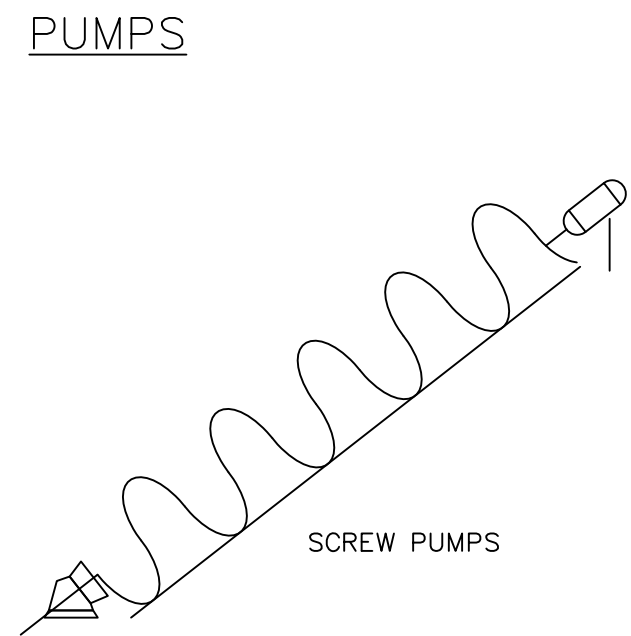
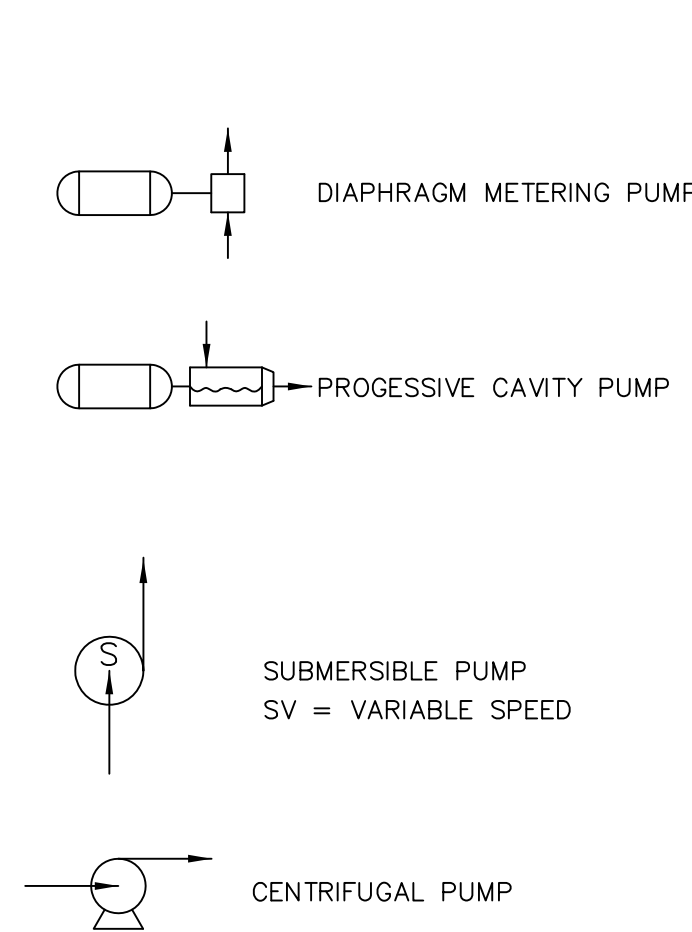
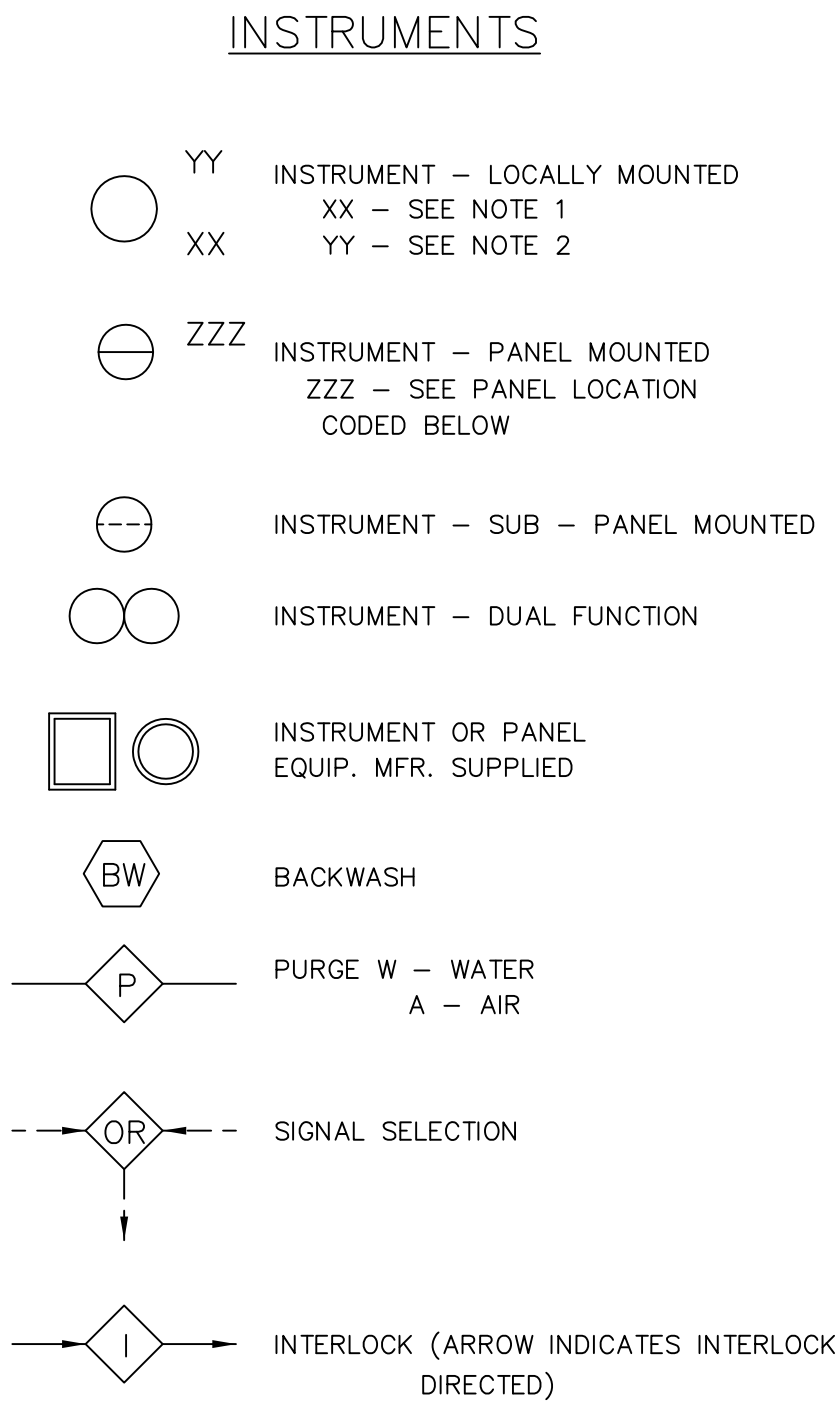
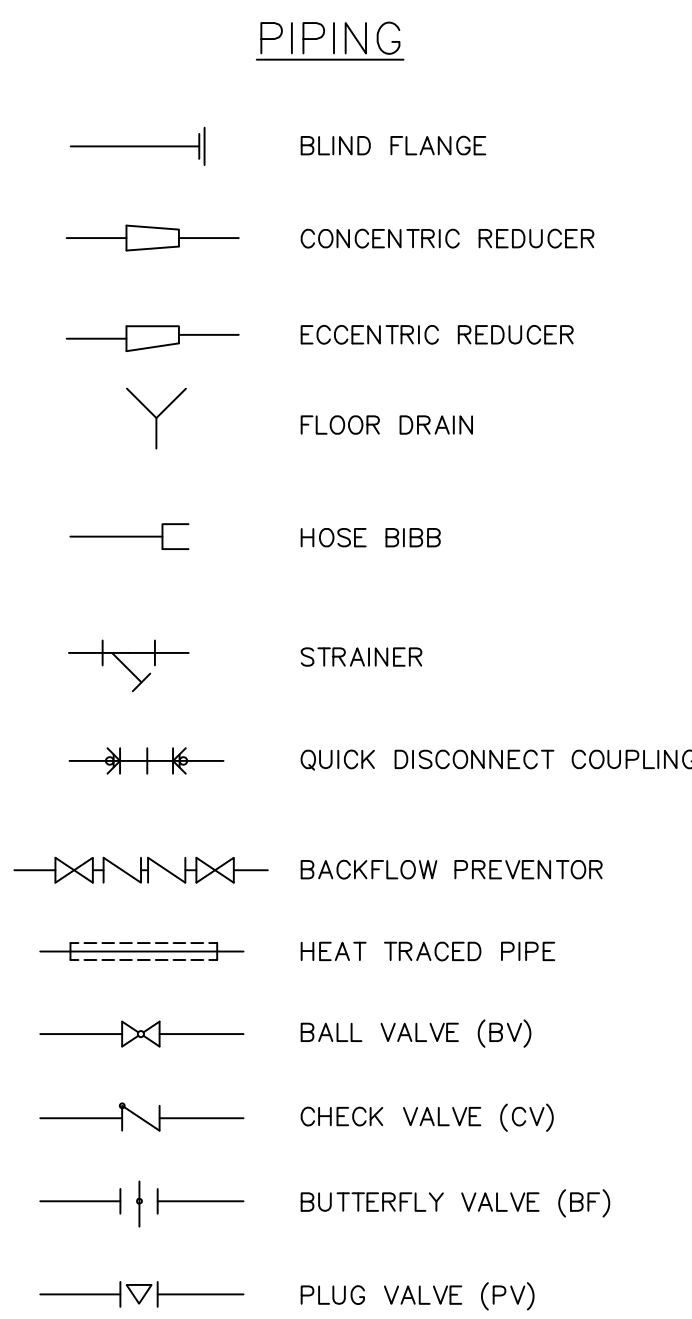
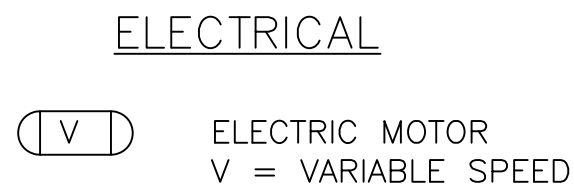
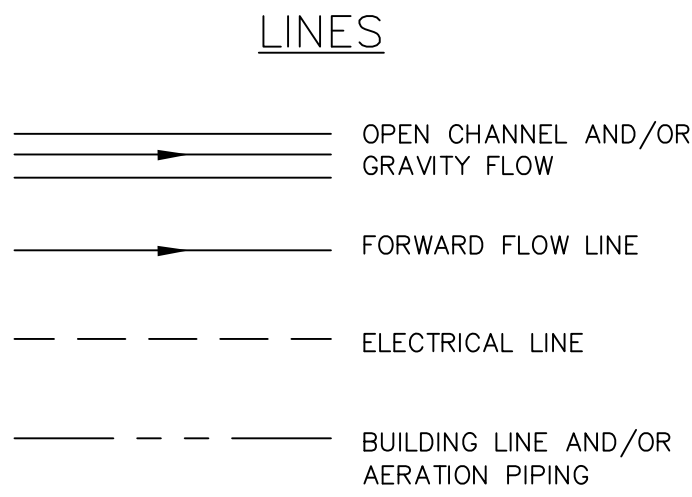




| UPPER CASE LETTER | FIRST LETTER PROCESS VARIABLE | SECOND LETTER TYPE HEADING OR FUNCTION | THIRD/FOURTH LETTER FUNCTION |
|-------------------|-------------------------------|----------------------------------------|------------------------------|
| A                 | ANALYZER (NOTE 1)             | ALARM                                  | ALARM                        |
| B                 | BURNER FLAME                  | -                                      | -                            |
| C                 | CONDUCTIVITY                  | CONTROL                                | CONTROLLER                   |
| D                 | DENSITY                       | -                                      | -                            |
| E                 | ELECTRICAL (EMF)              | ELEMENT                                | ELEMENT                      |
| F                 | FLOW                          | FLOW RATIO                             | -                            |
| G                 | GAGE                          | GLASS                                  | GLASS                        |
| H                 | HAND                          | HAND                                   | HAND/HIGH                    |
| I                 | CURRENT (ELECTRICAL)          | INDICATING/INDICATOR                   | -                            |
| J                 | POWER                         | -                                      | -                            |
| K                 | TIME                          | -                                      | -                            |
| L                 | LEVEL                         | LIGHT (PILOT)                          | LOW                          |
| M                 | MOISTURE (HUMIDITY)           | -                                      | -                            |
| N                 | -                             | -                                      | -                            |
| O                 | OPERATION                     | ORIFICE                                | OPERATION                    |
| P                 | PRESSURE/VACUUM               | PRESSURE                               | -                            |
| Q                 | INTEGRATION                   | QUANTITY TOTAL                         | QUANTITY                     |
| R                 | RADIOACTIVITY                 | RECORDING/RECORDER                     | RECORDER                     |
| S                 | SPEED/STOP                    | SWITCH                                 | SWITCH                       |
| T                 | TEMPERATURE                   | TRANSMITTER                            | TRANSMITTER                  |
| U                 | MULTIFUNCTION                 | -                                      | -                            |
| V                 | VISCOSITY                     | VALVE/DAMPER/LOUVER                    | VALVE                        |
| W                 | WEIGHT                        | WELL                                   | -                            |
| X                 | TORQUE                        | BLANK                                  | -                            |
| Y                 | -                             | RELAY (NOTE 2)                         | RELAY                        |
| Z                 | POSITION                      | DRIVE                                  | -                            |

**INSTRUMENT LEGEND**

NOTE:

- THE FOLLOWING ABBREVIATIONS FOR ANALYSIS, READING OR FUNCTION DESCRIPTIONS ARE TO BE PLACED OUTSIDE THE LOWER RIGHT QUADRANT OF THE BALLOON SYMBOL.

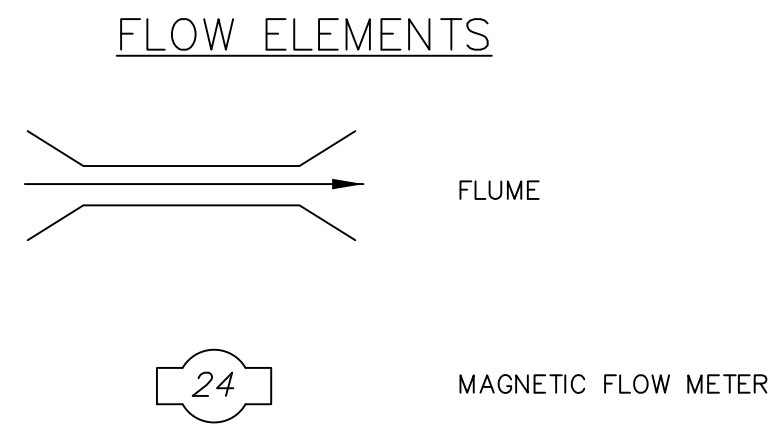
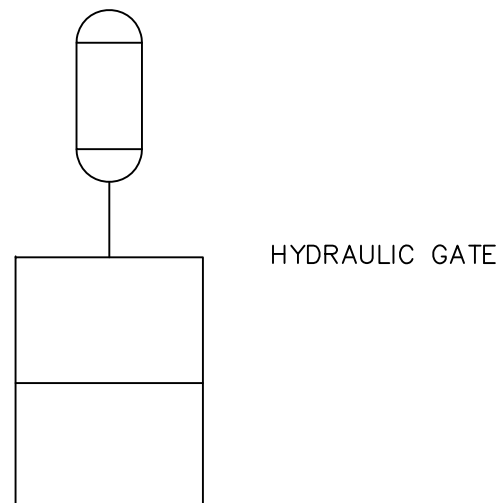
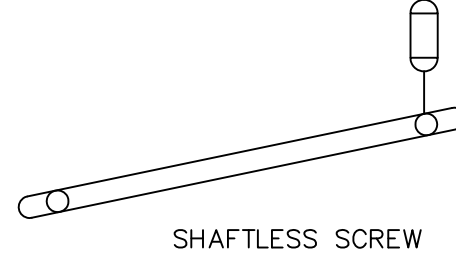
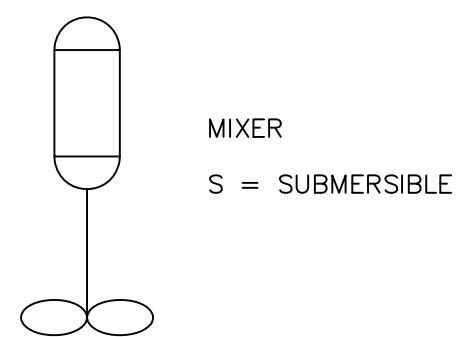
| ABBREVIATION    | DESCRIPTIONS                  |
|-----------------|-------------------------------|
| NH <sub>3</sub> | AMMONIA                       |
| Cal             | CALIBRATION                   |
| Cl <sub>2</sub> | CHLORINE                      |
| Cond            | CONDUCTIVITY                  |
| DO              | DISSOLVED OXYGEN              |
| ORP             | OXIDATION REDUCTION POTENTIAL |
| OP              | ORTHOPHOSPHATES               |
| pH              | ACID/ALKALINE SCALE LOG       |
| TOC             | TOTAL ORGANIC CARBON          |
| TQ              | TORQUE                        |
| TC              | TOTAL CARBON                  |
| TB              | TURBIDITY                     |
| D               | DENSITY                       |

- TYPICAL SYMBOLS FOR INPUT/OUTPUT SIGNAL SEQUENCES ARE TO BE PLACED OUTSIDE THE UPPER RIGHT QUADRANT OF THE BALLOON SYMBOL.

| ABBREVIATION | DESCRIPTIONS             |
|--------------|--------------------------|
| A            | ANALOG                   |
| D            | DIGITAL                  |
| E            | VOLTAGE                  |
| H            | HYDRAULIC                |
| I            | CURRENT (ELECTRICAL)     |
| O            | ELECTROMAGNETIC OR SONIC |
| P            | PNEUMATIC                |
| R            | RESISTANCE (ELECTRICAL)  |
| ±            | ADDER - SUBTRACTOR       |
| V            | SQUARE ROOT EXTRACTOR    |

- INSTRUMENT DESIGNATIONS SHOWN ON FLOW DIAGRAMS REPRESENT INSTRUMENT FUNCTION, NOT INSTRUMENT HARDWARE.
- ALL INSTRUMENT IDENTIFICATIONS ARE BASED UPON "INSTRUMENT SOCIETY OF AMERICA STANDARDS. FOR FURTHER INFORMATION REFER TO ISA STANDARD.

**SPECIAL EQUIPMENT**



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AJP  
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APPROVED BY  
WAD

| NO. | DESCRIPTIONS   | DATE | BY  | APP'D |
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WWTP UPGRADE 2000  
P & ID LEGEND

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|------------------|
| JOB NO.<br>E9031 |
| DATE<br>08/13/01 |
| SCALE<br>NONE    |
| SHEET<br>P1      |