ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
S	DASHED SYMBOL INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO BE REMOVED.
$	FINE-LINED SYMBOL INDICATES EXISTING FIXTURE, OUTLET, DEVICE OR EQUIPMENT TO REMAIN.
—EX—	EXISTING CONDUIT TO REMAIN.
—R—	EXISTING CONDUIT TO BE REMOVED IF IN AN ACCESSIBLE AREA OR TO BE ABANDONED IF IN AN INACCESSIBLE AREA.
R	EXISTING LIGHT FIXTURE TO BE REMOVED AND RELOCATED.
R	NEW LOCATION OF RELOCATED LIGHT FIXTURE.
A / 1a	INDICATES FIXTURE TYPE. SEE FIXTURE SCHEDULE FOR LAMP, WATTAGE, AND MOUNTING INFORMATION. TYPICAL FOR ROOM INDICATED, UNLESS OTHERWISE NOTED.
1a	INDICATES CONTROLLING SWITCH LEG.
	DENOTES BRANCH CIRCUIT NUMBER SUPPLYING FIXTURE.
	RECESSED MOUNTED FLUORESCENT LIGHTING FIXTURE.
	SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE.
	FLUORESCENT STRIP LIGHTING FIXTURE.
S_a	SINGLE POLE, SINGLE THROW TOGGLE SWITCH, MOUNTED AT +45" AT CENTER OF BOX U.O.N. SUBSCRIPT INDICATES CONTROLLING SWITCH LEG.
S^T	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION.
(OS)	OCCUPANCY SENSOR OMNIDIRECTIONAL, CEILING MOUNTED.
(OS)	COMBINATION OCCUPANCY SENSOR/WALL SWITCH, WALL MOUNTED AT +45" TO CENTER OF BOX U.O.N.
	DUPLEX RECEPTACLE, MOUNTED AT +18" TO CENTER OF BOX U.O.N.
	DUPLEX RECEPTACLE, WITH GFI PROTECTION, MOUNTED AT +18" TO CENTER OF BOX U.O.N.
	DOUBLE DUPLEX RECEPTACLE, MOUNTED AT +18" TO CENTER OF BOX U.O.N.
1	8"X8"X4" DEEP NEMA 1 PULLBOX WITH SCREW COVER. COMPLETE WITH DUPLEX RECEPTACLE MOUNTED WITHIN FOR CLASSROOM AV SPEAKER TRANSFORMER.
IR	INTRUSION SYSTEM CEILING MOUNTED INFRARED DEVICE "DMP DX-360".
IR	INTRUSION SYSTEM MOUNTED TO WALL INFRARED DEVICE "DMP DX-60".
	FLUSH MOUNTED PANELBOARD.
	SURFACE MOUNTED PANELBOARD.
	SURFACE MOUNTED CABINET, AS NOTED.
	FLUSH MOUNTED CABINET, AS NOTED.
N	NON-FUSED DISCONNECT SWITCH. SIZE AS NOTED. (NFDS)
	FUSED DISCONNECT SWITCH, SIZE AS NOTED. (FDS)
J	JUNCTION BOX. SIZED PER CEC, U.O.N.
	MOTOR CONNECTION.
AC 2	MECHANICAL EQUIPMENT REFERENCE.
	RELAY
	CONDUIT CONCEALED IN WALL OR CEILING SPACE.
	CONDUIT CONCEALED UNDERFLOOR SLAB OR UNDERGROUND.
	CONDUIT INSTALLED EXPOSED.
	CONDUIT TURNED UP.
	CONDUIT TURNED DOWN.
E	CONDUIT STUB-OUT TERMINATION.
	FLEXIBLE METAL CONDUIT. INSTALL REQUIRED BRANCH CIRCUIT CONDUCTORS AND EQUIPMENT GROUND CONDUCTOR.
A-1,3	HOMERUN TO INDICATED PANELBOARD ('A'). NUMBERS (1,3) INDICATE BRANCH CIRCUIT NUMBERS.
3/4"-3#8+1#10 E6	INDICATES 3/4" CONDUIT WITH 3 NUMBER 8 CONDUCTORS + 1 NUMBER 10 EQUIPMENT GROUND.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT DESIGNATIONS:
	3/4" CONDUIT WITH 2#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	3/4" CONDUIT WITH 3#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	3/4" CONDUIT WITH 4#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	3/4" CONDUIT WITH 5#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	3/4" CONDUIT WITH 6#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	3/4" CONDUIT WITH 7#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
	1" CONDUIT WITH 8#12 CONDUCTORS PLUS 1#12 EQUIPMENT GROUNDING CONDUCTOR.
#10	A NUMBER ADJACENT TO THE HASH MARK IN ANY CONDUIT RUN INDICATES THE CONDUCTOR SIZE TO BE USED IN LIEU OF #12 AWG. CONDUIT AND EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER CEC, U.O.N.
A-1,3	HOMERUN TO INDICATED PANELBOARD ('A'). NUMBERS (1,3) INDICATE BRANCH CIRCUIT NUMBERS.
3/4"-3#8+1#10 E6	INDICATES 3/4" CONDUIT WITH (3) 8 AWG CONDUCTORS + (1) 10 AWG EQUIPMENT GROUND.
3/4"-3#10+3#10 (IN)+1#10 E6	INDICATES 3/4" CONDUIT WITH (3) 10 AWG PHASE CONDUCTORS PLUS (3) 10 AWG INDIVIDUAL NEUTRAL CONDUCTORS + (1) 10 AWG EQUIPMENT GROUND.
(2) 3" 3-500KCM +1#1/0 E6	INDICATES TWO (2) 3" CONDUITS WITH THREE (3) 500 kcmil CONDUCTORS PLUS ONE (1) 1/0 AWG EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT.
	WHEN HOMERUN IS NOT SHOWN, BRANCH CIRCUIT NUMBER(S) (AND PANELBOARD) ARE DESIGNATED BY NUMBERS ADJACENT TO OUTLET:
J PA-7 PA-7	DENOTES BRANCH CIRCUIT(S) SUPPLYING OUTLET.
	WHEN USED, DENOTES PANELBOARD SUPPLYING OUTLET.
PA-13,5 #10	DENOTES BRANCH CIRCUIT WIRE SIZE WHEN OTHER THAN 12 AWG.
	BRANCH CIRCUIT WIRING NOTE: MULTIWIRE BRANCH CIRCUITS SHALL ORIGINATE FROM MULTIPLE-POLE CIRCUIT BREAKERS AS REQUIRED BY CEC (NEC) 210.4(B). BRANCH CIRCUITS THAT ORIGINATE FROM SINGLE-POLE CIRCUIT BREAKERS SHALL NOT BE INSTALLED AS PART OF A MULTIWIRE CIRCUIT . EACH SINGLE-POLE BREAKER CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. REFER TO THE PANEL SCHEDULES FOR CIRCUIT BREAKER REQUIREMENTS.
4 / 1 E-6	ELECTRICAL NOTE REFERENCE INDICATES DETAIL '1' ON SHEET E-6

ABBREVIATIONS

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
BKBD	BACKBOARD
L.V.	LOW VOLTAGE
CB	CIRCUIT BREAKER
CBB	COMMUNICATION BACKBOARD
CEC	CALIFORNIA ELECTRICAL CODE
CIR	CIRCUIT
CMH	COMMUNICATIONS MAINTENANCE HOLE
C.O.	CONDUIT ONLY
CPB	COMMUNICATIONS PULLBOX
CTC	COMMUNICATIONS TERMINAL CABINET
CU	COPPER
DMP	DIGITAL MONITORING PRODUCTS
DP	DISTRIBUTION PANELBOARD
DSA	DIVISION OF THE STATE ARCHITECT
E	EMERGENCY LIGHTING FIXTURE
EG	EQUIPMENT GROUND
EMH	ELECTRICAL HANDHOLE
EIA/TIA	ELECTRICAL INDUSTRY ASSOCIATION / TELECOMMUNICATION INDUSTRY ASSOCIATION
EPB	ELECTRICAL PULLBOX
EX	EXISTING
FAAP	FIRE ALARM ANNUCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
GFI	GROUND FAULT INTERRUPTER
IDF	INTERMEDIATE DISTRIBUTION FRAME
IDTC	INTRUSION DETECTION TERMINAL CABINET
IR	INFRARED
KAIC	1000 AMPS INTERRUPTING CAPACITY
KVA	KILOVOLT-AMPS
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
MSB	MAIN SWITCHBOARD
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
PBX	PRIVATE BRANCH EXCHANGE (PHONE SWITCH)
PNL	PANEL
RMC	RIGID METALLIC CONDUIT
RTU	REMOTE TERMINAL UNIT
S.I.	SQUARE INCHES
SID	SMART INTERFACE DEVICE
SNAC	SUPPLEMENTARY NOTIFICATION APPLIANCE CIRCUIT
SCCR	SHORT CIRCUIT CURRENT RATING
STC	SIGNAL TERMINAL CABINET
SWBD	SWITCHBOARD
TMH	TELEPHONE MAINTENANCE HOLE
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
WP	WEATHERPROOF
XFMR	TRANSFORMER
+45"	MOUNTING HEIGHT ABOVE FINISHED FLOOR (TO CENTER OF DEVICE)

GENERAL NOTES

1. ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2013 CBC, SECTION 1615A.1.12 THROUGH 1615A.1.22 AND ASCE 7-05 CHAPTER 6 AND 13.
   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

   THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS HAVE BEEN POSITIVELY ATTACHED. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
   D. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   E. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER.
2. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY THE FORCE AND DISPLACEMENTS PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A1.22.

   THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA #, SUCH AS MASON INDUSTRIES (OPA 344), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

   COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

   THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
3. ALL WIRING ON THIS PROJECT SHALL BE COPPER/FIBER AND SHALL BE INSTALLED IN CONDUIT, SURFACE RACEWAY OR CABLE TRAY PER SPECIFICATIONS.
4. INSTALL A PULL ROPE IN ALL CONDUITS LABELED "CONDUIT ONLY". ROPE SHALL BE PER SPECIFICATION.
5. ALL COLD WATER PIPE GROUND CONNECTIONS SHALL BE MADE WITHIN 5 FT. OF COLD WATER PIPE ENTRANCE INTO THE BUILDING. SEE CEC 250.52.
6. VERIFY ALL EXISTING CONDITIONS AND ASSUME THE RESPONSIBILITY OF FITTINGS, EQUIPMENT, RACEWAYS, ETC. IN THE EXISTING SPACE ALLOWED. ALL NEW INSTALLATIONS SHALL BE AT NEAT RIGHT ANGLES.
7. THE FOLLOWING BENDING RADII SHALL BE MAINTAINED FOR ALL COMMUNICATION UNDERGROUND CONDUIT SWEEPS.

CONDUIT SIZE	SWEEP MINIMUM RADIUS
2"	24"
3"	36"
4"	48"

GENERAL NOTES

8. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA 70-2013 WITH CALIFORNIA AMENDMENTS (2013 CEC) AND WHERE APPLICABLE AS AMENDED BY LOCAL ORDINANCES AND CODES OF GOVERNING MUNICIPALITIES.
9. ALL ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND ALL OTHER RELATED CONTRACT DRAWINGS.
10. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS/SPECIFICATIONS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED WITHOUT SUBSTANTIAL ALTERATION. IN AS MUCH AS THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. FURNISHING FITTINGS REQUIRED TO MEET SUCH CONDITIONS SHALL BE AT NO COST TO THE OWNER.
11. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS.
12. ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATINGS AND INTERRUPTING CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT AT ITS SUPPLY TERMINAL.
13. ALL BUILDING WIRING SHALL BE COPPER, PER SPECIFICATIONS, REGARDLESS OF APPLICATION. NO ALUMINUM WIRING SHALL BE USED.
14. FIELD VERIFY EXISTING CONDITIONS AND ADVISE ENGINEER OF ANY DISCREPANCIES OR DEVIATIONS BETWEEN PLANS AND ACTUAL CONDITIONS PRIOR TO SUBMITTING BID.
15. ALL EQUIPMENT AND MATERIALS REMOVED BY THE CONTRACTOR SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR.
16. DIVISION 26 CONTRACTOR SHALL CLOSELY COORDINATE THE RACEWAY INSTALLATION WITH THE DIVISION 21 CONTRACTOR. DIVISION 27 SHALL INSTRUCT THE DIVISION 26 ON THE SPECIAL REQUIREMENTS FOR THE INSTALLATION OF FIBER OPTIC AND CATEGORY 6 RACEWAYS. DIVISION 27 SHALL INSPECT AND ACCEPT RACEWAY SYSTEMS PRIOR TO THE INSTALLATION OF ANY DATA WIRING.
17. ALL FEEDERS AND BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR INSTALLED, SIZED PER CEC TABLE 250.122 UNLESS OTHERWISE NOTED.
18. DEVICE MOUNTING HEIGHTS ARE MEASURED FROM FINISHED FLOOR TO CENTER OF BOX.
19. PROVIDE ADDITIONAL CONDUIT SLEEVES THROUGH EXIST WALLS ABOVE T-BAR CEILING AS REQUIRED FOR NEW CABLING.

STRUCTURAL NOTE

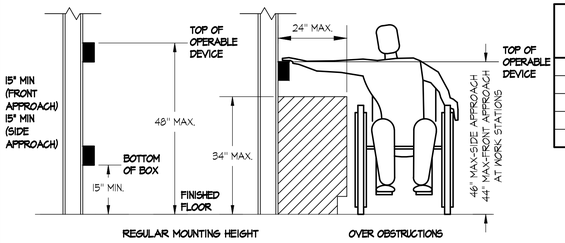
UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

WIREMOLD NOTES

CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED WIREMOLD FITTINGS AND ACCESSORIES FOR A COMPLETE INSTALLATION. THIS SHALL INCLUDE ALL OFFSETS, BENDS, T AND L FITTINGS, SPLICE COVERS AND WIRE CLIPS. INSTALL WIRE CLIPS AT 4 FT. ON CENTER (AT 2 FT. ON CENTER IF INSTALLED ON THE CEILING). ALL FITTINGS SHALL BE FIBER OPTIC RATED AND SHALL BE INSTALLED PER EIA/TIA STANDARDS. PROVIDE BACKING OR FURRING BEHIND WIREMOLD (WHERE REQUIRED) FOR A FLAT INSTALLATION.

ARCHITECTURAL WORK NOTES

SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL WORK REQUIRED ON THE SITE AND WITHIN BUILDINGS.



NOTE

WHERE LIGHT SWITCHES, RECEPTACLES, TELEPHONE/DATA OUTLETS, DIMMING CONTROL STATIONS, FIRE ALARM PULL STATIONS OR OTHER OPERABLE OUTLET DEVICES OCCUR OVER FIXED OBSTRUCTIONS (SUCH AS CASEWORK, ETC) RESPECTIVE DEVICE MOUNTING HEIGHT LIMITS AFF SHALL BE AS TYPICALLY DEPICTED ABOVE.

SWITCH, OUTLET OR OTHER CONTROL DEVICE MOUNTING HEIGHT LIMITS OVER OBSTRUCTIONS

1 / E-0.1

NO SCALE

MINIMUM CONDUIT SIZES ALLOWED FOR THIS PROJECT

3/4" CONDUIT	POWER/LIGHTING
3/4" CONDUIT	FIRE ALARM
3/4" CONDUIT	INTRUSION
1" CONDUIT	DATA
1 1/4" CONDUIT	AUDIO/VISUAL

TURPIN & RATTAN ENGINEERING, INC.
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REGISTERED PROFESSIONAL ENGINEER — DALE M. FRANCHAK — No.11533 exp.6/30/2014 — ELECTRICAL — STATE OF CALIFORNIA

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LICENSED ARCHITECT — PATRICIA T. SPROTTE — C12359 — REGISTERED — STATE OF CALIFORNIA

IT UPGRADE YEAR TWO

LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

LEGEND LIST, ABBREVIATIONS & GENERAL NOTES

DATE

02/14/2014

JOB #

13392

SHEET #

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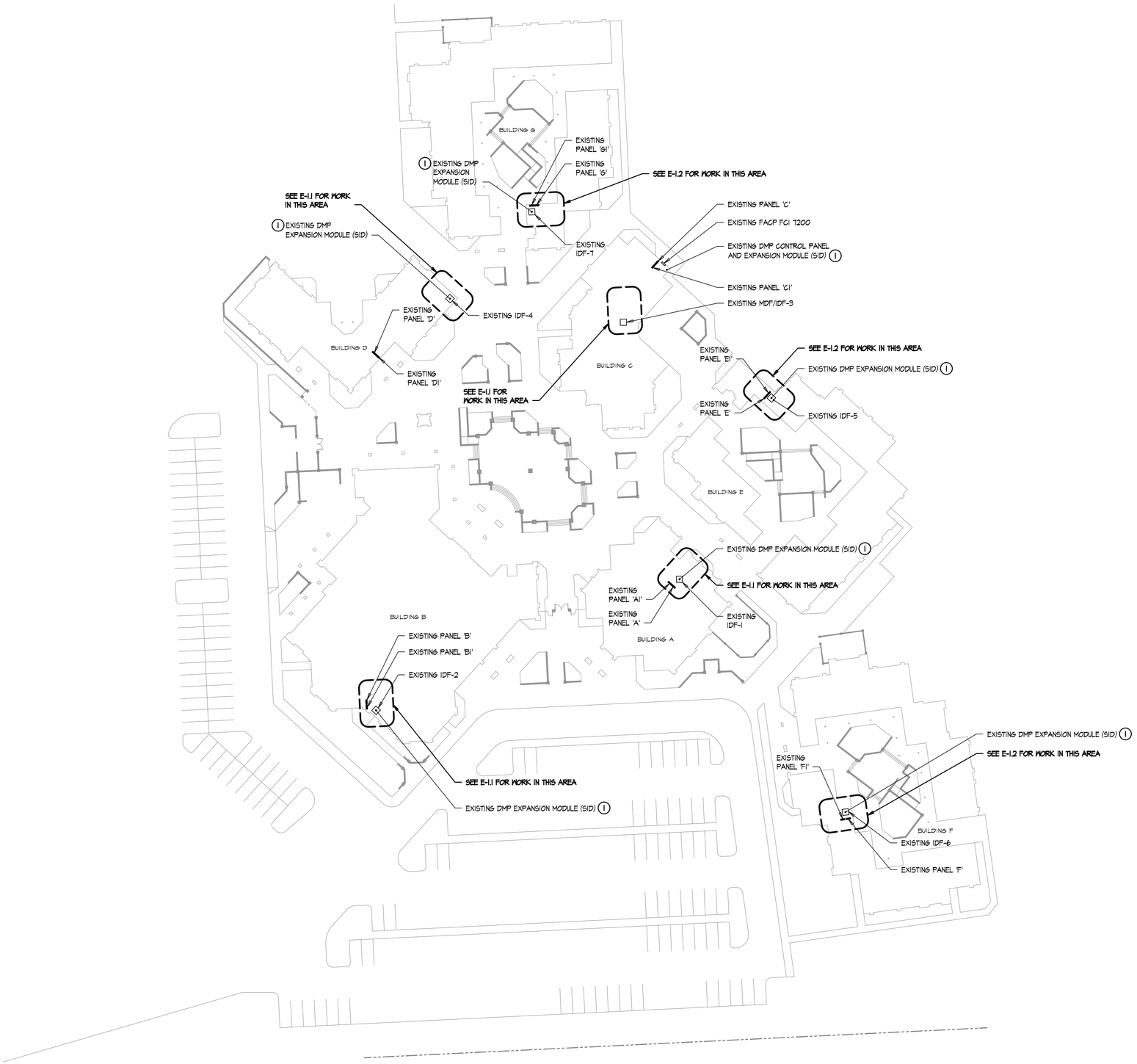

KEYNOTES

(1) CONTRACTOR SHALL FURNISH AND INSTALL DMP PASSIVE INFRARED DEVICE WIRED TO BUILDING'S INTRUSION EXPANSION MODULE. TEST TO ENSURE FULL INTRUSION DETECTION FUNCTIONALITY.

SHEET NOTE

1. ALL EXISTING SYSTEMS NOT UPGRADED UNDER THIS CONTRACT SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.

0 20' 40' 80' 120'

1" = 40'-0"

NORTH

1" = 40'-0"

ELECTRICAL - SITE PLAN

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LICENSED ARCHITECT REGISTERED PROFESSIONAL C12359 RENEWAL 08/31/2015 STATE OF CALIFORNIA

IT UPGRADE YEAR TWO

LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
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ELECTRICAL SITE PLAN

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E-1.0

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REGISTERED PROFESSIONAL ENGINEER DALE M. FRANCHIN No.11533 exp.6/30/2014 ELECTRICAL STATE OF CALIFORNIA

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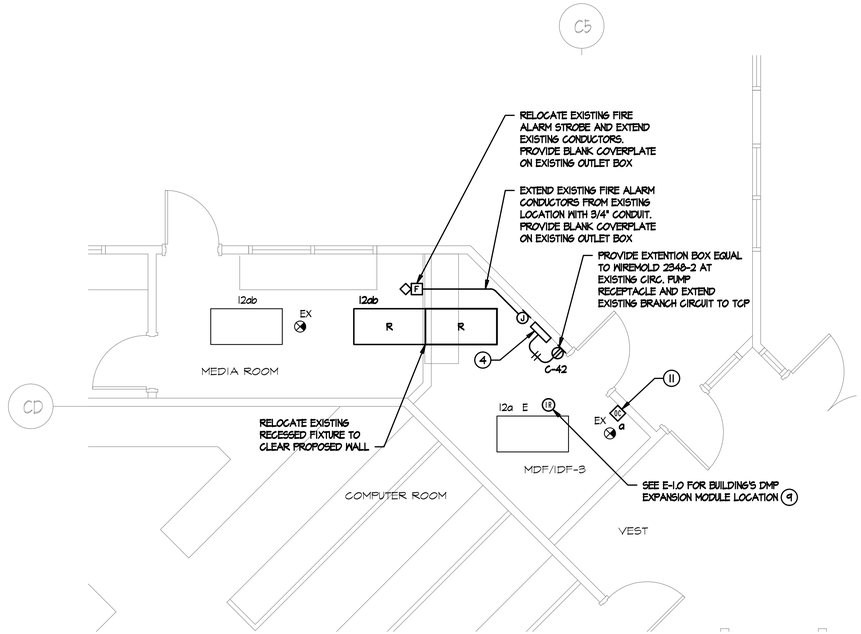
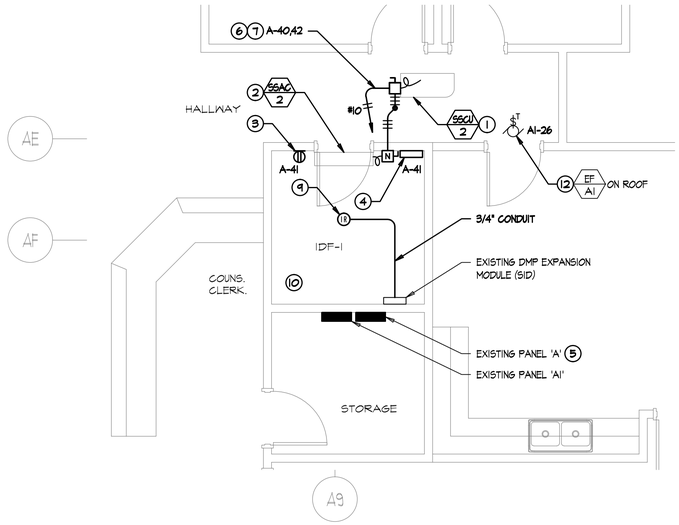


ENLARGED PLAN - BUILDING C (MDF/IDF-3)

SCALE: 1/4" = 1'-0"

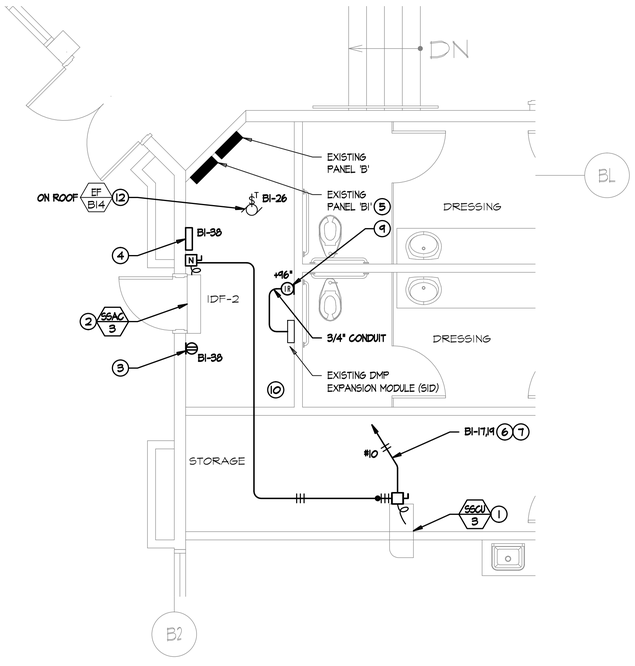


ENLARGED PLAN - BUILDING A (IDF-1)

SCALE: 1/4" = 1'-0"

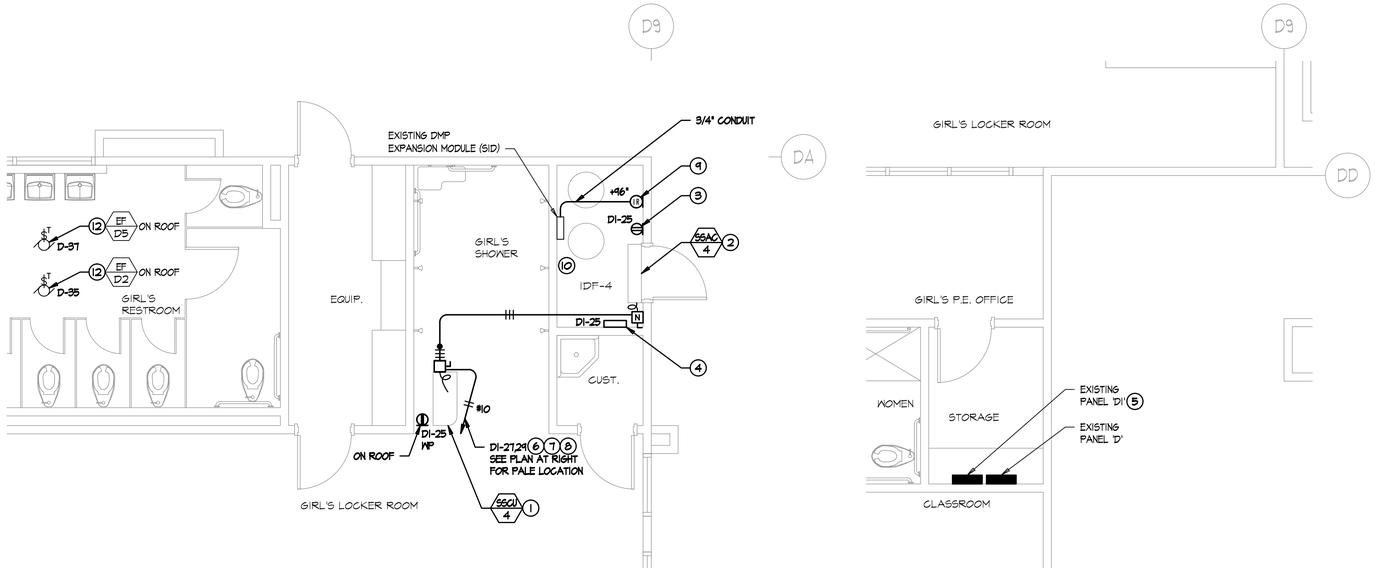
KEYNOTES

1. PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT (55CU). PROVIDE 3/4"-3#12+1#12 EG DOWN TO FAN COIL UNIT (55CU) IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION. SEE 1/E-2.1 FOR MOUNTING DISCONNECT SWITCH.
2. PROVIDE NEMA 1, 30AS/NF/3P DISCONNECT SWITCH AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL POWERED AND PROVIDED WITH OVERCURRENT PROTECTION THROUGH CONDENSING UNIT.
3. PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
4. PROVIDE 120 VOLT CONNECTION TO TEMPERATURE CONTROL PANEL (TCP). CONNECT TO SAME BRANCH CIRCUIT SERVING CONDENSATE PUMP.
5. SEE RESPECTIVE PANEL SCHEDULE ON SHEET E-3.1 FOR ADDITIONAL WORK AT EXISTING PANEL.
6. SUPPORT CONDUIT ON ROOF (WIRE TO BE THHN-2 90° RATED). FOR CONDUIT SUPPORT SEE DETAIL 3/E-2.1.
7. SEAL ALL CONDUIT PENETRATIONS THROUGH WALLS. SEE 4/E-2.1 WHEN FIRE RATING IS REQUIRED, TYPICAL.
8. PROVIDE FLEXIBLE CONDUIT WHEN CONDUIT IS REQUIRED TO PASS THROUGH BUILDING SEISMIC/SEPERTION JOINTS. SEE 5/E-2.1., TYPICAL.
9. FURNISH AND INSTALL NEW DMP IR INTRUSION DEVICE. CONNECT TO BUILDING'S EXISTING DMP EXPANSION MODULE. SEE INTRUSION RISER DIAGRAM 1/ET-1.1 FOR DETAILS. TEST NEW IR DEVICE TO ENSURE FULL FUNCTIONALITY.
10. CONTRACTOR SHALL FURNISH AND INSTALL (1) CATEGORY 6 PATCH CORD FROM NEW HVAC SPLIT SYSTEM CONTROLS TO IDF RACK. DISTRICT SHALL MAKE FINAL CONNECTION TO NETWORK SWITCH TO PROVIDE NETWORK CONNECTIVITY. SEE MECHANICAL PLANS FOR EXACT LOCATION OF HVAC CONTROLS.
11. REPLACE EXISTING WALL SWITCH WITH WALL MOUNTED OCCUPANCY SENSOR.
12. DISCONNECT EXISTING BRANCH CIRCUIT FROM EXISTING EXHAUST FAN AND ASSOCIATED 120 VOLT THERMOSTAT CONTROL. FAN TO BE ABANDONED IN PLACE. COORDINATE WORK WITH MECHANICAL CONTRACTOR.



ENLARGED PLAN - BUILDING B (IDF-2)

SCALE: 1/4" = 1'-0"



ENLARGED PLAN - BUILDING D (IDF-4)

SCALE: 1/4" = 1'-0"

0 2' 4' 8' 12'

1/4" = 1'-0"

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LICENSED ARCHITECT — C12359 — RENEWAL 08/31/2015 — STATE OF CALIFORNIA

IT UPGRADE YEAR TWO

LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

ENLARGED PLANS
MDF/IDF-3
IDF-1
IDF-2 & IDF-4

DATE

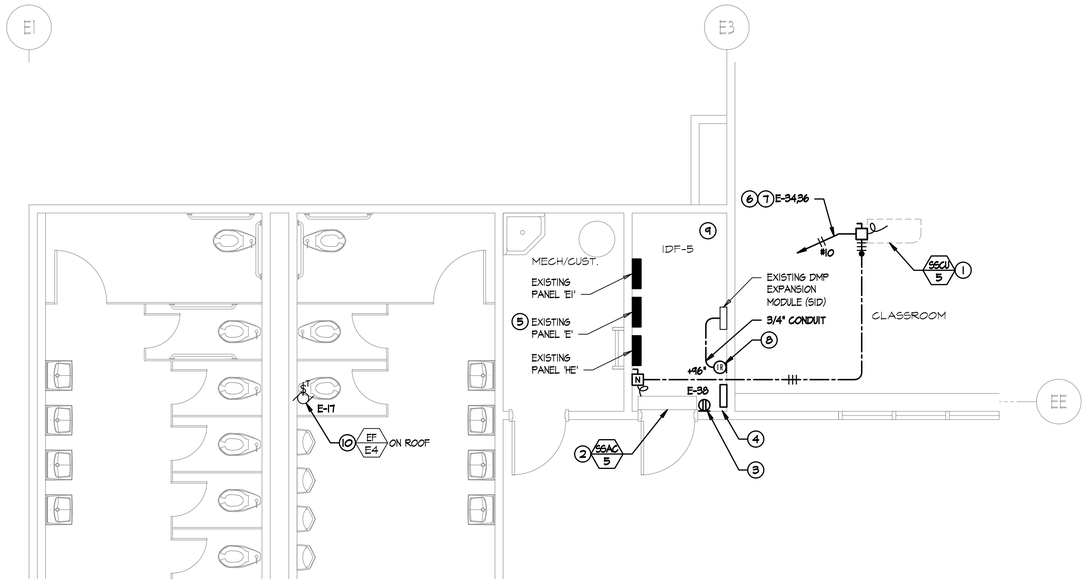
02/14/2014

JOB #

13392

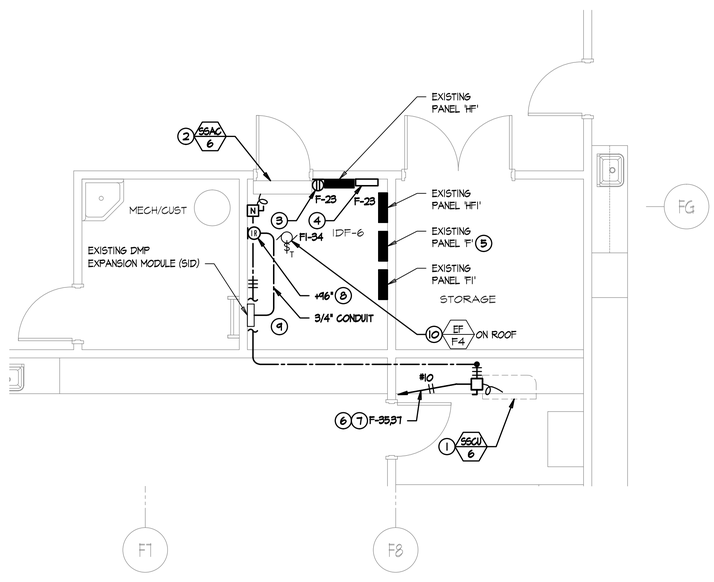
SHEET #

E-1.1



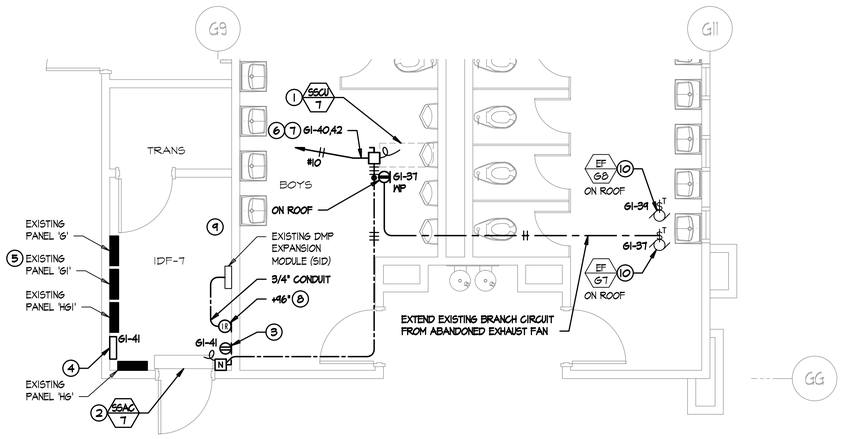
ENLARGED PLAN - BUILDING E (IDF-5)

SCALE: 1/4" = 1'-0"



ENLARGED PLAN - BUILDING F (IDF-6)

SCALE: 1/4" = 1'-0"



ENLARGED PLAN - BUILDING G (IDF-7)

SCALE: 1/4" = 1'-0"

KEYNOTES

1. PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT (55CU). PROVIDE 3/4"-3#12+1#12 EG DOWN TO FAN COIL UNIT (55AC) IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION. SEE 1/E-2.1 FOR MOUNTING DISCONNECT SWITCH.
2. PROVIDE NEMA 1, 30AS/NF/3P DISCONNECT SWITCH AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL POWERED AND PROVIDED WITH OVERCURRENT PROTECTION THROUGH CONDENSING UNIT.
3. PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
4. PROVIDE 120 VOLT CONNECTION TO TEMPERATURE CONTROL PANEL (TCP). CONNECT TO SAME BRANCH CIRCUIT SERVING CONDENSATE PUMP.
5. SEE RESPECTIVE PANEL SCHEDULE ON SHEET E-3.1 FOR ADDITIONAL WORK AT EXISTING PANEL.
6. SUPPORT CONDUIT ON ROOF (WIRE TO BE THHN-2 90° RATED). FOR CONDUIT SUPPORT SEE DETAIL 3/E-2.1.
7. SEAL ALL CONDUIT PENETRATIONS THROUGH WALLS. SEE 4/E-2.1 WHEN FIRE RATING IS REQUIRED, TYPICAL.
8. FURNISH AND INSTALL NEW DMP IR INTRUSION DEVICE. CONNECT TO BUILDING'S EXISTING DMP EXPANSION MODULE. SEE INTRUSION RISER DIAGRAM 1/ET-1.1 FOR DETAILS. TEST NEW IR DEVICE TO ENSURE FULL FUNCTIONALITY.
9. CONTRACTOR SHALL FURNISH AND INSTALL (1) CATEGORY 6 PATCH CORD FROM NEW HVAC SPLIT SYSTEM CONTROLS TO IDF RACK. DISTRICT SHALL MAKE FINAL CONNECTION TO NETWORK SWITCH TO PROVIDE NETWORK CONNECTIVITY. SEE MECHANICAL PLANS FOR EXACT LOCATION OF HVAC CONTROLS.
10. DISCONNECT EXISTING BRANCH CIRCUIT FROM EXISTING EXHAUST FAN AND ASSOCIATED 120 VOLT THERMOSTAT CONTROL. FAN TO BE ABANDONED IN PLACE. COORDINATE WORK WITH MECHANICAL CONTRACTOR.
11. DISCONNECT EXISTING BRANCH CIRCUIT FROM EXISTING EXHAUST FAN AND ASSOCIATED 120 VOLT THERMOSTAT CONTROL. FAN TO BE REMOVED. COORDINATE WORK WITH MECHANICAL CONTRACTOR.

0 2' 4' 8' 12'

1/4" = 1'-0"

TURPIN & RATTAN ENGINEERING, INC.
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REGISTERED PROFESSIONAL ENGINEER DALE M. FRANCHAK No.11533 exp.6/30/2014 ELECTRICAL STATE OF CALIFORNIA

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LICENSED ARCHITECT C12359 RENEWAL 08/31/2015 STATE OF CALIFORNIA

IT UPGRADE YEAR TWO
LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

ENLARGED PLANS IDF-5, IDF-6 & IDF-7

DATE

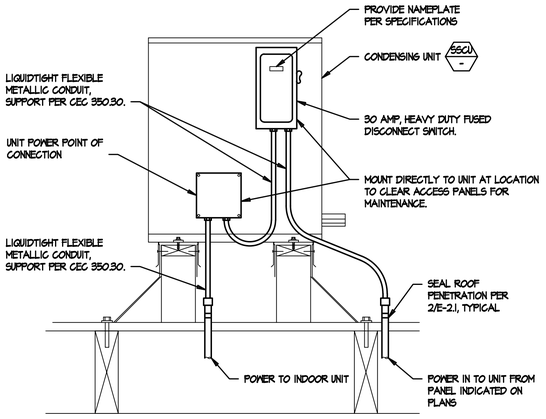
02/14/2014

JOB #

13392

SHEET #

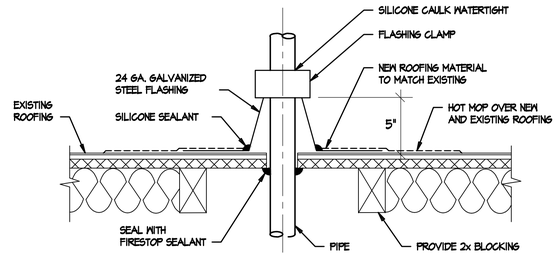
E-1.2



DISCONNECT SWITCH MOUNTING DETAIL

1 / E-2.1

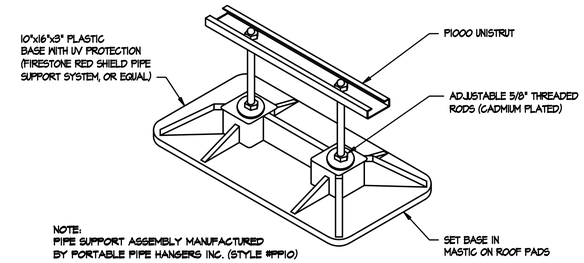
NO SCALE



ROOF PENETRATION DETAIL

2 / E-2.1

NO SCALE

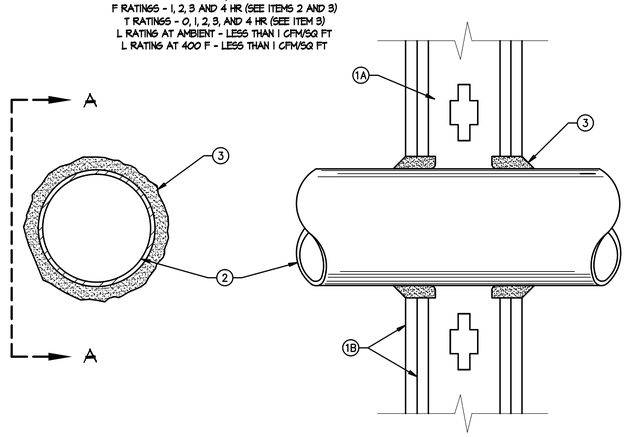


ROOF TOP CONDUIT SUPPORT SLEEPER DETAIL

3 / E-2.1

NO SCALE

SYSTEM NO.W-L-1001
JUNE 15, 2005
F RATINGS - 1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS - 0, 1, 2, 3, AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT



SECTION A-A

KEYNOTES

1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC WITH NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE BY 1-3/8 IN. (35 MM) DEEP CHANNELS SPACED MAX 24 IN. (610 MM) OC.

   B. GYPSUM BOARD* - NOM 1/2 OR 5/8 IN. (13 OR 16 MM) THICK, 4 FT. (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY PROVIDES 14 KNOCKOUTS FOR 3/4", 1", AND 1 1/4" CONDUIT, WITH FEED-THROUGH CAPABILITIES.

2. THROUGH PENETRANT - ONE, CONDUIT INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN CONDUIT AND PERIPHERY OF OPENING SHALL BE MIN OF 0 IN. (0 MM) (POINT CONTACT) TO MAX 2 IN. (51 MM). CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF CONDUITS MAY BE USED:
   A. CONDUIT - NOM 6 IN. (152 MM) DIAM (OR SMALLER) STEEL CONDUIT OR NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.

3. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8, 1-1/4)-7/8 AND 2-1/2 IN. (16, 32, 48 AND 64 MM) THICKNESS OF CAULK FOR 1, 2, 3 AND 4 HR RATED ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE.
THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

ED MAX PIPE OR CONDUIT DIAM IN. (MM)	F RATING HR	T RATING HR
1 (25)	1 or 2	0, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

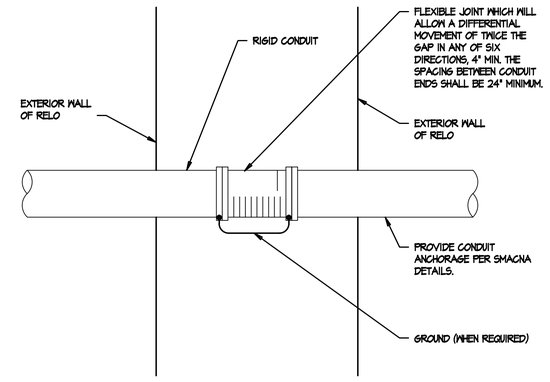
3M COMPANY - CP 25WB+ CAULK OR FB-3000 WT SEALANT,

*BEARING THE UL CLASSIFICATION MARKING

GYPSUM BOARD RATED WALL CONDUIT PENETRATION DETAIL

4 / E-2.1

NO SCALE



CONDUIT DETAIL FOR SEISMIC GAPS

5 / E-2.1

NO SCALE

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CONSULTANT

APPROVALS

DESCRIPTION

DETAILS

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PANEL ID: A — EXISTING

LOCATION:	BUILDING A
MAIN:	400A/3P M.C.B.
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	65K

FEEDER/SYSTEM — FED FROM: HA; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	COUNSLER RECEPTACLES	REC	20/1	1000	600					20/1		ATTENDANCE CONFERENCE,V.P SEC.	2
3	COUNSLER RECEPTACLES	REC	20/1			900	600			20/1		ATTENDANCE CONFERENCE,V.P SEC.	4
5	COUNSLER RECEPTACLES	REC	20/1					540	600	20/1	REC	ATTENDANCE CONFERENCE,V.P SEC.	6
7	TEACHER LOUNGE RECEPTACLES	REC	20/1	1000	500					20/1	REC	ATTENDANCE CONFERENCE,V.P SEC.	8
9	TEACHER LOUNGE RECEPTACLES	REC	20/1			600	900			20/1	NON	EMS	10
11	TEACHER LOUNGE RECEPTACLES	REC	20/1					600	360	20/1	REC	ATTENDANCE CONFERENCE, PRINCIPAL	12
13	SPARE		20/1	1000	750					20/1	REC	ATTENDANCE CONFERENCE, PRINCIPAL	14
15	ELECTRIC ROOM RECEPTACLES	REC	20/1			360	1080			20/1	REC	ATTENDANCE CONFERENCE, PRINCIPAL	16
17	FIRE ALARM	NON	20/1					1260	750	20/1	REC	COPY ROOM, PRINCIPAL	18
19	COUNSLER CLERK RECEPTACLES	REC	20/1	1260	720					20/1	REC	COPY ROOM, PRINCIPAL	20
21	COUNSLER CLERK RECEPTACLES	REC	20/1			1260	900			20/1	REC	COPY ROOM, PRINCIPAL	22
23	COUNSLER CLERK RECEPTACLES	REC	20/1					1260	360	20/1	REC	PSYCHOLOGIST, OFFICE MANAGER RECEPTACLES	24
25	DRINK FOUNTAIN	NON	20/1	300	1000					20/1	REC	PSYCHOLOGIST, OFFICE MANAGER RECEPTACLES	26
27	DRINK FOUNTAIN	NON	20/1			1000	500			20/1	REC	PSYCHOLOGIST, OFFICE MANAGER RECEPTACLES	28
29	MEN'S RESTROOM	NON	20/1					100	500	20/1	REC	LOBBY RECEPTACLES	30
31	EF-A3,EF-A4,EF-A5	MTR	20/1	500	1000					20/1	REC	LOBBY RECEPTACLES	32
33	SPARE		20/1			500	1200			20/1	NON	REFRIGERATOR	34
35	IRRIGATION CONTROLLER	NON	20/1					500	1200	20/1	NON	REFRIGERATOR	36
37	OFFICE RECEPTACLE	REC	20/1	360	360					20/1	REC	NURSE OFFICE RECEPTACLES	38
39	SPARE		20/1				**2288**			**30/**	**MTR**	***SSAC-2,SSCU-2**	40
41	***CP-2,TCP**	**NON**	**20/1**					**360**	**2288**	/2	**MTR**	**SAME AS CIRCUIT ABOVE**	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	9520	9520	10350	12088	10678	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		33116		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	18520	14260		92		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	5076	+25% OF LARGEST		29428		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		106		HIGH PHASE AMPS/LCL

PANEL NOTES:
* PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE OF SIZE INDICATED TO MATCH EXISTING PANEL AIC RATING.

PANEL ID: B1 — EXISTING

LOCATION:	BUILDING B
MAIN:	LUGS ONLY
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	65

FEEDER/SYSTEM — FED FROM: HB; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	BACKSTOP	NON	20/1	1500	1200					20/1	REC	RECEPTACLES	2
3	BACKSTOP	NON	20/1			1500	1200			20/1	REC	RECEPTACLES	4
5	BACKSTOP	NON	20/1					1500	1200	20/1	REC	RECEPTACLES	6
7	BACKSTOP	NON	20/1	1500	2800					30/1	NON	HAND DRYERS	8
9	BACKSTOP	NON	20/1			1500	2800			30/	NON	HAND DRYERS	10
11	BACKSTOP	NON	20/1					1500	2800	/	NON	SAME AS CIRCUIT ABOVE	12
13	RECEPTACLES	REC	20/1	400	2800					/3	NON	SAME AS CIRCUIT ABOVE	14
15	SPARE		20/1			800	1700			20/1	REC	RECEPTACLES	16
17	***SSAC-2,SSCU-2**	**MTR**	**30/**					**2288**	1700	40/1	NON	RECEPTACLES	18
19	**SAME AS CIRCUIT ABOVE**	**MTR**	**/2**	**2288**	1700					20/1	REC	RECEPTACLES	20
21	EF-B1,B2,B3	MTR	20/1			300	300			20/1	REC	RECEPTACLES	22
23	SPACE		/1					1200	1700	20/1	REC	LCD TV	24
25	SAME AS CIRCUIT ABOVE	NON	20/	3000	1000					20/1	MTR	EF-14,15,16,17,26	26
27	SAME AS CIRCUIT ABOVE	NON	/2			3000	300			20/1	MTR	EF-B10,B11	28
29	CUTRAIN CONT	MTR	20/1					1200	1000	20/1	MTR	WHEELCHAIR LIFT	30
31	CURTAIN CONT	MTR	20/1	1200	500					30/	MTR	MOTORIZED SCREEN	32
33	CURTAIN CONT	MTR	20/1			1600	1000			/	MTR	SAME AS CIRCUIT ABOVE	34
35	EF-B9	MTR	20/1					400	1000	/3	MTR	SAME AS CIRCUIT ABOVE	36
37	SPARE		20/1		**360**					**20/1**	**NON**	***CP-2, TCP**	38
39	PROJECTION SCREEN	NON	20/1			360	1000			30/	NON	ROLLUP DOOR	40
41	***SOUND SYSTEM**	**NON**	**20/1**					1200	1000	/2	NON	SAME AS CIRCUIT ABOVE	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	33820	33820	20248	17360	19688	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		57296		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	9400	9400		159		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	14076	+25% OF LARGEST		57868		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		174		HIGH PHASE AMPS/LCL

PANEL NOTES:
* RELOCATE BRANCH CIRCUIT 17 TO CIRCUIT 41. PROVIDE NEW CIRCUIT BREAKER OF SIZE INDICATED TO MATCH EXISTING AIC RATING
** PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE OF SIZE INDICATED TO MATCH EXISTING PANEL AIC RATING.

PANEL ID: D1 — EXISTING

LOCATION:	BUILDING D
MAIN:	LUGS ONLY
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	35K

FEEDER/SYSTEM — FED FROM: HD; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	SPARE		20/1		**360**					**20/1**	**NON**	**IDF**	2
3	SPARE		20/1				**200**			**20/1**	**NON**	**FIRE ALARM PANEL**	4
5	SPARE		20/1						200	20/1	NON	INTRUSION CABINET	6
7	SPARE		30/1							20/1		SPARE	8
9	SPARE		20/1							20/1	NON	SPARE	10
11	SPARE		20/1							20/1		SPARE	12
13	SPARE		20/1							20/1		SPARE	14
15	SPARE		20/1							20/1		SPARE	16
17	SPARE		20/1							20/1		SPARE	18
19	SPARE		20/1							20/1		SPARE	20
21	SPARE		20/1							20/1		SPARE	22
23	SPARE		20/1							20/1		SPARE	24
25	***CP-4, TCP**	**NON**	**20/1**	**360**						20/1		SPARE	26
27	***SSAC-4, SSCU-4**	**MTR**	**30/**			**2288**				/1		SPACE	28
29	**SAME AS CIRCUIT ABOVE**	**MTR**	**/2**					**2288**		/1		SPACE	30
31	SPACE		/1							/1		SPACE	32
33	BOYS PE OFFICE RECEPTACLE	REC	20/1			**360**				/1		SPACE	34
35	BOYS PE OFFICE RECEPTACLE	REC	20/1					**360**		/1		SPACE	36
37	SPACE		/1							/1		SPACE	38
39	SPACE		/1							/1		SPACE	40
41	SPACE		/1							/1		SPACE	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	1120	1120	720	2848	2848	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		6416		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	720	720		18		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	4576	+25% OF LARGEST		6988		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		29		HIGH PHASE AMPS/LCL

PANEL NOTES:
* PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE OF SIZE INDICATED TO MATCH EXISTING PANEL AIC RATING.

PANEL ID: E — EXISTING

LOCATION:	BUILDING E
MAIN:	400A/3P M.C.B.
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	35K

FEEDER/SYSTEM — FED FROM: HE; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	RECEPTACLES LAB	REC	20/1	1000	1000					20/1	REC	RECEPTACLES CLASSROOM	2
3	RECEPTACLES LAB	REC	20/1			1000	1000			20/1	REC	RECEPTACLES CLASSROOM	4
5	RECEPTACLES LAB	REC	20/1					1000	1000	20/1	REC	RECEPTACLES CLASSROOM	6
7	TV/LCD	NON	20/1	1000	1000					20/1	REC	RECEPTACLES CLASSROOM	8
9	RECEPTACLES LAB	REC	20/1			1000	1000			20/1	REC	RECEPTACLES LAB (GFI CB)	10
11	RECEPTACLES LAB	REC	20/1					1000	1000	20/1	REC	RECEPTACLES LAB	12
13	EF-E1	MTR	20/1	800	1000					20/1	REC	RECEPTACLES LAB	14
15	CIRC PUMP	MTR	20/1			85	1000			20/1	REC	RECEPTACLES LAB	16
17	EF-E3, EF-E4(ABANDONED)	MTR	20/1					1000	1000	20/1	REC	RECEPTACLES LAB	18
19	EF-E5, EF-E6, EF-E7, EF-E8	MTR	20/1	1000	1000					20/1	REC	RECEPTACLES LAB	20
21	SPARE		20/1				1000			20/1	REC	RECEPTACLES (A.I.C)	22
23	SPARE		20/1						1000	20/1	REC	RECEPTACLES (A.I.C)	24
25	SPARE		20/1		1000					20/1	REC	RECEPTACLES (A.I.C)	26
27	SPARE		20/1				1000			30/	NON	WATER HEATER WH-3	28
29	RECEPTACLES LAB	REC	20/1					1000	1000	/2	NON	SAME AS CIRCUIT ABOVE	30
31	RECEPTACLES LAB	REC	20/1	1000						20/1		SPARE	32
33	RECEPTACLES LAB	REC	20/1			1000	**2288**			**30/**	**MTR**	***SSCU-5, SSAC-5**	34
35	EF-EF-2	MTR	20/1					800	**2288**	**/2**	**MTR**	**SAME AS CIRCUIT ABOVE**	36
37	SPARE		20/1		**360**					**20/1**	**NON**	***CP-5, TCP**	38
39	SPARE		20/1							/1		BUSSED SPACE	40
41	SPACE		/1							/1		BUSSED SPACE	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	3360	3360	10160	10373	12088	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		32621		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	21000	15500		91		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	8261	+25% OF LARGEST		27693		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		106		HIGH PHASE AMPS/LCL

PANEL NOTES:
* PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE OF SIZE INDICATED TO MATCH EXISTING PANEL AIC RATING.

PANEL ID: F — EXISTING

LOCATION:	BUILDING F
MAIN:	400A/3P M.C.B.
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	65K

FEEDER/SYSTEM — FED FROM: FE; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	RECEPTACLES 606	REC	20/1	1000	1000					20/1	REC	RECEPTACLES 609	2
3	RECEPTACLES 606	REC	20/1			1000	1500			20/1	REC	RECEPTACLES 609	4
5	RECEPTACLES 606	REC	20/1					1000	540	20/1	REC	RECEPTACLES 609	6
7	RECEPTACLES 606	REC	20/1	1000	540					20/1	REC	RECEPTACLES 609	8
9	RECEPTACLES 606	REC	20/1			1000	1200			20/1	REC	RECEPTACLES 609	10
11	RECEPTACLES 606	REC	20/1					1000	1200	20/1	REC	RECEPTACLES 609	12
13	RECEPTACLES 606	REC	20/1	1000	1200					20/1	REC	RECEPTACLE 609 (GFI CB)	14
15	RECEPTACLES 606	REC	20/1			1000	1200			20/1	REC	RECEPTACLES 609	16
17	RECEPTACLES 606	REC	20/1					1000	540	20/1	REC	RECEPTACLES-STORAGE	18
19	RECEPTACLES 606	REC	20/1	540	540					20/1	REC	RECEPTACLES-STORAGE	20
21	RECEPRACLES 606	REC	20/1			540	1000			20/1	REC	RECEPTACLES 608	22
23	**CP-6, TCP**	**REC**	20/1					**360**	1200	20/1	REC	RECEPTACLES 608	24
25	RECEPTACLES 605	REC	20/1	540	1200					20/1	REC	RECEPTACLES 608	26
27	IDF	NON	20/1			1000	1600			20/1	REC	RECEPTACLES 608	28
29	IDF	NON	20/1					1000	1000	20/1	REC	RECEPTACLES 607	30
31	STORAGE, PH MONITOR	NON	20/1	1000	1500					20/1	REC	RECEPTACLES 607	32
33	STORAGE ROOM	NON	20/1			540	540			20/1	REC	RECEPTACLES 607	34
35	***SSCU-6, SSCAC-6**	**MTR**	**30/**					**2288**	540	20/1	REC	RECEPTACLES 607	36
37	**SAME AS CIRCUIT ABOVE**	**MTR**	**/2**	**2288**	**500**					20/1	NON	FIRE DAMPER	38
39	EXISTING	NON	20/1			500				20/1		SPARE	40
41	CIRC PUMP - SPARE	NON	20/1						200	20/1	NON	FIRE ALARM SNAC	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	4740	4740	13848	12620	11868	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		38336		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	29020	19510		106		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	4576	+25% OF LARGEST		29398		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		120		HIGH PHASE AMPS/LCL

PANEL NOTES:
* REPLACE EXISTING 20A/1P CIRCUIT BREAKERS WITH NEW 30A/2P CIRCUIT BREAKER OF SIZE INDICATED TO MATCH EXISTING PANEL

PANEL ID: G1 — EXISTING

LOCATION:	BUILDING G
MAIN:	LUGS ONLY
BUS AMPS	400
MOUNTING:	SURFACE
AIC RATING	65K

FEEDER/SYSTEM — FED FROM: HG; FEEDER OCP 400 AMPS; SYSTEM: 208 /120V, 3-PH, 4W

LOAD TYPES — blank or NON: NON-CONTINUOUS; LCL: LONG-CONTINUOUS; REC: DEMANDABLE RECEPT'S; KIT: KITCHEN; PNL: SUB-FED PNL; UNIT: RESID. UNIT; MTR: MOTOR

CKT	DESCRIPTION	LOAD TYPE	BKR	LOAD (VA) PH. A		LOAD (VA) PH.B		LOAD (VA) PH.C		BKR	LOAD TYPE	DESCRIPTION	CKT
1	RECEPTACLE RM 308	REC	20/1	1000	1000					20/1	NON	RECEPTACLE RM 308	2
3	RECEPTACLE RM 308	REC	20/1			1000	1000			20/1	NON	RECEPTACLE RM 308	4
5	RECEPTACLE RM 308	REC	20/1					1000	1000	20/1	NON	RECEPTACLE RM 308	6
7	RECEPTACLE RM 309	REC	20/1	1000	1000					20/1	REC	RECEPTACLE RM 308	8
9	EF-1,EF-3, EF-11 ROOF	MTR	20/1			500	1000			20/1	NON	OUTSIDE RECEPTACLE	10
11	EF-2, EF-10	MTR	20/1					500	1000	20/1	NON	OUTSIDE RECEPTACLE (GFI CB)	12
13	WARMING CART	NON	20/1	500	1000					20/1	REC	RESTROOM RECEPTACLE	14
15	RECEPTACLE STORAGE RM 309	REC	20/1			500	1000			20/1	REC	RESTROOM RECEPTACLE	16
17	RECEPTACLE STORAGE RM 309	REC	20/1					1000	85	20/1	MTR	BOYS RESTROOM CIRC PUMP	18
19	RECEPTACLE STORAGE RM 309	REC	20/1	1000						20/1		SPARE	20
21	RECEPTACLE STORAGE RM 309	REC	20/1			500	1200			20/1	REC	ROOF RECEPTACLE	22
23	RECEPTACLES	REC	20/1					1000		20/1		SPARE	24
25	EXISTING	NON	20/	1000	1000					20/1	REC	RECEPTACLE ROOM 309	26
27	SAME AS CIRCUIT ABOVE	NON	/			1000	1500			20/1	REC	RECEPTACLE ROOM 309	28
29	SAME AS CIRCUIT ABOVE	NON	/3					1000	500	20/1	NON	FIRE DAMPERS	30
31	ELECTRIC ROOM RECEPTACLE	REC	/1	500	9500					20/1	REC	RECEPTACLE ROOM 309	32
33	ELECTRIC ROOM RECEPTACLE	REC	20/1			800	8000			20/1	REC	BOYS RESTROOM	34
35	ROOF RECEPTACLE	REC	20/1					800	360	20/1	REC	RECEPTACLE ROOM 308	36
37	**ROOF RECEPTACLE**	**NON**	20/1	**180**						20/1		SPACE	38
39	EF-5 ROOF	MTR	20/1			800	**2288**			**30/**	**MTR**	***SSAC-7, SSCU-7**	40
41	***CP-7, TCP**	**MTR**	**20/1**					**360**	**2288**	**/2**	**MTR**	**SAME AS CIRCUIT ABOVE**	42

	CONNECTED VA	DEMAND VA	PH A	PH B	PH C	
GEN'L LOAD:	9180	9180	18680	21088	10893	CONNECTED LOAD PER PHASE
LONG CONTIN.:	0	0		50661		TOTAL CONNECTED LOAD (VA)
GEN'L RECEPT:	34660	22330		141		AMPS OF TOTAL CONNECTED LOAD
MOTOR LOAD:	6821	+25% OF LARGEST		38903		TOTAL DEMAND VA (BALANCED)
KITCHEN LOAD:	0	0		162		HIGH PHASE AMPS/LCL

PANEL NOTES:
* PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE OF SIZE INDICATED TO MATCH EXISTING PANEL AIC RATING.

SCHEDULE KEY

'A'	'B1'	'D1'
'E'	'F'	'G1'

TURPIN & RATTAN ENGINEERING, INC.
CONSULTING ENGINEERS
4719 PALM AVENUE
LA MESA, CA 91941-5221
619 / 466 / 6224 FAX 466 / 6233
E-MAIL: ENGINEER@TREISD.COM
TREI # 13392

REGISTERED PROFESSIONAL ENGINEER — DALE M. FRANCHAK — No.11533 exp.6/30/2014 — ELECTRICAL — STATE OF CALIFORNIA

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SPROTTE | WATSON ARCHITECTURE | PLANNING
450 S. Melrose Dr. Suite 200 Vista, California 92081 | 760.639.4120 | www.sprottewatson.com

LICENSED ARCHITECT — C12359 — STATE OF CALIFORNIA

IT UPGRADE YEAR TWO
LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION
PANEL SCHEDULES

DATE
02/14/2014

JOB #
13392

SHEET #
E-3.1

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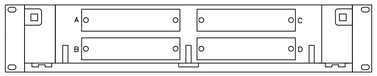
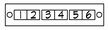
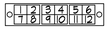
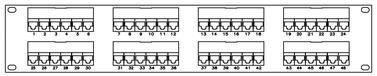
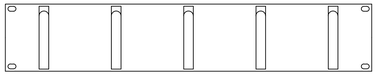
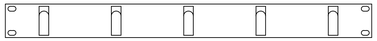
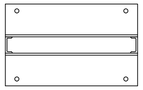
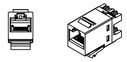
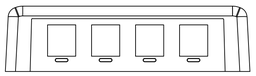
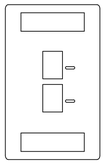
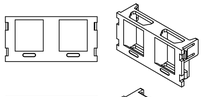
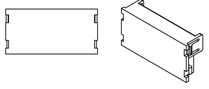
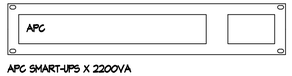
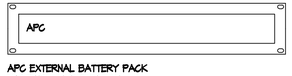
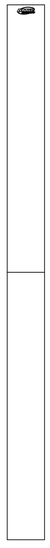
MATERIAL LIST

1		2 RU RACK MOUNTED FIBER ENCLOSURE TE CONNECTIVITY PART NO. 554542-2
2		DUPLEX SC ADAPTER PLATE 6 STRANDS MULTIMODE TE CONNECTIVITY PART NO. 554558-6
3		DUPLEX SC ADAPTER PLATE 12 STRANDS MULTIMODE TE CONNECTIVITY PART NO. 554546-1
4		BLANK MODULE TE CONNECTIVITY PART NO. 554523-1
5		2 RU CATEGORY 6 48 PORT SL SERIES PATCH PANEL TE CONNECTIVITY PART NO. 1375015-2
6		2 RU HORZ. CABLE MANAGEMENT TE CONNECTIVITY PART NO. 556331-1
7		1 RU CABLE MANAGEMENT PANEL TE CONNECTIVITY PART NO. 558324-1
8		1 RU RACK MOUNTED SURGE PROTECTOR
9		HORIZONTAL RACK BUSBAR CPI PART NO. 10610-019
10		CHATSWORTH TWO-POST UNIVERSAL RACK (BLACK) UL LISTED. 19"W X 84"H 45RU CPI PART No. 46853-703
11		SL SERIES JACK (RJ45) TE CONNECTIVITY PART NO. 1375055-6
12		SL SERIES BLANK INSERT TE CONNECTIVITY PART NO. 1116412-X
13		SURFACE MOUNT MODULE (4 PORT) TE CONNECTIVITY
14		TE CONNECTIVITY NETCONNECT 110 SL SERIES 2/3/4 PORT FACEPLATE. TE CONNECTIVITY PART NO. 2111009-X, 2111010-X, 2111011-X (COLOR TO MATCH ELECTRICAL) (PORT COUNT TO MATCH CATEGORY 6 DROP QUANTITY)
15		MODULE TE CONNECTIVITY PART NO. 1116409-X
16		BLANK MODULE TE CONNECTIVITY PART NO. 1116410-X
17		APC NET SHELTER SHELF #AR8105BLK
18		APC SMART-UPS X 2200VA RACK/TOWER LCD 100-127V PART NO. SMX2200RMLV2U
19		APC EXTERNAL BATTERY PACK PART NO. SMX120RMBP2U
20		VERTICAL WIRE MANAGER D/S BLACK 4" W X 5" D X 78" H CENTER MOUNT TE CONNECTIVITY PART NO. 1375254-1

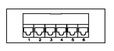
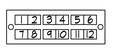
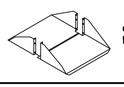
FLOOR PLAN LEGEND

SYMBOL	DESCRIPTION
	MULTI-CHANNEL SURFACE RACEWAY UP WALL INTO CEILING SPACE.
	MULTI-CHANNEL SURFACE RACEWAY DOWN WALL TO FLOOR.
	MULTI-CHANNEL SURFACE RACEWAY AT ELEVATION NOTED.
	WIREMOLD 5400 (OR AS NOTED) MOUNTED AT +15" AFF
	WIREMOLD 5400 (OR AS NOTED) MOUNTED AT CEILING/WALL INTERSECTION.
	(WIREMOLD 5400 U.O.N.)
	MULTI-CHANNEL SURFACE RACEWAY MOUNTED ON CEILING.
W	DOUBLE CHANNEL PLASTIC SURFACE RACEWAY EQUIVALENT TO WIREMOLD SERIES 2300.
R	CONDUIT OR CABLING PER PLANS TO BE REMOVED.
	CONDUIT CONCEALED IN WALL OR CEILING SPACE.
	CONDUIT CONCEALED UNDER FLOOR SLAB OR UNDERGROUND.
	CONDUIT INSTALLED EXPOSED.
	CONDUIT INSTALLED UNDER A RAISED FLOOR OR UNDER A PORTABLE BUILDING.
	GROUND CONNECTION.

TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION
1	TELECOMMUNICATIONS OUTLET (VOICE ONLY) AT +18" AFF U.O.N., NUMBER INDICATES QUANTITY OF CATEGORY 6 DROPS.
3	TELECOMMUNICATIONS OUTLET (DATA ONLY) AT +18" AFF U.O.N., NUMBER INDICATES QUANTITY OF CATEGORY 6 DROPS.
1/2	TELECOMMUNICATIONS OUTLET (VOICE/DATA) AT +18" AFF U.O.N., NUMBERS INDICATE QUANTITY OF CATEGORY 6 DROPS.
2	TELECOMMUNICATIONS OUTLET (DATA ONLY) MOUNTED WITHIN CEILING SPACE. NUMBER INDICATES QUANTITY OF CATEGORY 6 DROPS.
2	TELECOMMUNICATIONS OUTLET (DATA ONLY) MOUNTED IN FLOOR BOX. NUMBER INDICATES QUANTITY OF CATEGORY 6 DROPS.
S	AUDIO/VISUAL SYSTEM AUDIO SPEAKER MOUNTED FLUSH IN CEILING.
S	AUDIO/VISUAL SYSTEM SPEAKER MOUNTED TO WALL.
IC	INTERCOM SYSTEM SPEAKER MOUNTED FLUSH IN CEILING.
IC	INTERCOM SYSTEM SPEAKER MOUNTED TO WALL AT +46" AFF. U.O.N.
	BOSEN PAGING HANDSET AT +45" AFF.
	WIRELESS CLOCK MOUNTED FLUSH IN WALL AT +46" AFF.
AV1	EXTRON PVT SW HDMI RGB D & PVT SW HDMI D.
AV2	EXTRON MLC 104 IP PLUS CONTROL PANEL.
AV3	EXTRON PVS 405D
	TELEPHONE OR DATA BACKBOARD, 4' X 8' X 3/4" TREATED PLYWOOD.
MDF OR IDF	MAIN DISTRIBUTION FRAME/INTERMEDIATE DISTRIBUTION FRAME.
	CABLE TRAY MOUNTED WITHIN CEILING SPACE.
IR	INTRUSION SYSTEM CEILING MOUNTED INFRARED DEVICE.
IR	INTRUSION SYSTEM INFRARED DEVICE MOUNTED TO WALL AT +46" AFF U.O.N.
A	INTRUSION SYSTEM DOOR ALARM CONTACT.
KP	INTRUSION SYSTEM KEYPAD CONTROLLER AT +45" AFF U.O.N.
	CLOSED CIRCUIT TELEVISION SYSTEM CAMERA.
	WIRELESS CLOCK ANTENNA.
#	MATERIAL SHOWN WITH CORRESPONDING NUMBER FROM MATERIAL LIST TO BE PROVIDED AND INSTALLED BY CONTRACTOR.

MATERIAL LIST

21		24 PORT MODULAR CONSOLIDATION POINT. TE CONNECTIVITY PART NO. 406711-1
22		48 PORT MODULAR CONSOLIDATION POINT. TE CONNECTIVITY PART NO. 1474922-1
23		6 PORT MODULAR CONSOLIDATION POINT MODULE, CATEGORY 6 TE CONNECTIVITY PART NO. 1375367-1
24		6 PORT/12 STRAND MODULAR CONSOLIDATION POINT MODULE, SC DUPLEX, TE CONNECTIVITY PART NO. 406788-1
25		CHATSWORTH 26"D X 19" W SHELF. PART NO. 11054-719.
26		APC NET SHELTER CX ENCLOSURE. APC PART NO. AR4018, WITH INTEGRATED COOLING, NOISE DAMPENING, POWER DISTRIBUTION AND LOCKING DOORS. CONTRACTOR TO ORDER MOUNTING HARDWARE AND CABLE MANAGEMENT AS REQUIRED.

ABBREVIATIONS

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURSIDICTION
AMG	AMERICAN WIRE GAUGE
BCT	BONDING CONDUCTOR FOR TELECOMMUNICATIONS
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION
CBB	COMMUNICATIONS BACKBOARD
CCTV	CLOSED CIRCUIT TELEVISION
CIR	CIRCUIT
COMM	COMMUNICATIONS, OR COMMERCIAL.
CMH	COMMUNICATION MAINTENANCE HOLE
C.O.	CONDUIT ONLY
CPB	COMMUNICATIONS FULLBOX
CP	CONSOLIDATION POINT
CU	COPPER
DIAG.	DIAGRAM
DIA.	DIAMETER
EA	EACH
ELEC.	ELECTRICAL
EG	EQUIPMENT GROUND, OR EQUIPMENT GROUNDING CONDUCTOR.
ELEC.	ELECTRICAL
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
EX	EXISTING
F	FIXED
FT	FOOT, FEET
FOX	OPTICAL FIBER CABLE WITH 'X' NUMBER OF STRANDS
GND	GROUND
IDF	INTERMEDIATE DISTRIBUTION FRAME
IWB	INTERACTIVE WHITEBOARD
LAN	LOCAL AREA NETWORK
LIU	LIGHT INTERFACE UNIT (FIBER)
LV	LOW VOLTAGE
MIN.	MINIMUM
MAX.	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MPOE	MINIMUM POINT OF ENTRY (TELCO)
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PR	PAIR
PROJ.	PROJECTOR
PTZ	PAN, TILT, ZOOM
OC	ON CENTER
OSP	OUTSIDE PLANT RATED
RGB	RACK GROUNDING BUSBAR
RU	RACK UNIT
RMC	RIDGED METAL CONDUIT
STC	SIGNAL TERMINAL CABINET
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMUNICATIONS MAIN GROUNDING BUSBAR
T.O.	TELECOMUNICATIONS OUTLET
TEL	TELEPHONE/VOICE
TP	TWISTED PAIR
TYP	TYPICAL
SQ.	SQUARE
SH	SHIELDED
U.O.N.	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
WAP	WIRELESS ACCESS POINT
WP	WEATHER PROOF
VOIP	VOICE OVER INTERNET PROTOCOL
+48"	MOUNTING HEIGHT ABOVE FINISHED FLOOR (TO CENTER OF DEVICE)
4	NOTE REFERENCE
1 / E-6	INDICATES DETAIL '1' ON SHEET E-6

GENERAL NOTES

1. EXISTING TELEPHONE, FIRE ALARM AND ALL OTHER COMMUNICATION/INTRUSION SYSTEMS SHALL REMAIN IN OPERATION DURING CONSTRUCTION PERIOD. DO NOT REMOVE ANY EXISTING CONNECTIONS, FACE PLATES OR OTHER EXISTING DEVICES. INTERRUPTION TO EXISTING SYSTEM DUE TO CONTRACTORS ACTIONS SHALL BE REPLACED/RECTIFIED BY THE CONTRACTOR AT NO COST TO THE OWNER.

2. THIS DRAWING PACKAGE IS PRESENTED WITH SYMBOLS, REPRESENTATIONS, TEMPLATES AND PARTS LIST OF A SINGLE MANUFACTURER (AMP). OTHER OWNER APPROVED MANUFACTURERS SYMBOLS, REPRESENTATIONS, TEMPLATES AND PARTS LISTS REQUIRE A CONVERSION PACKAGE AND SHALL BE REQUESTED USING THE 'REQUEST FOR INFORMATION OR REQUEST FOR CLARIFICATION' PROCESS. IF OTHER OWNER APPROVED MANUFACTURERS (ORTRONICS, AVAYA, SIEMONS) ARE PROPOSED TO BE USED IN THE CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL COST RELATED TO CONVERSION FROM DESIGN PACKAGE AND CONTRACTOR'S SUPPLIED PROPOSED INSTALLATION. PROPOSED INSTALLATION SHALL COMPLY WITH CONVERSION LAYOUTS AND PARTS LISTS. THE CONTRACTOR SHALL 'REQUEST CLARIFICATION' FOR ANY QUESTIONS REGARDING THE DESIGN OR IMPLEMENTATION CONSIDERATION WHEN USING THE CONVERSION PROCESS. ADDITIONAL COMPONENTS MAY BE REQUIRED WHEN USING OWNER APPROVED EQUAL MANUFACTURERS.

3. ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2010 CBC, SECTION 1615A.1.12 THROUGH 1615A.1.22 AND ASCE 7-05 CHAPTER 6 AND 13.

   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.

   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

   THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS HAVE BEEN POSITIVELY ATTACHED. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.

   D. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

   E. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER.

4. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY THE FORCE AND DISPLACEMENTS PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.6, 13.6.7, 13.6.5.6, AND 2010 CBC, SECTIONS 1615A.1.20, 1615A.1.21 AND 1615AMT 1.22.

   THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA #, SUCH AS MASON INDUSTRIES (OPA 344), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

   COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

   THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

5. THE ANCHORAGE OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING DUCTS, CONDUIT AND PIPING TO THE STRUCTURE SHALL BE IN ACCORDANCE WITH 2010 CBC SECTION 1615A.1 (ASCE 7-05 SECTION 13.3 AND TABLE 13.6-1).

6. ALL WIRING ON THIS PROJECT SHALL BE COPPER/FIBER AND SHALL BE INSTALLED IN CONDUIT, J-HOOKS OR SURFACE MOUNTED RACEWAY.

7. INSTALL A PULL ROPE IN ALL SPARE UNUSED CONDUITS LABELED "CONDUIT ONLY". ROPE SHALL BE PER SPECIFICATION. (MIN. 200 LB. TEST RATING)

8. ELECTRICAL DEVICES ARE DIMENSIONED TO CENTER OF DEVICE UNLESS OTHERWISE NOTED.

9. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND ASSUME THE RESPONSIBILITY OF FITTING HIS EQUIPMENT, RACEWAYS, ETC. IN THE EXISTING SPACE ALLOWED. ALL NEW INSTALLATIONS SHALL BE AT NEAT RIGHT ANGLES.

10. THE FOLLOWING BEND RADII SHALL BE MAINTAINED FOR ALL COMMUNICATION UNDERGROUND CONDUIT SWEEPS.

CONDUIT SIZE	SWEEP SIZE
2"	24"
3"	36"
4"	48"

11. DIVISION 27 CONTRACTOR SHALL CLOSELY COORDINATE THE RACEWAY INSTALLATION WITH THE DIVISION 26 CONTRACTOR. DIVISION 27 SHALL INSTRUCT THE DIVISION 26 ON THE SPECIAL REQUIREMENTS FOR INSTALLATION OF FIBER OPTIC AND CATEGORY 6 RACEWAYS. DIVISION 27 SHALL INSPECT AND ACCEPT RACEWAY SYSTEMS PRIOR TO THE INSTALLATION OF ANY DATA WIRING.

12. REFERENCE SPECIFICATIONS, TITLE SHEET GENERAL NOTES AND APPLICABLE ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

MINIMUM CONDUIT SIZES ALLOWED FOR THIS PROJECT

3/4" CONDUIT	POWER/LIGHTING
3/4" CONDUIT	FIRE ALARM
3/4" CONDUIT	INTRUSION
1" CONDUIT	DATA
1 1/4" CONDUIT	AUDIO/VISUAL

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LICENSED ARCHITECT — C12359 — REGISTERED PROFESSIONAL — STATE OF CALIFORNIA

IT UPGRADE YEAR TWO
LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

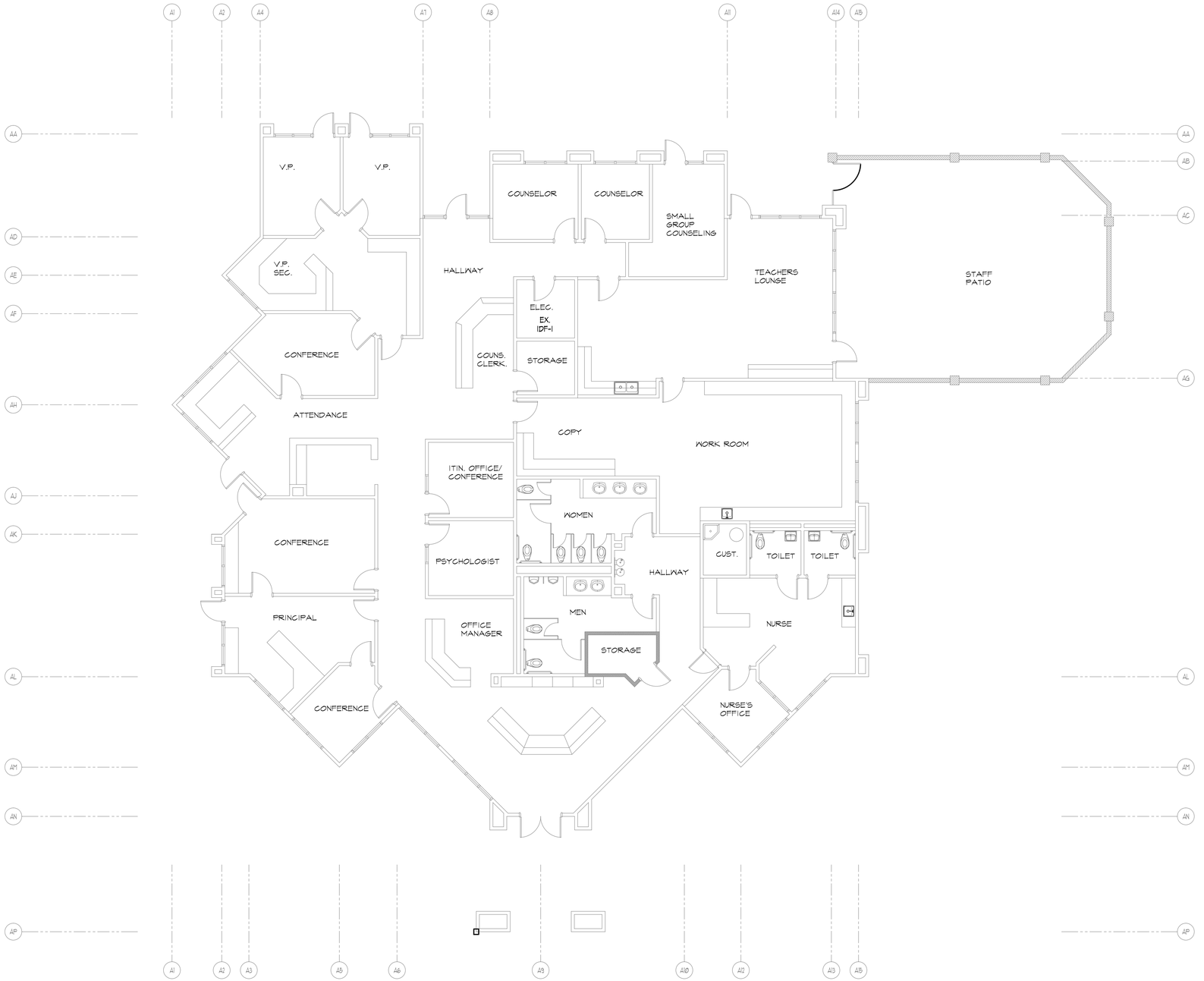
DESCRIPTION

LEGEND LIST, ABBREVIATIONS & GENERAL NOTES

DATE
02/14/2014

JOB #
13392

SHEET #
ET-0.1



BUILDING A - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

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APPROVALS

DESCRIPTION

BUILDING A SIGNAL PLAN

DATE

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SHEET #

ET-2.0

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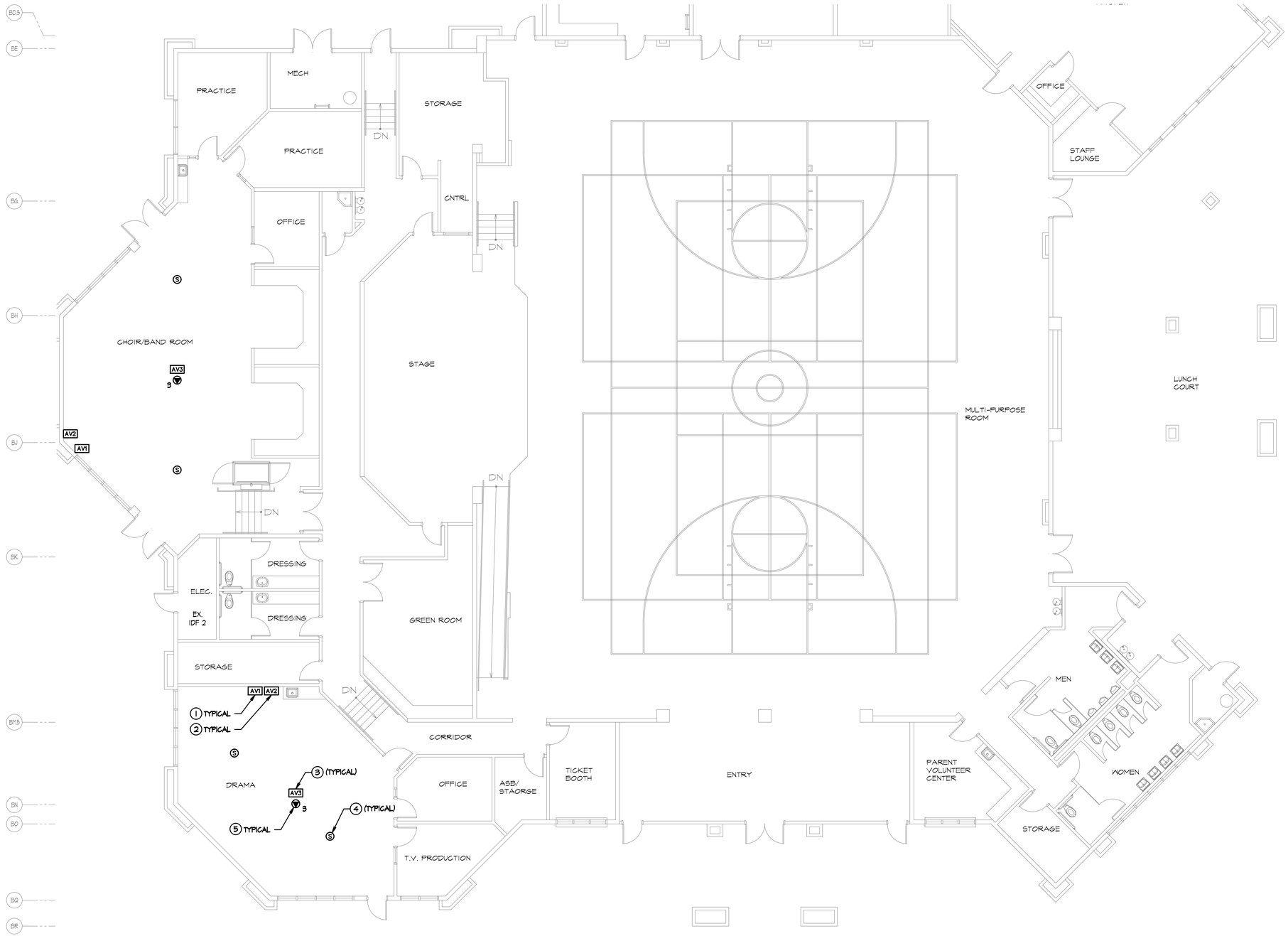

KEYNOTES

1. AUDIO/VISUAL SYSTEM INTERFACES AT CENTER OF TEACHING WALL. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
2. AUDIO/VISUAL SYSTEM INTERFACE AT TEACHING STATION LOCATION. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
3. REMOVE EXISTING PROJECTOR AND IT'S ASSOCIATED CEILING MOUNT. PROVIDE EXTRON PROJECTOR MOUNT AND AUDIO/VISUAL COMPONENTS PER SHEETS ET-5.2. RE-INSTALL PREVIOUSLY REMOVED PROJECTOR TO NEW MOUNT. CONTRACTOR SHALL MAKE NECESSARY CONNECTIONS TO PROVIDE A FULLY FUNCTIONING EXTRON AUDIO/VISUAL SYSTEM PER PLANS AND SPECIFICATIONS.
4. AUDIO/VISUAL SYSTEM SPEAKER IN SYMMETRICAL CONFIGURATION. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
5. RELOCATE EXISTING DATA DROP INTO ACCESSIBLE CEILING SPACE. USE EXISTING CAT6 DATA JACK AND CABLE; PROVIDE (2) ADDITIONAL CAT6 DATA DROPS. SEE DETAILS 1/ET-5.2 AND 5/ET-5.1.

SHEET NOTES

1. SUPPORT CATEGORY 6 & AUDIO/VISUAL CABLING WITH 'J-HOOK' SUPPORTS EVERY 4' WHERE CABLES ARE NOT SUPPORTED, ROUTED THROUGH CONDUIT OR CABLE TRAY. MAINTAIN 12" CLEARANCE FROM ELECTRICAL & LIGHTING. SEE DETAIL 4/ET-5.1.
2. SEE 6/ET-5.1 FOR CABLE LABELING REQUIREMENTS.
3. EXISTING WIRELESS ACCESS POINTS SHALL BE CONNECTED, POWERED UP AND TESTED FOR FUNCTIONALITY. COORDINATE TESTING WITH DISTRICT IT PERSONNEL.
4. SEE RISER DIAGRAM ON SHEET ET-3.0.

BUILDING B - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

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DESCRIPTION

BUILDING B SIGNAL PLAN

DATE

02/14/2014

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ET-2.1

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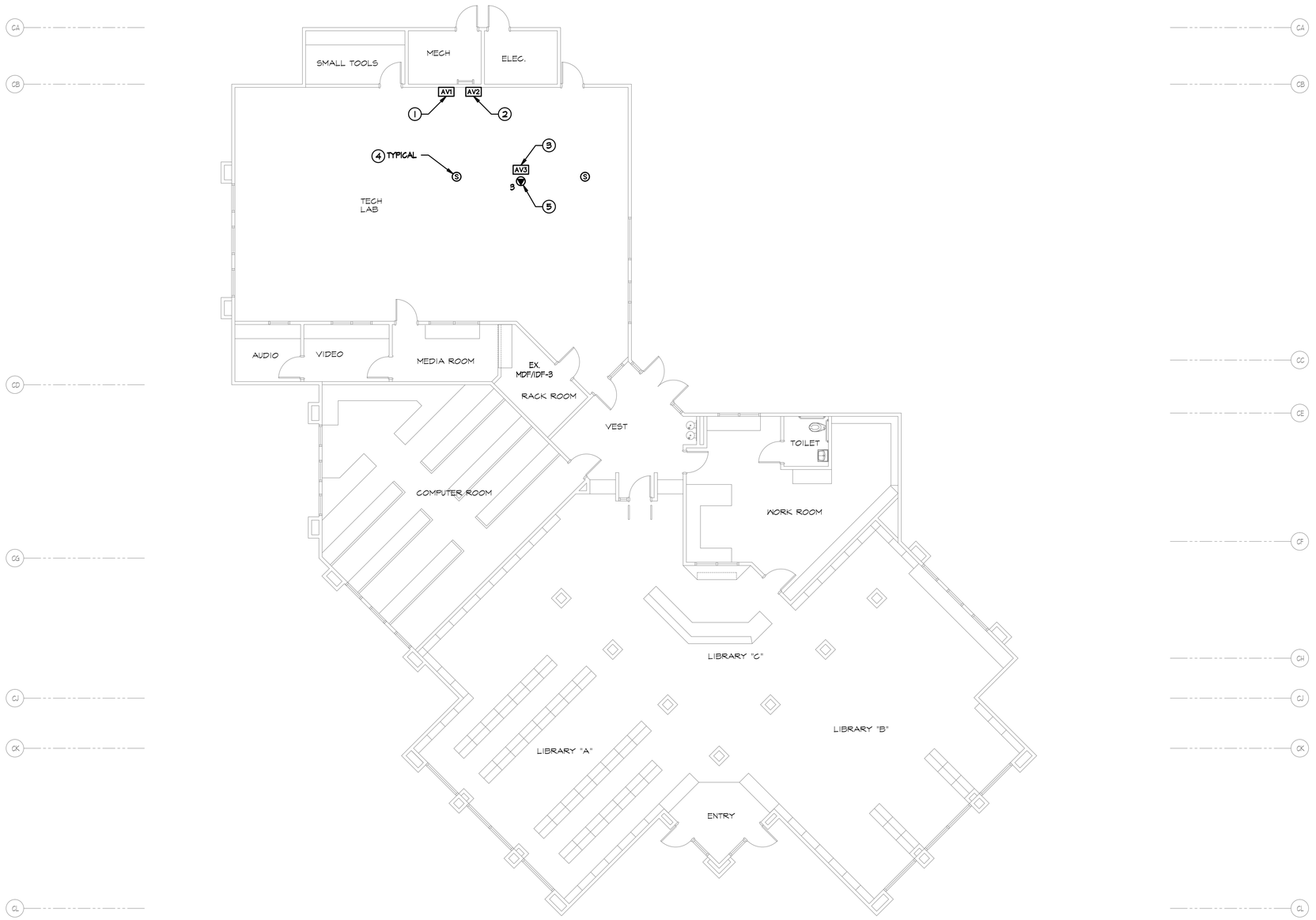

BUILDING C - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

KEYNOTES

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CAJON VALLEY UNION SCHOOL DISTRICT
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EL CAJON, CA 92021

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APPROVALS

DESCRIPTION

BUILDING C
SIGNAL PLAN

DATE

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SHEET #

ET-2.2

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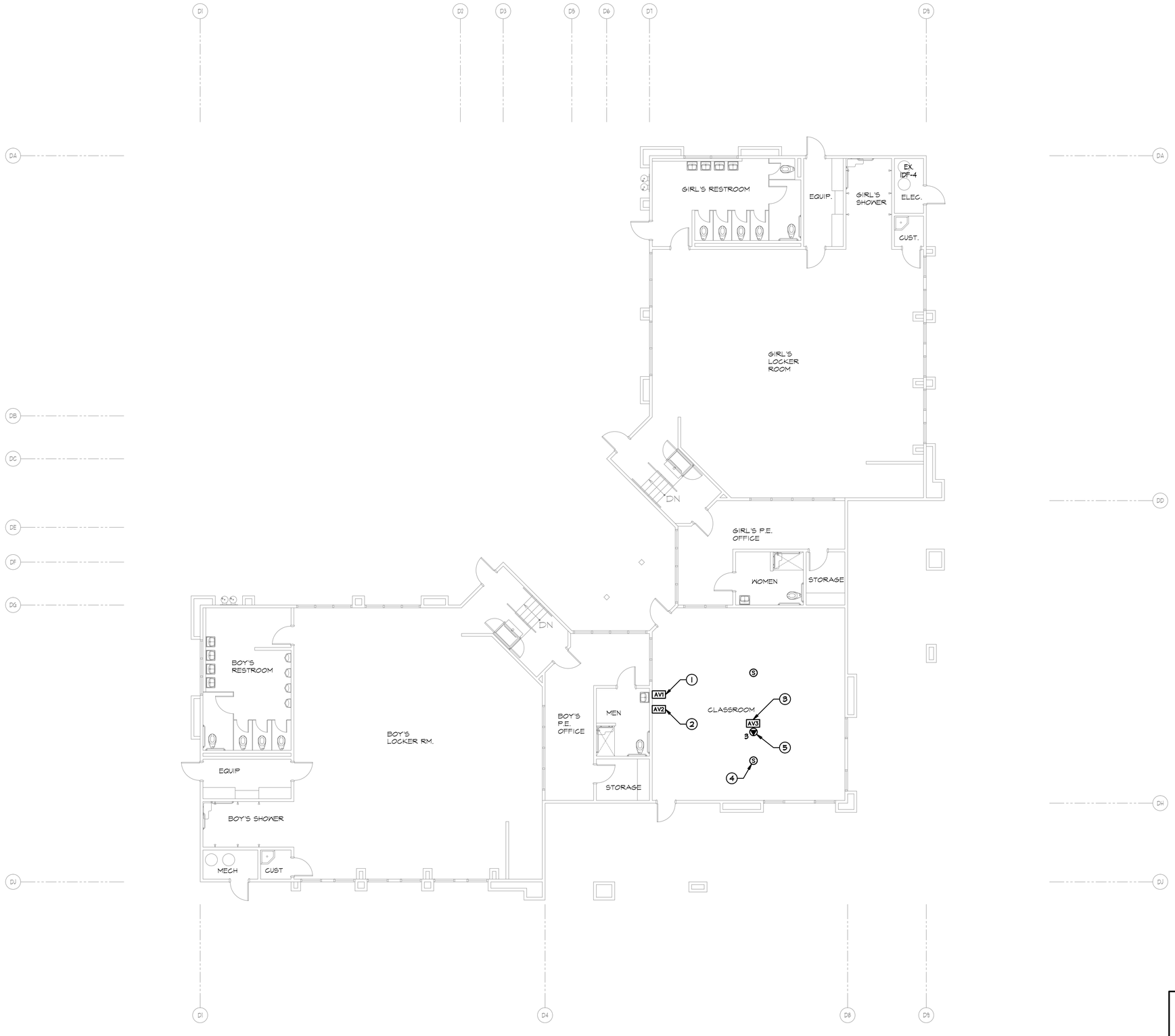

KEYNOTES

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BUILDING D - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

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EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

BUILDING D SIGNAL PLAN

DATE

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ET-2.3

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KEYNOTES

1. AUDIO/VISUAL SYSTEM INTERFACES AT CENTER OF TEACHING WALL. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
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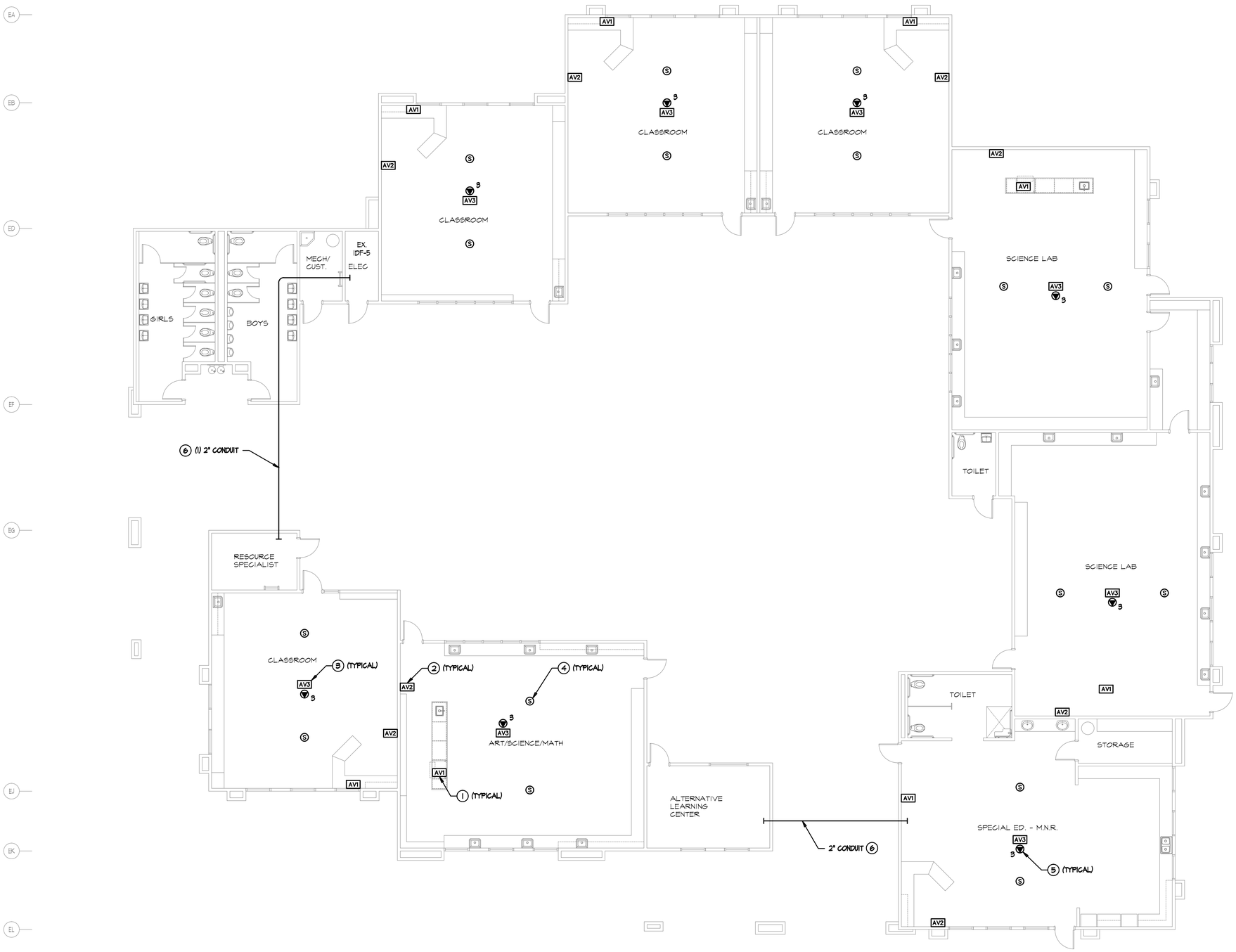
6. BEND AND ROUTE CONDUIT ALONG UNDERSIDE OF ROOF STRUCTURE TO FOLLOW PITCH OF ROOF. PAINT TO MATCH.



BUILDING E - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

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CONSULTANT

APPROVALS

DESCRIPTION

BUILDING E SIGNAL PLAN

DATE

02/14/2014

JOB #

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SHEET #

ET-2.4

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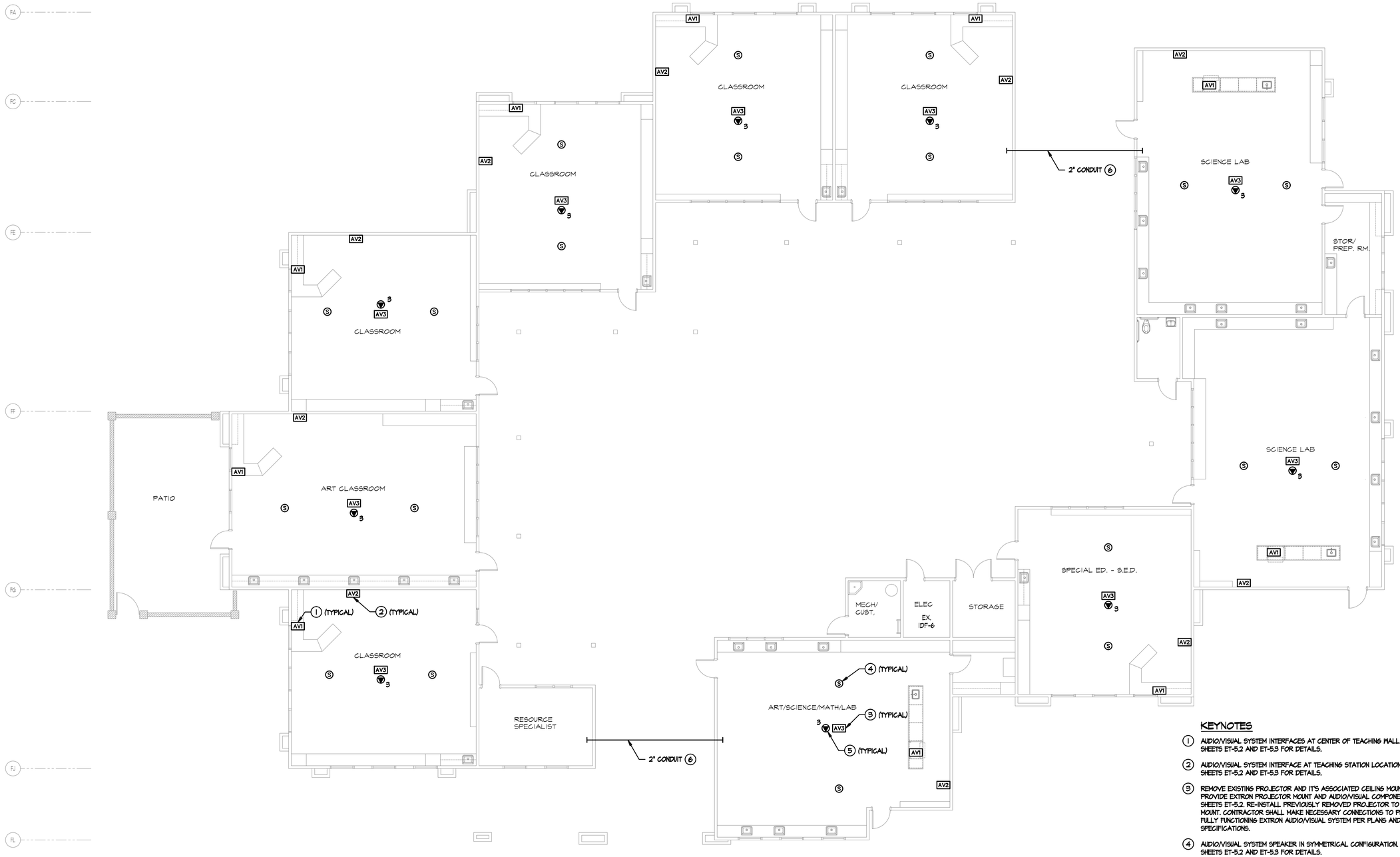

KEYNOTES

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6. BEND AND ROUTE CONDUIT ALONG UNDERSIDE OF ROOF STRUCTURE TO FOLLOW PITCH OF ROOF. PAINT TO MATCH.

BUILDING F - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

1/8" = 1'-0"

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Regis. No. 081432

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CAJON VALLEY UNION SCHOOL DISTRICT
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EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

BUILDING F SIGNAL PLAN

DATE

02/14/2014

JOB #

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SHEET #

ET-2.5

KEYNOTES

1. AUDIO/VISUAL SYSTEM INTERFACES AT CENTER OF TEACHING WALL. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
2. AUDIO/VISUAL SYSTEM INTERFACE AT TEACHING STATION LOCATION. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
3. REMOVE EXISTING PROJECTOR AND IT'S ASSOCIATED CEILING MOUNT. PROVIDE EXTRON PROJECTOR MOUNT AND AUDIO/VISUAL COMPONENTS PER SHEETS ET-5.2. RE-INSTALL PREVIOUSLY REMOVED PROJECTOR TO NEW MOUNT. CONTRACTOR SHALL MAKE NECESSARY CONNECTIONS TO PROVIDE A FULLY FUNCTIONING EXTRON AUDIO/VISUAL SYSTEM PER PLANS AND SPECIFICATIONS.
4. AUDIO/VISUAL SYSTEM SPEAKER IN SYMMETRICAL CONFIGURATION. SEE SHEETS ET-5.2 AND ET-5.3 FOR DETAILS.
5. RELOCATE EXISTING DATA DROP INTO ACCESSIBLE CEILING SPACE. USE EXISTING CAT6 DATA JACK AND CABLE; PROVIDE (2) ADDITIONAL CAT6 DATA DROPS. SEE DETAILS 1/ET-5.2 AND 5/ET-5.1.
6. BEND AND ROUTE CONDUIT ALONG UNDERSIDE OF ROOF STRUCTURE TO FOLLOW PITCH OF ROOF. PAINT TO MATCH.

BUILDING G - SIGNAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'
1/8" = 1'-0"

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IT UPGRADE YEAR TWO
LOS COCHES CREEK MIDDLE SCHOOL
CAJON VALLEY UNION SCHOOL DISTRICT
9669 DUNBAR LANE
EL CAJON, CA 92021

CONSULTANT

APPROVALS

DESCRIPTION

BUILDING g SIGNAL PLAN

DATE
02/14/2014

JOB #
13392

SHEET #
ET-2.6

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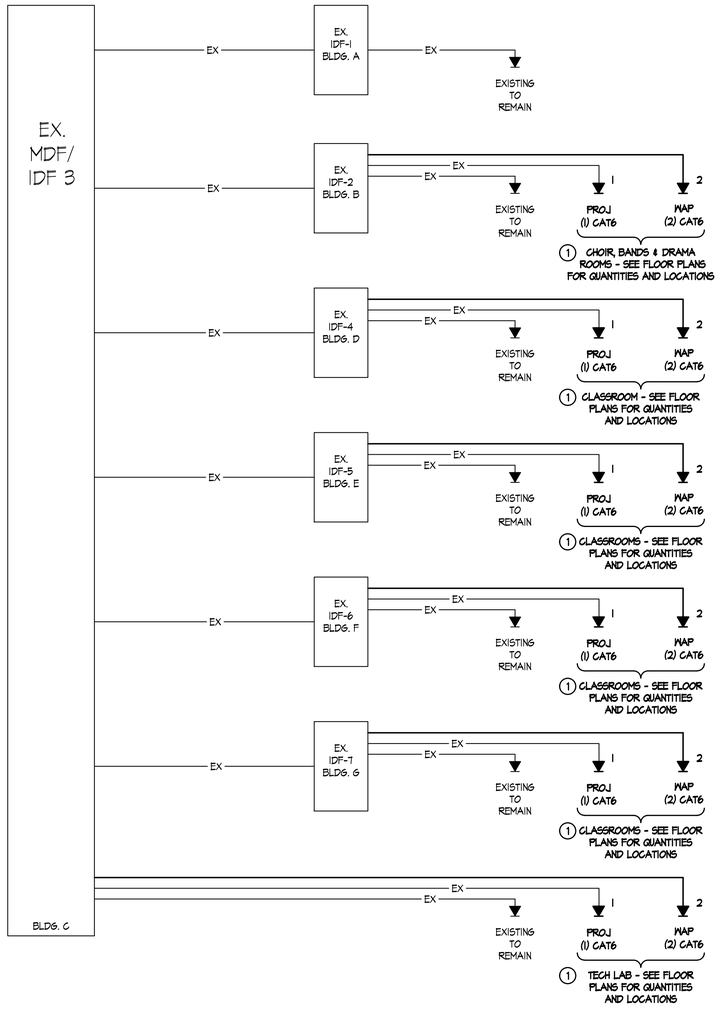


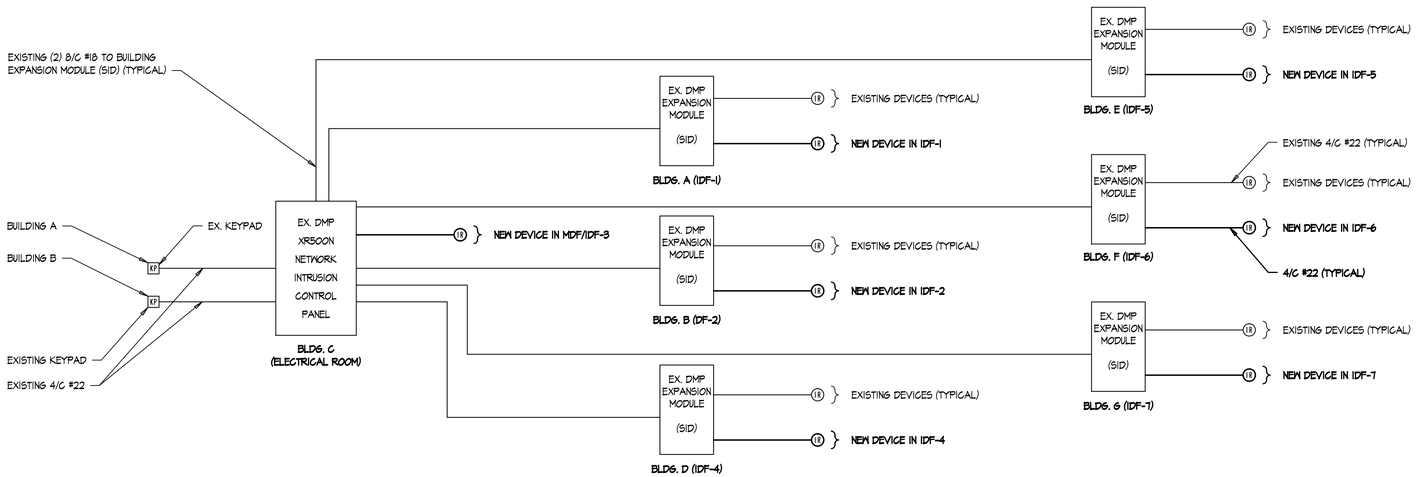
DATA RISER DIAGRAM

NO SCALE

1 / ET-3.0

KEYNOTES

1. RELOCATE EXISTING PROJECTOR DATA OUTLET INTO NEW BISCUIT BLOCK LOCATED ABOVE CEILING GRID. PROVIDE (2) NEW ADDITIONAL DATA DROPS FOR WIRELESS ACCESS POINT. SEE DETAIL 5/ET-5.1.



INTRUSION RISER DIAGRAM

NO SCALE

2 / ET-3.0

SHEET NOTES

1. SEE FLOOR PLANS FOR NEW INTRUSION DEVICE LOCATIONS. CONNECT NEW DEVICES TO EXISTING BUILDING DMP EXPANSION MODULES.
2. VERIFY AND TEST SYSTEM TO ENSURE ALL DEVICES FUNCTION PROPERLY.
3. ALL CABLE AND WIRE SHALL BE PLENUM RATED WHEN REQUIRED.

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INTRUSION RISER DIAGRAM

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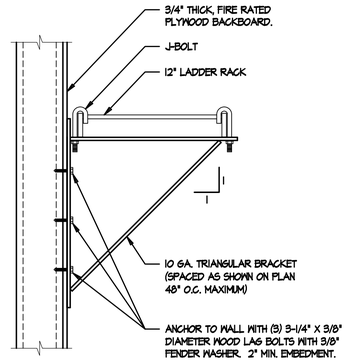
ET-3.0

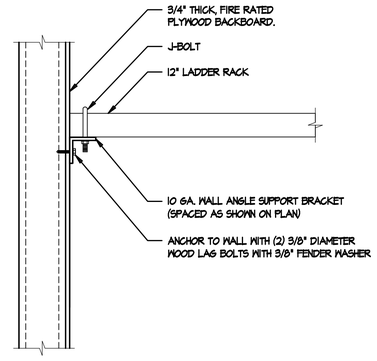


GENERAL NOTES

1. CONTRACTOR TO FURNISH AND INSTALL ALL DATA RACKS.
2. COORDINATE RACK AND LADDER RACK INSTALLATION WITH MECHANICAL CONTRACTOR.

TRIANGULAR BRACKET SUPPORT

NO SCALE — 1 / ET-5.1

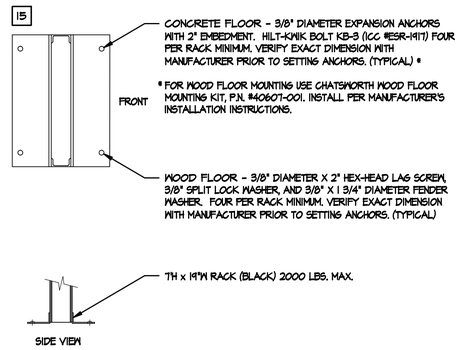


GENERAL NOTES

1. CONTRACTOR TO FURNISH AND INSTALL ALL DATA RACKS.
2. COORDINATE RACK AND LADDER RACK INSTALLATION WITH MECHANICAL CONTRACTOR.

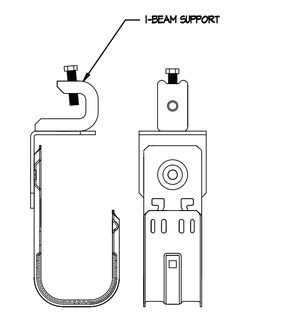
WALL ANGLE SUPPORT BRACKET

NO SCALE — 2 / ET-5.1



IDF RACK ANCHOR DETAIL

NO SCALE — 3 / ET-5.1

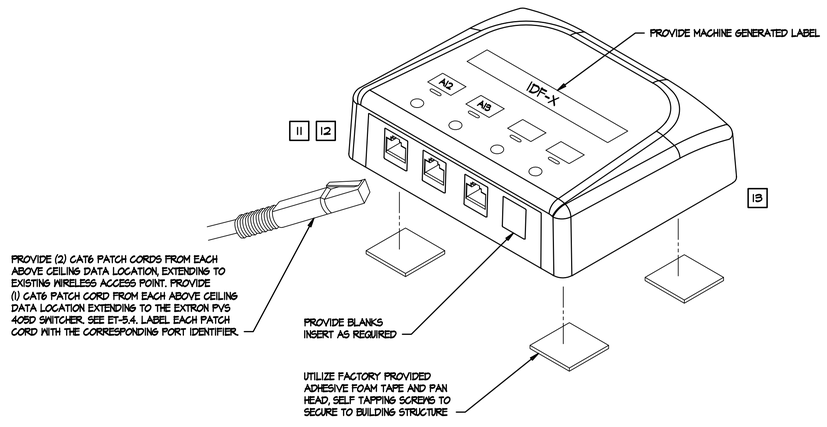


NOTES

1. STATIC LOAD CAPACITY: 30 LBS.
2. MAX FILL OF 40 CATEGORY 6 CABLES
3. MAINTAIN MAXIMUM 4' DISTANCE BETWEEN J-HOOK SUPPORTS.

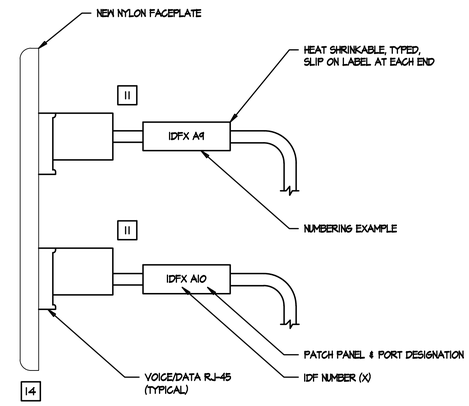
J-HOOK INSTALLATION DETAIL

NO SCALE — 4 / ET-5.1



4 PORT SURFACE MOUNT MODULE DETAIL

NO SCALE — 5 / ET-5.1



TYPICAL LABELING EXAMPLES	
CABLE	TYPICAL END USE CABINET & TYPE
24 FIBERS	IDF 24 F/O DATA
CAT6 (SPARE)	IDF CAT6 SPARE

LABELING EXAMPLE DETAIL

NO SCALE — 6 / ET-5.1

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DESCRIPTION
TECHNOLOGY SUPPORT DETAILS

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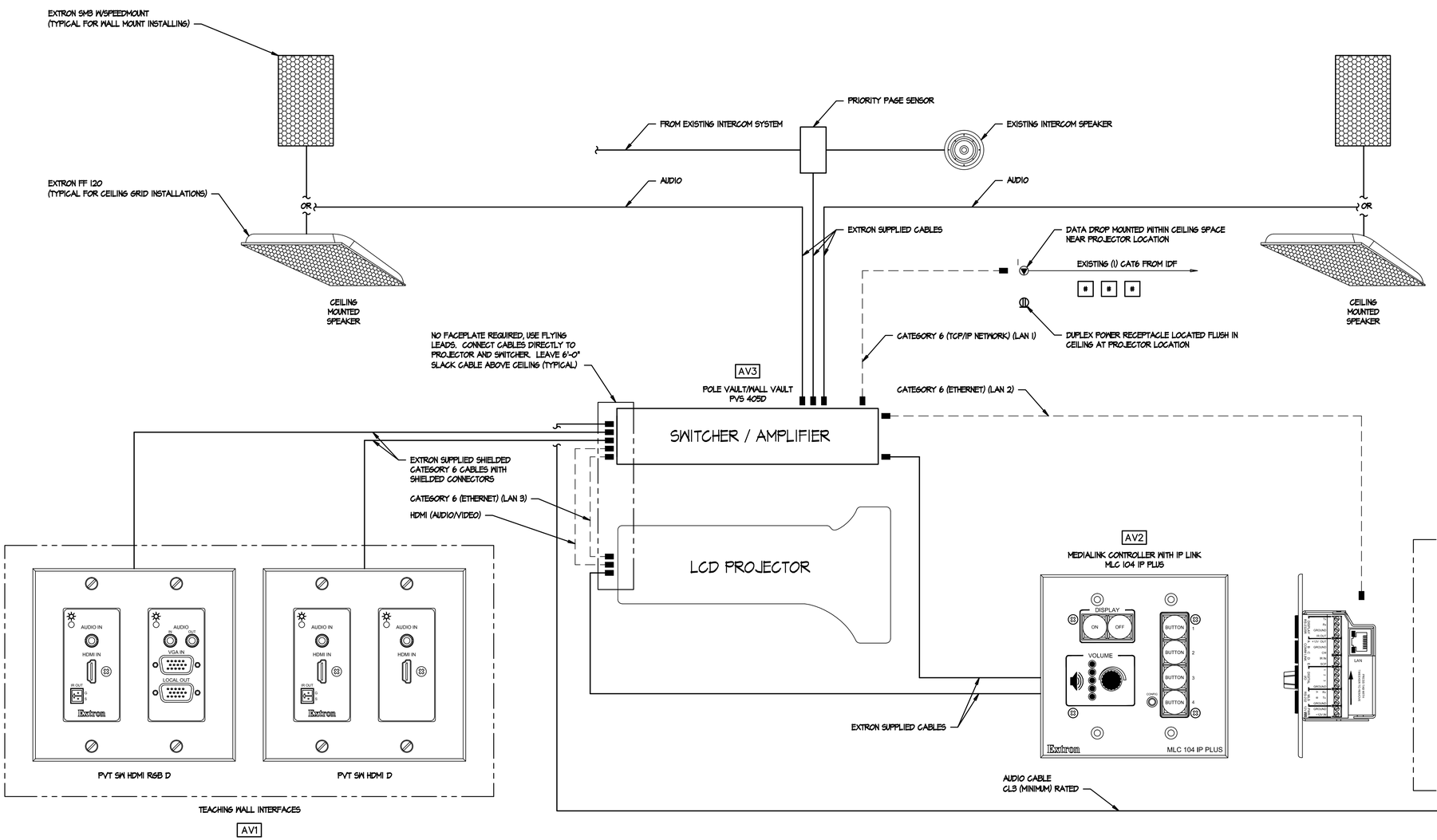

DETAIL NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL A FULLY FUNCTIONING AUDIO/VISUAL SYSTEM PER PLANS, DETAILS AND SPECIFICATIONS.
2. DATA OUTLETS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL INSTALL ACTUAL DATA DROP QUANTITIES PER FLOOR PLANS AND RISER DIAGRAMS.
3. ALL AUDIO/VISUAL INTERFACES TO BE WHITE.

WIRE LEGEND

- COMPONENT PATCH CORD
- CAT6 TO IDF → STRUCTURED CABLING
- WIRE/CABLING IN WALL OR SPECIFIED PATHWAY

TYPICAL AUDIO/VISUAL WIRING DETAIL

NO SCALE

1 / ET-5.2

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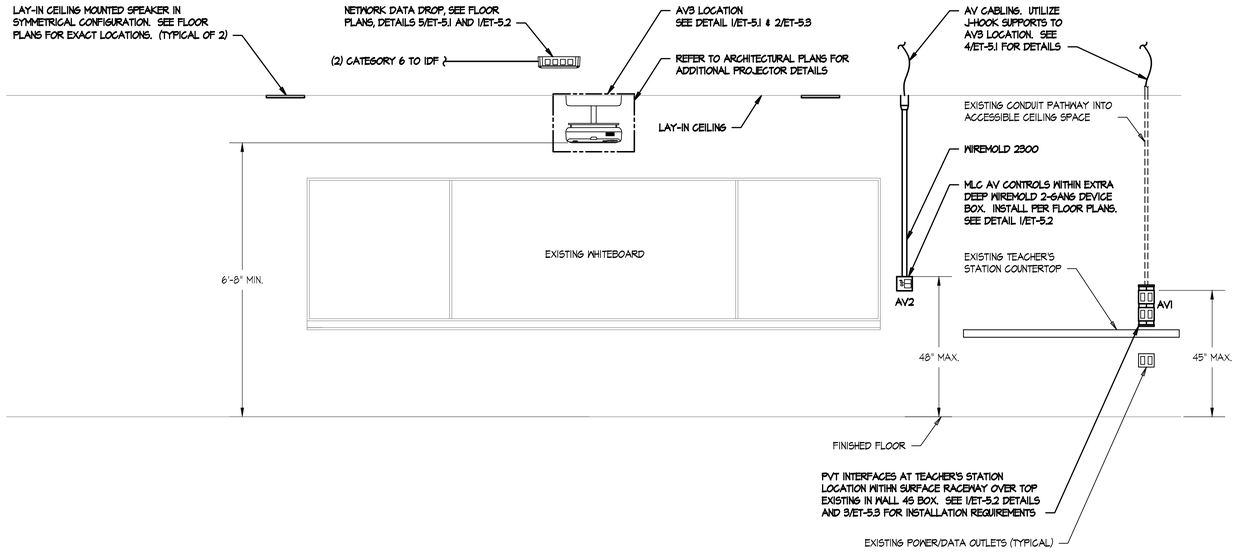
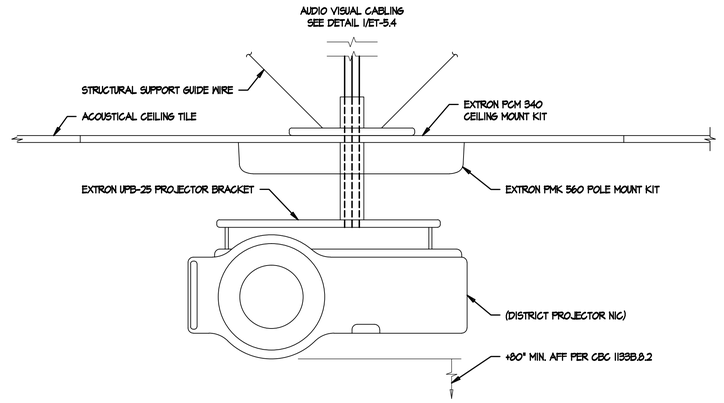


AUDIO/VISUAL CEILING MOUNTED PROJECTOR DETAIL (TYPICAL CLASSROOM)

1 ET-5.3

NO SCALE



NOTES

1. ALL PROJECTOR RELATED CEILING-MOUNTED INTERFACES SHALL BE MOUNTED IN CLOSE PROXIMITY, WITHIN 2 TO 3 FEET, OF THE PROJECTOR MOUNT.
2. GENERAL CONTRACTOR SHALL COORDINATE WITH ALL INSTALLATION TRADES TO LOCATE PROJECTOR MOUNT, CEILING INTERFACES, AND CAT6 NETWORK DROP, AS INDICATED WITH NO OBSTRUCTIONS FROM EQUIPMENT OR OTHER SYSTEMS INCLUDING BUT NOT LIMITED TO: LIGHTING, CEILING FANS, SPRINKLERS, FIRE-ALARM DEVICES, SPEAKERS, AND CABLING.
3. ADJUSTABLE PROJECTOR MOUNTING PLATE TO BE SET INTO ACOUSTICAL PANEL. REFER TO ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR INSTALLATION. TOTAL HEIGHT OF PROJECTOR AND MOUNTING SYSTEM SHALL NOT EXCEED 50 LBS.
4. MOUNT PROJECTOR PLATE 12" FROM TEACHING WALL, CENTERED ON EXISTING SCREEN (OR TEACHING WALL IF NO EXISTING SCREEN) 2" +/- LATITUDE (FRONT/BACK OR SIDE-TO-SIDE) IS ALLOWABLE TO CLEAR EXISTING OBSTRUCTIONS.

AUDIO/VISUAL CEILING PROJECTOR DETAIL

2 ET-5.3

NO SCALE

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