

GENERAL NOTES

- A. ALL MECHANICAL WORK, EQUIPMENT, AND FIXTURES SHALL COMPLY WITH THE APPLICABLE YEAR OF THE FOLLOWING CODES AND GOVERNING AGENCIES:
- 2014 INDIANA BUILDING CODE (2012 IRC)
 - 2008 INDIANA ELECTRICAL CODE (2008 NEC)
 - 2012 INDIANA PLUMBING CODE (2008 IPC)
 - 2014 INDIANA MECHANICAL CODE (2012 IMC)
 - 2010 INDIANA ENERGY CONSERVATION CODE (ANSI/ASHRAE 90.1)
 - 2014 INDIANA FIRE CODE (2012 IFC)
 - 2009 ANSI A117.1
- B. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS, INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- C. COORDINATE WITH THE WORK OF OTHER SECTIONS. EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISERS AND DROPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- D. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURERS STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- E. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- F. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND SIZES OF ALL UTILITIES, INCLUDING THE DEPTHS OF ALL BELOW GRADE SANITARY SEWERS. PRIOR TO START OF WORK, THIS DRAWING IS NOT INTENDED TO INDICATE ALL EXISTING UTILITIES.
- G. CONTRACTOR SHALL BE FAMILIAR WITH LANDLORD'S STANDARDS, RULES AND REGULATIONS. ALL LANDLORD'S CRITERIA SHALL BE COMPLIED WITH AND INCLUDED IN THIS BID.
- H. CONTRACTOR SHALL VERIFY AND COORDINATE ALL UTILITY CONNECTION POINTS, INCLUDING SIZES AND INVERTS WITH EXISTING FIELD CONDITION PRIOR TO START OF WORK.
- I. MAKE ALL UTILITY CONNECTION AND INSTALLATION IN FULL ACCORDANCE WITH ALL UTILITY REGULATIONS. PROVIDE ALL ADDITIONAL APPURTENANCES AS REQUIRED BY UTILITY COMPANY. THE COMPLETED INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY. AND THE MANUFACTURERS STRICTEST RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION.
- J. MAINTAIN ALL MANUFACTURERS RECOMMENDED SERVICE CLEARANCES FOR ALL FIXTURES AND EQUIPMENT.
- K. ALL HORIZONTAL FIRE PROTECTION SPRINKLER PIPING AND ALL ABOVE GRADE EXPOSED PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE. SPRINKLER CONTRACTOR SHALL COORDINATE SPRINKLER SYSTEM WITH DUCTWORK AND LIGHTS. ALL COSTS ASSOCIATED WITH RAISING SPRINKLER PIPING WHERE THE ARCHITECTURAL DESIGN CAN NOT BE ACCOMPLISHED SHALL BE THE RESPONSIBILITY OF THE SPRINKLER CONTRACTOR.
- L. CONTRACTOR SHALL COORDINATE TIMES TO WORK IN SPECIFIC AREAS OF THE EXISTING BUILDING WITH THE BUILDING MANAGER.
- M. SLEEVE AND SEAL ALL PIPE PENETRATIONS OF WALLS AND FLOORS. APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATIONS OF FIRE-RATED WALLS AND FLOORS. MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR, BE GROUTED INTO PLACE AND WATER PROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT WITH SILICONE CALK.
- N. ROOF TOP EQUIPMENT SHALL BE TAGGED WITH 2"X12" HIGH PERMANENT LETTERS TO IDENTIFY SPACE SERVED.
- O. EXHAUST FANS / DUCTS AND ROOF VENTS SHALL TERMINATE A MINIMUM OF 15'-0" FROM OUTSIDE AIR INTAKES.
- P. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLenums. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.
- Q. CONTRACT LANDLORD APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ROOF CURB TO MAINTAIN ROOFING WARRANTY.
- R. CONTRACTOR TO DETERMINE IF ANY STRUCTURAL ELEMENTS SUCH AS REBAR OR POST TENSION CABLE EXIST IN FLOORS, WALLS OR ROOFS BY INSPECTION COORDINATED WITH THE LANDLORD'S TENANT COORDINATOR OR STRUCTURAL ENGINEER AND BY USE OF X-RAY WHEN REQUIRED PRIOR TO ANY CUTTING OR CORE DRILLING. IF SUCH ELEMENTS EXIST, REPORT THIS IMMEDIATELY TO THE ARCHITECT AND THE LANDLORD'S TENANT COORDINATOR FOR RESOLUTION PRIOR TO CUTTING OR DRILLING.
- S. VISIT SITE PRIOR TO BIDDING AND FIELD VERIFY EXISTING CONDITIONS. TAKE INTERFERENCES INTO CONSIDERATION.
- T. DUCTWORK SHALL BE INSTALLED TIGHT TO UNDERSIDE OF ROOF STRUCTURE AS HIGH AS POSSIBLE TO AVOID OBSTRUCTIONS.
- U. PAINT INTERIOR OF ALL DUCTS VISIBLE THROUGH DIFFUSERS/GRILLES FLAT BLACK.
- V. ALL ABANDONED HVAC EQUIPMENT SHALL BE REMOVED AND PROPERLY DISPOSED. CAP AND INSULATE ALL UNUSED ROOF OPENINGS.
- W. REPLACE ALL HVAC FILTERS JUST PRIOR TO STORE GRAND OPENING.
- X. ALL DUCT MAINS, DUCTWORK, PLENUMS, BRANCHES, ADJUSTABLE DAMPERS, SENSORS, OR ACCESSORIES PERTAINING TO HVAC SYSTEM INSTALLED ABOVE ACUSTIC OR GYPSUM TYPE CEILINGS SHALL BE NO MORE THAN 4'-0" (48") ABOVE FINISHED CEILING FOR ACCESSIBILITY AND MAINTENANCE REQUIREMENTS.

BURGLAR BAR NOTES

- PROVIDE BURGLAR BARS IN ALL ROOF AND EXTERIOR WALL PENETRATIONS, INCLUDING PENETRATIONS REQUIRED FOR ROOF MOUNTED EQUIPMENT LARGER THAN 12"x12" OR 12"x16" BARS SHALL BE 1/2" STEEL RODS @8" O.C. WELDED IN PLACE AT ALL INTERSECTIONS AND SIDES OF OPENINGS. BARS SHALL BE SECURELY EMBEDDED IN CONCRETE OR WELDED STEEL FRAMES AS REQUIRED BY CONSTRUCTION OF ROOF AND/OR WALL.
- G.C. TO PROVIDE AND INSTALL BURGLAR BARS OVER EXISTING RTU CURBS WHERE EQUIPMENT IS TO BE REMOVED. IN ADDITION TO ABOVE NOTED REQUIREMENT, REFER TO DEMOLITION PLAN FOR CAPPED AND SEALED EQUIPMENT CURBS.

MECHANICAL REQUIREMENTS

- PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.
- DEFINITIONS: FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE/USE. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
- 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.
- COORDINATION: COORDINATE WITH THE WORK OF OTHER TRADES. EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.
- DUCT DIMENSIONS, UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.
- SHEETMETAL DUCTWORK: PROVIDE SHEETMETAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A". SHEETMETAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY. WITH 60% ZINC COATING. SHEET STEEL SHALL COMPLY WITH ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEETMETAL, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEAL) BY THE HOT DIP PROCESS. AND A024 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR SHEET, METALLO-COATED BY THE HOT DIP PROCESS. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CALKING. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT. PROVIDE TURNING VANES AT ALL 90° ELBOWS.
- ROUND SHEETMETAL DUCT: PROVIDE SPIRAL SEAM (ALL SIZES) OR SNAP LOCK (DUCT SIZES UP TO 10" ABOVE CEILING) GALVANIZED STEEL, COMPLYING WITH SMACNA STANDARDS. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.
- DUCTWORK FITTINGS AND ACCESSORIES: ALL FITTINGS AND ACCESSORIES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST PUBLISHED STANDARDS FROM SMACNA AND ASHRAE.
- FLEXIBLE DUCT: PROVIDE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH 1" THICK 1 PCF FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR BARRIER. FLEXIBLE DUCT SHALL MEET NFPA 99A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR MINIMUM 2" W.G. PRESSURE, AND 0 TO 250°F TEMPERATURE. PROVIDE SCREEN OPERATED METAL ADJUSTABLE CLAMPING DEVICES. USE TWIST-LOCK TAP COLLARS AT CONNECTIONS INTO SHEETMETAL DUCTWORK. MAXIMUM EXTENDED LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 4 FEET.
- EXPOSED DUCTWORK: EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, THEN WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARING CHEMICAL. TO PREPARE DUCT FOR PAINT.
- DUCT SEALANT: PROVIDE POLYMERIC RUBBER TYPE SEALANT FOR USE ON BOTH INTERIOR LOCATED DUCTWORK AND DUCTWORK EXPOSED TO OUTDOOR CONDITIONS. SEALER SHALL HAVE HIGH BONDING STRENGTH FOR SURE, FIRST TIME SEALING OF JOINTS IN LOW, MEDIUM, AND HIGH PRESSURE DUCT SYSTEMS. SEALER SHALL BE HIGH IN SOLID CONTENT. PROVIDE A TWO PART TAPE SEALING SYSTEM, CONSISTING OF WOVEN FIBER TAPE IMPREGATED WITH A GYPSIUM MINERAL COMPOUND, AND A MODIFIED ACRYLSILOXANE ACTIVATOR THAT REACTS EXOTHERMICALLY WITH THE TAPE. TWO PART TAPE SEALING SYSTEM MUST BE RATED FOR BOTH INDOOR AND OUTDOOR APPLICATION. TAPE SHALL NOT CONTAIN ASBESTOS.
- DUCT INSULATION (ALL ROUND SUPPLY DUCT AND ROUND RETURN DUCT ABOVE CEILING): PROVIDE MINIMUM 1-1/2" THICK BLANKET TYPE FIBERGLASS INSULATION COMPLYING WITH ASTM C-553, TYPE II, WITH FACTORY APPLIED RAFT BONDED TO ALUMINUM FOL. REINFORCED WITH FIBERGLASS VAPOR BARRIER/JACKET. JACKET SHALL CONFORM TO ASTM C-1136, TYPE II. INSTALLED R VALUE SHALL BE R-6 OR HIGHER WITH A 0.75 PCF DENSITY.
- DUCT LINER (ALL RECTANGULAR SUPPLY AND RETURN DUCT): PROVIDE MINIMUM 1" THICK, 3 PCF DENSITY, NEOPRENE COATED, FIBREX TEXTILE FIBER TYPE DUCT LINER WITH COATING ON THE AIR SIDE. DUCT LINER SHALL CONFORM TO ASTM C-916, TYPE II. ADHESIVE SHALL BE AS RECOMMENDED BY DUCT LINER MANUFACTURER, AND SHALL COMPLY WITH ASTM C-916. DUCT LINER FASTENERS SHALL COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITION. THERMAL CONDUCTIVITY SHALL BE EQUAL TO OR LESS THAN 0.26 AT 75°F.
- ROUND VOLUME DAMPERS: PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEETMETAL BRACKET BEYOND DUCT COVERING, WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE. PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.
- RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM 3/8" HEXAGONAL AXLE, MOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".
- DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.
- FLEXIBLE DUCT CONNECTORS: PROVIDE UL Labeled 20 OUNCE NEOPRENE COATED FIBERGLASS FABRIC DUCT CONNECTORS AT DUCT CONNECTIONS TO ALL VIBRATING EQUIPMENT.
- DUCT ACCESS DOORS: PROVIDE HINGED ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT. PROVIDE INSULATED ACCESS DOORS FOR INSULATED DUCTWORK. CONSTRUCT OF SAME OR THICKER GAUGE SHEETMETAL AS DUCT IN WHICH IT IS INSTALLED. PROVIDE FLUSH FRAMES FOR UNINSULATED DUCTS, AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTS. PROVIDE CONTINUOUS HINGE ON ONE SIDE, WITH ONE HANDLE-TYPE LATCH FOR ACCESS DOORS 12" HIGH AND SMALLER, AND TWO HANDLE-TYPE LATCHES FOR LARGER ACCESS DOORS.
- TESTING AND BALANCING: TEST AND ADJUST ALL MECHANICAL SYSTEMS AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH THE MOST CURRENT NEBS OR AABC, AND ASHRAE STANDARDS. ELIMINATE OBSTRUCTION, NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. BALANCING CONTRACTOR SHALL BE AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR, WITH NEBS OR AABC CERTIFICATION. SUBMIT COMPLETED AND CERTIFIED TEST AND BALANCE REPORT TO OWNERS REPRESENTATIVE. BALANCE ALL SYSTEMS TO WITHIN 5% OF AIR FLOWS INDICATED ON THE DRAWINGS, AND REPORT ALL DISCREPANCIES TO HVAC INSTALLER FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.

THERMOSTAT/SENSOR NOTES

- ALL THERMOSTATS AND SENSORS SHALL BE PROVIDED BY NOVAR CONTROLS. FINAL LOCATIONS AND ELEVATIONS PER NOVAR CONTROL'S PLANS (SHOP DRAWINGS). MECHANICAL CONTRACTOR SHALL PROVIDE TEMPORARY HEAT/COOL THERMOSTATS FOR ROOFTOP UNITS TO ALLOW FOR SPACE TEMPERING LOCATE THERMOSTATS NEAR RETURN INLET LOCATION.
- MECHANICAL CONTRACTOR SHALL PROVIDE ALL OTHER LOCAL CONTROL DEVICES (EXHAUST FAN WALL TOGGLE SWITCH, CIRCULATING FAN TIMER, ETC).
- COORDINATE ANY AND ALL CONTRACTOR REQUIREMENTS SHOWN ON SITE SPECIFIC NOVAR SHOP DRAWINGS.

NOVAR SYSTEM NOTES

- NOVAR INTERFACE SUMMARY (REFER TO T&X SPECIFICATIONS FOR DETAIL INFORMATION)
- GENERAL CONTRACTOR
 - PROVIDE 4'X8' PLYWOOD BACKBOARD IN ELECTRIC ROOM FOR NOVAR TO MOUNT THEIR EQUIPMENT. PHONE AND ETHERNET JACKS FOR THE NOVAR CONTROLLER WILL ALSO BE LOCATED ON THIS BOARD BY SEPARATE T&X VECTOR.
 - MECHANICAL CONTRACTOR
 - MOUNT 2X4 J-BOX WITH CONDUIT (WIREMIDIE EXPOSED IN FINISHED AREAS) AT LOCATIONS DESIGNATED ON NOVAR CONTROLS SITE SPECIFIC PLANS. THE J-BOXES ARE SHALL BE MOUNTED 60" AFF EXCEPT IN FITTING ROOM LOCATIONS WHERE J-BOXES SHALL BE MOUNTED 94" AFF. ON SALES FLOOR J-BOXES SHALL BE MOUNTED ON BACK SIDE OF COLUMNS WHEN VIEWED FROM FRONT OF STORE.
 - PROVIDE PERMANENT STRANDED 1/8" AWG NON SHIELDED CABLE (18/10 IF THE RTU IS EQUIPPED WITH A CO2 SENSOR) FROM EACH ROOFTOP UNIT TO THE NOVAR ETM (1-STAT) LOCATION SHOWN ON THE NOVAR PLAN THAT SUPERSEDES ANY MECHANICAL PLAN LOCATIONS. ALL CONTROL DEVICES SHALL BE APPROPRIATELY IDENTIFIED AND PERMANENTLY ATTACHED.
 - TEMPORARY THERMOSTATS SHALL BE INSTALLED NEAR THE ROOFTOP UNITS.
 - HVAC EQUIPMENT SHALL HAVE MANUFACTURERS RECOMMENDED STARTUP PROCEDURE PERFORMED AND BE OPERATIONAL IN ALL MODES BEFORE ARRIVAL OF NOVAR CONTROLS REPRESENTATIVE FOR FINAL NOVAR INSTALLATION.
 - IN COLD WEATHER THE CONTRACTOR SHALL PROVIDE TEMPORARY THERMOSTAT TO OPERATE THE HEATERS IN RECEIVING.
 - BASEBOARD HEATERS SHALL BE FACTORY EQUIPPED WITH INTEGRAL THERMOSTATS AND INSTALLED IN ALL OFFICES, LOUNGE, RESTROOMS, AND SECURITY OFFICES WITH AT LEAST ONE EXTERIOR WALL WHEN LOCATED IN CLIMATE ZONES 4 AND 5. THE CIRCULATING HEATING SHALL BE THROUGH GE RELAY PANEL.
 - ELECTRIC VENTILABLE HEATERS SHALL BE FACTORY EQUIPPED WITH LOW VOLTAGE CONTROLS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: POWER CONTACTORS, LOV VOLTAGE TRANSFORMER, AND TWO WIRE FIELD TERMINATION CONTROL POINT.
 - ELECTRICAL CONTRACTOR
 - REFER TO ELECTRICAL PLANS FOR REQUIREMENTS AND COORDINATION INFORMATION

NATIONAL ACCOUNTS

- T&X GROUP OF COMPANIES HAS A NATIONAL ACCOUNT AGREEMENT WITH YORK. AIR CONDITIONING UNITS ARE OWNER FURNISHED. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND ACCEPTING THE EQUIPMENT, VERIFYING PROPER QUANTITIES, PROVIDING TEMPORARY STORAGE, LABOR, PROPER INSTALLATION, AND ONE-YEAR LABOR WARRANTY.
- FOR COMPLETE INFORMATION ON THE OWNER FURNISHED HVAC EQUIPMENT, CONTACT YORK NATIONAL ACCOUNTS: SAUL DAZ SAul.Diaz@tjx.com cc @ BE-TJXNHAcct@tjx.com DIRECT OFFICE PHONE: (405) 419-6447 TOLL FREE: (800) 484-8738
- NOTE: ORDERING PROCEDURES**
- YORK NATIONAL ACCOUNTS DEPARTMENT WILL ORDER EQUIPMENT AND COORDINATE SHIPMENT WITH THE SUCCESSFUL HVAC CONTRACTOR. THE HVAC CONTRACTOR WILL BE RESPONSIBLE FOR DELIVERY COORDINATION, RECEIVING, AND INSTALLATION AS DESCRIBED IN THE SPECIFICATIONS.
- STANDARD LEAD-TIME FOR YORK RTU HVAC EQUIPMENT IS FOUR (4) WEEKS MANUFACTURING PLUS ONE (1) WEEK TRANSPORTATION DEPENDING ON THE LOCATION WITH THE 48 STATES. ANY NON-STANDARD OPTION MAY ADD TO THE STANDARD MANUFACTURING LEAD-TIME AND WILL BE CONFIRMED AT PLACEMENT OF ORDER.
- HVAC EQUIPMENT WITH THE FACTORY TECHNICOAT COATING OF THE CONDENSER AND EVAPORATOR COILS WILL HAVE AN ELEVEN (11) WEEK LEAD-TIME.
- NOTE: EQUIPMENT STARTUP INSTRUCTION**
- YORK IS RESPONSIBLE FOR STARTUP AND COMMISSIONING OF THE HVAC EQUIPMENT.

NOVAR
JOHN ANKENS OR JOE BORDERS
(216) 662-1600

THE FOLLOWING EQUIPMENT FALLS UNDER THE YORK (JOHNSON CONTROLS) NATIONAL ACCOUNT AGREEMENT:

- HVAC EQUIPMENT: YORK
GAS LINE HEATER: STERLING
EXHAUST FANS: PENNBARRY
DROPOFF DIFFUSERS, GRILLES, REGISTERS: TUTTLE & BAILEY AND AES MECHANICAL. (tjx@aesctm.com) (800) 786-0402

NO SUBSTITUTIONS WILL BE ALLOWED

MECHANICAL SYMBOLS AND ABBREVIATIONS

ABBREVIATIONS:		DOUBLE LINE DUCT SYMBOLS:	
AFB	ABOVE FINISHED FLOOR		NEW SHEET METAL DUCTWORK & SIZE
AHU	AUTHORITY HAVING JURISDICTION		EXISTING DUCTWORK/PIPING TO REMAIN
BHP	BRAKE HORSEPOWER		EXISTING DUCTWORK/PIPING TO BE REMOVED
BTU	BRITISH THERMAL UNIT		SUPPLY OR OUTSIDE AIR DUCT
CFM	CUBIC FEET PER MINUTE		EXHAUST DUCT
DB	DRY BULB		RETURN DUCT
EC	ELECTRICAL CONTRACTOR		DUCT TRANSITION
EA	EXHAUST AIR		DUCT TRANSITION - RECTANGULAR TO ROUND
EAT	ENTERING AIR TEMPERATURE		SUPPLY DUCT ELBOW - UP and DOWN
ESP	EXTERNAL STATIC PRESSURE		RETURN DUCT ELBOW - UP and DOWN
GC	GENERAL CONTRACTOR		EXHAUST DUCT ELBOW - UP and DOWN
HZ	FREQUENCY		FIXED VANE TURNING ELBOW
LAT	LEAVING AIR TEMPERATURE		RETURN AIR
MC	MECHANICAL CONTRACTOR		FULL RADIUS ELBOW
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		RECTANGULAR BRANCH WITH VOLUME DAMPER (RECTANGULAR MAIN)
NC	NOISE CRITERIA		ROUND BRANCH WITH VOLUME DAMPER (RECTANGULAR MAIN)
OA	OUTSIDE AIR		ROUND BRANCH WITH VOLUME DAMPER (ROUND MAIN)
PC	PLUMBING CONTRACTOR		FLEXIBLE DUCTWORK
PD	PRESSURE DROP		
RA	RETURN AIR		
RTU	ROOFTOP UNIT		
SA	SUPPLY AIR		
TSP	TOTAL STATIC PRESSURE		
TYP	TYPICAL		
UNO	UNLESS NOTED OTHERWISE		
WC	WATER COLUMN		
WB	WET BULB		

GRILLES/DIFFUSERS:		EQUIPMENT:	
	SUPPLY DIFFUSER (4-WAY THROW)		ROOF MOUNTED EXHAUST FAN
	SUPPLY DIFFUSER (3-WAY THROW)		PACKAGED ROOFTOP UNIT
	SUPPLY DIFFUSER (2-WAY THROW)		GAS UNIT HEATER
	SUPPLY DIFFUSER (1-WAY THROW)		CEILING HEATER
	SIDEWALL MOUNTED SUPPLY REGISTER		THERMOSTAT
	RETURN/TRANSFER GRILLE		REMOTE TEMPERATURE SENSOR
	EXHAUST GRILLE		SENSOR / CONTROLLER
			CARBON DIOXIDE SENSOR
			SMOKE DETECTOR
			TOGGLE SWITCH

GENERAL REFERENCES/NOTATIONS:

- 2 OR 2M1 DETAIL OR SECTION REFERENCE
- CONNECT TO EXISTING
- TAGGED NOTE DESIGNATION
- REVISION DESIGNATION
- EQUIPMENT DESIGNATION

NOTES:
REFER TO PLANS, EQUIPMENT SCHEDULES AND SPECIFICATIONS FOR DETAILED INFORMATION REGARDING ALL EQUIPMENT AND DEVICES.
MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND DEVICES UNLESS SPECIFICALLY NOTED OTHERWISE.

DIFFUSER TAG
 GRILLE/REGISTER/DIFFUSER DESIGNATION
 CM NECK SIZE
 34" DOOR UNDERCUT - COORDINATE WITH GENERAL CONTRACTOR

MECHANICAL VENTILATION SCHEDULE

ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION	ZONE AREA A _z	AREA OUTDOOR AIR RATE (CFM/50 FT²)	DEFAULT OCCUPANT DENSITY # / 1000 SQ FT	OCCUPANT DENSITY P _z	PEOPLE OUTDOOR AIR RATE (CFM/50 FT²) P _z	ZONE AIR DISTRIBUTION EFFECTIVENESS E _z	BREATHING OUTDOOR AIR FLOW REQ'D Vbz = (PzPz+RAz)Ez	ACTUAL OUTDOOR AIRFLOW PROVIDED	EXHAUST AMOUNT (CFM)		EXHAUST EQUIPMENT	SUPPLY EQUIPMENT
											REQUIRED	PROVIDED		
1	VESTIBULE	CORRIDOR	171	0.06	0	0	0.0	0.8	13	60.0	0	0	-	RTU-1
2	SALES	SALES	11,264	0.12	15	169	7.5	0.8	3,274	3,300.0	0	0	-	RTU-1, 2, 3, 4, 5
3	MGR	OFFICE	199	0.06	5	1	5.0	0.8	21	22.0	0	0	-	RTU-6
4	CASH	OFFICE	81	0.06	5	1	5.0	0.8	12	12.0	0	0	-	RTU-6
5	LP OFFICE	OFFICE	74	0.06	5	1	5.0	0.8	12	12.0	0	0	-	RTU-6
6	LOUNGE HALLWAY	CORRIDOR	194	0.06	0	0	0.0	0.8	15	27.0	0	0	-	RTU-9
7	MENS RESTROOM	TOILET	174	0.00	0	0	0.0	0.8	0	27.0	50	250	EF-1	RTU-9
8	WOMENS RESTROOM	TOILET	175	0.00	0	0	0.0	0.8	0	27.0	50	250	EF-1	RTU-9
9	LOUNGE	BREAK ROOM	461	0.06	25	12	5.0	0.8	107	115.2	0	220	EF-2	RTU-9
10	JANTOR	TOILET	104	0.00	0	0	0.0	0.8	0	19.8	50	150	EF-1	RTU-9
11	PROCESSING	SHIPPING, RECEIVING	4,468	0.12	0	0	0.0	0.8	670	700.0	0	0	-	RTU-8
12	ELECTRICAL ROOM	UNOCCUPIED	149	0.00	0	0	0.0	0.8	0	0.0	0	0	-	-
14	HALL@CASH	CORRIDOR	54	0.06	0	0	0.0	0.8	4	8.0	0	0	-	RTU-6
15	ASST MGR	OFFICE	216	0.06	5	1	5.0	0.8	22	22.0	0	0	-	RTU-6
16	DRESSING ENTRANCE	CORRIDOR	129	0.06	0	0	0.0	0.8	25	26.0	0	0	-	RTU-7
17	WOMENS DRESSING	DRESSING ROOM	192	0.00	0	0	0.0	0.8	0	39.0	48	100	EF-3	RTU-7
18	MENS DRESSING	DRESSING ROOM	192	0.00	0	0	0.0	0.8	0	39.0	48	100	EF-3	RTU-7
19	WOMENS ADA	DRESSING ROOM	66	0.00	0	0	0.0	0.8	0	10.0	17	INCL ROOM#17	EF-3	RTU-7
20	MENS ADA	DRESSING ROOM	66	0.00	0	0	0.0	0.8	0	10.0	17	INCL ROOM#18	EF-3	RTU-7
TOTALS:			18,429				184		4,474	4,476	260	1,070		
			SQ. FT.			PEOPLE			CFM	CFM	CFM	CFM		

TJX COMPANIES PLAN REVIEW

Approved as Noted
 Review & Resubmit

Review is for conformance to the TJX COMPANIES Criteria documents (plans & specifications). This review does not relieve responsibility of the TJX COMPANIES criteria documents and specifications.

By: janderson
Date: 12/04/2023

CT

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SIERRA
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EVANSVILLE, IN 47715

REVISION DATES

NO.	DATE	TYPE

ISSUE DATES

