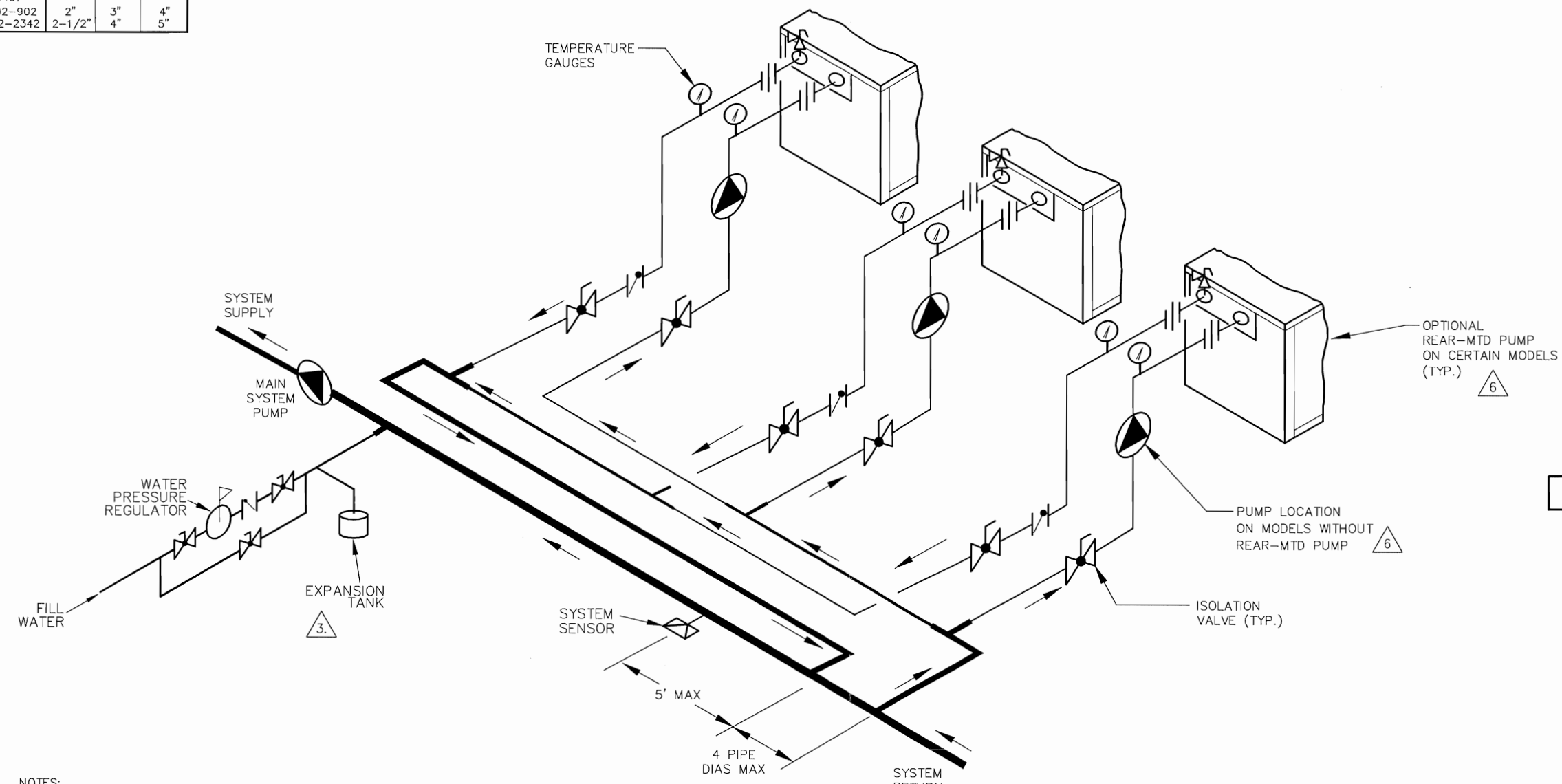


PIPE SIZES			
	1 UNIT	2 UNITS	3 UNITS
RAYTHERM			
181-401	1-1/2"	2"	2-1/2"
514-824	2"	3"	4"
926-1826	2-1/2"	3"	4"
2100-4001	3"	4"	6"
MVB			
503-754	2"	3"	4"
1003-2004	2-1/2"	4"	4"
HI DELTA			
HD101-HD401	1-1/2"	2"	2-1/2"
302-902	2"	3"	4"
992-2342	2-1/2"	4"	5"

THIS PIPING DIAGRAM IS RAYPAK'S RECOMMENDATION AND IS NOT INTENDED TO REPLACE AN ENGINEERED PIPING SYSTEM DESIGNED BY A PROFESSIONAL ENGINEER.

REVISIONS						
REV	ZONE	DESCRIPTION	E.O.	BY	DATE	CHECK
1		REVISED EXPANSION TANK LOCATION		RDN	6-14-06	RDN
2		REVISED PIPING LOGIC AND PIPE SIZING CHART.		RAN	11-10-06	DRB
3		REMOVED EXTERNAL CONTROLLER.		DRB	5-24-07	DRB
4		UPDATED SYMBOLS, ADDED MVB USAGE, ADDED NOTE 3 AND ENGINEER NOTE.		RAN	2-4-10	DRB
5		UPDATED USAGE, NOTE 4 & 5. ADDED NOTE 6.		KA	2-25-14	



- NOTES:
1. PLUMB SWING CHECK VALVE IN GRAVITY-CLOSED POSITION.
 2. PIPE ALL RELIEF VALVES TO DRAIN, OR AS LOCAL CODES REQUIRE.
 3. PROVIDE FOR THERMAL EXPANSION OF HOT WATER IF A BACKFLOW PREVENTER, CHECK VALVE, WATER METER OR PRESSURE-REDUCING VALVE IS INSTALLED IN THE COLD WATER LINE.
 4. SEE CHART "PIPE SIZES" FOR PIPE SIZES, CALCULATED AT MAXIMUM FLOW, NOT TO EXCEED 7.5 FT/SEC. SMALLER PIPE SIZES MAY BE USED IF LOWER FLOW RATES PERMIT WITHIN THE FLOW RATE OF THE UNIT.
 5. A TWO-FOOT MINIMUM CLEARANCE SHOULD BE USED FOR THE SPACING BETWEEN ADJACENT RAYTHERM AND HI DELTA BOILERS FOR MAINTENANCE.
 6. STANDARD PUMP SIZING BASED ON 75 EQUIVALENT FEET OF PIPING. IF DISTANCE IS GREATER, THE PUMP MUST BE SIZED TO ACCOMMODATE INCREASE IN PIPING-RELATED LOSSES.

8373 5

KEY	
	PRESSURE RELIEF VALVE
	PUMP
	UNION
	CHECK VALVE
	BALL VALVE
	THERMOMETER

UNLESS OTHERWISE SPECIFIED:
 ALL UNITS ARE IN INCHES
 FRACTIONS ±1/32 ANGLES ±1°
 X.X = ±.12 X.XX = ±.05
 X.XX = ±.03 X.XXX = ±.010
 DRAFT WALL ____ RADII ____
 CONCENTRICITIES .020 DIA.
 SQUARENESS .015 IN./IN.
 BREAK EDGES .015 MAX.
 SURFACE FINISH PER ASME Y14.36M-1996

APPROVED: DATE: 7-24-02
 CHECKED: D BALDWIN DATE: 7-24-02
 DRAWN: D BALDWIN DATE: 7-24-02

Raypak OXNARD, CALIFORNIA
 E.O. SPR SCALE NONE

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TITLE: PIPING, HYDRONIC: 3 BOILERS
 MAT'L: H SIZE: C DWG. NO.: 8373 REV: 5