

PLUMBING LEGEND

AFB	.....	ABOVE FINISHED FLOOR	---	---	(CW) COLD WATER
ARCH	.....	ARCHITECTURAL	---	---	(HW) HOT WATER
B.G.	.....	BELOW GRADE	---	---	(HWR) HOT WATER RECIRC
BTU	.....	BRITISH THERMAL UNIT	---	---	(NFW) NON POTABLE WATER
CAP.	.....	CAPACITY	---	---	(W) BELOW GRADE WASTE
C.I.	.....	CAST IRON	---	---	(W) ABOVE GRADE WASTE
COMP.	.....	COMPARTMENT	---	---	(V) VENT
CONT.	.....	CONTINUATION	---	---	(RD) RAIN DRAIN
CU.	.....	CUBIC	---	---	(OD) OVERFLOW RAIN DRAIN
DF	.....	DRINKING FOUNTAIN	---	---	(FDC) (FDC) FIRE DEPARTMENT CONNECTION
DI	.....	DIAMETER	---	---	(MA) (MA) MEDICAL COMPRESSED AIR
DIA.	.....	ELEVATION	---	---	(MV) (MV) MEDICAL VACUUM
ELEV.	.....	ELECTRIC WATER COOLER	---	---	(F) (F) FIRE WATER
EW	.....	FLOOR DRAIN	---	---	(CO2) (CO2) CARBON DIOXIDE
FD	.....	FIRE DEPARTMENT CONNECTION	---	---	(N2) (N2) NITROGEN
FDC	.....	FINISH FLOOR	---	---	(N2O) (N2O) NITROUS OXIDE
F.F.	.....	FLANGE	---	---	(O2) (O2) OXYGEN
FLG.	.....	FOOT / FEET	---	---	
FT	.....	GAS	---	---	
G	.....	GAUGE	---	---	
GA	.....	GALVANIZED	---	---	
GPM	.....	GALLONS PER MINUTE	---	---	
G.V.	.....	GATE VALVE	---	---	
HP	.....	HORSEPOWER	---	---	
HR.	.....	HOUR	---	---	
I.E.	.....	INVERT ELEVATION	---	---	
KW	.....	KILOWATT	---	---	
LAV	.....	LAVATORY	---	---	
LBS	.....	POUNDS	---	---	
MAX.	.....	MAXIMUM	---	---	
MGH	.....	THOUSANDS OF BTUs PER HOUR	---	---	
MIN.	.....	MINIMUM	---	---	
M.J.	.....	MECHANICAL JOINT	---	---	
N.I.M.	.....	NOT IN MECHANICAL	---	---	
OS&Y	.....	OUTSIDE STEM & YOKE	---	---	
PROT.	.....	PROTECTION	---	---	
PRV	.....	PRESSURE REDUCING VALVE	---	---	
PSI, PSIG	.....	POUNDS PER SQUARE INCH	---	---	
P/T	.....	PRESSURE / TEMPERATURE	---	---	
REQ'D	.....	REQUIRED	---	---	
RPBP	.....	REDUCED PRESSURE BACKFLOW PREVENTER	---	---	
RPM	REVOLUTIONS PER MINUTE	---	---	
TYP.	TYPICAL	---	---	
UR	URINAL	---	---	
VTR	VENT THROUGH ROOF	---	---	
WC	WATER CLOSET	---	---	

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CONNECT TO EXISTING

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PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW	REMARKS
WC-1	WATER CLOSET	3"	2"	1"		FLOOR MOUNT, FLUSH VALVE, ADA
WC-2	WATER CLOSET	3"	2"	1"		FLOOR MOUNT, CONCEALED FLUSH VALVE, ADA
LV-1	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNTED, ADA
LV-2	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER MOUNTED, ADA
LV-3	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNTED, ADA
LV-4	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	WALL MOUNTED, ADA
SH-1	SHOWER	2"	1-1/2"	1/2"	1/2"	FIBERGLASS, ADA
SH-2	SHOWER	2"	1-1/2"	1/2"	1/2"	SS ACCESS PANEL, MIX VALVE, HAND-HELD SPRAYER
S-1	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS
S-2	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-3	SINK	2"	1-1/2"	1/2"	1/2"	SCRUB SINK WITH INFRARED FAUCET AND EYE WASH
S-4	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-5	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-6	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-7	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-8	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-9	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
S-10	SINK	1-1/2"	1-1/2"	1/2"	1/2"	SEE SPECS;
CS-1	CLINICAL SINK	3"	2"	1"	1/2"	HAND HOSE, SPRAYER, FOOT PEDAL
CS-2	CLINICAL SINK	3"	2"	1"	1/2"	KOHLER 6676. PROMOTE FLUSH VALVE, HAND HOSE, SPRAYER & FOOT PEDAL AS FOR "CS-1"
SS-1	SERVICE SINK	3"	2"	1/2"	1/2"	SEE SPECS;
EW-1	EMERGENCY EYEWASH			1/2"		GUARDIAN G5022BP-TMV
DF-1	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"		HAWS 1105BP SINGLE BOWL, ADA
HB-1	HOSE BIB			3/4"		NON-FREEZE
FD-1	FLOOR DRAIN	3"	V.L.			JR SMITH 2500A (SQUARE)
FS-1	FLOOR SINK	3"	V.L.			JR SMITH 3002 W/ 1/2" SS GRATE
FS-2	FLOOR SINK	3"	V.L.			JR SMITH 3002 W/ 3/4 SS GRATE
RD-1	RAIN DRAIN	SEE PLANS				JR SMITH 1580
OD-1	OVERFLOW DRAIN	SEE PLANS				JR SMITH 1580
OF-1	OVERFLOW DRAIN OUTLET	SEE PLANS				JR SMITH 1770
RPBP-1	REDUCED PRESSURE BACKFLOW PREVENTER			1"		WATTS 009-QT
RPBP-2	REDUCED PRESSURE BACKFLOW PREVENTER			3/4"		WATTS 009-QT
RPBP-3	REDUCED PRESSURE BACKFLOW PREVENTER			3/4"		WATTS 009-QT
RPBP-4	REDUCED PRESSURE BACKFLOW PREVENTER			1/2"		WATTS 009-QT; PIPE DRAIN WITH AIR GAP TO OVER SS-1
V.L.	VENTED LINE					

MEDICAL GAS ZONE VALVE SCHEDULE

MARK	TYPE	O2	MV	MA	N2O	N2	CO2	LOCATION
MZV-1	WALL	1"	1"					TREATMENT AND EXAM
MZV-2	BOOM	1/2"	1"	1/2"	1/2"	1/2"	1/2"	OR #1
MZV-3	BOOM	1/2"	1"	1/2"	1/2"	1/2"	1/2"	OR #2
MZV-4	WALL	1/2"	1"	1/2"				PACU
MZV-5	WALL	1"	1"	3/4"				SAME DAY AND MINOR PROCEDURE

NOTE:
ALL ZONE VALVES TO BE ACCESSIBLE FROM THE CORRIDOR SIDE OF THE WALL.

MEDICAL GAS DESIGN CRITERIA	MV, SCFM	MA, SCFM	O2, SCFM	N2, SCFM	N2O, SCFM	CO2, SCFM
ROOM TYPE						
SAME DAY/EXAM/TREATMENT ROOM	0.1/ROOM	0.5/ROOM	1.0/OUTLET	---	---	---
PACU	0.75/BED	2.0/BED	1.0/OUTLET	---	---	---
OPERATING ROOM (OR)	3.5/ROOM	0.5/ROOM	1.0/OUTLET	15.0/ROOM	1.0/ROOM	1.0/ROOM
MINOR PROCEDURE	0.1/ROOM	0.5/ROOM	1.0/OUTLET	---	---	---

ALLOWABLE SYSTEM PRESSURE DROP:
MEDICAL VACUUM (19 IN.Hg) (MV)-4 in.Hg PER 100 FEET;
MEDICAL AIR (55 PSI) (MA)-5.0 PSI PER 100 FEET;
OXYGEN (55 PSI)(O2)- 5.0 PSI PER 100 FEET;
NITROGEN (160-185 PSI)(N2)- 10 PSI PER 100 FEET;
NITROUS OXIDE (55 PSI)(N2O)- 5.0 PSI PER 100 FEET;
CARBON DIOXIDE (55 PSI)(CO2)- 5.0 PSI PER 100 FEET;

GENERAL NOTES:

FUNCTIONAL PERFORMANCE TESTING:
ALL MECHANICAL, PLUMBING AND MEDICAL GAS SYSTEMS TO BE FUNCTIONAL TESTED AS REQUIRED BY OREGON OAR 333-535-0300 (1)(I), AND ALL TESTING REPORTS BE GIVEN TO THE ENGINEER OF RECORD FOR REVIEW.

PLUMBING CALCULATIONS

FIXTURE TYPE	NUMBER OF FIXTURES	DOMESTIC WATER SERVICE				SANITARY WASTE SERVICE	
		WATER FIXTURE UNITS	TOTAL WSFU	TOTAL CW FIXTURE UNITS	TOTAL HW FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
CLINICAL SINK	4	8	32	24	24	6	24
DRINKING FOUNTAIN / WATER COOLER (GENERAL USE)	1	0.5	0.5	0.5	0	0.5	0.5
KITCHEN SINK (ONE 1-1/2" TRAP)	3	1.5	4.5	3.375	3.375	2	6
LAUNDRY SINK	5	1.5	7.5	5.625	5.625	2	10
LAVATORY (SINGLE)	12	1	12	9	9	1	12
WIP BASH	3	3	9	6.75	6.75	3	9
RECEPTOR (INDIRECT WASTE)	10	---	---	---	---	1	10
SHOWERS (STALL)	4	2	8	6	6	2	8
SINK GENERAL (1-1/2" TRAP)	44	1.5	66	49.5	49.5	3	132
SINK GENERAL (2" TRAP)	2	6	12	9	9	4	8
WATER CLOSET (1.6 GPF FLUSHMETER VALVE-GENERAL)	12	5	60	45	45	4	48
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	---
HOSE BIBB (EACH ADDITIONAL)	1	1	1	1	0	---	---
TOTAL	102		209	172.75	108.75		267.5
		GPM	93		45	WASTE SIZE	6"

MEDICAL GAS AREA ALARM SCHEDULE

MARK	TYPE	O2	MV	MA	N2O	N2	CO2	LOCATION
AP-1	ALARM PANEL *	1	1	1	1	1	1	WALL MOUNT ALARM PANEL - ** OR
AP-2	ALARM PANEL *	1	1	1	1	1	1	WALL MOUNT ALARM PANEL - ** OR
AP-3	ALARM PANEL *	1	1	1				WALL MOUNT ALARM PANEL - ** PACU
AP-4	ALARM PANEL *	1	1					WALL MOUNT ALARM PANEL - ** ED TREATMENT/EXAM ROOMS
AP-5	ALARM PANEL *	1	1					WALL MOUNT ALARM PANEL - ** ED LARGE TREATMENT/TREATMENT ROOMS
MAP-1	MASTER ALARM PANEL ***	---	---	1	1	1	1	WALL MOUNT ALARM PANEL - ** ENGINEERING OFFICE
MAP-2	MASTER ALARM PANEL ***	---	---	1	1	1	1	WALL MOUNT ALARM PANEL - ** NURSING STATION

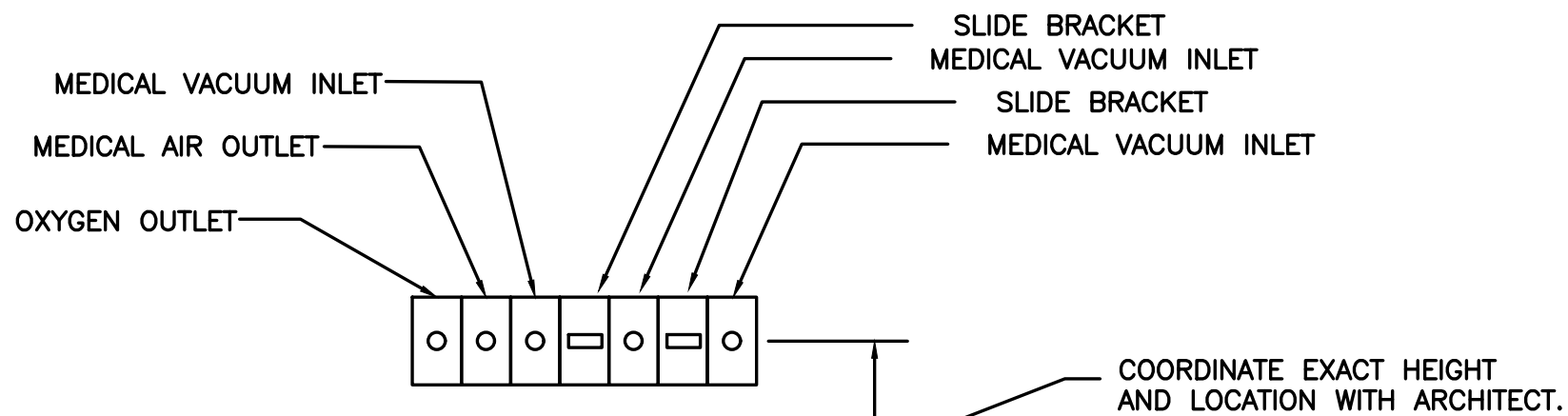
NOTE:
* ALARM TO INDICATE HIGH AND LOW GAS PRESSURES WITH AUDIBLE AND VISIBLE SIGNAL. AUDIBLE SIGNAL TO BE SILENCED AT PANEL. VISIBLE SIGNAL TO REMAIN VISIBLE UNTIL PRESSURE CONDITION HAS BEEN CORRECTED. ALARM PANEL TO ALSO SHOW GAS LINE PRESSURE.
** - ALARM PANEL TO BE WIRED TO REMOTE ELECTRONIC PRESSURE SENSORS (TRANSDUCERS) AS INDICATED ON PLAN - SEE PLAN FOR LOCATION OF PRESSURE SENSORS.
*** - MASTER ALARM SIGNALS TO INDICATE:
MA - LOW AND HIGH PRESSURE, DEW POINT HIGH, CARBON MONOXIDE ABOVE 10 PPM, SYSTEM FAULT, LAG IN USE.

MASTER ALARM PANELS GENERAL NOTES:
1. PROVIDE LABELS FOR EACH MEDICAL GAS MASTER ALARM PANEL INCLUDING TWO EXISTING ONES. THE LABEL SHALL INCLUDE THE LOCATIONS OF ALL HOSPITAL MASTER ALARM PANELS AND COVERAGE. EXISTING MASTER ALARM PANELS LOCATED IN ENGINEERING OFFICE 709 AND THE OTHER ONE WILL BE RELOCATED ON THE WEST WALL OF TREATMENT ROOM 10 #134 ACROSS OF ACTIVE CHARTING 2 #126.

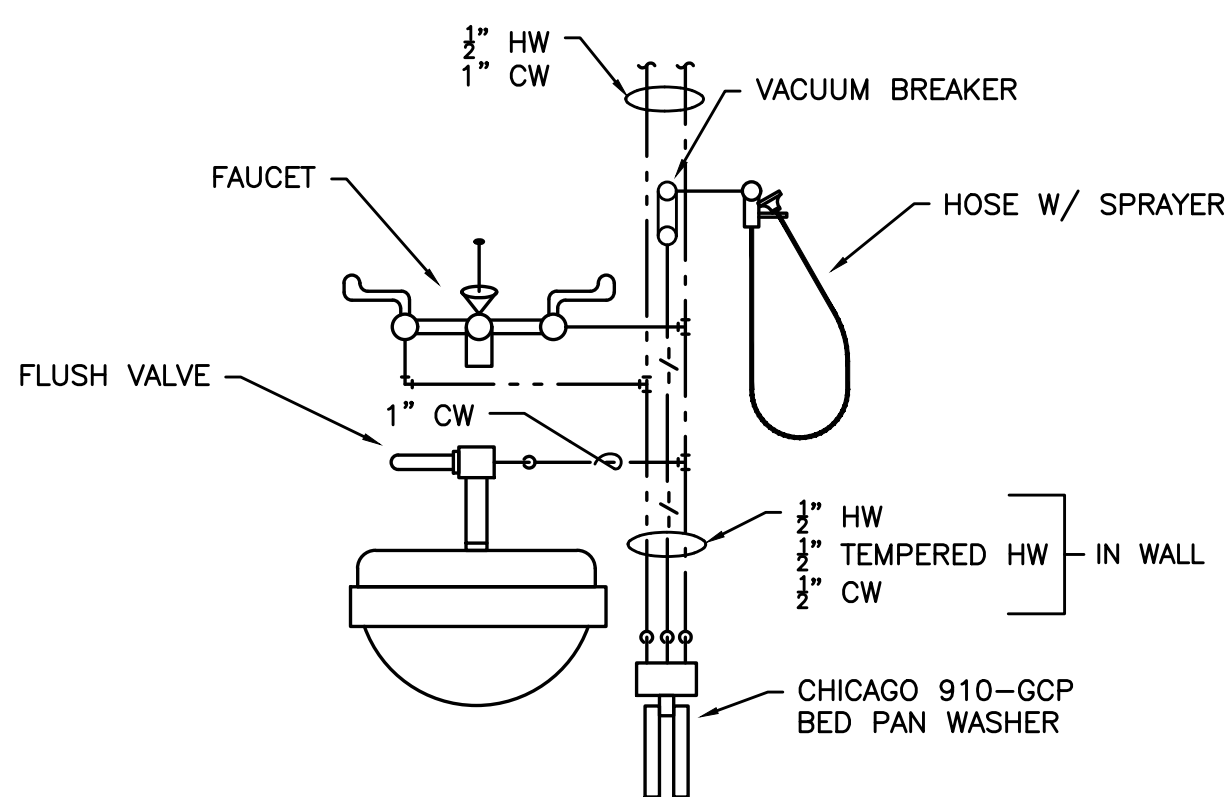
MEDICAL GAS OUTLET SCHEDULE

VALVE NO.	NUMBER, TYPE AND SIZE OF SERVICE CONNECTIONS						TYPE
	O2	MV	MA	N	N2O	CO2	
MGO-1	(2)1/2"	(2)3/4"					WALL
MGO-2	(1)1/2"	(3)3/4"	(1)1/2"				WALL
MGO-3**	(2)1/2"	(4)1/2"	(1)1/2"		(1)1/2"		ANESTHESIA BOOM EQUIPMENT BOOM
MGO-4		(2)1/2"	(1)1/2"	(1)1/2"		(1)1/2"	
MGO-5*							NOT USED
MGO-6*							NOT USED
MGO-7***	(2)1/2"	(2)3/4"					WALL
MGO-8***	(1)1/2"	(1)3/4"					WALL

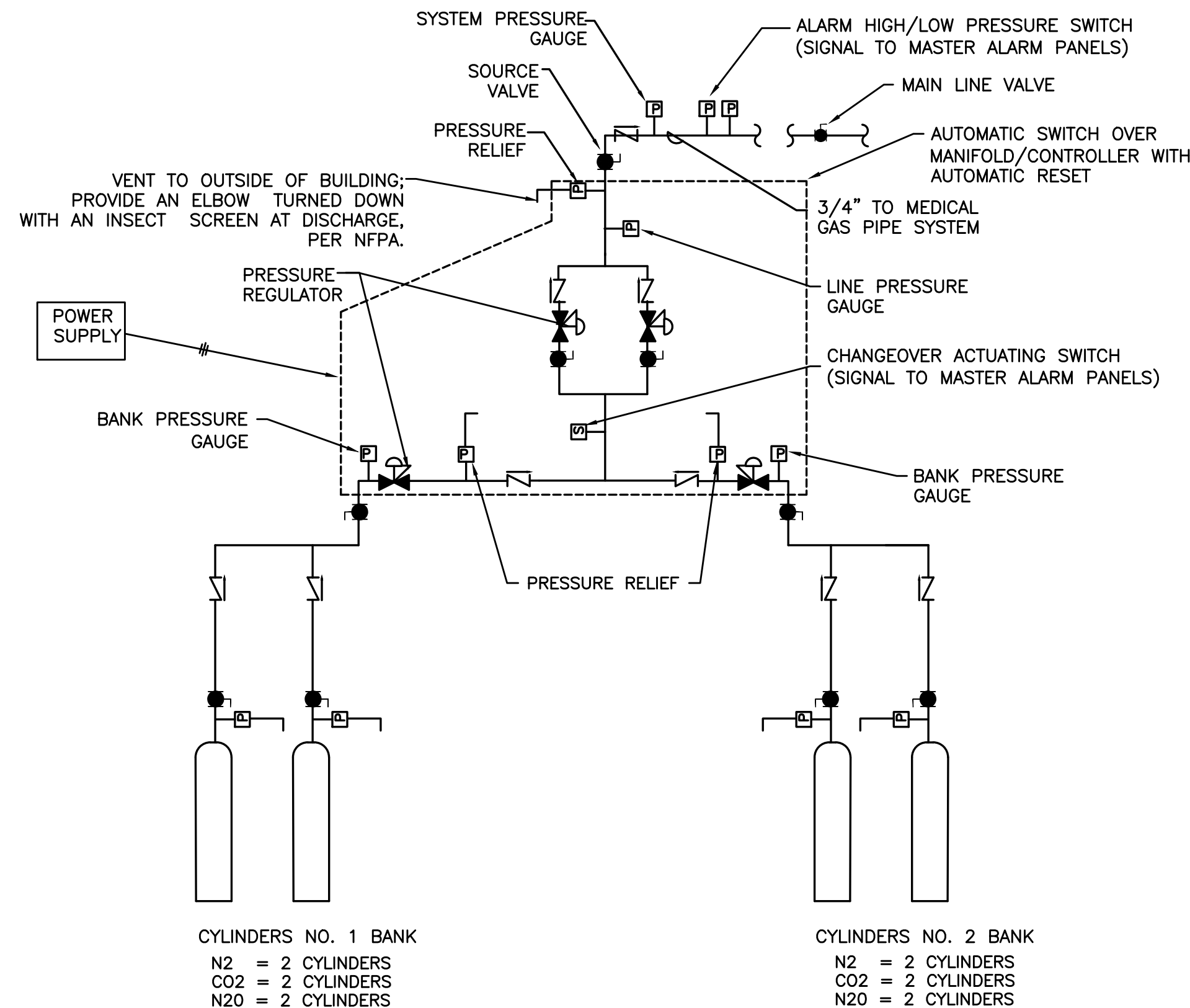
** - ONE VACUUM INLET INTENDED FOR WASTE ANESTHESIA GAS (WAGD). BRANCH OFF WAGD PIPING MIN. 6' FROM ANY VACUUM INLET.
*** - NEW MEDICAL GAS OUTLETS AND MEDICAL VACUUM INLETS (SEE SCHEDULE FOR THE QUANTITY) ADDED TO THE EXISTING MEDICAL VACUUM INLET AND OXYGEN OUTLET.



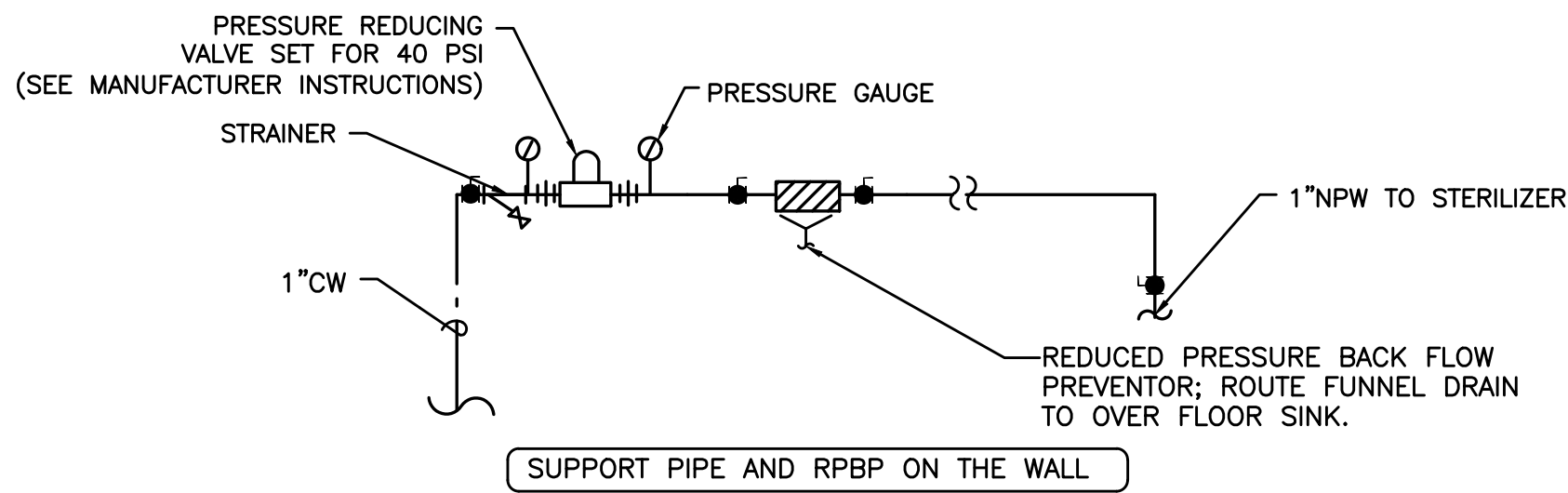
1 MEDICAL GAS WALL OUTLETS
P6.00
DETAIL



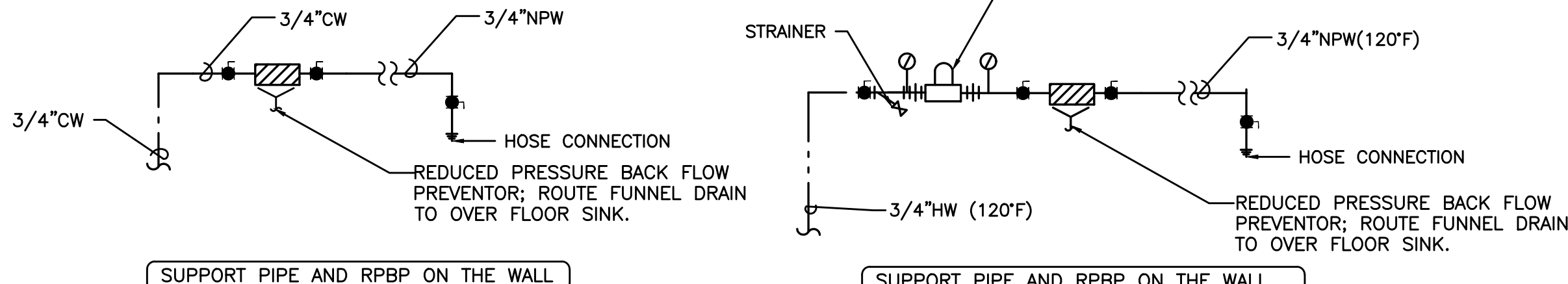
2 CLINICAL SINK CS-1
P6.00
SCALE: DETAIL



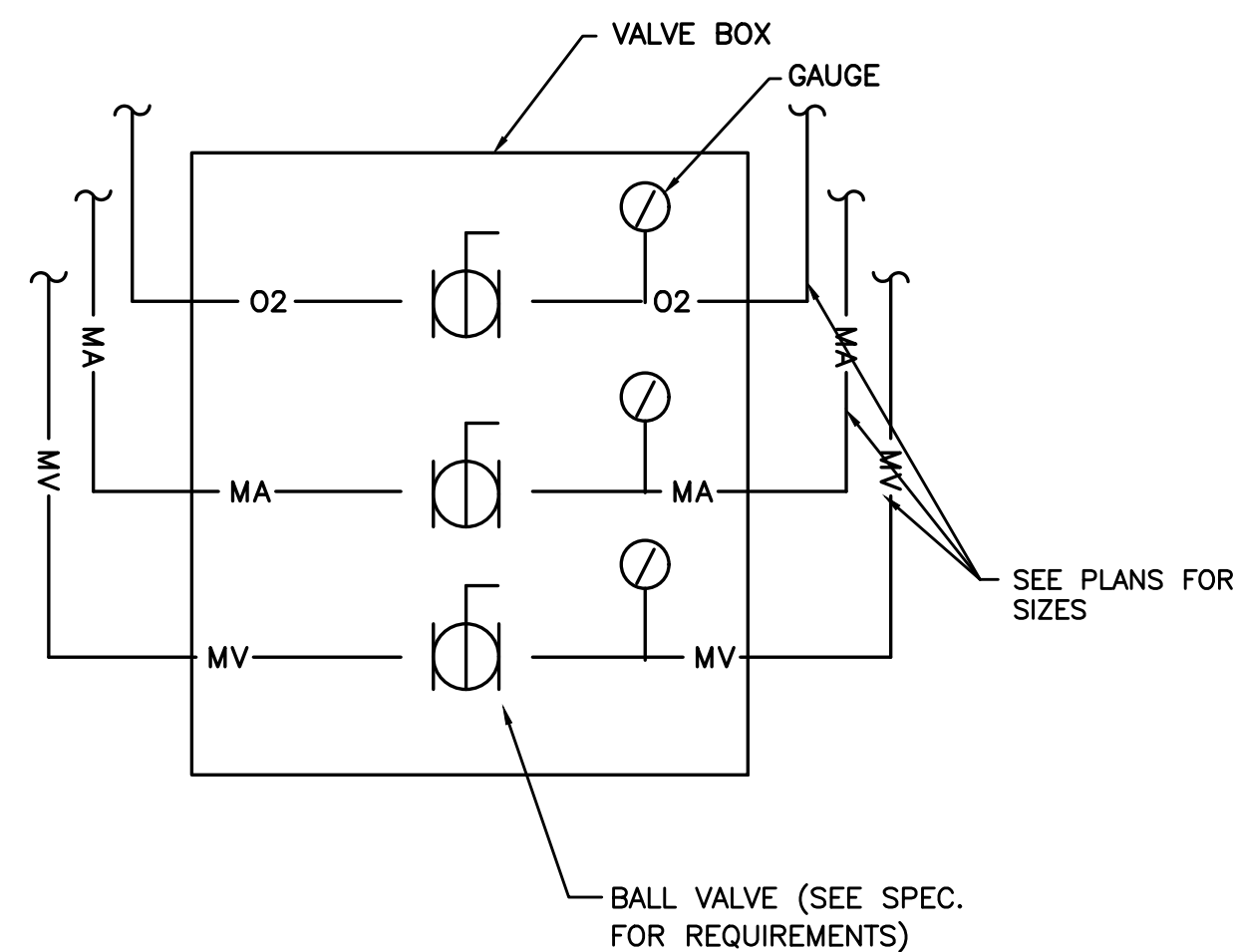
4 MEDICAL GAS SUPPLY SCHEMATIC
P6.00
SCHEMATIC



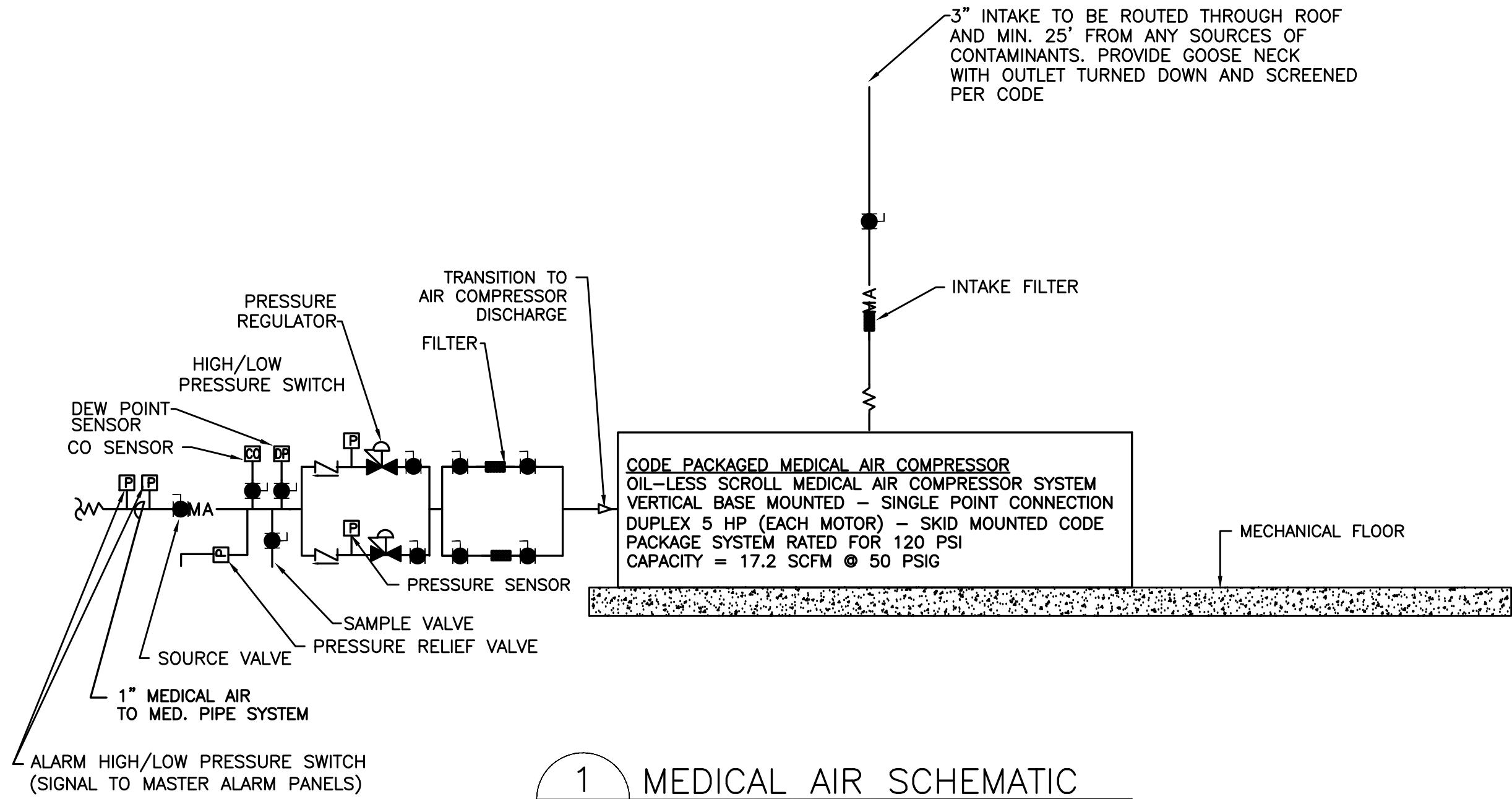
5 STERILIZER RPBP-1 DETAIL
P6.00
NTS



7 STERILIZER RPBP-3 DETAIL
P6.00
NTS

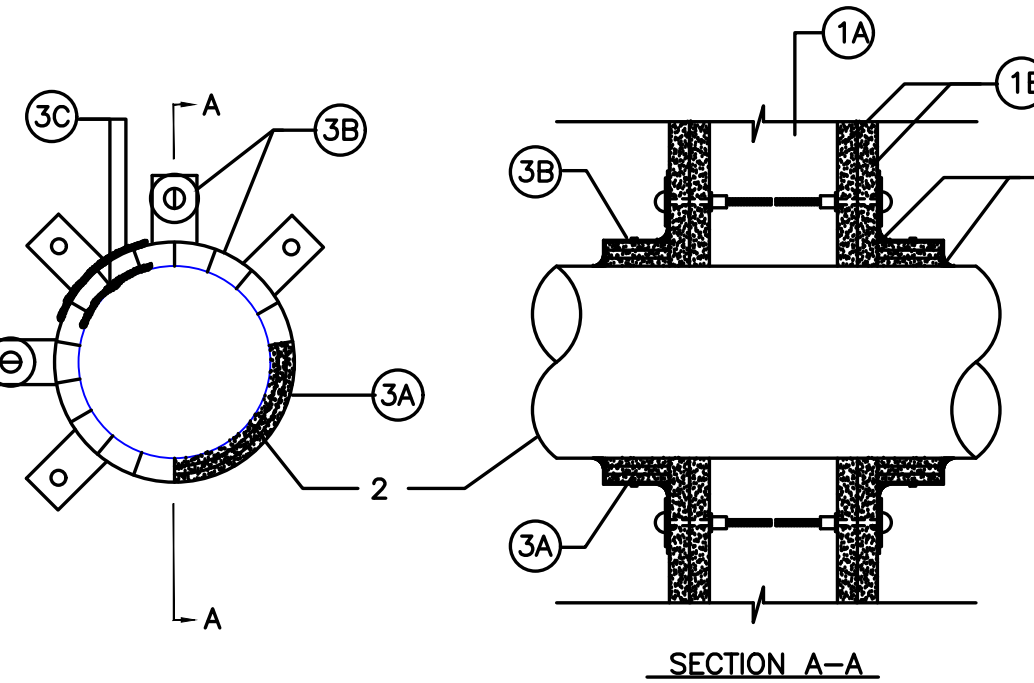


8 ZONE VALVE BOX DETAIL
P6.00
SCHEMATIC



1 MEDICAL AIR SCHEMATIC
P6.01 SCHEMATIC

SYSTEM NO. W-1-2002
(FORMERLY SYSTEM NO. 148)
F RATING - 1, 1-1/2 AND 2 HR (SEE ITEM 3)
T RATING - 3/4, 1, 1-1/2 AND 2 HR (SEE ITEM 3)
L RATING AT AMBIENT - 7 CFM / SQ. FT. (SEE ITEM 3C)
L RATING AT 400 F - 1 CFM / SQ. FT. (SEE ITEM 3C)



1. WALL ASSEMBLY - THE 1 AND 2 HR FIRE-RATED GYPSUM WALLBOARD / STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 AND U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

- A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUD OR STEEL CHANNEL STUD. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-5/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC.
- B. WALLBOARD, GYPSUM - NOM 5/8 IN. THICK, 4FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 7 IN..

2. NONMETALLIC PIPE OR CONDUIT- ONE METALLIC PIPE OR CONDUIT IS CENTERED WITHIN THE FIRE STOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. THE FOLLOWING TYPES AND SIZES OF NONMETALLIC PIPES OR CONDUIT MAY BE USED:

- A. NOM 6 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID-CORE POLYVINYL CHLORIDE (PVC) PIPE.
- B. NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 CELLULAR-CORE POLYVINYL CHLORIDE (PVC) PIPE.
- C. NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 SOLID-CORE ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PIPE.
- D. NOM 4 IN. DIAM (OR SMALLER) SCHEDULE 40 FIRE RETARDANT POLYPROPYLENE (FRPP) PIPE.
- E. NOM 4 IN. DIAM (OR SMALLER) RIGID NONMETALLIC CONDUIT FORMED OF PVC.
- F. NOM 1 IN. DIAM (OR SMALLER) ELECTRICAL NONMETALLIC TUBING FORMED OF PVC.
- G. NOM 6 IN. DIAM (OR SMALLER) SCHEDULE 40 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE.

SEE RIGID NONMETALLIC CONDUIT (CZKT) AND ELECTRICAL NONMETALLIC TUBING (FQND) CATEGORIES IN UL ELECTRICAL CONSTRUCTION MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS.

3. FIRESTOP SYSTEM- INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F AND R RATINGS FOR THE FIRESTOP SYSTEM ARE DEPENDENT UPON THE SIZE AND TYPE OF NONMETALLIC PIPE OR CONDUIT. THE PIPING SYSTEM TYPE (CLOSED SYSTEMS SUCH AS PROCESS OR SUPPLY PIPING OR VENTED SYSTEMS SUCH AS DRAIN, WASTE OR VENT PIPING) AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE.

PIPE/CONDUIT TYPE	NOM PIPE DIAM (IN.)	ANNUAL SPACE (IN.)	PIPING SYSTEM (A)	WALL FIRE RATING (HR)	F RATING (HR)	T RATING (HR)
FRPP	1/2 TO 2	0-3/16	V	2	1-1/2	1-1/2
FRPP, PB	1/2 TO 2	0-3/16	C	2	2	2
ABS	1/2 TO 4	0-3/16	C,V	2	1-1/2	1-1/2
ABS	1/2 TO 4	0-3/16	C,V	2	2	2
PVC	1/2 TO 4	0-3/16	C,V	2	2	2
FRPP++	1-1/2 TO 2	0-3/16	C,V	2	1-1/2	1-1/2
PVC+	5-6	0-3/16	C,V	2	2	2

+PIPE COVERING MATERIAL WRAP REQUIRED ON PIPE ON BOTH SIDES OF WALL.

(A) C = CLOSED SYSTEMS, V = VENTED SYSTEMS.

THE DETAILS OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:

DIAM PIPES, A MIN OF 3 LAYERS OF WRAP STRIP ARE REQUIRED. FOR NOM 3 AND 6 IN. DIAM, TWO TIERS (4 IN. OVERALL LENGTH) OF THREE LAYERS OF WRAP STRIP IS REQUIRED, WITH ADJOINING WRAP STRIP LAYER EDGES BETWEEN TIERS TIGHTLY BUTTED. EACH LAYER OF WRAP STRIP TO BE INSTALLED WITH BUTTED SEAM, WITH BUTTED SEAMS IN SUCCESSIVE LAYERS STAGGERED. WRAP STRIP LAYERS TEMPORARILY HELD IN POSITION USING ALUMINUM FOIL TAPE, STEEL WIRE TIE OR EQUIVALENT. MINNESOTA MINING AND MFG. CO. - F TYPE FS-195+

B. STEEL COLLAR- NOM 2 OR 4 IN. DEEP COLLAR WITH 1-1/4 IN. WIDE BY 2 IN. LONG ANCHOR TABS AND MIN 3/4 IN. LONG TABS TO RETAIN WRAP STRIP LAYERS. COILS OF RECT 0.016 IN. THICK (NO. 30 GAUGE) GALV SHEET STEEL AVAILABLE FROM WRAP STRIP MANUFACTURER. AS AN ALTERNATE, COLLAR MAY BE FIELD-FABRICATED FROM MIN 0.016 IN. THICK (NO. 30 GAUGE) GALV SHEET STEEL IN ACCORDANCE WITH INSTRUCTION SHEET SUPPLIED BY WRAP STRIP MANUFACTURER.

STEEL COLLAR, WITH ANCHOR TABS BENT OUTWARD 90 DEG, WRAPPED TIGHTLY AROUND WRAP STRIP LAYERS WITH MIN 1 IN. OVERLAP AT THE SEAM. WITH STEEL COLLAR ANCHOR TABS PRESSED TIGHTLY AGAINST WALL SURFACE, COMPRESS COLLAR AROUND WRAP STRIP LAYERS USING A MINIMUM 1/2 IN. WIDE BY 0.009 IN. THICK STAINLESS STEEL BAND CLAMP WITH WORM DRIVE TIGHTENING MECHANISM AT THE COLLAR MIDHEIGHT. AS AN ALTERNATE TO THE STAINLESS STEEL BAND CLAMP, THE STEEL COLLAR MAY BE COMPRESSED AROUND NOM 4 IN. DIAM (OR SMALLER) NONMETALLIC PIPES USING TWO MIN 16 SWG (0.0625 IN. DIAM) STEEL WIRES SECURED WITH MULTIPLE TWISTS. SECURE COLLAR TO WALL SURFACE WITH 3/16 IN. DIAM STEEL TOGGLE BOLTS (5/8 IN. OR 1-1/4 IN. GRIP) IN CONJUNCTION WITH MIN 1-1/2 IN. DIAM STEEL WASHERS. THREE BOLTS, SYMMETRICALLY LOCATED, REQUIRED FOR 2 IN. DEEP STEEL COLLAR FOR NOM 1/2 IN. TO NOM 3 IN. DIAM PIPES. FOUR BOLTS, SYMMETRICALLY LOCATED, REQUIRED FOR 2 IN. DEEP STEEL COLLAR FOR NOM 3-1/2 AND 4 IN. DIAM PIPES. FIVE TO SEVEN BOLTS (EVERY OTHER ANCHOR TAB) REQUIRED FOR 4 IN. DEEP STEEL COLLAR FOR NOM 5 AND 6 IN. DIAM PIPES. AS A FINAL STEP, BEND RETAINER TABS 90 DEG TOWARD PIPE TO LOCK WRAP STRIP LAYERS IN POSITION.

C. FILL, VOID OR CAVITY MATERIALS- CAULK OR PUTTY - GENEROUS BEAD OF CAULK APPLIED TO OUTER PERIMETER OF PIPE OR CONDUIT AT ITS EDGES FROM THE WRAP STRIP LAYERS.

MINNESOTA MINING & MFG. CO. - CP 25W+ CAULK AND MPS-+ PUTTY (NOTE: L RATINGS APPLY ONLY WHEN TYPE CP-25 W+ CAULK IS USED.)

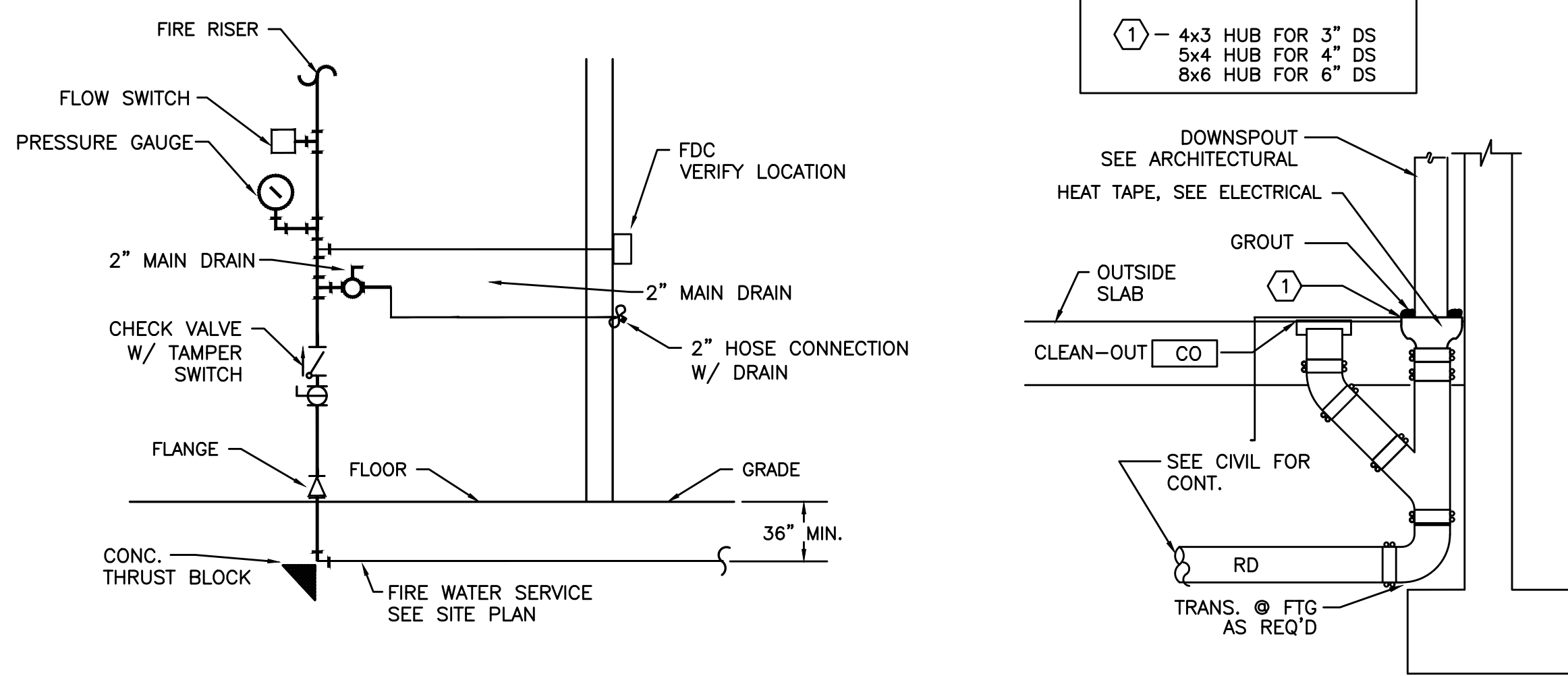
D. PIPE COVERING- (NOT SHOWN) - NOM 1 IN. THICK HOLLOW CYLINDRICAL, HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS JACKED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. WHEN REQUIRED (SEE TABLE), MIN 6 IN. LENGTH OF PIPE COVERING INSTALLED AROUND PVC PIPE AT ITS EGRESS FROM STEEL COLLAR ON BOTH SIDES OF WALL. PIPE COVERING SECURED TO PIPE WITH STEEL WIRE TIES SPACED MAX 4 IN. OC. EDGE OF PIPE COVERING ABUTTING STEEL COLLAR TO BE SEALED WITH A MINIMUM 1/4 IN. DIAM BEAD OF CAULK (ITEM C)

SEE PIPE AND EQUIPMENT COVERING - MATERIALS (BROU) CATEGORY IN BUILDING MATERIALS DIRECTORY FOR NAMES OF MANUFACTURERS. ANY PIPE COVERING MATERIAL MEETING THE ABOVE SPECIFICATIONS AND BEARING THE UL CLASSIFICATION MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

E. FIRESTOP DEVICE- (NOT SHOWN) - AS AN ALTERNATE TO ITEMS A, B AND C FOR NOM 1-1/2, 2, 3, OR 4 IN. DIAM NONMETALLIC PIPES, A FIRESTOP DEVICE CONSISTING OF SHEET-STEEL SPLIT COLLAR LINED WITH INTUMESCENT MATERIAL AND PROVIDED WITH STEEL CLIPS FOR ATTACHMENT MAY BE USED. FIRESTOP DEVICE TO BE INSTALLED ON BOTH SIDES OF WALL IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS.

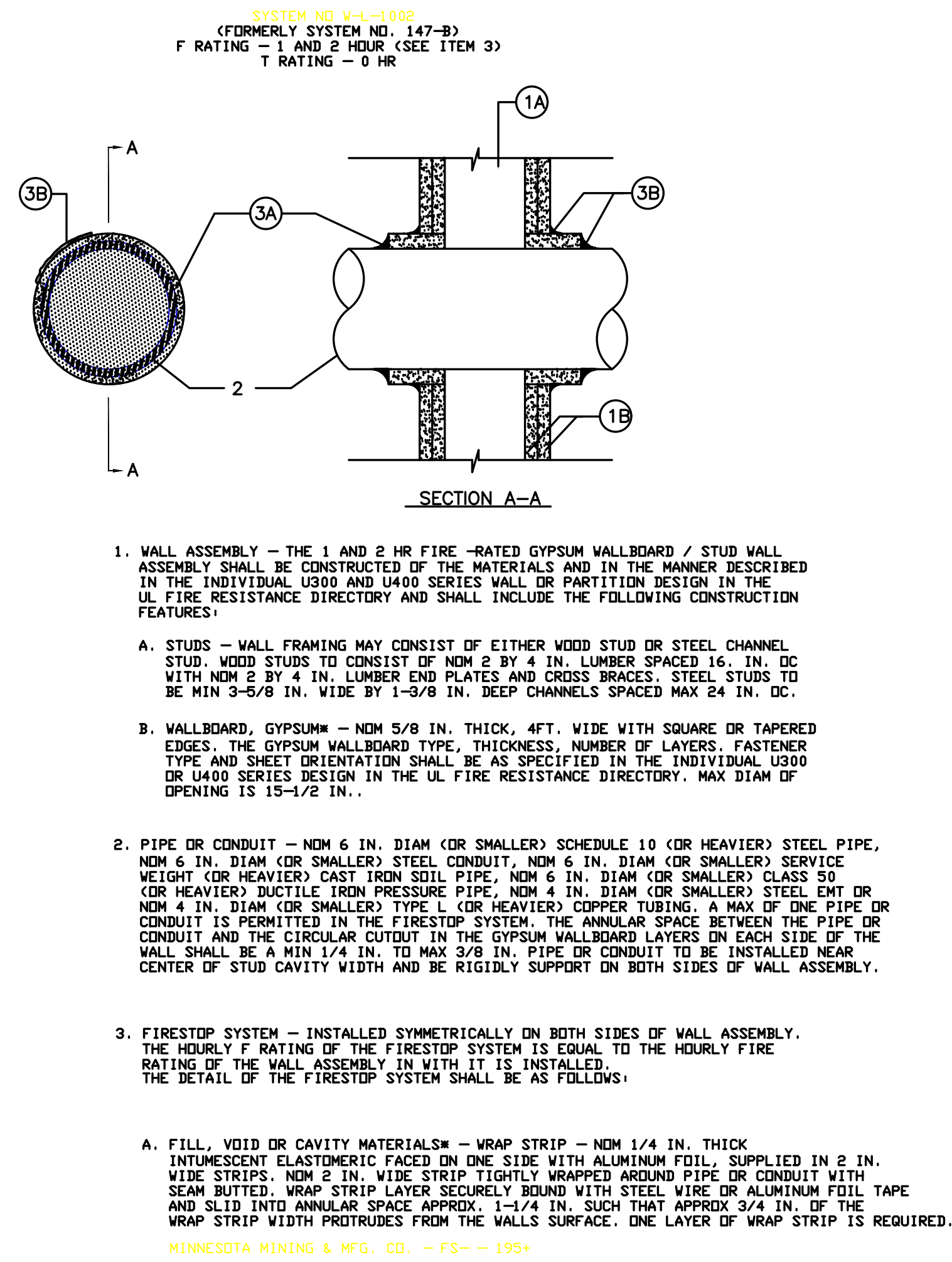
MINNESOTA MINING & MFG. CO. - F TYPES PPD 150, PPD 200, PPD 300, PPD 400

+BEARING THE UL CLASSIFICATION MARKING.



4 TYPICAL FIRE RISERS DETAIL
P6.01 NTS

5 DOWN SPOUT DETAIL
P6.01 SCALE: DETAIL



1. WALL ASSEMBLY - THE 1 AND 2 HR FIRE-RATED GYPSUM WALLBOARD / STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 AND U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

- A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUD OR STEEL CHANNEL STUD. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. OC WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-5/8 IN. DEEP CHANNELS SPACED MAX 24 IN. OC.
- B. WALLBOARD, GYPSUM - NOM 5/8 IN. THICK, 4FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 15-1/2 IN..

2. PIPE OR CONDUIT - NOM 6 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 6 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST-IRON SOIL PIPE, NOM 6 IN. DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 4 IN. DIAM (OR SMALLER) STEEL EMT OR NOM 4 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE PIPE OR CONDUIT AND THE CIRCULAR CUTOUT IN THE GYPSUM WALLBOARD LAYERS ON EACH SIDE OF THE WALL SHALL BE A MIN 1/4 IN. TO MAX 3/8 IN. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND BE RIGIDLY SUPPORT ON BOTH SIDES OF WALL ASSEMBLY.

3. FIRESTOP SYSTEM - INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED. THE DETAIL OF THE FIRESTOP SYSTEM SHALL BE AS FOLLOWS:

A. FILL, VOID OR CAVITY MATERIALS- WRAP STRIP - NOM 1/4 IN. THICK INTUMESCENT ELASTOMERIC FACED ON ONE SIDE WITH ALUMINUM FOIL, SUPPLIED IN 2 IN. WIDE STRIPS. NOM 2 IN. WIDE STRIP TIGHTLY WRAPPED AROUND PIPE OR CONDUIT WITH SEAM BUTTED. WRAP STRIP LAYER SECURELY BOUND WITH STEEL WIRE OR ALUMINUM FOIL TAPE AND SLD INTO ANNULAR SPACE APPROX. 1-1/4 IN. SUCH THAT APPROX 3/4 IN. OF THE WRAP STRIP WIDTH PROTRUDES FROM THE WALLS SURFACE. ONE LAYER OF WRAP STRIP IS REQUIRED. MINNESOTA MINING & MFG. CO. - FS- - 195+

B. FILL, VOID OR CAVITY MATERIALS- CAULK - MIN 1/4 IN. DIAM CONTINUOUS BEAD APPLIED TO THE WRAP STRIP / WALL, INTERFACE AND TO THE EXPOSED EDGE OF THE WRAP STRIP LAYER APPROX. 3/4 IN. FROM THE WALL SURFACE.

MINNESOTA MINING & MFG. CO. - CP 25W+ CAULK, MPS-2+ PUTTY

+ BEARING THE UL CLASSIFICATION MARKING

3 FIRE STOP DETAIL METTALLIC PIPE OR CONDUIT
P6.01 NONE

2 FIRE STOP DETAIL NON-METTALLIC PIPE OR CONDUIT
P6.01 P6.01



ISSUE DATE: 06.05.2015

REVISIONS:

△ SAME DAY REV. 10-5-15

△ ASI #7 2-25-16