

| HOOD / EXHAUST FAN SCHEDULE | | | | | | | | | |
|-----------------------------|--------------|------------|-------------|-------------|-------------------|---------|-------------|---------|-------|
| | MANUFACTURER | MODEL | SIZE | CFM OFF/MAX | MISC. | LIGHTS | FIRE SYSTEM | WEIGHT | NOTES |
| H-1 | CAPTIVEAIRE | 6030ND-2-F | (9) 60"X30" | 0 / 1350 | 12"Ø EXHAUST C.XN | (6) LED | YES | 861 LBS | I-10 |
| EF-3 | CAPTIVEAIRE | DUSOHA | 1/2 HP | 0 / 1350 | DIRECT-DRIVE | - | - | 74 LBS | IJ2 |

NOTES:

- HOODS, FANS, AND ACCESSORIES SHALL BE MANUFACTURER-FURNISHED, CONTRACTOR-INSTALLED.
- HOOD SHALL BE 430 STAINLESS STEEL.
- HOOD SHALL BE FURNISHED WITH FAN INDICATOR AND LIGHTSWITCH MOUNTED ON FRONT PANEL.
- MANUFACTURER FURNISHED UL LISTED STAINLESS STEEL DUCT KIT AND ALL REQUIRED CONNECTION ACCESSORIES FOR FIELD-INSTALLATION FROM HOOD TO FAN.
- HOOD SHALL HAVE RIGHT AND LEFT QUARTER END PANELS, AND FRONT, LEFT, AND RIGHT STAINLESS STEEL FIELD WRAPPER.
- HOOD SHALL BE FURNISHED WITH UL 1046 LISTED GREASE FILTERS.
- HOOD SHALL BE FURNISHED WITH DUCT MOUNTED HEAT SENSORS AND AUTOMATIC FAN CONTROLS MOUNTED IN HOOD UTILITY CABINET.
- SYSTEM SHALL BE CAPABLE OF MODULATING FAN AS SCHEDULED, AND INTERLOCKED WITH BUILDING HVAC SYSTEM FOR BUILDING PRESSURIZATION.
- EQUIPMENT SHUT DOWN CONTACTORS ARE FACTORY-FURNISHED WITHIN HOOD UTILITY CABINET.
- HOOD SHALL BE LISTED AND LABELED FOR 0" CLEARANCE REQUIREMENTS TO COMBUSTIBLES.
- FAN SHALL BE FURNISHED WITH VENTED AND HINGED CURB, GREASE BOX, AND DISCONNECT.
- VARIABLE SPEED CONTROLLER PRE-MOUNTED IN FAN HOUSING. SPEED CONTROLLER SHALL BE MANUALLY ADJUSTED BY TEST AND BALANCE CONTRACTOR.

| GRILLE, REGISTER, & DIFFUSER SCHEDULE | | | | | | | |
|---------------------------------------|--------------|-------|---------|-----------|-----------|--------------------------------------------|-------|
| | MANUFACTURER | MODEL | SERVICE | FACE SIZE | NECK SIZE | DESCRIPTION | NOTES |
| RI | TITUS | 350RL | EXHAUST | 8" X 8" | SEE PLAN | 3/4" 35° BLADE TRANSFER GRILLE, ALL WHITE. | I2 |
| SI | TITUS | 300FS | SUPPLY | 22" X 22" | SEE PLAN | DOUBLE DEFLECTION GRILLE, ALL WHITE. | I3 |

NOTES:

- PROVIDE TRIM RINGS FOR ALL DIFFUSERS OR GRILLES IN GYP. BOARD CEILING.
- PROVIDE PLASTER FRAME IN HARD CEILING.
- PROVIDE BORDER TYPE 1 WITH NO SCREEN HOLES.

GENERAL NOTES (APPLY TO ALL THE ABOVE):

- GRILLES, REGISTERS, AND DIFFUSERS SHALL BE CONTRACTOR-FURNISHED, CONTRACTOR-INSTALLED.
- MAXIMUM NG. OF 30 FOR ALL GRILLES, REGISTERS, AND DIFFUSERS.
- FOUR-WAY THROW PATTERN FOR SQUARE DIFFUSERS UNLESS SHOWN OTHERWISE.
- PROVIDE SQUARE-TO-ROUND ADAPTER ON ALL GRILLES AND DIFFUSERS AS REQUIRED PER THE DRAWINGS.
- PROVIDE NON-ASBESTOS THERMAL INSULATING BLANKETS WITH VAPOR BARRIER FOR ALL SUPPLY DIFFUSERS AND RETURN GRILLES.
- RE: THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- RE: DRAWINGS FOR FURTHER INSTALLATION AND APPLICATION DETAILS.

| EXHAUST FAN CONTROL SETTINGS | | | | RTU 1, 2, 3 O/A CONTROL SETTINGS | | | |
|------------------------------|-----------------|---------------------------|-----------------------|----------------------------------|-----------------|--------------------------------|--|
| CONDITION | EXHAUST FAN CFM | PERCENTAGE OF MAX EXHAUST | CONTROL VOLTAGE Vdc * | CONTROL VOLTAGE Vdc * | OUTSIDE AIR CFM | O/A DAMPER POSITION ** | |
| HOOD OFF | 0 | 0.0% | 0 | 0 | 420 | 0 / (FAN% X SUPPLY AIRFLOW) | |
| HOOD ON | 1350 | 100.0% | 10 | 5 | 810 | 1350 / (FAN% X SUPPLY AIRFLOW) | |

* CONTROL VOLTAGE SIGNAL RECEIVED FROM HOOD CONTROL PANEL ** O/A CFM / (SUPPLY FAN% X SUPPLY AIRFLOW)

| AIR BALANCE & PRESSURIZATION SCHEDULE | | | | |
|---------------------------------------|--------|----------------|-----------------|----------------|
| | SA CFM | HOOD ON RA CFM | HOOD OFF OA CFM | HOOD ON OA CFM |
| RT-1 OUTSIDE AIR | 4200 | 3400 | 350 | 800 |
| RT-2 OUTSIDE AIR | 4200 | 3400 | 350 | 800 |
| RT-3 OUTSIDE AIR | 4200 | 3400 | 350 | 800 |
| EF-1 WOMENS EXHAUST | 0 | 0 | -225 | -225 |
| EF-2 MENS EXHAUST | 0 | 0 | -525 | -525 |
| EF-3 KITCHEN EXHAUST HOOD | 0 | 0 | 0 | -1350 |
| | 12600 | 10200 | 300 | 300 |

NEW SUPPLY DIFFUSER WITH CFM AMOUNT, NEW RETURN OR EXHAUST GRILLE WITH TYPE AND CFM AMOUNT.

RELOCATED SUPPLY DIFFUSER WITH CFM AMOUNT, RELOCATED RETURN OR EXHAUST GRILLE WITH TYPE AND CFM AMOUNT.

EXISTING SUPPLY DIFFUSER WITH CFM AMOUNT, EXISTING RETURN GRILLE WITH CFM AMOUNT.

REMOVED SUPPLY DIFFUSER WITH CFM AMOUNT, REMOVED RETURN GRILLE WITH CFM AMOUNT.

RECTANGULAR DUCTWORK WIDTH INCHES X DEPTH INCHES

TAKE-OFF WITH GASKET AND DAMPER 45° OR 90° AS SHOWN ON PLAN FLEXDUCT RINGOUT

ELEWON WITH TURNING VANES

ROOF-MOUNTED EXHAUST FAN

ROOFTOP UNIT (HIDDEN OUTLINE REPRESENTS SERVICE CLEARANCE)

TEMPERATURE SENSOR

HUMIDITY SENSOR

DUCT SMOKE DETECTOR

INTERIOR ELEVATION TAG

CONNECT TO EXISTING

DISCONNECT FROM EXISTING

HOOD SUPPRESSION PUSH STATION

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QuikTrip No. 1099

1195 RIVERVIEW ROAD
ROCK HILL, SOUTH CAROLINA

G1 MECHANICAL SCHEDULES

MECHANICAL SYSTEM SECTION 230000

THE WORK INCLUDES INSTALLATION OF THE HVAC SYSTEM AND PROVIDING NEW DUCTWORK, DIFFUSERS AND GRILLES, INSULATION, CONTROLS, AND EQUIPMENT NECESSARY FOR A COMPLETE FUNCTIONING SYSTEM. HVAC SYSTEM INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) UNITS.
SUPPLY AND RETURN DUCTWORK SYSTEM WITH GRILLES, DIFFUSERS, FILTERS, AND DAMPERS.
CONTROL SYSTEM INCLUDING LOW VOLTAGE WIRING AND CONDUIT.
DUCT, PIPING, AND EQUIPMENT INSULATION, WHERE INDICATED HEREIN.
ROOF CURBS AND FLASHING OF ROOF PENETRATIONS FOR EQUIPMENT NOTED.

EQUIPMENT INDICATED ON THE DRAWINGS OR AS REQUIRED FOR A COMPLETE INSTALLATION, SUCH AS ROOFTOP UNITS, DUCTWORK, HOODS, EXHAUST FANS, SUPPLY AND RETURN DIFFUSERS, ETC., SHALL BE PROVIDED WITHIN THE SCOPE OF WORK OF THIS SECTION.

COMPLY WITH ALL LAWS APPLYING TO MECHANICAL INSTALLATIONS IN EFFECT. ALL MATERIALS USED SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS ESTABLISHED BY LOCAL CODES AND SMACNA.

WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.

DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS AS REQUIRED. PROVIDE ALL DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE SYSTEM FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED. THE WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES OR ORDINANCES AND SUBJECT TO INSPECTION.

COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITES.

CONTRACTOR SHALL INSTALL ONE SET OF NEW FILTERS AT THE END OF CONSTRUCTION, WHEN QUIKTRIP TAKES OCCUPANCY OF THE BUILDING.

SHEET METAL DUCTWORK: SHEET METAL FABRICATED AND INSTALLED TO CONFORM TO THE 2005 EDITION OF "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" OF THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION. SHEET METAL SHALL BE GALVANIZED SHEET STEEL OF LOCK-FORMING QUALITY, ASTM A-525, UNLESS OTHERWISE NOTED. DUCT DIMENSIONS ON DRAWINGS ARE INTERNAL AIRWAY DIMENSIONS. DUCT REINFORCEMENT SHALL BE SUITABLE FOR 1" AND -1" INCH STATIC PRESSURE.

ALL UNISTRUT USED FOR SUPPORT SHALL BE PRIMED STEEL SHOP PAINTED. CONNECTIONS TO WALLS OR FLOORS SHALL BE AIRTIGHT WITH ANGLE IRON AND CAULKING. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIRTIGHT WITH UNITED SHEET METAL "DUCT SEALER" TO SMACNA CLASS 'B'. PROVIDE TURNING VANES AT ALL ELBOWS OR OFFSETS EXCEEDING 45°.

TRAPEZE DUCT HANGERS: MINIMUM 1"X2"X1/8 18 GAUGE CHANNELS WITH 1" X18 GAUGE STRAPS TO STRUCTURAL SUPPORT ABOVE.

DUCT WRAP/AS-J INSULATION (ON ALL RIGID ROUND AND RECTANGULAR SUPPLY AIR DUCTWORK): PROVIDE 2" THICK (MIN R-6) FIBERGLASS AS-J DUCT WRAP WITH VAPOR SEAL ON ALL RIGID ROUND DUCTWORK ABOVE THE CEILING. CONFORM TO SPEC ASTM C 1290.

RIGID ROUND GALVANIZED DUCT SHALL BE SPIRAL OR SNAP LOCK GALVANIZED SHEET METAL COMPLYING WITH SMACNA.

FLEX DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH 1" THICK 1 PGF (MIN R-5) FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR BARRIER. FLEX DUCT SHALL MEET NFPA 40A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR 2" W.G. PRESSURE AND 0 TO 250 DEGREE FAHRENHEIT. PROVIDE STAINLESS STEEL ADJUSTABLE CLAMPING DEVICES, SCREW OPERATED. USE TWIST-LOCK CONICAL TAP COLLARS AT CONNECTIONS INTO SHEET METAL DUCTWORK. DO NOT EXCEED SIX (6) FEET IN LENGTH FOR ANY FLEX DUCT. REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS. FLEXIBLE DUCTWORK SHALL BE SERIES 70 BY ATCO, OR EQUIVALENT.

ROUND BALANCING DAMPERS: FABRICATED OF SAME MATERIAL AS DUCT, TWO METAL GAUGES HEAVIER THAN DUCT. MOUNT ON 3/8" SQUARE ROD WITH SAM SLOT POSITION INDICATOR. PIVOT BEARING, LOCKING POSITION REGULATOR, YOUNG REGULATOR CO., SERIES 443. REGULATOR SHALL BE POSITIONED WITH SHEET METAL BRACKET BEYOND DUCT COVERING.

CEILING DIFFUSERS/RETURNS: PROVIDE SUPPLY DIFFUSERS AND DAMPER IN SIZES, CAPACITIES, MATERIALS, AND PATTERN INDICATED ON THE DRAWINGS.

ACCESS PANELS: PROVIDE HINGED ACCESS PANELS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS IN INSULATED DUCTWORK.

AUTOMATIC TEMPERATURE CONTROL: ENTIRE BUILDING IS SERVED BY A BUILDING ENERGY MANAGEMENT SYSTEM REFERRED TO AS 'EMS'. SYSTEM WILL INCLUDE THERMOSTATIC AND HUMIDITY CONTROL FOR HVAC ROOFTOP UNITS.

HVAC TEST AND BALANCING AND CRITERIA:
HVAC TEST AND BALANCING AND SHALL BE PERFORMED BY A CERTIFIED BALANCING CONTRACTOR WHO IS AN INDEPENDENT CONTRACTOR FROM THE HVAC INSTALLING CONTRACTOR. A COMPLETED AND CERTIFIED TEST & BALANCE REPORT SHALL BE PRESENTED TO THE OWNER'S CONSTRUCTION MANAGER PRIOR TO REQUEST FOR FINAL PAYMENT.

CONTRACTOR SHALL FIRST VERIFY THAT THE SYSTEM MATCHES THE CONSTRUCTION DOCUMENTS FOR LOCATIONS OF ALL DIFFUSERS, GRILLES, ROOFTOP UNITS, EXHAUST FAN, THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, SMOKE DETECTORS, TEST UNITS, AND ANNUNCIATORS, MAKE VISUAL OBSERVATIONS OF INSTALLATION SUCH AS ROOFTOP UNITS INSTALLED LEVEL AND COMPLETE, CLEAN FILTERS, GOOD REFRIGERANT CHARGE, ADEQUATE CONDENSATE DRAINAGE, ETC. VERIFY THAT ALL DUCTS ARE CONNECTED (NONE HAVE COME LOOSE AND ARE BLOWING AIR INTO THE PLENUM), NO KINKED FLEX-DUCT, ALL DUCTS WELL INSULATED AND NO GAPS EXIST THAT COULD CREATE A SOURCE FOR CONDENSATION, PARTICULARLY ON TOP OF DIFFUSERS. INDICATE DIRECTION THAT STOREFRONT FACES. (PROVIDE A NORTH ARROW ON PLAN). ANY DISCREPANCIES SHALL BE MARKED ON A DRAWING TO BE PRESENTED TO THE OWNER'S REPRESENTATIVE ALONG WITH THE FINAL REPORT.

MINOR REPAIR WORK, SUCH AS LOOSE FLEX CONNECTIONS, REPLACEMENT BELTS, ETC., SHALL BE PERFORMED BY THE TEST AND BALANCE CONTRACTOR PRIOR TO AIR BALANCING. MAJOR REPAIR WORK SHALL BE REPORTED TO THE QUIKTRIP REPRESENTATIVE AND NEGOTIATED PRIOR TO WORK BEING DONE. INSTALL ALL NEW FILTERS.

ADJUST EACH PIECE OF HVAC EQUIPMENT AS REQUIRED TO ASSURE PROPER BALANCE AND OPERATION. FOLLOW NEBS AND ASHRAE STANDARDS. BALANCE ALL SYSTEMS TO WITHIN 5% OF AIR VOLUMES INDICATED OR PROPORTIONALLY PER THE DRAWING TO ACHIEVE A SLIGHTLY POSITIVE BUILDING PRESSURIZATION OF +0.05%.

TEST AND VERIFY PROPER ECONOMIZER AND GRAVITY RELIEF VENT OPERATION. CHECK RESTROOM PRESSURIZATION AND VERIFY THAT AN ADEQUATE TRANSFER AIR PATH EXISTS, ELIMINATE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF ALL CONTROLS, MAINTENANCE OF TEMPERATURE AND HUMIDITY WHERE APPLICABLE, AND OVERALL OPERATION. FINAL BALANCED POSITIONS SHALL BE MARKED ON EACH DAMPER WITH A PERMANENT MARKER.

AUTOMATIC TEMPERATURE & HUMIDITY CONTROL: EACH ROOFTOP UNIT SHALL BE CONTROLLED BY THE BUILDING ENERGY MANAGEMENT SYSTEM BY OTHERS. EMS LOCATED IN THE LOW-VOLTAGE CABINET, TEMPERATURE AND/OR HUMIDITY SENSORS IN THE SPACE. SET OUTSIDE AIR DAMPER TO MINIMUM POSITION DURING OCCUPIED MODE. ALL PROGRAMMING SHALL BE THROUGH THE EMS BY OTHERS. VERIFY THAT ROOFTOP UNITS EQUIPPED WITH DEHUMIDIFICATION (HOT GAS REHEAT) ARE WIRED, FUNCTIONAL, AND SET. ALL WIRING SHALL BE IN CONDUIT.

CONTRACTOR SHALL PRESENT A FINAL DRAWING AND CERTIFIED BALANCE REPORT TO THE QT REPRESENTATIVE THAT CONTAINS ALL ACTUAL DIFFUSER AND GRILLE LOCATIONS WITH AIR QUANTITIES SHOWN FOR EACH DEVICE, EXHAUST AND OUTSIDE AIR QUANTITIES, SUPPLY AIR TEMPERATURE, FAN RPM, MOTOR CURRENTS, MAIN DUCT STATIC PRESSURE, AND DUCT TEMPERATURES, INDOOR/OUTDOOR PRESSURE DIFFERENTIAL, AND ROOFTOP UNIT(S) MAKE AND MODEL NUMBER.

CONTRACTOR TO OBTAIN COPY OF 'QT TEST AND BALANCE REPORT FORM' FROM QT REP FOR REPORTING PURPOSES.

G13 MECHANICAL SYMBOLS LEGEND

- REFER TO THE SPECIFICATIONS, DETAILS, AND SCHEDULES FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON THE PLAN.
- ALL TEMPERATURE CONTROL WIRING SHALL BE TAPPAN OR BELDEN CABLE BY THE EMS INSTALLER AND SHALL MEET NATIONAL ELECTRIC CODE REQUIREMENTS. SEE ROOFTOP UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS. CONCEAL ALL WIRING IN HALL CAVITIES OR ABOVE CEILING.
- MECHANICAL CONTRACTOR SHALL REMOVE AND REPLACE FILTERS FOR ALL EXISTING ROOFTOP UNITS AT THE END OF PROJECT CONSTRUCTION.
- CONTRACTOR SHALL FIELD REVIEW AND VERIFY EXISTING CONDITIONS AS APPLICABLE AND COORDINATE WITH OTHER TRADES.
- TRANSITION AS REQUIRED FROM BRANCH DUCT TO DIFFUSER NECK. COORDINATE BETWEEN PLANS AND SCHEDULES.
- DUCTWORK DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.
- FLEXIBLE DUCTWORK SHALL BE LIMITED TO NO MORE THAN 6' IN LENGTH.
- HOLD TOP OF DUCTWORK INSULATION TO UNDERSIDE OF STRUCTURE WHEREVER POSSIBLE.
- ALL BRANCH DUCTS SHALL HAVE BALANCING DAMPERS INSTALLED AS INDICATED ON DRAWINGS. HANDLE SHALL BE BOTH ACCESSIBLE AND CAPABLE OF OPENING AND CLOSING FULLY. REFER TO DIFFUSER CONNECTION DETAIL.
- FINAL LOCATION OF TEMPERATURE CONTROLS SHALL BE FIELD-VERIFIED BY OWNER AT JOB SITE.
- MECHANICAL CONTRACTOR SHALL CLEAN ALL CONDENSERS AFTER CONSTRUCTION HAS BEEN COMPLETED.
- ALL DUCTWORK SHALL RECEIVE DUCT WRAP INSULATION PER SPECIFICATIONS. LINED DUCTWORK IS NOT ACCEPTABLE.

PROTOTYPE Fryer
DIVISION Carolina
VERSION GEN3
DATE 07-11-2025

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SHEET TITLE:
MECHANICAL SCHEDULES, SPECIFICATIONS, AND SYMBOLS

SHEET NUMBER:
M601

A1 MECHANICAL DUCTWORK SPECIFICATIONS

A13 GENERAL NOTES