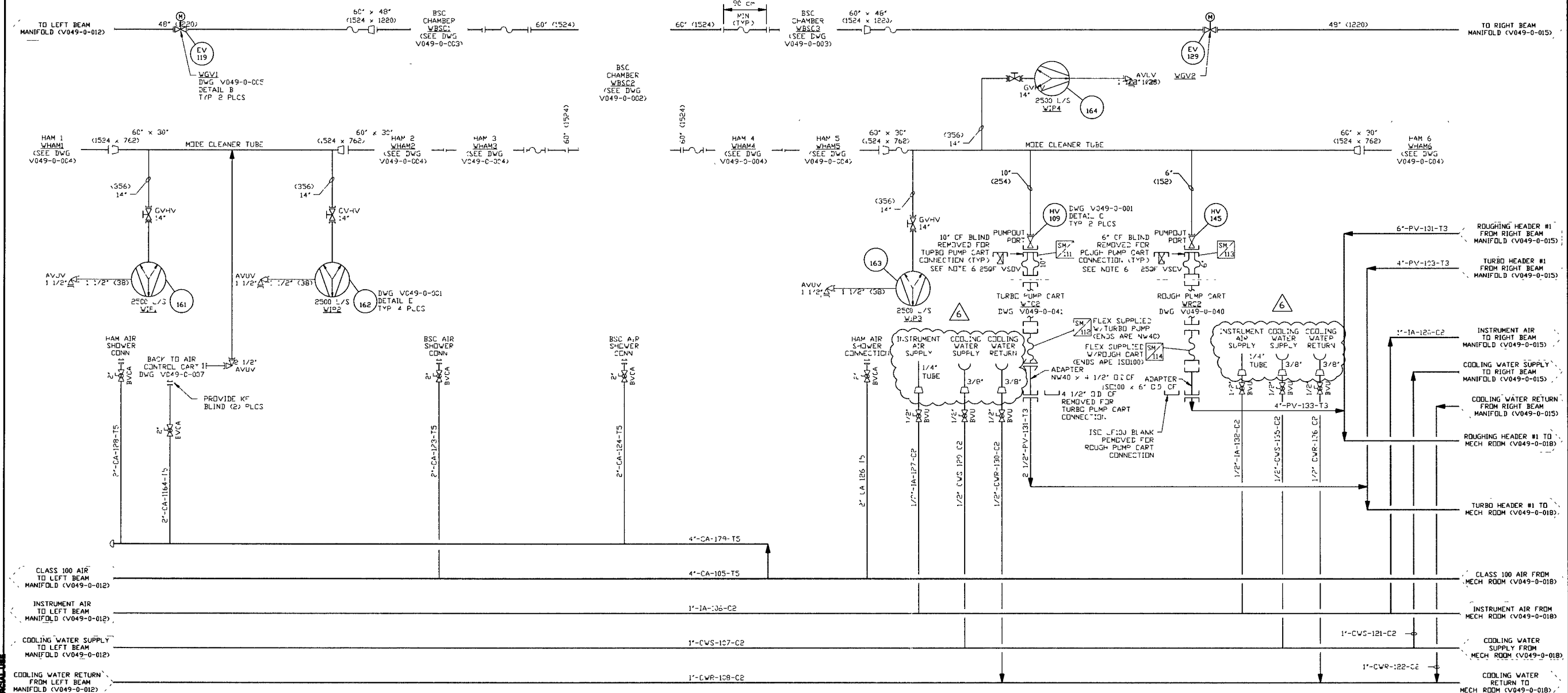


# ELECTRONIC COPY

- NOTES:**
- EACH PUMPOUT PORT LOCATION HAS BOTH POWER & CENTRAL 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 BAKEDOUT SYSTEM.
  - DIMENSIONS IN ( ) ARE IN MILLIMETERS
  - BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS
  - BEAM MANIFOLD FLANGE ANNULUS IN PUMP DETAILS LATER
  - PROVIDE CF BLIND WITH 25 OF SEAL-OFF FITTING



DWG NO	DESCRIPTION	DWG NO	DESCRIPTION
V049-0-015	P & ID RIGHT BEAM MANIFOLD	V049-0-041	P & ID TURBO PUMP CART
V049-0-012	P & ID LEFT BEAM MANIFOLD	V049-0-040	P & ID MAIN ROUGHING PUMP CART
V049-0-004	P & ID HORIZONTAL ACCESS MODULE	V049-0-018	P & ID MECHANICAL ROOM
V049-0-003	P & ID BEAM SPLITTER CHAMBER		
V049-0-002	P & ID BEAM SPLITTER CHAMBER		
V049-0-001	P & ID LEGEND		

EQUIP THIS DWG	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
WHAM1 WBS3	TOLERANCES: FRACTIONAL & ANGULAR: 1/16" - 3/32" BEND 1/2" TWO PLACE DECIMAL & 01 FINISHED SURFACE RNS BREAK CORNERS IN OUT REMOVE ALL BURRS
WHAM2 WGV1	DO NOT SCALE THIS DRAWING
WHAM3 WGV2	USED ON
WHAM4 WVP1	NEXT ASS'Y
WHAM5 WVP2	
WHAM6 WVP3	
WBS1 WVP4	
WBS2 WTC2	

REV	DESCRIPTION	CHKD	DRWN	DATE	DESN
6	AS BUILT				
5	REISSUED FOR FDR UPDATE				
4	REVISED				
3	REVISED				
2	ISSUED FOR FDR UPDATE				
1	ISSUED FOR FDR	REB	TS	04 26 96	0134
0	ISSUE FOR DESIGN			01 03 96	0031

LIGO-D961078-06-V

**PROCESS SYSTEMS INTERNATIONAL INC.**  
20 WALKUP DR WESTBOROUGH, MASSACHUSETTS 01581 USA

**PIPING & INSTRUMENTATION DIAGRAM**  
**LIGO VACUUM EQUIPMENT**  
**WASHINGTON SITE**  
**VERTEX SECTION**

CAB FILE	SIZE	DWG NO.	REV
V0490013	D	V049-0-013	6

SCALE: NONE SHEET: 1 OF 1

EDUCATIONAL USE ONLY