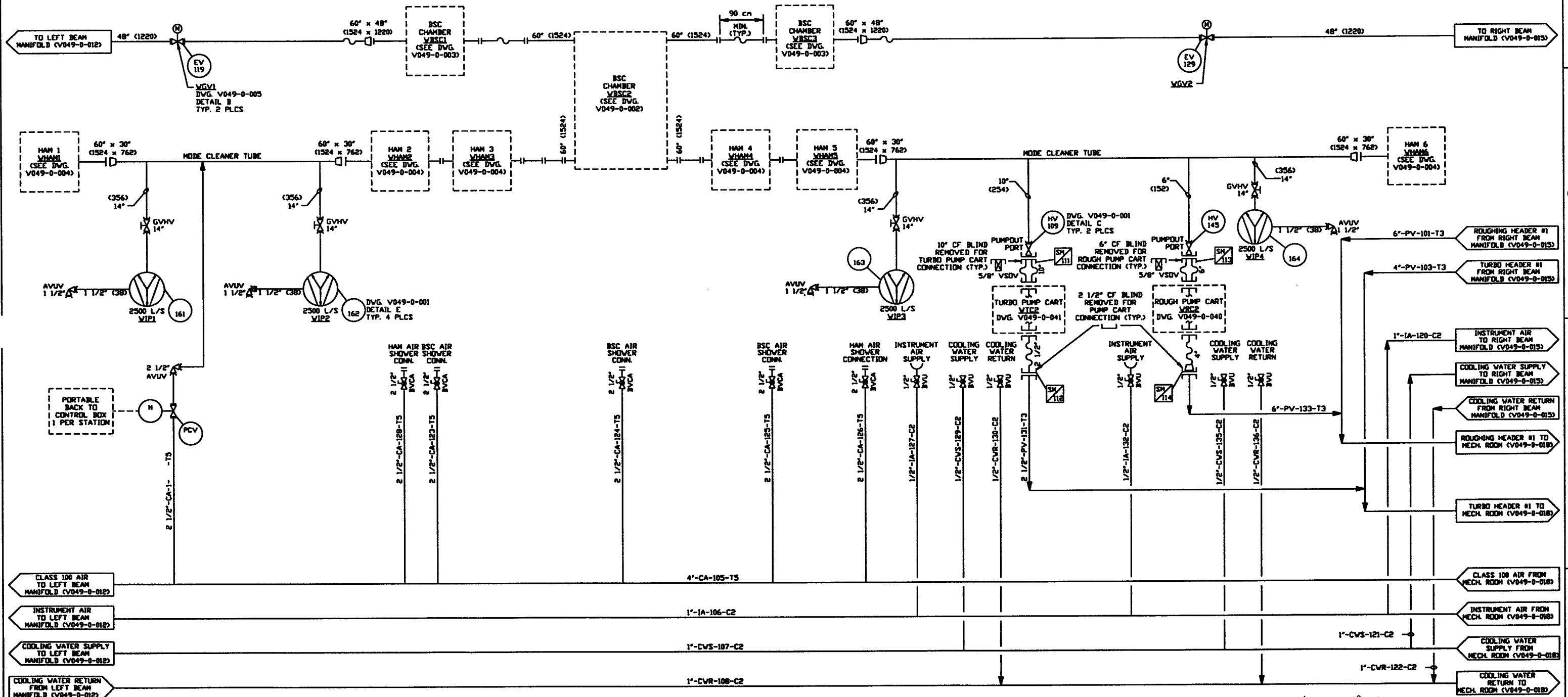


**NOTES:**

- EACH PUMPOUT PORT LOCATION HAS BOTH POWER & CONTROL PLUG-IN CONNECTIONS.
- ALL VACUUM GAUGES TO BE BAKED OUT AT 250 C DURING PUMPDOWN, USING A REMOVABLE BLANKET TYPE HEATER. ALL VACUUM SECTIONS SHALL ALSO BE BAKED OUT AT 150 C DURING PUMPDOWN USING A REMOVABLE BLANKET TYPE HEATER. SEE DWG. V049-0-043 FOR BAKEOUT SYSTEM.
- DIMENSIONS IN <> ARE IN MILLIMETERS.
- BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS.
- BEAM MANIFOLD FLANGE ANNUALUS IDN PUMP DETAILS LATER.



PROPRIETARY AND CONFIDENTIAL		
ICNDNT CONTAINS PROPRIETARY INFORMATION BELONGING TO PROCESS SYSTEMS INTERNATIONAL, INC. OR ITS SUBSIDIARIES. THIS DRAWING IS FOR THE USE OF THE CONTRACTOR ONLY FOR THE PURPOSE FOR WHICH IT WAS SUPPLIED. IT SHALL NOT BE COPIED, REPRODUCED OR OTHERWISE DISCLOSED EXCEPT WITH THE WRITTEN AUTHORIZATION OF THE CONTRACTOR. THIS DRAWING IS THE PROPERTY OF THE CONTRACTOR AND IS TO BE RETURNED UPON REQUEST.	V049-0-015	P & ID RIGHT BEAM MANIFOLD
V049-0-012	P & ID LEFT BEAM MANIFOLD	
V049-0-004	P & ID HORIZONTAL ACCESS MODULE	
V049-0-003	P & ID BEAM SPLITTER CHAMBER	V049-0-041 P & ID TURBO PUMP CART
V049-0-002	P & ID BEAM SPLITTER CHAMBER	V049-0-040 P & ID MAIN ROUGHING PUMP CART
V049-0-001	P & ID LEGEND	V049-0-010 P & ID MECHANICAL ROOM
DWG. NO.	DESCRIPTION	DWG. NO.
	REFERENCE DRAWINGS	

REFERENCE DRAWINGS

EQUIP. THIS DWG.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: 1/16, 1/32, 1/64, 1/128, 1/256 DECIMAL: .001, .002, .005, .010, .020, .050 THREE PLACE DECIMAL: .000, .001, .002, .005, .010, .020, .050 FINISHED SURFACE: .000, .001, .002, .005, .010, .020, .050 BROKE CORNERS IN: .000, .001, .002, .005, .010, .020, .050 REMOVE ALL SURFS: .000, .001, .002, .005, .010, .020, .050	ISSUED FOR FDR	REV.	TS	RT	SM	D.W.M.	P.R.V.	04-26-96	0134	
VHAN1	V049-0-015	ISSUE FOR DESIGN	REB	TNS	RT	SM	D.W.M.	P.R.V.	01-03-96	0031	
VHAN2	V049-0-012	DO NOT SCALE THIS DRAWING	P1	PRELIMINARY DESIGN UPDATE	REB				AFG	09-26-95	
VHAN3	V049-0-010	USED ON:	REV.	DESCRIPTION					CHKD	DRVN	DATE
VHAN4	V049-0-041	NEXT ASS'Y:							DEOB		
VHAN5	V049-0-040										
VHAN6	V049-0-010										
VHSC1	V049-0-015										
VHSC2	V049-0-012										
VRC2	V049-0-010										

PROCESS SYSTEMS INTERNATIONAL INC.  
35 WILMINGTON, MASSACHUSETTS 01843 USA  
DWG. NO. V049-0-013 REV. 1  
P.D.F. DATE 04-26-96  
C.A.D. FILE V049-0-013  
SCALE NONE  
SHEET 1 OF 1

PIPING & INSTRUMENTATION DIAGRAM  
LIGO VACUUM EQUIPMENT  
WASHINGTON SITE  
VERTEX SECTION