GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE FOLLOWING CODES/STANDARDS: INTERNATIONAL BUILDING CODE, NATIONAL FIRE PROTECTION ASSOCIATION, INTERNATIONAL ENERGY CONSERVATION CODE, AND ALL LOCAL CODE ORDINANCES, REGULATIONS, NATIONAL ELECTRICAL CODE (NEC)-2017 AND THE AUTHORITY HAVING JURISDICTION.

2. ALL ELECTRICAL WORK PROVIDED FOR THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CRITERIA:

   A) TRADE SIZE CONDUIT SMALLER THAN 1/2 INCH SHALL NOT BE USED.

   B) CONDUIT ABOVE GRADE AND NOT EXPOSED TO WEATHER SHALL BE PVC, ENT & MC.

   C) CONDUIT BELOW GRADE AND PENETRATIONS AT GRADE SHALL BE SCHEDULE 40 PVC EXCEPT TURNS.

   D) CONDUIT ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE SCHEDULE 80 PVC.

   E) WIRE SIZE SMALLER THAN #12 AWG. SHALL NOT BE USED FOR POWER CKT. #18 AWG. SHALL BE USED FOR LOW VOLTAGE CKT.

   F) BRANCH CIRCUIT WIRING PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE COPPER; FEEDER & SERVICE WIRING SHALL BE ALUMINUM.

   G) CONDUCTORS AMPACITY OF NONMETALLIC SHEATHED CABLE IS LIMITED TO THE 60 DEGREE.CONTRACTOR SHALL REFER NEC TABLE 310.15(B)(16), ALL OTHER CONDUCTORS SHALL HAVE A MINIMUM TEMPERATURE RATING OF 75 DEGREES C. (TYPE THWN OR TYPE THHN), 98% COPPER OR ALUMINUM.

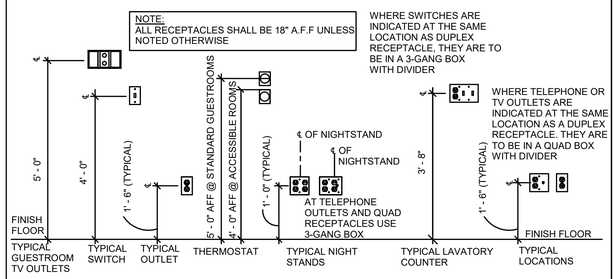
   H) WHERE POSSIBLE, EXCEPT AS SHOWN OTHERWISE ON THE DRAWINGS, ALL CONDUIT SHALL BE RUN CONCEALED BELOW GRADE,WITHIN WALLS OR ABOVE CEILING.

   I) CONDUCTORS #12 AWG AND SMALLER SHALL BE SOLID. CONDUCTOR 10# AWG AND LARGER SHALL BE STRANDED. CONDUCTOR #12 AWG MAY BE SOLID OR STRANDED, EXCEPT THAT ONLY #12 AWG SOLID OR ONLY #12 AWG STRANDED SHALL BE USED.

   J) THERE SHALL BE NO MORE THAN 270 DEGREES TOTAL TURN OR 150 FEET BETWEEN PULL POINTS IN CONDUIT RUNS.

   K) ALL ELECTRICAL RECEPTACLES IN THE BATHROOM, OUTSIDE AREAS AND AIR CONDITIONING / HEATING / REFRIGERATION AREAS SHALL BE GFCI PROTECTED.

   L) MOUNTING HEIGHT OF WALL MOUNTED CONTROLS AND RECEPTACLES SHALL FOLLOW THE GIVEN DIAGRAM BELOW, UNLESS COMPARABLE CONTROLS OR OUTLETS (THAT PERFORM THE SAME FUNCTIONS) ARE PROVIDED WITHIN THE SAME AREA AND ARE ACCESSIBLE.



3. CONTRACTOR SHALL:

   A) OBTAIN AND PAY ALL INSURANCE, FEES, PERMITS, ASSOCIATION DUES, ROYALTIES, AND TAXES OF WHATEVER NATURE WHICH SHALL APPLY TO THE WORK.

   B) PAY ALL INSPECTION FEES AS REQUIRED BY LAW OR ORDINANCE.

   C) HOLD THE OWNER HARMLESS FROM ANY DAMAGE AND EXPENSE ARISING FROM ANY VIOLATION OF THE LAWS, RULES, OR ORDINANCES.

   D) PROVIDE MATERIALS THAT ARE NEW AND FREE OF DEFECTS AND UL LISTED FOR THE INTENDED APPLICATION.

   E) TAKE MEASUREMENTS AND MAKE LAYOUTS AS REQUIRED FOR PROPER INSTALLATION AND COMPLETION OF WORK IF THE ELECTRICAL DRAWINGS ARE NOT TO BE SCALED, WHERE SPECIFIC DETAILS AND DIMENSIONS FOR ELECTRICAL WORK ARE NOT SHOWN IN DRAWINGS.

   F) INSPECT SITE FOR FIELD VERIFICATION OF ALL ASPECTS OF THE PROJECT PRIOR TO BIDDING.

   G) EXAMINE ALL DRAWINGS CAREFULLY PRIOR TO SUBMITTING A BID.

   H) BE REQUIRED TO FURNISH, INSTALL AND/OR CONNECT WITH APPROPRIATE SERVICES ALL ELECTRICAL ITEMS SHOWN ON ANY OF THE ARCHITECTURAL, PLUMBING, AIR CONDITIONING, SPRINKLER DRAWINGS WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

4. START OF WORK BY CONTRACTOR SHALL BE CONSIDERED AS ACCEPTANCE BY HIM OF ALL CLAIMS OR QUESTIONS AS TO SUITABILITY OF THE WORK OF OTHER TRADES OR OTHER CONTRACTORS TO RECEIVE HIS WORK. THIS CONTRACTOR SHALL REMOVE AND REPLACE AT HIS EXPENSE, ALL ELECTRICAL WORK WHICH MAY HAVE TO BE REMOVED BECAUSE OF INTERFERENCE WITH OTHER TRADES

5. VERIFY SERVICES CHARACTERISTICS, LOCATION AND CONNECTION WITH TELEPHONE AND ELECTRICAL UTILITY COMPANIES. THEY SHALL PERFORM ALL WORK RELATED TO SERVICE IN STRICT ACCORDANCE WITH UTILITY COMPANY STANDARDS AND REQUIREMENTS.

6. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND TOOLS TO PERFORM ALL WORK NECESSARY FOR THE COMPLETE EXECUTION OF THE ELECTRICAL WORK AS SHOWN ON THE DRAWINGS.

7. DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL OF THE MINOR ITEMS, UNLESS SPECIFIC DIMENSIONS ARE SHOWN. THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN THE EXACT LOCATIONS. IF THE LOCATION OF ELECTRICAL DEVICES ARE NOT SHOWN ON ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, CHECK DRAWINGS OF ALL TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED AND MAINTAIN MAXIMUM HEAD ROOM, OR SPACES OR CONDITIONS AT ALL POINTS. WHERE HEAD ROOM OR SPACES OR CONDITIONS APPEAR INADEQUATE, ARCHITECT/ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. THIS CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE FIELD MODIFICATIONS IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF VARIOUS TRADES OR FOR PROPER EXECUTION OF WORK. WHERE DISCREPANCIES OCCUR, THE ARCHITECTURAL REFLECTED CEILING PLANS TAKE PRECEDENCE OVER THE ELECTRICAL LIGHTING FOR LOCATION AND ORIENTATION OF LIGHTING FIXTURES.

8. ALL DISCREPANCIES OF DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING IN AMPLE TIME TO PERMIT REVISIONS PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID CONSTITUTES ACCEPTANCE OF FIELD CONDITIONS AND ELECTRICAL DRAWINGS.

9. PROVIDE MEANS 'FURNISH AND INSTALL COMPLETE AND READY FOR USE'.

10. DRAWINGS DO NOT NECESSARILY INDICATE THE ACTUAL ROUTES OF CONDUIT. WHERE INDICATED, THEY SHALL BE FOLLOWED AS CLOSELY AS PROPER COORDINATION WITH THE WORK OF OTHER TRADES AND SPACES WILL PERMIT. WHERE CONDUIT RUNS ARE NOT SHOWN ON THE DRAWINGS, COORDINATE CONDUIT RUNS WITH THE WORK OF OTHER TRADES AND STRUCTURE. SIMPLIFY INSTALLATION WHERE POSSIBLE, BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL REASONS. IT IS NOT WITHIN THE SCOPE OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, BENDS, PULL BOXES, AND OBSTRUCTIONS. THE DRAWINGS ARE NOT INTENDED TO BE SCALED AND REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS

11. LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT PROVIDED UNDER THE ELECTRICAL CONTRACTORS SCOPE OF WORK SHALL BE PERFORMED IN A NEAT AND FIRST CLASS WORKMANSHIP LIKE MANNER BY THOSE EXPERIENCED AND QUALIFIED OF THE PROPER TRADE AND SHALL BE IN COMPLIANCE WITH THE SPECIFIC REQUIREMENTS OF THE CONTRACT DRAWINGS, AND ALL CODES, ORDINANCES OF STATUES, ETC. APPLICABLE.

12. FIELD DETERMINE EXACT INSTALLATION LOCATION OF FIRE PROTECTION REQUIREMENTS UNDER THE NFPA AND MANUFACTURER'S WRITTEN INSTRUCTIONS. INCLUDE ALL FIRE ALARM SYSTEMS AND DETECTION DEVICES.

13. ALL MOUNTING HEIGHTS INDICATED ARE MEASURED FROM FINISHED FLOOR UNLESS OTHERWISE NOTED.

14. PROVIDE TEMPORARY LIGHTING, POWER, AND WIRING SYSTEMS FOR USE OF ALL TRADES, ADEQUATE FOR ENTIRE NEEDS OF THE PROJECT.

15. CONNECT ALL MOTORS, STARTERS, CONTROLS, DISCONNECT SWITCHES, CIRCUIT BREAKERS, ETC. WHETHER FURNISHED UNDER THIS CONTRACT BY THE GENERAL CONTRACTOR, OTHER SUB-CONTRACTOR, OR BY THE OWNER.

16. PROVIDE PULL WIRES WHEN EMPTY CONDUITS ARE SHOWN ON THE PLANS.

17. PROVIDE LIGHT FIXTURES AS SELECTED BY ARCHITECT, OR AS SPECIFIED.

18. PROVIDE ALL WIRING DEVICES.

19. IDENTIFY CLEARLY ON A TYPE WRITTEN FROM ALL CIRCUITS AND EQUIPMENT TO CORRESPOND WITH THE PLANS AND PANEL SCHEDULE AND ATTACH INSIDE THE PERTAINING PANEL.

20. NM CABLE IS ALLOWED FOR TYPE II,IV AND V CONSTRUCTION.FOR TYPE I AND II CONSTRUCTION, THE USE IS PERMITTED IF INSTALLED WITHIN RACEWAYS OR SIMILAR STRUCTURE TO PROTECT FROM PHYSICAL DAMAGE(NEC 334).

21. CONTRACTOR SHALL FURNISH THE ENGINEERING WITH SHOP DRAWINGS OF EQUIPMENT PRIOR TO PURCHASE FOR APPROVAL.

22. THE CONTRACTOR SHALL TEST ALL WORK AND EQUIPMENT AS DIRECTED BY THE ARCHITECT AND BY AUTHORITIES HAVING JURISDICTION, FURNISHING ALL EQUIPMENT AND NECESSARY PERSONNEL AND ELECTRICAL POWER. THE ENTIRE INSTALLATION SHALL BE TESTED FOR SHORTS, GROUNDS AND OPEN CIRCUITS, AND ALL DEFECTS SHALL BE DEMONSTRATED TO BE IN PROPER WORKING AND OPERATING CONDITION TO THE COMPLETE SATISFACTION OF THE ENGINEER.

23. ALL EQUIPMENTS AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF ACCEPTANCE BY OWNER.

24. AT COMPLETION OF JOB THE ELECTRICAL CONTRACTOR SHALL GIVE THE OWNER AN AS-BUILT SET OF REPRODUCIBLE DRAWINGS SHOWING THE EXACT ELECTRICAL INSTALLATION, WRITTEN MAINTENANCE INSTRUCTIONS AND SCHEDULE OF ROUTINE MAINTENANCE AS WELL AS ANY OTHER CLOSE OUT ITEMS REQUIRED BY THE CONTRACT DOCUMENTS.

25. BEFORE BIDDING THE JOB THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ANY EXISTING CONDITIONS.

26. ALL ELECTRICAL SWITCHES, CONTROLS, ETC. IN ALL AREAS ARE TO BE AT A.D.A. ACCESSIBILITY CODE COMPLAINT HEIGHT. REFER TO GENERAL NOTE #2-L.

27. CIRCUIT NUMBERS SHOWN ON THE DRAWINGS ARE FOR REFERENCE ONLY. BALANCE LOADS AMONG PHASES IN NEW PANEL BOARDS TO WITHIN 10% OF EACH OTHER.

28. FEEDER CONDUCTORS SHALL BE SIZED BY ENGINEER.

29. CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING:

   A) A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM

   B) FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.

30. CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER. THE MANUALS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:

   A) SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.

   B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.

   C) NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.

31. ELECTRICAL OUTLETS OR BOXES LOCATED ON OPPOSITE SIDES OF RATED WALLS OR PARTITIONS SHALL MEET ONE OF THE FOLLOWING CRITERIA:

   A) BOXES SHALL BE SURROUNDED ON 5 SIDES WITH FIRE RATED GYPSUM BOARD TO MAINTAIN THE FIRE RATING OF THE WALL.

   B) BACK OF BOXES SHALL BE WRAPPED IN FIRE RESISTANT PUTTY SIMILAR TO SPEC-SEAL FIRE RATED PUTTY PADS.

32. DO NOT INSTALL SMOKE DETECTORS UNTIL BUILDING IS FREE OF DUST AND DUST PRODUCING ACTIVITIES, JUST PRIOR TO FINAL INSPECTION FOR CERTIFICATE OF OCCUPANCY.

33. AT COMPLETION OF WORK, CONTRACTOR SHALL CLEAN UP AND REMOVE ALL DEBRIS AND MATERIALS NOT INSTALLED IN WORK, LEAVING PREMISES CLEAN.

34. ALL BRANCH CIRCUITS SUPPLYING OUTLETS IN LIVING AREA, SLEEPING AREA AND DINING AREA SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12 FOR HOTEL GUEST ROOMS AND SUITES.

35. PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15- AND 20-AMPERE RECEPTACLES LOCATED IN GUESTROOMS AND GUEST SUITES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES AS PER NEC 406.12.

36. THE FRANCHISE BRAND STANDARDS DESIGN DOCUMENT SHALL BE CONSIDER AS AN INTEGRAL PART OF THE CONSTRUCTION DOCUMENTS. ALL CONTRACTORS SHALL ENSURE THEY OBTAIN,READ, AND FAMILIARIZE THEMSELVES WITH THE BRAND STANDARD DOCUMENT BEFORE BIDDING AND ALSO THROUGHOUT THE CONSTRUCTION STAGES. IF THERE ARE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE FRANCHISE BRAND STANDARDS, THE CONTRACTOR SHALL ISSUE AN RFI TO THE AOR AND EOR.

LEGENDS

SYMBOL	
WIRING DEVICES	
XX	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED AT 18" AFF ON CENTER, UNO. IG = ISOLATED GROUND WP = WEATHER PROOF AC = MOUNTED 4" ABOVE COUNTER USB = USB OUTLET H = HORIZONTAL OUTLET V = VERTICAL OUTLET
	NEMA 5-20R GROUND FAULT CIRCUIT INTERRUPT DUPLEX RECEPTACLE MOUNTED AT 18" AFF ON CENTER, UNO. WP = WEATHER PROOF H = HORIZONTAL OUTLET V = VERTICAL OUTLET
	NEMA 5-20R DUPLEX RECEPTACLE MOUNTED AT 18" AFF ON CENTER, DEDICATED CIRCUIT, UNO.
	NEMA 5-20R DUPLEX RECEPTACLE FLOOR MOUNTED , UNO.
	NEMA 5-20R DUPLEX RECEPTACLE, CEILING MOUNTED, UNO.
	NEMA 5-20R DOUBLE DUPLEX RECEPTACLE MOUNTED AT 18" AFF ON CENTER, DEDICATED CIRCUITS UNO.
	NEMA 5-20R DOUBLE DUPLEX RECEPTACLE MOUNTED AT 18" AFF ON CENTER, DEDICATED CIRCUITS UNO.
	NEMA 5-20R DOUBLE DUPLEX RECEPTACLE FLOOR MOUNTED , UNO.
	NEMA 5-20R DOUBLE DUPLEX RECEPTACLE CEILING MOUNTED , UNO.
	100-240 VAC 60Hz FLOOR MOUNTED RECEPTACLE, UNO.
	SPECIAL RECEPTACLE SEE PLAN NOTES FOR TYPE.
J	JUNCTION BOX FOR ELECTRICAL DEVICE INSTALLATION, PULL OR TAP BOX, CEILING, WALL OR FLOOR MOUNTED
TV	TELEVISION OUTLET MOUNTED BEHIND TV, UNO
	TELEPHONE OUTLET MOUNTED AT 48" AFF, UNO
	DATA OUTLET MOUNTED AT 18" AFF, UNO
HP	COMBINATION DATA/PHONE OUTLET MOUNTED AT 18" AFF, UNO
	HOUSEPHONE OUTLET MOUNTED AT 48" AFF, UNO
TV	2 GANG FLOOR BOX WITH DUPLEX RECEPTACLE AND TV OUTLET.
TV	2 GANG FLOOR BOX WITH DUPLEX RECEPTACLE AND COMMUNICATION OUTLET.
CR	CARD READER MOUNTED AT 46" AFF, UNO
	CIRCUIT BREAKER
$	125V OR 277V AC SINGLE POLE 20 AMP SWITCH (ROCKER TYPE) MOUNTED AT 46" AFF ON CENTER, UNO.
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	GUEST ROOM DOORBELL PUSH-BUTTON MOUNTED @ 46" AFF
A	GUEST ROOM DOOR ANNUNCIATOR MOUNTED @ 80" AFF
D	GUEST ROOM DOORBELL DISCONNECT SWITCH MOUNTED @ 46" AFF
WAP	WIRELESS ACCESS POINT
Cat6	CAT6 OUTLET MOUNTED AT 12" AFF, UNO
$ DS	MOTOR DISCONNECT SWITCH
	UNISTRUT RACK
TV	3 GANG FLOOR BOX WITH DUPLEX RECEPTACLE AND TV OUTLET AND 100-240 VAC OUTLET.
ELECTRICAL EQUIPMENT	
	ELECTRICAL PANEL BOARD
	ELECTRICAL DISTRIBUTION PANEL BOARD OR SWITCHBOARD
T	TRANSFORMER
GEN	GENERATOR
MECHANICAL EQUIPMENT & FIXTURE	
	EXHAUST FAN, CEILING MOUNTED
	EXHAUST FAN, WALL MOUNTED
T	THERMOSTAT
P-#	PUMP
FIRE ALARM DEVICES	
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
	MAGNETIC DOOR HOLDER
TWC	TWO WAY COMMUNICATION
RF	RADIO RESPONDER
	FIRE SMOKE DAMPER

DRAWING INDEX

ELECTRICAL

SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE	CURRENT REVISION DESCRIPTION
E-001	GENERAL NOTES, LEGENDS AND ABBREVIATIONS	2020.02.21	ISSUED FOR PERMIT
E-101	ELECTRICAL DETAILS-1	2020.02.21	ISSUED FOR PERMIT
E-102	ELECTRICAL DETAILS-2	2020.02.21	ISSUED FOR PERMIT
E-103	ELECTRICAL DETAILS-3	2020.02.21	ISSUED FOR PERMIT
E-104	POOL GROUNDING DETAILS	2020.02.21	ISSUED FOR PERMIT
E-105	ELECTRICAL GROUNDING DETAILS	2020.02.21	ISSUED FOR PERMIT
E-200	SITE POWER PLAN	2020.06.19	CITY COMMENTS
E-201	1ST FLOOR POWER PLAN A	2020.02.21	ISSUED FOR PERMIT
E-202	1ST FLOOR POWER PLAN B	2020.02.21	ISSUED FOR PERMIT
E-203	2ND FLOOR POWER PLAN A	2020.02.21	ISSUED FOR PERMIT
E-204	2ND FLOOR POWER PLAN B	2020.02.21	ISSUED FOR PERMIT
E-205	3RD FLOOR POWER PLAN A	2020.02.21	ISSUED FOR PERMIT
E-206	3RD FLOOR POWER PLAN B	2020.02.21	ISSUED FOR PERMIT
E-207	4TH FLOOR POWER PLAN A	2020.02.21	ISSUED FOR PERMIT
E-208	4TH FLOOR POWER PLAN B	2020.02.21	ISSUED FOR PERMIT
E-209	5TH FLOOR POWER PLAN A	2020.02.21	ISSUED FOR PERMIT
E-210	5TH FLOOR POWER PLAN B	2020.02.21	ISSUED FOR PERMIT
E-211	ROOF ELECTRICAL PLAN	2020.02.21	ISSUED FOR PERMIT
E-212	ENLARGED FLOOR POWER PLAN-1	2020.02.21	ISSUED FOR PERMIT
E-213	ENLARGED FLOOR POWER PLAN-2	2020.02.21	ISSUED FOR PERMIT
E-214	TYPICAL UNIT ELECTRICAL PLAN-1	2020.02.21	ISSUED FOR PERMIT
E-215	TYPICAL UNIT ELECTRICAL PLAN-2	2020.02.21	ISSUED FOR PERMIT
E-216	TYPICAL UNIT ELECTRICAL PLAN-3	2020.02.21	ISSUED FOR PERMIT
E-301	PANEL SCHEDULE-1	2020.02.21	ISSUED FOR PERMIT
E-302	PANEL SCHEDULE-2	2020.02.21	ISSUED FOR PERMIT
E-303	PANEL SCHEDULE-3	2020.02.21	ISSUED FOR PERMIT
E-304	PANEL SCHEDULE-4	2020.02.21	ISSUED FOR PERMIT
E-305	PANEL SCHEDULE-5	2020.02.21	ISSUED FOR PERMIT
E-306	PANEL SCHEDULE-6	2020.02.21	ISSUED FOR PERMIT
E-307	PANEL SCHEDULE-7	2020.06.19	CITY COMMENTS
E-308	PANEL SCHEDULE-8	2020.06.19	CITY COMMENTS
E-309	PANEL SCHEDULE-9	2020.06.19	CITY COMMENTS
E-310	ELECTRICAL RISER DIAGRAM	2020.06.19	CITY COMMENTS
E-311	TELEPHONE, DATA AND TV RISER DIAGRAM	2020.02.21	ISSUED FOR PERMIT

ABBREVIATIONS

A	AMP
AFC	AVAILABLE FAULT CURRENT
AIC	AMPERES INTERRUPTING CAPACITY
AFF	ABOVE FINISHED FLOOR
ADA	AMERICAN DISABILITIES ACT
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BRKR	BREAKER
C	CONDUIT OR CONDUCTOR-AS APPLICABLE
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER
DTTS	DOUBLE THROW TRANSFER SWITCH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
ELEC	ELECTRICAL/ELECTRIC
EM	EMERGENCY
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
G,GND	GROUND
FLUOR	FLUORESCENT
GEN	GENERATOR
GF,GFCI	GROUND FAULT (CIRCUIT)INTERRUPTER
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND/OFF/AUTO
HP	HORSE POWER
HWH	HOT WATER HEATER
IG	ISOLATED GROUND
INCAN	INCANDESCENT
PJB	JUNCTION BOX
TCM	THOUSAND CIRCULAR MILES
KVA	KILOVOLT - AMPERE
KW	KILOWATT
LTG	LIGHTING
KWH	KILOWATT HOUR
LTS	LIGHTS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MSB	MAIN SWITCH BOARD
MH	METAL HALIDE OR MANHOLE- AS APPLICABLE
MLO	MAIN LUG ONLY
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NF	NON FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT (UNSWITCHED CKT.)
PB	PULL BOX
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PWR	POWER
RCPT	RECEPTACLE
RF	RADIO RESPONDER
RGS	RIGID GALVANIZED STEEL
SF	SUPPLY FAN
SH	SHIELDED
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SRAIC	SERIES RATED AMPERES INTERRUPTING CAPACITY
SW	SWITCH
SWB	STRUCTURED WIRING BOX
TELE	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TWC	TWO WAY COMMUNICATION
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W	WATTS
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
XFMR	TRANSFORMER

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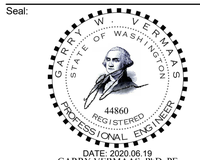

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PROTOTYPE VERSION: V9.2 2014 FEB

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2020.02.21

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VSG

CHECKED BY
GWV

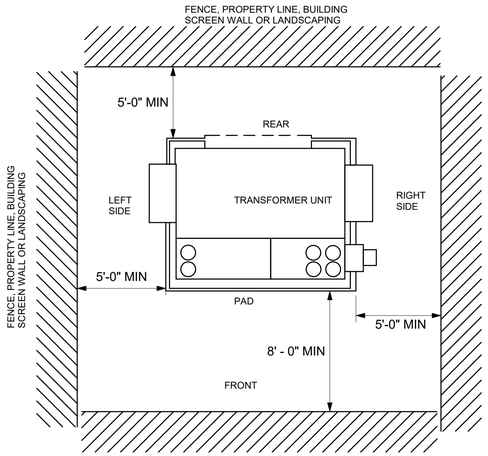
PROJECT NO.
B4-124-1803

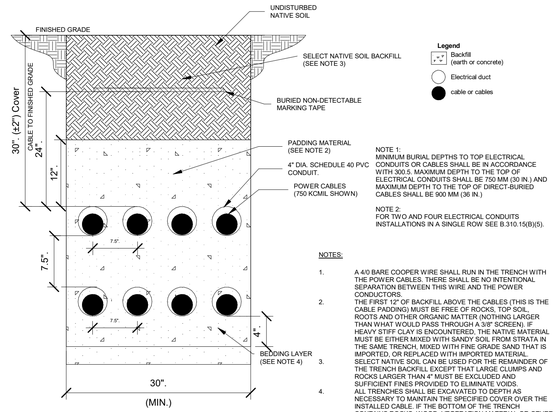
SHEET NAME

GENERAL NOTES, LEGENDS AND ABBREVIATIONS

DRAWINGS NO.

E-001





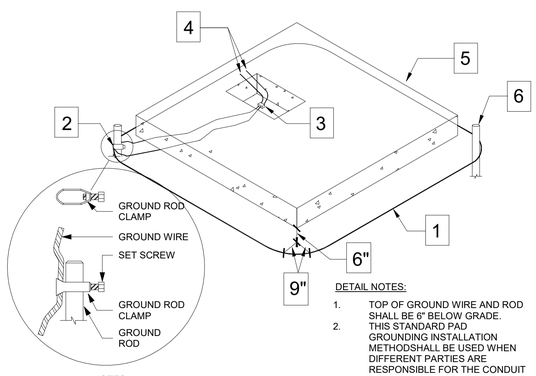
NOTE 1:
MINIMUM BURIAL DEPTHS TO TOP ELECTRICAL CONDUITS OR CABLES SHALL BE IN ACCORDANCE WITH 300.5. MAXIMUM DEPTH TO THE TOP OF ELECTRICAL CONDUITS SHALL BE 750 MM (30 IN.) AND MAXIMUM DEPTH TO THE TOP OF DIRECT-BURIED CABLES SHALL BE 900 MM (36 IN.)

NOTE 2:
FOR TWO AND FOUR ELECTRICAL CONDUITS INSTALLATIONS IN A SINGLE ROW SEE B.310.15(B)(5).

NOTES:

1. A 4/0 BARE COOPER WIRE SHALL RUN IN THE TRENCH WITH THE POWER CABLES. THERE SHALL BE NO INTENTIONAL SEPARATION BETWEEN THIS WIRE AND THE POWER CONDUCTORS.
2. THE FIRST 12" OF BACKFILL ABOVE THE CABLES (THIS IS THE CABLE PADDING) MUST BE FREE OF ROCKS, TOP SOIL, ROOTS AND OTHER ORGANIC MATTER (NOTHING LARGER THAN WHAT WOULD PASS THROUGH A 3/8" SCREEN). IF HEAVY STIFF CLAY IS ENCOUNTERED, THE NATIVE MATERIAL MUST BE EITHER MIXED WITH SANDY SOIL FROM STRATA IN THE SAME TRENCH, MIXED WITH FINE GRADE SAND THAT IS IMPORTED, OR REPLACED WITH IMPORTED MATERIAL. SELECT NATIVE SOIL CAN BE USED FOR THE REMAINDER OF THE TRENCH BACKFILL EXCEPT THAT LARGE CLUMPS AND ROCKS LARGER THAN 4" MUST BE EXCLUDED AND SUFFICIENT FINES PROVIDED TO ELIMINATE VOIDS.
3. ALL TRENCHES SHALL BE EXCAVATED TO DEPTH AS NECESSARY TO MAINTAIN THE SPECIFIED COVER OVER THE INSTALLED CABLE. IF THE BOTTOM OF THE TRENCH CONTAINS ROCKS, WOOD, VEGERATION MATERIAL OR OTHER HARD, ROUGH OR SHARP MATERIALS THAT COULD DAMAGE THE CABLE, THE TRENCH SHALL BE OVER EXCAVATED AND BACKFILLED WITH 4" LAYER OF COMPACTED FINE CLEAN SOIL (NOTHING LARGER THAN WHAT WOULD PASS THROUGH A 3/8" SCREEN) OR SAND PRIOR TO THE CABLE BEING LAID IN PLACE.
4.

7 TRENCH CONDUIT DETAIL
NTS



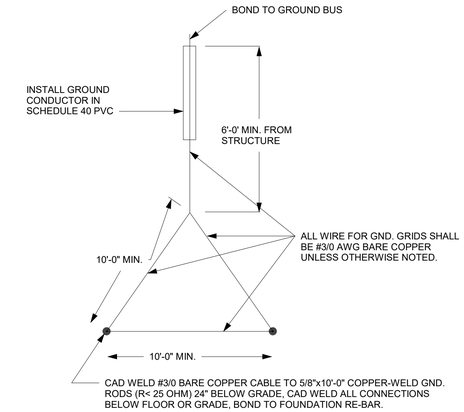
DETAIL NOTES:

1. TOP OF GROUND WIRE AND ROD SHALL BE 6" BELOW GRADE.
2. THIS STANDARD PAD GROUNDING INSTALLATION METHODSHALL BE USED WHEN DIFFERENT PARTIES ARE RESPONSIBLE FOR THE CONDUIT AND PAD INSTALLATION.

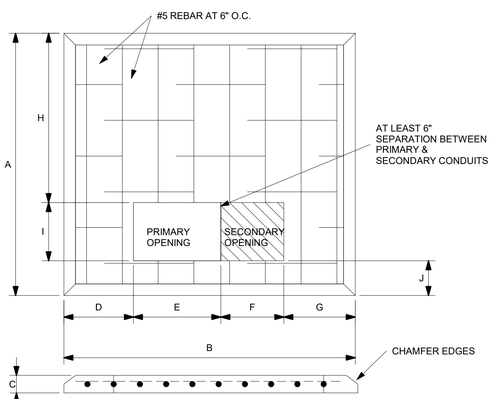
NOTES:

1. BARE COPPER GROUNDING WIRE, #2AWG, 7-STRAND SOFT DRAWN.
2. RUN SECOND TAIL AROUND GROUND ROD BUT NOT THRU CLAMP.
3. SDG&E FURNISHED AND INSTALLED COMPRESSION CONNECTOR.
4. 24" LENGTH OF TAILOUT BEYOND PAD.
5. PAD INSTALLATION BY ELECTRICAL CONTRACTOR PER SDG&E REQUIREMENTS.
6. GROUND ROD 5/8" X 8'-0", COPPERWELD.

4 TRANSFORMER GROUNDING DETAIL
NTS



1 GROUND ROD GRID DETAIL
NTS

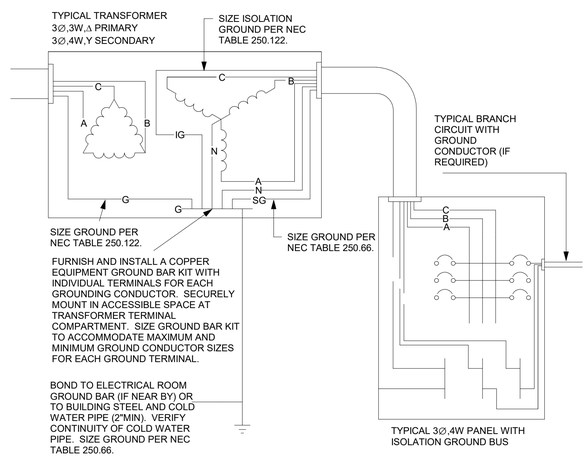


KVA	A	B	C	D	E	F	G	H	I	J
45 - 500	76	76	6	8	34	26	8	42	26	8
750- 1000	90	90	8	15	34	26	15	54	26	10
1500-2500	104	104	8	22	34	26	22	68	26	10

NOTES:

1. CONCRETE SPECIFICATIONS, MIN 28 DAY COMPRESSIVE STRENGTH 3000PSI,3/4" AGGREGATE MAXIMUM SIZE.
2. REINFORCING STEEL, ASTM - A615 GRADE 60, PLACE 6" O.C. EACH WAY AND SECURELY TIED TOGETHER.
3. MINIMUM CONCRETE COVER OVER REINFORCING RODS, 3".
4. WOOD FLOAT FINISH, LEAVING NO DEPRESSIONS.
5. PRIMARY & SECONDARY CONDUITS TO BE SEPARATED BY AT LEAST 6".

10 SITE TRANSFORMER INSTALLATION DETAILS
NTS



8 DRY TYPE SHIELDED ISOLATION TRANSFORMER WIRING DETAIL
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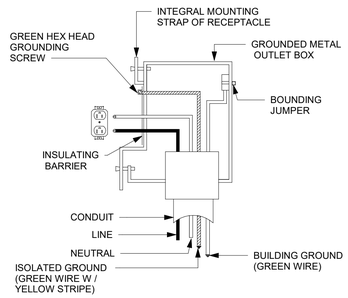
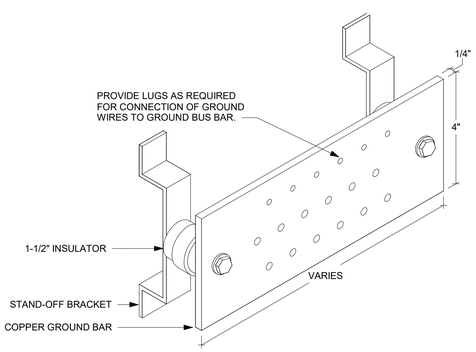


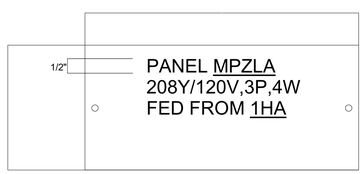
5 IG RECEPTACLE GROUND DETAIL RECEPTACLE GROUND DETAIL
NTS



NOTES:

1. COPPER BUS BARS SHALL BE CHATSWORTH MODEL 10622-010 (10"X4") LOCATED IN SMALL ELECTRICAL ROOMS AND COMMUNICATION ROOMS AND MODEL 10622-020 (20"X4") LOCATED IN MAIN ELECTRICAL ROOM. IN ALL CASES GROUND BAR LENGTH SHALL BE SIZED TO ACCOMMODATE NUMBER OF CONNECTIONS REQUIRED.
2. INSTALL GROUND BUS BAR A MINIMUM OF 18"AFF WITH 6" CLEAR ON ALL OTHER SIDES.

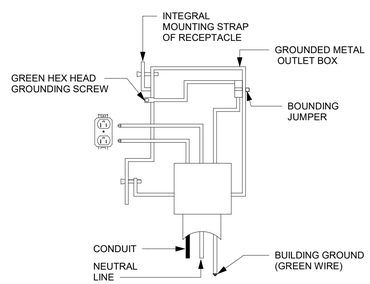
2 GROUND BAR DETAIL
NTS



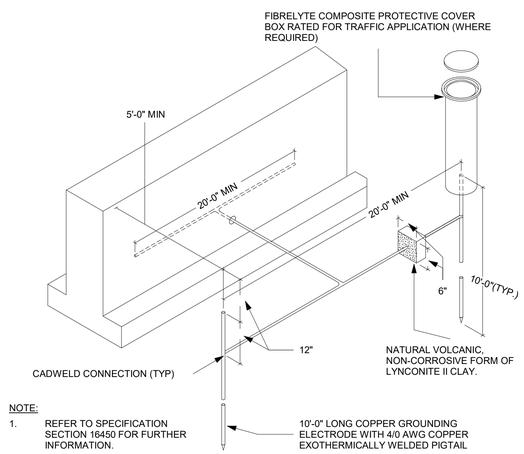
NOTES:

1. TAGS TO BE MELAMINE PLASTIC LAMINATE IN SIZES AND THICKNESSES INDICATED. TAG THICKNESS TO BE 1/16" FOR UNITS UP TO 20 SQUARE INCHES OR 8" IN LENGTH AND 1/8" FOR LARGER TAGS.
2. SECURE TAGS TO EQUIPMENT WITH SELF-TAPPING STAINLESS STEEL SCREWS, EXCEPT CONTACT TYPE PERMANENT COMMERCIAL GRADE ADHESIVE PROVIDING A PERMANENT BOND SHALL BE USED WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
3. COLOR CODES:
   (a) NORMAL SYSTEM: WHITE LETTERING IN A BLACK FIELD
   (b) EMERGENCY SYSTEM: WHITE LETTERING IN A YELLOW FIELD
   (c) FIRE ALARM SYSTEM: WHITE LETTERING IN A RED FIELD
4. REFER TO SPECIFICATION SECTION 16020 FOR FURTHER INFORMATION.

9 PANEL IDENTIFICATION DETAIL
NTS



6 STANDARD RECEPTACLE GROUND DETAIL
NTS



NOTE:

1. REFER TO SPECIFICATION SECTION 16450 FOR FURTHER INFORMATION.

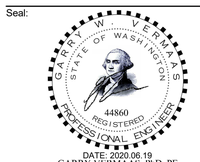
3 ELECTROLYTIC GROUNDING SYSTEM DETAIL
NTS

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
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Owner:

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4500 36TH AVE. S SUITE
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PROTOTYPE VERSION: V9.2 2014 FEB

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CURRENT ISSUE

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CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

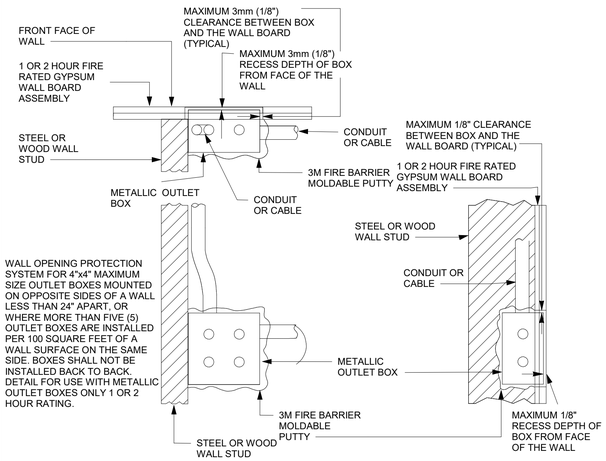
PROJECT NO.
B4-124-1803

SHEET NAME

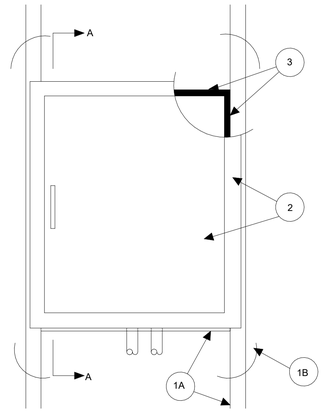
ELECTRICAL DETAILS-1

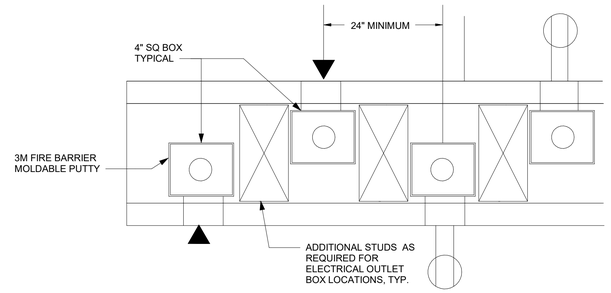
DRAWINGS NO.

E-101



8 WALL OPENING PROTECTION
NTS

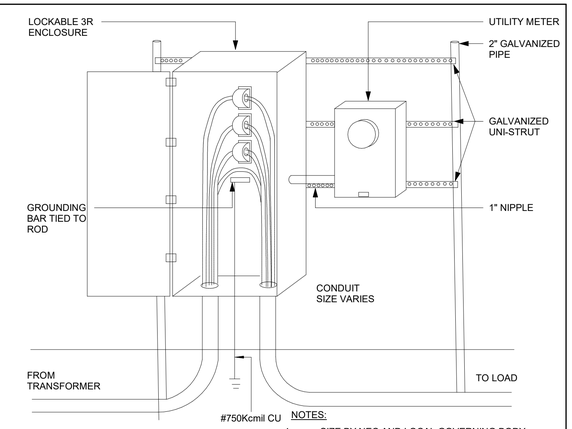




NOTE:

BACK-TO-BACK AND THRU-WALL OUTLETS ARE NOT PERMITTED. GUESTROOM POWER OUTLETS, TELEPHONE OUTLETS, TELEVISION OUTLETS, HVAC JUNCTION BOXES, ETC. MUST BE OFFSET. THIS IS TO MAINTAIN THE FIRE RATING OF THE WALL AND TO PREVENT SOUND TRANSMISSION THROUGH THE OUTLETS. IN CONCRETE BLOCK WALLS OFFSET OUTLETS 6" BY LOCATING IN SEPARATE BLOCK CELLS. IN METAL STUD WALLS AND WOOD STUD WALLS, PROVIDE AT LEAST 6" CLEAR HORIZONTAL SPACE BETWEEN BOXES. LOCATE IN SEPARATE STUD SPACES IF POSSIBLE, BUT DO NOT MOUNT ON THE OPPOSITE SIDES OF THE SAME STUD

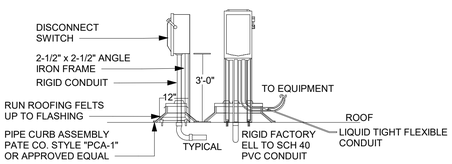
4 OPPOSITE WALLS OUTLET DETAIL
NTS



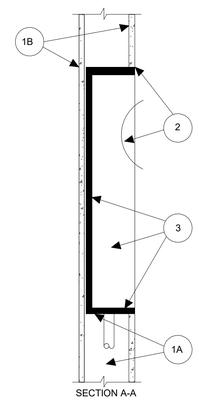
NOTES:

1. SIZE BY NEC AND LOCAL GOVERNING BODY.
2. BONDING WIRE TO EXTEND TO PECI IF STRUCTURE IS LESS THAN 6' FROM TRANSFORMER.

1 CT CABINET DETAIL
NTS



9 MOTOR DISCONNECT DETAILS
NTS



NOTES:

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE RATED FRAMED GYPSUM BOARD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400, V400, OR W400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS — WALL FRAMING SHALL CONSIST OF STEEL CHANNEL STUDS OR WOOD STUDS. STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. WOOD STUDS TO BE MIN 2 BY 4 IN. (51 BY 102 MM) OR LARGER AND SPACED MAX 16 IN. (406 MM) OC. AN ADDITIONAL FRAMING MEMBER SHALL BE USE TO FORM A SHELF WITHIN THE WALL CAVITY TO SUPPORT THE STEEL BOX (ITEM 2) AND MAT FILL MATERIAL (ITEM 3). THE FRAMED OPENING IS TO BE 1 IN. (25 MM) WIDER THAN THE WIDTH OF THE STEEL BOX.

   B. GYPSUM BOARD* — THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS AND ORIENTATION SHALL BE, AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. SIZE OF CUTOUT MADE TO ACCOMMODATE STEEL BOX (ITEM 2) IS TO BE 1 IN. (25 MM) WIDER AND 1 IN. (25 MM) HIGHER THAN THE WIDTH AND HEIGHT OF THE STEEL BOX.
   THE HOURLY F, T, FT, FH AND FTH RATINGS OF THE FIRE STOP SYSTEM ARE EQUAL TO THE HOURLY FIRE RATING OF THE WALL IN WHICH THE FIRE STOP SYSTEM IS INSTALLED.

2. STEEL BOX — MAX 19 IN. (483 MM) WIDE BY MAX 32 IN. (813 MM) HIGH BY MAX 3 1/2 IN. (89 MM) DEEP FOR STEEL STUD WALLS. MAX 12 IN. (305 MM) WIDE BY MAX 32 IN. (813 MM) HIGH BY MAX 3 1/2 IN. (89 MM) DEEP FOR WOOD STUD WALLS. BOX TO BE RECESSED BOX WITH HINGED STEEL DOOR AND MOUNTING FLANGE. STEEL BOX SECURED TO STEEL STUDS WITH STEEL SCREWS AFTER APPLICATION OF MAT MATERIAL (ITEM 3) ON EXTERIOR SURFACES OF STEEL BOX. BOTTOM AND/OR TOP OF STEEL BOX MAY BE PENETRATED BY UP TO TWO MAX 1-1/2 IN. (38 MM) DIAM COPPER, STEEL OR IRON PIPES OR TUBES. OPEN PIPES OR TUBES WHICH TERMINATE WITHIN THE BOX SHALL BE SEALED WITH CAULK (ITEM 4) OR PLUGGED WITH A BALL OF PUTTY (ITEM 5).

3. FILL, VOID OR CAVITY MATERIALS* - MAT — NOMINAL 0.4 IN. (10 MM) THICK ALUMINUM FOIL FACED ENDOTHERMIC MAT SUPPLIED IN 24 IN. WIDE ROLLS.INDIVIDUAL PIECES OF MAT CUT TO COVER FOUR SIDES AND BACK OF BOX AND LAMINATED TO BOX WITH HIGH STRENGTH, FAST, CONTACT TYPE ADHESIVE (FOIL FACE EXPOSED). THE MAT SECTIONS ON THE TOP AND BOTTOM OF THE BOX SHALL BE CUT TO OVERLAP THE MAT SECTIONS ON THE SIDES OF THE BOX. THE MAT SECTION ON THE BACK OF THE BOX SHALL BE CUT TO LAP OVER THE EDGE OF THE MAT SECTIONS ON THE TOP, BOTTOM AND VERTICAL SIDES OF BOX. CIRCULAR CUTOUTS MADE IN THE MAT TO ACCOMMODATE THE PIPES OR TUBES TO BE 1/4 IN. TO 1/2 IN. (6 TO 13 MM) LARGER THAN OUTSIDE DIAM OF PIPE OR TUBE. ALL CORNERS AND BUTTED SEAMS IN THE MAT ARE TO BE COVERED WITH MIN 2 MIL ALUMINUM FOIL TAPE.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — TYPE E-54A OR E-5A-4 MAT

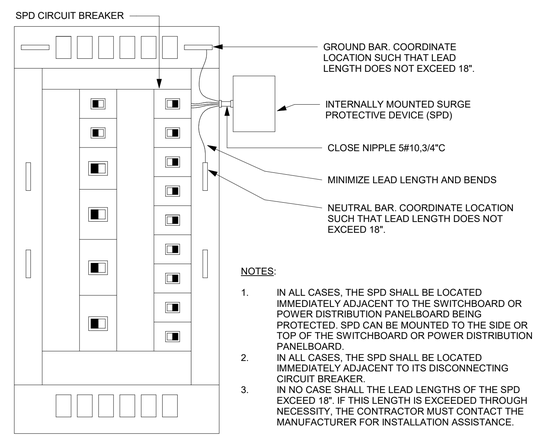
4. FILL, VOID OR CAVITY MATERIALS* - CAULK OR SEALANT — (NOT SHOWN) - NOM 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO THE EDGE OF THE MAT MATERIAL AROUND THE PERIMETER OF THE BOX MOUNTING FLANGE. ADDITIONAL CAULK FILL MATERIAL SHALL BE USED TO COMPLETELY FILL EACH CIRCULAR CUTOUT MADE IN THE MAT MATERIAL TO ACCOMMODATE A PIPE OR TUBE. THE END OF EACH OPEN PIPE OR TUBE WHICH TERMINATES WITHIN THE BOX SHALL BE SEALED WITH A MIN 1/2 IN. (13 MM) DEPTH OF CAULK.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — TYPE CP 25WB+ CAULK, FB-3000WT SEALANT

5. FILL, VOID OR CAVITY MATERIALS* - PUTTY — (NOT SHOWN) - AS AN ALTERNATE TO THE CAULK (ITEM 4), THE END OF EACH OPEN PIPE OR TUBE WHICH TERMINATES WITHIN THE BOX MAY BE SEALED WITH A MIN 1/2 IN. (13 MM) DEPTH OF PUTTY FILL MATERIAL.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — TYPE MP+ MOLDABLE PUTTY

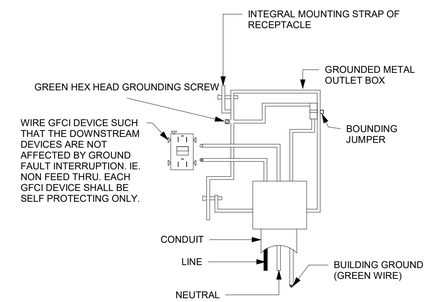
7 FLUSH MOUNTED PANEL BOARD DETAIL
NTS



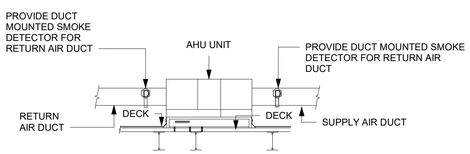
NOTES:

1. IN ALL CASES, THE SPD SHALL BE LOCATED IMMEDIATELY ADJACENT TO THE SWITCHBOARD OR POWER DISTRIBUTION PANELBOARD BEING PROTECTED. SPD CAN BE MOUNTED TO THE SIDE OR TOP OF THE SWITCHBOARD OR POWER DISTRIBUTION PANELBOARD.
2. IN ALL CASES, THE SPD SHALL BE LOCATED IMMEDIATELY ADJACENT TO ITS DISCONNECTING CIRCUIT BREAKER.
3. IN NO CASE SHALL THE LEAD LENGTHS OF THE SPD EXCEED 18". IF THIS LENGTH IS EXCEEDED THROUGH NECESSITY, THE CONTRACTOR MUST CONTACT THE MANUFACTURER FOR INSTALLATION ASSISTANCE.

5 SWITCHBOARD SPD INSTALLATION DETAIL
NTS



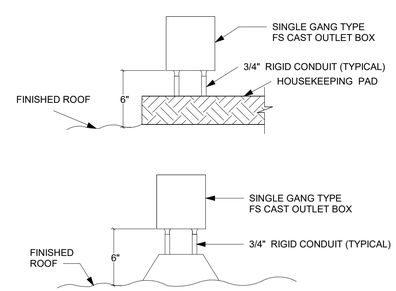
2 GFCI RECEPTACLE - WIRE DIAGRAM
NTS



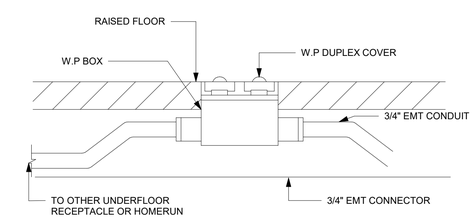
NOTE:

FOR MORE THAN 2000 CFM SMOKE DETECTOR REQUIRED IN HVAC DUCT.

10 MAKE-UP AIR UNIT DUCT MOUNTED SMOKE DETECTOR DETAIL
NTS



6 TYPICAL ROOF MOUNTED RECEPTACLE
NTS



NOTE:

CONTRACTOR SHALL PROVIDE APPROVE 3M FIRE BARRIER MOLDABLE PUTTY 1 HR. RATED FIRE STOP SYSTEM, IN ACCORDANCE WITH ASTM E814 OR UL 1479 AS PER IBC 714.4.2

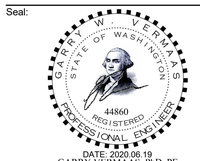
3 UNDER FLOOR RECEPTACLE DETAIL
NTS

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE 200, FARGO, ND 58104
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HOMEWOOD SUITES BY HILTON
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PROTOTYPE VERSION: V9.2 2014 FEB

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CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

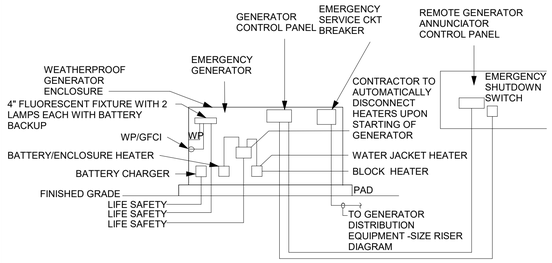
DRAWN BY
VSG

CHECKED BY
GWV

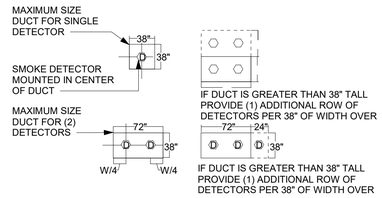
PROJECT NO.
B4-124-1803

SHEET NAME
ELECTRICAL DETAILS-2

DRAWINGS NO.
E-102



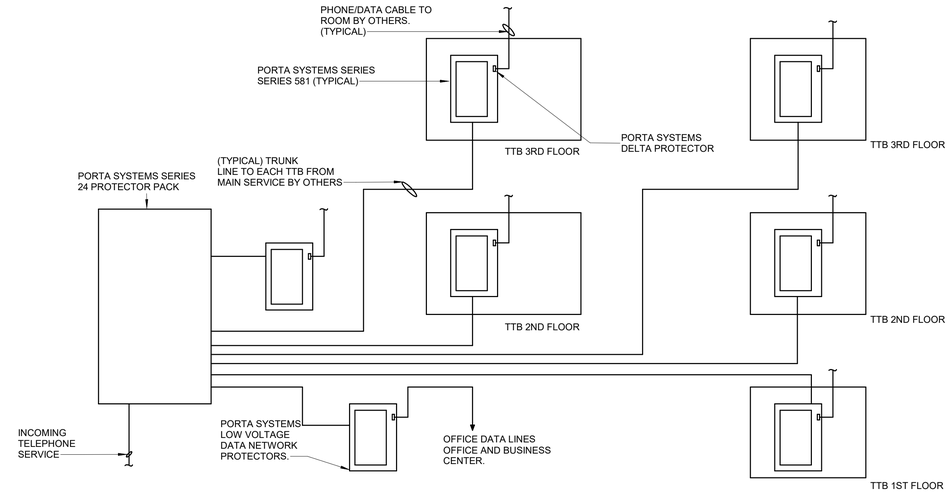
9 EMERGENCY GENERATOR DETAIL
NTS



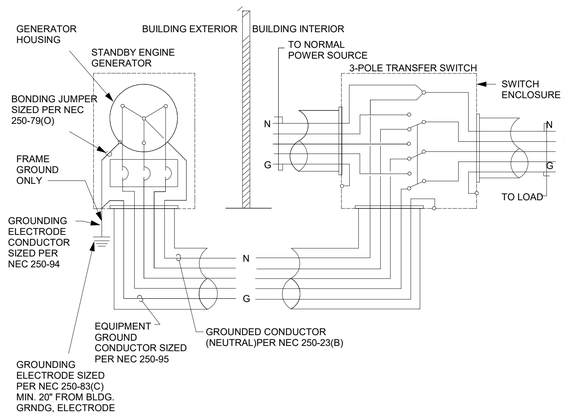
NOTES:

1. INSTALLATION DETAILS BELOW SHALL PERTAIN TO SMOKE DETECTORS IN SUPPLY AIR DUCTS, RETURN AIR DUCTS, AND RETURN AIR OPENINGS AS REQUIRED BY THE SPECIFICATIONS AND GOVERNING CODES.
2. FOR MORE THAN 2000 CFM SMOKE DETECTOR REQUIRED IN HVAC DUCT.

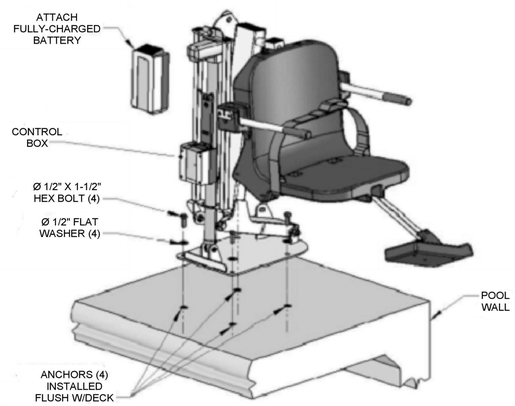
6 DUCT MOUNTED SMOKE DETECTOR DETAILS
NTS



1 DATA/PHONE PROTECTION SYSTEM
NTS



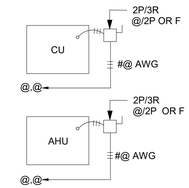
10 ENGINE GENERATOR W/3-POLE TRANSFER SWITCH GROUNDING DETAIL
NTS



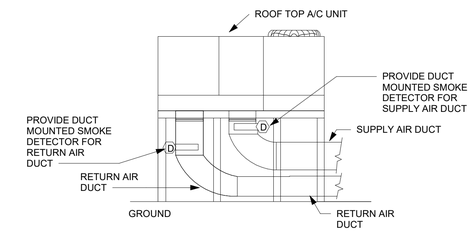
7 POOL LIFT DETAIL
NTS

NOTES:

1. VERIFY NAMEPLATE RATINGS, LOCATIONS AND POINT OF POWER CONNECTIONS PRIOR TO ROUGH-IN.
2. DO NOT LOCATE DISCONNECT SWITCHES OVER UNIT ACCESS PANELS.
3. PROVIDE A 3/4" EMPTY CONDUIT THROUGH INACCESSIBLE LOCATIONS (I.E. WALLS, UNDER SLAB)
4. EQUIPMENT REQUIREMENTS ARE FOR MANUFACTURER AND MODEL NUMBER LISTED ON MECHANICAL PLANS. THE MECHANICAL CONTRACTOR SHALL BEAR ANY ADDITIONAL COSTS INCURRED IF ALTERNATE EQUIPMENT IS USED.
5. ALL MOTOR STARTERS AND/OR COMBINATION STARTERS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
6. #@ REPRESENTS THE TYPICAL WIRE SIZE AND TO VERIFY WIRE SIZE PER MANUFACTURER NAMEPLATE.
7. @.@ REPRESENTS THE TYPICAL PANEL AND CIRCUIT PER PIECE OF EQUIPMENT.
8. CONTRACTOR SHALL PROVIDE FUSED DISCONNECTS WHERE AVAILABLE FAULT CURRENT AT EQUIPMENT IS ABOVE 5KA AMPS.



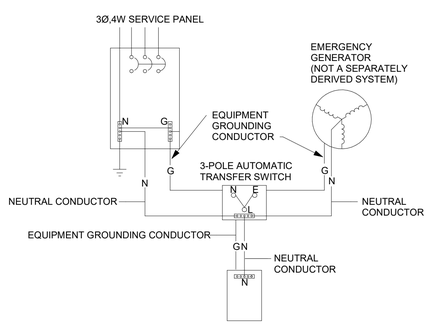
4 WIRING DIAGRAM - HVAC SPLIT SYSTEM.
NTS



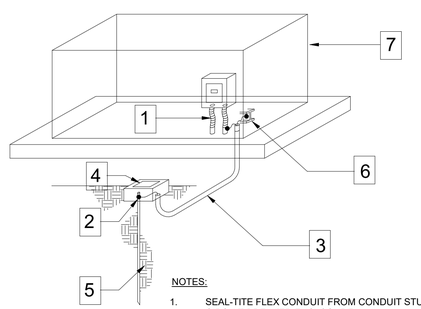
NOTE:

FOR MORE THAN 2000 CFM SMOKE DETECTOR REQUIRED IN HVAC DUCT.

2 AIR HANDLER UNIT DUCT MOUNTED SMOKE DETECTOR DETAIL
NTS



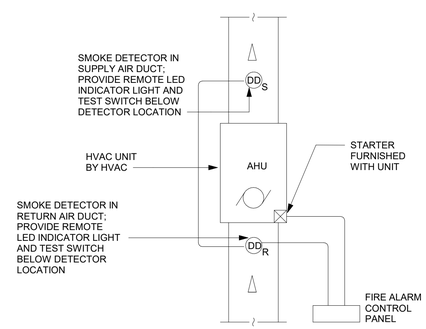
11 3-POLE ATS WIRING DIAGRAM
NTS



NOTES:

1. SEAL-TITE FLEX CONDUIT FROM CONDUIT STUB INTO CIRCUIT BREAKER ENCLOSURE.
2. GROUND BOND CADWELD CONNECTION AT GROUND ROD INSIDE GROUND WELL.
3. 1"C. AND CODE SIZED GROUND BOND (SEE SINGLE LINE DIAGRAM) FROM GENERATOR ENCLOSURE TO GROUND WELL.
4. CONCRETE GROUND WELL WITH REMOVABLE CONCRETE COVER, MINIMUM 12"x12"x12" BOX.
5. 5/8"x96" COPPER, DRIVEN GROUND ROD.
6. LUG GROUND BOND TO GENERATOR REFERENCE GROUND POINT. VERIFY LOCATION WITH MANUFACTURER.
7. GENERATOR WEATHER HOUSING.

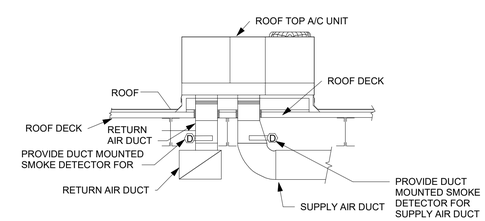
8 GENERATOR GROUNDING DETAIL
NTS



NOTE:

FOR MORE THAN 2000 CFM SMOKE DETECTOR REQUIRED IN HVAC DUCT .

5 WIRING DIAGRAM - HVAC DUCT SMOKE DETECTOR
NTS



NOTE:

FOR MORE THAN 2000 CFM SMOKE DETECTOR REQUIRED IN HVAC DUCT.

3 ROOF TOP UNIT DUCT MOUNTED SMOKE DETECTOR DETAIL
NTS

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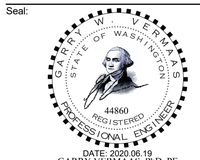
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



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Owner:

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PROTOTYPE VERSION: V9.2 2014 FEB

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1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

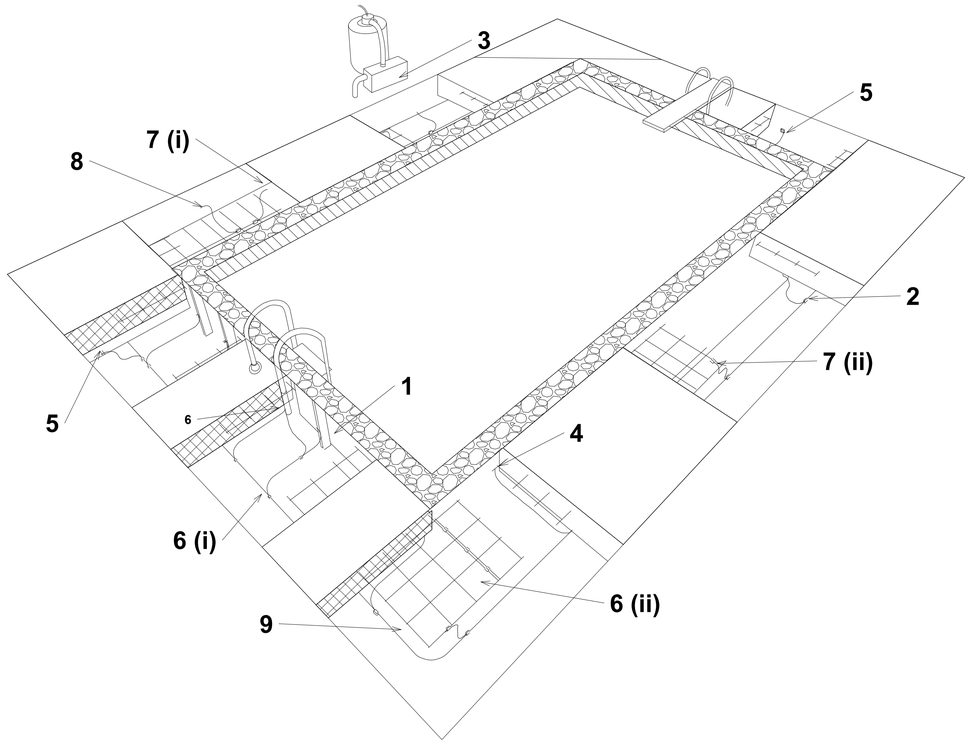
PROJECT NO.
B4-124-1803

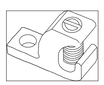
SHEET NAME

ELECTRICAL DETAILS-3

DRAWINGS NO.

E-103





Detail-1

Conductor Range (AWG)	Bolt Hole Size
4 - 14	#10

• Suitable for direct burial.

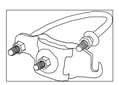
1 One-Hole Tinned Copper Lay-In Lug

Detail-3

Conductor Range (AWG)	Bolt Hole Size
14 Str. - 6 Str.	#8

• Not suitable for direct burial.

3 Copper Offset Terminal Lug

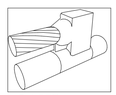


Detail-5

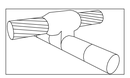
Material	Nom. Pipe Size Range	Pipe Outside Diameter
Tinned Bronze	1.5" - 2"	1" - 2.4"
Tinned Bronze	2.5" - 3"	2.25" - 3.5"

• Suitable for direct burial. • Conductor Range #6 - 250 MCM.
• Other sizes available.

5 CPC Pipe Clamps



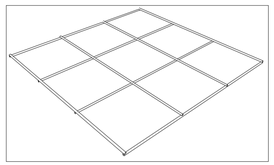
Detail-7(i)RP



Detail-7(ii)RO

Weld Metal		Required Handle	Packing Mat'l No.
UltraShot	NUWTUBE		
US25	NUWTUBE25	MH1	WRPSLV
US25	NUWTUBE25	Included	CERPM1
US65	NUWTUBE65	MH1	WRPSLV
US65	NUWTUBE65	MH1	WRPSLV
US65	NUWTUBE65	MH1	WRPSLV

7 Cable to Rebar Ultraweld Exothermic Connection Molds



Detail-9

Width (ft.)	Length (ft.)	Conductor Spacing (in.)	Approx. Wt. (lbs.)
3	50	12	32
3	75	12	42
3	100	12	51

• Other mesh sizes and wire gauges available.

9 UL Listed Prefabricated #8 Solid Copper Ground Mesh

Detail-2

Range for Equal Main (AWG)	Minimum Tap
4 Sol. - 8 Sol.	16 Sol.

• Suitable for direct burial.

2 Copper Split Bolt

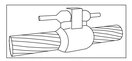
Detail-4(i)RB12A

Detail-4(ii)RB12B

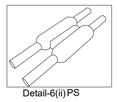
Pipe & Rebar Range	Conductor Range (AWG)
3/8" - 1"	10 Sol. - 2 Str.
3/8" - 1"	10 Sol. - 2 Str.

• Suitable for direct burial.

4 Rebar & Water Pipe Ground Clamps



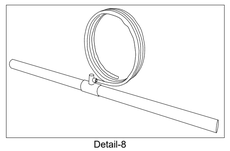
Detail-6(i) PT



Detail-6(ii) PS

Weld Metal		Required Handle
UltraShot	NUWTUBE	
US25	NUWTUBE25	MH1
US25	NUWTUBE25	MH3 (Included)
US25	NUWTUBE25	MH3 (Included)

6 Cable to Cable Ultraweld Exothermic Connection Molds



Detail-8

Rebar Size	Conductor Type (AWG)	Conductor Length (ft.)
3	8 Sol.	5

• Prefabricated rebar grounding assembly with exothermically welded connection.
• Standard 24" long rebar.
• Can be wire tied or welded to rebar cage prior to concrete pour.

8 Rebar Grounding Assembly

NOT IN USE

1 POOL GROUNDING DETAILS
NTS

TECHNICAL NOTES:

• 680.26 Equipotential Bonding* (Summarized)

(A) Performance:

The equipotential bonding required by this section shall be installed to reduce voltage gradients in the pool area.

(B) Bonded Parts:

The parts specified in 680.26(B)(1) through (B)(7) shall be bonded together using solid copper conductors,insulated covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal.Connections to bonded parts shall be made in accordance with 250.8**. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to remote panelboards, service equipment, or electrodes.

(1) Conductive Pool Shells:

Bonding to conductive pool shells shall be provided as specified in 680.26(B)(1)(a) or (B)(1)(b).Poured concrete, pneumatically applied or sprayed concrete, and concrete block with painted or plastered coatings shall all be considered conductive materials due to water permeability and porosity. Vinyl liners and fiberglass composite shells shall be considered to be nonconductive materials.

(a) *Structural Reinforcing Steel:*

Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent. Where structural reinforcing steel is encapsulated in a nonconductive compound, a copper conductor grid shall be installed in accordance with 680.26(B)(1)(b).

(b) *Copper Conductor Grid*:

A copper conductor grid shall be provided and shall comply with (b)(1) through (b)(4).

(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing. The bonding shall be in accordance with 250.8 or approved means.
(2) Conform to the contour of the pool.
(3) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.).
(4) Be secured within or under the pool no more than 150 mm (6 in.) from the outer contour of the pool shell.

(2) Perimeter Surfaces:

The perimeter surface shall extend for 1 m (3 ft.) horizontally beyond the inside walls of the pool and shall include unpaved surfaces as well as poured concrete surfaces and other types of paving. Perimeter surfaces less than 1 m (3 ft.) separated by a permanent wall or building 1.5 m (5 ft.) in height or more shall require equipotential bonding on the pool side of the permanent wall or building. Bonding to perimeter surfaces shall be provided as specified in 680.26(B)(2)(a) or (2)(b) and shall be attached to the pool reinforcing steel or copper conductor grid at a minimum of four (4) points uniformly spaced around the perimeter of the pool.

For nonconductive pool shells, bonding at four points shall not be required.

(a) Structural Reinforcing Steel. Structural reinforcing steel shall be bonded in accordance with 680.26(B)(1)(a).
(b) Alternate Means. Where structural reinforcing steel is not available or is encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where the following requirements are met:
(1) At least one minimum 8 AWG bare solid copper conductor shall be provided.
(2) The conductors shall follow the contour of the perimeter surface.
(3) Only listed splices shall be permitted.
(4) The required conductor shall be 450 to 600 mm (18 in. to 24 in.) from the inside walls of the pool.
(5) The required conductor shall be secured within or under the perimeter surface 100 to 150 mm (4 in. to 6 in.) below the subgrade.

(3) Metallic Components:

All metallic parts of the pool structure, including reinforcing metal not addressed in 680.26(B)(1)(a),shall be bonded. Where reinforcing steel is encapsulated with a nonconductive compound, the reinforcing steel shall not be required to be bonded.

(4) Underwater Lighting.

(5) Metal Fittings.

(6) Electrical Equipment.

(7) Fixed Metal Parts:

All fixed metal parts shall be bonded including, but not limited to, metal-sheathed cables and raceways,metal piping, metal awnings, metal fences, and metal door and window frames.

Exception No 1:
Those separated from the pool by a permanent barrier that prevents contact by a person shall not be required to be bonded.

Exception No 2:
Those greater than 1.5 m (5 ft.) horizontally from the inside walls of the pool shall not be required to be bonded.

Exception No 3:
Those greater than 3.7 m (12 ft.) measured vertically above the maximum water level of the pool, or as measured vertically above any observation stands, towers, or platforms, or any diving structures, shall not be required to be bonded.

(C) Pool Water.

Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than 5800 mm2 (9 in.2) of surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities,and it shall be bonded in accordance with 680.26(B).

• 250.8 Connection of Grounding and Bonding Equipment**

(A) Permitted Methods:

Equipment grounding conductors, grounding electrodes conductors, and bonding jumpers shall be connected by one or more of the following means:
(1) Listed pressure connectors
(2) Terminal bars
(3) Pressure connectors listed as grounding and bonding equipment
(4) Exothermic welding process
(5) Machine screw-type fasteners that engage not less than two threads or are secured with a nut.
(6) Thread-forming machine screws that engage not less than two threads in the enclosure
(7) Connections that are part of a listed assembly
(8) Other listed means

(B) Methods Not Permitted:

Connection devices or fittings that depend soley on solder shall not be used.

* NEC 2017 Equipotential Bonding Article 680.26
**NEC 2017 Connection of Grounding and Bonding Equipment Article 250.8

GENERAL NOTES:

(1) FINAL POOL DRAWING SUBMITTED BY POOL VENDOR FOR CITY REVIEW BEFORE CONSTRUCTION.

(2) POOL VENDOR SHALL PROVIDE EQUIPOTENTIAL BONDING DETAILS FOR THE SWIMMING POOL AS REQUIRED PER ARTICLE 680.26, 2017 NEC

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MEP ENGINEER
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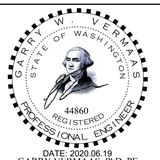
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
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Owner:

Dakota Legacy Group
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HOMEWOOD SUITES BY HILTON

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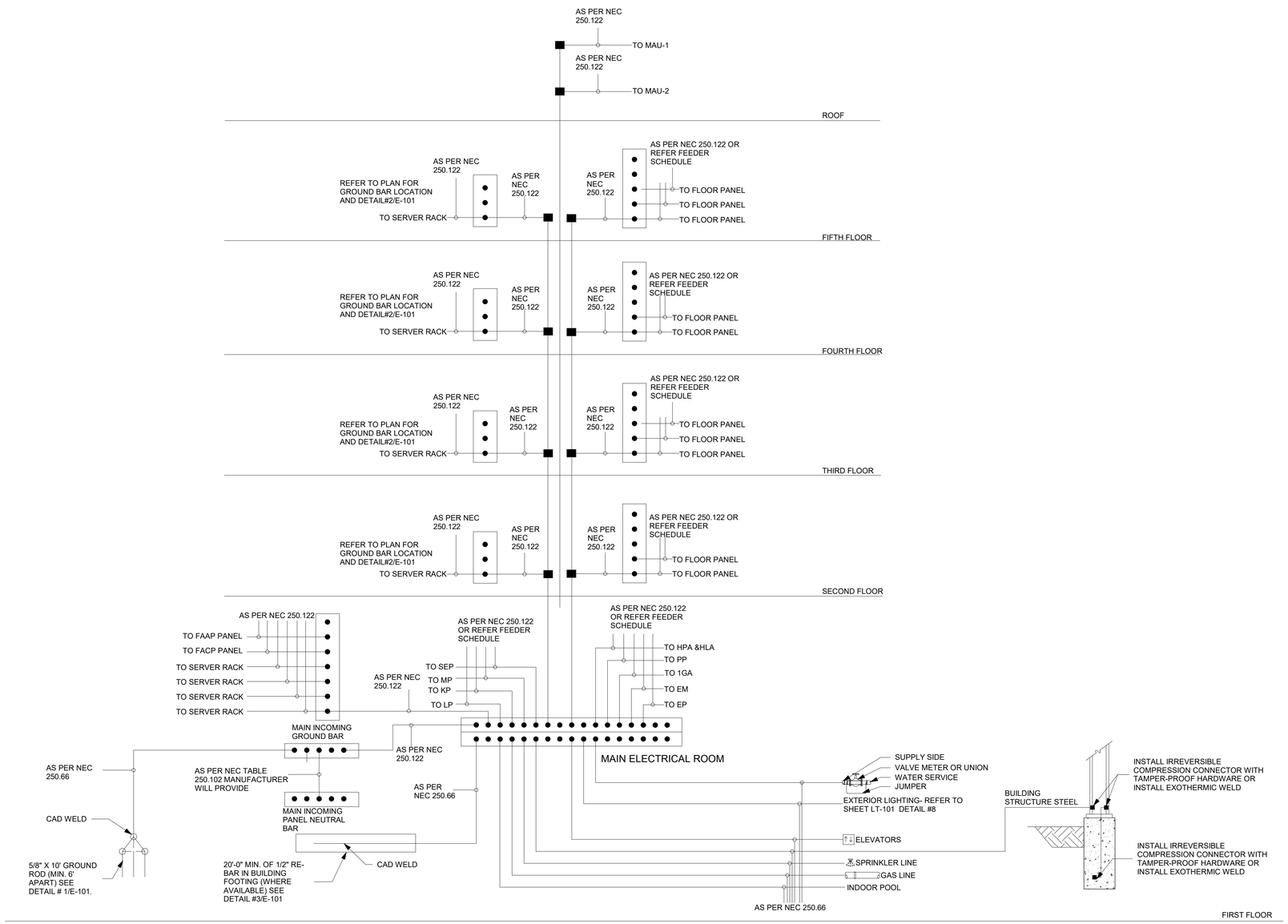
PROJECT NO.
B4-124-1803

SHEET NAME

POOL GROUNDING DETAILS

DRAWINGS NO.

E-104



NOTE: GROUNDING RISER IS ONLY FOR REFERENCE PURPOSE.

1 GROUNDING RISER DIAGRAM
NTS

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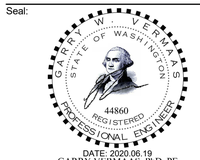
Seal:



DATE: 2020.06.19
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Owner:

Dakota Legacy Group
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PROJECT NO.
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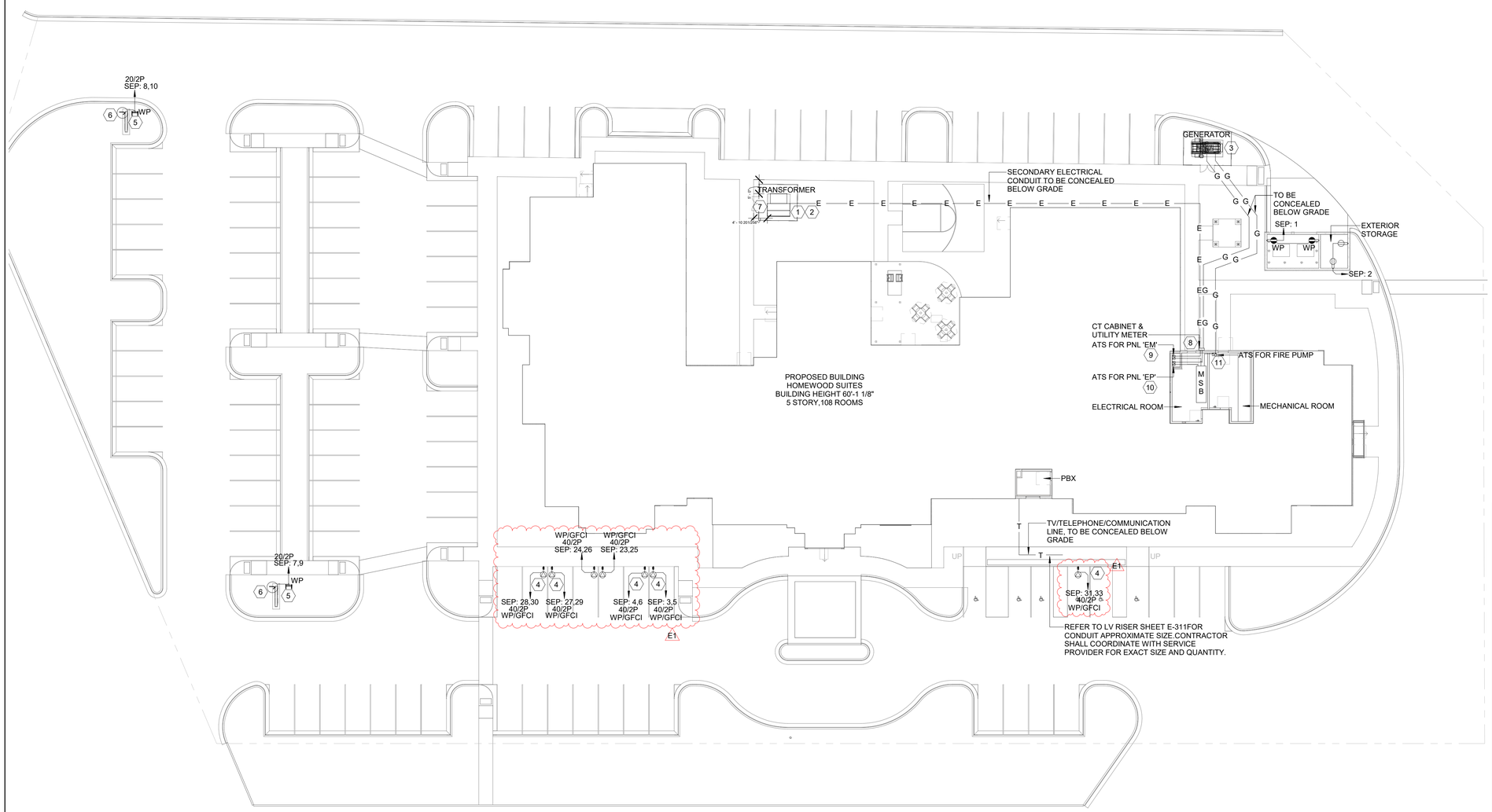
SHEET NAME

ELECTRICAL GROUNDING DETAILS

DRAWINGS NO.

E-105



1 SITE POWER PLAN
1" = 20'-0"

MINIMUM WIRE & CONDUIT SIZES FOR CIRCUIT BREAKERS AND FUSES

AMPS	CONDUCTOR	GROUND
15	#12	#12
20	#12	#12
25	#10	#10
30	#10	#10
35	#8	#10
40	#8	#10
45	#8	#10
50	#8	#10
60	#6	#10
70	#4	#8
80	#4	#8
90	#3	#8
100	#3	#8

PROVIDE THE FOLLOWING QUANTITIES:
1 POLE CIRCUIT - 1 HOT, 1 NEUTRAL, 1 GROUND
2 POLE CIRCUIT - 2 HOT, 1 GROUND
3 POLE CIRCUIT - 3 HOT, 1 GROUND
1 POLE IG CIRCUIT - 1 HOT, 1NEUTRAL, 1 GROUND, 1 ISOLATED GROUND

THREE-PHASE VOLTAGE DROP SCHEDULE

208 VOLT BRANCH CIRCUITS UP TO 3.4 AMPS

RUN DISTANCE IN FEET			WIRE SIZE AWG
1'	-	525'	#12

208 VOLT BRANCH CIRCUITS UP TO 4.5 AMPS

RUN DISTANCE IN FEET			WIRE SIZE AWG
1'	-	400'	#12
401'	-	667'	#10

208 VOLT BRANCH CIRCUITS UP TO 6.7 AMPS

RUN DISTANCE IN FEET			WIRE SIZE AWG
1'	-	268'	#12
269'	-	446'	#10
447'	-	687'	#8

208 VOLT BRANCH CIRCUITS UP TO 7.8 AMPS

RUN DISTANCE IN FEET			WIRE SIZE AWG
1'	-	230'	#12
231'	-	383'	#10
384'	-	589'	#8

208 VOLT BRANCH CIRCUITS UP TO 21 AMPS

RUN DISTANCE IN FEET			WIRE SIZE AWG
1'	-	85'	#12
86'	-	141'	#10
142'	-	217'	#8
218'	-	346'	#6

WIRE SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM WIRE SIZES. CONTRACTOR SHALL UPSIZE WIRES BASED ON LOAD AND LENGTH OF RUN AS INDICATED IN SCHEDULE ABOVE.

GENERAL NOTES:

1. ALL WIRING IS TO BE #12 AWG AND #12 AWG GROUND MINIMUM THHN/THWN (90 DEG. C) IN 1" SCHEDULE 40 PVC (MINIMUM SIZE). TRENCH 30" DEEP. CLEAN BACKFILL USING SITE MATERIALS CAN BE USED. PROVIDE PREMIUM BACKFILL WHERE SITE MATERIALS ARE NOT ACCEPTABLE FOR USE.
2. ALL CONDUIT ENTRIES TO THE BUILDING SHALL PITCH AWAY FROM BUILDING WALLS. SEAL PENETRATIONS WATERTIGHT WITH LINK-SEAL PIPE SEALS OR APPROVED EQUIVALENT.
3. PROVIDE WARNING TAPE ABOVE ALL ELECTRICAL CIRCUITS. WARNING TAPE FOR SITE LIGHTING CIRCUITS TO BE 8" BELOW GRADE, 3" WIDE, RED WITH ELECTRICAL WARNING.
4. CUT AND PATCH EXISTING PAVING AS REQUIRED FOR THE INSTALLATION OF NEW WIRING WHERE PAVING EXISTS.
5. PROVIDE INTERMATIC ASTRONOMIC TIMECLOCK TO CONTROL ALL BUILDING SIGNAGE CIRCUITS AND BUILDING SIGNAGE CIRCUITS. CIRCUITS SHALL HAVE THE ABILITY TO BE INDIVIDUALLY CONTROLLED AND PROGRAMMED BY THE TIMECLOCK. TIMECLOCK TO BE INSTALLED IN THE MAIN ELECTRICAL ROOM

E-200 KEY NOTES

#	TEXT
1	120-208V 3PH TRANSFORMER MOUNTED ON 8" CONCRETE PAD WITH CLEARANCES AS SHOWN ON THE PLAN. GC SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL TRANSFORMER SELECTION AND INSTALLATION REQUIREMENT. GC SHALL PROVIDE TRANSFORMER SPECS WITH INSTALLATION REQUIREMENT TO LOCAL AHJ AS DEFERRED SUBMITTAL PRIOR TO PURCHASE AND INSTALLATION.
2	CONTRACTOR SHALL PROVIDE SPARE CONDUIT FOR FUTURE EXPANSION.
3	CONTRACTOR SHALL INSTALL GENERATOR IN COMPLIANCE WITH NEC ARTICLE NO 225, 445 AND 700. CONTRACTOR SHALL SUBMIT GENERATOR SPEC AND DRAWING FOR ENGINEERS REVIEW. CONTRACTOR SHALL CO-ORDINATE WITH CIVIL FOR EXACT LOCATION.
4	CONTRACTOR SHALL PROVIDE UNDERGROUND ELECTRICAL EMPTY CONDUITS FOR CAR CHARGING STATIONS. CONTRACTOR SHALL COORDINATE WITH THE OWNER/VENDOR FOR THE EXACT LOCATION AND MOUNTING DETAILS. GC SHALL PROVIDE A SIGN STATING "ELECTRIC VEHICLE PARKING AND CHARGING STATION". CONTRACTOR SHALL REFER TO THE ELECTRICAL PANEL SCHEDULES FOR CORRECT WIRE AND CONDUIT SIZES OF EACH CHARGING STATION. E1
5	CONTRACTOR SHALL PROVIDE A DISCONNECT LOCATED WITHIN SIGHT OF THE CONTROLLER MUST BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
6	CONTRACTOR SHALL COORDINATE WITH CIVIL AND PROVIDE J-BOX FOR MONUMENT SIGNAGE.
7	PRIMARY ELECTRICAL LINES FALLS UNDER THE UTILITY SCOPE OF WORK. CONTRACTOR TO CO-ORDINATE WITH UTILITY.
8	CONTRACTOR SHALL PROVIDE 8 CONDUITS OF 4" MINIMUM 24" BELOW THE SOG AND AND LAY DOWN THE SECONDARY CONDUITS AS SHOWN IN ELECTRICAL SITE PLAN. CONTRACTOR SHALL CO-ORDINATE WITH SE AND CIVIL DRAWINGS FOR SLEEVE LOCATIONS.
9	CONTRACTOR SHALL PROVIDE 1 CONDUIT OF 2 1/2" MINIMUM 24" BELOW THE SOG AND AND LAY DOWN THE CONDUITS FROM GENERATOR AS SHOWN IN ELECTRICAL SITE PLAN.
10	CONTRACTOR SHALL PROVIDE 2 CONDUIT OF 3" MINIMUM 24" BELOW THE SOG AND AND LAY DOWN THE CONDUITS FROM GENERATOR AS SHOWN IN ELECTRICAL SITE PLAN.
11	CONTRACTOR SHALL PROVIDE 1 CONDUIT OF 2" MINIMUM 24" BELOW THE SOG AND AND LAY DOWN THE CONDUITS FROM GENERATOR AS SHOWN IN ELECTRICAL SITE PLAN.

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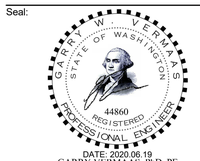

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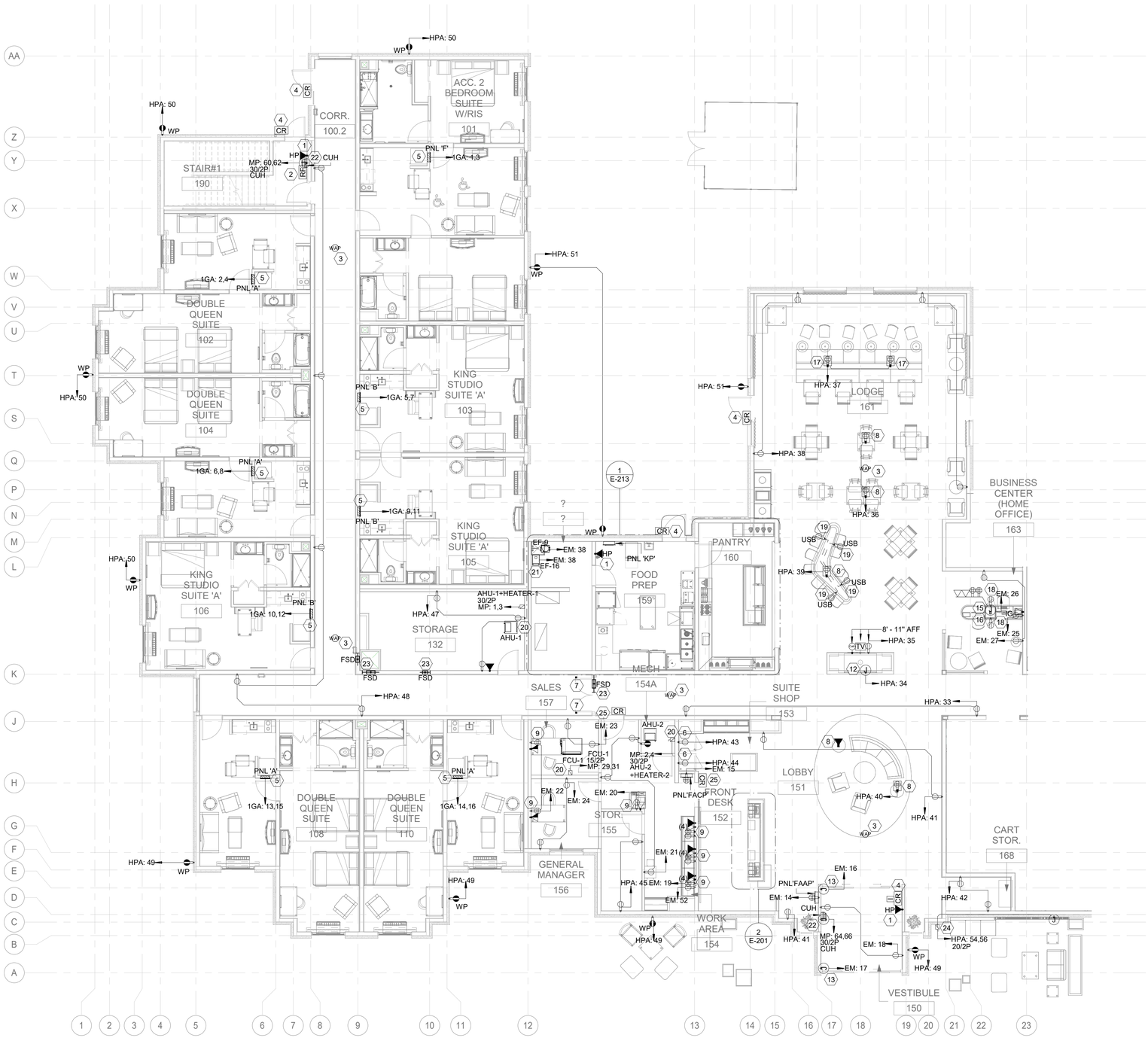
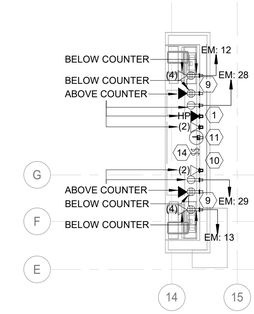
PROJECT NO.
B4-124-1803

SHEET NAME
SITE POWER PLAN

DRAWINGS NO.
E-200



1 1ST FLOOR POWER PLAN A
1/8" = 1'-0"



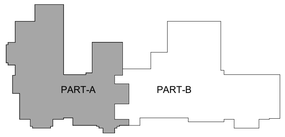
2 FRONT DESK
1/4" = 1'-0"

GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRICAL ROUTE INCLUDING FEEDER HOME RUN TO METER CENTER.
2. CONTRACTOR SHALL USE COPPER CONDUCTOR BELOW 100AMP. FOR 100AMP AND ABOVE USE ALUMINIUM CONDUCTOR UNLESS NOTED OTHERWISE.
3. ELECTRICAL CONTRACTOR SHALL BALANCE CURRENT IN ALL PANELS MODIFY AND/OR ADJUST CIRCUITS AS REQUIRED.
4. DATA CABLING SHOULD BE INSTALLED IN "SMURF TUBE".
5. CONTRACTOR SHALL PROVIDE MIN. CLEAR SPACE AS PER NEC TABLE 110.26 FOR ALL ELECTRICAL LIVE PARTS.
6. CONTRACTOR SHALL VERIFY WITH ELECTRICAL EQUIPMENT SUPPLIER AND OWNER THAT ALL THE SERVICE DISCONNECTING MEANS SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT AS REQUIRED BY SECTION 110.24 OF NFPA 70
7. CONTRACTOR SHALL CO-ORDINATE WITH FURNITURE VENDOR FOR PLACEMENT AND CONNECTION AND CO-ORDINATE WITH ARCH DRAWING FOR EXACT LOCATION AND HEIGHT.
8. CONTRACTOR SHALL PROVIDE GFCI PROTECTION FOR ALL 15A AND 20A, 120V RECEPTACLES LOCATED IN BATHROOMS, ROOFTOPS, AND KITCHENS. CONTRACTOR TO PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION.
9. ALL FLOOR OUTLETS MUST BE FLUSH WITH THE FINISH FLOOR SURFACE.

E-201 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
2	GC/FIRE VENDOR SHALL PERFORM RADIO FREQUENCY COVERAGE TESTING AND PROVIDE DISTRIBUTED ANTENNA SYSTEM (DAS) ACCORDINGLY TO COMPLY WITH IFC SECTION 510 AND LOCAL AHJ REQUIREMENT.
3	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
4	CONTRACTOR SHALL PROVIDE CARD READERS WITH POWER SUPPLY. PROVIDE ELECTRICAL CONNECTION TO CARD READER FROM CKT EM: 55.
5	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL.CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
6	AS PER NEC 210.8 PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI PROTECTION IN BREAKER FOR CIRCUIT.
7	MAGNETIC DOOR-HOLD TIED TO THE BUILDING FIRE ALARM CONTROL PANEL. PROVIDE ELECTRICAL CIRCUIT EM:54 CONNECTION TO MAGNETIC DOOR-HOLD TYPICAL FOR ALL FLOORS. CONTRACTOR SHALL ENSURE TO PROVIDE ELECTROMAGNETIC DOOR HOLD OPEN MECHANISM CONNECTED TO THE FIRE ALARM SYSTEM AND ELECTRICAL SERVICE TO HOLD DOOR OPEN AND TO AUTOMATICALLY RELEASE DOORS WHEN AN ALARM IS ACTIVATED.
8	CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR RECEPTACLE INSTALLED ON FLOOR AND ON MILLWORK TYPICAL FOR ALL. CO-ORDINATE POWER REQUIREMENTS AND EXACT LOCATION WITH FURNISHING PLAN AND FF&E DRAWINGS SPECIFICATIONS.
9	PROVIDE IG TYPE RECEPTACLE FOR TYPICAL FLOOR IT EQUIPMENTS.
10	CONTRACTOR SHALL PROVIDE MINIMUM 2'' UNDER FLOOR CONDUIT FOR TELECOM FROM CLOSET TO FRONT DESK
11	PROVIDE JUNCTION BOX FOR VESTIBULE SLIDING DOOR RELEASE BUTTON.
12	CONTRACTOR SHALL COORDINATE WITH VENDOR FOR FIRE PLACE CONNECTION AND NECESSARY ARRANGEMENTS.REFER TO MANUFACTURER'S WIRING DIAGRAM FOR DETAILS.
13	JN. BOX FOR AUTOMATIC DOORS
14	SWITCHES FOR LIGHT AND MAIN FLAME FOR FIRE PLACE. CONTRACTOR SHALL MAKE THE NECESSARY CONNECTIONS ACCORDINGLY.
15	CONTRACTOR SHALL PROVIDE 120V, 1 PHASE SERVICE, 20 AMPS (2 QUAD RECEPTACLE), STUB AS NOTED, FOR COMPUTER SYSTEM. (DEDICATED CIRCUIT, ISOLATED GROUND, ADD DATA(2), PROVIDE EMPTY J-BOX WITH CONDUIT FOR INTERCONNECTING THE SYSTEM).CONTRACTOR SHALL VERIFY ALL THE REQUIREMENT WITH COMPUTER SYSTEM SUPPLIER.
16	COORDINATE STUB-UP AND/OR JUNCTION BOX LOCATIONS W/ MILLWORK PRIOR TO INSTALLATION. PROPER WIRE MANAGEMENT NEEDS TO BE INCORPORATED TO ALLOW FOR ALL COMPUTER EQUIPMENTS.
17	CONTRACTOR SHALL PROVIDE POWER CONNECTION TO CONVENIENCE RECEPTACLES IN SPINE OF SECTIONAL. CONTRACTOR SHALL COORDINATE WITH MILLWORK VENDOR FOR EXACT LOCATION AND WITH FURNISHING PLAN AND FF&E DRAWINGS/SPECIFICATIONS.
18	UNIT ITSELF TO INCORPORATE TWO (2) DUPLEX RECEPTACLES FLUSH WITH FACE OF APRON ON EACH SIDE FOR GUEST CHARGING.
19	CONTRACTOR SHALL PROVIDE CONVENIENCE OUTLETS IN TABLE SKIRT. ACCESS PANEL PROVIDED IN THE TABLE BASE TO CONNECT ELECTRICAL TO FLOOR OUTLET. TABLE WIRING IS RATED AT 20 AMP WITH A STANDARD 3 PRONG MALE PLUG. ALL PLUG-IN CONNECTIONS AND POWER RECEPTACLE MUST BE UL LISTED.
20	CONTRACTOR SHALL CO-ORDINATE WITH MECHANICAL VENDOR FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND PROVIDE DISCONNECT SWITCH ACCORDINGLY. CONTRACTOR SHALL MAINTAIN MIN. CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26. CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH NOT ACCESSIBLE TO COMMON PERSON.
21	CONTRACTOR SHALL PROVIDE SWITCH FOR DISCONNECT FOR EXHAUST FAN APPLIANCE OF MORE THAN 1/8HP THAT COMPLIES WITH NEC 422.34(A), (B), (C) OR OTHERWISE PROVIDE HARDWARE CONNECTION TO EXHAUST FAN ON EM PANEL
22	CONTRACTOR SHALL PROVIDE HARDWIRE CONNECTION TO CUH UNIT ELECTRICAL CONTRACTOR SHALL PROVIDE JN BOX AND CO-ORDINATE WITH MECHANICAL VENDOR FOR CONNECTION.
23	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.
24	CONTRACTOR SHALL PROVIDE A DISCONNECT LOCATED WITH IN SIGHT OF THE CONTROLLER MUST BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
25	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER FOR ALL INTERIOR DOOR.



KEYPLAN

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1ST FLOOR POWER PLAN A

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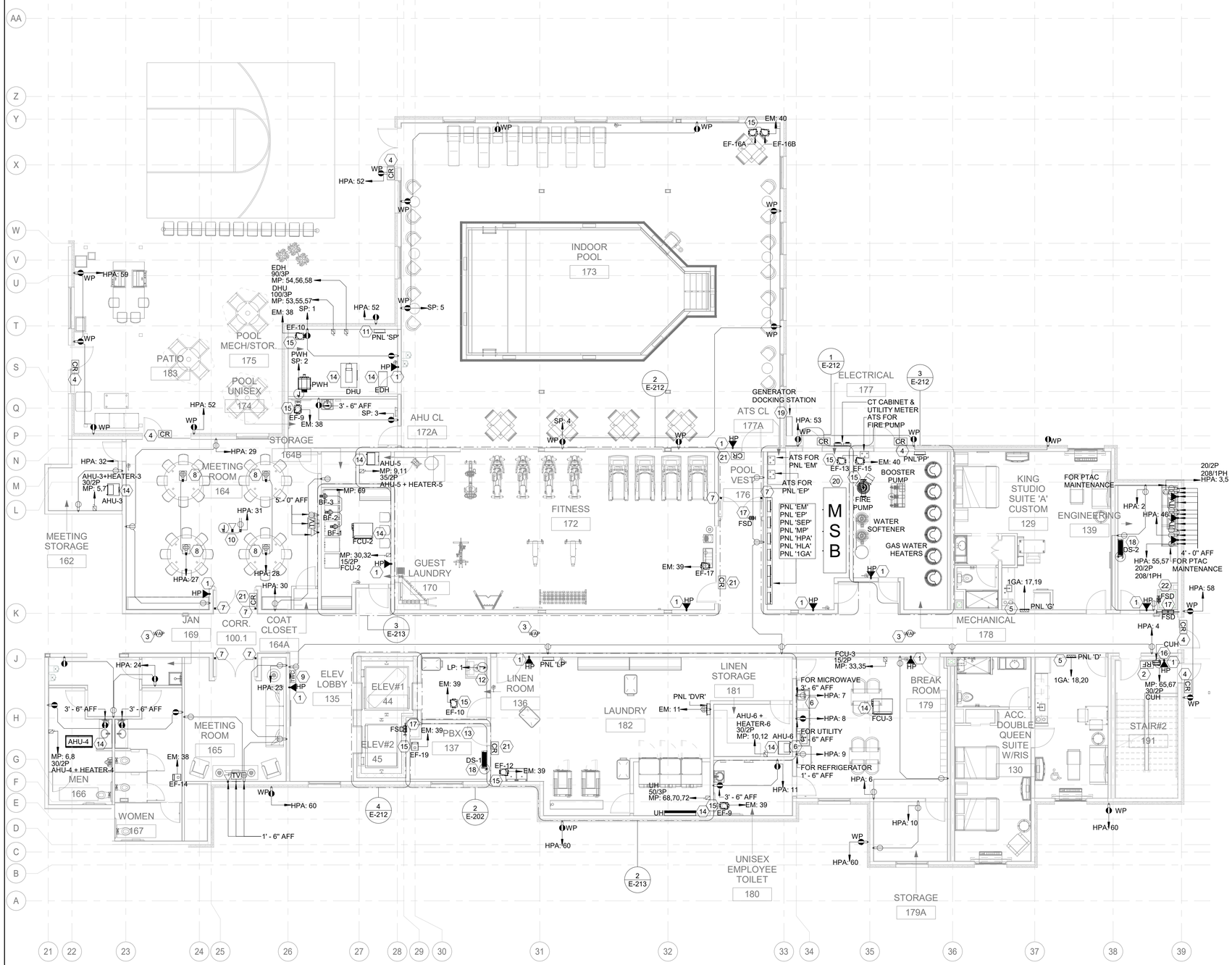
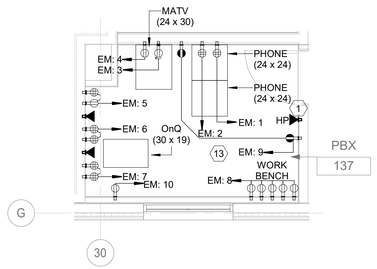
E-201



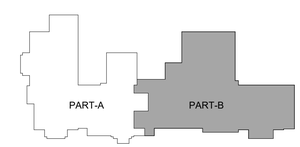
1 1ST FLOOR POWER PLAN B
1/8" = 1'-0"



2 PBX
1/4" = 1'-0"

E-202 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.
2	GC/FIRE VENDOR SHALL PERFORM RADIO FREQUENCY COVERAGE TESTING AND PROVIDE DISTRIBUTED ANTENNA SYSTEM (DAS) ACCORDINGLY TO COMPLY WITH IFC SECTION 510 AND LOCAL AHJ REQUIREMENT.
3	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
4	CONTRACTOR SHALL PROVIDE CARD READERS WITH POWER SUPPLY. PROVIDE ELECTRICAL CONNECTION TO CARD READER FROM CKT EM: 55.
5	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL.CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
6	AS PER NEC 210.8 PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI PROTECTION IN BREAKER FOR CIRCUIT.
7	MAGNETIC DOOR-HOLD TIED TO THE BUILDING FIRE ALARM CONTROL PANEL. PROVIDE ELECTRICAL CIRCUIT EM:54 CONNECTION TO MAGNETIC DOOR-HOLD TYPICAL FOR ALL FLOORS. CONTRACTOR SHALL ENSURE TO PROVIDE ELECTROMAGNETIC DOOR HOLD OPEN MECHANISM CONNECTED TO THE FIRE ALARM SYSTEM AND ELECTRICAL SERVICE TO HOLD DOOR OPEN AND TO AUTOMATICALLY RELEASE DOORS WHEN AN ALARM IS ACTIVATED.
8	CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR RECEPTACLE INSTALLED ON FLOOR AND ON MILLWORK TYPICAL FOR ALL. CO-ORDINATE POWER REQUIREMENTS AND EXACT LOCATION WITH FURNISHING PLAN AND FF&E DRAWINGS SPECIFICATIONS.
9	TWO WAY COMMUNICATION SYSTEM SHALL PROVIDE COMMUNICATION BETWEEN EACH REQUIRED LOCATION AND THE FIRE COMMAND CENTER OR A INTERNAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPARTMENT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL OUT CAPABILITY TO A MONITORING LOCATION OR 911. THE TWO WAY COMMUNICATION SYSTEM SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. DIRECTION FOR THE USE OF TWO WAY COMMUNICATION SYSTEM, INSTRUCTION FOR SUMMONING ASSISTANCE VIA THE TWO WAY COMMUNICATION SYSTEM AND WRITTEN IDENTIFICATION OF THE LOCATION SHALL BE POSTED ADJACENT TO THE TWO WAY COMMUNICATION SYSTEM.
10	CONTRACTOR SHALL PROVIDE POWER IN CEILING FOR PROJECTOR. CONTRACTOR SHALL PROVIDE EMPTY CONDUIT IN CEILING FOR LV CABLES FROM PROJECTOR TO SCREEN.
11	POOL VENDOR SHALL PROVIDE NEMA 3R RATED AND POOL RECEPTACLE PROTECTED BY WP PROTECTION.
12	J-BOX FOR LAUNDRY CHUTE DOOR INTERLOCK TO TIE TO CIRCUIT LP: 1. CONTRACTOR SHALL COORDINATE WITH LAUNDRY VENDOR FOR CONNECTION OF LAUNDRY CHUTE CONTROL PANEL AND FOR LOCKOUT TIMER SWITCH LOCATION.
13	CONTRACTOR SHALL COORDINATE WITH LV VENDOR FOR FINAL LAYOUT. BASE4 HAS PROVIDED PBX ROOM LAYOUT FOR REFERENCE ONLY, FINAL PBX ROOM LAYOUT TO BE PROVIDED BY LV VENDOR.
14	CONTRACTOR SHALL CO-ORDINATE WITH MECHANICAL VENDOR FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND PROVIDE DISCONNECT SWITCH ACCORDINGLY. CONTRACTOR SHALL MAINTAIN MIN. CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26. CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH NOT ACCESSIBLE TO COMMON PERSON.
15	CONTRACTOR SHALL PROVIDE SWITCH FOR DISCONNECT FOR EXHAUST FAN APPLIANCE OF MORE THAN 1/8HP THAT COMPLIES WITH NEC 422.34(A), (B), (C) OR OTHERWISE PROVIDE HARDWARE CONNECTION TO EXHAUST FAN ON EM PANEL.
16	CONTRACTOR SHALL PROVIDE HARDWIRE CONNECTION TO CUH UNIT ELECTRICAL CONTRACTOR SHALL PROVIDE JN BOX AND CO-ORDINATE WITH MECHANICAL VENDOR FOR CONNECTION.
17	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.
18	CONTRACTOR TO PROVIDE JUNCTION BOX FOR SPLIT UNIT CONNECTION BEING FED BY ITS RESPECTIVE OUTDOOR UNIT. CONTRACTOR TO COORDINATE WITH MECHANICAL VENDOR ON SITE AND PROVIDE NECESSARY ARRANGEMENTS.
19	CONTRACTOR SHALL FIELD VERIFY AND PROVIDE PANEL FOR DOCKING SYSTEM AT THE TIME OF MAINTENANCE OF GENERATOR. AS PER NEC-2017 ARTICLE 700.3(F). CONTRACTOR SHALL COORDINATE WITH LOCAL AHJ FOR FINAL LOCATION AND PROVIDE CONNECTION ACCORDINGLY.
20	CONTRACTOR SHALL PROVIDE HOUSEKEEPING PAD FOR MSB AND OTHER FLOOR MOUNTED PANELS. PADS SHALL BE OF CONCRETE AND NOT LESS THAN 4" THICK. FOR FINAL PAD SIZE, CONTRACTOR TO VERIFY WITH ELECTRICAL SWITCHGEAR SUBMITTAL
21	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER FOR ALL INTERIOR DOOR.
22	CONTRACTOR SHALL ROUTE THE MAU-2 CONDUITS THROUGH THE 8" X 8" CHASE.



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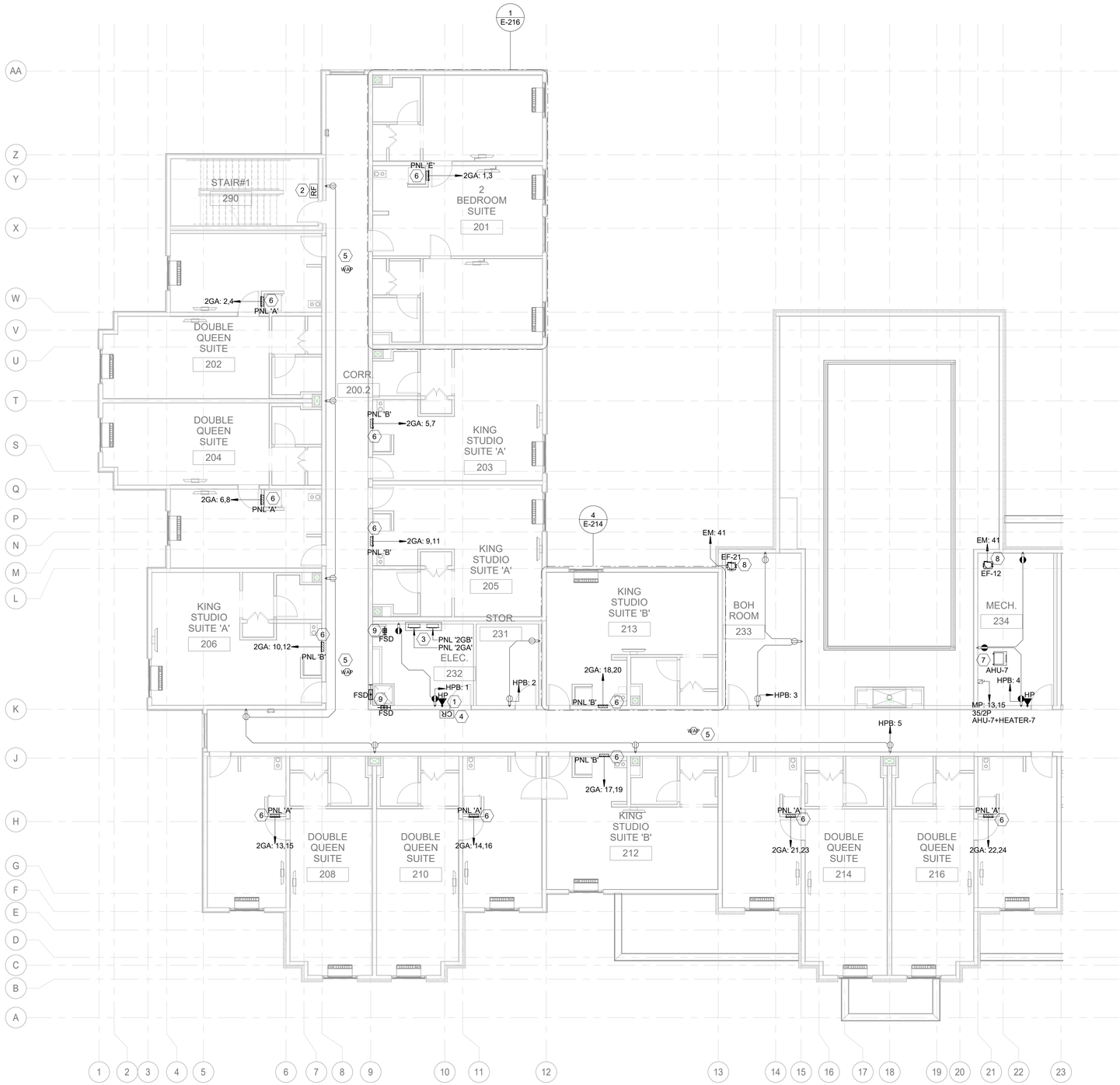
PROJECT NO.: B4-124-1803

SHEET NAME
1ST FLOOR POWER PLAN B

DRAWINGS NO.
E-202



1 2ND FLOOR POWER PLAN A
1/8" = 1'-0"

E-203 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
2	GC/FIRE VENDOR SHALL PERFORM RADIO FREQUENCY COVERAGE TESTING AND PROVIDE DISTRIBUTED ANTENNA SYSTEM (DAS) ACCORDINGLY TO COMPLY WITH IFC SECTION 510 AND LOCAL AHJ REQUIREMENT.
3	CONTRACTOR SHALL CO-ORDINATE ELECTRICAL ROOM SIZE WITH PANEL PHYSICAL DIMENSION. CONTRACTOR SHALL PROVIDE MIN. CLEARANCE REQUIRED AS PER NEC ARTICLE 110.26 AND PLACE PANEL ACCORDINGLY.
4	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER.
5	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
6	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
7	CONTRACTOR SHALL CO-ORDINATE WITH MECHANICAL VENDOR FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND PROVIDE DISCONNECT SWITCH ACCORDINGLY. CONTRACTOR SHALL MAINTAIN MIN. CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26. CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH NOT ACCESSIBLE TO COMMON PERSON.
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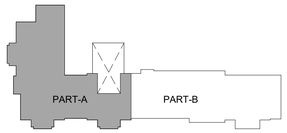
9	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.



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PROJECT NO.
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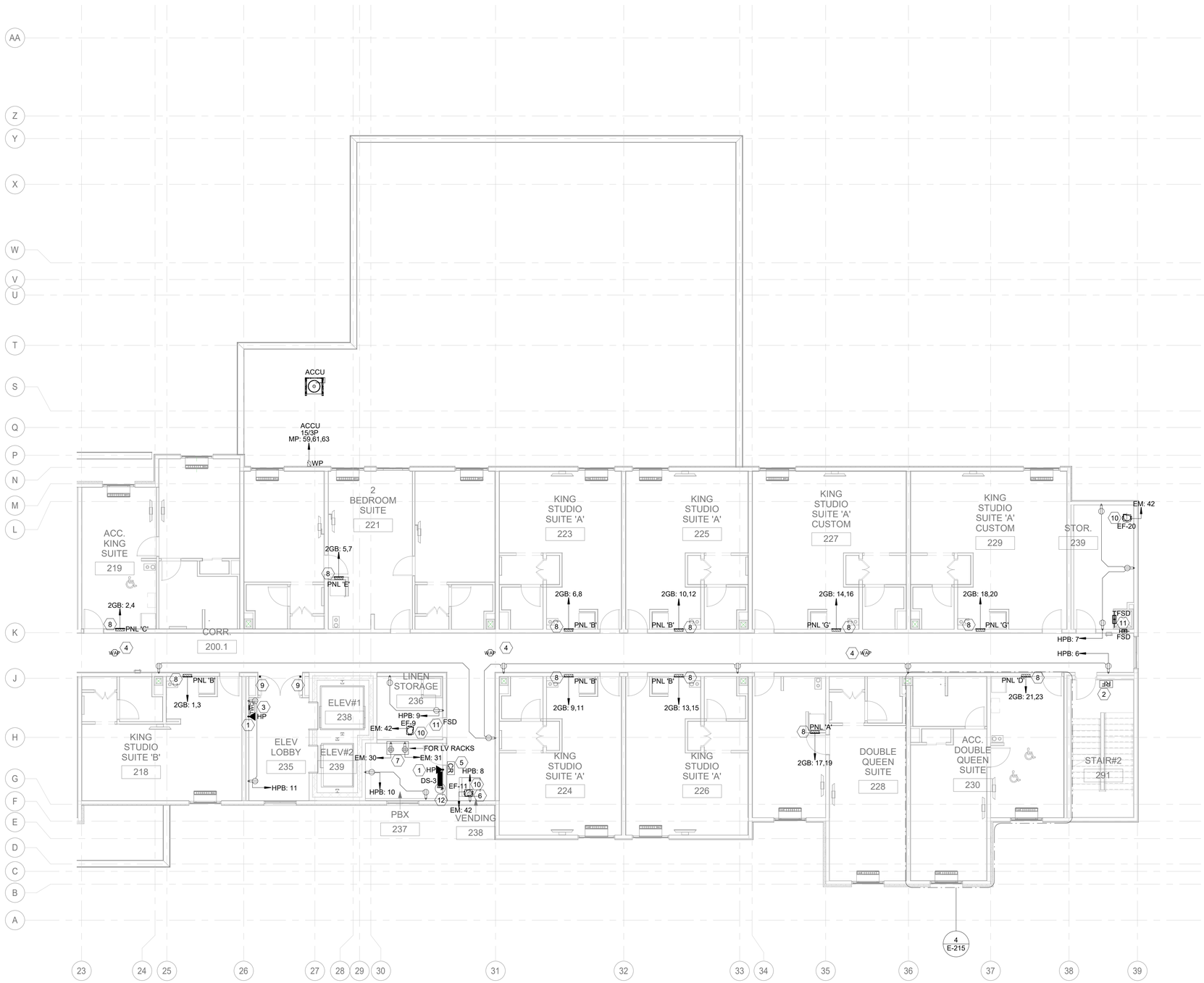
SHEET NAME

2ND FLOOR POWER PLAN A

DRAWINGS NO.

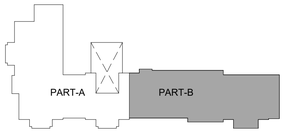
E-203



1 2ND FLOOR POWER PLAN B
1/8" = 1'-0"

E-204 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
2	GC/FIRE VENDOR SHALL PERFORM RADIO FREQUENCY COVERAGE TESTING AND PROVIDE DISTRIBUTED ANTENNA SYSTEM (DAS) ACCORDINGLY TO COMPLY WITH IFC SECTION 510 AND LOCAL AHJ REQUIREMENT.
3	TWO WAY COMMUNICATION SYSTEM SHALL PROVIDE COMMUNICATION BETWEEN EACH REQUIRED LOCATION AND THE FIRE COMMAND CENTER OR A INTERNAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPARTMENT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL OUT CAPABILITY TO A MONITORING LOCATION OR 911. THE TWO WAY COMMUNICATION SYSTEM SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. DIRECTION FOR THE USE OF TWO WAY COMMUNICATION SYSTEM, INSTRUCTION FOR SUMMONING ASSISTANCE VIA THE TWO WAY COMMUNICATION SYSTEM AND WRITTEN IDENTIFICATION OF THE LOCATION SHALL BE POSTED ADJACENT TO THE TWO WAY COMMUNICATION SYSTEM.
4	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
5	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER.
6	AS PER NEC 210.8 PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI PROTECTION IN BREAKER FOR CIRCUIT.
7	PROVIDE IG TYPE RECEPTACLE FOR TYPICAL FLOOR IT EQUIPMENTS.
8	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL.CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
9	MAGNETIC DOOR-HOLD TIED TO THE BUILDING FIRE ALARM CONTROL PANEL. PROVIDE ELECTRICAL CIRCUIT EM:54 CONNECTION TO MAGNETIC DOOR-HOLD TYPICAL FOR ALL FLOORS. CONTRACTOR SHALL ENSURE TO PROVIDE ELECTROMAGNETIC DOOR HOLD OPEN MECHANISM CONNECTED TO THE FIRE ALARM SYSTEM AND ELECTRICAL SERVICE TO HOLD DOOR OPEN AND TO AUTOMATICALLY RELEASE DOORS WHEN AN ALARM IS ACTIVATED.
10	CONTRACTOR SHALL PROVIDE SWITCH FOR DISCONNECT FOR EXHAUST FAN APPLIANCE OF MORE THAN 1/8HP THAT COMPLIES WITH NEC 422.34(A), (B), (C) OR OTHERWISE PROVIDE HARDWARE CONNECTION TO EXHAUST FAN ON EM PANEL.
11	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.
12	CONTRACTOR TO PROVIDE JUNCTION BOX FOR SPLIT UNIT CONNECTION BEING FED BY ITS RESPECTIVE OUTDOOR UNIT. CONTRACTOR TO COORDINATE WITH MECHANICAL VENDOR ON SITE AND PROVIDE NECESSARY ARRANGEMENTS.



KEYPLAN

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PROJECT NO.
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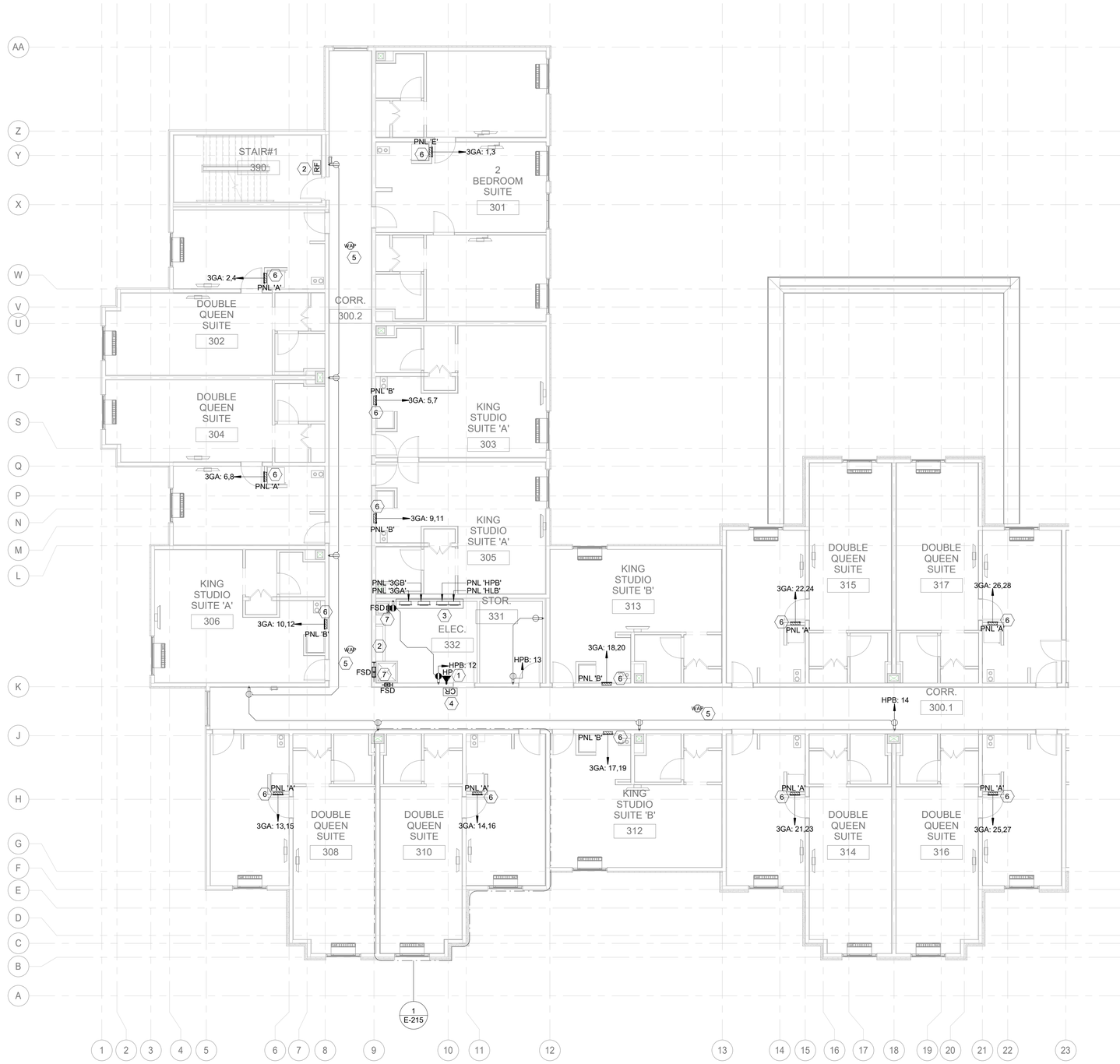
SHEET NAME
2ND FLOOR POWER PLAN B

DRAWINGS NO.
E-204



1 3RD FLOOR POWER PLAN A
1/8" = 1'-0"

E-205 KEY NOTES

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3	CONTRACTOR SHALL CO-ORDINATE ELECTRICAL ROOM SIZE WITH PANEL PHYSICAL DIMENSION. CONTRACTOR SHALL PROVIDE MIN. CLEARANCE REQUIRED AS PER NEC ARTICLE 110.26 AND PLACE PANEL ACCORDINGLY.
4	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER.
5	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
6	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL.CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
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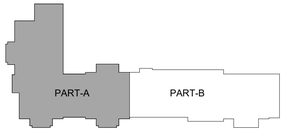

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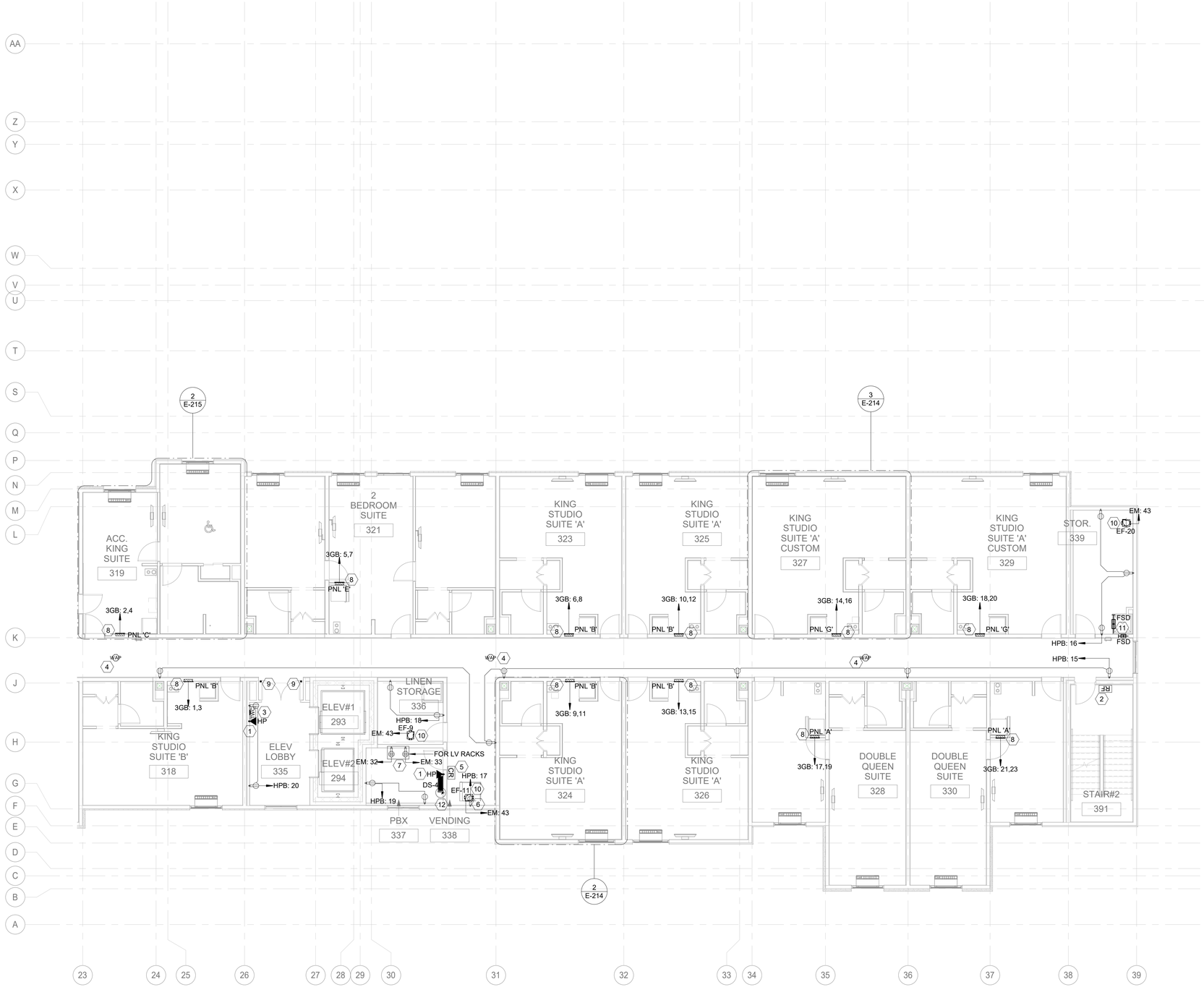
SHEET NAME

3RD FLOOR POWER PLAN A

DRAWINGS NO.

E-205



1 3RD FLOOR POWER PLAN B
1/8" = 1'-0"

E-206 KEY NOTES

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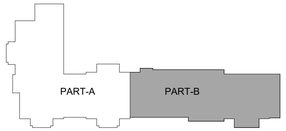

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SHEET NAME

3RD FLOOR POWER PLAN B

DRAWINGS NO.

E-206

1 4TH FLOOR POWER PLAN A
1/8" = 1'-0"

E-207 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
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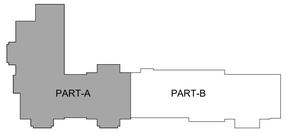

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PROJECT NO.
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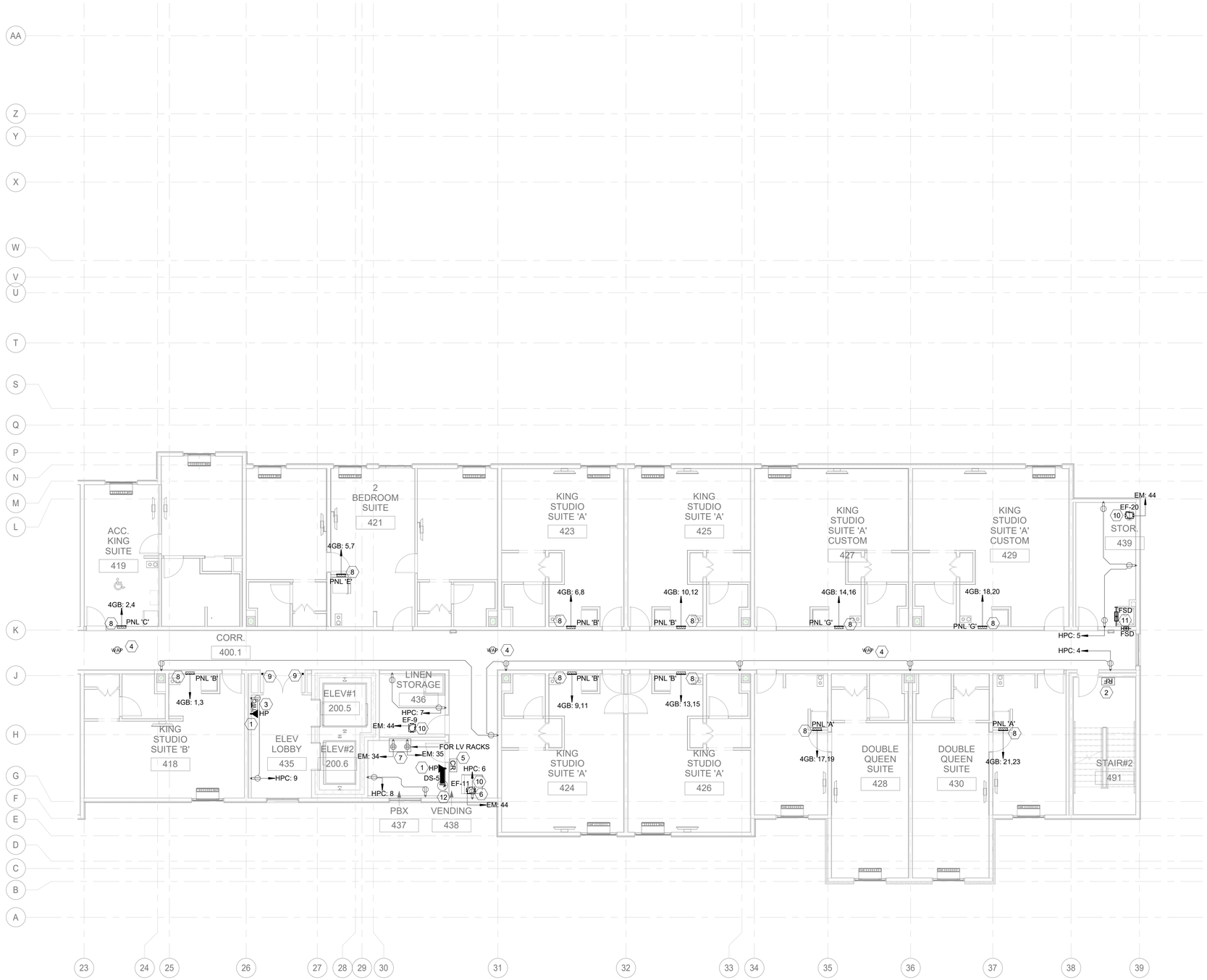
SHEET NAME

4TH FLOOR POWER PLAN A

DRAWINGS NO.

E-207



1 4TH FLOOR POWER PLAN B
1/8" = 1'-0"

E-208 KEY NOTES

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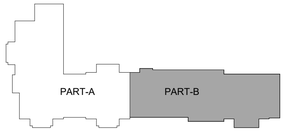

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SHEET NAME
4TH FLOOR POWER PLAN B

DRAWINGS NO.
E-208

1 5TH FLOOR POWER PLAN A
1/8" = 1'-0"

E-209 KEY NOTES

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1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
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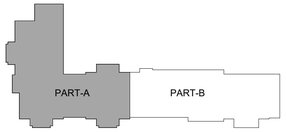

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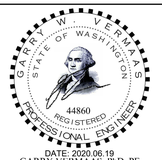

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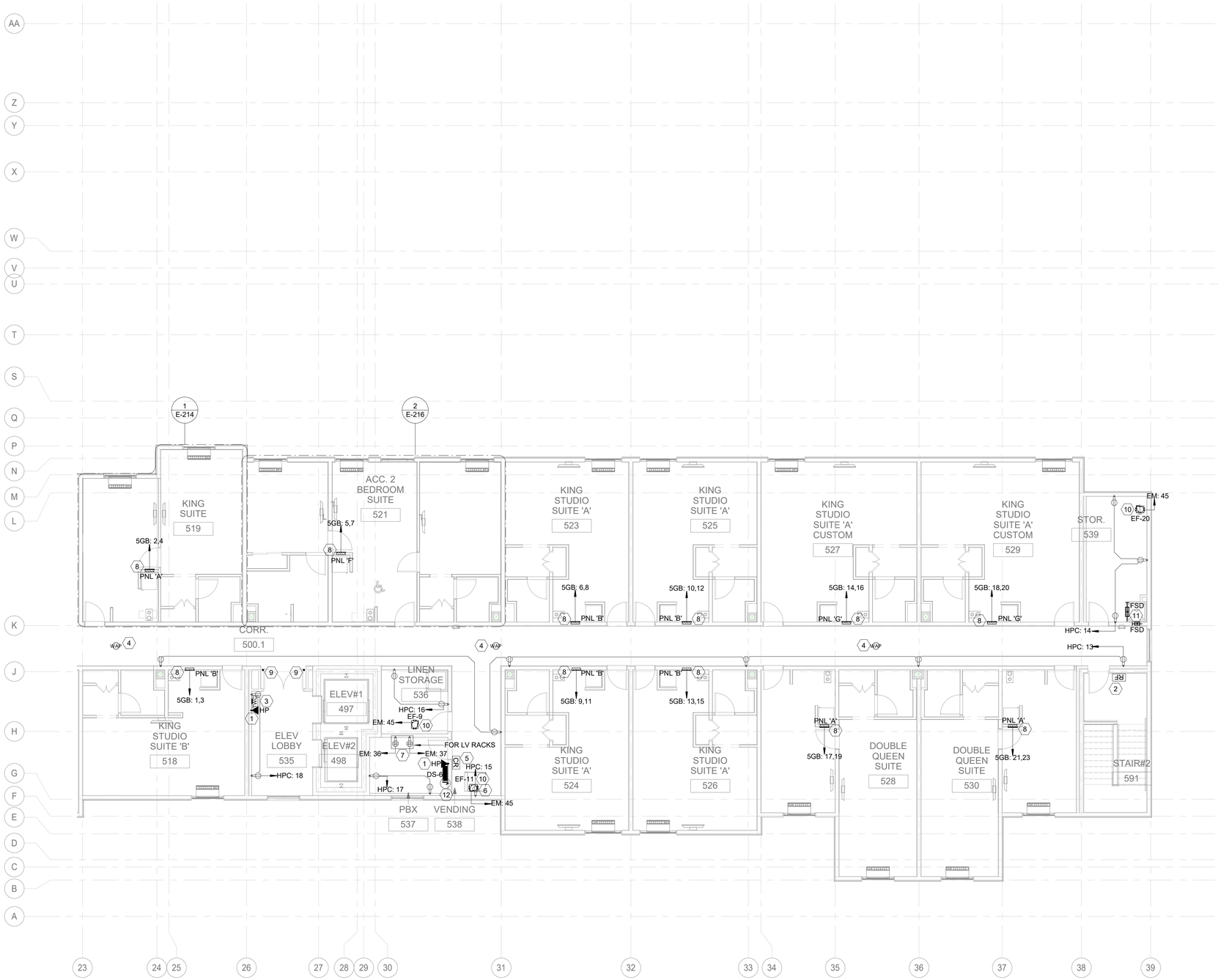
SHEET NAME

5TH FLOOR POWER PLAN A

DRAWINGS NO.

E-209



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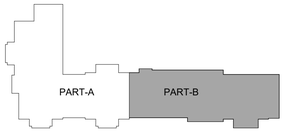
1/8" = 1'-0"

E-210 KEY NOTES

#	TEXT
1	HOUSE PHONE ONLY W/ AUTOMATIC DIAL TO FRONT DESK AT LOCATE 12" FROM DOOR U.N.O.,44" AFF.
2	GC/FIRE VENDOR SHALL PERFORM RADIO FREQUENCY COVERAGE TESTING AND PROVIDE DISTRIBUTED ANTENNA SYSTEM (DAS) ACCORDINGLY TO COMPLY WITH IFC SECTION 510 AND LOCAL AHJ REQUIREMENT.
3	TWO WAY COMMUNICATION SYSTEM SHALL PROVIDE COMMUNICATION BETWEEN EACH REQUIRED LOCATION AND THE FIRE COMMAND CENTER OR A INTERNAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPARTMENT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL OUT CAPABILITY TO A MONITORING LOCATION OR 911. THE TWO WAY COMMUNICATION SYSTEM SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. DIRECTION FOR THE USE OF TWO WAY COMMUNICATION SYSTEM, INSTRUCTION FOR SUMMONING ASSISTANCE VIA THE TWO WAY COMMUNICATION SYSTEM AND WRITTEN IDENTIFICATION OF THE LOCATION SHALL BE POSTED ADJACENT TO THE TWO WAY COMMUNICATION SYSTEM.
4	WIRELESS ACCESS POINT ABOVE CEILING IN ACCESSIBLE LOCATION SITE SURVEY SHALL BE COMPLETED BY THE TECHNOLOGY CONTRACTOR TO DETERMINE BEST LOCATION FOR EACH ZONE.
5	CONTRACTOR SHALL PROVIDE BATTERY PACK CARD READER.
6	AS PER NEC 210.8 PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI PROTECTION IN BREAKER FOR CIRCUIT.
7	PROVIDE IG TYPE RECEPTACLE FOR TYPICAL FLOOR IT EQUIPMENTS.
8	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL.CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102.CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26
9	MAGNETIC DOOR-HOLD TIED TO THE BUILDING FIRE ALARM CONTROL PANEL. PROVIDE ELECTRICAL CIRCUIT EM:54 CONNECTION TO MAGNETIC DOOR-HOLD TYPICAL FOR ALL FLOORS. CONTRACTOR SHALL ENSURE TO PROVIDE ELECTROMAGNETIC DOOR HOLD OPEN MECHANISM CONNECTED TO THE FIRE ALARM SYSTEM AND ELECTRICAL SERVICE TO HOLD DOOR OPEN AND TO AUTOMATICALLY RELEASE DOORS WHEN AN ALARM IS ACTIVATED.
10	CONTRACTOR SHALL PROVIDE SWITCH FOR DISCONNECT FOR EXHAUST FAN APPLIANCE OF MORE THAN 1/8HP THAT COMPLIES WITH NEC 422.34(A), (B), (C) OR OTHERWISE PROVIDE HARDWARE CONNECTION TO EXHAUST FAN ON EM PANEL.
11	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.
12	CONTRACTOR TO PROVIDE JUNCTION BOX FOR SPLIT UNIT CONNECTION BEING FED BY ITS RESPECTIVE OUTDOOR UNIT. CONTRACTOR TO COORDINATE WITH MECHANICAL VENDOR ON SITE AND PROVIDE NECESSARY ARRANGEMENTS.



KEYPLAN

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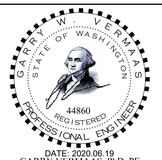

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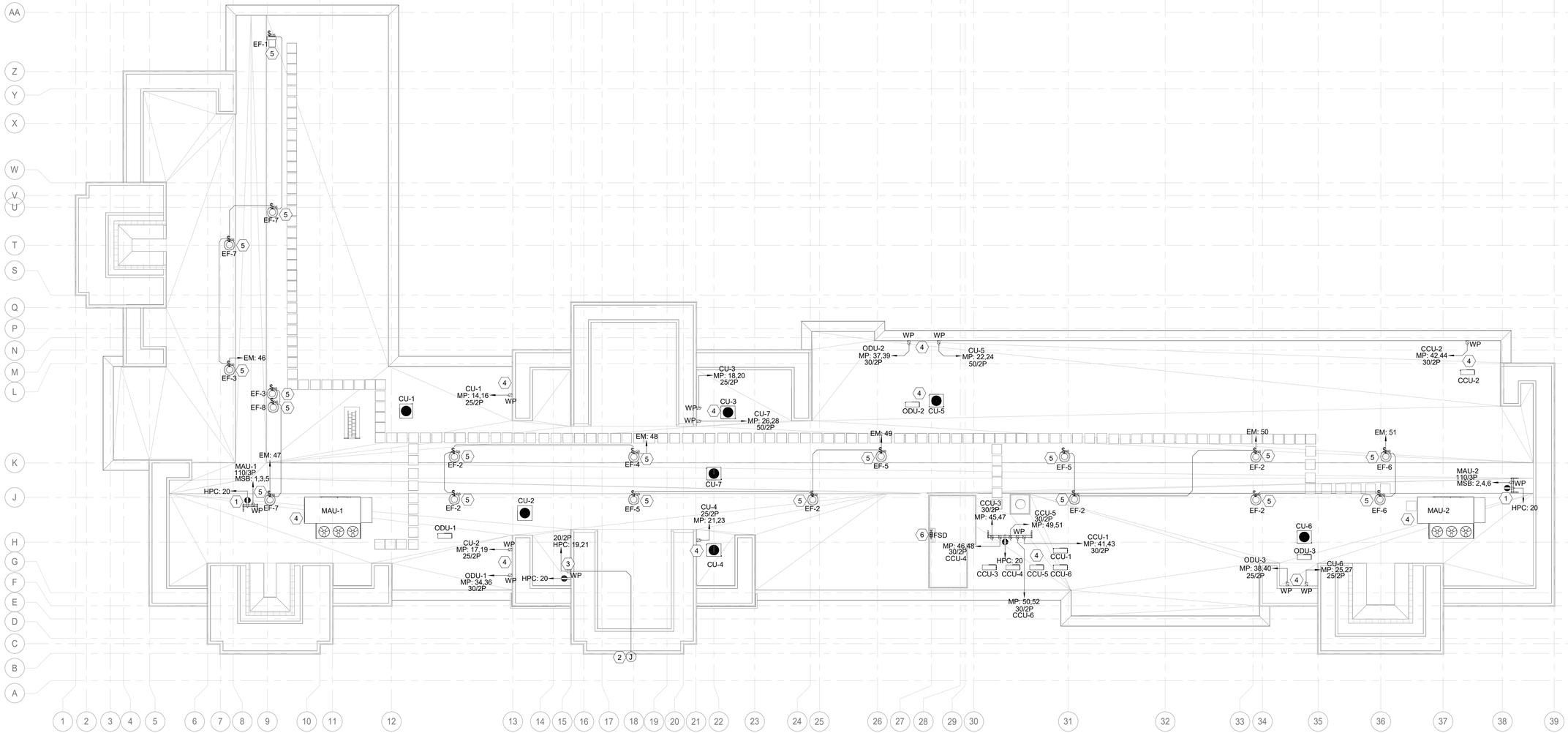
PROJECT NO.
B4-124-1803

SHEET NAME

5TH FLOOR POWER PLAN B

DRAWINGS NO.

E-210



1 ROOF POWER PLAN
3/32" = 1'-0"

E-211 KEY NOTES

#	TEXT
1	CONTRACTOR SHALL PROVIDE WP/GFCI TYPE UTILITY RCPT WITH IN 25FT FOR MAINTENANCE ACCORDING TO NEC 2017 ARTICLE 210.63 NOT IN THE SAME CIRCUIT AS THAT OF THE EQUIPMENT.
2	J-BOX FOR BUILDING SIGN. CONTRACTOR SHALL VERIFY LOCATION & REQUIREMENTS BEFORE ROUGH-IN SIGN. WILL BE CONTROLLED BY TIME CLOCK.
3	CONTRACTOR SHALL PROVIDE A DISCONNECT LOCATED WITHIN SIGHT OF THE CONTROLLER MUST BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
4	CONTRACTOR SHALL CO-ORDINATE WITH MECHANICAL VENDOR FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND PROVIDE DISCONNECT SWITCH ACCORDINGLY. CONTRACTOR SHALL MAINTAIN MIN. CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26. CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH NOT ACCESSIBLE TO COMMON PERSON.
5	CONTRACTOR SHALL PROVIDE SWITCH FOR DISCONNECT FOR EXHAUST FAN APPLIANCE OF MORE THAN 1/8HP THAT COMPLIES WITH NEC 422.34(A), (B), (C) OR OTHERWISE PROVIDE HARDWARE CONNECTION TO EXHAUST FAN ON EM PANEL.
6	FIRE/SMOKE DAMPER CONNECT TO FIRE ALARM SYSTEM. SEE MECHANICAL DRAWING FOR LOCATION AND REQUIREMENT. PROVIDE ELECTRICAL CONNECTION TO FIRE/SMOKE DAMPER FROM CKT EM: 53 TYPICAL FOR ALL FLOOR.

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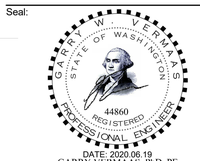

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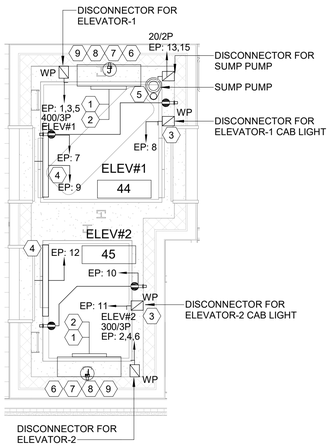
ROOF ELECTRICAL PLAN

DRAWINGS NO.

E-211



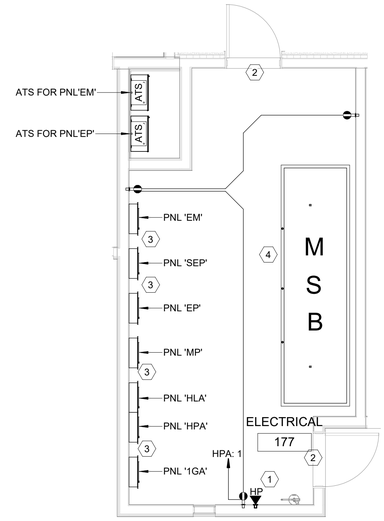
ELEVATOR EQUIPMENT SCHEDULE								
QTY	DESCRIPTION	ELECTRICAL LOAD IN KW (EACH)	MOTOR HORSEPOWER RATING	OUTLET RATING	ELECTRICAL SUPPLY	MOUNTING HEIGHT	REMARKS	ELECTRICAL CIRCUIT
1	SP	2.516	1	20/2P	208/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	EP: 13,15
1	ELEVATOR-1	56.2	50	400/3P (SHUNT TRIP)	208/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	EP: 1,3,5
1	ELEVATOR-2	44.1	40	300/3P (SHUNT TRIP)	208/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	EP: 2,4,6

KEY NOTES FOR ELEVATOR

#	TEXT
1	CAT. #6 CABLES TO ELECTRICAL ROOM IN 3/4"C, ONE CABLE FOR EACH ELEVATOR.
2	JUNCTION BOX FOR TELEPHONE SERVICE TO ELEVATOR.
3	PROVIDE DISCONNECT SWITCH-20AMP-120V-1PHASE-60HZ FOR ELEVATOR CAB LIGHTING.
4	WALL MOUNTED ELEVATOR PIT LIGHTING AND RECEPTACLE LOCATED AT EACH FLOOR. CONTRACTOR SHALL PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION. CONTRACTOR SHALL PROVIDE GFCI PROTECTION TO PIT RCPT ACCORDING TO NEC SECTION 620.85
5	CONTRACTOR SHALL CO-ORDINATE WITH PLUMBING VENDOR FOR SUMP PUMP LOCATION AND CONTROLLER LOCATION AND PROVIDE DISCONNECT SWITCH ACCORDINGLY.
6	CONTROL CIRCUIT TO SHUT DOWN ELEVATOR POWER SHALL BE MONITORED FOR THE PRESENCE OF OPERATING VOLTAGE. LOSS OF VOLTAGE TO THE CONTROL CIRCUIT FOR THE DISCONNECTING MEANS SHALL CAUSE A SUPERVISORY SIGNAL TO BE INDICATED AT THE BUILDING FIRE CONTROL UNIT.
7	CONTRACTOR SHALL REFER SECTION 620.53 OF THE NEC AND CIRCUITS SHALL BE PROVIDED WITH AN ENCLOSED CIRCUIT BREAKER OR EXTERNALLY OPERABLE FUSED MOTOR CIRCUIT SWITCH AS A DISCONNECTING MEANS.
8	CONTRACTOR SHALL CO-ORDINATE WITH ELEVATOR VENDOR FOR FINAL SIZE AND TYPE OF CONTROLLER BEFORE PRIOR TO PURCHASE SWITCHGEAR.
9	CONTRACTOR SHALL CO-ORDINATE WITH ELEVATOR VENDOR FOR EXACT LOCATION AND CONNECTION.

NOTE:
1. ELECTRICAL CONTRACTOR SHALL OBTAIN ELEVATOR CUT SHEETS FROM OWNER AND COORDINATE BREAKER SIZE FOR ELEVATOR AS PER MANUFACTURER'S SPECIFICATIONS.AT THE TIME OF BIDDING AND BEFORE SWITCHGEAR PRICING.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE SELECTIVE COORDINATION REPORT TO CITY REVIEW BEFORE PRIOR TO INSTALLATION.

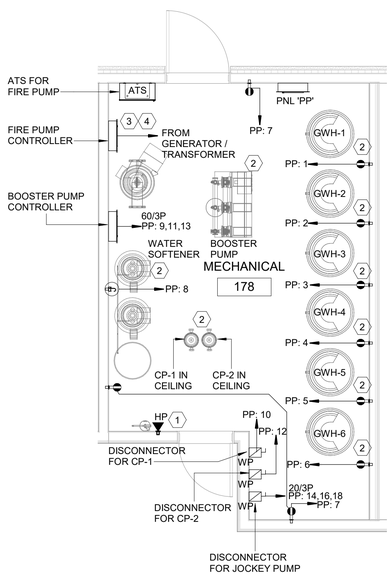
4 ELEVATOR
1/4" = 1'-0"



KEY NOTES FOR ELECTRICAL ROOM

#	TEXT
1	HOUSE PHONE ONLY W/AUTOMATIC DIAL TO FRONT DESK. LOCATE HOUSE PHONES 12" FROM DOOR U.N.O., 44"AFF.
2	CONTRACTOR SHALL PROVIDE A PERSONNEL DOOR(S) INTENDED FOR ENTRANCE TO AND EGRESS FROM THE WORKING SPACE LESS THAN 7.6 M (25 FT.) FROM THE NEAREST EDGE OF THE WORKING SPACE, THE DOOR(S) SHALL OPEN IN THE DIRECTION OF EGRESS AND BE EQUIPPED WITH PANIC BARS, PRESSURE PLATES, OR OTHER DEVICES THAT ARE NORMALLY LATCHED BUT OPEN UNDER SIMPLE PRESSURE AS PER SECTION 110.26(C)(3) OF THE NEC.
3	CONTRACTOR SHALL VERIFY ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARDS, PANEL BOARDS AND METER SOCKET ENCLOSURES, THAT ARE IN OTHER THAN DWELLING UNITS SHALL BE MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS AS REQUIRED BY SECTION 110.16 OF NFPA 70.
4	CONTRACTOR SHALL PROVIDE HOUSEKEEPING PAD FOR MSB AND OTHER FLOOR MOUNTED PANELS. PADS SHALL BE OF CONCRETE AND NOT LESS THAN 4" THICK. FOR FINAL PAD SIZE, CONTRACTOR TO VERIFY WITH ELECTRICAL SWITCHGEAR SUBMITTAL.

1 ELECTRICAL ROOM
1/4" = 1'-0"

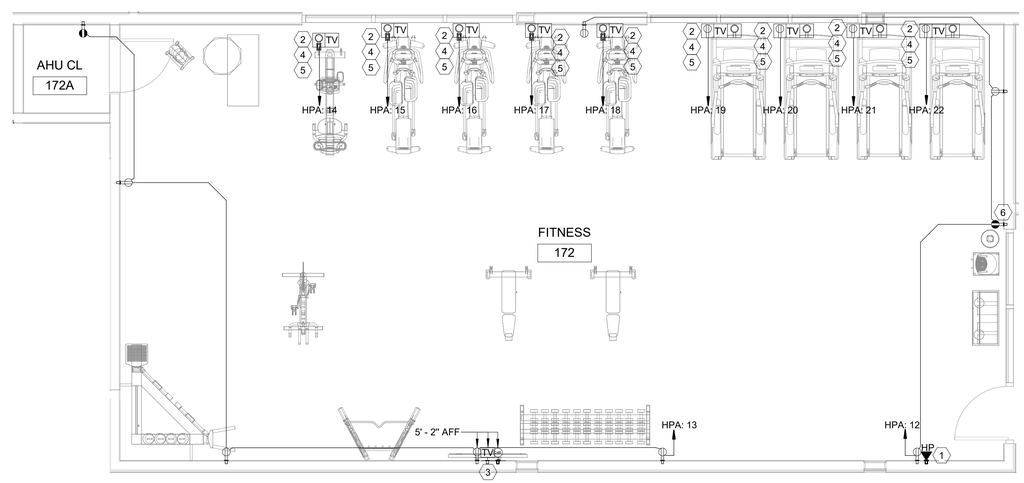


KEY NOTES FOR MECHANICAL ROOM

#	TEXT
1	HOUSE PHONE ONLY W/AUTOMATIC DIAL TO FRONT DESK. LOCATE HOUSE PHONES 12" FROM DOOR U.N.O., 44"AFF.
2	CONTRACTOR SHALL CO-ORDINATE WITH PLUMBING VENDOR FOR EQUIPMENTS FINAL LOCATION AND PROVIDE POWER AND CONNECTION ACCORDINGLY. CONTRACTOR SHALL MAINTENANCE MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26. CONTRACTOR SHALL ALSO REFER CODE AND PROVIDE POWER FOR MOTOR ACCORDINGLY.
3	FIRE PUMP VENDOR NEED TO CHECK THE EXACT LOCATION OF FIRE PUMP AND PROVIDE POWER ACCORDINGLY.
4	CONTRACTOR TO INSTALL A SOFT START KIT ON THE FIRE PUMP TO REDUCE THE MOTOR LOAD.

PLUMBING EQUIPMENT SCHEDULE							
EQUIPMENT TAG	QTY	DESCRIPTION	ELECTRICAL LOAD IN KW (EACH)	ELECTRICAL SUPPLY	MOUNTING HEIGHT	REMARKS	ELECTRICAL CIRCUIT
1	6	GWH-1,2,3,4,5,6	0.2	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 1 ; PP: 2 ; PP: 3 ; PP: 4 ; PP: 5 ; PP: 6
2	1	WATER SOFTENER	0.5	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 8
3	1	CP-1	0.625	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 10
4	1	CP-2	0.28	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 12
5	1	BOOSTER PUMP	15.99	208V/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 9,11,13
6	1	FIRE PUMP	31.702	208V/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	FROM GENERATOR/ TRANSFORMER
7	1	JOCKEY PUMP	2.701	208V/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	PP: 14,16,18

3 MECHANICAL ROOM
1/4" = 1'-0"



KEY NOTES FOR FITNESS AREA

#	TEXT
1	HOUSE PHONE ONLY W/AUTOMATIC DIAL TO FRONT DESK. LOCATE HOUSE PHONES 12" FROM DOOR U.N.O., 48" MAX AFF.
2	PROVIDE CABLE CONNECTION TO EACH LCD EQUIPPED EXERCISE MACHINE.
3	CONTRACTOR NEED TO VERIFY TELEVISION HEIGHT WITH ARCHITECTURAL DRAWING.
4	RECEPTACLE ARE IN FLOOR CONTRACTOR NEED TO PROVIDE ADEQUATE PROTECTION FOR THE SAME. TYPICAL FOR ALL FLOOR MOUNTED BOXES.
5	CONTRACTOR SHALL PROVIDE REQUIRED DATA AND POWER CONNECTIONS TO TREADMILL AND ELLIPTICAL CROSS TRAINERS ATTACHED WITH LCD SCREEN AS PER THE FINAL PLACEMENT OF THE EQUIPMENT.
6	CONTRACTOR SHALL CO-ORDINATE WITH FITNESS VENDOR AND PROVIDE POWER CONNECTION TO WATER COOLER STATION.

2 FITNESS ROOM
1/4" = 1'-0"

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PROJECT NO.
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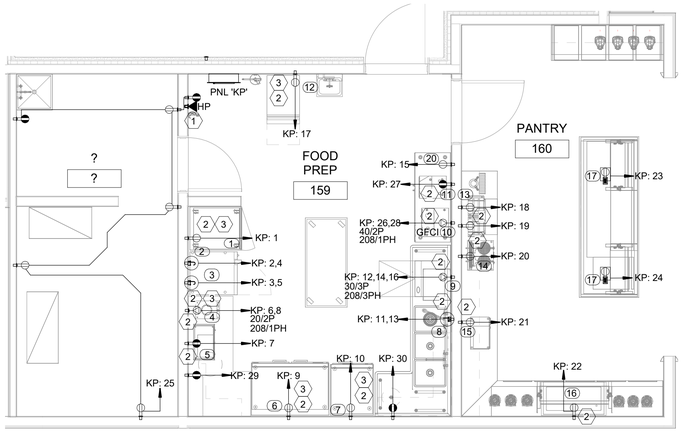
SHEET NAME
ENLARGED FLOOR POWER PLAN-1

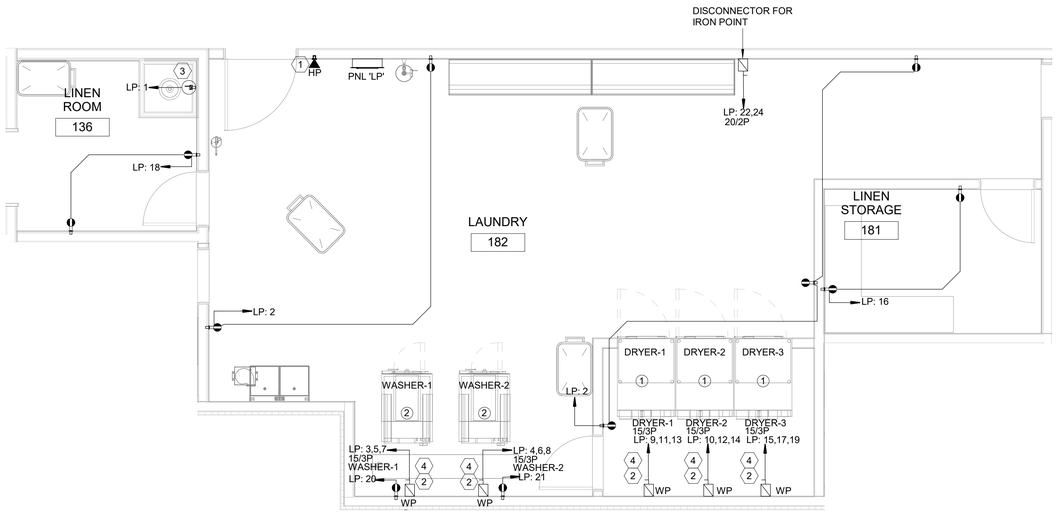
DRAWINGS NO.
E-212



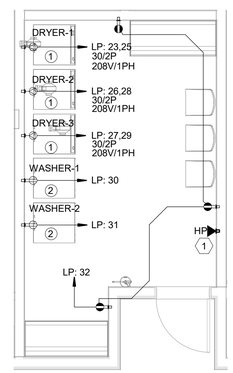
KITCHEN AND COFFEE HOUSE PUB EQUIPMENT SCHEDULE							
EQUIPMENT TAG	QTY	DESCRIPTION	ELECTRICAL LOAD IN KW	ELECTRICAL SUPPLY	MOUNTING HEIGHT	REMARK	ELECTRICAL CIRCUIT
1	1	REACH-IN REFRIGERATOR	0.720KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 1
2	1	VENTLESS EXHAUST HOOD	0.416KW	208V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 2,4
3	1	CONVECTION OVEN	5.8KW	208V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 3,5
4	1	INDUCTION COOKER	3.8KW	208V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 6,8
5	1	MICROWAVE OVEN	1.55KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 7
6	1	REACH-IN REFRIGERATOR	0.840KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 9
7	1	REACH-IN FREEZER	1.080KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 10
8	1	DISPOSER	1.60KW	208V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 11,13
9	1	UNDERCOUNTER DISHWASHER	6.0KW	208V/60Hz/3PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 12,14,16
10	1	COFFEE BREWER	8.856KW	208V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 26,28
11	1	JUICE DISPENSER	1.2KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 27
12	1	ICE MACHINE	1.380KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 17
13	2	TOASTER	1.8KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 18 ; KP: 19
14	1	WAFFLE MAKER	1.2KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KH: 20
15	1	MICROWAVE OVEN	1.55KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KH: 21
16	1	REFRIGERATED COLD PAN	0.588KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KH: 22
17	2	CHAFING DISH	0.504KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 23 ; KP: 24
20	1	KEG COOLER	0.66KW	120V/60Hz/1PH	VENDOR TO CONFIRM	VENDOR TO CONFIRM	KP: 15

KEY NOTES FOR FOOD PREP	
#	TEXT
1	HOUSE PHONE ONLY W/AUTOMATIC DIAL TO FRONT DESK. LOCATE HOUSE PHONES 12" FROM DOOR U.N.O., 44"AFF.
2	CONTRACTOR SHALL COORDINATE WITH KITCHEN VENDOR AND PROVIDE CONNECTION ACCORDINGLY. CONTRACTOR SHALL PROVIDE ALL NECESSARY CORD AND ARRANGEMENT FOR CONNECTION.
3	AS PER NEC 210.8 PROVIDE GFCI RECEPTACLE AT READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI PROTECTION IN BREAKER FOR CIRCUIT.

1 FOOD PREP & PANTRY
1/4" = 1'-0"



2 LAUNDRY
1/4" = 1'-0"



3 GUEST LAUNDRY
1/4" = 1'-0"

LAUNDRY EQUIPMENT SCHEDULE							
EQUIPMENT TAG	QTY	DESCRIPTION	ELECTRICAL LOAD IN KW (EACH)	OUTLET RATING	ELECTRICAL SUPPLY	MOUNTING HEIGHT	ELECTRICAL CIRCUIT
1	3	MAIN LAUNDRY-DRYERS (UNIMAC-UTF75N)	2.161	15/3P	208V/60Hz/3PH	VENDOR TO CONFIRM	LP: 9,11,13 LP: 10,12,14 LP: 15,17,19
2	2	MAIN LAUNDRY-WASHERS (UNIMAC-UWT065D40V)	3.602	15/3P	208V/60Hz/3PH	VENDOR TO CONFIRM	LP: 3,5,7 LP: 4,6,8

GUEST LAUNDRY EQUIPMENT SCHEDULE							
EQUIPMENT TAG	QTY	DESCRIPTION	ELECTRICAL LOAD IN KW (EACH)	OUTLET RATING	ELECTRICAL SUPPLY	MOUNTING HEIGHT	ELECTRICAL CIRCUIT
1	3	GUEST LAUNDRY-DRYERS (SPEED QUEEN-SDENCAGS)	5.408	30/2P	208V/60Hz/1PH	VENDOR TO CONFIRM	LP: 23,25 LP: 26,28 LP: 27,29
2	2	GUEST LAUNDRY-WASHERS (SPEED QUEEN-SENNCASG)	1.176	15/1P	120V/60Hz/1PH	VENDOR TO CONFIRM	LP: 30 LP: 31

KEY NOTES FOR LAUNDRY	
#	TEXT
1	HOUSE PHONE ONLY W/AUTOMATIC DIAL TO FRONT DESK. LOCATE HOUSE PHONES 12" FROM DOOR U.N.O., 44"AFF.
2	AS PER NEC SECTION 210.50 (C) APPLIANCE OUTLETS. APPLIANCE RECEPTACLE OUTLETS INSTALLED SPECIFIC APPLIANCES, SUCH AS LAUNDRY EQUIPMENT, SHALL BE INSTALLED WITHIN 1.8 M (6 FT) OF THE INTENDED LOCATION OF THE APPLIANCE. (CONTRACTOR TO PROVIDE ELECTRICAL POINT FOR DRYER AND WASHER SHOULD BE WITHIN 6FT FROM THE EQUIPMENT).
3	J-BOX FOR LAUNDRY CHUTE DOOR INTERLOCK TO TIE TO CIRCUIT LP: 1. CONTRACTOR SHALL COORDINATE WITH LAUNDRY VENDOR FOR CONNECTION OF LAUNDRY CHUTE CONTROL PANEL AND FOR LOCKOUT TIMER SWITCH LOCATION.
4	CONTRACTOR SHALL CO-ORDINATE WITH LAUNDRY VENDOR FOR EXACT LOCATION AND POWER REQUIREMENT. PROVIDE ALL NECESSARY ARRANGEMENT AND CORD REQUIRED FOR CONNECTION.

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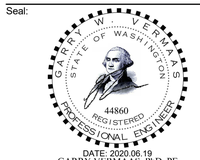
MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
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Owner:

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HOMEWOOD SUITES BY HILTON

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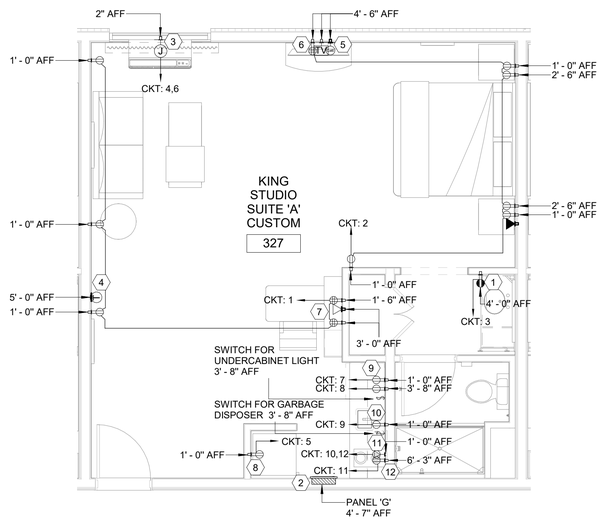
PROJECT NO.
B4-124-1803

SHEET NAME

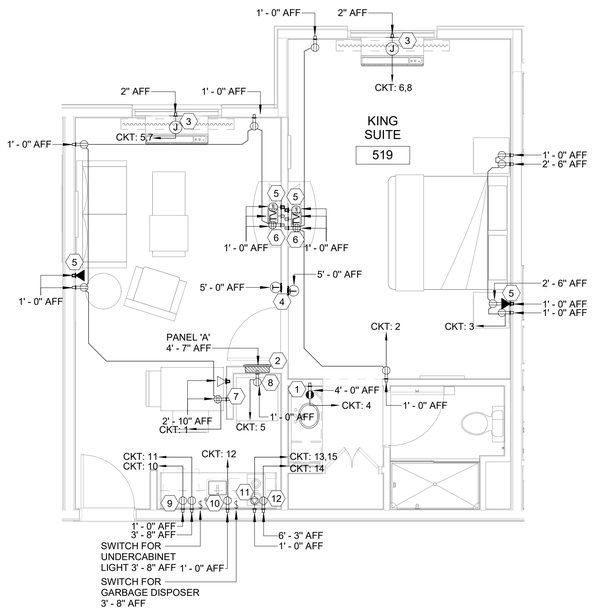
ENLARGED FLOOR POWER PLAN-2

DRAWINGS NO.

E-213



3 KING STUDIO 'A' CUSTOM
1/4" = 1'-0"



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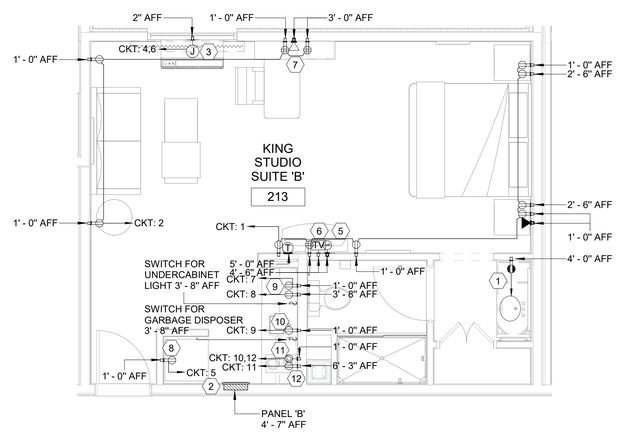
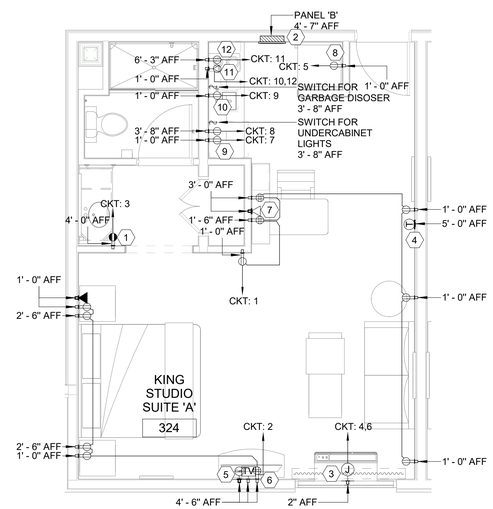


4 KING STUDIO SUITE 'B'
1/4" = 1'-0"



2 KING STUDIO SUITE 'A'
1/4" = 1'-0"

GENERAL NOTES:

1. REFER TO ARCHITECTURAL/ID DRAWINGS FOR EXACT DIMENSIONS AND HEIGHT.
2. REFER TO SHEET E-301 THROUGH E-310 FOR PANEL SCHEDULE, RISER DIAGRAM AND BRANCH CIRCUIT INFORMATION.
3. BOXES ON OPPOSITE SIDES OF A RATED WALL OR PARTITION MUST BE SPACED 24"(60.9CM) MINIMUM HORIZONTAL. REDUCED SPACING IS ALLOWED IF BOXES ARE PROTECTED WITH 3MTH FIRE BARRIER MOLDABLE PUTTY+PADS, PROVIDED BOXES ARE NOT BACK TO BACK.
4. ALL SWITCHES IN GUEST ROOM TO BE MOUNTED AT 42" A.F.F. TO CENTER UNLESS OTHERWISE NOTED.
5. PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15- AND 20-AMPERE RECEPTACLES LOCATED IN GUESTROOMS AND GUEST SUITES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES AS PER NEC 406.12.
6. ACCESSIBLE AND HEARING IMPAIRED GUEST ROOMS SHALL COMPLY W/REQUIREMENTS OF THE A.D.A GUIDELINES MANUAL; NAMELY ADA 9.2.2, 9.3 & 4.315 TELEPHONE SHALL HAVE ADJUSTABLE VOLUME CONTROL AND THE ROOM SHALL HAVE NOTIFICATION ALARM DEVICE SYSTEMS FOR DOOR KNOCK OR BELL AND FOR INCOMING TELEPHONE CALLS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING WITH THE AUTHORITY HAVING JURISDICTION,THAT THE RECEPTACLES LAYOUT MEETS THE REQUIREMENTS OF 210.52 AND LOCAL REQUIREMENTS.
8. AS PER NEC ARTICLE 210.8 GFCI PROTECTION REQUIRED FOR ALL RECEPTACLES THAT SERVE KITCHEN COUNTERTOP SURFACES IN DWELLING UNIT. GFCI PROTECTION IS NOT REQUIRED FOR RECEPTACLES SERVING APPLIANCES LIKE DISHWASHERS ,OR CONVENIENCE RECEPTACLES INSTALLED WITHIN 6FT OF THE OUTSIDE EDGE OF A WET BAR SINK MUST ALSO BE GFCI-PROTECTED . GFCI PROTECTION IS NOT REQUIRED FOR RECEPTACLES REFRIGERATORS, ICE MAKERS ,WATER HEATERS,OR CONVENIENCE RECEPTACLES THAT DO NOT SUPPLY COUNTER-TOP SURFACES
9. ALL BRANCH CIRCUITS SUPPLYING OUTLETS IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUEST ROOM AND SUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
10. CONTRACTOR SHALL PROVIDE REMOTE OPERATED, WALL-MOUNTED, HARD-WIRED ELECTRONIC DIGITAL THERMOSTAT IN GUEST ROOM SLEEPING AREA.
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12. AT WALLS BETWEEN ADJACENT ROOMS, ELECTRICAL OUTLET LOCATIONS, INCLUDING TV AND TELEPHONE OUTLETS, SHALL BE OFFSET 6" MIN. HORIZONTALLY FOR INSTALLATION.
13. LIGHT SWITCH AND GFCI OUTLETS CAN BE MOUNTED IN A COMMON BOX WITH COVER PLATE. COORDINATE CLEARANCE WITH MIRROR.
14. HEIGHT OF ALL SWITCHES, OUTLETS, ETC., TO MEET ACCESSIBILITY STANDARDS FOR MAXIMUM AND MINIMUM REACH RANGE. FEDERAL AND LOCAL CODES APPLY AND THE MOST STRINGENT STANDARD PREVAILS. SWITCHES ON LAMPS MUST BE TOGGLE TYPE.
15. ACCESSIBLE CLEARANCES INDICATED IN THESE DRAWINGS ARE FOR DESIGN INTENT ONLY, DESIGNER OF RECORD SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ACCESSIBILITY REQUIREMENTS PER LOCAL AND NATIONAL CODES.
16. CONTRACTOR TO PROVIDE COAXIAL AND DATA (CAT6 RJ45) WIRING AT GUESTROOM TV LOCATIONS TO ENSURE CURRENT GUESTROOM ENTERTAINMENT STANDARDS CAN BE MET. THE COAXIAL AND DATA LINE SHOULD BE BROUGHT INTO THE ROOM VIA A FLEX-TUBE OR SIMILAR CONDUIT TO ALLOW FOR ADJUSTMENT/MODIFICATION AS NEEDED FOR FUTURE PROGRAMMING CHANGES.

E-214 KEY NOTES

#	TEXT
1	ALL GFCI RECEPTACLES IN GUEST BATHROOMS SHALL BE MOUNTED 48" TO CENTER A.F.F. UNLESS NOTED OTHERWISE.
2	GUEST ROOM PANEL BOARD SHALL BE FLUSH MOUNTED ON WALL AND MAINTAIN MIN. 2HR FIRE RESISTANCE RATING OF THE WALL. CONTRACTOR SHALL REFER DETAIL 7 ON SHEET E-102. CONTRACTOR SHALL MAINTAIN MIN CLEAR SPACE REQUIRED AS PER NEC ARTICLE 110.26.
3	FLUSH JUNCTION BOX MOUNTED BELOW PTAC UNIT. PROVIDE FINAL CONNECTIONS TO UNIT WITH FLEX. UNIT PROVIDED WITH SUB-BASE DISCONNECT.
4	CONTRACTOR SHALL PROVIDE A HARDWIRED THERMOSTAT IN GUESTROOMS MOUNTED AT HEIGHT SHOWN.
5	CONTRACTOR SHALL PROVIDE CAT6 RJ45 AT TV AND AT PHONES AT HEIGHT SHOWN.
6	CONTRACTOR SHALL PROVIDE COAX TV SYSTEM OUTLET IN GUESTROOMS AT HEIGHT SHOWN
7	CONTRACTOR SHALL PROVIDE HIGH SPEED INTERNET ACCESS (HSIA) WIRED WHERE APPLICABLE.
8	OUTLET FOR REFRIGERATOR @ HEIGHT SHOWN
9	OUTLET FOR DISHWASHER @ HEIGHT SHOWN
10	OUTLET FOR DISPOSER @HEIGHT SHOWN
11	OUTLET FOR ELECTRIC COOKTOP @HEIGHT SHOWN
12	OUTLET FOR MICROWAVE WITH DUCTLESS EXHAUST HOOD @ HEIGHT SHOWN

ELECTRICAL OUTLET HEIGHTS (U.N.O)

#	DESCRIPTION	HEIGHT (A.F.F)
1	TYPICAL WALL OUTLET	12" A.F.F.
2	TYPICAL ACCESSIBLE WALL OUTLET	18" A.F.F.
3	BATHROOM VANITY OUTLET	48" A.F.F.
4	GUESTROOM STUDIO WET BAR	48" A.F.F.
5	TYPICAL KITCHEN OUTLET	42" A.F.F.
6	ACCESSIBLE KITCHEN OUTLET	46" A.F.F. MAX.
7	ACCESSIBLE BATHROOM VANITY OUTLET	44" A.F.F. MAX.

BASE4

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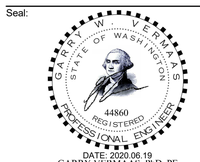

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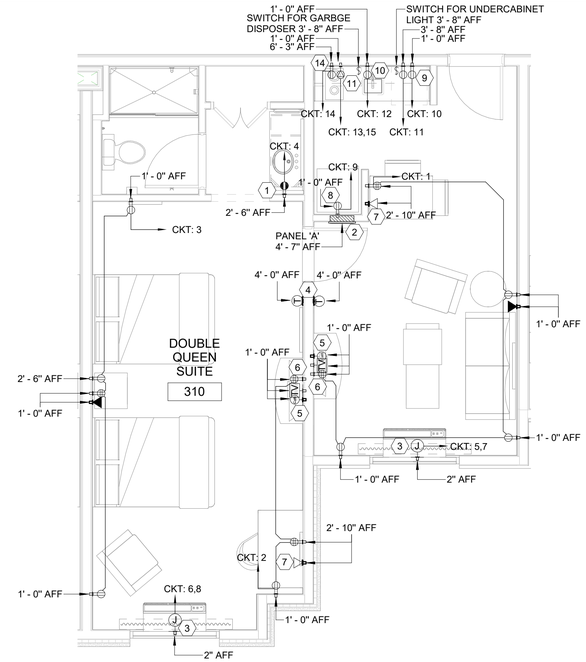
SHEET NAME

TYPICAL UNIT ELECTRICAL PLAN-1

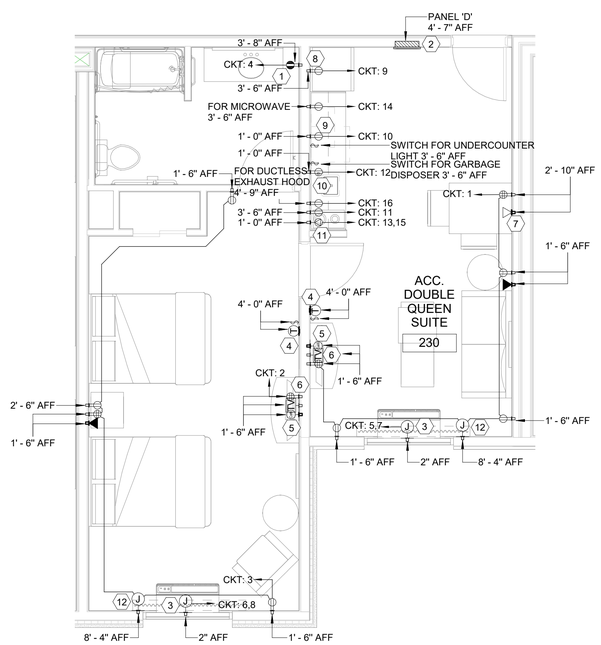
DRAWINGS NO.

E-214

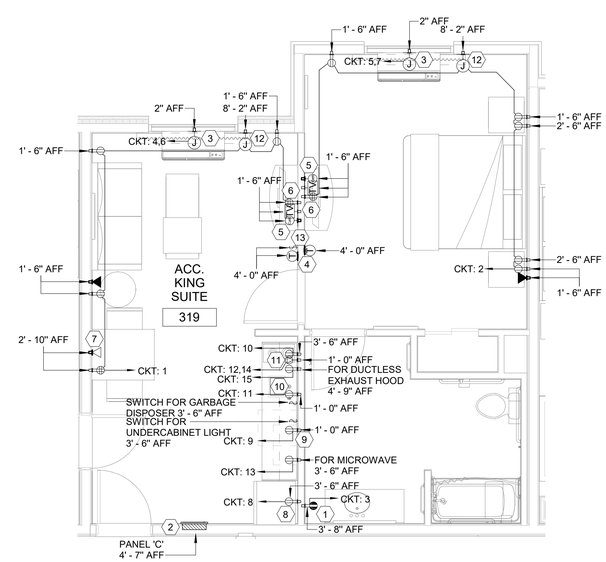
NOT IN USE



1 DOUBLE QUEEN SUITE
1/4" = 1'-0"



4 ACCESSIBLE DOUBLE QUEEN SUITE
1/4" = 1'-0"



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1/4" = 1'-0"

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E-215 KEY NOTES

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3	FLUSH JUNCTION BOX MOUNTED BELOW PTAC UNIT. PROVIDE FINAL CONNECTIONS TO UNIT WITH FLEX. UNIT PROVIDED WITH SUB-BASE DISCONNECT.
4	CONTRACTOR SHALL PROVIDE CAT6 RJ45 AT TV AND AT PHONES AT HEIGHT SHOWN.
5	CONTRACTOR SHALL PROVIDE CAT6 RJ45 AT TV AND AT PHONES AT HEIGHT SHOWN.
6	CONTRACTOR SHALL PROVIDE COAX TV SYSTEM OUTLET IN GUESTROOMS AT HEIGHT SHOWN.
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8	OUTLET FOR REFRIGERATOR @ HEIGHT SHOWN
9	OUTLET FOR DISHWASHER @ HEIGHT SHOWN
10	OUTLET FOR DISPOSER @HEIGHT SHOWN
11	OUTLET FOR ELECTRIC COOKTOP @ HEIGHT SHOWN
12	CONTRACTOR TO PROVIDE JUNCTION BOX FOR MOTORIZED WINDOW TREATMENT IN ALL ACCESSIBLE ROOMS. CONTRACTOR SHALL MAKE SURE TO CONCEAL THE POWER CONNECTIONS
13	SWITCH FOR MOTORIZED DRAPERIES AT 4' - 0" AFF
14	OUTLET FOR MICROWAVE WITH DUCTLESS EXHAUST HOOD @ HEIGHT SHOWN

ELECTRICAL OUTLET HEIGHTS (U.N.O)

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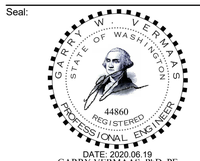

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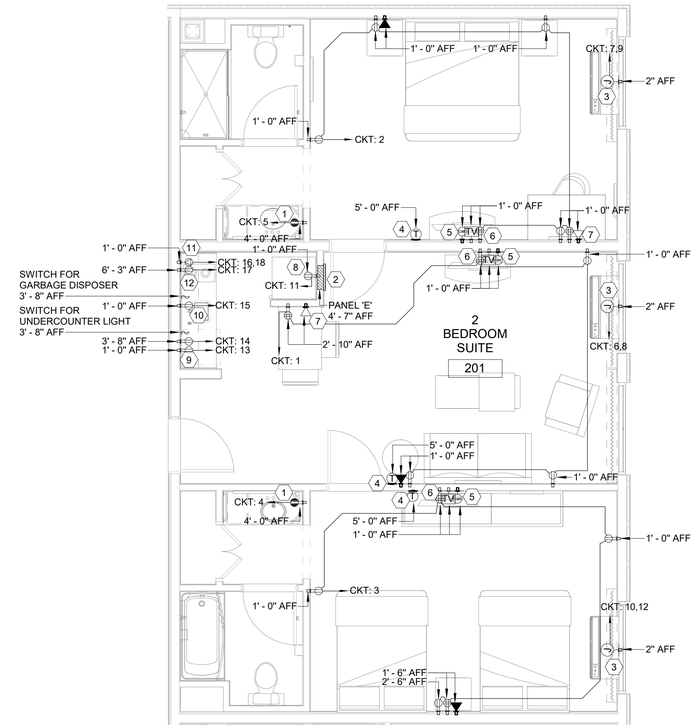
SHEET NAME

TYPICAL UNIT ELECTRICAL PLAN-2

DRAWINGS NO.

E-215

NOT IN USE



1 2 BEDROOM SUITE
1/4" = 1'-0"

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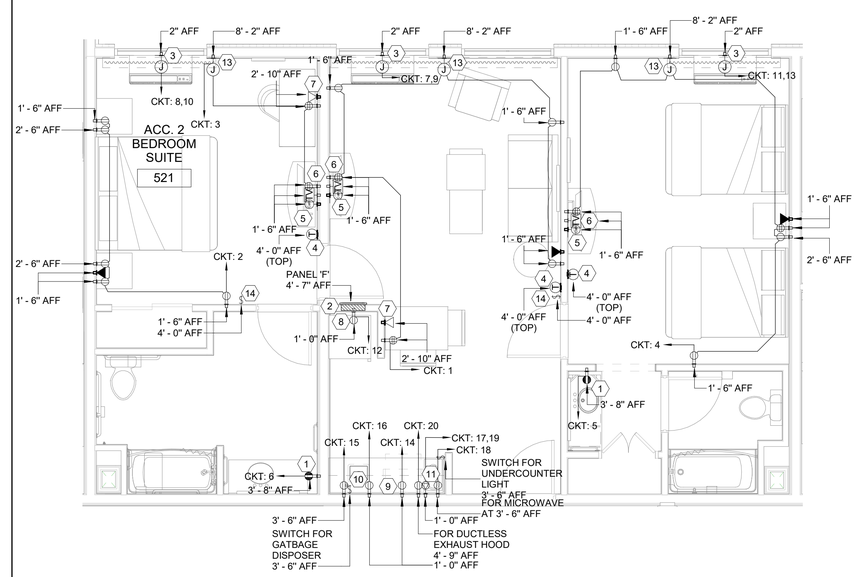

2 ACCESSIBLE 2 BEDROOM SUITE
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11	OUTLET FOR ELECTRIC COOKTOP @ HEIGHT SHOWN
12	OUTLET FOR MICROWAVE WITH DUCTLESS EXHAUST HOOD @ HEIGHT SHOWN
13	CONTRACTOR TO PROVIDE JUNCTION BOX FOR MOTORIZED WINDOW TREATMENT IN ALL ACCESSIBLE ROOMS. CONTRACTOR SHALL MAKE SURE TO CONCEAL THE POWER CONNECTIONS
14	SWITCH FOR MOTORIZED DRAPERIES @ HEIGHT SHOWN

ELECTRICAL OUTLET HEIGHTS (U.N.O)

#	DESCRIPTION	HEIGHT (A.F.F)
1	TYPICAL WALL OUTLET	12" A.F.F.
2	TYPICAL ACCESSIBLE WALL OUTLET	18" A.F.F.
3	BATHROOM VANITY OUTLET	48" A.F.F.
4	GUESTROOM STUDIO WET BAR	48" A.F.F.
5	TYPICAL KITCHEN OUTLET	42" A.F.F.
6	ACCESSIBLE KITCHEN OUTLET	46" A.F.F. MAX.
7	ACCESSIBLE BATHROOM VANITY OUTLET	44" A.F.F. MAX.

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

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5453 NW 106TH DR
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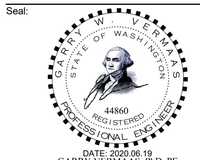
MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
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FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
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HOMEWOOD SUITES BY HILTON

3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

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CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

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GWV

PROJECT NO.
B4-124-1803

SHEET NAME

TYPICAL UNIT ELECTRICAL PLAN-3

DRAWINGS NO.

E-216

SERVICE:2 PHASE,3-WIRE		PANEL 'A'								MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	CKT NO.	TRIP POLE	WIRE	CONDUIT (INCH)	LOAD		CONDUIT (INCH)	WIRE	TRIP POLE	CKT NO.	LOAD DESCRIPTION
LIVING AREA RCPT & LTG	1	20/1P(AFCI)	12	3/4	1360	950	3/4	12	20/1P(AFCI)	2	BEDROOM RCPT & LTG
BEDROOM RCPT	3	20/1P(AFCI)	12	3/4	900	1000	3/4	12	20/1P	4	BATHROOM RCPT & LTG
LIVING AREA PTAC-1	5	15/2P	12	3/4	950	950	3/4	12	15/2P	6	BEDROOM PTAC-1
	7				950	950				8	
REFRIGERATOR RCPT	9	20/1P(AFCI/GFCI)	12	3/4	500	1500	3/4	12	20/1P(AFCI/GFCI)	10	DISHWASHER RCPT
KITCHEN UTILITY RCPT	11	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	12	GARBAGE DISPOSER RCPT
ELECTRIC COOKTOP RCPT	13	30/2P(AFCI/GFCI)	12	3/4	1500	1200	3/4	12	20/1P(AFCI/GFCI)	14	MICROWAVE RCPT
	15				1500					16	SPACE
SPACE	17									18	SPACE
SPACE	19									20	SPACE
SUBTOTAL VA					9160	8050					SUBTOTAL VA
				TOTAL	17210						

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	4210	AS PER NEC	1875
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
TOTAL LOAD IN VA	**13410**		**11075**
1AT 10KW@100%	11075	AS PER NEC	11075
REMAINDER@40%	0	AS PER NEC	0
HVAC LOAD	3800	AS PER NEC	3800
TOTAL DEMAND LOAD	**14875**		**14875**
TOTAL LOAD IN AMPERE	**72**		**72**
TAKING 20% SPARE CAPACITY IN AMP			**86**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
2)AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.
3) ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:2 PHASE,3-WIRE		PANEL 'B'								MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	CKT NO.	TRIP POLE	WIRE	CONDUIT (INCH)	LOAD		CONDUIT (INCH)	WIRE	TRIP POLE	CKT NO.	LOAD DESCRIPTION
GUESTROOM RCPT	1	20/1P(AFCI)	12	3/4	1440	1360	3/4	12	20/1P(AFCI)	2	GUESTROOM RCPT & LTG
BATHROOM RCPT & LTG	3	20/1P	12	3/4	1000	950	3/4	12	15/2P	4	GUESTROOM PTAC-1
REFRIGERATOR RCPT	5	20/1P(AFCI/GFCI)	12	3/4	500	950				6	
DISHWASHER RCPT	7	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	8	KITCHEN UTILITY RCPT
GARBAGE DISPOSER RCPT	9	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	10	30/2P(AFCI/GFCI)	10	ELECTRIC COOKTOP RCPT
MICROWAVE RCPT	11	20/1P(AFCI/GFCI)	12	3/4	1200	1500				12	
SPACE	13									14	SPACE
SPACE	15									16	SPACE
SPACE	17									18	SPACE
SPACE	19									20	SPACE
SUBTOTAL VA					7140	7760					SUBTOTAL VA
				TOTAL	14900						

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	3800	AS PER NEC	1452
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
TOTAL LOAD IN VA	**13000**		**10652**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	652	AS PER NEC	261
HVAC LOAD	1900	AS PER NEC	1900
TOTAL DEMAND LOAD	**12552**		**12161**
TOTAL LOAD IN AMPERE	**60**		**58**
TAKING 20% SPARE CAPACITY IN AMP			**70**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
2)AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.
3) ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:2 PHASE,3-WIRE		PANEL 'C'								MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	CKT NO.	TRIP POLE	WIRE	CONDUIT (INCH)	LOAD		CONDUIT (INCH)	WIRE	TRIP POLE	CKT NO.	LOAD DESCRIPTION
LIVING AREA RCPT & LTG	1	20/1P(AFCI)	12	3/4	1560	1500	3/4	12	20/1P(AFCI)	2	BEDROOM RCPT & LTG
BATHROOM RCPT & LTG	3	20/1P	12	3/4	1000	950	3/4	12	15/2P	4	LIVING AREA PTAC-1
BEDROOM PTAC-1	5	15/2P	12	3/4	950	950				6	
	7				950	500	3/4	12	20/1P(AFCI/GFCI)	8	REFRIGERATOR RCPT
DISHWASHER RCPT	9	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	10	KITCHEN UTILITY RCPT
GARBAGE DISPOSER RCPT	11	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	10	30/2P(AFCI/GFCI)	12	ELECTRIC COOKTOP RCPT
MICROWAVE RCPT	13	20/1P(AFCI/GFCI)	12	3/4	1200	1500				14	
EXHAUST HOOD	15	20/1P(AFCI/GFCI)	12	3/4	200					16	SPACE
SPACE	17									18	SPACE
SPACE	19									20	SPACE
SUBTOTAL VA					8860	8400					SUBTOTAL VA
				TOTAL	17260						

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	4060	AS PER NEC	1749
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
EXHAUST HOOD	200	AS PER NEC	200
TOTAL LOAD IN VA	**13460**		**11149**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	1149	AS PER NEC	460
HVAC LOAD	3800	AS PER NEC	3800
TOTAL DEMAND LOAD	**14949**		**14260**
TOTAL LOAD IN AMPERE	**72**		**69**
TAKING 20% SPARE CAPACITY IN AMP			**82**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
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3)ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:2 PHASE,3-WIRE		PANEL 'D'								MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	CKT NO.	TRIP POLE	WIRE	CONDUIT (INCH)	LOAD		CONDUIT (INCH)	WIRE	TRIP POLE	CKT NO.	LOAD DESCRIPTION
LIVING AREA RCPT & LTG	1	20/1P(AFCI)	12	3/4	1560	410	3/4	12	20/1P(AFCI)	2	BEDROOM RCPT & LTG
BEDROOM RCPT	3	20/1P(AFCI/GFCI)	12	3/4	920	1000	3/4	12	20/1P	4	BATHROOM RCPT & LTG
LIVING AREA PTAC-1	5	15/2P	12	3/4	950	950	3/4	12	15/2P	6	BEDROOM PTAC-1
	7				950	950				8	
REFRIGERATOR RCPT	9	20/1P(AFCI/GFCI)	12	3/4	500	1500	3/4	12	20/1P(AFCI/GFCI)	10	DISHWASHER RCPT
KITCHEN UTILITY RCPT	11	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	12	GARBAGE DISPOSER RCPT
ELECTRIC COOKTOP RCPT	13	30/2P(AFCI/GFCI)	10	3/4	1500	1200	3/4	12	20/1P(AFCI/GFCI)	14	MICROWAVE RCPT
	15				1500	200	3/4	12	20/1P(AFCI/GFCI)	16	EXHUAST HOOD
SPACE	17									18	SPACE
SPACE	19									20	SPACE
SUBTOTAL VA					9380	7710					SUBTOTAL VA
				TOTAL	17090						

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	3890	AS PER NEC	1872
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
KITCHEN HOOD	200	AS PER NEC	200
TOTAL LOAD IN VA	**13290**		**11272**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	1272	AS PER NEC	509
HVAC LOAD	3800	AS PER NEC	3800
TOTAL DEMAND LOAD	**15072**		**14309**
TOTAL LOAD IN AMPERE	**72**		**69**
TAKING 20% SPARE CAPACITY IN AMP			**83**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
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3)ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

PANEL 'A'	PANEL 'B'
PANEL 'C'	PANEL 'D'

BASE4
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BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

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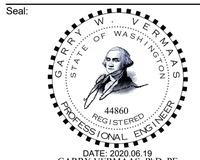
Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
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PROJECT NO.
B4-124-1803

SHEET NAME

PANEL SCHEDULE-1

DRAWINGS NO.

E-301

SERVICE:2 PHASE,3-WIRE	PANEL 'E'									MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	**CKT NO.**	**TRIP POLE**	**WIRE**	**CONDUIT (INCH)**	**LOAD**		**CONDUIT (INCH)**	**WIRE**	**TRIP POLE**	**CKT NO.**	**LOAD DESCRIPTION**
LIVING AREA RCPT & LTG	1	20/1P(AFCI)	12	3/4	1360	1460	3/4	12	20/1P(AFCI)	2	BEDROOM RCPT & LTG
BEDROOM RCPT & LTG	3	20/1P(AFCI)	12	3/4	1280	1000	3/4	12	20/1P	4	BATHROOM RCPT & LTG
BATHROOM RCPT & LTG	5	20/1P	12	3/4	1000	950	3/4	12	15/2P	6	LIVING AREA PTAC-1
BEDROOM PTAC-1	7	15/2P	12	3/4	950	950				8	
	9				950	950	3/4	12	15/2P	10	BEDROOM PTAC-1
REFRIGERATOR RCPT	11	20/1P(AFCI/GFCI)	12	3/4	500	950				12	
DISHWASHER RCPT	13	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	14	KITCHEN UITILITY RCPT
GARBAGE DISPOSER RCPT	15	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	10	30/2P(AFCI/GFCI)	16	ELECTRIC COOKTOP RCPT
MICROWAVE RCPT	17	20/1P(AFCI/GFCI)	12	3/4	1200	1500				18	
SPACE	19									20	SPACE
SUBTOTAL VA					**10240**	**10760**					**SUBTOTAL VA**
			TOTAL		**21000**						

LOAD	**CONNECTED LOAD**	**DEMAND FACTOR**	**DEMAND LOAD**
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	6100	AS PER NEC	2556
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
TOTAL LOAD IN VA	**15300**		**11756**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	1756	AS PER NEC	702
HVAC LOAD	5700	AS PER NEC	5700
TOTAL DEMAND LOAD	**17456**		**16402**
TOTAL LOAD IN AMPERE	**84**		**79**
TAKING 20% SPARE CAPACITY IN AMP			**95**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
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3)ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:2 PHASE,3-WIRE	PANEL 'F'									MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	**CKT NO.**	**TRIP POLE**	**WIRE**	**CONDUIT (INCH)**	**LOAD**		**CONDUIT (INCH)**	**WIRE**	**TRIP POLE**	**CKT NO.**	**LOAD DESCRIPTION**
LIVING AREA RCPT & LTG	1	20/1P(AFCI)	12	3/4	1560	950	3/4	12	20/1P(AFCI)	2	BEDROOM RCPT & LTG
BEDROOM RCPT	3	20/1P(AFCI)	12	3/4	920	1500	3/4	12	20/1P(AFCI)	4	BEDROOM RCPT & LTG
BATHROOM RCPT & LTG	5	20/1P	12	3/4	1000	1000	3/4	12	20/1P	6	BATHROOM RCPT & LTG
LIVING AREA PTAC-1	7	15/2P	12	3/4	950	950	3/4	12	15/2P	8	BEDROOM PTAC-1
	9				950	950				10	
BEDROOM PTAC-1	11	15/2P	12	3/4	950	500	3/4	12	20/1P(AFCI/GFCI)	12	REFRIGERATOR RCPT
	13				950	1500	3/4	12	20/1P(AFCI/GFCI)	14	DISHWASHER
KITCHEN UTILITY RCPT	15	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	16	GARBAGE DISPOSER RCPT
ELECTRIC COOKTOP RCPT	17	30/2P(AFCI/GFCI)	10	3/4	1500	1200	3/4	12	20/1P(AFCI/GFCI)	18	MICROWAVE RCPT
	19				1500	200	3/4	12	20/1P(AFCI/GFCI)	20	EXHUAST HOOD
SUBTOTAL VA					**11780**	**10250**					**SUBTOTAL VA**
			TOTAL		**22030**						

LOAD	**CONNECTED LOAD**	**DEMAND FACTOR**	**DEMAND LOAD**
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	6930	AS PER NEC	2469
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
RANGE HOOD	200	AS PER NEC	200
TOTAL LOAD IN VA	**16330**		**11869**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	1869	AS PER NEC	748
HVAC LOAD	5700	AS PER NEC	5700
TOTAL DEMAND LOAD	**17569**		**16448**
TOTAL LOAD IN AMPERE	**84**		**79**
TAKING 20% SPARE CAPACITY IN AMP			**95**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
2)AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.
3)ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:2 PHASE,3-WIRE	PANEL 'G'									MAIN BUS (A)	100
VOLTAGE:120/240										NEUTRAL	100%
MOUNTING:FLUSH MOUNTED										MAINS (A)	MLO
TYPE:LOAD CENTRE										AIC (A)	10,000
LOAD DESCRIPTION	**CKT NO.**	**TRIP POLE**	**WIRE**	**CONDUIT (INCH)**	**LOAD**		**CONDUIT (INCH)**	**WIRE**	**TRIP POLE**	**CKT NO.**	**LOAD DESCRIPTION**
GUESTROOM RCPT	1	20/1P(AFCI)	12	3/4	1440	1360	3/4	12	20/1P(AFCI)	2	GUESTROOM RCPT & LTG
BATHROOM RCPT & LTG	3	20/1P	12	3/4	1000	1415	3/4	12	20/2P	4	GUESTROOM PTAC-2
REFRIGERATOR RCPT	5	20/1P(AFCI/GFCI)	12	3/4	500	1415				6	
DISHWASHER RCPT	7	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	12	20/1P(AFCI/GFCI)	8	KITCHEN UTILITY RCPT
GARBAGE DISPOSER RCPT	9	20/1P(AFCI/GFCI)	12	3/4	1500	1500	3/4	10	30/2P(AFCI/GFCI)	10	ELECTRIC COOKTOP RCPT
MICROWAVE RCPT	11	20/1P(AFCI/GFCI)	12	3/4	1200	1500				12	
SPACE	13									14	SPACE
SPACE	15									16	SPACE
SPACE	17									18	SPACE
SPACE	19									20	SPACE
SUBTOTAL VA					**7140**	**8690**					**SUBTOTAL VA**
			TOTAL		**15830**						

LOAD	**CONNECTED LOAD**	**DEMAND FACTOR**	**DEMAND LOAD**
LIGHTING AND RCPT LOAD@ 3WATT/SQFT	3800	AS PER NEC	1452
COOKTOP/RANGE	3000	AS PER NEC	3000
DISHWASHER	1500	AS PER NEC	1500
DISPOSER	1500	AS PER NEC	1500
MICROWAVE	1200	AS PER NEC	1200
REFRIGERATOR	500	AS PER NEC	500
SMALL APPLIANCES	1500	AS PER NEC	1500
TOTAL LOAD IN VA	**13000**		**10652**
1AT 10KW@100%	10000	AS PER NEC	10000
REMAINDER@40%	652	AS PER NEC	261
HVAC LOAD	2830	AS PER NEC	2830
TOTAL DEMAND LOAD	**13482**		**13091**
TOTAL LOAD IN AMPERE	**65**		**63**
TAKING 20% SPARE CAPACITY IN AMP			**76**

1) PROVIDE ALL NON LOCKING-TYPE, 125-VOLT, 15 AND 20-AMPERE RECEPTACLES LOCATED IN LIVING AREA, SLEEPING AREA AND DINING AREA IN GUESTROOM AND GUESTSUITES SHALL BE PROTECTED BY A LISTED ARC-FAULT CURRENT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF BRANCH CIRCUIT AS PER NEC 210.12.
2)AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.
3) ELECTRICAL CONTRACTOR TO CHECK WITH VENDOR FOR EXACT MODEL NUMBER OF GUEST ROOM KITCHEN EQUIPMENT. BASE4 HAS CONSIDERED MAXIMUM RATING OF EQUIPMENT.

SERVICE:3 PHASE,4-WIRE	PANEL '1GA'											MAIN BUS (A)	300				
VOLTAGE:120/208												NEUTRAL (%)	100%				
MOUNTING:WALL MOUNTED												MAINS (A)	MLO				
TYPE:LOAD CENTRE												AIC (A)	42000				
LOAD DESCRIPTION	**PHASE**			**TRIP POLE**	**WIRE**	**CONDUIT (INCH)**	**CKT NO.**	**CKT NO.**	**CONDUIT (INCH)**	**WIRE**	**TRIP POLE**	**PHASE**			**LOAD DESCRIPTION**
	R	**Y**	**B**									**R**	**Y**	**B**	
ROOM 101 PNL 'F'	11015			100/2P	1 AL	2	1	2	1 1/4	3	90/2P	8605			ROOM 102 PNL 'A'
		11015					3	4					8605		
ROOM 103 PNL 'B'			7450	70/2P	4	1 1/4	5	6	1 1/4	3	90/2P			8605	ROOM 104 PNL 'A'
	7450						7	8				8605			
ROOM 105 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 106 PNL 'B'
			7450				11	12						7450	
ROOM 108 PNL 'A'	8605			90/2P	3	1 1/4	13	14	1 1/4	3	90/2P	8605			ROOM 110 PNL 'A'
		8605					15	16					8605		
ROOM 129 PNL 'G'			7915	80/2P	4	1 1/4	17	18	1 1/4	3	90/2P			8545	ROOM 130 PNL 'D'
	7915						19	20				8545			
SPACE							21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**34985**	**27070**	**22815**									**34360**	**24660**	**24600**	**SUBTOTAL VA**
												34985	**27070**	**22815**	
												69345	**51730**	**47415**	
											TOTAL VA:	**168490**			

LOAD	**CONNECTED LOAD**	**DEMAND FACTOR**	**DEMAND LOAD**
GUEST ROOMS:10			
TOTAL GUEST ROOM LOAD IN VA	168490	NEC ARTICLE NO 220.42	72451
TOTAL LOAD IN VA	**168490**		**72451**
TOTAL LOAD IN AMPERE	**468**		**201**
TAKING 20% SPARE CAPACITY IN AMP			**241**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

PANEL 'E'	PANEL 'F'
PANEL 'G'	PANEL '1GA'

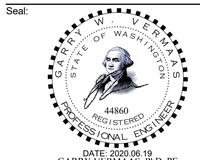
BASE4

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON

3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

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VSG

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GWV

PROJECT NO.
B4-124-1803

SHEET NAME

PANEL SCHEDULE-2

DRAWINGS NO.

E-302

SERVICE:3 PHASE,4-WIRE						PANEL '2GA'					MAIN BUS (A)	350			
VOLTAGE:120/208											NEUTRAL (%)	100%			
MOUNTING:WALL MOUNTED											MAINS (A)	MLO			
TYPE:LOAD CENTRE											AIC (A)	18000			
LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 201 PNL 'E'	10500			100/2P	1 AL	2	1	2	1 1/4	3	90/2P	8605			ROOM 202 PNL 'A'
		10500					3	4					8605		
ROOM 203 PNL 'B'			7450	70/2P	4	1 1/4	5	6	1 1/4	3	90/2P			8605	ROOM 204 PNL 'A'
	7450						7	8				8605			
ROOM 205 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 206 PNL 'B'
			7450				11	12						7450	
ROOM 208 PNL 'A'	8605			90/2P	3	1 1/4	13	14	1 1/4	3	90/2P	8605			ROOM 210 PNL 'A'
		8605					15	16					8605		
ROOM 212 PNL 'B'			7450	70/2P	4	1 1/4	17	18	1 1/4	4	70/2P			7450	ROOM 213 PNL 'B'
	7450						19	20				7450			
ROOM 214 PNL 'A'		8605		90/2P	3	1 1/4	21	22	1 1/4	3	90/2P		8605		ROOM 216 PNL 'A'
			8605				23	24						8605	
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**34005**	**35160**	**30955**									**33265**	**33265**	**32110**	**SUBTOTAL VA**
												34005	**35160**	**30955**	
												67270	**68425**	**63065**	
											TOTAL VA:	**198760**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:12			
TOTAL GUEST ROOM LOAD IN VA	198760	NEC ARTICLE NO 220.42	81492
TOTAL LOAD IN VA	**198760**		**81492**
TOTAL LOAD IN AMPERE	**552**		**226**
TAKING 20% SPARE CAPACITY IN AMP			**271**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE						PANEL '2GB'					MAIN BUS (A)	300			
VOLTAGE:120/208											NEUTRAL (%)	100%			
MOUNTING:WALL MOUNTED											MAINS (A)	MLO			
TYPE:LOAD CENTRE											AIC (A)	10000			
LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 218 PNL 'B'	7450			70/2P	4	1 1/4	1	2	1 1/4	3	90/2P	8630			ROOM 219 PNL 'C'
		7450					3	4					8630		
ROOM 221 PNL 'E'			10500	100/2P	1 AL	2	5	6	1 1/4	4	70/2P			7450	ROOM 223 PNL 'B'
	10500						7	8				7450			
ROOM 224 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 225 PNL 'B'
			7450				11	12						7450	
ROOM 226 PNL 'B'	7450			70/2P	4	1 1/4	13	14	1 1/4	4	80/2P	7915			ROOM 227 PNL 'G'
		7450					15	16					7915		
ROOM 228 PNL 'A'			8605	90/2P	3	1 1/4	17	18	1 1/4	4	80/2P			7915	ROOM 229 PNL 'G'
	8605						19	20				7915			
ROOM 230 PNL 'D'		8545		90/2P	3	1 1/4	21	22							SPACE
			8545				23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**34005**	**30895**	**35100**									**31910**	**23995**	**22815**	**SUBTOTAL VA**
												34005	**30895**	**35100**	
												65915	**54890**	**57915**	
											TOTAL VA:	**178720**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:11			
TOTAL GUEST ROOM LOAD IN VA	178720	NEC ARTICLE NO 220.42	75062
TOTAL LOAD IN VA	**178720**		**75062**
TOTAL LOAD IN AMPERE	**496**		**208**
TAKING 20% SPARE CAPACITY IN AMP			**250**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE						PANEL '3GA'					MAIN BUS (A)	400			
VOLTAGE:120/208											NEUTRAL (%)	100%			
MOUNTING:WALL MOUNTED											MAINS (A)	MLO			
TYPE:LOAD CENTRE											AIC (A)	10000			
LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 301 PNL 'E'	10500			100/2P	1 AL	2	1	2	1 1/4	3	90/2P	8605			ROOM 302 PNL 'A'
		10500					3	4					8605		
ROOM 303 PNL 'B'			7450	70/2P	4	1 1/4	5	6	1 1/4	3	90/2P			8605	ROOM 304 PNL 'A'
	7450						7	8				8605			
ROOM 305 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 306 PNL 'B'
			7450				11	12						7450	
ROOM 308 PNL 'A'	8605			90/2P	3	1 1/4	13	14	1 1/4	3	90/2P	8605			ROOM 310 PNL 'A'
		8605					15	16					8605		
ROOM 312 PNL 'B'			7450	70/2P	4	1 1/4	17	18	1 1/4	4	70/2P			7450	ROOM 313 PNL 'B'
	7450						19	20				7450			
ROOM 314 PNL 'A'		8605		90/2P	3	1 1/4	21	22	1 1/4	3	90/2P		8605		ROOM 315 PNL 'A'
			8605				23	24						8605	
ROOM 316 PNL 'A'	8605			90/2P	3	1 1/4	25	26	1 1/4	3	90/2P	8605			ROOM 317 PNL 'A'
		8605					27	28					8605		
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**42610**	**43765**	**30955**									**41870**	**41870**	**32110**	**SUBTOTAL VA**
												42610	**43765**	**30955**	
												84480	**85635**	**63065**	
											TOTAL VA:	**233180**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:14			
TOTAL GUEST ROOM LOAD IN VA	233180	NEC ARTICLE NO 220.42	93272
TOTAL LOAD IN VA	**233180**		**93272**
TOTAL LOAD IN AMPERE	**647**		**259**
TAKING 20% SPARE CAPACITY IN AMP			**311**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE						PANEL '3GB'					MAIN BUS (A)	300			
VOLTAGE:120/208											NEUTRAL (%)	100%			
MOUNTING:WALL MOUNTED											MAINS (A)	MLO			
TYPE:LOAD CENTRE											AIC (A)	10000			
LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 318 PNL 'B'	7450			70/2P	4	1 1/4	1	2	1 1/4	3	90/2P	8630			ROOM 319 PNL 'C'
		7450					3	4					8630		
ROOM 321 PNL 'E'			10500	100/2P	1 AL	2	5	6	1 1/4	4	70/2P			7450	ROOM 323 PNL 'B'
	10500						7	8				7450			
ROOM 324 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 325 PNL 'B'
			7450				11	12						7450	
ROOM 326 PNL 'B'	7450			70/2P	4	1 1/4	13	14	1 1/4	4	80/2P	7915			ROOM 327 PNL 'G'
		7450					15	16					7915		
ROOM 328 PNL 'A'			8605	90/2P	3	1 1/4	17	18	1 1/4	4	80/2P			7915	ROOM 329 PNL 'G'
	8605						19	20				7915			
ROOM 330 PNL 'A'		8605		90/2P	3	1 1/4	21	22							SPACE
			8605				23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**34005**	**30955**	**35160**									**31910**	**23995**	**22815**	**SUBTOTAL VA**
												34005	**30955**	**35160**	
												65915	**54950**	**57975**	
											TOTAL VA:	**178840**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:11			
TOTAL GUEST ROOM LOAD IN VA	178840	NEC ARTICLE NO 220.42	75113
TOTAL LOAD IN VA	**178840**		**75113**
TOTAL LOAD IN AMPERE	**496**		**208**
TAKING 20% SPARE CAPACITY IN AMP			**250**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

PANEL '2GA'	PANEL '2GB'
PANEL '3GA'	PANEL '3GB'

BASE4

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON™

3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME
PANEL SCHEDULE-3

DRAWINGS NO.
E-303

SERVICE:3 PHASE,4-WIRE	PANEL '4GA'	MAIN BUS (A)	400
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10,000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 401 PNL 'E'	10500			100/2P	1 AL	2	1	2	1 1/4	3	90/2P	8605			ROOM 402 PNL 'A'
		10500					3	4					8605		
ROOM 403 PNL 'B'			7450	70/2P	4	1 1/4	5	6	1 1/4	3	90/2P			8605	ROOM 404 PNL 'A'
	7450						7	8				8605			
ROOM 405 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 406 PNL 'B'
			7450				11	12						7450	
ROOM 408 PNL 'A'	8605			90/2P	3	1 1/4	13	14	1 1/4	3	90/2P	8605			ROOM 410 PNL 'A'
		8605					15	16					8605		
ROOM 412 PNL 'B'			7450	70/2P	4	1 1/4	17	18	1 1/4	4	70/2P			7450	ROOM 413 PNL 'B'
	7450						19	20				7450			
ROOM 414 PNL 'A'		8605		90/2P	3	1 1/4	21	22	1 1/4	3	90/2P		8605		ROOM 415 PNL 'A'
			8605				23	24						8605	
ROOM 416 PNL 'A'	8605			90/2P	3	1 1/4	25	26	1 1/4	3	90/2P	8605			ROOM 417 PNL 'A'
		8605					27	28					8605		
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	42610	43765	30955									41870	41870	32110	SUBTOTAL VA
												42610	43765	30955	
												84480	85635	63065	
											TOTAL VA:	233180			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:14			
TOTAL GUEST ROOM LOAD IN VA	233180	NEC ARTICLE NO 220.42	93272
TOTAL LOAD IN VA	233180		93272
TOTAL LOAD IN AMPERE	647		259
TAKING 20% SPARE CAPACITY IN AMP			311

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL '4GB'	MAIN BUS (A)	300
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 418 PNL 'B'	7450			70/2P	4	1 1/4	1	2	1 1/4	3	90/2P	8630			ROOM 419 PNL 'C'
		7450					3	4					8630		
ROOM 421 PNL 'E'			10500	100/2P	1 AL	2	5	6	1 1/4	4	70/2P			7450	ROOM 423 PNL 'B'
	10500						7	8				7450			
ROOM 424 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 425 PNL 'B'
			7450				11	12						7450	
ROOM 426 PNL 'B'	7450			70/2P	4	1 1/4	13	14	1 1/4	4	80/2P	7915			ROOM 427 PNL 'G'
		7450					15	16					7915		
ROOM 428 PNL 'A'			8605	90/2P	3	1 1/4	17	18	1 1/4	4	80/2P			7915	ROOM 429 PNL 'G'
	8605						19	20				7915			
ROOM 430 PNL 'A'		8605		90/2P	3	1 1/4	21	22							SPACE
			8605				23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	34005	30955	35160									31910	23995	22815	SUBTOTAL VA
												34005	30955	35160	
												65915	54950	57975	
											TOTAL VA:	178840			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:11			
TOTAL GUEST ROOM LOAD IN VA	178840	NEC ARTICLE NO 220.42	75113
TOTAL LOAD IN VA	178840		75113
TOTAL LOAD IN AMPERE	496		208
TAKING 20% SPARE CAPACITY IN AMP			250

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL '5GA'	MAIN BUS (A)	400
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 501 PNL 'E'	10500			100/2P	1 AL	2	1	2	1 1/4	3	90/2P	8605			ROOM 502 PNL 'A'
		10500					3	4					8605		
ROOM 503 PNL 'B'			7450	70/2P	4	1 1/4	5	6	1 1/4	3	90/2P			8605	ROOM 504 PNL 'A'
	7450						7	8				8605			
ROOM 505 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 506 PNL 'B'
			7450				11	12						7450	
ROOM 508 PNL 'A'	8605			90/2P	3	1 1/4	13	14	1 1/4	3	90/2P	8605			ROOM 510 PNL 'A'
		8605					15	16					8605		
ROOM 512 PNL 'B'			7450	70/2P	4	1 1/4	17	18	1 1/4	4	70/2P			7450	ROOM 513 PNL 'B'
	7450						19	20				7450			
ROOM 514 PNL 'A'		8605		90/2P	3	1 1/4	21	22	1 1/4	3	90/2P		8605		ROOM 515 PNL 'A'
			8605				23	24						8605	
ROOM 516 PNL 'A'	8605			90/2P	3	1 1/4	25	26	1 1/4	3	90/2P	8605			ROOM 517 PNL 'A'
		8605					27	28					8605		
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	42610	43765	30955									41870	41870	32110	SUBTOTAL VA
												42610	43765	30955	
												84480	85635	63065	
											TOTAL VA:	233180			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:14			
TOTAL GUEST ROOM LOAD IN VA	233180	NEC ARTICLE NO 220.42	93272
TOTAL LOAD IN VA	233180		93272
TOTAL LOAD IN AMPERE	647		259
TAKING 20% SPARE CAPACITY IN AMP			311

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT KITCHEN COUNTER AND SHALL BE READILY ACCESSIBLE LOCATION. IF ANY GFCI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL '5GB'	MAIN BUS (A)	300
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ROOM 518 PNL 'B'	7450			70/2P	4	1 1/4	1	2	1 1/4	3	90/2P	8605			ROOM 519 PNL 'A'
		7450					3	4					8605		
ROOM 521 PNL 'F'			11015	100/2P	1 AL	2	5	6	1 1/4	4	70/2P			7450	ROOM 523 PNL 'B'
	11015						7	8				7450			
ROOM 524 PNL 'B'		7450		70/2P	4	1 1/4	9	10	1 1/4	4	70/2P		7450		ROOM 525 PNL 'B'
			7450				11	12						7450	
ROOM 526 PNL 'B'	7450			70/2P	4	1 1/4	13	14	1 1/4	4	80/2P	7915			ROOM 527 PNL 'G'
		7450					15	16					7915		
ROOM 528 PNL 'A'			8605	90/2P	3	1 1/4	17	18	1 1/4	4	80/2P			7915	ROOM 529 PNL 'G'
	8605						19	20				7915			
ROOM 530 PNL 'A'		8605		90/2P	3	1 1/4	21	22							SPACE
			8605				23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	34520	30955	35675									31885	23970	22815	SUBTOTAL VA
												34520	30955	35675	
												66405	54925	58490	
											TOTAL VA:	179820			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOMS:11			
TOTAL GUEST ROOM LOAD IN VA	179820	NEC ARTICLE NO 220.42	75524
TOTAL LOAD IN VA	179820		75524
TOTAL LOAD IN AMPERE	499		210
TAKING 20% SPARE CAPACITY IN AMP			252

NOTE:
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PANEL '4GA'	PANEL '4GB'
PANEL '5GA'	PANEL '5GB'

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

GARRY W. VERMAAS
STATE OF WASHINGTON
64860
REGISTERED
PROFESSIONAL ENGINEER

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON
3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME

PANEL SCHEDULE-4

DRAWINGS NO.

E-304

SERVICE:3 PHASE,4-WIRE	PANEL 'HPA'	MAIN BUS (A)	150
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	18000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
SECTION-1															
ELECTRICAL ROOM RCPT	540			20/1P	12	3/4	1	2	3/4	12	20/1P	540			ENGINEERING ROOM RCPT
PTAC MAINTENANCE RCPT		500		20/2P	12	3/4	3	4	3/4	12	20/1P		1260		1ST FLOOR CORRIDOR RCPT
			500				5	6	3/4	12	20/1P			540	BREAK ROOM RCPT
BREAK ROOM MICROWAVE RCPT	1000			20/1P	12	3/4	7	8	3/4	12	20/1P	1000			BREAK ROOM UTILITY RCPT
BREAK ROOM REFRIGERATOR RCPT		1000		20/1P	12	3/4	9	10	3/4	12	20/1P		360		STORAGE RCPT
UNISEX EMPLOYEE TOILET RCPT			360	20/1P	12	3/4	11	12	3/4	12	20/1P			720	FITNESS ROOM RCPT
FITNESS ROOM RCPT	900			20/1P	12	3/4	13	14	3/4	12	20/1P	500			FITNESS ROOM EQUIPMENT RCPT
FITNESS ROOM ELLIPTICAL RCPT		500		20/1P	12	3/4	15	16	3/4	12	20/1P		500		FITNESS ROOM ELLIPTICAL RCPT
FITNESS ROOM ELLIPTICAL RCPT			500	20/1P	12	3/4	17	18	3/4	12	20/1P			500	FITNESS ROOM ELLIPTICAL RCPT
FITNESS ROOM TREADMILL RCPT	1000			20/1P	12	3/4	19	20	3/4	12	20/1P	1000			FITNESS ROOM TREADMILL RCPT
FITNESS ROOM TREADMILL RCPT		1000		20/1P	12	3/4	21	22	3/4	12	20/1P		1000		FITNESS ROOM TREADMILL RCPT
PRE-FUNCTION AREA RCPT			900	20/1P	12	3/4	23	24	3/4	12	20/1P			540	CORRIDOR RCPT
WOMEN RESTROOM RCPT	360			20/1P	12	3/4	25	26	3/4	12	20/1P	360			MEN RESTROOM RCPT
MEETING ROOM RCPT		720		20/1P	12	3/4	27	28	3/4	12	20/1P		720		MEETING ROOM RCPT
MEETING ROOM RCPT			540	20/1P	12	3/4	29	30	3/4	12	20/1P			540	MEETING ROOM RCPT
MEETING ROOM PROJECTOR RCPT	500			20/1P	12	3/4	31	32	3/4	12	20/1P	360			MEETING STORAGE RCPT
1ST FLOOR CORRIDOR RCPT		360		20/1P	12	3/4	33	34	3/4	12	20/1P		600		FIREPLACE JN.BOX
LODGE AREA RCPT			180	20/1P	12	3/4	35	36	3/4	12	20/1P			720	LODGE AREA RCPT
LODGE AREA RCPT	720			20/1P	12	3/4	37	38	3/4	12	20/1P	720			LODGE AREA RCPT
LODGE AREA RCPT		360		20/1P	12	3/4	39	40	3/4	12	20/1P		360		LOBBY AREA RCPT
LOBBY AREA RCPT			540	20/1P	12	3/4	41	42	3/4	12	20/1P			360	CART STOR. RCPT
SUITE SHOP REACH-IN REFRIGERATOR	648			20/1P	12	3/4	43	44	3/4	12	20/1P	1140			SUITE SHOP REACH-IN FREEZER
STORAGE RCPT		360		20/1P	12	3/4	45	46	3/4	12	20/1P		1080		ENGINEERING ROOM RCPT
STORAGE RCPT			540	20/1P	12	3/4	47	48	3/4	12	20/1P			900	1ST FLOOR CORRIDOR RCPT
EXTERIOR AREA RCPT	720			20/1P	12	3/4	49	50	3/4	12	20/1P	720			EXTERIOR AREA RCPT
EXTERIOR AREA RCPT		540		20/1P	12	3/4	51	52	3/4	12	20/1P		540		EXTERIOR AREA RCPT
EXTERIOR AREA RCPT			540	20/1P	12	3/4	53	54	3/4	12	20/2P			500	BUILDING SIGNAGE
PTAC MAINTENANCE RCPT	500			20/2P	12	3/4	55	56				500			
		500					57	58	3/4	12	20/1P		360		EXTERIOR AREA RCPT
EXTERIOR AREA RCPT			540	20/1P	12	3/4	59	60	3/4	12	20/1P			720	EXTERIOR AREA RCPT
SPACE							61	62							SPACE
SPACE							63	64							SPACE
SPACE							65	66							SPACE
SPACE							67	68							SPACE
SPACE							69	70							SPACE
SPACE							71	72							SPACE
SUBTOTAL VA	6888	5840	5140									6840	6780	6040	SUBTOTAL VA
												6888	5840	5140	
												13728	12620	11180	
											TOTAL VA:	37528			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
RCPT 20A	21420	NEC ARTICLE 220.44	15710
REFRIGERATOR LOAD	2788	1.25	3485
MISC LOAD	12600	1	12600
TOTAL LOAD IN VA	36808		31795
TOTAL LOAD IN AMPERE	102		88
TAKING 20% SPARE CAPACITY IN AMP			100

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL 'HPB & HLB'	MAIN BUS (A)	200
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
SECTION-1 'HPB'															
2ND FLOOR ELEC. ROOM RCPT	360			20/1P	12	3/4	1	2	3/4	12	20/1P	360			2ND FLOOR STORAGE RCPT
2ND FLOOR BOH RCPT		540		20/1P	12	3/4	3	4	3/4	12	20/1P		540		2ND FLOOR MECH. ROOM RCPT
2ND FLOOR CORRIDOR RCPT			1260	20/1P	12	3/4	5	6	3/4	12	20/1P			1080	2ND FLOOR CORRIDOR RCPT
2ND FLOOR STORAGE RCPT	540			20/1P	12	3/4	7	8	3/4	12	20/1P(GFCI)	1000			2ND FLOOR ICE MACHINE RCPT
2ND FLOOR LINEN STORAGE RCPT		360		20/1P	12	3/4	9	10	3/4	12	20/1P		360		2ND FLOOR PBX ROOM RCPT
2ND FLOOR ELEV. LOBBY RCPT			360	20/1P	12	3/4	11	12	3/4	12	20/1P			360	3RD FLOOR ELEC. ROOM RCPT
3RD FLOOR STORAGE RCPT	360			20/1P	12	3/4	13	14	3/4	12	20/1P	1260			3RD FLOOR CORRIDOR RCPT
3RD FLOOR CORRIDOR RCPT		1080		20/1P	12	3/4	15	16	3/4	12	20/1P		540		3RD FLOOR STORAGE RCPT
3RD FLOOR ICE MACHINE RCPT			1000	20/1P(GFCI)	12	3/4	17	18	3/4	12	20/1P			360	3RD FLOOR LINEN STORAGE RCPT
3RD FLOOR PBX ROOM RCPT	360			20/1P	12	3/4	19	20	3/4	12	20/1P	360			3RD FLOOR ELEV. LOBBY RCPT
SPACE							21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SECTION-2 'HLB'															
2ND FLOOR CORRIDOR LTG	50			15/1P	12	3/4	1	2	3/4	12	15/1P	60			2ND FLOOR CORRIDOR LTG
2ND FLOOR CORRIDOR LTG		158		15/1P	12	3/4	3	4	3/4	12	15/1P		158		2ND FLOOR CORRIDOR LTG
2ND FLOOR CORRIDOR LTG			40	15/1P	12	3/4	5	6	3/4	12	15/1P			81	2ND FLOOR CORRIDOR LTG
2ND FLOOR CORRIDOR LTG	158			15/1P	12	3/4	7	8	3/4	12	15/1P	158			2ND FLOOR CORRIDOR LTG
2ND FLOOR ELEC. ROOM LTG		60		15/1P	12	3/4	9	10	3/4	12	15/1P		31		2ND FLOOR STORAGE LTG
2ND FLOOR BOH ROOM LTG			91	15/1P	12	3/4	11	12	3/4	12	15/1P			91	2ND FLOOR MECH. ROOM LTG
2ND FLOOR CORRIDOR LTG	60			15/1P	12	3/4	13	14	3/4	12	15/1P	92			2ND FLOOR CORRIDOR LTG
2ND FLOOR CORRIDOR LTG		203		15/1P	12	3/4	15	16	3/4	12	15/1P		203		2ND FLOOR CORRIDOR LTG
2ND FLOOR STORAGE LTG			63	15/1P	12	3/4	17	18	3/4	12	15/1P			130	2ND FLOOR VENDING AREA LTG
2ND FLOOR LINEN STORAGE LTG	31			15/1P	12	3/4	19	20	3/4	12	15/1P	31			2ND FLOOR PBX ROOM LTG
2ND FLOOR ELEV. LOBBY LTG		177		15/1P	12	3/4	21	22	3/4	12	15/1P		50		3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG			60	15/1P	12	3/4	23	24	3/4	12	15/1P			158	3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG	158			15/1P	12	3/4	25	26	3/4	12	15/1P	40			3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG		81		15/1P	12	3/4	27	28	3/4	12	15/1P		158		3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG			158	15/1P	12	3/4	29	30	3/4	12	15/1P			60	3RD FLOOR ELEC. ROOM LTG
3RD FLOOR STORAGE LTG	31			15/1P	12	3/4	31	32	3/4	12	15/1P	60			3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG		92		15/1P	12	3/4	33	34	3/4	12	15/1P		203		3RD FLOOR CORRIDOR LTG
3RD FLOOR CORRIDOR LTG			203	15/1P	12	3/4	35	36	3/4	12	15/1P			63	3RD FLOOR STORAGE LTG
3RD FLOOR VENDING AREA LTG	130			15/1P	12	3/4	37	38	3/4	12	15/1P	31			3RD FLOOR LINEN STORAGE LTG
3RD FLOOR PBX ROOM LTG		31		15/1P	12	3/4	39	40	3/4	12	15/1P		177		3RD FLOOR ELEV. LOBBY LTG
SPACE							41	42							SPACE
SUBTOTAL VA	2238	2782	3235									3452	2420	2383	SUBTOTAL VA
												2238	2782	3235	
												5690	5202	5618	
											TOTAL VA:	16510			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)	4070	1.25	5088
RCPT 20A	10440	NEC ARTICLE 220.44	10220
REFRIGERATOR LOAD	2000	1.25	2500
TOTAL LOAD IN VA	16510		17808
TOTAL LOAD IN AMPERE	46		49
TAKING 20% SPARE CAPACITY IN AMP			59

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL 'LP'	MAIN BUS (A)	150
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	18000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
LINEN CHUTE J-BOX	500			20/1P	12	3/4	1	2	3/4	12	20/1P	900			LAUNDRY RCPT
WASHER-1		1200		15/3P	12	3/4	3	4	3/4	12	15/3P		1200		WASHER-2
			1200				5	6						1200	
	1200						7	8				1200			
DRYER-1		720		15/3P	12	3/4	9	10	3/4	12	15/3P		720		DRYER-2
			720				11	12						720	
	720						13	14				720			
DRYER-3		720		15/3P	12	3/4	15	16	3/4	12	20/1P		360		LINEN STORAGE RCPT
			720				17	18	3/4	12	20/1P			360	LINEN ROOM RCPT
	720						19	20	3/4	12	20/1P	500			CHEMICAL DISPENSER
CHEMICAL DISPENSER		500		20/1P	12	3/4	21	22	3/4	12	20/2P		500		IRON POINT
GUEST LAUNDRY DRYER-1			2704	30/2P	10	3/4	23	24						500	
	2704						25	26	3/4	10	30/2P	2704			GUEST LAUNDRY DRYER-2
GUEST LAUNDRY DRYER-3		2704		30/2P	10	3/4	27	28					2704		
			2704				29	30	3/4	12	15/1P			1176	GUEST LAUNDRY WASHER-1
GUEST LAUNDRY WASHER-2	1176			15/1P	12	3/4	31	32	3/4	12	20/1P	540			GUEST LAUNDRY RCPT
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	7020	5844	8048									6564	5484	3956	SUBTOTAL VA
												7020	5844	8048	
												13584	11328	12004	
											TOTAL VA:	36916			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
RCPT 20A	2160	NEC ARTICLE 220.44	2160
LAUNDRY LOAD	33256	1	33256
MISC LOAD	1500	1	1500
TOTAL LOAD IN VA	36916		36916
TOTAL LOAD IN AMPERE	102		102
TAKING 20% SPARE CAPACITY IN AMP			123

SERVICE:3 PHASE,4-WIRE	PANEL 'PP'	MAIN BUS (A)	200
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	18000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
GWH-1	200			20/1P	12	3/4	1	2	3/4	12	20/1P	200			GWH-2
GWH-3		200		20/1P	12	3/4	3	4	3/4	12	20/1P		200		GWH-4
GWH-5			200	20/1P	12	3/4	5	6	3/4	12	20/1P			200	GWH-6
MECHANICAL ROOM RCPT	540			20/1P	12	3/4	7	8	3/4	12	20/1P	500			WATER SOTENER
BOOSTER PUMP		5331		60/3P	6	1	9	10	3/4	12	15/1P		625		CP-1
			5331				11	12	3/4	12	15/1P			280	CP-2
	5331						13	14	3/4	12	20/3P	900			JOCKEY PUMP
SPACE							15	16					900		
SPACE							17	18						900	
SPACE							19	20							SPACE
SPACE							21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SUBTOTAL VA	6071	5531	5531									1600	1725	1380	SUBTOTAL VA
												6071	5531	5531	
												7671	7256	6911	
											TOTAL VA:	21838			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
RCPT 20A	540	NEC ARTICLE 220.44	540
MOTOR		NEC ARTICLE 430.24	
BOOSTER PUMP	15993	1	15993
CP PUMP	905	1	905
JOCKEY PUMP	2700	1	2700
25% OF LARGEST MOTOR	15993	0.25	3998
MISC LOAD	1700	1	1700
TOTAL LOAD IN VA	21838		25836
TOTAL LOAD IN AMPERE	61		72
TAKING 20% SPARE CAPACITY IN AMP			86

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PANEL 'HPA'	PANEL 'HPB &HLB'
PANEL 'LP'	PANEL 'PP'

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

GARRY W. VERMAAS
STATE OF WASHINGTON
64860
REGISTERED
PROFESSIONAL ENGINEER

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON
3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME
PANEL SCHEDULE-5

DRAWINGS NO.
E-305

SERVICE:3 PHASE,4-WIRE	PANEL 'HPC & HLC'	MAIN BUS (A)	100
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
SECTION-1 'HPC'															
4TH FLOOR ELEC. ROOM RCPT	360			20/1P	12	3/4	1	2	3/4	12	20/1P	360			4TH FLOOR STORAGE RCPT
4TH FLOOR CORRIDOR RCPT		1260		20/1P	12	3/4	3	4	3/4	12	20/1P		1080		4TH FLOOR CORRIDOR RCPT
4TH FLOOR STORAGE RCPT			540	20/1P	12	3/4	5	6	3/4	12	20/1P(GFCI)			1000	4TH FLOOR ICE MACHINE RCPT
4TH FLOOR LINEN STORAGE RCPT	360			20/1P	12	3/4	7	8	3/4	12	20/1P	360			4TH FLOOR PBX ROOM RCPT
4TH FLOOR ELEV. LOBBY RCPT		360		20/1P	12	3/4	9	10	3/4	12	20/1P		360		5TH FLOOR ELEC. ROOM RCPT
5TH FLOOR STORAGE RCPT			360	20/1P	12	3/4	11	12	3/4	12	20/1P			1260	5TH FLOOR CORRIDOR RCPT
5TH FLOOR CORRIDOR RCPT	1080			20/1P	12	3/4	13	14	3/4	12	20/1P	540			5TH FLOOR STORAGE RCPT
5TH FLOOR ICE MACHINE RCPT		1000		20/1P(GFCI)	12	3/4	15	16	3/4	12	20/1P		360		5TH FLOOR LINEN STORAGE RCPT
5TH FLOOR PBX ROOM RCPT			360	20/1P	12	3/4	17	18	3/4	12	20/1P			360	5TH FLOOR ELEV. LOBBY RCPT
BUILDING SIGNAGE	500			20/2P	12	3/4	19	20	3/4	12	20/1P	720			ROOF RCPT
		500					21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SECTION-2 'HLC'															
4TH FLOOR CORRIDOR LTG	50			15/1P	12	3/4	1	2	3/4	12	15/1P	60			4TH FLOOR CORRIDOR LTG
4TH FLOOR CORRIDOR LTG		158		15/1P	12	3/4	3	4	3/4	12	15/1P		158		4TH FLOOR CORRIDOR LTG
4TH FLOOR CORRIDOR LTG			40	15/1P	12	3/4	5	6	3/4	12	15/1P			81	4TH FLOOR CORRIDOR LTG
4TH FLOOR CORRIDOR LTG	158			15/1P	12	3/4	7	8	3/4	12	15/1P	158			4TH FLOOR CORRIDOR LTG
4TH FLOOR ELEC. ROOM LTG		60		15/1P	12	3/4	9	10	3/4	12	15/1P		31		4TH FLOOR STORAGE LTG
4TH FLOOR CORRIDOR LTG			60	15/1P	12	3/4	11	12	3/4	12	15/1P			92	4TH FLOOR STORAGE LTG
4TH FLOOR CORRIDOR LTG	203			15/1P	12	3/4	13	14	3/4	12	15/1P	203			4TH FLOOR STORAGE LTG
4TH FLOOR STORAGE LTG		63		15/1P	12	3/4	15	16	3/4	12	15/1P		130		4TH FLOOR VENDING AREA LTG
4TH FLOOR LINEN STORAGE LTG			31	15/1P	12	3/4	17	18	3/4	12	15/1P			31	4TH FLOOR PBX ROOM LTG
4TH FLOOR ELEV. LOBBY LTG	177			15/1P	12	3/4	19	20	3/4	12	15/1P	50			5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG		60		15/1P	12	3/4	21	22	3/4	12	15/1P		158		5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG			158	15/1P	12	3/4	23	24	3/4	12	15/1P			40	5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG	81			15/1P	12	3/4	25	26	3/4	12	15/1P	158			5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG		158		15/1P	12	3/4	27	28	3/4	12	15/1P		60		5TH FLOOR ELEC. ROOM LTG
5TH FLOOR STORAGE LTG			31	15/1P	12	3/4	29	30	3/4	12	15/1P			60	5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG	92			15/1P	12	3/4	31	32	3/4	12	15/1P	203			5TH FLOOR CORRIDOR LTG
5TH FLOOR CORRIDOR LTG		203		15/1P	12	3/4	33	34	3/4	12	15/1P		63		5TH FLOOR STORAGE LTG
5TH FLOOR VENDING AREA LTG			130	15/1P	12	3/4	35	36	3/4	12	15/1P			31	5TH FLOOR LINEN STORAGE LTG
5TH FLOOR PBX ROOM LTG	31			15/1P	12	3/4	37	38	3/4	12	15/1P	177			5TH FLOOR ELEV LOBBY LTG
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**3092**	**3822**	**1710**									**2989**	**2400**	**2955**	**SUBTOTAL VA**
												3092	**3822**	**1710**	
												6081	**6222**	**4665**	
											TOTAL VA:	**16968**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)	3888	1.25	4860
RCPT 20A	10080	NEC ARTICLE 220.44	10040
REFRIGERATION	2000	1.25	2500
MISC	1000	1	1000
TOTAL LOAD IN VA	**16968**		**17400**
TOTAL LOAD IN AMPERE	**47**		**48**
TAKING 20% SPARE CAPACITY IN AMP			**58**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL 'KP'	MAIN BUS (A)	200
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
REACH-IN REFRIGERATOR	720			20/1P(GFCI)	12	3/4	1	2	3/4	12	20/2P	208			VENTLESS EXHAUST HOOD
CONVECTION OVEN		2900		35/2P(GFCI)	8	3/4	3	4					208		
			2900				5	6	3/4	12	20/2P(GFCI)			1900	INDUCTION COOKER
MICROWAVE OVEN	1550			20/1P	12	3/4	7	8				1900			
REACH-IN REFRIGERATOR		840		20/1P(GFCI)	12	3/4	9	10	3/4	12	20/1P(GFCI)		1080		REACH-IN FREEZER
DISPOSER			800	20/2P	12	3/4	11	12	3/4	10	30/3P			2000	UNDERCOUNTER DISHWASHER
	800						13	14				2000			
KEG COOLER		660		20/1P(GFCI)	12	3/4	15	16					2000		
ICE MACHINE			1380	20/1P(GFCI)	12	3/4	17	18	3/4	12	20/1P			1800	TOASTER
TOASTER	1800			20/1P	12	3/4	19	20	3/4	12	20/1P	1200			WAFFLE MAKER
MICROWAVE OVEN		1550		20/1P(GFCI)	12	3/4	21	22	3/4	12	20/1P		588		REFRIGERATED COLD PAN
CHAFING DISH			504	20/1P	12	3/4	23	24	3/4	12	20/1P			504	CHAFING DISH
FOOD STORAGE RCPT	1080			20/1P	12	3/4	25	26	3/4	8	40/2P	4428			COFFEE BREWER
JUICE DISPENSER		1200		20/1P	12	3/4	27	28					4428		
KITCHEN UITLITY RCPT			1500	20/1P	12	3/4	29	30	3/4	12	20/1P			1500	KITCHEN UTILITY RCPT
SPACE							31	32							SPACE
SPACE							33	34							SPACE
SPACE							35	36							SPACE
SPACE							37	38							SPACE
SPACE							39	40							SPACE
SPACE							41	42							SPACE
SUBTOTAL VA	**5950**	**7150**	**7084**									**9736**	**8304**	**7704**	**SUBTOTAL VA**
												5950	**7150**	**7084**	
												15686	**15454**	**14788**	
											TOTAL VA:	**45928**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
RCPT 20A	1080	NEC ARTICLE 220.44	1080
REFRIGERATOR LOAD	5268	1.25	6585
KITCHEN LOAD	36164	0.65	23507
MISC LOAD	3416	1	3416
TOTAL LOAD IN VA	**45928**		**34588**
TOTAL LOAD IN AMPERE	**127**		**96**
TAKING 20% SPARE CAPACITY IN AMP			**115**

NOTE:
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SERVICE:3 PHASE,4-WIRE	PANEL 'EM'	MAIN BUS (A)	150
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	22000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
SECTION-1 'EM'															
PBX ROOM RCPT (PHONE)	1000			20/1P	12	3/4	1	2	3/4	12	20/1P	1000			PBX ROOM RCPT(PHONE)
PBX ROOM RCPT(MATV)		1000		20/1P	12	3/4	3	4	3/4	12	20/1P		1000		PBX ROOM RCPT(MATV)
PBX ROOM RCPT			1000	20/1P	12	3/4	5	6	3/4	12	20/1P			1000	PBX ROOM RCPT
PBX ROOM RCPT	1000			20/1P	12	3/4	7	8	3/4	12	20/1P	1000			PBX ROOM RCPT
PBX ROOM RCPT		360		20/1P	12	3/4	9	10	3/4	12	20/1P		1000		PBX ROOM RCPT(OnQ)
PANEL 'DVR'			1000	20/1P	12	3/4	11	12	3/4	12	20/1P			900	FRONT DESK RCPT
FRONT DESK RCPT	900			20/1P	12	3/4	13	14	3/4	12	20/1P	1000			PANEL 'FAAP'
PANEL 'FACP'		1000		20/1P	12	3/4	15	16	3/4	12	20/1P		600		AUTOMATIC VESTIBULE DOOR
AUTOMATIC VESTIBULE DOOR			600	20/1P	12	3/4	17	18	3/4	12	20/1P			360	VESTIBULE RCPT
WORK AREA RCPT	1080			20/1P	12	3/4	19	20	3/4	8	40/1P	500			PRINTER RCPT
WORK AREA RCPT		720		20/1P	12	3/4	21	22	3/4	12	20/1P		720		SALES/G.M ROOM RCPT
SALES ROOM RCPT			360	20/1P	12	3/4	23	24	3/4	12	20/1P			360	GENERAL MANAGER AREA RCPT
BUSINESS CENTER (PRINTER) RCPT	500			20/1P	12	3/4	25	26	3/4	12	20/1P	1000			BUSINESS CENTER JN. BOX
BUSINESS CENTER RCPT		360		20/1P	12	3/4	27	28	3/4	12	20/1P		180		FRONT DESK RCPT
FRONT DESK RCPT			180	20/1P	12	3/4	29	30	3/4	12	20/1P			1000	2ND FLOOR LV RACK-1
2ND FLOOR LV RACK-2	1000			20/1P	12	3/4	31	32	3/4	12	20/1P	1000			3RD FLOOR LV RACK-1
3RD FLOOR LV RACK-2		1000		20/1P	12	3/4	33	34	3/4	12	20/1P		1000		4TH FLOOR LV RACK-1
4TH FLOOR LV RACK-2			1000	20/1P	12	3/4	35	36	3/4	12	20/1P			1000	5TH FLOOR LV RACK-1
5TH FLOOR LV RACK-2	1000			20/1P	12	3/4	37	38	3/4	12	20/1P	541			1ST FLOOR EXHAUST FAN
1ST FLOOR EXHAUST FAN		832		20/1P	12	3/4	39	40	3/4	12	20/1P		1044		1ST FLOOR EXHAUST FAN
2ND FLOOR EXHAUST FAN			355	20/1P	12	3/4	41	42	3/4	12	20/1P			265	2ND FLOOR EXHAUST FAN
3RD FLOOR EXHAUST FAN	265			20/1P	12	3/4	43	44	3/4	12	20/1P	265			4TH FLOOR EXHAUST FAN
5TH FLOOR EXHAUST FAN		265		20/1P	12	3/4	45	46	3/4	12	20/1P		1604		ROOF EXHAUST FANS
ROOF EXHAUST FANS			1584	20/1P	12	3/4	47	48	3/4	12	20/1P			1584	ROOF EXHAUST FANS
ROOF EXHAUST FANS	1584			20/1P	12	3/4	49	50	3/4	12	20/1P	1584			ROOF EXHAUST FANS
ROOF EXHAUST FANS		1584		20/1P	12	3/4	51	52	3/4	12	20/1P		540		WORK AREA RCPT
FIRE SMOKE DAMPER			500	20/1P	12	3/4	53	54	3/4	12	20/1P			500	MAGNETIC DOOR HOLD
CARD READER	500			20/1P	12	3/4	55	56							SPACE
SPACE							57	58							SPACE
SPACE							59	60							SPACE
SUBTOTAL VA	**8829**	**7121**	**6579**									**7890**	**7688**	**6969**	**SUBTOTAL VA**
												8829	**7121**	**6579**	
												16719	**14809**	**13548**	
											TOTAL VA:	**45076**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
RCPT 20A	7020	NEC ARTICLE 220.44	7020
HVAC	NEC ARTICLE NO 220.82		
EXHAUST LOAD	13356	1	13356
MISC LOAD	24700	1	24700
TOTAL LOAD IN VA	**45076**		**45076**
TOTAL LOAD IN AMPERE	**125**		**125**
TAKING 20% SPARE CAPACITY IN AMP			**150**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

SERVICE:3 PHASE,4-WIRE	PANEL 'SP'	MAIN BUS (A)	100
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
POOL MECH ROOM RCPT	360			20/1P	12	3/4	1	2	3/4	12	20/1P	500			POOL WATER HEATER
POOL UNISEX RCPT		360		20/1P	12	3/4	3	4	3/4	12	20/1P		720		INDOOR POOL AREA RCPT
INDOOR POOL AREA RCPT			720	20/1P	12	3/4	5	6	3/4	12	20/1P			250	POOL PH FEEDER
POOL FILTER PUMP	1350			20/3P	12	3/4	7	8	3/4	12	20/1P	250			POOL CHLORINE FEEDER
		1350					9	10	3/4	12	20/1P		200		POOL LTG
			1350				11	12							SPACE
SPACE							13	14							SPACE
SPACE							15	16							SPACE
SPACE							17	18							SPACE
SPACE							19	20							SPACE
SPACE							21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SUBTOTAL VA	**1710**	**1710**	**2070**									**750**	**920**	**250**	**SUBTOTAL VA**
												1710	**1710**	**2070**	
												2460	**2630**	**2320**	
											TOTAL VA:	**7410**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)	200	1.25	250
RCPT 20A	2160	NEC ARTICLE 220.44	2160
MOTOR	NEC ARTICLE 430.24		
POOL PUMP	4050	1	4050
25% LARGEST MOTOR	4050	0.25	1013
MISC LOAD	1000	1	1000
TOTAL LOAD IN VA	**7410**		**8473**
TOTAL LOAD IN AMPERE	**21**		**24**
TAKING 20% SPARE CAPACITY IN AMP			**28**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE. 2) PANEL 'SP' SHOULD BE NEMA 3R RATED.

PANEL 'HPC & HLC'	PANEL 'EM'
PANEL 'KP'	PANEL 'SP'

BASE4
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Seal:

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STATE OF WASHINGTON
64860
REGISTERED
PROFESSIONAL ENGINEER

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
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Owner:

Dakota Legacy Group
-Hospitality Development-
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HOMEWOOD SUITES BY HILTON

3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME

PANEL SCHEDULE-6

DRAWINGS NO.

E-306

SERVICE:3 PHASE,4-WIRE	PANEL 'SEP'	MAIN BUS (A)	600
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	65000

E1

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
DUMPSTER RCPT	360			20/1P	12	3/4	1	2	3/4	12	20/2P	360			EXTERIOR STORAGE RCPT
CHARGING STATION		3120		40/2P	8	3/4	3	4	3/4	8	40/2P		3120		CHARGING STATION
			3120				5	6						3120	
MONUMENT SIGNAGE	500			20/2P	12	3/4	7	8	3/4	12	20/2P	500			MONUMENT SIGNAGE
		500					9	10					500		
SITE LTG			286	20/2P	12	3/4	11	12	3/4	12	20/2P			230	SITE LTG
	286						13	14				230			
SITE LTG		286		20/2P	12	3/4	15	16	3/4	12	20/2P		411		SITE LTG
			286				17	18						411	
SITE LTG	286			20/2P	12	3/4	19	20	3/4	12	20/2P	60			EXTERIOR STORAGE LTG
		286					21	22	3/4	12	20/2P		95		FLAG POLE LTG
CHARGING STATION			3120	40/2P	8	3/4	23	24	3/4	8	40/2P			3120	CHARGING STATION
	3120						25	26				3120			
CHARGING STATION		3120		40/2P	8	3/4	27	28	3/4	8	40/2P		3120		CHARGING STATION
			3120				29	30						3120	
CHARGING STATION	3120			40/2P	8	3/4	31	32			40/2P				SPARE
		3120					33	34							
SPARE				40/2P			35	36			40/2P				SPARE
							37	38							
SPARE				40/2P			39	40			40/2P				SPARE
							41	42							
SPARE				40/2P			43	44			40/2P				SPARE
							45	46							
SPARE				40/2P			47	48			40/2P				SPARE
							49	50							
SPARE				40/2P			51	52			40/2P				SPARE
							53	54							
SPARE				40/2P			55	56			40/2P				SPARE
							57	58							
SPARE				40/2P			59	60			40/2P				SPARE
							61	62							
SPARE				40/2P			63	64			40/2P				SPARE
							65	66							
SPARE				40/2P			67	68							SPACE
							69	70							SPACE
SPACE							71	72							SPACE
SUBTOTAL VA	7672	10432	9932									4270	7246	10001	SUBTOTAL VA
												7672	10432	9932	
												11942	17678	19933	
											TOTAL VA:	49553			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)		1.25	0
LIGHTING (EXTERIOR)	3153	1.25	3941
RCPT 20A	720	NEC ARTICLE 220.44	720
CHARGING STATIONS LOAD	43680	1	156000
MISC LOAD	2000	1	2000
TOTAL LOAD IN VA	**49553**		**162661**
TOTAL LOAD IN AMPERE	**138**		**452**
TAKING 20% SPARE CAPACITY IN AMP			**542**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.
2) BASE4 HAS DESIGN SEP PANEL BY KEEPING PROVISION FOR 24 CAR CHARGING STATION WHICH IS 20% OF THE TOTAL PARKING SPACES IN REFERENCE OF IBC 427.3.

SERVICE:3 PHASE,4-WIRE	PANEL 'MP'	MAIN BUS(A)	300
VOLTAGE:120/208		NEUTRAL	100%
MOUNTING:WALL MOUNTED		MAINS(A)	MLO
TYPE:LOAD CENTRE		AIC(A)	42000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
AHU-1+HEATER-1	2926			30/2P	10	3/4	1	2	3/4	10	30/2P	2926			AHU-2+HEATER-2
		2926					3	4					2926		
AHU-3+HEATER-3			2926	30/2P	10	3/4	5	6	3/4	10	30/2P			2791	AHU-4+HEATER-4
	2926						7	8				2791			
AHU-5+HEATER-5		3124		35/2P	8	3/4	9	10	3/4	10	30/2P		2926		AHU-6+HEATER-6
			3124				11	12						2926	
AHU-7+HEATER-7	3124			35/2P	8	3/4	13	14	3/4	10	25/2P	1198			CU-1
		3124					15	16					1198		
CU-2			1198	25/2P	10	3/4	17	18	3/4	10	25/2P			1198	CU-3
	1198						19	20				1198			
CU-4		1198		25/2P	10	3/4	21	22	3/4	8	50/2P		2695		CU-5
			1198				23	24						2695	
CU-6	1198			25/2P	10	3/4	25	26	3/4	8	50/2P	2695			CU-7
		1198					27	28					2695		
FCU-1			140	15/2P	12	3/4	29	30	3/4	10	30/2P			120	FCU-2
	140						31	32				120			
FCU-3		120		30/2P	10	3/4	33	34	3/4	10	30/2P		915		ODU-1
			120				35	36						915	
ODU-2	915			30/2P	10	3/4	37	38	3/4	10	30/2P	915			ODU-3
		915					39	40					915		
CCU-1+DS-1			998	15/2P	12	3/4	41	42	3/4	10	30/2P			998	CCU-2+DS-2
	998						43	44				998			
CCU-3+DS-3		998		30/2P	10	3/4	45	46	3/4	10	30/2P		998		CCU-4+DS-4
			998				47	48						998	
CCU-5+DS-5	998			30/2P	10	3/4	49	50	3/4	10	30/2P	998			CCU-6+DS-6
		998					51	52					998		
DHU			9378	45/3P	8	3/4	53	54	1 1/4	3	90/3P			6666	EDH
	9378						55	56				6666			
		9378					57	58					6666		
ACCU			222	15/3P	12	3/4	59	60	3/4	10	30/2P			2400	CUH
	222						61	62				2400			
		222					63	64	3/4	10	30/2P		2400		CUH
CUH			2400	30/2P	10	3/4	65	66						2400	
	2400						67	68	3/4	8	50/3P	2666			UH
BOOSTER FANS		169					69	70					2666		
SPACE							71	72						2666	
SUBTOTAL VA	26423	24370	22702									25571	27998	26773	
												26423	24370	22702	
												51994	52368	49475	
											TOTAL VA:	153837			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
HVAC		NEC ARTICLE NO 220.82	
HVAC COOLING	69786	1	69786
HVAC HEATING	77396	1	
EXHAUST LOAD	169	1	169
AHU	6490	1	6490
MISC LOAD		1	0
TOTAL LOAD IN VA	**153837**		**76445**
TOTAL LOAD IN AMPERE	**427**		**212**
TAKING 20% SPARE CAPACITY IN AMP			**255**

NOTE:
1) CONTRACTOR SHALL CO-ORDINATE WITH HVAC VENDOR AND EQUIPMENT SCHEDULE BEFORE TO CONSTRUCTION.

SERVICE:3 PHASE,4-WIRE	PANEL 'EP'	MAIN BUS (A)	600
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	65000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
ELEVATOR-1	18735			400/3P (SHUNT TRIP)	2(3#3/0P+1#3G)CU	3	1	2	3	(3#350P+1#4G)CU	300/3P (SHUNT TRIP)	14710			ELEVATOR-2
		18735					3	4					14710		
			18735				5	6						14710	
ELEVATOR-1 RCPT	360			20/1P	12	3/4	7	8	3/4	12	20/1P	500			ELEVATOR-1 CAB DISCONNECT SWITCH
ELEVATOR-1 PIT LIGHT		200		20/1P	12	3/4	9	10	3/4	12	20/1P		360		ELEVATOR-2 RCPT
ELEVATOR-2 CAB DISCONNECT SWITCH			500	20/1P	12	3/4	11	12	3/4	12	20/1P			200	ELEVATOR-2 PIT LIGHT
SUMP PUMP	1258			20/2P	12	3/4	13	14							SPACE
		1258					15	16							SPACE
SPACE							17	18							SPACE
SPACE							19	20							SPACE
SPACE							21	22							SPACE
SPACE							23	24							SPACE
SPACE							25	26							SPACE
SPACE							27	28							SPACE
SPACE							29	30							SPACE
SUBTOTAL VA	20353	20193	19235									15210	15070	14910	SUBTOTAL VA
												20353	20193	19235	
												35563	35263	34145	
											TOTAL VA:	104971			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)	400	1.25	500
RCPT 20A	720	NEC ARTICLE 220.44	720
MOTOR		NEC ARTICLE 430.24	
ELEVATORS-1	56205	1.25	70256
ELEVATORS-2	44130	1	44130
SUMP PUMP	2516	1	2516
25% LARGEST MOTOR	56205	0.25	14051
MISC LOAD	1000	1	1000
TOTAL LOAD IN VA	**104971**		**133174**
TOTAL LOAD IN AMPERE	**291**		**370**
TAKING 20% SPARE CAPACITY IN AMP			**444**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENTS	VOLT	PHASE	FLA	MCA	MOCP	WATT	CKT NO.
AHU-1	208	1	4.1	-	-	853	
HEATER-1	208	1	-	-	-	5000	
AHU1+HEATER-1	208	1	20.8	26	30	5853	MP: 1,3
CU-1	208	1	11.52	14.4	25	2396	MP: 14,16
AHU-2	208	1	4.1	-	-	853	
HEATER-2	208	1	-	-	-	5000	
AHU-2+HEATER-2	208	1	20.8	26	30	5853	MP: 2,4
CU-2	208	1	11.52	14.4	25	2396	MP: 17,19
AHU-3	208	1	4.1	-	-	853	
HEATER-3	208	1	-	-	-	5000	
AHU-3+HEATER-3	208	1	20.8	26	30	5853	MP: 5,7
CU-3	208	1	11.52	14.4	25	2396	MP: 18,20
AHU-4	208	1	2.8	-	-	582	
HEATER-4	208	1	-	-	-	5000	
AHU-4+HEATER-4	208	1	20.8	26	30	5582	MP: 6,8
CU-4	208	1	11.52	14.4	25	2396	MP: 21,23
AHU-5	208	1	6	-	-	1248	
HEATER-5	208	1	-	-	-	5000	
AHU-5+HEATER-5	208	1	24.96	31.2	35	6248	MP: 9,11
CU-5	208	1	25.92	32.4	50	5391	MP: 22,24
AHU-6	208	1	4.1	-	-	853	
HEATER-6	208	1	-	-	-	5000	
AHU-6+HEATER-6	208	1	20.8	26	30	5853	MP: 10,12
CU-6	208	1	11.52	14.4	25	2396	MP: 25,27
AHU-7	208	1	6	-	-	1248	
HEATER-7	208	1	-	-	-	5000	
AHU-7+HEATER-7	208	1	24.96	31.2	35	6248	MP: 13,15
CU-7	208	1	25.92	32.4	50	5391	MP: 26,28
FCU-1	208	1	1.352	1.69	15	281	MP: 29,31
FCU-2	208	1	1.16	1.45	15	241	MP: 30,32
FCU-3	208	1	1.352	1.69	15	281	MP: 33,35
ODU-1	208	1	8.8	11	30	1830	MP: 34,36
ODU-2	208	1	8.8	11	30	1830	MP: 37,39
ODU-3	208	1	8.8	11	30	1830	MP: 38,40
CCU-1+DS-1	208	1	9.60	12	30	1997	MP: 41,43
CCU-2+DS-2	208	1	9.60	12	30	1997	MP: 42,44
CCU-3+DS-3	208	1	9.60	12	30	1997	MP: 45,47
CCU-4+DS-4	208	1	9.60	12	30	1997	MP: 46,48
CCU-5+DS-5	208	1	9.60	12	30	1997	MP: 49,51
CCU-6+DS-6	208	1	9.60	12	30	1997	MP: 50,52
DHU	208	3	78.10	97	100	28136	MP: 53,55,57
EDH	208	3	55.50	69.375	90	20000	MP: 54,56,58
ACCU	208	3	3.20	4	15	666	MP: 59,61,63
CUH	208	1	23.5	-	30	4800	MP: 60,62 ; MP: 64,66 ; MP: 65,67
UH	208	3	38.9	-	50	8000	MP: 68,70,72
MAU-1	208	3	69	93	110	24858	MSB: 1,3,5
MAU-2	208	3	69	93	110	24858	MSB: 2,4,6

PANEL 'EP'	PANEL 'MP'
MECH SCHEDULE	PANEL 'SEP'

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44860
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DATE: 2020.06.19
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FRANKLIN TN 37069

Owner:

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HOMEWOOD SUITES BY HILTON

3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
2	E1	2020.06.19	CITY COMMENTS
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME

PANEL SCHEDULE-7

DRAWINGS NO.

E-307

SERVICE:3 PHASE,4-WIRE	PANEL 'HLA'	MAIN BUS (A)	100
VOLTAGE:120/208		NEUTRAL (%)	100%
MOUNTING:WALL MOUNTED		MAINS (A)	MLO
TYPE:LOAD CENTRE		AIC (A)	10000

LOAD DESCRIPTION	PHASE			TRIP POLE	WIRE	CONDUIT (INCH)	CKT NO.	CKT NO.	CONDUIT (INCH)	WIRE	TRIP POLE	PHASE			LOAD DESCRIPTION
SECTION-1 'HLA'															
1ST FLOOR CORRIDOR LTG	180			15/1P	12	3/4"	1	2	12	3/4"	15/1P	180			1ST FLOOR CORRIDOR LTG
1ST FLOOR CORRIDOR LTG		80		15/1P	12	3/4"	3	4	12	3/4"	15/1P		78		1ST FLOOR CORRIDOR LTG
1ST FLOOR CORRIDOR LTG			34	15/1P	12	3/4"	5	6	12	3/4"	15/1P			136	1ST FLOOR CORRIDOR LTG
1ST FLOOR CORRIDOR LTG	136			15/1P	12	3/4"	7	8	12	3/4"	15/1P	92			STORAGE LTG
SALES LTG		70		15/1P	12	3/4"	9	10	12	3/4"	15/1P		130		GENERAL MANAGER
STORAGE LTG			60	15/1P	12	3/4"	11	12	12	3/4"	15/1P			55	WORK AREA LTG
WORK AREA LTG	190			15/1P	12	3/4"	13	14	12	3/4"	15/1P	85			FOOD STORAGE LTG
FOOD PREP LTG		245		15/1P	12	3/4"	15	16	12	3/4"	15/1P		44		PANTRY LTG
PANTRY LTG			16	15/1P	12	3/4"	17	18	12	3/4"	15/1P			255	PANTRY LTG
VESTIBULE LTG	142			15/1P	13	3/4"	19	20	12	3/4"	15/1P	60			1ST FLOOR CORRIDOR LTG
1ST FLOOR CORRIDOR LTG		180		15/1P	12	3/4"	21	22	12	3/4"	15/1P		396		PORTE COCHERE LTG
MEETING STORAGE LTG			63	15/1P	12	3/4"	23	24	12	3/4"	15/1P			97	MEETING ROOM LTG
MEETING ROOM LTG	315			15/1P	12	3/4"	25	26	12	3/4"	15/1P	312			MEETING ROOM LTG
POOL MECH ROOM LTG		63		15/1P	12	3/4"	27	28	12	3/4"	15/1P		65		POOL UNISEX LTG
GUEST LAUNDRY LTG			130	15/1P	12	3/4"	29	30	12	3/4"	15/1P			360	INDOOR POOL AREA LTG
INDOOR POOL AREA LTG	353			15/1P	12	3/4"	31	32	12	3/4"	15/1P	282			FITNESS AREA LTG
FITNESS AREA LTG		255		15/1P	12	3/4"	33	34	12	3/4"	15/1P		255		FITNESS AREA LTG
FITNESS AREA LTG			255	15/1P	12	3/4"	35	36	12	3/4"	15/1P			120	ELECTRICAL ROOM LTG
MECHANICAL ROOM LTG	150			15/1P	12	3/4"	37	38	12	3/4"	15/1P	85			ENGINEERING ROOM LTG
1ST FLOOR CORRIDOR LTG		260		15/1P	12	3/4"	39	40	12	3/4"	15/1P		60		STORAGE LTG
BREAK ROOM LTG			200	15/1P	12	3/4"	41	42	12	3/4"	15/1P			165	BREAK ROOM LTG
BREAK ROOM LTG	33			15/1P	12	3/4"	43	44	12	3/4"	15/1P	45			UNIXES EMPLOYEE LTG
LINEN STORAGE LTG		60		15/1P	12	3/4"	45	46	12	3/4"	15/1P		310		LAUNDRY ROOM LTG
LAUNDRY ROOM LTG			315	15/1P	12	3/4"	47	48	12	3/4"	15/1P			85	1ST FLOOR CORRIDOR LTG
1ST FLOOR CORRIDOR LTG	60			15/1P	12	3/4"	49	50	12	3/4"	15/1P	32			LINEN ROOM LTG
PBX ROOM LTG		60		15/1P	12	3/4"	51	52	12	3/4"	15/1P		165		ELEVATOR SHAFT LTG
ELEVATOR LOBBY AREA LTG			301	15/1P	12	3/4"	53	54	12	3/4"	15/1P			230	WOMEN RESTROOM LTG
MEN RESTROOM LTG	140			15/1P	12	3/4"	55	56	12	3/4"	15/1P	145			1ST FLOOR CORRIDOR LTG
STAIR-1 LTG		363		15/1P	12	3/4"	57	58	12	3/4"	15/1P		363		STAIR-2 LTG
STAIR-1 LTG			290	15/1P	12	3/4"	59	60	12	3/4"	15/1P			290	STAIR-2 LTG
OUTDOOR PATIO LTG	160			15/1P	12	3/4"	61	62	12	3/4"	15/1P	120			EXTERIOR LTG
EXTERIOR LTG		45		15/1P	12	3/4"	63	64	12	3/4"	15/1P		50		EXTERIOR LTG
OUTDOOR PATIO LTG			52	15/1P	12	3/4"	65	66	12	3/4"	15/1P			70	EXTERIOR LTG
EXTERIOR LTG	50			15/1P	12	3/4"	67	68	12	3/4"	15/1P	70			EXTERIOR LTG
DIMMER PANEL		3069		35/1P	12	3/4"	69	70	12	3/4"	15/1P		200		MEETING ROOM LTG
MEETING ROOM LTG			150	15/1P	12	3/4"	71	72	12	3/4"	15/1P				SPACE
SUBTOTAL VA	**1909**	**4750**	**1866**									**1508**	**2116**	**1863**	**SUBTOTAL VA**
												1909	**4750**	**1866**	
												3417	**6866**	**3729**	
											TOTAL VA:	**14012**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
LIGHTING (INTERIOR)	13607	1.25	17009
LIGHTING (EXTERIOR)	405	1.25	506
TOTAL LOAD IN VA	**14012**		**17515**
TOTAL LOAD IN AMPERE	**39**		**49**
TAKING 20% SPARE CAPACITY IN AMP			**58**

NOTE:
1) AS PER NEC 210.8 GFCI RECEPTACLE SHALL BE ON READILY ACCESSIBLE LOCATION IF NOT CONTRACTOR SHALL PROVIDE GFCI BREAKER IN PANEL. PROVIDE GFCI TYPE RECEPTACLE AT READILY ACCESSIBLE LOCATION. IF ANY GCFI RECEPTACLE COMING BEHIND EQUIPMENT PROVIDE GFCI PROTECTION IN BREAKER AS PER CODE.

TRANSFORMER SECONDARY SHORT CIRCUIT CURRENT CALCULATION

1	IF.L=(KVA X 1000)/(EL.L X1.732) IF.L=(1000 X 1000)/(208*1.732) **IF.L=2775.8 AMP** KVA= RATING OF TRANSFORMER EL.L=VOLTAGE OF CIRCUIT IF.L=TRANSFORMER FULL LOAD CURRENT	4	F=(1.732 X L X IS.C)/(C X n X EL.L) F=(1.732 X 250 X79304.61)/(29036X8X 208) **F = 0.71** F=FACTOR L=LENGTH OF CONDUCTOR IN FEET IS.C= TRANSFORMER SECONDRY FAULT CURRENT C= CONSTANT n=NO. OF CONDUCTOR PER PHASE EL.L=VOLTAGE OF CIRCUIT
2	M=100/%Z M=100/3.5 **M=28.57** M=MULTIPLIER %Z=TRANSFORMER IMPEDENCE	5	M=1/1+F M=1/1+0.71 **M= 0.585** IS.C SYM. RMS= IS.C X M IS.C SYM. RMS=79304.61 X 0.585 **IS.C SYM. RMS=46393.20 AMP**
3	IS.C=IF.L X M IS.C=2775.8 X 28.57 AMP **IS.C=79304.61AMP** IS.C= TRANSFORMER SECONDARY FAULT CURRENT		**AFC RATING OF 65 KA**

SHORT CIRCUIT CALCULATION

FEEDER DESIGNATION	DISTANCE(FT.)	IFL (AMP)	M	ISC (AMP)	BREAKER MAINS	AWG	N	C	F	M FACTOR	ISC(M)	AIC RATING (AMP)
MSB	250	2776	28.57	79309	3000	3#750	8	29036	0.71	0.58	46359	65000
HPA	45	2776	28.57	79309	110	3#1/0	1	5876	5.06	0.17	13093	18000
HLA	45	2776	28.57	79309	60	3#6	1	2433	12.21	0.08	6002	10000
HPB & HLB	240	2776	28.57	79309	110	3#1/0	1	5876	26.97	0.04	2835	10000
HPC & HLC	270	2776	28.57	79309	110	3#1/0	1	5876	30.35	0.03	2530	10000
KP	240	3470	28.57	99136	150	3#3/0	1	9243	21.43	0.04	4419	10000
MP	45	2776	28.57	79309	300	3#500	1	23018	1.29	0.44	34616	42000
PP	60	2776	28.57	79309	125	3#2/0	1	7373	5.37	0.16	12442	18000
LP	90	2776	28.57	79309	150	3#3/0	1	9243	6.43	0.13	10674	18000
SEP	45	2776	28.57	79309	600	3#500	2	23018	0.65	0.61	48196	65000
EM	45	2776	28.57	79309	150	3#3/0	1	9243	3.22	0.24	18815	22000
EP	45	2776	28.57	79309	500	3#350	2	17635	0.84	0.54	43042	65000
SP	160	2776	28.57	79309	100	3#1	1	4699	22.49	0.04	3377	10000
1GA	45	3470	28.57	99136	250	3#400	1	19588	1.90	0.35	34227	42000
2GA	225	2776	28.57	79309	300	3#500	1	23018	6.46	0.13	10638	18000
2GB	225	2776	28.57	79309	250	3#400	1	19588	7.59	0.12	9237	10000
3GA	240	2776	28.57	79309	350	3#4/0	2	11409	6.95	0.13	9981	10000
3GB	240	2776	28.57	79309	250	3#400	1	19588	8.09	0.11	8723	10000
4GA	255	2776	28.57	79309	350	3#4/0	2	11409	7.38	0.12	9464	10000
4GB	255	2776	28.57	79309	250	3#400	1	19588	8.60	0.10	8264	10000
5GA	270	2776	28.57	79309	350	3#4/0	2	11409	7.81	0.11	8998	10000
5GB	270	2776	28.57	79309	250	3#400	1	19588	9.10	0.10	7850	10000
MAU-1	280	2776	28.57	79309	110	3#2	1	6087	30.38	0.03	2528	10000
MAU-2	240	2776	28.57	79309	110	3#2	1	6087	26.04	0.04	2933	10000

E1

PANEL 'HLA'	TRANSFORMER SECONDARY SHORT CIRCUIT CURRENT CALCULATION
	SHORT CIRCUIT CALCULATIONS

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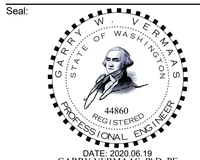
Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
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Owner:

Dakota Legacy Group
-Hospitality Development-
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PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
2	E1	2020.06.19	CITY COMMENTS
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME
PANEL SCHEDULE-8

DRAWINGS NO.
E-308

SERVICE:3 PHASE,4-WIRE	PANEL 'MSB'	MAIN BUS (A)	3000
VOLTAGE:120/208		NEUTRAL	100%
MOUNTING:FLOOR MOUNTED		MAINS (A)	3000
TYPE:LOAD CENTRE		AIC (A)	65000

LOAD DESCRIPTION	PHASE R	PHASE Y	PHASE B	TRIP POLE	WIRE	CONDUIT	CKT NO.	CKT NO.	CONDUIT	WIRE	TRIP POLE	PHASE R	PHASE Y	PHASE B	LOAD DESCRIPTION
MAU-1	10327			110/3P	(3#1/0+1#1/0N+1#4G)AL	2	1	2	2	(3#1/0+1#1/0N+1#4G)AL	110/3P	10327			MAU-2
		10327					3	4					10327		
			10327				5	6						10327	
PANEL '1GA'	69345			250/3P	(3#400+1#400N+1#2G)AL	3	7	8	4	(3#500+1#500N+1#2G)AL	300/3P	67270			PANEL '2GA'
		51730					9	10					68425		
			47415				11	12						63065	
PANEL '2GB'	65915			250/3P	(3#400+1#400N+1#2G)AL	3	13	14	2 1/2	2(3#4/0+1#4/0N)+(1#1G)AL	350/3P	84480			PANEL '3GA'
		54890					15	16					85635		
			57915				17	18						63065	
PANEL '3GB'	65915			250/3P	(3#400+1#400N+1#2G)AL	3	19	20	2 1/2	2(3#4/0+1#4/0N)+(1#1G)AL	350/3P	84480			PANEL '4GA'
		54950					21	22					85635		
			57975				23	24						63065	
PANEL '4GB'	65915			250/3P	(3#400+1#400N+1#2G)AL	3	25	26	2 1/2	2(3#4/0+1#4/0N)+(1#1G)AL	350/3P	84480			PANEL '5GA'
		54950					27	28					85635		
			57975				29	30						63065	
PANEL '5GB'	66405			250/3P	(3#400+1#400N+1#2G)AL	3	31	32	2	(3#1/0+1#1/0N+1#4G)AL	110/3P	13728			PANEL 'HPA'
		54925					33	34					12620		
			58490				35	36						11180	
PANEL 'HPB & HLB'	5690			110/3P	(3#1/0+1#1/0N+1#4G)AL	2	37	38	2	(3#1/0+1#1/0N+1#4G)AL	110/3P	6081			PANEL 'HPC & HLC'
		5202					39	40					6222		
			5618				41	42						4665	
PANEL 'LP'	13584			150/3P	(3#3/0+1#3/0N+1#4G)AL	2 1/2	43	44	2 1/2	(3#3/0+1#3/0N+1#4G)AL	150/3P	15686			PANEL 'KP'
		11328					45	46					15454		
			12004				47	48						14788	
PANEL 'PP'	7671			125/3P	(3#2/0+1#2/0N+1#4G)AL	2	49	50	4	2(3#500+1#500N)+(1#2/0G)AL	600/3P	11942			PANEL 'SEP' E1
		7256					51	52					17678		
			6911				53	54						19933	
PANEL 'SP'	2460			100/3P	(3#1+1#1N+1#6G)AL	2	55	56	2 1/2	(3#3/0+1#3/0N+1#4G)AL	150/3P	16719			PANEL 'EM'
		2630					57	58					14809		
			2320				59	60						13548	
PANEL 'EP'	35563			500/3P	2(3#350+1#350N)+(1#1/0G)AL	3	61	62	3	(3#500+1#500N+1#2G)AL	300/3P	51994			PANEL 'MP'
		35263					63	64					52368		
			34145				65	66						49475	
PANEL 'HLA'	3417			60/3P	(3#6+1#6N+1#10G)CU	1	67	68			30/3P				SPD
		6866					69	70							
			3729				71	72							
SPACE							73	74							SPACE
							75	76							
							77	78							
SPACE							79	80							SPACE
							81	82							
							83	84							
SUBTOTAL VA	**412207**	**350317**	**354824**									**447187**	**454808**	**376176**	**SUBTOTAL VA**
												412207	**350317**	**354824**	
												859394	**805125**	**731000**	
											TOTAL VA:	**2395519**			

LOAD	CONNECTED LOAD	DEMAND FACTOR	DEMAND LOAD
GUEST ROOM LOAD			
TOTAL GUEST ROOM LOAD IN VA	1783010	NEC ARTICLE NO 220.42	410092
PUBLIC AND BOH AREA LOAD			
LIGHTING (INTERIOR)	22165	1.25	27706
LIGHTING (EXTERIOR)	3558	1.25	4448
RCPT 20A	56340	NEC ARTICLE 220.44	33170
HVAC		NEC ARTICLE NO 220.82	
HVAC COOLING	131748	1	131748
HVAC HEATING	77396	1	
EXHAUST LOAD	13525	1	13525
AHU	6490	1	6490
MOTOR		NEC ARTICLE 430.24	
BOOSTER PUMP	15993	1	15993
CP PUMP	905	1	905
SUMP PUMP	2516	1	2516
JOCKEY PUMP	2700	1	2700
ELEVATORS-1	56205	1.25	70256
ELEVATORS-2	44130	1	44130
POOL PUMP	4050	1	4050
KITCHEN LOAD	36164	0.65	23507
REFRIGERATOR LOAD	12056	1.25	15070
LAUNDRY LOAD	33256	1	33256
CHARGING STATIONS LOAD	43680	1	43680
MISC LOAD	48916	1	48916
TOTAL LOAD IN VA	**2394799**		**932158**
TOTAL LOAD IN AMPERE	**6647**		**2587**
TAKING 10% SPARE CAPACITY IN AMP			**2846**
TRANSFORMER CALCULATION			
FIRE PUMP	31702	0	0
TOTAL LOAD IN VA	2426501		932158
TOTAL LOAD IN KVA	2427		932
DESIGN MARGIN@5%	2548		979
TRANSFORMER SIZE (KVA)			**1000**

NOTE :
1)CONTRACTOR SHALL CHECK BREAKER SIZES AS PER PANEL SCHEDULE AND VERIFY IF IS THERE ANY CORRECTION BEFORE CONSTRUCTION.
2)CONTRACTOR SHALL CHECK SHORT CIRCUIT CALCULATION AND VERIFY BREAKER AIC RATING AS PER AFC CALCULATION AND SELECT ACCORDINGLY.
3)CONTRACTOR SHALL PROVIDE SELECTIVE COORDINATION REPORT OF ELEVATORS FOR ENGINEERS REVIEW. PRIOR TO CONSTRUCTION.

FEEDER VOLTAGE DROP CALCULATION

FEEDER DESIGNATION	SOURCE	DISTANCE (FT.)	CURRENT (A)	CABLE SIZE (AWG)	NUMBER OF RUNS	V-DROP (%)
MSB	TRANSFORMER	250	3000	3#750	8	2.3
HPA	MSB	45	110	3#1/0	1	0.8
HLA	MSB	45	60	3#6	1	1.1
HPB & HLB	MSB	240	110	3#1/0	1	4.4
HPC & HLC	HPB & HLB	270	110	3#1/0	1	4.9
KP	MSB	240	150	3#3/0	1	3.9
MP	MSB	45	300	3#500	1	0.5
PP	MSB	60	125	3#2/0	1	1.0
LP	MSB	90	150	3#3/0	1	1.5
SEP	MSB	45	600	3#500	2	0.5 E1
EM	MSB	45	150	3#3/0	1	0.7
EP	MSB	45	500	3#350	2	0.6
SP	MSB	160	100	3#1	1	3.3
1GA	MSB	45	250	3#400	1	0.5
2GA	MSB	225	300	3#500	1	2.4
2GB	MSB	225	250	3#400	1	2.5
3GA	MSB	240	350	3#4/0	2	3.5
3GB	MSB	240	250	3#400	1	2.7
4GA	MSB	255	350	3#4/0	2	3.7
4GB	MSB	255	250	3#400	1	2.9
5GA	MSB	270	350	3#4/0	2	3.9
5GB	MSB	270	250	3#400	1	3.0
MAU-1	MSB	280	110	3#2	1	4.9
MAU-2	MSB	240	110	3#2	1	4.2

EMERGENCY GENERATOR SIZING CALCULATION			
LOAD	**CONNECTED LOAD**	**DEMAND FACTOR**	**DEMAND LOAD**
LIGHTING (INTERIOR)	**400**	AS PER NEC ARTICLE 220.42	400
LIGHTING (EXTERIOR)		AS PER NEC ARTICLE 220.42	0
RCPT	7740	AS PER NEC ARTICLE 220.44	7740
HVAC			
HVAC COOLING		1	
EXHAUST FAN	13292	1	13292
MOTOR		AS PER NEC ARTICLE 430.24	
ELEVATOR	100335	1	56205
SUMP PUMP	2516	1	2516
FIRE PUMP	31702	1	31702
LARGEST MOTOR	56205	0.25	14051
MISC. LOAD	25700	1	25700
TOTAL LOAD IN VA	**181685**		**151606**
TOTAL LOAD IN KVA	**182**		**152**
GENERATOR SIZE IN KW (P.F-0.89)			**150KW**

NOTE:
1."BASE4 HAS CONNECTED BOTH ELEVATOR WITH EMERGENCY GENERATOR BUT THE DEMAND LAOD CONSIDER FOR ONE. CONTRACTOR TO PROVIDE SWITCH GEAR ACCORDINGLY.
2.CONTRACTOR SHALL MAKE PROVISION AND PROVIDE SYSTEM SO THAT BOTH ELEVATOR COME DOWN AT GROUND FLOOR AND AFTER THAT ONE ELEVATOR WILL RUN ON EMERGENCY FOR FIRE FIGHTERS OPERATION.
3.BASE4 HAS PROPOSED GENERATOR SIZE AS PER LOAD CALCULATION. CONTRACTOR SHALL FIELD VERIFY AND CO-ORDINATE WITH GENERATOR VENDOR TO VERIFY SIZE."

MSB	FEEDER VOLTAGE DROP CALCULATIONS
	EMERGENCY GENERATOR SIZING CALCULATIONS

BASE4
2901 CLINT MOORE ROAD, #114
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2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

GARRY W. VERMAAS
STATE OF WASHINGTON
44860
REGISTERED
PROFESSIONAL ENGINEER

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
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Owner:

Dakota Legacy Group
-Hospitality Development-
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HOMEWOOD SUITES BY HILTON

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PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
2	E1	2020.06.19	CITY COMMENTS
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

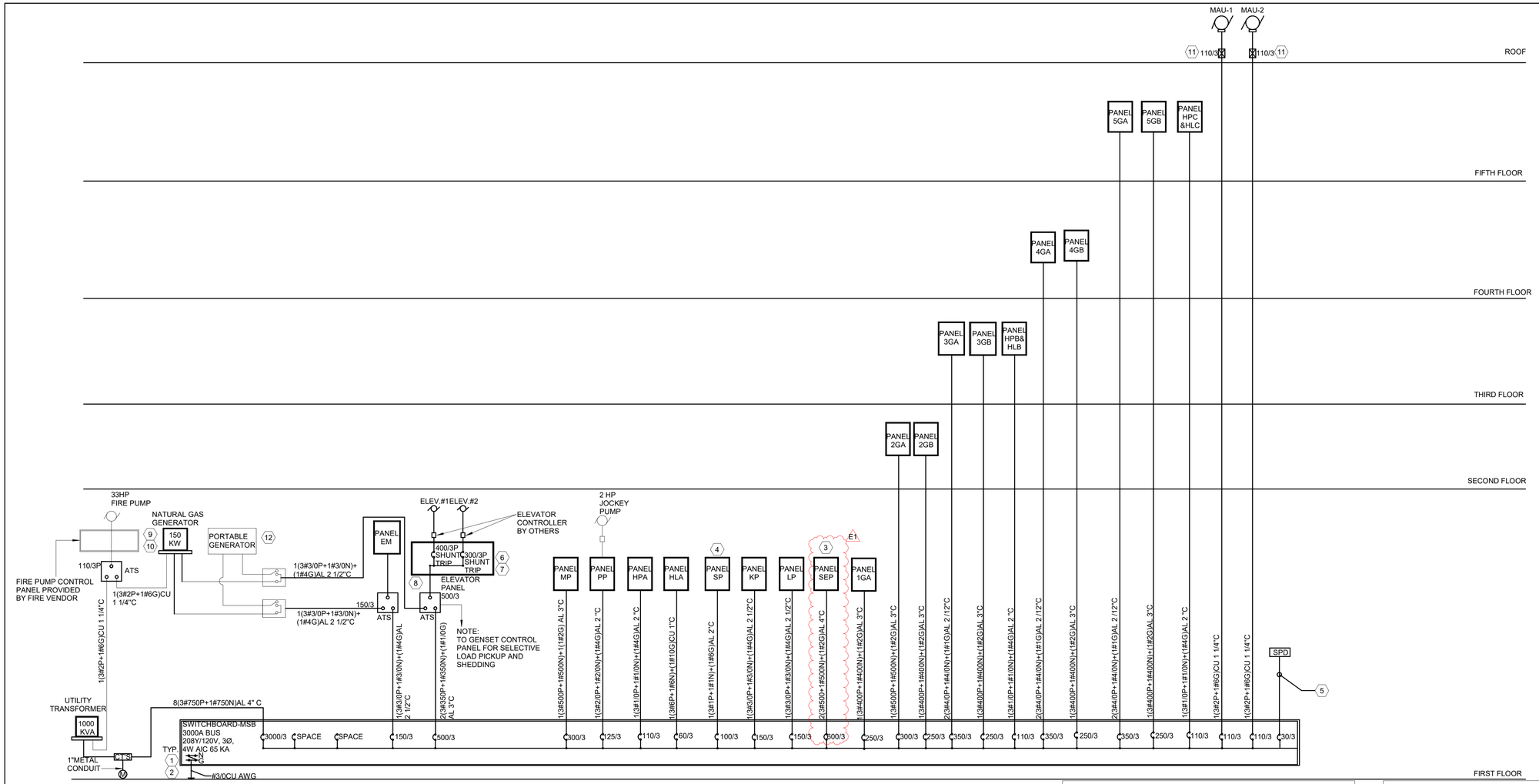
DRAWN BY
VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME
PANEL SCHEDULE-9

DRAWINGS NO.
E-309



1 ELECTRICAL RISER DIAGRAM
12" = 1'-0"

GENERAL NOTES:

1. VOLTAGE DROP TO STUDIO PANELS, FEEDERS AND BRANCH CIRCUITING SHALL NOT EXCEED A TOTAL VOLTAGE DROP 5%. SIZE FEEDERS AND BRANCH CIRCUITS AS REQUIRED PER NEC 210.19(A)(1)FPN NO.4, 215.2(A)(4)FPN NO.2.
2. ALL BREAKERS SERVING NEC 700 AND 701 LOADS SHALL BE FULLY COORDINATED AS REQUIRED BY THE NEC. CONTRACTOR TO PROVIDE A CIRCUIT BREAKER COORDINATION STUDY INDICATING BREAKER TYPES THAT WILL BE USED TO FULLY COORDINATE NEC 700 AND 701 LOADS.
3. CONNECT ALL ROOF EXHAUST FAN TO GENERATOR.
4. ELECTRICAL CONTRACTOR SHALL SUBMIT SELECTIVE CO-ORDINATION REPORT FOR ENGINEERS REVIEW BEFORE PRIOR TOO CONSTRUCTION.

WIRING NOTES:

SIZE 120V AND 208V BRANCH CIRCUITS FOR LENGTH OF RUN ON THE FOLLOWING BASIS:

1. 0 TO 100 FT. RUN FROM PANEL BOARD TO FIRST OUTLET: NO. 12 AWG MINIMUM.
2. 101 TO 150 FT. RUN: INCREASE ONE WIRE SIZE, I.E.; NO. 10 AWG BECOMES NO. 8 AWG TO FIRST OUTLET.
3. 151 TO 250 FT. RUN: WIRING SHALL BE NO. 6 AWG MINIMUM SIZE TO FIRST OUTLET.
4. FOR OTHER BRANCH CIRCUITS, SIZE CONDUCTORS SO THAT VOLTAGE DROP DOES NOT EXCEED 3%.

NOTE: THE WIRE SIZE INDICATED ON THE PANEL SCHEDULE IS THE MINIMUM WIRE SIZE FOR EACH CIRCUIT AND THAT WIRE SHALL BE UP SIZED FOR VOLTAGE DROP BASED ON THE WIRING NOTES ON SHEET E-312.

E-310 KEY NOTES

(#)	Text
1	REFER TO FEEDER SCHEDULE BELOW FOR ACTUAL WIRING REQUIREMENT.
2	CONTRACTOR SHALL USE COPPER CONDUCTOR UPTO 100AMP ABOVE 100AMP USE ALUMINIUM CONDUCTOR.
3	PANEL 'SEP' IS FOR SITE AREA AND ROOF AREA EQUIPMENT.
4	POOL VENDOR SHALL PROVIDE NEMA 3R RATED AND POOL RECEPTACLE PROTECTED BY WP PROTECTION.
5	CONTRACTOR SHALL VERIFY ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARD, PANEL BOARD AND METER SOCKET ENCLOSURES THAT ARE IN OTHER THAN DWELLING UNITS SHALL BE MARKED TO WARM QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS AS REQUIRED BY SECTION 110.16 OF NFPA 71.
6	CONTRACTOR SHALL COORDINATE WITH ELEVATOR VENDOR AND PROVIDE SELECTIVE COORDINATION REPORT FOR ENGINEERS REVIEW BEFORE PRIOR TO CONSTRUCTION.
7	ELEVATOR BREAKER SHOULD BE SHUNT TRIP TYPE AND TIED WITH FIRE ALARM SYSTEM.
8	BASE4 HAS CONNECTED BOTH ELEVATOR WITH EMERGENCY GENERATOR BUT THE DEMAND LOAD CONSIDER FOR ONE. CONTRACTOR TO PROVIDE SWITCH GEAR ACCORDINGLY.
9	CONTRACTOR TO CALCULATE GENERATOR SIZE WITH FINAL SPECIFICATION SHEETS FOR EACH EQUIPMENT AND SEND FOR BASE4'S REVIEW PRIOR TO GENSET PURCHASE.
10	CONTRACTOR SHALL MAKE SURE THAT GENERATOR WILL ABLE TO PIC EMERGENCY AND LIFE SAFETY ITEMS LOAD LIKE EMERGENCY AND EGRESS LIGHTING, FA SYSTEM ETC. WITH IN 10 SEC OF MAIN POWER GOES OFF.
11	CONTRACTOR SHALL PROVIDE FUSED DISCONNECT SWITCH NEAR TO THE EQUIPMENT.
12	CONTRACTOR SHALL FIELD VERIFY AND PROVIDE PANEL FOR DOCKING SYSTEM AT THE TIME OF MAINTENANCE OF GENERATOR. AS PER NEC-2017 ARTICLE 700.3(F). CONTRACTOR SHALL COORDINATE WITH LOCAL AHJ FOR FINAL LOCATION AND PROVIDE CONNECTION ACCORDINGLY.

COPPER FEEDER SCHEDULE

FEEDER DESIGNATION	No. OF SETS	PHASE CONDUCTORS (PER SET)	N NEUTRAL CONDUCTOR (PER SET)	G GROUND CONDUCTOR (PER SET)	CONDUIT SIZE - CONDUIT TYPES EMT, FMC, LFMC, IMC, RMC, SCH 40 PVC 3 PHASE NEUTRAL & GROUND NG; NSG; PG; PSG (PER SET)	CONDUIT SIZE - CONDUIT TYPES SCH 80 PVC 3 PHASE NEUTRAL & GROUND NG; NSG; PG; PSG (PER SET)
15	1	3 # 12	1 # 12	1 # 12	3/4"	3/4"
20	1	3 # 12	1 # 12	1 # 12	3/4"	3/4"
25/30	1	3 # 10	1 # 10	1 # 10	3/4"	3/4"
40/50	1	3 # 8	1 # 8	1 # 10	3/4"	1"
60	1	3 # 6	1 # 6	1 # 10	1"	1"
70/80	1	3 # 4	1 # 4	1 # 8	1 1/4"	1 1/4"
100	1	3 # 3	1 # 3	1 # 8	1 1/4"	1 1/4"
110	1	3 # 2	1 # 2	1 # 6	1 1/4"	1 1/2"
125	1	3 # 1	1 # 1	1 # 6	1 1/2"	1 1/2"
150	1	3 # 1/0	1 # 1/0	1 # 6	2"	2"
175	1	3 # 2/0	1 # 2/0	1 # 6	2"	2"
200	1	3 # 3/0	1 # 3/0	1 # 6	2"	2 1/2"
225	1	3 # 4/0	1 # 4/0	1 # 4	2 1/2"	2 1/2"
250	1	3 # 250	1 # 250	1 # 4	3"	3"
300	1	3 # 350	1 # 350	1 # 4	3"	3"
350	1	3 # 500	1 # 500	1 # 3	4"	4"
400	2	3 # 3/0	1 # 3/0	1 # 3	2 1/2"	2 1/2"
450	2	3 # 4/0	1 # 4/0	1 # 2	2 1/2"	2 1/2"
500	2	3 # 250	1 # 250	1 # 2	3"	3"
600	2	3 # 350	1 # 350	1 # 1	3"	3"
700	2	3 # 500	1 # 500	1 # 1/0	4"	4"
800	3	3 # 300	1 # 300	1 # 1/0	3"	3"
1000	3	3 # 400	1 # 400	1 # 2/0	3"	4"
1200	4	3 # 350	1 # 350	1 # 3/0	3"	3"
1600	5	3 # 400	1 # 400	1 # 4/0	4"	4"
2000	6	3 # 400	1 # 400	1 # 250	4"	4"
2500	6	3 # 750	1 # 750	1 # 350	4"	4"
3000	7	3 # 750	1 # 750	1 # 400	4"	4"
4000	9	3 # 750	1 # 750	1 # 500	4"	4"

EXAMPLES:

1. 150NG = INDICATES 1 SET OF 4# 1/0 + 1# 6 GROUND CONDUCTOR PER SET.

ALUMINIUM FEEDER SCHEDULE

FEEDER DESIGNATION	No. OF SETS	PHASE CONDUCTORS (PER SET)	N NEUTRAL CONDUCTOR (PER SET)	G GROUND CONDUCTOR (PER SET)	CONDUIT SIZE - CONDUIT TYPES EMT, FMC, LFMC, IMC, RMC, SCH 40 PVC 3 PHASE NEUTRAL & GROUND NG; NSG; PG; PSG (PER SET)	CONDUIT SIZE - CONDUIT TYPES SCH 80 PVC 3 PHASE NEUTRAL & GROUND NG; NSG; PG; PSG (PER SET)
100	1	3 # 1	1 # 1	1 # 6	2"	2"
110	1	3 # 1/0	1 # 1/0	1 # 4	2"	2"
125	1	3 # 2/0	1 # 2/0	1 # 4	2"	2"
150	1	3 # 3/0	1 # 3/0	1 # 4	2 1/2"	2 1/2"
175	1	3 # 4/0	1 # 4/0	1 # 4	2 1/2"	2 1/2"
200	1	3 # 250	1 # 250	1 # 4	2 1/2"	3"
225	1	3 # 300	1 # 300	1 # 2	3"	3"
250	1	3 # 400	1 # 400	1 # 2	3"	3"
300	1	3 # 500	1 # 500	1 # 2	3"	4"
350	2	3 # 4/0	1 # 4/0	1 # 1	2 1/2"	2 1/2"
400	2	3 # 250	1 # 250	1 # 1	2 1/2"	3"
450	2	3 # 300	1 # 300	1 # 1/0	3"	3"
500	2	3 # 350	1 # 350	1 # 1/0	3"	3"
600	2	3 # 500	1 # 500	1 # 2/0	4"	4"
700	3	3 # 350	1 # 350	1 # 3/0	3"	3"
800	3	3 # 400	1 # 400	1 # 3/0	4"	4"
1000	4	3 # 350	1 # 350	1 # 4/0	3"	3"
1250	4	3 # 500	1 # 500	1 # 250	4"	4"
1600	6	3 # 400	1 # 400	1 # 350	4"	4"
2000	7	3 # 500	1 # 500	1 # 400	4"	4"
2500	7	3 # 750	1 # 750	1 # 350 (Cu)	4"	--
3000	8	3 # 750	1 # 750	1 # 400 (Cu)	4"	--
4000	10	3 # 750	1 # 750	1 # 500 (Cu)	4"	--

EXAMPLES:

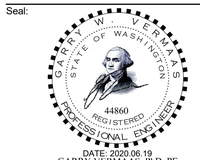
1. 150NG = INDICATES 1 SET OF 4# 3/0 + 1# 4 GROUND CONDUCTOR PER SET.

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:



DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON
3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
2	E1	2020.06.19	CITY COMMENTS
1	E0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
VSG

CHECKED BY
GWV

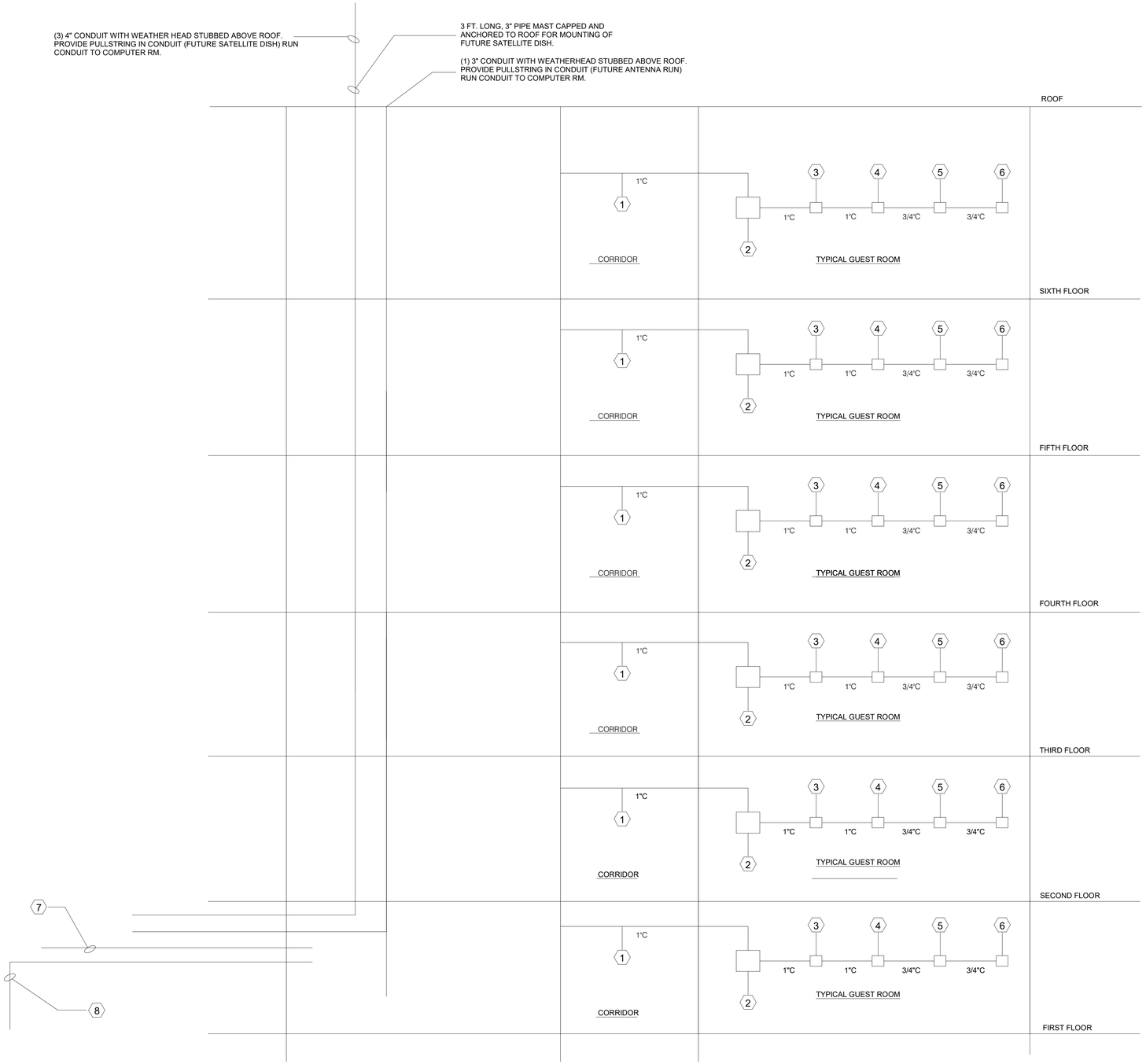
PROJECT NO.
B4-124-1803

SHEET NAME

ELECTRICAL RISER DIAGRAM

DRAWINGS NO.

E-310



1 TELEPHONE,DATA AND TV RISER DIAGRAM
1/4" = 1'-0"

GENERAL NOTES:

1. VENDOR NEEDS TO PLACE WIRELESS INTERNET AND ROUTERS IN ALL PUBLIC LOCATIONS AND ON EACH END OF EACH FLOOR.

KEY NOTES:

1. 1" CONDUIT TO GUEST ROOM AS SHOWN.
2. MAIN DOUBLE GANG BOX LOCATED NEAR TV LOCATION.
3. DATA JACK AT DESK LOCATION.
4. VOICE JACK AT BELOW DESK LOCATION.
5. VOICE JACK AT BED LOCATION.
6. PHONE OUTLET IN SUIT OR GUEST ROOM WHERE IT OCCURS. REFER TO ENLARGED GUEST ROOM DRAWINGS.
7. (1) 3" CONDUIT TO BE RAN FROM THE TECHNOLOGY CLOSET TO THE FRONT DESK. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AS TO THE FINAL LOCATION OF THE CONDUIT RUN.
8. (3) 4" CONDUIT TO BE RAN FROM THE HEAD END TO THE TECHNOLOGY CLOSET.
9. BASE4 HAS PROVIDED DRAWING FOR REFERENCE PURPOSE ONLY. FINAL DRAWING SUBMITTED BY VENDOR.

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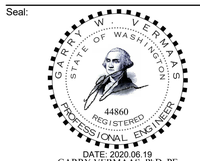
Seal:



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VSG

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

SHEET NAME

TELEPHONE, DATA AND TV RISER DIAGRAM

DRAWINGS NO.

E-311