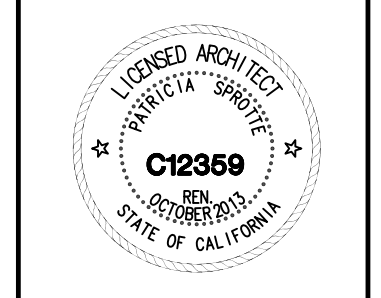


# IT UPGRADE - JAMACHA ELEMENTARY SCHOOL CAJON VALLEY UNION SCHOOL DISTRICT



**CONSULTANT**

**APPROVALS**

**DESCRIPTION**

TITLE SHEET

**PROJECT DIRECTORY**

**DATE**

**JOB #**

**11-0101.6**

**SHEET #**

**T-1**

**GENERAL NOTES**

**GENERAL**  
An Inspector employed by the Owner and approved by the Division of the State Architect, in accordance with the requirements of the California Code of Regulations, Title 24, will be assigned to the work. His duties are specifically defined in Title 24, Part 1, Section 4-342 and shall include continuous inspection of the work. Inspector shall be class 2 or better.

Changes to the approved drawings and specifications shall be made by an addenda or a change order approved by the Division of the State Architect, as required by Section 4-338, Part 1, Title 24, C.C.R.

Consumption of alcoholic beverages, tobacco or similar products, illegal drugs or similar products is strictly prohibited on District property. Radios and other audio devices are not allowed on the District's premises.

The term "contractor" shall pertain to the General Contractor and any subcontractors.

**PHASING/TIMELINE**  
The school may be occupied and operational during project construction. The Contractor shall coordinate and schedule with the District a sequence for the work. The Contractor shall notify the school personnel when construction noise will be excessive. The Contractor shall reschedule work if so required by the school personnel.

Contractor shall provide written requests for any anticipated mechanical, electrical or plumbing shutdowns at least three days prior to event. Work requiring shutdown may be required to be performed outside normal school hours. Written requests shall provide the following information: Areas Affected, Planned Time and Length of Interruption.

Work shall not commence until receipt of written Notice to Proceed.

Where service interruption impacts daily school operations, at the discretion of the school administration, these interruptions shall be made during off hours.

Contractor shall coordinate with Owner for staging or storing of materials, phasing and hours of construction.

Prior to the commencement of any demolition work, a minimum of 12 hours notice shall be given to the school administration. Work shall not commence until receipt of written Notice to Proceed.

**CONTRACTOR RESPONSIBILITIES**  
Contractor shall be responsible to remove or relocate any materials as required and to temporarily disconnect and store any items as required to perform any new work or install any new materials to be provided in these plans. This shall include, but is not limited to, casework, light fixtures, mechanical equipment, electrical equipment, metal studs, gypsum wallboard, lath and plaster, conduits, low voltage systems, mechanical ducts, and other similar construction. It shall be the responsibility of the contractor to restore any portions of work removed or relocated to its preconstruction location or condition unless otherwise specified in the Construction Documents. Existing equipment and/or systems scheduled to be reinstalled or reconnected shall be fully operational upon completion of reinstallation or reconnection unless contractor has notified the owner in writing prior to the start of construction that the specific systems and/or equipment were inoperative prior to the start of work.

The Contractor shall review all operational systems within the campus prior to starting work and provide a listing of non-operational components to the District and the Architect. These systems shall include, but are not limited to, Telephone Data, Public Address, Security, Clock, Electrical, Lighting, Mechanical Controls, and Fire Alarm. It shall be assumed all systems are operational and fully functioning unless identified by the Contractor. It shall be the responsibility of the contractor to restore systems in operational order or to restore these systems to operational order upon completion of the work, with the exception of those items found initially to be non-operational and determined by the District and Architect to remain non-operational. The maintenance of systems operation does not apply to items specifically designated to be replaced by new systems.

Contractor shall be responsible to replace or repair any finishes or systems removed or required to be replaced as a result of the new work identified in these plans, matching the removed material's configuration, texture, color and finish of the original application of material. This includes, but is not limited to, roofing, ceilings, acoustical ceilings, wall and floor systems. Any framing, suspension systems, bracing or similar elements removed as a necessity of the new work shall be replaced, matching the original condition. In no case shall the contractor remove or alter any of the structural systems necessary for the building's structural integrity without prior authorization of the design engineer responsible for the work.

Not all locations for repair may be noted due to the access needed for installation or work required. Contractor shall review the project's requirements and site conditions for evaluation of work necessary to repair as a result of the new work required. These areas may include, but not necessarily limited to, partitions, soffits, gypsum drywall, ceilings, plaster ceilings, suspensions, acoustical ceilings, walls, chases, parapets, plenums, mechanical ducts, electrical conduits, etc. The contractor shall repair existing finishes and re-establish existing systems connections disturbed or damaged due to the installation of new work.

The contractor shall provide adequate and safe braces and connections to support the component parts of the structure, until the structure itself is sufficiently complete to support itself.

For existing floors, ceilings, partitions, and services to remain, the contractor shall be responsible for protecting all finishes and materials, and repairing or replacing all items that are damaged or soiled during the course of construction. All required exits from occupied portions of the building shall be maintained at all times. The contractor shall immediately clean dust and dirt from corridor areas not protected by dust screens.

The contractor shall be responsible for keeping work area in a neat and safe condition. All trash and debris shall be removed from site and disposed of in a lawful manner. Area of work shall be thoroughly and completely cleaned and ready for occupancy upon completion of work.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours. The Contractor shall defend, indemnify and hold the Architect free and harmless from any and all claims, demands and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Architect.

Prior to delivery of materials to the construction zone and removal of waste from the site, the Contractor shall check with the school personnel for an acceptable access route and time. Under no circumstances shall the Contractor, his subcontractors, or any of their employees use any area outside the construction zone without prior clearance from the school personnel.

Storage of all materials, equipment and supplies shall be limited to scheduled areas of work in progress, or to designated exterior locations approved and arranged with the Owner.

The Contractor shall be responsible for keeping the work area in a neat and safe condition. All trash and debris shall be removed from site and disposed of in a lawful manner. The area of work shall be thoroughly and completely cleaned and ready for occupancy upon completion of work.

During the construction period, the Contractor shall be responsible for providing adequate barricades around the limits of work to insure the safety of students, staff, the public and the construction in progress.

The Contractor shall provide adequate and competent supervision at each site while construction is in progress.

The Contractor will be responsible for providing dumpsters, telephone, toilet facilities, etc. for the use of his personnel during construction. School facilities shall not be used.

**CONSTRUCTION DRAWINGS**  
It is the intent of these drawings to indicate a complete and finished product matching and/or abutting existing construction in a neat and professional manner.

It is the contractor's responsibility to field verify and locate all existing utilities in the construction area prior to commencing work.

Dimensions shall take precedence over scaled dimensions of the plans, sections, details, etc. in these drawings.

Where a construction detail is not shown or noted, the detail shall be the same as for similar work.

The Contractor shall refer to specifications provided, for a complete list of general conditions, special conditions, materials, installation methodology, related documents, quality assurance submittals, job conditions, products, execution, etc.

All drawings, though noted to scale, are for illustration only. The Contractor and his subcontractors shall not scale the drawings.

The Contractor shall verify all existing dimensions in the field prior to commencing with construction.

All substitutions shall be by change order and require DSA's Approval. In accordance with Section 01300-3.12.

These drawings represent the finished project and do not include the method of construction. The Contractor is responsible for temporary bracing, shoring and support necessary to achieve the finished project. The Contractor is responsible for determining and enforcing all construction load limits on any structure.

The drawings shall be bid and constructed in its entirety unless specified otherwise. Drawings shall be coordinated between trades and between all of the drawings to each other in their entirety. In the event there is a discrepancy between the Civil, Landscape, Architectural, Structural, Mechanical, Electrical, or Plumbing drawings it shall be assumed that the more stringent or more costly methodology for construction shall be utilized for construction, with the Architect making the final determination of the methodology utilized.

**INVESTIGATIONS**  
The contractor shall report any variations or discrepancies in site conditions or contract documents to the design engineer responsible for the work for clarification prior to proceeding with work. Proceeding on any phase of the work without notification shall imply acceptance of the conditions for the work.

Typical notes and details shall apply unless shown otherwise on these plans. The Contractor shall field verify all existing conditions including but not limited to, structures, mechanical, plumbing, electrical, equipment, and all other existing systems, and make necessary provisions to maintain the integrity of said systems prior to the commencement of demolition, if any. All possible care shall be exercised by the Contractor to insure that any said utility will not be the cause of endangerment to the life or health of any person.

It shall be the responsibility of the Contractor to check with the architectural drawings before the installation of any mechanical, plumbing, electrical or other construction of any discrepancies between or within the architectural and consulting engineer's drawings shall be brought to the Architect's attention for clarification before commencing with the work. Failure of the Contractor to seek clarification from the Architect prior to installing questionable construction will be cause to hold the Contractor responsible for revising the work to meet the intent of the drawings.

The Contractor shall request from the District all Record Documents, "As-Builts," or other Owner supplied documents prior to beginning any demolition or construction to examine and determine any conditions where conflicts, hardships or similar problematic issues may occur. The Contractor shall notify the Architect of any conditions where these potential conflicts may arise prior to any demolition or construction.

The Contractor shall field verify all existing dimensions, services, points of connection, utilities and irrigation lines in the construction area prior to commencing work. The Contractor shall repair, at his expense, any utility lines damaged during the completion of the contract.

Unless specifically noted otherwise in the Construction Documents, all existing building systems and equipment within the limits of work are considered to be in satisfactory working order prior to the start of construction. All building systems and equipment within the limits of new work or affected by the scope of new work, shall be fully functional upon completion of the new work. Unless the contractor has notified and identified to the owner in writing prior to the start of construction that specific systems and/or equipment are inoperative or faulty at the start of work, the contractor shall be potentially responsible for making the system back into an operational manner.

All work shall be done in accordance with Title 24, C.C.R.

All construction shall be done in accordance with the codes listed under the applicable codes heading on this sheet. It shall be the Contractor's and his employee's responsibility to be familiar with all codes and ordinances, City or State, as required for the construction of this project, where any conflicts occur between Federal, State and local laws, codes, ordinances, and regulations, the most stringent shall govern.

All materials and workmanship shall conform to the requirements of both the Uniform Building Code and Title 24, California Code of Regulations (C.C.R.).

A copy of Title 24, C.A.C. shall be available at the job site.

**DEMOLITION**  
Owner shall have first right of refusal on all demolition and/or salvaged items.

All items to be removed, relocated or reused shall be handled with proper care and stored in a safe place to prevent damage, or in the event of damage or loss, replaced at the Contractor's expense.

When demolition work impacts daily school operations, at the discretion of the school administration, demolition work shall be performed during off hours.

When it is necessary to remove partitions of existing construction including floors, walls and ceilings to install new building systems or related work, these areas shall be replaced or repaired to match the existing adjacent surfaces.

Floors/Pavement: Sawcut edges shall be sharp, straight and square with no overcuts.

Walls: As required, due to new construction, neatly remove existing plaster or gypsum board at walls. Edges shall be sharp, straight and square.

Following completion of work, new plaster or gypsum board, or other new materials required to match existing adjacent construction, shall be applied, filled and textured to match adjacent surfaces, then sealed and painted. Paint shall match existing adjacent paint in material, type and color. Prior to painting, obtain approval of color from Architect.

Demolition notations reference general items and conditions. Variations may occur within areas and shall be treated as similar conditions. Contractor shall coordinate materials noted for demolition to the new work requirements to insure any materials hidden from view or exposed may be required to remain for future new work or maintenance of building systems operations.

**REPAIRS**  
The contractor shall repair at his expense any utility lines damaged during construction.

Any construction installed in conflict with the contract documents shall be corrected by the Contractor at his own expense, and at no expense to the Owner or Architect.

Contractor shall repair exposed finishes matching adjacent material's configuration, texture, color and finish for those areas which have materials removed. This would include, but is not limited to, holes, adhesives etc. in walls left from removed furnishings, finishes or casework.

Contractor shall not alter or remove any shear or bearing walls unless identified on the drawings and appropriate details are provided and approved by DSA. The contractor shall take precautions to maintain all apparent structural elements of the building, upon any discovery of any shear walls, columns, bearing walls, etc. indicated for removal, but not specifically identified as such shall be brought to the attention of the architect immediately without proceeding with any further removal to insure structural integrity.

**BUILDING**  
The contractor shall, wherever possible, route conduits, piping or ductwork in a concealed location, or when not possible, to route systems in the least conspicuous location in a neat and professional manner as approved by the Architect and the Owner.

When installing drilled in anchors or power driven pins into existing reinforced concrete, use care to avoid cutting or damaging the reinforcing bars. Exercise extreme caution. Maintain min. 1" clear from pins to bars.

Dust screens of either plastic or plywood partitions shall be maintained adjacent to and separating areas of construction from adjoining occupied areas. Screens shall be relocated as necessary. The contractor shall advise and coordinate the screen locations with school personnel. Required exits and occupant circulation within buildings shall be maintained.

Work which creates an inordinate amount of noise to disturb the occupants shall be scheduled after hours or during periods when the area is not occupied.

Systems which contain electronic or microprocessor systems with date or time programming, where applicable, shall be Y2K or Year 2000 compliant.

**SITE**  
Where paving, walks and/or landscape areas including irrigation systems are disturbed or damaged during construction, they shall be repaired and/or replaced to match existing conditions. The Contractor is responsible for modifying existing grades or pavement slopes, where site work is required within these drawings.

Grade or pavement within five feet of any building perimeter shall be sloped at a minimum of 1/4 inch per foot drainage away from the building(s). Existing drainage swales which may be interrupted by the installation of new construction shall be modified so as to direct drainage away from buildings and walkways and to maintain continuation of existing site drainage to an existing storm drain.

The General Contractor shall remove all irrigation lines and sprinkler heads to a distance of five feet beyond the limits of new construction. After installation of the building(s) and related paving, walks and ramps, the General Contractor shall modify the configuration of the sprinkler lines and heads within the limits of construction and reconnect the irrigation lines disturbed due to construction. Contractor shall rework irrigation heads and lines, including full coverage of planting and lawn areas to remain. Direct sprinklers away from all buildings and walkways. Replant landscape areas damaged due to construction with planting to match adjacent undisturbed areas. Site plans utilities not specifically defined with horizontal or vertical control requirements shall be considered diagrammatic and shall not be utilized for service run lengths and exact locations.

Where play equipment is to be removed, the District shall be responsible for removal of play structures except masonry ball walls, where occurring, which shall be the Contractor's responsibility for removal.

Where construction creates excess earth, all excess soil spoils shall be removed from the site(s) unless specifically noted otherwise, and shall be deposited off premises in a legal and acceptable manner.

The Contractor will be responsible for locating all above and below grade utilities prior to commencing work. Utilities found to be in conflict with the proposed construction shall be brought to the attention of the Inspector and the Architect immediately and prior to commencing work. The Contractor will be responsible for repairing any utilities damaged due to construction activities at no cost to the District.

The building envelope shall be over-excavated to a depth of 3 feet or more into compact terrace deposit materials. The elevator shaft area shall be over-excavated to a depth of 2 feet below the bottom of the elevator shaft foundation.

Preparation of the exposed surfaces, and placement of compacted fill shall be performed in accordance with the referenced geotechnical report.

**WALLS**  
All penetrations into sound rated partitions, floors, or ceiling assemblies shall be sealed with approved resilient acoustic sealant. Electrical devices, recessed items, etc. shall be sealed or lined to maintain integrity of the acoustic assembly.

Thoroughly caulk, flash and/or seal around all wall and/or roof penetrations that are made as part of construction to create a watertight condition.

All electrical, mechanical and plumbing penetrations through fire resistive area separation and corridor assemblies, including conduits and piping shall be tightly and solidly sealed with an approved firestopting compound of ICBDO, #631, approved equal or as indicated within the drawings or specifications. Where services penetrate an area separation wall, the section passing through the wall face and the future connections thereto shall be only of metal.

All penetrations through fire rated walls, floors and ceilings shall be sealed with a material capable of preventing the passage of hot gases when subjected to the requirements of A.S.T.M. E814 and as prescribed in state fire marshal set 43-1. Use 3M UL system #41, as detailed or specified, or state fire marshal approved equal.

No pipes, ducts, sleeves, chases, etc. shall be placed in slabs, beams, or walls, unless specifically noted, nor shall any structural member be cut for pipes, ducts, etc. unless specifically detailed.

All framing nailing shall be in accordance with CBC Table 23-II-B-1, including roof framing.

**CEILING**  
Not all ceiling materials and systems within the plans are defined by notation or illustration. It is incumbent of the contractor to field verify prior to bidding, the ceiling conditions and systems for cleaning the materials required to be removed for access or required for replacement to perform the work within the plans.

**ROOF**  
All penetrations, such as pipes, conduits, ducts, etc. through the roof membrane, when required, shall be thoroughly flashed with roof jacks, foamed or sealed with sealant compatible to the roofing membrane, or counter flashed to provide appropriate weather resistance. Nails, screws, bolts or other fasteners penetrating the roof membrane shall not be used unless specifically detailed or approved by record. All roof sleepers indicated in the drawings or required, shall be oriented on the roof to reduce drainage blockage.

New roof work, where required, shall be integrated into the existing roofing to continue to provide positive drainage to gutters, roof drains or to the roof's edge and to provide weather resistance. All detailing shall conform to the latest edition of the national roofing contractors manual or the manufacturer's recommendations.

Construction materials shall be evenly distributed if placed on framed roofs. Loads shall not exceed the allowable loading for the supporting members and their connections.

Contractor shall contact the District's Maintenance and Operations facilities to verify existing life of warranty and to perform all work with labor, materials and installation methods and design criteria to maintain warranty.

**MATERIALS**  
Classification of interior finishes shall be based on their flame-spread index as set forth in Table 8-A, CBC.

Interior finishes shall not have a smoke density greater than 450 when tested in accordance with UBC Standard 8-1.

Insulation and covering on pipes and tubing (1012), acoustical ceilings, fiberglass reinforced plastic panels, shall have a flame-spread rating not to exceed 25 and a smoke density to exceed 450 when tested in accordance with UBC Standard 8-1.

**HAZARDOUS MATERIALS**  
Hazardous Materials, if encountered, shall be removed in accordance with state and local regulations. Removal of hazardous materials shall not be part of this scope of work.

**DEFERRED APPROVALS**

Not applicable.

**GEOTECHNICAL EVALUATION**

Not applicable.

**APPLICABLE CODES:**

APPLICABLE CODES as of January 1, 2011 (DSA-AC Checklist, Rev. 02/15/2011)

2010 Building Standards Administrative Code, Part 1, CBSC  
 2010 California Building Code (CBC), Part 2, CBSC  
 (2009 IBC 4 California Amendments)  
 2010 California Electrical Code (CEC), Part 3, CBSC  
 (2008 National Electrical Code 4 California Amendments)  
 2010 California Mechanical Code (CMC) Part 4, CBSC  
 (2009 Uniform Mechanical Code 4 California Amendments)  
 2010 California Plumbing Code (CPC), Part 5, CBSC  
 (2009 Uniform Plumbing Code 4 California Amendments)  
 2010 California Energy Code, Part 6, CBSC  
 2010 California Historical Building Code, Part 8, CBSC  
 2010 California Fire Code, Part 9, CBSC  
 (2009 International Fire Code 4 California Amendments)  
 2010 California Referenced Standards, Part 12, CBSC  
 Title 8 C.C.R. Ch. 4, Sub-Chapter - Elevator Safety Orders  
 Title 19 C.C.R., Public Safety, SPT Regulations.

**LIST OF FEDERAL CODES AND STANDARDS (IF APPLICABLE)**  
Americans with Disabilities Act (ADA), Title II or Title III  
For Title II: Uniform Federal Accessibility Standards (UFAS) or ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36).  
For Title III: ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36).

**PARTIAL LIST OF APPLICABLE REFERENCED STANDARDS**

NFPA 13, Installation of Sprinkler Systems, 2010 Edition  
 NFPA 72, National Fire Alarm Code (CA Amended), 2010 Edition  
 (Note: See UL Standard 181 for "Visual Devices")  
 Reference code section for NFPA Standards - CBC (SFM) Chapter 35  
 ASME A11/CSA B44-2001  
 ASME A181-2009  
 ASTM F 1481-99 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use  
 ASTM F 1951-99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment  
 ASTM F 1292-99 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment  
 BHMMA A18610-2006 American National Standard for Power Operated Pedestrian Doors  
 BHMMA A18619-2002 American National Standard for Power Assist and Low Energy Power Operated Doors

**PROJECT SCOPE**

The Project is to include all labor, materials and equipment to provide improvements to the existing facilities as indicated in the plans and project manual.

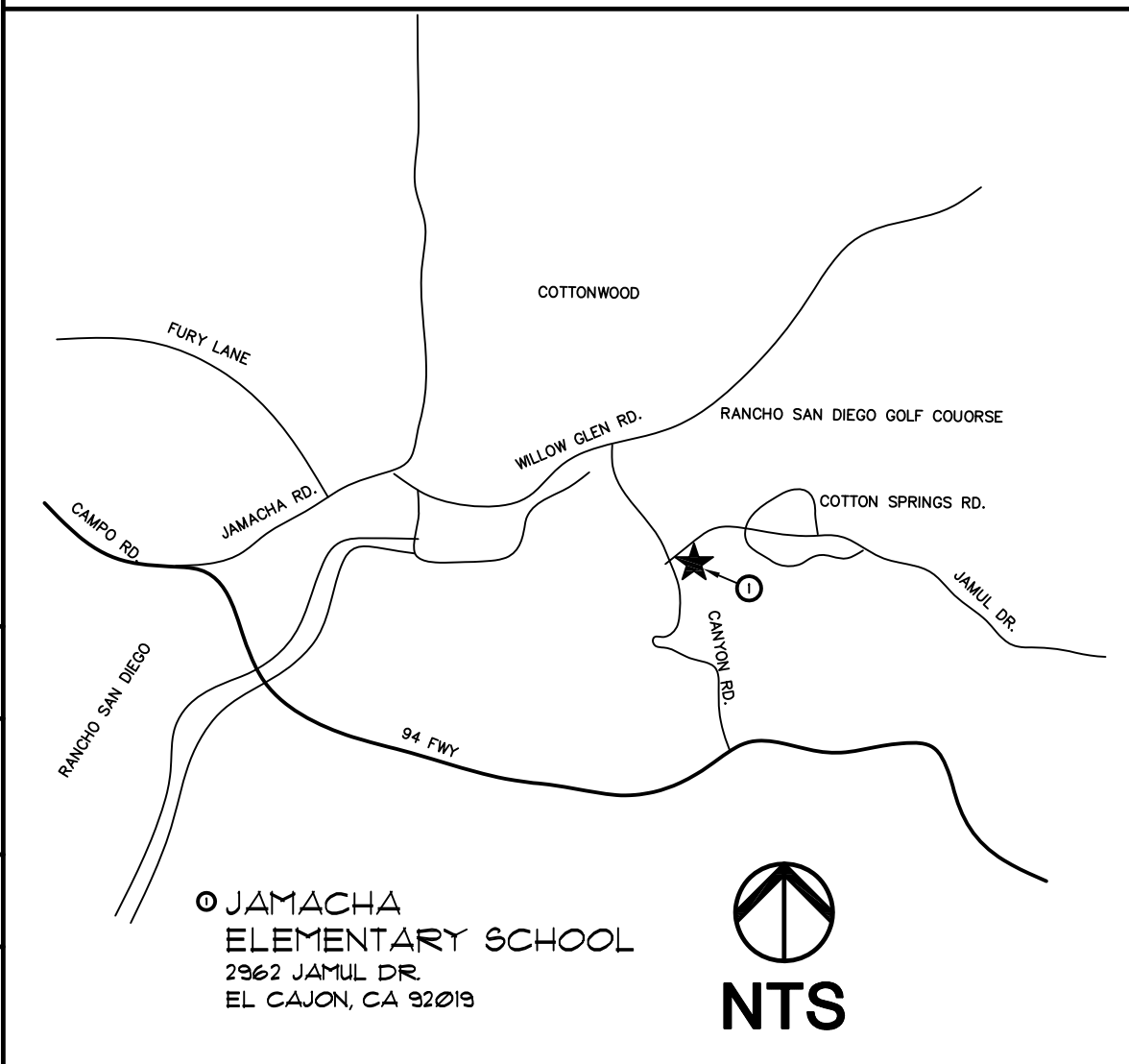
The scope of work includes, but is not limited to, demolition, excavation, upgrade to site and building data/power infrastructure, installation of mechanical equipment, IDF and MDF cabinets, racks, new walls, doors and hardware, and site improvements at trenching locations. All work to renovate the indicated areas shall be part of this contract.

Hazardous materials, if encountered, shall be brought to the attention of the Cajon Valley Union School District, and removed in accordance with state and local regulations. Removal of hazardous materials shall not be a part of the scope of work. There are no known abatement issues.

**EXIT ANALYSIS**

Not applicable.

**VICINITY MAP**



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 D-2 FRAMING & OPENING DETAILS  
 D-3 CASEWORK & FINISH DETAILS  
 D-4 RCP DETAILS

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 E-01 SYMBOL LIST AND GENERAL NOTES  
 E-02 DEMOLITION SITE PLAN  
 E-03 POWER SITE PLAN  
 E-04 SIGNAL SITE PLAN  
 E-10 BUILDING A DEMOLITION PLAN  
 E-11 BUILDING B DEMOLITION PLAN  
 E-12 BUILDING B LIGHTING-POWER & SIGNAL PLANS  
 E-20 BUILDING C DEMOLITION PLAN  
 E-30 BUILDING C POWER & SIGNAL PLANS  
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 E-60 BUILDING F DEMOLITION PLAN  
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 E-81 BUILDING H POWER & SIGNAL PLANS  
 E-90 BUILDING J DEMOLITION PLAN  
 E-91 BUILDING J POWER & SIGNAL PLANS  
 E-100 BUILDING K DEMOLITION PLAN  
 E-101 BUILDING K POWER & SIGNAL PLANS  
 E-110 BUILDING L DEMOLITION PLAN  
 E-111 BUILDING L POWER & SIGNAL PLANS  
 E-120 RELOCATABLE DEMOLITION PLAN  
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 E-142 PANEL SCHEDULES  
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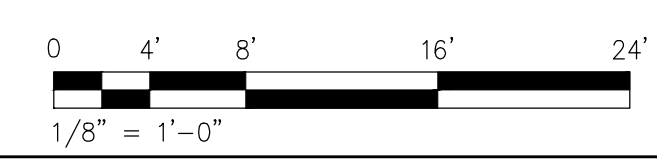
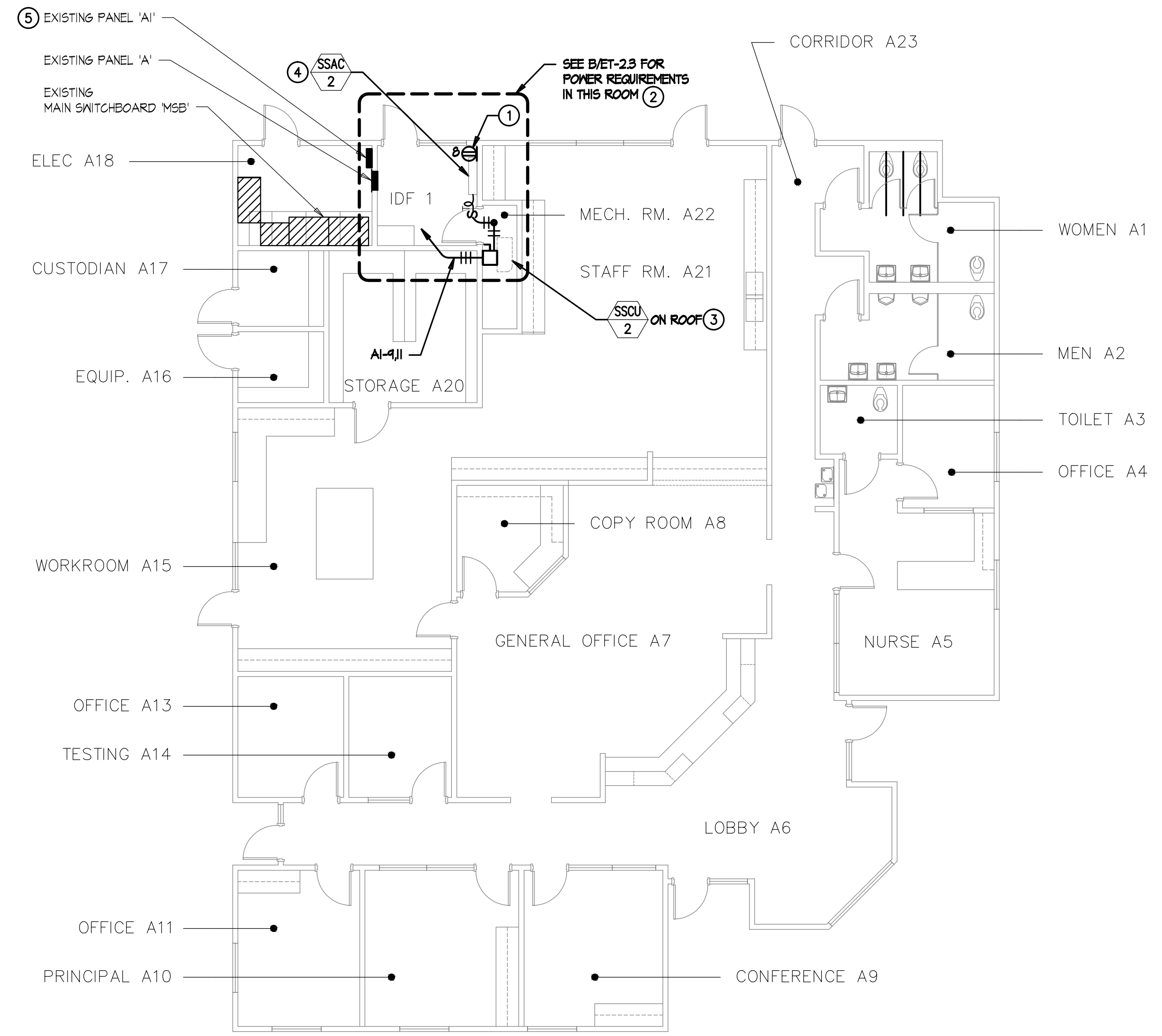
**MECHANICAL**  
 M-01 HVAC GENERAL NOTES, LEGEND & SCHEDULES  
 M-02 BUILDING C TITLE-24  
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 M-04 BUILDING A TITLE-24  
 M-05 BUILDING A TITLE-24  
 M-06 BUILDING B TITLE-24  
 M-07 BUILDING B TITLE-24  
 M-08 BUILDING D TITLE-24  
 M-09 BUILDING D TITLE-24  
 M-10 BUILDING G TITLE-24  
 M-011 BUILDING J TITLE-24  
 M-012 BUILDING J TITLE-24  
 M-013 BUILDING J TITLE-24  
 M-014 HVAC SITE PLAN  
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 M-102 BLDG C-14 HVAC PLANS  
 M-2-0 BLDG B-14 HVAC DEMO PLANS  
 M-2-1 BLDG B-14 HVAC PLANS  
 M-3-0 BLDG G-14 HVAC DEMO PLANS  
 M-3-1 BLDG G-14 HVAC PLANS  
 M-5-1 HVAC DETAIL

**PROJECT DIRECTORY**

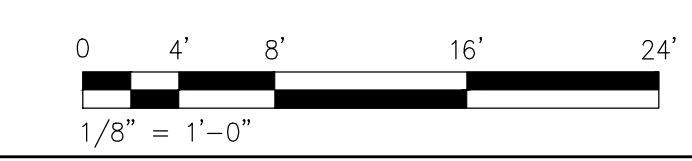
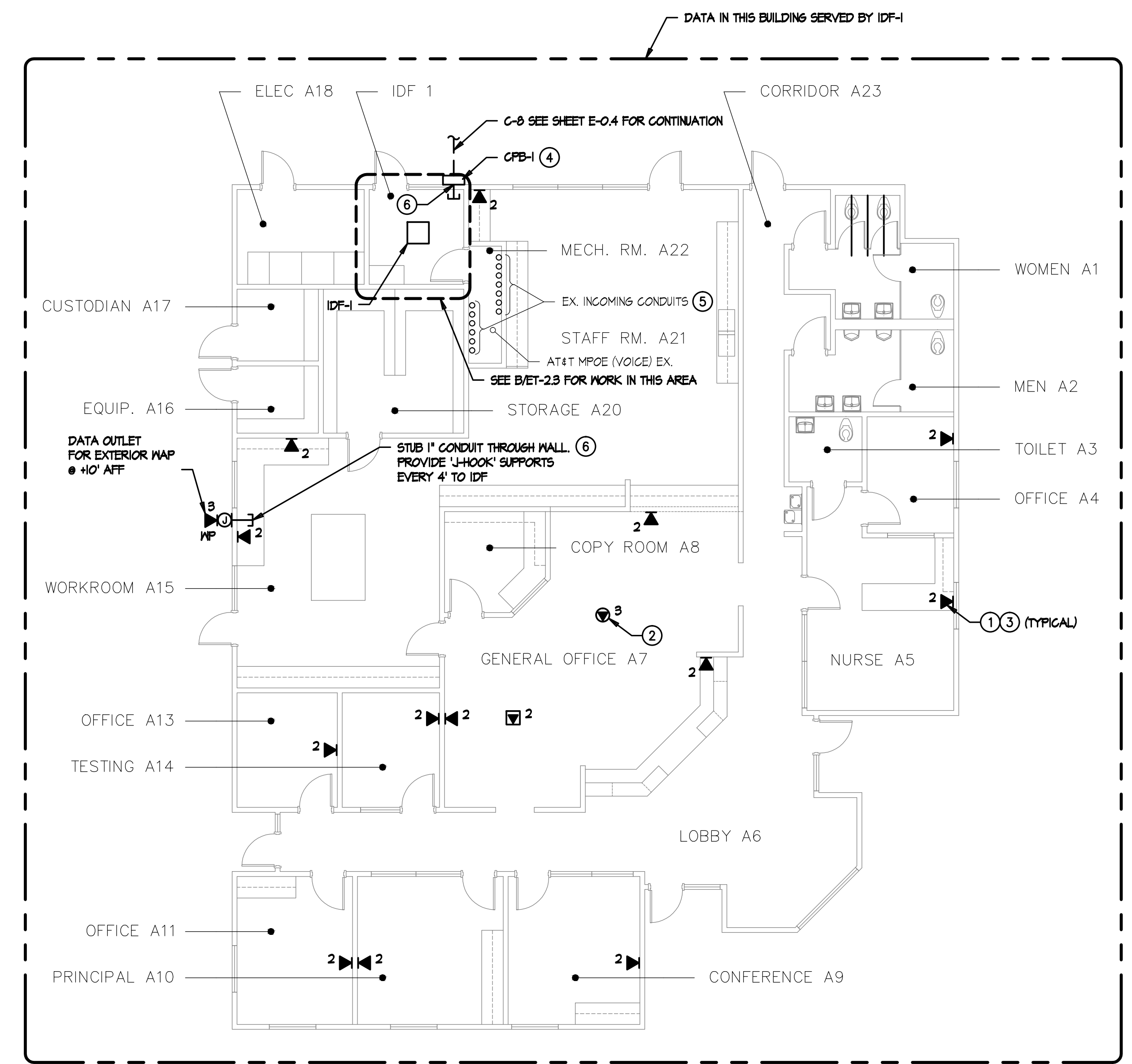
**Client/District:**  
Cajon Valley Union School District  
150 East Main Street  
El Cajon, CA 92020  
Phone: (619) 588-3009  
Fax: (619) 588-1653

**Architect:**  
Sprotte + Watson Architecture & Planning  
450 S. Melrose Dr., Suite 200  
Vista, CA 92081  
Phone: (760) 639-4120  
Fax: (760) 639-4125

**Electrical Engineer:**  
Turpin & Rattan Engineering  
4115 Palm Avenue  
La Mesa, CA 91941  
Phone: (619) 466-6224  
Fax: (619) 466-6233



**BUILDING A - POWER PLAN**



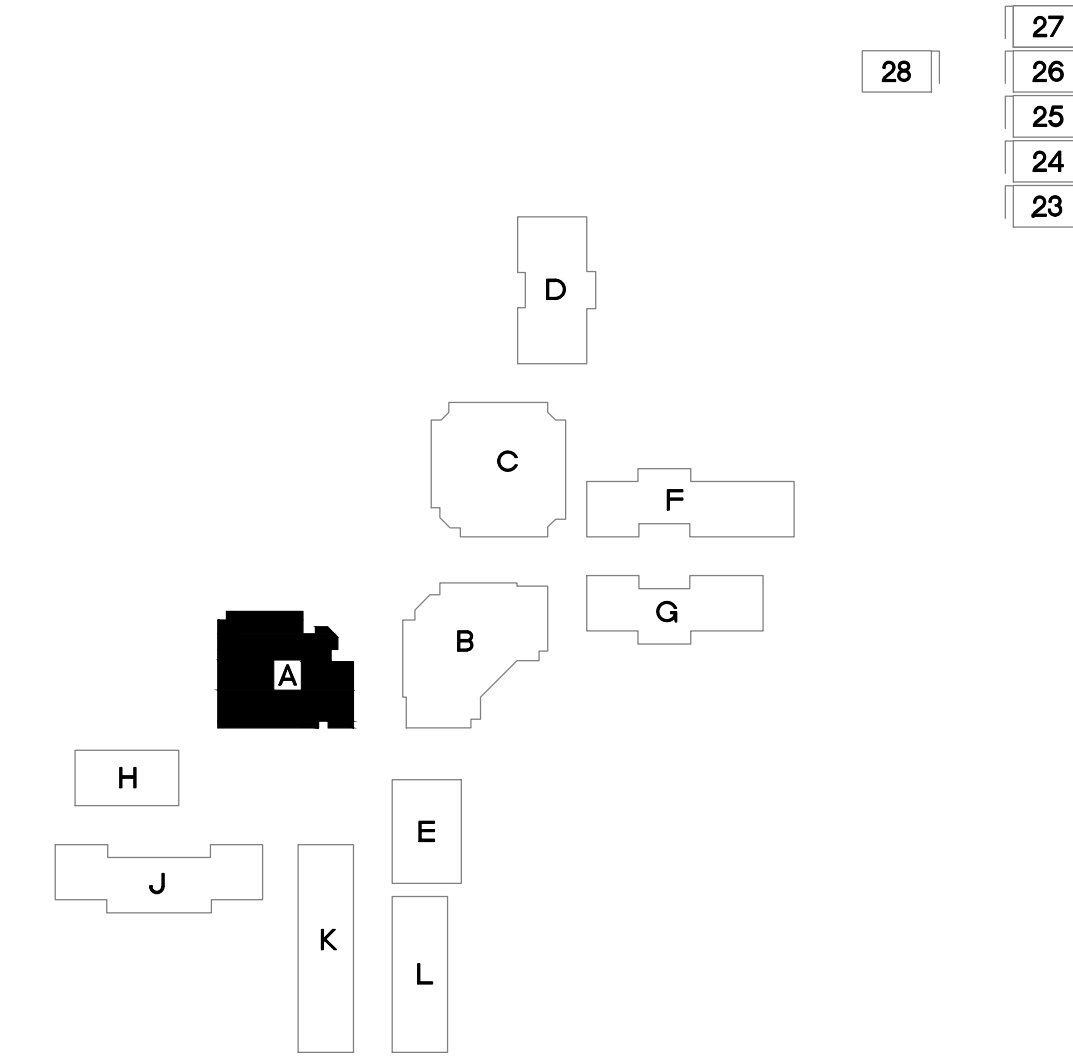
**BUILDING A - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

- ① PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. SEE SHEET ET-23 FOR BRANCH CIRCUIT REQUIREMENT.
- ② PROVIDE NEW POWER OUTLETS FOR IDF 2. SEE SHEET ET-23 ADDITIONAL POWER REQUIREMENTS.
- ③ PROVIDE NEMA 3R, 30A/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT. PROVIDE 3/4"-3/8" DOWN TO FAN COIL UNIT IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION.
- ④ PROVIDE NEMA 1, DPST 208 VOLT MOTOR RATED SWITCH WITH PROTECTION AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL UNIT POWERED THROUGH CONDENSING UNIT.
- ⑤ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

- ① (2) PORT CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 JACK AND CABLE TO IDF. UTILIZE EXISTING PATHWAYS FOR INSTALLATION IN WALLS; PROVIDE AND UTILIZE 'J-HOOK' SUPPORTS EVERY 4' IN ACCESSIBLE CEILING SPACE TO IDF. SEE RISER DIAGRAM ET-13 FOR DETAILS. SEE DETAIL G/ET-5.2.
- ② (3) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING DESIGNATED FOR WIRELESS NETWORK. PROVIDE 'J-HOOKS' EVERY 4' TO IDF. SEE DETAIL G/ET-5.2.
- ③ SEE DETAIL A/B/ET-5.3 FOR LABELING.
- ④ SEE DETAIL D/ET-5.3 FOR LABELING.
- ⑤ SEE DETAIL E/ET-5.3 FOR LABELING.
- ⑥ PENETRATE OUTSIDE WALL. CAULK PENETRATION TO MAINTAIN WALL RATINGS.



**KEYPLAN**

NTS

|    |    |
|----|----|
| 27 | 28 |
| 26 |    |
| 25 |    |
| 24 |    |
| 23 |    |

**APPROVALS**

**DESCRIPTION**

**BUILDING A  
POWER &  
SIGNAL PLANS**

**DATE**

04-05-2012

**JOB #**

11340

**SHEET #**

**E-11**

**NORTH**

1/8" = 1'-0"

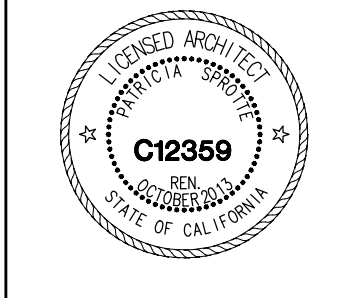
**TURPIN & RATTAN**  
ENGINEERING, INC.

CONSULTING ELECTRICAL ENGINEERS  
4719 PALM AVENUE  
LA MESA, CA 91941-5221  
619-466-16224 FAX 619-466-16233  
E-MAIL: ENGINEER@TREISO.COM

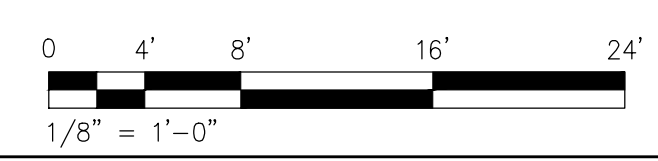
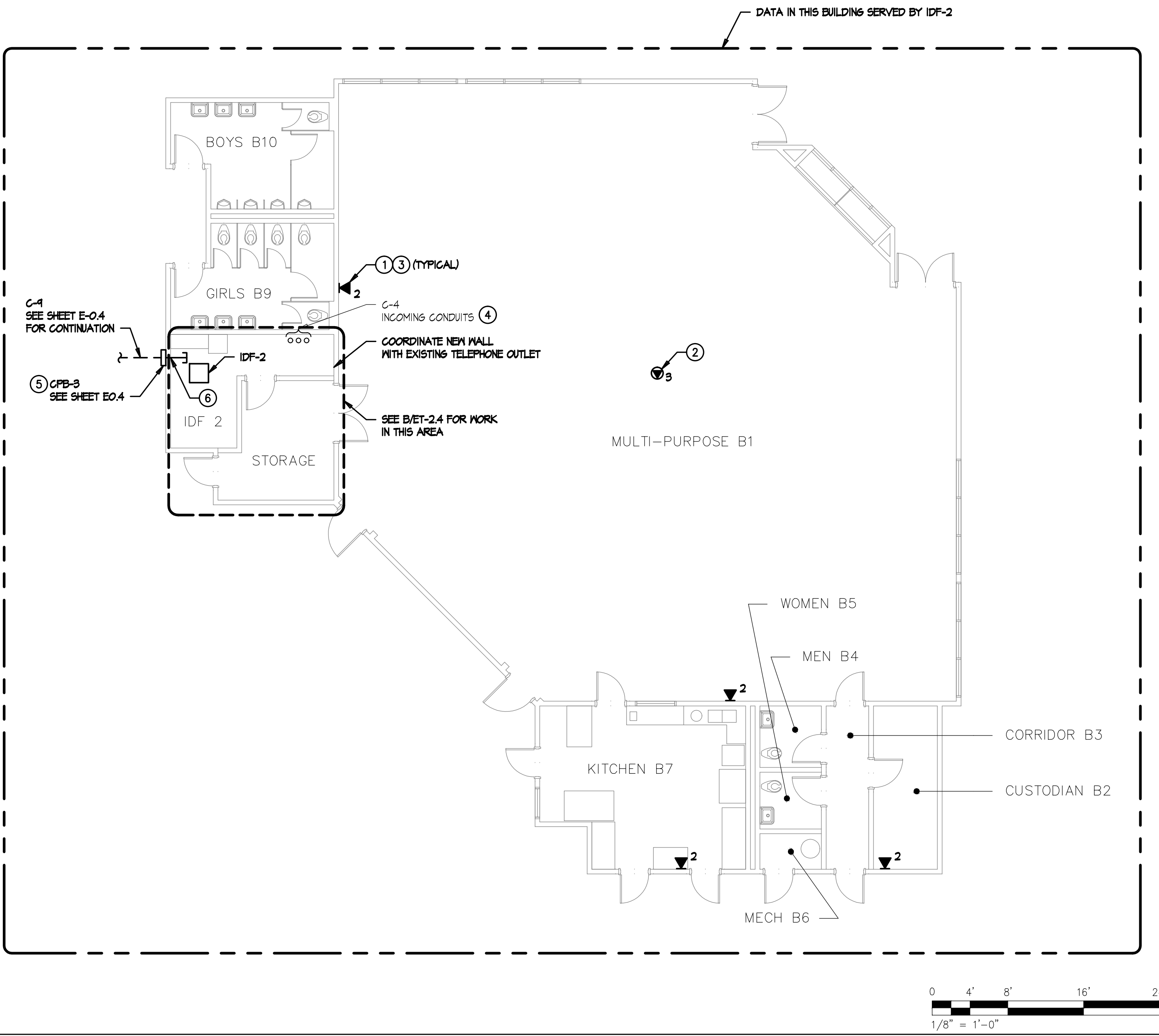
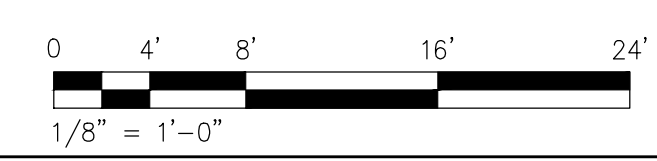
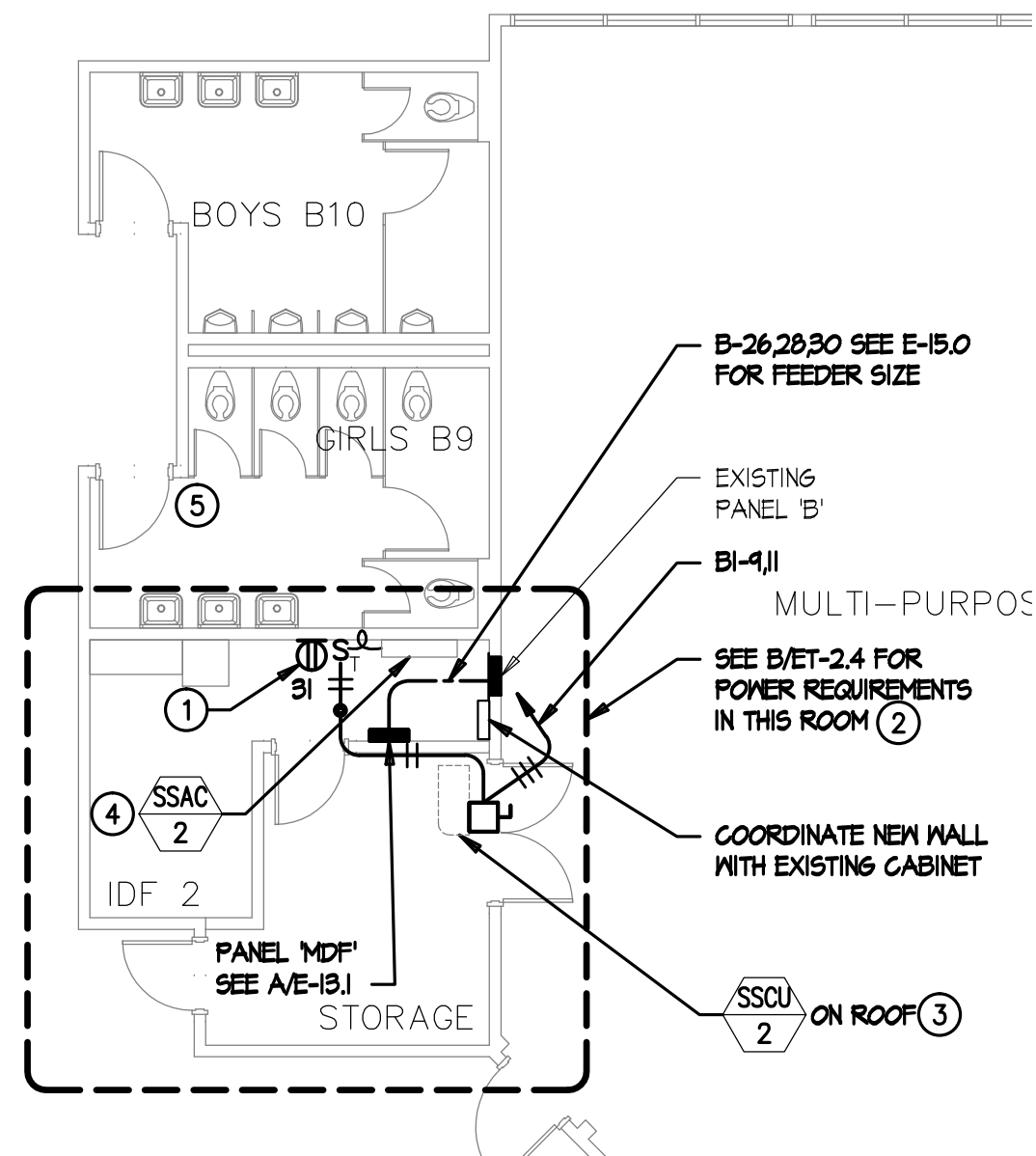
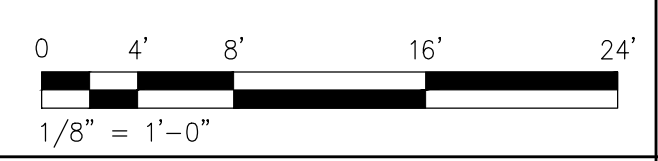
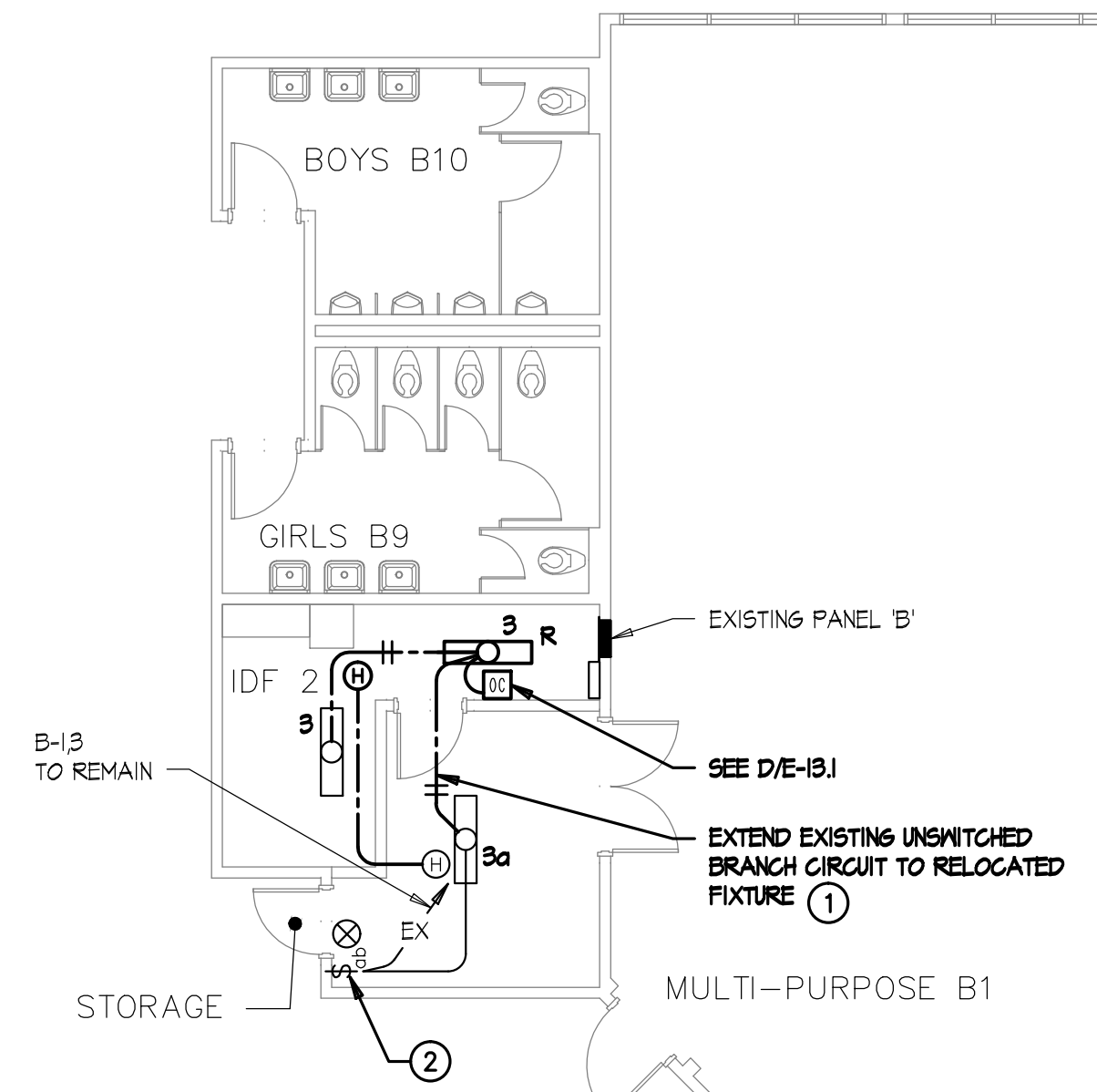
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V.PHATHANAK 04/02/12 6:49PM

REGISTERED PROFESSIONAL ENGINEER  
STEPHEN J. KORTMAN  
13554  
Exp. 9-30-12  
STATE OF CALIFORNIA

MARK FORTIE, RCDD  
REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER  
EXPIRES 12/31/13  
Regis. No. 081432



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**BUILDING B - LIGHTING PLAN**

**BUILDING B - POWER PLAN**

**BUILDING B - SIGNAL PLAN**

**LIGHTING PLAN KEYNOTES**

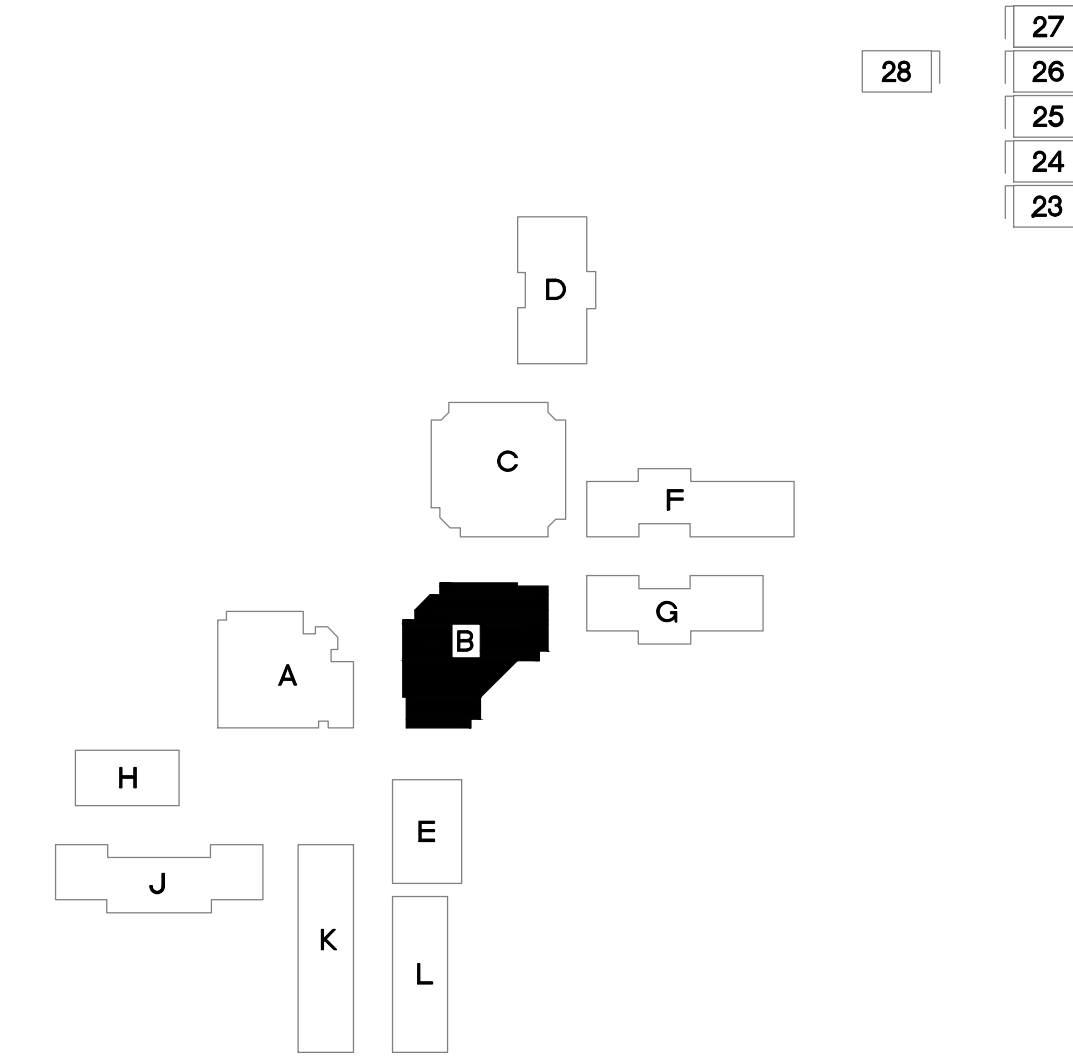
- 1 FIELD VERIFY EXACT LOCATION OF UNSWITCHED BRANCH CIRCUIT PRIOR TO DOING WORK.
- 2 DISABLE AND SAFE-OFF WALL SWITCH 'b' IN BOX.

**POWER PLAN KEYNOTES**

- 1 PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. SEE SHEET ET-2.4 FOR BRANCH CIRCUIT REQUIREMENT.
- 2 PROVIDE NEW POWER OUTLETS FOR IDF 2. SEE SHEET ET-2.4 ADDITIONAL POWER REQUIREMENTS.
- 3 PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT. PROVIDE 3/4\"-3/4\" DOWN TO FAN COIL UNIT IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION.
- 4 PROVIDE NEMA 1, DPST 208 VOLT MOTOR RATED SWITCH WITH PROTECTION AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL UNIT POWERED THROUGH CONDENSING UNIT.
- 5 SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

- 1 (2) PORT CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 JACK AND CABLE TO IDF. UTILIZE EXISTING PATHWAYS FOR INSTALLATION IN WALLS; PROVIDE 'J-HOOK' SUPPORTS EVERY 4' IN ACCESSIBLE CEILING SPACE TO IDF. SEE DETAIL C/ET-1.3 FOR DETAILS.
- 2 (3) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING DESIGNATED FOR WIRELESS NETWORK. PROVIDE 'J-HOOK' SUPPORTS EVERY 4' TO IDF. SEE DETAIL C/ET-5.2.
- 3 SEE DETAIL A/B/ET-5.3 FOR LABELING.
- 4 SEE DETAIL E/ET-5.3 FOR LABELING.
- 5 SEE DETAIL D/ET-5.3 FOR LABELING.
- 6 PENETRATE OUTSIDE WALL. CAULK PENETRATION TO MAINTAIN WALL RATINGS.



**KEYPLAN**

NTS

**CONSULTANT**

**APPROVALS**

**DESCRIPTION**

**BUILDING B LIGHTING, POWER & SIGNAL PLANS**

**DATE**

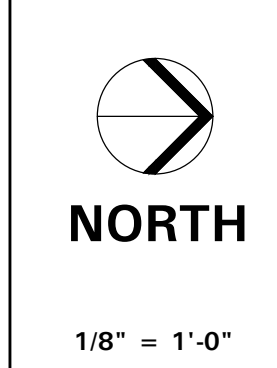
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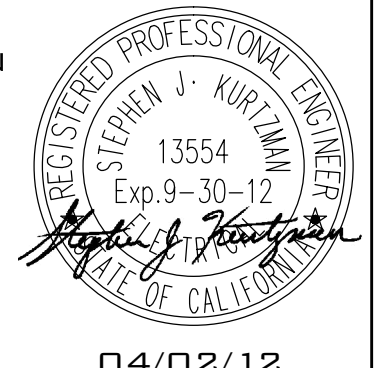
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**SHEET #**

**E-21**

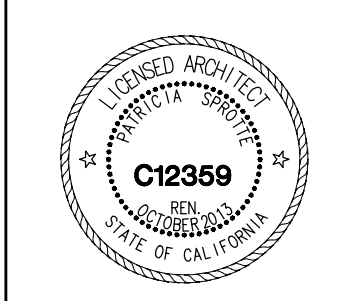


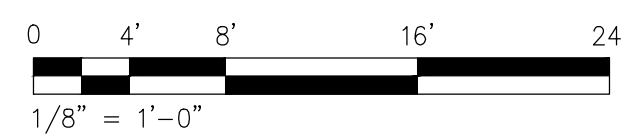
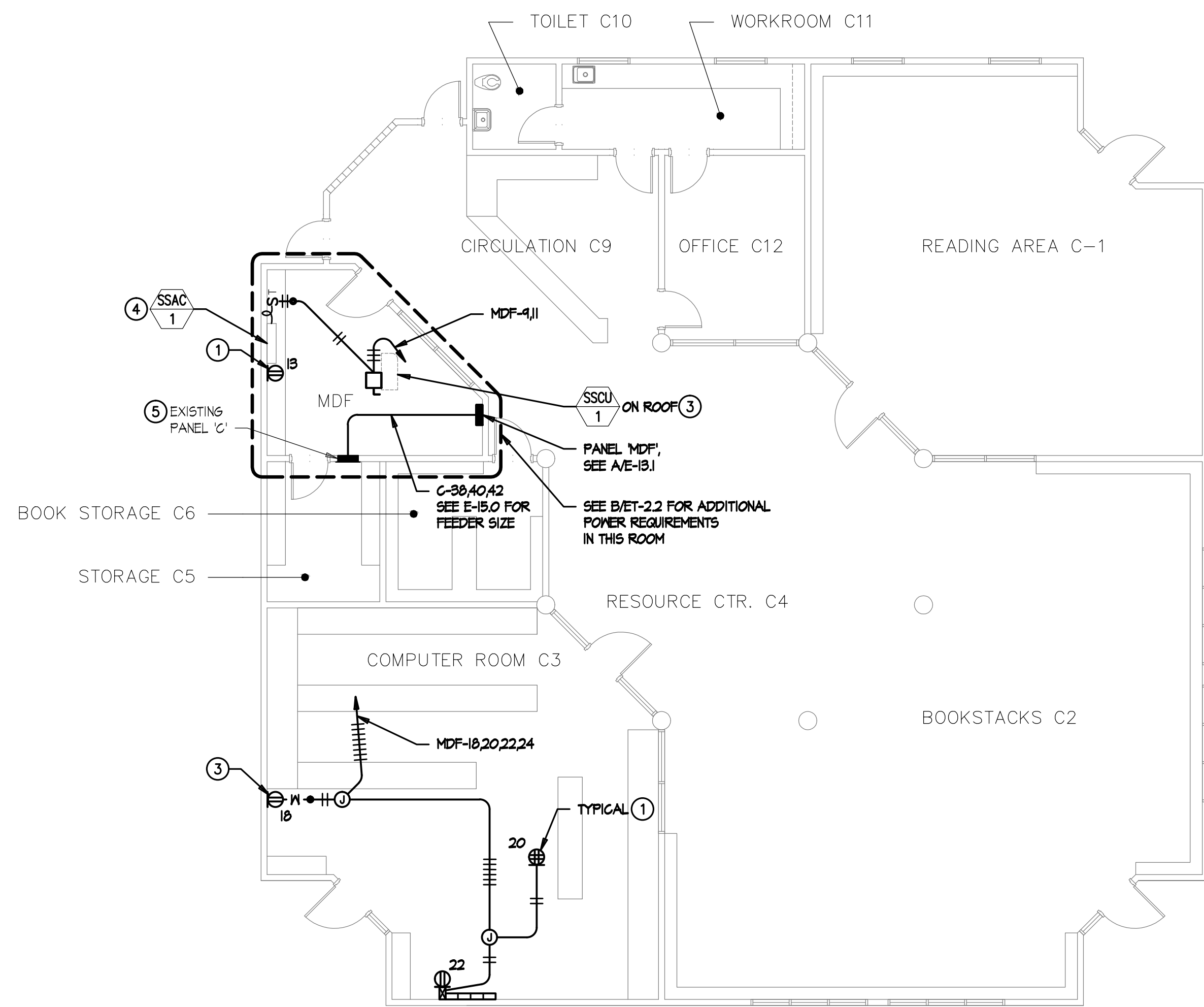
**TURPIN & RATTAN**  
ENGINEERING, INC.  
CONSULTING ELECTRICAL ENGINEERS  
4719 PALM AVENUE  
LA MESA, CA 91941-5221  
619-466-6224 FAX 619-466-6233  
E-MAIL: ENGINEER@TREISO.COM  
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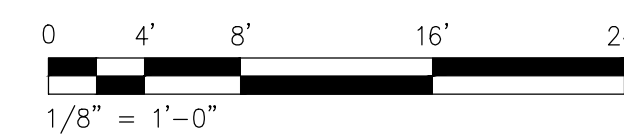
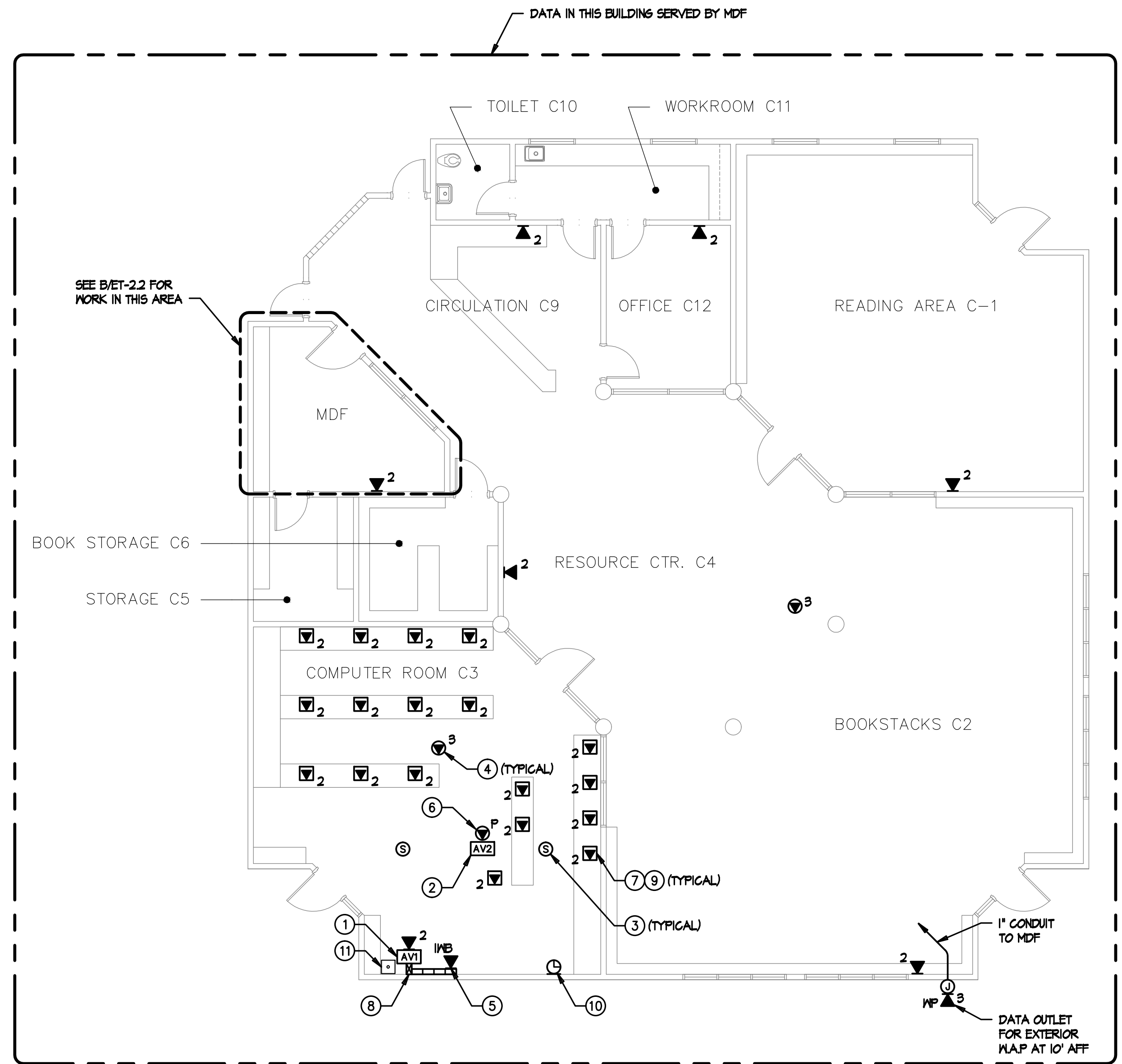
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EXPIRES 12/31/13  
Regis. No. 081432

04/02/12





**BUILDING C - POWER PLAN**



**BUILDING C - SIGNAL PLAN**

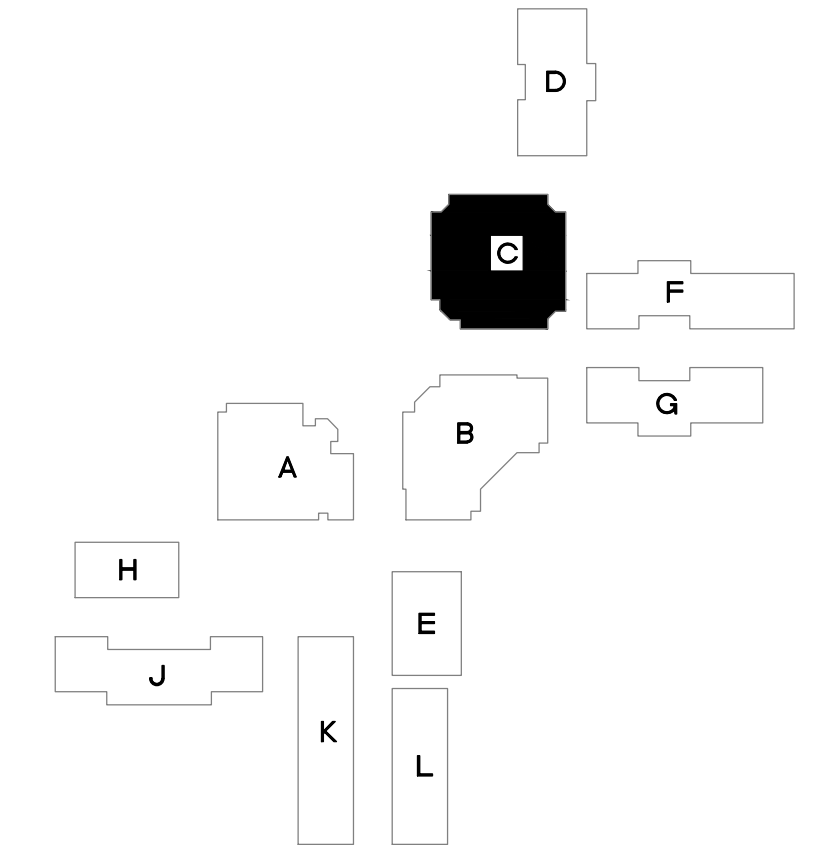
**POWER PLAN KEYNOTES**

- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.
- ⑤ PROVIDE NEW POWER OUTLETS FOR MDF. SEE SHEET ET-2.2 ADDITIONAL POWER REQUIREMENTS.
- ⑥ PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT. PROVIDE 3/4"-3/4" DOWN TO FAN COIL UNIT IN MDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION.
- ⑦ PROVIDE NEMA 1, DPST 208 VOLT MOTOR RATED SWITCH AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL UNIT POWERED THROUGH CONDENSING UNIT.
- ⑧ PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. SEE SHEET ET-2.4 FOR BRANCH CIRCUIT REQUIREMENT.

**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (3) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK. PROVIDE 'J-HOOK' SUPPORTS EVERY 4' TO IDF. SEE DETAIL C/ET-5.2.
- ⑤ (1) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (1) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ (2) PORT CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO MDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION AND PROVIDE 'J-HOOK' SUPPORTS EVERY 4' TO MDF. SEE DETAIL C/ET-5.2. SEE RISER DIAGRAM A/ET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6AN6 ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/ET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑪ EXISTING PHONE (BOSEN HANDSET), TO REMAIN.

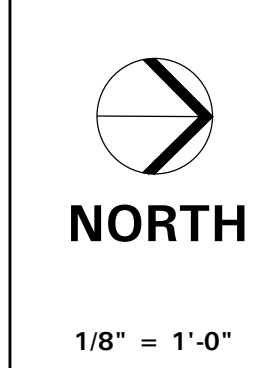
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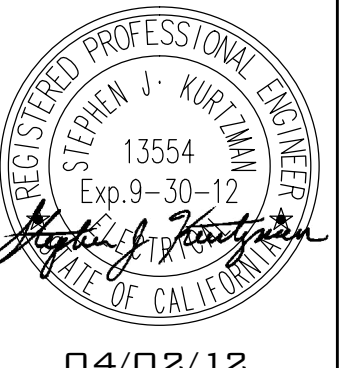
**KEYPLAN**



NTS



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CONSULTING ELECTRICAL ENGINEERS  
4719 PALM AVENUE  
LA MESA, CA 91941-5221  
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MARK FORTIE, RCDD  
REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER  
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EXPIRES 12/31/13  
Regis. No. 081432

CONSULTANT

APPROVALS

DESCRIPTION

**BUILDING C  
POWER &  
SIGNAL PLANS**

DATE

04-05-2012

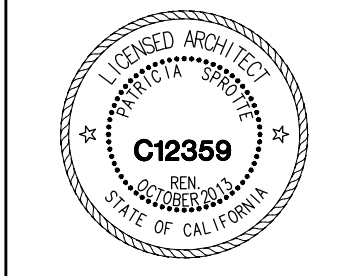
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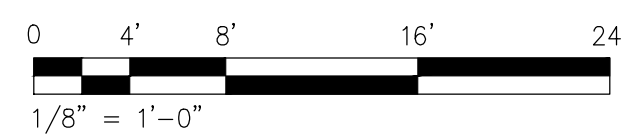
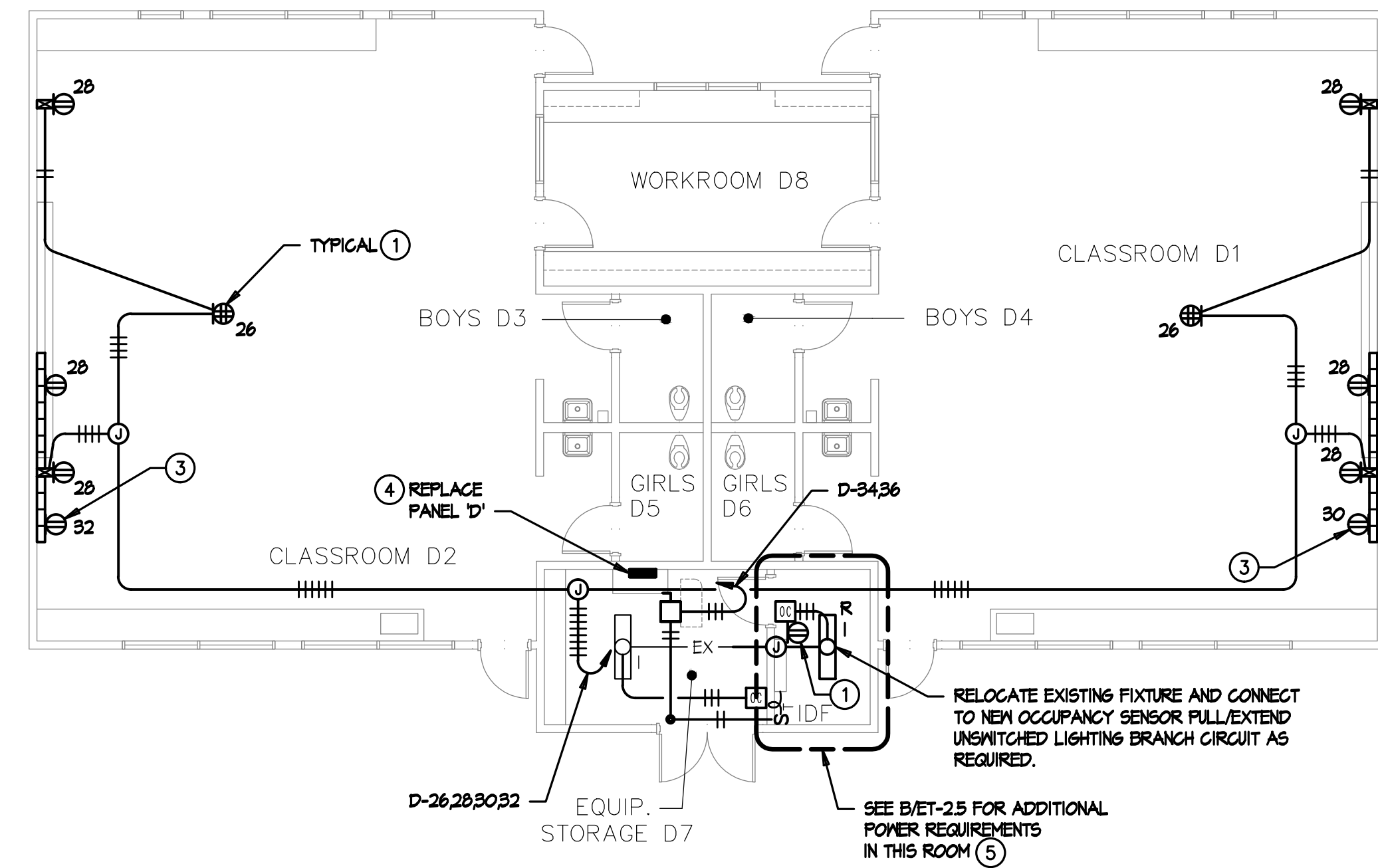
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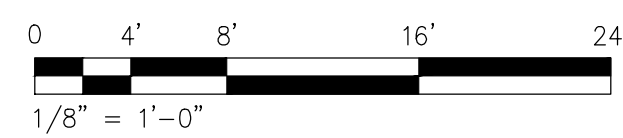
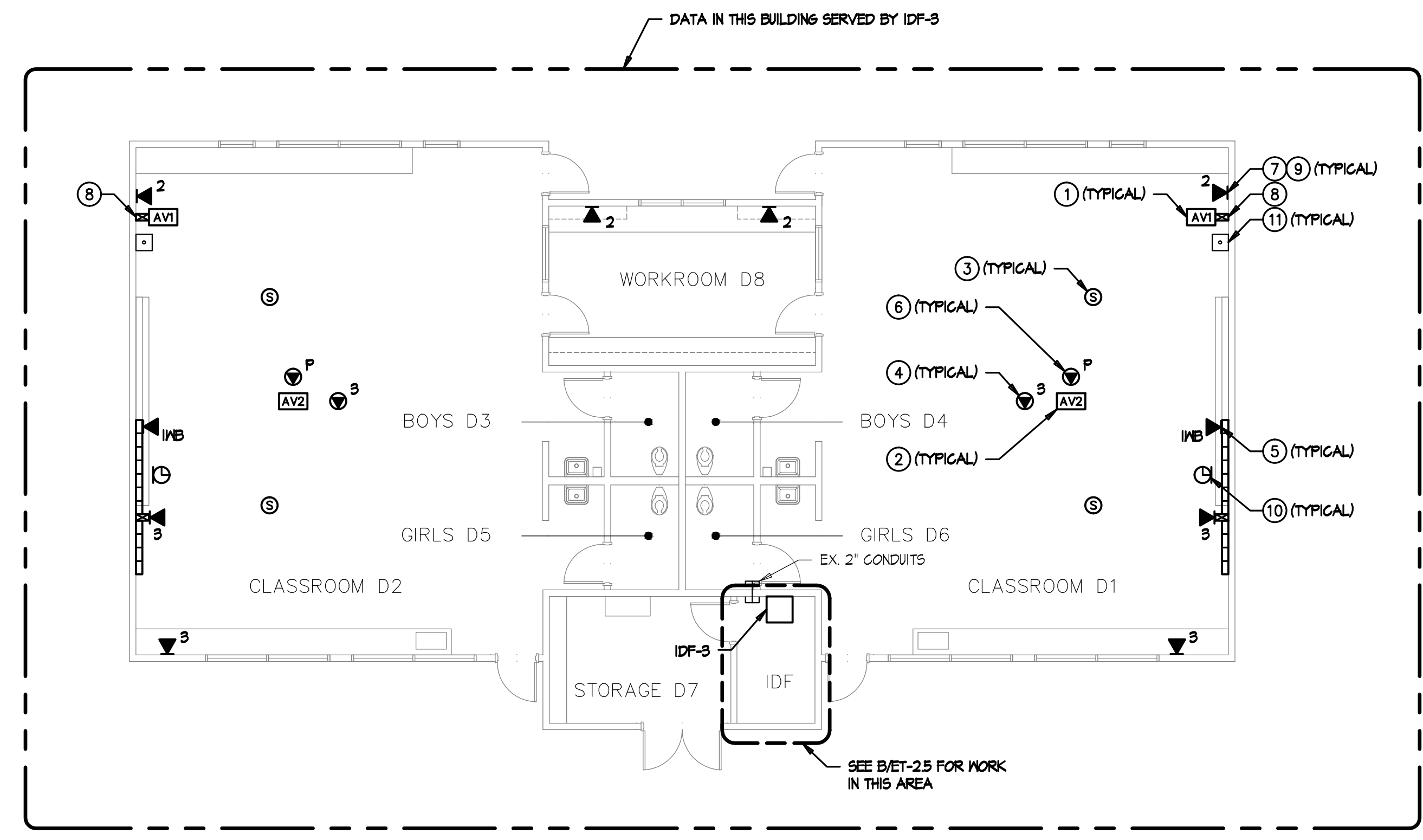
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CAJON VALLEY UNION SCHOOL DISTRICT  
2962 JAMUL DRIVE  
EL CAJON, CA 92019**



**BUILDING D - POWER PLAN**



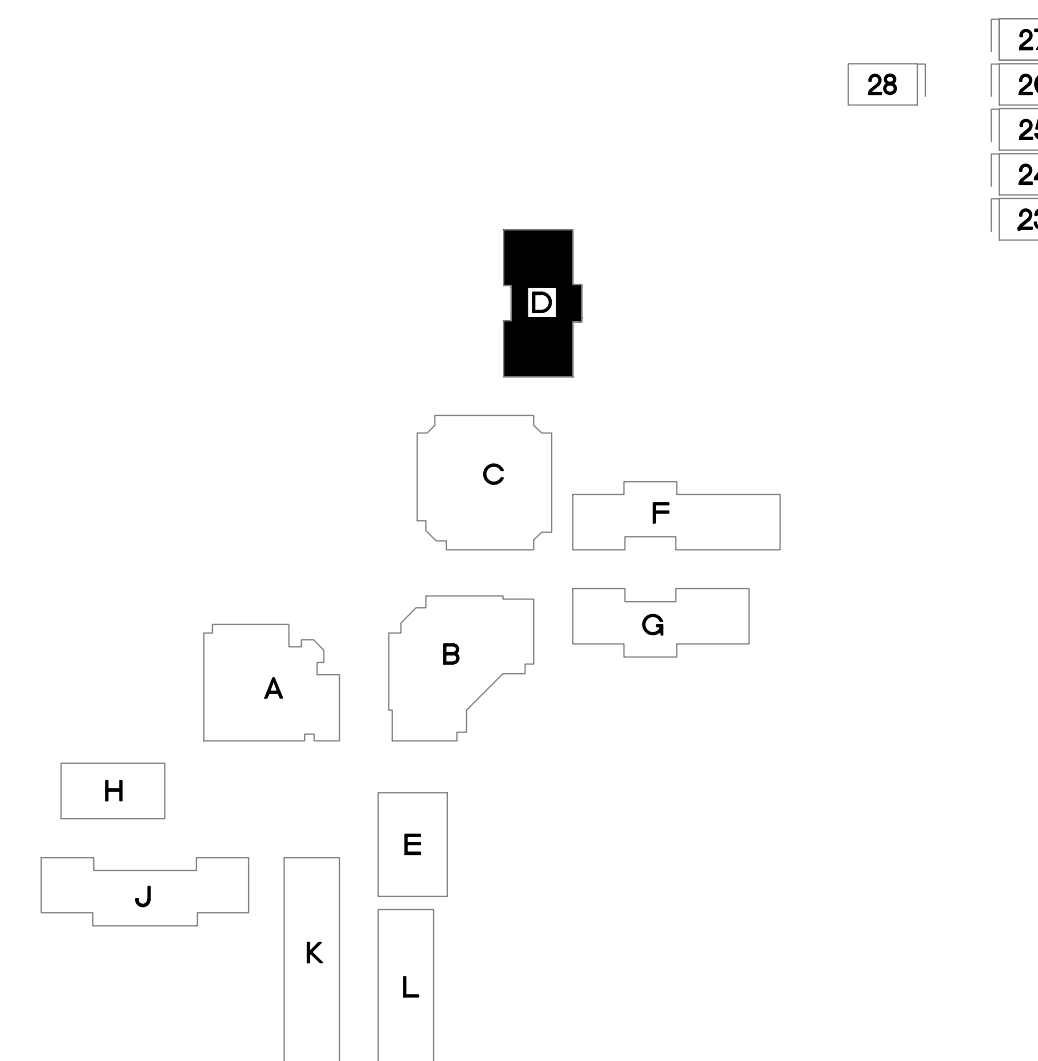
**BUILDING D - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.
- ⑤ PROVIDE NEW POWER OUTLETS FOR IDF. SEE SHEET ET-25 ADDITIONAL POWER REQUIREMENTS.
- ⑥ PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT. PROVIDE 3/4"-3/12 DOWN TO FAN COIL UNIT IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION.
- ⑦ PROVIDE NEMA 1, DPST 208 VOLT MOTOR RATED SWITCH AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL UNIT POWERED THROUGH CONDENSING UNIT.
- ⑧ PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. SEE SHEET ET-25 FOR BRANCH CIRCUIT REQUIREMENT.

**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (S) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK. PROVIDE 'J-HOOK' SUPPORTS EVERY 4' TO EXISTING CONDUIT FEEDING CLASSROOM. SEE DETAIL C/ET-5.2.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION AND PROVIDE 'J-HOOK' SUPPORTS EVERY 4' TO EXISTING CONDUIT FEEDING CLASSROOM. SEE DETAIL C/ET-5.2. SEE RISER DIAGRAM AVET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL AVET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑪ EXISTING PHONE (BOSEN HANDSET), TO REMAIN.



**KEYPLAN**

NTS

**NORTH**

1/8" = 1'-0"

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ENGINEERING, INC.

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LA MESA, CA 91941-5221  
619-466-1622 FAX 619-466-1623  
E-MAIL: ENGINEER@TRISO.COM

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REGISTERED PROFESSIONAL ENGINEER  
STEPHEN J. KORTUM  
13554  
Exp. 9-30-12  
STATE OF CALIFORNIA

REGISTERED COMMERCIAL ENGINEER  
DISTRIBUTION DESIGNER

MARK FORTIE, RCDD  
EXPIRES 12/31/13  
Regis. No. 081432

CONSULTANT

APPROVALS

DESCRIPTION

**BUILDING D  
POWER &  
SIGNAL PLANS**

DATE

04-05-2012

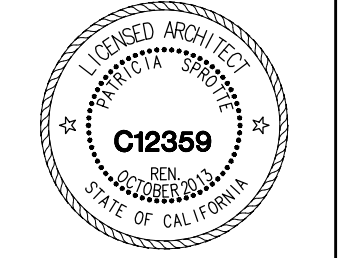
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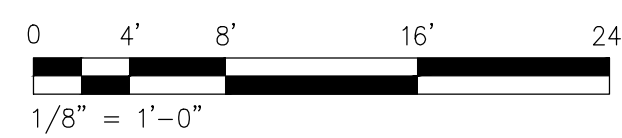
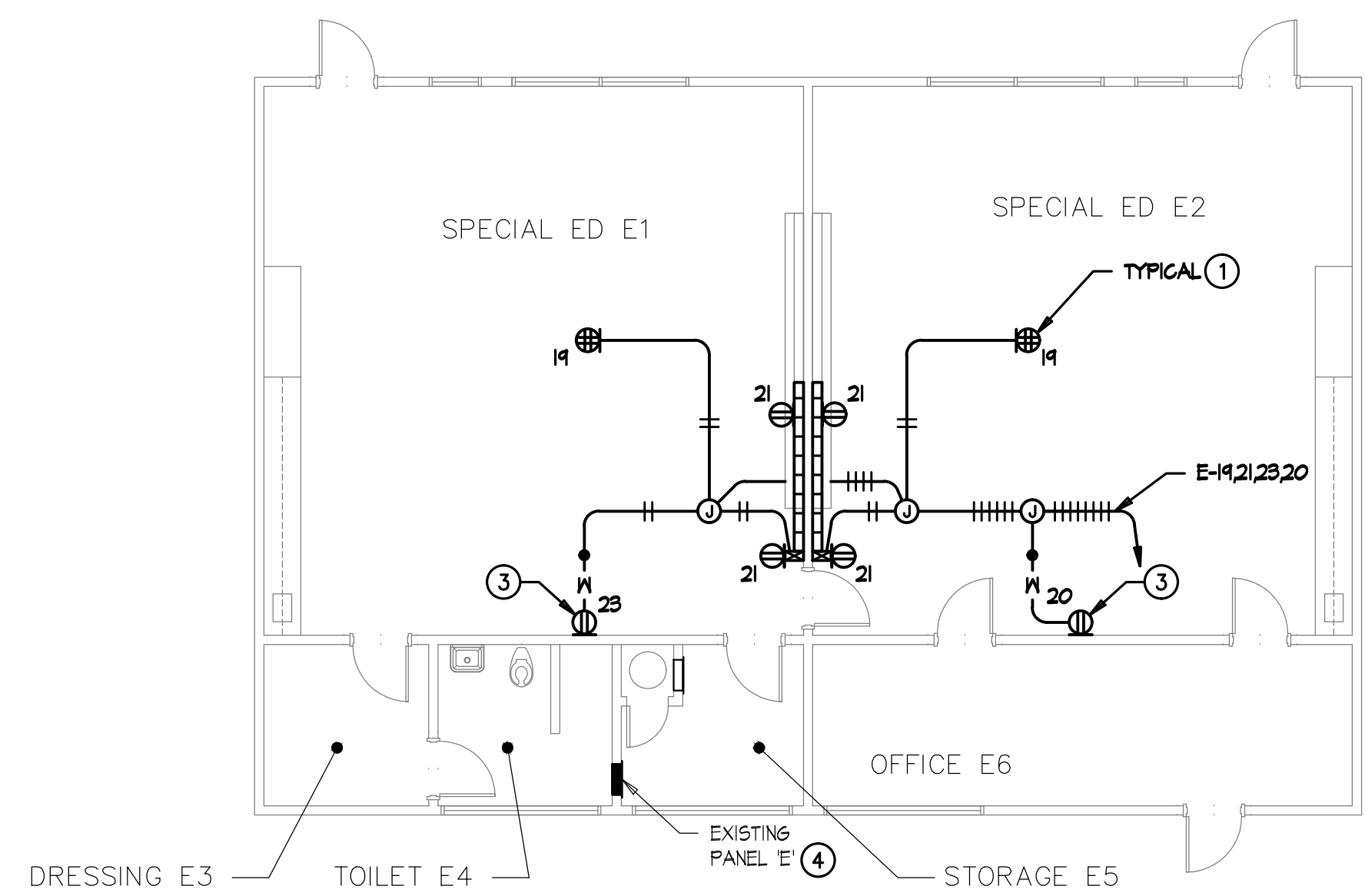
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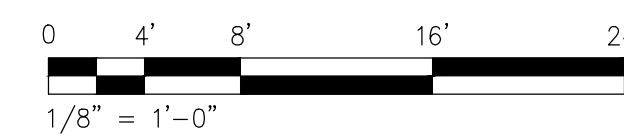
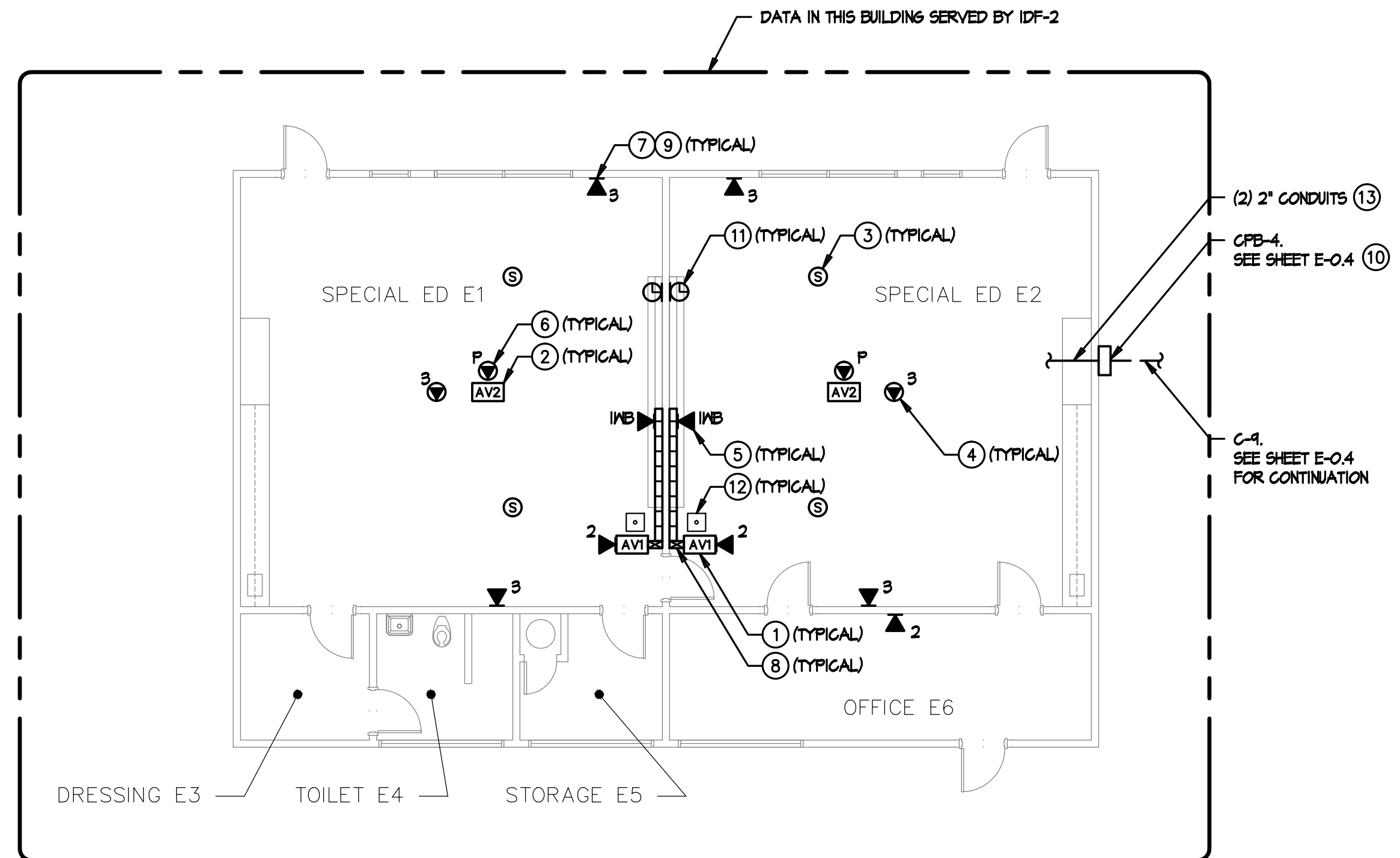
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 CAJON VALLEY UNION SCHOOL DISTRICT  
 2962 JAMUL DRIVE  
 EL CAJON, CA 92019



**BUILDING E - POWER PLAN**



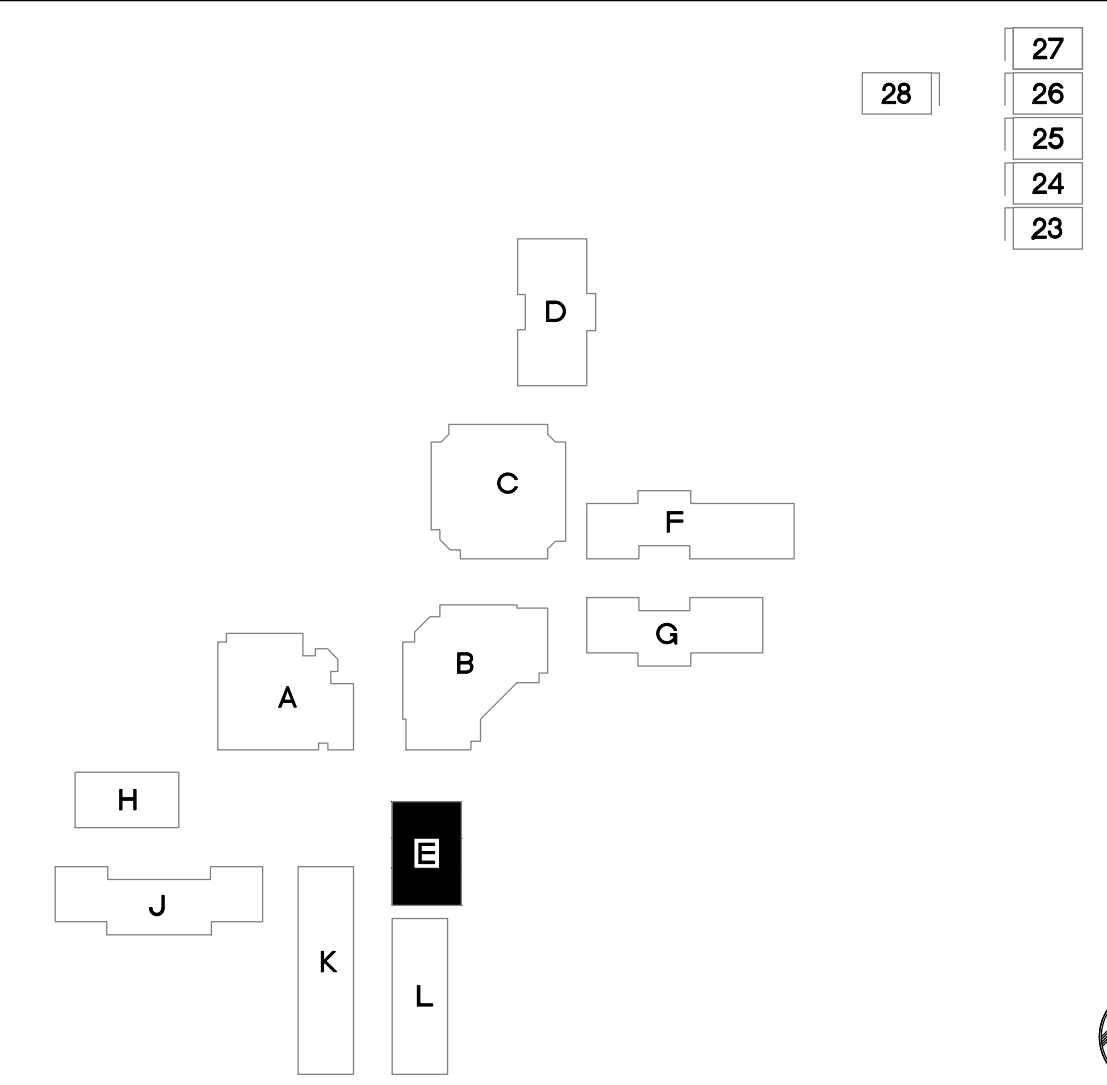
**BUILDING E - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

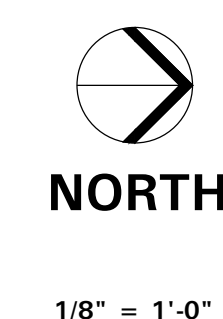
- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

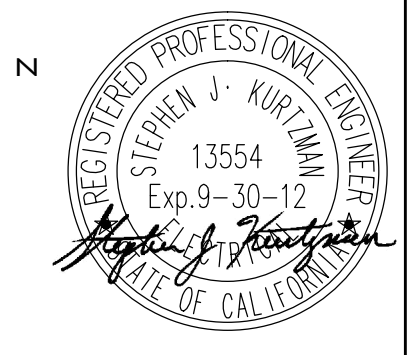
- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (S) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION. SEE RISER DIAGRAM AVET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6 GANG EMB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL AVET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOSEN HANDSET), TO REMAIN.
- ⑬ PENETRATE OUTSIDE WALL INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL D/E-13.2. CAULK PENETRATION TO MAINTAIN WALL RATINGS. SEE DETAIL AVET-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.



**KEYPLAN**



**TURPIN & RATTAN**  
ENGINEERING, INC.  
CONSULTING ELECTRICAL ENGINEERS  
4719 PALM AVENUE  
LA MESA, CA 91941-5221  
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E-MAIL: ENGINEER@TREISO.COM  
TREI # 11340  
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CONSULTANT

APPROVALS

DESCRIPTION

**BUILDING E  
POWER &  
SIGNAL PLANS**

DATE

04-05-2012

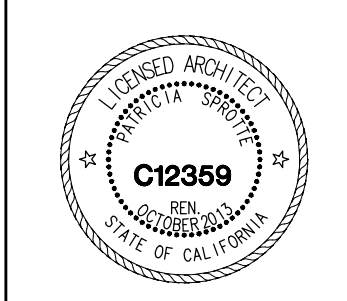
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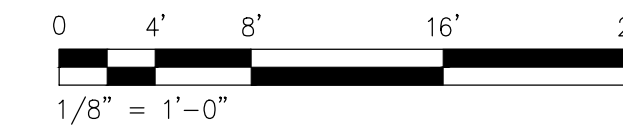
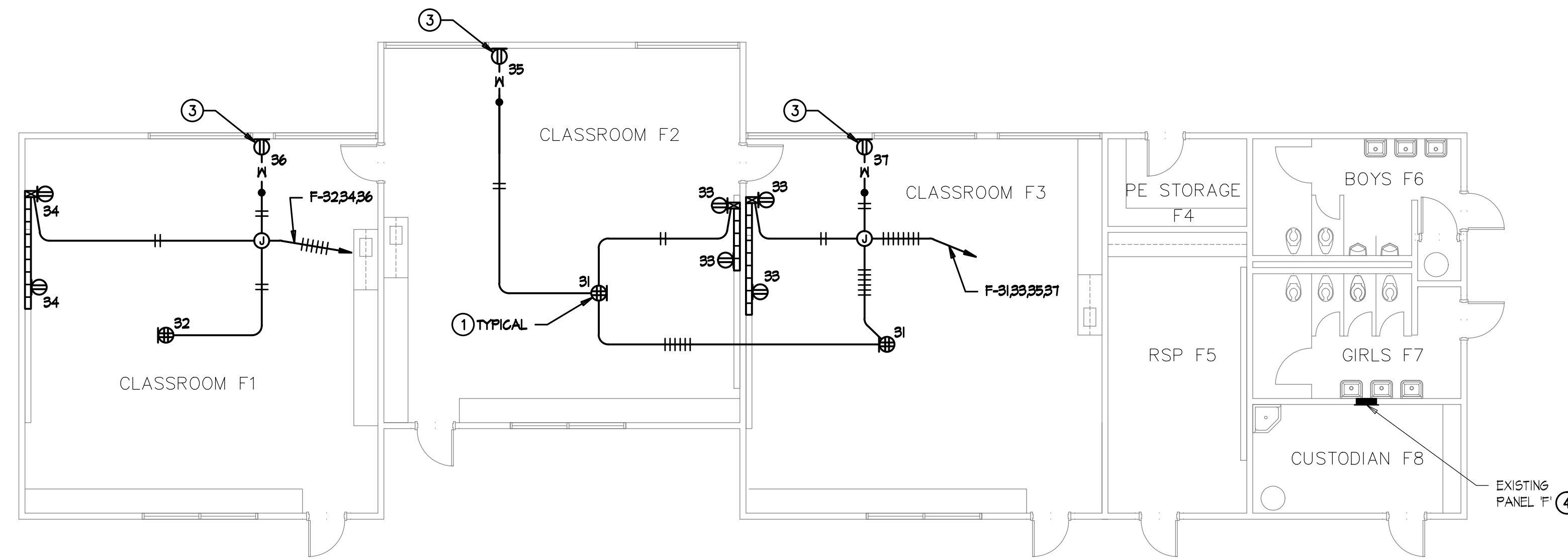
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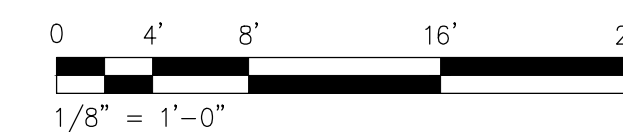
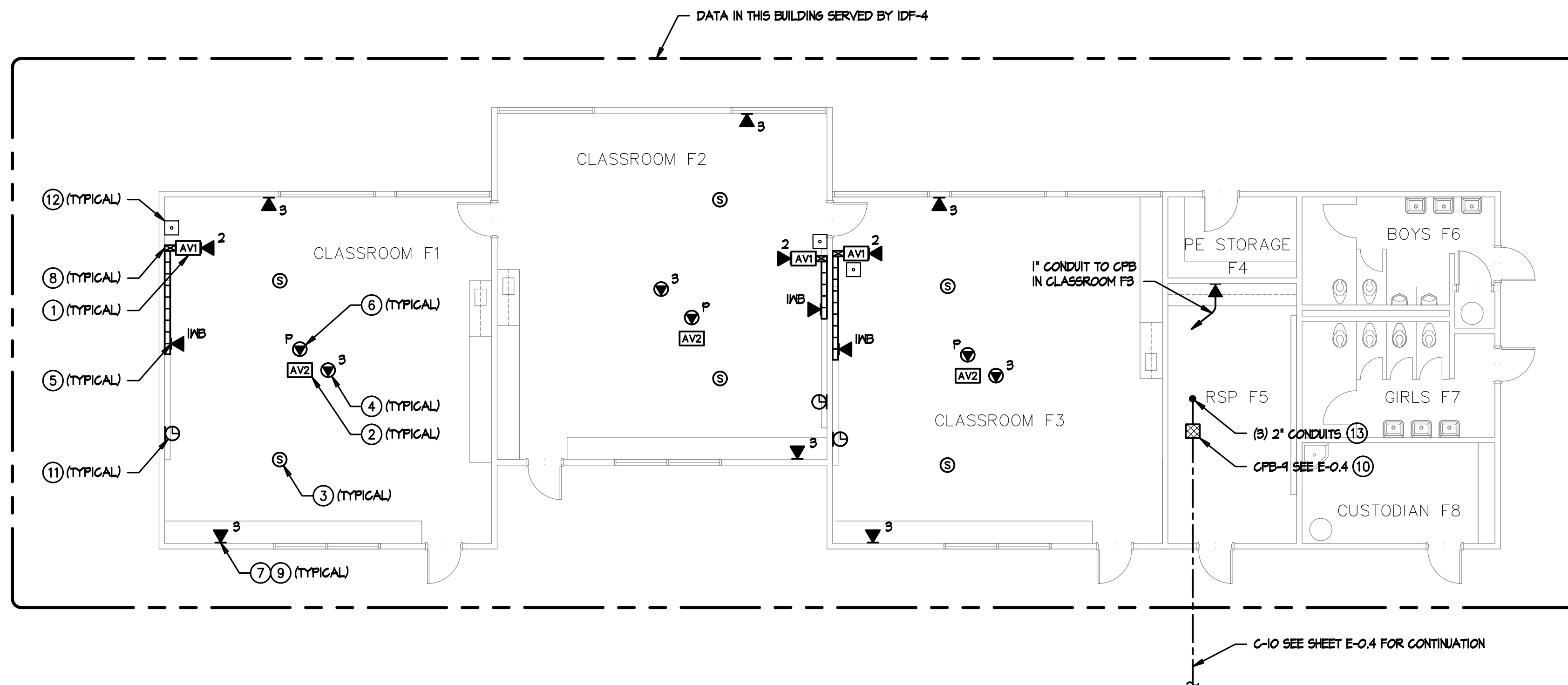
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EL CAJON, CA 92019



**BUILDING F - POWER PLAN**



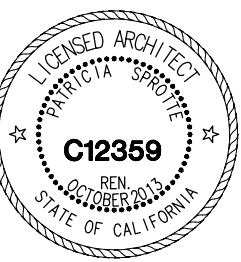
**BUILDING F - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

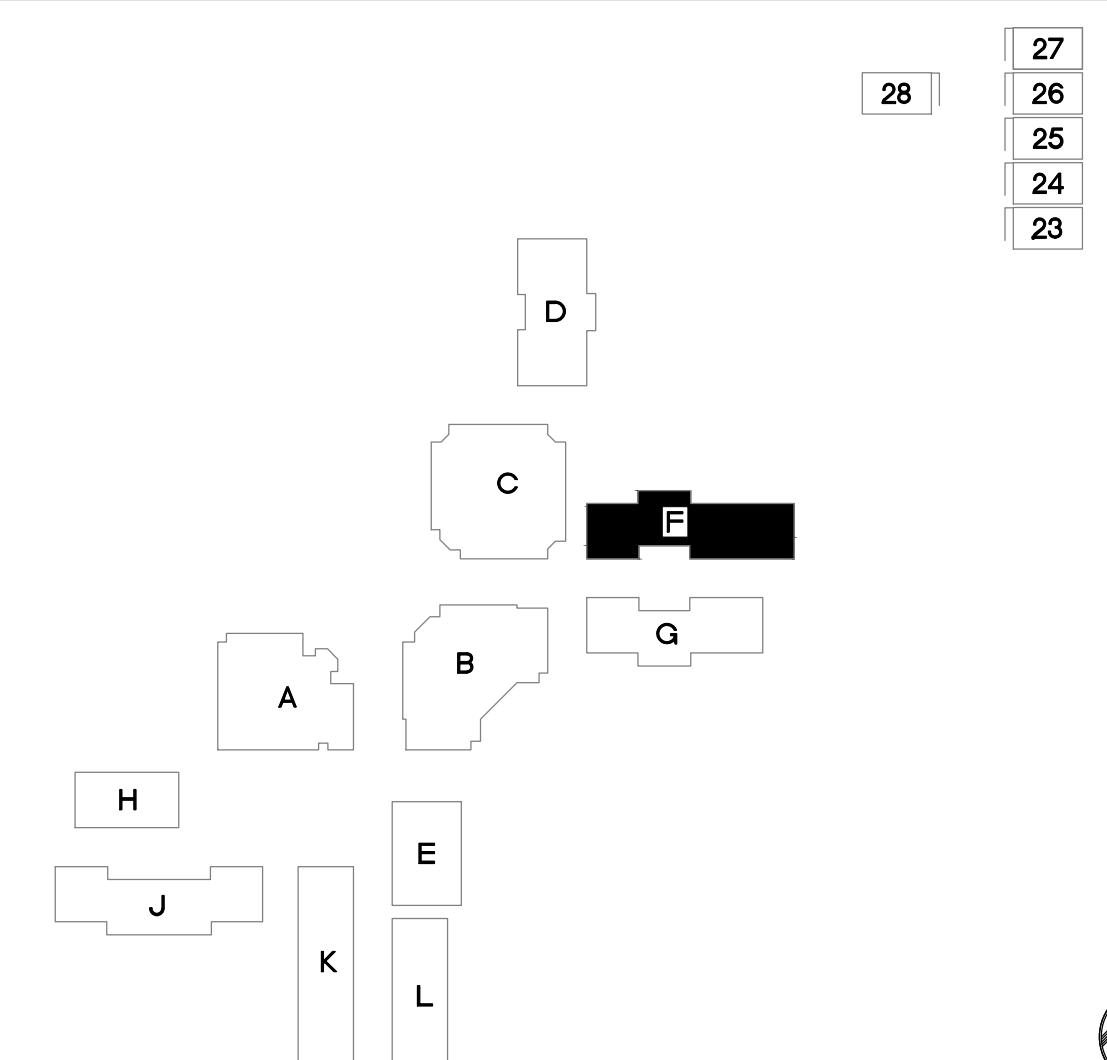
- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIOVISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (B) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION. SEE RISER DIAGRAM A/ET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/ET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPRS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOGEN HANDSET), TO REMAIN.
- ⑬ PENETRATE ROOF INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL E/E-13.2. CAULK PENETRATION TO MAINTAIN ROOF RATING. SEE DETAIL A/ET-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.

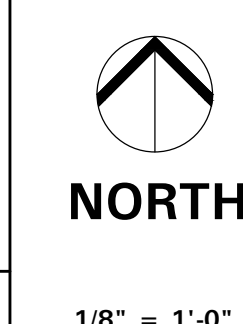


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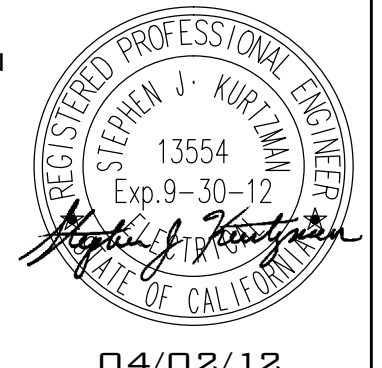


KEYPLAN

NTS



**TURPIN & RATTAN**  
 ENGINEERING, INC.  
 CONSULTING ELECTRICAL ENGINEERS  
 4719 PALM AVENUE  
 LA MESA, CA 91941-5221  
 619-465-1622 FAX 619-465-16233  
 E-MAIL: ENGINEER@TRESO.COM  
 TREI # 11340  
 V.PHATHANAK 04/02/12 - 6:50PM



MARK FORTIE, RCDD  
 REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER  
 BICSI  
 EXPIRES 12/31/13  
 Regis. No. 081432

APPROVALS

DESCRIPTION

**BUILDING F  
 POWER &  
 SIGNAL PLANS**

DATE

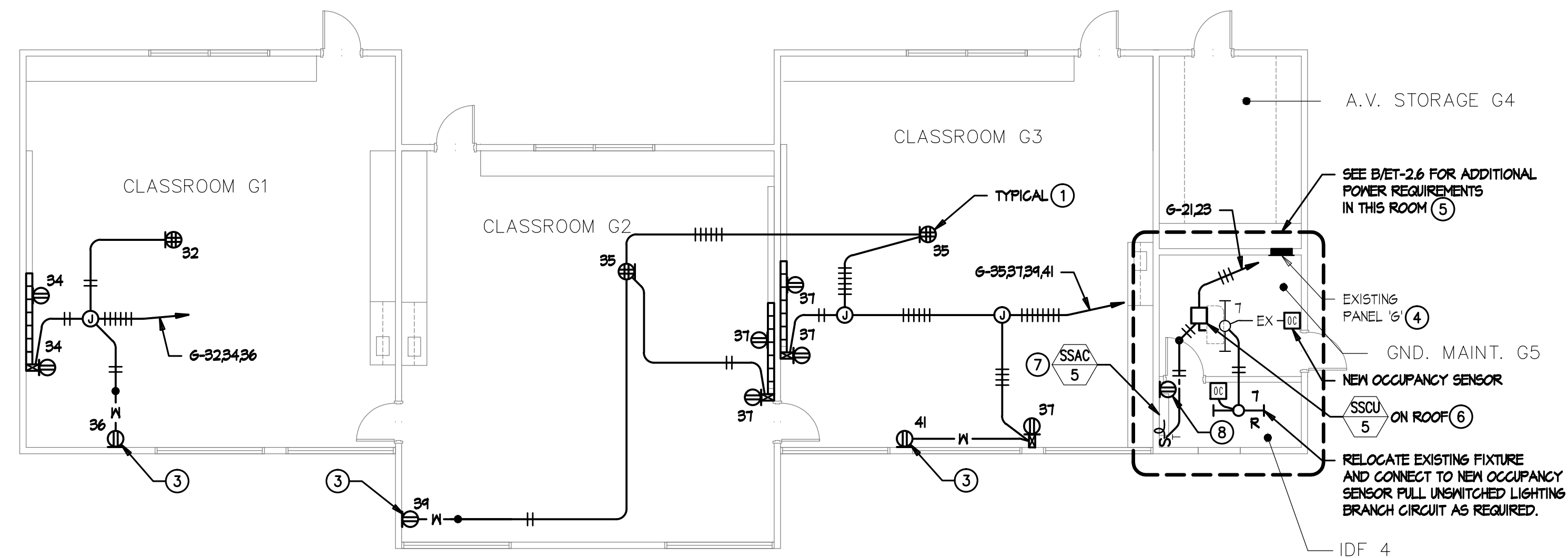
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JOB #

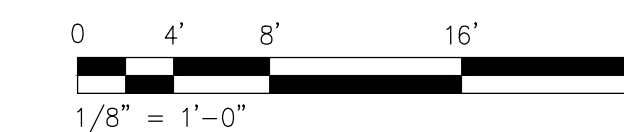
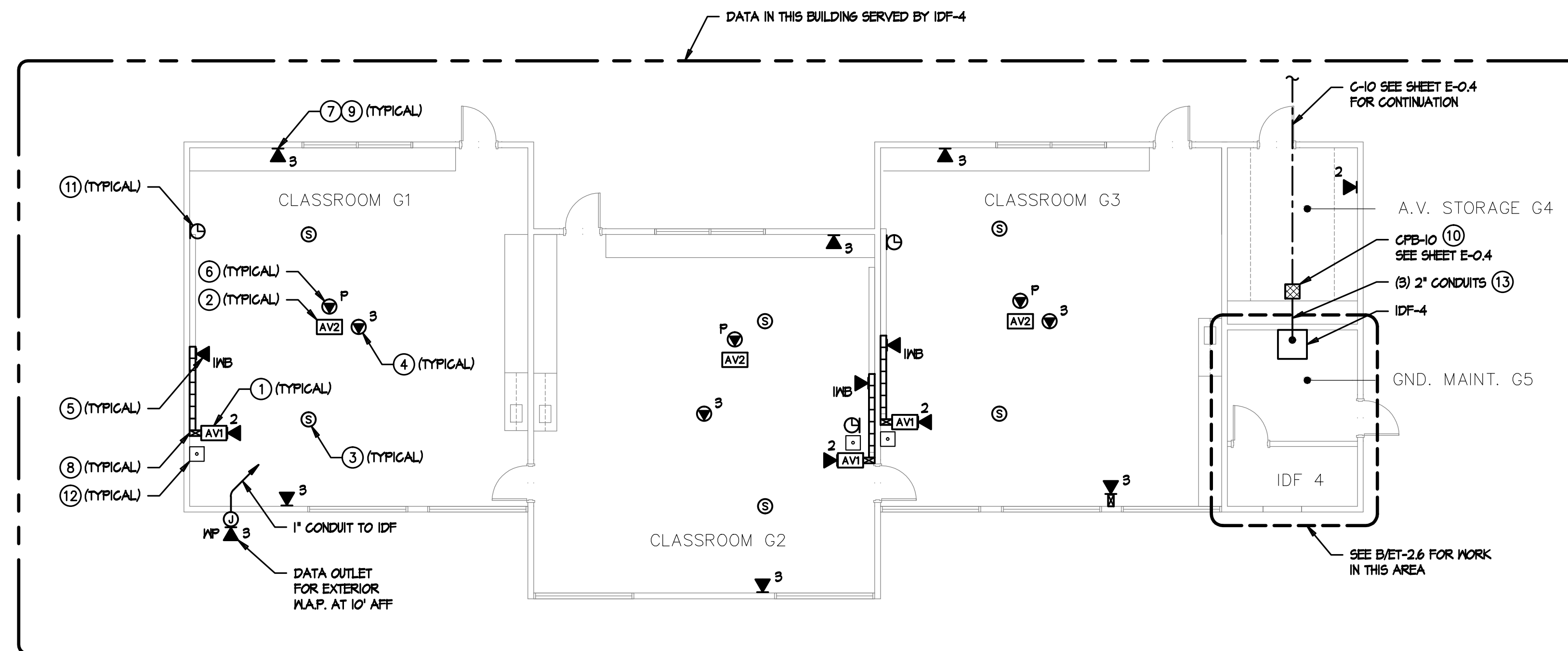
11340

SHEET #

E-61



**BUILDING G - POWER PLAN**



**BUILDING G - SIGNAL PLAN**

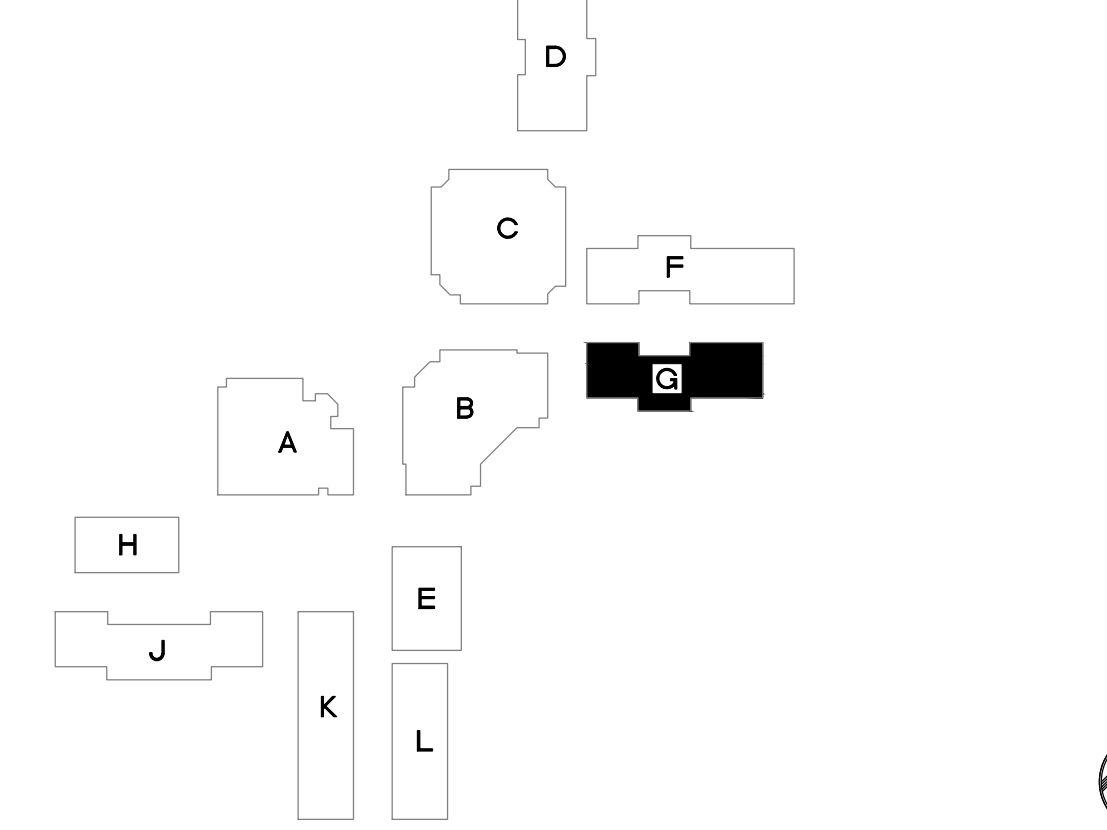
**POWER PLAN KEYNOTES**

- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.
- ⑤ PROVIDE NEW POWER OUTLETS FOR IDF. SEE SHEET ET-2.6 ADDITIONAL POWER REQUIREMENTS.
- ⑥ PROVIDE NEMA 3R, 30AS/30AF/2P DISCONNECT SWITCH ON ROOF FOR CONDENSING UNIT. PROVIDE 3/4"-2#12 DOWN TO FAN COIL UNIT IN IDF ROOM. PATCH/REPAIR/SEAL ROOF PENETRATION.
- ⑦ PROVIDE NEMA 1, DPST 208 VOLT MOTOR RATED SWITCH AND FINAL CONNECTION TO FAN COIL UNIT. FAN COIL UNIT POWERED THROUGH CONDENSING UNIT.
- ⑧ PROVIDE RECEPTACLE NEXT TO FAN COIL UNIT FOR CONDENSATE PUMP CONNECTION. SEE SHEET ET-2.6 FOR BRANCH CIRCUIT REQUIREMENT.

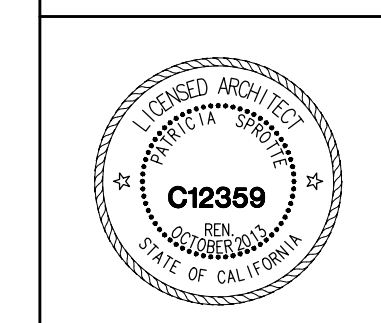
**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (3) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (1) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (1) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION; PROVIDE AND UTILIZE 'J-HOOK' SUPPORTS EVERY 4' IN ACCESSIBLE CEILING SPACE TO IDF. SEE RISER DIAGRAM AVET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-GANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL AVET-5.5.
- ⑨ SEE AV/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOSEN HANDSET), TO REMAIN.
- ⑬ PENETRATE ROOF INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL E/E-3.2. CALLK PENETRATION TO MAINTAIN ROOF RATING. SEE DETAIL AVET-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.

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|----|
| 27 |
| 26 |
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| 24 |
| 23 |



**KEYPLAN**



CONSULTANT

APPROVALS

DESCRIPTION

**BUILDING G  
POWER &  
SIGNAL PLANS**

DATE

04-05-2012

JOB #

11340

SHEET #

**E-7.1**

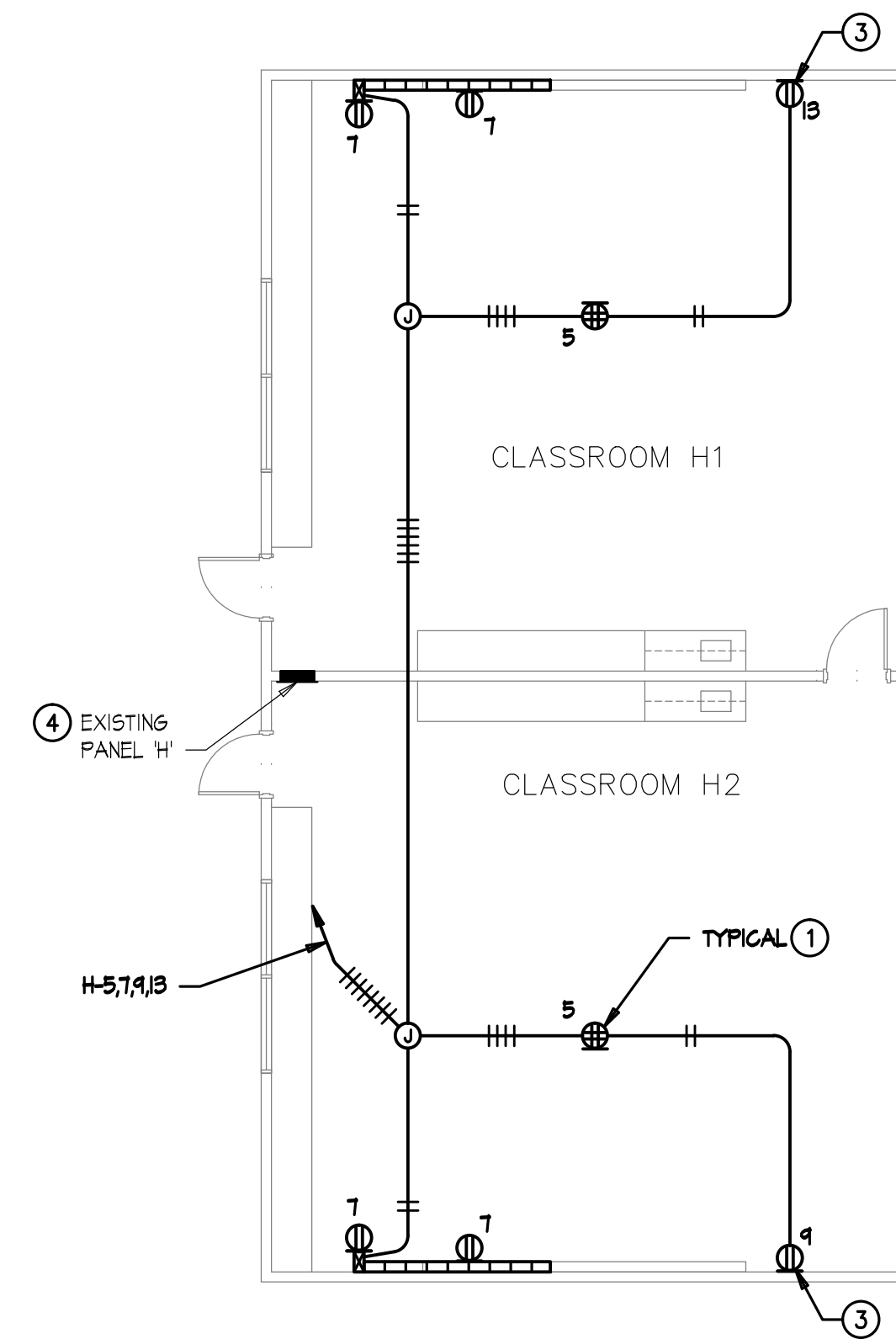
**NORTH**

1/8" = 1'-0"

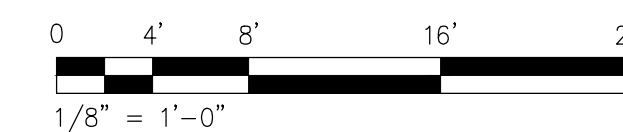
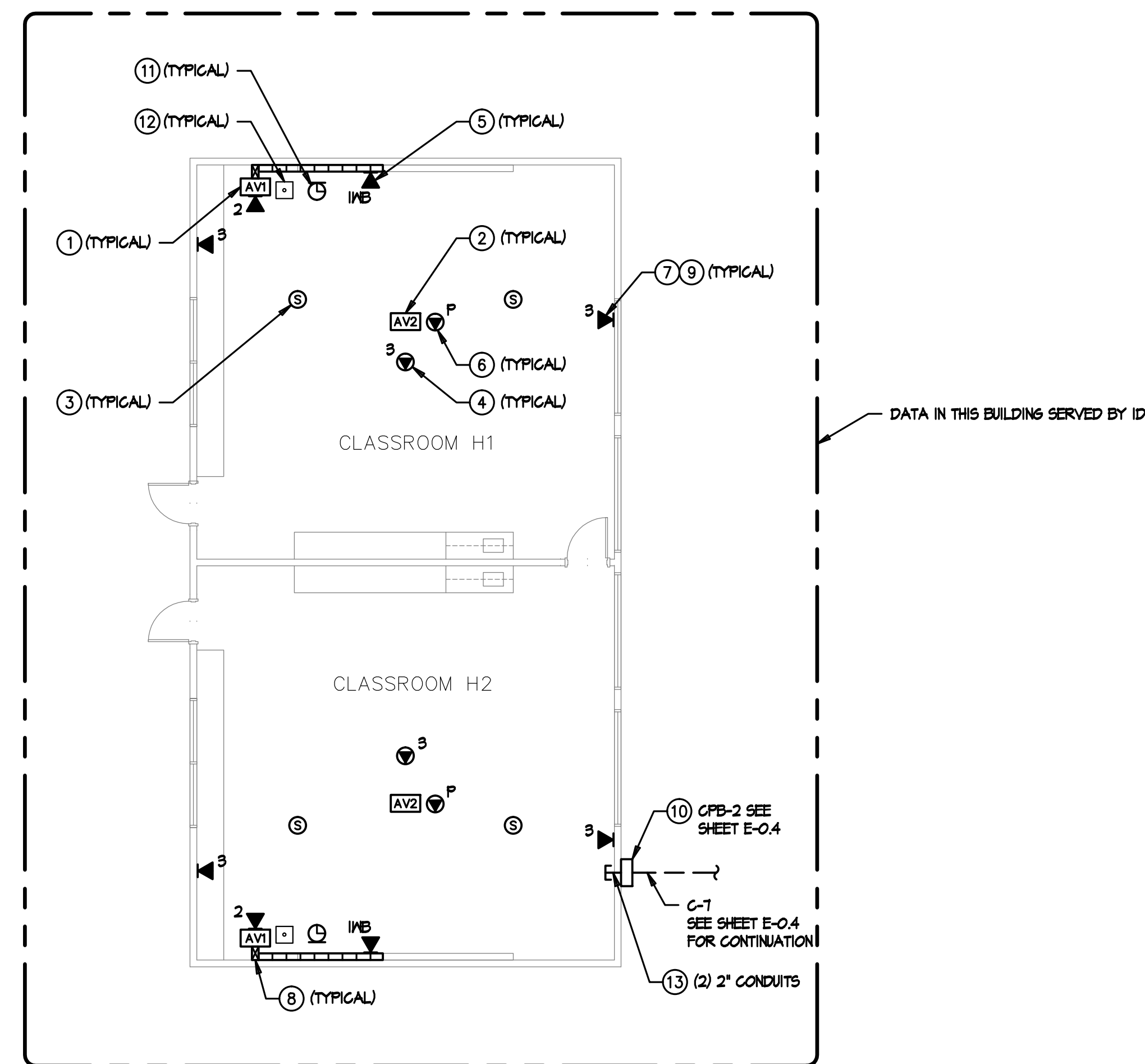
**TURPIN & RATTAN**  
 ENGINEERING, INC.  
 CONSULTING ELECTRICAL ENGINEERS  
 4719 PALM AVENUE  
 LA MESA, CA 91941-5221  
 619-466-1622 FAX 619-466-16233  
 E-MAIL: ENGINEER@TRESD.COM

TREI # 11340  
 V.PHATHANAK 04/02/12 - 6:50PM

REGISTERED PROFESSIONAL ENGINEER  
 13554  
 Exp. 9-30-12  
 Mark Fortie, RCDD  
 REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER  
 EXPIRES 12/31/13  
 Regis. No. 081432



**BUILDING H - POWER PLAN**



**BUILDING H - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (3) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (1) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (1) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEMAY FOR INSTALLATION. SEE RISER DIAGRAM A/ET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEMAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/ET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOGEN HANDSET), TO REMAIN.
- ⑬ PENETRATE OUTSIDE WALL INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL D/E-13.2. CAULK PENETRATION TO MAINTAIN WALL RATINGS. SEE DETAIL A/ET-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.



CONSULTANT

APPROVALS

DESCRIPTION

**BUILDING H  
POWER &  
SIGNAL PLANS**

DATE

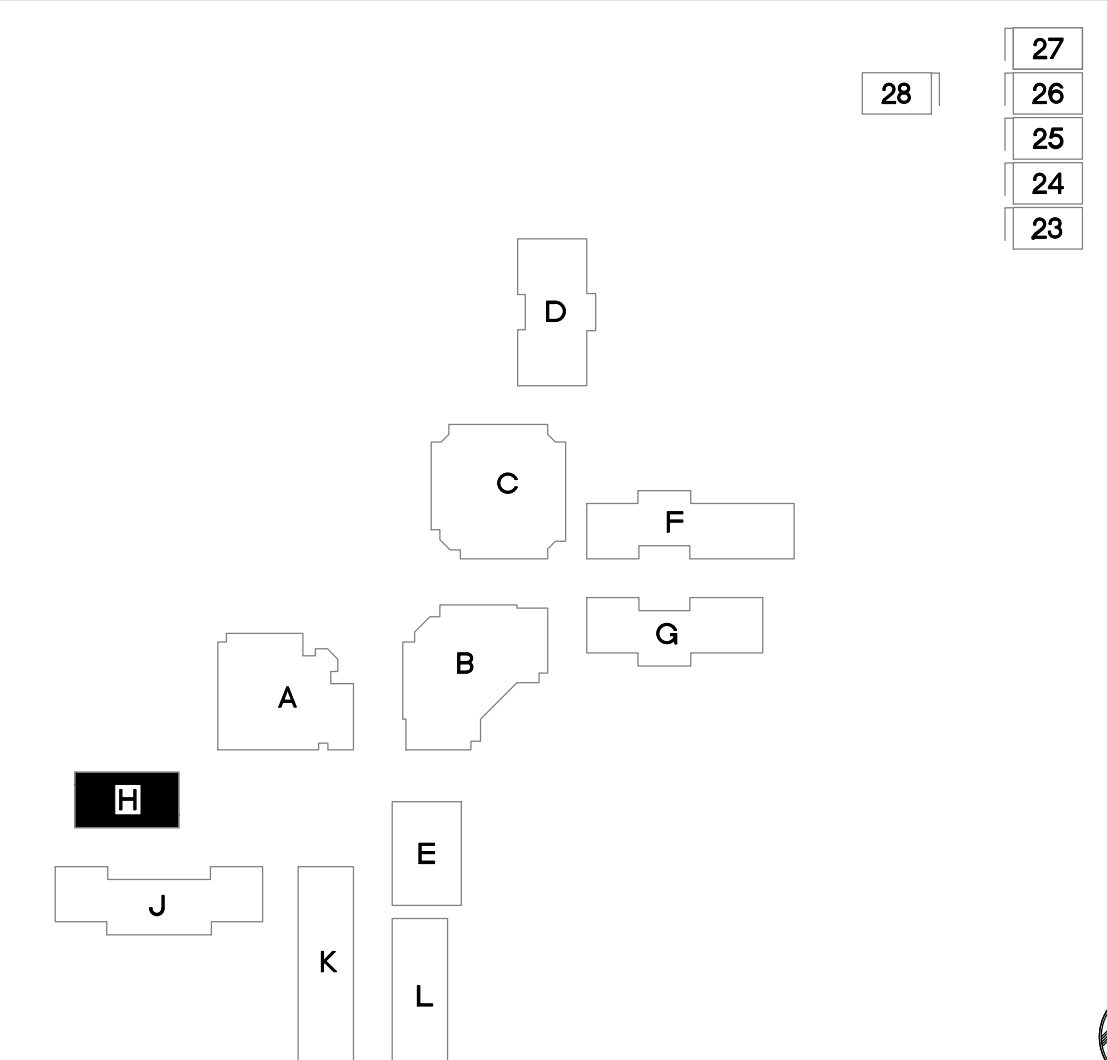
04-05-2012

JOB #

11340

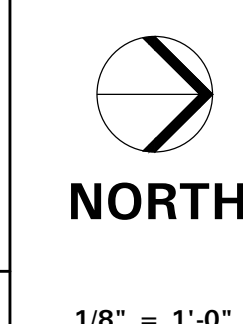
SHEET #

**E-8.1**



KEYPLAN

NTS



1/8" = 1'-0"

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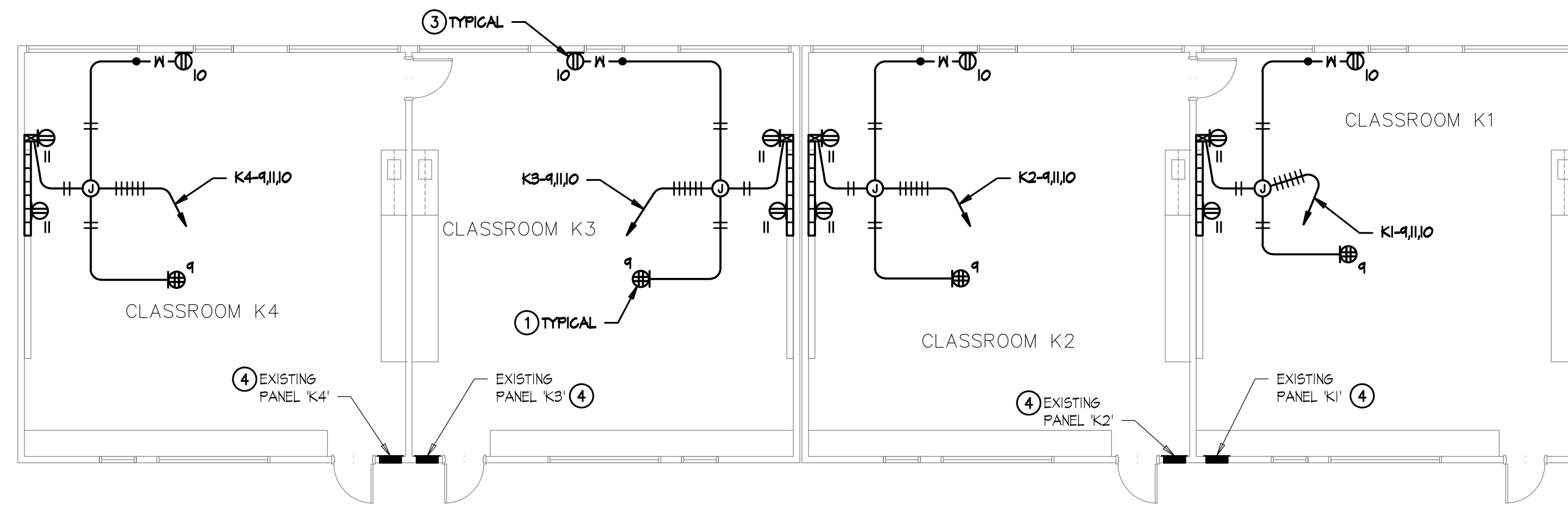
REGISTERED PROFESSIONAL ENGINEER  
 STEPHEN J. KORTMAN  
 13554  
 Exp. 9-30-12  
 STATE OF CALIFORNIA

MARK FORTIE, RCDD  
 REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER  
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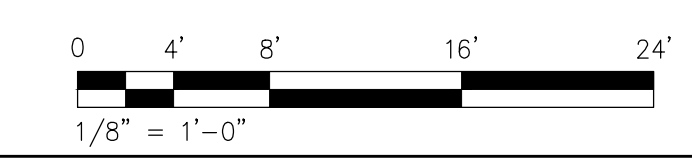
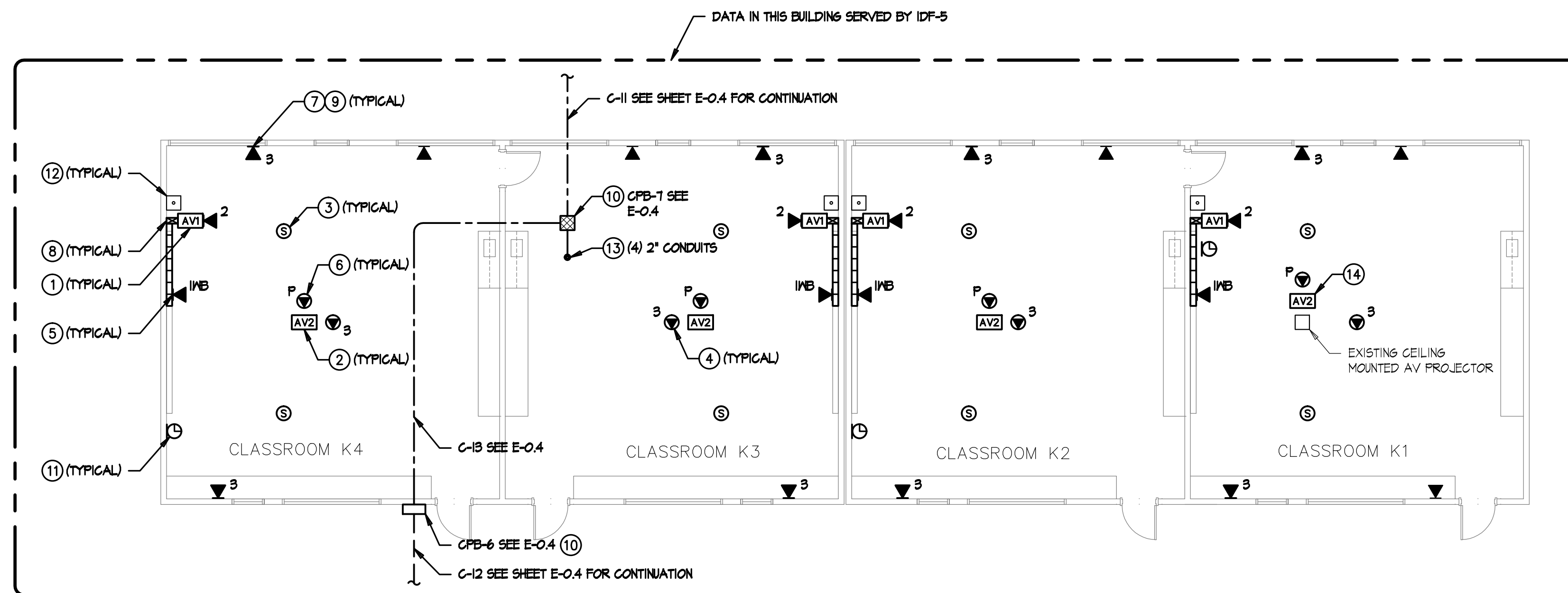
TREI # 11340  
 V.PHATHANAK 04/02/12 - 6:50PM

04/02/12





**BUILDING K - POWER PLAN**



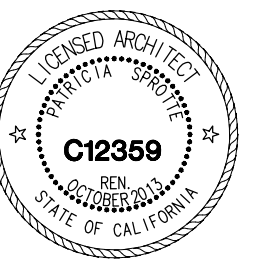
**BUILDING K - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

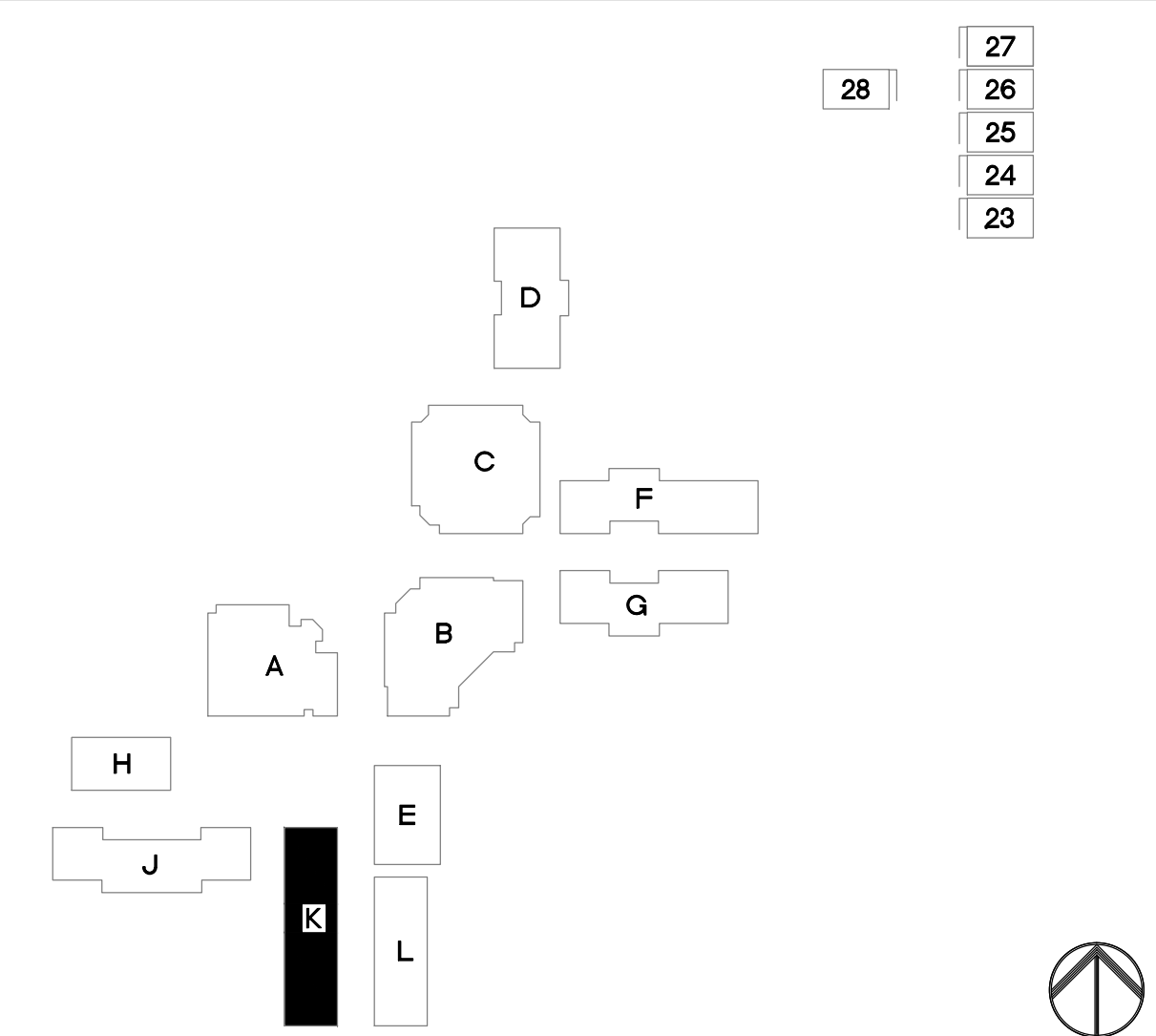
- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 FOR DETAILS.
- ④ (B) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION. SEE RISER DIAGRAM A/E-T-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/E-T-5.5.
- ⑨ SEE A/E-T-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/E-T-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOGEN HANDSET), TO REMAIN.
- ⑬ PENETRATE ROOF INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL E/E-19.2. CAULK PENETRATION TO MAINTAIN ROOF RATING. SEE DETAIL A/E-T-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.
- ⑭ EXISTING AV PROJECTOR TO BE UTILIZED. PROVIDE AV2 INTERFACE FLUSH IN CEILING AT PROJECTOR LOCATION. SEE ET-5.4 FOR DETAILS.

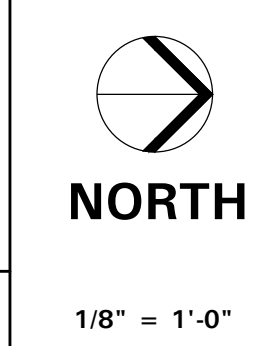


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KEYPLAN

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 ENGINEERING, INC.  
 CONSULTING ELECTRICAL ENGINEERS  
 4719 PALM AVENUE  
 LA MESA, CA 91941-5221  
 619-469-6224 FAX 619-469-6233  
 E-MAIL: ENGINEER@TRTSD.COM

REGISTERED PROFESSIONAL ENGINEER  
 STEPHEN J. KORTMAN  
 13554  
 Exp. 9-30-12  
 STATE OF CALIFORNIA

REGISTERED COMMERCIAL DESIGNER  
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 EXPIRES 12/31/13  
 Regis. No. 081432

TREI # 11340  
 V.PHATHANAK 04/02/12 - 6:51PM

04/02/12

APPROVALS

DESCRIPTION

**BUILDING K  
 POWER &  
 SIGNAL PLANS**

DATE

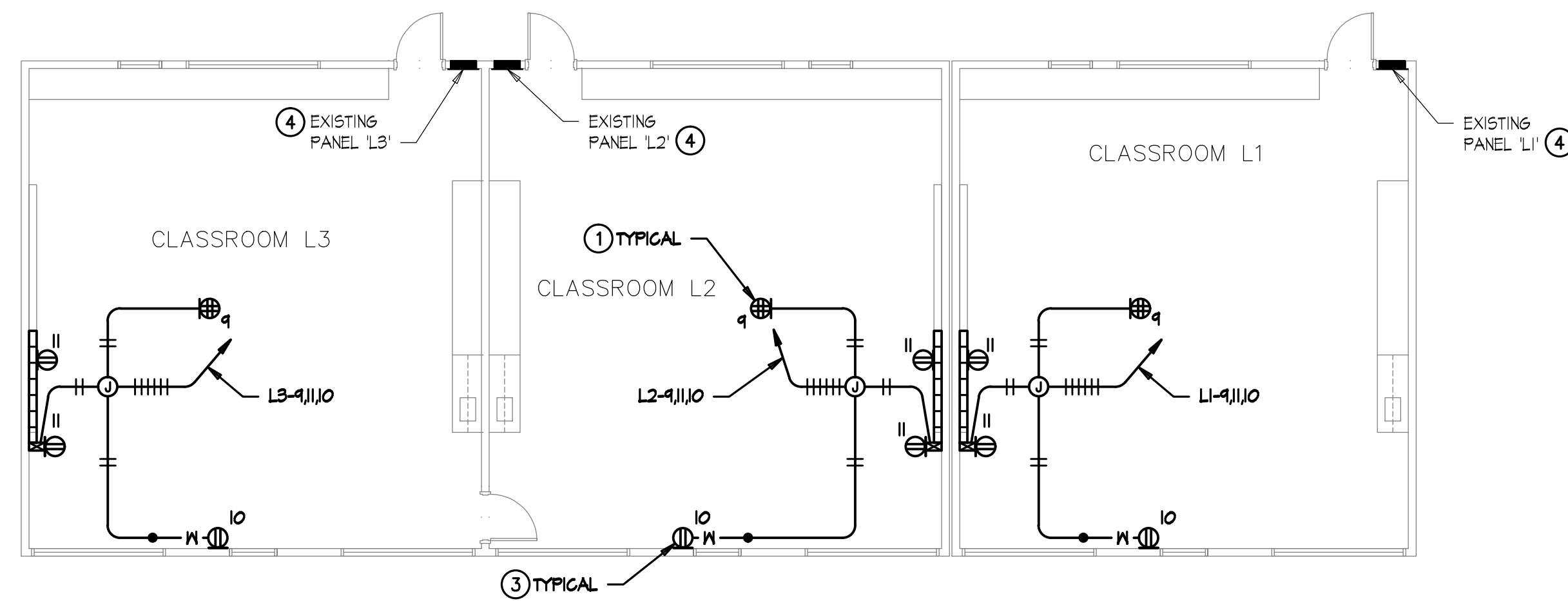
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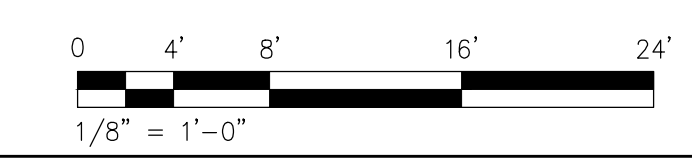
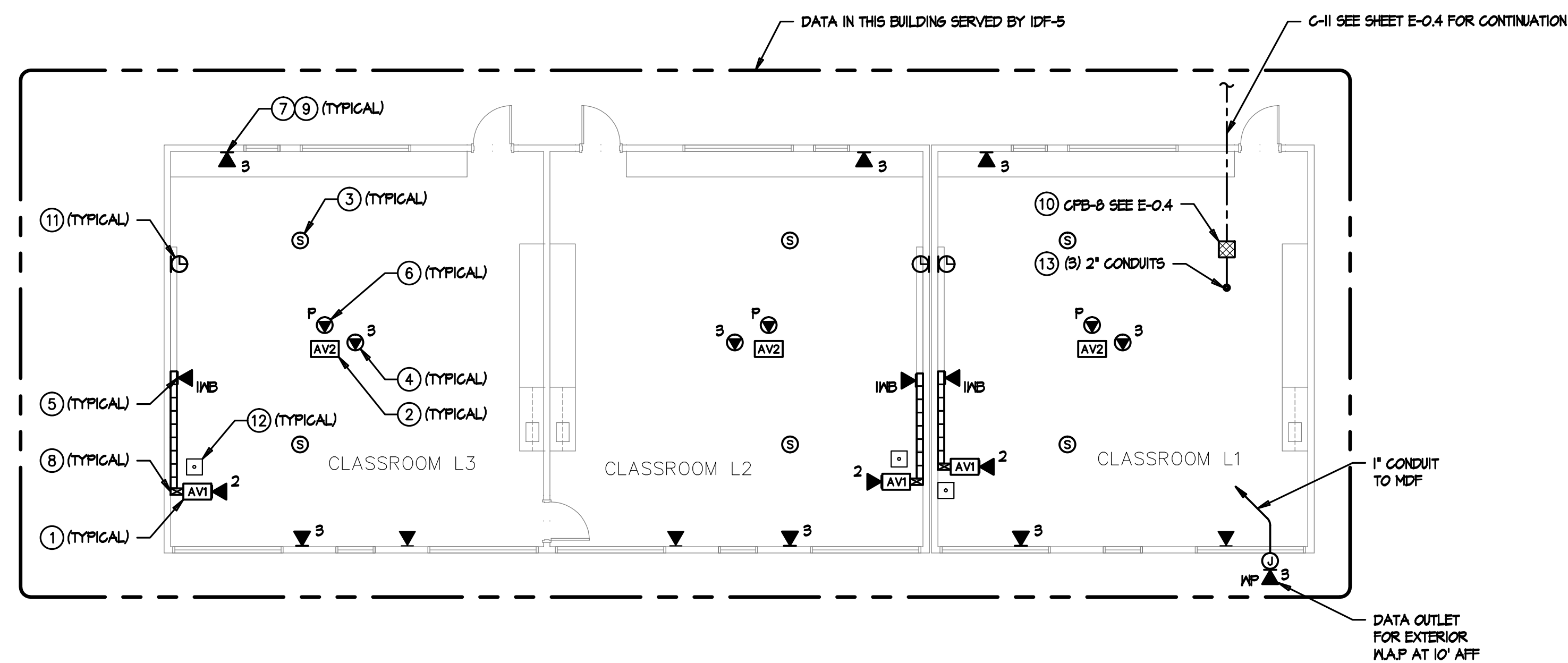
11340

SHEET #

**E-10.1**



**BUILDING L - POWER PLAN**



**BUILDING L - SIGNAL PLAN**

**POWER PLAN KEYNOTES**

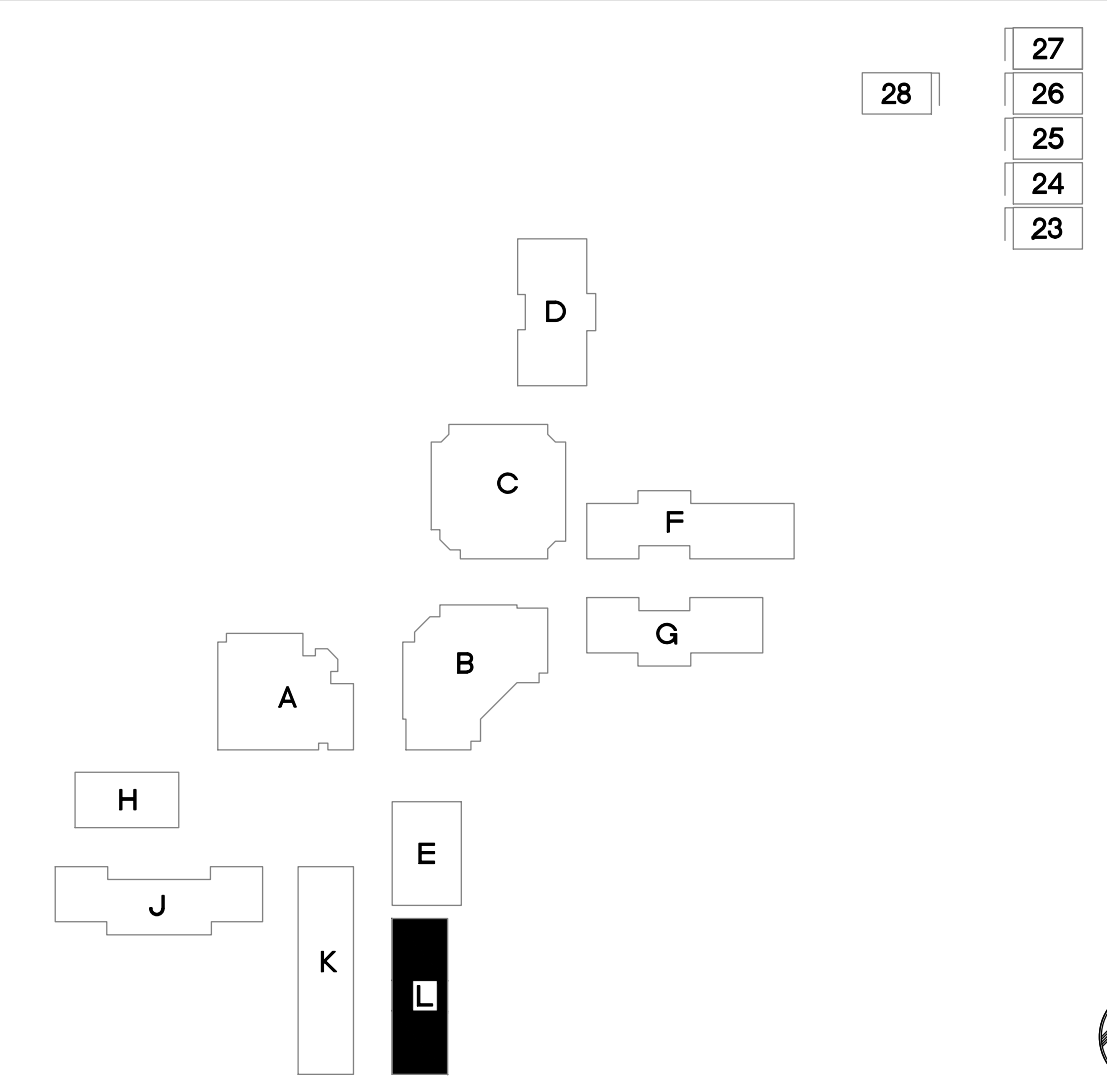
- ① MOUNT DOUBLE DUPLEX OUTLET IN CEILING TILE FOR CEILING MOUNTED PROJECTOR AND AV POWER SUPPLY.
- ② NOT USED.
- ③ PROVIDE RECEPTACLE MOUNTED AT +18" AFF FOR LAPTOP CART. PROVIDE DEDICATED BRANCH CIRCUIT. USE WIREMOLD 2400 DROP FROM CEILING WITH ASSOCIATED CONDUIT TRANSITION FITTINGS.
- ④ SEE RESPECTIVE PANEL SCHEDULE FOR ADDITIONAL WORK AT EXISTING PANEL.

**SIGNAL PLAN KEYNOTES**

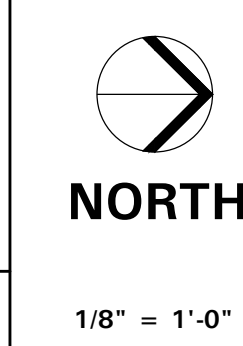
- ① AV1 OUTLET MOUNTED AT TEACHER'S STATION LOCATION AT +18" AFF. SEE ET-5.4 FOR DETAILS.
- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (B) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACEWAY FOR INSTALLATION. SEE RISER DIAGRAM A/ET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACEWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENG SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/ET-5.5.
- ⑨ SEE A/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOGEN HANDSET), TO REMAIN.
- ⑬ PENETRATE ROOF INTO ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL E/E-13.2. CALK PENETRATION TO MAINTAIN ROOF RATING. SEE DETAIL A/ET-5.2 FOR TYPICAL CONNECTION TO HORIZONTAL PATHWAYS.



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**KEYPLAN**



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 13554  
 Exp. 9-30-12  
 REGISTERED COMMERCIAL DESIGNER  
 BICSI  
 EXPIRES 12/31/13  
 Regis. No. 081432

APPROVALS

DESCRIPTION

**BUILDING L  
POWER &  
SIGNAL PLANS**

DATE

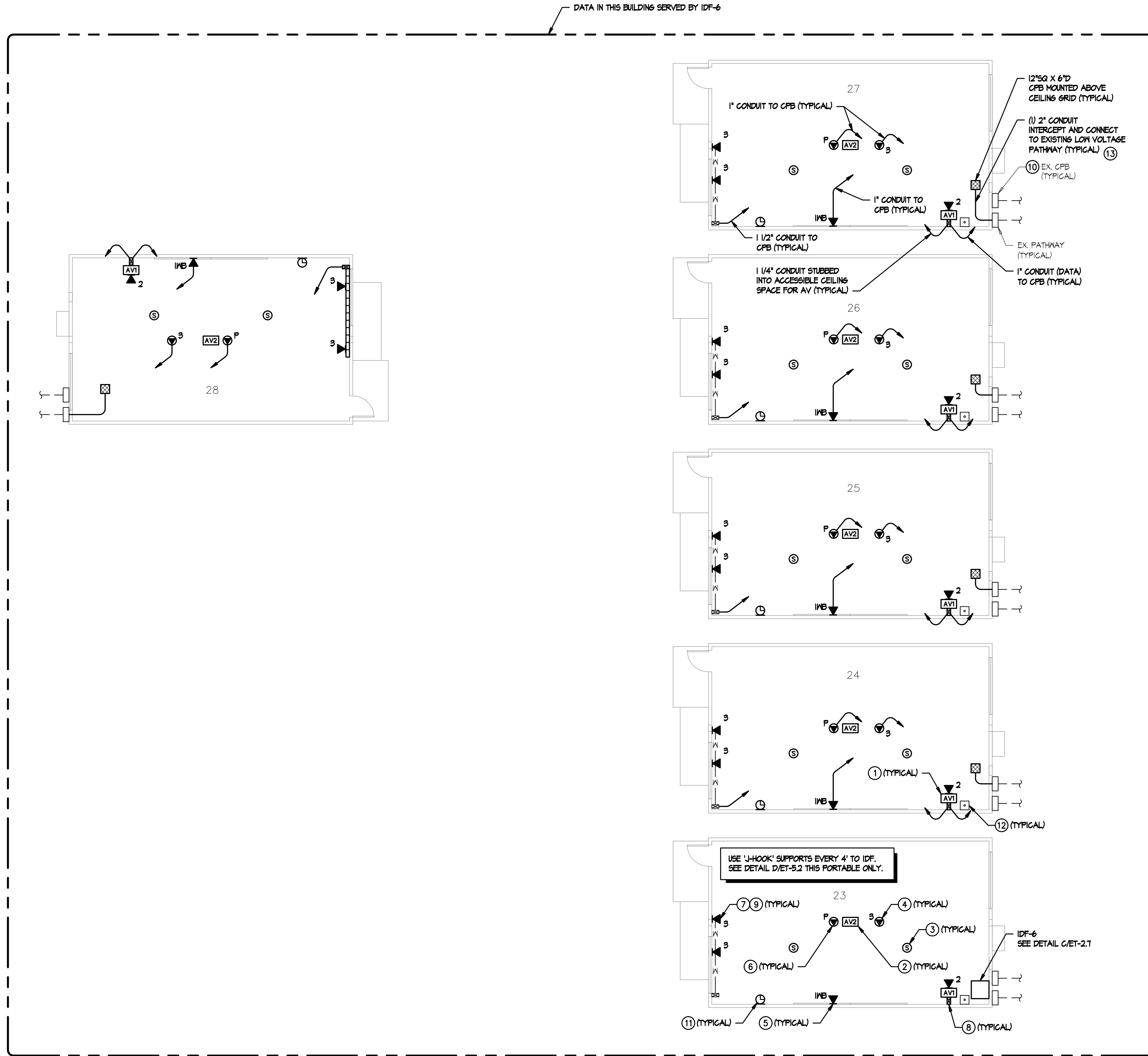
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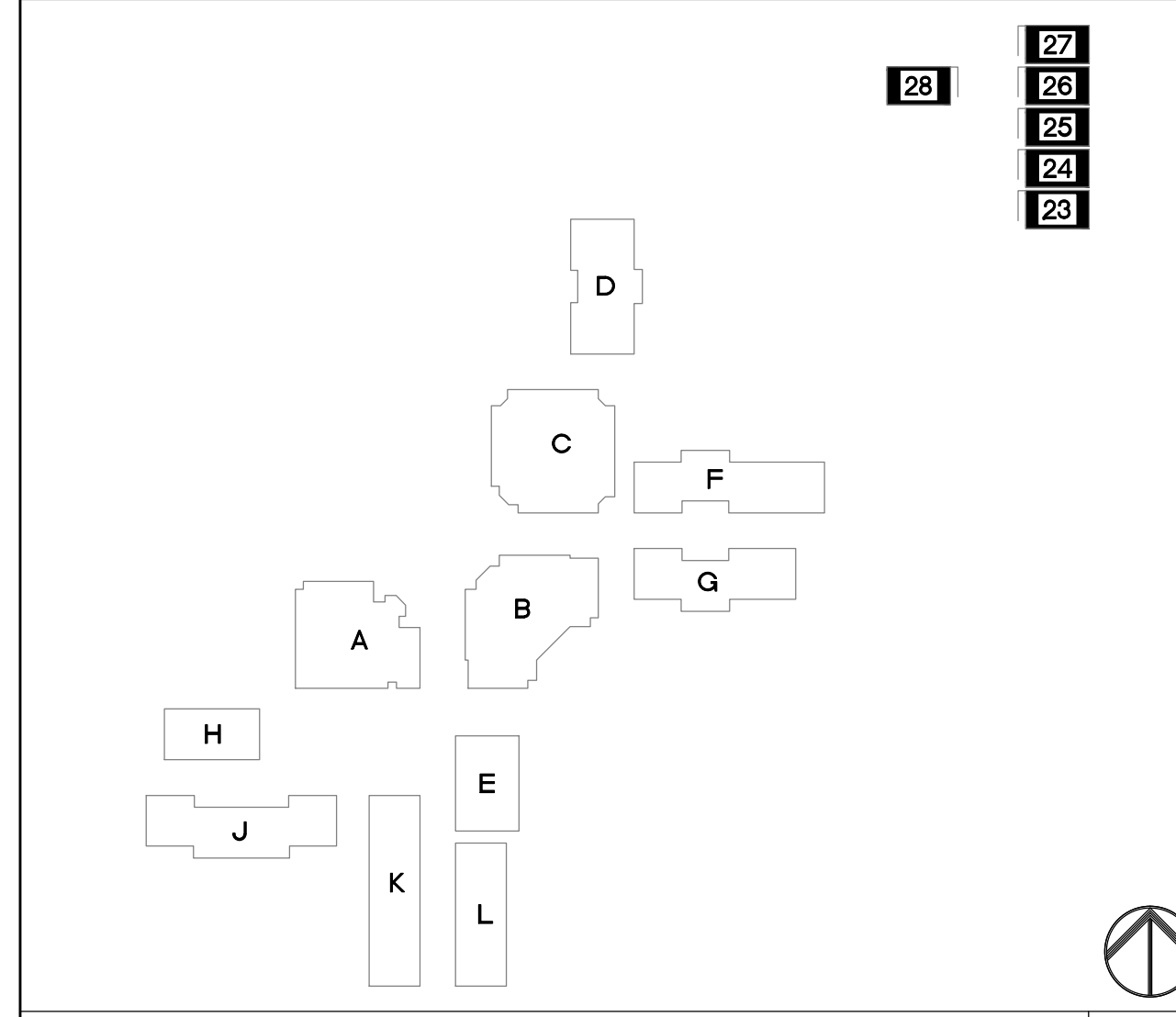
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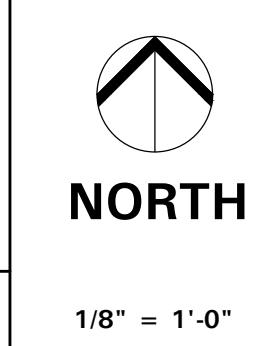


**KEYNOTES**

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- ② AV2 OUTLET MOUNTED AT CEILING MOUNTED PROJECTOR LOCATION. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ③ AUDIO/VISUAL SPEAKER FLUSH IN CEILING TILE. SEE ET-5.4 & ET-5.5 FOR DETAILS.
- ④ (B) PORT CATEGORY 6 CEILING MOUNTED DATA OUTLET FLUSH IN CEILING TILE DESIGNATED FOR WIRELESS NETWORK.
- ⑤ (I) PORT CATEGORY 6 DATA OUTLET DESIGNATED FOR FUTURE INTERACTIVE WHITEBOARD. LOCATION TO BE AT CENTER OF TEACHING WALL AT +18" AFF. UTILIZE EXISTING PATHWAY INTO CEILING SPACE.
- ⑥ (I) PORT CATEGORY 6 DATA OUTLET AT PROJECTOR DESIGNATED FOR PROJECTOR MONITORING. CONTRACTOR TO COORDINATE EXACT LOCATION WITH CEILING MOUNTED PROJECTOR MOUNTING PLATE.
- ⑦ CATEGORY 6 DATA OUTLET. PROVIDE NEW CATEGORY 6 DATA JACK AND CABLE TO IDF. UTILIZE EXISTING RACENWAY, FULLEXES, & PATHWAYS FOR INSTALLATION. SEE RISER DIAGRAM A/ET-1.3 FOR DETAILS.
- ⑧ NEW MULTI-CHANNEL SURFACE RACENWAY INTO CEILING SPACE. PROVIDE EXTRON 2-6ANG ENB SERIES WALL BOX FOR AV INTERFACE. SEE DETAIL A/ET-5.5.
- ⑨ SEE A/B/ET-5.3 FOR LABELING DETAILS.
- ⑩ SEE D/ET-5.3 FOR LABELING DETAILS.
- ⑪ DISTRICT INSTALLED GPS/SATELLITE CLOCK.
- ⑫ EXISTING PHONE (BOSEN HANDSET), TO REMAIN.
- ⑬ PENETRATE OUTSIDE WALL FROM ACCESSIBLE CEILING SPACE ABOVE CEILING GRID. SEE DETAIL D/E-13.2. CAULK PENETRATION TO MAINTAIN WALL RATINGS.

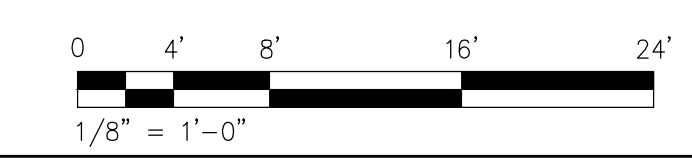


KEYPLAN NTS



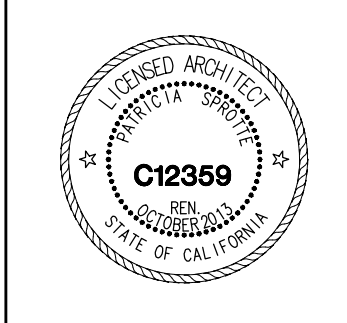
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E-MAIL: ENGINEER@TRRSO.COM  
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CONSULTANT

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