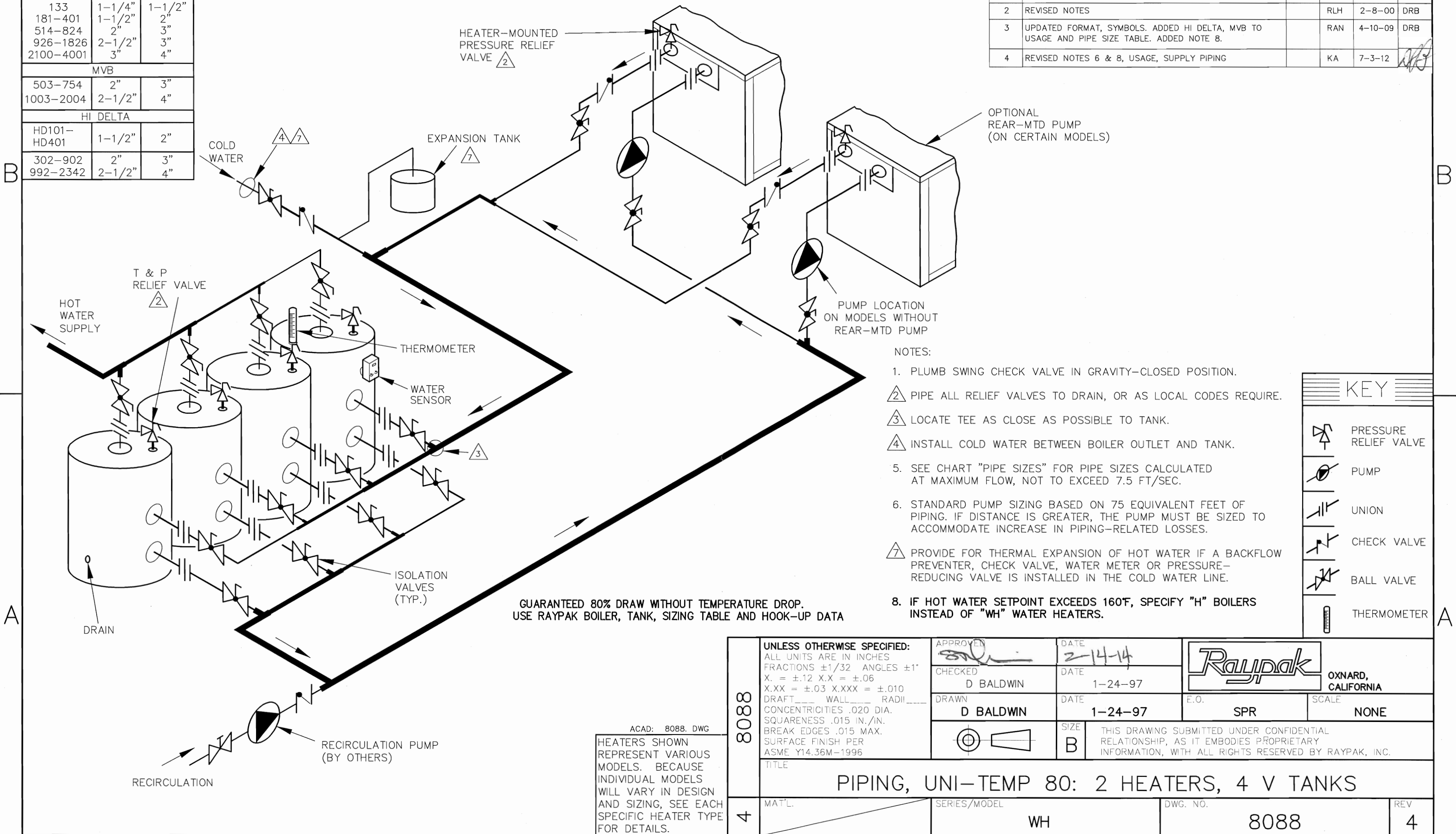


| PIPE SIZES | | |
|-------------|---------|--------|
| HEATER | 2 UNITS | |
| RAYTHERM | | |
| 133 | 1-1/4" | 1-1/2" |
| 181-401 | 1-1/2" | 2" |
| 514-824 | 2" | 3" |
| 926-1826 | 2-1/2" | 3" |
| 2100-4001 | 3" | 4" |
| MVB | | |
| 503-754 | 2" | 3" |
| 1003-2004 | 2-1/2" | 4" |
| HI DELTA | | |
| HD101-HD401 | 1-1/2" | 2" |
| 302-902 | 2" | 3" |
| 992-2342 | 2-1/2" | 4" |

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

| REVISIONS | | | | | |
|-----------|--|------|-----|----------|--------------------|
| REV | DESCRIPTION | E.O. | BY | DATE | CHECK |
| 1 | UPDATED FORMAT | | RLH | 11-17-99 | DRB |
| 2 | REVISED NOTES | | RLH | 2-8-00 | DRB |
| 3 | UPDATED FORMAT, SYMBOLS. ADDED HI DELTA, MVB TO USAGE AND PIPE SIZE TABLE. ADDED NOTE 8. | | RAN | 4-10-09 | DRB |
| 4 | REVISED NOTES 6 & 8, USAGE, SUPPLY PIPING | | KA | 7-3-12 | <i>[Signature]</i> |



- NOTES:
1. PLUMB SWING CHECK VALVE IN GRAVITY-CLOSED POSITION.
 2. PIPE ALL RELIEF VALVES TO DRAIN, OR AS LOCAL CODES REQUIRE.
 3. LOCATE TEE AS CLOSE AS POSSIBLE TO TANK.
 4. INSTALL COLD WATER BETWEEN BOILER OUTLET AND TANK.
 5. SEE CHART "PIPE SIZES" FOR PIPE SIZES CALCULATED AT MAXIMUM FLOW, NOT TO EXCEED 7.5 FT/SEC.
 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.
 7. 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.
 8. IF HOT WATER SETPOINT EXCEEDS 160°F, SPECIFY "H" BOILERS INSTEAD OF "WH" WATER HEATERS.

GUARANTEED 80% DRAW WITHOUT TEMPERATURE DROP. USE RAYPAK BOILER, TANK, SIZING TABLE AND HOOK-UP DATA

| KEY | |
|-----|-----------------------|
| | PRESSURE RELIEF VALVE |
| | PUMP |
| | UNION |
| | CHECK VALVE |
| | BALL VALVE |
| | THERMOMETER |

ACAD: 8088.DWG
 HEATERS SHOWN REPRESENT VARIOUS MODELS. BECAUSE INDIVIDUAL MODELS WILL VARY IN DESIGN AND SIZING, SEE EACH SPECIFIC HEATER TYPE FOR DETAILS.

| | | | | | | |
|------|--|--------------------------------|------------------|--|--------------------|---------------|
| 8088 | UNLESS OTHERWISE SPECIFIED: ALL UNITS ARE IN INCHES FRACTIONS ±1/32 ANGLES ±1° X. = ±.12 X.X = ±.06 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 <i>[Signature]</i> | DATE 2-14-14 | | OXNARD, CALIFORNIA | |
| | CHECKED D BALDWIN | DATE 1-24-97 | E.O. | | | SCALE NONE |
| | DRAWN D BALDWIN | DATE 1-24-97 | SIZE B | THIS DRAWING SUBMITTED UNDER CONFIDENTIAL RELATIONSHIP, AS IT EMBODIES PROPRIETARY INFORMATION, WITH ALL RIGHTS RESERVED BY RAYPAK, INC. | | |
| | TITLE PIPING, UNI-TEMP 80: 2 HEATERS, 4 V TANKS | | | | | |
| 4 | MAT'L. | SERIES/MODEL WH | DWG. NO. 8088 | REV 4 | | |