



ARCHI NOTE:
 1) ALL WORKS SHALL BE CA IED OUT UNDER THE MAIN CONTRACTOR UNLESS SPECIFIED OTHERWISE.
 2) CONTRACTOR SHALL REFER CONCURRENTLY TO ARCHITECTURAL SCHEDULE OF FINISHES, WALL TYPE, CEILING TYPE, WINDOW, DOOR, IRONMONGERY AND SANITARYWARE.
 3) CONTRACTOR SHALL REFER CONCURRENTLY TO M&E SCHEDULES FOR MECHANICAL, ELECTRICAL ACCESSORIES AND LIGHT FITTINGS.
 4) CONTRACTOR SHALL SUBMIT COORDINATED SHOP DRAWINGS BASED ON VERIFIED SITE DIMENSIONS, FOR ARCHITECT'S APPROVAL.
 5) CONTRACTOR SHALL SUBMIT ALL PROPOSED MATERIALS AND SAMPLES, FOR ARCHITECT'S APPROVAL.
 6) ALL ID FITMENT, SYSTEM & LOOSE FURNITURE REFER TO ID SCHEDULE/ DETAILS (BY ID CONTRACTOR).
 7) ALL LAB EQUIPMENT AND REQUIREMENT WILL BE PROVIDED BY LAB CONTRACTOR/SPECIALIST.

M&E NOTE:
 1) ALL EQUIPMENT DIMENSION SHOWN IS PRELIMINARY & ACTUAL DIMENSION TO BE DETERMINED BASED ON EQUIPMENT SELECTED.
 2) 300 LUX LEVEL DESIGN BASED ON MS STANDARD:1525 (2007)
 3) TO MEET MINIMUM REQUIREMENTS OF VENTILATION RATE IN ASHRAE 62.1 OR THE LOCAL BUILDING CODE WHICHEVER IS MORE STRINGENT.
 4) THIS DRAWING SHALL BE STUDIED IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL & PLUMBING DRAWING.
 5) CEILING HEIGHT SHALL ACHIEVE 2800MM MINIMUM.
 6) JUNCTION BOX & UNDERFLOOR TRUNKING/ CONCEALED CONDUIT/TRUNKING SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR FOR AUDIO/VISUAL SERVICES TO LECTURER SEATING AREA.

LEGEND : LAB EQUIPMENT & REQUIREMENT (BY LAB CONTRACTOR)

<p>1. FP-FS: Friction in Pipe (Floor Standing) Dim: W=400 x L=2500 x H=2000mm Weight: 50kg Volt: N/A</p> <p>2. FM: Flow Measurement Dim: W=300 x L=400 x H=600mm Weight: 20kg Volt: N/A</p> <p>3. HB: Hydraulic Bench Dim: W=1000 x L=1500 x H=1200mm Weight: 80kg Volt: 240V/1ph</p> <p>4. CP: Centrifugal Pump + DAQ Dim: W=450 x L=1500 x H=800mm Weight: 80kg Volt: 240V/1ph</p> <p>5. STP: Steam Turbine Plant Dim: W=500 x L=1200 x H=950mm Weight: 80kg Volt: 240V/1ph</p> <p>6. FFC: Free and Forced Convection(TD1005) Dim: W=550 x L=850 x H=1200mm Weight: 30kg Volt: 240V/1ph</p> <p>7. CCS: Change of State of Gases Dim: W=550 x L=900 x H=900mm Weight: 80kg Volt: 240V/1ph</p> <p>8. HCS: Heat Conduction in Solids Dim: W=400 x L=1300 x H=800mm Weight: 80kg Volt: 240V/1ph</p> <p>9. SET-FS: Small Engine Test Set (Floor Standing) Dim1: W=1250 x L=1400 x H=1050mm Dim2: W=600 x L=1500 x H=800mm Weight: 150kg Volt: 240V/1ph</p> <p>10. WB.24: Wall Mounted White Board Dim: W=1200 x L=2400 Weight: 10kg Volt:N/A</p> <p>LTB.15 22x Lab Table 1x 2 gang Sockets Outlet Dim: W=600 x L=1500 H=900mm Weight : 50kg Volt: 240V/1ph</p>	<p>11. MIAA: Moment of Inertia and Angular Acceleration Dim: W=100 x L=1000 x H=800mm Weight: 30kg Volt: 240V/1ph</p> <p>12. CB-FS: Curved Beam Apparatus (Floor Standing) Dim: W=500 x L=1000 x H=1100mm Weight: 40kg Volt: N/A</p> <p>13. BD: Beam Deflection Dim: W=180 x L=880 x H=120mm Weight: 5.5kg Volt: N/A</p> <p>14. SG: Strain Gauge Rosette Dim: W=720 x L=520 x H=760mm Weight: 20kg Volt: 240V/1ph</p> <p>15. FIP: Friction and Inclined Plane Kit Dim: W=280 x L=450 x H=480mm Weight: 10kg Volt: N/A</p> <p>16. LC-AT: Law of Collision - Air Track Dim: W=500 x L=2000 x H=400mm Weight: 50kg Volt: 240V/1ph</p> <p>17. CRS: 4x Cartesian Robot Stations Dim: W=1200 x L=3000 x H=600mm Weight: 200kg Volt: 240V/1ph</p> <p>18. SRS: 4x SCARA Robot Stations Dim: W=1200 x L=3000 x H=600mm Weight: 200kg Volt: 240V/1ph</p> <p>19. L/TB: Lecturer Table + Chair Dim: W=600 x L=1000 x H=750mm Weight: 10kg Volt: N/A</p> <p>20. SSK.19: Stainless Steel Sink Dim: W=750 x L=1900 x H=750mm Weight: 180kg Volt: N/A</p>
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LEGEND : ELECTRICAL INSTALLATION

SYMBOL	DESCRIPTION(S)	QTY
	2 x 14W RECESSED TYPE T5 FLUO. FTG. C/W MI OR REFLECTOR & ALUMINIUM CROSS BLADE. (ELECTRONIC BALLAST)	4
	2 x 28W RECESSED TYPE T5 FLUO. FTG. C/W MI OR REFLECTOR & ALUMINIUM CROSS BLADE. (ELECTRONIC BALLAST)	22
	10A 1/2/3 GANG TWO WAY LIGHTING SWITCH AT 1450mm AFFL.	2
	10A 1/2/3/ GANG ONE WAY LIGHTING SWITCH AT 1450mm AFFL.	-
	13A TWIN SWITCH SOCKET OUTLET AT 900mm AFFL. (UNLESS OTHERWISE STATED).	16
	13A TWIN SWITCH SOCKET OUTLET (RUN IN FLOOR TRUNKING) MOUNTED AT TABLE / LOW HEIGHT PARTITION. (ACTUAL POSITION TO BE DETERMINE ON SITE)	10
	13A SWITCH SOCKET OUTLET AT ABOVE CEILING LEVEL FOR WIFI SYSTEM	1
	13A SWITCH SOCKET OUTLET AT BELOW CEILING LEVEL FOR SPEAKER	-
	13A SWITCH SOCKET OUTLET AT ABOVE CEILING LEVEL FOR PROJECTOR	-
	20A 1 GANG ONE WAY DOUBLE POLE SWITCH (FOR PROJECTOR & SPEAKER)	-
	UNDER FLOOR JUNCTION BOX (250mm X 250mm X 56mm) FOR POWER, TELEPHONE & DATA CAST IN FLOOR SLAB - DATA - 150mm X 25mm X 3.2mm UNDERFLOOR UPVC TRUNKING/CONDUIT. (CAST IN FLOOR SLAB) - POWER - 150mm X 25mm X 3.2 mm UNDERFLOOR UPVC TRUNKING/CONDUIT. (CAST IN FLOOR SLAB)	AS SHOWN
	150mm X 25mm METAL TRUNKING DROPPER	AS SHOWN
	-25MM PVC CONDUIT FOR AUDIO AND VISUAL C/W INSPECTION BOX (BY ELECTRICAL CONTRACTOR)	AS SHOWN

CONSTRUCTION DRAWING

PROJECT TITLE : CADANGAN MEMBINA SEBUAH KOLEJ UNIVERSITI SWASTA DI ATAS PT 5828, PERSIARAN CASSIA BARAT 3, BATU KAWAN, MK. 13, SEBERANG PERAI SELATAN YANG MENDUNGUNI : BLOK A - PUSAT PENTADBIRAN 5 TINGKAT BLOK B - PERPUSTAKAAN DAN BILIK KULIAH 6 TINGKAT BLOK C - BANGUNAN AKADEMIK DAN DEWAN SERBAGUNA B3 TINGKAT DENGAN PODIUM BLOK D - DEWAN KULIAH DAN KAFETERIA 3 TINGKAT BLOK E - BANGUNAN AKADEMIK 5 TINGKAT 2 UNIT PONDOK PENGAWAL DAN 1 UNIT TNB 11 KV STESEN SUIS UTAMA UNTUK: TETUAN KDU COLLEGE (PG) SDN. BHD	LAND OWNER & BUILDING OWNER SIGNATURE : NAME : DR.CHONG BENG KEOK CHIEF EXECUTIVE OFFICER (CEO) IC. NO : 610612-02-5048 ALAMAT :KDU COLLEGE (PG) SDN.BHD. 32, JALAN ANSON, 10400 GEORGE TOWN, PULAU PINANG. TEL. NO : 604-2386368	DESIGN ARCHITECT : ARCHITECTURE GROUP - STUDIO A CPG CONSULTANTS PTE LTD 1 Gateway Drive #23-01 Westgate Tower, Singapore 608531 Tel : +63574888 ; fax: +63574188 BH YEOW ARCHITECT 15TH FLOOR, BANGUNAN AMMTELIFE, NO.1, JLN. LUMUT, 50400 KUALA LUMPUR. TEL: (30)-4046-1346 FAX: (03) 4043-1349 EMAIL: ybhwa@nrasb.com.my	C&S CONSULTANT : PERUNDING KELANA CIVIL & STRUCTURAL ENGINEERS Level 12, Unit 12(D), Wisma Boon Siew, No.1, Penang Road, 10000 Penang. Tel: 2622628, Fax: 2641618 (Company No. A55232772-W) M&E CONSULTANT : PERUNDING P.L.A. Consulting Mechanical & Electrical Engineers. 8-01, WISMA PANTAI, JALAN WISMA PANTAI, 12200 BUTTERWORTH, PENANG. TEL. NO. : (604) 3337990 FAX NO. : (604) 3317337 E-MAIL : project@pla-group.com	QS CONSULTANT : UNITECH QS CONSULTANCY SDN. BHD. 12A-A, MENARA NORTHAM, 55, JALAN SULTAN AHMAD SHAH, 10050 PENANG KITCHEN SPECIALIST : DISHES SDN BHD NO. 21-1, JALAN SEMENYIH SENTRAL 1, SEMENYIH SENTRAL, SEMENYIH, 43500 SELANGOR TEL. : +603-872-71207 email : info@dishes.com.my webmail : www.dishes.com.my	DRAWING TITLE : BLOCK E_GROUND FLOOR MECHANTRONICS & MECHANICAL LAB FURNITURE LAYOUT PLAN <table> <tr> <td>DATE : 11.03.16</td> <td>SCALE : 1:75</td> <td>CHECK BY : EJ/EDM</td> <td colspan="3"></td> </tr> <tr> <td colspan="2">PROJECT NO. : 55314</td> <td>STATUS CA</td> <td>BLOCK E</td> <td>DWG. NO 0401</td> <td>REVISION A</td> </tr> </table>	DATE : 11.03.16	SCALE : 1:75	CHECK BY : EJ/EDM				PROJECT NO. : 55314		STATUS CA	BLOCK E	DWG. NO 0401	REVISION A
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