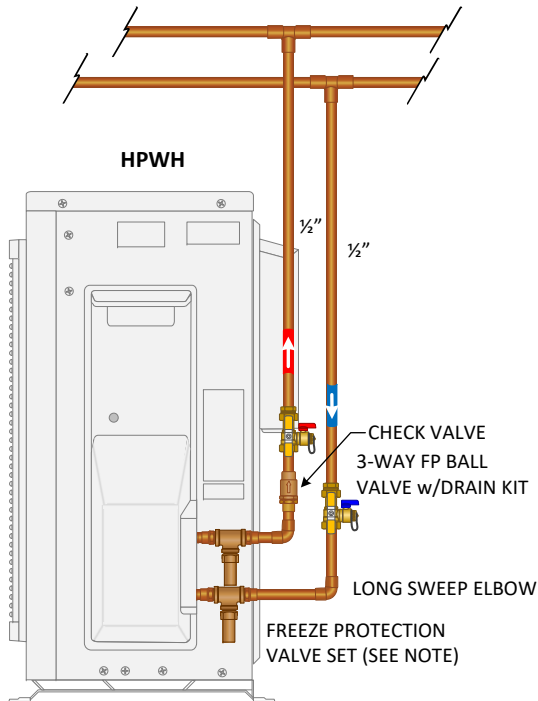
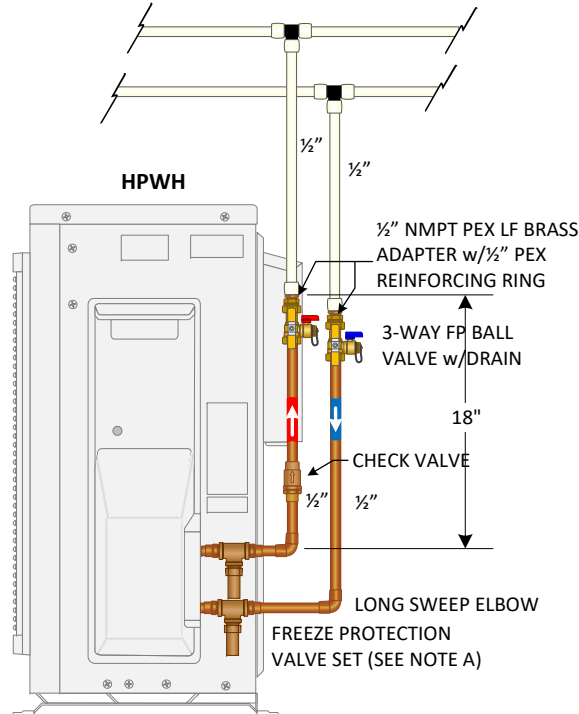


HEAT PUMP WATER HEATER PIPING DETAIL (HPWH)



PIPING DETAIL A
WITH COPPER PIPE



PIPING DETAIL B
WITH PEX PIPE

NOTES

NOTE A: TO PREVENT DAMAGE TO THE HPWH, WHERE TEMPERATURES ROUTINELY DROP BELOW FREEZING, WE RECOMMEND A FREEZE PROTECTION VALVE SET.

NOTE B: AREAS WHERE WATER HARDNESS IS GREATER THAN > 200 PPM, IT MAY BE NECESSARY TO PERIODICALLY SERVICE THE HPWH HEAT EXCHANGER. WE RECOMMEND INSTALLING A SERVICE VALVE FLUSH KIT TO THE HPWH. INSTRUCTIONS ON HOW TO DO THE PROCEDURE IS EXPLAINED IN OUR SANCO₂ TECHNICAL MANUAL.

NOTE C: INSULATE ALL PIPING PER CODE.

NOTE D: CHECK WITH LOCAL JURISDICTIONS FOR CODE REQUIREMENTS. SOME AREAS REQUIRE 18 INCHES OF COPPER PIPE AT THE HOT WATER HEATER OUTLET CONNECTION BEFORE TRANSITIONING TO PEX.

NOTE B: MAXIMUM DISTANCE OF SEPARATION FROM THE FURTHEST HPWH TO THE FURTHEST STORAGE TANK IS 66 FEET. THE DESIGNER/ENGINEER MUST ACCOUNT FOR TOTAL EQUIVALENT LENGTH OF PIPE & FITTING PLUS STRAIGHT PIPE ALONG THE CRITICAL PIPING PATH. CONSULT WITH ECO2 SYSTEMS TECHNICAL SUPPORT OR REFER TO OUR ECO2 APPLICATION AND DESIGN MANUAL.

The diagram illustrates a hydronic heating system layout. At the top, a row of 15 HPWHs (HPWH-1 to HPWH-15) is shown with 'AIR FLOW' arrows indicating 'FRONT' (up) and 'BACK' (down) directions. Below them is a 'REVERSE RETURN PIPING' loop with various pipe sizes (1/2", 3/4", 1", 1 1/2"). The central part of the diagram features a manifold with five tanks (TANK-1 to TANK-5) and a 'SWING TANK' (MODEL ECO-200SW18). Each tank has a '150# PRV' and a 'PRV TO DRAIN'. The manifold also includes a 'RECIRC-PUMP', 'CHECK VALVES', 'ANTI-SCALD (MIXING VALVE)', 'Y-STRAINER', 'PRESSURE REDUCING VALVE 75# MAX', and 'ISOLATION VALVE'. The bottom row shows another 15 HPWHs (HPWH-16 to HPWH-30) with similar 'AIR FLOW' arrows. The entire system is labeled 'NO BULLHEAD TEE'S' and 'APPROXIMATE LENGTH' with a 31' scale bar.

**NOTE: SEE VALVE
DETAIL ON PAGE-1 (TYP)**

HPWH MODEL's G55-45HPC & G55-45HPC-D	
HOT WATER OUTLET CONN.	½" NMPT
COLD WATER INLET CON.	½" NMPT
ALL PIPING & CONNECTIONS TO MAIN HEADERS CAN BE ½" COPPER OR PEX	

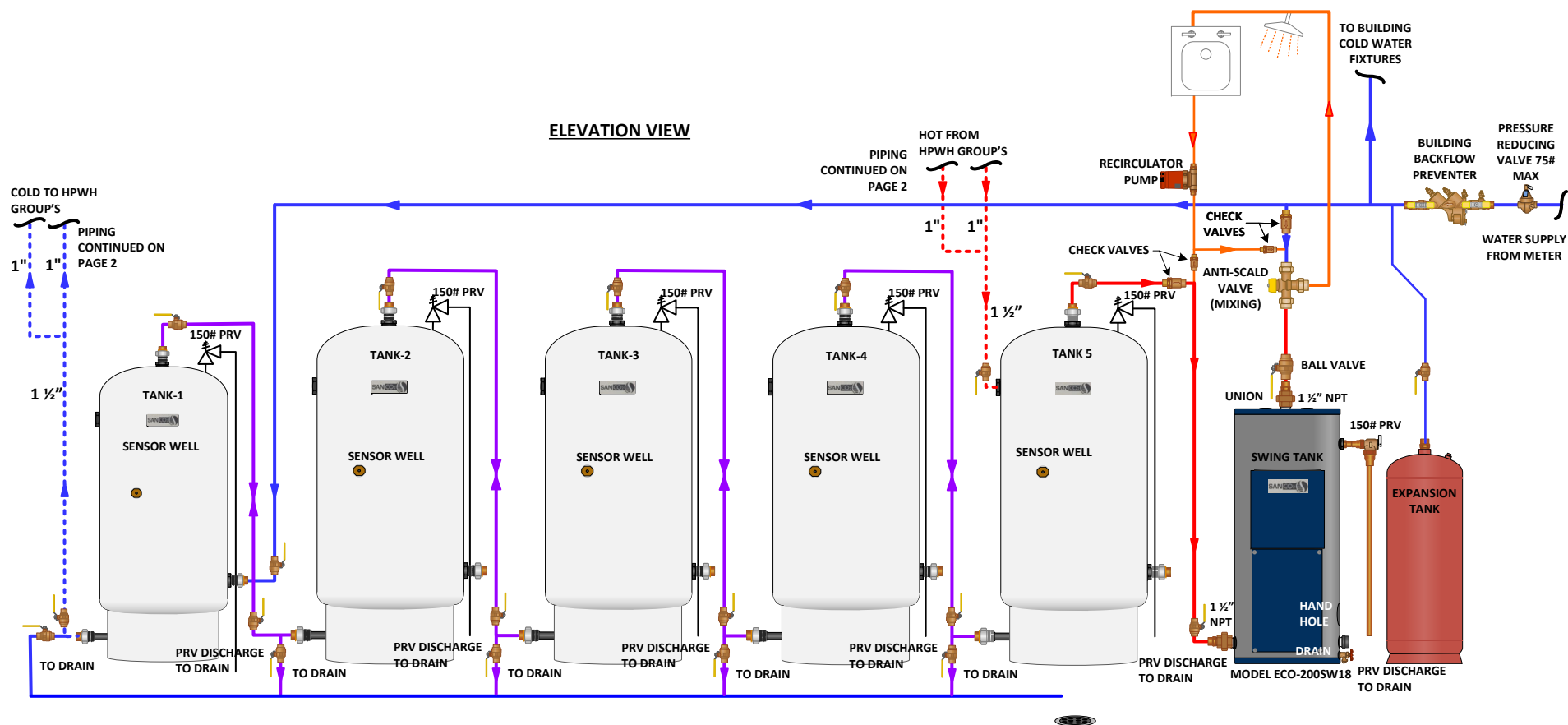
NOTE:
DASHED LINES REPRESENT CRITICAL
PIPING PATH. REFER TO ECO2
APPLICATION AND DESIGN MANUAL ON
HOW TO DETERMINE TOTAL
EQUIVALENT LENGTH (T.E.L.) DO NOT
EXCEED 66 FEET OF T.E.L.



NOTE A: TO PREVENT DAMAGE TO HPWH'S INTERNAL COMPONENTS, WE MUST LIMIT THE INCOMING BUILDING WATER PRESSURE TO A MAXIMUM OF 75 PSI. THIS INCLUDES CALCULATING STATIC PRESSURE PLUS INCOMING WATER PRESSURE. THIS CAN BE CONTROLLED BY SELECTING A PROPERLY SIZED PRESSURE REDUCING VALVE.

NOTE B: MAXIMUM DISTANCE OF SEPARATION FROM THE FURTHEST HPWH TO THE FURTHEST STORAGE TANK IS 66 FEET. THE DESIGNER/ENGINEER MUST ACCOUNT FOR TOTAL EQUIVALENT LENGTH OF PIPE & FITTING PLUS STRAIGHT PIPE ALONG THE CRITICAL PIPING PATH. CONSULT WITH ECO2 SYSTEMS TECHNICAL SUPPORT OR REFER TO OUR ECO2 APPLICATION AND DESIGN MANUAL.

ELEVATION VIEW



MODEL ECO-505GLNST	
STORAGE TANK CONNECTIONS	
COLD WATER INLET	3" FEMALE NPT
HOT WATER OUTLET	3" MALE NPT
COLD WATER TO HP	1 1/2" FEMALE NPT
HOT WATER FROM HP	1 1/2" FEMALE NPT

MODEL ECO-455GLNST	
STORAGE TANK CONNECTIONS	
COLD WATER INLET	3" FEMALE NPT
HOT WATER OUTLET	3" MALE NPT
COLD WATER TO HP	1 1/2" FEMALE NPT
HOT WATER FROM HP	1 1/2" FEMALE NPT

HPWH MODEL'S GSS-45HPC & GSS-45HPC-D	
HOT WATER OUTLET CONN.	1/2" NMPT
COLD WATER INLET CON.	1/2" NMPT
ALL PIPING & CONNECTIONS TO MAIN HEADERS CAN BE 1/2" COPPER OR PEX	