

**5 DATA COMMUNICATION SYSTEM RISER DIAGRAM**  
N.T.S.

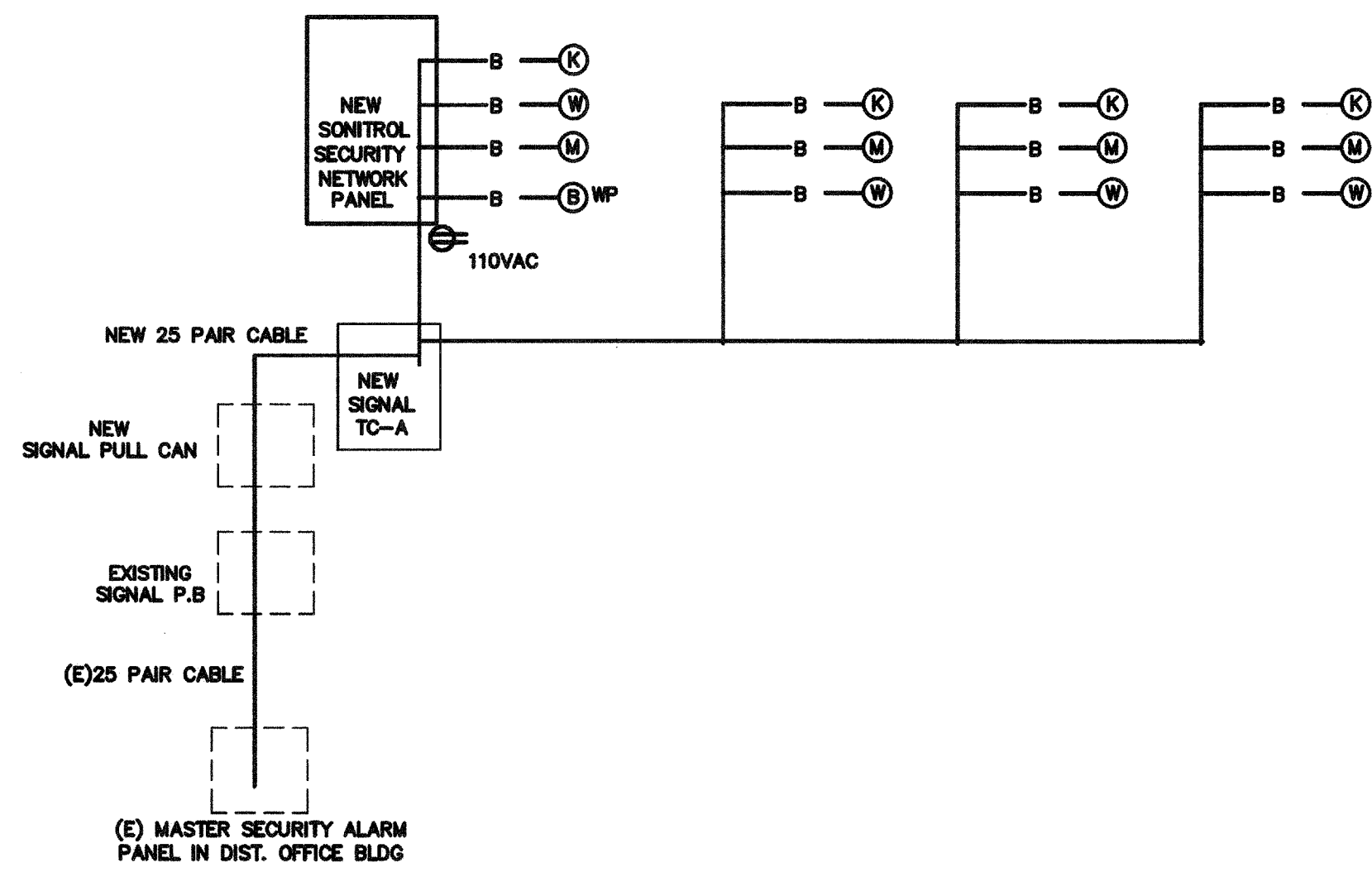
**FIBER OPTIC CABLE**  
THREE MULTIMODE PAIRS (SIX STRANDS) AND THREE SINGLE-MODE PAIRS (SIX STRANDS)  
OPTICAL CABLE COMPANY # DX 12/0650-6W3S8/1UC-6SYMC-YMD/900-QFNR OF EQUAL  
**CAT5E CABLE**  
SEN4P24-BL-BER-PV OR EQUAL

**CABLE TESTING**  
ALL FIBER OPTIC CABLE MUST BE TESTED TO SUPPORT 1000BASE-FX FULL DUPLEX STANDARDS,  
ALL CAT 5E CABLE MUST BE TESTED TO SUPPORT 100BASE-TX.  
TEST RESULTS ARE TO BE PROVIDED TO SCHOOL TECHNOLOGICAL SERVICES FOR REVIEW AND APPROVAL.

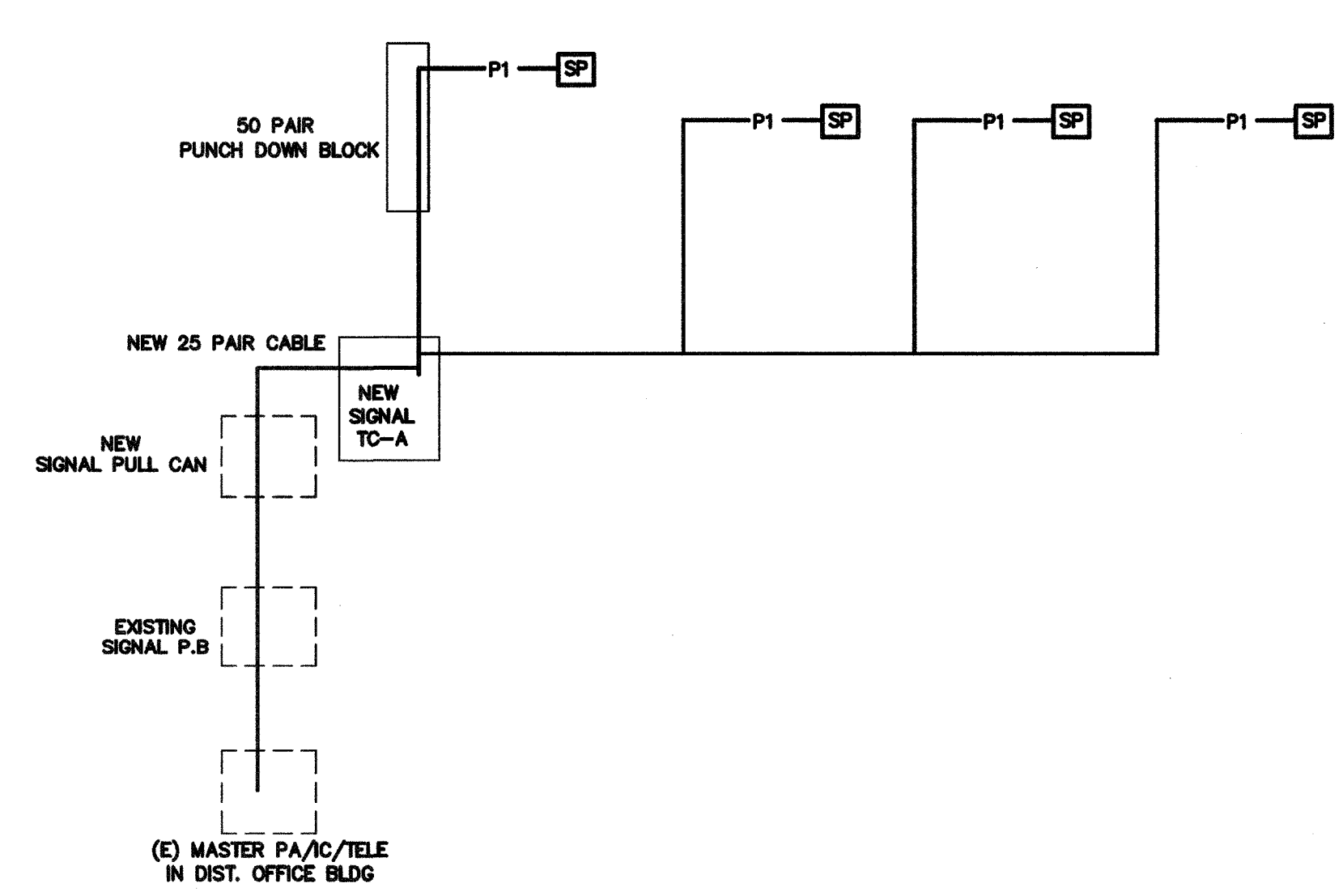
**IDF SWITCH EQUIPMENT**  
F/O CISCO WS-C2850-24 W/ WS-C5484 GBIC  
TP CISCO WS-C2850-24  
CABINETS SOUTH WESTERN DATA PRODUCT SWE 4000-18UBDLK OR EQUAL  
JACKS ALLEN TEL ATSS-16 OR EQUAL  
FACEPLATE ALLEN TEL ATSS-09 OR EQUAL  
PATCH PANEL ALLEN TEL ATPL-24 OR EQUAL

**LABELING IDENTIFICATION**  
ALL INSTALLED EQUIPMENT, CABLES, TERMINATIONS, ETC. WILL BE PERMANENTLY AND UNIQUELY MARKED. CABLES WILL BE MARKED USING A CONVENTION THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION. LAN TERMINATIONS WILL SIMILARLY BE MARKED TO UNIQUELY IDENTIFY THEM WHILE PROVIDING THE SOURCE AND DESTINATION OF CABLE. IDENTIFICATIONS MUST BE SUCH THAT THEY WILL NOT RUB OFF, FALL OFF, OR EASILY BREAK AWAY.

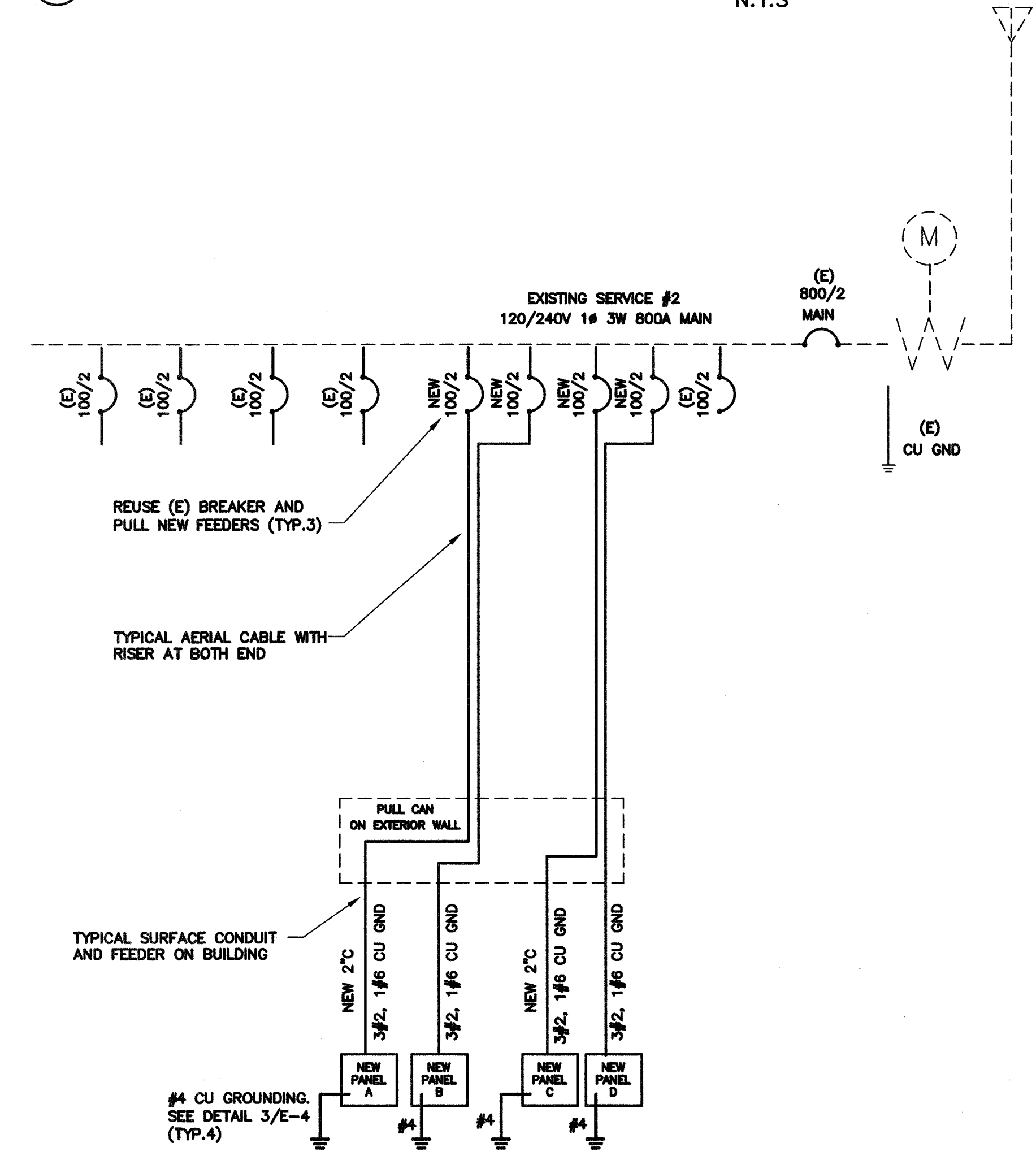
**DATA COMMUNICATION SYSTEM NOTES**  
1. CONTRACTOR TO PROVIDE ALL EQUIPMENT, PATCH CABLE AND ACCESSORY FOR A FULLY FUNCTIONAL SYSTEM.  
2. NEW DATA JACK WIRING CONFIGURATION MUST BE MATCHED EXISTING SYSTEM. FIELD VERIFY PRIOR TO INSTALLATION.  
3. ADMINISTRATIVE NODE TO BE RED IN COLOR WITH THE INSTRUCTIONAL NODE TO BE BLUE IN COLOR. NODE LOCATION MUST BE 12" WITHIN POWER RECEPTACLE AND FIELD VERIFY EXACT LOCATION WITH OWNER PROJECT COORDINATOR OR TECHNOLOGICAL SERVICES PERSONNEL PRIOR TO INSTALLATION.  
4. ALL EQUIPMENT DOCUMENTATION AND WARRANTY INFORMATION WILL BE PROVIDED TO OWNER TECHNOLOGICAL SERVICES. WARRANTY CARDS WILL BE PROVIDED TO VUSD TECHNOLOGICAL SERVICES FOR FILING WITH MANUFACTURERS UPON COMPLETION OF INSTALLATION.



**4 SECURITY ALARM SYSTEM RISER DIAGRAM**  
N.T.S.



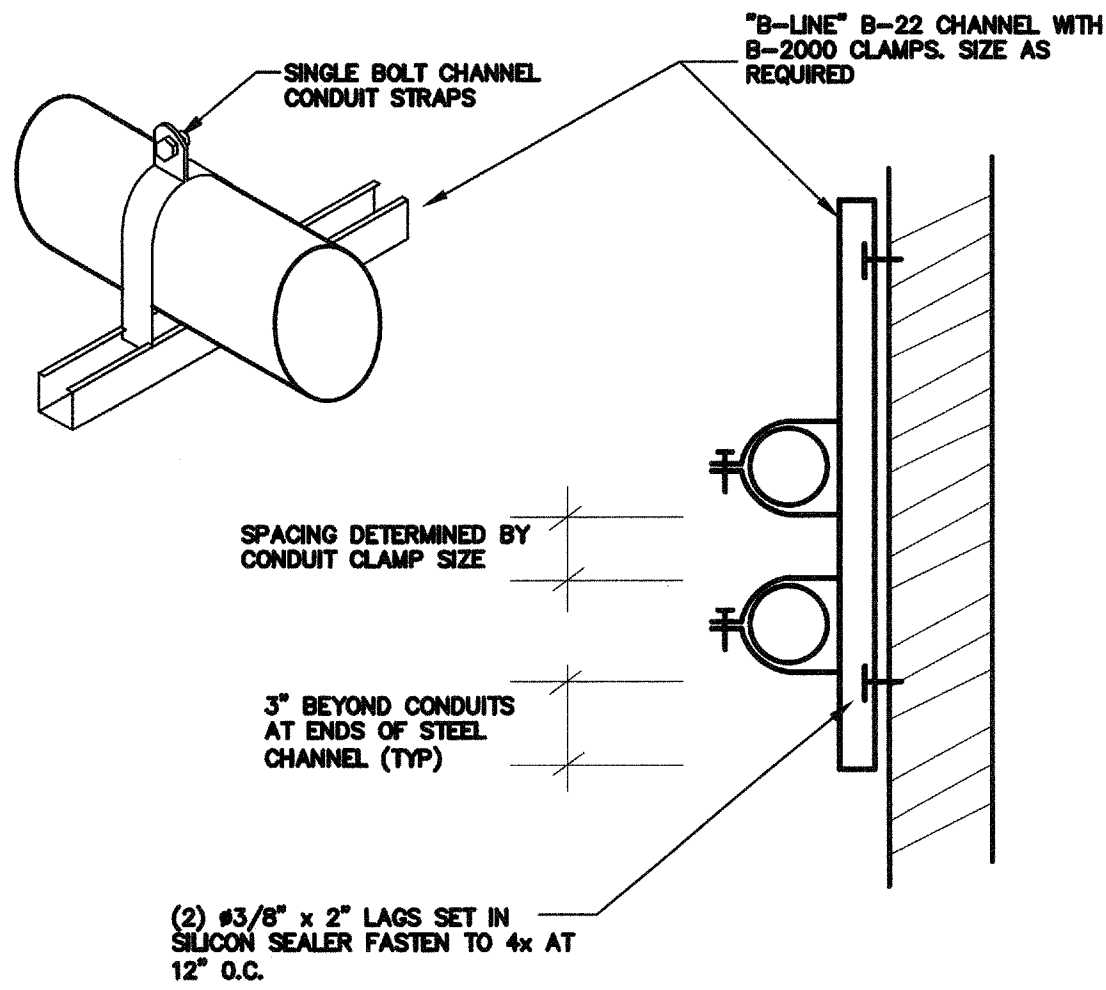
**2 PA/IC/TELE SYSTEM RISER DIAGRAM**  
N.T.S.



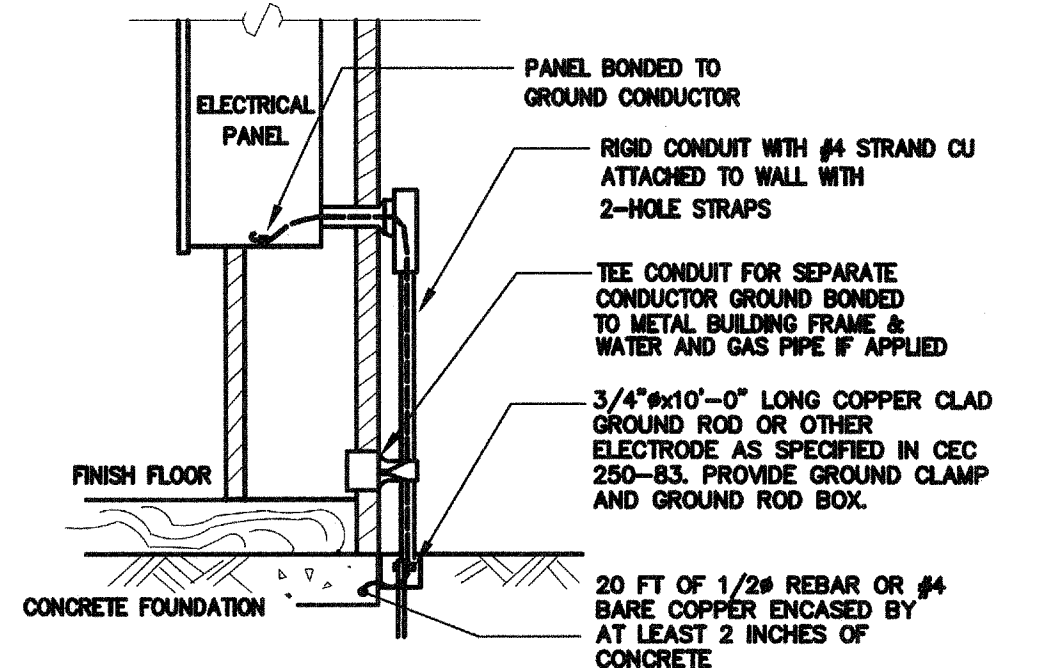
**1 SINGLE LINE DIAGRAM**  
N.T.S.

**NOTES:**

- PROVIDE NEW MATCHING BREAKERS, FEEDERS AND PANELS PER PLANS.
- ALL NEW CONDUCTOR SHALL BE 75°C THWN-2 COPPER IN CONDUIT. (AMPACITY FOR CONDUCTOR SELECTION MUST BE DETERMINED/DERATED BY THE ALLOWED TERMINATION RATINGS MARKED/APPROVED ON EACH DEVICES, MOTOR, APPLIANCE, XMR O.G.P.C. PANEL, ETC. CONDUCTORS INSTALLED IN U.G OR NET LOCATIONS SHALL BE MARKER 'W' PER 2010 NEC 110-14(C)(1).)
- ALL WIRING OVER 100 VOLT SHALL BE INSTALLED IN RACEWAY CONDUIT, EMT ABOVE GRADE, PVC SCH. 40 BELOW GRADE AND STEEL CONDUIT ON EXPOSE SURFACE BELOW 8' AFF. FOR PHYSICAL PROTECTION. MC CABLE WITH SEPARATE GROUND CONDUCTOR CAN BE USED IN CEILING AND CONCEAL IN WALL.
- STEEL BACK BOX SHALL BE PROVIDE FOR ALL NEW ELECTRICAL DEVICES SUCH AS SWITCH, OUTLET AND CONDUCTOR SPLICE.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY THE EXISTING SWITCHBOARD AND PANELS ARE INSTALL PER ONE LINE DIAGRAM PRIOR TO WORKING, AND REPORT TO ENGINEERS IF ANY DISCREPANCY ARE FOUND.



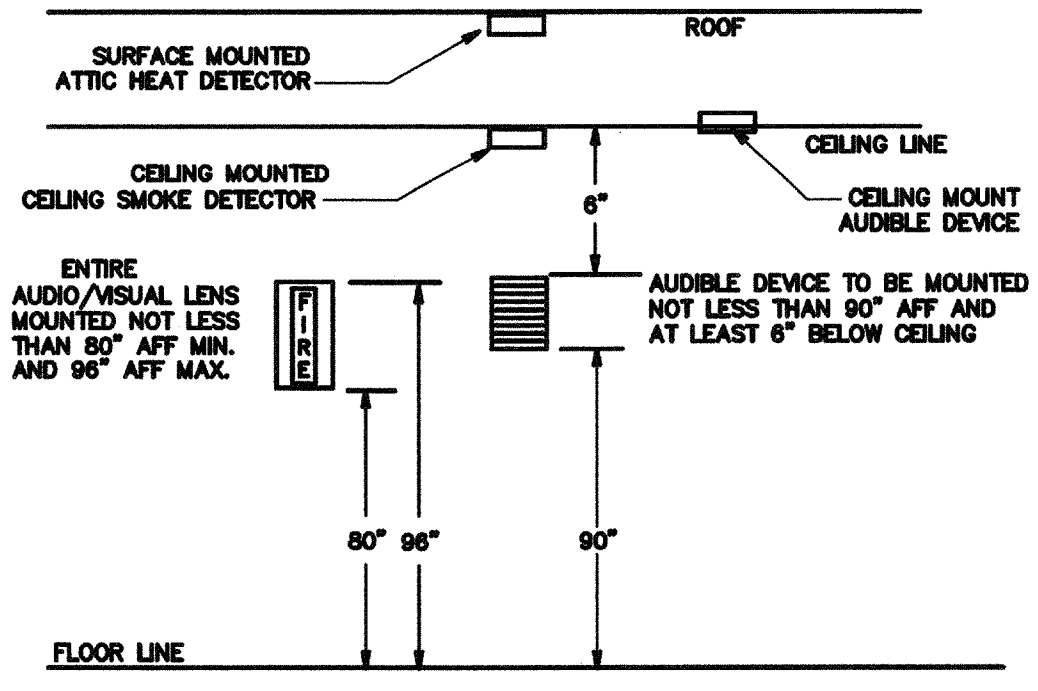
**6 CONDUIT SUPPORT DETAIL**  
N.T.S.



**3 GROUNDING DETAIL**  
N.T.S.

**NOTES:**

- SIZE OF CONDUCTORS SHALL COMPLY WITH NEC TABLE 250-66.
- BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL AND TO METAL BUILDING FRAME PER NEC 250-50. IN ADDITION TO THE DETAIL SHOWN ABOVE BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10 FT. IN SOIL IF AVAILABLE (NEC 250-50, 250-82).
- ALL MADE OF METAL FRAME BUILDINGS SHALL BE ELECTRICALLY BONDED TOGETHER, BOND TO HAND RAIL AND WATER PIPE IF APPLIED. (BOLTING ONLY IS NOT ACCEPTABLE BONDING).
- CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEED 25 OHMS, INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (NEC 250-84).
- FIELD INSPECTOR SHALL WITNESS GROUNDING TEST.



**5 TYPICAL FIRE ALARM DEVICES MT'D DETAIL**  
N.T.S.

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3801 BRAVE AVE., BAKERSFIELD, CA 93309

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