



4 March 2025

Dear Tenderers,

Tender Reference No. (570) in P/AE/PUR/AGC

**Construction of Outdoor Training Ground at Siu Lam, Area 56, Tuen Mun
for the Construction Industry Council (2nd Re-tender)**

Tender Addendum No. 1

We refer to the tender document issued you on 21 February 2025 for the captioned tender. Please find enclosed herewith Tender Addendum No. 1 consisting of:

- List of Tender Document
- Conditions of Tender
- Schedule of Quantities and Rates
- Special Conditions of Contract
- Assignment Brief and its Annexes
- Tender Drawings

Please replace the corresponding pages in the tender documents by the revised page being marked with "Addendum No. 1".

The above amendments shall be effective immediately and Tender Addendum No. 1 shall form part of the tender document. Please acknowledge receipt of the aforementioned information by signing below and returning this letter by fax at (852) 2100 9439 or by e-mail to rubywong@cic.hk **by 11 March 2025**.

Yours sincerely,
For and on behalf of
Construction Industry Council

Accepted and Confirmed by
Company Name:

Eric LEE
Manager
Procurement

Name:
Position:
Company Name:
Date:

/EL

**CONSTRUCTION OF OUTDOOR TRAINING GROUND
AT SIU LAM, AREA 56, TUEN MUN
FOR THE CONSTRUCTION INDUSTRY COUNCIL
(2ND RE-TENDER)
Tender Addendum No.1**

(I) Tender Documents

All revised / additional pages marked with “Addendum No.1” at the bottom right hand corner are summarized below: -

	<u>Page No.</u>
<u>Revised Pages (Total 64 pages)</u>	
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Conditions of Tender	CT-29
Schedule of Quantities and Rates	
Schedule No. 1 – Preliminaries	1/9
Schedule No. 2 – Temporary Building	2/5, 2/6, 2/12, 2/19, 2/20, 2/23, 2/24-2/27, 2/29
Schedule No. 3 – Containers	3/8, 3/11, 3/12
Schedule No. 4 – External Works	4/22
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Schedule No. 6 – Underground Drainage	6/5
Schedule No. 12.1 – Optional Works No. 1 – New Guard House	12/1/3
Schedule No. 12.2 – Optional Works No. 2 – Drop Bar	12/2/2
Schedule No. 12.3 – Optional Works No. 3 – Feature Wall with Decorative Green Feature	12/3/3
Schedule No. 12.4 – Optional Works No. 4 – PV Panels	12/4/2
Schedule No. 12.5 – Optional Works No. 5 – Planter	12/5/3
Schedule No. 12.6 – Optional Works No. 6 – Metal Fence Wall around FS Tank	12/6/3
Schedule No. 12.7 – Optional Works No. 7 – MiC/DfMA Shelters	12/7/6
Schedule No. 12.8 – Optional Works No. 8 – Relocation of Construction Plant from Tuen Mun Training Ground	12/8/2
Special Conditions of Contract	SC/2, SC/11, SC/27
Specification – Technical	
Part 1 - Architectural Works	A1 – A17
Part 3 - Building Services Installation	SOR/3A/10 - SOR/3A/11
Annex 1 – Drawings Issued to Tenderers for Tendering Purpose	SD/3 – SD/6
Summary of Tender	SOT/1

**CONSTRUCTION OF OUTDOOR TRAINING GROUND
AT SIU LAM, AREA 56, TUEN MUN
FOR THE CONSTRUCTION INDUSTRY COUNCIL
(2ND RE-TENDER)
Tender Addendum No.1**

(I) Tender Documents (Cont'd)

Page No.

Revised Pages (Total 64 page) (Cont'd)

Assignment Brief and its Annexes

Assignment Brief

AB-1, AB-2

Specification – Preliminaries

SP/vi, SP/21,
SP/76-SP/77, SP/92,
SP/99

Additional Pages (Total 40 pages)

Schedule of Quantities and Rates

Schedule No. 2 – Temporary Building

2/20A, 2/23A

Schedule No. 3 – Containers

3/8A

Schedule No. 13 – IoT Equipment for Facility Management (All Provisional)

cover, 13/1 – 13/2

Assignment Brief and its Annexes

Assignment Brief

AB/11A

Specification – Preliminaries

SP/77A

Specification – Technical

Part 1 - Architectural Works

A18

Part 3 - Building Services Installation

SOR/3A/11A,
SOR/3A/11B

Part 8 - AV System and IT Infrastructure

cover, AVIT/1 – AVIT/18

Part 9 - IoT Solutions for Facilities Management

cover, total 9 pages

(II) Tender Drawings (Refer to Annex 1 – Drawings Issued to Tenderers for Tendering Purpose)

Construction of Outdoor Training Ground
at
Siu Lam, Area 56, Tuen Mun
for
the Construction Industry Council
(2nd Re-tender)
List of Tender Documents

	Page
1. Conditions of Tender	CT-1 to CT-15
2. <u>Appendices to Conditions of Tender</u>	
Appendix – Details for Technical Submission CT.A	CT-16 to CT-22
Appendix – Standard Letter for Complying with CT.B Anti-Collusion Clause	CT-23 to CT-24
Appendix – Form of Tender CT.C	CT-25 to CT-26
Appendix – Fee Proposal CT.D	CT-27 to CT-30
Schedule of Quantities and Rates	Total 155 pages
Appendix – Tender Evaluation Procedures and Criteria CT.E	CT-31 to CT-33
Appendix – Reply Slip for Declining Bid CT.F	CT-34 to CT-35
Appendix – Reply Slip for Tender Briefing and Site Visit CT.G Session	CT-36
Appendix – Further information required in tender CT.H submission	CT-37
Appendix – Letter of Declaration on Compliance with One CT.I Tender Requirement for Holding Companies, Subsidiaries or Related Parties	CT-38 to CT-39
3. Special Conditions of Tender	SCT/1 – SCT/2
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Construction of Outdoor Training Ground
at
Siu Lam, Area 56, Tuen Mun
for
the Construction Industry Council
(2nd Re-tender)
List of Tender Documents (Cont'd)

	Page
5. <u>Appendices to Special Conditions of Contract (Cont'd)</u>	
Appendix - Sample Letter to the Contractor regarding SCC.S Subcontractor's Request for Direct Payment of Outstanding Adjudicated Amount under a Relevant Subcontract	SCC.S/1 to SCC.S/2
Appendix - Site Notice of Implementation of SOP SCC.T Provisions in Relevant Subcontracts under the Main Contract	SCC.T/1 to SCC.T/4
6. Assignment Brief and its Annexes	Total 1389 pages
7. Memorandum of Agreement	MA/1 to MA/3

Schedule of Quantities and Rates

Detailed breakdown of the tender price under this Section shall refer to the Schedule of Quantities and Rates and Summary of Tender as listed below of this Conditions of Tender.

Schedule No. 1 – Preliminaries

Schedule No. 2 – Temporary Building

Schedule No. 3 – Containers

Schedule No. 4 – External Works

Schedule No. 5 – Removal, Relocation and Reinstatement Works at Tuen Mun Campus

Schedule No. 6 – Underground Drainage

Schedule No. 7 – General Attendance on Specialist Contractor

Schedule No. 8 – Site Safety Management (All Provisional)

Schedule No. 9 – Smart Site Safety System (All Provisional)

Schedule No. 10 – Design for Safety

Schedule No. 11 – Monitoring of Wage Payment to Site Workers (All Provisional)

Schedule No. 12 – Optional Works

Schedule No. 13 – IoT Equipment for Facilities Management (All Provisional)

Schedule of Rates for Building Services Works (included in Specification – Technical Part 3 – Building Services Installation)

Summary of Tender

Interim payments based on the estimated gross valuation of work in progress shall be made on a monthly basis.

The valuation of work shall be certified by the Architect within 14 calendar days upon receipt of the Contractor's payment application. The period for honouring payment certificate shall be 1 month upon presentation of payment certificate as certified by the Architect to the Employer.

Ref.	Item	Total
	<u>SCHEDULE NO. 1 -PRELIMINARIES (Cont'd)</u>	
<u>19.0</u>	<u>TEMPORARY WORKS (Cont'd)</u>	
	19.06 Temporary supports	
	19.07 Telephones	
	19.08 Water for the Works	
	19.09 Lighting and power	
	19.10 Temporary roads	
	19.11 Restriction of advertising	
	19.12 Name board	
	19.13 Other temporary works	
<u>20.0</u>	<u>SUPPLEMENTAL REQUIREMENTS</u>	
	20.01 Adoption of Modular Integrated Construction (MiC) / Design for Manufacture and Assembly (DfMA)	
	20.02 Off-site joint inspection/visit outside Hong Kong	
	20.03 Design for Safety	
	20.04 Building Information Modeling (BIM)	
	20.05 Partnering Workshop	
	20.06 Public relation plan and public relation officer	
	20.07 Provision of Contract car	
	20.08 Construction site welfare facilities	
CARRIED TO COLLECTION \$		

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING</u> <u>(Cont'd)</u></p> <p><u>WATERPROOFING</u></p> <p><u>WATERPROOFING TO INTERNAL AREA</u></p> <p><u>Approved cementitious waterproofing system applied in accordance with the manufacturer's recommendations by an approved specialists at the Contractor's expense including preparing and priming the substrate and all necessary accessories as described</u></p>				
17	Horizontal covering on concrete surface.	190	m2		
18	Vertical lining.	205	m2		
	<p><u>WOOD WORKS</u></p> <p><u>DRY WALL PARTITION SYSTEM AS DRAWING NO. AD-DW-001, AD-DW-002 AND AD-DW-003</u></p> <p>Special Preamble</p> <p>1) Not withstanding the SMM, dry wall partitions are measured by the net area. Deductions have been made for doors, windows, etc. Doors and windows shall be measured separately.</p> <p>2) The rates for dry wall partitions shall include for all necessary cutting, additional edging, studs, runners, trimming, lead strips, acoustic sealants, x-ray sealants, etc. around openings.</p> <p>3) In the addition to item 2 above, the rates for fire resistant dry wall partitions shall further include for fire resistant acrylic intumescent mastic and sealant at floor, ceiling and around</p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u></p> <p><u>WOOD WORKS (Cont'd)</u></p> <p><u>DRYWALL PARTITION SYSTEM AS DRAWING NO. AD-DW-001, AD-DW-002 AND AD-DW-003 (Cont'd)</u></p> <p>4) The rates and prices dry wall partitions inserted herein shall include for additional supporting frame, channel, bracing, metal strip required for doors, windows, etc. and surface mounted fixtures on dry wall.</p> <p>5) The rates for dry wall partitions shall include for additional studs, jointing tapes, flushing tapes, movement strips, joint filler, acoustic sealants, fire resistant sealants at wall junctions, expanded flange corner beads at stopped ends and external corners, additional gypsum board and studs at open edge.</p> <p><u>Approved dry wall partition system comprising 1 layer of board on both sides, metal framing, metal stud, acoustic insulation, all necessary fixings and accessories</u></p>				
19	<p>Partition 100 mm (minimum) thick overall.</p> <p><u>Approved fire rated dry wall partition system comprising 1 layer of board on both sides, metal framing, metal stud, acoustic insulation, sealants, all necessary fixings and accessories</u></p> <p><u>1 Hour fire rated</u></p>	85	m2		
20	<p>Partition 100 mm (minimum) thick overall.</p> <p><u>2 Hours fire rated</u></p>	43	m2		
21	<p>Partition 100 mm (minimum) thick overall.</p>	26	m2		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u>				
	<u>STEEL AND METAL WORKS (Cont'd)</u>				
	<u>STRUCTURAL STEELWORK IN FRAME OF BUILDING COMPRISING STRUCTURAL STEEL COMPONENTS SUPPLIED, FABRICATED, DELIVERED, ASSEMBLED, HOISTED AND FRAMED, WELDED AND BOLTED IN POSITION (Cont'd)</u>				
	<u>Steel shear studs</u>				
43	Steel shear studs with UTS of 450 MPa; 16 mm shank diameter x 70 mm long at 200 mm centre to centre (typical) welded to composite slab.	1,768	No		
	<u>Connection</u>				
44	Steelwork in loose and attached connection etc.	-	item	-	
	<u>"FIRECUT FM900" or approved equal spray-on fire proofing material applied in accordance with the manufacturer's recommendations to achieve fire resistance rating (FRR) of 120/120/120</u>				
45	Structural steel surfaces.	1,753	m2		
	<u>LINING, COVERING AND CLADDING</u>				
	<u>EXTERNALLY</u>				
	<u>3 mm Thick aluminium wall cladding system complete with PVF2 coated wood look aluminium cladding panels, supporting framework and backing, including all brackets, joints, fixing and accessories as Drawing No. TB-AE-001 and as described in the Specification</u>				
46	Cladding on wall for door portals (MT-03).	18	m2		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 2 -TEMPORARY BUILDING (Cont'd)</u>				
	<u>STEEL AND METAL WORKS (Cont'd)</u>				
	<u>WINDOWS, LOUVRES AND DOORS (Cont'd)</u>				
	<u>Externally (Cont'd)</u>				
	<u>Design, fabricate and install PVF2 coated aluminium windows and doors, including IGU tempered clear insulated glass unit (8 mm + 15 + 8 mm) thick, framing completed with wood pattern aluminium cladding in PVF2 finish, glazing beads, door closer, plate, ironmongery, all necessary fixings and accessories and finishes as Drawing No. WS-01 to WS-03 (Cont'd)</u>				
61	Composite window, louvre and door comprising one fixed light 1000 x 600 mm, one side hung door unit with vision panel 1000 x 2250 mm high and weatherproof aluminium louvre with aluminium blades 1000 x 250 mm high in one compartment (W6).	1	No.		
	<u>Design, fabricate and install PVF2 coated weatherproof aluminium louvre comprising extruded perimeter frame, 2.3 mm (minimum) aluminium louvre blades, ironmongery, beads, all necessary fixings and accessories and finishes as shown on Drawing No. LS-01 and as described in the Specification</u>				
62	Louvre 800 x 500 mm high overall (ML1).	3	No.		
63	Louvre 300 x 500 mm high overall (ML2).	1	No.		
64	Louvre 2800 x 2000 mm high overall (ML3).	2	No.		
64.1	Louvre 1950 x 350 mm high overall (ML5).	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u>				
	<u>STEEL AND METAL WORKS (Cont'd)</u>				
	<u>CAT LADDER WITH SAFETY CAGE AND LOCKABLE PANEL AS DRAWING NO. AD- CL-001</u>				
	<u>Stainless steel framed and welded</u>				
65	Cat ladder, approximate 5870 mm girth comprising 50 x 12 mm stringers 500 mm apart with 20 mm diameter bar at 300 mm centre to centre, stringers built into wall and welded to 250 x 75 x 12 mm bracket with 16 mm diameter fixing bolt nuts and washer at maximum 900 mm centre to centre, including galvanized mild steel safety hood, 6 mm steel lockable panel, ironmongery and all necessary fixing accessories.	1	No.		
66	Ditto; approximate 7720 mm girth.	2	No.		
67	(Not used)				
	<u>DESIGN, SUPPLY AND INSTALL CAT LADDERS WITH MESH PLATFORM, SAFETY CAGE AND LOCKABLE PANEL AS DRAWING NO. TB- AP-003 and TB-AE-003</u>				
67.1	Cat ladder with mesh platform 7780 mm high overall, each cat ladder comprises stringers with fixing plates, rungs, safety hood, locking plates, 3000 x 1400 mm mesh platform complete with minimum 30 x 3 mm galvanized wire mesh steel grating at lv. +49.90, 900 mm high metal guard rail and 200 mm high metal perforated kick plate, all necessary components, finishes, fixings and accessories, all as shown on drawings and as described in the Specification.	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u></p> <p><u>STEEL AND METAL WORKS (Cont'd)</u></p> <p><u>HATCH DOOR AS DRAWING NO. AD-TR-001</u></p> <p><u>850 x 850 x 1.5 mm Cover comprising 50 x 50 x 5 mm S.S. angle frame hinged with 75 x 50 x 5 mm thick angle frame and fixed to curb by fixing bolt and welded to 5 mm flat bars all round, 1.5 mm thick S.S. flashing screwed to angle frame all round, including 2 nos. 75 mm long hinge, anchor bolts, sealants, pull handle and lock plates, finishes and all necessary fixing accessories.</u></p>				
68	Hatch door, 900 x 900 mm overall.	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u>				
	<u>PLASTERING AND PAVING</u>				
	<u>INTERNAL FLOOR FINISHES AND SKIRTINGS</u>				
	<u>Cement and sand (1:3) screeds</u>				
84	25 mm (Min.) Screed on approved waterproofing to receive ceramic tiling.	121	m2		
85	25 mm (Min.) Screed on slab to receive ceramic tiling.	325	m2		
	<u>300 x 300 x (8+5) (Min.) mm Non-slip ceramic tactile tiling bedded on cement and sand screed, including approved adhesive and grouting and cement mortar as described and as shown on Drawing No. AD-FD-002</u>				
85.1	Hazard warning tactile (Type B).	3	m2		
	<u>600 x 600 x 10 mm thick approved slip-resistant (R11) ceramic tiling bedded on cement and sand screed, including approved adhesive and grouting and cement mortar as described in</u>				
86	Floor (TL01).	446	m2		
	<u>2 mm Thick approved seamless non-slip roll-form flexible PVC sheet vinyl flooring fixed with an approved adhesive on screed, applied strictly in accordance with the manufacturer's recommendations and laid by an approved Specialist Contractor at the Contractor's expense</u>				
87	Floor (VY-01).	-	m2		(Rate Only)
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
88	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING</u> <u>(Cont'd)</u></p> <p><u>PLASTERING AND PAVING (Cont'd)</u></p> <p><u>INTERNAL WALL FINISHES</u></p> <p><u>Internal lime / cement plater as described</u></p> <p>15 mm Plaster on wall and columns to receive paint.</p>	637	m2		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u></p> <p><u>PLASTERING AND PAVING (Cont'd)</u></p> <p><u>INTERNAL CEILING FINISHES</u></p> <p><u>Design, supply and install approved acoustic gypsum board suspended ceiling system comprising 600 x 600 mm acoustic metal ceiling tiles with mineral fibre, complete with exposed grid suspension system, plaster and painting, forming all necessary access panels and grille opening, including all necessary fixings and accessories as Drawing No. AD-CD-001 and as described in the Specification</u></p>				
89	Flush ceiling.	321	m2		
90	Extra over flush ceiling for forming opening for ceiling track for folding partition including perimeter frame and trim around opening.	28	m		
	<p><u>PAINTING</u></p> <p><u>Approved emulsion paint (PA-05) all applied in accordance with manufacturer's recommendations on</u></p>				
91	Plastered walls and columns.	637	m2		
	<p><u>LOOSE FURNITURE</u></p> <p><u>Supply and install and positioning the following loose furniture to specific location as Drawing No. TB-AP-001, AD-PC-001, SFS-0001, MS-0002 and MS-0003 and to the Architect's satisfaction</u></p>				
92	Built in kitchen sink	1	No.		
93	Kitchen faucet.	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
<p>94 (Not used)</p> <p>95 (Not used)</p> <p>96 (Not used)</p>	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u></p> <p><u>CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM</u></p> <p>Note:</p> <p>(1) All equipment and accessories for supply and installation of CCTV system not otherwise specified in the Bill shall be included in the Bill of Rate in Building Services Installation of Specification - Technical to complete the system.</p> <p>(2) All electrical installation, signal and control circuits comprising cables of approved type and size, drawing into and including conduits and fittings and/or flexible conduits and fittings and any cable installing facilities, with earthing shall be included in the Bill of Rate in Building Services Installation of Specification - Technical to complete the system.</p> <p>(3) For CCTV not serving for examination use, the Contractor is only responsible for the signal and control circuits and electrical installation and the mounting post.</p> <p><u>Equipment and accessories complete with all detailed and necessary components, including all cables and conduit connections to power points, fixing and supports, all as described and as shown on Drawings</u></p> <p><u>For examination use (Refer to Schedule of Rates of Building Services Installation)</u></p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 2 -TEMPORARYBUILDING (Cont'd)</u>				
	<u>CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM (Cont'd)</u>				
	<u>Equipment and accessories complete with all detailed and necessary components, including all cables and conduit connections to power points, fixing and supports, all as described and as shown on Drawings (Cont'd)</u>				
	<u>For examination use (Refer to Schedule of Rates of Building Services Installation) (Cont'd)</u>				
97	(Not used)				
98	(Not used)				
99	(Not used)				
100	(Not used)				
101	(Not used)				
	<u>Uninterruptible Power Supply (UPS) units complete with inverter, rectifier, batteries, battery chargers, all necessary accessories and connections, including all cables and conduit connections to power points (measured separately), fixing and supports, all as described</u>				
	<u>For examination use (Refer to Schedule of Rates of Building Services Installation)</u>				
102	(Not used)				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 2 -TEMPORARYBUILDING</u> <u>(Cont'd)</u></p> <p><u>SUNDRIES</u></p> <p><u>Approved vinyl roller blinds (PP-01) completed with all necessary component parts and fixing accessories as shown on the Drawing No. WS-001 to WS-003 and in accordance with the manufacturer's recommendations</u></p>				
103	<p>Roller blinds (PP-01).</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	34	m2		
CARRIED TO COLLECTION \$					

Ref.	Item	Total
	<u>COLLECTION</u>	
	<u>Brought Forward From Page 2/28</u>	
	Page No.2/19	
	Page No.2/20	
	Page No.2/20 A	
	Page No.2/21	
	Page No.2/22	
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	Page No.2/23 A	
	Page No.2/24	
	Page No.2/25	
	Page No.2/26	
	Page No.2/27	
TOTAL - SCHEDULE NO. 2 -TEMPORARY BUILDING CARRIED TO SUMMARY OF TENDER \$		

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 3 - CONTAINERS (Cont'd)</u></p> <p><u>DESIGN, SUPPLY AND INSTALL TAILOR MADE CONTAINER WITH SEWAGE TANK</u></p> <p>Note:</p> <p>(1) The description of the fully fitted and equipped container and furniture hereunder are not intended to be fully comprehensive and should be read in conjunction with the Specification and Drawings, in particular the annexes and reference photos stipulating CIC's requirement in order that the full requirements in respect of each item can be allowed for in pricing.</p> <p>(2) The E&M services installation for mobile lavatories is measured separately in separated Schedules.</p>				
46	6185 x 4040 x 3845 mm High overall tailor made mobile lavatory with sewage tank, complete with metal framework, container envelope, metal stair platform and railing, metal roofing, internal partition, 1.8 m high overall toilet cubicle in four compartment, 2 no. of weatherproof louvre (ML4) with PVF2 paint finish, 2 no. of PVF2 coated aluminium window (W11) with PVF2 paint finish, 2 no. of Grade 316 stainless steel door complete with door frames, ironmongery and signage, fixing and accessories (MD3, MD3a), cementitious waterproofing, non-slip ceramic tile flooring, internal and external wall paint, floor drain, including all necessary component parts, fixings and accessories and as described as shown on Drawings No ML-AE-001, ML-AP-001 and ML-AS-001.	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
47	<p><u>SCHEDULE NO. 3 - CONTAINERS (Cont'd)</u></p> <p><u>DESIGN, SUPPLY AND INSTALL TAILOR MADE CONTAINER WITH SEWAGE TANK (Cont'd)</u></p> <p>1600 x 1600 x 3845 mm High overall tailor made mobile lavatory with sewage tank, complete with metal framework, container envelope, metal roofing, door and ironmongery, cementitious waterproofing, non-slip ceramic tile flooring, internal and external wall paint, all necessary component parts, fixings and accessories as described and as shown on Drawings No ML-AE-001, ML-AP-001 and ML-AS-001.</p>	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>SCHEDULE NO. 3 - CONTAINERS (Cont'd)</u>				
	<u>FURNITURE AND FITTINGS (Cont'd)</u>				
	<u>Re-installation from Tuen Mun Training Ground (ALL PROVISIONAL) (Cont'd)</u>				
67	Exhaust fan.	2	No.		
68	Helmet Rack.	2	No.		
69	Hot and cold water dispenser.	8	No.		
70	Photocopier.	8	No.		
71	Telephone.	16	No.		
72	Vending machine.	1	No.		
73	Wall-mounted fan.	2	No.		
	<u>(END OF ALL PROVISIONAL)</u>				
	<u>OTHERS</u>				
	<u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u>				
CARRIED TO COLLECTION \$					

Ref.	Item	Total
	<p><u>SCHEDULE NO. 3 - CONTAINERS</u></p> <p><u>COLLECTION</u></p> <p>Page No.3/1</p> <p>Page No.3/2</p> <p>Page No.3/3</p> <p>Page No.3/4</p> <p>Page No.3/5</p> <p>Page No.3/6</p> <p>Page No.3/7</p> <p>Page No.3/8</p> <p>Page No.3/8 A</p> <p>Page No.3/9</p> <p>Page No.3/10</p> <p>Page No.3/11</p>	
	<p>TOTAL - SCHEDULE NO. 3 - CONTAINERS</p> <p>CARRIED TO SUMMARY OF TENDER \$</p>	

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 4 - EXTERNAL WORKS (Cont'd)</u></p> <p><u>BUILDER'S WORKS FOR UNDERGROUND PIPEWORK</u></p> <p><u>SPECIAL PREAMBLES:</u></p> <p>Notwithstanding the requirement of SMM, the following have been adopted for measurement in this Bill.</p> <p>(a) Separate items for excavation trench for service pipes have not been given for depth in stages.</p> <p><u>Excavate trench for service pipes</u></p> <p>72 Excavate trench for 4 no. of services pipes not exceeding 200 mm diameter.</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	149	m		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 5 - REMOVAL, RELOCATION AND REINSTATEMENT WORKS AT TUEN MUN TRAINING GROUND (Cont'd)</u></p> <p><u>DEMOLITION (Cont'd)</u></p> <p><u>Carefully remove, transport to Siu Lam Training Ground, unload and place in position as directed (Cont'd)</u></p> <p><u>Plant</u></p>				
16	Air shoes cleaner (Ref. code: SW1).	-	item	-	
17	Waste treatment plant (Refcode: WS1).	-	item	-	
	<p><u>SUNDRIES</u></p>				
18	Allow for filling up the holes, ditches, void etc back to original site condition.	-	item	-	
	<p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 6 - UNDERGROUND DRAINAGE (Cont'd)</u></p> <p><u>SOIL, WASTE AND STORMWATER DRAINAGE (Cont'd)</u></p> <p><u>Holding tank in reinforced concrete Grade 30D/20 including all necessary excavation, backfilling, disposal, finishes, precast reinforced concrete covers, bedding, haunching frames in cement mortar and expansion joints and other accessories as Drawing No. D-0001 and D-0002 and as described</u></p>				
11	Internal size; 4000 x 3000 x 1500 mm deep.	1	No.		
	<p><u>TESTING</u></p>				
12	Allow for testing the whole of the foregoing drainage systems as directed by and to the satisfaction of the Architect and leaving in perfect working order on completion.	-	item	-	
	<p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>ADDITION (Cont'd)</u></p> <p>7 Take down, take up, take out, clear away and credit the existing guard house at Tuen Mun Training Ground.</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	-	item	-	
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
1	<p><u>ADDITION</u></p> <p>Approved drop bars as specified.</p> <p>Note: Wiring and conduit to adjacent power supply has been included in base tender.</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>ADDITION</u></p> <p><u>Design, supply and install metal feature wall green wall as Drawing No. AD-MF-002 and AD-MF-004</u></p>				
2	6190 x 2800 mm high overall feature wall comprising metal framework, 150 mm high metal planter box at the bottom of wall and 1000 mm high metal planter box 800 mm AFFL completed with supporting frame and overall 385 mm offset from the main frame work, aluminium cladding (MT-01) fixed to perimeter frame of wall 285 mm projected from the supporting frame and fixed to the rear side of wall with all necessary backing and framing, wood-plastic composites, 4800 x 1100 mm high overall aluminium cladding (MT-04) signage, all necessary component parts, including excavation, backfilling, disposal, formwork, concrete footing, all necessary anchorages and fixings inserted or cast into structure, painting, finishes and all necessary fixing accessories as detailed on Drawings and as described.	1	No.		
3	Decorative vertical green wall system comprising approved plants, panels/tray, supporting framework, all necessary component parts, including necessary structural calculation and statutory submission (Please specify in detail).	-	item	-	
	<p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>ADDITION</u></p> <p><u>DESIGN, SUPPLY and INSTALL photovoltaic system including structural design and calculation, preparation and submission to Government Department, including all necessary component parts, all fixing and accessories, testing and commissioning as shown on Drawing No. TB-AP-003, TB-IE-001 to TB-IE-003 and as described in the Specification</u></p> <p>1 Grid tied roof rack mounted photovoltaic panel system for lighting and air-conditioning application with a min. capacity of 0.325kWP for each panel (Total 48 nos. of panel on plan).</p> <p>(Wiring and conduit to adjacent power supply has been included in base tender).</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	-	item	-	
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>ADDITION</u></p> <p><u>LANDSCAPING</u></p> <p><u>Supply and plant the following tree completed with maximum 300 mm thick planting soil and drainage layer, including all necessary preparatory works, fertilization, staking support, protecting and watering, etc. all as described and as Drawing No. ALEAD TD LAN 1</u></p> <p>Turf</p>				
6	Axonopus compressus.	56	m2		
	<p><u>Establishment work</u></p>				
7	Allow for the establishment works for all newly planted lawn/ turf for a period of 12 months including watering and firming up all plants, weeding the planting areas, pruning, pre-planting and post-planting fertilizer to plants, protection, pest and disease control, mulch maintenance, staking and tie maintenance and removal, etc. all as described including providing reports and records.	-	item	-	
	<p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>				
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
3	<p><u>ADDITION (Cont'd)</u></p> <p><u>FENCE WALL (Cont'd)</u></p> <p>Design, supply and install metal fence wall as Drawing No. AD-MF-003 and AD-MF-004 (Cont'd)</p> <p>Extra over for forming overall 2475 x 975 x 2500 (min.) high fire services check meter cabinet; comprising column post, 1900 x 2105 mm high metal door, metal panel top cover, all necessary ironmongery, fixings and accessories, including excavation, backfilling, disposal, formwork, concrete footing, all necessary anchorages and fixings inserted or cast into structure, painting, finishes and all necessary fixing accessories as shown on Drawings and as described.</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	1	No.		
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>ADDITIONS (Cont'd)</u></p> <hr/> <p>23 Take down, take up, take out, clear away and credit the existing temporary shelters at Tuen Mun Training Ground (In 5 Nos).</p> <p><u>OTHERS</u></p> <p><u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u></p>	-	item	-	
CARRIED TO COLLECTION \$					

Ref.	Item	Quantity	Unit	Rate	Total
	<u>ADDITION</u>				
	<u>Carefully remove, transport to Siu Lam Training Ground, unload and place in position as directed</u>				
	Plant				
1	Bulldozer (In 2 No.).	-	item	-	
2	Excavator (In 10 No.).	-	item	-	
3	Standard compactor (In 2 No.).	-	item	-	
4	Wheel loader / Ski-steer loader (In 4 No.).	-	item	-	
	<u>OTHERS</u>				
	<u>Allow below any items not herein above mentioned but necessary for the completion of works (please specify in details, if any)</u>				
CARRIED TO COLLECTION \$					

**SCHEDULE NO. 13 IOT EQUIPMENT FOR
FACILITY MANAGEMENT**

Ref.	Item	Quantity	Unit	Rate	Total
	<p><u>SCHEDULE NO. 13 - IOT EQUIPMENT FOR FACILITIES MANAGEMENT (ALL PROVISIONAL)</u></p> <p>Notes:-</p> <p>(1) Refer to Note (1) to (6) in Schedule 12.1 - Optional Works No. 1</p> <p><u>IOT Equipment for facilities management (ALL OPTIONAL)</u></p>				
1	IoT Electricity & Water Meter Monitoring	10	No.		
2	IoT Indoor AC Units Water Leakage Monitoring	20	No.		
3	IoT Services Pumps Health Status	10	No.		
4	IoT Water Tanks Overflow Monitoring	10	No.		
5	IoT Weather Stations	3	No.		
6	IoT Toilet Cubicles Status Monitoring	10	No.		
7	IoT Gateway	8	No.		
8	People Counting Analysis at Main Entrance	1	No.		
9	System Infrastructure, Digital Twin & Dashboard On-Boarding	1	No.		
10	Security CCTV Surveillance System (Exclude all related to Examination Use)	1	No.		
	<u>(END OF ALL OPTIONAL)</u>				
CARRIED TO COLLECTION \$					

Ref.	Item	Total
	<p style="text-align: center;"><u>SCHEDULE NO. 13 - IOT EQUIPMENT FOR FACILITIES MANAGEMENT (ALL PROVISIONAL)</u></p> <p style="text-align: center;"><u>COLLECTION</u></p> <p style="text-align: center;">Page No.13/1</p>	
	<p style="text-align: center;">TOTAL - SCHEDULE NO. 13 - IOT EQUIPMENT FOR FACILITIES MANAGEMENT (ALL PROVISIONAL)</p> <p style="text-align: center;">CARRIED TO SUMMARY OF TENDER \$...</p>	

Ref.	Item	Total
<u>SUMMARY OF TENDER</u>		
		<u>Page No.</u>
	SCHEDULE NO. 1 - PRELIMINARIES	1/10
	SCHEDULE NO. 2 - TEMPORARY BUILDING	2/29
	SCHEDULE NO. 3 - CONTAINERS	3/12
	SCHEDULE NO. 4 - EXTERNAL WORKS	4/24
	SCHEDULE NO. 5 - REMOVAL, RELOCATION AND REINSTATEMENT WORKS AT TUEN MUN TRAINING GROUND	5/5
	SCHEDULE NO. 6 - UNDERGROUND DRAINAGE	6/6
	SCHEDULE NO. 7 - GENERAL ATTENDANCE ON SPECIALIST CONTRACTOR	7/4
	SCHEDULE NO. 8 - SITE SAFETY MANAGEMENT (ALL PROVISIONAL)	8/3
	SCHEDULE NO. 9 - SMART SITE SAFETY SYSTEM (ALL PROVISIONAL)	9/3
	SCHEDULE NO.10 - DESIGN FOR SAFETY	10/3
	SCHEDULE NO. 11 - MONITORING OF WAGE PAYMENT TO SITE WORKERS (ALL PROVISIONAL)	11/2
	SCHEDULE NO. 12 - OPTIONAL WORKS	12.S/1
	SCHEDULE NO. 13 - IOT EQUIPMENT FOR FACILITIES MANAGEMENT (ALL PROVISIONAL)	3/2
	SCHEDULE OF RATES FOR BUILDING SERVICES INSTALLATION	SOR/SOT/1
CARRIED TO FORM OF TENDER \$		

Index of the Special Conditions of Contract: (Cont'd)

SCC 14	Not used
SCC 15	Not used
SCC 16	Not used
SCC 17	Substantial Completion and defects liability
SCC 18	Not used
SCC 19	Not used
SCC 20	Not used
SCC 21	Insurance against injury to persons or property
SCC 22	Not used
SCC 22A	Not used
SCC 22B	Insurance of the Works by the Employer
SCC 22C	Insurance of existing building and insurance of the Works by the Employer
SCC 23	Possession, commencement and completion
SCC 24	Damages for non-completion
SCC 25	Extension of Time
SCC 26	Not used
SCC 27	Direct loss and/or expense
SCC 28	Not used
SCC 29	Nominated Sub-Contractors and Nominated Suppliers
SCC 30	Not used
SCC 31	Not used
SCC 32	Certificates and payments
SCC 33	Surety bond
SCC 34	Not used
SCC 35	Determination by the Employer
SCC 36	Not used
SCC 37	Not used
SCC 38	Fluctuations
SCC 39	Not used
SCC 40	Not used
SCC 41	Settlement of disputes
SCC 42	Contracts (Rights of Third Parties) Ordinance (Additional Clause)
SCC 43	Environmental Management Plan (Additional Clause)
SCC 44	Safety Plan (Additional Clause)
SCC 45	Subcontracting (Additional Clause)
SCC 46	Security of Payment (Additional Clause)
SCC 47	Payment of wages of Site Workers (Additional Clause)
SCC Schedule 1	Form of surety bond to be given by the Contractor to the Employer

SCC 33 – Surety bond

It is expressly agreed that clause 33.2B of the Standard Conditions of Contract is deleted.

Add the following in clause 33.3 of the Standard Conditions of Contract :

The word "or the issue of the Substantial Completion Certificate for the whole of the Works between the words "Employer" and ",at".

The word "or the issue of the Substantial Completion Certificate as appropriate" between the words "delivery of the bond" and ".".

Add the following at the end of clause 33.3 of the Standard Conditions of Contract :

The amount so withheld shall be held upon trust by the Employer for the Contractor (without obligation to invest) subject to the rights of the Employer to have recourse to it for payment of any amount which he is entitled to under the Contract or at law or to deduct from it any sum owed to him by the Contractor, provided that the Employer gives notice to the Contractor in accordance with clause 32.1(6).

SCC 35 – Determination by the Employer

Add the following clause 35.2A after clause 35.2 of the Standard Conditions of Contract :

Determination due to non-compliance with safety requirements

35.2A (1) Notwithstanding the provision of any other clause in the Contract, the Employer may give a notice of determination of the employment if the Contractor fails to comply with the safety requirement as required in this Contract.

(2) The determination of the employment of the Contractor under clause 35.2A(1) shall take effect on the date of receipt of the notice of determination.

Add the following in clause 35.3 of the Standard Conditions of Contract :

The words “or clause 35.2A” between the words “clause 35.2” and “:”.

SCC 47 – Payment of wages of Site Workers (Cont'd)

- (2) The Contractor shall ensure that all workers who are self-employed persons engaged to work on the Site shall each be covered by a personal accident insurance plan with a minimum coverage of HK\$1,000,000 by extending either the Contractor's employees compensation insurance policy or his third party liability and all risks insurance policy. Alternatively the Contractor shall arrange a separate personal accident insurance plan for all self-employed workers for a minimum cover of HK\$1,000,000 in the form specified in Appendix SCC.N to these Special Conditions of Contract and shall maintain such policy for the duration of the self-employed workers being engaged in the Contract. The Contractor shall inform the Architect immediately when the insurance policy of a self-employed worker has expired together with evidence showing its renewal as appropriate.
- (3) Truck drivers engaged for the Works (excluding those truck drivers engaged by suppliers to deliver material to the Site) may be either a Site Worker or a self-employed person.
- (4) Within 14 days of the commencement of the Contract, the Contractor shall make necessary arrangements with a bank to implement the arrangement on payment of wages to Site Workers in accordance with Appendix PS.02 to Specification – Preliminaries Section X on "Payment of Wages of Site Workers". The Contractor shall submit a written declaration that all Site Workers' wages payable have been paid when the Contractor submits the instruction records as specified in Appendix PS.02 to Specification – Preliminaries Section X to the Architect. Site Workers who are not able to open a personal bank account in Hong Kong shall be paid by personal cash cheques in accordance with Appendix PS.02 to Specification – Preliminaries Section X. If the Contractor fails to submit evidence that Site Workers' wages payable have been paid as specified in Appendix PS.02 to Specification – Preliminaries Section X to the Architect, the Employer shall be entitled to withhold the whole or part of the payment until evidence is submitted and the Contractor shall not be entitled to interest as provided for under clause 32.13 of the Standard Conditions of Contract in that period.
- (5) Failure to comply with Section X of the Appendix PS.02 to Specification – Preliminaries by any of the sub-contractors may render the removal of the sub-contractor from the Site and/or the Works.

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2. Objectives	AB-5
3. Assignment Scope	AB-6 to AB-11, AB-11A, AB-12 to AB- 15
4. Presentations	AB-16
5. Deliverables	AB-16 to AB-19
6. Brief Programme	AB-20 to AB-21
7. Management of the Contractor	AB-22
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9. Specification - Preliminaries	SP/i to SP/vi, SP/1 to SP/77, SP77A, SP/78 to SP/99
9A <u>Appendices to Specification – Preliminaries</u>	
PS.01 Checklist of Items to be included in the Outline Quality Plan for the works	PS.01/1
PS.02 Monitoring of Wage Payment to Site Workers	PS.02/1 to PS.02/12
PS.03 Management of Subcontractors	PS.03/1
PS.04 Implementation of Mandatory Construction Industry Collaborative Training Schemes	PS.04/1 to PS.04/3
PS.05 Building Information Modelling (BIM) Requirement	PS.05/1 to PS.05/22
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Part 4 Tree removal, tree preservation, landscape works	Total 116 pages
Part 5 Training Ground Facilities list and Requirement	Total 4 pages
Part 6 Catalogue and reference photos of loose furnitures and equipment	Total 35 pages
Part 7 CCTV Requirement	Total 2 pages
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Part 9 IoT Solutions for Facilities Management	Total 9 pages
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Annex P.A – Method of Measurement for Site Safety Management	P.A/1 to P.A/8
Annex P.B – Method of Measurement for Smart Site Safety System	P.B/1 to P.B/9
Annex P.C – Method of Measurement for Monitoring of Wage Payment to Site Workers	P.C/1 to P.C/5

3.3. Cont'd

- (34) The Contractor's design proposal for item (31), (32) and (33) above shall fully comply with the conditions as stipulated in the Drawings and Specification and CIC's requirement [including all the requirement listed on the website, <https://mic.cic.hk/en/Publications>] and shall be responsible for obtaining all necessary statutory approvals as necessary.

SPECIFICATION PRELIMINARIES

INDEX (Cont'd)

18.0 GENERAL OBLIGATIONS (Cont'd)

- 18.17 Safety
- 18.18 Safety Plan
- 18.19 Safety Officer
- 18.20 Safety Supervisor
- 18.21 Smart Site Safety System
- 18.22 Heat Stroke at Work
- 18.23 Quality Plan

19.0 TEMPORARY WORKS

- 19.01 Plant, tools, etc. and scaffolding
- 19.02 Hoardings, screens, etc.
- 19.03 Contractor's storage sheds, workshops and offices
- 19.04 Office for Architect and Architect's representative
- 19.05 Temporary latrines
- 19.06 Temporary supports
- 19.07 Telephones
- 19.08 Water for the Works
- 19.09 Lighting and power
- 19.10 Temporary roads
- 19.11 Restriction of advertising
- 19.12 Name board
- 19.13 Other temporary works

20.0 SUPPLEMENTAL REQUIREMENTS

- 20.01 Adoption of Modular Integrated Construction (MiC) / Design for Manufacture and Assembly (DfMA)
- 20.02 Off-site joint inspection/visit outside Hong Kong
- 20.03 Design for Safety
- 20.04 Building Information Modeling (BIM)
- 20.05 Partnering Workshop
- 20.06 Public relation plan and public relation officer
- 20.07 Provision of Contract car
- 20.08 Construction site welfare facilities

6.0 CONDITIONS OF CONTRACT (Cont'd)

6.01 Form of Contract (Cont'd)

Clause No.	18	Partial possession by Employer (amended)
	19	Assignment and sub-letting
	20	Injury to persons and property and indemnity to Employer
	21	Insurance against injury to persons or property (amended)
	22	Insurance of the Works
	22A	Insurance of the Works by the Contractor
	22B	Insurance of the Works by the Employer (amended)
	22C	Insurance of existing building and insurance of the Works by the Employer (amended)
	23	Possession, commencement and completion (amended)
	24	Damages for non-completion (amended)
	25	Extension of time (amended)
	26	Delay recovery measures
	27	Direct loss and/or expense (amended)
	28	Notice of claims for additional payment
	29	Nominated Sub-Contractors and Nominated Suppliers (amended)
	30	Persons engaged by Employer
	31	Facilities for statutory undertakers and utility companies
	32	Certificates and payments (amended)
	33	Surety bond (amended)
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	36	Determination by Contractor
	37	Determination by Employer or Contractor
	38	Fluctuations (amended)
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	41	Settlement of disputes (amended)
	42	Contracts (Rights of Third Parties) Ordinance (Additional Clause)
	43.	Environmental Management Plan (Additional Clause)
	44.	Safety Plan (Additional Clause)
	45	Subcontracting (Additional Clause)
	46	Security of Payment (Additional Clause)
	47	Payment of wages of Site Workers (Additional Clause)

18.0 GENERAL OBLIGATIONS (Cont'd)

18.17 Safety

In addition to the provisions of GS Clause 1.19, the Contractor's attention is drawn to the Construction Site Safety Manual (2024) : [Chapter 3 – Contractual Provision on Construction Safety] and [Chapter 12 – Pay for Safety Scheme together with revisions as stated in WBTC No. 30/2000] and relevant codes of practice, guidelines, guidance notes or any other guidance issued by Government Departments or organization including the Labour Department, Fire Services Department, Electrical and Mechanical Services Department, Highways Department, Buildings Department, Construction Industry Council and Occupational Safety and Health Council.

In addition to the above provision, the Contractor shall fully comply with ALL safety requirements as required by the following CIC standard documents or its latest version available at CIC's website including but not limited to the following: -

- (a) Contractor's Safety Requirements issued by the Construction Industry Council (Refer to Annex 2 of the Assignment Brief and its Annexes)
- (b) Guidelines on work above ground safety issued by the Construction Industry Council
- (c) Work at Height Safety Handbook issued by the Construction Industry Council
- (d) Guidelines on Site Safety Measures on Working in Hot Weather issued by the Construction Industry Council
- (e) Guidelines on the Design, Installation and Maintenance of Cast-in Anchors at External Walls of New Buildings issued by the Construction Industry Council
- (f) Guidelines on the Implementation of "P" and "N" Caring Programme issued by the Construction Industry Council
- (g) Building Services Safety Handbook issued by the Construction Industry Council
- (h) Standard and Guide on Scaffolding Safety issued by the Construction Industry Council
- (i) Standard and Guide on Lifting Operation issued by the Construction Industry Council
- (j) Reference Material – guide to smart safety-related technologies for Use in Construction works issued by the Construction Industry Council

18.0 GENERAL OBLIGATIONS (Cont'd)

18.17 Safety (Cont'd)

- (k) Reference Material – On Fatal Zone Management issued by the Construction Industry Council
- (l) Reference Material – on Construction Safety Assembly issued by the Construction Industry Council
- (m) Reference Material – on Temporary Works Management Plan issued by the Construction Industry Council
- (n) Reference Material – on Hole Management issued by the Construction Industry Council
- (o) Silver Card Course Requirements as per DevB's memo DEVB(W)516/71/01 dated 2/2/2023 available at https://www.devb.gov.hk/filemanager/en/content_191/Covering%20memo.pdf .

Any cost arises from the compliance of the safety requirements and meeting all statutory and contractual obligations in the upkeep of safety and health shall be fully borne by the Contractor and shall be deemed to be allowed in the tender. For the avoidance of doubt, no extra time and cost will be allowed in relation to complying both statutory and contractual obligations on Safety and Health requirements.

If the Employer / Architect / Architect's representative is of the opinion that the labour / the execution of the works are not in compliance with the safety requirement described in the Contractor's Safety Requirement in Annex 2 of the Assignment Brief and its Annexes, the above guidelines and standards or the Safety Plan is not being properly and fully implemented, the Employer/Architect reserves the right to ask the non-complying labour to leave the Site, suspend the works (all / proportional) and request the Contractor to take corrective action until the non-compliance or unfavorable operation is rectified by the Contractor to the satisfaction of the Employer/Architect.

The Contractor shall, upon requested by the Employer/Architect, take all corrective measures / actions to rectify the non-compliance and unfavorable operation at his own expense to the satisfaction of the Employer/Architect. The Contractor shall indemnify and keep indemnified the Employer against all loss, damages, costs and other expenses of any nature whatsoever the Employer may suffer, sustain or incur, whether direct or consequential, arising out of or in connection with any breach of or non-compliance with these Statutory and Contractual Obligations relating to safety and health by the Contractor.

18.0 **GENERAL OBLIGATIONS** (Cont'd)

18.17 Safety (Cont'd)

If the Contractor does not rectify the non-compliance and unfavorable operation as requested, the Employer may, without prejudice to his other rights and remedies, arrange additional resources directly (e.g. Manpower, plants, equipment and materials) to rectify or facilitate the rectification for the non-compliance of the safety requirements by the Contractor. All additional costs incurred by the Employer in connection with the employment of other persons to carry out the rectification works may be recovered from the Contractor under Conditions of Contract clause 40 or as a debt.

Under no circumstances shall the compliance with the requirement described in the Contractor's Safety Requirement in Annex 2 of the Assignment Brief and its Annexes, the guidelines and standard as listed above relieve the Contractor of his responsibilities to observe and comply with statutory provisions, relevant codes of practice, guidelines, guidance notes and other government departments' requirements from time to time.

In addition, where the statutory and contractual obligations are not performed by the Contractor to the satisfaction of the Employer, the Employer reserves the right to terminate this Contract, and the Contractor is not entitled to claim any compensation. The Contractor shall be liable for all financial loss or expenses necessarily incurred by the Employer as a result of the termination of this Contract.

Apart from the above clauses regarding the loss and damages in relation to safety issues for which the Contractor is responsible, the Contractor shall also forfeit the right to submit future quotations or tender to the CIC.

18.18 Safety Plan (See also Special Conditions of Contract Clause 44)

“**Safety Plan**” means a document, including any revised or updated version, setting out details of the safety management system that the Contractor will implement on the Site, together with any other measures and information required by the contract to ensure safety and health to Provide the Works.

The safety plan covers full implementation of 14 elements under safety management system regulation with details [Sections 8(1) and 8(3) of the Safety Management Regulation is referred] and the safety plan shall review, update and submit monthly.

20.0 SUPPLEMENTAL REQUIREMENTS

20.01 Adoption of Modular Integrated Construction (MiC) / Design for Manufacture and Assembly (DfMA)

The Contractor is encouraged to adopt off-site manufacturing and fabrication method including but not limited to Modular Integrated Construction (MiC) / Design for Manufacture and Assembly (DfMA) etc. for the Works based on Contractor's Design as detailed in the Specification – Technical Part 1 for Architectural Works of the Assignment Brief and its Annexes. The Contractor's design proposal shall be submitted to the Architect for approval after commencement of the Contract. The Contractor's design proposal shall fully comply with the conditions as stipulated in the Drawings and Specification and CIC's requirement [including all the requirement listed on the website, <https://mic.cic.hk/en/Publications>] and shall be responsible for obtaining all necessary statutory approvals as necessary.

Notwithstanding the Works have been priced based on Schedule of Quantities and Rates prepared according to Architect's design as shown on drawings and as described in the Specification, all necessary cost implications for all work, services and obligations in connection with the adoption of Off-site manufacturing and fabrication method based on Contractor's Design shall be deemed to be included in the Contract Sum and hence included in the rates / prices contained in the Schedule of Quantities and Rates.

20.02 Off-site joint inspection/visit outside Hong Kong

The Contractor shall be deemed to have allowed in his tender for all expenses in providing transportation, meal and reasonable accommodation in connection with carrying out of the following work by the CIC, Architect and his authorized delegates before the works are ready for shipment and being delivered to the Site.

- (i) Joint inspection / visit and assessment of the works, especially for at the overseas suppliers' or sub-contractors' factories as requested by the Contractor,
- (ii) Verification of off-site pre-fabrication works as required under the Contract.

20.0 SUPPLEMENTAL REQUIREMENTS (Cont'd)

20.06 Public relation plan and public relation officer (Cont'd)

- (3) Set up an enquiry hotline and handle the public enquires and complaints from stakeholders and the public on 24-hour basis.
- (4) Communicate and liaise with different members or relevant authorities;
- (5) Coordinate with and conduct other work tasks assigned by Corporate Communications Department of CIC;
- (6) Work at irregular hours and outdoors.

For the avoidance of doubt, all costs and expenses incurred in connection with the PR plan and the duty of the PR officer shall be deemed to have allowed in the Contract Sum.

20.07 Provision of Contract car

The Contractor shall allow in this tender for any extra costs incurred for the provision of contract car (not necessarily first-hand 7 seater car) for the Employer, the Architect, Architect's Representative and other consultants use from time to time for travelling between the Site.

20.08 Construction Site welfare facilities

The Contractor shall allow in this tender for any extra costs and expenses incurred for the provision of welfare facilities as stipulated in the CIC's requirement [including all requirement in Annex 7 – Reference materials on construction site welfare, health and safety measures] for the site workers, Employer, the Architect, Architect's Representative and other consultants.

Our Ref.: H23003-MC-001

27 Sep 2023

Re: **Construction of Outdoor Training Ground at Siu Lam, Area 56, Tuen Mun for the Construction Industry Council**
Main Contract Scope of Work

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	Works required under this Contract is for the whole of the labour and all materials necessary to complete the Works for the Establishing an Outdoor Training Ground at Siu Lam for the Construction Industry Council as described in the Specifications and Drawings mentioned in Conditions of Tender – List of Drawings Issued to Tenderer. The Scope of Works under this Contract shall include but not limited to the following:
1.	GENERAL COORDINATION & RESPONSIBILITIES
1.1.	<p>REGULATION</p> <ul style="list-style-type: none"> - Contractor to carry out the Works in full compliance with the current statutory regulation, code of practice and requirement, contract design drawings, specification, document. - In case of non-compliance of regulation, the contractor should be responsible to inform and submit proposed solution to the Architect in advance for review and consideration prior to carrying out of the said works.
1.2.	<p>DISCREPANCIES</p> <ul style="list-style-type: none"> - Contractor to check, coordinate and comply with all drawings, documents, specification and approved plans by the Buildings Department. In case of any discrepancies between the works, drawings or requirement, contractor should submit queries and proposed solution <i>with adequate time</i> to Architect/ Consultant team for review/ consideration and confirmation prior to carrying out of the said work.
1.3.	<p>INCLUDE ALL WORKS AND RESOURCES</p> <ul style="list-style-type: none"> - To allow for all tools, equipment, plants manpower, resources, transportation including from mainland China that are necessary for completion of the work.
1.4.	<p>SCOPE OF WORKS</p> <ul style="list-style-type: none"> - The scope of the Works described here shall not be treated as exhaustive and the Main Contractor shall study all relevant documents and satisfy himself as to the full extent, character and nature of the Works. - No claims for additional cost or extension of time resulting from failure to do so would be entertained. - Remarks: The minor work should be included in the project which the contractor is responsible for the preparation, engagement of structural engineers for preparation of calculation, method statement, etc and submission to the BD prior to carrying out of work. If those works are essential for TOP application or forming part of the building shown on GBP, contractor shall design and prepare the submission, endorsed by Contractor's RSE, and submit to project's RSE for BD submission.
1.5.	<p>DESIGN INTENT</p> <ul style="list-style-type: none"> - Contractor should check thoroughly all the design intent and requirement as drawn in the design drawings at tender stage. After award of contract, contractor would be responsible for achieving the design intent and requirement. Should there be any ambiguity, Contractor should propose method in resolving the ambiguity in advance to the Architect for consideration and acceptance prior to carrying out of said work.
1.6.	<p>SECTIONAL COMPLETION</p> <ul style="list-style-type: none"> - To allow sectional completion of work for handover to client, if required by the Architect.
1.7.	<p>ADJOINING DEVELOPMENT</p> <ul style="list-style-type: none"> - To coordinate and notify the adjoining developments/ owners/ residents on the construction matter. - To follow up and response to the nuisance to the adjoining developments/ owners and complaint made.
1.8.	<p>COVID-19</p> <ul style="list-style-type: none"> - To follow the latest requirement from the Centre for Health Protection, HKSAR
1.9.	<p>ASSIST NSC and DSC</p> <ul style="list-style-type: none"> - To provide assistance and onsite setting out/ gridline, scaffoldings for Nominated sub-contractor (NSC) (if nomination required by contract), and domestic sub-contractor (DSC) use and reference in carrying out the Works.
2.	PROGRAMME
2.1.	<p>PROGRAMME</p> <ul style="list-style-type: none"> - Contractor was reminded that all construction work should be completed as per contract period marked below in

	<p>order to allow for completion submission to BD for issue acknowledgement. This would be important for relocation of the equipment and stuffs form Tuen Mun training ground.</p> <ul style="list-style-type: none"> - To submit master programme indicating critical path diagram for works necessary to complete the work to Architect for approval upon commencement of contract work. - And to keep monitoring the programme and to speed up the work as necessary to comply with the contract completion date; 																						
2.2.	<p>LONG LEAD ITEMS</p> <ul style="list-style-type: none"> - To check and order long lead items as soon as possible which is critical for the completion of work. Late in order of long/ checking of long lead items would not be accepted and no NOD/ EOT would be accepted. 																						
2.3.	<p>SUBMISSION REQUIREMENT:</p> <table border="1"> <thead> <tr> <th>To submit/ complete the following works upon commencement of work:</th> <th>Time after commencement of Works</th> </tr> </thead> <tbody> <tr> <td>i. Submit Detailed master programme for approval:</td> <td>1 week</td> </tr> <tr> <td>ii. Submission of Minor work to BD for commencement of work, completion of new electrically operated mesh metal gate/ corrugated metal fence/ entrance gate and report completion for applying for consent of Temporary building works to BD.</td> <td>1 months</td> </tr> <tr> <td>iii. Submit site condition survey of the existing fence, pavement, existing drainage system adjoining building (if any) for information and record.</td> <td>1 month</td> </tr> <tr> <td>iv. Submission of application to utility companies for water, electricity supply, direct link application, excavation permit</td> <td>1 month</td> </tr> <tr> <td>v. Submission of BIM model for core and shell</td> <td>1 month</td> </tr> <tr> <td>vi. Submission of CSD (Combined Services Drawings) together with updated BIM model</td> <td>2 months</td> </tr> <tr> <td>vii. Completion of all necessary shop drawings, material/ sample/ mockup to Architect for approval</td> <td>2 months</td> </tr> <tr> <td>viii. Phase 1 completion date: Completion of Works and submission of all necessary document and drawings, test report, etc. to BD and FSD for reporting completion of Temporary building and applying for TOP/ request for inspection to the satisfaction of the Architect</td> <td>245 days</td> </tr> <tr> <td>ix. Commencement of work at Tuen Mun Site</td> <td>246 days</td> </tr> <tr> <td>x. Contract Completion date of all contract works after BD inspection of the site</td> <td>305 days</td> </tr> </tbody> </table>	To submit/ complete the following works upon commencement of work:	Time after commencement of Works	i. Submit Detailed master programme for approval:	1 week	ii. Submission of Minor work to BD for commencement of work, completion of new electrically operated mesh metal gate/ corrugated metal fence/ entrance gate and report completion for applying for consent of Temporary building works to BD.	1 months	iii. Submit site condition survey of the existing fence, pavement, existing drainage system adjoining building (if any) for information and record.	1 month	iv. Submission of application to utility companies for water, electricity supply, direct link application, excavation permit	1 month	v. Submission of BIM model for core and shell	1 month	vi. Submission of CSD (Combined Services Drawings) together with updated BIM model	2 months	vii. Completion of all necessary shop drawings, material/ sample/ mockup to Architect for approval	2 months	viii. Phase 1 completion date: Completion of Works and submission of all necessary document and drawings, test report, etc. to BD and FSD for reporting completion of Temporary building and applying for TOP/ request for inspection to the satisfaction of the Architect	245 days	ix. Commencement of work at Tuen Mun Site	246 days	x. Contract Completion date of all contract works after BD inspection of the site	305 days
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2.4.	<p>CONTRACT PERIOD</p> <ul style="list-style-type: none"> - Contractor to plan ahead on arranging the necessary document for report of completion of temporary building works, inspection by BD and FSD, completion of outstanding work after TOP, removal of buildings and site construction works and return the Tuen Mun Training Ground back to its original state to the satisfaction to CIC, transportation of material/ goods/ equipment/ etc as per contract requirement from Tuen Mun Training ground to CIC siu lam site, set up of temporary shelter, storage, lavatories etc as per contract requirement. - The contract period is measured from date of commencement of construction work to 2 months after MC's submission of completion form together with all the necessary documents and forms to BD applying for TOP to the <i>satisfaction of the Architect</i>, or is measured from the date of application of license to Labours Department for use as the Training ground (whichever the date is later). - 1 month is allowed for processing of the completion application by AP. In case of any delay in issuance of TOP by BD, MC is entitled grant of extension of time (subject to the fact that the delay is due to BD and not due to Contractor's defaults). - 1 month after issuance of TOP is allowed for processing of the license application by CIC to Labours Department (LD). LD would inspect the completed works at CIC Siu Lam Site. Contractor to incorporate the comment issued by LD. 																						

3.	PROTECTION/ HOARDING/ SCAFFOLDING/ CLEANING
3.1.	<p>HOARDING & GATE</p> <ul style="list-style-type: none"> - Contractor to Design and construct the temporary hoarding, safety nets, temporary access doors, access control as necessary to protect site, workers, pedestrians, vehicles, etc.
3.2.	<p>METAL GATE/ METAL FENCE</p> <ul style="list-style-type: none"> - MC to Design and Construct the new corrugated metal fence (also as temporary hoarding for protecting the site) and metal gates for vehicular entrance and pedestrian entrance as per the contract drawing. - Contractor to prepare the necessary calculation, document, etc to the Architect and RSE for approval and to submit minor work to the Buildings Department. - The completion of the corrugated metal fence and metal gates are the pre-requisite for submission for consent to BD. Hence, MC should prepare the design, document , minor work information in advance and submit the Minor work to BD upon the date of commencement of work and carry out and complete the work in 1 month after commencement of construction work. - MC to reinstate the existing metal fence on site to good standard to the satisfaction of the Architect.
3.3.	<p>PROTECTION</p> <ul style="list-style-type: none"> - Contractor should provide all the necessary protection to the completed works, windows/ louvres, doors and ironmongeries, sanitary fittings, finishes and equipment, etc. during construction stage (including removal of the protection upon hand over of work to the client) including removal of the same upon completion of works;
3.4.	<p>SITE CLEANING</p> <ul style="list-style-type: none"> - Contractor should keep the site clean and tidy particularly on mosquito and mice to the satisfaction of the Architect and to comply with the current regulation, code of practice and requirement;
3.5.	<p>MAJOR CLEANING</p> <ul style="list-style-type: none"> - Contractor should carry out deep cleaning on the whole development on completion of works to the satisfaction of the client before handover to the client.
4.	DEMOLITION/ REMOVAL OF DEBRIS
4.1	<p>SCOPE</p> <ul style="list-style-type: none"> - Removal of all debris, vegetation/ shrubs, stones, existing drainage system (except those trees as per confirmation by landscape consultant) etc. to the satisfaction of the Architect from site. - Removal of the existing fence and gate as per approved plan. - Removal of the existing trees as per the approved tree felling and compensation proposal by DLO/ relevant Government Department to the satisfaction of the Landscape consultant.

5. SCOPE OF NEW BUILDING WORKS			
5.1.	SCOPE - MC should check and design to fulfill the design intend to the Architect for approval prior to fabrication. - Finish of the metal proof to be approved by the Architect prior to the ordering and fabrication. The detail of door, window, curtain wall, louvre is only design intend.		
5.2.	DESIGN & BUILD SUBMISSION DATES - Main Contract to be responsible for the following items below as per the contract drawings, specification, approved BD drawings:	Shop drawing/ material/ catalogue submission	Sample submission
i.	Temporary building structure (including the provision of FRR paint to the metal structural members to the satisfaction of the Architect, RSE, BD.)	Required	Not required
ii.	Temporary lavatory cubicle, shelter, storage, chemical storage , etc. as per the requirement by CIC (design and build);	Required	Not required
iii.	Proprietary safety harness system on all pitch roofs for maintenance of the roof in full compliance with the current regulation and code, etc. (design and build);	Required	Not required
iv.	Door & Access panels, Ironmongeries (design and build);	Required	Required
v.	Window, louvre (design and build);	Required	Required
vi.	Proprietary internal partition/ FRR enclosure (design and build);	Required	Not required
vii.	Proprietary ceiling system and safety roof railing (design and build);	Required	Not required
viii.	Signage and entrance feature wall (green wall) (design and build);	Required	Required
ix.	CCTV system (design and build);	Required	Not required
x.	External Works	Required	Not required
xi.	Metal works (design and build);	Required	Not required
xii.	Metal gate and Metal fence wall (design and build);	Required	Not required
xiii.	MIMEP design for Hose Reel cabinet (design and build);	Required	Not required
Other works			
xiv.	EXTERNAL LIGHTING: - external light pole - external flood light external solar panel for supplying hot water to lavatory on top of temporary lavatory (minor work submission) external solar panel for supplying electricity to lighting on top of temporary building (minor work submission)	Required	Not required
xv.	Interior Finish	Required	Required
xvi.	Landscape work	As per requirement by relevant consultant/ client	
xvii.	Structural work		
xviii.	E&M services		
xix.	CIC requirement		
SHOP DRAWING SUBMISSION - Allowance of timely preparation and submission of shop drawing for the aforesaid works with layout, sections, specification, detail and setting out to the Architect for approval prior to order and commencement of work: - Internal floor, wall, ceiling finish (if any) including tile, stone, vinyl flooring etc with sockets and switches and circuitries;			
ALTERNATIVE MATERIAL			

	<ul style="list-style-type: none"> - In case of proposed alternative material/ equipment/ facilities/ finish (proposed product) and the original material/ equipment/ facilities/ finish (original product)., contractor should submit: <ul style="list-style-type: none"> i. Detail of comparison of the proposed product and the original product. ii. Confirmation that the proposed product is at least the same or better than the original product, and there is no cost and time implication to the proposed product.
5.3.	TEMPORARY BUILDING/ LAVATORY / SHELTER
5.3.1.	<p>MC is required to design and build the temporary building, temporary lavatory, temporary shelters/ store, temporary sink, temporary storage tank etc. as per the design of the contract.</p> <p>The structure should be approved by RSE and in compliance with the BD requirement and approval drawings.</p> <p>FRR painting to the main structural members should be included in the contract.</p>
5.3.2.	<p>MC to design and submit sanitary fitments to the Architect for approval prior to ordering and installation.</p> <ul style="list-style-type: none"> - The sanitary fitments to be of the quality equivalent to “Toto” sanitary fitments.
5.3.3.	MC to design and install the proprietary type external wall panels system with insulation to enclose the whole temporary building.
5.4.	DOOR & ACCESS PANELS (DESIGN AND BUILD)
5.4.1.	- MC to provide master key system for all the doors, access panel, inlet doors, etc.
5.4.2.	- MC to design and build all doors including FRR doors together with all the associated ironmongeries and door contacts, access panels/ hatches/ signage, as per contract drawings, specification and approved GBP plan.
5.4.3.	- To provide fire test certificate and necessary document for compliance with the fire rated requirement as per approved GBP (including all the accessories, ironmongeries).
5.4.4.	- To provide fire sealant, drop seal, FRR vision panels, compactable ironmongery , etc. as per current statutory requirement.
5.4.5.	- All doors and access panels in escape routes and protected lobbies should be self-closing (with door closer or self-closing hinge) and fire rated as per approved GBP and in full compliance with the current regulation, code of practice and requirement.
5.4.6.	- MC to submit ironmongeries meeting the functional needs to the Architect for approval prior to ordering of the ironmongeries. The ironmongery should be of the quality equivalent to and not less than the model of “Yale door locks”.
5.4.7.	- The door locks should be in full compliance with the current Buildings Regulation and Code of Practice in terms of Means of Escape. All doors should be capable of allow escape without the use of key from inside.
5.5.	WINDOW/ LOUVRE/ CLADDING
5.5.1.	- PVF2 shall be 2 coats for all external aluminum surface. Colour sample to be submitted to the Architect for approval prior to ordering and fabrication.
5.5.2.	- In case of Glass thickness and louvre member thickness as marked on contract drawings are less than that required to comply with the current regulation and requirement, the contractor should follow the thickness required by current regulation and requirement.
5.5.3.	- MC to supply and install proprietary type metal wall panels with insulation within for enclosing the temporary building
5.5.4.	- MC to supply and install proprietary type FRR metal wall panels for enclosing the E&M rooms as per the approved plans (including the FRR ceiling panel on top).
5.5.5.	<p>HEAT SOAK TEST</p> <p>T1, including his transportation and accommodation shall be provided by Main contractor.</p>
5.5.6.	T3 shall be provided by the Consultant, T3’s transportation and accommodation shall be provided by MC
5.6.	PROPRIETARY INTERNAL PARTITION/ FRR ENCLOSURE

5.6.1.	- MC to supply and install proprietary type folding metal wall panels with insulation within the temporary building for providing the required acoustic effects (NC 40 for conference rooms).
5.6.2.	- Provision of new metal partitions for all internal partitions (including fire rating requirement) with the necessary accessories and fitting as per contract drawings, specifications and approved plan.
5.6.3.	MC to allow for all strengthening work and necessary accessories for the installation of partition wall, glass partition wall, dry wall, etc.
5.6.4.	MC to design and construct the FRR enclosure wall in full compliance with the approved plans.
5.7.	PROPRIETARY CEILING SYSTEM & SAFETY ROOF RAILING
5.7.1.	MC to design and install new ceiling system, light fixtures, etc. for false ceiling with the necessary accessories and fitting including all necessary hangers and rods and openings for E&M services.
5.7.2.	All ceiling lights are to the LED light panels.
5.7.3.	Spray paint to structure soffit & E&M services (as per requirement by E&M consultant) for all opening ceiling area as specified paint as per drawings and specifications.
5.7.4.	Ceiling soffit and wall (100mm above false ceiling) above false ceiling does not require paint finish.
5.7.5.	Provision of safety roof metal railing on top of Genset room
5.8.	SIGNAGE & ENTRANCE FEATURE WALL & GREEN WALL
5.8.1.	DISABLED PROVISION Supply and installation of signage, disabled ramp notification sign/ plate, poster frame, exit signs, name tags/ plate, door and pipe duct signs, floor numberings, MOE escape routine floor plans for the temporary building, the disabled provisions, EVA sign and poles according to the contract drawings, specification and approved GBP;
5.8.2.	SHOP DRAWING <ul style="list-style-type: none"> - To submit shop drawings for signage and graphic/ vertical green wall to Architect for approval prior to ordering of material and signage and commencement of work; - All rooms should have sufficient signage indicating the use/ function of the rooms on the outside of the room/ door. - To install signage to all E&M services indicating the names of the pipes, rooms and equipment; - To provided external light to light up the signage and graphic
5.8.3.	- To allow for all necessary permanent/ temporary signage for TOP inspection.
5.8.4.	- To design and install the entrance feature wall & Green wall (wire type with and including climbing plant) as per the design concept and contract requirement. <ul style="list-style-type: none"> - MC to design and provide plant with maintenance free (including no flowering plant) on the vertical green wall to the satisfaction of the landscape consultant.
5.9.	ELV SYSTEM
5.9.1.	- The Access Control System, CCTV System, IoT, Network and Telephone System will be supplied and installed by CIC engaged contractors. The MC shall supply and install all necessary power point, cabling, cable containment, conduits, builder's works for above systems from server / plant room to final points.
5.9.2.	- Contractor to supply and install the CCTV system for examination use to the satisfaction of the Labours Department.
5.10.	ROOFING/ WATERPROOFING AND INSULATION
5.10.1.	- The roof of the temporary building, temporary store, temporary chemical store, temporary shelter to be constructed in proprietary metal roofing system (with brand of "Kalzip roof systems" or equivalent). <ul style="list-style-type: none"> - MC to submit the product with job reference to the Architect for approval prior to ordering and fabrication of the roofing.
5.10.2.	- The proprietary metal roofing system to be installed with 50mm thick insulation below. <ul style="list-style-type: none"> - For external wall, MC to provide adequate insulation to achieve the OTTV requirement by BD.
5.10.3.	- Provide a water proof external metal wall system for the temporary building, temporary store, temporary chemical store, temporary shelter (including window/ louvre/ exhaust/ door etc).

5.10.4.	<ul style="list-style-type: none"> - Water test (100% to external metal wall system) - Water test to be conducted upon completion and report to the Architect with no water leakage problem to the satisfaction of the Architect. - MC to rectify the leakage/ defects to the satisfaction of the Architect within a reasonable time.
5.10.5.	<ul style="list-style-type: none"> - MC to provide waterproofing membrane to floor, wall of pantry and lavatory . - The waterproofing membrane on wall up to 1.2m high to be provided with tile finish in the front to the satisfaction of the Architect.
5.11.	EXTERNAL WORKS
5.11.1.	<ul style="list-style-type: none"> - To construct the external RC slab, steps, platform, ramps with necessary metal railing, slopes on the whole of the site except the training platforms as per the approved plan. - The training platform to be formed up to 1.18m high after TOP completion submission.
5.11.2.	<ul style="list-style-type: none"> - To construct the planters, lawn as per the layout and landscape consultant's requirement.
5.11.3.	<p>PAINTING</p> <ul style="list-style-type: none"> - To paint the carpark and motorcycle parking line, EVA line marking, traffic direction line markings with adequate carpark marking paint.
5.11.4.	<ul style="list-style-type: none"> - To construct the external training ground as per the approved plan. Then to construct the external training ground up to 1.18m high as per CIC requirement. - The material used to follow the requirement by CIC.
5.11.5.	<ul style="list-style-type: none"> - To construct the temporary sinks and storage tanks as per CIC requirement.
5.11.6.	<ul style="list-style-type: none"> - To supply and install the temporary stores, chemical store, shelters, lavatories, disabled lavatories, guard house, as per CIC requirement and contract requirement. - To connect the water and electrical services to the said buildings.
5.12.	METAL WORKS
5.12.1.	<ul style="list-style-type: none"> - MC to design and construct the metal works as per contract drawings like handrail, cat ladder, metal supporting frame for the water tanks, MEP equipment support that are necessary for the proper functioning of the MEP equipment and in full compliance with the current regulation, code of practice, etc.
5.12.2.	<ul style="list-style-type: none"> - Minor work submission should be included in the contract should the works be necessary be submitted to BD for carrying out of the works.
5.13.	INTERIOR FINISH
5.12.3.	<p>COORDINATION</p> <ul style="list-style-type: none"> - Contractor is responsible for coordinating on the MEP services installation and the provision of sockets, outlets, furniture installation (by CIC) etc.
5.12.4.	<p>FLOOR & WALL TILE</p> <ul style="list-style-type: none"> - MC to design and construct floor and wall tile to temporary lavatory and pantry of temporary building. - MC to allow for all necessary tile adhesive, colour tile grout, sealant etc. for the installation of internal floor, wall.
5.12.5.	<p>FURNITURE & EQUIPMET</p> <ul style="list-style-type: none"> - MC to provide all fixed/ loose furniture and equipment as per the contract requirement and CIC requirement.
6.	LANDSCAPING
6.1.	<ul style="list-style-type: none"> - MC to carry out Tree protection, felling, transplanting and compensation as per the requirement by Landscape Consultant/ DLO's requirement and the contract design drawings, specification, approved plans.
6.2.	<ul style="list-style-type: none"> - MC to provide tree maintenance to the compensated trees to the satisfaction of the landscape consultant.
6.3.	<ul style="list-style-type: none"> - MC to provide irrigation points for the site to the satisfaction of the landscape consultant.
6.4.	<ul style="list-style-type: none"> - Planters as marked on plan to be constructed with soil and covered with lawn as per landscape consultant's requirement. No RC slab and no blinding layer below the planter.
6.5.	<ul style="list-style-type: none"> - MC to provide adequate protection and support to all the trees, especially in bad weather and typhoon until expiry

	of DLP period
7.	STRUCTURAL ISSUE
7.1.	<p>COORDINATION</p> <ul style="list-style-type: none"> - Contractor to coordinate all Structural Design/ approved plans, Architectural design and drawings, E&M services with consultants, contractors, suppliers, etc. and prepare combined services drawings to avoid conflict of services and structures, windows, doors, etc. to the Consultant team for approval prior to commencement of work.
7.2.	<p>SCOPE</p> <ul style="list-style-type: none"> - Carry out Design, supply and construction work for the temporary building, temporary shelter, temporary chemical store and stores as per the contract design drawings, specification (Design and Building). - Carry out structural Design, Supply and construction of the Temporary Buildings as per the approved drawings by BD; Contractor can adopt or propose alternative to suit their construction method for DfMA construction) - Formation of 100mm new thick concrete slab together with the required 150mm deep blinding layer as per requirement by RSE for the whole site except the training platform, planters and EVA (including removing of soil/ rock to form the required gradients as per the proposed layout to the edge.); - MC to design and arrange site level to suit the site drainage to the approval by Architect prior to commencement of site work; - Construction of the EVA with the required loading as per RSE's requirement; - construction of the drainage system and connect to the existing drainage system as per the drainage plans. - Construction of the new metal fence wall, metal pedestrian entrance gate, metal vehicular entrance gates as per contract drawing; - Construction of the flag poles; - Construction of the RC/ metal plinths for the E&M services; - Formation of floor openings around existing tree to be kept on site (no 100mm thick concrete slab as per requirement above). Opening dimension to coordinate with landscape consultant subject to site condition
7.3.	<p>TEMPORARY SHELTERS, TEMPORARY BUILDING & TEMPORARY LAVATORY</p> <ul style="list-style-type: none"> - MC to design and install the temporary shelters and temporary lavatory by means of off-site fabrication but not limited to MiC, DfMA and on site fabrication. - The installation work would be after completion inspection by BD. - Contractor to engage any experienced MiC/ DfMA factory that is capable of designing and fabricating MiC/ DfMA (If MiC/ DfMA design is proposed).). The experience factory obtains Full Certificate/Provisional Certificate in Modular Integrated Construction (MiC) Manufacturer Accreditation Scheme. - Contractor to construct the Temporary buildings as per RSE's design and approved plan. Any change in design should be amended for RSE's amendment submission to BD for approval prior to fabrication and installation. - Contractor to Design and Build the Temporary chemical store and Temporary store per requirement by CIC & Tender condition. - Contractor to provide staff/worker who passed in CIC MiC Training Course below: <ul style="list-style-type: none"> • Master Class on MiC Project Implementation • Master Class on MiC Logistic and Transportation • Certificate in MiC for Forman • Foundation Certificate in MiC(Lifting, Installation, Disassembly)
7.4.	<p>FRR PAINT</p> <ul style="list-style-type: none"> - Provision of FRR paint to all main structural members as per the approved plan.
8.	E&M SERVICES
8.1.	<p>COORDINATION</p> <ul style="list-style-type: none"> - Contractor to carry out works as per the contract design drawings, specification, approved plans - Contractor to coordinate all Structural Design/ approved plans, Architectural design and drawings, E&M services

	with consultants, contractors, suppliers, etc. and prepare combined services drawings to avoid conflict of services and structures, windows, doors, etc. to the Consultant team for approval prior to commencement of work.
8.2.	UNDERGROUND UTILITY SURVEY - To carry out the underground utilities' detection survey prior to carrying out of construction work.
8.3.	SCOPE - To supply and construct E&M services, Street fire hydrant and tanks, rooms, cabinets, ducts, inlets, RC/ metal plinths, temporary sinks, temporary lavatories for all equipment as per contract drawings, specification and approved GBP, drainage plan and current regulation, code of practice and requirement. - Installation of E&M services include the necessary accessory fixings , hangers and supports of E&M services on walls, ceiling soffit and floor, external walls etc. to complete the installation; - To prepare and submit minor work for E&M works if not covered by the approved plans, eg external hanger/ supporting frame for MEP services. If any works is required for the TOP and BD approval, contractor shall prepare drawings and structural calculation with their RSE's endorsement, and submit to project RSE for BD submission.
8.4.	DOCUMENT FOR COMPLETION OF E&M WORKS - To submit the design and necessary document/ drawings, certificates, test reports, etc. to BD, including any minor work, if necessary, for the approval prior to carrying out work; - To carry out T&C to the satisfaction of the E&M consultants and submit report on T&C works; - To submit O&M manual to the satisfaction of E&M consultant.
8.5.	OPENINGS - All openings for pipes, cable, trucking, air ducts etc. through internal/ external wall, floor and ceiling should be sealed properly by material compactible with the material adjoining to the opening. - Fire rated sealant/ material/ fire collars to be used in case the wall, floor and ceiling are fire rated. - Weatherproof sealant/ material to be used in case of wall, floor and ceiling are on external floor, wall and roof.
8.6.	QUALIFIED CONTRACTORS - Employ qualified contractors , licensed plumber (LP), Registered Electrical worker & contractor, Registered Ventilation contractor, Registered Fire service contractor, etc. for preparation, endorsement and submission of all statutory submission to WSD, EMSD, FSD, BD, EPD, etc.
8.7.	CCTV Drainage: - Not applicable
8.8.	Utility service installation: - To install meter/ inlet cabinets as per utility companies' requirement - To install Electrical posts as per utility company's requirement. Minor work to be submitted for the installation work.
8.9.	ACCESS PANELS/ HATCHES - To coordinate and submit to the consultant team on provision of access/ access panels to all the E&M services for maintenance purpose for approval prior to carrying out the work. - Access panels to be of the proprietary type approved by the Architect/ consultant team
8.10.	LIGHT FITTING - Contractor to ensure that all external light fitting used in external area and in lavatory/ bathroom to be waterproofed and good for the area used. - Installation of external solar light poles on top of the fence wall pole as per requirement by client to the satisfaction of the client. - Installation of external flood light at high level of the building as marked on plan to comply with the minimum lighting requirement of the Means of escape requirement and to the satisfaction of the Architect. - Contractor to provide emergency light in full compliance with the Current regulation and code, etc.
8.11.	RC CURBS - MC to allow for all E&M rooms doors to have RC curb to stop water going out.
8.12.	BEC

	<ul style="list-style-type: none"> - MC should engage lighting supplier for carrying out the lighting energy study to comply with the BEC and current regulation and code on lighting installation. - MC to prepare and submit BEC report on completion of work to the relevant Government Department for approval
8.13.	<p>EXIT SIGN</p> <ul style="list-style-type: none"> - MC to supply and install the proprietary exit sign. MC to submit the proposed product to the Architect for approval.
8.14.	<p>Plumbing/ Drainage</p> <ul style="list-style-type: none"> - MC To supply and install/ fabricate temporary lavatory containers including sanitary fittings, urinal, shower cubicles and all equipment and facilities with all the necessary accessories and fitting as per the contract drawings, specification and approved GBP and drainage plan. - To supply and install all the temporary disabled toilet cubicles as per the approved plan. - To supply and install all the temporary sinks and temporary storage tank as per the contract drawings with all the necessary accessories and fitting as per the contract drawings, specification. <p>To supply and install all the site drainage system as per the design drawings with all the necessary accessories and fitting as per the contract drawings, specification and current regulation and code of practice.</p> <p>To design and install 2 temporary water treatment systems at both end of the site as per CIC requirement (附件一 (現有污水處理器規格參考資料)) the tanks would be installed at low level with excavation of ground, if necessary.</p>
8.15.	<p>FSI</p> <ul style="list-style-type: none"> - MC to supply and construct the FSI as per the approved plan and contract requirement
8.16.	<p>MIMEP</p> <ul style="list-style-type: none"> - MC to design the Hose Reel cabinet as MIMEP (Modular in MEP design) for fabrication in factory and installation on site by simply connection of the pipping and wiring work.
8.17.	<p>SOLAR PANEL (ELECTRICITY SUPPLY):</p> <ul style="list-style-type: none"> - supply and installation of Jinko Tiger Black solar panel system (黑魂二代目系列,次世代 Jinko Tiger Black pro 組件) or equivalent brand and including circuitry and connection to the grid, supporting metal frame, necessary accessories. - Output 580W. Xtech aluminium supporting frame, Dupont Tedlar PVF film on top of the Solar Panel. 10 years warranty - Reference: https://www.amosola.com/%E9%BB%91%E9%AD%82%E4%BA%8C%E4%BB%A3%E7%9B%AE-%E5%A4%AA%E9%99%BD%E8%83%BD%E7%B3%BB%E7%B5%B1 Amosola/ Email: info@amosola.com/ Tel: 3614 6298
8.18.	<p>SOLAR PANEL (HOT WATER SUPPLY SYSTEM)</p> <ul style="list-style-type: none"> - Supply and installation of solahart 181K water heater system or equivalent brand and including circuitry and connection to the bathroom and basin of the temporary lavatory, supporting metal frame, necessary accessories. - Voltage: 220V - Power 2.4W - Electric Current: 11A - Capacity: water storage 108L - Colour : Grey - Warranty: 1 year (inner tank 3 year) - Certification/ standard: CSTCat-17-425 - Reference: https://www.germanpool.com/eng/products/p_wh_solar.php By German Pool (Hong Kong) Limited/ Email: info@germanpool.com/ Tel: +852 2773 2888
9.	<p>GOVERNMENT SUBMISSION/ COMPLETION OF WORKS AND TOP INSPECTION APPLICATION/ MINOR WORK</p>

9.1.	<p>COMPLY WITH APPROVED DRAWINGS</p> <ul style="list-style-type: none"> - To carry out new building works as per the approved GBP, Structural plan, drainage plans, etc and the contract drawings. - In case of any discrepancies, contractor to propose solution to the Architect in advance for consideration and acceptance prior to carrying out the said work. - To comply with MOE in providing fire rated exit door and/ or vision panel with necessary signage, escape lobbies, corridor, exit sign as per approved GBP and current regulation and requirement. - To comply with the EVA requirement - Contractor is reminded that no construction debris, silt and sediments, or cementitious materials will be discharged to or deposited inside the public drains or sewers from the site. - Should there be any drainage connection work is required for the carrying out of construction work, Contractor would be responsible for conducting all the necessary CCTV survey work for the Underground drains to the satisfaction of the relevant Government Department. - Any pipe blockage or damage arising from the construction works shall be made good at the cost of the developer and to our satisfaction.
9.2.	<p>APPLICATION TO GOVERNMENT DEPARTMENTS & UTILITY COMPANIES</p> <ul style="list-style-type: none"> - To include all the cost in arranging, submission of plan/ drawings/ document to Government Departments, utility companies like WSD, HKE, Telephone companies, FSD, DSD, TD, Highways Department, DLO for approval, water supply and connection, electricity supply and connection, direct link provision, FSI installation, drainage connection, excavation permit etc.
9.3.	<p>BFA</p> <ul style="list-style-type: none"> - To comply with approved GBP and current BFA requirement in providing like floor tactile, handrail and braille, disabled sign, alarm and button for disabled lavatories, disabled ramp and access, 330mm return on the side of access door, 800mm min. access door width, etc.
9.4.	<p>CONTINUOUS SUPERVISION</p> <ul style="list-style-type: none"> - Contractor should provide continuous supervision in carrying out the Works in accordance with the Buildings Ordinance and regulation; - MC to provide detail of SSP in compliance with current regulation and COP for submission of consent to BD.
9.5.	<p>TEMPORARY PROVISION FOR BD INSPECTION</p> <ul style="list-style-type: none"> - Contractor to allow for all the temporary works, provisions, utilities connections that are necessary for the TOP inspection submission. This includes temporary sanitary fitments, lighting, doors, windows and louvres, railings, disabled provisions, signage, protections including FRR protections for all protected lobbies & MOE, temporary sinks, water supply, electricity supply, exit signs, floor and wall finishes especially for bathrooms and lavatories, E&M services that are necessary to meet the requirement for TOP inspection (not exhaustive) like temporary MVAC to meet approval conditions.
9.6.	<p>SUBMISSION FEE</p> <ul style="list-style-type: none"> - Contractor is responsible for all the Government submissions and fee that are required to complete the said Works like Minor works, FSD submissions, WSD submission, CLP submission, telephone application, drainage connections, direct link application, Excavation permit application, etc.
9.7.	<p>FRR PROVISION</p> <ul style="list-style-type: none"> - Provision of FRR paint to major structural members as per approved plan - To design and install all the fire rated enclosure (Promat board or dura steel enclosure) for covering up the E&M services on four sides of the wall, ceiling for GF M&E rooms and four sides of the wall, floor and ceiling for 1F M&E rooms.
9.8.	<p>OTTV</p> <ul style="list-style-type: none"> - To meet the OTTV requirement in regard to the façade material performance like cladding and glass, proprietary metal wall panel with insulation within, proprietary metal roofing system with insulation below, and to provide the

	necessary data and information to the consultant team for preparation the OTTV calculation and submission to the Buildings Department for approval.	
9.9.	<p>COMPLETION SUBMISSION</p> <ul style="list-style-type: none"> - To supporting the TOP application, to coordinate with all consultants, contractors, sub-contractors and submit to the Architect all the necessary document and material in according to the current regulation, code of practice, requirement like: <ol style="list-style-type: none"> i. FSD Form (314, 501, 251A, etc.) FS completion certificate, fire certificates for material, equipment and finishes, ii. drainage connection completion certificate iii. availability of water supply for portable water, flushing water and FS water, iv. VAC certificate, if any v. Building material schedule vi. Structural test certificate, report for structural material, concrete cube test, mill certificate, etc (not exhaustive). - <i>The submission of completion of work and application TOP to BD should be 2 months before end of the contract period.</i> 	
9.10.	<p>MINOR WORK</p> <ul style="list-style-type: none"> - In case of Minor work, Contractor is responsible for preparing the necessary documents, drawings to AP/RSE for information prior to submission to BD for carrying out of work and reporting completion of work for all works mentioned above, and including all works that are within the minor work regulation. - Consultant team would be the AP/RSE, and MC is responsible for preparing all the necessary information, calculation, document to the consultant team for review. - MC is responsible for the submission of all the required minor works for this project; 	
9.11.	<p>INGRESS/ EGRSS/ PAVEMENT & ACCESS ROAD</p> <ul style="list-style-type: none"> - To rectify the ingress/ egress, pavement and carriageway defects due to the carrying out of the Works to the satisfaction of the Architect and the relevant Government Departments like DLO, Highways Department. Report completion of work with record photos to the Architect for acceptance prior to completion of work and Submission TOP application to BD. 	
10.	OPTIONAL ITEMS	Original design in tender
10.1.	New guard house with installation of conduit and power points, etc.	Re-use of Tuen Mun training ground guard house installation of conduit and power points, etc.
10.2.	Drop bar with installation of conduit and power point	No drop bar, with installation of conduit and power point for future drop bar.
10.3.	Green wall with signage	No green wall, sign on corrugated metal fence
10.4.	PV panels on roof for providing electricity with installation of conduit.	No PV panels, with installation of conduit for future PV panels.
10.5.	Planters	RC slab on grade with no planters
10.6.	Metal fence wall around FS tank	No metal fence around FS tank
10.7.	7 nos of New Temporary shelters	Re-use 5 nos. of temporary shelters from Tuen Mun Training ground with 2 No. of new container for temporary shelter use. Contractor to design and build the new container for temporary shelter use.

		Contractor shall check the condition of existing shelters to ensure they are suitable for relocation, modification and reuse.
10.8.	Relocation of construction plants from Tuen Mun Training Ground (SOR12.8)	relocation of construction plants (SOR12.8)
11.	WORKS TO BE DONE AFTER TOP	
11.1.	<p>OUTSTANDING WORK</p> <ul style="list-style-type: none"> - To carry out all the outstanding work that after TOP application to BD. - The outstanding work list should be agreed with the Architect/ Client prior to completion of the Work and report completion to BD. - Connection of sink to the temporary storage tank - Installation of temporary shelters, temporary store, temporary chemical store. 	
12.	CIC REQUIREMENT	
12.1.	<p>TUEN MUN TRAINING GROUND:</p> <ul style="list-style-type: none"> - Remove all equipment, facilities, features, signage, etc. - Remove the soil platforms, built structure, features, etc. including the submission of Minor work for removal of the said works. - Fill up the holes, ditches, void etc. back to original site condition. - Works required refers to (7.屯門訓練場平面圖 (07 2023)) 	
12.2.	<p>TUEN MUN SIU LAM TRAINING GROUND CIC'S REQUIREMENT</p> <ul style="list-style-type: none"> i. CIC1_小欖戶外訓練場辦公室參考圖 (附件 3)_230703 ii. CIC2_小欖戶外訓練場參考圖 ELV_IoT_r1_230908 iii. CIC3_屯門訓練場平面圖 (07 2023)_230703 iv. CIC4_Annex 7 - 小欖戶外訓練場設施 v6_230921 v. CIC-SK-001_toilet layout_230714 vi. CIC-SK-002_External lighting layout_230717 vii. CIC-SK-003_Solar panel & Safety harness system_230717 viii. ANNEX1_附件 1_現有污水處理器規格參考資料_230717 ix. ANNEX2_附件 2_PROPOSE FLAGPOLE_230717 x. ANNEX9_附件 9_安全帽架尺寸_230717 xi. ANNEX10_附件 10_大金分體冷氣型號_230717 xii. ANNEX11_附件 11_KDK 抽氣扇型號_230717 xiii. ANNEX12_附件 12_洗手間連底層污水缸 (男,女) (WR1-2) 同等配置建議_230717 xiv. ANNEX15_附件 15_掛牆風扇同等配置_230717 xv. ANNEX16_附件 16_浴室同等配置_230717 xvi. ANNEX17_附件 17_窗簾同等配置_230717 xvii. ANNEX18_附件 18_電車充電器(中叉)同等配置_230717 xviii. ANNEX19_附件 19_電箱同等配置_230717 	
12.3.	<p>REQUIREMENT FOR TEMPORARY STORE, TEMPORARY CHEMICAL STORE:</p> <ul style="list-style-type: none"> - Provision of high and low vents for natural ventilation with fixed louvres with a total net opening area of not less than 1% of the wall area. Louvre opening to be on opposite side of the walls. louvre of min. 300x300mm and evenly distributed on wall surface. Low louvre should be 300mm above internal floor area and not lower than doorsill. High louvre to be at the top of the room. 	

	<ul style="list-style-type: none"> - For Temporary Chemical Store, In order to avoid spillage of liquid, it is required to have 300m H metal door sill 50mm wide above internal floor level to seal off the edge and contain liquid inside. - For safety, provision of Portable 4.5kg Co2 FE , sand bucket - “ No Smoking” sign in ss. Plate with etched lettering in 50mm high to be stuck on outside of door.
13.	CLOSE OUT DOCUMENT
13.1.	- O&M manual
13.2.	- T&C records
13.3.	- Master key system for all doors and access panel, etc.
13.4.	- Defect completed record
13.5.	<p>WARRANTIES</p> <ul style="list-style-type: none"> - main contractor to submit to the Employer written guarantees or guarantees certificates in the joint name of the approved contractor and / or the manufacturer for specialist elements as requested by the Architect and / or specified in the Specification for the following works (if discrepancies found between the contract condition and the below requirement, the higher requirement would be adopted): - Waterproofing membrane (10 years); - Painting (5 years); - Window (10 years); - Metal roofing, (10 years); - Aluminium cladding with PVF2 coating (10 years) - Electrical appliance (1 year); - Corian/ solid material (10 year) - Suspended ceiling system (1 years) - Ironmongeries for both fire rated doors and non-fire rated doors (3 years)
14.	TENDER SUBMISSION REQUIREMENT
14.1.	<p>Tenderers to demonstrate the understanding of the tender by submitting the followings in tender return:</p> <ol style="list-style-type: none"> 1. Contractor’s Organization chart for this project team 2. Name and CV of full-time staffs and key staffs. 3. Current Projects on hand 4. Contractor’s Confirmation that sufficient resource is available for this project 5. Past relevant experience of the company similar to this project. 6. Master programme indicating all keys items of works, Government submission, etc. 7. Master programme for Tuen Mun Training Site indicating all keys items of works, Government submission, etc. 8. Understanding of the project with description of main activities of the project 9. Site Logistics plan on site planning and arrangement of storage, entrance, temporary office, wheel washing pool, etc. 10. Outline Health and safety plan 11. Safety record in 5 years/ any conviction record in 5 years under the Immigration Ordinance, Factories and Industrial undertaking Ordinance, Occupational Safety and Health Ordinance, site safety and environmental protection related Ordinances. 12. List of long lead items affecting the construction programme 13. Contractor’s proposed MiC/ DfMA factory name with adequate HK MiC/DfMA experience (if MiC/ DfMA design is proposed) with Full Certificate/Provisional Certificate in Modular Integrated Construction (MiC) Manufacturer Accreditation Scheme

15.	SPARE MATERIAL LIST
15.1.	NOT APPLICABLE

ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT (HK\$)
(IV)	<u>ELV SYSTEM</u>				
	<u>Network System</u>				
A	25mm dia spare conduits		m		
B	32mm dia spare conduits		m		
	<u>AV System</u>				
C	25mm dia spare conduits		m		
D	32mm dia spare conduits		m		
	<u>Wifi System</u>				
E	25mm dia spare conduits		m		
F	32mm dia spare conduits		m		
	<u>Telephone System (PABX)</u>				
G	25mm dia spare conduits		m		
H	32mm dia spare conduits		m		
	<u>CCTV System include but not limit to</u>				
I	Fuse spur unit, completed with faceplate and conduits		No.		
J	25mm dia spare conduits and wiring		m		
K	32mm dia spare conduits and wiring		m		
Carried Forward (HK\$)					

ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT (HK\$)
(IV)	<p><u>ELV SYSTEM (cont'd)</u></p> <p><u>Door Access Controls System include but not limit to</u></p> <p>A Access control panel, keypad with card reader, door release button, etc.</p> <p>B Fuse spur unit, completed with faceplate and conduits</p> <p>C Spare conduits / trunking for Doorkey Access point system</p> <p>D Dry contact point, c/w conduit and cable for door release on FS signal</p> <p><u>Doorbell System include but not limit to</u></p> <p>E Door bell, door bell push button, doorbell transformer, etc.</p> <p>F Fuse spur unit, completed with faceplate and conduits</p> <p>G Spare conduits / trunking for Doorbell point system</p> <p><u>G.I. Trunking</u></p> <p>H 50 x 50mm</p> <p>I 100 x 100mm</p> <p>J 100 x 150mm</p> <p>K 100 x 100mm</p> <p>L _____ x _____mm</p> <p><u>Allow for other works not listed above but required by the Drawings and /or the Specification</u></p>			<p>Brought Forward (HK\$)</p>	
Carried to Summary of Schedule No. 3A (IV) (HK\$)					

ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT (HK\$)
(V)	<p><u>ELV SYSTEM (ALL OPTIONAL)</u></p> <p><u>Supply and install equipment as per CIC's ITD requirement</u></p> <p><u>Network System</u></p> <p>A Data outlets, complete with faceplate</p> <p>B CAT6A cable</p> <p><u>AV System</u></p> <p>C AV outlet faceplate, complete with plate fixing and cable connection</p> <p><u>Wifi System</u></p> <p>D Category 6 cable connection to access points / data points</p> <p>E Wifi access point devices complete with transformer, and associated accessories</p> <p><u>Telephone System (PABX)</u></p> <p>F Telephone outlets, complete with faceplate and associated accessories</p> <p>G Telephone line</p>			<p>Brought Forward (HK\$)</p>	
Carried Forward (HK\$)					

ITEM	DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT (HK\$)
(V)	<u>ELV SYSTEM (ALL OPTIONAL) (cont'd)</u>			Brought Forward (HK\$)	
	<u>Supply and install equipment as per CIC's ITD requirement</u>				
A	2MP Dome type IP CCTV		No.		
B	CCTV system, complete with NVR (8 Channel 1U 2HDDs 8PoE) spare conduits and trunking, and associated accessories		No.		
C	16 way digital video signal multiplexer		No.		
D	CCTV operator workstation		No.		
E	Supply and install video content analysis (VCA) system including information about how many nos. of people in specified area, periods of peak occupancy, demographic analysis		Item		
F	POE switch, complete with power and stainless steel box		No.		
G	CCTV system, complete with 2 hours backup (Normal use)		No.		
H	CCTV system, complete with 16 hours backup (Examination use)		No.		
I	Hi-Fidelity pickup.		No.		
J	4TB Surveillance hard disk (designed for CCTV)		No.		
K	8TB Surveillance hard disk (designed for CCTV)		No.		
L	Outdoor equipment rack for CCTV		No.		
M	Supply and install fatal zone safety control including PPE and helmet detection		Item		
N	Modular all-in-rack IT Rack		No.		
O	Router/ Firewall		No.		
P	Network switches		No.		
Q	Wi-Fi access points		No.		
R	AV for classroom and conference room		No.		
S	Mobile teaching lectern		No.		
T	86" Projector/ TV		No.		
U	AV switcher		No.		
V	Speaker		No.		
	<u>(END OF ALL OPTIONAL)</u>				

Carried to Summary of Schedule No. 3A (V) (HK\$)

SPECIFICATION - TECHNICAL

PART 8 - AV SYSTEM AND IT INFRASTRUCTURE

Technical Specifications of Siu Lam Training Ground AV System

1. Common Requirements

1.1. Cabling Requirements

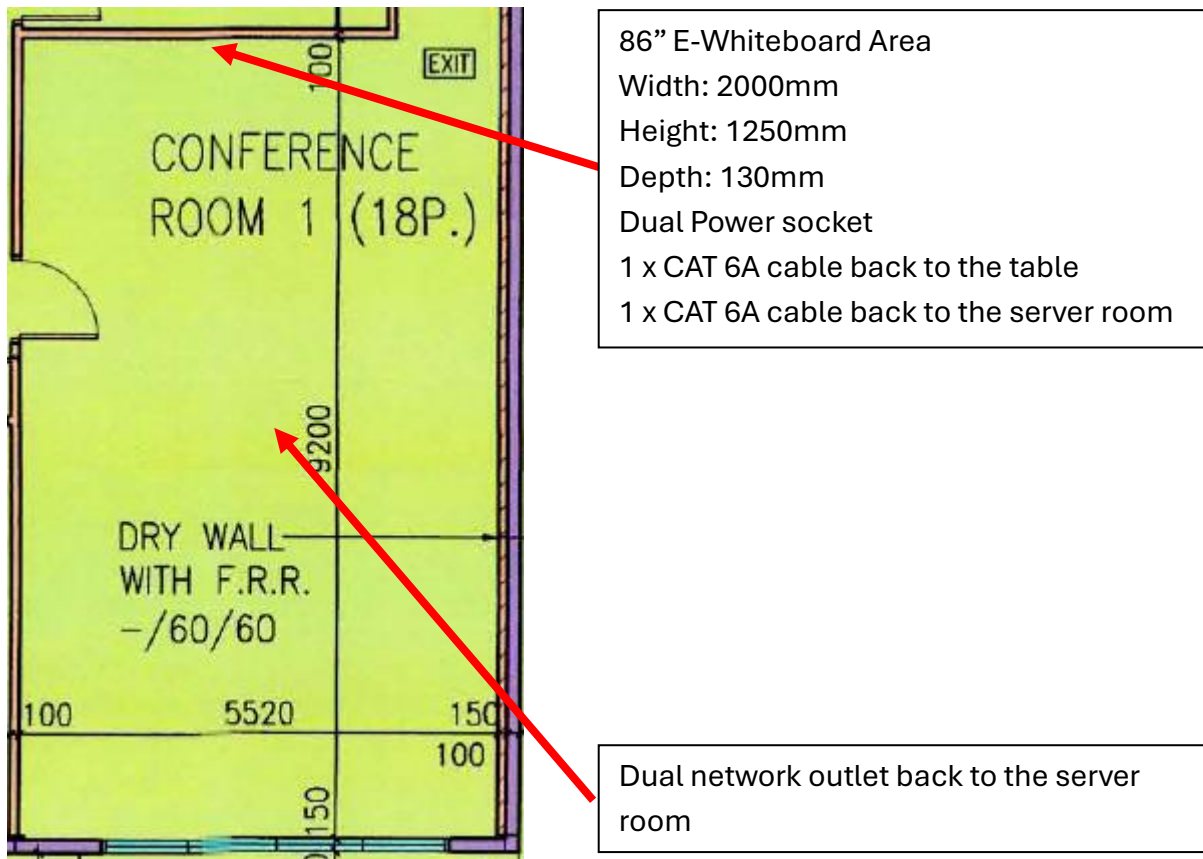
All HDMI cables must be HDMI™ Premium Certified Cable with HDMI® Generation 1 or 2 Cable certification Labels. Please refer to the following URL for details:

<https://hdmi.org/spec/premiumcable>

The color of the CAT 6A cables use for AV System **MUST** be different from other CAT 6A cables for easy identification.

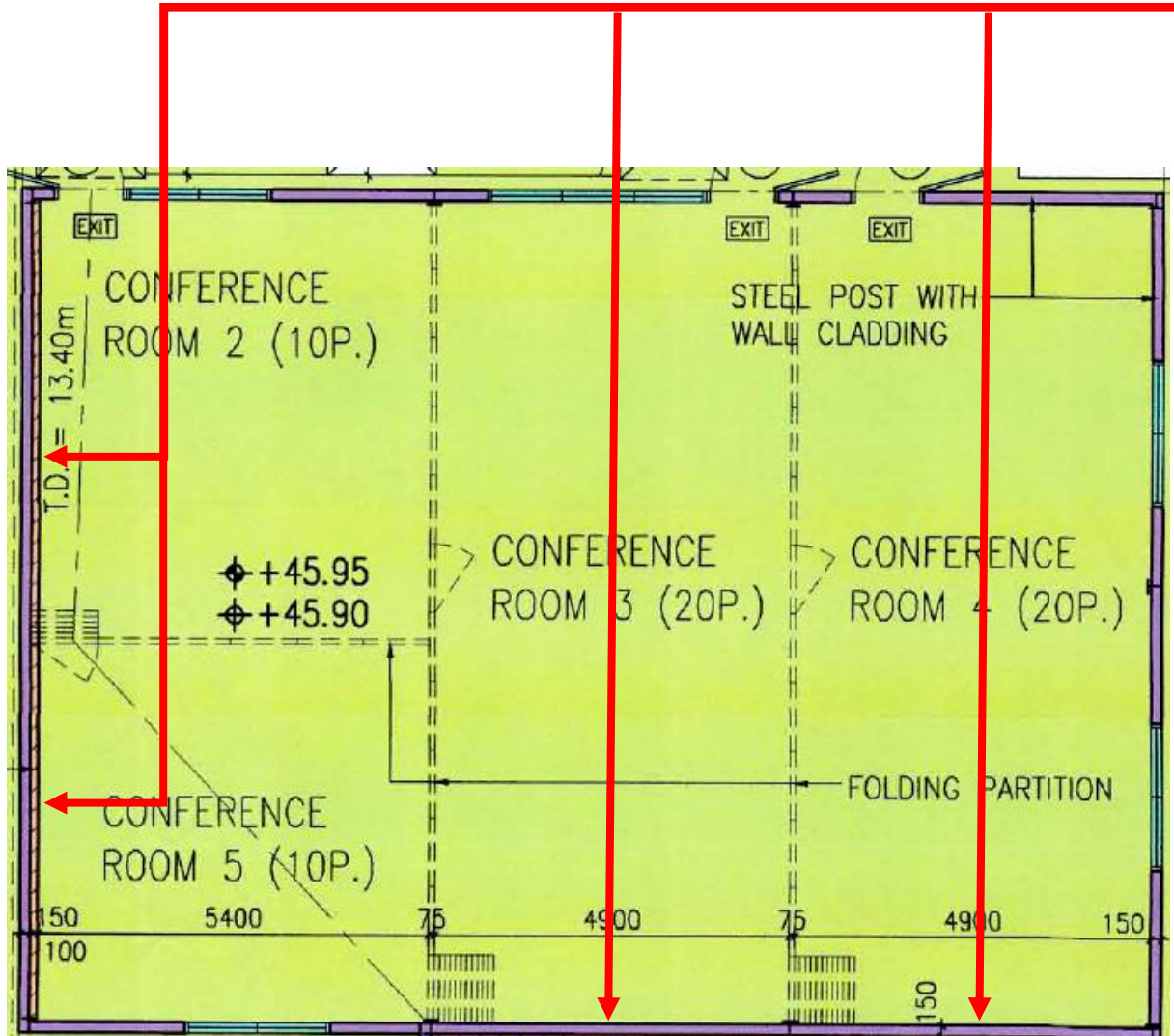
1.2. To ensure the final solution can be monitored by CIC's existing subscribed Crestron XiO Cloud and control by Appspace. Therefore, some of the product models are fixed and not allow bidders to change.

1.3. Supply and install a **H3C S5130S-10P-HPWR-EI Network Switch or equivalent** in each room. CIC will configure the proposed network switch.



2. Functional and Technical Requirements for Conference Room 1

- 2.1. Supply and install an 86 inches E-Whiteboard which equivalent to Huawei Ideahub ES2 Plus or Fujitsu IW862 DX (**Model is TBC**).
- 2.2. Supply and install **ONE (1)** Owl 4+, **ONW (1)** Owl Bar and **ONE (1)** Expansion Mic.
- 2.3. Supply and install a Crestron AirMedia AM-3200-WF-I with **ONE (1)** Crestron AM-TX3-100 Connect Adaptor.
- 2.4. Supply and install a Crestron HD-DA2-4KZ-E or equivalent **ONE (1)** in **TWO (2)** out HDMI Distribution Amplifier.
- 2.5. Supply and install **TWO (2)** sets of KRAMER PT-871/2xr-KIT or equivalent networked video transmitter.



86" E-Whiteboard Area
 Width: 2000mm
 Height: 1250mm
 Depth: 130mm
 Dual Power socket
 1 x CAT 6A cable back to the lectern / teacher's cabinet
 1 x CAT 6A cable back to the server room

Each lectern / teacher's cabinet should equip with:

- Dual network outlet back to the server room
- 2 x Dual Power socket
- A 25mm conduit to other lectern / teacher's cabinets

Each room should have THREE (3) CAT 6A cable from the ceiling back to the lectern / teacher's cabinets.

3. Functional and Technical Requirements for Conference Room 2 to 5

- 3.1. Supply and install **ONE (1)** Crestron CP4 Control Processor in the server room as the main control processor for all rooms.
- 3.2. Supply and install **FOUR (4)** 86 inches E-Whiteboard which equivalent to Huawei Ideahub ES2 Plus or Fujitsu IW862 DX **(Model is TBC)**.
- 3.3. Supply and install a Crestron TS-770-B-S Touch Panel in each room.
- 3.4. Supply and install a Crestron DM-NVX-384 as video encoder in each room, this encoder will be connected to a computer, remaining video ports will be used when needed.
- 3.5. Supply and install a Crestron DM-NVX-D30 as video decoder in each room which connect to the E-Whiteboard.
- 3.6. Supply and install a **Shure MXW neXt 2 Wireless Microphone System** (System) or equivalent system in each room which each System will contain **THREE (3)** components:
 - 3.6.1. **ONE (1)** docking which can charge the battery of at least 2 handheld transmitters or bodypack transmitter at the same time by just plug-in the whole transmitter into the docking. The docking also will act as the signal receiver and equip with an onboard Digital Signal Processing (DSP) unit which can perform Automatic Mixing, Acoustic Echo Cancellation (AEC), Noise Reduction, Automatic Gain Control and Equalizer which can eliminate annoying distractions. It can accept analog sign input, the mixed audio signal can be output via an analog output, Dante and USB.
 - 3.6.2. **TWO (2)** MXW2X/SM58 or equivalent Handheld Transmitter.
- 3.7. Supply and install **EIGHT (8)** Dante Speakers
 - 3.7.1. Contain a Digital Signal Processing (DSP) unit which can perform Delay, Limiter, Signal Generator and 4-band Parametric Equalizer
 - 3.7.2. Able to mount for ceiling installation with additional mounting accessories.
 - 3.7.3. Support not less than 2 Dante Inputs and 1 Dante Outputs
 - 3.7.4. Support signal encryption when transmit via network
 - 3.7.5. Contain a 2-way driver system with a woofer not less than 13 cm
 - 3.7.6. Able to use without the need of outboard amplifier

- 3.7.7. Shall equip with at least 1 RJ-45 female port as data connector and it should also support PoE / PoE+ standard for powering the equipment with following power consumption requirements:
 - 3.7.7.1. Class 0 with maximum power consumption not more than 12 W
 - 3.7.7.2. Class 4 with maximum power consumption not more than 24 W
 - 3.7.8. Able to response to audio signal with frequency within 120 Hz to 20 kHz, or wider
 - 3.7.9. Not more than 2 ms Latency (Not include network / Dante latency)
 - 3.7.10. Maximum Output Level:
 - 3.7.10.1. Not less than 90 dB SPL when using PoE class 0 @ 1 meter
 - 3.7.10.2. Not less than 95 dB SPL when using PoE class 4 @ 1 meter
 - 3.7.11. Coverage Angle:
 - 3.7.11.1. 180 degrees for -6 dB at 2 kHz
 - 3.7.11.2. Not less than 105 degrees for -6 dB at 10 kHz
 - 3.7.12. Able to control by software remotely
 - 3.7.13. Genuine accessories for mounting the tendered product to the ceiling tiles (if exists)
 - 3.7.14. Certified with UL2043 or equivalent Plenum Rating standard
 - 3.7.15. Certified for Zoom and Microsoft Teams
- 3.8. Control Programming Requirements:
- 3.8.1. The control program **MUST** implement using **Crestron supported C#** and **HTML 5** for the user interface.
 - 3.8.2. Use CIC Logo and color theme
 - 3.8.3. Easy to use
 - 3.8.4. Use the venue floor plan for easy control

- 3.8.5. Select room combination and ensure only **ONE** panel of the combined room can control the facilities.
- 3.8.6. Select video source input and output combinations
- 3.8.7. Control the lighting control system to on or off based on pre-defined zones / profiles
- 3.8.8. Control the display panels to on or off
- 3.8.9. Control each microphone to on or off and able to adjust the volume
- 3.8.10. Master output volume control
- 3.8.11. User interface and other functions will be confirmed by the CIC afterwards
- 3.8.12. The user interface must be very user friendly which can allow user to use the control panel without complex training.
- 3.8.13. CIC can request the Contractor to revise the UI/UX until it fulfils CIC requirements.
- 3.8.14. Support Apple iPad as an additional control platform.
- 3.8.15. Integrate all devices to XiO, such as sending devices health signals to XiO.



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

CIC Infrastructure Siu Lam

20 February 2025



Location of Server and Hub Room

Location should be

- a. The server/hub room must be a dedicated space with a fixed location
- b. Must have a door with the door access control system
- c. Floor can support full loaded of server rack(s) <1,000 KG
- d. The Server and Hub Room should be located or near the center of the building, ensure the structure cable length is not over 100 meters between the cable panel and the user's endpoint
- e. Easy access for ISP circuits shall be ensured, avoiding any obstructions in the upper ceiling or beneath the floor

The location should not be

- a. Should not be outside of the building
- b. Should not be placed in a location with water pipes across the server room space either above the ceiling tiles or under the floor
- c. Should not have any window
- d. Should not be near washroom or canteen

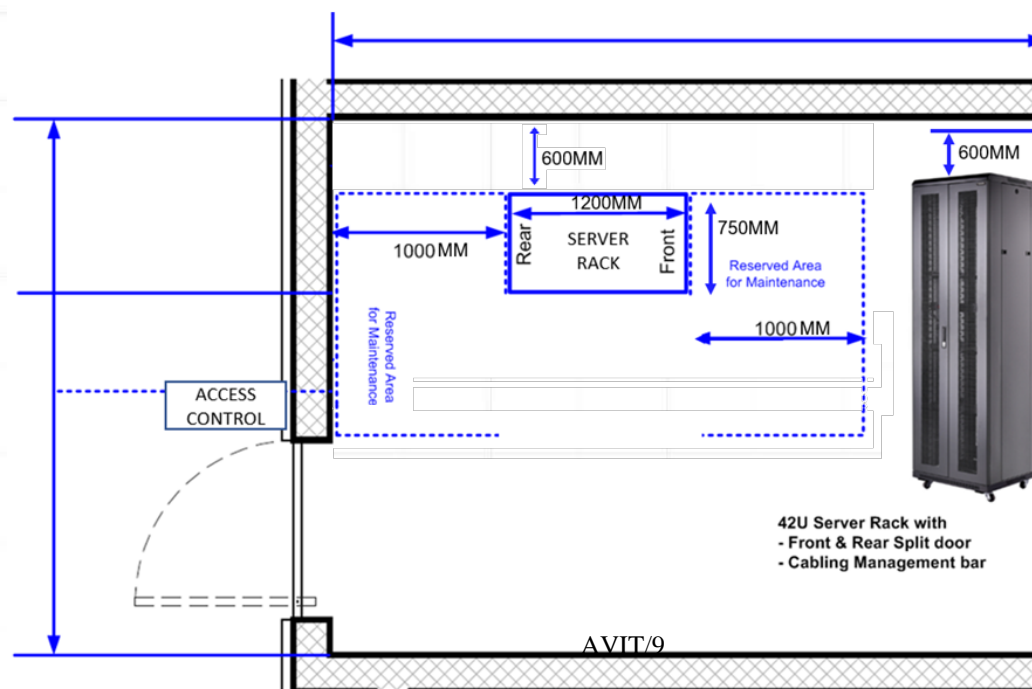
Space of Server and Hub Room

Vertical space

- Provide enough space (> 0.6 meters) of server rack for structure cabling,
- Example 1 – placing the standard full (42U) rack(s) or all-in-one (42U) rack(s), the height of the ceiling should be more than 2.6 meters
- Example 2 – placing the half(24U) rack or all-in-one half(24U) rack, it should be above 1.8 meters

Horizontal space

Provide enough space for the rack door to fully open and for equipment in&out or maintenance



Location of Edge Network Rack

Location should be

- a. The server/hub room must be a dedicated space with a fixed location
- b. Placing the rack on the floor is the preferred option, the height is lower 2 meters for a rack mounted on the wall
- c. Floor/wall can support a full load of server rack(s)
- d. ensure the structure cable length is not over 100 meters between the cable panel and the user's endpoint
- e. Easy access for ISP circuits shall be ensured, avoiding any obstructions in the upper ceiling or beneath the floor

The location should not be

- a. Should not be outside of the building
- b. Should not be placed in a location with water pipes across the server room space either above the ceiling tiles or under the floor
- c. Should not be near to any window

Server Rack Specification

1. The standard 42U full rack or all-in-one 42U full Rack (preferred) is the preferred option for server or hub room
2. Guidelines for a non-full rack
 - **Rack height** - Determined by the number of rack-mounted devices. allocate 2 x Rack U for each shelf tray
 - **Rack depth** - Depends on the device with the greatest depth, typically the UPS or standard rack-mounted server
 - **Rack width** - The standard width of a rack-mounted device is 19" (484.6mm). Non-rack mount devices should be placed on server rack shelf trays
3. The server rack **MUST** have doors with a lock for the front and rear of the server rack, and to open the lock **MUST** with a key (could be physical or electronic)
4. The server rack **MUST** have proper ventilation to keep the equipment cool. Choose rack with built-in fans or other cooling systems
5. Considering devices cannot mount into rack (e.g., small devices, modem, fiber converter), the movable wheels should be used, usually 3-4 shelf trays for a full rack, 1-2 shelf trays (s) for half-rack
6. Server rack should have cable management features, such as cable trays, cable ties, and install patch panel
7. Full server rack should be equipped with 2 x 15 ways (or above) vertical power distribution units (PDU) (refer to Electricity power section in detail)
8. Half server rack should be equipped with 2 X 6-8 ways horizontal power distribution units (PDU)

Cooling System

Racks in server room or hub room

- 24 x 7 air conditioning system
- Two independent cooling system
- The temperature should always keep between 18-25 ° C and the humidity range should be between 40% and 60% in the server room for all time

(*when air conditioning is used, Server racks should not be installed underneath or too close to an air conditioner in case of water leakage or drip problems. And require a pumping system for pump water leaving the room)

Rack in edge location

- it requires a 24 x 7 cooling system, could be air conditioning system and air cooling with fans
- The temperature should always keep between 18-25 ° C and the humidity range should be between 40% and 60% in the server room for all time

Power System

- Install the uninterruptible power supply (UPS) is required to install in IT server rack
- The capacity of UPS should be enough to supply those devices on the UPS for 20 minutes during the city power supply outage
- Each full should install 2 X PDU with 15 ways (or above) and from power from 2 different sources (UPS power and city power)
- Each half rack should install 2 X PDU with 6-8 ways and from power from 2 different sources (UPS power and city power)
- All server rack MUST be grounded, and connect to grounded system to ensure the safety for staff or operators

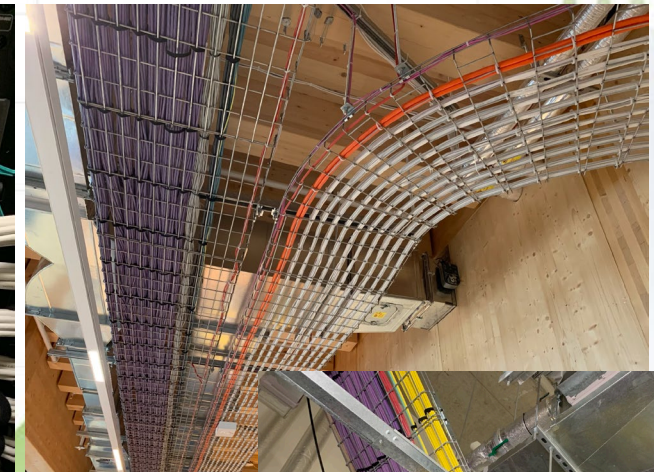
Wiring cabling

- Wires 6 cores (3 pairs) OM4 multimode fibers from the racks at the remote server/hub room and edge rack to the server rack in the main server room
- All cable (copper or fiber) should be hidden in the upper ceiling or under the raised floor, and in the low voltage trunk, until both ends (user end and server end)
- A patch panel should be required in the server rack for all cabling
- All cables should have labels and updated labels when changing the cabling patch

Copper cable specification

Scenario	Copper cable to outlet	Copper patch cord
Category	CAT6A or above	CAT6A or above
Standards	ANSI/TIA-568.2-D	ANSI/TIA-568.2-D
Construction	UTP	UTP
AWG	23	26 or 28

Example of cabling



Wi-Fi Signal Specification

a) Indoor Wi-Fi Access Point

- a) AP must be approved by the Office of the Communications Authority of Hong Kong for import and allowed to be used in Hong Kong
- b) AP shall be compatible with CIC's current management platform (Aruba Central Cloud)
- c) AP shall be Wi-Fi CERTIFIED a, b, g, n, ac, 6, 7
- d) AP shall be Integrated down-tilt omni-directional antennas for 2x2 MIMO
- e) AP shall be Integrated down-tilt omni-directional antennas for 4x4 MIMO (main meeting room > 10 seats)
- f) AP shall be come with 3 years cloud manage license and support
- g) AP shall be come with official mount kit (ceiling mount)

b) Outdoor Wi-Fi Access Point

- a) AP must be approved by the Office of the Communications Authority of Hong Kong for import and allowed to be used in Hong Kong
- b) AP shall be compatible with CIC's current management platform (Aruba Central Cloud)
- c) AP shall be Wi-Fi CERTIFIED a, b, g, n, ac, 6, or above
- d) AP shall be Integrated down-tilt omni-directional antennas for 2x2 MIMO
- e) AP shall support Water and Dust-IP66/67
- f) The new outdoor AP shall operate normally with temperatures: -40° C to +55° C, and relative humidity: Up to 95%.
- g) AP shall be come with 3 years cloud manage license and support
- h) AP shall be come with official mount kit (ceiling mount)

Wi-Fi Signal Specification

- a) The highest RSSI for all SSIDs shall be higher than -65dBm for all bands, 2.4Ghz, 5Ghz, and 6Ghz (if the new AP supports the Wi-Fi 7 or Wi-Fi6E) for all decided Wi-Fi signal coverage areas when new AP transmission power at 75% of maximum transmission power.
- b) The secondary RSSI for all SSIDs shall be higher than -70dBm for all bands, 2.4Ghz, 5Ghz, and 6Ghz (if the new AP supports the Wi-Fi 7 or Wi-Fi6E) for all decided Wi-Fi signal coverage areas when new AP transmission power at 75% of maximum transmission power.
- c) The SNR shall be higher than 25dBm for all decided Wi-Fi signal coverage areas when new AP transmission power at 75% of maximum transmission power.
- d) There is NO channel overlapping for 5Ghz and 6Ghz when the new AP transmission power at 75% of maximum transmission power.

Switch Specification

Core Switch	Edge Switch - Access Point	Edge Switch - PC/IP phone/others
General		
Shall be capable of at least 1.44 Tbps port switching capacity	24-port Switch	48-port Switch
Shall be capable of at least 357 Mpps packet forwarding rate	Shall be capable of at least 598 Gbps port switching capacity	Shall be capable of at least 590 Gbps port switching capacity
Shall support 24 x 1/10 GE SFP+ fiber ports (2 Combo 1G/2.5G/ 5G/10G Base-T Multi-giga ports)	Shall be capable of at least 178 Mpps packet forwarding rate	Shall be capable of at least 160 Mpps packet forwarding rate
Shall support 1 x RJ45 console port	Shall provide 24 x 2.5G BASE-T ports, 6 x 1G/10G BASE-X SFP+ ports	Shall provide 48 x 10/100/1000 BASE-T ports, 6 x 1G/10G BASE-X SFP+ ports
Shall support dual hot-pluggable power supply	Shall support POE(802.3af), PoE+(802.3at) & POE++(802.3bt) Power over Ethernet protocol, maximum PoE budget is 1360W in AC	Shall support POE(802.3af), PoE+(802.3at) Power over Ethernet protocol, maximum PoE budget is 1680W in AC
Shall support MAC address up to 32K, support IP routing table up to 16K, support ARP table up to 16K	Shall support dual power supply, at least 720W in AC, failure of one power supply should not cause interruption to the equipment	Shall support dual power supply, at least 920W in AC, failure of one power supply should not cause interruption to the equipment
Technical Requirements:		
Layer 2 features		
Shall support up to 4096 Virtual LANs (VLANs)		Shall support up to 4096 Virtual LANs (VLANs)
Shall support Voice VLAN		Shall support Voice VLAN
Shall Support Loop detection		Shall Support Loop detection
Shall support Spanning Tree Protocol (STP) / Rapid Spanning Tree Protocol (RSTP) / Multiple Spanning Tree Protocol (MSTP) / PVST (Per-VLAN Spanning Tree (PVST/PVST+/RPVST+)		Shall support Spanning Tree Protocol (STP) / Rapid Spanning Tree Protocol (RSTP) / Multiple Spanning Tree Protocol (MSTP) / PVST (Per-VLAN Spanning Tree (PVST/PVST+/RPVST+)
Shall support BPDU filter		Shall support BPDU filter
Shall support BPDU / root / TC-BPDU / PVST BPDU guard		Shall support BPDU / root / TC-BPDU / PVST BPDU guard
Shall support Jumbo frame, the maximum frame length up to 10000 bytes		Shall support Ethernet link aggregation
Layer 3 features		Shall support static and dynamic mode link aggregation
Shall support standard routing protocols, including but not limited to static, RIP, OSPF		Shall support 1/10 GE link aggregation
Shall support GRE tunneling		
Shall support DHCP server and DHCP relay		Shall support Link Aggregation Control Protocol (LACP)
Stacking		Stacking
Shall support switch virtualization technology such as Intelligent Resilient Framework (IRF) by using 10G ports as switch fabric connections to form a logical virtual switch		Shall support switch virtualization technology such as Intelligent Resilient Framework (IRF) by using 10G ports as switch fabric connections to form a logical virtual switch
Shall support maximum 9 switches stacking		Formation of virtual switch shall not require dedicated service module(s) or external device(s)
Shall provide single IP management for entire logical switch		Shall support maximum 9 switches stacking
Shall provide IEEE 802.3ad link aggregation across different physical switches		Shall provide single IP management for entire logical switch
Fail-over of virtual switch control master to backup switch shall be within a second		Shall provide IEEE 802.3ad link aggregation across different physical switches
Shall support IPv4 and IPv6 routing		Shall support 80G stacking bandwidth
Shall support stacking bandwidth up to 160G		All physical switches shall provide Layer 2 and Layer 3 traffic forwarding
		Fail-over of virtual switch control master to backup switch shall be within a second
		Multicast
		Shall support IPv4 and IPv6 multicast
		Shall support IGMP v1/v2/v3
		Shall support IGMP snooping v1/v2/v3
	AVIT/I7	Shall support PIM-DM, PIM-SM, PIM-SSM, and Any-RP
		Shall support PIM snooping
		Addendum No. 1

Firewall and SDWAN Specification

Firewall in High Availability		SD-WAN in High Availability	
GE RJ45 WAN / DMZ Ports	2/1	Cloud management platform	Meraki
GE RJ45 Internal Ports	5	NGFW throughput	1 Gbps
Console (RJ45)	1	Maximum site-to-site VPN throughput	900 Mbps
Internal Storage	1 x 128 GB SSD	Maximum site-to-site VPN tunnels	75
IPS Throughput	1.4 Gbps	WAN interfaces	1x GbE SFP & 2x GbE RJ45
NGFW Throughput	1 Gbps	LAN interfaces	10x GbE RJ45
Threat Protection Throughput	700 Mbps	Mounting	Desktop or wall mount
Firewall Throughput (1518 / 512 / 64 byte UDP packets)	10/10/6 Gbps	Subscription & License Info	MX medium 3 years
Firewall Latency (64 byte UDP packets)	3.3 μ s		
Firewall Throughput (Packets Per Second)	9 Mpps		
Concurrent Sessions (TCP)	700 000		
New Sessions/Second (TCP)	35 000		
Firewall Policies	2000		
IPsec VPN Throughput (512 byte)	6.5 Gbps		
Gateway-to-Gateway IPsec VPN Tunnels	200		
Client-to-Gateway IPsec VPN Tunnels	500		
SSL-VPN Throughput	900 Mbps		
SSL Inspection Throughput (IPS, avg. HTTPS)	630 Mbps		
SSL Inspection CPS (IPS, avg. HTTPS)	400		
SSL Inspection Concurrent Session (IPS, avg. HTTPS)	55 000		
Application Control Throughput (HTTP 64K)	1.8 Gbps		
CAPWAP Throughput (HTTP 64K)	8 Gbps		
Virtual Domains (Default / Maximum)	10 / 10		
High Availability Configurations	Active-Active, Active-Passive, Clustering		
Subscription & License Info	3 years		

SPECIFICATION - TECHNICAL

PART 9 - IOT SOLUTIONS FOR FACILITIES MANAGEMENT

Siu Lam Training Ground

IoT Solutions for Facilities Management

Estates Office – Building Innovation Team

18 Feb 2025

Addendum No. 1



Smart Facilities Management Solutions

1. IoT Electricity & Water Meter Monitoring
2. IoT Indoor AC Units Water Leakage Monitoring
3. IoT Services Pumps Health Status
4. IoT Water Tanks Overflow Monitoring
5. IoT Weather Stations
6. IoT Toilet Cubicles Status Monitoring
7. People Counting Analysis



IoT Electricity & Water Meter Monitoring

- Install IoT-based energy meter and water meter
- Automatic monitoring on water and electricity consumption
- Data collected will be passed to our CIC Smart Facilities Management Control Dashboard



IoT Indoor AC Units Water Leakage Monitoring

- Install rope-type water leakage sensor
- Detect water leakage from indoor AC units



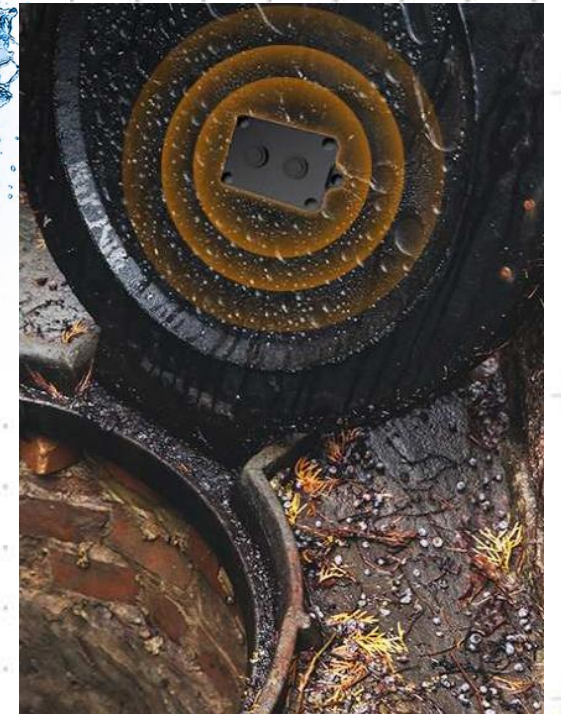
IoT Services Pumps Health Status

- Install vibration & temperature sensor
- Monitor and detect abnormal pump operations



IoT Water Tanks Overflow Monitoring

- Install ultrasonic water level sensor
- Detect water level and prevent water overflows



IoT Weather Stations

- Install outdoor environmental sensor
- Measure :
 - Temperature & Humidity
 - Barometric pressure
 - Wind speed, Wind Direction



Toilet Cubicles Status Monitoring

- Install door contact sensors at cubicles
- Alert if the cubicle has been closed for a long period of time, i.e. someone has been locked inside for more than 40mins



AI CCTV People Counting Analysis

- With the IP CCTV cameras, Video Content Analysis (VCA) system provide :
 - Information about how many people are in specific area
 - The periods of peak occupancy



<u>Drawing No.</u>	<u>Rev.</u>	<u>Description</u>
<u>ARCHITECTUAL DETAILS</u>		
AD- CC-001	-	TYPICAL DETAIL - CHANNEL COVERS (1 OF 2)
AD- CC-002	-	TYPICAL DETAIL - CHANNEL COVERS (2 OF 2)
AD- CC-003	-	TYPICAL DETAILS - SCOPE OF CHANNEL COVERS
AD- CD-001	-	TYPICAL DETAIL - CEILING DETAIL
AD- CL-001	-	TYPICAL DETAIL - CAT LADDER
AD-DW-001	-	TYPICAL DETAIL - DRYWALL DETAIL (1 OF 3)
AD-DW-002	-	TYPICAL DETAIL - DRYWALL DETAIL (2 OF 3)
AD-DW-003	-	TYPICAL DETAIL - DRYWALL DETAIL (3 OF 3)
AD-FD-001	-	TYPICAL DETAIL - FLOOR DETAIL
AD-FD-002	-	TYPICAL DETAIL - TACTILE DETAILS
AD-FP-001	-	TYPICAL DETAIL - FOLDING PARTITION
AD-FR-001	-	TYPICAL DETAILS - SCOPE OF FENCE WALL RECTIFICATION
AD-HR-001	-	TYPICAL DETAILS MiC HOSE REEL
AD-IW-001	-	TYPICAL DETAIL - INTERIOR WALL FINISH DETAIL (1 OF 3)
AD-IW-002	-	TYPICAL DETAIL - INTERIOR WALL FINISH DETAIL (2 OF 3)
AD-IW-003	A	TYPICAL DETAIL - INTERIOR WALL FINISH DETAIL (3 OF 3)
AD-LD-001	-	TYPICAL DETAILS - ALUMINUM LOUVRE
AD-MD-001	-	TYPICAL DETAIL - METAL DOOR DETAILS (1 OF 2)
AD-MD-002	-	TYPICAL DETAIL - METAL DOOR DETAILS (2 OF 2)
AD-MF-001	-	TYPICAL DETAILS FENCE WALL (1)
AD-MF-002	-	TYPICAL DETAILS FENCE WALL (2)
AD-MF-003	-	TYPICAL DETAILS FENCE WALL (3)
AD-MF-004	-	TYPICAL DETAILS FENCE WALL (4)
AD-PL-001	-	TYPICAL DETAIL - WATER TANK PLINTH
AD-RD-001	-	TYPICAL DETAIL - ROOF DETAIL
AD-RR-001	-	TYPICAL DETAIL - ROOF RAILING

<u>Drawing No.</u>	<u>Rev.</u>	<u>Description</u>
AD-SC-001	-	TYPICAL DETAIL - SINK CABINET
AD-SD-001	-	TYPICAL DETAIL - SHELTER DETAILS
AD-SG-001	-	TYPICAL DETAIL - SIGNAGE (1 OF 2)
AD-SG-002	-	TYPICAL DETAIL - SIGNAGE (2 OF 2)
AD-SG-003	-	TYPICAL DETAILS - TRAFFIC SIGNAGE
AD-SG-004	-	TYPICAL DETAIL - TRAFFIC MARK
AD-SG-005	-	TYPICAL DETAIL - WAYFIND SIGNAGE
AD-SW-001	-	TYPICAL DETAIL - STEEL WALL
AD-TD-001	-	TYPICAL DETAIL - TIMBER DOOR DETAILS (1 OF 3)
AD-TD-002	-	TYPICAL DETAIL - TIMBER DOOR DETAILS (2 OF 3)
AD-TD-003	-	TYPICAL DETAIL - TIMBER DOOR DETAILS (3 OF 3)
AD-TR-001	-	TYPICAL DETAIL - TRAP DOOR (1 OF 2)
AD-TR-002	-	TYPICAL DETAIL - TRAP DOOR (2 OF 2)
AD-WP-001	A	TYPICAL DETAILS SCOPE OF WATERPROOFING (1 OF 2)
AD-WP-002	A	TYPICAL DETAILS SCOPE OF WATERPROOFING (2 OF 2)
AD-PC-001	-	TYPICAL DETAILS - PANTRY CABINET

STRUCTURE

S-0001	T	GENERAL NOTES & LAYOUT PLAN
S-0002	T	TEMPORARY BUILDING FRAMING PLANS
S-0003	T	TEMPORARY BUILDING SECTIONS (SHEET 1)
S-0004	T	TEMPORARY BUILDING SECTIONS (SHEET 2)
S-0005	T	CONNECTION DETAILS
S-0006	T	TEMPORARY BUILDING - FOOTING R.C. DETAILS
S-0007	T	LOADING KEY PLAN

DRAINAGE

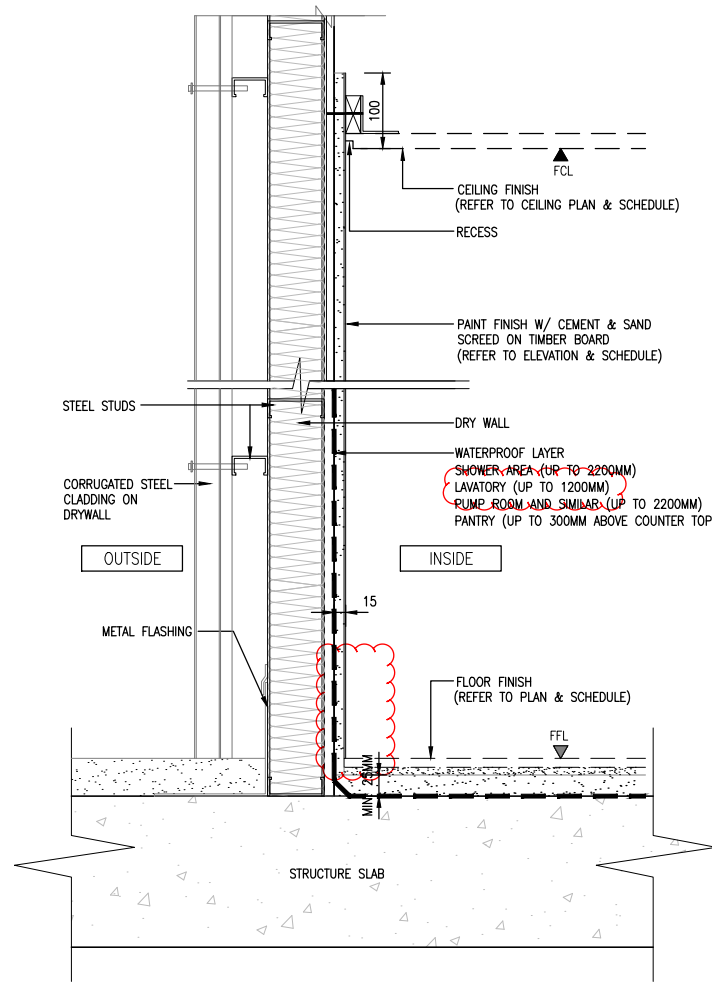
D-0001	T	GENERAL NOTES & LAYOUT PLAN
D-0002	T	GENERAL NOTES & LAYOUT PLAN

<u>Drawing No.</u>	<u>Rev.</u>	<u>Description</u>
<u>LANDSCAPE</u>		
ALEAD_TD_LAN_1	0	APPENDIX A PLANTING PLAN
<u>BUILDING SERVICES</u>		
MEP-AC-001	0	MVAC LEGENDS, GENERAL NOTES AND
MEP-AC-101	0	MVAC EQUIPMENT SCHEDULE
MEP-AC-201	0	MVAC LAYOUT PLAN (SHEET 1 OF 2)
MEP-AC-202	0	MVAC LAYOUT PLAN (SHEET 2 OF 2)
MEP-AC-401	0	MVAC INSTALLATION DETAILS
MEP-EL-001	0	ELECTRICAL LEGENDS, GENERAL NOTES AND ABBREVIATIONS
MEP-EL-101	0	ELECTRICAL MAIN SCHMATIC WIRING DIAGRAM
MEP-EL-102	1	SCHEMATIC WIRING DIAGRAM FOR CCTV, EMERGENCY CALL BELL & WATER LEAKAGE
MEP-EL-201	0	LIGHTING LAYOUT PLAN (SHEET 1 OF 3)
MEP-EL-202	0	LIGHTING LAYOUT PLAN (SHEET 2 OF 3)
MEP-EL-203	0	LIGHTING LAYOUT PLAN (SHEET 3 OF 3)
MEP-EL-204	0	POWER & DATA LAYOUT PLAN (SHEET 1 OF 3)
MEP-EL-205	1	POWER & DATA LAYOUT PLAN (SHEET 2 OF 3)
MEP-EL-206	0	POWER & DATA LAYOUT PLAN (SHEET 3 OF 3)
MEP-EL-207	0	CABLE CONTAINMENT LAYOUT PLAN (SHEET 1 OF 3)
MEP-EL-208	0	CABLE CONTAINMENT LAYOUT PLAN (SHEET 2 OF 3)
MEP-EL-209	0	CABLE CONTAINMENT LAYOUT PLAN (SHEET 3 OF 3)
MEP-EL-210	0	LIGHTNING PROTECTION LAYOUT PLAN
MEP-EL-301	0	MCB DETAIL
MEP-EL-401	0	ELECTRICAL INSTALLATION DETAILS (SHEET 1 OF 3)
MEP-EL-402	0	ELECTRICAL INSTALLATION DETAILS (SHEET 2 OF 3)

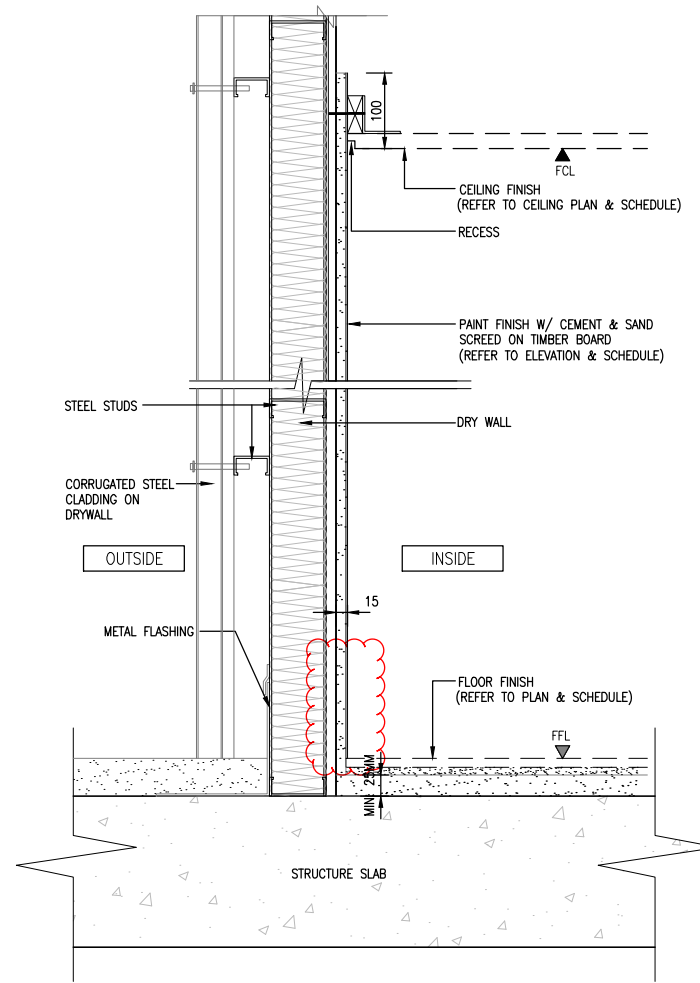
<u>Drawing No.</u>	<u>Rev.</u>	<u>Description</u>
MEP-EL-403	0	ELECTRICAL INSTALLATION DETAILS (SHEET 3 OF 3)
MEP-PL-001	0	PLUMBING LEGENDS, PIPE MATERIAL SCHEDULE, GENERAL NOTES AND ABBREVIATIONS
MEP-PL-101	0	VERTICAL PLUMBING LINE DIAGRAM & WATER METER CABINET DETAIL
MEP-PL-201	0	PLUMBING UNDERGROUND LAYOUT PLAN
MEP-PL-202	0	PLUMBING ABOVEGROUND LAYOUT PLAN
MEP-PL-203	0	PLUMBING ABOVEGROUND LAYOUT PLAN
MEP-PL-401	0	PLUMBING INSTALLATION DETAILS
MEP-DR-001	0	DRAINAGE LEGENDS, GENERAL NOETS, AND ABBREVIATIONS
MEP-DR-201	0	FOUL WATER DRAINAGE LAYOUT PLAN
MEP-DR-401	0	DRAINAGE INSTALLATION DETAILS
MEP-FS-001	0	FIRE SERVICES LEGENDS, PIPE MATERIAL SCHEDULE, GENERAL NOTES & ABBREVIATIONS
MEP-FS-101	0	STREET FIRE HYDRANT & HOSE REEL SYSTEM SCHEMATIC DIAGRAM
MEP-FS-102	1	AUTOMATIC FIRE ALARM & DETECTION SYSTEM SCHEMATIC DIAGRAM
MEP-FS-201	0	FIRE SERVICES UNDERGROUND LAYOUT PLAN
MEP-FS-202	0	FIRE SERVICES ABOVEGROUND LAYOUT PLAN
MEP-FS-401	0	FIRE SERVICES INSTALLATION DETAILS
MEP-GS-201	0	EMERGENCY GENERATOR LAYOUT PLAN
MEP-BS-401	0	TYPICAL INSTALLATION DETAILS ALONG EXISTING FENCE

CIC DRAWINGS

CIC-SK-001	-	CCTV LAYOUT
CIC-SK-001A	-	CCTV LAYOUT FOR EXAMINATION USE (1)
CIC-SK-001B	-	CCTV LAYOUT FOR EXAMINATION USE (2)
CIC-SK-002	-	SOLAR LIGHT POLE LAYOUT
CIC-SK-003	-	SOLAR PANEL & SAFETY HARNESS SYSTEM LAYOUT
CIC-SK-004	-	TEMPORARY LAVATORY LAYOUT
TMTG-01	-	SCOPE OF WORKS AT TMTG (SHEET 1 OF 5)



1 WALL DETAIL - PAINT
VERTICAL SECTION SCALE 1 : 10



2 WALL DETAIL - PAINT
VERTICAL SECTION SCALE 1 : 10

B.D. Ref. : --
F.S.D. Ref. : --

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DEVELOPER-
HONG KONG INSTITUTE OF CONSTRUCTION

ARCHITECT/ DESIGNER -
ALEAD architects ltd.
建築師事務所有限公司
Tel: (852) 25433330 Fax: (852) 25433331 Email: info@aleadarchitect.com

STRUCTURAL & GEOTECHNICAL CONSULTANT-
Kewisk Engineering & Consulting Co. Limited

MEP CONSULTANT -
S/C SC CONSULTANTS LTD.
ROOM 2402-2406, 415 NATHAN ROAD, MONG KOK, KOWLOON, H.K.
Tel: (852) 3433 8624 Fax: (852) 3433 8428
Trusted Professional

Revision	Description	Date
A	REVISED.	FEB 2025

Project :
Proposed for Construction of Outdoor Training Ground at Siu Lam, Area 56, Tuen Mun for the Construction Industry Council

Job No. :
H-23003

Drawing Title :
TYPICAL DETAIL - INTERIOR WALL FINISH DETAIL (3 OF 3)

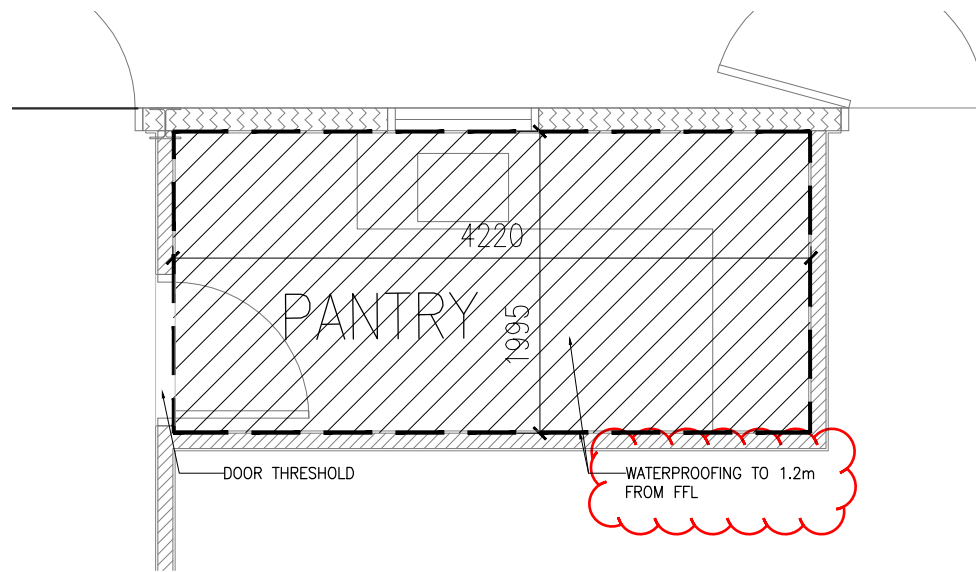
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Checked : -- Authorised : --
Scale BAS : 1:10 Issue Date : --

Sheet :
TENDER DRAWING

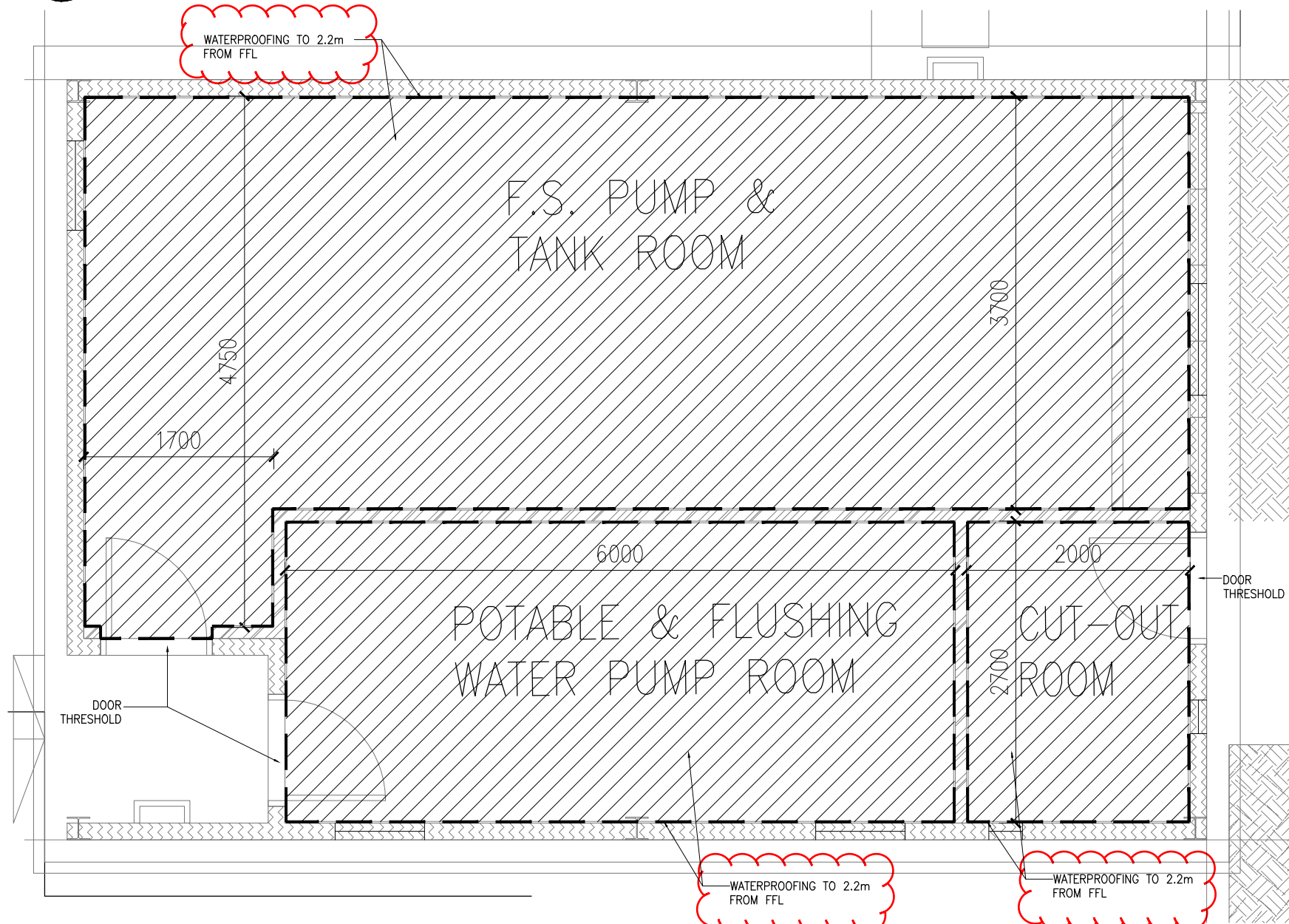
Authority's Approval :

Drawing No. :
AD-IW-003

Revision :
A



1 GROUND FLOOR PLAN
PANTRY AT TEMPORARY BUILDING 1 1:50



2 GROUND FLOOR PLAN
PLANT ROOM 1:50

E.D. Ref. : -
F.S.D. Ref. : -

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DEVELOPER -
HONG KONG INSTITUTE OF CONSTRUCTION

ARCHITECT/ DESIGNER -
ALEAD architects ltd.
樓建建築師事務所有限公司

STRUCTURAL & GEOTECHNICAL CONSULTANT -
Kewisk Engineering & Consulting Co. Limited

MEP CONSULTANT -
S/C SC CONSULTANTS LTD.
ROOM 2002-2003, 415 NATHAN ROAD, MONG KOK, HONG KONG, H.K.
Tel: (852) 3437 8624 Fax: (852) 3437 8428
Trusted Professional

Revision	Description	Date
A	REVISED	FEB 2025

Project :
Proposed for Construction of Outdoor Training Ground at Siu Lam, Area 56, Tuen Mun for the Construction Industry Council

Job No. :
H-23003

Drawing Title :
TYPICAL DETAILS
SCOPE OF WATERPROOFING
(1 OF 2)

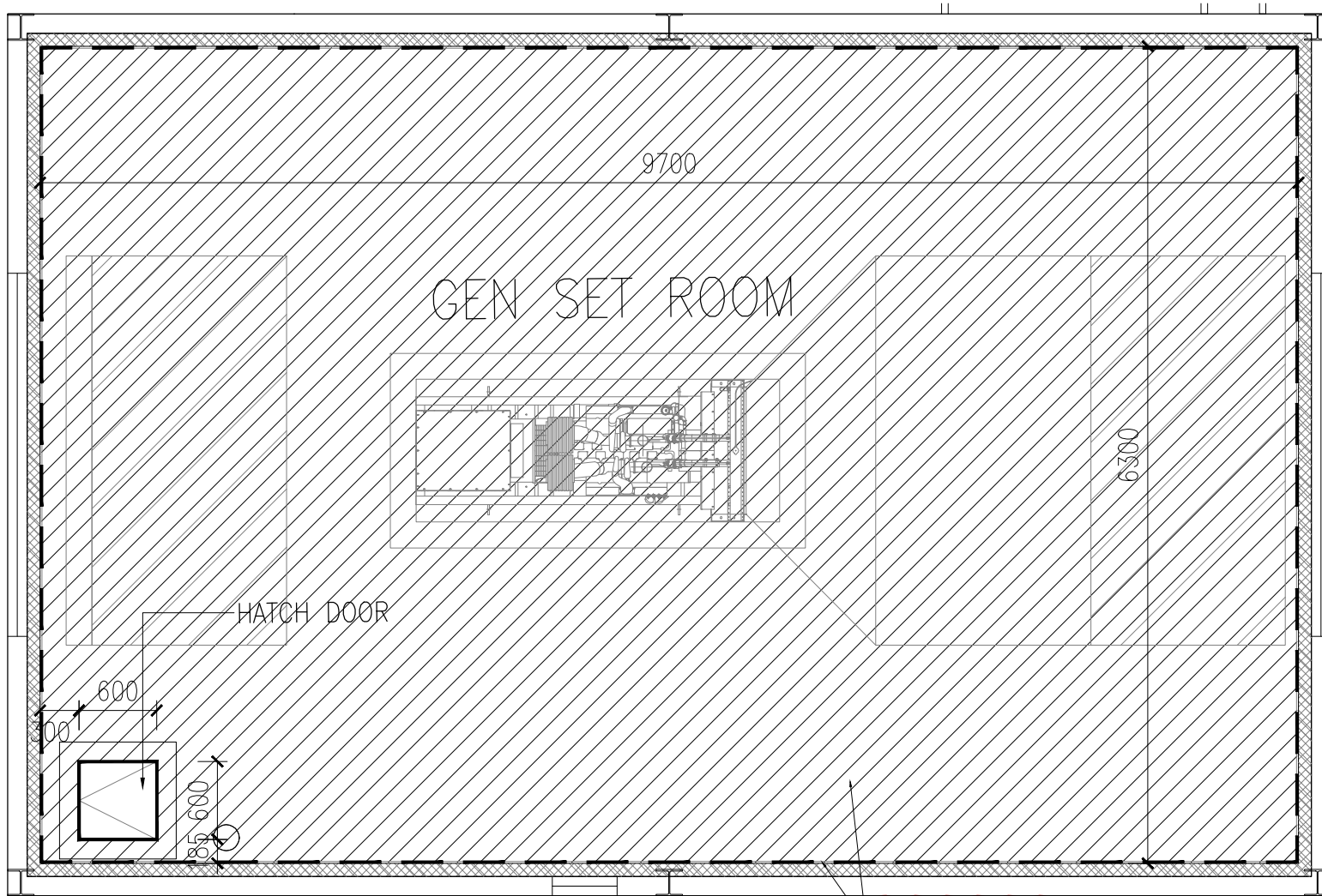
Drawn : -	Design : -
Checked : -	Authorised : -
Scale BAS : 1:50	Issue Date : -

Sheet :
TENDER DRAWING

Authority's Approval :

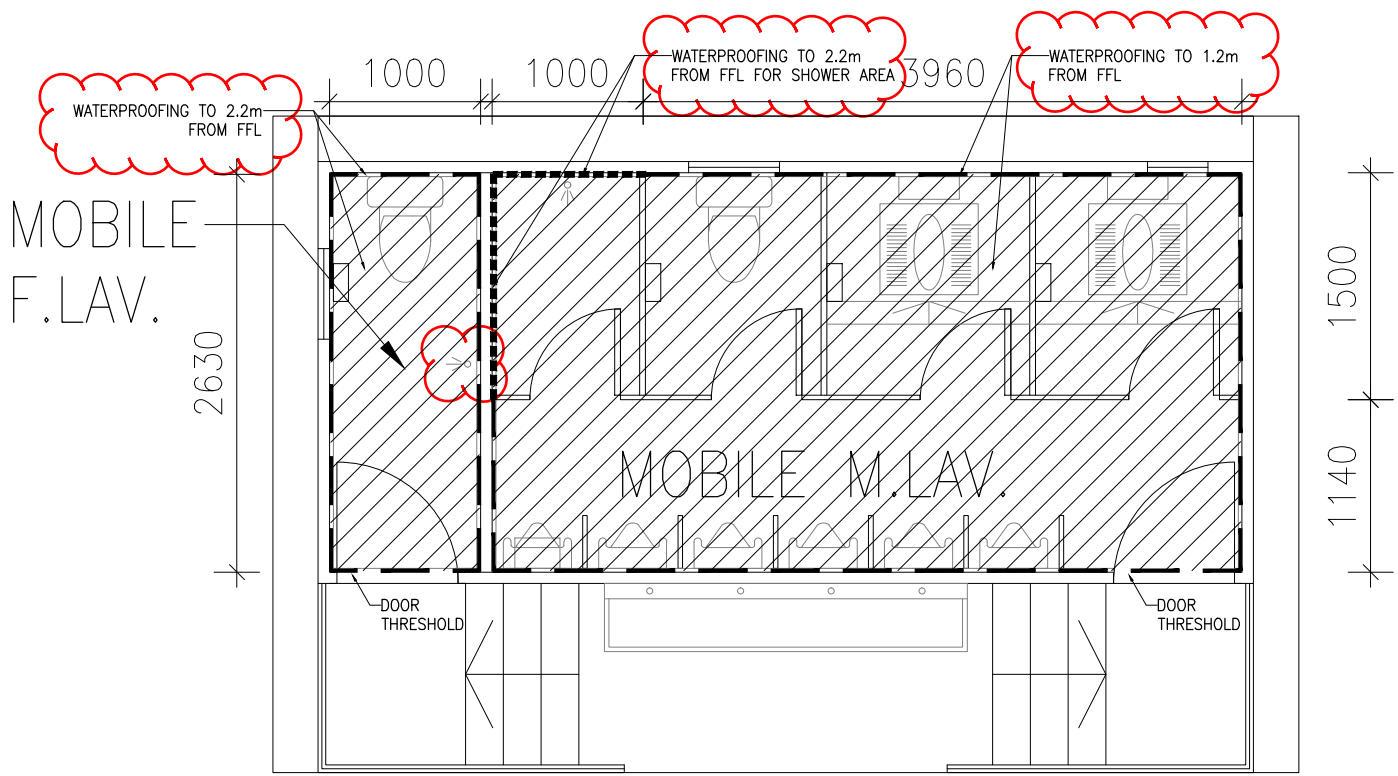
Drawing No. :
AD-WP-001

Revision :
A



1 GROUND FLOOR UPPER PLAN
GEN SET ROOM 1:50

WATERPROOFING TO 2.2m FROM FFL



2 GROUND FLOOR PLAN
LAVATORY 1:50

E.D. Ref. : -
F.S.D. Ref. : -

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DEVELOPER -
HONG KONG INSTITUTE OF CONSTRUCTION

ARCHITECT/ DESIGNER -
ALEAD architects ltd.
建築師事務所有限公司

STRUCTURAL & GEOTECHNICAL CONSULTANT -
Kewisk Engineering & Consulting Co. Limited

MEP CONSULTANT -
S/C SC CONSULTANTS LTD.
SC CONSULTANTS LTD.
ROOM 2402-2403, 415 NATHAN ROAD, MONG KOK, KOWLOON, H.K.
Tel: (852) 3437 8624 Fax: (852) 3437 8428
Trusted Professionals

Revision	Description	Date
A	REVISED	FEB 2025

Project :
Proposed for Construction of Outdoor Training Ground at Siu Lam, Area 56, Tuen Mun for the Construction Industry Council

Job No. :
H-23003

Drawing Title :
TYPICAL DETAILS
SCOPE OF WATERPROOFING
(2 OF 2)

Drawn : -	Design : -
Checked : -	Authorised : -
Scale BAS : 1:50	Issue Date : -

Sheet :
TENDER DRAWING


Authority's Approval :


Drawing No. :
AD-WP-002


Revision :
A


B.D. Ref. :
F.S.D. Ref. :


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CLIENT -
 HONG KONG INSTITUTE OF CONSTRUCTION

LEAD CONSULTANT -
 RANBOLL Bright Ideas. Sustainable change.

ARCHITECT / DESIGNER -
 ALEAD architects Ltd. 領建建築師事務所有限公司
Tel: (852) 25432020 Fax: (852) 25432091 Email: info@aleadarchitect.com

STRUCTURAL & GEOTECHNICAL CONSULTANT -
 ARCADIS Design & Consultancy for natural and built assets

EAM CONSULTANT -
 SC CONSULTANTS LTD.
ROOM 2402-2406, 455 NATHAN ROAD, HONGKONG, HONGKONG, H.K.
Tel: (852) 3615 8624 Fax: (852) 3760 8426 www.sicc.hk

1	RENDER ADDENDUM NO.1	FEB 2025
0	RENDER	FEB 2025

Revision	Description	Date
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Project :
Proposed Temporary Training Grounds for Construction Industry Council for Government Land

Job No. :
H23003

Drawing Title :
SCHEMATIC WIRING DIAGRAM FOR CCTV, EMERGENCY CALL BELL & WATER LEAKAGE SYSTEM







Drawn : KL	Design : KL
Checked : LT	Authorised : SC
Scale (B1) : N.T.S.	Issue Date : FEB 2025

Status :

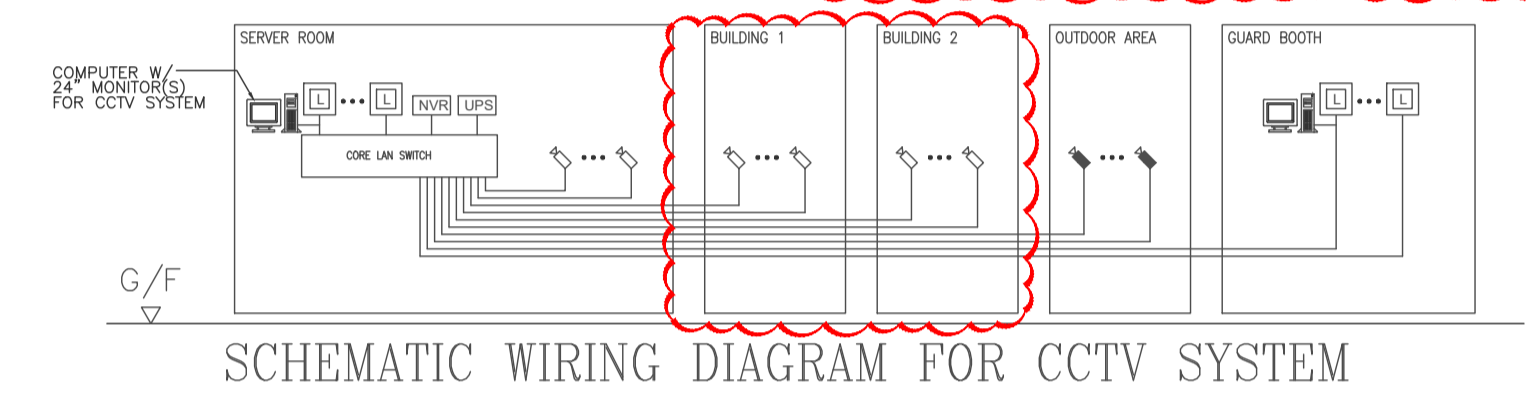
Authority's Approval :

Drawing No. :
MEP-EL-102




Revision :
1

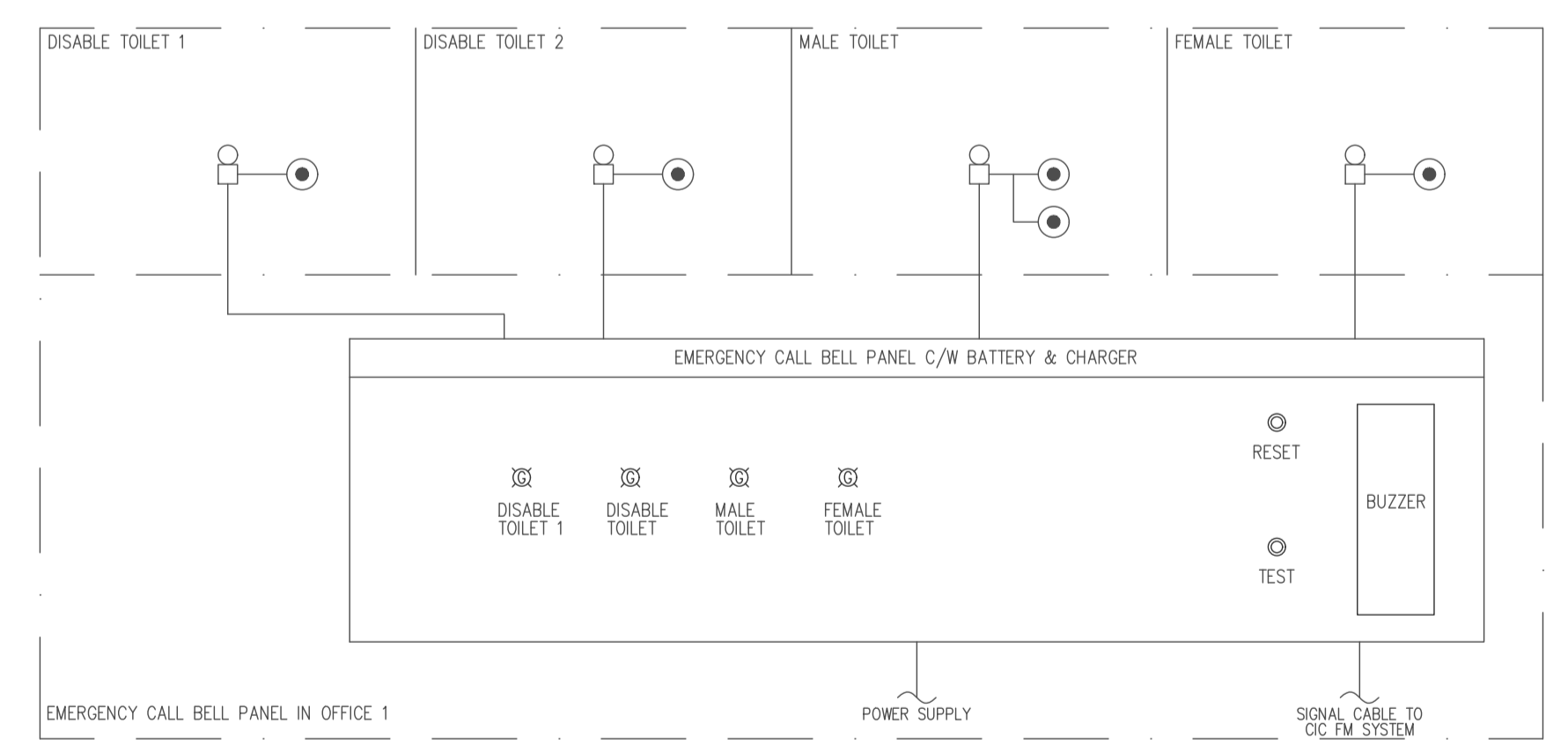
- LEGEND**
-  24" COLOUR LCD MONITOR C/W 13A SWITCHED SOCKET OUTLET
 -  CCTV CAMERA
 -  CCTV CAMERA IP65
 -  NETWORK VIDEO RECORDER WITH BUILT-IN MULTIPLEXER C/W 13A SWITCHED SOCKET OUTLET (30 DAYS RECORDING)
 -  CAT. 6 CABLE FOR CCTV SYSTEM IN CONDUIT/TRUNKING
 -  UNINTERRUPTED POWER SUPPLY (2 HOURS FOR WHOLE CCTV SYSTEM)

- NOTE**
1. SUFFICIENT NOS. OF POWER SUPPLY POINTS FOR THE EQUIPMENT SHOWN OF THE DRAWING SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.
 2. THE DRAWING IS PREPARED FOR SHOWING THE CONCEPT OF THE SYSTEM ONLY. ELECTRICAL CONTRACTOR SHALL CONSTRUCT THEIR SHOP DRAWING & SELECT SUITABLE EQUIPMENTS ACCORDING TO THE ACTUAL REQUIREMENTS OF THE SYSTEM IN ORDER TO ENSURE THAT THE SYSTEM FUNCTION SATISFACTORY.
 3. THE SYSTEMS SHOWN ON THIS DRAWING ARE DIAGRAMMATIC ONLY. THE ELECTRICAL CONTRACTOR SHALL SUBMIT HIS DETAILED SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION.
 4. FOR EXACT LOCATION AND QUANTITIES OF EQUIPMENTS, PLEASE REFER TO THE LAYOUT PLAN.
 5. ALL CABLING SHALL BE INSTALLED IN TRUNKING / CONDUIT.
 6. EACH CCTV MONITOR SHALL DISPLAY MAX. 16 VIDEO IMAGE IN SPLIT SCREEN FORMAT AND SHALL BE SELECTABLE FOR QUAD., SINGLE SCREEN DISPLAY.
 7. THE CCTV SYSTEM SHALL BE PROTECTED WITH SURGE PROTECTION DETAILS TO BE DESIGNED AND SUBMITTED BY ELECTRICAL CONTRACTOR.
 8. EACH MULTIPLEXER AND CORE LAN SWITCH SHALL HAVE 10% SPARE CAPACITY OR 2 SPARE CHANNEL.
 9. ONE CABLE SHALL BE PROVIDED FOR EACH CAMERA.
 10. CCTV SYSTEM AND ALL THE CCTV CAMERA SHOULD BE POE TYPE.
 11. CCTV SYSTEM SHALL BE ABLE TO INTERACT WITH CIC EO'S VIDEO MANAGEMENT SYSTEM.







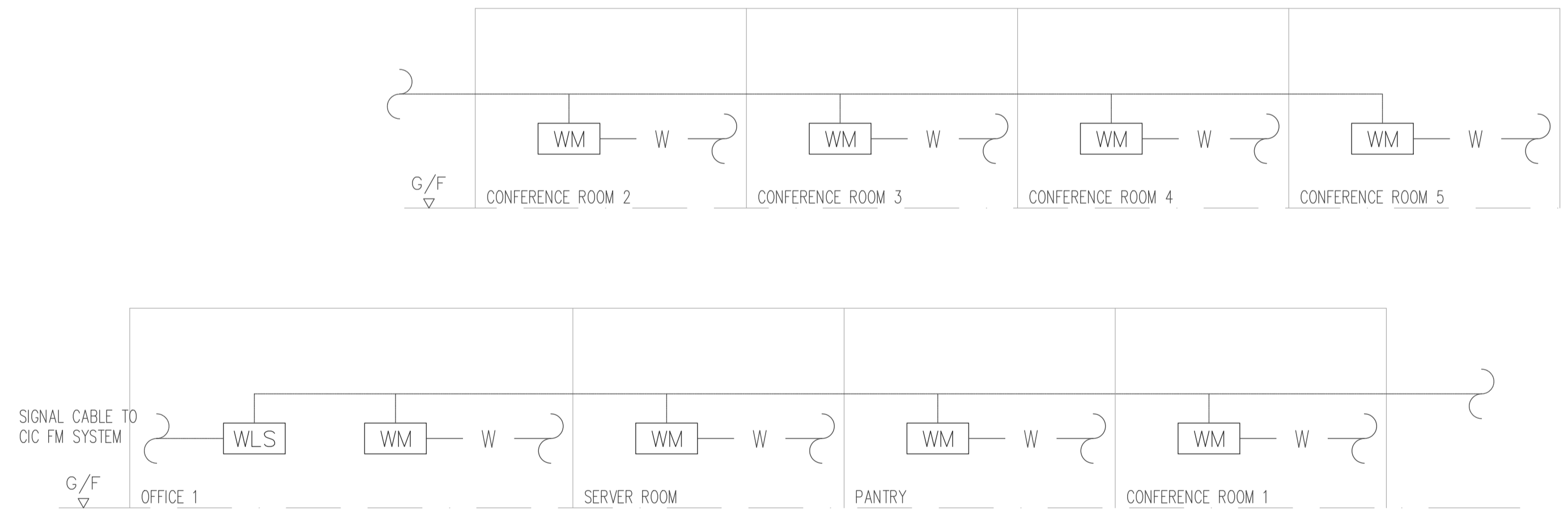
SCHEMATIC WIRING DIAGRAM FOR CCTV SYSTEM

- LEGEND**
-  CENTRAL WATER LEAKAGE ALARM PANEL
 -  WATER LEAKAGE DETECTION MODULE
 -  WATER LEAKAGE DETECTION CABLE



SCHEMATIC WIRING DIAGRAM EMERGENCY CALL BELL SYSTEM

- LEGEND**
-  EMERGENCY CALL BELL BUTTON
 -  EMERGENCY ALARM BUZZER W/ FLASH LIGHT AT H/L
 -  TESTING/RESET LED LIGHT
 -  INDICATING LED LIGHT



SCHEMATIC DIAGRAM FOR WATER LEAKAGE DETECTION SYSTEM



FOR CONTINUATION, REFER TO DRAWING MEP-EL-204

FOR CONTINUATION, REFER TO DRAWING MEP-EL-206

POWER & DATA LAYOUT PLAN
SCALE: 1:150 @ A1

B.D. Ref. :
F.S.D. Ref. :

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CLIENT -
香港 HONG KONG INSTITUTE OF CONSTRUCTION 建造學院

LEAD CONSULTANT -
RAMBOLL Bright ideas. Sustainable change

ARCHITECT / DESIGNER -
A LEAD architects ltd. 領建建築師事務所有限公司

STRUCTURAL & GEOTECHNICAL CONSULTANT -
ARCADIS Design & Consultancy for natural and built assets

E&M CONSULTANT -
SCC SC CONSULTANTS LTD. ROOM 2402-2406, 455 NATHAN ROAD, SINGAPORE, SINGAPORE, H.K. Tel: (852) 3415 8624 Fax: (852) 3765 8426 www.scc.hk

KEY PLAN (1:2000 @ A1)

1	RETENDER ADDENDUM NO.1	FEB 2025
0	RETENDER	FEB 2025

Revision	Description	Date

Project :
Proposed Temporary Training Grounds for Construction Industry Council for Government Land

Job No. : H23003

Drawing Title :
POWER & DATA LAYOUT PLAN (SHEET 2 OF 3)

Drawn : KL	Design : KL
Checked : LT	Authorised : SC

Scale @A1 : 1:150 @A1 Issue Date : FEB 2025

Status :

Authority's Approval :

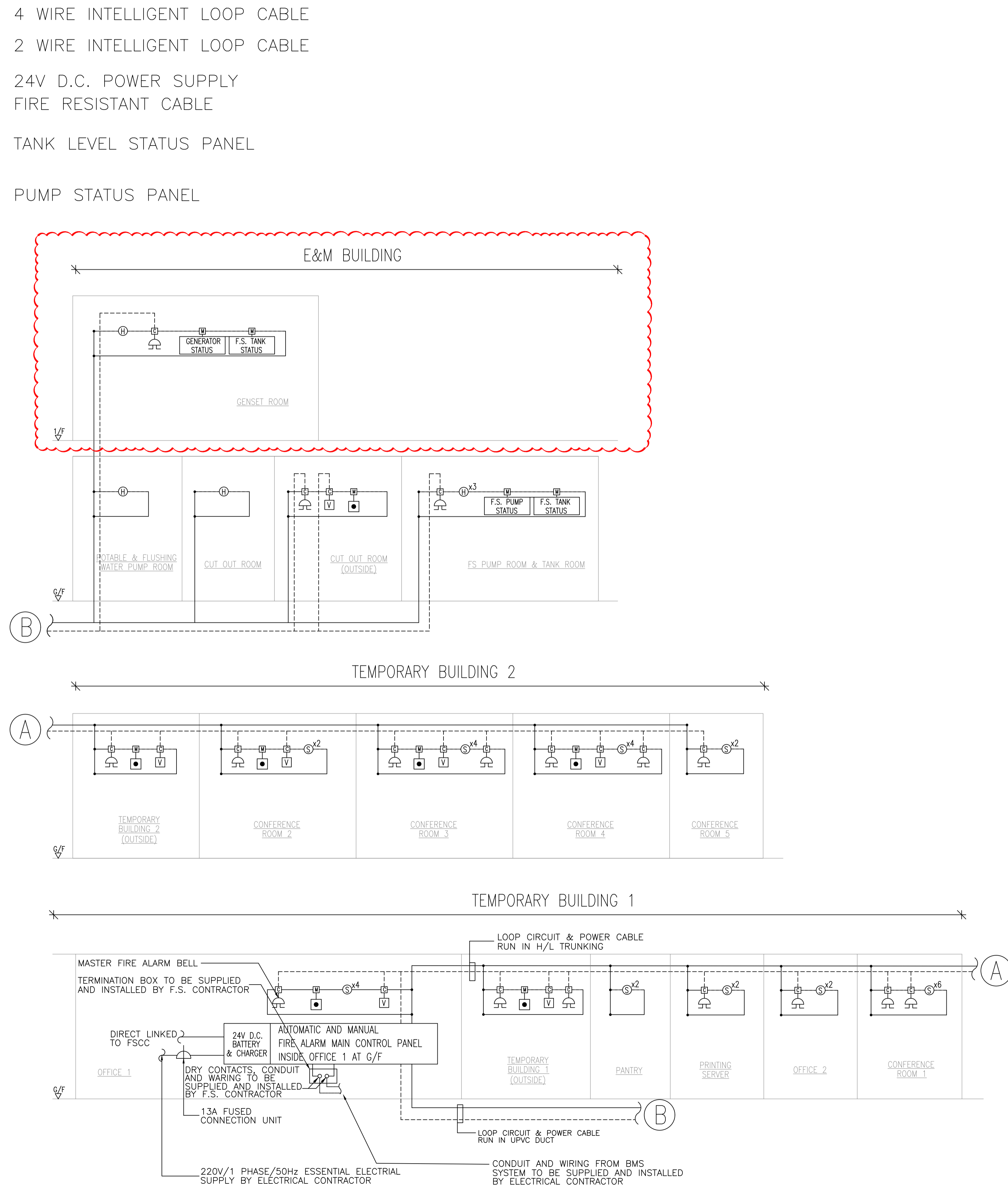
Drawing No. : MEP-EL-205 Revision : 1

LEGEND

- C INTELLIGENT CONTROL MODULE
 - M INTELLIGENT MONITOR MODULE
 - S SMOKE DETECTOR
 - H HEAT DETECTOR
 - ALARM BELL
 - V VISUAL FIRE ALARM UNIT
 - BREAK GLASS UNIT
- 4 WIRE INTELLIGENT LOOP CABLE
 - 2 WIRE INTELLIGENT LOOP CABLE
 - 24V D.C. POWER SUPPLY
 - FIRE RESISTANT CABLE
 - TANK STATUS TANK LEVEL STATUS PANEL
 - PUMP STATUS PUMP STATUS PANEL

NOTES FOR FIRE ALARM SYSTEM

1. SYSTEM SHALL COMPLY TO THE LATEST LPC RULES FOR THE PROTECTION OF PROPERTY.
2. THE AUTOMATIC FIRE DETECTION SYSTEM SHALL BE PROVIDED AS SHOWN ON DRAWINGS. AN AUTOMATIC HEAT/SMOKE DETECTOR FIRE ALARM SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH :
 - i) BS5839-1:2002+A2:2008 FIRE DETECTION AND FIRE ALARM SYSTEM FOR BUILDING-PART 1:CODE OF PRACTICE FOR SYSTEM DESIGN, INSTALLATION, COMMISSIONING AND MAINTENANCE.
 - ii) FSD CIRCULAR LETTERS NO. 1/2009.
3. VISUAL FIRE ALARM SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH :
 - i) BS5839-1:2002+A2:2008 FIRE DETECTION AND FIRE ALARM SYSTEM FOR BUILDING-PART 1:CODE OF PRACTICE FOR SYSTEM DESIGN, INSTALLATION, COMMISSIONING AND MAINTENANCE.
 - ii) FSD CIRCULAR LETTERS NO. 2/2012.
 - iii) DESIGN MANUAL - BARRIER FREE ACCESS 2008.
4. THE SYSTEM SHALL BE LINKED TO HONG KONG FIRE SERVICES COMMUNICATION CENTRE (HKFSCC) BY DIRECT TELEPHONE LINE.
5. UPON THE ACTUATION OF ANY BREAK GLASS UNIT:
 - (i) FIRE SIGNAL TRANSMITS TO FIRE ALARM MAIN CONTROL PANEL LOCATED AT G/F.
 - (ii) ALARM BELLS OF THE WHOLE BUILDING SHALL SOUND (NO ZONING OF ALARM REQUIRED).
 - (iii) FIXED FIRE PUMP SHALL BE ACTUATED.
 - (iv) VISUAL FIRE ALARM UNIT OF THE WHOLE BUILDING SHALL FLASH.
6. MINIMUM SIZE OF CONTROL CABLE SHALL BE 1.5MM FIRE RESISTING COPPER CABLE FOR 24V CONTROL CABLE FEEDING MODULE & ALL CABLE SHALL BE IN CONDUIT / TRUNKING SYSTEM.
7. FIRE RESISTING COPPER CABLE SHALL BE USED FOR FIRE ALARM BELL & VISUAL FIRE ALARM UNIT WHERE RUN IN EXPOSED CONDUIT/TRUNING.
8. OVERFLOW/HIGH WATER LEVEL/LOW WATER LEVEL OF F.S. WATER TANKS SHALL GIVE AN AUDIBLE AND VISUAL ALARM IN THE FIRE ALARM CONTROL PANEL.
9. ZONING FOR BREAK GLASS UNITS, FLOW SWITCHES AND SMOKE/HEAT DETECTORS SHALL BE IN FLOOR BASIS. FIRE DETECTION ZONING SYSTEM SHALL BE IN ACCORDANCE WITH LATEST FSD'S REQUIREMENTS.
10. FIRE DETECTION SYSTEM WITH HEAT DETECTORS WILL BE PROVIDED TO ALL E&M PLANT ROOMS EXCEPT PIPE DUCT AND PLANT ROOMS AT ROOF OF RESIDENTIAL BLOCKS.
11. THE BATTERY SHOULD BE SUPPLIED AND INSTALLED IN ACCORDING TO LPC RULE.
12. THE MONITORING DEVICES FOR ALARM AND INDICATION AND INDICATOR PANEL SHOULD BE SUPPLIED AND INSTALLED IN ACCORDING TO LPC RULE.
13. PLEASE REFER TO THE LAYOUT PLAN FOR EXACT QUANTITY OF FIELD DEVICES.
14. EXACT NUMBER OF INTELLIGENT LOOPS TO BE DETERMIND BY F.S. CONTRACTOR.
15. MINIMUM FIRE RESISTING CABLE REQUIREMENTS FOR FIRE SERVICE INSTALLATIONS SHALL BE COMPLIED WITH APPENDIX 8 OF CODES OF PRACTICE FOR MINIMUM FIRE SERVICE INSTALLATIONS AND EQUIPMENT AND INSPECTION, TESTING AND MAINTENANCE OF INSTALLATIONS AND EQUIPMENT 2012 (THE LATEST EDITION) AND THE LATEST FSD'S REQUIREMENTS.



B.D. Ref. :
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LEAD CONSULTANT -
 RAMBOLL

ARCHITECT / DESIGNER -
 ALEAD architects ltd.
領通建築師事務所有限公司

STRUCTURAL & GEOTECHNICAL CONSULTANT -
 ARCADIS

E&M CONSULTANT -
 SC CONSULTANTS LTD.
ROOM 2402-2406, 455 NATHAN ROAD, HONGKONG, HONGKONG, H.K.
Tel: (852) 3415 8824 Fax: (852) 3765 8426

1	RETENDER ADDENDUM NO.1	FEB 2025
0	RETENDER	FEB 2025

Revision Description Date

Project :
Proposed Temporary Training Grounds for Construction Industry Council for Government Land

Job No. : H23003

Drawing Title :
AUTOMATIC FIRE ALARM & DETECTION SYSTEM SCHEMATIC DIAGRAM

Drawn : KL	Design : KL
Checked : LT	Authorised : SC
Scale: 0A1	Issue Date : FEB 2025

Status :
Authority's Approval :

Drawing No. : MEP-FS-102
Revision : 1