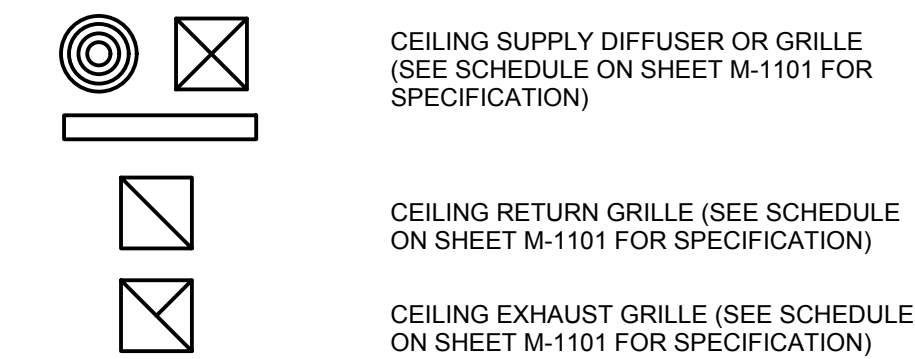
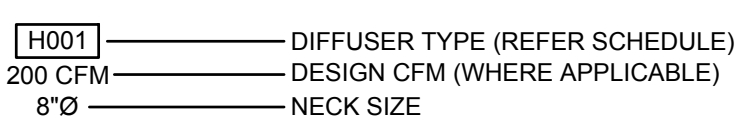
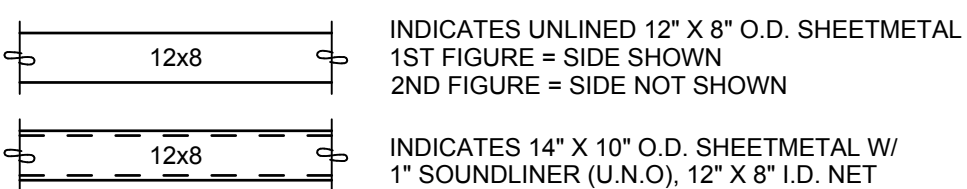
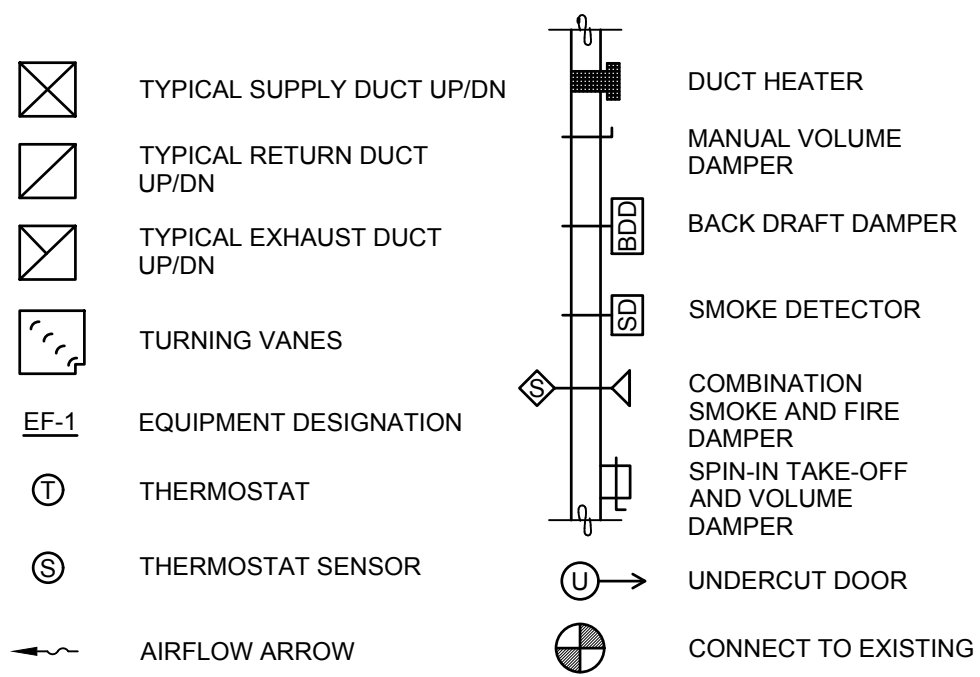


## ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
APPROX	APPROXIMATE
BLDG	BUILDING
CO2	CARBON DIOXIDE
CD	CEILING DIFFUSER
CLG	CEILING
CONST	CONSTRUCTION
CXA	COMMISSIONING AGENT
DEG	DEGREES
DM	STARBUCKS DESIGN MANAGER
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
EA	EACH
EC	ELECTRICAL CONTRACTOR
ECP	EQUIPMENT CONTROL PAC
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EXIST	EXISTING
EXT	EXTERIOR
F&I	FURNISH & INSTALL
FLR	FLOOR
FT	FOOT/FEET
G	GAS PIPING
GC	GENERAL CONTRACTOR
HR	HOOR
HVAC	HEATING, VENTILATION, AIR CONDITIONING
I.D.	INSIDE DIAMETER
IAQ	INDOOR AIR QUALITY
LCP	LIGHTING CONTROL PANEL
LL	LANDLORD
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MFG	MANUFACTURER
MIN	MINIMUM
NTS	NOT TO SCALE
O.D.	OUTSIDE DIMENSION
OSA	OUTSIDE AIR
REF	REFERENCE
REQ'D	REQUIRED
REV	REVISION
RT	ROOFTOP
SF	SQUARE FEET
SHT	SHEET
SPECS	SPECIFICATION(S)
SST	STAINLESS STEEL
TEMP	TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WH	WATER HEATER
WSHP	WATER SOURCE HEAT PUMP

## MECHANICAL SYMBOL LEGEND



## DUCTWORK AND ACCESSORIES

**SHEETMETAL DUCTWORK**  
SEE SPECIFICATIONS FOR SHEET METAL DUCT REQUIREMENTS. ALL EXPOSED DUCTWORK TO BE SPIRAL ROUND, OR RECTANGULAR LOCK-SEAM TYPE, AS SHOWN ON HVAC PLAN SHEET. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICE FOR ACHIEVING AIR TIGHT (5% LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. FURNISH AND INSTALL ALL REQUIRED DAMPERS, TRANSITIONS, CONNECTIONS TO AIR TERMINALS, AND OTHER ACCESSORIES NECESSARY FOR COMPLETE OPERATING SYSTEM. NO VARIATION OF DUCT CONFIGURATION OR SIZES WILL BE PERMITTED EXCEPT BY PERMISSION FROM THE ENGINEER.

**DUCT SEALANT**  
SEAL ALL LONGITUDINAL AND TRANSVERSE JOINTS PER SPECIFICATIONS. COVER ALL FIELD JOINTS, JOINTS AROUND SPIN-IN FITTINGS, AND FASTENING SCREWS WITH MASTIC.

**SUPPORTS**  
PROVIDE FASTENERS, ANCHORS, RODS, STRAPS, TRIM, AND ANGLES FOR SUPPORT OF DUCTWORK. SUPPORTS MUST COMPLY WITH LOCAL REGULATIONS AND CODE.

**DAMPERS**  
PROVIDE VOLUME CONTROL DAMPERS WHERE INDICATED ON DRAWINGS AND AT POINTS ON LOW PRESSURE SUPPLY, RETURN, AND EXHAUST DUCTS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS. PROVIDE UL LISTED FIRE OR FIRE/SMOKE DAMPERS WHERE REQUIRED AND IN ACCORDANCE WITH NFPA AND LOCAL CODES. PROVIDE CONVENIENTLY LOCATED ACCESS DOORS OF AMPLE SIZE AND QUANTITY FOR SERVICING THE DAMPERS. PROVIDE MOTORIZED DAMPERS AT ALL INTAKE & EXHAUST BUILDING OPENINGS. COORDINATE WITH OTHER TRADES FOR ACCESS PANELS, POWER AND FIRE ALARM INTERFACES. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

**GRILLES, REGISTERS, AND DIFFUSERS**  
GRILLES, REGISTERS, AND DIFFUSERS SHALL BE AS SPECIFIED AND SHALL BE MECHANICAL CONTRACTOR SUPPLIED, UNLESS OTHERWISE NOTED. DIFFUSERS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SCHEDULES. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPE OF CEILING AND WALLS USED IN THIS PROJECT.

**THERMAL INSULATION**  
PROVIDE EXTERNAL THERMAL INSULATION WITH AN INTEGRAL VAPOR BARRIER FACING OF SUFFICIENT THICKNESS TO MEET LOCAL ENERGY CODE REQUIREMENTS OR ASHRAE 90.1-2004, WHICHEVER IS MORE STRINGENT. PROVIDE INSULATION ON EXHAUST AND OUTSIDE AIR DUCTS, AND ON CONCEALED PORTIONS OF SUPPLY AND RETURN AIR DUCTS. DO NOT EXTERNALLY INSULATE EXPOSED DUCTWORK AND PORTIONS OF DUCTWORK THAT ARE INTERNALLY LINED WITH CODE REQUIRED THICKNESS. INTERNALLY INSULATE EXPOSED SUPPLY DUCTWORK IF POSSIBILITY OF CONDENSATION. INTERNALLY INSULATE EXTERIOR DUCTWORK PER CODE.

**ACOUSTICAL DUCT LINER**  
UNLESS OTHERWISE INDICATED ON THE PLANS, PROVIDE 1" (25MM) ACOUSTICAL DUCT LINER IN SUPPLY AND RETURN DUCTWORK WITHIN 10'-0" (305CM) OF THE DISCHARGE AND INTAKE OF AIR HANDLING UNITS. INCREASE DUCT SIZE INDICATED ON PLANS AS NEEDED TO ACCOMMODATE LINER. LINER TO BE PROVIDED AND FASTENED TO DUCT WITH MECHANICAL LINER FASTENERS IN ACCORDANCE WITH SMAACNA AND SPECIFICATION REQUIREMENTS.

**FLEXIBLE DUCTWORK**  
FLEXIBLE DUCT WORK SHALL ONLY BE INSTALLED AS SHOWN IN PLAN AND NOT ABOVE HARD LID CEILINGS. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" (152CM) IN LENGTH AND TWO 45° ELBOWS. IT SHALL BE PULLED TAUT AND APPROPRIATELY FASTENED TO RIGID BRANCH DUCT & DIFFUSER. BENDS SHALL BE MINIMIZED AND WHERE NEEDED BE A FULL RADIUS BEND. SUPPORT BANDS SHALL BE INSTALLED SO AS TO NOT CRIMP FLEX DUCT. FLEXIBLE DUCTWORK SHALL MEET SPECIFICATION REQUIREMENTS.

## HVAC EQUIPMENT AND MATERIALS

**AIR HANDLING UNITS**  
AIR HANDLING UNITS SHALL BE AS SPECIFIED IN THE MECHANICAL SCHEDULE AND SHALL BE FURNISHED AND INSTALLED PER THE LEASE AGREEMENT. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING DELIVERY, PROVIDING COMPLETE INSTALLATION INCLUDING CURBS, PIPING, VIBRATION ISOLATION, AND NECESSARY ACCESSORIES, AND PROVIDING WARRANTY.

**FILTERS**  
IF OPERATING HVAC DURING CONSTRUCTION, PROVIDE THREE (3) SETS OF 2" (51MM) MERV3 PLEATED DISPOSABLE FILTERS. USE ONE SET UNTIL COMPLETION OF CONSTRUCTION. INSTALL ONE SET AT COMPLETION OF CONSTRUCTION (PRIOR TO TAB) AND DELIVER ONE SET OF MERV13 FILTERS TO STARBUCKS LABELED TO DENOTE THEIR RESPECTIVE AIR HANDLING UNIT.

**EXHAUST FANS**  
EXHAUST FANS SHALL BE AS SPECIFIED AND PROVIDED PER THE LEASE AGREEMENT. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING DISCHARGE LOCATION WITH NEW AND EXISTING VENTS AND INTAKES, PROVIDING COMPLETE INSTALLATION INCLUDING CURBS, BACKDRAFT DAMPER, DUCTWORK FROM RESTROOM GRILLE TO UNIT, NECESSARY ACCESSORIES AND PROVIDING WARRANTY.

**AIR CURTAINS**  
AIR CURTAINS, WHEN REQUIRED, SHALL BE FURNISHED BY OWNER WITH WINDOW UNIT FROM READY-ACCESS AND INSTALLED BY THE GENERAL CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR FOR LOCATION OF POWER CONNECTION.

**NATURAL GAS PIPING**  
PROVIDE NATURAL GAS PIPING FROM GAS COMPANY METER TO EACH PIECE OF EQUIPMENT OR APPLIANCES IN ACCORDANCE WITH CODE AND SPECIFICATIONS. PRESSURE REGULATORS FOR MEDIUM PRESSURE SYSTEMS SHALL BE VENTED TO THE OUTDOORS. PROVIDE PIPING SUPPORT BLOCKING ON ROOF, COMPATIBLE WITH ROOFING SYSTEM.

**BRACING AND ANCHORING**  
ALL MECHANICAL EQUIPMENT, FIXED OR FLEXIBLY MOUNTED, SHALL BE BRACHED OR ANCHORED TO COMPLY WITH LOCAL CODES.

## TESTING, ADJUSTING, BALANCING

INDEPENDENT AIR BALANCE CONTRACTOR OR QUALIFIED MECHANICAL CONTRACTOR SHALL ACCURATELY BALANCE THE SUPPLY, RETURN AND OUTSIDE AIR (INCLUDING EXHAUST FAN(S)) AND HYDRONIC (WHERE APPLICABLE) SYSTEMS TO PROVIDE AIR AND WATER QUANTITIES INDICATED ON THE DRAWINGS AND IN THIS SPECIFICATION. BALANCER SHALL BE QUALIFIED FOR TAB WORK PER NEBB OR AABC STANDARDS. OPERATE AUTOMATIC CONTROLS SYSTEM AND VERIFY SET POINTS. SUBMIT TWO (2) COPIES OF THE BALANCE REPORT TO THE ENGINEER AND COMMISSIONING AGENT FOR APPROVAL. INCLUDE A COPY OF THE BALANCE REPORT AS APPROVED BY THE ENGINEER WITH APPLICATION FOR FINAL CONTRACT PAYMENT.

## GENERAL MECHANICAL NOTES

- MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO PATCH AND REPAIR ALL EXISTING WALLS, FLOORS, CEILINGS OR OTHER SURFACES IDENTIFIED TO REMAIN THAT MAY BECOME DAMAGED DURING THE COURSE OF WORK.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S), FURNISH & INSTALL ALL COMPONENTS NEEDED WHETHER INDICATED OR NOT TO PROVIDE A COMPLETE AND OPERATING SYSTEM.
- CONTRACTOR TO VERIFY ALL DIMENSIONS, INCLUDING CLEARANCES REQUIRED BY OTHER TRADES, AND NOTIFY STARBUCKS CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. ALL DIMENSIONS ARE TO THE FACE OF THE FINISHED SURFACE UNLESS NOTED OTHERWISE. ALL DIMENSIONS TO BE TAKEN FROM ACTUAL BUILDING DIMENSIONS.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE HVAC WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DIMENSIONED DIFFUSER LOCATIONS AND MOUNTING HEIGHTS WHERE EXPOSED. SEE SPECIFICATION SHEETS FOR MECHANICAL SPECIFICATION SECTIONS
- NEW DUCTWORK AND EQUIPMENT SHALL NOT BE INSTALLED WHERE IT OBSTRUCTS ANY EXISTING OR NEW AREAS THAT REQUIRE ACCESS.

## GENERAL NOTES

**SCOPE**  
THE INTENT OF THE SPECIFICATIONS AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.

**SITE EXAMINATION**  
THE MECHANICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, DUCTWORK, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE MECHANICAL WORK.

**PENETRATIONS**  
WHERE PIPES AND DUCTS PENETRATE WALL, SEAL OPENINGS TO PREVENT AIR TRANSFER BETWEEN SPACES. USE FIRE RATED SEALANTS ON ALL FIRE SEPARATION PENETRATIONS, INCLUDING FLOORS. SEAL AROUND ALL PIPES AND DUCTS PENETRATING FIRE SEPARATIONS WITH NON-COMBUSTIBLE PACKING RETAINED BY METAL COLLARS. THE ASSEMBLY SHALL BE APPROVED BY STATE FIRE MARSHALL.

**STANDARDS**  
EQUIPMENT AND MATERIALS SHALL CONFORM WITH THE APPROPRIATE PROVISIONS OF CSA, ULC, ARL, ASME, ASTM, UL, NEMA, ANSI, SMAACNA, ASHRAE, NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

**CODES**  
ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE PROVINCIAL AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS AND THE CODES AND ORDINANCES, USE WHICHEVER IS MORE STRINGENT. THE MECHANICAL CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO STARBUCKS.

**PERMITS AND FEES**  
THE MECHANICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY TO COMPLETE THE MECHANICAL WORK.

**WARRANTY**  
THE MECHANICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY STARBUCKS AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

## LANDLORD REQUIREMENTS

**PRIOR TO BID:** THE CONTRACTOR SHALL COORDINATE WITH LANDLORD / BUILDING OWNER FOR ANY CONSTRUCTION REQUIREMENTS / SPECIFICATIONS. IF LANDLORD / BUILDING OWNER DOES HAVE REQUIREMENTS, CONTRACTOR SHALL BECOME COMPLETELY FAMILIAR WITH REQUIREMENTS / SPECIFICATIONS AND ADHERE TO THEM. WHERE LANDLORD / BUILDING OWNER REQUIREMENTS ARE MORE STRINGENT THAN SHOWN IN THESE PLANS (IN THE OPINION OF THE ENGINEER), LANDLORD / BUILDING OWNER REQUIREMENTS SHALL GOVERN.

ISSUED FOR CONSTRUCTION - 08/23/2017



**STARBUCKS COFFEE COMPANY**  
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STARBUCKS TEMPLATE VERSION | 2016.12.23

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PROJECT NAME:  
**RENOVATION OF STARBUCKS COFFEE PORTLAND, 1080 FOREST AVE.**  
PROJECT ADDRESS:  
**1080 FOREST AVENUE PORTLAND, ME 04103 CUMBERLAND COUNTY**

STORE #: 11917  
PROJECT #: 37548-037  
ISSUE DATE: 08/04/2017  
PROGRAM MANAGER: J. BOND  
DESIGNER: A. LEE  
LEAD: R. TURNER-LAUCK  
PRODUCTION DESIGNER: E. VEGA  
CHECKED BY: DMC / SWE

Revision Schedule			
Rev	Date	By	Description

SHEET TITLE:  
**MECHANICAL NOTES**

SCALE: AS SHOWN

SHEET NUMBER:  
**M-0001**

