

DRAWINGS/SPECIFICATIONS BY:
 WALGREENS'
 LANDLORD'S CONSULTANT
ALL CONSTRUCTION WORK, UNLESS NOTED OTHERWISE, BY:
 WALGREENS' CONTRACTOR
 LANDLORD'S CONTRACTOR (TURNKEY CONSTRUCTION)

STORE		BUILDING	
NEW	<input checked="" type="checkbox"/>	NEW	<input checked="" type="checkbox"/>
REMODELING	<input type="checkbox"/>	EXISTING	<input type="checkbox"/>
RELOCATION	<input type="checkbox"/>	NEW SHELL ONLY	<input type="checkbox"/>
OTHERS	<input type="checkbox"/>		

WALGREENS - H.V.A.C. LOAD SCHEDULE

R.T.U. NUMBER	OCCUPANT LOAD	REQUIRED FRESH-AIR-INTAKE	MISC. LOADS
RTU 1	ZERO OCCUPANTS	ZERO FRESH AIR	3 CASH REG. = 2250 BTU/H
RTU 2	5 CUSTOMERS 7 EMPLOYEES	12 PEOPLE (15 CFM / PERSON) = 180 CFM	OFFICE = 7500 BTU/H EMPLOYEE = 5100 BTU/H TOTAL = 12600 BTU/H
RTU 3	59 CUSTOMERS	59 PEOPLE (15 CFM / PERSON) = 885 CFM ADDITIONAL MAKE-UP AIR = 90 CFM	1 CASH REG. = 750 BTU/H
RTU 4	5 CUSTOMERS 12 EMPLOYEES	17 PEOPLE (15 CFM / PERSON) = 255 CFM	PHARMACY = 15300 BTU/H TRAINING RM. = 2250 BTU/H TOTAL = 17550 BTU/H
RTU 5	3 EMPLOYEES	3 PEOPLE (15 CFM / PERSON) = 45 CFM	N/A
RTU 6	3 EMPLOYEES	3 PEOPLE (15 CFM / PERSON) = 45 CFM	PHOTO AREA = 21000 BTU/H
TOTAL	94 OCCUPANTS	1500 CFM	54150 BTU/H

COOLING SET POINTS				HEATING SET POINTS			
8AM-10PM OCCUPIED / DEG. F.	10PM-8AM NOT OCCUPIED	HVAC UNIT NO.	AREA	8AM-10PM OCCUPIED / DEG. F.	10PM-8AM NOT OCCUPIED	HVAC UNIT NO.	AREA
NA	NA	EH-1	ENTRANCE HEATER	68	55		
74	80	RTU-1	ENTRANCE RTU	70	60		
74	80	RTU-2	OFFICE/SALES	70	60		
74	80	RTU-3	INTERIOR SALES	70	60		
72	76	RTU-4	PHARMACY, ETC.	70	60		
78	80	RTU-5	GENERAL STOCK	70	60		
74	80	RTU-6	PHOTO	70	60		

56 - DEW POINT FOR ENTIRE BUILDING - EQUALS 53% RH @ 74DB

IN HUMID CLIMATES (74DF WB OR GREATER), DO NOT RAISE THE COOLING SET POINTS FOR RTU-1,2,3 OR 6, WHEN THE BUILDING IS NOT OCCUPIED.

INTERLOCK THE CODE OUTSIDE AIR ON RTU-3 TO TOILET EXHAUST

AUTO CYCLE RTUS 1&6 IF THEY DO NOT HAVE CODE OUTSIDE AIR

DESIGN CRITERIA SHOWN
BASED ON 2001 ASHRAE FUNDAMENTALS

ASHRAE LOCATION PORTLAND, ME

PROJECT ELEVATION 48 FT

COOLING TABLE 1B
83 DEGREES F. DRY BULB
70 DEGREES F. WET BULB

HEATING TABLE 1A
2 DEGREES F. DRY BULB

MECHANICAL BUILDING CODE INTERNATIONAL MECHANICAL CODE

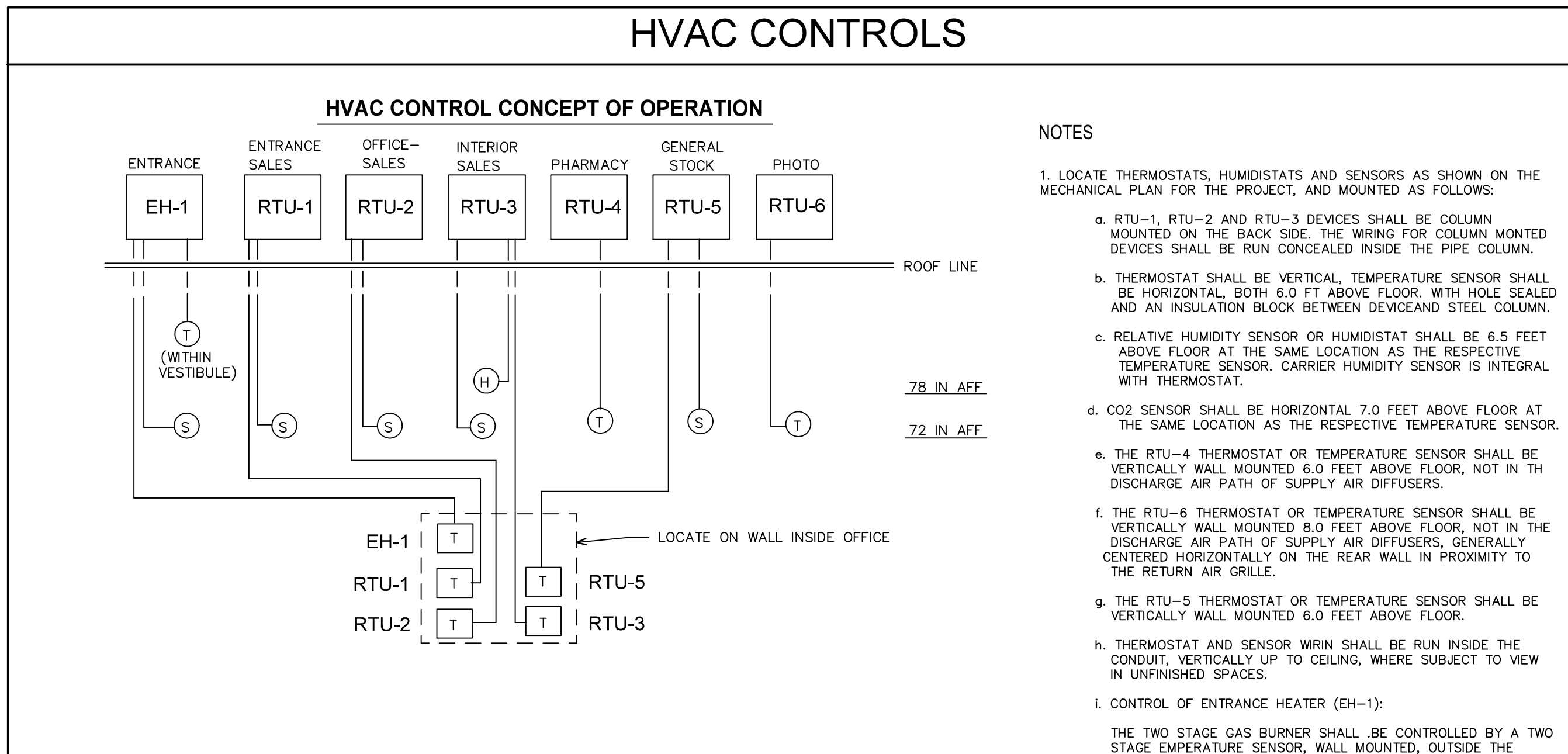
OCCUPANCY CLASSIFICATION SPECIALTY SHOPS, DRUGS

NATIONAL ACCOUNT FOR TRANE ROOF TOP UNIT

I. HVAC UNITS

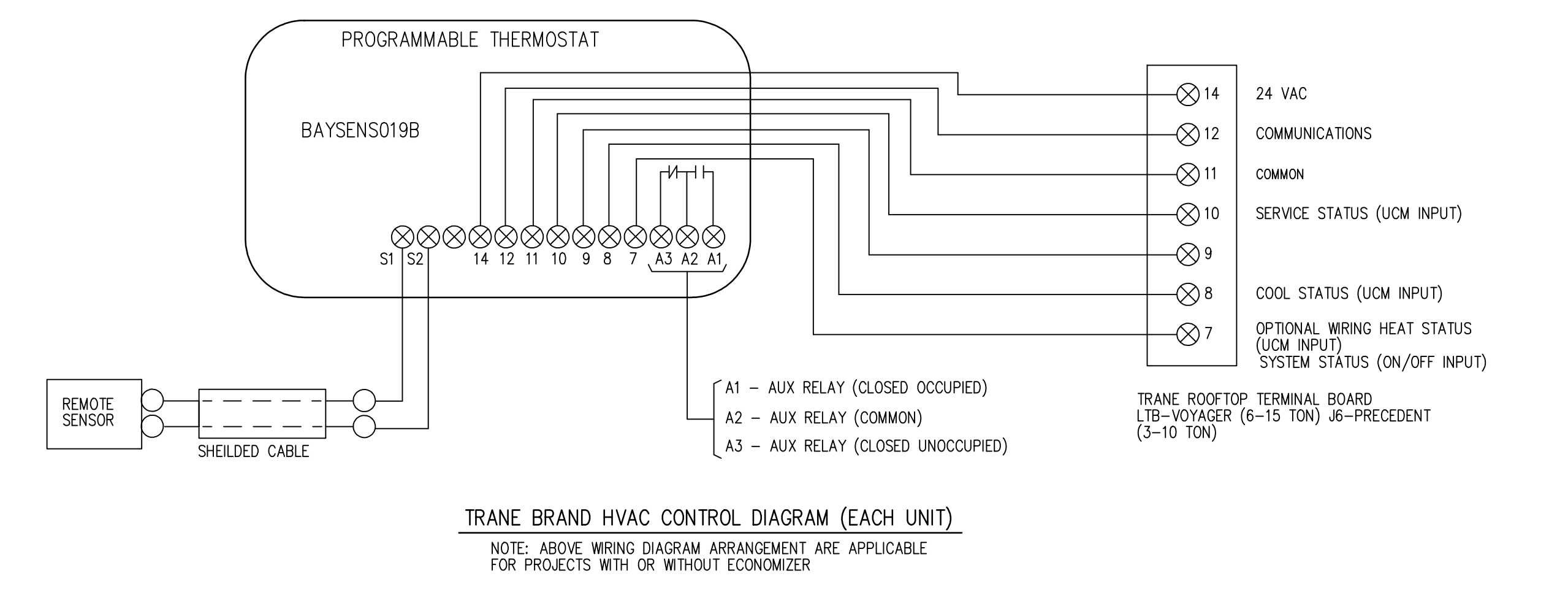
WALGREEN CO. SHALL HAVE TRANE EQUIPMENT INSTALLED FOR STORES LOCATED IN ARIZONA, ARKANSAS, CALIFORNIA, CONNECTICUT, COLORADO, FLORIDA, HAWAII, IDAHO, IOWA, KANSAS, LOUISIANA, MASSACHUSETTS, MAINE, MINNESOTA, MISSOURI, MONTANA, NEBRASKA, NEVADA, NEW HAMPSHIRE, NEW MEXICO, NORTH CAROLINA, NORTH DAKOTA, OHIO, OKLAHOMA, OREGON, RHODE ISLAND, SOUTH DAKOTA, TEXAS, UTAH, VERMONT, VIRGINIA, WASHINGTON, WISCONSIN AND WYOMING.

FOR TRANE EQUIPMENT, CALL TRANE NATIONAL ACCOUNT TEAM @ (800)453-6954 TO COORDINATE THE PURCHASE ORDER AGREEMENT AND EQUIPMENT DELIVERY.



- NOTES**
- LOCATE THERMOSTATS, HUMIDISTATS AND SENSORS AS SHOWN ON THE MECHANICAL PLAN FOR THE PROJECT, AND MOUNTED AS FOLLOWS:
 - RTU-1, RTU-2 AND RTU-3 DEVICES SHALL BE COLUMN MOUNTED ON THE BACK SIDE, THE WIRING FOR COLUMN MOUNTED DEVICES SHALL BE RUN CONCEALED INSIDE THE PIPE COLUMN.
 - THERMOSTAT SHALL BE VERTICAL, TEMPERATURE SENSOR SHALL BE HORIZONTAL, BOTH 6.0 FT ABOVE FLOOR, WITH HOLES SEALED AND AN INSULATION BLOCK BETWEEN DEVICE AND STEEL COLUMN.
 - RELATIVE HUMIDITY SENSOR OR HUMIDISTAT SHALL BE 6.5 FEET ABOVE FLOOR AT THE SAME LOCATION AS THE RESPECTIVE TEMPERATURE SENSOR. CARRIER HUMIDITY SENSOR IS INTEGRAL WITH THERMOSTAT.
 - CO2 SENSOR SHALL BE HORIZONTAL 7.0 FEET ABOVE FLOOR AT THE SAME LOCATION AS THE RESPECTIVE TEMPERATURE SENSOR.
 - THE RTU-4 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 6.0 FEET ABOVE FLOOR, NOT IN THE DISCHARGE AIR PATH OF SUPPLY AIR DIFFUSERS.
 - THE RTU-6 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 8.0 FEET ABOVE FLOOR, NOT IN THE DISCHARGE AIR PATH OF SUPPLY AIR DIFFUSERS, GENERALLY CENTERED HORIZONTALLY ON THE REAR WALL IN PROXIMITY TO THE RETURN AIR GRILLE.
 - THE RTU-5 THERMOSTAT OR TEMPERATURE SENSOR SHALL BE VERTICALLY WALL MOUNTED 6.0 FEET ABOVE FLOOR.
 - THERMOSTAT AND SENSOR WIRIN SHALL BE RUN INSIDE THE CONDUIT, VERTICALLY UP TO CEILING, WHERE SUBJECT TO VIEW IN UNFINISHED SPACES.
 - CONTROL OF ENTRANCE HEATER (EH-1):
 - THE TWO STAGE GAS BURNER SHALL BE CONTROLLED BY A TWO STAGE TEMPERATURE SENSOR, WALL MOUNTED, OUTSIDE THE VESTIBULE, INSIDE THE SALES AREA, THE SET POINT FOR THIS SENSOR SHALL HAVE AN OPERATIONAL HI-O-A SUBBASE. WHEN A VESTIBULE IS PRESENT, A FREEZE PROTECTION THERMOSTAT SHALL BE PROVIDED TO SENSE AIR TEMPERATURE INSIDE THE RETURN AIR DUCT RIGHT ABOVE THE CEILING GRILLE. THIS THERMOSTAT (SET AT 55 DEGREES F.) SHALL CALL FOR FAN ON AND/OR HEAT EVEN IF THE TEMPERATURE SENSOR INSIDE THE SORE IS SATISFIED.
 - TEMPERATURE CONTROL DEVICES IN THE OFFICE SHALL BE MOUNTED VERTICALLY IN A 4 X 4 PATTERN WITH 6 INCHES BETWEEN DEVICES, APPROXIMATELY, 5.0 FT ABOVE FLOOR.
 - OUTDOOR AIR TEMPERATURE SENSOR SHALL BE INSTALLED ON NORTH WALL OF THE BUILDING, 8'-0" ABOVE THE GROUND (MINIMUM), SENSOR PROBE SHALL BE FACING DOWNWARD.
 - ALL SENSORS AND THERMOSTATS SHALL BE LABELED.
 - REMOTE DUCT SMOKE DETECTOR TEST STATIONS SHALL BE INSTALLED ADJACENT TO FIRE ALARM PANEL AND LABELED WITH CORRESPONDING RTU NUMBER.
 - MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES, AND PROVIDE A FULLY OPERATIONAL AND FUNCTIONAL CONTROL SYSTEM.
 - MECHANICAL CONTRACTOR SHALL BE PRESENT AT START UP.

HVAC CONTROLS		
THE FOLLOWING CONTROLS TO BE FURNISHED BY TEMPERATURE CONTROL CONTRACTOR		
TAG	TRANE	REMARKS
(T)	BAYSENS019B OR BAYSENS119A	FOR ALL RTUS FURNISH A SWITCHING BASE FOR HEAT, COOL AND FAN-OFF-AUTO
(S)	BAYSENS077A	REMOTE SENSOR FOR ALL RTUS EXCEPT PHARMACY AND 1 HR PHOTO
(T)	N/A	FOR RTU'S THAT HAVE THE HUMIDIZER OPTION
(H)	BAYSENS036A	HUMIDITY SENSOR, COLUMN OR WALL MOUNTED
(T)	HONEYWELL MODEL TH8320U1006	FOR ENTRANCE HEATER WITH Q7100A1010 SUBBASE
(S)	HONEYWELL MODEL C7189U1005	REMOTE SENSOR FOR ENTRANCE HEATER
(CO2)	CO2K001B	CO2 SENSOR, COLUMN OR WALL MOUNTED



FAN SCHEDULE

UNIT	AREA SERVED	CFM	SP. IN. WG.	MOTOR		RPM	MAKE AND MODEL	REMARKS
				HP	VOLTS PHASE			
EF-1	TOILET ROOMS	550	.375	1/15	120 1	1550	GREENHECK G-90-DGEX-QD-D	CONTROLLED BY LIGHTING CIRCUIT. PROVIDE BACKDRAFT DAMPER, INT. DISC. SWITCH, SPEED CONTROL & ROOF CURB.
EF-2	EMPLOYEE ROOM	450	.375	1/15	120 1	1550	GREENHECK G-90-DGEX-QD-D	CONTROLLED BY LIGHTING CIRCUIT. PROVIDE BACKDRAFT DAMPER, INT. DISC. SWITCH, SPEED CONTROL & ROOF CURB.

INSTALL THE SPEED CONTROL INSIDE THE EXHAUST FAN DOME NEAR THE MOTOR.
ACCEPTABLE MANUFACTURERS FOR EXHAUST FANS: (SEE FAN SCHEDULE REMARKS)
- ACME, CARNES, COOK, ILG, JENN AND PENN.

AIR CURTAIN & HEATER SCHEDULE

UNIT	AREA SERVED	OUTPUT	CFM	MOTOR		TYPE	MAKE AND MODEL
				HP.	VOLT PHASE		
AC-1	OVERHEAD RECEIVING DOOR	15 KW 208/3 PH	2072	1/5	208/ 1 PH	AIR CURTAIN WITH ELECTRIC HEAT AND THERMOSTAT.	BERNER MODEL MAX1072EX-150-WAG SEE NOTE 2
EH-1	ENTRANCE	120,000 BTUH	2000	3/4	208/ 3 PH	OUTDOOR, POWER VENTED, GAS FIRED, PACKED DUCT FURNACE/ BLOWER UNIT W/FILTER SECTION.	TRANE-GRAA15 SEE NOTE 1 & 3
EWH-1	MENS, MULTIPURPOSE, TRAIN'G & EMPLOYEE	2 KW				ELECTRIC WALL HEATER	SEE ELECTRICAL DRAWINGS SEE NOTE 4
EWH-2	PASSAGEWAY 1	4 KW				ELECTRIC WALL HEATER	SEE ELECTRICAL DRAWINGS SEE NOTE 4
EWH-3	SPRINKLER ROOM	4 KW				ELECTRIC WALL HEATER (SURFACE MOUNTED)	SEE ELECTRICAL DRAWINGS SEE NOTE 4

- NOTES:**
- PROVIDE HEAT EXCHANGER WITH A 10 YEAR WARRANTY, 0.5 IN. WC E.S.P., TWO STAGE BURNER, TWO STAGE WALL THERMOSTAT WITH REMOTE SENSOR (LOCATED IN SALES). ALSO, WHEN A VESTIBULE IS PRESENT, PROVIDE A THERMOSTAT IN THE VESTIBULE (SET @ 55 DEG. F.) TO REVENT A FREEZING CONDITION (HONEYWELL MODEL T678A OR EQUAL) . ALTERNATE MANUFACTURERS FOR ENTRANCE HEATER: REZNRD HRPB-150, MODINE-HOP150, GREENHECK - 1GX-HV-110.
 - PROVIDE AIR CURTAIN WITH DOOR CONTROL, FAN AND HEAT CONTROL, SUMMER FAN CONTROL, TIME DELAY, BUILT-IN THERMOSTAT (PACKAGE CONTROL SYSTEM), MOUNTING BRACKET, FED FROM A SINGLE 60A MAX. CIRCUIT. 120V, 1 FOR AIR CURTAIN W/O ELECTRIC HEAT. (CONTACT WILLIASON & COMPANY @ 847-674-0000 FOR BERNER UNIT).
 - MECHANICAL CONTRACTOR SHALL FURNISH AIR CURTAIN. ELECTRICAL CONTRACTOR SHALL INSTALL AIR CURTAIN.
 - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ELECTRIC WALL HEATERS.

PACKAGE ROOFTOP AIR CONDITIONING UNIT (RTU) SCHEDULE

ID MARK	AREAS SERVED	EVAPORATOR FAN DATA					COOLING DATA					HEATING DATA					ELECT.	NOTES	MANUFACTURER			
		DESIGN G.A.I. CFM	EVAP. AIRFLOW CFM	UNIT ESP. IN. WC.	EVAP. FAN BHP	FAN MOTOR HP	NO. OF COMP.	CAPACITY LEAVING RTU		DISCHARGE AIR FROM UNIT		EER	RE-HEAT OUT MSH	HEAT PUMP OUT MSH	GAS FIRED FURNACE (2-STAGE)				UNIT MCA	UNIT MOP	MAKE	MODEL
								NOMINAL TONS	TOTAL NET MSH	SENSIBLE NET MSH	DB. DEG. F.				WB. DEG. F.	IN MSH						
RTU-1	SALES-ENTRANCE	0	1600	0.50	0.71	1.0	1	4	42.80	35.74	55.9	54.4	13.0							TRANE	YHC043	
RTU-2	SALES-OFFICE-EMPLOYEE	180	1600	0.50	0.71	1.0	1	4	42.80	35.74	55.9	54.4	13.0			60.0	49.81	22.6	35	1,4,6,8,10,12,13	TRANE	YHC043
RTU-3	SALES	975	5000	0.75	2.49	3.0	2	12.5	132.09	102.92	57.5	54.6	11.3			150.0	128.3	64.0	80	1,4,6,8,10,12,13	TRANE	YCD151
RTU-4	PHARMACY	255	2000	0.50	1.05	1.0	1	5	53.45	43.51	56.4	54.4	13.0			60.0	50.7	28.8	45	1,4,6,8,10,12,13	TRANE	YHC063
RTU-5	STOCK ROOM	45	1200	0.50	0.41	0.5	1	3	32.74	26.33	56.2	54.2	13.0			120.0	97.1	19.9	30	1,4,6,8,10,12,13	TRANE	YHC033
RTU-6	PHOTO	45	1200	0.50	0.41	0.5	1	3	32.74	26.33	56.2	54.2	13.0			60.0	49.0	19.9	30	1,4,6,8,10,12,13	TRANE	YHC033
TOTALS		1500							31.5	347.27	278.34											

- NOTES:**
- DESIGN CONDITIONS CONDENSER AND OUTSIDE AIR FOR COOLING: 83 DB 70 WB
OUTSIDE AIR FOR HEATING: 2 DB.
 - HUMIDIFIER, HUMIDITROL OR DEHUMIDIFICATION OPTION USING COMPRESSOR REHEAT - CONTROLLED BY A HUMIDISTAT OR RH SENSOR.
 - MOTORIZED TWO POSITION OUTSIDE AIR AND RETURN AIR DAMPERS.
 - ECONOMIZER WITH ENTHALPY CONTROL.
 - DUCT SMOKE DETECTOR, FACTORY INSTALLED, WIRED TO SHUTDOWN RTU, MOUNT ON THE RETURN.
 - DUCT SMOKE DETECTOR, FACTORY INSTALLED, WIRED TO SHUTDOWN RTU, MOUNT ON THE SUPPLY.
 - DEMAND CONTROLLED VENTILATION "DCV", WITH CO2 SENSOR.
 - PROGRAMMABLE THERMOSTAT - ELECTRONIC TYPE-2 STAGE.
 - PREMIER LINK CONTROLLER.
 - ANTI-CORROSION COATING FOR THE CONDENSER COIL.
 - POWER EXHAUST OPTION.
 - ROOF CURBS.
 - ADDITIONAL REQUIREMENTS APPLICABLE TO ALL RTUS, REFER TO THE HVAC SPECIFICATION 15500.

NO.	DATE	BY	DESCRIPTION	CONST

REVISIONS

CERTIFICATION AND SEAL

I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT OR ENGINEER UNDER THE LAWS OF THE STATE OF MAINE AS SIGNIFIED BY MY HAND AND SEAL.

FISCAL 2007 CRITERIA - STORE #12326

WALGREENS
(NWC) WASHINGTON & ALLEN AVES.
PORTLAND, MAINE

DRAWING TITLE
HVAC CONTROL WIRING DIAGRAMS AND SCHEDULES

CADD PLOT:	SCALE: AS NOTED	DRAWING NO.
VOID PLOT:	DRAWN BY: WAL	M2.2
RELEASED TO CONSTRUCTION	DATE: 3-26-09	
	REVIEWED BY: SAM	