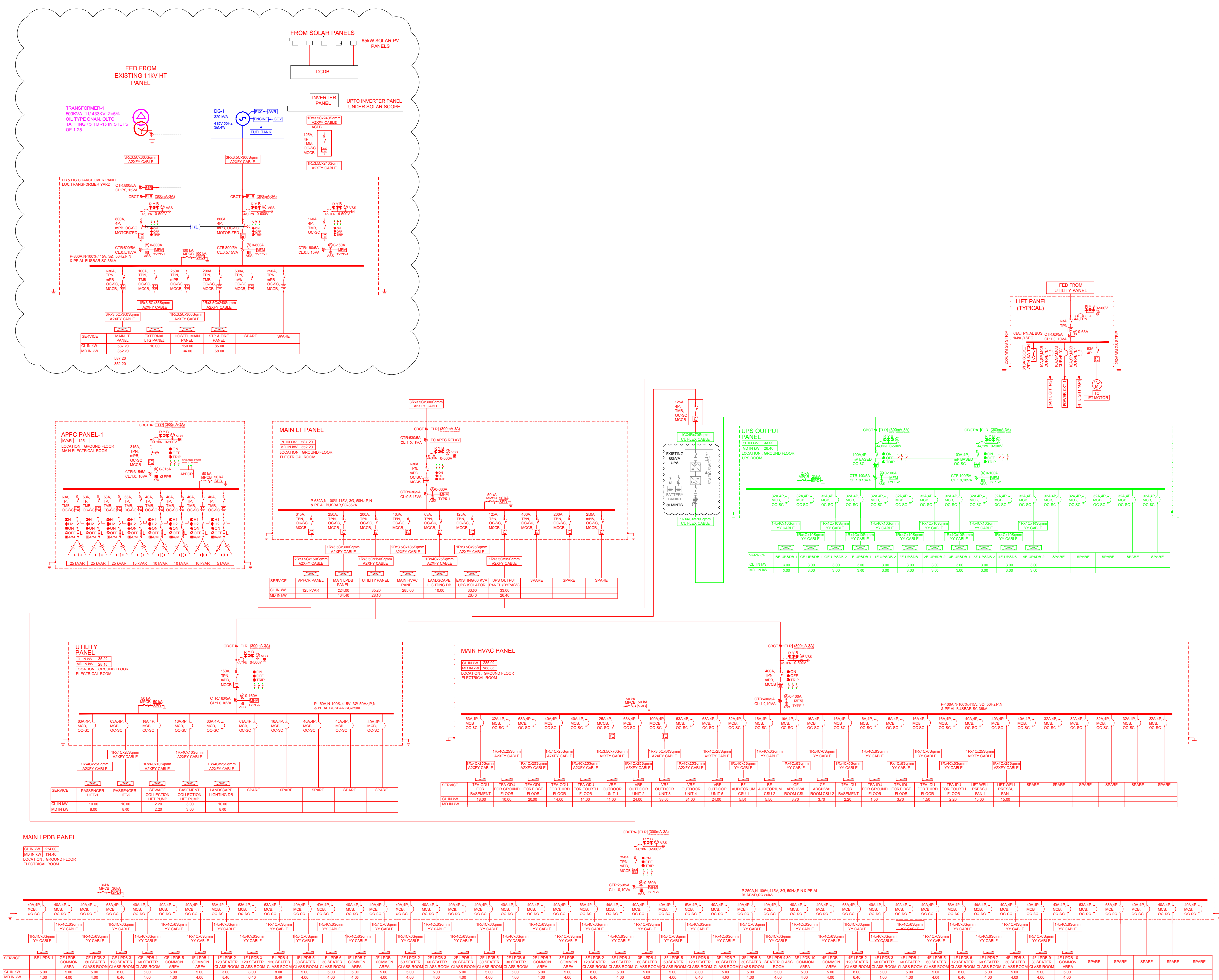


TO BE DISCUSSED FOR THE LOAD SHEET FURTHER DEVELOPMENT FOR THE HIGH-SIDE AREA.



LEGENDS

	DIESEL GENERATOR
	TRANSFORMER WITH DYN, NEUTRAL BROUGHT OUT
	AIR CIRCUIT BREAKER (ACB), EDO TYPE, MOTORIZED, WITH OC-SC-EF RELEASES (μP)
	AIR CIRCUIT BREAKER (ACB), EDO TYPE, MOTORIZED, WITH OC-SC RELEASES (μP)
	AIR CIRCUIT BREAKER (ACB), MDO TYPE, WITH OC-SC RELEASES (μP)
	AIR CIRCUIT BREAKER (ACB), MDO TYPE, WITH OC-SC-EF RELEASES (μP)
	AIR CIRCUIT BREAKER (ACB), MDO TYPE, WITHOUT RELEASES
	MOLDED CASE CIRCUIT BREAKER (MCCB) MDO TYPE, WITH OC-SC-EF RELEASES(μP)
	MOLDED CASE CIRCUIT BREAKER (MCCB) MDO TYPE, WITH OC-SC RELEASES(μP)
	MOLDED CASE CIRCUIT BREAKER (MCCB) EDO TYPE, WITH OC-SC RELEASES(μP)
	MOLDED CASE CIRCUIT BREAKER (MCCB) MDO TYPE, WITHOUT RELEASES
	MINIATURE CIRCUIT BREAKER (MCB)
	ISOLATOR
	MOTOR PROTECTION CIRCUIT BREAKER (MPCB)
	4P AUTO TRANSFER SWITCH WITH OVER LAPPING NEUTRAL (MAKE - ASCO)
	INDUCTANCE (L)
	DELTA CONNECTED CAPACITORS
	POTENTIAL TRANSFORMER (PT)
	CURRENT TRANSFORMER (CT)
	DUAL CORE CURRENT TRANSFORMER (CT)
	AMMETER WITH SELECTOR SWITCH
	VOLTMETER WITH SELECTOR SWITCH
	3PHASE SPIN INDUSTRIAL SOCKET WITH PLUG
	1PHASE 3PIN INDUSTRIAL SOCKET WITH PLUG
	POTENTIAL FREE CONTACT FOR ON/OFF/TRIP STATUS FOR BMS INTEGRATION

LEGENDS

H1	R PHASE ON
H2	Y PHASE ON
H3	B PHASE ON
H4	VCB ON
H5	VCB OFF
H6	VCB TRIP
H7	TRIP CKT HEALTHY
H8	SPRING CHARGED
H9	VCB TEST
H10	VCB SERVICE

LEGENDS

	KILOWATT HOUR METER WITH RS-485
	DUAL KILOWATT HOUR METER WITH RS-485
	POWER FACTOR METER WITH RS-485
	EARTH LEAKAGE RELAY (300mA-3A)WITH CBCT MICROPROCESSOR BASED.
	MULTI DATA METER WITH RS-485
	TRANSIENT VOLTAGE SURGE SUPPRESSOR (ASCO)
	TRIVECTOR METER WITH RS-485
	AUTO POWER FACTOR CORRECTION RELAY
	MULTI FUNCTION METER WITH : ION9000 / EQUIVALENT
	MULTI FUNCTION METER WITH : EM6438 / EQUIVALENT
	ILLUMINATED PUSH BUTTON
	MOTORIZED POTENTIOMETER WITH JOY STICK
	INDICATING LAMPS
	AUTO MANUAL SELECTOR SWITCH
	PUSH BUTTON (OFF)
	PUSH BUTTON (ON)
	SHORT CIRCUIT PROTECTION
	OVER CURRENT PROTECTION
	EARTH FAULT PROTECTION
	AUTO MAINS FAILURE
	CORE BALANCE CURRENT TRANSFORMER
	AUTO TRANSFER SWITCH
	PROGRAMMABLE LOGIC CONTROLLER
	SUB MAIN DISTRIBUTION BOARD
	RISE / LOWER
	EMERGENCY PUSH BUTTON
	INSULATION MONITORING DEVICE
	OVER LAPPING NEUTRAL
	BUS COUPLER
	OVER LOAD RELAY
	LOCAL REMOTE SWITCH
	TRIP CIRCUIT/COIL SUPERVISION RELAY
	DISTRIBUTION BOARD
	LIGHTING DISTRIBUTION BOARD
	POWER DISTRIBUTION BOARD
	EMERGENCY LIGHTING DISTRIBUTION BOARD
	UNINTERRUPTED POWER SUPPLY DB
	EMERGENCY POWER DISTRIBUTION BOARD
	FRONT DISPLAY MODULE
	POWER MONITOR
	SURGE PROTECTION DEVICE

CABLE NOTATIONS

AYFY -	PVC INSULATED PVC SHEATHED FLAT STRIP ARMoured ALUMINIUM CONDUCTOR CABLE
AYWY -	PVC INSULATED PVC SHEATHED ROUND WIRE ARMoured ALUMINIUM CONDUCTOR CABLE
YFY -	PVC INSULATED PVC SHEATHED FLAT STRIP ARMoured COPPER CONDUCTOR CABLE
YWY -	PVC INSULATED PVC SHEATHED ROUND WIRE ARMoured COPPER CONDUCTOR CABLE
AYY -	PVC INSULATED PVC SHEATHED UNARMoured ALUMINIUM CONDUCTOR CABLE
YY -	PVC INSULATED PVC SHEATHED UNARMoured COPPER CONDUCTOR CABLE
A2XFY -	XLPE INSULATED PVC SHEATHED FLAT STRIP ARMoured ALUMINIUM CONDUCTOR CABLE
A2XWY -	XLPE INSULATED PVC SHEATHED ROUND WIRE ARMoured ALUMINIUM CONDUCTOR CABLE
A2XY -	XLPE INSULATED PVC SHEATHED UNARMoured ALUMINIUM CONDUCTOR CABLE
XYF -	XLPE INSULATED PVC SHEATHED FLAT STRIP ARMoured COPPER CONDUCTOR CABLE

NOTES

- * NEUTRAL SIZING IN ALL PANELS SHALL BE RATED FOR 100% OF PHASE UNLESS OTHERWISE SPECIFIED.
- * ALL GLAND PLATES SHALL BE MADE OUT OF ALUMINIUM SHEET.
- * ALL ACB'S SHALL HAVE THE FOLLOWING FEATURES AS MUST NP BASED, SAFETY SHUTTER LOCK, DOOR INTERLOCK, READY TO CLOSE CONTACT, ARC CHUTE COVER.
- * CAPACITOR BANKS OPERATING VOLTAGE 415VOLTS, WITHSTAND VOLTAGE 550VOLTS
- * NECESSARY CONTROL WIRING BETWEEN GRID POWER CT AND APFC SHALL BE DONE TO ENSURE CAPACITOR BANKS OPERATE ONLY ON GRID SUPPLY
- * ALL kWh, PM SHALL HAVE COMMUNICATION RS485/RS232/RTU MOBILE COMMUNICATION PORT
- * WIRING BETWEEN GENERATOR BUS & SUB-METER, COMMUNICATION CABLEING UP TO BMS SYSTEMSWITCH SHALL BE CARRIED OUT AS PRESCRIBED BY DIGITAL METER SUPPLIER.
- * ALL LTY SYSTEM CONTROL SUPPLY SHOULD BE 110V AC BY USING 50-60V CENTER TAPPED CONTROL TRANSFORMER WITH SUITABLE PRIMARY/ SECONDARY PROTECTION ARRANGEMENT
- * ALL THE SUB PANEL IN CORNER SHALL BE SUITABLE FOR BMS COMPATIBILITY.
- * REQUIRED CONTROL SUPPLY NEEDS TO BE GENERATED INTERNALLY USING POWER PACK, NO EXTERNAL SUPPLY SHALL BE PROVIDED.
- * ALL MCCB BEYOND 250A SHALL BE MICROPROCESSOR BASED AND UP TO 200A SHALL BE THERMAL MAGNETIC

IBMS INTEGRATION

- * SEPARATE CUBICLE TO BE CONSIDERED TO PLACE THE TERMINAL BLOCKS OF ALL BREAKER, AUX. CONTACTS FOR ON/OFF & TRIP.
- * ALL RS-485 PORTS SHALL BE LOOPED AND TERMINATED IN THE ABOVE TERMINAL COMPARTMENT
- * ALL TRIP RELAY CONTACTS TO BE WIRED AND TERMINATED FOR BMS CONNECTIVITY.
- * ALL TRIP RELAY CONTACTS TO BE WIRED AND TERMINATED FOR BMS CONNECTIVITY.

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REV. NO.	REVISION DESCRIPTION	DATE
R0	ISSUED FOR TENDER	11.02.2025
R1		
R2		
R3		
R4		
R5		
R6		

PROJECT

JSW ACADEMIC BLOCK - NLSIU
NEW ACADEMIC BLOCK Gnana Bharathi Main Rd, Teachers Colony, Naagarabhaavi, Bengaluru, Karnataka 560072

CLIENT

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DRAWING TITLE

SINGLE LINE DIAGRAM

DRAWN BY	SSK	DRAWING NUMBER	SCALE	1:150
CHECKED	SSK	LCS-NLS-E-001	SHEET SIZE	A1
APPROVED	PD	REV - R0	DATE	11.02.2025

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NEW ACADEMIC BLOCK Gana Bharathi
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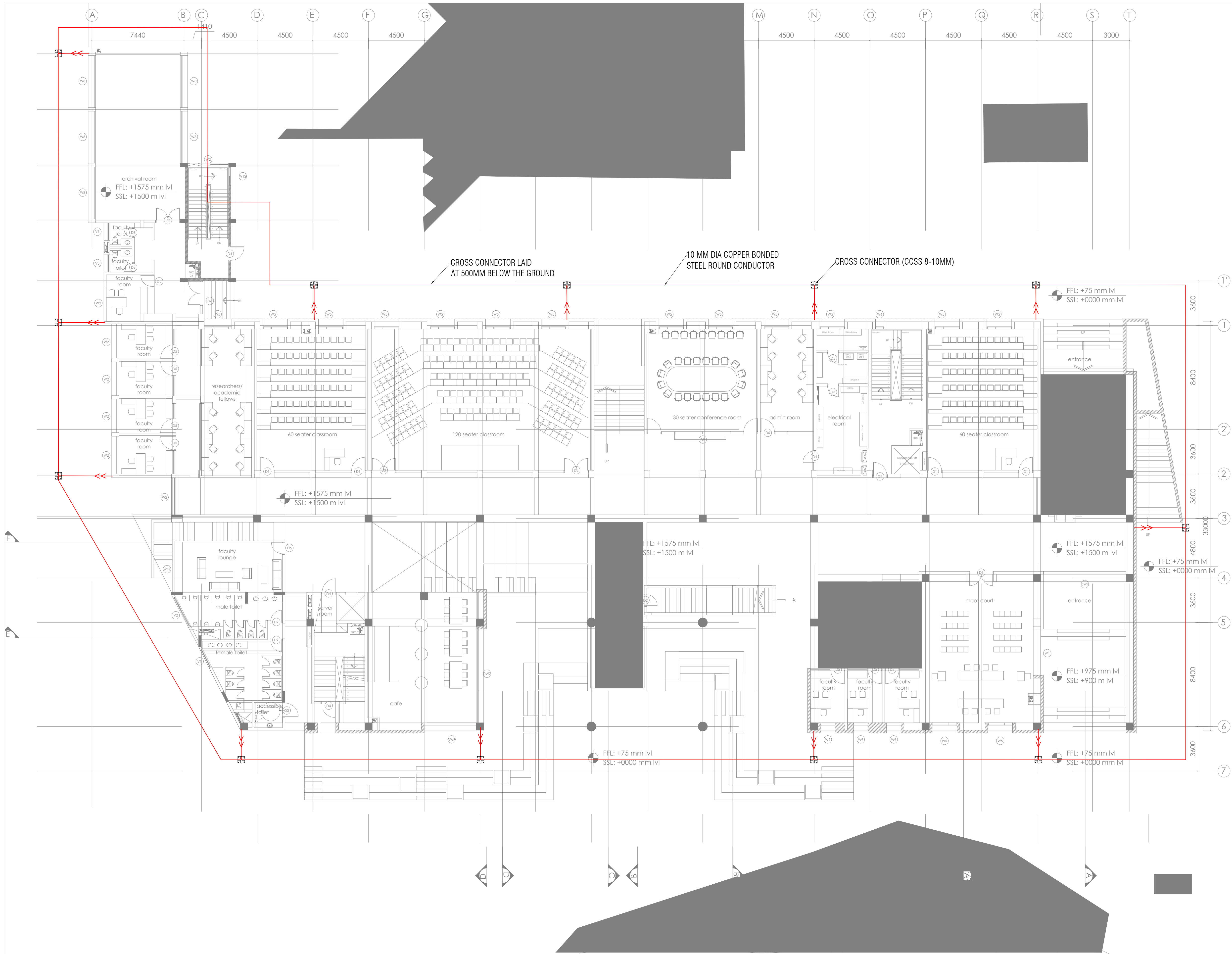
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DRAWING TITLE			
EXTERNAL ELECTRICAL LAYOUT			
DRAWN BY	HMD	DRAWING NUMBER	SCALE
CHECKED	SSK	LCES-NLS-E-002	SHEET SIZE
APPROVED	PD	REV - R0	DATE

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LEGEND

	8 MM DIA ALUMINIUM ROUND CONDUCTOR
	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
	CROSS CONNECTOR (CCSS 8-10 MM)
	EXPANSION JOINT WITH CONNECTOR
	PARAPET CONDUCTOR HOLDER
	2 MTR VAT WITH WALL CLAMP
	CONDUCTOR HOLDER
	TERRACE CONDUCTOR HOLDER
	DOWN CONDUCTOR
	LIGHTNING COUNTER
	TEST JOINT WITH ENCLOSURE
	3 MTR VAT WITH WALL CLAMP

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R2		
R3		
R4		
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R6		

PROJECT

JSW ACADEMIC BLOCK - NLSIU
NEW ACADEMIC BLOCK Gnan Bharathi
Main Rd, Teachers Colony, Naagarabhaavi,
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DRAWING TITLE

LIGHTNING PROTECTION LAYOUT

DRAWN BY	HMD	DRAWING NUMBER	SCALE	1:150
CHECKED	SSK	LCES-NLS-E-005	SHEET SIZE	A1
APPROVED	PD	REV - R0	DATE	11.02.2025

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NOTE:-

AIR TERMINATION :

- 1) Level IV Protection based on the risk assessment.
- 2) Vertical Air Terminal is considered at the top of the building based on Rolling sphere method covering all corners and edges.
- 3) Fixing support for the conductor considered at every 1 mtr.
- 4) 8mm dia round Solid Aluminium alloy considered as conductor.
- 5) Expansion joints as well as accessories such as cross connectors, straight connectors included conforming IS/IEC 62305.

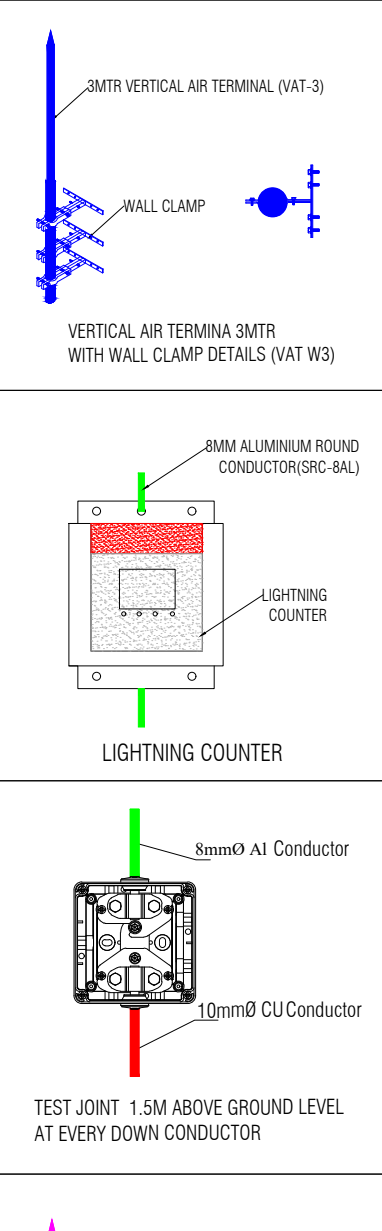
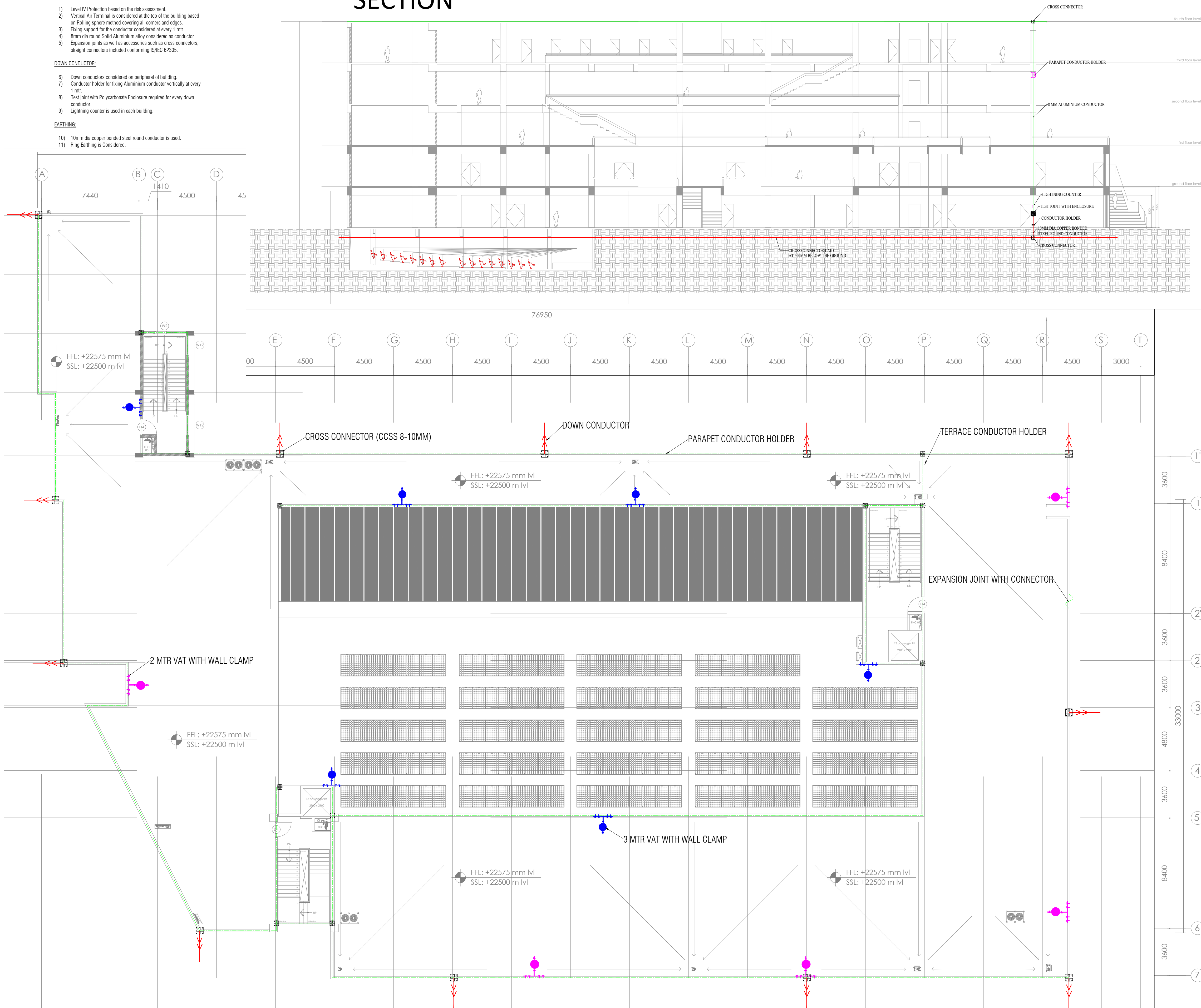
DOWN CONDUCTOR:

- 6) Down conductors considered on peripheral of building.
- 7) Conductor holder for fixing Aluminium conductor vertically at every 1 mtr.
- 8) Test joint with Polycarbonate Enclosure required for every down conductor.
- 9) Lightning counter is used in each building.

EARTHING:

- 10) 10mm dia copper bonded steel round conductor is used.
- 11) Ring Earthing is Considered.

SECTION



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	10 MM DIA COPPER BONDED STEEL ROUND CONDUCTOR
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	PARAPET CONDUCTOR HOLDER
	2 MTR VAT WITH WALL CLAMP
	CONDUCTOR HOLDER
	TERRACE CONDUCTOR HOLDER
	DOWN CONDUCTOR
	LIGHTNING COUNTER
	TEST JOINT WITH ENCLOSURE
	3 MTR VAT WITH WALL CLAMP

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PROJECT

JSW ACADEMIC BLOCK - NLSIU
NEW ACADEMIC BLOCK Gnan Bharathi
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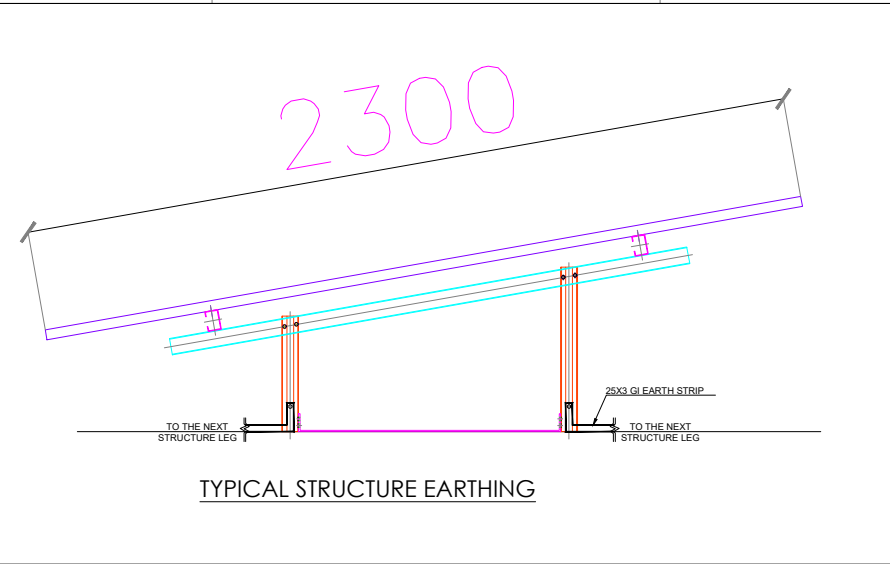
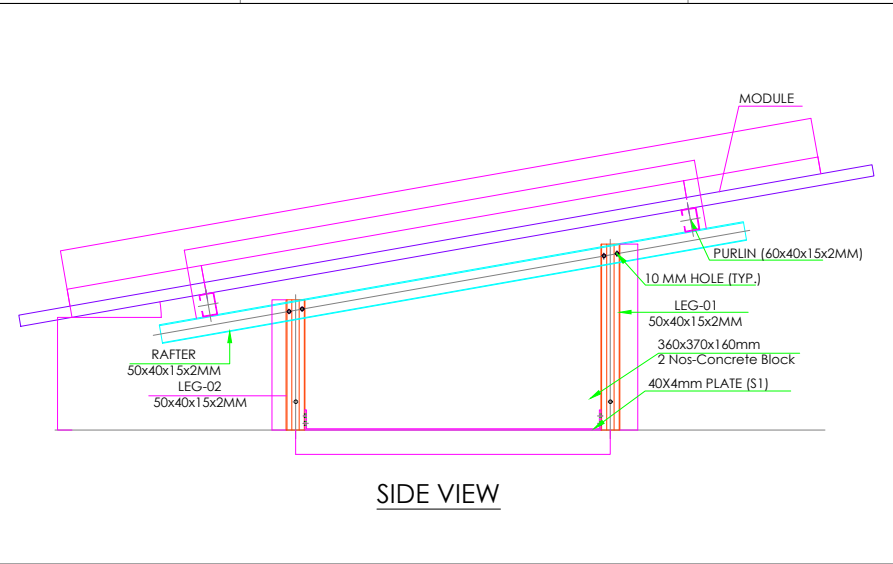
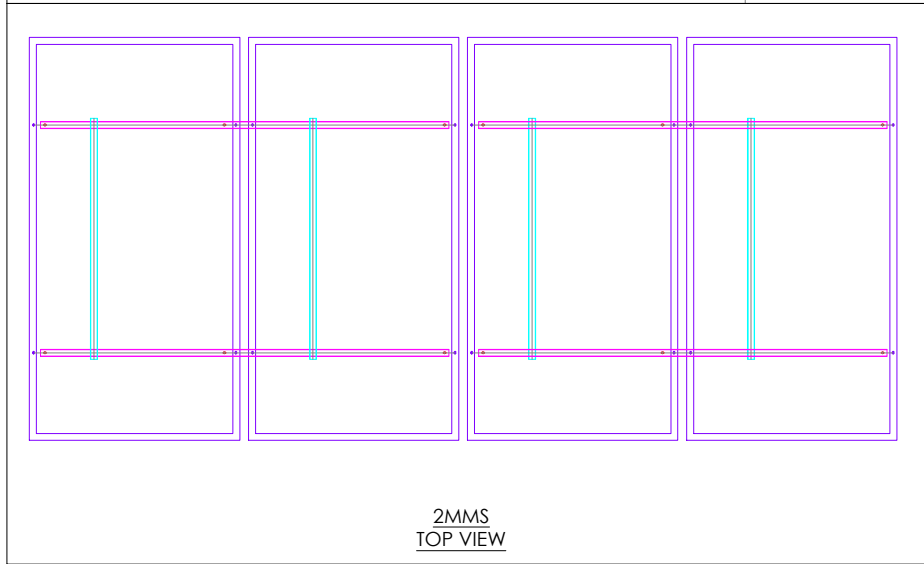
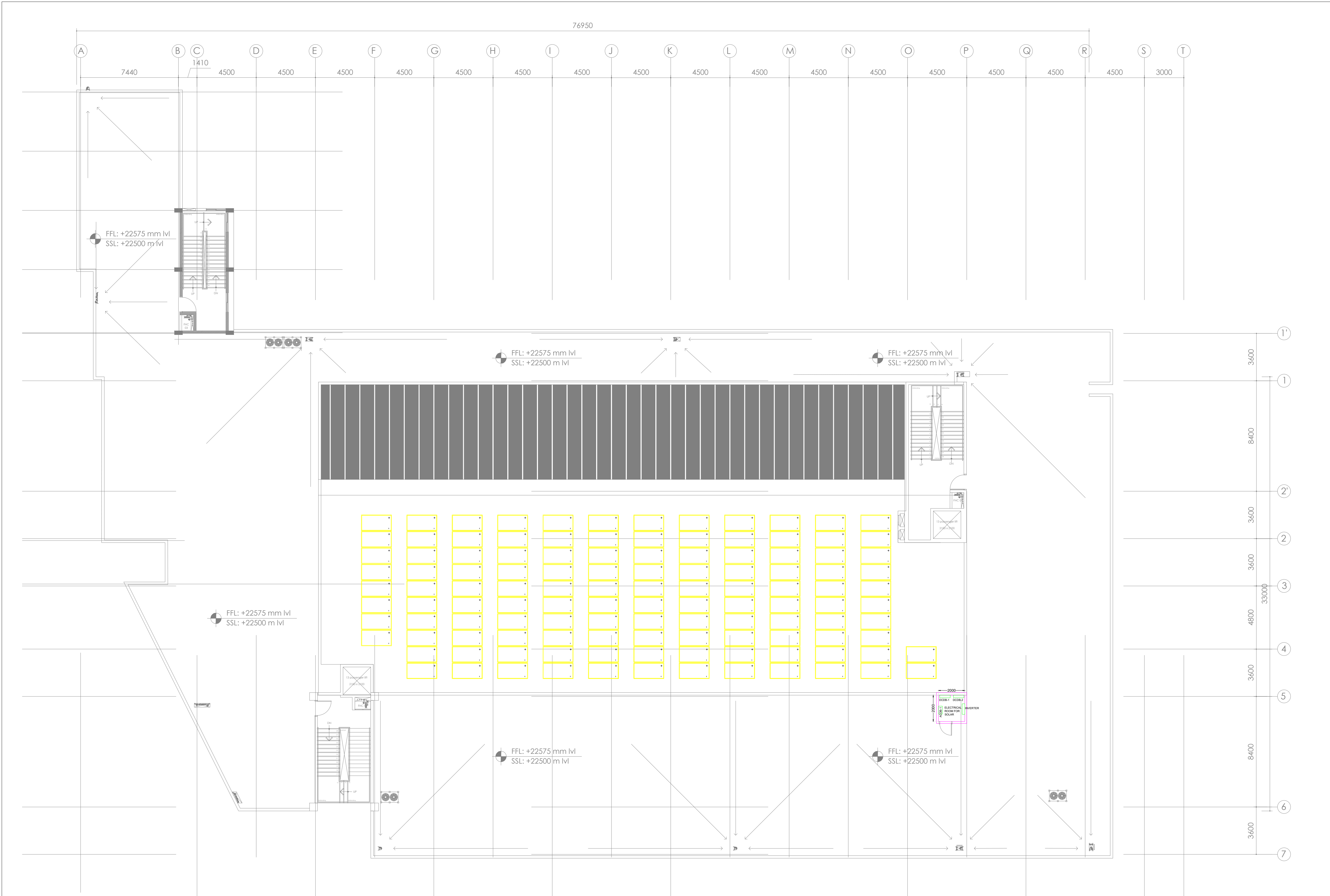
LIGHTNING PROTECTION LAYOUT

DRAWN BY	HMD	DRAWING NUMBER	LCES-NLS-E-006	SCALE	1:150
CHECKED	SSK	REV - R0		SHEET SIZE	A1
APPROVED	PD			DATE	11.02.2025

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SOLAR PV PLANT AT NATIONAL LAW SCHOOL			
LEGEND	MODULE CAPACITY	TOTAL NUMBER OF MODULES	TOTAL CAPACITY(kWp)
	550	120	66.00

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NEW ACADEMIC BLOCK Gnana Bharathi Main Rd, Teachers Colony, Naagarabhaavi, Bengaluru, Karnataka 560072

CLIENT

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DRAWING TITLE			
TERRACE SOLAR PANEL LAYOUT			
DRAWN BY	HMD	DRAWING NUMBER	SCALE
CHECKED	SSK	LCES-NLS-E-004	1:150
APPROVED	PD	REV - R0	SHEET SIZE A1
			DATE 11.02.2025

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