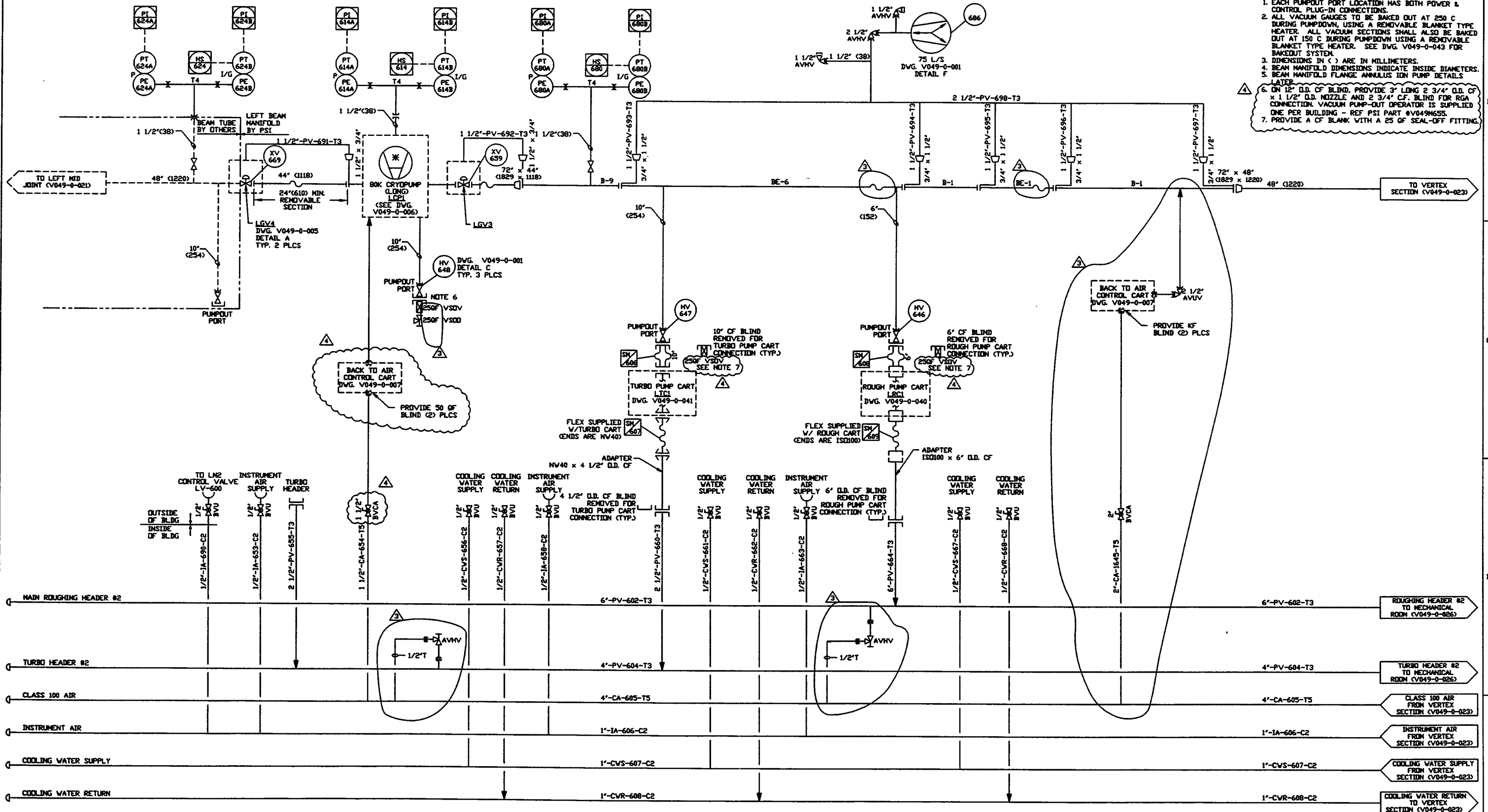


- NOTES:**
1. EACH PUMP/OUT PORT LOCATION HAS BOTH POWER & CONTROL PLUG-IN CONNECTIONS.
  2. ALL VACUUM GAUGES TO BE BAKED OUT AT 250 C DURING PUMPDOWN, USING A REMOVABLE BLANKET TYPE HEATER. ALL VACUUM SECTIONS SHALL ALSO BE BAKED OUT AT 150 C DURING PUMPDOWN USING A REMOVABLE BLANKET TYPE HEATER. SEE DWG. V049-0-043 FOR BAKEDOUT SYSTEM.
  3. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  4. BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS.
  5. BEAM MANIFOLD FLANGE ANNULUS ION PUMP DETAILS LATER.
  6. ON 12" O.D. CF BLIND, PROVIDE 3" LONG 2 3/4" O.D. CF x 1 1/2" O.D. NOZZLE AND 2 3/4" CF. BLIND FOR RGA CONNECTION. VACUUM PUMP-OUT OPERATOR IS SUPPLIED ONE PER BUILDING - REF PSI PART #V049M655.
  7. PROVIDE A CF BLANK WITH A 25 OF SEAL-OFF FITTING.



DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION
V049-0-041	P & ID TURBO PUMP CART		
V049-0-040	P & ID ROUGHING PUMP CART		
V049-0-023	P & ID VERTEX SECTION		
V049-0-021	P & ID LEFT & RIGHT MID JOINTS		
V049-0-006	P & ID 60K CRYOPUMP		
V049-0-001	P & ID LEGEND		

EQUIP. THIS DWG.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
LGV3 LICI	
LGV4 LRLI	
LCP1	

REV	DESCRIPTION	ISSUE DESCRIPTION	CHKD	DRWN	DATE	DESD
4	REISSUED FOR FDR UPDATE		SM	DMCV	02/14/97	0499
3	REVISED		SM	DMCV	02/14/97	0435
2	ISSUE FOR FDR UPDATE		SM	DMCV	10/25/96	0309
1	ISSUE FOR FDR	REB TS RT	SM	DMCV	04/26/96	0134
0	ISSUE FOR DESIGN	REB TS RT	SM	DMCV	01/03/96	0031

**PROCESS SYSTEMS INTERNATIONAL INC.**  
 30 WALCUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA

**PIPING & INSTRUMENTATION DIAGRAM**  
**LIGO VACUUM EQUIPMENT**  
**LOUISIANA SITE**  
**LEFT BEAM MANIFOLD**

CAD FILE: V049022  
 SHEET: D  
 DWG. NO.: V049-0-022  
 REV: 4

SCALE: NONE  
 SHEET: 1 OF 1