

ORDERING OF MATERIALS AND SERVICES: All systems, items, specifications, quantities, and prices are subject to change without notice. The Consultant and its subcontractors shall not be held responsible for any errors or omissions in the drawings. The Consultant shall not be held responsible for any errors or omissions in the drawings. The Consultant shall not be held responsible for any errors or omissions in the drawings.

11/10/2018 1:44:57 PM

Order Plans

@

www.LDILine.com

- GENERAL NOTES**
- A. REFER TO HEATING, VENTILATING & AIR CONDITIONING SPECIFICATIONS AND GENERAL CONDITIONS FOR ADDITIONAL REQUIREMENTS.
  - B. ALL DIFFUSERS AND CEILING GRILLES SHALL BE COORDINATED WITH LAY AN CEILING GRID AND PROVIDED BY MECHANICAL CONTRACTOR.
  - C. PROVIDE BALANCING DAMPERS FOR EACH DIFFUSER, REGISTER AND GRILLE AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES LEAD OFF FROM MAINS DUCTS OR IN DIFFUSERS AS REQUIRED FOR AIR BALANCING. INSTALL AT A MINIMUM OF TWO DUCT WIDTHS FROM BRANCH TAKEOFF WHERE PRACTICAL. NO PROVISION HAS BEEN MADE FOR RETURN AIR FROM THE BACK ROOM AS IT HAS BEEN OUR EXPERIENCE THAT ACCEPTABLE CONSTRUCTION TO ENRANCE IN THIS AREA RESULTS IN LEAKAGE IN AN AMOUNT EQUAL TO THAT SUPPLIED.
  - E. ALL NEW EXHAUST FANS AND RTUs SPECIFIED ARE INCLUDED IN KROGER'S DIRECT BUY PROGRAM AND SHALL BE PROVIDED BY KROGER AND INSTALLED BY HVAC CONTRACTOR, UNLESS OTHERWISE NOTED.
  - F. ALL HVAC DUCT SMOKE DETECTORS ARE TO BE PROVIDED BY HVAC CONTRACTOR.
  - G. PROVIDE BACKDRIFT DAMPERS FOR NON-KITCHEN EXHAUST FANS.
  - H. THE STORE'S MECHANICAL DESIGN SHALL BE ELIGIBLE TO EARN ENERGY STAR CERTIFICATION.
  - I. SUPPLY AND RETURN DUCTWORK FROM ROOFS SHALL BE INTERNALLY INSULATED A MINIMUM OF 1/2" FOR SOUND ATTENUATION.
  - J. PROVIDE TURNING VANES IN ALL RECTANGULAR MITERED ELBOWS.
  - K. ONLY ITEMS REQUIRED FOR THE OPERATION OF THE ELEVATOR ARE ALLOWED TO BE IN OR PASS THROUGH THE ELEVATOR EQUIPMENT ROOM.
  - L. ALL DIFFUSERS SHALL BE THE SAME SIZE AS THE SUPPLY, EXHAUST OR RETURN DUCTS TO WHICH THEY ARE CONNECTED UNLESS OTHERWISE NOTED.
  - M. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER, UNLESS OTHERWISE NOTED.
  - N. INTERNAL LABELS SHALL BE LOCATED WHERE LOCATED ABOVE CEILING TO BE READ TO SPECIFICATION 200703.

CINCINNATI 600 Vine Street, Suite 200, Cincinnati, OH 45202  
 DENVER 1675 Broadway, Suite 1000, Denver, CO 80202  
 LOS ANGELES 1000 Wilshire Blvd, Suite 1000, Los Angeles, CA 90017  
 MIAMI 1100 Brickell Avenue, Suite 1000, Miami, FL 33131  
 NEW YORK 110 West Street, Suite 1000, New York, NY 10038  
 PHOENIX 100 North Central Expressway, Suite 1000, Phoenix, AZ 85004  
 PORTLAND 1000 NE Oregon Street, Suite 1000, Portland, OR 97232  
 SAN FRANCISCO 100 Montgomery Street, Suite 1000, San Francisco, CA 94104  
 SEATTLE 1000 4th Avenue, Suite 1000, Seattle, WA 98101

CR

architecture + design

creating extraordinary places  
 www.cr-architects.com  
 500-450-6848

CONSULTANTS

MECHANICAL/ELECTRICAL ENGINEERS  
 WWW.KHENGERS.COM  
 LEVINGTON, KENTUCKY  
 LOUISVILLE, KENTUCKY  
 NEW YORK, NEW YORK

EKHL

ENGINEERS

1501 ALEXANDRIA BLVD, SUITE 11  
 FT. THOMAS, KENTUCKY 40310  
 502-452-9255  
 959-448-8286 FAX

OWNER

Kroger

DATE ISSUE  
 10/25/18 5% OWNER REVIEW  
 11/01/18 100% SUBMIT

DATE REVISION

PROJECT TITLE

KROGER STORE  
R543

MERCURY BLVD.  
HAMPTON, VA

COMMENSALING 517315  
 ISSUE DATE 10/23/2018  
 SHEET TITLE  
**MECHANICAL ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES**  
 SHEET NO.  
**M0.1**  
 2018 10/23/2018 1:44:57 PM

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
<b>MECHANICAL AIR DEVICES</b>	
SR	SUPPLY REGISTER
RR	RETURN REGISTER
ER	EXHAUST REGISTER
SG	SUPPLY GRILLE
RG	RETURN GRILLE
CD	CEILING DIFFUSER
<b>MECHANICAL DUCTWORK</b>	
UP	SUPPLY DUCT WITH ELBOW TURNED UP
DN	SUPPLY DUCT WITH ELBOW TURNED DOWN
UP	RETURN DUCT WITH ELBOW TURNED UP
DN	RETURN DUCT WITH ELBOW TURNED DOWN
UP	EXHAUST DUCT WITH ELBOW TURNED UP
DN	EXHAUST DUCT WITH ELBOW TURNED DOWN
SD	SUPPLY DUCT
RD	RETURN DUCT
ED	EXHAUST DUCT
OARD	OUTSIDE AIR DUCT
L	1" LINED DUCTWORK
F	FLEXIBLE DUCTWORK CONNECTION
B	BRANCH TAKEOFF
C	REDUCER, CONCENTRIC
NC	REDUCER, NONCONCENTRIC
<b>MECHANICAL DUCTWORK ACCESSORIES</b>	
M	DUCT WITH MANUAL VOLUME DAMPER
R	ROUND ELBOW WITH TURNING VANES
E	ELBOW WITH TURNING VANES
MOP	MOTOR OPERATED DAMPER - LINE VOLTAGE
MOL	MOTOR OPERATED DAMPER - LOW VOLTAGE
DSD	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.) FURNISHED BY E.C., NOT ALLED BY M.C.
<b>MECHANICAL STATS &amp; SENSORS</b>	
T	TEMPERATURE SENSOR
L	LOW VOLTAGE THERMOSTAT
LGL	LOW VOLTAGE THERMOSTAT WITH LOCKABLE GUARD
H	HUMIDISTAT
LH	LINE VOLTAGE THERMOSTAT
HS	HUMIDITY SENSOR
CO2	CARBON DIOXIDE SENSOR
RM	REFRIGERANT MONITOR
<b>MECHANICAL MISCELLANEOUS</b>	
RFS	ANUL FULL STATION

**DESIGN AMBIENT TEMP'S:**  
 SUMMER: 94 DEG DRY BULB  
 77 DEG WET BULB  
 WINTER: 20 DEG DRY BULB

STANDARD HVAC ABBREVIATIONS			
AAV	AUTOMATIC AIR VENT	HD	HEAD
AD	ACCESS DOOR	HQA	HANDICAPPED AUTOMATIC
ADP	ADJUST FINISHED FLOOR	HP	HORSEPOWER
AMP	AMPERE	HPR	HIGH PRESSURE RETURN
AP	ACCESS PANEL	HRS	(STEAM CONDENSATE)
ARD	AIR PRESSURE DROP	HTG	HEATING
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE	HWR	HEATING HOT WATER RETURN
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	HWS	HEATING HOT WATER SUPPLY
BAS	BUILDING AUTOMATION SYSTEM	HZ	HERTZ
BD	BACKDRIFT DAMPER	IC	INPUT/OUTPUT
BHP	BRAKE HORSEPOWER	IQ	INDOOR AIR QUALITY
BTU	BRITISH THERMAL UNIT	IN HG	INCHES OF MERCURY
BTUH	BRITISH THERMAL UNIT PER HOUR	NWC	NON WATER COLUMN
CD	CEILING DIFFUSER	NWG	NON WATER GAUGE
CFM	CUBIC FEET PER HOUR	PLV	INTERGRATED PART LOAD VALUE
CFM	CUBIC FEET PER MINUTE	INST	INSTALLED
CHWR	CHILLED WATER RETURN	KWH	KILOWATT HOUR
CHWS	CHILLED WATER SUPPLY	KW	KILOWATT
CI	CAST IRON	LAT	LEAVING AIR TEMPERATURE
COOLING	COOLING	LSHR	LEAVING WATER TEMPERATURE
CO	CARBON MONOXIDE	LF	LINEAR FOOT (FEET)
CO2	CARBON DIOXIDE	LPR	LOW PRESSURE RETURN
COE	COEFFICIENT OF PERFORMANCE	LPS	(STEAM CONDENSATE)
DWR	CONDENSER WATER RETURN	LWT	LEAVING WATER TEMPERATURE
DWS	CONDENSER WATER SUPPLY	LWT	LEAVING WATER TEMPERATURE
DB	DEGREES	LWS	LEAVING WATER SUPPLY
DB	DEGREES F	M	MINIMUM
DB	DISCONNECT	M&A	MINIMUM BRANCH CIRCUIT AMPACITY
DDC	DIRECT DIGITAL CONTROLS	M&V	MINIMUM EFFICIENCY REPORTING VALUE
DDC	DEGREE DELTA CHANGE IN TEMPERATURE	MOP	MOTOR OPERATED DAMPER
DIA	DIAMETER	MPS	MEDIUM PRESSURE RETURN
DW	DESIGNED WATER	MRI	MACHINE TO RESONANCE IMAGING
DP	DEW POINT TEMPERATURE	MVD	MANUAL VOLUME DAMPER
DX	DIRECT EXPANSION	NA	NOT APPROPRIATE
EA	EXHAUST AIR	NG	NOISE CRITERIA
EER	ENERGY EFFICIENCY RATIO	NO	NORMALY CLOSED
EG	EXHAUST GRILLE	NO	NORMALY OPEN
EMERG	EMERGENCY POWER	NS	NOT TO SCALE
ESP	EXTERNAL STATIC PRESSURE	OA	OUTSIDE AIR
EW	ENTERING WATER TEMPERATURE	OP	OVER CURRENT PROTECTION
EX	EXISTING	PPM	PARTS PER MILLION
F	FAHRENHEIT	PRS	PRESSURE REGULATING VALVE STATION
FAT	FAT AND THERMOSTAT	PSI	POUNDS PER SQUARE INCH
FA	FREE AREA	PSI	POUNDS PER SQUARE INCH - ABSOLUTE
FD	FIRE DAMPER	PSIG	POUNDS PER SQUARE INCH - GAGE
FLA	FULL LOAD AMPERES	RA	RETURN AIR
FM	FEET PER MINUTE	RAT	RETURN AIR TEMPERATURE
FPS	FEET PER SECOND	RH	RELATIVE HUMIDITY
FURN	FURNISHED	RL	REFRIGERANT LIQUID LINE
GA	GALLONS	RLA	RUN LOAD AMPERE
GPM	GALLONS PER MINUTE		

2" REFERENCE LINE