

SPECIFICATIONS

1. Follow all local and state codes/ordinances and general conditions of contract. Pay all required fees and obtain all required permits. Submit these plans to building department for plan review. Implement all code review required

2. Equipment, insulation and controls shall be provided as required by the adopted energy code. 3. Visit site to verify existing conditions prior to ordering equipment, providing price quote and/or fabricating ductwork or piping. Change orders will not be considered for non-compliance. 4. Contractor shall purchase, receive, uncrate, assemble, insure, and install in conformance to manufacturer's recommendations all Mechanical equipment.

5. Mechanical drawings are schematic and not to be scaled. Refer to architectural, certified drawings, and site measurements for all dimensions prior to duct and piping fabrication. 6. As-built scale drawings shall be provided by contractor and submitted to division 15 Engineer at completion showing all piping, duct, and equipment changes.

7. Contractor shall check shop drawings for 100% compliance with contract documents. Submit four (4) copies to division 15 engineer for review prior to ordering. 8. Base bid on specified equipment as shown on plans and in specifications. Substitutions will be processed as change-orders after bidding with all electrical, building alterations, flue requirements and dollar amounts included. 9. Extra costs or change orders allowed only if approved in writing by engineer with dollar amount prior to ordering equipment or fabricating ductwork or piping. No extensions of completion time unless agreed upon by all parties. 10. Provide 2 operating manuals to owner and engineer for all systems and equipment including manufacturer's

maintenance manuals. Include lubrication, filter types and sizes, starting and stopping procedures. List

contractor's telephone numbers. 11. Supports and anchors shall be provided for Mechanical work. No chain, tape, or wire. 12. Sleeves shall be provided for all pipe and ducts thru walls, floors, and ceilings.

13. Conceal all work in finished areas. 14. Cut and patch to match adjacent areas. No structural member shall be cut or notched. 15. Electrical: confirm voltage, phase, and ampacity with electrical contractor prior to ordering equipment. All 24v controls including interlock wiring for Mechanical equipment by division 15 contractor. Provide magnetic starters for all 3-phase motors with protection on all three leads. Electrical equipment to automatically restart after power failure. All wire in conduit per NEC latest edition. 16. Vibration isolation shall be provided for all equipment. Provide UL listed flexible duct connections on all fans

17. Temperature control shall be by equipment manufacturer 24v low voltage. Provide all transformers, relays, thermostats, min 18 ga. low voltage wiring in conduit per NEC for a complete operating system. 18. Provide condensate pumps as required where gravity drain condensate is not possible. Provide condensate acid neutralization for all condensate drains to sanitary sewer. 19. Ductwork shall be galvanized sheet metal with 45 max reducing fitting, 20 max increasing fittings. All

construction and installation shall be per SMACNA and code standards. 20. Grease duct shall be listed factory duct, or field fabricated to code. Field fabricated grease duct shall be welded 10 gauge steel and shall be fully wrapped with city approved 3" fire wrap. All grease duct shall have cleanouts at each change of direction and each building level penetrated by duct run. All horizontal grease ducts less than 75 feet developed length shall slope at 1/4" per linear foot back to hood, or to an approved grease reservoir/pollution control unit/ grease exhaust fan. Horizontal grease ducts in excess of 75 feet developed length shall slope at 1" per linear

21. All environmental air exhaust (not considered hazardous or noxious) shall discharge a minimum of 3' from property lines and operable openings, and a minimum of 10' from mechanical air intakes. Product conveying exhaust outlets shall discharge a minimum of 10' from property lines, operable openings, and above adjoining grade. Product conveying exhaust outlets shall discharge a minimum of 3' from exterior walls and roofs. 22. Duct insulation for all rectangular HVAC supply/return ducts shall be internally lined. Duct insulation for all round/ovular spiral HVAC supply/return ducts that are located in unconditioned spaces shall be internally lined. Liner shall be Schuller Permacote 1.5" thick ul-181 class-1 EPA registered anti-microbial fiberglass liner attached with stic-klips 12" oc each way and 100% coverage of flame proof adhesive. Duct exposed to weather to be insulated with liner at 3" thickness. Increase duct interior dimension to allow for liner. Elbows for rectangular duct shall be provided multi-blade turning vanes or 1.5 centerline radius. Round ducts shall be externally wrapped with 1.5" thick Halstead insul-tube ul-181 class-1 covered fiberglass strapped and taped in place. Exposed spiral duct is not to be insulated on exterior. Flexible ductwork shall be limited to 6ft or max allowed by local code. Flexible ductwork shall be provided with UL listed and plenum rated Thermaflex FlexFlow elbow supports at

23. All return air plenum materials shall be plenum rated or shall be enclosed in a plenum rated enclosure. 24. Seal duct joints and seams with 3-m hard-cast or equivalent per code. Spiral duct joints shall be sealed using approved connectors and 100%silicone sealant

25. Provide balancing dampers in accessible locations as required. Test and air balance all systems to attain quantities shown on plans. Air CFM flow rates shall be adjusted as required based on site altitude. Balance with dampers at conical spin-in fittings at main trunk with registers/diffusers wide open or provide dampers at registers/diffusers as required due to inaccessibility of manual balancing dampers. Motors to draw 95% max nameplate amps. Tabulate all motors, grilles, registers, and diffusers with full type-written test and balance report submitted to engineer for approval prior to final payment. Balance airflow within 5% of noted CFM 26. Fire dampers and fire smoke dampers where noted on plan or where required; Provide Greenheck or equal listed damper approved for application. No dampers shall be installed in hazardous, range, or grease exhaust ducts. Ducts 4" or less in diameter penetrating fire rated assemblies do not require fire dampers, provide approved fire caulking at penetrations. All fire/smoke dampers shall be 120v rated and wired by electrical 27. Gas piping shall be schedule 40 black iron with Viega MegaPress-connect fittings complying with ANSI

contractor and shall be interlocked with fire protection controls. Provide remote test stations as required by code. LC-4/CSA6.32-12 inside building and from meter to building where not buried. Verify gas line routing with architect and building department prior to installation. Costs involved in gas service shall be included in bid. Provide line size valve immediately prior to entering building. Provide equipment regulators to suit pressure supplied and gas equipment requirements. Gas piping on roof shall run on B-Line C-Port supports per code. Paint all exposed gas piping per code. Prior to each piece of equipment, provide gas valve, union, dirt leg, all accessible per code. 28. Requests for information (RFI's) from contractor shall include at least one proposed solution which complies with the intent of these contract documents.

29. Fire caulk fire rated wall/ceiling/floor penetrations with HILTI or equal listed fire caulk. 30. Guarantee all labor and new equipment per this contract for one year from the date of acceptance by owner.

| SYMBOL DESCRIPTION AIR FLOW DIRECTION AIR FLOW DIRECTION CONNECT NEW TO EXISTING CONNECT NEW TO EXISTING RECTANGULA AIR DUCT UP/ ROUND NECK ROUND NECK ROUND DIFFUSER SLOT DIFFUSER SLOT DIFFUSER SLOT DIFFUSER CONCAL SPIN-IN FITTING FOR MED PRESS DUCT CONCAL SPIN-IN FITTING FOR LOW PRESS DUCT TYPICAL BRAIL AIR DUCT UP/ TYPICAL BRAIL TYPICAL BRAIL 45° TAKE-OFF CONCAL SPIN-IN FITTING FOR LOW PRESS DUCT TYPICAL ROUND STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT FLEXIBLE DUCT MANUAL VOLUME DAMPER W/LOCKING QUADRANT M MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
|--|-------------------|
| CONNECT NEW TO EXISTING CONNECT NEW TO EXISTING 24X24 DIFFUSER ROUND NECK ROUND NECK ROUND DIFFUSER SUAZA RETURN GRILL 24X24 RETURN GRILL 24X24 RETURN GRILL CONICAL SPIN-IN FITTING FOR MED PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | ΓΙΟΝ |
| EXISTING 24X24 DIFFUSER ROUND NECK ROUND DIFFUSER SOUARE NECK ROUND DIFFUSER SLOT DIFFUSER SLOT DIFFUSER SLOT DIFFUSER 24X24 RETURN GRILL 24X12 RETURN GRILL CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT FLEXIBLE DUCT MANUAL VOLUME DAMPER WITH DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
| 24X24 DIFFUSER ROUND NECK ROUND NECK ROUND NECK ROUND DIFFUSER SQUARE NECK ROUND DIFFUSER RECTANGULA AIR DUCT UP/ SLOT DIFFUSER RECTANGULA AIR DUCT UP/ AIR DUCT UP/ RECTANGULA AIR DUCT UP/ AIR DUCT UP/ AIR DUCT UP/ TYPICAL BRAI 45° TAKE-OFF CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT FLEXIBLE DUCT MANUAL VOLUME DAMPER WILOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
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| SLOT DIFFUSER SLOT DIFFUSER RECTANGULA AIR DUCT UP/ 24X24 RETURN GRILL 24X12 RETURN GRILL TYPICAL BRAI 45° TAKE-OFF CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT WITH DAMPER MANUAL VOLUME DAMPER MICK SIZE IN INCHES | |
| 24X24 RETURN GRILL RECTANGULA AIR DUCT UP/ 24X12 RETURN GRILL TYPICAL BRAI 45° TAKE-OFF CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT TYPICAL RECTANGULA DUCT TRANSI CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT TYPICAL RADI RECTANGULA DUCT FLEXIBLE DUCT DUCT TRANSI MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
| 24X12 RETURN GRILL TYPICAL BRAI 45° TAKE-OFF CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT TYPICAL REC' DUCT ELBOW WITH TURNIN TYPICAL RADI RECTANGULA DUCT FLEXIBLE DUCT MANUAL VOLUME DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
| TYPICAL BRAI 45° TAKE-OFF CONICAL SPIN-IN FITTING FOR MED PRESS DUCT STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT WITH DAMPER TYPICAL REC DUCT ELBOW WITH TURNIN TYPICAL RADI RECTANGULA DUCT DUCT TRANSI MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | R EXHAUST DOWN |
| STRAIGHT SPIN-IN FITTING FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT WITH DAMPER TYPICAL RADI RECTANGULA DUCT DUCT TRANSI MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | NCH DUCT |
| FOR LOW PRESS DUCT CONICAL SPIN-IN FITTING FOR LOW PRESS DUCT WITH DAMPER TYPICAL RADIR RECTANGULA DUCT DUCT TRANSI MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | TANGULAR |
| WITH DAMPER DUCT FLEXIBLE DUCT MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | G VANES |
| MANUAL VOLUME DAMPER W/LOCKING QUADRANT MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
| M MOTORIZED DAMPER AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | TION |
| M MOTORIZED DAMPER AIR DUCT OP AIR DUCT OP AIR DUCT OP NECK SIZE IN INCHES | |
| NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES | |
| (' ~) | |
| DEVICE 24X24 CFM SIZE | |

GAS FIRED ROOFTOP HVAC UNIT SCHEDULE

| | | | | | | | | | | | , , , , , , | / (O O (11) O | | | | | | | | |
|-----------|--------------|----------|------------------------|--------------|--------------------------|----------------|------|--------------|-----------|---------------|-------------|-----------------------------------|-------|----------|----------|------|-----------|----------------|------------------------------------|--|
| PLAN | | | 95F A | | OLING DATA 0F DB RET, | | RET | HEATIN | G DATA | | FAN D | ATA | | ELECTRIC | CAL DATA | | | | | |
| CODE RTU# | MANUFACTURER | MODEL # | NOMINAL ARI TONS | MBH TOTAL | MBH SENSIBLE | EER (SEER2) | IEER | MBH INPUT | AFUE % | CFM AT ALT | E.S.P. | OSA INTAKE MIN. SETTING CFM | VOLTS | PHASE | MCA | MOCP | WT. (LBS) | AREA SERVED | DIMENSIONS INC. CURB (LxWxH) | NOTES |
| RTU 1 | TRANE | YHC092F4 | 7.5 | 89.0 | 62.4 | 12.6 | 14.5 | 200 | 80 | 3,000 | 1.1 | REFER TO OSA CALCS | 460 | 3 | 20.0 | 25 | 1400 | SEE PLANS | 89"x54"x65" | 1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25 |
| (RTU) | TRANE | YHC036E4 | 3.0 | 37.1 | 25.1 | (15.0) | - | 120 | 80 | 1,200 | 0.94 | REFER TO OSA CALCS | 460 | 3 | 12.0 | 15 | 850 | SEE PLANS | 70"x45"x55" | 1, 2, 3, 5, 6, 8, 9, 10, 12, 15, 16, 17, 18, 22, 23, 24, 25 |

1. EQUIPMENT SCHEDULE BASED ON TRANE. ACCEPTABLE ALTERNATES INCLUDE CARRIER, DAIKIN, LENNOX, TEMPMASTER, ARMSTRONG, AAON, OR YORK.

2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.

3. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTOR. 4. MERV-8 FILTERS.

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CODE

5. MERV-13 FILTERS.

7. PROVIDE WITH DRY BULB ECONOMIZER. AIR SIDE ECONOMIZER SHALL MODULATE THE OUTDOOR AIR DAMPER UP TO OPEN AS THE FIRST STAGE OF COOLING WHEN OUTDOOR AIR TEMPERATURE IS BELOW 65F. PROVIDE BAROMETRIC RELIEF OR POWERED EXHAUST FOR RELIEF DURING ECONOMIZER MODE. SET MINIMUM POSITION FOR OSA CFM SHOWN. FAULT DETECTION AND DIAGNOSTICS REQUIRED.

8. PROVIDE WITH COMPARATIVE ENTHALPY ECONOMIZER. AIR SIDE ECONOMIZER SHALL MODULATE THE OUTDOOR AIR DAMPER UP TO 100% OPEN AS THE FIRST STAGE OF COOLING WHEN OUTDOOR AIR ENTHALPY IS LESS THAN RETURN AIR ENTHALPY. PROVIDE BAROMETRIC RELIEF OR POWERED EXHAUST FOR RELIEF DURING ECONOMIZER MODE. SET MINIMUM POSITION FOR OSA CFM SHOWN. FAULT DETECTION AND DIAGNOSTICS REQUIRED.

9. BURNER SHALL BE DESIGNED TO FIRE NATURAL GAS, 6"-14" W.C.

10. STAINLESS STEEL HEAT EXCHANGER. 11. HIGH ALTITUDE KIT

12. COMPRESSOR: ANTI-SHORTCYCLE, HIGH/LOW PRESSURE SWITCHES, CRANKCASE HEATER. 13. HOT GAS BYPASS. HOT GAS BYPASS CAPACITY SHALL NOT EXCEED 50% RATED CAPACITY.

15. HAIL GUARD ON CONDENSER COILS

16. 18" HIGH FACTORY ROOF CURB. FLASH INTO ROOF.

17. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT. 18. SPACE CO2 SENSORS INSTALLED BY MC. REFER TO PLANS FOR QUANTITY AND LOCATION. REFER TO DEMAND BASED VENTILATION CONTROL FOR DETAIL. 19. IONIZED SMOKE DETECTOR AND REMOTE SENSOR FURNISHED AND INSTALLED IN RETURN DUCT BY MC. INTERLOCK WITH FIRE ALARM SYSTEM.

20. PROVIDE WITH BACNET CONTROL BOARD WITH FAULT DETECTION OUTPUT. 21. POWERED CONVENIENCE OUTLET AND STEP DOWN TRANSFORMER BY MANUFACTURER.

23. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING. 24. DESIGN LEAVING AIR TEMPERATURES: 55F DB COOLING, 95F DB HEATING.

25. AIRFLOW MONITORING (SA, RA, OSA).

22. FACTORY MOUNTED DISCONNECT

| | | | | | · | | GAS FI | RED SP | ACE HE | EATER | SCHED | ULE | | |
|--------------|---------|----------------|----------------------|-----------------|---------------|---------------|-----------------------------------|--------|---------|----------|-------|-----------|----------------|--|
| | | ŀ | HEATING [| DATA | | FAN DA | ГА | | ELECTRI | CAL DATA | | | | |
| MANUFACTURER | MODEL # | TYPE AT ALT | INPUT MBH @ SL | EFFICIENCY % | CFM AT ALT | E.S.P. "WC | OSA INTAKE MIN. SETTING CFM | | PHASE | FLA | HP | WT. (LBS) | AREA SERVED | NOTES |
| CAMBRIDGE | S1850 | DIRECT | 1850 | 92 | 8,565 | 0.19 | 100% | 460 | 3 | 11.1 | 7.5 | 2200 | 100 - HANGAR | 1, 2, 3, 4, 5, 6, 7, 9, 11, 16, 17, 18, 19, 20, 21 |

EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS. DIRECT DRIVE FAN MOTOR.

7. STAINLESS STEEL HEAT EXCHANGER.

MANUFACTURER

GREENHECK

GREENHECK

3. 18" FACTORY ROOF CURB. FLASH INTO ROOF.

5. 120V MOTORIZED BACKDRAFT DAMPER. FAIL OPEN.

MANUFACTURER

3. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTOR.

4. SOUND ATTENUATING BLANKET OR EQUAL ON COMPRESSORS.

6. ECM OR SPEED CONTROLLER, PROVIDE WITH VFD AS REQUIRE

4. INTEGRAL GRAVITY BACKDRAFT DAMPER.

7. FACTORY VIBRATION ISOLATORS.

8. 1/4" GALVANIZED MESH BIRD SCREEN.

CODE

4. MERV-8 FILTERS.

AIRFLOW PROVING CONTACT. 4. FILTER SECTION. MERV-8 FILTERS.

6. BURNER SHALL BE DESIGNED TO FIRE NATURAL GAS, 6"-14" W.C.

5. 7 DAY PROGRAMMABLE SPACE THERMOSTAT. SET FAN TO ON DURING OCCUPIED HOURS. GAS HEATING SECTION SHALL STAGE ON TO MAINTAIN SPACE HEATING SETPOINT.

AER-20-VG

G-140-VG

EQUIPMENT SCHEDULE BASED ON SAMSUNG. ACCEPTABLE ALTERNATES INCLUDE CARRIER, MITSUBISHI, AND LENNOX.

3. MOUNT FAN APPROXIMATELY IN BETWEEN THE NEAREST FOUR SPRINKLER HEADS, MAINTAINING 3 FT VERTICAL CLEARANCE TO NEAREST SPRINKLER DEFLECTOR.

4. INTERLOCK FAN RELAY TO SHUT DOWN OPERATION OF FAN WITH FIRE ALARM ACTIVATION

3. FIBER ENERGY RECOVERY CORE TYPE.

MERV-8 FILTERS.

4. POLYMER ENERGY RECOVERY CORE TYPE.

6. HIGH EFFICIENCY, MULTI-SPEED DIRECT DRIVE FAN MOTORS.

EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.

GREENHECK CUE-100HP-VG

10. 24" HIGH FACTORY ROOF CURB. FLASH INTO ROOF. 11. UNDER ROOF MOUNTING PACKAGE. 12. THROUGH WALL MOUNTING PACKAGE 13. INDOOR VERTICAL MOUNTING PACKAGE 14. OUTDOOR VERTICAL MOUNTING PACKAGE.

9. LOW GAS PRESSURE SWITCH, FREEZE PROTECTION.

8. HIGH ALTITUDE KIT

CFM AT S

ALTITUDE "

SERVED

PLANS

PLANS

PLANS

SIDEWALL

PROPELLER

ROOF

CENTRIFUGAL

CENTRIFUGAL

15. 1-WAY FACTORY DIRECTIONAL ELBOW DISCHARGE. 16. 3-WAY FACTORY DIRECTIONAL ELBOW DISCHARGE.

17. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT. 18. EXHAUST FAN CONTACT.

19. FACTORY MOUNTED DISCONNECT. 20. VERIFY VOLTAGE, PHASE, AND HP WITH EC PRIOR TO ORDERING.

21. DESIGN LEAVING AIR TEMPERATURE: 160F DB HEATING.

| | | F | AN SC | HEDUL | _E | | | | | | |
|-------------|------|----------------|---------------|--------|---------------------------|-------|-----------|---------------|----------|----------------|---|
| | | FAN DAT | A | | | ELE | CTRICAL [| DATA | | | |
| S.P. "WC | RPM | SYSTEM TYPE | BLADE TYPE | DRIVE | ROOF (WALL) OPENING | VOLTS | PHASE | HP (WATTS) | WT (LBS) | FAN CONTROL | NOTES |
| 0.3 | 1436 | EXHAUST | PROP | DIRECT | (22.5"X22.5") | 115 | 1 | 1 | 150 | E | 1, 2, 5, 6, 7, 8, 11, 13, 15, 16 INTERLOCK TO OPERATE WITH GSH-1. |
| 0.3 | 1200 | EXHAUST | ВІ | DIRECT | 18.5"X18.5" | 115 | 1 | 1/2 | 90 | G | 1, 2, 3, 5, 6, 7, 8, 14, 15, 16 |
| 1.0 | 2411 | EXHAUST | ВІ | DIRECT | 15.5"X15.5" | 115 | 1 | 1/2 | 100 | Е | 1, 2, 4, 6, 7, 8, 14, 15, 16, PROVIDE WITH 24"H VENTED CURB, GREASE CUP, INTERLOCK TO OPERATE |

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE ALTERNATES INCLUDE COOK, CAPTIVEAIRE, NAILOR, OR 9. DUCT FROM FAN OUTLET TO EXTERIOR. SEE PLANS. 10. SMACNA OUTLET ROOF CAP. 2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, SCREENS, ROOF CAPS, OR DAMPERS.

11. WALL HOUSING FLUSH TO EXTERIOR WITH ACCESS GUARD SCREEN

WEATHER HOOD. 13. FLUSH LOUVER.

MERV-13 FILTERS.

6. WIRELESS REMOTE THERMOSTAT

14. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.

15. DISCONNECT SWITCH. 16. VERIFY VOLTAGE, PHASE, AND MOTOR HP WITH EC PRIOR TO ORDERING.

7. FACTORY LINE SET. VERIFY REQUIRED LENGTH PRIOR TO ORDERING.

8. GRAVITY DRAIN IF POSSIBLE. PROVIDE CONDENSATE PUMP AS REQUIRED.

A. SEPARATE WALL SWITCH (NOT WITH LIGHTS). B. SWITCH ON WITH ROOM LIGHTS. C. 7-DAY TIME CLOCK SET ON DURING OCCUPIED HOURS. D. TO OPERATE CONTINUOUSLY.

E. INTERLOCK TO OPERATE WITH EQUIPMENT NOTED. G. LINE VOLTAGE COOLING ONLY THERMOSTAT. SET TO 85F.

10. FACTORY MOUNTED DISCONNECT.

12. COOLING ONLY OPERATION

12. COASTAL RATED

C. SEPARATE WALL SWITCH

D. 24-HOUR DIGITAL TIMER

E. THERMOSTAT

9. VERIFY SINGLE POINT CONNECTION TO OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT

11. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.

| | | | | | DUCT | LESS F | AN CO | IL UNI | T SCH | EDULE | | | | |
|---------|-----------------|------------------------|-------------------|--------------|---------------|------------------|----------|--------|-------|---------|--------|-----------------------|-------------|---------------------------------|
| | | COOLING SEE CU SO | G DATA CHEDULE | HEATING DATA | | i | FAN DATA | | | ELEC | ΓRICAL | | | |
| MODEL | TYPE | NOMINAL ARI TONS | CU-# | MBH TOTAL | CFM @ ALT. | E.S.P. " W.C. | HP | MCA | WATTS | VOLTS | PHASE | OUTDOOR AIR CFM | AREA SERVED | Notes |
| NS09ABC | WALL MOUNTED | 0.75 | CU-1 | - | 392 | - | - | 1 | 27 | 208/230 | 1 | - | SEE PLANS | 1, 2, 3, 6, 7, 8, 9, 10, 11, 12 |

| | | | | | | | Al | R COOLED (| CONDENSI | NG UNIT S | CHEDULE | | | | | | | |
|-----------|------------------------------|------------------------|------------------------|--------------|-------------------|--------|-------------------|------------------------|-------------------------------------|----------------------|----------------------|---------|-----------|---------------|---------------|------------------------|---------------------|---------------------------------------|
| PLAN | | | 9 | 5F AMBIE | COOLING DE F | | WB RET | HEATING DATA | COMP | PRESSOR/FAN DA | ATA | | ELECTRIC | CAL DATA | | | | |
| CODE # | MANUFACTURER | MODEL | NOMINAL ARI TONS | MBH TOTAL | MBH SENSIBLE | | REFRIGERANT | MBH TOTAL | CONDENSER FAN CFM (@ 0.0" SP) | COMPRESSOR STAGES | SOUND RATING (DB) | VOLTS | PHASE | MCA | MOCP | WT. (LBS) INC. CURB | EQUIPMENT SERVED | NOTES |
| CU 1 | SAMSUNG | RXS09ACC | 0.75 | 9 | 9 | (24.5) | R-410A | - | - | 1 | 45 | 208/230 | 1 | 12 | 20 | 100 | DFC-1 | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 |
| . EQUIPN | MENT SCHEDULE BASED ON SAI | MSUNG. ACCEPTABLE ALTE | ERNATES INCLU | DE CARRIER, | MITSUBISHI, AND L | ENNOX. | 5. LOW AMBIENT | CONTROL TO -40F WITH V | WIND BAFFLES, 0F WITH | HOUT WIND BAFFLES. | | | 9. FACTO | RY MOUNTED | DISCONNECT. | | | |
| 2. COMPF | RESSOR: ANTI-SHORTCYCLE, HI | GH/LOW PRESSURE SWITC | HES, CRANKCA | SE HEATER, S | START ASSIST. | | 6. HAIL GUARD C | OR WIND BAFFLE KIT. | | | | | 10. VERIF | / VOLTAGE, PH | ASE, MCA, AND | MOCP WITH EC PR | IOR TO ORDERING. | |
| B. ELECTI | RONIC EXPANSION VALVE, FILTE | ER DRIER. | | | | | 7. 18" QUICK SLIN | NG MOUNTING RAIL. | | | | | 11. COOLI | NG ONLY OPER | ATION | | | |

| | | | | | | | El | LECTRIC (| JNIT HEATER | R SCHEDUL | E | |
|--------------|----------------------------|------------------------|------------------|--------------|-----------|----------|------------------|------------|-------------|----------------------|-----------------------|---------------------|
| PLAN CODE | | | | | ELECTRIC | CAL DATA | | | | | | |
| | MANUFACTURER | MODEL | WATTS | BTU/H | VOLTS | PHASE | WT. (LBS) | CFM @ S.L. | AREA SERVED | EQUIPMENT CONTROL | DIMENSIONS | NOTES |
| EUH 1 | MODINE | HER 50 | 5,000 | 17,100 | 208 | 1 | 40 | 380 | SEE PLANS | В | 15" X 17.5" X 17.5" H | 1, 3, 4, 6, 7, 8 |
| 1 FOUIPA | MENT SCHEDULE BASED ON MOD | DINE ACCEPTABLE ALTERI | NATES INCLUDE RE | ZNOR INDEECO | AND TRANE | 6 HA | NGING MOUNTING H | KIT | | | Δ | INTEGRAL THERMOSTAT |

8. VERIFY SINGLE POINT CONNECTION TO OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT

| 1 | MODINE | HER 50 | 5,000 | 17,100 | 208 | 1 | 40 | 380 | SEE PLANS | В | 15" X 17.5" X 17.5" H 1, 3, 4, 6, 7, 8 | | | | |
|------------|-------------------------|-------------------------|-------------------|-----------------|------------|--------|-------------------|--------------------|--|---|---|--|--|--|--|
| 1. EQUIPME | ENT SCHEDULE BASED ON I | MODINE. ACCEPTABLE ALTE | RNATES INCLUDE RE | EZNOR, INDEECO, | AND TRANE. | 6. HA | ANGING MOUNTING K | IT. | | | A. INTEGRAL THERMOSTAT | | | | |
| 2. EXPLOSI | ION PROOF UNIT. | | | | | 7. DIS | SCONNECT SWITCH. | | | | B. LINE-VOLTAGE SINGLE STAGE THERMOSTAT | | | | |
| 3. THERMA | L CUTOUT. | | | | | 8. VE | RIFY VOLTAGE, PHA | SE, AND KW WITH EC | PRIOR TO ORDERING. | | C. LINE-VOLTAGE 2-STAGE THERMOSTAT | | | | |
| 4. FAN DEL | AY. | | | | | | | | D. LOW-VOLTAGE SINGLE STAGE THERMOSTAT | | | | | | |
| 5. WALL MO | OUNTING KIT. | | | | | | | | E. SUMMER-WINTER SWITCH | | | | | | |
| | WALL MOONTHO NT. | | | | | | | | | | | | | | |
| | CEILING FAN SCHEDULE | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| | | | | | | | | CI | EILING | FAN SC | CHEDUL | .E | | | | |
|------------|--|---|----------------------|----------------|-------|--------------|-----|--------|---------------|--------|--------|------------|---------------|----------|----------------|--|
| PLAN | | | | | | | FAN | DATA | | | ELE | ECTRICAL D | DATA | | | |
| CODE FAN # | MANUFACTURER | MODEL | TYPE | AREA SERVED | SIZE | S.P. " WC | RPM | FINISH | BLADE TYPE | DRIVE | VOLTS | PHASE | HP (WATTS) | WT (LBS) | FAN CONTROL | NOTES: |
| FAN 1-2 | BIG ASS FANS | BA6-24 | STRUCTURE MOUNTED | SEE PLANS | 24 FT | - | 61 | ALUM | AIRFOIL | GEAR | 460 | 3 | 2.0 | 250 | В | 1, 2, 3, 4, 5, 6, ONE CONTROLLER TO OPERATE BOTH HANGAR FANS |
| 1. EQUIPI | MENT SCHEDULE BASED ON | SCHEDULE BASED ON BIG ASS FANS. ACCEPTABLE ALTERNATES INCLUDE GREENHECK, HUNTER, AND EPIC. 5. VERIFY VOLTAGE, PHASE, AND MOTOR HP WITH EC PRIOR TO ORDERING. A. STANDARD WALL CONTROLLER | | | | | | | | | | | | | | |
| | 4. STANDARD WALL CONTROLLER SOURCE DASS PAINS. ACCEPTABLE ALTERNATES INCLUDE GREENHECK, HUNTER, AND EPIC. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDERING. S. VERIFF VOLTAGE, PHASE, AND MOTOR AP WITH EC PRIOR TO ORDER | | | | | | | | | | | | | | | |

| | | | | | RECOVERY V | ENTILATO | R UN | IT SCHEDU | JLE | | | | | | | |
|-------------------|---------------|--|---------------------------------------|--|---------------------------------------|----------|--------|------------------------|---------|----------|------|-----------|----------------|------------------------------------|-----------------------------------|---|
| PLAN | | | OOLING) DATA DB RET, 58F WB RET | | ATING) DATA DB RET, 53F WB RET | FAN | N DATA | | ELECTRI | CAL DATA | 4 | | | | | |
| CODE MANUFACTURER | MODEL # | NOMINAL SUPPLY TEMPERATURE (DEG F) | OSA ENTHALPY RECOVERY RATIO (%) | NOMINAL SUPPLY TEMPERATURE (DEG F) | OSA ENTHALPY RECOVERY RATIO (%) | | | E.S.P. ("W.C.) VOLT | S PHASE | MCA | МОСР | WT. (LBS) | AREA SERVED | DIMENSIONS INC. CURB (LxWxH) | NOTES | 3 |
| GREENHECK 1 | ERV-10-20L-VG | 74.4 | 85.8 | 54.0 | 79 | 600 | 600 | 0.75 208 | 1 | 21.9 | 25 | 300 | SEE PLANS | 46"x34"x28" | 1, 2, 5, 6, 7, 8 15 (2 KW), 19 | |

| PLAN | | | DB RET, 58F WB RET | | DB RET, 53F WB RET | | FAN DATA | _ | | ELECTRIC | AL DATA | | | | | | | |
|--|---------------|--|---------------------------------------|--|--|------------------------|-------------------------|--------------------|-------|----------|---------|---------------------------|-----------------------|----------------|------------------------------------|-----------------------------|---------------------------|---|
| CODE MANUFACTURER | MODEL # | NOMINAL SUPPLY TEMPERATURE (DEG F) | OSA ENTHALPY RECOVERY RATIO (%) | NOMINAL SUPPLY TEMPERATURE (DEG F) | OSA ENTHALPY RECOVERY RATIO (%) | SUPPLY CFM @ ALT | EXHAUST CFM @ ALT | E.S.P. (" W.C.) | VOLTS | PHASE | MCA | МОСР | WT. (LBS) | AREA SERVED | DIMENSIONS INC. CURB (LxWxH) | NOTES | 3 | |
| GREENHECK 1 | ERV-10-20L-VG | 74.4 | 85.8 | 54.0 | 79 | 600 | 600 | 0.75 | 208 | 1 | 21.9 | 25 | 300 | SEE PLANS | 46"x34"x28" | 1, 2, 5, 6, 7 15 (2 KW), | , 8, 9, 11, 12, 19, 20 | |
| EQUIPMENT SCHEDULE BASED ON POLYMER ENERGY RECOVERY WH | | LTERNATES INCLUDE COOK, F | RENEWAIRE, AAON, OR YORK. | | TO ON DURING OCCUPIED HOL AIRFLOW MONITORING. | JRS. | | | | | | IC PREHEAT OR AIR DAMP | FROST CONTROL. ER. | SEE NOTES FO | R HEATER SIZE. | | | 7 |

9. SUPPLY AND EXHAUST AIRFLOW MONITORING. DIRTY FILTER SENSOR. 11. 18" FACTORY ROOF CURB. FLASH INTO ROOF. 5. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR WHEEL/CORE.

13. TIMED EXHAUST FROST CONTROL. 14. MODULATING WHEEL FROST CONTROL.

12. UNIT CASING AND CURB SHALL BE COASTAL RATED OR COATED WITH A COASTAL RATED COATING OR PAINT.

16. OUTDOOR AIR DAMPER. 17. RETURN AIR DAMPER. 18. POWERED CONVENIENCE OUTLET AND STEP DOWN TRANSFORMER BY MANUFACTURER.

20. VERIFY VOLTAGE, PHASE, MCA, AND MOCP WITH EC PRIOR TO ORDERING.

19. FACTORY MOUNTED DISCONNECT.

MECHANICAL DETAILS AND

| SIGNATURE STEWART (SWF)

SIGNATURE

AVIATION

1188 1ST STREET, NEW WINDSOR, NY 12553

SIGNATURE FLIGHT SUPPORT

ORLANDO, FLORIDA 32827

ISSUE DATE: 06/12/2024

SCHEDULES

COMM. NO.: 2023-177

DRAWN BY: JH

13485 VETERANS WAY, SUITE 600

127 W. FAIRBANKS AVENUE, SUITE 140

WINTER PARK, FL 32789

(PH): 407-739-9000

8201 SHAFFER PARKWAY

SUITE A

LITTLETON, COLORADO 80127

303.991.0991

THOMPSON-ENG.COM

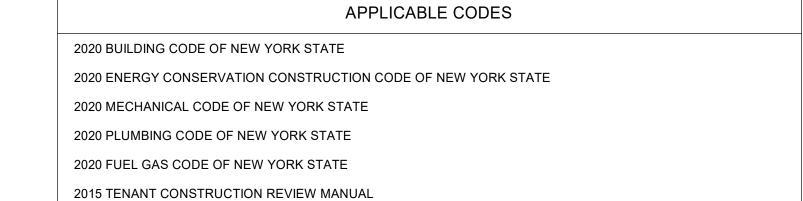
REVISIONS

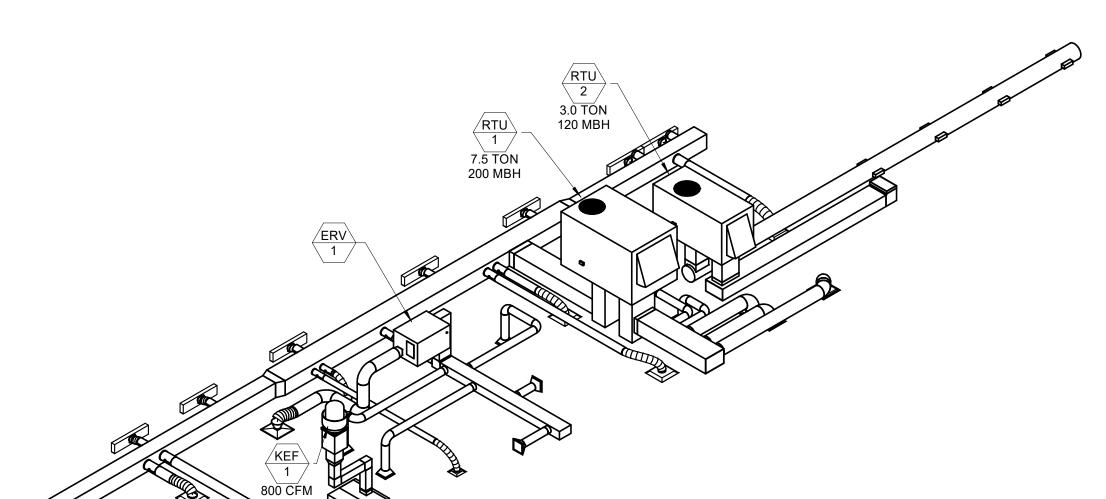
Key Plan

HANGAR

8/12/2024 1:09:24 PM Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/2023-177-SFS SWF HANGAR-M&P-CENTRAL-R23.rvt

CHECKED BY: DL/RS





| 1 | MECHANICAL | ISOMETRIC |
|---|-------------------|-----------|

| TYPE I HOOD SCHEDULE | | | | | | | | | | | | | | | | |
|----------------------|--------------|--------------|-----------|----------------|--------------------|-------|------------------|----------|-------|----------|--------------------------|-------|-----------------|-----------------|----------|--|
| | PLAN CODE | | | | | | EXHAUS | T DATA | | SUPPL | SUPPLY DATA ELECTRICAL D | | ELECTRICAL DATA | | | |
| | | MANUFACTURER | MODEL | TYPE | DIMENSIONS | | EXHAUST | SP | TOTAL | SP | TOTAL | VOLTS | PHASE | FIRE PROTECTION | WT (LBS) | NOTES |
| | GH # | | | | | LOAD | RATE (CFM/FT) | (" W.C.) | CFM | (" W.C.) | CFM | | | SYSTEM | | |
| | GH 1 | GREENHECK | GXEW-48-S | WALL CANOPY | 48"L X 39"W X 24"H | HEAVY | 200 | 0.58 | 800 | - | - | 115 | 1 | ANSUL R-102 | 200 | 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15 |

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE ALTERNATES INCLUDE CAPTIVEAIRE.

2. MOUNT SUCH THAT THE BOTTOM OF HOOD IS AT 80" A.F.F. 3. TYPE 430 STAINLESS STEEL. ALL WELDS SHALL BE LIQUID TIGHT.

4. PROVIDE WITH STAINLESS STEEL FILTERS. PROVIDE WITH GREASE TROUGH.

6. ROUND LED LIGHTS.

INTEGRAL SUPPLY PLENUM. 9. CONSTRUCT IN ACCORDANCE WITH UL 710 AND NFPA 96.

7. SUPPLY/MAKEUP AIR NOT ENTERING THROUGH HOOD. SEE PLANS.

10. BEAR NSF SEAL OF APPROVAL. 11. FURNISH COMPLETE WITH PRE-PIPED INTEGRAL FIRE PROTECTION SYSTEM INCLUDING UTILITY CABINET, TANK, PIPING, PULL STATION, AND ACTUATOR. ALL EXPOSED PIPING SHALL BE CHROME-PLATED.

12. INSTALL AUTOMATIC FIRE SUPPRESSION SYSTEM PER UL 300 AND NFPA 96 INCLUDING AUTOMATIC SHUT-OFF OF ALL POWER AND GAS TO ALL EQUIPMENT UNDER HOOD.

13. INSTALL PER MANUFACTURERS INSTRUCTIONS. MAINTAIN ALL REQUIRED CLEARANCES.

14. EC TO PROVIDE JUNCTION BOX AND WIRING TO HOOD. 15. VERIFY VOLTAGE AND PHASE WITH EC PRIOR TO ORDERING.

| | EXTERIOR LOUVER SCHEDULE | | | | | | | | | | | | |
|-------------------------|--|----------------------|--------------------------------|---------------------|----------------------|-------------------|-------------------|------------------|--------------------|---------------------|--|--|--|
| PLAN CODE | MANUFACTURER | MODEL# | TYPE | CONSTRUCTION | APPLICATION | CFM | SIZE (IN.) | PD (" W.C.) | FINISH | QUANTITY | NOTES | | |
| LVR 1 | GREENHECK | ESD-435X | WEATHER | ALUMINUM | INTAKE | 1,500 | 36"X36"H | 0.015 | SEE ARCH | 1 | 1, 2, 3, 5, INTERLOCK TO OPEN DAMPER WITH EF-3 | | |
| VERIFY FINAL COORDINATE | LOCATION WITH ARCHITECT. 2. PRESSURE I E OPENING WITH STRUCTURAL. SCHEDULE VALU | DROP NOT TO EXCEED E | 3. 120V MOTORIZE FAIL OPEN. | D BACKDRAFT DAMPER. | 4. 1/4" GALVANIZED N | MESH BIRD SCREEN. | 5. INSECT SCREEN. | 6. SECURITY BARS | 7. FILTER RACK. ME | L ERV-8 FILTERS. | 1 | | |

| | | | | A | IR DEVICE | SCHEDULE | | | |
|--|---|--|--|--------------------------|--|---|----------------------------|--------------------------|---|
| PLAN CODE # X XXX | MANUFACTURER | MODEL # / SERIES | TYPE | CONSTRUCTION | NOMINAL CFM | SIZE (INCHES) * NO FILLER PANELS ALLOWED | FINISH | NOTES | AIR DEVICE NUMBER (SEE SCHEDULE) NECK SIZE IN INCHES |
| 1 X XXX | PRICE | SCD | CEILING DIFFUSER | STEEL | SEE PLANS | SEE PLANS | SEE ARCH | 2 | DEVICE SIZE 24X24 CFM |
| 2 X XXX | PRICE | TBD3 | SLOT SUPPLY DIFFUSER | STEEL | SEE PLANS | 4 FT LONG | SEE ARCH | 2, 7, 12, 14, 17 | * CONTRACTOR SHALL PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO BALANCE AIR DEVICES TO VALUES SHOWN ON PLANS |
| 3 X XXX | PRICE | PDF | PERFORATED CEILING DIFFUSER | ALUMINUM | SEE PLANS | SEE PLANS | STANDARD | 2, 6 | |
| 4 X XXX | PRICE | 81 | RETURN GRILLE | ALUMINUM | SEE PLANS | SEE PLANS | STANDARD | 2, 9, 19 | |
| 5 X XXX | PRICE | 81 | EXHAUST REGISTER | ALUMINUM | SEE PLANS | SEE PLANS | STANDARD | 2, 9, 19 | |
| 6 X XXX | PRICE | ATG | DOOR/WALL TRANSFER GRILLE | ALUMINUM | SEE PLANS | SEE PLANS | STANDARD | 2 | |
| 7 X XXX | PRICE | SDG | SPIRAL DUCT SUPPLY DIFFUSER | STEEL | SEE PLANS | SEE PLANS | STANDARD | 4, 5 | |
| T-BAR CEILI SURFACE M SURFACE M DUCT MOUNT | IOUNT, GYPBOARD WALL/CEILING. IOUNT, DOOR. | 5. MULTI-BLADE DAMPER. 6. ADJUSTABLE BLADES DAMPER. 7. REMOTE BALANCING DAMPER. 8. PERFORATED 4-WAY. | 9. CUBE CORE. 1/2" X 1 10. FILTER GRILLE. 11. FIXED CORE. 12. ENGINEERED SUPPL NECK SIZE ON PLAN | Y PLENUM. INLET TO MATCH | PROVIDE FULI OPENING. 14. 1" SLOT. | RETURN PLENUM. OUTLET TO MA I PLANS. IF NO NECK SIZE IS LISTE L SIZE RECTANGULAR PLENUM | 16. 1 SLOT. 17. 2 SLOT. | S. MOUNT FLUSH TO GYPBOA | 19. SQUARE TO ROUND ADAPTOR. MATCH RECTANGULAR AND NECK DIMENSIONS ON PLANS. 20. PRESSURE RELIEF COLLAR. 21. 24 VAC INPUT. PROVIDE TR115 115/24, 20 VA TRANSFORMER ON MASTER DIFFUSER ONLY. |

| CO2 PURGE SYSTEM SEQUENCE OF OPERATIONS | |
|--|---|
| N CO2 SENSOR DETECTS LEVELS OF SPACE CO2 ABOVE 900 PPM, THE ICIATED UNIT SHALL OPEN THE OSA DAMPER TO THE HIGH VALUE. THE DAMPER SHALL STAY AT THE HIGH VALUE UNTIL THERE IS A CALL FOR IOMIZING OR THE CO2 LEVEL HAS DROPPED BELOW THE CO2 SENSOR OINT (500 PPM). | |
| 1: 30% 2: 20% | K |
| OR SPECIFICATIONS: | |
| STRONG MODEL AMC-310 SENSOR MUST BE INSTALLED 3-6 FEET ABOVE FINISHED FLOOR | |
| | + |

| HVAC SYSTEM: | RTU-1 | | 7.5 | Ton Cooling | | Total SA = | -,,,,, | CFM | Set O | SA min set = | 20.0% |
|---|--------------------------------|-------------|-------------------|---------------------|---------------------------|-------------|--|--------------------------------|------------------------|-----------------------|-----------|
| | Room Name and | Az | Rp | Ra | Default Occ | Pz | If all Return Air is at Ceiling Level | Effectiveness Factor = 0.8 | Total Room | Total OSA | |
| Room Type: | Room # | AREA (sqft) | OSA per person | OSA CFM per sqft | People per 1000sqft | # of People | Total min OSA CFM req'd | Total minimum OSA CFM req'd | Supply Air (SA) CFM | CFM Provided | Result: |
| Break Rooms (ASHRAE62.1 2016 T.6.2.2.1) | 101 - Kitchenette (PARTIAL) | 234 | 5.0 | 0.12 | 50 | 12 | 87 | 108 | 900 | 180 | Complies. |
| Occupiable Storage Rooms (ASHRAE62.1 | 102 - Stock Room/Pantry | 300 | 5.0 | 0.06 | 2 | 1 | 21 | 26 | 475 | 95 | Complies. |
| Corridors | 103 - Corridor | 342 | 0.0 | 0.06 | 0.0 | 0.0 | 21 | 26 | 400 | 80 | Complies. |
| Corridors | 104 - Corridor | 134 | 0.0 | 0.06 | 0.0 | 0.0 | 8 | 10 | 50 | 10 | Complies. |
| Toilet Rooms (EXHAUST) | 105 - Women | 64 | | | | | 0 | 0 | 50 | 10 | Complies. |
| Toilet Rooms (EXHAUST) | 106 - Men | 63 | | | | | 0 | 0 | 100 | 20 | Complies. |
| Toilet Rooms (EXHAUST) | 109 - Unisex | 81 | | | | | 0 | 0 | 100 | 20 | Complies. |
| Office | 111 - Flt. Ops. Office | 120 | 5.0 | 0.06 | 5 | 1 | 10 | 13 | 125 | 25 | Complies. |
| Office | 112 - Maint, Office | 119 | 5.0 | 0.06 | 5 | 1 | 10 | 13 | 125 | 25 | Complies. |
| Conference | 113 - Conf. | 376 | 5.0 | 0.06 | 50 | 19 | 117 | 146 | 675 | 135 | * |
| | | | | 1 | | | Total min OSA reqd floor RA | Total min OSA CFM required | Total SA | Total OSA Provided | |
| | Total Floor Area = | 1,833 | sqft | | | Totals = | 273 | 341 | 3,000 | 600 | |

OUTSIDE AIR CALCULATIONS: IMC Code (table 403.3)

| | | | <u>OUT</u> | SIDE AIF | R CALCUL | ATION | S: IMC (| Code (table | 403.3) | | | |
|---|--------------|-------------------------|-----------------------|-------------------|---------------------------|----------------|-----------------|---------------------------------------|--------------------------------|--------------------------------|-----------------------|-----------|
| | HVAC SYSTEM: | Ton Cooling | on Cooling Total SA = | | | = 8,565 CFM | | | Set OSA min set = 100.0% | | | |
| | | Doom Name and | Az | Rp | Ra | Default Occ | Pz | If all Return Air is at Ceiling Level | Effectiveness Factor = 0.8 | Total | Total OSA | |
| | Room Type: | Room Name and Room # | AREA (sqft) | OSA per person | OSA CFM per sqft 1000sqft | | # of People | Total min OSA CFM req'd | Total minimum OSA CFM req'd | Room Supply Air (SA) CFM | CFM Provided | Result: |
| | Warehouses | 100 - Hangar | 33,813 | 10.0 | 0.06 | 0.0 | 0.0 | 2,029 | 2,536 | 8,565 | 8,565 | Complies. |
| | | | | | | | | Total min OSA reqd floor RA | Total min OSA CFM required | Total SA | Total OSA Provided | |
| 1 | | Total Floor Area = | 33,813 | sqft | | | Totals = | 2,029 | 2,536 | 8,565 | 8,565 | |

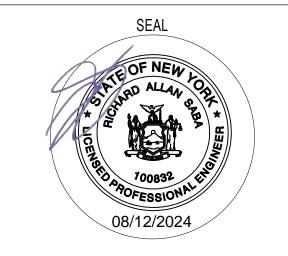
| OUTSIDE AIR CALCULATIONS: IMC Code (table 403.3) | | | | | | | | | | | |
|---|---------------------------------|-------------|-------------------|---------------------|---------------------------|-------------|---------------------------------------|---|-------------------------|-----------------------|---------|
| HVAC SYSTEM: RTU-2 | | | 3.0 Ton Cooling | | | Total SA = | Total SA = 1,200 | | Set OSA min set = 10.0% | | |
| | Room Name and | Az | Rp | Ra Default Occ | | Pz | If all Return Air is at Ceiling Level | Effectiveness Factor = 0.8 | Total Room | Total OSA | |
| Room Type: | Room # | AREA (sqft) | OSA per person | OSA CEM per sqft | People per 1000sqft | # of People | Total min OSA CFM req'd | Total mi nim um OSA CFM req'd | Suppl y A ir | V Provined | Result: |
| Occupiable Storage Rooms (ASHRAE62.1 | orage Rooms 114 - Maintenance | | 5.0 | 0.06 | 0.06 2 | | 57 71 | | 1,200 | 120 | * |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | 1 | | | Total min OSA reqd floor RA | Total min OSA CFM required | Total SA | Total OSA Provided | |
| | sqft | | | Totals = | 57 | 71 | 1,200 | 120 | | | |
| * SPACE CONTAINS DEMAND CONTROLLED VENTILATION. REFER TO CO2 SEQUENCE FOR DETAIL. | | | | | | | | | | | |

|) . | | | \sim | | | | | \sim | | $\overline{}$ | | | |
|--------|---|--------------------------------|-------------|------------------------|---------------------|---------------------------|-----------------|--|--------------------------------|---------------|-----------------------|---------------------|--|
| | | | <u>OUT</u> | SIDE AIF | R CALCUL | ATIONS | S: IMC (| Code (table | 403.3) | | | | |
| \int | HVAC SYSTEM: | ERV-1 | | 0.0 Ton Cooling | | | Total SA = | 600 | CFM Set OSA | | SA min set = | SA min set = 100.0% | |
| | | Room Name and | Az | Rp | Ra | Default Occ | Pz | If all Return Air is at Ceiling Level | Effectiveness Factor = 0.8 | Total Room | Total OSA | | |
| | Room Type: | Room # | AREA (sqft) | OSA per person | OSA CFM per sqft | People per 1000sqft | # of People | Total min OSA CFM req'd | Total minimum OSA CFM req'd | Supply Air | CFM Provided | Result: | |
| | Break Rooms (ASHRAE62.1 2016 T.6.2.2.1) | 101 - Kitchenette (PARTIAL) | 334 | 5.0 | 0.12 | 50 | 17 | 124 | 154 | 600 | 600 | Complies. | |
| | | | | | 1 | | | Total min OSA reqd floor RA | Total min OSA CFM required | Total SA | Total OSA Provided | | |
| | | Total Floor Area = | 334 | sqft | | | Totals = | 124 | 154 | 600 | 600 | | |





SUITE A LITTLETON, COLORADO 80127 303.991.0991 THOMPSON-ENG.COM



| | REVISIONS | |
|------|-----------------|-----------|
| MARK | DESCRIPTION | DATE |
| 1 | PERMIT COMMENTS | 6/28/2024 |
| | | |

Key Plan

SIGNATURE STEWART (SWF) HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553



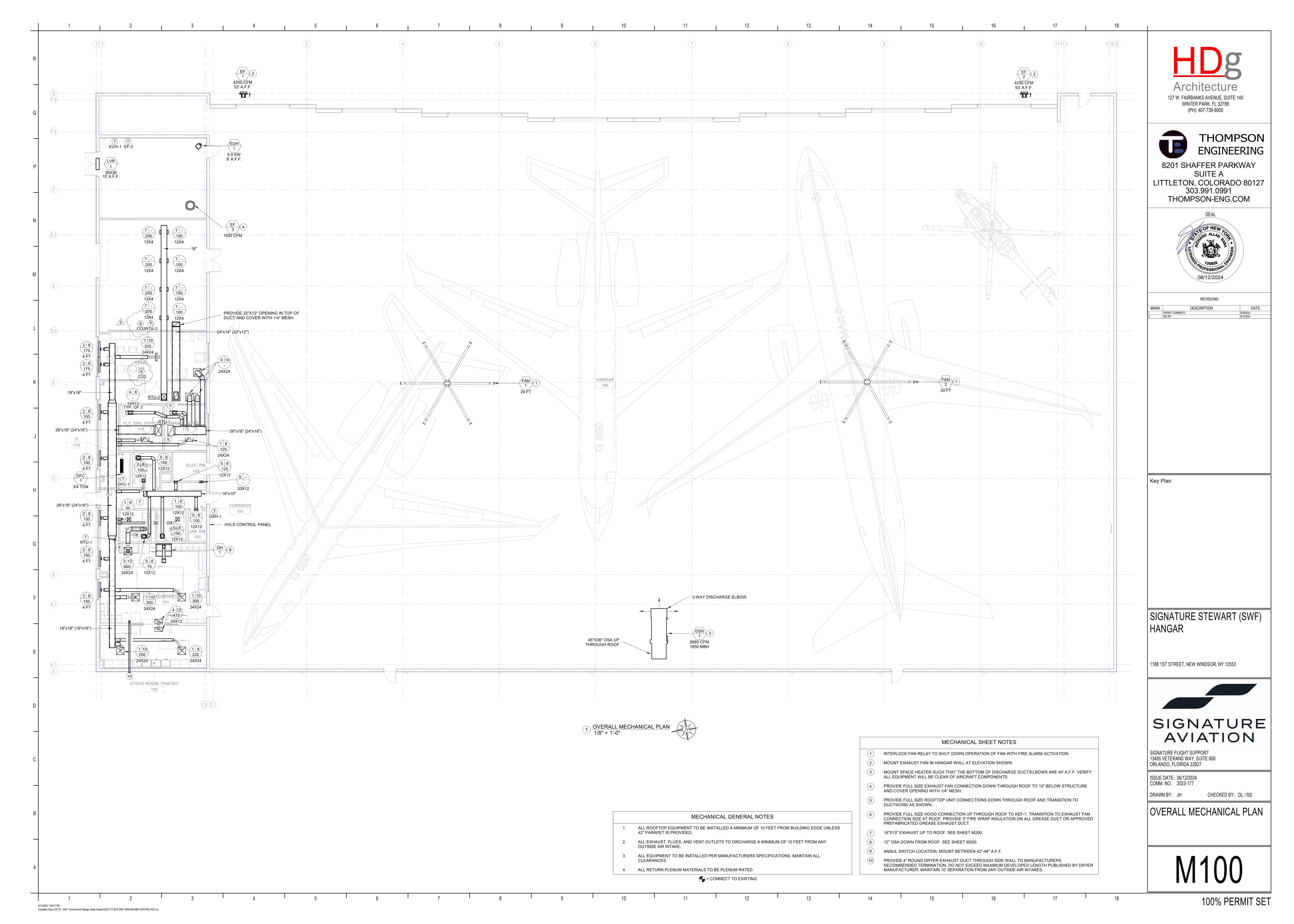
SIGNATURE FLIGHT SUPPORT 13485 VETERANS WAY, SUITE 600 ORLANDO, FLORIDA 32827

ISSUE DATE: 06/12/2024 COMM. NO.: 2023-177

DRAWN BY: JH CHECKED BY: DL/RS

MECHANICAL DETAILS AND SCHEDULES

8/12/2024 1:09:25 PM Autodesk Docs://23715 - SWF Terminal and Hangar (Halle House)/2023-177-SFS SWF HANGAR-M&P-CENTRAL-R23.rvt 100% PERMIT SET



APPLICABLE CODES

2020 BUILDING CODE OF NEW YORK STATE

2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

2020 MECHANICAL CODE OF NEW YORK STATE

2020 PLUMBING CODE OF NEW YORK STATE

2020 FUEL GAS CODE OF NEW YORK STATE

2015 TENANT CONSTRUCTION REVIEW MANUAL

SAND AND OIL SEPARATOR CALCULATIONS

NUMBER OF PARKING SPACES

10

1-3 VEHICLES

6 CU. FT.

1 ADDITIONAL CU. FT. PER VEHICLE UP TO 10 VEHICLES

7 CU. FT.

0.15 ADDITIONAL CU. FT. PER VEHICLE ABOVE 10 VEHICLES

0 CU. FT.

CU. FT. REQUIREMENT

13 CU. FT.

GAL. REQUIREMENT

97 GAL.

 GREASE INTERCEPTOR CALCULATIONS (2018 UPC)

 FIXTURE
 QUANTITY
 DRIANAGE F.U.
 TOTAL DRIANAGE F.U.

 DISHWASHER
 1
 2.0
 2.0

 FLOOR DRAIN
 1
 2.0
 2.0

 COMMERCIAL SINK W/ FOOD WASTE
 1
 3.0
 3.0

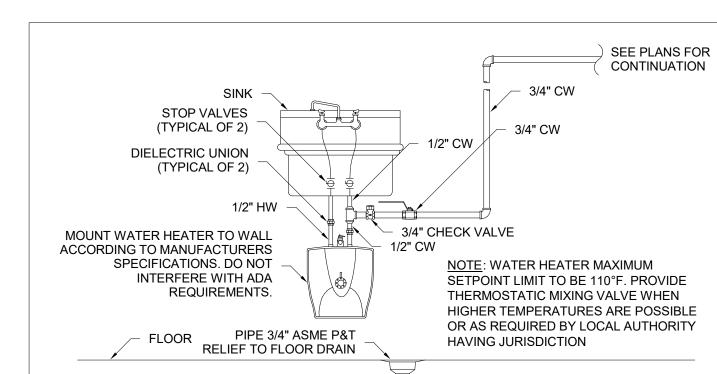
 HAND SINK
 1
 2.0
 2.0

 TOTAL D.F.U = 9.0

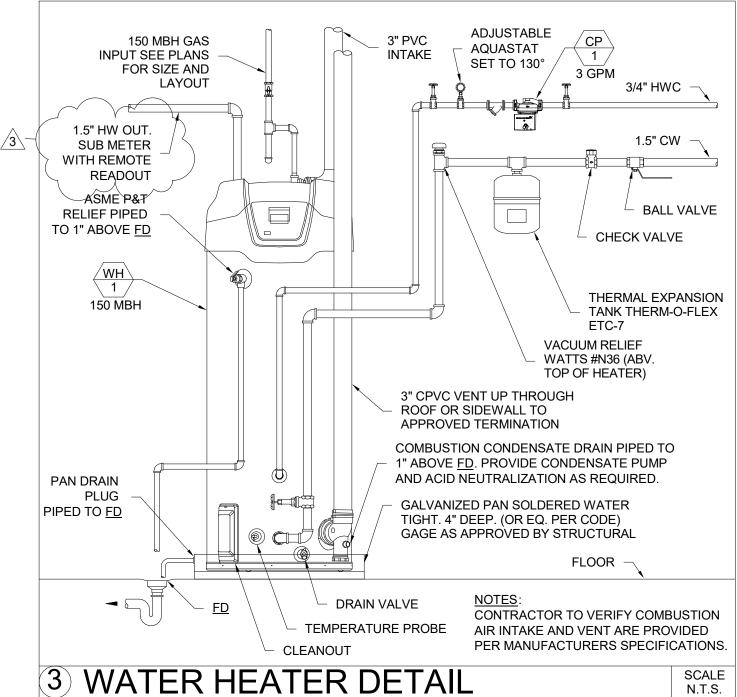
 MINIMUM GREASE INTERCEPTOR SIZE (TABLE 1014.3.6) = 750

SUB METERS SHALL BE INSTALLED ON WATER HEATER OUTLETS AND IRRIGATION TAP PER LEED REQUIREMENTS. FLOW METER: DYNASONICS TFX-5000 CLAMP-ON ULTRASONIC FLOW METER (24 VAC). PROVIDE WITH BADGER METER ORION ENDPOINT/TRANSMITTER. REMOTE READOUT: BADGER METER AQUACUE FLOW MANAGER SOFTWARE (WEB BROWSER INTERFACE). OWNER TO CREATE ACCOUNT AND ACTIVATE METERS PRIOR TO LEED CERTIFICATION BEING AWARDED. PLUMBING CONTRACTOR RESPONSIBLE -FOR ALL GAS PIPING AFTER OUTLET OF GAS METER INTO BUILDING. SEE PLANS FOR SIZE AND CONTINUATION GAS PRESSURE REGULATOR ISOLATION VALVE SERVICE TERMINAL VALVE GAS LINE FINISHED GRADE **NEW GAS METER** GAS PIPING TO BUILDING, GAS LOCAL UTILITY REGULATOR, AND GAS METER PROVIDED BY LOCAL UTILITY GAS METER DETAIL SCALE N.T.S.

WATER SUB METER SPECIFICATIONS



2 POINT OF USE WATER HEATER



SPECIFICATIONS

Follow all Local and state codes/ordinances and general conditions of contract. Pay all required fees and obtain all required permits. Submit these plans to building department for plan review. Implement all code review required changes into installation.
 Equipment, insulation and controls shall be provided as required by the Adopted energy code.

Visit site to verify existing conditions prior to ordering equipment, providing price quote or fabricating piping.
 Change orders for non-compliance will not be accepted.

 Plumbing drawings are schematic and not to be scaled. Refer to architectural, certified drawings, and site

4. Plumbing drawings are schematic and not to be scaled. Refer to architectural, certified drawings, and site measurements for all dimensions prior to duct and piping fabrication.
5. Contractor shall purchase, receive, uncrate, assemble, insure, and install in conformance to manufacturer's recommendations all Plumbing equipment. Plumbing Contractor shall install and final connect owner furnished

equipment as indicated.
6. Provide 2 operating manuals to owner and engineer for all systems and equipment including manufacturer's maintenance manuals. Include lubrication, filter types and sizes, starting and stopping procedures. List contractor's telephone numbers.

7. Supports and anchors shall be provided for plumbing work. No chain, tape, or wire.8. Sleeves shall be provided for all pipe through walls, floors, and ceilings. Provide chrome plated escutcheons for piping penetrations in finished areas.9. Conceal all work in finished areas.

10. Cut and patch to match adjacent areas. No structural member shall be cut or notched.
11. Any pressure reducing valves should be arranged, tested, and maintained per FM Global Property Loss Prevention Data Sheet 3-11; *Pressure Reducing Valves*. Immediately after installation and once a year after that, conduct a full flow test on the valve. The annual performance Test Record of Pressure Reducing Valves Form (Form
2707 should be used for all full flow tests.

12. Electrical: confirm voltage, phase, and ampacity with electrical contractor prior to ordering equipment. All 24v controls including interlock wiring for plumbing equipment by division 15 contractor. Provide magnetic starters for all 3-phase motors with protection on all three leads. Electrical equipment to automatically restart after power failure. All wire in conduit per NEC latest edition.

13. Excavate for all mechanical work. Compact to 95% AASHO or proctor density in 6" maximum lifts at optimum moisture content. Rework if any settlement within first years guarantee.14. Valves shall be provided to isolate each piece of equipment and for all rough-ins excluding waste and vent. Water valves shall be Apollo ball valve line-size rated for 200 psig wog. Gas valves shall be AGA listed line-size

lubricated.

15. Waste and vent piping shall be cast iron no-hub listed for location installed. Schedule-40 plastic PVC may be used if code approved. Provide cleanouts 50'-0" min oc of appropriate type inside buildings. Vent through roof with a total cross sectional area to equal to or greater than building sewer main shall be provided.

16. Pipe each evaporative pan drain with p-trap 3/4" minimum to waste. Provide condensate pumps as required

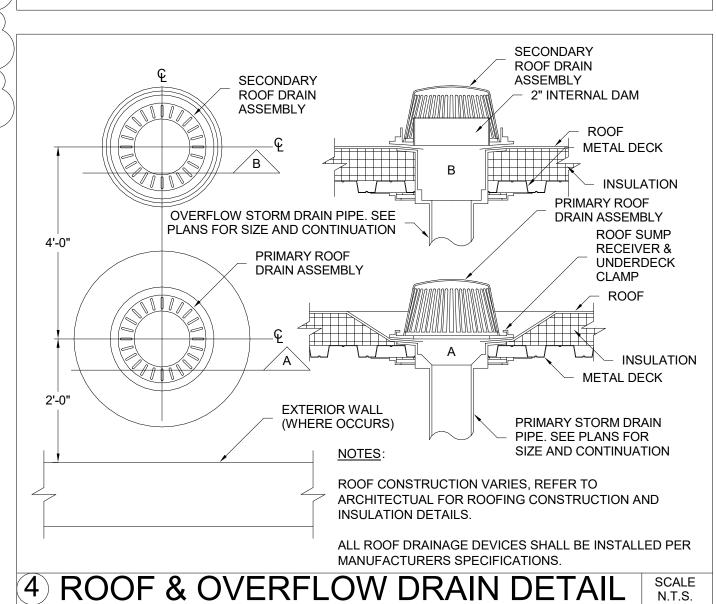
sanitary sewer.

17. Water piping shall be type-L copper (or approved PEX piping and fittings where allowed by local codes) above grade with no-lead ASTM B32 solder and ASMT B813 flux soldered joint (or with Viega ProPress fittings where allowed by local codes.) Buried piping or piping within 6" of grade shall be 15% silver sil-phos brazed joint type-K. Insulate all hot and cold water lines routed in ceiling or crawl space with 1/2" thick preformed fiberglass (1" for circulated Hot Water lines) with UL-181 class-1 plenum rated jacket. Route all piping inboard of building insulation to avoid freezing. Electric heat trace all piping located in unheated areas with Chromalox 7.0 watts/ft mi cable and 1" thick fiberglass piping insulation with cover (do not route PEX piping in unheated areas).

18. Insulate all horizontal roof drain piping with 1.5" fiberglass insulation with UL-181 class-1 plenum rated jacket.

where gravity drain condensate is not possible. Provide condensate acid neutralization for all condensate drains to

19. Pressure test all piping per code but to at least 150% max working pressure.20. Fire caulk fire rated wall/ceiling/floor penetrations with HILTI or equal listed fire caulk.21. Guarantee all labor and new equipment for one year from the date of acceptance by owner.



ADJUSTABLE TYPE CLEANOUT FINISHED FLOOR

COMBINATION Y & 1/8 BEND FITTING

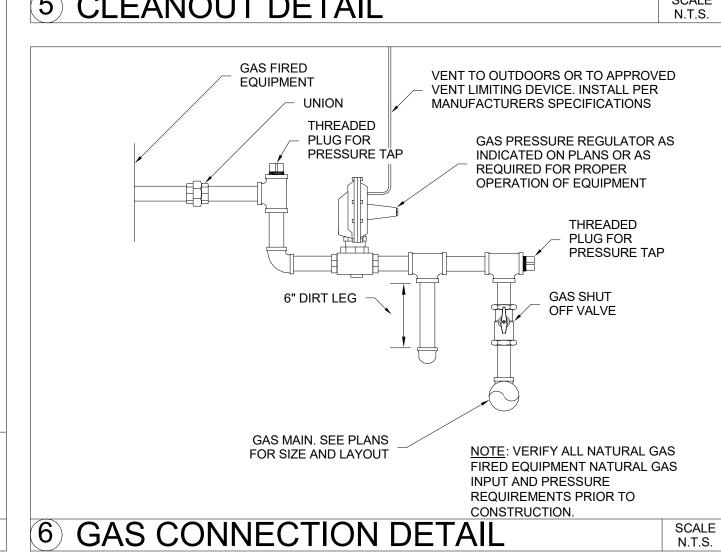
FLOW

WASTE/VENT PIPING

FLOOR CLEANOUT (FCO)

FLOW
WASTE/VENT PIPING
FLOOR CLEANOUT (FCO)
PROVIDE EXTENSION IF GREATER THAN 3"
WALL PLATE, CHROME PLATED (SEE SPECIFICATIONS)
WALL OPENING SHALL BE 1" LARGER THAN PLUG DIAMETER
THREADED BRASS ROD OR MACHINE SCREW
CLEANOUT TEE WITH TAPER THREADED BRASS PLUG

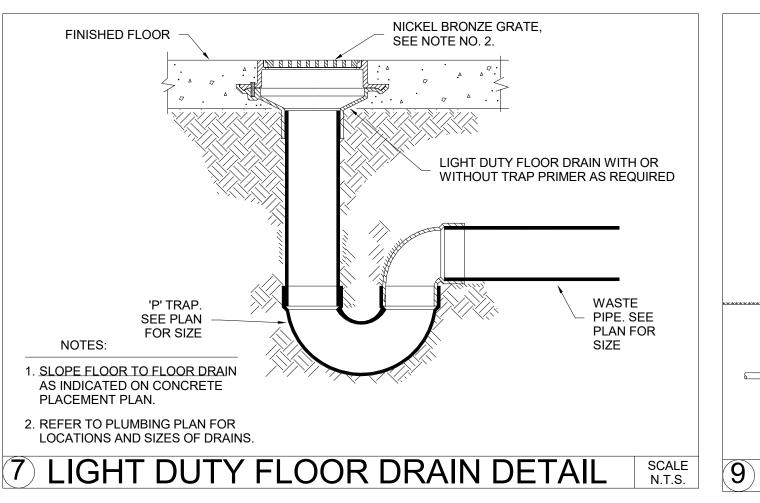
SCALE
N.T.S.

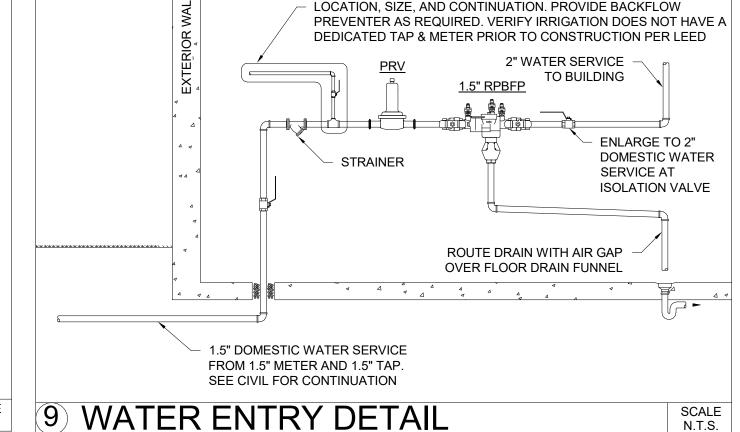


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|--|----------|------------|---------------------------------------|--------------------------------|------------------------|-------------|--------------|---------------|-------------|---|---|
| Auto-Control Auto | | ITEM | FIXTURE | MANUFACTURER | MODEL NO. | CW | HW | WASTE | VENT | REMARKS | NOTES |
| Models | | WC1 | WATER CLOSET - FLUSH VALVE | ZURN | Z5615 | 1" | - | 3" | 2" | ZURN ZN1201-N WALL CARRIER | 1, 5, 6, 10, 12 |
| 10 10 10 10 10 10 10 10 | | <u>L1</u> | LAVATORY | ELKAY | ELUH1511 | 1/2" | 1/2" | 1.5" | 1.5" | UNDERMOUNT, KOHLER TOUCHLESS K-7517-VS FAUCET (.35 GPM), SLOAN ESD-410-SF SOAP | 4, 7, 8, 10, 12, 15 (110 DEG F), ADA COMPLIANT |
| 10 | | <u>U1</u> | URINAL | ZURN | Z5755 | 3/4" | - | 2" | 1.5" | | 2, 6, 10, 12, 17 |
| March Marc | | <u>S1</u> | BREAK ROOM SINK | ZLINE | SR50D-36 | 1/2" | 1/2" | 2" | 1.5" | · | 4, 7, 8, 10, 12, 15 (120 DEG F) |
| POT LEG | | <u>S2</u> | HAND SINK - ADA | ZLINE | | 1/2" | 1/2" | 2" | 1.5" | UNDERMOUNT, DELTA FAUCET 1903-DST | 4, 7, 10, 12, 15 (110 DEG F), ADA COMPLIANT |
| March Control Contro | | <u>PF</u> | POT FILLER | ZLINE | GEM-FPF | 3/4" | - | - | - | REFER TO ARCHITECTURAL FOR FINISH | |
| Contract | | <u>IMB</u> | ICE MAKER WALL BOX | SIOUX CHIEF | | 1/2" | - | - | - | | |
| ### DOSESTING DOSESTING | | <u>CMB</u> | COFFEE MAKER WALL BOX | SIOUX CHIEF | | 1/2" | - | - | - | VALVE, WATTS SD-3 DOUBLE-CHECK BACKFLOW | |
| ### WALLOW DATE DESCRIPTION DESCRIPTION | | <u>DWB</u> | DISHWASHER WALL BOX | SIOUX CHIEF | | - | 1/2" | - | - | | |
| 10 10 10 10 10 10 10 10 | | <u>WB</u> | WALL BOX | ох вох | | 1/2" | 1/2" | 3 | 1.5" | | 20 |
| March Marc | | <u>S3</u> | UTILITY SINK | ELKAY | B1C18X18X | 1/2" | 1/2" | 1.5" | 1.5" | | 2, 4, 7, 8, 10, 11, 12 |
| 10 | | <u>S4</u> | UTILITY SINK | ULINE | H-8966R | 1/2" | 1/2" | 1.5" | 1.5" | | 2, 4, 7, 8, 10, 11, 12 |
| Mode 100 | | <u>MS</u> | MOP SINK | FIAT | TSB-100 | 1/2" | 1/2" | 3" | 1.5" | | 6, 8, 10, 12 |
| MOST PRINCE PRINCE PRINCE MOST PRINCE PRINCE PRINCE MOST PRINCE PR | | HC1 | HOSE BIBB | WOODFORD | 24P | 1/2" | - | - | - | WITH VACUUM BREAKER | VERIFY LOCATION |
| Trence passes Pas | | HC2 | HOSE BIBB (FREEZE-PROOF) | WOODFORD | B67 | 3/4" | - | - | - | ROUGH BRASS BOX COVER, SELF DRAINING | VERIFY LOCATION |
| 1-100 1-10 | | <u>TD</u> | TRENCH DRAIN | NEENAH FOUNDRY | | - | - | - | - | AIRCRAFT RATED, GRAY IRON CLASS 35 GRATE | REFER TO STRUCTURAL FOR TRENCH DRAIN DETAILS |
| FLOOR DRAIN | | <u>FS1</u> | FLOOR SINK | ZURN | Z1901 | - | - | 3" | 1.5" | · · · · · · · · · · · · · · · · · · · | 16 |
| ### SHOWER-TILE WALLS (ADA) ### SHOWER-TILE WALLS (ADA) ### ADA GOURT OF \$ \$80.05 ### ADA GOURT OF \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | | FS2 | FLOOR SINK ZURN | | Z1901 | - | - | 3" | 1.5" | · · · · · · · · · · · · · · · · · · · | 16 |
| PACAGE 1 1 1 1 1 1 1 1 1 | | <u>FD</u> | FLOOR DRAIN | ZURN | Z400 TYPE N | - | - | SEE PLAN | SEE PLAN | DEEP SEAL TRAP, BRASS GRATE | 16 |
| ESH | | <u>SH</u> | SHOWER - TILE WALLS (ADA) | AQUATIC | SB6036 | 1/2" | 1/2" | 2" | 1.5" | ADA COMPLIANT, KOHLER K-304 MIXING VALVE (120 DEG F), HANDHELD KOHLER ADA SHOWERING PACKAGE (1 5 GPM), SHOWER DRAIN | |
| EMPRIED BACKFLOW PREVENTER WATTS | | <u>ESH</u> | EMERGENCY SHOWER/EYE WASH | ULINE | H-10735 | 1" | 1" | - | - | PROVIDE WITH MIXING VALVE (70 DEG F). COMPLY | |
| PRPSP BACKFLOW PREVENTER WATTS | | <u>DF</u> | DRINKING FOUNTAIN | ELKAY | EZWS-EDFPBM117K | 1/2" | - | 1.5" | 1.5" | | 2, 10, 12 |
| PRESSURE REDUCING VALVE | <u> </u> | RPBFP | BACKFLOW PREVENTER | WATTS | LF009 | - | - | - | - | REDUCED PRESSURE TYPE, TWO CHECK VALVES, ONE RELIEF VALVE, INLET/OUTLET VALVES, STRAINER, TEST COCK, DRAIN FUNNEL | UNIT SHALL HAVE ASSE APPROVAL |
| OUR OVERFLOW DRAIN ZURN ZURN | | <u>PRV</u> | PRESSURE REDUCING VALVE | WATTS | LF223 | | | | | PILOT-OPERATED, BRASS, | NSF/ANSI 372 |
| PLAN 2 | | <u>RD</u> | ROOF DRAIN | ZURN | Z121 | - | - | SEE PLAN | - | CAST IRON DOME STRAINER, 12"D | |
| EQ.A PLAN | | <u>OD</u> | OVERFLOW DRAIN | ZURN | Z121 | | | SEE-PLAN | | | |
| WATER HEATER STATE GTS-910-NIEA 1" 1" | | FCO-A | | ZURN/NEENAH FOUNDRY | Z1440/R-3487 | SEE PLAN | - | - | - | NEENAH AIRPORT CLEANOUT, DUCTILE IRON | |
| WH WATER HEATER STATE GTS-910-NIEA 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT SET DETAIL. 100V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 1" 1" 1" 1" - NATURAL GAS INPUT, 120V/1P, 25"X13"X25"H 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT 1" 12, 13, 5" PVC COMBUSTION AIR INTOKE AND CPVC VENT 1" 12, 13, 5" PVC | | WH 1 | WATER HEATER | STATE | SUF100_150NE | 1.5" | 1.5" | | <u> </u> | | |
| 3 WATER REATER 4 CIRCULATION PUMP GRUNDFOS UP 15-10 B7 1/2" - 3 GPM @ 3 FT HD, 115V/1P, 1/25 HP. BRASS HOUSING, SS IMPELLER, SEE DETAIL 5 OB GALLON ASDIC GREASE, INTERCEPTOR PRE-CAST 1500 GALLON 1500 GALLON 1500 GALLON 1500 GALLON 1500 GALLON 24", DUCTILLE IRON, 1/20 VAC ACTUATOR (MODEL K4) INSTALL WITHIN AIRCRAFT RATED VALVE BOX BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 24" | | WH 2 | WATER HEATER | STATE | GTS-910-NIEA | 1" | 1" | - | - | | 12, 13, 5" PVC COMBUSTION AIR INTAKE AND CPVC VENT |
| SOI SAND-OIL INTERCEPTOR PRE-CAST 1500 GALLON 6" 3" 1500 GALLON GI GREASE INTERCEPTOR PRE-CAST 800 GALLON - 3º 3" 800 GALLON EAV ELECTRICALLY-ACTUATED BUTTERFLY VALVE BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 24" SIZED PER MER, AIRCRAFT RATED VALVE BOX SIZED PER MER, AIRCRAFT RATED VALVE BOX BUTTERFLY VALVE ELECTRICALLY-ACTUATED BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 6" 6", DUCTILE IRON, 120 VAC ACTUATOR (MODEL K4) NORMALLY CLOSED AND POWER FAILURE EAV ELECTRICALLY-ACTUATED BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 6" 6", DUCTILE IRON, 120 VAC ACTUATOR (MODEL K4) NORMALLY CLOSED AND POWER FAILURE NOTES: 1 - Open Front Seat 2 - Wall Carrier 3 - UL'Listed Trap Primer With VAC Breaker 4 - Handicap Trap Wrap 5 - Bolt Caps 6 - Vacuum Breaker 7 - Chrome Plated Cast Brass P Trap With Clean-Out 8 - Open Grid Drain 9 - Pop-Drain 10 - Angle Supply With Stops 11 - 1/2 GPM Flow Limiters 12 - Anchors, Supports Trim Complete 13 - UL and AGA Listed, Reg Stat. High Limit Safety, ASME P&T Relief To Drain, ASHRAE 9080 Insulation 14 - 2.5 GPM Flow Limiters | | WH 3 | WATER HEATER | STATE | ES6 2 SSUS K | 3/4" | 3/4" | - | - | | 12, 13 |
| GI GREASE INTERCEPTOR PRE-CAST 800 GALLON - 3" 800 GALLON - 24", DUCTILE IRON, 120 VAC ACTUATOR (MODEL K4) INTERLOCK WITH FIRE ALARM SYSTEM, VALVE TO BE INSTALL WITHIN AIRCRAFT RATED VALVE BOX SIZED PER MFR, AIRCRAFT RATED MANHOLE COVER EVENT. VALVE SHALL OPEN IN EVENT OF POWER FAILURE INSTALL WITHIN AIRCRAFT RATED VALVE BOX SIZED PER MFR, AIRCRAFT RATED VALVE BOX BUTTERFLY VALVE EAV 2 ELECTRICALLY-ACTUATED ASSURED AUTOMATION STLESS4A 6" INSTALL WITHIN AIRCRAFT RATED VALVE BOX BUTTERFLY VALVE BOX BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 6" INSTALL WITHIN AIRCRAFT RATED VALVE BOX SIZED PER MFR, AIRCRAFT RATED VALVE BOX SIZED PER MFR, AIRCRAFT RATED MANHOLE COVER EVENT. VALVE SHALL CLOSE IN EVENT OF POWER FAILURE NOTES: 1 - Open-Front Seat 2 - Wall Carrier 3 - UL' Listed Trap Primer With VAC Breaker 4 - Handicap Trap Wrap 5 - Bolt Caps 6 - Vacuum Breaker 7 - Chrome Plated Cast Brass P Trap With Clean-Out 8 - Open-Grid Drain 9 - Pop-Drain 10 - Angle Supply With Stops 11 - 1/2 GPM Flow Limiters 12 - Anchors, Supports Trim Complete 13 - UL and AGA Listed, Reg Stat. High Limit Safety, ASME P&T Relief To Drain, ASHRAE 90A80 Insulation 14 - 2.5 GPM Flow Limiters | | CP 1 | CIRCULATION PUMP | GRUNDFOS | UP 15-10 B7 | - | 1/2" | - | - | | |
| GREASE INTERCEPTOR BOUGARTON CAN BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 24" | | SOI 1 | SAND-OIL INTERCEPTOR | PRE-CAST | 1500 GALLON | - | - | 6" | 3" | 1500 GALLON | |
| ELECTRICALLY-ACTUATED BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 24" | | GI 1 | GREASE INTERCEPTOR | PRE-CAST | 800 GALLON | | | 3" | 3" | 800 GALLON | |
| ELECTRICALLY-ACTUATED BUTTERFLY VALVE ASSURED AUTOMATION STLESS4A 6" | | | | ASSURED AUTOMATION | STLESS4A | 24" | - | - | - | INSTALL WITHIN AIRCRAFT RATED VALVÈ BOX | NORMALLY CLOSED AND SHALL OPEN DURING FIRE ALARM |
| NOTES: 1 - Open Front Seat 2 - Wall Carrier 3 - UL Listed Trap Primer With VAC Breaker 4 - Handicap Trap Wrap 5 - Bolt Caps 6 - Vacuum Breaker 7 - Chrome Plated Cast Brass P Trap With Clean-Out 8 - Open Grid Drain 9 - Pop-Drain 10 - Angle Supply With Stops 11 - 1/2 GPM Flow Limiters 12 - Anchors, Supports Trim Complete 13 - UL and AGA Listed, Reg Stat. High Limit Safety, ASME P&T Relief To Drain, ASHRAE 90A80 Insulation 14 - 2.5 GPM Flow Limiters | | EAV 2 | | ASSURED AUTOMATION | STLESS4A | 6" | - | - | - | 6", DUCTILE IRON, 120 VAC ACTUATOR (MODEL K4) INSTALL WITHIN AIRCRAFT RATED VALVE BOX | INTERLOCK WITH FIRE ALARM SYSTEM, VALVE TO BE NORMALLY OPEN AND SHALL CLOSE DURING FIRE ALARM |
| 15 - Provide Thermostatic Mixing Valve 16 - Provide UL Listed Trap Primer With VAC Breaker or ASSE Certified Trap Seal Where Required 17 - Water Hammer Arrester (HA1), Sioux Chief Hydra-Rester Part No. 652-AS, 1/2" male sweat, 1-11 water supply units | | 10 - Angle | Supply With Stops 11 - 1/2 GPM Flow I | _imiters 12 - Anchors, Support | s Trim Complete 13 - U | JL and AG | GA Listed, R | Reg Stat. Hig | gh Limit Sa | Vacuum Breaker 7 Chrome Plated Cast Brass P Tra fety, ASME P&T Relief To Drain, ASHRAE 90A80 Insulation | p With Clean-Out 8 - Open Grid Drain 9 - Pop-Drain 14 - 2.5 GPM Flow Limiters |

15 - Provide Thermostatic Mixing Valve 16 - Provide UL Listed Trap Primer With VAC Breaker or ASSE Certified Trap Seal Where Required 17 - Water Hammer Arrester (HA1), Sioux Chief Hydra-Rester Part No. 652-AS, 1/2" male sweat, 1-11 water supply units

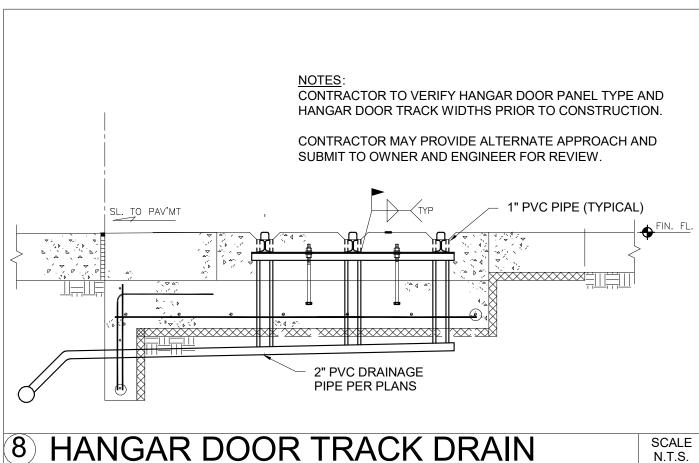
PLUMBING FIXTURE SCHEDULE

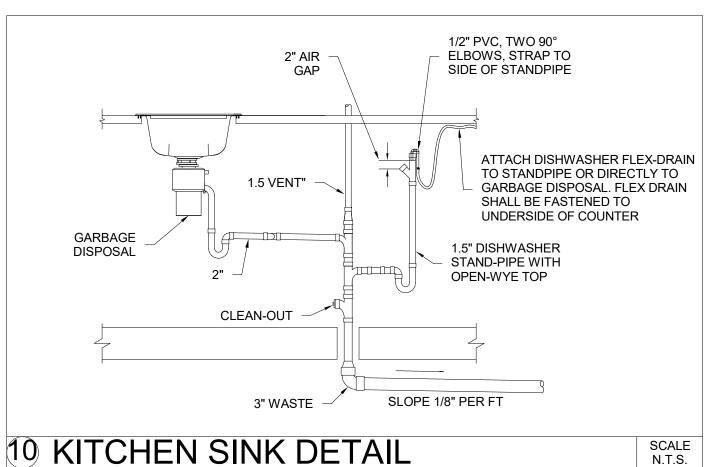




OPTIONAL IRRIGATION SUPPLY TAP LOCATION: REFER TO

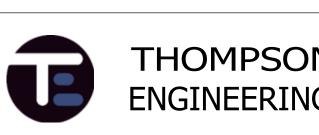
LANDSCAPING PLANS BY OTHERS FOR IRRIGATION SUPPLY



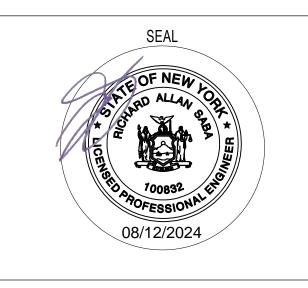


Architecture

127 W. FAIRBANKS AVENUE, SUITE 140
WINTER PARK, FL 32789
(PH): 407-739-9000



8201 SHAFFER PARKWAY
SUITE A
LITTLETON, COLORADO 80127
303.991.0991
THOMPSON-ENG.COM



Key Plan

SIGNATURE STEWART (SWF)
HANGAR

1188 1ST STREET, NEW WINDSOR, NY 12553



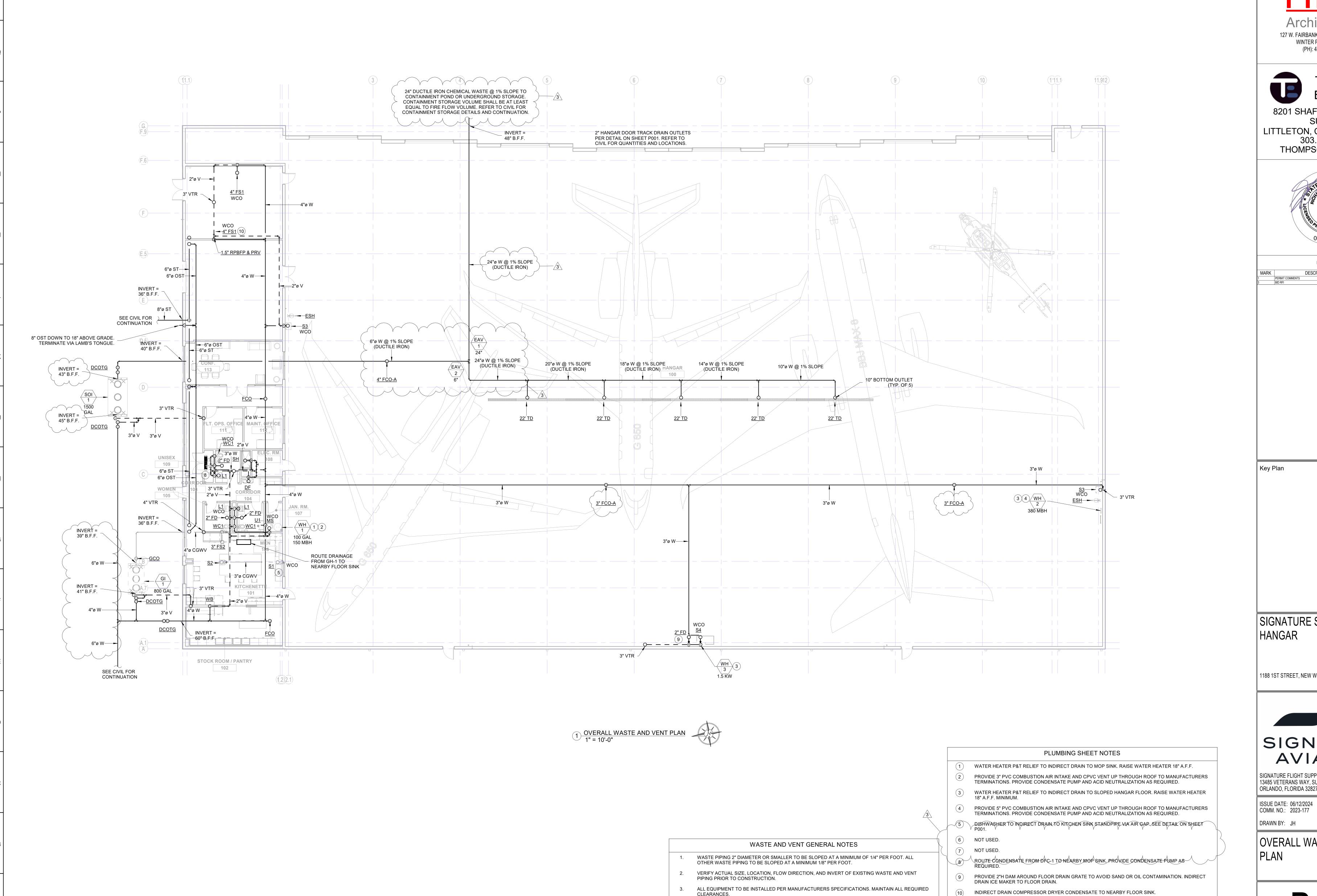
SIGNATURE FLIGHT SUPPORT 13485 VETERANS WAY, SUITE 600 ORLANDO, FLORIDA 32827

ISSUE DATE: 06/12/2024 COMM. NO.: 2023-177

DRAWN BY: JH CHECKED BY: DL/RS

PLUMBING DETAILS AND SCHEDULES

P001







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REVISIONS

SIGNATURE STEWART (SWF)

1188 1ST STREET, NEW WINDSOR, NY 12553



SIGNATURE FLIGHT SUPPORT 13485 VETERANS WAY, SUITE 600 ORLANDO, FLORIDA 32827

COMM. NO.: 2023-177

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OVERALL WASTE AND VENT

100% PERMIT SET

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