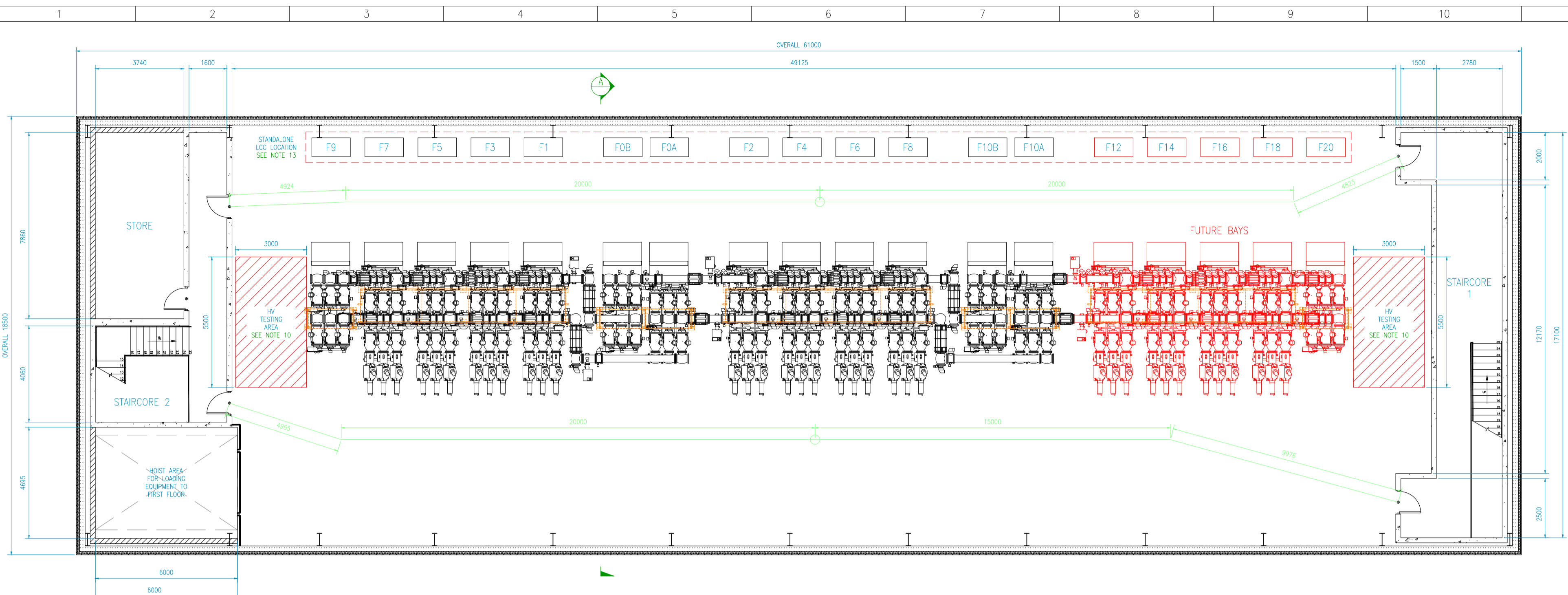


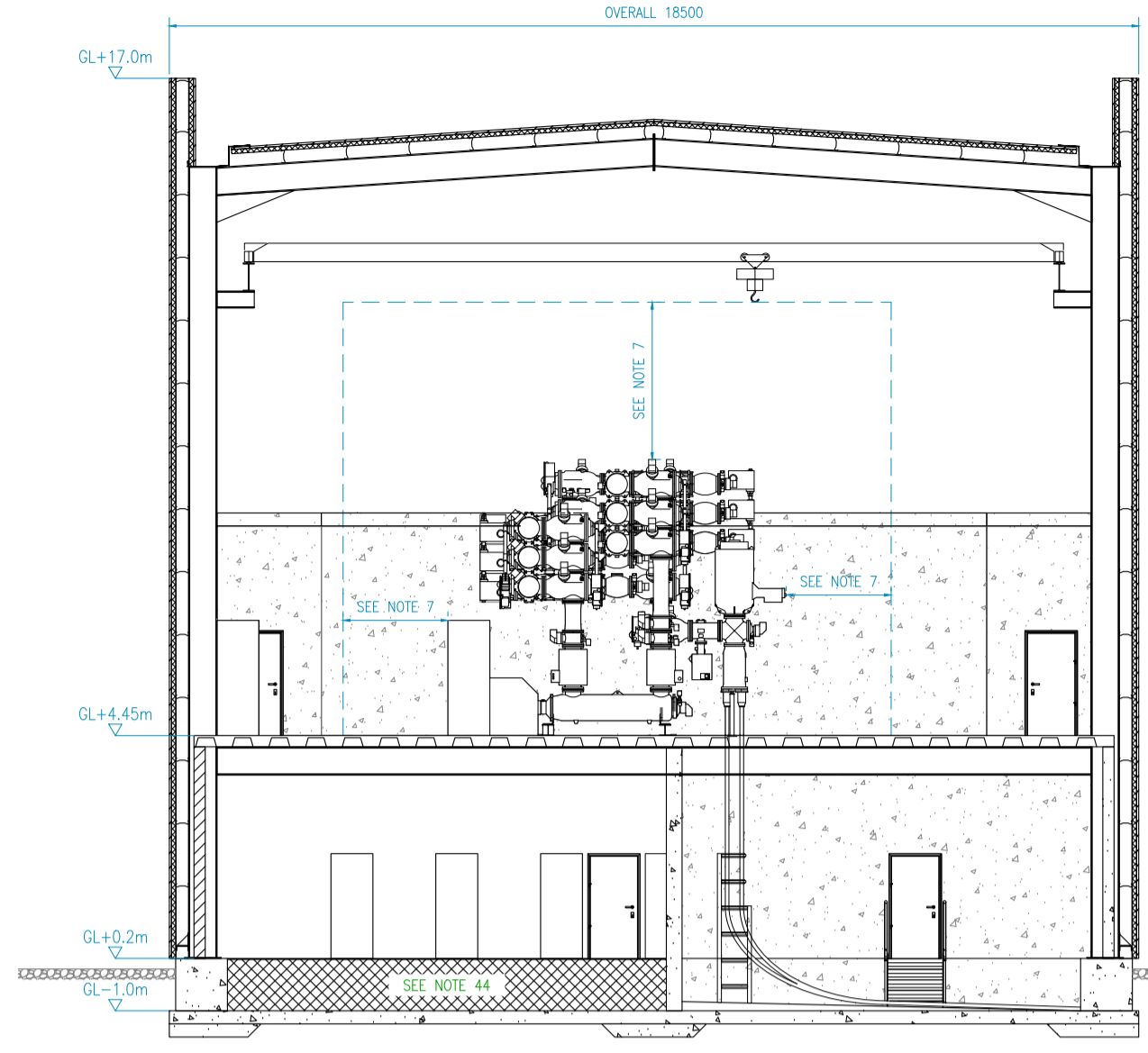
- KEY:**
 CUSTOMER EQUIPMENT
- NOTE 1:**
THIS IS A CONCEPTUAL DESIGN. DETAILED DESIGN IS REQUIRED PENDING CONFIRMATION OF SPECIFIC EQUIPMENT SUPPLIER AND SITE DETAILS.
- NOTE 2:**
THIS DRAWING IS PRODUCED FOR INFORMATION PURPOSES ONLY. ALL DIMENSIONS, REFERENCES (EG. LIGHTNING MAST LOCATIONS ETC.) GIVEN ARE INDICATIVE AND SHOULD NOT BE USED AS PART OF A DETAILED DESIGN.
- NOTE 3:**
HV AND LV CABLE ROUTES ARE NOT SHOWN BUT SHOULD BE AND INCORPORATED INTO THE OVERALL SUBSTATION DESIGN.
- NOTE 4:**
LIGHTING DESIGN HAS NOT BEEN IDENTIFIED IN THIS LAYOUT.
- NOTE 5:**
220KV BUILDING HAS BEEN SPECIFICALLY DESIGNED TO ACCOMMODATE 4 No. TRANSFORMER BAYS (CABLE CONNECTION), 2 No. SECTIONALISING CIRCUIT BREAKERS, 2 No. WING COUPLERS, AND 8 No. FEEDER BAYS (CABLE CONNECTION). THE FINAL BUILDING DESIGN SHALL MATCH THE APPROPRIATE SINGLE LINE DIAGRAM.
- NOTE 6:**
SUFFICIENT SPACE TO BE IDENTIFIED IN THE VICINITY OF THE 220KV BUILDING TO ALLOW FOR HV CABLE INSTALLATION.
- NOTE 7:**
INDICATIVE LIGHTNING PROTECTION SYSTEM SHOWN. DETAILED DESIGN TO BE IN ACCORDANCE WITH EIRGRID FUNCTIONAL SPECIFICATIONS.
- NOTE 8:**
ELECTRICAL, SAFETY, ACCESS AND MAINTENANCE CLEARANCES TO BE INCORPORATED IN DETAILED DESIGN AS PER EIRGRID FUNCTIONAL SPECIFICATIONS.
- NOTE 9:**
ACCESS AND SET DOWN AREAS TO BE CONSIDERED AND PROVISION MADE FOR SITE ACTIVITIES DURING CONSTRUCTION, INSTALLATION AND FUTURE DECOMMISSIONING.
- NOTE 10:**
VEHICULAR PARKING TO BE IDENTIFIED AND INCORPORATED.
- NOTE 11:**
DETAILED ACCESS ROUTES TO ENSURE SAFE DELIVERY OF EQUIPMENT TO BE ASSESSED. PARTICULAR ATTENTION TO BE CONSIDERED FOR THE INSTALLATION OF POWER TRANSFORMER UNITS.
- NOTE 12:**
OVERALL COMPOUND SECURITY DESIGN TO BE IN ACCORDANCE WITH EIRGRID FUNCTIONAL SPECIFICATIONS. ENHANCED SECURITY MAY BE REQUIRED IN CERTAIN LOCATIONS.
- NOTE 13 (AS ILLUSTRATED ON DRAWING):**
LOCATION AND DETAIL OF CUSTOMER TRANSFORMERS IS INDICATIVE ONLY. CUSTOMER SHALL IDENTIFY A SUITABLE LOCATION, TAKING INTO ACCOUNT CABLE LAYOUT DESIGN AND INSTALLATION CONSTRAINTS. CUSTOMER SHALL DEVELOP THEIR OWN SPECIFIC LAYOUT FOR TRANSFORMERS.
- NOTE 14 (AS ILLUSTRATED ON DRAWING):**
LOCATION OF INTERFACE ASSETS (SEALING ENDS, SURGE ARRESTERS, ETC) TO BE AGREED BASED ON CUSTOMER COMPOUND DESIGN.
- NOTE 15:**
VEHICULAR ACCESS SHOULD BE PROVIDED TO ALL SIDES OF THE GIS BUILDING.
- NOTE 16:**
REFER TO PROJECT SPECIFIC SLD TO DETERMINE ULTIMATE SIZE OF BUILDING.
- NOTE 17 (AS ILLUSTRATED ON DRAWING):**
FOR CUSTOMER PROJECTS THE INTERFACE KIOSKS SHALL BE INCORPORATED INTO THE FENCE.
- NOTE 18:**
FOR CLEARANCE REQUIREMENTS, REFER TO THE LATEST REVISION OF EIRGRID 110/220/400KV STATION GENERAL REQUIREMENTS FUNCTIONAL SPECIFICATION XDS-GFS-00-001.
- NOTE 19:**
FOR GIS INFORMATION, REFER TO THE LATEST REVISION OF EIRGRID 110/220/400KV STATION GENERAL REQUIREMENTS FUNCTIONAL SPECIFICATION XDS-GFS-25-001.

01	LAYOUT REVISED IN LINE WITH ESBN DUE DILIGENCE, FIRE/BUILDING REGULATIONS, EXTERNAL BUILDING DIMENSIONS UPDATED TO MATCH CUSTOMER REQUIREMENTS, INTERNAL BUILDING UPDATES, ADDITIONAL NOTES ADDED	DA	NK	CF	01/09/2020
00	FIRST ISSUE	JD	NK/ KMcG	CF	19/07/2019
REV	DESC	DRAWN	CHECKED	APPROVED	DATE

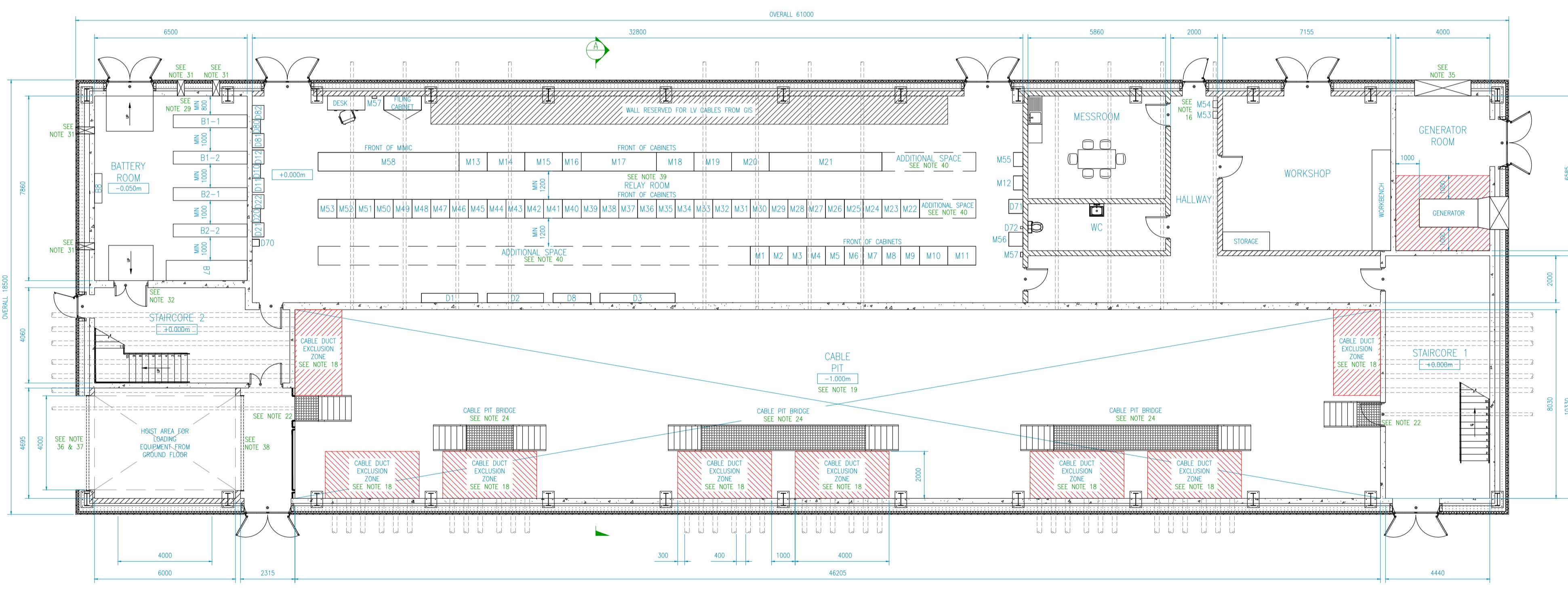
EirGrid plc The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4, Ireland Telephone: +353 1 677 1700 Fax: +353 1 661 5375 Email: info@eirgrid.com Web: www.eirgrid.com	PROJECT GENERIC DESIGN STANDARD 220kV GIS STATION		
	DRAWING TITLE 220kV GIS STATION LAYOUT COMPOUND LAYOUT - 12 BAY STATION		
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DRAWING NUMBER XDN-LAY-ELV-STND-F-004	SHEET 001	REV 01	



PLAN - FIRST FLOOR
SCALE: NTS



ELEVATION - SECTION A-A
SCALE: NTS



PLAN - GROUND FLOOR
SCALE: NTS

CABINET/EQUIPMENT LIST	DESCRIPTION	DIMENSIONS
BT-1	220V DC BATTERY 1, STAND 1	3150x550
BT-2	220V DC BATTERY 2, STAND 1	3150x550
B2-1	220V DC BATTERY 2, STAND 2	3150x550
B2-2	220V DC BATTERY 2, STAND 2	3150x550
B7	48V DC TELECOMS BATTERY	3450x880
B8	48V DC STATION BATTERY	1260x220
D1	220V DC DISTRIBUTION BOARD 1	2400x400
D2	220V DC DISTRIBUTION BOARD 2	2400x400
D8	48V DC DISTRIBUTION BOARD	1600x400
D3	AC DISTRIBUTION BOARD	3200x400
D10	220V BATTERY No.1 CHARGER CHANGEOVER SWITCH & FUSE BOX	600x350
D11	220V BATTERY No.1 CHARGER 1 & BATTERY SUPERVISION	600x500
D12	220V BATTERY No.1 CHARGER 2 & BATTERY SUPERVISION	600x500
D20	220V BATTERY No.2 CHARGER CHANGEOVER SWITCH & FUSE BOX	600x350
D21	220V BATTERY No.2 CHARGER 1 & BATTERY SUPERVISION	600x500
D22	220V BATTERY No.2 CHARGER 2 & BATTERY SUPERVISION	600x500
D80	24/48V BATTERY CHARGER CHANGEOVER SWITCH & FUSE BOX	600x350
D81	24/48V BATTERY CHARGER 1 & BATTERY SUPERVISION	600x500
D82	24/48V BATTERY CHARGER 2 & BATTERY SUPERVISION	600x500
D70	48V TELECOMS CONNECTION/FUSE BOX	600x350
D71	48V SPS TELECOMS	100x100
D72	TELECOMS ISOLATION SWITCH	100x100
M1	OPM1	800x800
M2	OPM2	800x800
M3	OPM3	800x800
M4	COF	800x800
M5	IP SERVICES	800x800
M6	48V DC (TELECOMS) DISTRIBUTION BOARD	600x350
M7	MAN DISTRIBUTION FRAME	800x800
M8	NCC RTU 1 (INCL. GPS CLOCK)	800x800
M9	NCC RTU 2 (INCL. GPS CLOCK)	800x800
M10	TELEMETRING 1	1200x800
M11	TELEMETRING 2	1200x800
M12	DCU RTU	800x800
M13	CONCENTRATOR PANEL	1200x800
M14	EVENT RECORDER/AMP 1	1600x800
M15	EVENT RECORDER/AMP 2	1600x800
M16	BATTERY SUPERVISION	800x800
M17	SIGNAL INTERFACING	3200x800
M18	BUSBAR PROTECTION 1	1600x800
M19	BUSBAR PROTECTION 2	1600x800
M20	BUSBAR PROTECTION 3	1600x800
M21	CUSTOMER INTERFACE	400x800
M22	F19 COUPLER PROTECTION	800x800
M23	F17 PROTECTION	800x800
M24	F17 PROTECTION	800x800
M25	F15 PROTECTION	800x800
M26	F15 PROTECTION	800x800
M27	F13 PROTECTION	800x800
M28	F13 PROTECTION	800x800
M29	F11 PROTECTION	800x800
M30	F11 PROTECTION	800x800
M31	F9A SECTIONALISER PROTECTION	800x800
M32	F9B SECTIONALISER PROTECTION	800x800
M33	F7 PROTECTION	800x800
M34	F7 PROTECTION	800x800
M35	F5 PROTECTION	800x800
M36	F5 PROTECTION	800x800
M37	F3 PROTECTION	800x800
M38	F3 PROTECTION	800x800
M39	F1 PROTECTION	800x800
M40	F1 PROTECTION	800x800
M41	F9A SECTIONALISER PROTECTION	800x800
M42	F9B SECTIONALISER PROTECTION	800x800
M43	F2 PROTECTION	800x800
M44	F2 PROTECTION	800x800
M45	F4 PROTECTION	800x800
M46	F4 PROTECTION	800x800
M47	F6 PROTECTION	800x800
M48	F6 PROTECTION	800x800
M49	F8 PROTECTION	800x800
M50	F8 PROTECTION	800x800
M51	F19 COUPLER PROTECTION	800x800
M52	REMOTE INTERROGATION/DISTURBANCE RECORDER	800x800
M53	INTRUDER ALARM PANEL	800x800
M54	FIRE ALARM PANEL	800x800
M55	ETC	800x400
M56	ERGSD ENERGY METERING	800x800
M57	TELEPHONE POINTS (2x4)	800x800
M58	MIMC	600x800

- GENERAL**
- NOTE 1: THIS DRAWING IS PRODUCED FOR INFORMATION PURPOSES ONLY. ALL DIMENSIONS, REFERENCES (EG. LIGHTNING MAST LOCATIONS ETC.) GIVEN ARE INDICATIVE AND SHOULD NOT BE USED AS PART OF A DETAILED DESIGN.
- NOTE 2: THIS IS A CONCEPTUAL DESIGN. DETAILED DESIGN IS REQUIRED PENDING CONFIRMATION OF SPECIFIC EQUIPMENT SUPPLIER AND SITE DETAILS.
- NOTE 3: BUILDING HAS BEEN SPECIFICALLY DESIGNED TO ACCOMMODATE 4 NO. TRANSFORMER BAYS (CABLE CONNECTION) AND 8 NO. FEEDER BAYS (CABLE CONNECTION).
- NOTE 4: RISK ASSESSMENT TO BE CARRIED OUT AT DETAIL DESIGN STAGE TO EVALUATE THE REQUIREMENT FOR FORCED VENTILATION WITHIN CABLE PIT.
- NOTE 5: WHERE THERE IS MORE THAN ONE MINIMUM DISTANCE STATED FOR A SPECIFIC AREA THE LARGEST MINIMUM DISTANCE SHOULD BE ADHERED TO.
- NOTE 6: FIRE AND ATEX ZONES NOT SHOWN, THIS SHOULD BE CONSIDERED DURING DETAILED CUSTOMER DESIGN.
- NOTE 7: CIVIL CALCULATIONS ARE TO BE CARRIED OUT AT THE DETAIL DESIGN STAGE AND TAKE INTO ACCOUNT SPECIFIC, EXISTING SITE CONDITIONS.
- NOTE 8: SMITH GEAR
- NOTE 9: ALL OPS IN GIS ROOM FOR LV AND HV CABLES TO BE FIRE SEALED.
- NOTE 10: REQUIREMENT FOR GIS OVERPRESSURE VENTS TO BE CONFIRMED BY GIS SUPPLIER.
- NOTE 11: SCREENED VENTS (2 HIGH LEVEL AND 2 LOW LEVEL) ARE TO BE INSTALLED IN THE BATTERY ROOM AS PER IEC 62485-2 ON ADJACENT EXTERNAL WALL. MINIMUM VENT DIMENSIONS: 900 x 250mm.
- NOTE 12: DETAIL DESIGN IS TO CARRY OUT APPROPRIATE RISK ASSESSMENT & VENTILATION CALCULATIONS TO EVALUATE BATTERY ROOM VENT REQUIREMENTS.
- NOTE 13: BATTERY ROOM FLOOR IS TO BE FITTED WITH NON-SLIP, ACID RESISTANT VINYL AS PER THE REQUIREMENTS OF ISO-95-13-001-02.
- NOTE 14: HIGH FREQUENCY MESH IS TO BE LAID WITHIN THE GIS FLOOR AND SUIT SWITCHGEAR MANUFACTURER REQUIREMENTS. FOR FURTHER DETAILS ON EMBROID EARTHING REQUIREMENTS, REFER TO ERGRID'S FUNCTIONAL SPECIFICATION XDS-GFS-12-001.
- NOTE 15: ROLLER SHUTTER DOOR EXTENDS TO CEILING LEVEL OF THE GROUND FLOOR OF THE GIS BUILDING.
- NOTE 16: FIRE AND ALARM PANELS TO BE LOCATED IN THE VICINITY OF THE MAIN ENTRANCE.
- NOTE 17: A TELECOMS EARTH BAR SHALL BE INSTALLED IN CLOSE PROXIMITY TO THE OCC RTU.
- NOTE 18: NO ELECTRICAL EQUIPMENT (INCL. BATTERIES) SHALL BE INSTALLED DIRECTLY IN FRONT OF VENTS.
- NOTE 19: RELAY ROOM FLOOR CONSTRUCTION TO SUIT ROOM REQUIREMENTS.
- NOTE 20: ROOF ACCESS IS TO BE EVALUATED AT THE DETAIL DESIGN STAGE BY CONDUCTING A RISK ASSESSMENT.
- NOTE 21: CABLE SUPPORT STEELWORK TO BE PROVIDED BY THE CONTRACTOR. WALL TO BE CAPABLE OF SUPPORTING HV CABLES, RING CT'S etc.
- NOTE 22: AN OPENING SHALL BE PROVIDED UNDER THE STAIRS FOR CABLE PULLING.
- NOTE 23: SUITABLE ANCHOR POINTS SHALL BE INSTALLED FOR CABLE PULLING.
- NOTE 24: CABLE PIT AND ARE INTENDED TO PROVIDE AN UNIMPEDED ROUTE OF ESCAPE FROM THE PIT IN THE EVENT OF AN EMERGENCY. BRIGGS ARE TO BE CONSTRUCTED WITH A NON-METALLIC MATERIAL, I.E. GLASS REINFORCED PLASTIC.
- NOTE 25: CABLE PIT ENTRY DUCTS LOCATIONS ARE INDICATIVE ONLY. DUCTING SHALL BE FACILITATED TO SUIT THE ULTIMATE DEVELOPMENT OF THE STATION TO REDUCE THE POSSIBILITY OF WATER INGRESS.
- NOTE 26: RISK ASSESSMENT TO BE CARRIED OUT AT DETAIL DESIGN STAGE TO EVALUATE THE REQUIREMENT FOR FORCED VENTILATION WITHIN CABLE PIT.
- NOTE 27: LAW ROUES LOCATED IN THE CABLE BASEMENTS SHALL BE READILY ACCESSIBLE FOR OPERATIONS STAFF FOR MAINTENANCE PURPOSES. WITH SAFETY SIGNAGE AS OUTLINE IN THE ERGRID CABLE SPECIFICATIONS.
- NOTE 28: TELECOMMUNICATION DUCTS SHALL BE ROUTED DIRECTLY TO THE RELAY ROOM AS PER ESB TELECOMS REQUIREMENTS.
- NOTE 29: MINIMUM CLEAR DISTANCE BETWEEN 220V BATTERY STANDS AND WALLS IS 300mm.
- NOTE 30: BATTERIES SHOULD BE LOCATED AWAY FROM THE WALL TO ENSURE ACCESS TO ALL BATTERY CELLS FOR MAINTENANCE. BATTERIES SHOULD NOT BE LOCATED IN FRONT OF AIR VENTS.
- NOTE 31: MINIMUM VENT DIMENSIONS: 900 x 250mm.
- NOTE 32: DETAIL DESIGN IS TO CARRY OUT APPROPRIATE RISK ASSESSMENT & VENTILATION CALCULATIONS TO EVALUATE BATTERY ROOM VENT REQUIREMENTS.
- NOTE 33: MINIMUM CLEAR DISTANCE BETWEEN 220V BATTERY STANDS AND WALLS IS 300mm.
- NOTE 34: EQUIPMENT ACCESS DOOR TO BE SIZED SUCH THAT A STANDARD ESB TRUCK CAN BE REVERSED IN THE HOIST AREA (MIN 4000mm WIDTH).
- NOTE 35: ROLLER SHUTTER DOOR EXTENDS TO CEILING LEVEL OF THE GROUND FLOOR OF THE GIS BUILDING.
- NOTE 36: FIRE AND ALARM PANELS TO BE LOCATED IN THE VICINITY OF THE MAIN ENTRANCE.
- NOTE 37: A TELECOMS EARTH BAR SHALL BE INSTALLED IN CLOSE PROXIMITY TO THE OCC RTU.
- NOTE 38: NO ELECTRICAL EQUIPMENT (INCL. BATTERIES) SHALL BE INSTALLED DIRECTLY IN FRONT OF VENTS.
- NOTE 39: RELAY ROOM FLOOR CONSTRUCTION TO SUIT ROOM REQUIREMENTS.
- NOTE 40: SPACE SHOULD BE CONSIDERED FOR ADDITIONAL TELECOMS AND PROTECTION PANELS.
- NOTE 41: INDICATIVE CABLE ACCESS SIGN.
- NOTE 42: A TELECOMS EARTH BAR SHALL BE INSTALLED IN CLOSE PROXIMITY TO THE OCC RTU.
- NOTE 43: NO ELECTRICAL EQUIPMENT (INCL. BATTERIES) SHALL BE INSTALLED DIRECTLY IN FRONT OF VENTS.
- NOTE 44: RELAY ROOM FLOOR CONSTRUCTION TO SUIT ROOM REQUIREMENTS.
- NOTE 45: ROOF ACCESS IS TO BE EVALUATED AT THE DETAIL DESIGN STAGE BY CONDUCTING A RISK ASSESSMENT.

01	LAYOUT REVISED IN LINE WITH ESBN DUE DILIGENCE, FIRE/BUILDING REGULATIONS, EXTERNAL BUILDING DIMENSIONS UPDATED TO MATCH CUSTOMER REQUIREMENTS, INTERNAL BUILDING UPDATES, ADDITIONAL NOTES ADDED	DA	NK	CF	01/09/2020
00	FIRST ISSUE	JD	NK/KMcG	CF	19/07/2019
REV	DESC	DRWN	CHECKED	APPROVED	DATE

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PROJECT: **GENERIC DESIGN STANDARD 220kV GIS STATION**
DRAWING TITLE: **220kV GIS STATION LAYOUT PLAN VIEW - 12 BAY STATION**

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No of SHS	2	SIZE	A1	SCALE	NTS
DRAWING NUMBER	XDN-LAY-ELV-STND-F-004	SHEET	002	REV	01