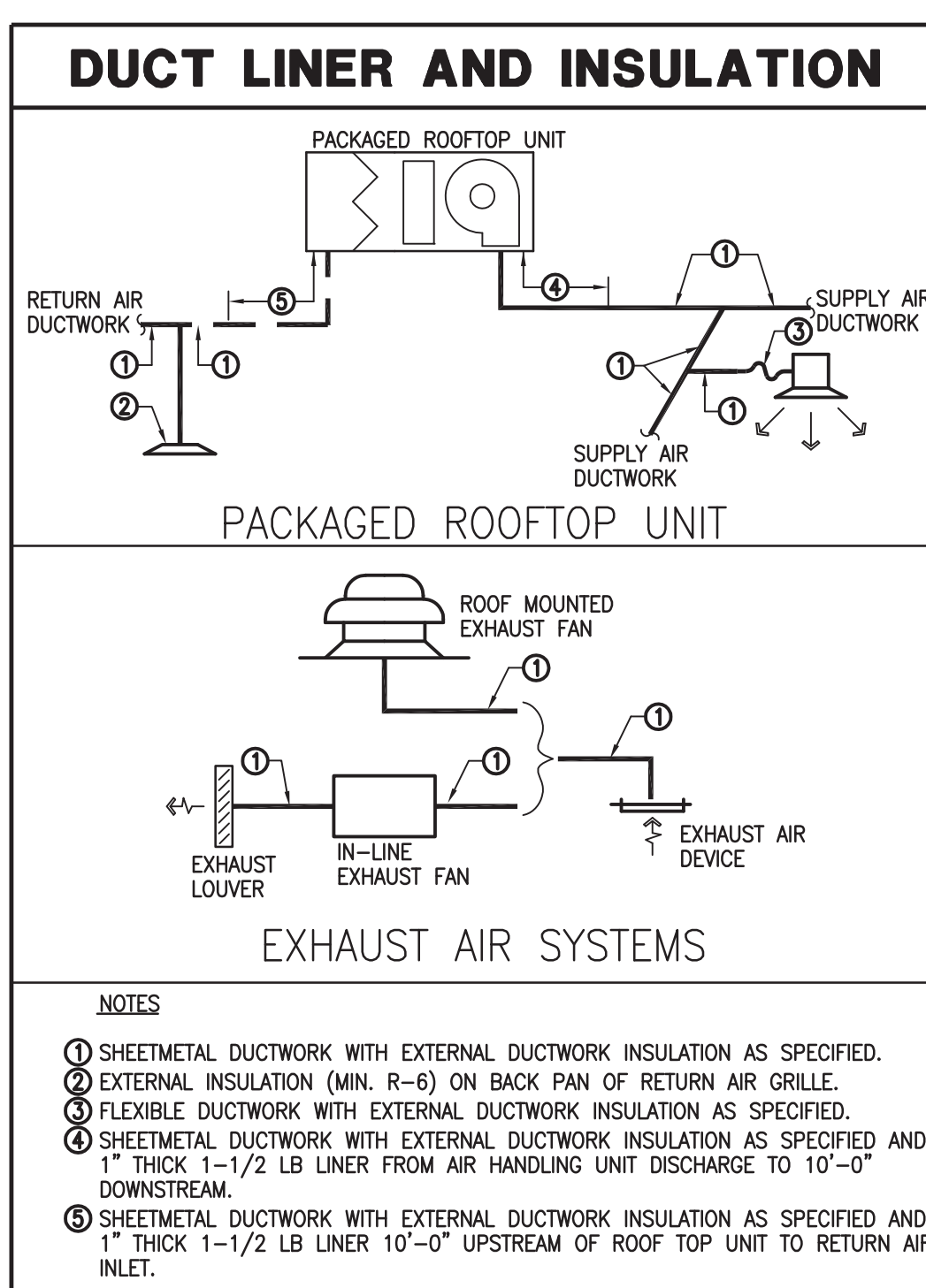
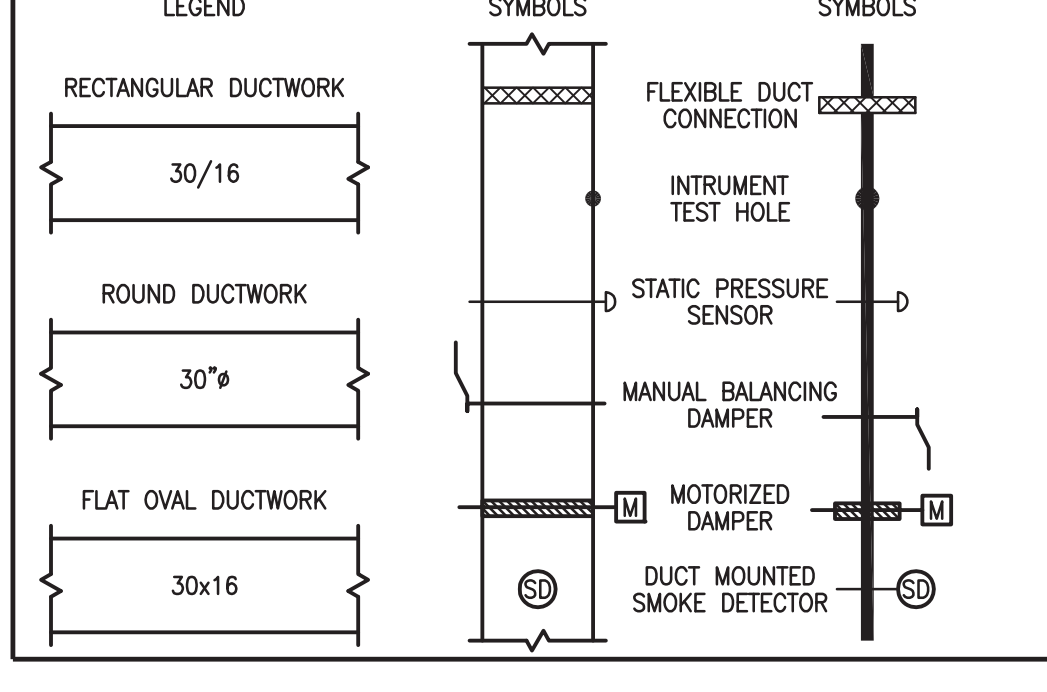
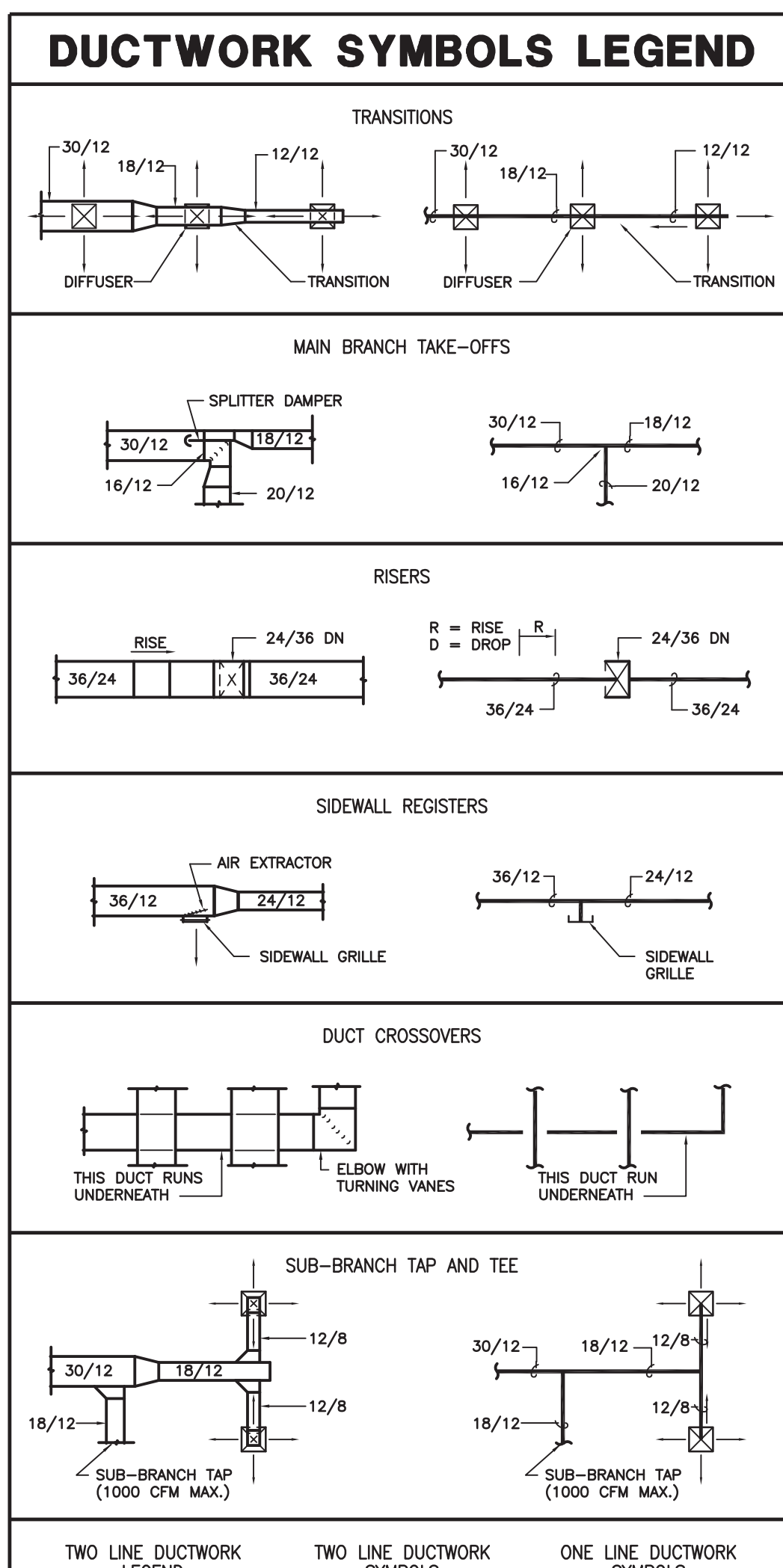


**1 CONDENSATE DRAIN**  
SCALE: NONE



SYMBOL LEGEND	
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
(K)	KEY NOTE TAG
(I)	NOTE SPECIFIC TO DETAIL TAG
(R)	REVISION TAG
(N)	NEW EQUIPMENT
<b>DUCTWORK</b>	
(S)	SUPPLY AIR DUCTWORK
(R)	RETURN AIR AND OUTSIDE AIR DUCTWORK
(E)	EXHAUST AIR DUCTWORK
(F)	FLEXIBLE DUCTWORK
(H)	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
(R)	RETURN AIR AND OUTSIDE AIR DUCTWORK THROUGH HORIZONTAL PARTITION
(E)	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
<b>SENSORS</b>	
(T)	THERMOSTAT AND TEMPERATURE SENSOR
(S)	SMOKE DETECTOR
<b>PIPING</b>	
(D)	CONDENSATE DRAIN LINE
(E)	ELBOW DOWN
(90)	90° ELBOW
(45)	45° ELBOW
(F)	FLANGE
(C)	CAP
(C)	CONTINUATION
<b>SUBSCRIPTS AND ABBREVIATIONS</b>	
AF	ABOVE FINISHED FLOOR
BF	BELOW BOTTOM OF STRUCTURE
BD	BOTTOM OF DUCT
BP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FBM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR

GRILLE SIZING SCHEDULE	
GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"
2	8" x 8"
3	9" x 9"
4	10" x 10"
5	12" x 12"
6	14" x 14"
7	15" x 15"
8	16" x 16"
9	18" x 18"
10	20" x 20"
11	22" x 22"
12	24" x 24"

PACKAGED ROOFTOP UNIT - GAS HEAT																
MARK	INDOOR AIR FAN				COOLING				GAS HEATING				REMARKS			
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. ST. PRESSURE (IN. W.C.)	HORSEPOWER	ENTERING DRY BULB WET BULB	ENTERING OUTDOOR AMBIENT	MIN. TOTAL CAPACITY (BTUH)	MIN. SENSIBLE CAPACITY (BTUH)	MCA	MOCP	MINIMUM CAPACITY (BTUH)	AFUE EFFICIENCY (%)		CARRIER UNIT MODEL		
RTU-1	3,000	300	0.80	2.0	208/3/60	80.0	67.0	98.0	82,000	63,000	39.0	50.0	120,000	80	48HCD	1,2,3,4
RTU-2	3,000	300	0.80	2.0	208/3/60	80.0	67.0	98.0	82,000	63,000	39.0	50.0	120,000	80	48HCD	1,2,3,4

EXHAUST FAN/LIGHT												
MARK	LOCATION	CFM	MAXIMUM RPM	EXT. ST. PRESSURE (IN. W.C.)	WATTS	CURRENT CHARG.	LOCALLY SWITCHED BY	INTERLOCKED WITH	FAN TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
EF-1	CEILING SPACE	75	1,000	0.25"	144 W	208/1/60	DOUBLE SWITCH	-	FAN/LIGHT	NUTONE	LS100L	1
EF-2	CEILING SPACE	75	1,000	0.25"	144 W	208/1/60	DOUBLE SWITCH	-	FAN/LIGHT	NUTONE	LS100L	1

GRILLE								
MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	REMARKS
A	SUPPLY AIR	DIFFUSER	-	STEEL	OFF WHITE	TITUS	TDC	FRAME STYLE FOR EXPOSED T-BAR CEILING, OR PLASTER RING 24"x24" LOUVERED FACE.
B	RETURN AIR	DIFFUSER	-	STEEL	OFF WHITE	TITUS	PAR	FRAME STYLE FOR EXPOSED T-BAR CEILING, OR PLASTER RING 24"x24" LOUVERED FACE.
C	SUPPLY AIR	DIFFUSER	-	STEEL	OFF WHITE	TITUS	TD	FRAME STYLE FOR EXPOSED T-BAR CEILING, OR PLASTER RING 12"x12" LOUVERED FACE.
D	SUPPLY AIR	DIFFUSER	-	STEEL	OFF WHITE	TITUS	TMRA	FRAME STYLE FOR DIRECT DUCT MOUNT FACE SIZE AS INDICATED ON DRAWING.
E	RETURN AIR	DIFFUSER	-	STEEL	OFF WHITE	TITUS	350RL	FRAME STYLE FOR SURFACE MOUNT FACE SIZE AS INDICATED ON DRAWING.

MECHANICAL SPECIFICATIONS	
1. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND FUNCTIONAL AIR CONDITIONING SYSTEM. ALL APPURTENANCES REQUIRED BUT NOT SHOWN SHALL BE PROVIDED.	8. CONDENSATE DRAIN TO BE PVC WITH DRAINAGE PATTERN FITTINGS. CONDENSATE DRAIN PIPING IN PLENUM AREAS OR BELOW ROOF SHALL BE TYPE "L" COPPER WITH DRAINAGE PATTERN FITTINGS. PROVIDE CLEANOUTS EVERY 50 FEET AND AT EACH CHANGE OF DIRECTION. MAINTAIN POSITIVE SLOPE AND SUPPORT TO PREVENT SAGGING. INSULATE PIPING WITH 3/4" ELASTOMERIC INSULATION FOR ALL PIPE BELOW ROOF. SUPPORT PIPING IN THE VERTICAL. INSULATION TO BE 20/50 FLAME AND SMOKE RATING. CONDENSATE PIPING ON ROOF TO BE SUPPORTED BY 4"x4" PRETREATED REDWOOD BLOCKS AND SPACED 4"-0" ON CENTER AND AT EACH CHANGE OF DIRECTION. SECURE PIPE TO BLOCKS WITH NON CORROSIVE PIPE STRAPPING.
2. THE CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES. ALL VOLTAGES AND POWER REQUIREMENTS SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.	9. FLEXIBLE DUCTWORK TO BE INSULATED WITH R-6 INSULATION. INSULATION SHALL BE UL 181 LABELED. PROVIDE WITH 1" OVERLAP. INSTALL AND SUPPORT PER MANUFACTURERS INSTRUCTIONS. INSULATED FLEXIBLE DUCTWORK TO BE 20/50 RATED FOR SMOKE AND FLAME. MAXIMUM LENGTH SHALL BE 6'-0".
3. THE EXHAUST FANS SHALL BE MANUFACTURED BY GREENHECK, PENN OR COOK.	10. HVAC SUBCONTRACTOR TO OBTAIN A 3RD PARTY CERTIFIED AIR BALANCE CONTRACTOR TO TEST AND BALANCE NEWLY INSTALLED EQUIPMENT. MUST BE COMPLETE PRIOR TO FINAL INSPECTION.
4. DUCTWORK SHALL BE GALVANIZED SHEETMETAL CONSTRUCTED TO SMACNA STANDARDS FOR 2" WG PRESSURE. EXHAUST DUCTS SHALL BE CONSTRUCTED TO 2" NEGATIVE PRESSURE SEAL. ALL SEAMS IN THE DUCT WITH HARDCAST IRON GRIP UNLESS OTHERWISE INDICATED.	11. HVAC SUBCONTRACTOR TO INSTALL NEW FILTERS IN ALL UNITS PRIOR TO BALANCING.
5. SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE METAL EXTERNALLY WRAPPED WITH 1-1/2" MINIMUM DUCT INSULATION SEALED WITH BENJAMIN FOSTER 32-14. THE INSULATION SHALL BE MANUFACTURED BY OWENS CORNING, SCHULLER, KNAUF, OR CERTAINTED. THE INSTALLED R-VALUE OF THE INSULATION SHALL BE R-6 OR BETTER WITH VAPOR BARRIER. THE INSULATION SHALL BE STARTED ON R CENTERS AND SEALED WITH PRESSURE SENSITIVE TAPE. THE R-VALUE MUST BE INDICATED ON THE EXTERIOR SIDE OF THE INSULATION FOR THE CITY INSPECTOR TO VERIFY.	
6. THE AIR DEVICES SHALL BE MANUFACTURED BY TITUS, KRUEGER OR NAILOR.	
7. THE ROOF TOP UNITS W/ GAS HEAT SHALL BE MANUFACTURED BY CARRIER OR TRANE. PROVIDE UNITS WITH FACTORY MOUNTED DISCONNECT, HEAD PRESSURE CONTROL TO OPERATE DOWN TO 20°F AMBIENT, AND SHORT CYCLE CIRCUIT. PROVIDE 2" THROW-AWAY FILTERS. PROVIDE COMPRESSOR WITH FIVE YEAR WARRANTY, VIBRATION ISOLATION, SERVICE VALVES, CRANK CASE HEATER, SIGHT GLASS AND FILTER DRYER. PROVIDE UNITS WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTOMATIC CHANGE-OVER AND TEMPERATURE SENSOR. THE CONTRACTOR SHALL INSTALL UNIT PER MANUFACTURER INSTRUCTION. ALL CONTROL WIRING BY MECHANICAL CONTRACTOR.	

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KAE PROJECT # 001011

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PROJECT NO.	809501
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MECHANICAL SCHEDULES

M2.01