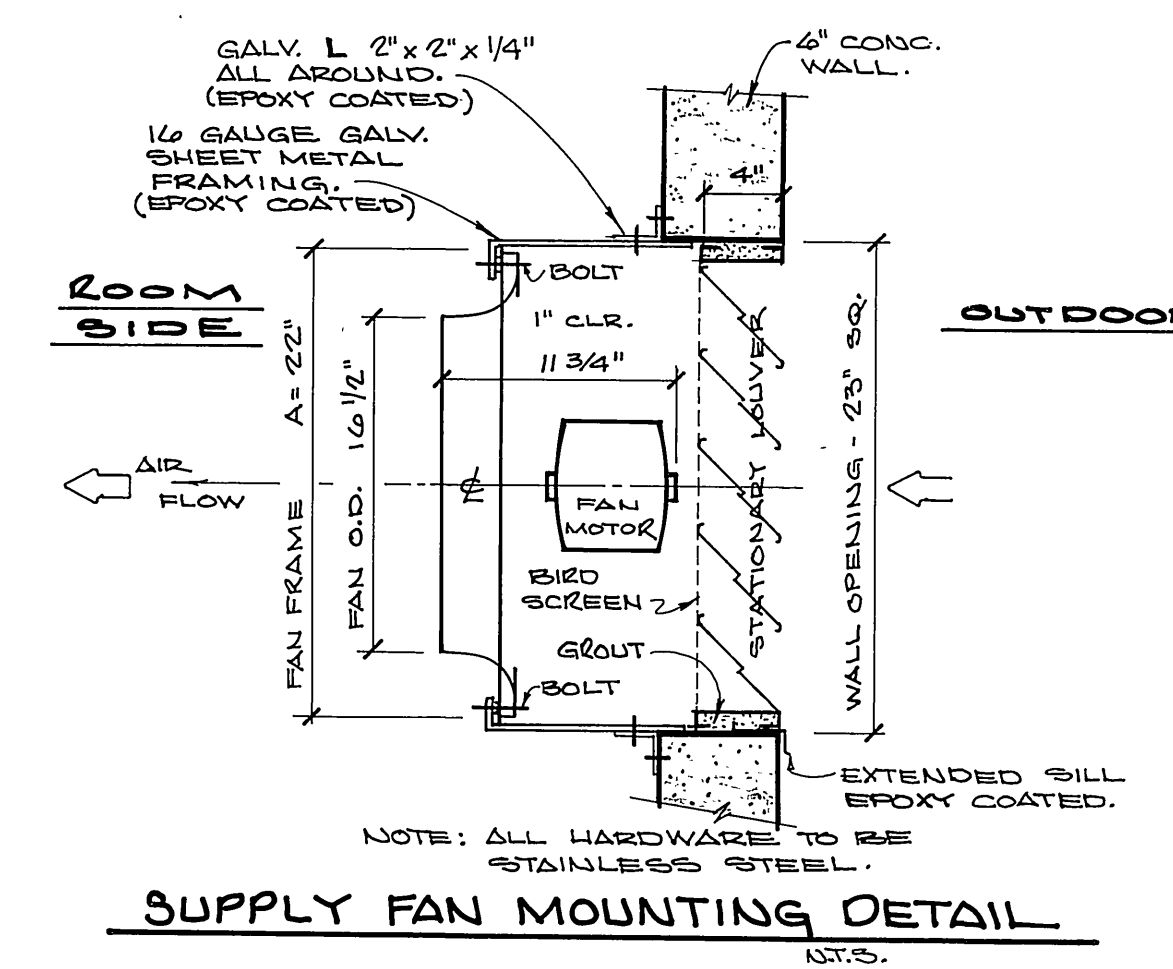
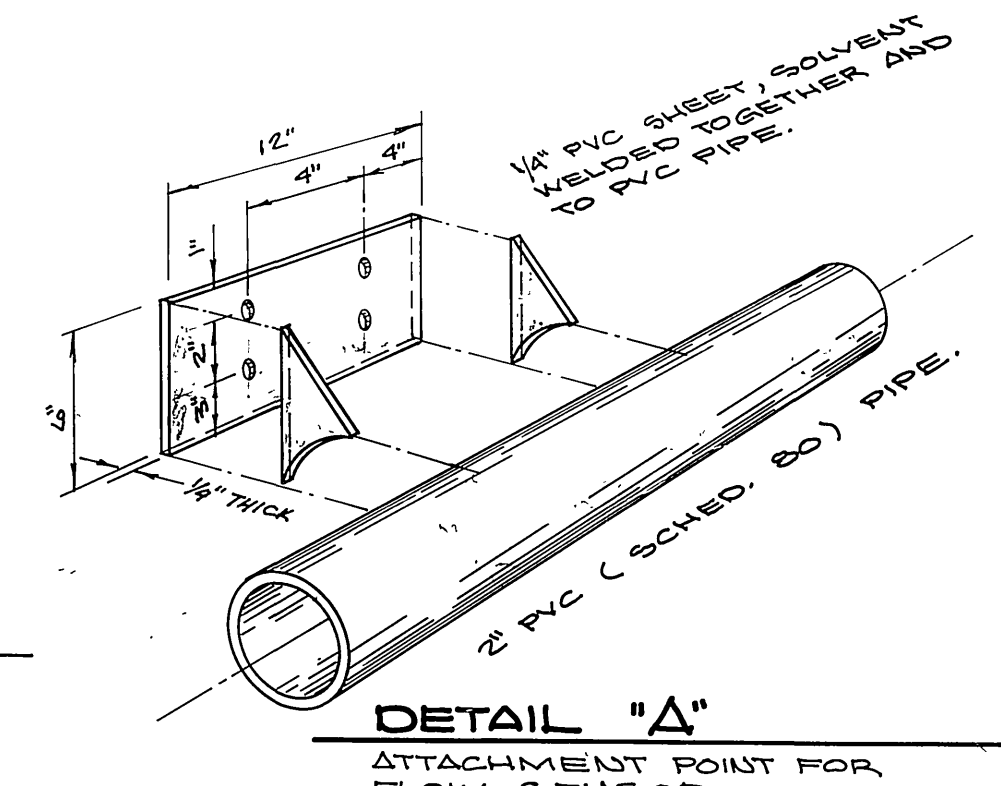


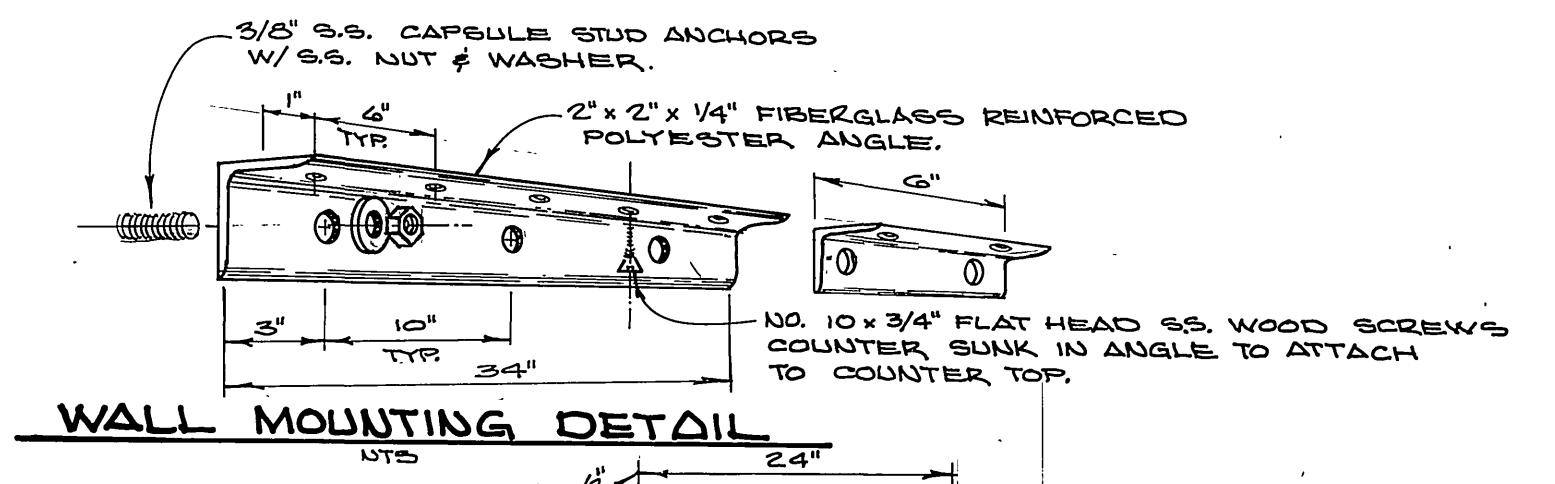
**ELEVATIONS**  
SCALE: 1"=4'



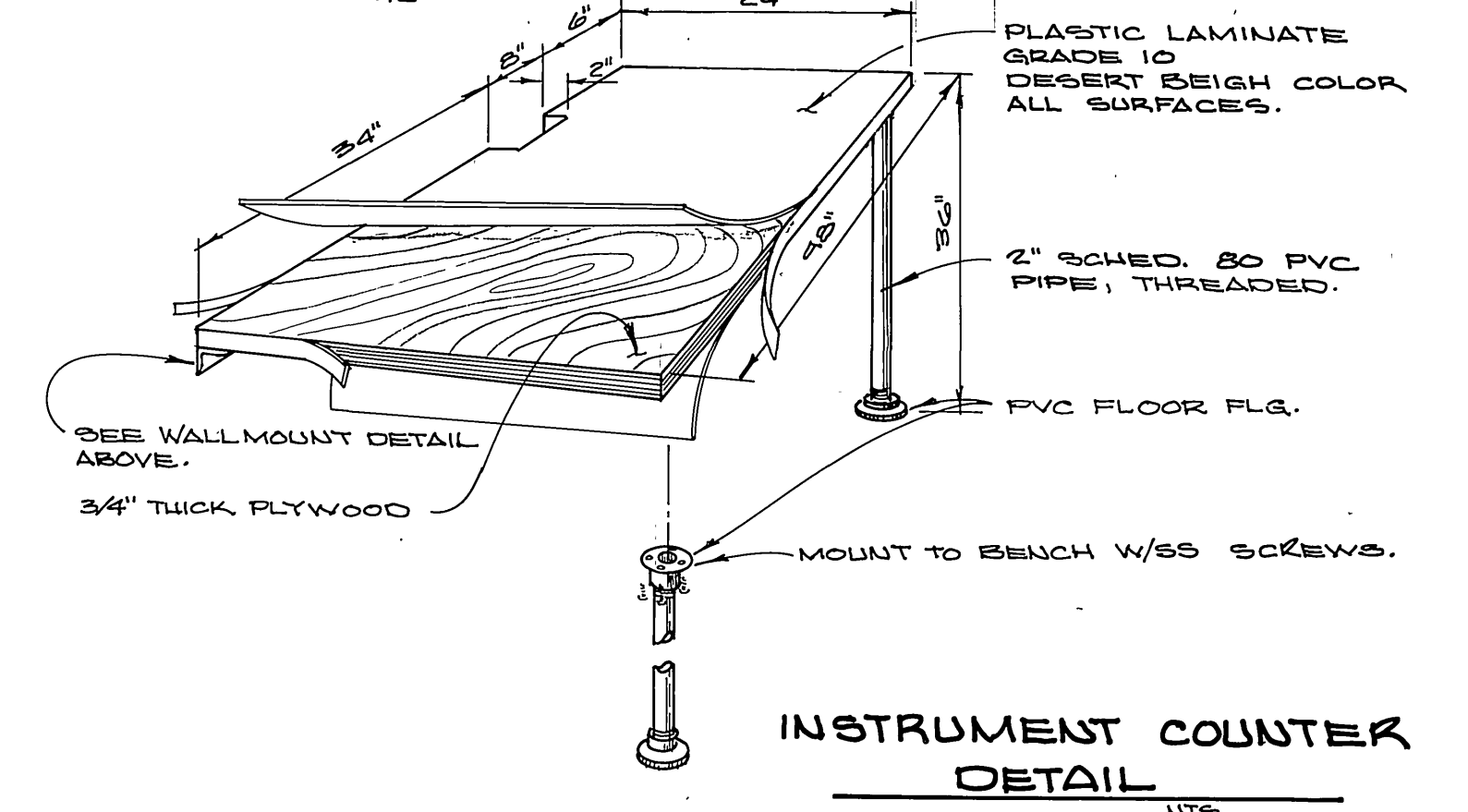
**SUPPLY FAN MOUNTING DETAIL**  
N.T.S.



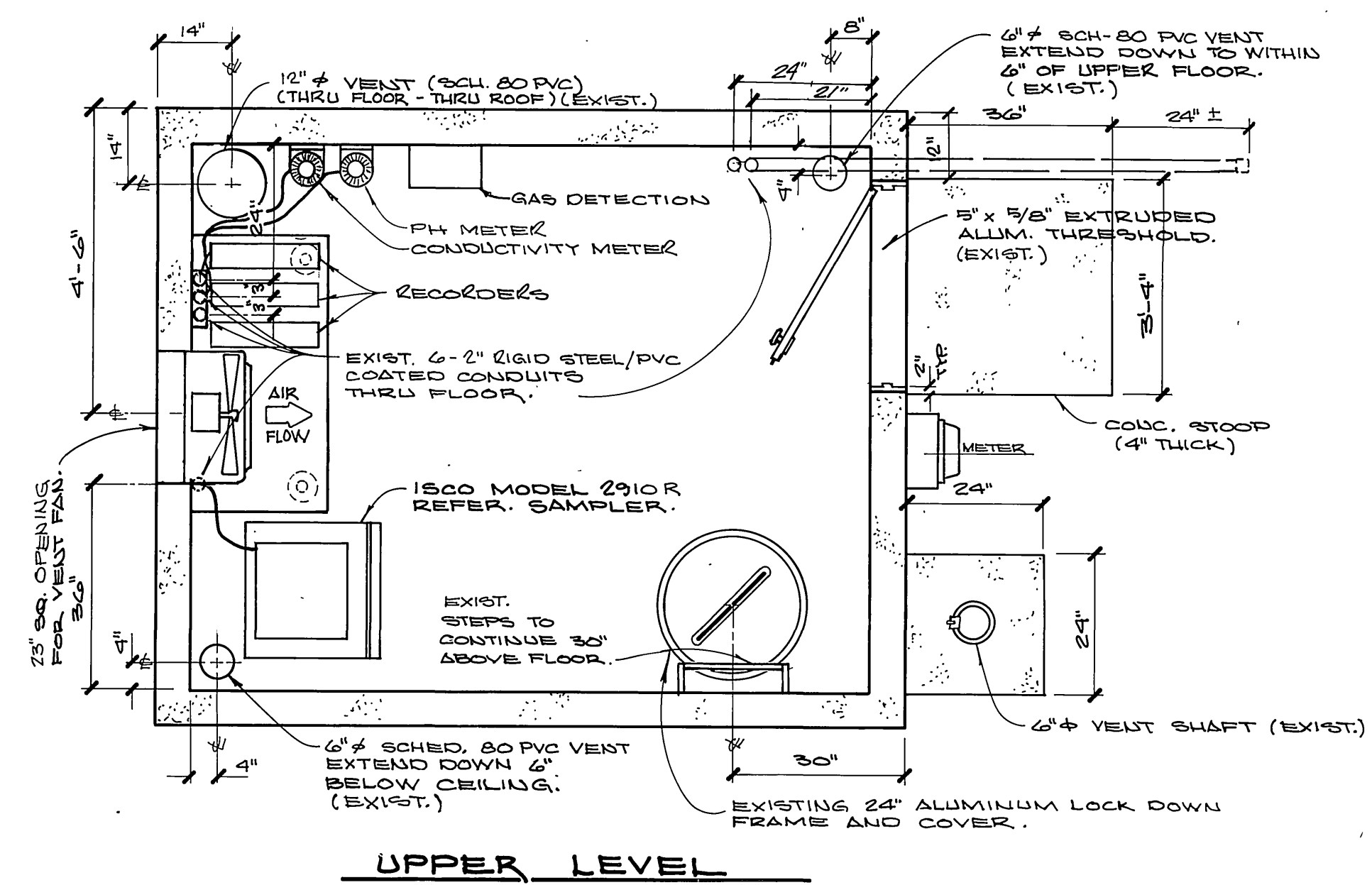
**DETAIL "A"**  
ATTACHMENT POINT FOR FLOW SENSOR.



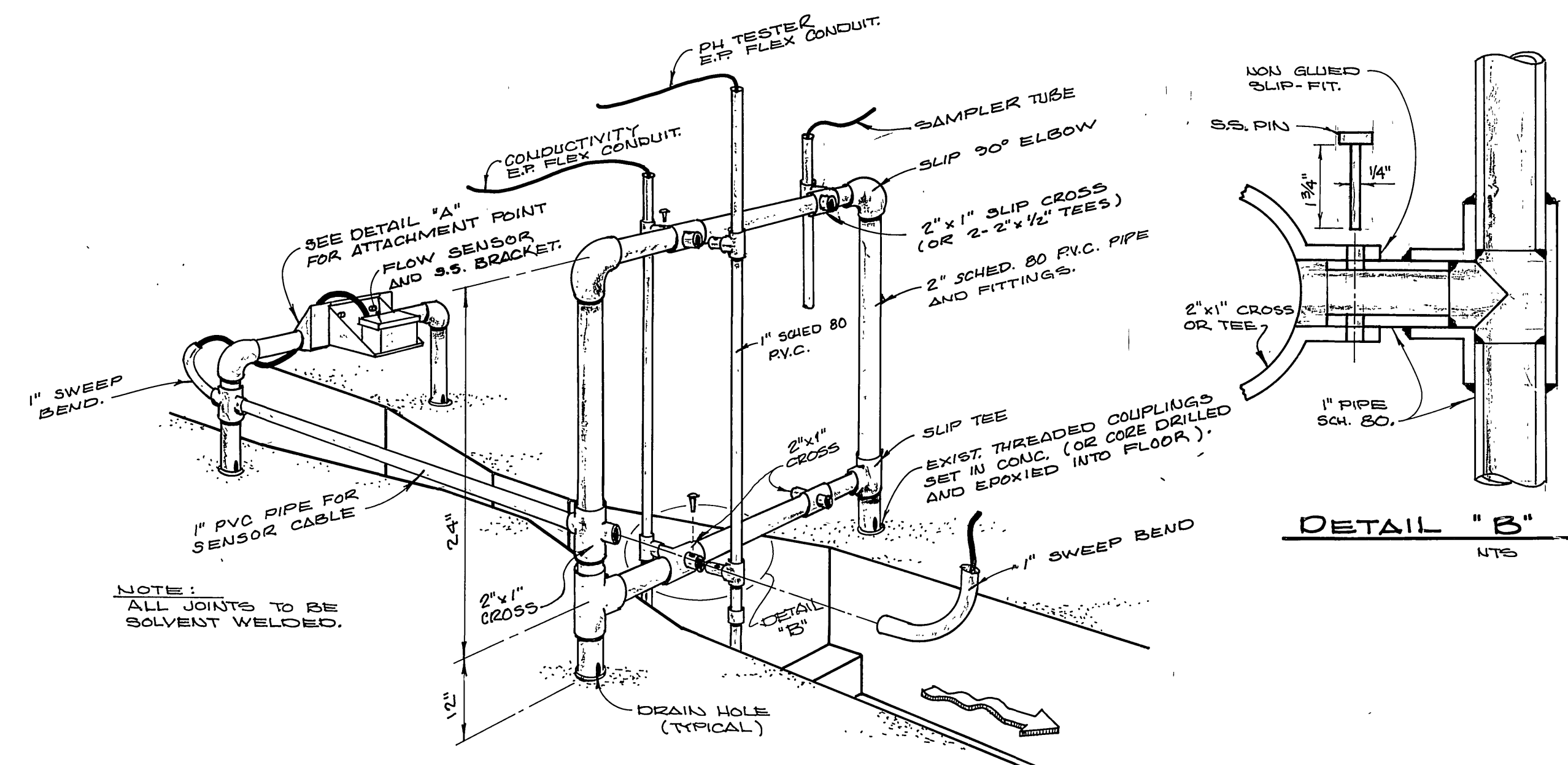
**WALL MOUNTING DETAIL**  
N.T.S.



**INSTRUMENT COUNTER DETAIL**  
N.T.S.



**UPPER LEVEL**



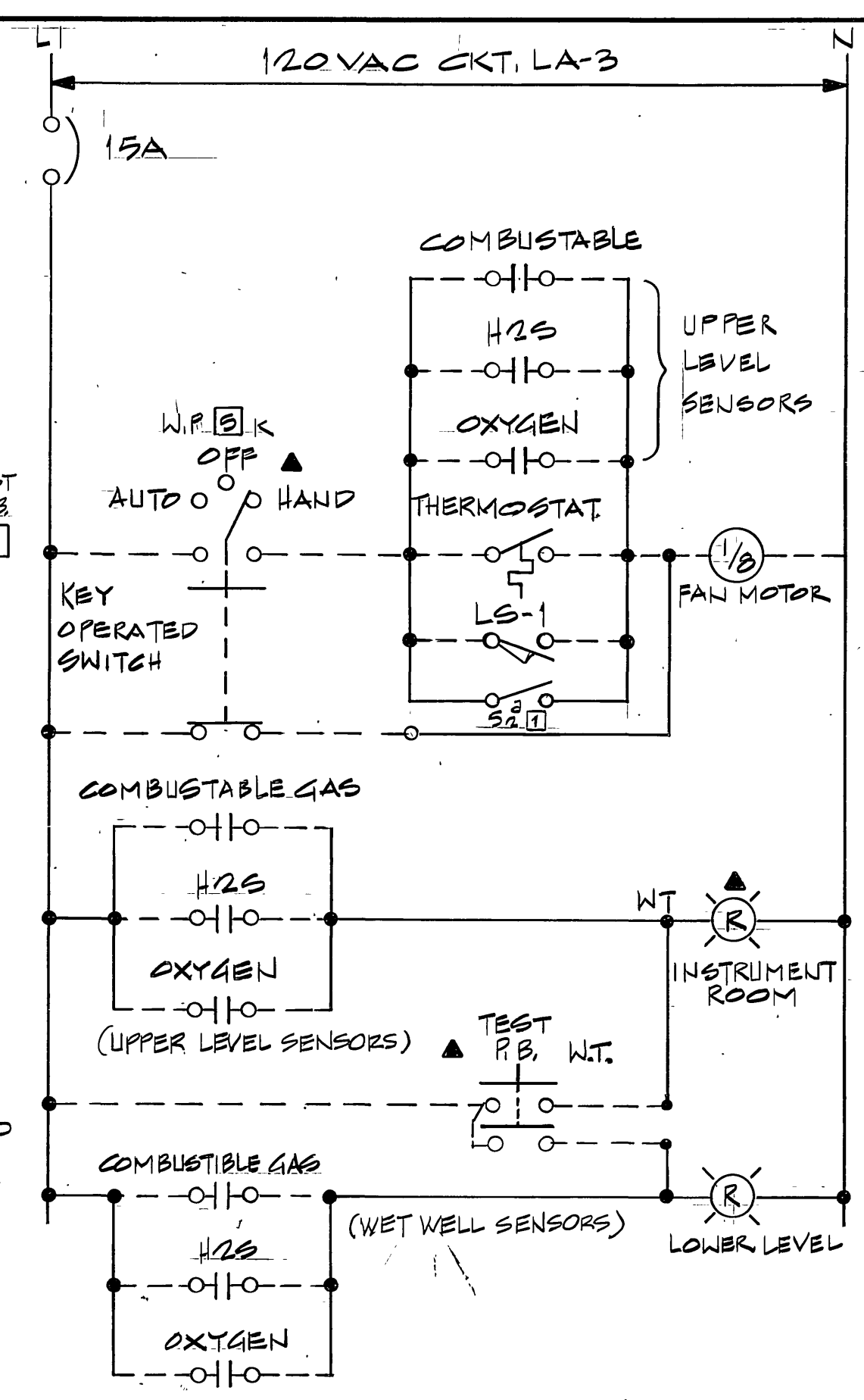
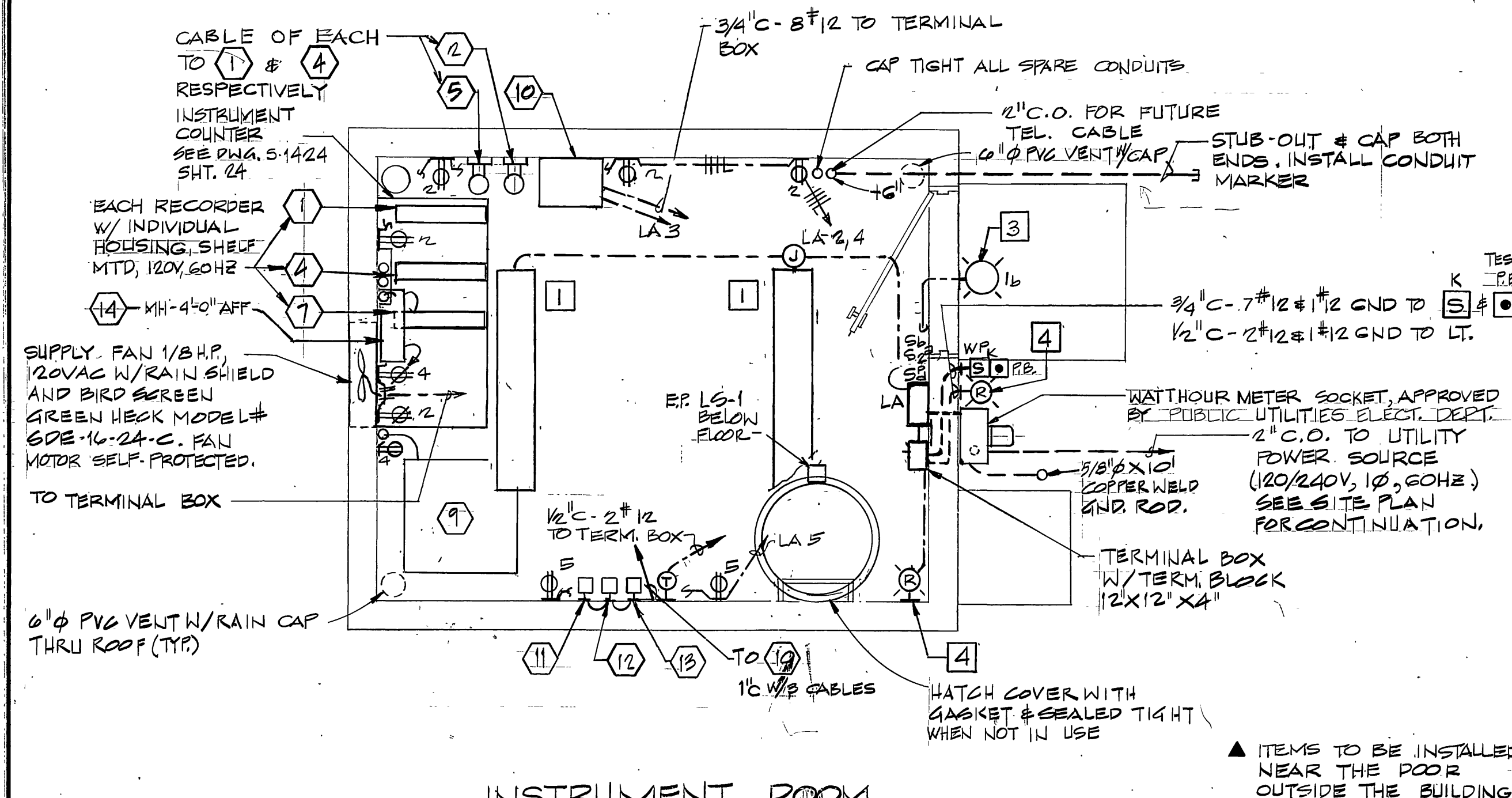
**DETAIL "B"**  
N.T.S.



|  |   |  |  |   |  |
|--|---|--|--|---|--|
| CITY OF RIVERSIDE<br>SEWERAGE SYSTEMS      | ALBERT A. WEBB ASSOCIATES<br>CIVIL ENGINEERS<br>RIVERSIDE, CALIFORNIA | APPROVED BY <i>Wallace H. Frank</i> DATE 2/13/87<br>R.E. No. 26979 | CITY OF RIVERSIDE, CALIFORNIA<br>PUBLIC WORKS DEPARTMENT | CANYON SPRINGS<br>TRUNK SEWER<br>MONITORING STATION | INDEX/CD   |
|  |   |  |  |   | ACCOUNT No. 32-577-563<br>DRAWING NUMBER<br><b>S-1424A</b> |
| APPROVED BY <i>al 2/13</i>                 | DATE 4-1-87   | DESIGNED BY <i>WF</i>  | DRAWN BY <i>RP</i>                                       | CHECKED BY <i>WF</i>                                | SHEET 1 of 2   |
| W.G. 85-55 FOR CITY OF RIVERSIDE F.B. 1045 |   |  | DATE 4-2-87  |   | SCALE: N.T.S.  |

**1**

**LOWER LEVEL**



- LEGEND**
- CONDUIT RUN EXPOSED GALVANIZED RIGID STEEL P.V.C. COATED U.O.N. RUN ABOVE FLOOR SLAB/GRADE INDICATES EQUIPMENT GND CONDUCTOR
  - HASH MARKS INDICATE NO OF CONDUCTORS. NO MARKS INDICATE 3#12.
  - LA-2-4 HOMERUN TO PANEL "LA" CIRCUITS 2-4 W/ SHARED NEUTRAL.
  - SP SINGLE POLE SWITCH, "P" INDICATES SWITCH W/ RED PILOT LIGHT.
  - WP SK SELECTOR SWITCH, WEATHERPROOF
  - DUPLEX RECEPTACLE, NEMA 5-20R HASH MARK INDICATE MOUNTED ABOVE SHELF.
  - RT ROOM THERMOSTAT, HEAVY DUTY 10 AMPERE CONTACT, MINIMUM
  - S<sub>2</sub> TWO-POLE SWITCH FOR LIGHT & FAN MOTOR.
  - LS-1 PUSHBUTTON 10A, 120V, 2-SECTION WATER-TIGHT WITH ONE-INCH RED SIGN TO READ - "TEST GAS WARNING LIGHTS BEFORE ENTERING"
  - LIMIT SWITCH, HEAVY DUTY, E.P., 10A, 120VAC, INSTALL UNDER THE FLOOR SO THAT WHEN HATCH COVER IS OPEN, SWITCH WILL CLOSE TO START INTAKE FAN.

- NOTES:**
- THE ROOM BELOW GRADE IS CLASSIFIED AS CLASS I, DIVISION I WHILE THE ROOM AT GRADE LEVEL IS NON HAZARDOUS. THE EQUIPMENT AND WIRING TO BE INSTALLED SHALL BE APPROVED FOR THE CLASS OF LOCATION AND THE PROPERTIES OF THE GASES PRESENT.
  - ALL CONDUIT PASSING BETWEEN THE TWO ROOMS SHALL BE PROVIDED WITH APPROVED SEALING FITTINGS AND SEALING COMPOUND. INSTALL SEALING FITTINGS IN THE UPPER ROOM.
  - CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUIT CONDITIONS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH AND INSTALL THE WATTHOUR METER SOCKET AND ACCESSORIES APPROVED BY THE SERVING UTILITY COMPANY.
  - PROVIDE A SIGN UNDER THE RED LIGHT WITH RED LETTERS, A MINIMUM OF ONE INCH HIGH, TO READ: "DO NOT ENTER, HAZARDOUS GAS PRESENT WHEN LIGHT IS ON."
  - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND SENSORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND LEAVE THE EQUIPMENT IN GOOD OPERATING CONDITION SATISFACTORY TO THE OWNER.

**ELECTRICAL SPECIFICATIONS**

**SCOPE**

THE DRAWINGS AND THESE SPECIFICATIONS DESCRIBE THE SYSTEMS. FURNISH ALL MATERIALS AND DO ALL WORK REQUIRED BY THE DRAWINGS AND THESE SPECIFICATIONS UNLESS SPECIFICALLY NOTED TO THE CONTRARY. FURNISH AND INSTALL ALL NEW MATERIAL AND EQUIPMENT AS REQUIRED TO PROVIDE A COMPLETE OPERATING SYSTEM.

**PERMITS**

OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS AND INSPECTION FEES. ALL PERMITS REQUIRED FROM THE CITY OF RIVERSIDE WILL BE AT NO COST TO THE CONTRACTOR.

**REGULATIONS**

PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, CALIFORNIA ADMINISTRATION CODE, TITLE 8, AND LOCAL CODES AND REGULATIONS. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND THE MANUFACTURER'S RECOMMENDATIONS.

**AS-BUILT**

PROVIDE RECORD DRAWINGS TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT.

**GUARANTEE**

CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS FOR A MINIMUM PERIOD OF ONE YEAR.

**SHOP DRAWINGS**

SUBMIT SHOP DRAWINGS AND MATERIAL LIST PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTANCE TESTING LABORATORY.

**SWITCHES AND RECEPTACLES**

PROVIDE SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE AS MANUFACTURED BY SIERRA OR APPROVED EQUAL.

**BOXES**

ALL BOXES SHALL BE CAST METAL AS MANUFACTURED BY GROUSE-HINDS OR EQUAL.

**CONDUITS**

CONDUITS SHALL BE RIGID STEEL GALVANIZED AND RIGID STEEL GALVANIZED WITH PVC COATING WHERE INDICATED ON THE DRAWINGS, INCLUDING ALL ASSOCIATED FITTINGS. PVC CONDUIT, SCHEDULE 80 SHALL BE UTILIZED WHERE INDICATED.

**WIRE**

ALL WIRE SHALL BE NEW, COPPER, 600 VOLT INSULATION, UNLESS OTHERWISE SUPPLIED WITH THE EQUIPMENT (LOW VOLTAGE WIRING). CONDUCTORS SHALL BE THIN/THIN INSULATION, #12 AWG MINIMUM SIZE. CONTROL CIRCUITS SHALL BE #14 AWG STRANDED WIRE.

**ACCESSORIES**

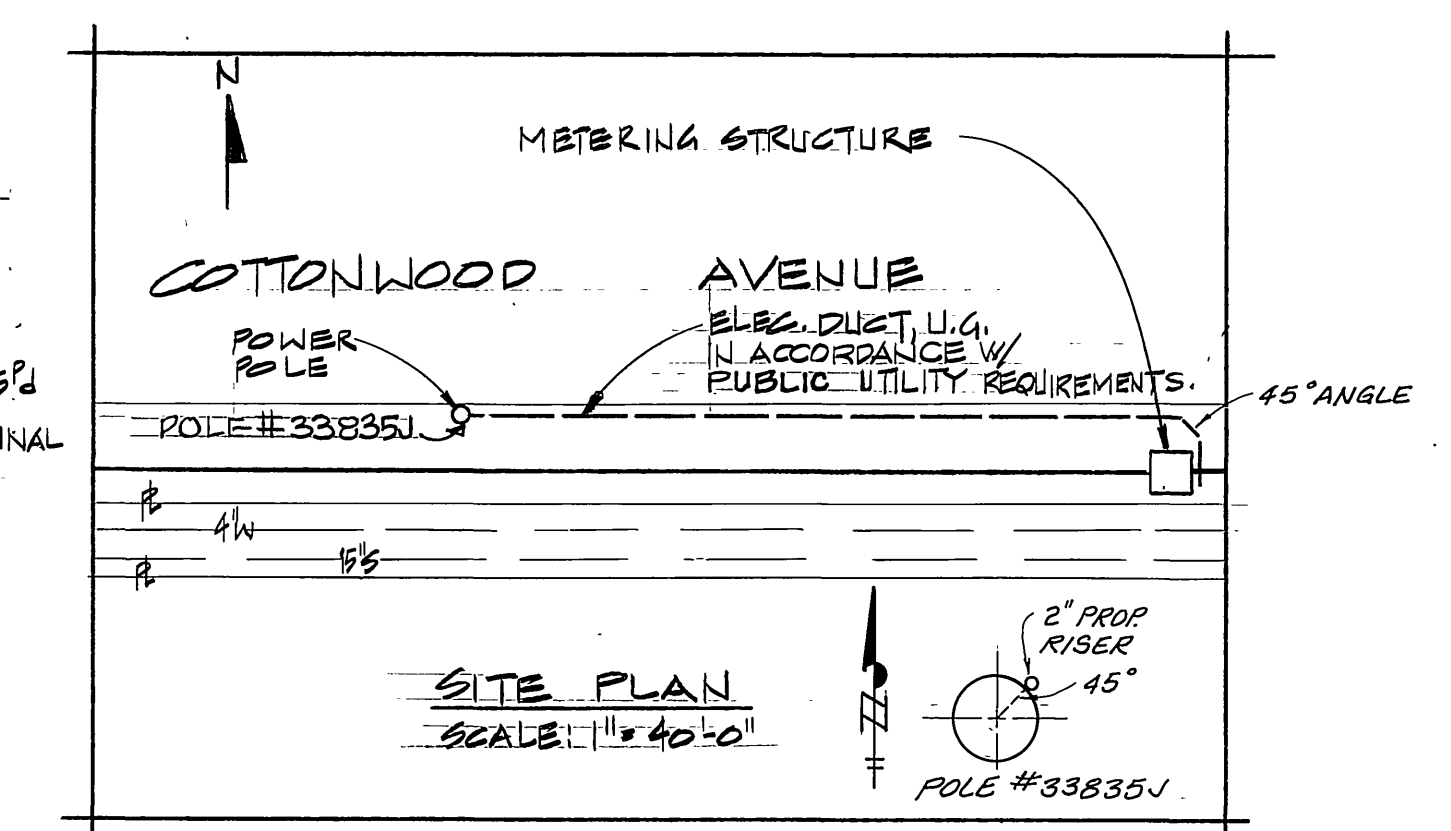
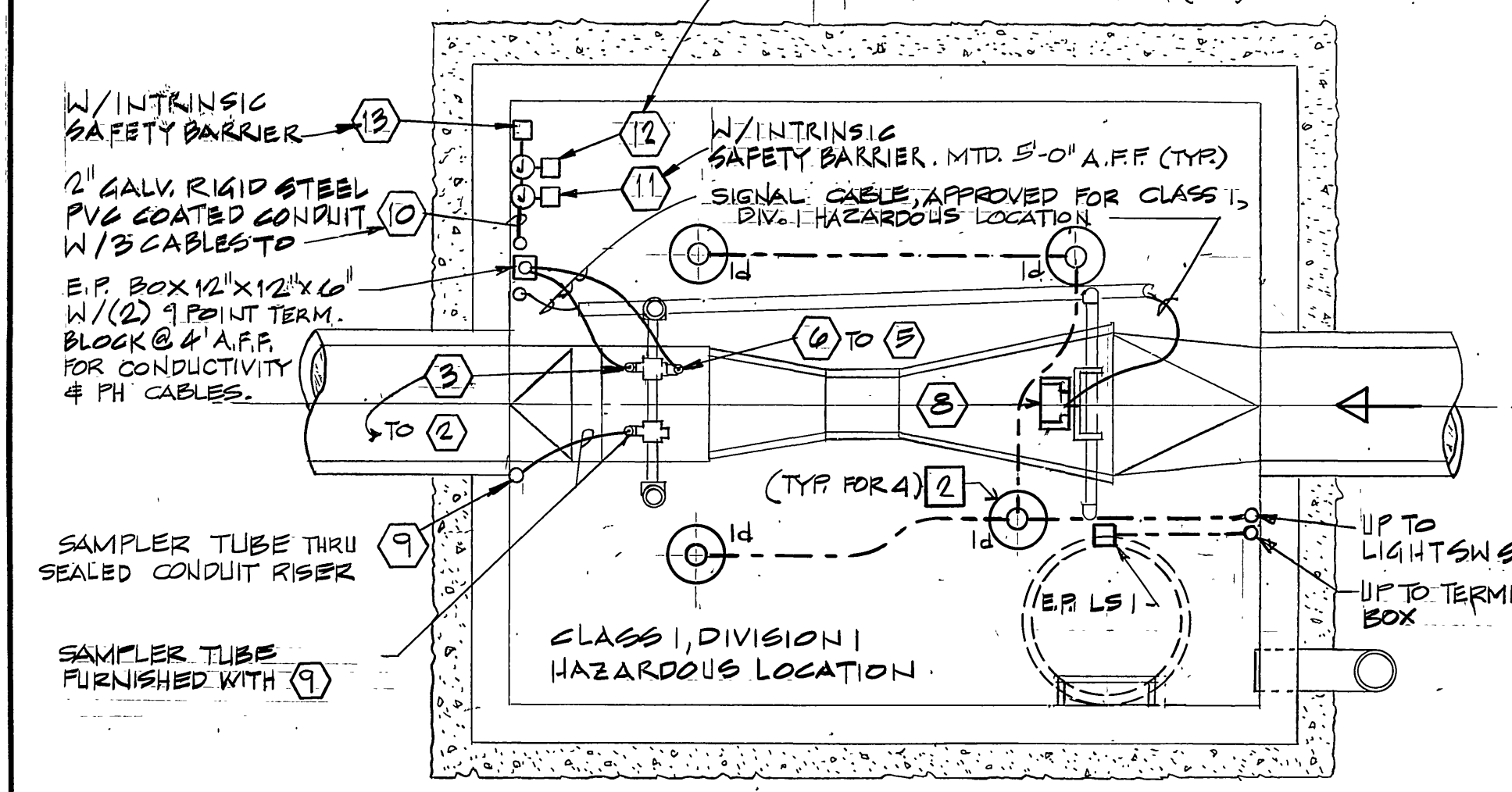
FURNISH AND INSTALL ALL HANGERS, SUPPORTS, CLAMPS, ETC. AS REQUIRED TO PROVIDE A NEAT INSTALLATION.

**TESTING AND ADJUSTMENTS**

PERFORM ALL NECESSARY TESTS REQUIRED TO ASCERTAIN THAT THE ELECTRICAL SYSTEM HAS BEEN PROPERLY INSTALLED, THAT THE POWER SUPPLY TO EACH ITEM OF EQUIPMENT IS CORRECT AND, THAT THE SYSTEM IS FREE OF GROUNDS, GROUND FAULTS, AND OPEN CIRCUITS, AND OTHER TESTS AND ADJUSTMENTS AS MAY BE REQUIRED FOR THE COMPLETION OF THE ELECTRICAL SYSTEM AND THE INSTRUMENTATION AND ALARM SYSTEMS.

**RESEALING**

ANY EXISTING STATION SURFACES DAMAGED (INCLUDES MOUNTING HOLES) DUE TO THE INSTALLATION OF EQUIPMENT, CONDUITS, BOXES, AND/OR SWITCHES SHALL BE RESEALED TO THE SATISFACTION OF THE ENGINEER TO PREVENT DAMAGE FROM THE HAZARDOUS GASES.



**EQUIPMENT SCHEDULE**

| ITEM NUMBER | DESCRIPTION   | MANUFACTURER/CATALOG NUMBER  |
|-------------|---|--|
| 1           | PH indicating electronic recorder with integral power supply for transmitter, input signal 4-20 MADC, 1-5V or 0-10 VDC, single pen with 16-point terminal, accessories and enclosure, 120 VAC.  | FOXBORO Model No. 760-RNA-1A6T   |
| 2           | PH transmitter with indicating meter, 4-20 MADC output.   | FOXBORO Model No. 870 PH-70-P  |
| 3           | PH sensor with submersion adapter, electrode protective sleeve, accessories and 30 feet cable.  | FOXBORO Model No. 871PH-1A1A-3   |
| 4           | Conductivity indicating electronic recorder with integral power supply for transmitter, input signal 4-20 MADC, 1-5V or 0-10 VDC, single pen with 16-point terminal, accessories and enclosure, 120 VA.   | FOXBORO Model No. 760 RNA-1A6T   |
| 5           | Conductivity transmitter with indicating meter, 4-20 MADC output.   | FOXBORO Model No. 870EC-EV-16-D  |
| 6           | Electrodeless conductivity sensor complete with accessories, support material and 30 feet cable.  | FOXBORO Model No. 871EC-EV   |
| 7           | Flow rate indicating electronic recorder with integral power supply for transmitter input signal 4-20 MADC, 1-5V or 0-10 VDC, single pen with 16-point terminal, accessories and enclosure, 120 VAC.  | FOXBORO Model No. 760RNA-1A6T  |
| 8           | Ultrasonic level sensor complete with sampler control output signal card to serve as interface, mounting accessories and 30 feet signal cable.  | ISCO Model No. 2400 with optional accessories to be compatible with recorder.  |
| 9           | Refrigerated composite wastewater sampler. Sampling controlled by proportional w/ flow. 120 VAC   | ISCO Model No. 2910R   |
| 10          | Multi-channel gas detection system 6-point in NEMA 12 wall mounted cabinet for continuous monitoring 2 locations for hydrogen sulfide, combustible gas and oxygen deficiency with 3 spd relays each channel, alarm latch, self reset and readout, 4-20 MADC output. | GASTECH Model No. 72-0411 SETTINGS U.O.N. H <sub>2</sub> S - 10 PPM COMBUSTIBLE GAS - 20% OF LOWER EXPLOSIVE LEVEL. OXYGEN - 19.5% BY VOLUME |
| 11          | Hydrogen sulfide sensor, conduit mounted with 30 feet cable. 2 each   | GASTECH No. 72-2345  |
| 12          | Combustible gas sensor, conduit mounted with 30 feet cable, 2 each.   | GASTECH No. 72-2321  |
| 13          | Oxygen sensor, with 30 feet cable.  | GASTECH No. 72-2331 2 EACH   |
| 14          | OPEN CHANNEL FLOWMETER COMPATIBLE W/ (8) & PROPORTIONAL PAGING OF 4-20 MADC TO (7) COMPLETE W/ ACCESSORIES  | ISCO MODEL 2400 120VAC   |

**LIGHTING FIXTURE SCHEDULE**

| ITEM NO. | DESCRIPTION  | LAMP TYPE       | MANUFACTURER/CATALOG NO.                                    |
|----------|--|-----------------|---|
| 1        | FLUORESCENT LIGHTING FIXTURE VAPOR TIGHT, RAPID START BALLAST 120 VOLT   | (2) F40         | GROUSE-HINDS CAT. NO. NFW.4240                              |
| 2        | INCANDESCENT LIGHTING FIXTURE CEILING MOUNTED EXPLOSION-PROOF WITH GLOBE GUARD AND DOME REFLECTOR, 300W SIZE FIXTURE | PS 30 200W 120V | GROUSE-HINDS CAT. NO. EVXK                                  |
| 3        | INCANDESCENT, WEATHERPROOF LIGHTING FIXTURE WITH VANDAL AND TAMPER-PROOF SCREWS. WALL MOUNTED TYPE                   | PS 25 100W 120V | KENALL CAT. NO. 3737  |
| 4        | WEATHERPROOF INCANDESCENT WARNING FIXTURE WITH LEXAN FRESNEL RED LENS. WALL MOUNTED. 60/80 FLASHES PER MINUTE.       | 50 CP           | BENJAMINE ELECT. ELECT. MFG. CO. CATALOG NUMBER KL-3011-120 |

**PANEL "LA"**

| CIR. NO. | CIR. BRKR. | OUTLETS | REMARKS                   | WATTS |
|----------|------------|---------|---------------------------|-------|
| 1        | 20         | 7       | LIGHTS                    | 1080  |
| 2        | 20         | 5       | RECEPTACLES               | 900   |
| 3        | 15         | 1       | INTAKE FAN & GAS DETECTOR | 400   |
| 4        | 20         | 2       | RECEPTACLES               | 360   |
| 5        | 20         | 2       | SPACES                    | 300   |
| 6        |            |         | SPACES                    |       |
| 7        |            |         | SPACES                    |       |
| 8        |            |         | SPACES                    |       |
| 9        |            |         | SPACES                    |       |
| 10       |            |         | SPACES                    |       |
| 11       |            |         | SPACES                    |       |
| 12       |            |         | SPACES                    |       |

TOTAL WATTS - 3020 ••• TOTAL K. W. •••  
100 AMPERES @ 120/240 VOLTS • 1 PHASE • 60 CYCLES 3 W. S. N.  
COND. W/ # CABLES • LOC. W/ GND BUS  
MAIN 100A, 2P, CB. MOUNT - SURFACE BUS - 100A

⊖ - DENOTES CIRCUIT BREAKER HANDLE LOCKOUT DEVICE # LOCK-ON DEVICE

**NOTE**

FOR MULTI-CHANNEL GAS DETECTOR SYSTEM (10)  
CALL J. G. TUCKER & SONS, INC.  
PH. 818-967-2791  
850 EAST EDNA PLACE  
Covina, CA. 91722-0409

(E1781)  
S. Matakovich & Wolfberg  
Mechanical/Electrical Consulting Engineers  
9650 FLAIR DRIVE • P.O. BOX 5288 • EL MONTE, CA 91734  
(818) 352-9289 • (213) 696-4288 • EL MONTE

**DESIGNED BY** P. NIEUNGCO  
**DRAWN BY** B. S.  
**CHECKED BY** A. BARBER  
**DATE** 4.2.87

**APPROVED BY:** William D. Barber  
**R.I.E. NO.** 11405  
**DATE** 4.2.87

**ALBERT A. WEBB ASSOCIATES**  
CIVIL AND HYDRAULIC ENGINEERS  
3788 MC GRAY STREET  
RIVERSIDE CALIFORNIA

**CITY OF RIVERSIDE, CALIFORNIA**  
PUBLIC WORKS DEPARTMENT

**CANYON SPRING'S TRUNK SEWER**  
MONITORING STATION ELECTRICAL PLAN

**SHEET** S-1424A  
OF 2 SHEETS  
DWG. NO. WO-85-55