

SYSTEM DESIGNATOR

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
MAIN POWER CYCLE AND AUXILIARIES			
AB	MAIN STEAM	1	3
AC	MAIN TURBINE	1	4
AD	CONDENSATE	1	6
AE	FEEDWATER	1	2
AF	FEEDWATER HEATER EXTRACTION, DRAINS & VENTS	3	4
AK	CONDENSATE DEMINERALIZER	1	3
AL	AUXILIARY FEEDWATER	1	1
AN	DEMINERALIZED WATER STORAGE & TRANSFER	1	1
AP	CONDENSATE STORAGE AND TRANSFER	1	1
AQ	CONDENSATE AND FEEDWATER CHEMICAL ADDITION	2	2

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
REACTOR AND STEAM GENERATOR CONTROLS AND AUXILIARIES			
BB	REACTOR COOLANT	3	4
BG	CHEMICAL AND VOLUME CONTROL	5	5
BL	REACTOR MAKEUP WATER	1	1
BM	STEAM GENERATOR BLOWDOWN	3	5
BN	BORATED REFUELING WATER STORAGE	1	1

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
TURBINE GENERATOR CONTROLS AND AUXILIARIES			
CA	STEM SEAL	1	1
CB	MAIN TURBINE LUBE OIL	1	2
CC	GENERATOR HYDROGEN AND CO ₂	1	1
CD	GENERATOR SEAL OIL	1	1
CE	STATOR COOLING WATER	1	1
CF	LUBE OIL STORAGE, TRANSFER & PURIFICATION	1	2
CG	CONDENSER AIR REMOVAL	1	1
CH	MAIN TURBINE CONTROL OIL	1	2

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
CIRCULATING WATER			
DA	CIRCULATING WATER, WATER BOX DRAINS & VENTS	2	2

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
EQUIPMENT & EMERGENCY CORE COOLING WATER			
EA	SERVICE WATER	2	2
EB	CLOSED COOLING WATER	1	1
EC	FUEL POOL COOLING & CLEANUP	2	2
ED	ESSENTIAL SERVICE WATER	1	3
EE	COMPONENT COOLING WATER	2	3
EJ	RESIDUAL HEAT REMOVAL	1	1
EM	HIGH PRESSURE COOLANT INJECTION	2	2
EN	CONTAINMENT SPRAY	2	1
EP	ACCUMULATOR SAFETY INJECTION	1	1

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
AUXILIARY STEAM			
FA	AUXILIARY BOILER	1	1
FB	AUXILIARY STEAM	1	2
FC	AUXILIARY TURBINES	2	3
FE	AUXILIARY STEAM CHEMICAL ADDITION SYSTEM	1	1

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
HVAC			
GA	PLANT HEATING	3	2
GB	CENTRAL CHILLED WATER	3	1
GD	ESSENTIAL SERVICE WATER PUMP HOUSE BUILDING HVAC	1	1
GE	TURBINE BUILDING HVAC	6	5
GF	MISCELLANEOUS BUILDINGS HVAC	2	2
GG	FUEL BUILDING HVAC	1	2
GH	RADWASTE BUILDING HVAC	3	2
GK	CONTROL BUILDING HVAC	5	4
GL	AUXILIARY BUILDING HVAC	3	3
GM	DIESEL GENERATORS BUILDING HVAC	1	1
GN	CONTAINMENT COOLING	2	2
GP	CONTAINMENT INTEGRATED LEAK RATE TEST	NONE	1
GR	CONTAINMENT ATMOSPHERIC CONTROL	1	1
GS	CONTAINMENT HYDROGEN CONTROL	1	1
GT	CONTAINMENT PURGE HVAC	1	1

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
RADWASTE			
HA	GASEOUS RADWASTE	2	3
HB	LIQUID RADWASTE	5	5
HC	SOLID RADWASTE	5	4
HD	DECONTAMINATION	1	1
HE	BORON RECYCLE	2	3
HF	SECONDARY LIQUID WASTE	3	4

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
FUEL			
JE	EMERGENCY FUEL OIL	1	1

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
SERVICES			
KA	COMPRESSED AIR	2	6
KB	BREATHING AIR	NONE	1
KC	FIRE PROTECTION	3	7
KD	DOMESTIC WATER	NONE	2
KE	FUEL HANDLING, FUEL STORAGE & REACTOR VESSEL SERVICE	NONE	NONE
KF	CRANES HOISTS & ELEVATORS	NONE	NONE
KH	SERVICE GAS	2	2
KJ	STANDBY DIESEL GENERATOR	NONE	6
KT	ESW CHLORINATION SYSTEM	1	1

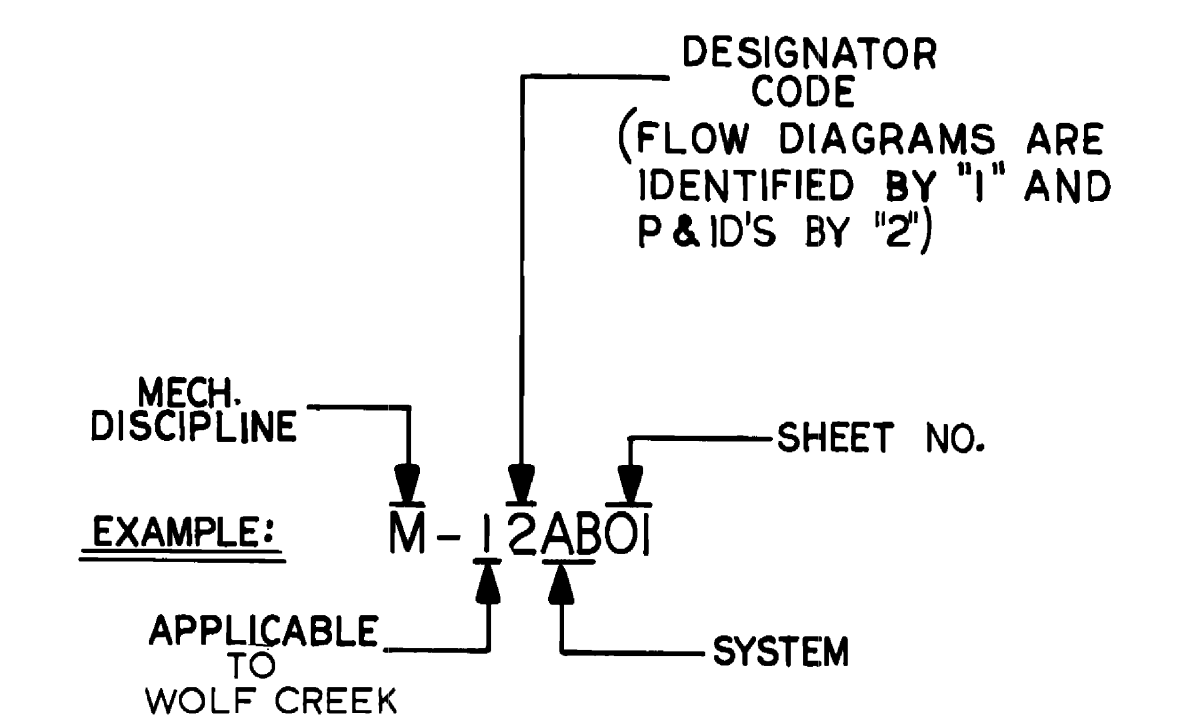
	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
DRAINS			
LA	SANITARY DRAINAGE	1	2
LB	ROOF DRAINS	NONE	NONE
LC	YARD DRAINS	NONE	1
LD	CHEMICAL AND DETERGENT WASTE	1	1
LE	DILLY WASTE	4	4
LF	FLOOR & EQUIPMENT DRAIN	1	10

	NO. OF SHEETS	NO. OF SHEETS	
		SFD	P & ID
SAMPLING SYSTEMS			
RM	PROCESS SAMPLING	NONE	3
SJ	NUCLEAR SAMPLING	NONE	4

NOTES:

1. THIS DRAWING PROVIDES THE SYSTEM DESIGNATORS USED IN THE P&ID AND FLOW DIAGRAM DRAWING NUMBERS. DRAWINGS M-120102, M-020103, AND M-120104 PROVIDE THE APPLICABLE SYMBOLS AND LEGEND.

2. DRAWING NUMBERING SYSTEM IS AS FOLLOWS:

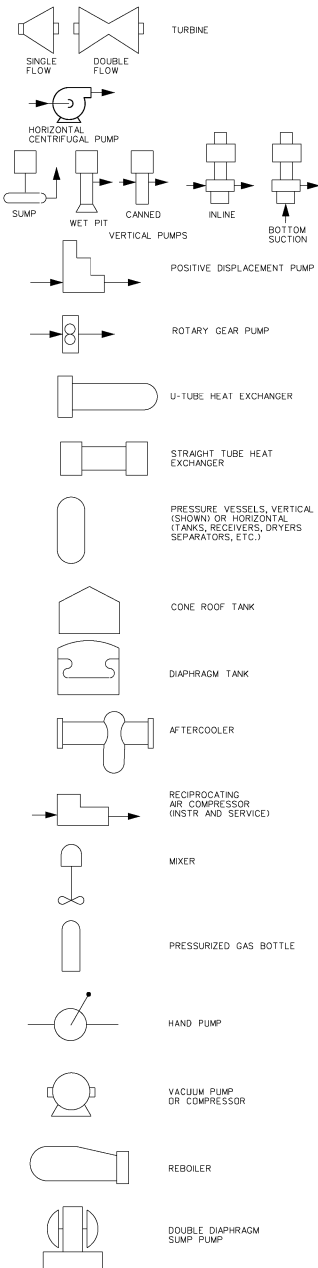


USAR FIG. 1.1-1-01

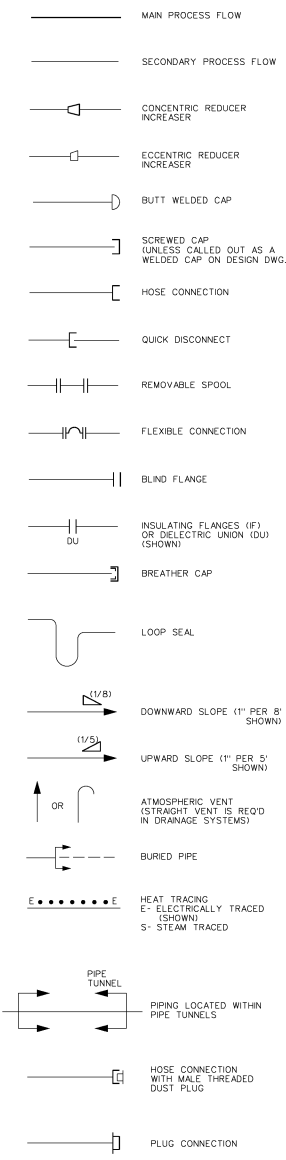
ESSENTIAL DRAWING

REVISION	INCORPORATED	CHANGE
ISSUED	CHG. DOC.	PKG. NO.
THIS DWG. SUPERSEDES BY: _____ REV. _____ THIS DWG. SUPERSEDES: _____ REV. _____		
REVISION NOTES: REF. CR 2007-000952 and AP 05-010, TABLE A, TYPE 2		
		ELECTRONIC APPROVAL
SYMBOLS & LEGEND FOR SYSTEM FLOW & PIPING & INSTRUMENTATION DIAGRAMS		
SCALE	DRAWING NUMBER	SHEET REV.
NONE	M-120101	04

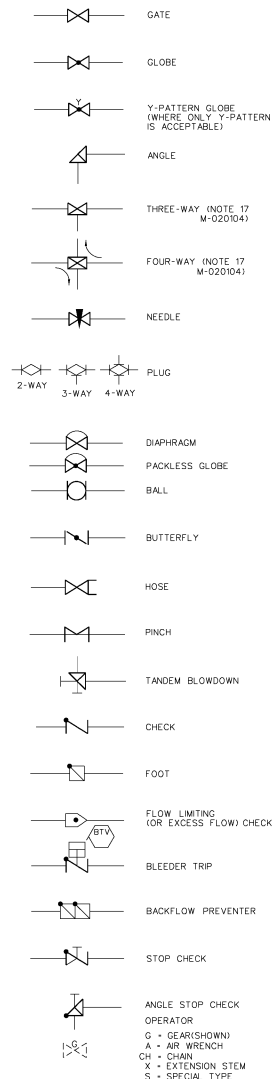
EQUIPMENT



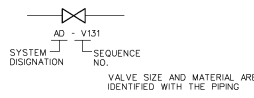
PROCESS PIPING



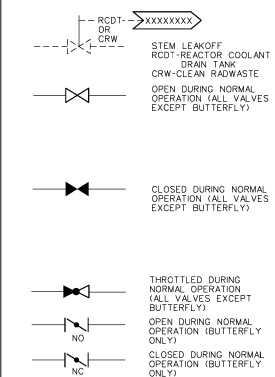
LINE VALVES



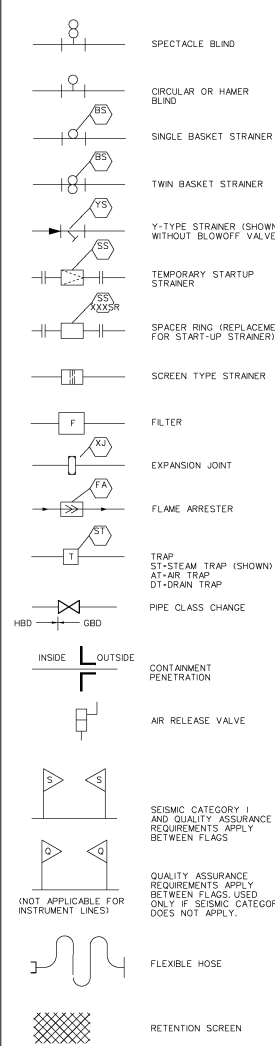
VALVE IDENTIFICATION



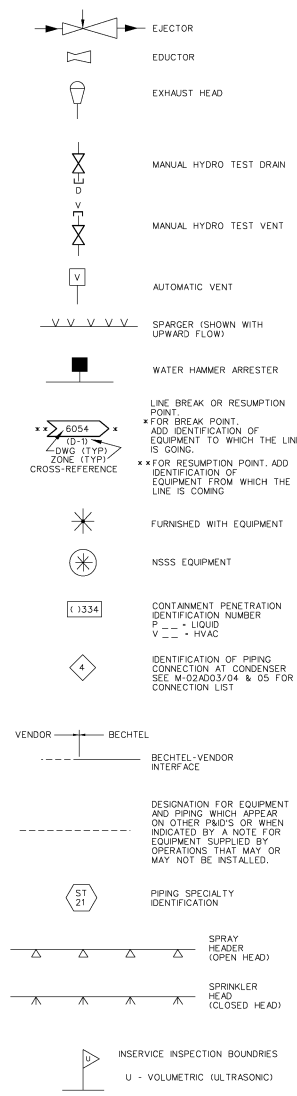
VALVE STATUS SYMBOLS



MISCELLANEOUS



MISCELLANEOUS (CONT.)



PIPING IDENTIFICATION

LINE IDENTIFICATION NUMBER WILL BE AS FOLLOWS
 PLANT UNIT NO. 2 - AD - 107
 SEQUENCE NO. 107
 ADDITIONAL INFORMATION SUCH AS PIPE CLASS & SIZE WILL BE ADDED AS FOLLOWS:
 2 - AD - 107 - EDB - 6" - L-SIZE
 PIPE CLASS - EDB - 6" - L-SIZE

GENERAL NOTES
 1- LINE NUMBERS AND SYSTEM DESIGNATORS WILL BE ASSIGNED IN ACCORDANCE WITH STANDARD ENGINEERING DEPARTMENT PROCEDURES LINE NUMBERS ABOVE 999 WILL BE INDICATED BY A LETTER FOLLOWED BY NUMERALS (E-G 001).
 2- UNIT NUMBER AND SYSTEM DESIGNATOR WILL APPEAR IN THE P&ID TITLE BLOCK AND NOT BE REPEATED ON THE LINES.
 3- PIPE AND VALVE CLASSES ARE DESIGNATED BY THREE LETTER CODE. THE FIRST LETTER INDICATES THE PRIMARY VALVE & FLANGE RATING, THE SECOND LETTER THE TYPE OF MATERIAL AND THE THIRD LETTER THE CODE TO WHICH THE PIPING IS DESIGNED, AS FOLLOWS:

FIRST LETTER - PRIMARY PRESSURE RATING (UNLESS OTHERWISE NOTED ALL RATINGS ARE IN ACCORDANCE WITH ANSI/B31.5)
 A - SPECIFIC PRESSURE & SPECIFIC TEMPERATURE
 B - 2500#
 C - 1500#
 D - 900#
 E - 600#
 F - 400#
 G - 300#
 H - 150#
 J - 125# ANSIB31.1
 L - 250# ANSIB31.1
 M - 200# WIG
 N - 150# ANSIB31.24
 P - 100# AWWA (OR MANUFACTURER'S RATING)
 R - 75# AWWA (OR MANUFACTURER'S RATING)
 S - 50# AWWA (OR MANUFACTURER'S RATING)
 T - 25# AWWA (OR MANUFACTURER'S RATING)
 X - GRAVITY RATING
 Y,Z - GENERAL USE AS DESIGNATED ON PIPING CLASS SHEETS.

SECOND LETTER - MATERIAL
 A - ALLOY
 B - CARBON STEEL
 C - AUSTENITIC STAINLESS STEEL
 D - COPPER, BRASS, OR BRONZE
 E - ALUMINUM
 F - CARBON STEEL COPPER BEARING
 G - CARBON STEEL
 H - CAST IRON
 J - CONCRETE PIPE
 K - VITRIFIED CLAY PIPE
 L - CARBON STEEL IMPACT TESTED
 M - CAST IRON HIGH SILICON
 N - CARBON STEEL GALVANIZED
 P - CAST IRON CEMENT-LINED
 Q - ASBESTOS-CEMENT
 R - DUCTILE IRON
 S - 90-10 CU-NI
 T, Y, Z - SPECIAL MATERIAL SEE CLASS SHEET

THIRD LETTER - APPLICABLE CODES
 A - NUCLEAR POWER PLANT COMPONENTS, ASME B & PV CODE, SEC 11I, CLASS 1
 B - NUCLEAR POWER PLANT COMPONENTS, ASME B & PV CODE, SEC 11I, CLASS 2
 C - NUCLEAR POWER PLANT COMPONENTS, ASME B & PV CODE, SEC 11I, CLASS 3
 D - POWER PIPING CODE, ANSIB31.1
 F - NATIONAL FIRE PROTECTION ASSOCIATION CODE
 G - NATIONAL AND WISCONSIN ADMINISTRATIVE PLUMBING CODE
 H - POWER BOILERS, ASME B & PV CODE, SEC 1
 J - AWWA STANDARDS

4- TUBING AND INSTRUMENT VALVE CLASSES ARE PROVIDED ON DRAWING J-07C/D.
 5- DELETED
 6- DELETED
 7- DELETED
 8- FOR LOCKED VALVE STATUS SEE PROCEDURE AP21G-001 "CONTROL OF LOCKED COMPONENT STATUS".

USAR FIG. 1.1-1-02

ESSENTIAL DRAWING

REVISIONS: INCORPORATED, REV. 4-2002-1006-A-1, CHANGE 014592, P&ID-10

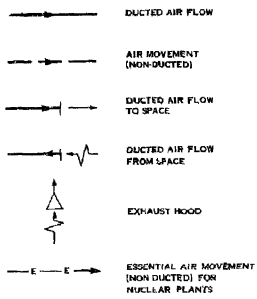
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WOLFE CREEK
 ENGINEERING & CONSTRUCTION

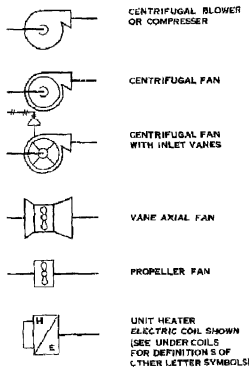
SYMBOLS AND LEGEND FOR SYSTEM FLOW AND PIPING & INSTRUMENTATION DIAGRAMS

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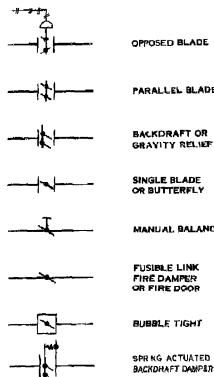
HVAC LINES



FANS

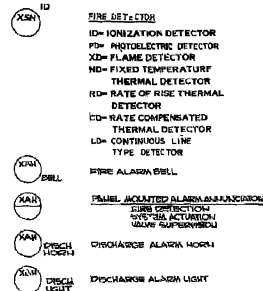


DAMPERS

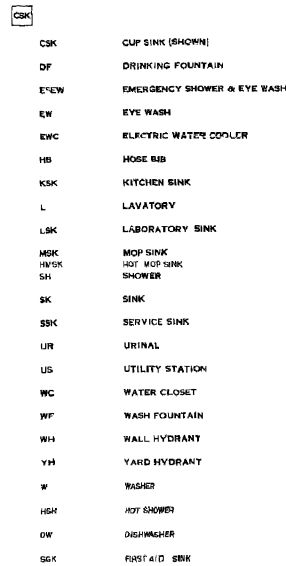


NOTE REFER TO SHEET M-201004 FOR ACTUATOR SYMBOLS

SUPPLEMENTARY INSTRUMENT DESIGNATIONS



EQUIPMENT & FIXTURES



DUCTWORK IDENTIFICATION

THE IDENTIFICATION NUMBER WILL BE AS FOLLOWS
 PLANT LINE NO. - SYSTEM DESIGNATION
 - REFERENCE NO.
 - DUCT CLASS
 - SIZE - ROUND EQUIVALENT DUCT DIAMETER IN INCHES

ADDITIONAL INFORMATION SUCH AS DUCT CLASS & SIZE WILL BE ADDED AS FOLLOWS
 2 - 0C - 10T - 30K - 100"
 DUCT CLASS SIZE - ROUND EQUIVALENT DUCT DIAMETER IN INCHES

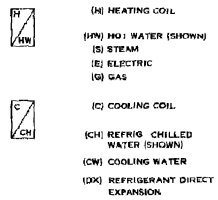
GENERAL NOTES
 1. LINE NUMBERS AND SYSTEM DESIGNATORS WILL BE ASSIGNED IN ACCORDANCE WITH STANDARD ENGINEERING DEPARTMENT PROCEDURES.
 2. UNIT NUMBER AND SYSTEM DESIGNATOR WILL APPEAR IN THE P & ID TITLE BLOCK AND NOT BE REPEATED ON THE LINES.
 3. DUCTWORK AND DAMPER CLASSES ARE DESIGNATED BY A THREE CHARACTER ALPHANUMERIC CODE. THE FIRST CHARACTER INDICATES THE DUCT PRIMARY PRESSURE RATING. THE SECOND CHARACTER DESCRIBES THE MATERIAL AND THE THIRD INDICATES APPLICABLE STANDARDS.

FIRST CHARACTER - PRIMARY PRESSURE RATING
 1. LESS THAN -2" WG TOTAL PRESSURE
 2. 1/2 3/4" WG TO -2" TOTAL PRESSURE
 3. -3 3/4" WG TO -13 3/4" TOTAL PRESSURE
 4. -6 3/4" WG TO -14" TOTAL PRESSURE
 5. -3 3/4" WG TO -13 3/4" TOTAL PRESSURE
 6. -4" WG TO -16 3/4" TOTAL PRESSURE
 7. -7" WG TO -12 3/4" TOTAL PRESSURE
 8. GREATER THAN -10" WG TOTAL PRESSURE

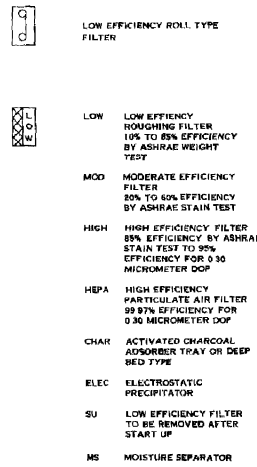
SECOND CHARACTER - MATERIAL
 B CARBON STEEL
 C AUSTENITIC STAINLESS STEEL
 E ALUMINUM
 N CARBON STEEL GALVANIZED
 R (FOR ADDITIONAL TYPES OF MATERIAL REFER TO DRAWING M-020402)

THIRD CHARACTER - APPLICABLE BECHTEL POWER CORPORATION HVAC DUCTWORK STANDARDS
 K STANDARD CONSTRUCTION
 L GAS TIGHT WELDED CONSTRUCTION
 M - SEISMIC CATEGORY I CONSTRUCTION INCLUDING HANGERS AND SUPPORTS
 N SEISMIC CATEGORY I CONSTRUCTION HANGERS AND SUPPORTS ONLY
 P SEISMIC CATEGORY I CONSTRUCTION INCLUDING HANGERS AND SUPPORTS ONLY FOR GAS TIGHT WELDED DUCTWORK
 R SEISMIC CATEGORY I CONSTRUCTION HANGERS AND SUPPORTS ONLY FOR GAS TIGHT WELDED DUCTWORK
 S DUST OR MATERIAL HANDLING DUCTWORK

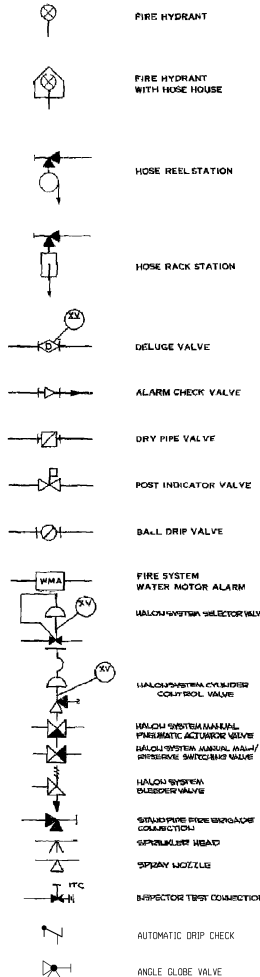
COILS



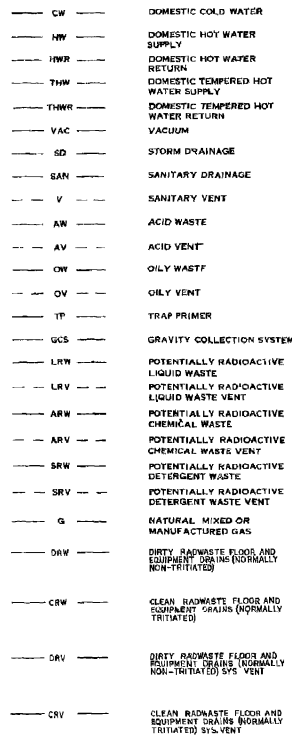
AIR CLEANING DEVICES



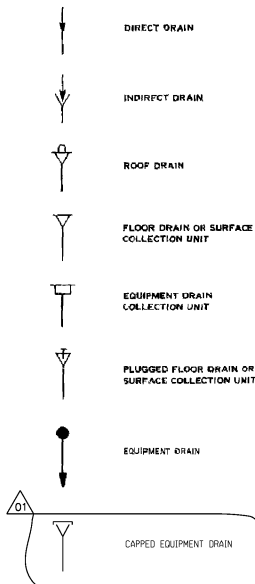
FIRE PROTECTION EQUIPMENT



PLUMBING LINES

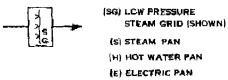


DRAINS

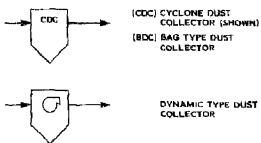


USAR FIG. 1.1-1-03

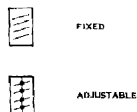
HUMIDIFIERS



DUST COLLECTORS



LOUVERS



ESSENTIAL DRAWING

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 DATE: 11/10/03
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WOLFE CREEK CONSULTANTS INC. ELECTRONIC APPROVAL
 SYMBOLS AND LEGEND FOR SYSTEM FLOW AND PIPING AND INSTRUMENTATION DIAGRAMS
 SCALE: 1/8" = 1'-0" DRAW NUMBER: M-120103 SHEET NO.: 01
 DATE: 11/10/03



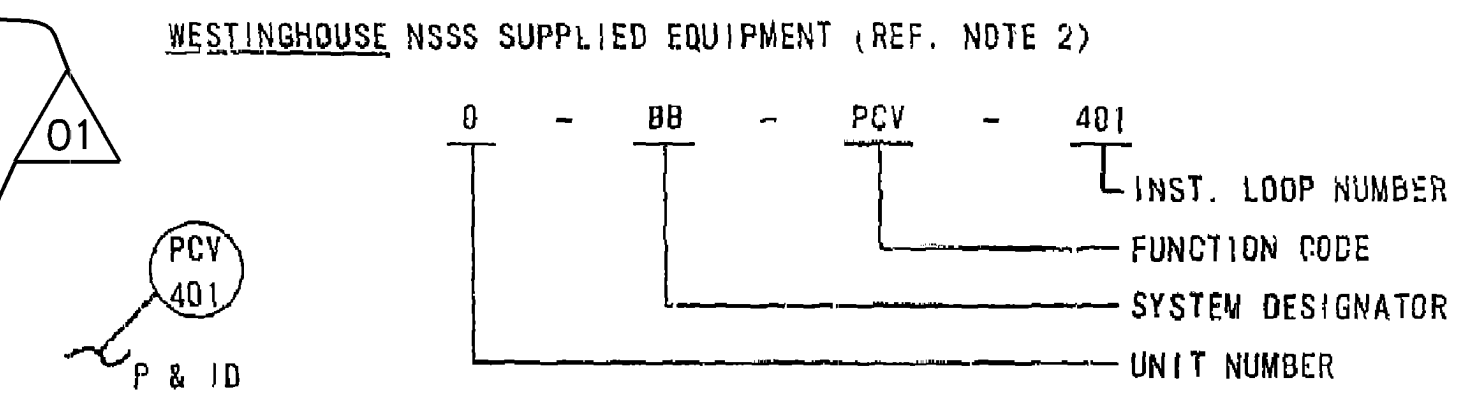
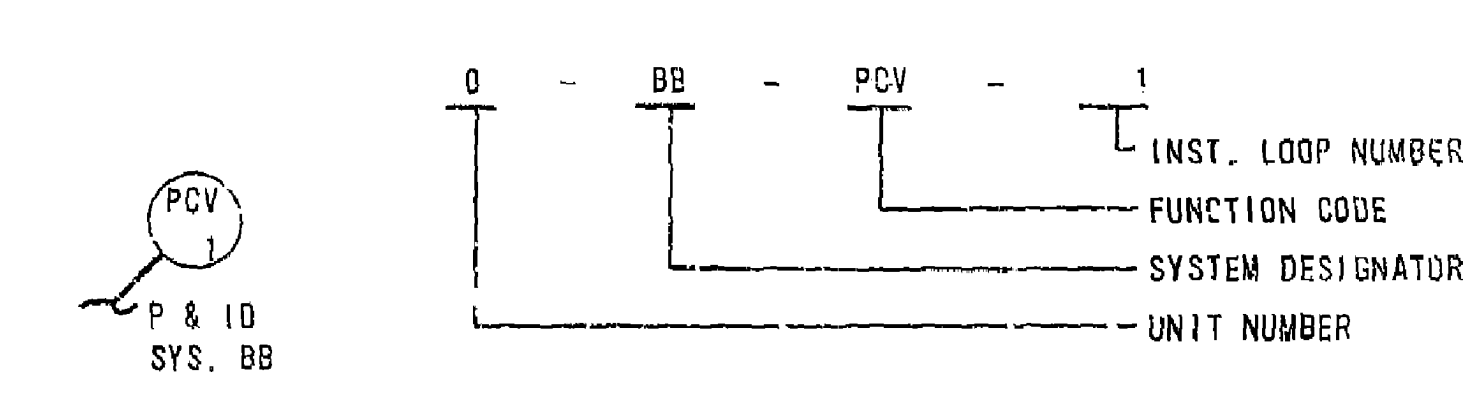
FIRST LETTER (NOTE 1)

SUCCESSING LETTER (NOTE 1)

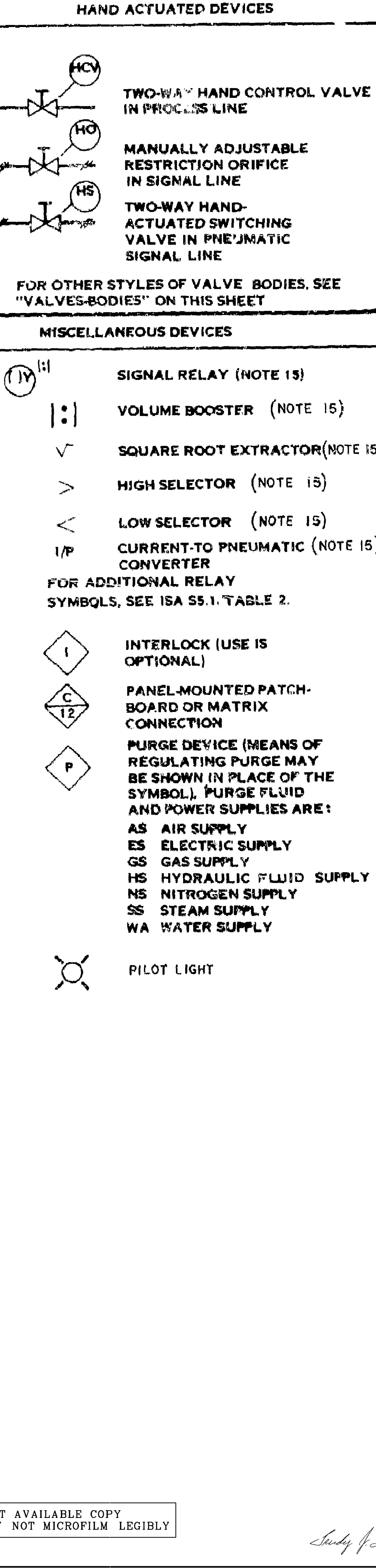
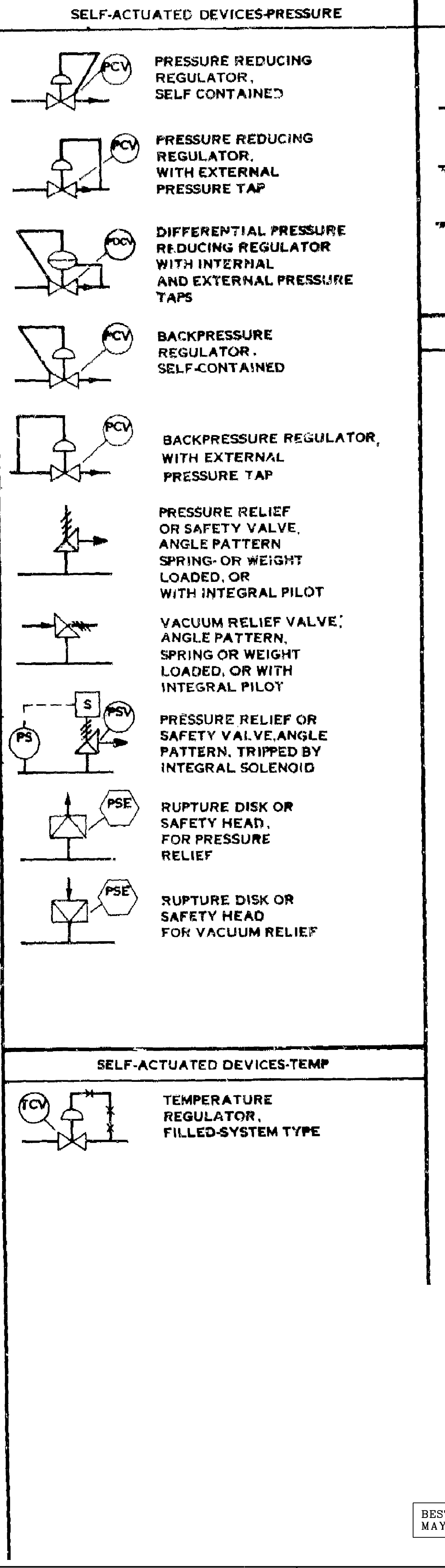
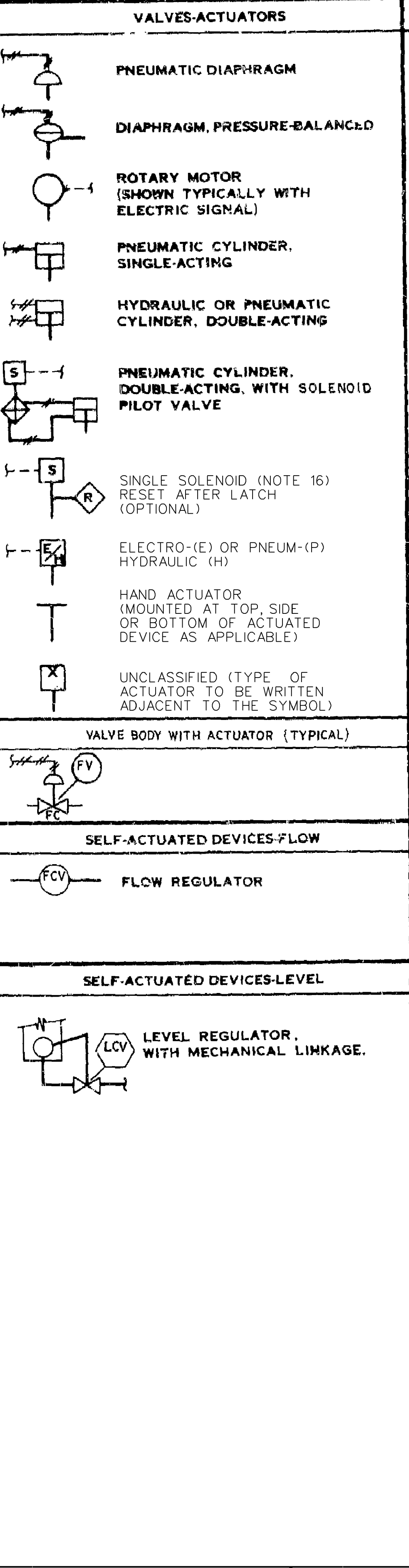
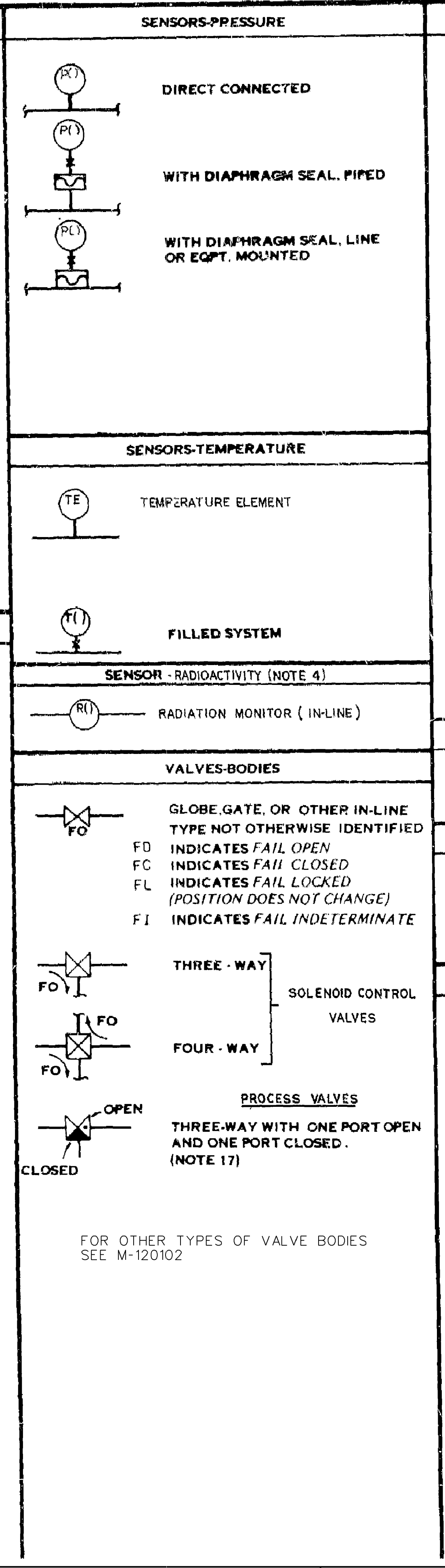
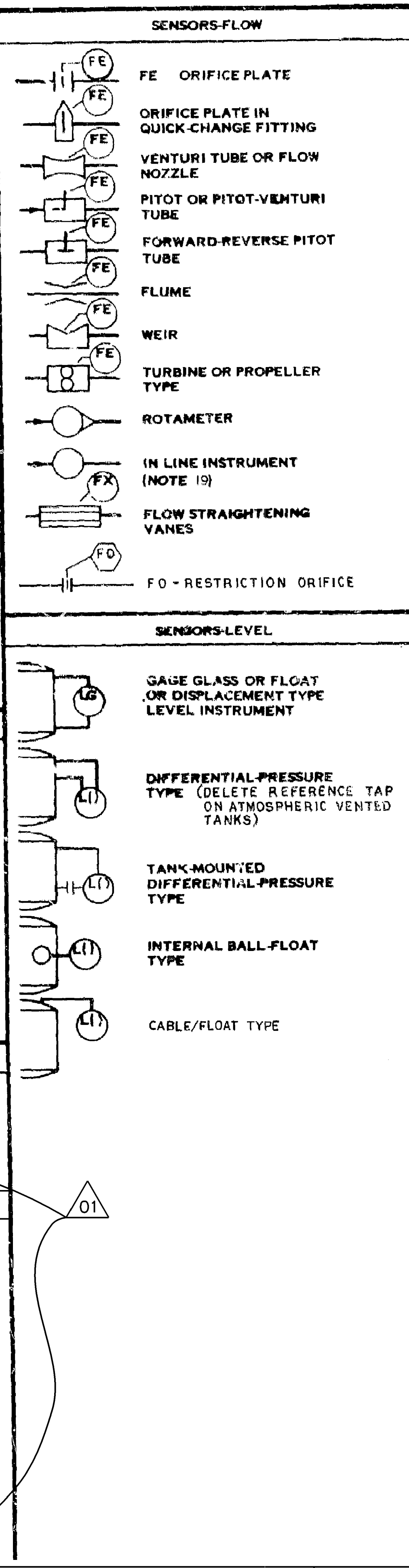
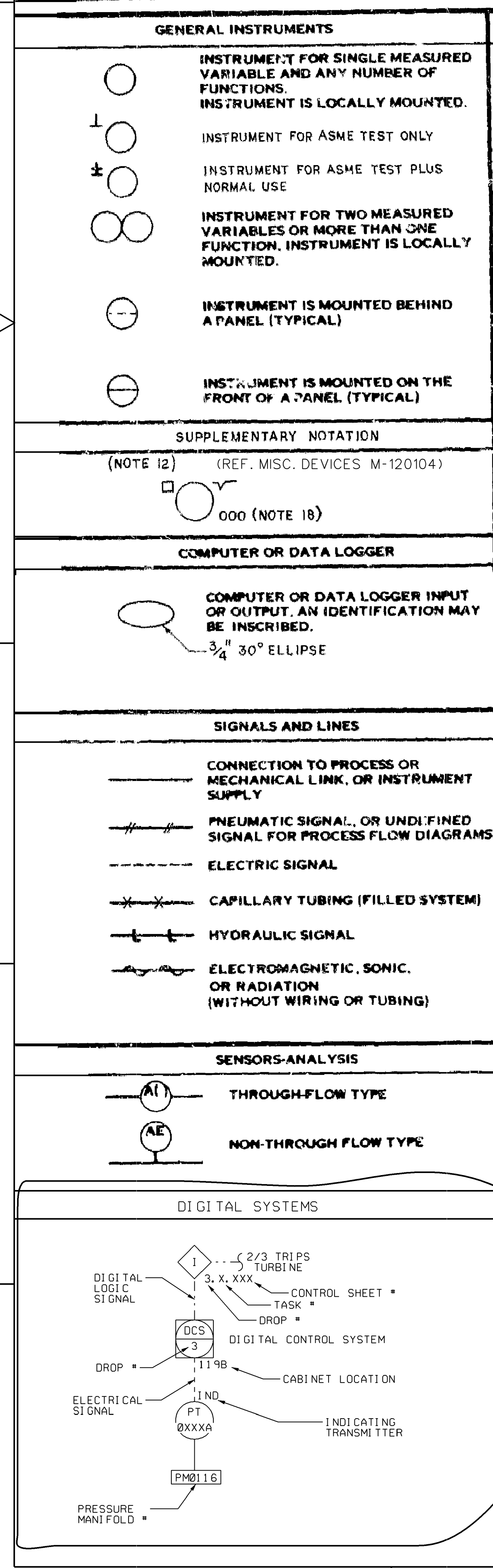
Table with columns for Measured or Initiating Variable, Symbol, Sensing Device, Display Device, Control Device, and Miscellaneous Device. It lists various instrument types and their corresponding alphanumeric codes.

INSTRUMENT IDENTIFICATION

WCNOC SUPPLIED EQUIPMENT (REF. NOTE 1)



- GENERAL NOTES: 1. THE INSTRUMENT LEGEND IS BASED ON ISA STANDARD... 2. INSTRUMENTS SUPPLIED BY WESTINGHOUSE... 3. THE LETTERS H AND L ARE ADDED TO THE MEASURED VARIABLES... 4. THE LETTER N IS USED ONLY WHEN NEUTRON FLUX IS THE MEASURED VARIABLE... 5. THE LETTER X IS FOR UNLISTED MEANINGS... 6. THE LETTER Z WHICH FOLLOWS A MEASURED VARIABLE REPRESENTS FINAL DEVICES... 7. A USER'S CHOICE LETTER IS FOR UNLISTED MEANINGS... 8. ANY FIRST LETTER MAY BE MODIFIED BY ANY SUCCEEDING LETTER... 9. FD - DESIGNATES FLOW RESTRICTION... 10. LAHL - DESIGNATES HIGH HIGH LEVEL ALARM... 11. A TEST POINT IS A PROCESS CONNECTION TO WHICH NO INSTRUMENT IS PERMANENTLY CONNECTED... 12. ELECTRICAL SAFETY RELATED SEPARATION GROUPS 1 THROUGH 4 ARE NOTED IN A SQUARE... 13. HIS - DESIGNATES - A HAND SWITCH WITH INDICATION LIGHTS... 14. A CONTROL OR SENSING DEVICE OR RELAY HAVING A DISPLAY FUNCTION SHOULD HAVE THE APPROPRIATE DISPLAY LETTERS ADDED... 15. THE DESCRIPTION DENOTING A RELAY FUNCTION SHOULD BE SHOWN ON THE P & ID EXCEPT WHEN USED WITH DISTINCTIVE SYMBOLS... 16. A DOUBLE SOLENOID VALVE IS DRAWN WITH TWO SINGLE SOLENOIDS... 17. FOR THREE WAY VALVES, THE PORT THAT IS CLOSED DURING NORMAL SYSTEM OPERATION WILL BE BLACKENED... 18. THE SPECIFIC CONTROL BOARD AND LOCATION AT WHICH AN INSTRUMENT IS LOCATED MAY BE REFERENCED OUTSIDE THE INSTRUMENT BALLOON... 19. INDICATING LIGHTS ARE DESIGNATED BY FIRST AND/OR SECOND LETTERS FOLLOWED BY L, E.G., ZL FOR POSITION INDICATING LIGHT... 20. INSTRUMENT LOOP POWER SUPPLIES, ALTHOUGH NOT NORMALLY SHOWN ON P & ID'S, ARE DESIGNATED BY Q AS THE FINAL LETTER... 21. ALL ANNUNCIATOR INPUTS ARE RECORDED BY THE PLANT COMPUTER... 22. THE TYPE OF FLOW INSTRUMENT MAY BE NAMED OUTSIDE THE INSTRUMENT CIRCLE, E.G., MAGNETIC FLOW METER, DISPLACEMENT METER, MASS FLOW METER, SIGHT GLASS.



ESSENTIAL DRAWING

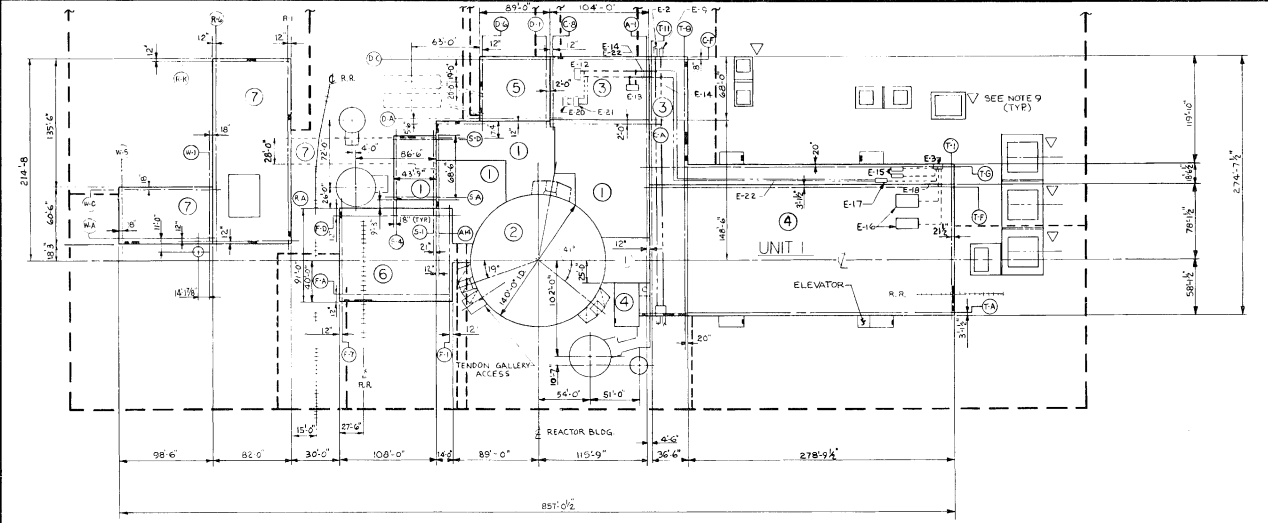
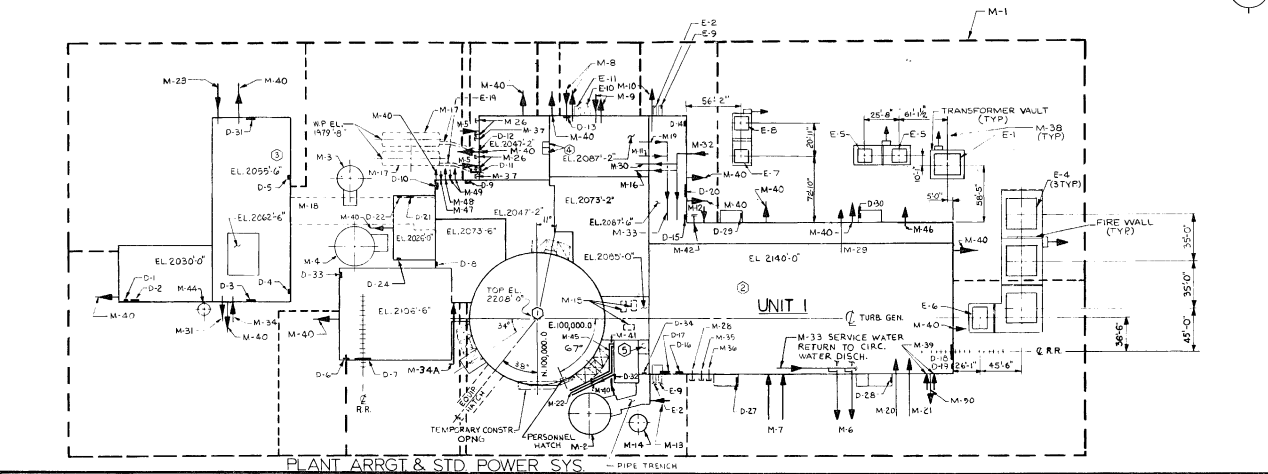
Table with columns for Revised, Incorporated, Issued, and Change. Includes drawing number M-120104 and electronic approval.

BEST AVAILABLE COPY MAY NOT MICROFILM LEGIBLY

Scale NONE, Drawing Number M-120104, Sheet 01



MECHANICAL DESIGNATOR	DESCRIPTION	BECHTEL P & ID M-02 (LNG)	SARGENT & LUNDY P & ID
M-1	KE FIRE LOOP	KE01, KE02, KC03	M-23
M-2	AP CONDENSATE WTR TK (450,000 GALS.)	AP01	N/A
M-3	BL REACTOR MAKEUP WTR TK (150,000 GALS USABLE)	BL01	N/A
M-4	BN REFUELING WTR TK (400,000 GAL USABLE)	BN01	N/A
M-5	JE EMERGENCY FUEL OIL LINE (2 PER UNIT)	JE01	N/A
M-6	DA CIRC WTR OUTLET (10'-0" SQUARE CONCRETE PIPE)	DA01	M-21
M-7	DA CIRC WTR INLET (10'-0" SQUARE CONCRETE PIPE)	DA01	M-21
M-8	EF ESW "B" CIRCUIT (30" DIA.)	M-K2EP01	N/A
M-9	EF ESW "C" CIRCUIT (30" DIA.)	M-K3EP01	N/A
M-10	LA SEWAGE LINE	LA01	M-22
M-11	EA SERVICE WTR RETURN "A" (30" DIA.) (NOTE 15)	EA01	N/A
M-12	KD DOMESTIC WTR LINE (4" DIA.)	KD01	M-22
M-13	AN DENIM WTR LINE (4" DIA.)	AN01	M-25
M-14	AN DENIM WTR TK (50,000 GALS.)	AN01	N/A
M-15	AL AIR FEED PUMPS	AL01	N/A
M-16	EA SERVICE WTR SUPPLY "A" (30" DIA.) (NOTE 15)	EA01	N/A
M-17	JE 7-DAY EMER P.O. SYS TK (100,000 GALS EACH)	JE01	N/A
M-18	PIPE & ELECT TRAY CHASE & PERSONNEL ACCESS TUNNEL	N/A	N/A
M-19	EA SERVICE WTR RETURN "B" (30" DIA.) (NOTE 15)	EA01	N/A
M-20	KH HYDROGEN SUPPLY TO GAS CASING & VOL. CONTROL TK.	KH02	M-29
M-21	KH CARBON DIOXIDE SUPPLY FOR GEN PURGE SYS.	KH02	M-29
M-22	FA FUEL OIL FOR AUX BOILER (SUPPLY)	FA01	M-27
M-23	KH2 OXYGEN SUPPLY FOR GASEOUS WASTEWATER SYS.	KH02	M-30
M-24	JE FUEL OIL (TRUCK CONNECTION, 4 PER UNIT)	JE01	N/A
M-28	LE TURBINE BLDG. OILY WASTE OUTLET (LUBE OIL SUMP TRUCK CONN.)	LE04	N/A
M-29	LE OILY WASTE HOR. TO OIL WTR SEPARATOR	LE03	N/A
M-30	EA SERVICE WTR SUPPLY "B" (30" DIA.) (NOTE 15)	EA01	N/A
M-31	HJ RADIOACTIVE LIQUID RELEASE	HJ03	M-22
M-32	EA SERVICE WATER SUPPLY HEADER (42" DIA. INSIDE POWER BLOCK)	EA01	M-22
M-33	EA SERVICE WATER RETURN HEADER (42" DIA.)	EA01	M-22
M-34	KH NITROGEN SUPPLY (LOW PRESSURE)	KH01	M-31
M-35	KH NITROGEN SUPPLY (HIGH PRESSURE)	KH01	M-31
M-35	CF TURBINE WASTE OIL OUTLET (TRUCK CONN.)	CF01	N/A
M-36	CF TURBINE LUBE OIL SUPPLY (TRUCK CONN.)	CF01	N/A
M-37	LE DIESEL GEN. BLDG. OILY WASTE OUTLET (TRUCK CONN., 2)	LE04	N/A
M-38	LE TRANSFORMER VAULT DRAIN PIPING	LE04	N/A
M-39	AK CONDENSATE DEMIN. CHAM. MAKEUP (2 PER UNIT) (NOTE 16)	AK03	N/A
M-40	LR ROOF DRAINS	N/A	ACID M-35 CAUSTIC M-50
M-41	AL AUXILIARY FIREWATER FROM CONDENSATE WATER TANK	AL01	N/A
M-42	KA SERVICE AIR CONNECTION (CONSTRUCTION AIR)	KA02	N/A
M-44	MC DRY CEMENT STORAGE TANK (TRUCK CONN.)	MC01	N/A
M-45	FA FUEL OIL FOR AUXILIARY BOILER (RECIRC.)	FA01	M-27
M-46	AL ACID DRY TANK VENT	AK09	M-33
M-47	GP B'ILRT SUPPLY LINE	GP01	N/A
M-48	GP B'ILRT EXHAUST LINE	GP01	N/A
M-49	GP (2)-2' ILRT COOLING WATER LINES	GP01	N/A
M-50	K2 DOWN WATER SUPPLY TO BULK CHEMICAL STORAGE BLDG.	N/A	N/A



ELECTRICAL DESIGNATIONS

- *E1 START-UP TRANSFORMER 345KV SPACINGS (SEE NOTE 9)
- *E2 DUCT BANK FOR CONTROL & INSTRUMENTATION FROM REMOTE SITE BLDGS. AND EQUIP TO CONTROL TOWER (2)
- *E3 CABLE PITS FOR 13.8KV/125V DC POWER TO SITE AND SWITCHYARD PROTECTIVE RELAYING TO E-17
- *E4 MAIN TRANSFORMERS (BASED ON 750 MVA SPACINGS AND THREE SINGLE PHASE UNITS) (SEE NOTE 9)
- *E5 STATION SERVICE TRANSFORMERS (3.94/16 KV)
- *E6 UNIT AUXILIARY TRANSFORMER
- *E7 CGF TRANSFORMER (15MVA/4KV)
- *E8 ESW TRANSFORMER (13.8/416 KV) SITE #2 TO PROVIDE PRIMARY SUPPLY (SEE NOTE 9)
- *E9 ELECTRICAL DUCT-TELEPHONE SYSTEM INTERFACE (2)
- *E10 ESW DUCT BANK SEPARATION GROUP 1
- *E11 ESW DUCT BANK SEPARATION GROUP 4
- *E12 SITE INTERFACE PANEL FOR CONTROL & INSTRUMENTATION FROM SITE (CONTROL ROOM, EL. 2047'-0")
- *E13 SITE RELATED SECT OF NCB CONTROL ROOM, EL. 2047'-0"
- *E14 RACEWAYS INSIDE BLDG FROM E-2, E-9 TO E-11, E-13
- *E15 DC SWITCHBOARDS (EL. 2035'-0")
- *E16 13.8KV SW TIEGEAR (EL. 2035'-0")
- *E17 GENERATOR TRANSFORMER RELAY CABINET (EL. 2035'-0")
- *E18 RACEWAYS INSIDE BLDG FROM E-3 TO E-15, E-16, E-17
- *E19 DUCT BANKS EMER FUEL OIL TANKS
- *E20 ANNUNCIATOR CONTROL PANEL
- *E21 COMPUTER I/O CABINET
- *E22 RACEWAYS INSIDE BUILDING FROM E-17 TO E-12, E-13, E-20 & E-21

- NOTES:
1. CIRC WTR LINE LAYOUT IS BASED ON A MULTI-PRESSURE CONDENSER.
 2. EQUIP IDENTIFIED FOR (1) UNIT.
 3. ALL ELEVATIONS ARE SHOWN TO TOP OF ROOF SLAB. FLOOR IS AT EL. 2000'-0" WITH GRADE AT EL. 1999'-6".
 4. UNDER BECHTEL SCOPE OF SUPPLY.
 5. INTERFACE & COLUMN LINE DESIGNATIONS ARE TYPICAL OF BOTH UNITS.
 6. SEE DETAIL 1 FOR EXPLANATION OF DIMENSIONING TO EXTERIOR WALLS, INCLUDING TRANSFORMER VAULT DRAINS.
 7. BECHTEL SCOPE OF SUPPLY ENDS 5'-0" FROM OUTSIDE OF BUILDING WALLS, INCLUDING TRANSFORMER VAULT DRAINS.
 8. DOOR NUMBERS SHOWN ARE FOR THIS DWG ONLY.
 9. ▽ INDICATES TRANSFORMER CT LEAD INTERFACES WITH THE SWITCHYARD.
 10. DELETED.
 11. DASHED LINE SHOWN IS FOR UNDERGROUND FIRE LOOP (M-1) AND THE PHANTOM LINE INDICATES FIRE PROTECTION DELUGE (M-1A) PIPING FOR TRANSFORMERS.
 12. RELEASE POINTS ARE TAKEN AT ROOF ELEVATIONS. ACTUAL RELEASE POINTS ARE APPROX 10'-0" ABOVE ROOF ELEVATIONS.
 13. FOR INTERFACE PIPING LOCATIONS SEE DWG. M-10006 AND M-10007.
 14. THE TURBINE BUILDING AIR IS EXHAUSTED TO THE ATMOSPHERE BY EXHAUST FANS LOCATED WITHIN LOUVERED PENTHOUSES ON THE ROOF.
 15. M-11, M-16, M-19, AND M-30 REPRESENT THE INTERFACE BETWEEN THE ESW SYSTEM AND THE SERVICE WATER SYSTEM INSIDE THE POWER BLOCK.
 16. DELETED.
 17. FOR INSULATING FLANGE JUMPER REQUIREMENTS SEE DRAWING M-10006 NOTES 19, 20 AND 21.
 18. OILY WASTE STREAM CONTINUES ON DWG. S-0186, SPANANCE PLAN PLANT AREA.

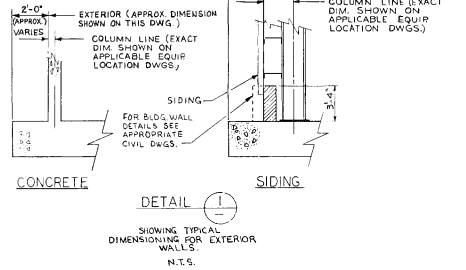
VENT RELEASE POINTS

- *10 UNIT VENT (EL. 2008'-0"; SEE NOTE 12)
- *11 TURBINE BUILDING (EL. 2143'-0"; SEE NOTE 14)
- *12 RADIOACTIVE BUILDING VENT (EL. 2055'-6"; SEE NOTE 12)
- *13 STACKS FOR DIESEL EXHAUST (TOP EL. 2097'-6")
- *16 VENT STACK FOR AUXILIARY BOILER (TOP EL. 2150'-0")

BLDG - KEY

- ① AUXILIARY BLDG., HOT MACHINE SHOP
- ② REACTOR BLDG.
- ③ CONTROL BLDG., COMMUNICATIONS CORRIDOR
- ④ TURBINE BLDG., AUXILIARY BOILER ROOM
- ⑤ DIESEL GENERATOR BLDG.
- ⑥ FUEL BLDG.
- ⑦ RADIOACTIVE BLDG., DRUM STORAGE (SOLID WASTE) & RADWASTE & PERSONNEL ACCESS TUNNEL.

DOOR NO.	SIZE (CLEAR OPENING)	DOOR NO.	SIZE (CLEAR OPENING)
D-1	3'-6" x 7'-2"	D-28	3'-8" x 7'-0"
D-2	14'-0" x 14'-0"	D-29	3'-8" x 7'-0"
D-3	10'-0" x 12'-0"	D-30	3'-8" x 7'-0"
D-4	3'-8" x 7'-0"	D-31	8'-0" x 12'-0"
D-5	3'-8" x 7'-0"	D-32	3'-8" x 7'-0"
D-6	3'-8" x 7'-0"	D-33	3'-8" x 7'-0"
D-7	17'-0" x 22'-0"	D-34	3'-8" x 7'-0"
D-8	3'-8" x 7'-0"		
D-9	3'-8" x 7'-0"		
D-10	10'-0" x 12'-0"		
D-11	6'-0" x 10'-3"		
D-12	6'-0" x 10'-3"		
D-13	3'-0" x 7'-0"		
D-14	5'-0" x 7'-0"		
D-15	3'-8" x 7'-0"		
D-16	3'-0" x 7'-0"		
D-17	10'-0" x 12'-0"		
D-18	17'-0" x 22'-0"		
D-19	3'-8" x 7'-0"		
D-20	10'-0" x 12'-0"		
D-21	8'-0" x 12'-0"		
D-22	3'-8" x 7'-0"		
D-24	3'-8" x 7'-0"		
D-27	3'-8" x 7'-0"		



ESSENTIAL DRAWING

WOLF CREEK NUCLEAR OPERATING CORPORATION

PENINSULAR PLANT ARRANGMENT STANDARD POWER SYSTEMS & STRUCTURE INTERFACE

DATE: 11-50 01 M-10001 SHEET NO. 02 OF 02

