

LEGEND

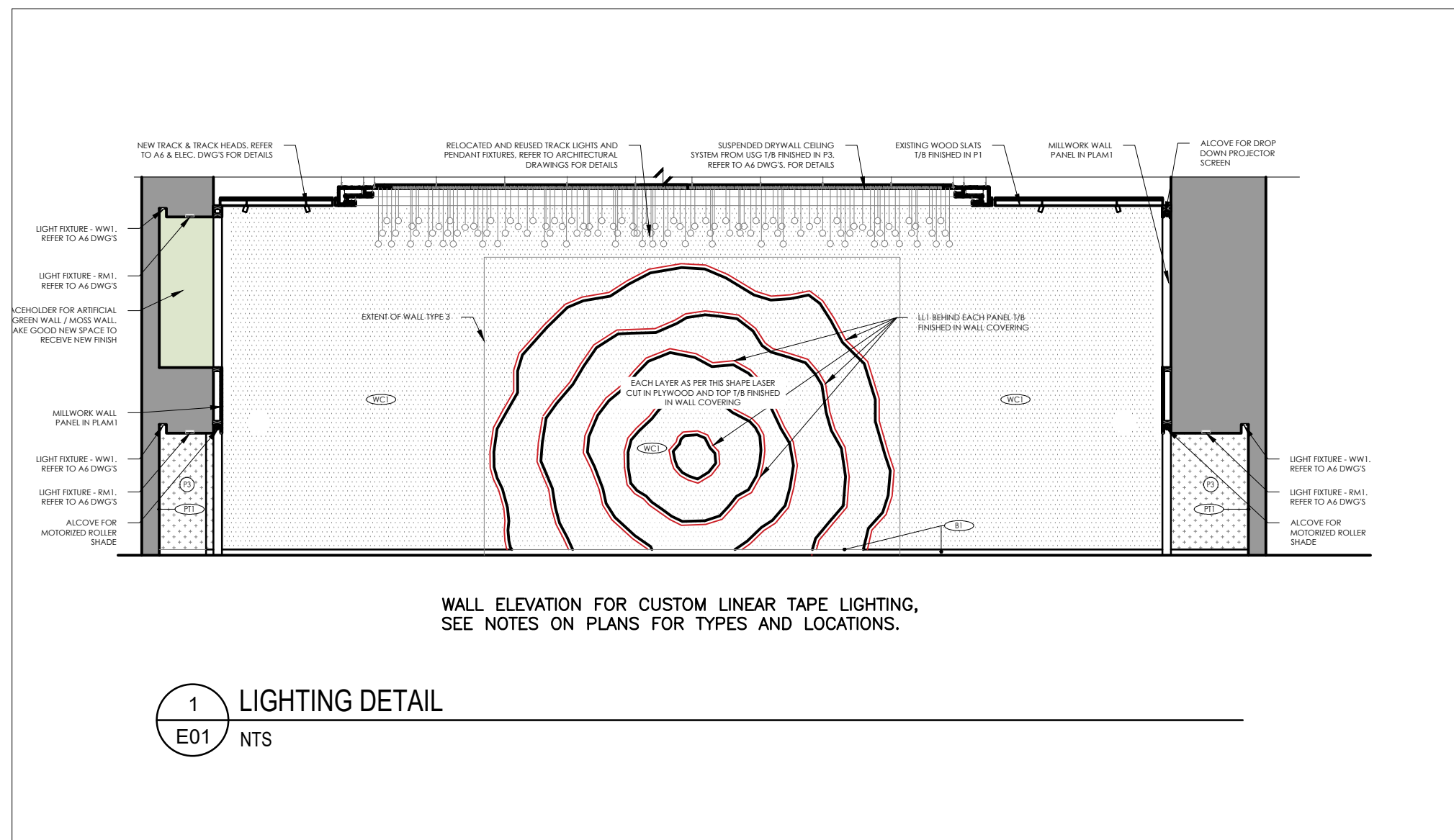
	LED LIGHT FIXTURE - LETTER DENOTES TYPE
	LUMINAIRE FED FROM EMERGENCY POWER
	INCANDESCENT, LED, FLUORESCENT OR HID CEILING MOUNTED DOWNLIGHT FIXTURE - LETTER DENOTES TYPE
	INCANDESCENT, LED, FLUORESCENT OR HID WALL FIXTURE - LETTER DENOTES TYPE
	EXIT LIGHT FIXTURE WALL OR CEILING MOUNTED, PICTOGRAM TYPE, 120V AC - REFER TO SPECIFICATIONS FOR MORE INFORMATION
	EMERGENCY LIGHTING TYPE 1 (SINGLE HEAD)& TYPE 2. (DOUBLE HEADS), LED, 24V, 7W PER HEAD. BAGHELLI® BTMR-MR16-LED-7W/HEAD-24V OR APPROVED EQUAL
	EMERGENCY BATTERY UNIT 24V, 144WH, BAGHELLI® NOVA-IN-24-144 OR APPROVED EQUAL
	LIGHT STANDARD.
	DUPLEX RECEPTACLE C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT.
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT.
	DUPLEX RECEPTACLE WITH SEPARATE NEUTRAL AND GROUND WIRE PER CIRCUIT.
	DUPLEX RECEPTACLE WITH SEPARATE NEUTRAL AND GROUND WIRE PER CIRCUIT MOUNTED ABOVE COUNTER.
	DUPLEX RECEPTACLE WITH WEATHERPROOF ENCLOSURE C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT.
	G.F.I DUPLEX RECEPTACLE C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT.
	G.F.I DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TYPE RECEPTACLE C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT
	T-SLOT SERVICE DUPLEX RECEPTACLE ON 20A CIRCUIT C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT
	USB CHARGER DUPLEX RECEPTACLE, 125W, 15A, 2-POLE, 3W, 5-15R (HUBBELL® USB 15X2 OR ATOTW HART (COOPER® TR7745). "TR" DENOTES TAMPER RESISTANT
	SPECIAL OUTLET AS NOTED
	SINGLE POLE LIGHT SWITCH.
	KEY OPERATED SWITCH
	DOOR ALARM SILENCING TOGGLE SWITCH
	THREE WAY LIGHT SWITCH
	LOW VOLTAGE LIGHT SWITCH WITH ONE BUTTON STATION
	LOW VOLTAGE LIGHT SWITCH WITH TWO BUTTON STATIONS (TYP.)
	ELECTRIC HEATING UNIT, NO. DENOTES TYPE
	HANDICAP PUSH BUTTON
	PANELBOARD
	MOTOR STARTER. LETTER F DENOTES FLUSH MTD, P= PILOT LIGHT, S=SURFACE MTD. EF-3 = EQUIPMENT CONTROLLED BY STARTER
	DISCONNECT SWITCH - WP DENOTES WEATHERPROOF
	COMBINATION MOTOR STARTER AND DISCONNECT
	MOTOR OUTLET AS NOTED
	MOTOR & DISCONNECT SWITCH TO SUIT
	TOUCHLESS DOOR OPERATOR SENSOR OR SENSOR FOR RELEASING MAGLOCK OR ELECTRIC STRIKE UNLESS SPECIFIED OTHERWISE.
	REQUEST TO EXIT DEVICE
	EMERGENCY PUSH BUTTON (CAMDEN 5/8" MUSHROOM, STAINLESS STEEL FLATEPATE, PUSH-ULL "PRESS FOR ASSISTANCE" - CM-4839/1/2) OF CALL FOR ASSISTANCE SYSTEM (CALL FOR ASSISTANCE SYSTEM SHALL BE CAMDEN® CX-WC10).
	THE EMERGENCY PUSH BUTTON SHALL BE MOUNTED ON A SINGLE GANG BOX. REFER FLOOR PLAN DWGS. FOR MORE INFORMATION.
	SINGLE GANG LED ANNUNCIATOR C/W SOUNDER, "ASSISTANCE REQUESTED" (CAMDEN: CM-4F5010) OF CALL FOR ASSISTANCE SYSTEM (CALL FOR ASSISTANCE SYSTEM SHALL BE CAMDEN® CX-WC10). REFER FLOOR PLAN DWGS. FOR MORE INFORMATION.
	SINGLE GANG DOME LIGHT WITH SOUNDER, "ASSISTANCE REQUIRED" (CAMDEN: CM-4F14050) OF CALL FOR ASSISTANCE SYSTEM (CALL FOR ASSISTANCE SYSTEM SHALL BE CAMDEN® CX-WC10).
	INDICATION LIGHT (ABOVE DOOR OF BF WASHROOM) PROVIDED BY DOOR HARDWARE SUPPLIER AND INSTALLED BY DIV.16.
	PUSH TO LOCK/EMERGENCY ACCESS PUSH BUTTON
	WATT STOPPER LMXD-100 OCCUPANCY/VACANCY SENSOR, DUAL TECH WALL CORNER MOUNT C/W ROOM CONTROLLERS AS REQUIRED. LIGHTING CONTROL TO BE MANUAL-ON, AUTO-OFF.
	WATT STOPPER DW-100-120 DUAL TECHNOLOGY WALLSWITCH SENSOR LINE VOLTAGE, AUTO-ON, AUTO-OFF.
	WATT STOPPER LMUC-100 OCCUPANCY SENSOR, ULTRA SONIC CEILING MOUNT C/W ROOM CONTROLLERS AS REQUIRED.
	WALL MOUNTED DUAL TECHNOLOGY TWO RELAY LINE VOLTAGE OCCUPANCY SENSOR. WATT STOPPER DW-200-120. MANUAL-ON, AUTO-OFF
	WATT STOPPER LMDC-100 OCCUPANCY/VACANCY SENSOR, DUAL TECH CEILING MOUNT, 360 DEGREES C/W ROOM CONTROLLERS AS REQUIRED. LIGHTING CONTROL TO BE MANUAL-ON, AUTO-OFF.
	WATT STOPPER LMDC-100 OCCUPANCY/VACANCY SENSOR, DUAL TECH CEILING MOUNT, 360 DEGREES C/W ROOM CONTROLLERS AS REQUIRED. LIGHTING CONTROL TO BE AUTO-ON, AUTO-OFF.
	WATT STOPPER LMLS-500 OPEN LOOP DAYLIGHT SENSOR.
	WATT STOPPER LS-102 DAYLIGHT SENSOR C/W POWER PACK FOR LIGHTING CONTROL IN SUITES. THE POWER PACK SHALL BE LOCATED IN NEAREST ACCESSIBLE CEILING SPACE.
	MOTION DETECTOR FOR DOOR OPERATOR
	INTERMATIC S303MWK 30 MINUTE SPRING WOUND TIMER, WHITE

LEGEND (CONTD.)

	F	RECESSED FLOOR BOX C/W COVER (COVER TO SUIT TYPE OF FLOOR FINISH, VERIFY ON SITE FOR THE FLOOR FINISH) AND DEVICES AS PER LAYOUT DWGS. WIREMOLD RFB-SS SERIES, FINISH TO ARCHITECT SELECTION.
	P F	FLUSH FLOOR MOUNTED FLOORBOX C/W COVER (TO SUIT FLOOR, VERIFY ON SITE FOR THE FLOOR FINISH PRIOR TO ORDERING), WIREMOLD, FIRE RATED, POKE THROUGH, EVOLUTION TYPE, 6AT SERIES C/W DEVICES AS INDICATED ON FLOOR PLANS & COVER TO SUIT TYPES OF FLOORS. THE FLOOR BOX SHALL BE FED FROM CEILING SPACES OF FLOOR BELOW VIA FIRE RATED CONDUITS/SLEEVES REFER ARCHITECTURAL DRAWINGS FOR TYPE OF FLOORS AND PROCEED ACCORDINGLY. COVER FINISH OF ALL FLOOR BOXES TO BE AS PER ARCHITECT SELECTION.
		PHOTO ELECTRIC SMOKE DETECTOR
		120V AC 2-W-1 LED STROBE SMOKE ALARM C/W STROBE & 10 YEAR SEALED BATTERY BACK-UP (KIDDE# P4010ACLEDSCA).
WG		FIRE ALARM MANUAL STATION C/W PLASTIC COVER WITH LOCAL HORN - LETTERS WG DENOTES WIREGUARD
$\frac{2}{\phi}$		AUTOMATIC FIRE DETECTOR RATE OF RISE 135 DEG. F. UNLESS NOTED OTHERWISE - NUMBER DENOTES ZONE, LETTER G DENOTES GUARD
	S	FIRE ALARM STROBE.
		FIRE ALARM BELL (6=6", 10=10").
	AV	A/V OUTLET
		VGA MONITOR OUTLET (SINGLE GANG BACKBOX) C/W 41mm CONDUIT TO CEILING MOUNTED AV OUTLET
	M	MICROPHONE JACK FOR LOCAL SOUND SYSTEM. REFER SCHEMATIC DIAGRAM FOR ROUGH-IN REQUIREMENTS.
		TELEPHONE OUTLET (SINGLE GANG BACKBOX) C/W 21mm EMT CONDUIT (27MM CONDUIT IN CASE DROPS ARE MORE THAN 3) TO ACCESSIBLE CEILING SPACE IN NEAREST CORRIDOR & WIRING UPTO NEAREST LT. CLOSET (COMMUNICATION PLYBOARD). REFER TO SPECIFICATIONS FOR MORE INFORMATION.
2		TELEPHONE/DATA OUTLET (SINGLE GANG BACKBOX) C/W 21mm EMT CONDUIT (27MM CONDUIT IN CASE DROPS ARE MORE THAN 3) TO ACCESSIBLE CEILING SPACE IN NEAREST CORRIDOR & WIRING UPTO NEAREST LT. CLOSET (COMMUNICATION PLYBOARD). REFER TO SPECIFICATIONS FOR MORE INFORMATION. NUMBER DENOTES NUMBER OF DROPS.
2		DATA OUTLET (SINGLE GANG BACKBOX) - C/W 21mm EMT CONDUIT (27MM CONDUIT IN CASE DROPS ARE MORE THAN 3) TO ACCESSIBLE CEILING SPACE IN NEAREST CORRIDOR & WIRING UPTO NEAREST LT. CLOSET (COMMUNICATION PLYBOARD). REFER TO SPECIFICATIONS FOR MORE INFORMATION.. NUMBER DENOTES NUMBER OF DATA DROPS
2		DATA OUTLET (SINGLE GANG BACKBOX) MOUNTED ABOVE COUNTER - C/W 21mm EMT CONDUIT (27MM CONDUIT IN CASE DROPS ARE MORE THAN 3) TO ACCESSIBLE CEILING SPACE IN NEAREST CORRIDOR & WIRING UPTO NEAREST LT. CLOSET (COMMUNICATION PLYBOARD). REFER TO SPECIFICATIONS FOR MORE INFORMATION.. NUMBER DENOTES NUMBER OF DATA DROPS
	ES	DOOR ELECTRIC STRIKE
	KP	KEY PAD (DOOR ACCESS SYSTEM) C/W ALUMINUM PLATE COVER (Ø 1100MM) & 16mm EMT CONDUIT TO DOOR ACCESS PANEL VIA A JUNCTION BOX LOCATED IN NEAREST ACCESSIBLE CEILING SPACE. OR KEY PAD FOR RELEASING MAGLOCK, UNLESS NOTED OTHERWISE.
	DC	DOOR CONTACT-SECURITY SYSTEM C/W 16MM CONDUIT TO SECURITY PANEL VIA A JUNCTION BOX LOCATED IN NEAREST ACCESSIBLE CEILING SPACE.
	CR	CARD READER (DOOR ACCESS SYSTEM) C/W ALUMINUM PLATE COVER (Ø 1100MM) & 16mm EMT CONDUIT TO DOOR ACCESS PANEL VIA A JUNCTION BOX LOCATED IN NEAREST ACCESSIBLE CEILING SPACE UNLESS NOTED OTHERWISE.
	DO	DOOR HOLD OPEN DEVICE
	CH	CABLE TV OUTLET C/W 27MM CONDUIT TO ACCESSIBLE CEILING SPACE IN NEAREST CORRIDOR.
	JB	JUNCTION BOX
		50 MM(2") CONDUIT SLEEVE THRU WALL ABOVE CEILING
	M	MOTION DETECTOR FOR RELEASING ELECTRIC STRIKE OF DOOR
	WAP	WIRELESS ACCESS POINT C/W A DATA DROP.

LEGEND (CONTD.)	
FG	DENOTES FRIDGE
MD	DENOTES MOTORIZED DAMPER
PT	DENOTES HEAT PIPE TRACING
WG	DENOTES WIRE GUARD
DO	DENOTES DOOR OPERATOR
DR	DENOTES DRYER
WSH	DENOTES WASHER
CUH	DENOTES CABINET UNIT HEATER
CV	DENOTES CONTROL VALVE
EFC	DENOTES ELECTRONIC FAUCETS
WP	DENOTES WEATHERPROOF
HD	DENOTES HAND DRYER
FACP	DENOTES FIRE ALARM CONTROL PANEL
F.A.A.P.	DENOTES FIRE ALARM ANNUNCIATOR PANEL (RECESSED IN WALL). THE ANNUNCIATOR PANELS/PASSIVE GRAPHICS SHALL BE PROVIDED AT VARIOUS LOCATIONS AS FOLLOWS: 1. FIRE ALARM LED ANNUNCIATOR PANEL C/W PASSIVE GRAPHICS AND TWO KEY SWITCHES (ONE KEY SWITCH TO RELEASE ALL MAG LOCKS IN THE BUILDING & OTHER KEY SWITCH TO SELECT STAGES OF THE FIRE ALARM SYSTEM) IN VESTIBULE-101. 2. FIRE ALARM LCD ANNUNCIATOR PANEL IN MULTI DISP.STATION ROOM-145. 3. FIRE ALARM LCD ANNUNCIATOR PANEL IN MULTI DISP.STATION ROOM-221. 4. FIRE ALARM LCD ANNUNCIATOR PANEL IN MULTI DISP.STATION ROOM-248. 5. FIRE ALARM LCD ANNUNCIATOR PANEL IN MULTI DISP.STATION ROOM-321.
LV	THE KEY SWITCHES OF THE ANNUNCIATOR PANEL LOCATED IN VESTIBULE-101 SHALL BE FOR THE SELECTION OF STAGES OF THE FIRE ALARM SYSTEM & TO RELEASE ALL MAG LOCKS IN THE BUILDING.
FMP	FIRE ALARM MONITORING PANEL. PROVIDE A DEDICATED TELEPHONE LINE FOR THE MONITORING PANEL. ALSO PROVIDE 1-16MM CONDUIT & WIRING FROM THIS PANEL TO FACP.
UH	DENOTES UNIT HEATER
CF-1	DENOTES CEILING FAN-1 (TYP.)
S/S	DENOTES SUB STATION
HV	DENOTES HIGH VOLTAGE
TRF.	DENOTES TRANSFORMER
A/C	DENOTES AIR CONDITIONER
VU-1	DENOTES VENTILATING UNIT#1 (TYP.)
RG	DENOTES RANGE
RH	DENOTES RANGE HOOD
DW	DENOTES DISHWASHER
MW	DENOTES MICROWAVE
COMM.	DENOTES COMMUNICATION/COMPUTER
RECEP.	DENOTES RECEPTACLES
AFCI	DENOTES ARC FAULT CURRENT INTERRUPTER
BVT	DENOTES VARIABLE VOLUME TERMINAL-MECH. EQUIPMENT
BKR.	DENOTES BREAKER
BMS	DENOTES BUILDING MANAGEMENT SYSTEM
SW. BD.	DENOTES SWITCHBOARD
P.C.E.	DENOTES PATIENT CARE ENVIRONMENT
RECEP.	DENOTES RECEPTACLE/RECEPTACLES
WH-1	DENOTES WATER HEATER-1 (TYP.)
CIRC.	DENOTES CIRCULATING
EX.	DENOTES EXISTING TO REMAIN
1A-1	DENOTES EQUIPMENT FED FROM PANEL '1A' AND BREAKER #1
1A-2.1	DENOTES EQUIPMENT FED FROM PANEL '1A' AND BREAKER #2 AND CONTROLLED BY SWITCH #1
1A-3.R1	DENOTES EQUIPMENT FED FROM PANEL '1A' AND BREAKER #3 AND CONTROLLED VIA RELAY-R1.
1A-5/7.R2(2P)	DENOTES EQUIPMENT FED FROM PANEL '1A' AND 2-POLE BREAKER #5/7 AND CONTROLLED VIA 2-POLE RELAY-R2.
	DETAIL 1 ON DRAWING E101
	REFERS TO ITEM IN MECHANICAL EQUIPMENT SCHEDULE
	NOTE PERTAINING TO SPECIFIC ITEM OR AREA
EX	DENOTES EXISTING TO REMAIN
DR	DENOTES EQUIPMENT TO BE REMOVED AND MADE GOOD.
ER	DENOTES EQUIPMENT TO BE RELOCATED.
RE	DENOTES EQUIPMENT IN RELOCATED POSITION.
NOTES FOR LEGEND	
1.	THE WEATHERPROOF RECEPTACLES SHALL BE PROVIDED WITH COVER PLATES SUITABLE FOR WET LOCATIONS WHETHER OR NOT A PLUG IS INSERTED INTO THE RECEPTACLE (N-USE COVER PLATE) AND MARKED # EXTRA DUTY AS PER RULE 26-702(2) OF OESC.
2.	'T' APPEARING WITH A RECEPTACLE DENOTES THE RECEPTACLE SHALL BE T-SLOT TYPE ON 20A CIRCUIT.
3.	'H' APPEARING BESIDE A RECEPTACLE DENOTES THAT THE RECEPTACLE SHALL BE OF HOSPITAL GRADE TYPE. THE HOSPITAL GRADE RECEPTACLES SHALL BE C/W SEPARATE GROUND & NEUTRAL WIRE PER CIRCUIT.
4.	'A' APPEARING BESIDE A RECEPTACLE DENOTES THAT THE RECEPTACLE SHALL BE FED FROM AFCI (ARC FAULT CIRCUIT INTERRUPTER) TYPE OF BREAKER.
5.	'TR' APPEARING BESIDE A RECEPTACLE DENOTES THAT THE RECEPTACLE SHALL BE TAMPER RESISTANT TYPE.
6.	'C' APPEARING BESIDE A DEVICE DENOTES THAT THE DEVICE SHALL BE CEILING MOUNTED.
7.	SLASH LINE SHOWN ON A SYMBOL DENOTES THAT THE DEVICE IS TO BE LOCATED ABOVE COUNTER.

1. ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL & MECHANICAL DRAWINGS FOR ALL SCOPE OF WORK OF ELECTRICAL CONTRACTOR WHICH ARE RELATED TO OTHER TRADES.
2. PROVIDE EACH ITEM MENTIONED OR INDICATED OF QUALITY AND SUBJECT TO QUALIFICATIONS NOTED; PERFORM ACCORDING TO CONDITIONS STATED EACH OPERATIONS STATED, EACH OPERATION PRESCRIBED; AND PROVIDE THEREFORE ALL LABOR, MATERIAL, EQUIPMENT, INCIDENTALS AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION.
3. EXAMINE THE SITE, EXISTING EQUIPMENT AND THE LOCAL CONDITIONS AFFECTING THE WORK UNDER CONTRACT. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY FOR ANY OBVIOUS CONSIDERATIONS OVERLOOKED.
4. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES.
5. CONTRACTOR SHALL BALANCE CIRCUIT LOADS AS CLOSELY AS POSSIBLE.
6. REFER TO MECHANICAL DRAWINGS AND COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION OF EQUIPMENT & DEVICES PRIOR TO ROUGH IN.
7. ALL ELECTRICAL INSTALLATIONS SHALL BE RECESSED/CONCEALED INSTALLATIONS WHEREVER POSSIBLE; OTHERWISE PROVIDE WIREMOLD STEEL SURFACE MOUNTED RACEWAY C/W SURFACE MOUNTED OUTLETS.
8. PROVIDE FIRE ALARM VERIFICATION REPORT & CERTIFICATE FOR THE COMPLETE FIRE ALARM SYSTEM AS REQUIRED BY AUTHORITIES.
9. CONTRACTOR SHALL PERFORM VOLTAGE DROP CALCULATIONS FOR ALL BRANCH CIRCUITS (LIGHTING AS WELL AS POWER) AND SHALL MAINTAIN VOLTAGE DROP WITHIN PERMISSIBLE LIMITS AS PER OESC REQUIREMENTS AND PROVIDE PROPER WIRE SIZES ACCORDINGLY PRIOR TO COMMENCING OF ROUGH-IN INSTALLATION. THE VOLTAGE DROP CALCULATIONS SHALL BE BASED ON MAXIMUM CIRCUIT AMPACITY.
10. IN CASE OF NON-ACCESSIBLE CEILING, ALL WIRING UP TO ELECTRICAL DEVICES SHALL BE DONE IN CONDUITS TO SUIT APPLICATION TO FACILITATE MAINTENANCE.
11. ELECTRICAL CONTRACTOR SHALL MAKE SUITABLE ARRANGEMENTS TO MAKE ALL THE ELECTRICAL DEVICES AS ACCESSIBLE TO FACILITATE MAINTENANCE. NO ELECTRICAL DEVICE SHALL BE INSTALLED IN SUCH A WAY THAT IT IS UN-ACCESSIBLE AT ANY STAGE FOR MAINTENANCE. CO-ORDINATE ON SITE AND PROCEED ACCORDINGLY.
12. ROOM CONTROLLERS OF LMRC-2000 SERIES FOR LIGHTING CONTROL HAVE CONNECTIONS AT ITS BACK. ACCORDINGLY, THIS TYPE OF ROOM CONTROLLERS ARE REQUIRED TO BE MOUNTED ON A BACKBOX. THE DEPTH OF THIS BACKBOX IS REQUIRED TO BE 2.5" DEEP. THEREFORE THE DEPTH OF THE RECESSED BACKBOXES (FOR MOUNTING ROOM CONTROLLERS) WHEREVER APPLICABLE SHALL BE SELECTED TO SUIT APPLICATION.
13. PROVIDE LABELING OF ELECTRICAL POWER OUTLETS AND RECEPTACLES THROUGHOUT THE ENTIRE BUILDING TO PROVIDE IDENTIFICATION OF ELECTRICAL CIRCUITS. THE LABEL SHALL INDICATE 'NAME OF PANEL & CCT.#' FED TO THE OUTLET/RECEPTACLE.
14. PROVIDE CONDUITS AND BACK BOXES FOR LIGHTING CONTROL DEVICES TO SUIT APPLICATIONS AND AS PER MANUFACTURER'S RECOMMENDATIONS.
15. ALL LIGHTING CONTROL WIRING IN CASE OF CAT CABLING SYSTEM, SHALL BE PROVIDED IN CONDUITS EXCEPT FOR T-BAR CEILINGS APPLICATIONS WHERE FT6 CABLES (PLENUM RATED) SHALL BE PROVIDED.
16. ALL EMPTY CONDUITS SHALL BE PROVIDED C/W PULL WIRES.
17. ALL ELECTRICAL INSTALLATIONS SHALL BE RECESSED/CONCEALED INSTALLATIONS WHEREVER POSSIBLE; OTHERWISE PROVIDE WIREMOLD STEEL SURFACE MOUNTED RACEWAY C/W SURFACE MOUNTED OUTLETS. CO-ORDINATE WITH CONSULTANTS PRIOR TO INSTALLATION.
18. WHEREVER NEW BREAKERS/DISCONNECT SWITCHES ARE REQUIRED TO BE ADDED IN EXISTING SWITCHBOARDS/DISTRIBUTION PANELS/PANELS AS INDICATED ON THE DRAWINGS, ELECTRICAL CONTRACTOR SHALL MODIFY, RETROFIT AND RE-CONFIGURE EXISTING RESPECTIVE SWITCHBOARD / DISTRIBUTION PANEL/PANEL IN ORDER TO ALLOW FOR THE INSTALLATION OF THE NEW REQUIRED/INDICATED CIRCUIT BREAKERS/DISCONNECT SWITCHES WITHIN THE EXISTING ELECTRICAL CONTRACTOR SHALL VERIFY THE SITE FOR THE SCOPE AND EXTENT OF WORK AND SHALL CO-ORDINATE WITH PANEL MANUFACTURER FOR MORE DETAILS AND THEN PROCEED ACCORDINGLY. CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS (INCLUDING BUT NOT LIMITED TO: CUSTOM MADE PARTS, BUS ASSEMBLY, BRACKETS/HARDWARE ETC.). LABOR ETC. FOR FULLY OPERATIONAL SYSTEM. THE NEW BREAKERS/DISCONNECT SWITCHES TO BE ADDED SHALL BE FROM THE SAME MANUFACTURER AS EXISTING. KVA RATING OF THE NEW BREAKERS/DISCONNECT SWITCHES SHALL MATCH EXISTING OR NEXT HIGHER AVAILABLE VALUE.



SYMBOL		DESCRIPTION	
		RECESSED LED DOWNLIGHT FIGURE 2 - RM1	
		MANUFACTURER: MODEL: PRODUCT: COLOR: SIZE: LAMP: COLOR TEMPERATURE: NOTE:	COOPER LIGHTING HALO COMMERCIAL(OR COMPARABLE) H4 LED 4" DOWNLIGHT SERIES WHITE 4" DIA. LED 3000K PROVIDE WITH DIMMERS
		RECESSED LED DOWNLIGHT FIGURE 2 - RM2	
		MANUFACTURER: MODEL: PRODUCT: COLOR: SIZE: LAMP: COLOR TEMPERATURE: NOTE:	COOPER LIGHTING HALO COMMERCIAL(OR COMPARABLE) H4S LED 6" DOWNLIGHT SERIES WHITE 6" DIA. LED 3000K PROVIDE WITH DIMMERS
		TRACK HEAD FIGURE 1 - TH1	
		MANUFACTURER: MODEL: PRODUCT: CONFIGURATION WITH MEDIA SIZE: LAMP: COLOR TEMPERATURE: NOTE:	COOPER LIGHTING HALO 809 VACT BEAM MEDIUM - NORMAL WHITE 4" DIA. LED 3000K PROVIDE WITH DIMMERS. PROVIDE 16" EXTENSION WAND PROVIDE SINGLE CIRCUIT MARKING TRACK ALL SUPPORTS AND WIRING ACCESSORIES
		WALL WASHER LIGHT FIGURE 1 - WW1	
		MANUFACTURER: MODEL: PRODUCT: WALL AS COLOR TEMPERATURE: NOTE:	PURE EDGE LIGHTING GRIGGS CEILING WALL GRABER 24VDC CONTINUOUS FULL LENGTH OF THE SHOWN ON DRAWING 3000K PROVIDE WITH DIMMERS.
		LED COVE LIGHT	
		MANUFACTURER: MODEL: PRODUCT: COLOR TEMPERATURE: NOTE:	PURE EDGE LIGHTING FLEX NEON LIPS BENDS LEFT/RIGHT 24VDC 0.5" LAMP CONTINUOUS AS SHOWN ON DRAWINGS 3000K PROVIDE WITH DIMMERS.
		LINEAR LIGHT L11 - ON MEZZANINE & IN WALL PANEL COVE LIGHTS	
		MANUFACTURER: MODEL: PRODUCT: COLOR TEMPERATURE: NOTE:	PURE EDGE LIGHTING 3" CHANNEL COMPLETE FIXTURE 24VDC 0.5" LIGHT CHANNEL CONTINUOUS AS SHOWN ON DRAWINGS 3000K PROVIDE WITH DIMMERS.

COORDINATE WITH LIGHTING VENDOR FOR ALL REQUIREMENTS

[illegible]


CLIENT:
ROYAL BOTANICAL GARDEN

22459

RBG - HALL INTERIOR RENOS

680 PLAINS RD W, BURLINGTON, ON L7T 4H4

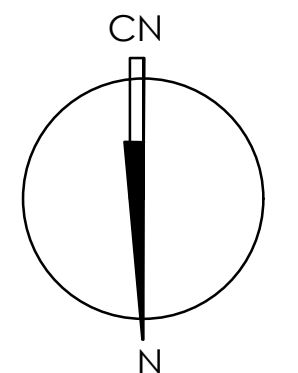
KEY TO DETAIL LOCATION:

KEY TO DETAIL LOCATION:
 A - DETAIL NO.
 B - DETAIL NO. ORIGIN

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E001

DRAWN BY : DK

CHECKED BY : D.

LEGEND & SCHEDULES

1. GENERAL CONDITIONS

A. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL LABOUR, MATERIAL, TOOLS, EQUIPMENT, ETC. REQUIRED TO COMPLETE ALL WORK SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED. THE WORK SHALL BE IN ACCORDANCE WITH RULES AND REGULATIONS OF ALL AUTHORITIES HAVING LEGAL JURISDICTION OVER THE WORK. THIS CONTRACTOR SHALL PROVIDE ANY SMALL ITEMS OF WORK NOT SPECIFICALLY CALLED FOR BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATION.

B. THE ENGINEER RESERVES THE RIGHT TO APPROVE THE QUALITY OF MATERIAL AND WORKMANSHIP, ALSO TO CALL FOR ANY TESTS WHICH ARE DEEMED NECESSARY DURING THE PROGRESS OF THE WORK AND A COMPLETE TEST OF EACH SYSTEM AT THE COMPLETION OF THE WORK. THE COST OF SUCH TESTS ARE NOT TO BE CONSIDERED AS EXTRAS.

2. SCOPE OF WORK

THE WORK SHALL CONSIST OF, BUT SHALL NOT BE LIMITED TO THE FOLLOWING:

A. ALL NECESSARY CONDUIT WIRING AND CONNECTIONS FOR A COMPLETE INSTALLATION.

B. LIGHTING AND POWER DISTRIBUTION SYSTEM AS SHOWN ON THE DRAWINGS.

C. MOTOR CIRCUITS.

D. COMPLETE CONDUIT SYSTEM FOR LOW VOLTAGE SYSTEM WHERE NOTED ON THE DRAWINGS.

3. CODES, PERMITS AND INSPECTION

A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL OBTAIN ALL PERMITS, INSPECTIONS, ETC. AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK AND SHALL PAY FOR SAME. THESE COSTS SHALL BE INCLUDED IN THE TENDER PRICE.

B. ALL PERMITS SHALL BE DELIVERED TO THE OWNER REPRESENTATIVE AS SOON AS THEY BECOME AVAILABLE.

4. DRAWINGS

THIS CONTRACTOR SHALL PREPARE, AT HIS OWN EXPENSE, ANY LARGE SCALE WORKING DRAWINGS WHICH MAY BE REQUIRED BY THE EXAMINING AUTHORITIES.

5. AS-BUILT DRAWINGS

THIS CONTRACTOR SHALL KEEP A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE PLANS ALONG WITH UPDATED ACAD 2000 DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE ENGINEER AT THE COMPLETION OF THIS CONTRACT BEFORE APPLYING FOR FINAL PAYMENT.

SUBMIT TO ENGINEERS THE FOLLOWING DOCUMENTS FOR REVIEW AND APPROVAL AT THE COMPLETION OF PROJECT:

— ESA INSPECTION CERTIFICATE.

6. SHOP DRAWINGS

SUBMIT SIX (6) COPIES OF MANUFACTURER'S SHOP DRAWINGS FOR ALL DEVICES, SYSTEMS AND SUCH FOR REVIEW BY THE ENGINEER.

7. EXAMINATION OF SITE

A. THIS CONTRACTOR SHALL VISIT THE SITE OF THE PROJECT AND FAMILIARIZE HIMSELF WITH THE SPECIFIC SITE CONDITIONS.

B. ANY DEVIATION AND / OR CONFLICTS ON SITE ESPECIALLY CONCERNING THE DISTRIBUTION DIAGRAM (S) AS SHOWN ON THE PLANS, SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING TENDER.

8. CONSTRUCTION SCHEDULE

THIS CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK TO MEET THE COMPLETION SCHEDULE AS SET OUT BY THE PLANNING HOUSE.

9. REVISIONS AND EXTRAS

NO ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ENGINEER. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, HOURLY RATES, ETC.

THERE SHALL BE NO EXTRA CLAIM FOR DELIVERY OF ANY EQUIPMENT WITHIN 10 FEET FROM ORIGINAL LOCATION.

10. CLEAN UP

THIS CONTRACTOR SHALL BE RESPONSIBLE TO PERIODICALLY REMOVE ALL DEBRIS AND TO KEEP THIS AREA CLEAN AT ALL TIMES.

11. CUTTING AND PATCHING

ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, OPENINGS, ETC. AND SHALL INFORM THE GENERAL CONTRACTOR OF SLEEVES OR OPENINGS REQUIRED DURING TENDERING SO THAT COSTS ARE INCLUDED AND SHALL INFORM THE GENERAL CONTRACTOR IN SUFFICIENT TIME TO PREVENT UNNECESSARY CUTTING.

12. CONDUIT IN SLAB

THIS CONTRACTOR SHALL NOT INSTALL RIGID CONDUIT AND FLOOR BOXES IN STRUCTURE FLOOR SLABS OR FRAMING OR CUT STRUCTURAL SLABS AND FRAMING FOR THIS PURPOSE IN SUCH A MANNER THAT THE STRUCTURAL INTEGRITY OF THE FLOOR IS WEAKENED. COORDINATE SUCH WORK WITH THE ARCHITECT OR STRUCTURAL ENGINEER.

13. DELIVERY DATES

THIS CONTRACTOR SHALL PLACE AN ORDER FOR ALL MATERIAL AND EQUIPMENT IMMEDIATELY AFTER SIGNING OF THE CONTRACT. HE SHALL SUBMIT A LIST OF DELIVERY DATES FOR EACH TYPE OF EQUIPMENT WITHIN 30 DAYS OF THE AWARDED OF THE CONTRACT. THE LIST SHALL INCLUDE MANUFACTURER'S NAMES.

14. EQUIPMENT AND MATERIAL

GROUNDING SHALL BE AS REQUIRED BY ELECTRICAL CODE AND THE APPROVAL OF ALL EQUIPMENT AND MATERIAL UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL MATERIAL AND EQUIPMENT SHALL BE OF THE TYPE SUBJECT TO FACTORY MUTUAL, "UNDERWRITERS LABORATORIES OF CANADA" OR "CANADIAN STANDARDS ASSOCIATION INSPECTION AND APPROVAL" AND SHALL BEAR "U.L.C." OR "C.S.A." LABELS.

15. DEMONSTRATION OF THE SYSTEM

DEMONSTRATE THE FUNCTION AND OPERATION OF EACH SYSTEM IN MAINTENANCE STAFF OWNER AND CONSULTANT PRESENCE. CO-ORDINATE COMMISSIONING AND TRAINING SCHEDULE WITH ALL PARTIES.

16. IDENTIFICATION

PROVIDE LAMACOD IDENTIFICATION NAMEPLATES. THESE SHALL BE BLACK WITH WHITE ENGRAVED LETTERS AND SHALL BE INSTALLED WITH SCREWS ON ALL EQUIPMENT, DISCONNECT SWITCHES, PANELS, ETC. INDICATING THE EQUIPMENT. EACH LIGHTING PANEL SHALL HAVE A TYPED DIRECTORY SHOWING LIGHTS OR EQUIPMENT CONNECTED TO EACH CIRCUIT. DIRECTORIES SHALL BE MOUNTED ON THE INSIDE OF THE PANEL DOOR WITH A TRANSPARENT PLASTIC COVER. RECEPTACLES AND LIGHT SWITCHES SHALL BE LABELLED WITH CIRCUIT NUMBER BY STICK-ON APPROVED TYPE LABELLING.

17. COORDINATION
THIS CONTRACTOR SHALL BE RESPONSIBLE TO CO-ORDINATE THE INSTALLATION OF EQUIPMENT, CONDUIT WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES PRIOR TO THE ACTUAL INSTALLATION.

18. ACCESSIBILITY
ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIRS.

19. RESPONSIBILITY
THIS TRADE SHALL BE RESPONSIBLE FOR THIS WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

20. WARRANTEE
THIS CONTRACTOR SHALL WARRANT ALL WORK AND EQUIPMENT INSTALLED UNDER THIS CONTRACT, AGAINST ALL DEFECTS OR WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE INSTALLATION BY THE OWNER.

21. CONDUIT AND FITTINGS
A. CONDUIT SIZES SHALL BE AS INDICATED ON THE DRAWINGS AND SHALL NOT BE REDUCED IN SIZE WITHOUT AUTHORIZATION. CONDUIT IN FINISHED AREA SHALL BE CONCEALED. ALL CONDUIT SHALL BE INSTALLED PARALLEL TO BUILDING LINES. MAKE FINAL CONNECTIONS TO VIBRATING EQUIPMENT WITH FLEXIBLE CONDUIT.
B. CONDUITS SHALL BE INSTALLED AT A MINIMUM OF 6" (152MM) FROM UNINSULATED HEATING PIPES.
C. CLEAN INTERIOR OF ALL CONDUITS TO REMOVE WATER AND DEBRIS BEFORE PULLING WIRES.
D. BX CABLES SHALL BE USED FOR FINAL SHORT CONNECTIONS BETWEEN OUTLET AND OUTLET BOX IN CEILING SPACE TO CEILING MOUNTED LIGHTING FIXTURES OR TO FEED OUTLETS, RECEPTACLES IN THE DRYWALL PARTITIONS. BX CABLES ARE NOT ALLOWED TO RUN IN THE OPEN CEILING AREAS.
E. EMPTY FLEXIBLE STEEL CONDUIT 1/2" (13MM) MINIMUM DIAMETER AND A MAXIMUM OF 6 FEET (1830MM) OR (1.83M) LONG, WITH A FISH WIRE AS INDICATED IN THE DRAWINGS CAN ALSO BE USED.
F. FOR FIREPROOFING WHERE HOLES ARE DRILLED THROUGH FLOORS OR WALLS, THEY SHALL BE PACKED AROUND CONDUIT WITH "3M" BRAND FIRE BARRIER CAULK FB369 COMPOUND. MINIMUM CONDUIT SHALL BE 3/4" (19MM), UNLESS OTHERWISE NOTED.
G. CONDUITS AND ARMORED CABLES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING.
H. SUPPLY AND INSTALL CONDUIT FOR WIRING AND CABLES WHERE THERE IS NO SUSPENDED CEILING SPACE.

22. PULL AND JUNCTION BOXES
A. BOXES SHALL BE CODE GAUGE AND SIZES TO MEET THE ELECTRICAL CODE REQUIREMENTS. SHEET STEEL BOXES FOR CONCEALED WORK AND CAST BOXES FOR EXPOSED WORK.
B. PROVIDE BARRIERS IN BOXES WHERE DIFFERENT VOLTAGES ARE USED.
C. PROVIDE PULL BOXES ON CONDUIT AT 50-FOOT (15.25M) INTERVALS.
D. BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUIT.

23. INSTALLATION OF OUTLETS
THE PLANS SHOW APPROXIMATE LOCATION OF OUTLETS, EXACT LOCATION SHALL BE CO-ORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL PLANS, ETC. OUTLETS INACCUATELY LOCATED SHALL BE RE-ADJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE NOTED ON THE PLAN (S), LOCATE OUTLETS AS FOLLOWS:
A. RECEPTACLES, TELEPHONE OUTLETS 18" ABOVE FINISHED FLOOR.
B. OUTLETS OVER COUNTER, 42" ABOVE FLOOR OR CO-ORDINATE ON JOB.
C. OUTLETS IN MECHANICAL, ELECTRICAL AND TELEPHONE ROOMS 47" (1200MM) ABOVE FLOOR.
D. LIGHT SWITCHES 47" TO TOP FROM FINISHED FLOOR.

24. WIRE AND CABLE
A. UNLESS OTHERWISE NOTED, ALL WIRES SHALL BE COPPER R90, RW90, R90 OR RWU90 RATING AS REQUIRED ON SITE AND AS DICTATED BY CODE. ALUMINUM WIRE SHALL NOT BE USED.
B. THE MINIMUM PERMISSIBLE SIZE FOR BRANCH CIRCUIT WIRING SHALL BE #12 (20m). EXCEPT FOR EMERGENCY LIGHTING SYSTEM SHALL BE MIN. #10.
C. FOR BRANCH WIRING EXCEEDING 100 FEET (30.5M) TO FURTHEST OUTLET FROM A PANEL SHALL BE #10 AT 120 VOLTS.
D. WIRES AND CABLES SHALL BE RATED AT 600 VOLTS EXCEPT FOR LOW VOLTAGE CONTROL WIRING WHICH SHALL BE RATED AT 300V.
E. ALL WIRES SHALL BE NEW AND DELIVERED TO THE SITE OF THE PROJECT IN THEIR ORIGINAL PACKING. WIRES #10 AND BIGGER SHALL BE STRANDED. THIS DENOTES GAUGE #8, #6, #4, ETC. WIRES SHALL BE FACTORY IDENTIFIED, SHOWING SIZE, VOLTAGE RATING AND INSULATION TYPE.
F. PROVIDE SEPARATE INSULATED GROUND CONDUCTOR FOR EACH FEEDER AND BRANCH CIRCUIT.
G. FINAL CONNECTIONS TO LUMINAIRES SHALL ORIGINATE FROM AN OUTLET BOX. CONNECTIONS OF FIXTURE BODY TO FIXTURE BODY SHALL NOT BE ACCEPTABLE.
H. CODE APPROVED WIRE SHALL BE USED FOR FINAL LUMINAIRE OR APPLIANCE CONNECTIONS.

25. CONNECTORS FOR WIRES
PROVIDE AN APPROVED TYPE WIRE CONNECTOR SIMILAR TO "IDEAL" OR "SUPER-NUT".

26. WIRING DEVICES
A. DUPLEX RECEPTACLES SHALL BE GRADING TYPE MINIMUM RATED FOR 15A, 120V, DECORA STYLE UNLESS OTHERWISE SPECIFIED ON PLANS. THESE SHALL HAVE BREAK-OFF LINE TO ALLOW FOR SPLIT WIRING OR 2 CIRCUITS. EQUIVALENT MANUFACTURER OF RECEPTACLES ARE AS FOLLOWS: "HUBBELL", "ARROW HART" AND "PASS & SEYMOUR".
B. LIGHT SWITCHES SINGLE POLE/3-WAY AND 4-WAY AS SHOWN SHALL BE "WHITE" AND DECORA STYLE. EQUIVALENT MANUFACTURER OF SWITCHES ARE AS FOLLOWS: "HUBBELL", "ARROW HART" AND "PASS & SEYMOUR", SPECIFICATION GRADE.
C. COVER-PLATES SHALL BE WHITE DECORA

27. TESTING, VERIFICATION & INTEGRATION OF LIFE SAFETY SYSTEMS
A. ALL LIFE SAFETY SYSTEMS INTEGRATED WITH THE FIRE ALARM SYSTEM MUST BE VERIFIED AND DOCUMENTED IN ACCORDANCE WITH O.B.C. 3.2.10.1 AND THE LATEST EDITION OF CAN/ULC-S1001-11, "STANDARD FOR INTEGRATED SYSTEMS TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS" THE FOLLOWING IS TO BE PREPARED AND SUBMITTED BY THE ELECTRICAL CONTRACTOR AND SIGNED BY A P.E.N.G. TO THE CONSULTANT FOR REVIEW AT THE START OF THE PROJECT:
B. INTEGRATED TESTING PLAN - A WRITTEN SPECIFIC DOCUMENT PREPARED BY THE INTEGRATED TESTING COORDINATOR, OUTLINING THE REQUIRED TESTS AND NECESSARY FUNCTIONAL RESULTS TO CONDUCT INTEGRATED FIRE PROTECTION AND LIFE SAFETY SYSTEMS TESTING.
C. INTEGRATED TESTING REPORT - A WRITTEN PROJECT SPECIFIC DOCUMENT, PREPARED BY THE INTEGRATED TESTING COORDINATOR, DOCUMENTING THE IMPLEMENTATION OF THE INTEGRATED TESTING PLAN.

THE FOLLOWING SYSTEMS (WHERE APPLICABLE) ARE TO BE INTEGRATED INTO THE TESTING PLAN AND TESTING REPORT:

1.	FIRE ALARM SYSTEM (INCLUDING SEQUENCE OF OPERATION)
2.	MASS NOTIFICATION SYSTEM
3.	ELEVATORS
5.	AUDIO/VISUAL SYSTEM
7.	NOTIFICATION SYSTEMS
8.	FIRE PROTECTION SYSTEM INCLUDING SPRINKLER SYSTEM, STANDPIPE, ETC.
9.	FREEZE PROTECTION SYSTEMS
10.	FIRE SUPPRESSION SYSTEMS
11.	SMOKE CONTROL PRESSURIZATION SYSTEMS
12.	SMOKE CONTROL SMOKE EXHAUST SYSTEMS
13.	HAZARDOUS PROTECTION MONITORING
14.	SMOKE ALARMS
16.	OTHER SYSTEM (WHERE APPLICABLE)

SUITE ENTRY INTERCOM SYSTEM

2.1 SYSTEM DESCRIPTION

.1 THE SYSTEM SHALL HANDLE THE TOTAL NUMBER OF RESIDENTS IN THE BUILDING, AND TO HAVE THE CAPABILITY OF ADDING FUTURE RESIDENTS TO THE SYSTEM WITHOUT CHANGING ANY OF THE EQUIPMENT THAT IS INSTALLED.

.2 THE TELEPHONE ACCESS SYSTEM SHALL USE THE TELEPHONES THAT ARE INSTALLED IN EACH RESIDENCE, AND SHALL REQUIRE NO EXTERNAL TELEPHONE LINE TO ACCESS TELEPHONES. THE SYSTEM SHALL BE A MIRCOM TAS 2000 NSL (NO SUBSCRIBER LINE) ACCESS SYSTEM, WHEREAS THE OWNER DOES NOT PAY FOR ANY TELEPHONE LINES TO ACCESS THE INDIVIDUAL RESIDENCE.

.3 THE TELEPHONE ACCESS SYSTEM SHALL HAVE THE CAPABILITY OF HANDLING MULTIPLE ENTRIES WITHOUT THE NEED OF ADDITIONAL MODULES AT THE CENTRAL CONTROL UNIT. THIS SHALL ALLOW VISITORS TO USE THE SYSTEM AT VARIOUS ENTRANCES TO THE COMPLEX.

.4 SYSTEM SHALL INCLUDE THE REQUIRED NUMBER OF LOBBY ENTRANCE PANELS THAT CONSIST OF A TELEPHONE ACCESS CONTROLLER, AND THE REQUIRED NUMBER OF DIRECTORIES. INCLUDED WITH THE CONTROLLER WILL BE THE FACILITY FOR A POSTAL LOCK THAT CAN BE USED BY THE POST OFFICE PERSONNEL TO GAIN ENTRY.

.5 THE TELEPHONE ACCESS SYSTEM SHALL BE A HANDS FREE OPERATION INCORPORATING AN ELECTRONIC DIRECTORY TO DISPLAY THE RESIDENTS' NAME AND CALL-UP CODE.

.6 THE SYSTEM SHALL BE CAPABLE OF RE-LOCKING THE CONTROL ACCESS POINT IMMEDIATELY AFTER THE DOOR CLOSES.

.7 TELEPHONE ACCESS SYSTEM SHALL PROVIDE AN INTERNAL CALL WAITING FEATURE, WHEREAS THE RESIDENT, WHEN USING THE TELEPHONE FOR AN OUTSIDE CALL, CAN DISTINGUISH BY A "CALL TONE" SOUND OVER THE PHONE THAT, A VISITOR IS TRYING TO CONTACT THE RESIDENT.

.8 THE RESIDENT CAN, AT HIS OR HER DISCRETION, PUT THE OUTSIDE CALL ON HOLD AND COMMUNICATE WITH THE VISITOR, DECIDE WHETHER TO ALLOW ENTRY, AND THEN GO BACK TO THE OUTSIDE CALL. PRESSING THE APPROPRIATE BUTTON ON THE TOUCH TONE/ROTARY DIAL PHONE CAN DO ALL OF THIS.

.9 THE SYSTEM SHALL HAVE THE CAPABILITY OF ASSIGNING INDIVIDUAL KEYLESS ENTRY CODES THAT THE RESIDENT USES TO GAIN ACCESS INTO THE COMPLEX BY THE ENTRY PANEL KEYPAD. THE NUMBER OF CODES SHALL BE EQUAL OR GREATER THAN THE NUMBER OF RESIDENTS.

2.2 SYSTEM

.1 EACH TELEPHONE ACCESS CONTROLLER (MIRCOM MODEL #2001-0360S) SHALL BE LINKED TOGETHER TO THE LINE ACCESS BOARDS TO ALLOW COMMUNICATIONS THROUGH THE TELEPHONE SYSTEM.

.2 EACH LINE ACCESS BOARD (MIRCOM MODEL #2012) SHALL HANDLE 12 TELEPHONE LINES, AND BY USING A STANDARD 50 CONDUCTOR CABLE, (MIRCOM MODEL #9106) BE CONNECTED TO THE TELEPHONE COMPANY'S RJ-71C TELEPHONE JACKS. A LINE ACCESS BOARD HOUSING SHALL CONTAIN EIGHT (MIRCOM MODEL #2008) OR SIXTEEN (MIRCOM MODEL #2016) LINE INTERFACE BOARDS. THE NUMBER OF HOUSINGS AND LINE INTERFACE BOARDS WILL DEPEND ON THE NUMBER OF RESIDENTS IN THE COMPLEX. AN INTERFACE SHALL ALLOW THE SYSTEM TO WORK IN CONJUNCTION WITH DSL HIGH SPEED INTERNET SERVICE. (MIRCOM MODEL #ADSL-100.)

.3 THE CONNECTION BETWEEN THE LOBBY TELEPHONE ACCESS CONTROLLER AND THE TELEPHONE ROOM SHALL BE A RS-485 SERIAL TYPE CONNECTION ALLOWING FOR DATA TRANSMISSION.

.4 ALL PROGRAMMING MAY BE ACCOMPLISHED FROM THE ENTRY PANEL KEYPAD OR WITH THE USE OF SOFTWARE (MIRCOM MODEL # MSW-003) AND A LAPTOP WITH THE ADDITION OF A (MIRCOM MODEL # RS-485IMA) DIRECT CONNECTION MODULE. OPTIONALLY, A MODEM MODULE (MIRCOM MODEL # MDM-1000B) MAY BE INSTALLED WITHIN THE MAIN LOBBY PANEL TO ALLOW FOR OFF-SITE PROGRAMMING.

.5 THE LOBBY CONTROL OF THE TELEPHONE ACCESS SYSTEMS SHALL CONTAIN A CONTROLLER INTERFACE BOARD, KEYPAD, HANDS FREE OPERATION, AND WHERE APPLICABLE, A COMPLETE DIRECTORY. THE CONTROLLER BOARD SHALL HAVE AN OUTPUT THAT CAN CONTROL A DOOR STRIKE OR MAGNETIC LOCK. THERE SHALL BE PROVISION FOR A SECONDARY CONTACT FOR ADDITIONAL DOOR RELEASE FUNCTIONS. THE RESIDENT THROUGH THE TELEPHONE SYSTEM CAN OPERATE EITHER OF THESE OUTPUTS.

.6 THE TELEPHONE IN THE RESIDENCE SHALL GIVE A DISTINCTIVE RING WHEN A VISITOR IS USING THE SYSTEM, ALLOWING THE RESIDENT TO DISTINGUISH BETWEEN A VISITOR AND A NORMAL CALL.

.7 THE LOBBY ENTRANCE PANEL MIRCOM MODEL #MUS-2000S SHALL INCLUDE PROVISIONS FOR A BOARD MOUNT CAMERA (MIRCOM MODEL # CAM-1) THAT WHEN CONNECTED TO A MODULATOR (SIMILAR TO CHANNELPLUS MODEL #5415) SHALL DISPLAY VIDEO IMAGES OF THE LOBBY AREA AND CALLER ON THE RESIDENT TELEVISION AUXILIARY CHANNEL. A KEY LOCKED FRAME CONSTRUCTION SHALL INHIBIT UNAUTHORIZED TAMPERING OF THE ENTRY PANEL, BUT ALLOW EASY PERIODIC MAINTENANCE. A MINIMUM 3/16" THICKNESS LEXAN MATERIAL SHALL BE USED OVER THE ELECTRONIC DIRECTORY PANEL. THE SEMI-FLUSH TRIM RING SHALL BE USFT-2000.

.8 ENTRANCE PANEL SHALL BE CONSTRUCTED OF 16-GAUGE STAINLESS STEEL TO RESIST IMPACT, FLAMES AND CHEMICALS.

.9 THE KEYPAD WILL BE OF THE DESIGN FOR PUBLIC TELEPHONES, WITH MARINE QUALITY CHROME PLATING, GOLD PLATED CONTACTS, LARGE NUMBER BRIGHT CHROME FINISH, AND CONDUCTIVE RUBBER TECHNOLOGY TO SEAL AGAINST DUST, MOISTURE, CORROSIVES OR SOLVENTS AND SHALL CONTAIN A BACK-LIT LCD DISPLAY TO INSTRUCT USERS ON THE OPERATION OF THE TELEPHONE ENTRY SYSTEM.

.10 ENTRANCE PANELS SHALL BE WATER AND SPRAY RESISTANT. WHERE MOUNTED ON THE EXTERIOR OF THE BUILDING THE UNIT SHOULD INCLUDE A THERMOSTAT HEATER. (MIRCOM MODEL #TH-102)

.11 THE SYSTEM SHALL INCORPORATE SELF-DIAGNOSTIC FUNCTIONS TO INHIBIT COMMON SYSTEM FAILURES. A WATCHDOG FUNCTION SHALL MONITOR THE MICROPROCESSOR AND PREVENT SPURIOUS LATCH UP.

.12 THE DIRECTORY SHALL CONTAIN AN ELECTRONIC SCROLLING DIRECTORY PANEL THAT IS CAPABLE OF HANDLING THE NUMBER OF RESIDENTS IN THE BUILDING, TO DESIGNATE THE CODE TO BE ENTERED BY THE VISITOR/SECURITY DESK TO ENABLE COMMUNICATION TO THE RESIDENT BY TELEPHONE.

.13 PROVIDE CAT 3 CABLEING FROM TELEPHONE ROOM TO EACH SUITE. INSTALL ALL CABLEING IN CONDUIT.

SUPPLY AND INSTALL CONDUIT FOR WIRING AND CABLES WHERE THERE IS NO SUSPENDED CEILING SPACE.

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ROYAL BOTANICAL GARDEN

22459

RBG - HALL INTERIOR RENOS

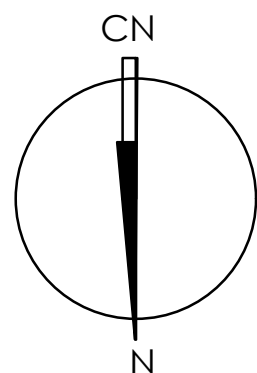
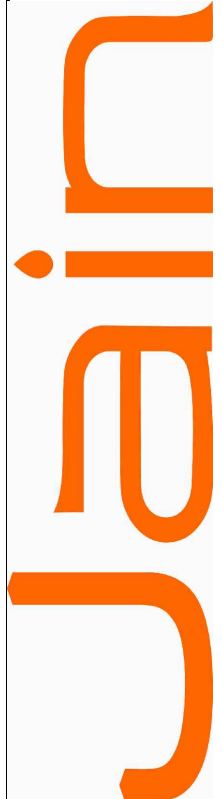
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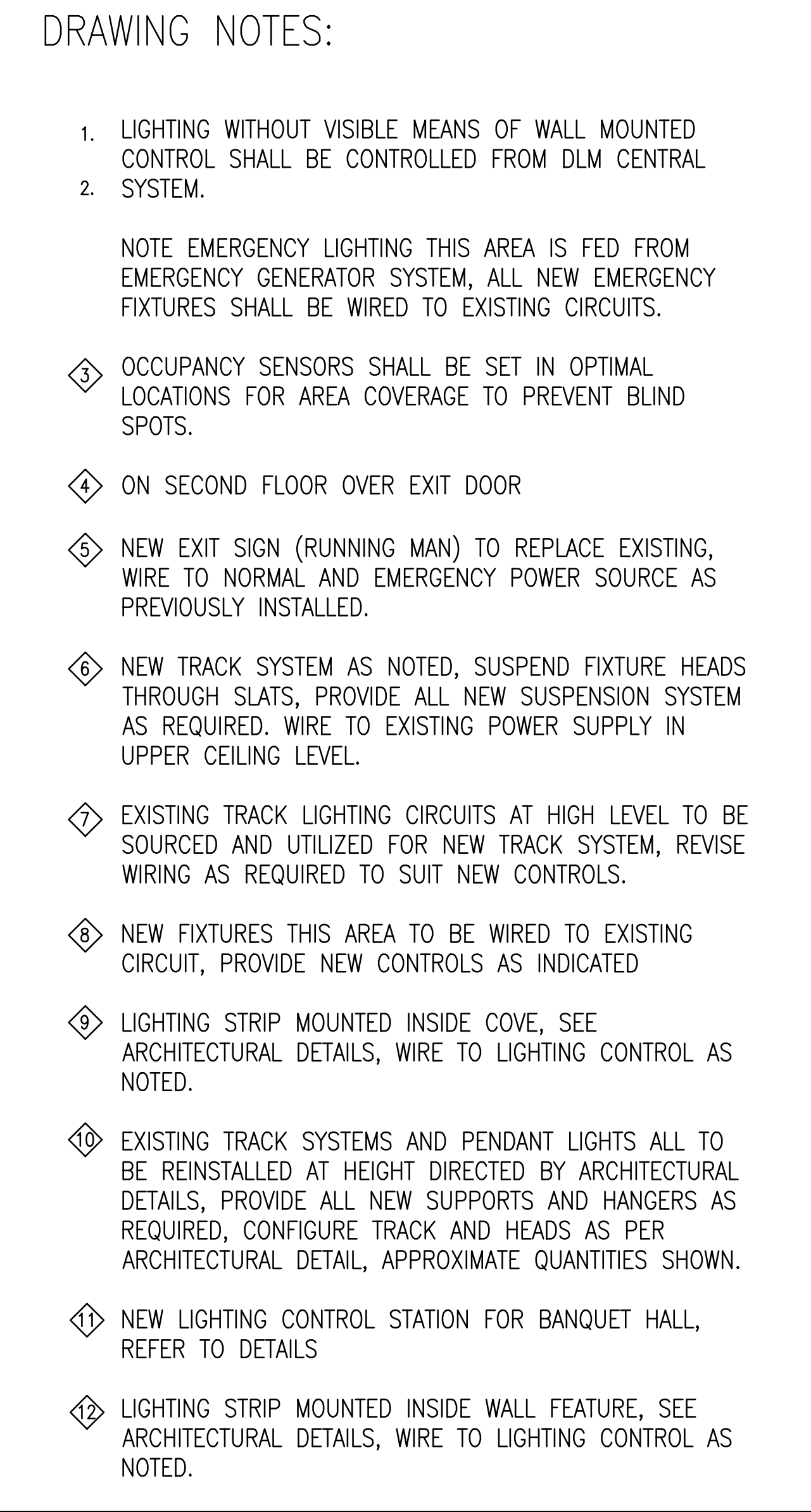


E002

DRAWN BY : DK

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ELECTRICAL SPECIFICATIONS

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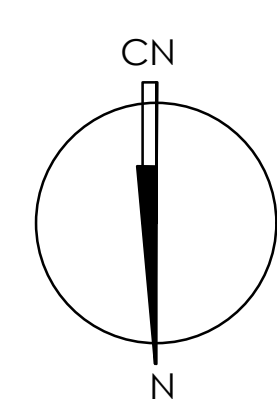
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E2.01

LIGHTING NEW-LOW LEVEL FLOOR PLAN



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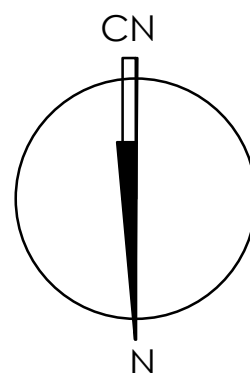
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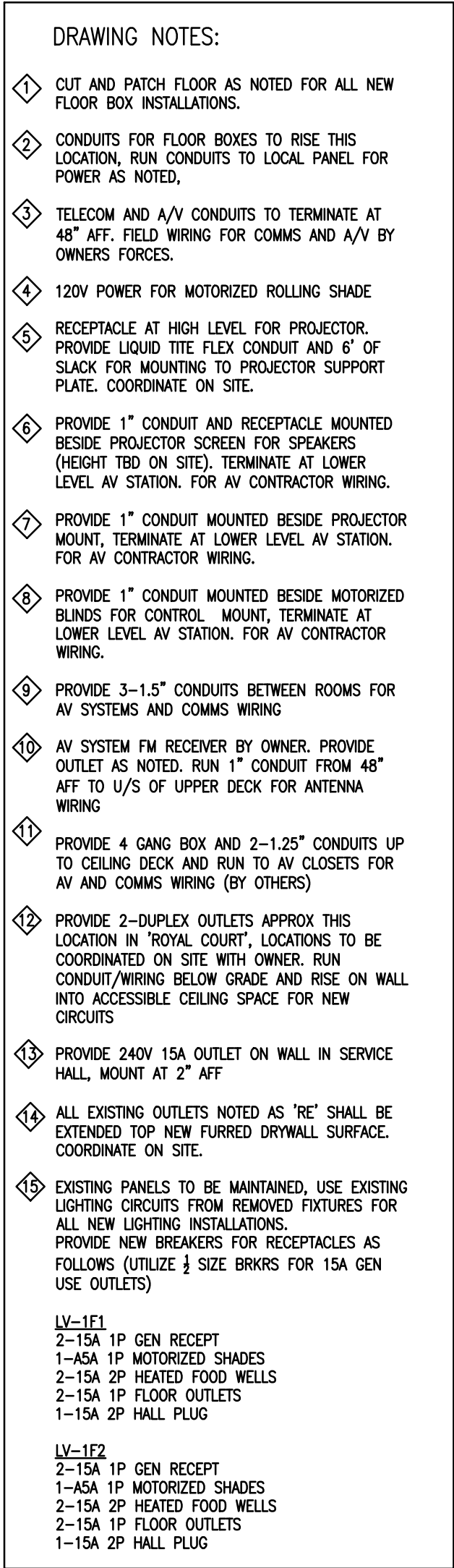


POWER & SYSTEMS DEMO

E3.00

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PROJECT:

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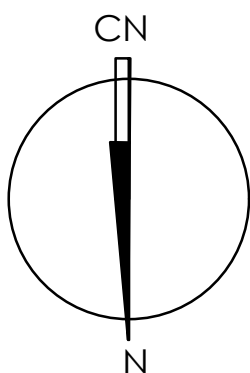
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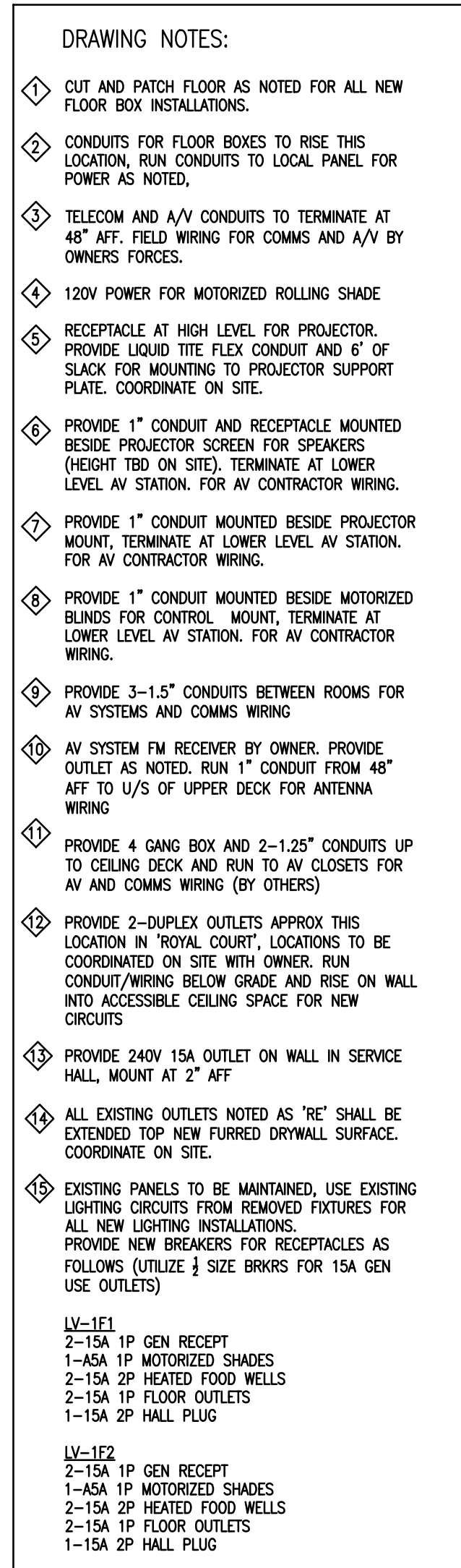
POWER & SYSTEMS NEW-LOW LEVEL FLOOR PLAN

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1. EXCEPT WHERE NOTED OTHERWISE, ALL EMPTY CONDUITS AND BACKBOXES FOR THE COMMUNICATIONS HORIZONTAL CABLING SYSTEM SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. ALL LINE VOLTAGE WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. ALL CABLING INSTALLED IN T-BAR CEILINGS SHALL BE SUPPORTED BY J-HOOKS OR MESH TRAY - MAXIMUM SPACING BETWEEN J-HOOKS 5' - . INSTALL CABLES IN NEAT AND ORGANIZED BUNDLES AND DO NOT LAY CABLES ON THE T-BAR CEILING. RUN ALL CABLING TO SYSTEMS FURNITURE VIA PACK POUCHES SUPPLIED WITH SYSTEMS FURNITURE, OR VIA BASE FEEDS FROM WALL OR CEILING. FOR FLOOR MOUNTED SYSTEMS, THE FLOOR MOUNTED SYSTEMS FURNITURE DETAILS ON DETAILS DRAWINGS. ALL CABLING IN T-BAR CEILINGS SHALL BE RUN IN CONDUIT TO NEAREST ACCESSIBLE CEILING OR TO /SERVER ROOM.
3. PROVIDE ALL BONDING ON CABLE MESH TRAY SYSTEM AND BOND TO MAIN IT ROOM SYSTEM

CHECKED BY : D.J.

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