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LEGEND

NOTE:
 LIGHT LINEWEIGHT SYMBOLS INDICATE EXISTING DEVICES, EQUIPMENT, PIPING, ETC. TO REMAIN. HEAVY LINEWEIGHT SYMBOLS INDICATES NEW DEVICES, EQUIPMENT, TO BE PROVIDED AND OR INSTALLED. HEAVY & DASHED LINEWEIGHT SYMBOLS INDICATE DEVICES, EQUIPMENT, PIPING, ETC. TO BE REMOVED.

- D— CONDENSATE DRAIN PIPING
- Z— CHECK VALVE
- A— STRAINER WITH BLOWDOWN VALVE
- G— PRESSURE GAUGE SHUT-OFF COCK
- R— REDUCING FITTING
- V— RELIEF VALVE
- P— PRESSURE REDUCING VALVE
- B— BACKFLOW PREVENTER
- T— THERMOMETER
- WP— SANITARY SEWER OR WASTE PIPE (WP)
- VP— SANITARY VENT PIPE (VP)
- CW— DOMESTIC COLD WATER (CW)
- HW— DOMESTIC HOT WATER (HW)
- POINT OF CONNECTION
- B— BALL VALVE
- B— BACKFLOW PREVENTER
- +— EXTERIOR WALL HYDRANT
- FD— FLOOR DRAIN (FD)
- FCO— FLOOR CLEANOUT (FCO)
- VTR— VENT THRU ROOF
- Ⓐ WATER RISER DESIGNATION
- Ⓐ WASTE RISER DESIGNATION

ABBREVIATIONS

- APPROX APPROXIMATELY
- DET-1 DIAPHRAGM EXPANSION TANK
- EA EACH
- EXIST EXISTING
- FD FLOOR DRAIN
- GAL GALLON
- GPM GALLONS PER MINUTE
- PSIG POUNDS PER SQUARE INCH GAGE
- SV SOLENOID VALVE
- W WATTS
- GWH-1 GAS FIRED WATER HEATER
- 208V/3φ/60HZ VOLTS/PHASE/HERTZ
- VTR VENT THRU ROOF
- WHA WATER HAMMER ARRESTOR

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	DETAIL	MOUNTING	PIPE SIZE			REMARKS
				CW	HW	W	
P-1	WALL HUNG WATER CLOSET	FLUSH VALVE 1.28 GPF. (HANDICAP)	WALL	1"	-	4"	①
P-2	COUNTER TOP LAVATORY	STAINLESS STEEL RIM, AT 0.5 GPM.	COUNTER TOP	1/2"	1/2"	1 1/2"	
P-3	SHOWER	1.5 GALLONS PER MINUTE.	WALL	1/2"	1/2"	2"	
P-4	DRINKING WATER COOLER	SELF CONTAINED. ELECTRIC, REFRIGERATED. (HANDICAP)	WALL	1/2"	-	1 1/2"	②
P-5	URINAL	0.125 GPF	WALL	3/4"	-	2"	
P-6	COUNTER TOP LAVATORY	WHITE VITREOUS CHINA AT 0.5 GPM.	COUNTER TOP	1/2"	1/2"	1 1/2"	
P-7	ICE MACHINE OUTLET BOX	1/4 TURN VALVE- 1/2" SWEAT WITH WATER HAMMER ARRESTER	WALL	1/2"	-	-	③
P-8	FLOOR DRAIN	FLOOR DRAIN WITH 5" ROUND STRAINER.	FLOOR	-	-	3"	

NOTES:

- ① PROVIDE CARRIER FOR WALL MOUNT APPLICATION.
- ② WATER COOLER SHALL USE HFC REFRIGERANTS.
- ③ PROVIDE IN PLASTIC BOX WITH 1/4 TURN ISOLATION VALVE. VALVE SHALL MEET AB1953.

EQUIPMENT LIST

GWH-1
 PROVIDE 74 GALLON PROPANE WATER HEATER. HEATER SHALL BE SIZED TO RECOVER 38 GPH WITH AN 81 DEG F TEMPERATURE RISE. GWH-1 SHALL PROVIDE REQUIRED SUPPLY OF 140°F TO BE MIXED DOWN TO 110°F. PROVIDE THERMOSTATIC, PRESSURE-BALANCED, OR COMBINATION THERMOSTATIC AND PRESSURE-BALANCED TYPE MIXING VALVES TO OBTAIN ABOVE WATER TEMPERATURE. PROVIDE WITH POWER VENT THAT IS FACTORY MOUNTED AND PRE-WIRED.

BFP-1
 PROVIDE REDUCED PRESSURE ZONE BACKFLOW PREVENTER. BFP-1 SHALL BE 2" NOMINAL WITH A PRESSURE DROP OF 13 PSI AT 57 GPM. TYPICAL MAXIMUM VELOCITY FOR THIS DEVICE SHALL BE 7.5 FPS. SEE "BACKFLOW PREVENTION ASSEMBLY DETAIL" A2/P-001.

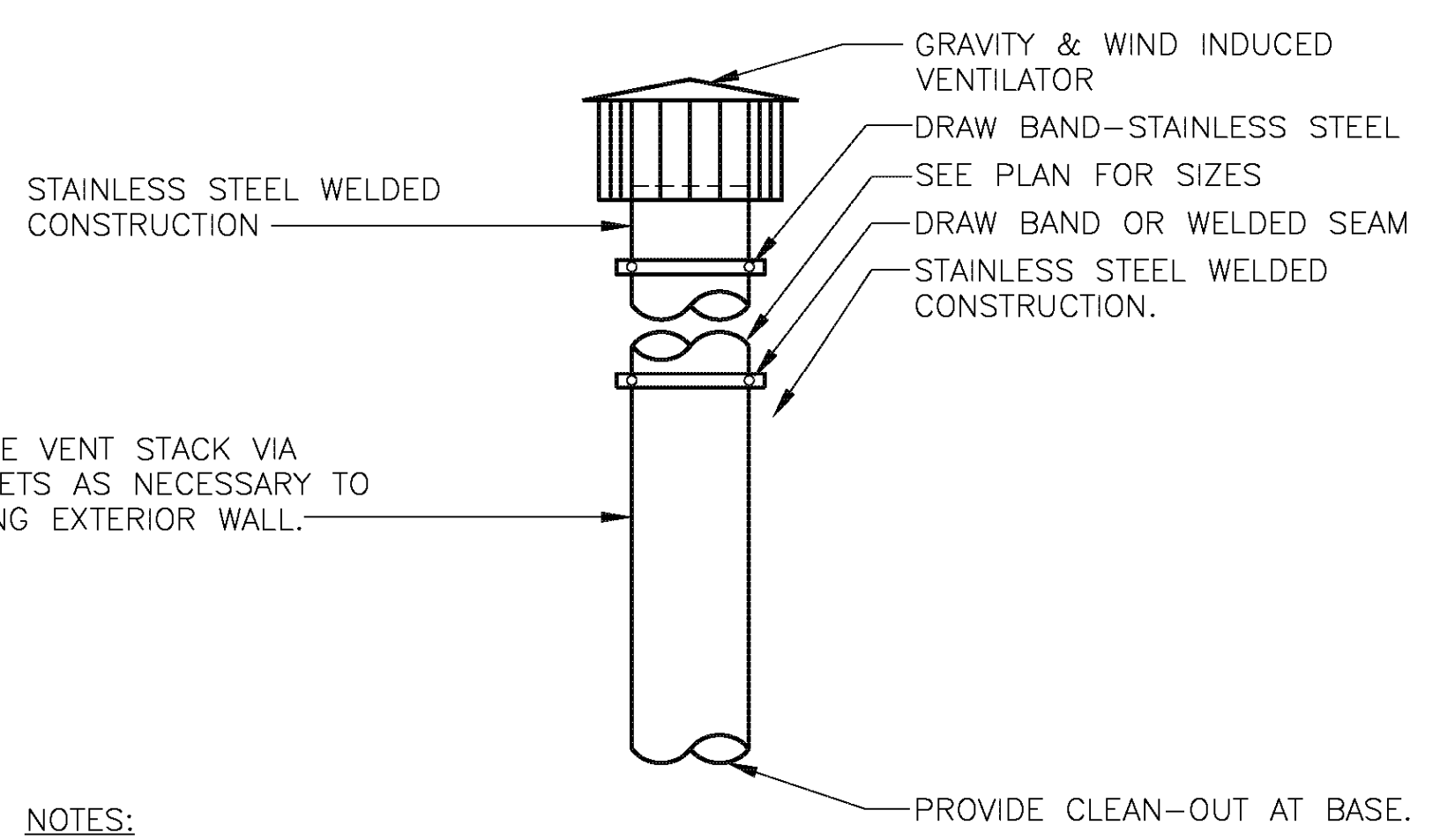
BFP-2
 PROVIDE REDUCED PRESSURE ZONE BACKFLOW PREVENTER. BFP-2 SHALL BE 3/4" NOMINAL WITH A PRESSURE DROP OF 13 PSI AT 13 GPM. TYPICAL MAXIMUM FLOW RATE FOR THIS DEVICE SHALL BE 7.5 FPS. SEE "BACKFLOW PREVENTION ASSEMBLY DETAIL" A2/P-001.

DET-1
 PROVIDE DIAPHRAGM TYPE EXPANSION TANK FOR POTABLE WATER SYSTEMS WITH A TANK SIZE OF 4.4 GALLONS AND 3.2 GALLONS OF ACCEPTANCE, MAXIMUM WORKING PRESSURE OF 100 PSIG AND MAXIMUM OPERATING TEMPERATURE OF 240 DEGREES FAHRENHEIT.

WHA-1
 PROVIDE 1/2" FACTORY CHARGED COMMERCIAL PISTON TYPE WATER ARRESTOR. DESIGNED FOR MAX OPERATING PRESSURE OF 150 PSI AND MAX TEMPERATURE RANGE OF 30-180 DEG F.

TG-1
 MECHANICAL ROOM G-178 FLOOR SHALL BE PROTECTED BY USE OF A TRAP GUARD. THE TRAP GUARD SHALL SIT WATERTIGHT INSIDE THE DRAIN AND STAYS OPEN WHEN WATER IS FLOWING BUT CLOSSES WHEN THE WATER STOPS. WHEN THE TRAP GUARD IS CLOSED, TRAP GUARD SUCCESSFULLY RESISTS ANY EMISSION OF SEWER GAS, EVEN IF THAT GAS IS UNDER SIGNIFICANT PRESSURE. IT USES A FLEXIBLE TUBE MADE OF AN ELASTOMERIC TM MATERIAL THAT IS TREATED TO ROLL UP WHEN WATER IS NOT PASSING. TRAP GUARD IS FLEXIBLE ENOUGH TO PERMIT WATER FLOW, FROM AN INTERMITTENT DRIP TO FIRE-HOSE TYPE FLOWS.

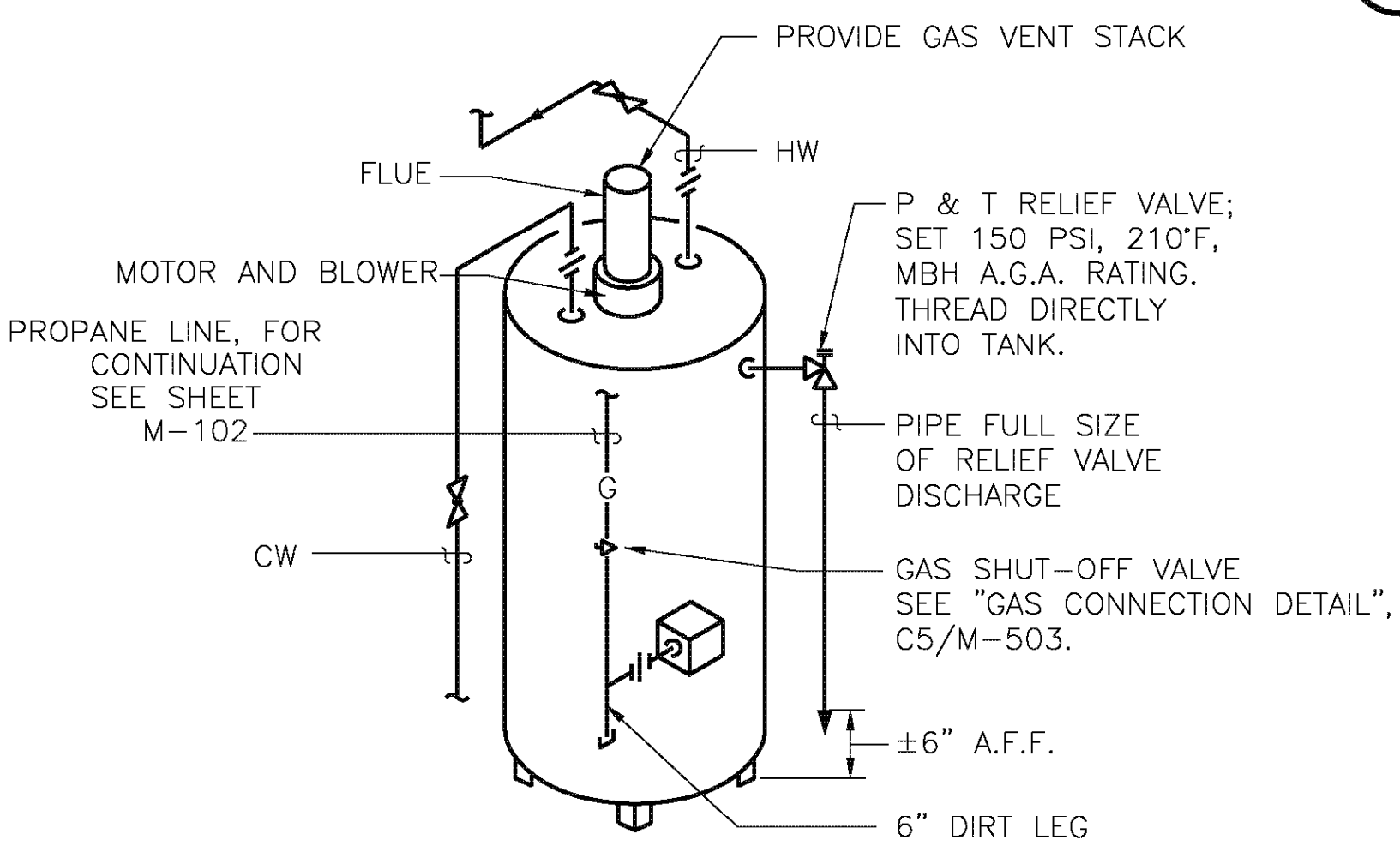
POSITIVE DISPLACEMENT WATER METER AND REMOTE READER
 WATER METER SHALL BE POSITIVE DISPLACEMENT TYPE CONFORMING TO AWWA C700 AND SHALL BE CONNECTED TO THE DDC CONTROL SYSTEM TO BE MONITORED REMOTELY.



NOTES:
 1. PROVIDE FOR GWH-1. INSTALL BOILER STACK PER MANUFACTURER'S RECOMMENDATIONS.

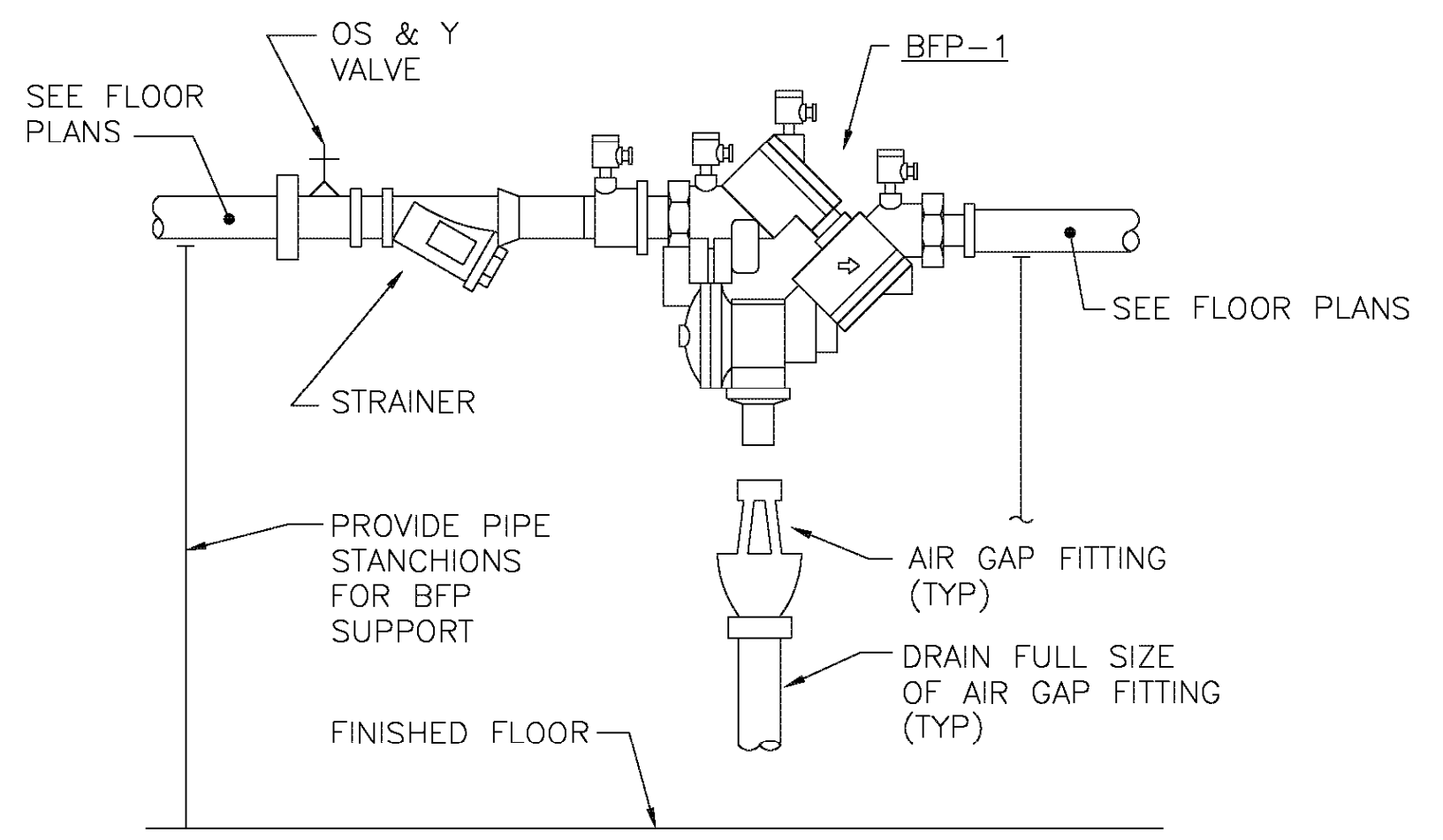
GAS VENT STACK DETAIL

NO SCALE P-101 B4



GAS-FIRED WATER HEATER DETAIL

NO SCALE P-101 A4



BACKFLOW PREVENTION ASSEMBLY DETAIL

NO SCALE P-001, P-101 A2

APPR DATE DESCRIPTION SWM

APPROVED FOR COMMANDER MWFAC

SATISFACTORY TO DATE

DES CML DRW KLB CHK SGR

BRANCH MANAGER PRW

CHIEF ENG/ARCH

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC NORFOLK, VA

DEPARTMENT OF THE NAVY

MARINE CORPS BASE CAMP LEJEUNE, NC

MARSOC COMPLEX - BUILDING RR440

HM2 CHARLES "LUKE" MILAM AID STATION

LEGEND ABBREVIATIONS DETAILS AND SCHEDULES

SCALE: AS NOTED

EPROJECT NO. 1132806

CONSTR. CONTR. NO.

NAVFAC DRAWING NO. 12605643

SHEET 44 OF 74

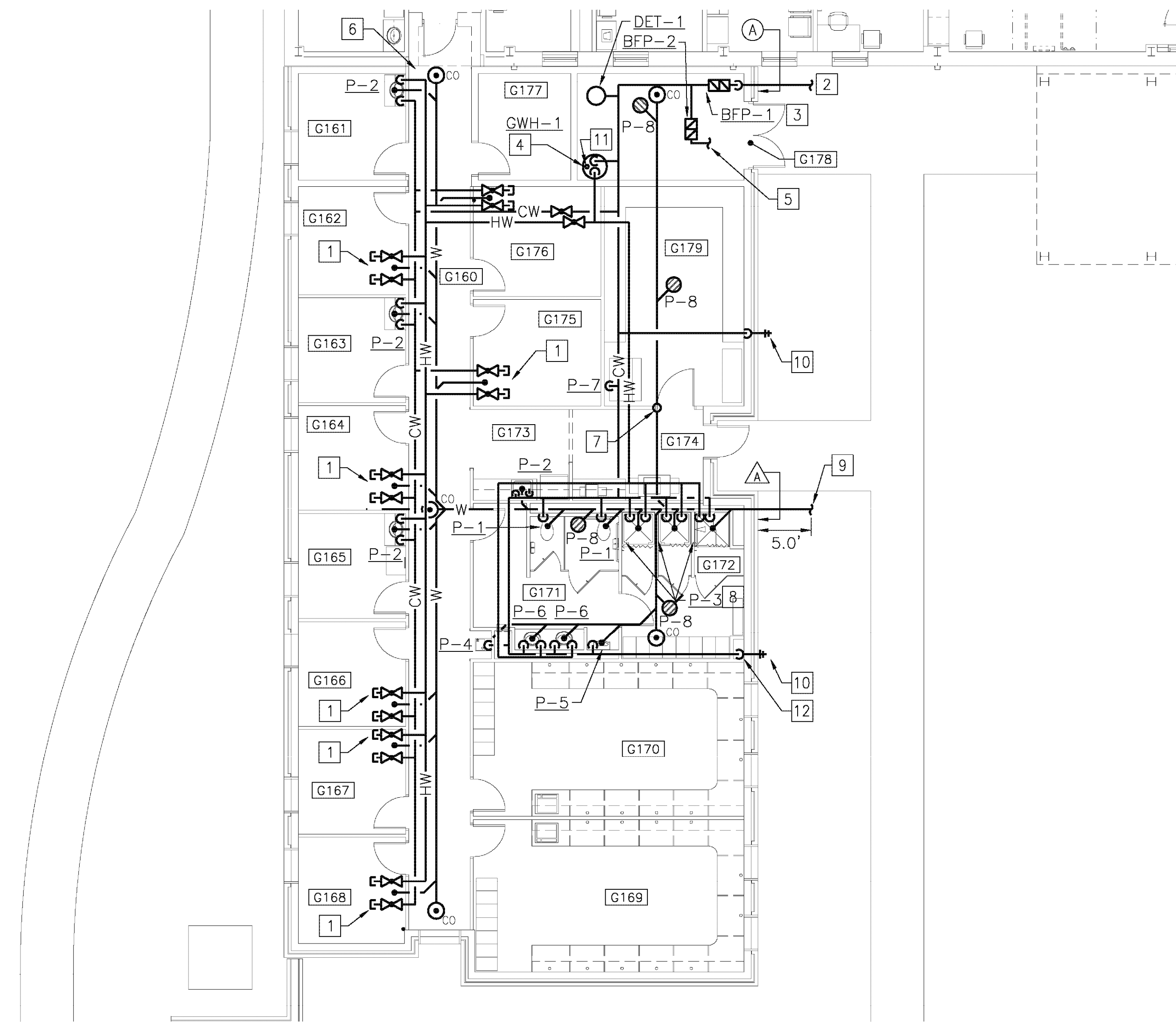
P-001

DRAWN/REVISED: 6 AUG 2007

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1 2 3 4 5

D
C
B
A



GENERAL NOTES (THIS SHEET ONLY)

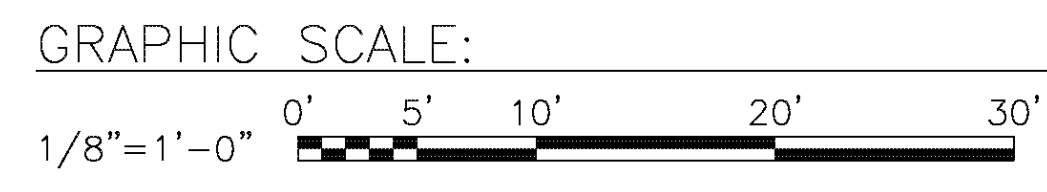
1. FOR FUTURE SANITARY CONNECTIONS IN ROOM G162, G164, G166, G167, G168, G175, AND G176 CAP SANITARY PIPING IN WALL. PROVIDE CLEANOUT COVER ON WALL ADJACENT TO CAPPED PIPING.

CONSTRUCTION NOTES (THIS SHEET ONLY)

- 1 PROVIDE BALL VALVES FOR FUTURE EXPANSION TO OFFICE LAVATORIES.
- 2 WATER PIPE SIZES ARE BASED ON A MAXIMUM RESIDUAL PRESSURE OF 74 PSI AND A VOLUMETRIC FLOW RATE OF 1460 GPM. PROVIDE WATER METER AND TIE INTO DDC CONTROL SYSTEM.
- 3 SEE "BACKFLOW PREVENTION ASSEMBLY DETAIL", SHEET A2/P-001.
- 4 SEE "GAS FIRED WATER HEATER", SHEET A4/P-001.
- 5 PROVIDE 3/4" MAKE UP WATER CONNECTION FOR BUILDING HOT WATER SYSTEM. SEE SHEET M-401 AND M-301 FOR MORE INFORMATION.
- 6 REMOVE EXISTING EXTERIOR HOSE BIBB. CAP DOMESTIC COLD WATER PIPING.
- 7 LOCATE FLOOR DRAIN IN ROOM G179 LESS THAN OR EQUAL TO 12' FROM VENT LINE.
- 8 PROVIDE INDIVIDUAL SHOWER COMBINATION BALANCED PRESSURE VALVES. VALVES SHALL HAVE MEANS TO LIMIT THE MAXIMUM SETTING OF THE VALVE TO 110 DEG F. FIELD ADJUST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 9 ROUTE SANITARY PIPING ON EAST SIDE OF BUILDING. INVERT -4.0' BELOW FINISHED FLOW. (ELEVATION 46.81')
- 10 PROVIDE 1/2" EXTERIOR HOSE BIBB. PROVIDE ATMOSPHERIC TYPE VACUUM BREAKER. CRITICAL LEVEL OF VACUUM BREAKER SHALL BE SET A MINIMUM 6" ABOVE HOSE BIBB. PROVIDE HOSE BIBB WITH BOX.
- 11 ROUTE 4" FLUE UP THROUGH ROOF. SEE "GAS VENT STACK DETAIL", B4/P-001.
- 12 PROVIDE WHA-1 IN CHASE WALL. PROVIDE ACCESS DOOR.

FLOOR PLAN
SCALE: 1/8" = 1'-0"

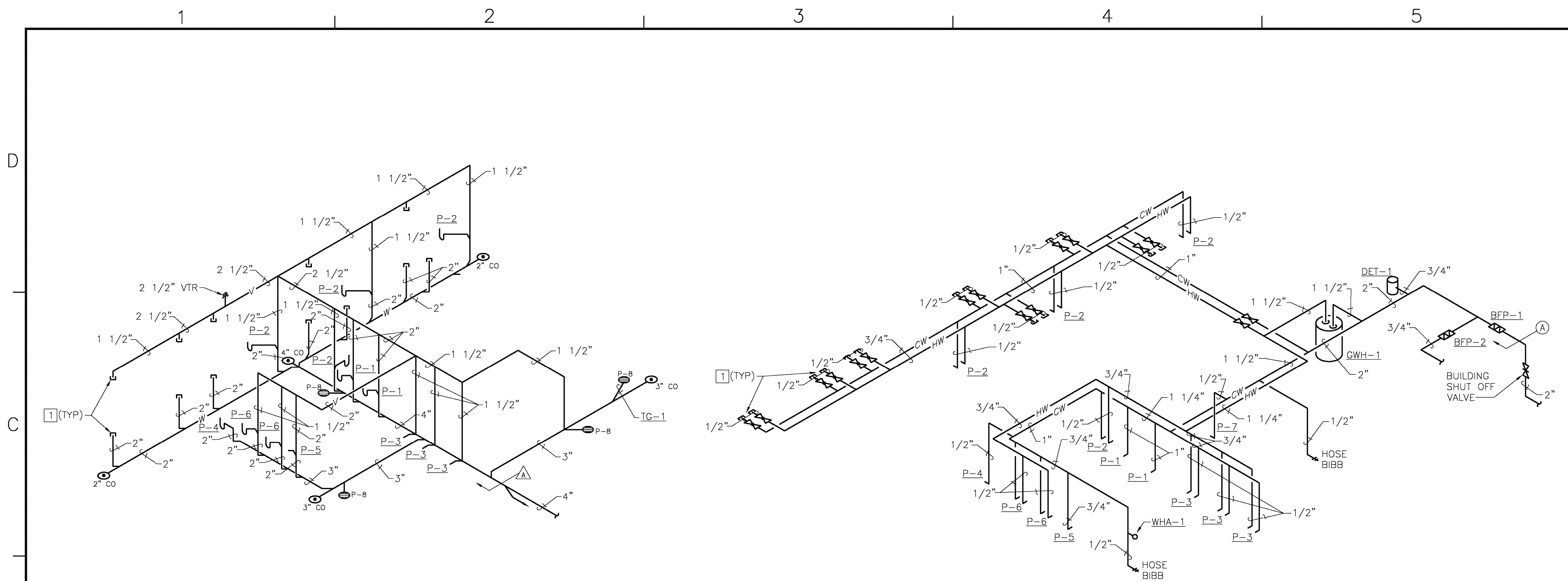
NOTE: IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE MUST BE USED.



BOWMAN, FOSTER & ASSOC.
CONSULTING ENGINEERS
#4 INTERSTATE CORP. CENTER
NORFOLK, VA 23502
2424 26th ROAD SOUTH
ARLINGTON, VA 22206

APPROVED	DATE	APPR
FOR COMMANDER MWFAC		
ACTIVITY		DESCRIPTION
SATISFACTORY TO	DATE	SW
DES CML	DRW KLB	CHK SGR
<<PM/DM>>		
BRANCH MANAGER		
CHIEF ENG/ARCH		
<<XXX>>		
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	
NAVAL FACILITIES ENGINEERING COMMAND	~ MID-ATLANTIC	
NAVAL STATION	NORFOLK, VA	
MARINE CORPS BASE	CAMP LEJEUNE, NC	
MARSOC COMPLEX - BUILDING RR440		
HM2 CHARLES "LUKE" MILAM AID STATION		
FLOOR PLAN - PLUMBING		
SCALE:	AS NOTED	
PROJECT NO.	1132806	
CONSTR. CONTR. NO.		
NAVAFAC DRAWING NO.	12605644	
SHEET	45	OF 74
P-101		
DRAWING REVISION: 6 AUG 2007		

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DWV RISER DIAGRAM

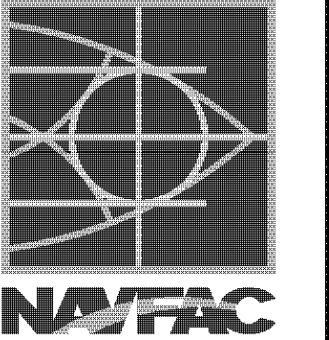
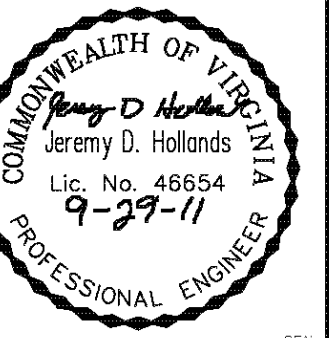


NO SCALE

DOMESTIC WATER RISER DIAGRAM

NO SCALE

CONSTRUCTION NOTES (THIS SHEET ONLY)

- 1 CAP FOR FUTURE USE.

APPROVED	DATE	DESCRIPTION	SYMBOL
  			
APPROVED FOR COMMANDER NAVFAC ACTIVITY SATISFACTORY TO DATE DES: CML DRW: KLB CHK: SGR <<PM/DM>> BRANCH MANAGER CHIEF ENG/ARCH <<XXX>>			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC NAVAL STATION MARINE CORPS BASE MARSOC COMPLEX - BUILDING RR440 HM2 CHARLES "LUKE" MILAM AID STATION WATER AND WASTE RISER			
 BOWMAN, FOSTER & ASSOC. CONSULTING ENGINEERS #4 INTERSTATE CORP. CENTER NORFOLK, VA 23502 2424 26TH ROAD SOUTH ARLINGTON, VA 22206		SCALE: AS NOTED EPROJECT NO. 1132806 CONSTR. CONTR. NO. NAVFAC DRAWING NO. 12605645 SHEET 46 OF 74 P-301 <small>DRAWING REVISION: 6 AUG 2007</small>	