

| LEGEND | |
|--------|---------------------------------|
| | TEMP. & PRESSURE RELIEF VALVE |
| | CHECK VALVE |
| | MOTORIZED 3 WAY VALVE |
| | ISOLATION VALVE-NORMALLY OPEN |
| | ISOLATION VALVE-NORMALLY CLOSED |
| | PUMP WITH ISOLATION FLANGES |
| | FLOW METER |
| | PRESSURE GAUGE |
| | AIR SEPARATOR |
| | TEMPERATURE GAUGE |
| | DRAIN VALVE |
| | PRESSURE RELIEF VALVE |
| | THERMOSTATIC MIXING VALVE |
| | CONTROL WIRING |
| | POINT OF CONNECTION |
| | FLOAT TYPE MANUAL AIR VENT |
| | CIRCUIT SETTER |
| | TEMPERATURE SENSOR/GAUGE |
| | SENSOR |

| TANK SCHEDULE | | | | | | | |
|---------------|----------------------------|--------------|---------|----------|-----------------|------------------------|-------------------------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | CAPACITY (GAL.) | DIMENSIONS | APPROVALS |
| T-1, T-2 | HVAC BUFFER TANKS | CALEFFI | MA20000 | 2 | 50 | 48" HEIGHT 28" DIAM | UL, CSA C209 ISO 9001-2008 |
| ST-1 | SOLAR THERMAL STORAGE TANK | CALEFFI | MA20022 | 1 | 276.184 | 65" HEIGHT 28" DIAM | UL, CSA C209 ISO 9001-2008 |

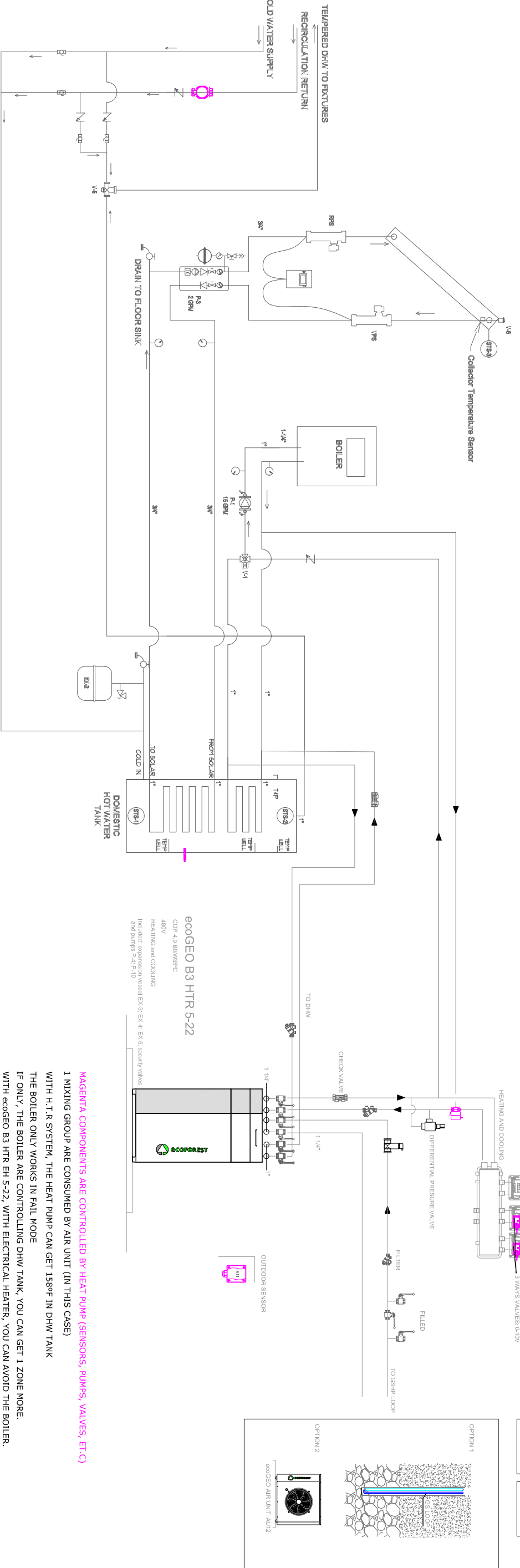
| EXPANSION TANK SCHEDULE | | | | | | | |
|-------------------------|-----------------------|--------------|--------|----------|----------------------------|----------------------------|-----------------------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | CAPACITY (GAL.) | DIMENSIONS | APPROVALS |
| ET-1 | SOLAR LOOP | VAITS | SET-18 | 1 | 2.4 GAL | 14.2" DIAM 14.2" DIAM | ASME B16.3 ISO 9001-2008 |
| ET-2 | DOMESTIC HOT WATER | VAITS | SET-35 | 1 | 15.2" HEIGHT 14.2" DIAM | 15.2" HEIGHT 14.2" DIAM | ASME B16.3 ISO 9001-2008 |
| ET-3 | HVAC BUFFER TANK HOT | AMROL | SET-18 | 1 | 14.2" HEIGHT 11.2" DIAM | 14.2" HEIGHT 11.2" DIAM | ASME B16.3 ISO 9001-2008 |
| ET-4 | HVAC BUFFER TANK COLD | AMROL | SET-18 | 1 | 14.2" HEIGHT 11.2" DIAM | 14.2" HEIGHT 11.2" DIAM | ASME B16.3 ISO 9001-2008 |
| ET-5 | HVAC BUFFER TANK COLD | AMROL | SET-18 | 1 | 14.2" HEIGHT 11.2" DIAM | 14.2" HEIGHT 11.2" DIAM | ASME B16.3 ISO 9001-2008 |

| MISC SCHEDULE | | | | | |
|---------------|----------------------|--------------|---------|----------|----------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | NOTES |
| AS-1 | 1-1/4" AIR SEPARATOR | CALEFFI | SS1000A | 1 | DISCAL - SWEAT |
| AS-1 | 3/4" AIR SEPARATOR | CALEFFI | SS1000A | 1 | DISCAL |

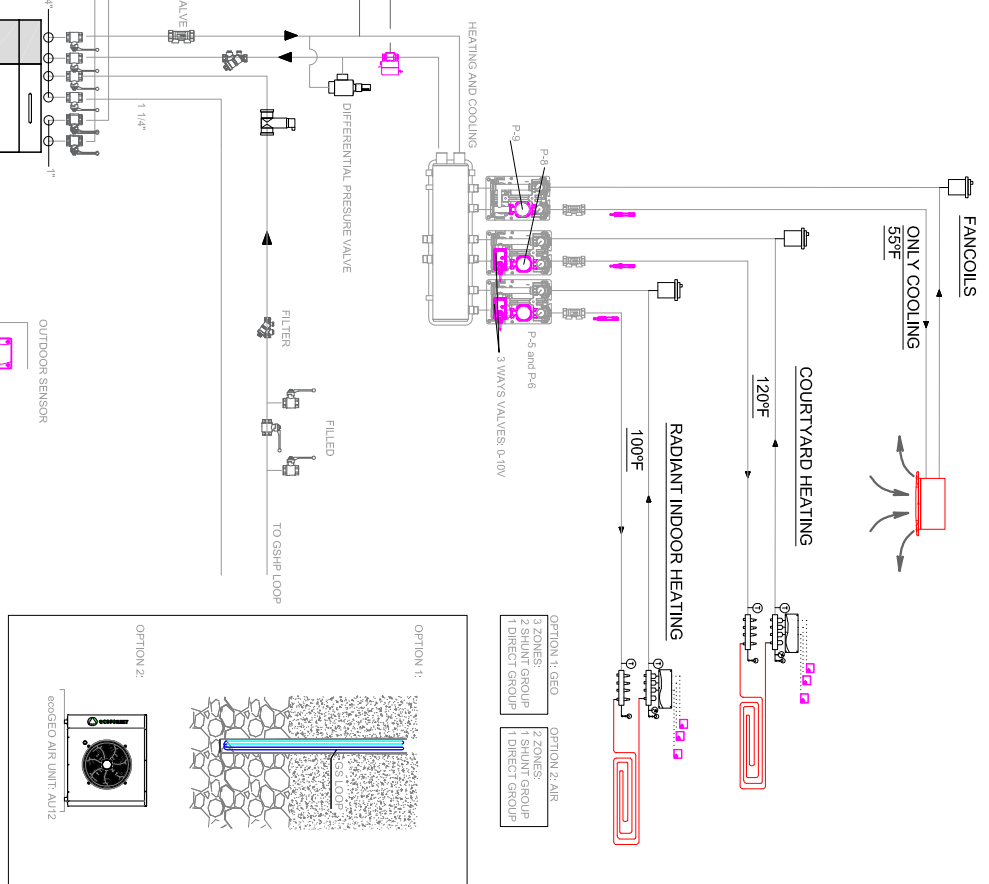
| VALVE SCHEDULE | | | | | |
|----------------|-------------------------|--------------|----------|----------|--------------------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | NOTES |
| V-1 | DIVERGING VALVE 1" | BELIMO | 302L-4LR | 1 | NON-SPRING RETURN |
| V-2 | DIVERGING VALVE 1-1/4" | BELIMO | 302L-NBR | 2 | NON-SPRING RETURN |
| V-3 | DIVERGING VALVE 1-1/2" | BELIMO | 304L-4BR | 2 | NON-SPRING RETURN |
| V-4 | ESBE TEMP CONTROL VALVE | ESBE | ESBE | 3 | FLOATING ACTUATOR |
| V-5 | TEMPERING VALVE | CALEFFI | 252066A | 1 | ISO 9001-2008, ASSE 0017 |
| V-6 | FLOAT TYPE AIR VENT | CALEFFI | 250044A | 6 | |

| SOLAR COLLECTOR SCHEDULE | | | | | | | |
|--------------------------|-------------------------------------------|--------------|----------|----------|-----------------|------------------------|-------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | CAPACITY (GAL.) | DIMENSIONS | APPROVALS |
| C-1 | GLAZED FLAT PLATE SOLAR THERMAL COLLECTOR | SUNEARTH | TR9 2E | 2 | 0.87 | 48"2" X 122"2" X 3.25" | SPCC 100-05 |
| SC | SOLAR CONTROLLER | STECOA | SETFR301 | 1 | NA | NA | NA |
| DT | DRAINBACK TANK | SUNEARTH | DB 10 SS | 1 | 10 | 17.5" H X 16" D | NA |

| PUMP SCHEDULE | | | | | | | |
|-----------------|---------------------------------|---------------------|----------------------|--------------|---------------|-------|-------------------------|
| MARK | DESCRIPTION | MANUFACTURER | MODEL | QUANTITY | GPM | NOTES | APPROVALS |
| P-1 | BOILER CIRCULATOR | GRUNDFOS | UPS 26-99 F | 1 | 15 | | ETL & UL |
| P-2 | PUMP STATION | CALEFFI | 250050A | 1 | 2 | | ETL & UL |
| P-3 | HEAT PUMP CIRCULATOR | GRUNDFOS | UPS 26-99 | 1 | 18 | | ETL & UL |
| P-5 | RADIANT P1 | GRUNDFOS | ALPHA | 1 | 6 | | ETL & UL |
| P-6 | RADIANT P2 | GRUNDFOS | ALPHA | 1 | 5 | | ETL & UL |
| P-7 | RADIANT P3 | GRUNDFOS | ALPHA | 1 | 7 | | ETL & UL |
| P-8 | RADIANT P4 | GRUNDFOS | ALPHA | 1 | 5 | | ETL & UL |
| P-9 | FAN COILS | GRUNDFOS | UPS 26-99 | 1 | 15 | | ETL & UL |
| P-10 | GSP LOOP | GRUNDFOS | UPS 26-99 | 1 | 18 | | ETL & UL |

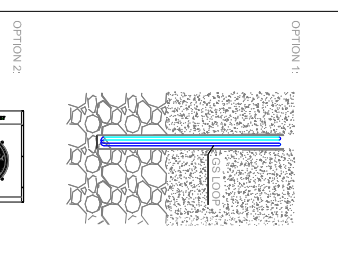


ecogeo B3 HTR 5-22
 COP 4.9 BIVV52C
 480V
 HEATING AND COOLING
 Inductor expansion vessel EX-3; EX-4; EX-5; security valves
 and pumps P-4; P-10



OPTION 1: 2 ZONE GROUP
 3 ZONE GROUP
 1 DIRECT GROUP

OPTION 2: AIR
 2 ZONE GROUP
 1 DIRECT GROUP



MAGENTA COMPONENTS ARE CONTROLLED BY HEAT PUMP (SENSORS, PUMPS, VALVES, ET-C)
 1 MIXING GROUP ARE CONSUMED BY AIR UNIT (IN THIS CASE)
 WITH H.T.R SYSTEM, THE HEAT PUMP CAN GET 158°F IN DHW TANK
 THE BOILER ONLY WORKS IN FAIL MODE
 IF ONLY, THE BOILER ARE CONTROLLING DHW TANK, YOU CAN GET 1 ZONE MORE.
 WITH ecogeo B3 HTR EH 5-22, WITH ELECTRICAL HEATER, YOU CAN AVOID THE BOILER.

BARROW RESIDENCE

6005 LA JOLLA SCENIC DRIVE SOUTH
 LA JOLLA, CA 92037

| | |
|----------------|------------------|
| ISSUE DATES | 08-03-2015 |
| REVISION DATES | 27-04-2016 |
| DRAWN BY | Utau Cusec-White |
| PILOT SCALE | NOT TO SCALE |
| SHEET NUMBER | M-3 |
| SHEET | OF |