



APPROX. L.F. 315

○	RESTRAINT	○	RESTRAINT
○	SPRINGS HANGERS	○	PIPE HANGERS
○	DIRECTION OF RESTRAINT	○	DIRECTION OF EXPANSION
○		○	ANCHOR
○		○	SLINGER

- NOTES:**
1. ALL FITTINGS TO BE FABRICATED AND TESTED IN ACCORDANCE WITH SPECIFICATIONS 72P-N-204, SA-201, SA-204.
 2. FOR MATERIAL DESCRIPTION OF PIPE, VALVES AND FITTINGS, SEE PIPING CLEAR SPECIFICATIONS, M-441.
 3. FOR PIPING AND INSTRUMENT DIAGRAMS SEE SPEC. M-412A & M-414-415.
 4. FOR EQUIPMENT LIST SEE M-445.
 5. FOR INSTRUMENT CONNECTION DETAIL SEE DRAWING M-443.
 6. NO ALLOWANCE HAS BEEN MADE FOR WELDING SHORTE OF CASES AND ALL FITTINGS IN DISPOSITIONS IF THE COLE LOCATED POSITION WELDS WERE MADE UPON THE SERVICE.
 7. FOR PIPING SYSTEM COMPATIBILITY THIS AREA, SEE M-52 54'S 1&2, M-53 54'S 1&2, M-54, M-56.
 8. FOR ISOLATION SEE SPEC. M-154.
 9. PIPE SIZES WHICH WOULD BE NOTED HAVE A MINIMUM CONTROLLING RATIO OF PIPE O.D. TO PIPE I.D. OF 1.31.
 10. FOR PIPING AND INSTRUMENT SYMBOLS SEE SPEC. M-400 PAGES 1&2.
 11. FIELD WELD JOINTS MADE FOR FIELD INSTALLATION ARE INDICATED (F-1).
 12. FOR VENTS AND DRAINS SEE DRAWING M-442. VENTS ARE INDICATED (V) AND DRAINS (D).
 13. ALL PRESSURE RATES ARE TO BE USED FOR PERMISSIBLE VALUES FOR ALL SIZES 1/2" UNLESS OTHERWISE NOTED.
 14. INDICATING SIGNALS OUTLINES EXTENDED, ALL PENETRATIONS.
 15. INDICATES PLACE ON WALL PENETRATIONS.

3.0 X

NO HANGERS INDICATED ON THIS ISO ARE BELIEVED DESIGNED EXCEPT AS INDICATED SH FOR CRANELL OR DCH FOR GILBERT CONSTRUCTION.

POOR ORIGINAL

DESIGN CALCULATION REFERENCE

FROM OP. TO OP.	CALCULATION NUMBER	REV.
376	275	32-1 (6-7-70)
499	172	50-1 (2-7-70)

NO.	DESCRIPTION	DATE	BY	CHKD.
1	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
2	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
3	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
4	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
5	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
6	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
7	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
8	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
9	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
10	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
11	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
12	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
13	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
14	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
15	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
16	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
17	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
18	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
19	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	
20	REVISED TO REFLECT REV. OF PIPING	10-15-59	JJB	

BECHTEL
AN ASSOCIATE OF
MIDLAND PLANT UNITS 1 & 2
CONSUMERS POWER COMPANY

MANAGER, ISOMETRIC
SERVICE WATER-REACTOR
AND AUXILIARY BUILDING UNITS 1&2

JOB NO.	DATE WITH NO.	REV.
7220	H-619 SHLO (Q) 8	

PRO APERTURE CARD

11

11

8.5

8.5

11

17

11

11

8.5

8.5

11

17

RIDS

8302150028

