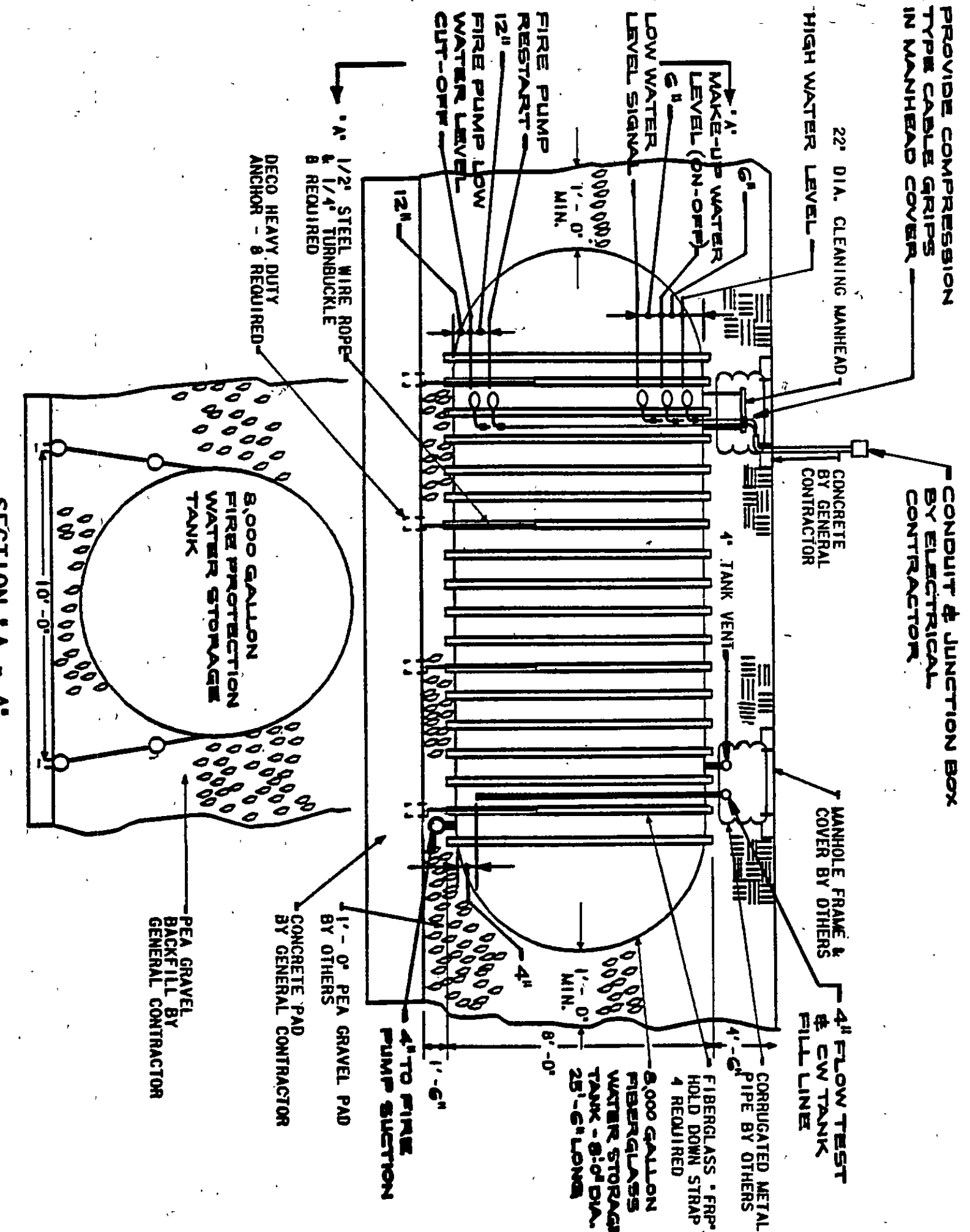


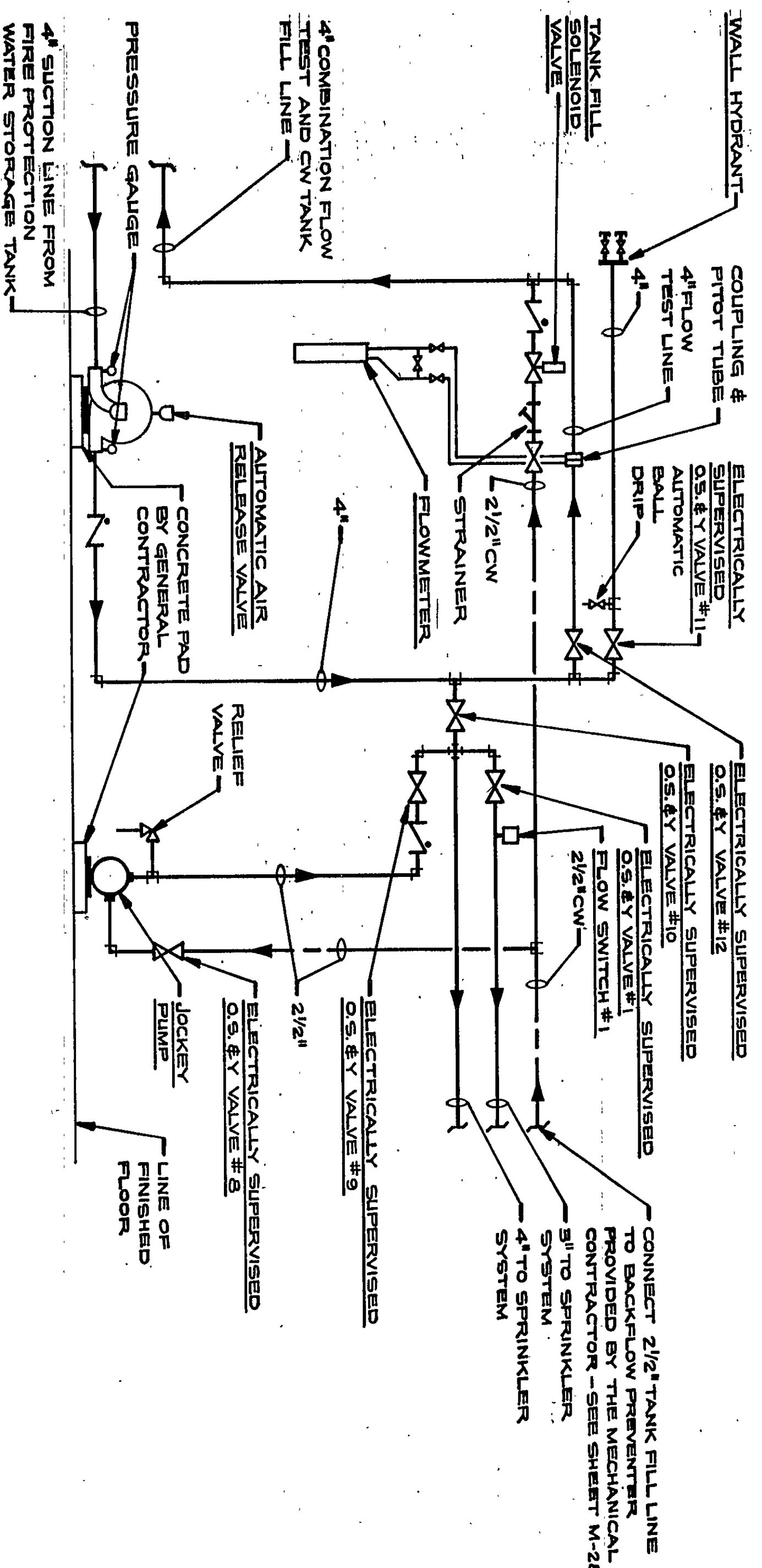
# GYMNASIUM, WRESTLING, & WEIGHTS ROOM SPRINKLER INSTALLATION DETAIL

NO SCALE



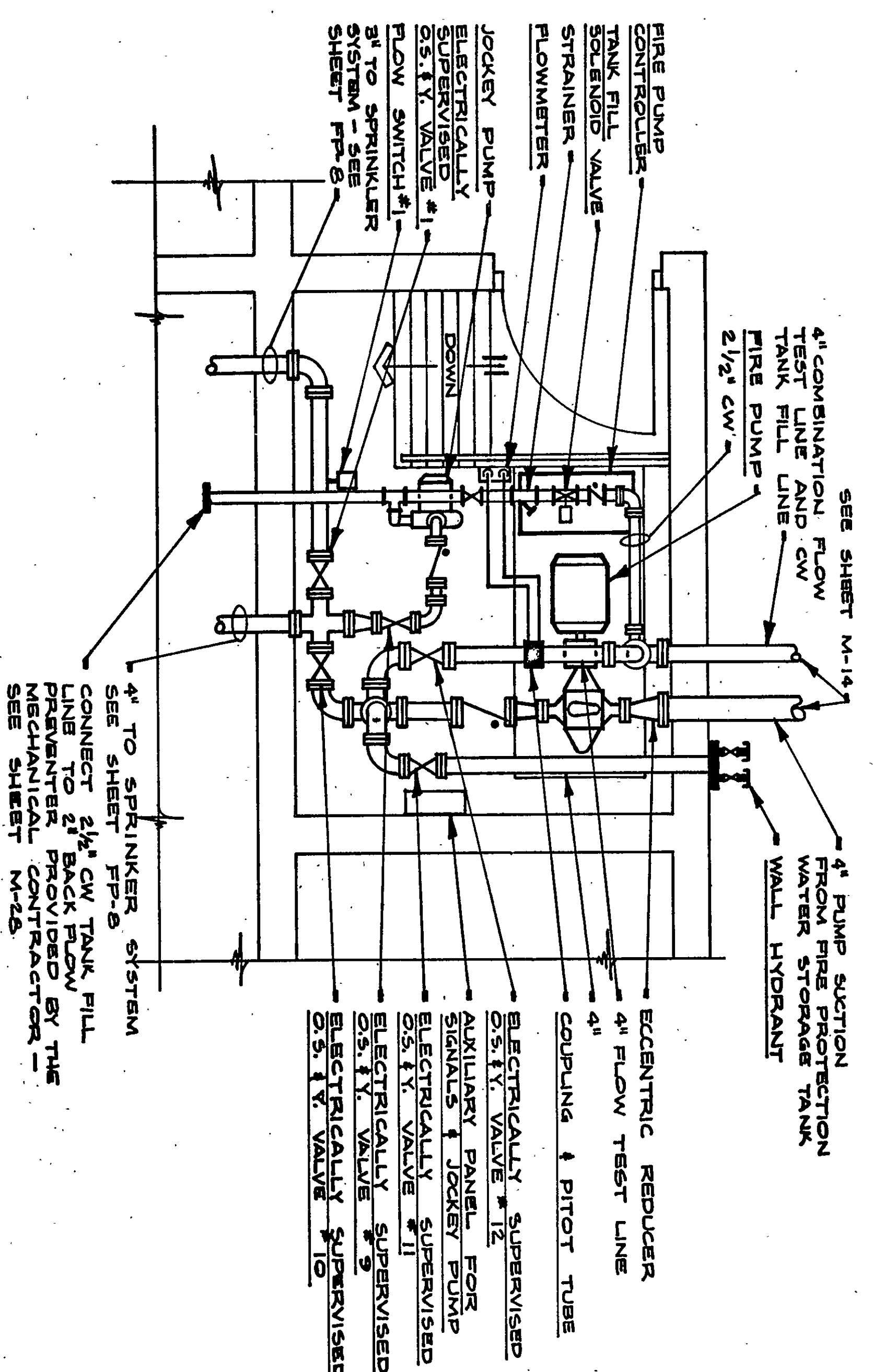
# FIRE PROTECTION WATER STORAGE TANK DETAIL

NO SCALE



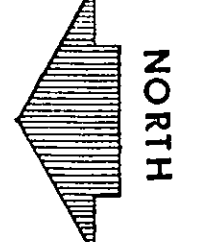
# SPRINKLER SYSTEM FIRE PUMP PIPING DIAGRAM

NO SCALE



# FIRE SPRINKLER SYSTEM PUMP ROOM LAYOUT

SCALE: 1/2" = 1'-0"



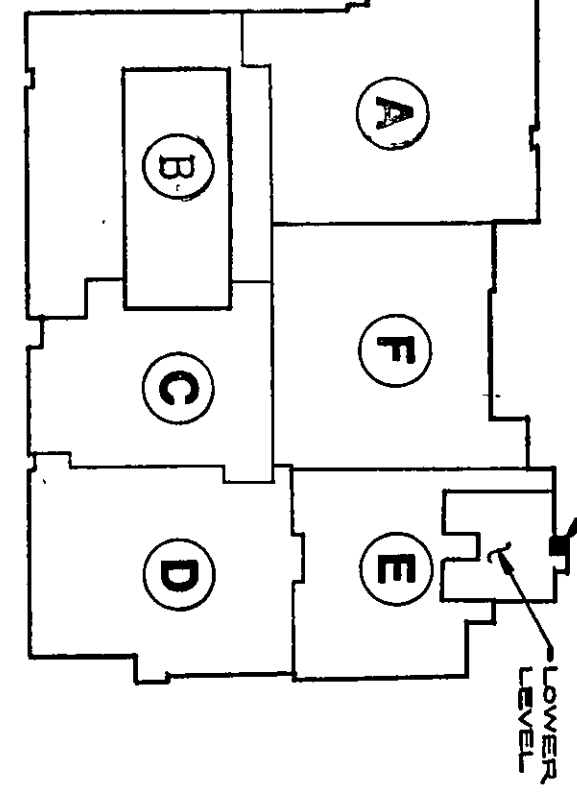
GENERAL NOTES (APPLY TO ALL SHEETS)  
THE FIRE PROTECTION CONTRACTOR SHALL CUT ALL HOLES  
THRU EXISTING AND NEW WALLS REQUIRED BY HIM TO IN-  
STALL HIS WORK.

## FIRE SPRINKLER CALCULATIONS

- DESIGN DATA:  
1. OCCUPANCY CLASSIFICATION = LIGHT HAZARD  
2. TOTAL WATER REQUIRED = 250 GPM X 30 MINUTES = 7500 GALLONS  
3. FIRE FIGHTING REQUIRED:  
A. CEMENT LINED CAST IRON C = 140  
B. SUCCTION PIPE FRICTION LOSS  
(1) FITTINGS (15) 90 ELBS., (1) 45 EL.,  
(2) GATE VALVE  
TOTAL LENGTH 140 FEET  
(3) FRICTION LOSS  
(PSI/FOOT) =  $\frac{(140 \times 1.43)}{100} = 1.00$  PSI/FOOT  
(4) TOTAL SUCCTION LOSS = .013 PSI/FOOT  
B. RESIDUAL PRESSURE REQUIRED  
AT HIGHEST SPRINKLER = 15.00 PSI  
C. STATIC HEAD  
(1) ELEVATION OF HIGHEST SPRINKLER ON = 117.33'  
(2) STORAGE TANK ELEVATION DIFFERENCE = 30.33'  
TOTAL STATIC HEAD = 147.66 PSI  
IN PSI = 30.33' X .433 PSI/FOOT = 13.23 PSI  
D. PUMP REQUIRED TO PUMP 250 GPM AT 29.53 PSI

## FIRE SPRINKLER SYSTEM PUMP ROOM EQUIPMENT SCHEDULE

- FIRE PUMP, JOCKEY PUMP AND CONTROLS:  
FIRE PUMP SHALL BE PERFECTION PUMP COMPANY, U.L. LISTED  
HORIZONTAL, SELF-CASE TYPE, MODEL #2008 HAVING THE  
FOLLOWING DATA: 15 H.P., 460 VOLTS, 3 PHASE, 60  
HERTZ, 3550 RPM.  
JOCKEY PUMP SHALL BE WESTINGHOUSE MODEL #5612, OR AN  
APPROVED EQUAL HAVING THE CAPACITY TO PUMP 5 GPM  
AT 105 PSI. MOTOR DATA: 1/2 H.P., 115 VOLTS, 1  
PHASE, 60 HERTZ, 3450 RPM.  
PROVIDE LIMITED SERVICE, U.L. LISTED FIRE PUMP CON-  
TROLS AND FUNCTIONS:  
(1) MAKE-UP WATER ON SIGNAL (LIGHT & SIGNAL)  
(2) HIGH LEVEL SIGNAL (LIGHT & SIGNAL)  
(3) LOW LEVEL SIGNAL (LIGHT & SIGNAL)  
(4) LOW LEVEL FIRE PUMP CUT-OFF AND SIGNAL (LIGHT & SIGNAL)  
(5) FIRE PUMP POWER FAILURE SIGNAL (LIGHT & SIGNAL)  
(6) JOCKEY PUMP ON SIGNAL (LIGHT)  
(7) JOCKEY PUMP OFF SIGNAL (LIGHT)  
(8) SWITCH SHALL BE PROVIDED WITH REMOTE ALARM SIGNAL  
AND SHALL INCLUDE JOCKEY PUMP CONTROL.  
FIRE PUMP CONTROLS SHALL BE COMPRISED OF A MERGID SWITCH  
SHALL IN A DOUBLE WALL ELASTIC FLOOR MOUNTED OPERA-  
TION. SWITCHES SHALL BE PROVIDED WITH COMPRESSION TYPE CABLE  
GRIPS FOR FLOOR LEVEL ADJUSTMENT AND SHALL BE SUITABLE  
FOR 115 VOLT, 1 PHASE OPERATION.  
A PROPERLY SIZED AUTOMATIC TRANSFER SWITCH SHALL BE  
PROVIDED FOR EMERGENCY POWER OPERATION. ALL CONTROLS  
SHALL MEET THE REQUIREMENTS OF THE LATEST ISSUE OF  
NFPA #13, NFPA #20 AND ANY ADDITIONAL NFPA STANDARDS  
WHICH MAY APPLY.  
TANK FILL SOLANOID VALVE:  
TANK FILL SOLANOID VALVE, SIZE 2-1/2" FOR NORMALLY CLOSED  
115 VOLT, 50/60 HERTZ, 1/2" NPT. PROVIDE 75 GPM MINIMUM FLOW.  
WALL HYDRANT:  
EASTMAN BRASS MANUFACTURING COMPANY MODEL #103 CHROME  
PLATED BRASS FLUSH TYPE WALL HYDRANT CONNECTION LESS  
WALL OUTLET. WALL HYDRANT CHROME PLATED HOSE GATE  
VALVES WITH CAPS AND CHAINS. VALVE OUTLETS SHALL  
HAVE MALE HOSE THREADS OF THE TYPE REQUIRED BY THE  
LOCAL FIRE DEPARTMENT.  
FLOWMETER:  
PERFECTION TYPE ANR 73 "ANGLE EYE" PIVOT TUBE TYPE.  
FLOWMETER SHALL BE RATED FOR 250 GPM OPERATION.



# PUMP ROOM KEY PLAN

NO SCALE



James A. Partridge

86-PP-57