SYMBOLS & ABBREVIATIONS SCHEDULE

RECEPTACLES

LP2,12	DUPLEX RECEPTACLE OUTLET, 18" A.F.F., TAMPER RESISTANT, 20AMP COMMERCIAL GRADE GROUNDING TYPE WITH MATCHING COVERPLATE. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
LP2,12	GFCI RECEPTACLE OUTLET, 18" A.F.F., TAMPER RESISTANT, 20AMP COMMERCIAL GRADE GROUNDING TYPE WITH MATCHING COVERPLATE. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
LP2,12	DUPLEX RECEPTACLE OUTLET, 18" AFF., TAMPER RESISTANT, 20AMP COMMERCIAL GRADE GROUNDING TYPE WITH MATCHING COVERPLATE. TAG INDICATES PANELBOARD & DEDICATED BRANCH CIRCUIT THAT IT IS CONNECTED TO. RECEPTACLE SHALL BE SUPPLIED BY A GFCI CIRCUIT BREAKER. PROVIDE LABEL ON COVER "PROTECTED BY GFCI"
LP2,12	INDICATES (2) TAMPER RESISTANT, 20 AMP, COMMERCIAL GRADE RECEPTACLES IN 2-GANG BOX UNDER A COMMON MATCHING COVERPLATE. RECEPTACLES SHALL BE GROUNDING TYPE. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
LP2,12	(2) GFCI RECEPTACLE OUTLETS, 18" A.F.F., TAMPER RESISTANT, 20AMP COMMERCIAL GRADE GROUNDING TYPE IN 2-GANG BACKBOX WITH MATCHING COMMON COVERPLATE. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
LP2,10,12	RANGE OR DRYER OUTLET VERIFY RECEPTACLE NEMA CONFIGURATION, RATING & INSTALLATION HEIGHT WITH SELECTED EQUIPMENT SUPPLIER. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO. COVER PLATES SHALL BE STAINLESS STEEL.
LP2,12	SPECIAL PURPOSE RECEPTACLE AS CALLED FOR ON DRAWINGS OR AS REQUIRED BY EQUIPMENT MANUFACTURER. VERIFY NEMA CONFIGURATION. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
LP2,12	FLOOR MOUNTED RECEPTACLE AS CALLED FOR ON DRAWINGS OR AS REQUIRED BY EQUIPMENT MANUFACTURER. UNLESS OTHERWISE NOTED, PROVIDE RECESSED IN CONCRETE WITH A METAL COVER. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.
WALL — J FLOOR — J	PROVIDE COMPLETE ELECTRICAL POWER CONNECTION TO MODULAR FURNITURE. WHIP TO BE PROVIDED WITH FURNITURE. CONNECTION SHALL INCLUDE MINIMUM WALL OR FLOOR JUNCTION BOX, WIRING TO CIRCUIT INDICATED, FINAL CONNECTION TO APPROPRIATE FURNITURE GROUP.
FB1 LP2,12	TYPE #1 FLOOR BOX WITH (1) DUPLEX RECEPTACLE . UNLESS OTHERWISE NOTED, PROVIDE RECESSED IN CONCRETE WITH A METAL COVER. TAG INDICATES PANELBOARD & BRANCH CIRCUIT THAT IT IS CONNECTED TO.

POWER

J	WALL MOUNTED JUNCTION BOX, SIZE AS INDICATED OR PROVIDE MINIMUM SIZE REQUIRED BY LATEST EDITION OF NATIONAL ELECTRICAL CODE (NFPA 70-NEC).
J	CEILING MOUNTED JUNCTION BOX, SIZE AS INDICATED OR PROVIDE MINIMUM SIZE REQUIRED BY LATEST EDITION OF NATIONAL ELECTRICAL CODE (NFPA 70-NEC).
	PROVIDE COMPLETE ELECTRICAL CONNECTION TO EQUIPMENT INDICATED (INCLUDING DISCONNECT, CONDUCTORS, RACEWAY, & OTHER REQUIRED HARDWARE. XX-X INDICATES EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	PROVIDE COMPLETE ELECTRICAL CONNECTION TO MOTOR INDICATED (INCLUDING DISCONNECT, STARTER, CONDUCTORS, RACEWAY, & OTHER REQUIRED HARDWARE. XX-X INDICATES EQUIPMENT TAG. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	EMERGENCY POWER OFF BUTTON (EPO). PROVIDE WHERE INDICATED ON DRAWINGS. PROVIDE ALL REQUIRED INTERFACES AS CALLED FOR ON DRAWINGS OR REQUIRED BY EQUIPMENT MANUFACTURER.
TYPICAL WALL	ELECTRICAL PANELBOARD, SURFACE MOUNTED. UNLESS OTHERWISE NOTED, INSTALL AT 72" A.F.F. TO THE TOP OF THE BOX.
TYPICAL WALL	ELECTRICAL PANELBOARD, FLUSH MOUNTED. UNLESS OTHERWISE NOTED, INSTALL AT 72" A.F.F. TO THE TOP OF THE BOX.
	TYPICAL DISCONNECT (SAFETY SWITCH). REFER TO DRAWINGS FOR SIZE & ADDITIONAL FUSING REQUIREMENTS.
	TYPICAL DRY-TYPE TRANSFORMER (SIZE MIGHT VARY). UNLESS OTHERWISE NOTED, PROVIDE FLOOR MOUNTED WITH CONCRETE EQUIPMENT PAD.
	ELECTRICAL PIECE OF EQUIPMENT. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.

DATA (SYSTEMS)

X	DATA DROP LOCATION. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM OF (2) CAT 6 CABLES & TERMINATIONS, INSTALL 18" AFF, EXTENSION RING & ASSOCIATED JACKS. PROVIDE 3/4" RACEWAY TO NEAREST ACCESSIBLE CEILING SPACE. PROVIDE WITH COVERPLATE. ALL DATA CABLES SHALL BE PROPERLY TERMINATED AT BOTH ENDS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
TV	TELEVISION CONNECTION DROP, VERIFY FINAL LOCATION PRIOR TO INSTALLATION. PROVIDE COAX CABLE WITH DUPLEX RECEPTACLE UNDER THE SAME COVERPLATE. VERIFY EXACT HEIGHT OF OUTLET & RECEPTACLE PRIOR TO ROUGH-IN.
AV	A/V CONNECTION FOR WALL MOUNTED FLAT PANEL DISPLAY. PROVIDE CABLE TV WIRING, DATA PORT CABLE, HDMI CABLE TO THE FLOOR BOX. BOX SHALL INCLUDE A DUPLEX RECEPTACLE. EQUIPMENT SHALL BE LEGRAND HT2102-WH-V1 OR EQUAL
DATA-X WALL — J FLOOR — J	PROVIDE DATA CABLING TO MODULAR OFFICE FURNITURE. SHALL INCLUDE WALL JUNCTION BOX OR FLOOR BOX, CONDUIT TO ACCESSIBLE SPACE. 'DATA-X' INDICATES NUMBER OF CABLES AT THIS LOCATION, UNLESS OTHERWISE NOTED, ROUTE DATA CABLES THROUGH THE FURNITURE & TERMINATE AT BOTH ENDS. COORDINATE DATA WIRING WITH FURNITURE INSTALLER.
	WIRELESS ACCESS POINT, CEILING MOUNTED. PROVIDE DATA CONNECTION & ALL REQUIRED WIRING FOR COMPLETE INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

BRANCH CIRCUIT WIRING NOTES:

A. UNLESS OTHERWISE NOTED, MINIMUM HOMERUN (HOMERUN SHALL BE CONSIDERED TOTAL LENGTH FROM SOURCE TO LAST DEVICE ON THE CIRCUIT) CONDUCTORS FOR 20A/1P BRANCH CIRCUITS INCLUDING LIGHTING SHALL BE AS FOLLOWS:
- 1-100FT - #12 AWG
- 101-150FT - #10 AWG
- 151-250FT - #8 AWG
- 251-400FT - #6 AWG.
- 401 & LONGER - #4 AWG.

REDUCE CONDUCTORS SIZE TO A MAXIMUM CONDUCTOR SIZE THAT THE LOAD TERMINALS CAN ACCOMMODATE. REDUCED SIZE NOT LONGER THAN ONE FOOT. INCREASE RACEWAY SIZE AS NEEDED PER NEC, FOR THE LARGER SIZES OF CONDUCTORS.

REMOVAL (TYPICAL FOR ALL DEVICES):

XXXcd	TYPICAL POWER & SYSTEMS DEVICE SCHEDULED FOR REMOVAL. DISCONNECT & REMOVE ALL ASSOCIATED ELECTRICAL WORK AS INDICATED ON CONTRACT DOCUMENTS. REINSTALL AS REQUIRED
	TYPICAL LUMINAIRE SCHEDULED FOR REMOVAL. REFER TO LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION.

REMOVAL NOTES:
NOT ALL DEVICES SCHEDULED FOR REMOVAL ARE SHOWN ON THIS SCHEDULE. ALL DEVICES TO BE REMOVED ARE MARKED WITH THE SAME LINETYPE & LINE WEIGHT AS SYMBOLS ABOVE. REFER TO DEMOLITION PLANS FOR ADDITIONAL INFORMATION.

EXISTING TO REMAIN (TYPICAL FOR ALL DEVICES):

XXXcd (ETR)	TYPICAL POWER & SYSTEMS DEVICE EXISTING TO REMAIN IN PLACE.
(ETR)	EXISTING LUMINAIRE SCHEDULED TO REMAIN IN PLACE. REFER TO LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION.

EXISTING TO REMAIN NOTES:
NOT ALL EXISTING DEVICES SCHEDULED TO REMAIN ARE SHOWN ON THIS SCHEDULE. ALL DEVICES SCHEDULED TO REMAIN ARE MARKED WITH THE SAME LINETYPE & LINE WEIGHT AS SYMBOLS ABOVE. REFER TO FLOOR PLAN DRAWINGS FOR ADDITIONAL INFORMATION.

POWER ONE-LINE

	POWER TRANSFORMER, DELTA PRIMARY, WYE SECONDARY OR AS INDICATED. PROVIDE ALL REQUIRED GROUNDING.
XXAF XXAT	MOLDED CASE CIRCUIT BREAKER. AF INDICATES FRAME SIZE, AT INDICATES TRIP SETTING
XXAF XXAT	DRAWOUT TYPE CIRCUIT BREAKER. AF INDICATES FRAME SIZE, AT INDICATES TRIP SETTING
XXAS XXAS XXAF XXAF	DISCONNECT SWITCH & FUSIBLE SWITCH. XXAS INDICATES SWITCH AMPERE SIZE XXAF INDICATES FUSE AMPERE SIZE
XX A	FUSE, XX A INDICATES FUSE SIZE IN AMPERES.
1PP1 225 MLO 208Y/120V 3-PHASE 4-WIRE	PANELBOARD
E N	TRANSFER SWITCH.
GFP	GROUND FAULT PROTECTION.
SPD	SURGE PROTECTION.
PQM	POWER QUALITY METER.
DVM	DIGITAL VOLT METER.
65000	AVAILABLE FAULT CURRENT TAG (AMPS)

GENERAL NOTES: (FOR ALL DRAWINGS)

A. THE DRAWINGS ARE DIAGRAMMATIC & INDICATE GENERALLY THE LOCATIONS OF THE MATERIAL & EQUIPMENT. THESE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE.

B. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION & OPERATION, SHALL BE INCLUDED IN THE CONTRACTOR'S BID, THE SAME AS IF HEREIN SPECIFIED OR SHOWN.

C. ALL MATERIAL & INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE NATIONAL ELECTRIC CODE, LATEST EDITION OF LOCAL CODES, & ORDINANCES.

D. ALL CONDUITS ON EXPOSED WORK SHALL BE RUN AT RIGHT ANGLES TO, & PARALLEL WITH, THE SURROUNDING WALL & SHALL CONFORM TO THE FORM OF THE CEILING. DIAGONAL RUNS WILL NOT BE ALLOWED. BENDS IN PARALLEL CONDUIT RUNS SHALL BE CONCENTRIC. ALL CONDUIT SHALL RUN PERFECTLY STRAIGHT & TRUE.

E. ALL CONDUIT RUNS ARE TO BE CONCEALED IN WALLS, CEILINGS, OR IN THE SLAB. CONTRACTOR SHALL COORDINATE CONDUIT INSTALLATION DURING BUILDING CONSTRUCTION WITH OTHER TRADES. RUN SURFACE RACEWAY ONLY WHERE CALLED FOR OR SHOWN ON THE DRAWINGS. EXPOSED CONDUIT SHALL ONLY BE INSTALLED WHERE MEANS OF CONCEALING DOES NOT EXIST. CONTRACTOR IS TO NOTIFY ENGINEER & GET OWNERS APPROVAL PRIOR TO RUNNING EXPOSED CONDUITS.

F. INTERIOR RECEPTACLE & LIGHT FIXTURE BRANCH CIRCUITS SHALL BE IN EMT CONDUIT. A MAXIMUM OF (3) CIRCUITS CAN BE GROUPED TOGETHER IN A HOMERUN CONDUIT. EACH CIRCUIT SHALL HAVE SEPARATE NEUTRAL, GROUPING OF NEUTRALS SHALL NOT BE ACCEPTABLE. EACH CIRCUIT SHALL ALSO HAVE A GROUND WIRE SIZED PER NEC. USING CONDUIT, OR MC CABLE AS GROUND PATH SHALL NOT BE ACCEPTABLE. CABLE MUST BE SUPPORTED PER NEC, GROUPING OF GROUND WIRES [(1) GROUND PER (3) CIRCUITS] IS ACCEPTABLE. MAXIMUM 6' LENGTH OF MC CABLE ALLOWED FOR A WHIP CONNECTION TO LUMINAIRE ONLY. EXTERIOR (OUTDOOR) RECEPTACLE & LIGHT FIXTURE BRANCH CIRCUITS SHALL BE IN RMC CONDUIT OR AS PERMITTED IN THE SPECIFICATIONS.

G. COORDINATE ALL LUMINAIRE & CEILING MOUNTED EQUIPMENT LOCATIONS & MOUNTING HARDWARE WITH ARCHITECTURAL CEILING PLANS PRIOR TO CONSTRUCTION.

H. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED COSTS FOR SEALING ALL PENETRATIONS THROUGH FIRE & SMOKE WALLS USING UL APPROVED SEALANT & METHODS.

I. ALL COMMUNICATIONS OUTLET LOCATIONS ARE DIAGRAMMATIC & MUST BE FIELD VERIFIED WITH OWNER'S FURNITURE LOCATIONS PRIOR TO CONSTRUCTION. NO EXTRA COMPENSATION WILL BE GIVEN FOR FAILURE TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION.

J. UNLESS OTHERWISE NOTED, PROVIDE ALL NEW RACEWAYS. USE SURFACE RACEWAY ONLY WHERE INDICATED ON THE PLANS. IF CONTRACTOR INTENDS TO UTILIZE SURFACE RACEWAY IN AREAS OTHER THOSE INDICATED ON PLANS, PRIOR APPROVAL IS REQUIRED FROM ENGINEER & OWNER.

K. CONTRACTOR MAY REUSE EXISTING CONCEALED CONDUIT UNLESS OTHERWISE NOTED ON THE PLANS.

L. ALL RECEWAYS CROSSING BUILDING EXPANSION JOINTS SHALL BE EQUIPPED WITH EXPANSION FITTINGS.

M. CONTRACTOR SHALL PROVIDE INFORMATION LABELS ON ALL RECEPTACLES, PANELBOARDS, JUNCTION BOXES, WALL SWITCHES, & DISCONNECT SWITCHES. LABELS SHALL BE PHENALIC TYPE WITH BLACK BACKGROUND & WHITE ENGRAVED LETTERING. LABEL SHALL INDICATED CIRCUIT/FEEDER SOURCE & EQUIPMENT ID NAME.

ABBREVIATIONS:

WP	INDICATES WEATHERPROOF DEVICE OR EQUIPMENT
WG	INDICATES DEVICE SHALL HAVE WIRE GUARD PROTECTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
(ETR)	EXISTING EQUIPMENT SHALL REMAIN IN PLACE
OC	OVER COUNTER (INSTALL 12" ABOVE COUNTER HEIGHT)
UC	UNDER COUNTER (INSTALL 18" ABOVE FINISHED FLOOR)
VNAC	VISUAL NOTIFICATION APPLIANCE CIRCUIT
ANAC	AUDIO NOTIFICATION APPLIANCE CIRCUIT
SLC	SIGNALING LINE CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
HP	HORSEPOWER
kW	KILOWATT
kVA	KILOVOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
EM	EMERGENCY
NL	NIGHTLIGHT (TYPICAL FOR LIGHTING, 'ON' ALL THE TIME)
LTG	LIGHTING
CPWR	CONTINUOUS LOAD (POWER)
PWR	POWER
EH	ELECTRIC HEAT
KIT	KITCHEN EQUIPMENT
LMTR	LARGEST MOTOR
EQP	SHOP EQUIPMENT
NEC	NATIONAL ELECTRICAL CODE
MLO	MAIN LUGS ONLY
MCB	MAIN CIRCUIT BREAKER
AWG	AMERICAN WIRE GAGE

GENERAL SYMBOLS NOTE:

THIS SYMBOLS & ABBREVIATIONS SCHEDULE IS FOR THE ELECTRICAL CONTRACTOR REFERENCE ONLY. NOT ALL SYMBOLS OR ABBREVIATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS SCHEDULE DOES NOT IMPLY INCLUSION AND / OR EXCLUSION OF ANY PARTICULAR ITEM FROM THE PROJECT.

Brown AND Caldwell
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wendel

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

60% DESIGN DOCUMENTS

NCWSA
NEWTON COUNTY WATER & SEWERAGE AUTHORITY

NCWSA OFFICE ADDITION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: MAP
DRAWN: MAP
CHECKED: JFW
CHECKED:
APPROVED:

FILENAME

BC PROJECT NUMBER
616202
CLIENT PROJECT NUMBER

ELECTRICAL

SYMBOLS, NOTES, AND ABBREVIATIONS

DRAWING NUMBER
E001