



GARDEN CITY

GARDEN CITY CITY HALL ROOFTOP UNIT REPLACEMENT

CHATHAM
ENGINEERING

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Revisions

No.	Date	Description	By

DRAWING LIST:

SHEET NUMBER:	NAME:
T0.1	TITLE SHEET
E0.1	LEGEND, GEN. & DEM. NOTES, ELEC SPECS AND PART. ONE-LINE DIAGS
E1.1	FLOOR PLAN - ELECTRICAL
M0.1	LEGEND, ABBREVIATIONS AND SCHEDULES - HVAC
M1.1	FLOOR PLAN - HVAC

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LOCATION:



100 CENTRAL AVE.
GARDEN CITY, GA 31405

GARDEN CITY
CITY HALL
ROOFTOP UNIT
REPLACEMENT

GARDEN CITY GEORGIA

CODE REQUIREMENTS:

International Building Code 2012 Edition
 International Plumbing Code 2012 Edition
 International Mechanical Code 2012 Edition
 International Fuel Gas Code 2012 Edition
 International Energy Conservation Code ... 2009 Edition
 International Fire Code 2012 Edition
 National Electrical Code 2017 Edition

Stamp

Sheet Title

TITLE SHEET

Job No. 19051.00

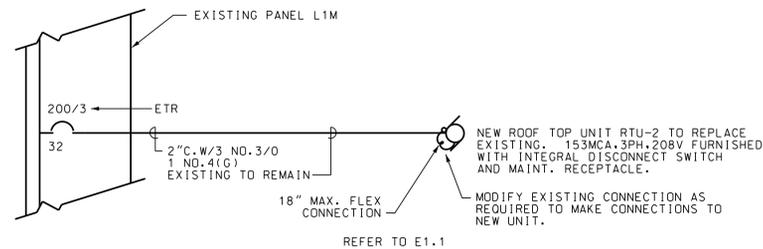
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Date 06/05/2019 Sheet No.

T0.1

LEGEND	
SYMBOL	DESCRIPTION
	JUNCTION BOX
	20AMP DUPLEX RECEPTACLE- MT. 16" AFF
	20AMP DUPLEX RECEPTACLE- MT. 48" AFF AND/OR ABOVE COUNTER TOP
	20AMP WEATHERPROOF DUPLEX RECEPTACLE, MT. 16" ABOVE FLOOR AND 36" ABOVE EARTH
	20AMP GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE- MT. 48" AFF AND/OR ABOVE COUNTER TOP OR AS INDICATED
	EQUIPMENT AS NOTED
	MOTOR, HORSEPOWER AS INDICATED
	NON-FUSIBLE DISCONNECT SWITCH, RATING/POLES/ENCLOSURE AS INDICATED
	FUSIBLE DISCONNECT SWITCH, RATING/POLES/ENCLOSURE, FUSES AS INDICATED
	MAGNETIC STARTER
	COMBINATION MAGNETIC STARTER/NON-FUSIBLE DISCONNECT SWITCH
	VARIABLE FREQUENCY DRIVE BY DIVISION 15.
	RACEWAY INSTALLED CONCEALED IN/OR BELOW FLOOR SLAB OR BELOW GRADE
	RACEWAY INSTALLED EXPOSED
	FLEXIBLE METALLIC RACEWAY, 18" MAXIMUM LENGTH
	EXISTING TO REMAIN
	BRANCH CIRCUIT BREAKER
	GROUND



PARTIAL ONE - LINE
SCHEMATICS

GENERAL NOTES: (APPLICABLE TO ALL DRAWINGS)

- WHEN CONDUCTOR SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.
- REFER TO MECHANICAL SYSTEM DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL SERVICE.
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL BRANCH AND FEEDER CIRCUITS.
- HOLD CONCEALED CONDUITS AS TIGHT TO THE STRUCTURE AS POSSIBLE AND ABOVE DUCTWORK AND PIPING. ALL CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE. WHERE LB OR SIMILAR FITTINGS ARE USED FOR PULL POINTS, SUCH FITTINGS SHALL BE READILY ACCESSIBLE AND SHALL NOT CONTAIN SPLICES AND SHALL BE SIZED PER NEC. COORDINATE THE LOCATIONS OF THESE FITTINGS WITH OTHER TRADES SO THEY ARE NOT COVERED BY DUCTWORK OR PIPING.
- ALL RACEWAY-PENETRATIONS IN RATED WALLS AND FLOORS SHALL BE MADE IN ACCORDANCE WITH THE U.L. FIRE RESISTANCE DIRECTORY FOR THROUGH-PENETRATION FIRESTOP SYSTEMS OR DEVICES. THE FIRESTOP SYSTEM OR DEVICE SELECTED SHALL BE BASED ON CONSTRUCTION TYPE, PENETRANT TYPE AND FLOOR, WALL OR CEILING RATING. ALL MATERIALS SHALL BE UL LISTED. ALL FIRE-STOPPING MATERIAL SHALL BE 3M FIRE BARRIER SLEEVES TO MEET STANDARDS.
- OPENINGS IN NON-RATED WALLS AND FLOORS SHALL BE ROUND, SQUARE OR RECTANGULAR. IRREGULAR OPENINGS ARE NOT ACCEPTABLE. SEAL BOTH SIDES OF OPENING IN A NEAT MANNER. USE JOINT COMPOUND FOR WALLS AND LIGHTWEIGHT CONCRETE FOR FLOORS. WIPE RACEWAYS CLEAN AND SMOOTH FILLER TO TROWEL FINISH.
- REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS REQUIRING ELECTRICAL SERVICE. PROVIDE FINAL CONNECTIONS TO EQUIPMENT.
- FOR MECHANICAL EQUIPMENT WHERE STARTER AND/OR DISCONNECTS ARE NOT PROVIDED BY DIV 16 SEE MECHANICAL DRAWINGS AND SPECIFICATIONS FOR INFORMATION.
- SEAL ALL CONDUITS ENTERING EXTERIOR MOUNTED ELECTRICAL EQUIPMENT.
- INSTALLATION OF EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES FOR SPACE REQUIREMENTS AND CONNECTION ARRANGEMENTS. EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES AS RECOMMENDED BY MANUFACTURER OF EQUIPMENT OR CODES AND SHALL BE INSTALLED TO MAINTAINED ACCESS TO ALL SERVICEABLE PARTS.
- THE USE OF MC CABLE IS NOT ALLOWED.
- PRIOR TO CUTTING ANY CONCRETE, X-RAY ALL AREAS TO BE CUT FOR EXISTING CONDITIONS (UTILITIES, PIPES, ETC.) WITHIN FLOOR SLABS, CONCRETE WALLS DECKS, ETC. TO AVOID DAMAGE TO EXISTING CONCEALED UTILITIES.

DEMOLITION NOTES: (GENERAL)

- VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. BIDDING SHALL INCLUDE ALL REQUIRED DEMOLITION AND/OR RELOCATION OF EQUIPMENT IN RENOVATED AREAS. WHETHER SUCH WORK IS OR IS NOT INDICATED ON THE DRAWINGS.
- DEMOLITION REQUIRES FIELD IDENTIFICATION OF ALL ELECTRICAL EQUIPMENT ETC., BRANCH CIRCUITS AND THEN THE REMOVAL OF ALL SUCH CIRCUITS AND ASSOCIATED EQUIPMENT NOT REUSED. CONTRACTOR SHALL FIELD TRACE EACH BRANCH CIRCUIT TO REMAIN AND TO BE DEMOLITIONED WITH CIRCUIT TRACER. REMOVE ALL BRANCH CIRCUITS NOT REUSED BACK TO POINT OF ORIGINATION.
- PATCH WALL PENETRATIONS FOR REMOVED AND RELOCATED EQUIPMENT AND RECONNECTED BRANCH CIRCUITS PASSING THROUGH EXISTING WALLS TO REMAIN.
- MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS, FEEDERS, BRANCH CIRCUITS, ETC. PASSING THROUGH RENOVATED AREAS SERVING UNDISTURBED AREAS.
- EXISTING CONDUIT IN PLACE, FOUND TO BE REUSABLE, MAY BE USED. ALL OTHER CONDUIT SYSTEMS SHALL BE REMOVED BACK TO POINT OF ORIGINATION.
- BRANCH CIRCUITS SHALL BE REMOVED FROM POINT OF ORIGINATION TO POINT OF TERMINATION. REMOVAL SHALL INCLUDE CONDUIT, CONDUCTORS, SUPPORTS, FITTINGS, JUNCTION BOXES, ETC. WHERE FEEDER IS RENDERED INACCESSIBLE, DUE TO EXISTING STRUCTURAL CONDITIONS, REMOVE CONDUCTORS ONLY. LAY-IN TYPE CEILING ARE CONSIDERED ACCESSIBLE. CONCRETE FLOORS AND MASONRY WALLS ARE CONSIDERED INACCESSIBLE.
- DASHED LINES (---) AND CROSSHATCHING (/////) INDICATES EXISTING TO BE REMOVED. REMOVE ALL ELECTRICAL SYSTEMS WITHIN DEMOLITION LIMITS, UNLESS NOTED OTHERWISE.

DIVISION 16 - ELECTRICAL

16010 - BASIC ELECTRICAL REQUIREMENTS

- QUALITY ASSURANCE**
 - ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND AGENCIES:
 - THE NATIONAL ELECTRICAL CODE (NFPA 70), 2017 EDITION WITH GEORGIA AMENDMENTS.
 - STATE AND LOCAL ORDINANCES GOVERNING ELECTRICAL WORK.
 - ALL MATERIALS SHALL BE NEW AND SHALL CONFORM TO STANDARDS WHERE SUCH HAVE BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL.
- PERMITS**
 - OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK INVOLVED.
- WARRANTY**
 - THE CONTRACTOR SHALL WARRANT TO THE OWNER THAT ALL WORK SHALL BE FREE FROM DEFECTS AND WILL CONFORM TO THE CONTRACT DOCUMENTS. THIS WARRANTY SHALL EXTEND NOT LESS THAN ONE YEAR FROM THE DATE OF BENEFICIAL OCCUPANCY.
- DRAWINGS**
 - COORDINATE INSTALLATION OF EQUIPMENT WITH ALL OTHER TRADES. DO NOT SCALE DRAWINGS FOR CONNECTION LOCATIONS. BRING ALL DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
 - CONTRACTOR SHALL INSTALL AND CIRCUIT ALL ELECTRICAL WORK AS INDICATED ON DRAWINGS UNLESS SPECIFIC BUILDING CONSTRUCTION REQUIRES A CHANGE OR REROUTING OF THIS WORK.
- EQUIPMENT REQUIRING ELECTRICAL SERVICE**
 - REVIEW ALL SPECIFICATION SECTIONS AND DRAWINGS FOR EQUIPMENT REQUIRING ELECTRICAL SERVICE. PROVIDE SERVICE TO AND MAKE CONNECTIONS TO ALL SUCH EQUIPMENT.
- MECHANICAL SYSTEM INTERFACE**
 - ALL CONTROL WIRING FOR PLUMBING AND HVAC EQUIPMENT SHALL BE INSTALLED UNDER DIVISION 15000. POWER WIRING TO ALL MOTORS AND MOTOR CONTROLLERS AND BETWEEN MOTORS AND CONTROLLERS SHALL BE PROVIDED UNDER DIVISION 16000. ALL MOTOR CONTROLLERS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 16000.
- SCHEDULING OF OUTAGES**
 - ELECTRICAL WORK REQUIRING INTERRUPTION OF ELECTRICAL POWER WHICH WOULD ADVERSELY AFFECT THE NORMAL OPERATION OF OTHER PORTIONS OF THE OWNER'S PROPERTY, SHALL BE DONE AT OTHER THAN NORMAL WORKING HOURS. SCHEDULE THE INTERRUPTION OF ELECTRICAL POWER THREE WORKING DAYS PRIOR TO ACTUAL SHUTDOWN.
- SITE INVESTIGATION AND RENOVATION CONDITIONS**
 - PRIOR TO SUBMITTING BIDS FOR THE PROJECT, VISIT THE SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS. THE PROJECT SHALL BE RESTORED TO ITS EXISTING CONDITION, WITH THE EXCEPTION OF WORK UNDER THIS CONTRACT, PRIOR TO FINAL PAYMENT.

- PROVIDE ADDITIONS AND ALTERATIONS TO EXISTING WORK REQUIRED TO PRODUCE A COMPLETE ELECTRICAL INSTALLATION. RELOCATE EXISTING ELECTRICAL WORK FOR OTHER TRADES REQUIRED TO COMPLETE THE WORK AND TO MAINTAIN BUILDINGS IN SERVICE. PROVIDE FOR THE REMOVAL, REINSTALLATION, RECONNECTION OR RELOCATION OF EXISTING CIRCUIT WIRING, NECESSITATED BY THE NEW WORK. IF ANY PORTION OF AN EXISTING CIRCUIT IS IN AN AREA WHERE NO NEW WORK IS BEING DONE, BUT IS MADE ELECTRICALLY DISCONTINUOUS BY THE NEW WORK, IT SHALL BE RE-CIRCUITED TO MAINTAIN ELECTRICAL CONTINUITY. CUTTING, CHANNELING, CHASING, OR DRILLING OF WALLS, PARTITIONS, CEILINGS, OR OTHER SURFACES AND SUPPORT, OR ANCHORAGE OF CONDUIT, OR OTHER ELECTRICAL WORK SHALL BE DONE WITHOUT DAMAGE TO OTHER PIPING OR BUILDING EQUIPMENT. EXISTING SURFACES SHALL THEN BE PATCHED AND PAINTED TO MATCH THE SURROUNDING AREAS.

1.9 CLEANING AND PAINTING

- REMOVE OIL, DIRT, GREASE AND FOREIGN MATERIALS FROM ALL EQUIPMENT. TOUCH UP SCRATCHED OR MARRED SURFACES OF LIGHTING FIXTURES, PANELBOARD AND CABINET TRIMS, AND EQUIPMENT ENCLOSURES WITH PAINT MANUFACTURED SPECIFICALLY FOR THAT PURPOSE.

16100 - BASIC MATERIALS

2.1 RACEWAYS

- RACEWAY IS REQUIRED FOR ALL WIRING, UNLESS SPECIFICALLY INDICATED OR SPECIFIED OTHERWISE. THE MINIMUM SIZE OF CONDUIT SHALL BE AS SHOWN, BUT SHALL NOT BE LESS THAN SIZE INDICATED ON THE DRAWINGS OR REQUIRED BY THE NEC.
- CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT) EXCEPT FOR THE FOLLOWING CONDITIONS:
 - CONDUITS WHICH PENETRATE THE BUILDING ROOF OR EXTERIOR OF BUILDING EXPOSED TO THE ATMOSPHERE SHALL BE GALVANIZED RIGID STEEL (GRS) OR INTERMEDIATE METAL CONDUIT (IMC).
 - USE FLEXIBLE CONDUIT FOR CONNECTIONS TO MOTORS, FLUSH MOUNTED LIGHTING FIXTURES, AND ALL VIBRATING EQUIPMENT.
 - LENGTH SHALL NOT EXCEED 18 INCHES.
 - MAINTAIN GROUND CONTINUITY THROUGH FLEXIBLE CONDUIT WITH A GREEN EQUIPMENT GROUNDING CONDUCTOR.
 - LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE USED IN MECHANICAL EQUIPMENT ROOMS AND EXTERIOR INSTALLATIONS.
 - EMT CONDUIT COUPLINGS AND CONNECTORS SHALL BE STEEL RAIN-TIGHT TYPE, COMPRESSION TYPE. ALL EMT CONNECTORS SHALL BE INSULATED THROAT TYPE. GRS AND IMC FITTINGS SHALL BE STANDARD THREADED COUPLINGS, LOCKNUTS, BUSHINGS, AND ELBOWS. ALL GRS AND IMC FITTINGS SHALL BE STEEL OR MALLEABLE IRON SET SCREW OR NON THREADED FITTINGS ARE NOT PERMITTED.
 - ALL CONDUIT SUPPORT PARTS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED. CONDUIT STRAPS SHALL BE TWO HOLE GALVANIZED METAL TYPE.

2.2 WIRES AND CABLES

- CONDUCTOR SIZE SHALL BE MINIMUM OF NO. 12 AWG, UNLESS LARGER SIZE IS REQUIRED BY THE DRAWINGS OR THE NEC. ALL WIRE AND CABLE SHALL BEAR THE UL LABEL.
- CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID COPPER, 75 DEGREES C. TYPE XHHW OR THHN/THWN. ALL OTHER CONDUCTORS SHALL BE STRANDED COPPER.
- COLOR CODE ALL CONDUCTORS. NO. 10 AND SMALLER SHALL HAVE SOLID COLOR COMPOUND OR COATING. NO. 8 AND LARGER SHALL HAVE SOLID COLOR COMPOUND OR COLORED PHASE TAPE. TAPE DO NOT SPLICE CONDUCTORS IN PANELBOARDS, SAFETY SWITCHES, OR MOTOR CONTROL ENCLOSURES. IDENTIFY EACH CONDUCTOR AS TO CIRCUIT CONNECTION IN ALL BOXES AND ENCLOSURES.
 - 208Y/120 VOLT THREE PHASE FOUR WIRE WYE SYSTEM: PHASE A-BLACK, PHASE B-RED, PHASE C-BLUE, NEUTRAL-WHITE.
 - GROUNDING CONDUCTORS SHALL BE GREEN.
- GROUP AND LACE WITH NYLON TIE STRAPS ALL CONDUCTORS WITHIN ENCLOSURES. MAKE SPLICES IN CONDUCTORS ONLY WITHIN JUNCTION BOXES, WIRING TROUGHS, OR OTHER NEC APPROVED ENCLOSURES. DO NOT SPLICE CONDUCTORS IN PANELBOARDS, SAFETY SWITCHES, OR MOTOR CONTROL ENCLOSURES. IDENTIFY EACH CONDUCTOR AS TO CIRCUIT CONNECTION IN ALL BOXES AND ENCLOSURES.
- TERMINATE STRANDED CONDUCTORS NO. 10 AWG AND SMALLER WITH CRIMP-TYPE LUG OR STUD. CRIMP TERMINAL SHALL BE THE CONFIGURATION TYPE SUITABLE FOR TERMINAL POINT.
- MC CABLE NOT ALLOWED.

2.3 BOXES

- BOXES SHALL BE HOT-DIPPED GALVANIZED STEEL SHEET METAL, UNLESS RUSTPROOF CAST METAL IS SPECIFIED OR REQUIRED BY THE NEC.
- DIMENSIONS OF PULL AND JUNCTION BOXES SHALL NOT BE LESS THAN THOSE REQUIRED BY THE NEC. NUMBER, SIZE, AND POSITION OF CONDUCTORS ENTERING THE BOX.
- ALL BOXES SHALL BE COMPLETELY ACCESSIBLE AND AS REQUIRED BY THE NEC.
- SUPPORT EVERY BOX FROM STRUCTURE.
- AFTER COMPLETION, USING AN INDELEIBLE WIDE TIP MARKER, INDICATE ON THE COVER OF EACH JUNCTION AND PULL BOX THE DESIGNATION OF THE CIRCUITS CONTAINED THEREIN, I.E., A-1,3,5. USE A BLACK MARKER FOR NORMAL POWER CIRCUITS.

2.4 CIRCUIT AND MOTOR DISCONNECTS

- PRODUCTS OF SQUARE D WHICH COMPLY WITH THESE SPECIFICATIONS ARE ACCEPTABLE.
- DISCONNECT SWITCHES SHALL BE HEAVY DUTY NONFUSIBLE SAFETY SWITCH TYPE, UNLESS FUSED TYPE IS INDICATED ON THE DRAWINGS, WITH THE NUMBER OF POLES REQUIRED TO DISCONNECT ALL UNGROUNDED CONDUCTORS SERVING THE EQUIPMENT.
 - FURNISH AN EQUIPMENT GROUNDING CONDUCTOR LUG BONDED TO THE SWITCH ENCLOSURE.
 - FURNISH NEMA TYPE ONE ENCLOSURE FOR ALL INTERIOR DRY LOCATIONS, AND NEMA TYPE 3R FOR ALL DAMP, WET, OR EXTERIOR LOCATIONS UNLESS OTHER TYPES ARE INDICATED ON THE DRAWINGS.
 - SWITCHES FOR AIR CONDITIONING EQUIPMENT SHALL BE FUSED IF REQUIRED BY THE EQUIPMENT MANUFACTURER. FUSE SIZE SHALL BE AS SHOWN ON THE EQUIPMENT NAMEPLATE.

C. SWITCHES SHALL HAVE THE FOLLOWING FEATURES:

- PERMANENT NAME PLATE INDICATING ALL RATINGS.
 - 250 VOLT RATING FOR 250 TO 600 VOLT SYSTEMS.
 - REJECTION CLIPS TO ACCEPT ONLY RK1 OR RK5 FUSES WHEN SWITCH IS FUSIBLE TYPE.
 - DISCONNECT SWITCHES FOR THREE PHASE MOTORS RATED TWO HORSEPOWER AND ABOVE SHALL BE THREE POLE NONFUSIBLE TYPE. DISCONNECT SWITCHES FOR THREE PHASE MOTORS RATED LESS THAN TWO HORSEPOWER SHALL BE THREE POLE MANUAL MOTOR STARTER SWITCHES WITHOUT OVERLOAD PROTECTION. DISCONNECTS FOR SINGLE PHASE MOTORS SHALL BE SINGLE OR TWO POLE HORSEPOWER RATED SWITCHES WITHOUT OVERLOAD PROTECTION.
 - LOCATE SWITCHES TO PROVIDE FULL ACCESSIBILITY AND WORKING CLEARANCES REQUIRED BY THE NEC. LOCATE ADJACENT TO EQUIPMENT SERVED UNLESS DRAWINGS INDICATE OTHERWISE. MOUNT SWITCH DIRECTLY TO STRUCTURE OR TO METAL CHANNEL DEPENDING UPON FIELD CONDITIONS. MOUNT SWITCH HANDLE BETWEEN 36" AND 60" ABOVE FINISHED FLOOR.
- 2.5 ELECTRICAL IDENTIFICATION**
- INSTALL ENGRAVED PLASTIC LAMINATE SIGN ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT, PROVIDE A SINGLE LINE OF TEXT, 1/2" HIGH LETTERING ON 1" HIGH SIGN (OR 2" HIGH SIGN IF 2 LINES REQUIRED). PROVIDE SIGNS FOR EACH UNIT OF THE FOLLOWING:
 - ELECTRICAL CABINETS AND ENCLOSURES.
 - MOTOR CONTROLLERS.
 - DISCONNECT SWITCHES.
 - PANELBOARDS

16400 - DISTRIBUTION EQUIPMENT

3.1 GROUNDING SYSTEMS

- EQUIPMENT GROUNDING SYSTEM SHALL BE ESTABLISHED WITH ELECTRICAL SERVICE. THE USE OF METALLIC RACEWAYS FOR EQUIPMENT GROUNDING IS NOT ACCEPTABLE, UNLESS INDICATED OTHERWISE. PROVIDE EQUIPMENT GROUND THE SAME SIZE AS PHASE CONDUCTORS.
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN INSULATED TYPE XHHW SIZED AS INDICATED ON THE DRAWINGS. WHERE SIZES ARE NOT INDICATED, GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250.
- GROUND ALL NONCURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM, I.E., WIRERAYS, EQUIPMENT ENCLOSURES AND FRAMES, JUNCTION AND OUTLET BOXES, MACHINE FRAMES, AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS.
- GROUNDING CONDUCTORS FOR BRANCH CIRCUITS ARE NOT SHOWN ON THE DRAWINGS; HOWEVER, GROUNDING CONDUCTORS SHALL BE PROVIDED IN ALL BRANCH CIRCUIT RACEWAYS AND FLEXIBLE CONDUIT. GROUNDING CONDUCTORS SHALL BE THE SAME AWG SIZE AS BRANCH CIRCUIT CONDUCTORS.

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GARDEN CITY GEORGIA
CITY HALL
ROOFTOP UNIT REPLACEMENT

Stamp

Sheet Title
LEGEND, GEN. & DEM. NOTES, ELEC. SPECS AND PART. ONE-LINE DIAGS.

Job No. 19051.00
Drawn L.C.
Checked W.P.
Date 06/05/2019 Sheet No. **E0.1**

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05-JUN-2019
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mpeavler

RELEASED FOR CONSTRUCTION

NOTES:

- DISCONNECT EXISTING & REUSE & RECONNECT IF CONNECTIONS ARE LONG ENOUGH TO CONNECT TO NEW UNIT OTHERWISE, DISCONNECT EXISTING FLEX AT CONTROL PANEL & CONDUIT STUB UP & REMOVE FLEX ONLY NOT CONDUCTORS. FURNISH & INSTALL 18" X 18" STAINLESS STEEL JUNCTION BOX ATTACHED TO CONDUIT STUB UP WITH VERTICAL STAINLESS STEEL CHANNEL SUPPORT ATTACHED TO ROOF AND JUNCTION BOX. SPLICE EXISTING CONDUCTORS TO NEW CONDUCTORS WITH COMPRESSION BUTT SPLICE WITH HEAT SHRINK SLEEVE AND ARC PROOF TAPE WRAP IN JB. INSTALL NEW CONDUCTORS IN RGC WITH AN 18" FLEX CONNECTION TO NEW CONTROL PANEL. LOCATE FACE OF JB TOWARDS REMOVABLE RTU PANELS FOR ACCESS. NEW CONDUCTORS & CONDUIT SHALL MATCH EXISTING IN SIZE.
- DISCONNECT, REINSTALL & RECONNECT EXISTING LIGHTNING PROTECTION SYSTEM AT RTU-2 TO CONFORM TO NFPA 780 & UL 96 & 96A. FURNISH AND INSTALL ALL MATERIALS REQUIRED FOR COMPLIANCE.



1 FLOOR PLAN - HVAC
E1.1 SCALE: 1/8" = 1'-0"



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GARDEN CITY GEORGIA

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Sheet Title
FLOOR PLAN - ELECTRICAL

Job No. 19051.00
Drawn L.C.
Checked W.P.
Date 06/05/2019 Sheet No. **E1.1**

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05-JUN-2019
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LEGEND & ABBREVIATIONS		
ABBREVIATION	SYMBOL	DESCRIPTION
	—	SINGLE LINE DUCT
	—~—	FLEXIBLE DUCT
	—▶—	DUCT TRANSITION
	⊕	ROUND
	→	DIRECTION OF FLOW
MLD/MD	⊠	MANUAL DAMPER
T'STAT	⊕	THERMOSTAT

ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A/C	ABOVE CEILING
ACU	AIR CONDITIONING UNIT
AD	DUCT ACCESS DOOR
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
DN	DOWN
DWGS	DRAWINGS
EA	EXHAUST AIR DUCT (EXISTING)
EF	EXHAUST FAN
ELEC	ELECTRIC
EXH	EXHAUST
EXIST	EXISTING
GPM	GALLONS PER MINUTE
HVAC	HEATING VENTILATING & AIR CONDITIONING
MAX	MAXIMUM
MIN	MINIMUM
TG	TRANSFER GRILLE
TYP	TYPICAL
VAV	VARIABLE AIR VOLUME UNIT
CTE	CONNECT TO EXISTING
RTU	ROOFTOP UNIT
PIU	POWERED INDUCTION UNIT (FAN POWERED BOX)

DESIGN CONDITIONS		
	WINTER DESIGN DB (°F)	SUMMER DESIGN DB (°F) / WB (°F)
DESIGN WEATHER CONDITIONS	27.1 ①	95.5 / 77.3 ①
INTERIOR DESIGN CONDITIONS	70.0	75.0 / 62.5

① PER ASHRAE WEATHER DATA

GENERAL NOTES:

- COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
- UNLESS OTHERWISE INDICATED, INSTALL ALL SPACE THERMOSTATS, HUMIDISTATS AND SENSORS 48 INCHES ABOVE FINISHED FLOOR.
- DUCT SIZES SHOWN ARE ACTUAL INSIDE DIMENSIONS.
- FLEXIBLE OR ROUND DUCT SHALL BE CONNECTED TO RECTANGULAR OR SQUARE DUCT WITH A SPIN-IN COLLAR WITH SCOOP AND DAMPER.
- INSTALL TURNING VANES IN ALL 45 AND 90 DEGREE MITERED ELBOWS.
- EXISTING CONDITIONS: THE DESIGN IS BASED ON BASIC FIELD INVESTIGATIONS AND EXISTING PLANS WHERE AVAILABLE. AS SUCH, THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS. IF ANY DEVIATIONS ARE DISCOVERED BETWEEN THE ACTUAL CONDITIONS AND THE CONDITIONS SHOWN ON THE DESIGN DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AS MODIFICATIONS MAY BE REQUIRED. CONTRACTOR SHALL ALSO VERIFY SPACE ABOVE CEILINGS AND IN MECHANICAL ROOMS PRIOR TO FABRICATION OF DUCTWORK.

ROOFTOP UNITS		
SYMBOL	RTU-1	
TYPE	VAV	
TOTAL CFM	8055	
MINIMUM CFM	3000	
MINIMUM OUTSIDE AIR CFM	1320	
EXTERNAL STATIC PRESSURE, IN. H ₂ O	2.5	
COOLING	TOTAL CAPACITY BTU/HR	330,320
	SENS. CAPACITY BTU/HR	236,510
	ENT. AIR DB, °F	78.3
	ENT. AIR WB, °F	64.9
	LVC. AIR DB, °F	51.0
	COND. AMBIENT TEMP., °F	95
HEATING	TOTAL CAPACITY KW	29
	NO. OF STAGES	SCR CONTROLS
LOCATION	ROOF	
ELECTRICAL CHARACTERISTICS	SEE ELEC DWGS	
REMARKS		

FAN POWERED BOXES

SYMBOL	PIU-2-1	PIU-2-2	PIU-2-3	PIU-2-4	PIU-2-5	PIU-2-6	PIU-2-7	PIU-2-8	PIU-2-9	PIU-2-10	PIU-2-11	PIU-2-12
TYPE	EXISTING											
AIR VALVE	MAXIMUM CFM	825	770	570	555	185	260	230	620	920	1540	380
	MINIMUM CFM	240	240	240	150	100	160	170	200	200	550	200
FAN CFM	700	650	380	380	100	100	100	400	680	400	200	400
LOCATION	SEE DRAWINGS											
REMARKS												

① ALL FAN POWERED BOXES ARE EXISTING PER ORIGINAL DRAWING. BOXES TO BE REPROGRAMMED TO NEW AIR FLOWS AS NOTED FOR PROPER AIR FLOW FROM NEW UNIT.

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 CITY HALL
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Sheet Title
LEGEND, ABBREVIATIONS AND SCHEDULES - HVAC

Job No. 19051.00
 Drawn SMP
 Checked SMP
 Date 06/05/2019 Sheet No. **MO.1**

