

GENERAL NOTES

- ALL SYMBOLS SHOWN ON SYMBOL LIST ARE NOT NECESSARILY USED ON THIS PROJECT. ALL WORK SHALL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, U.L. REQUIREMENTS N.E. THE STATE OF CALIFORNIA, COUNTY OF ORANGE AND AUTHORITIES HAVING JURISDICTION.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. DRAWINGS DO NOT ALWAYS SHOW OFFSETS, BENDS, SPECIAL FITTINGS OR JUNCTION AND PULL BOXES NECESSARY TO MEET JOB CONDITIONS. THESE ITEMS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH APPLICABLE CODES AT NO COST TO THE OWNER. ALL ADDED JUNCTION OR PULL BOXES SHALL BE SHOWN ON THE "AS-BUILT" DRAWINGS.
- THE WORK SHALL CONSIST OF THE FURNISHING OF ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION AND RELATED ITEMS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETED ELECTRICAL SYSTEMS FOR THIS PROJECT. IT IS INTENDED TO RESULT IN A FINISHED EQUIPMENT INSTALLATION, FULLY CONNECTED AND OPERATIONAL, INCLUDING ALL ELECTRICALLY POWERED MACHINES, APPARATUS, APPLIANCES AND DEVICES FURNISHED UNDER OTHER DIVISIONS OR OUTSIDE OF THIS CONTRACT.
- ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE FASTENED TO STRUCTURE SO AS TO RESIST MOVEMENT DUE TO SEISMIC FORCES. REQUIREMENTS SHALL BE AS SPECIFIED BY THE STATE OF CALIFORNIA AND LOCAL CODES AND ORDINANCES, AND WORK SHALL COMPLY WITH DETAILED PROVISIONS IF SHOWN ON THE DRAWINGS.
- UNLESS INSTRUCTED OTHERWISE, THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES AS REQUIRED FOR INSTALLATION OF THE ELECTRICAL WORK. FURNISH FINAL CERTIFICATE OF INSPECTION OR WRITTEN EVIDENCE OF ACCEPTANCE BY INSPECTION AUTHORITIES FOR ALL WORK INSTALLED.
- BEFORE STARTING ANY WORK, THE CONTRACTOR SHALL EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES INCLUDING ARCHITECTURAL, HEATING-VENTILATING-AIR CONDITIONING, VERIFY ALL DIMENSIONS, SPACE REQUIREMENTS AND POINTS OF CONNECTION TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.
- ALL ELECTRICAL MATERIALS SHALL BE NEW AND BEAR THE UNDERWRITERS LABORATORIES (AND/OR EQUIVALENT TESTING AGENCY) LABEL.
- THE CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE ELECTRICAL CONTRACTOR SHALL IDENTIFY EACH J-BOX AND CONDUIT IN A MANNER ALLOWING IDENTIFICATION OF J-BOXES AND CONDUITS AFTER ALL WALL FINISHES HAVE BEEN APPLIED.
- CONDUCTORS SHALL BE ASTM STANDARD SOLID NO. 10 AND SMALLER, STRANDED NO. 8 AND LARGER.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL CALIFORNIA CODE AND ALL LOCAL APPLICABLE CODES AND REGULATIONS.
- MINIMUM SIZE OF CONDUITS SHALL BE 1/2" MINIMUM SIZE OF CONDUCTORS SHALL BE #12 AWG. U.O.N. MINIMUM CONDUCTOR SIZE AT 120 VOLTS AND OVER 100 FT. CIRCUIT LENGTH SHALL BE #10 AWG U.O.N. MINIMUM CONDUCTOR SIZE AT 277 VOLTS AND OVER 200 FT. CIRCUIT LENGTH SHALL BE #10 AWG U.O.N.
- ALL CONDUCTORS SHALL BE COPPER TYPE THWN INSULATION AT 75°C. U.O.N. ALL EQUIPMENT AND THE WIRING TERMINALS SHALL BE SUITABLE FOR 75°C. WIRING TERMINATION
- ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN.
- THIS SET OF DOCUMENTS INCLUDES A SET OF (8 1/2 x 11) SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REQUIRING FIRE ALARM CONNECTION PRIOR TO SUBMIT BID.
- ALL TERMINAL BOARDS SHALL HAVE NAMEPLATES, LOCKING DOORS AND BE KEYPED ALIKE U.O.N. NAMEPLATES SHALL BE ENGRAVED BLACK LAMINATED PLASTIC WITH 1/4" MINIMUM HEIGHT, WHITE LETTERS INDICATING PANEL DESIGNATION AND VOLTAGE CHARACTERISTICS. PROVIDE TYPEWRITTEN DIRECTORY IN NEW PANELBOARDS. UPDATE DIRECTORIES ON EXISTING PANELBOARDS WHERE CIRCUITING IS CHANGED.
- THE CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTION.
- WHERE MOTORS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT. ACCESS DOORS AND PANELS REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE FURNISHED UNDER THIS DIVISION BUT INSTALLED AS PART OF THE WORK OF DIVISION 9 (CC).
- EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
- BEFORE SUBMITTING PROPOSALS FOR THIS WORK, EACH BIDDER SHALL BECOME FAMILIAR WITH DRAWINGS AND SHALL HAVE EXAMINED THE PREMISES AND BE AWARE OF ALL EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE IN PERFORMING HIS CONTRACT. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY EXTRA COMPENSATION FOR FAILURE TO ALLOW FOR ALL EXISTING CONDITIONS. SUBMITTING OF A BID OR PROPOSAL WILL BE CONSIDERED EVIDENCE OF THE FACT THAT CONTRACTOR IS FULLY AWARE OF THESE CONDITIONS AND IS ABLE TO COMPLETE ALL WORK REQUIRED BY THE DRAWINGS.
- EQUIPMENT ANCHORAGE: PER TITLE-24, VOLUME 2 SECTION 1632A AND TABLE 16A-0 ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED AGAINST SEISMIC FORCES TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:
- WHERE SPECIFIC ANCHORAGE DETAILS ARE NOT INDICATED, FIELD INSTALLATION SHALL REQUIRE THE APPROVAL OF ARCHITECT/ENGINEER.
- PROVIDE J-BOXES, PULLBOXES, ETC. PER CEC REQUIREMENTS. ALL J-BOXES, PULLBOXES, ETC. SHALL BE SIZED PER CEC TABLE 370-16(a).
- SUBMIT TORQUE CERTIFICATE FOR ALL ELECTRICAL EQUIPMENT/CONNECTIONS PRIOR TO CERTIFICATION OF OCCUPANCY ISSUANCE.
- ALL SCREWS EXPOSED TO PUBLIC SHALL BE TAMPER PROOF INCLUDING BUT NOT LIMITED TO COVERPLATES, J-BOXES, PANELBOARDS, LIGHTING FIXTURES, ETC.
- CONTRACTOR SHALL PROVIDE ALL OF THE APPLICATION, ENGINEERING, DOCUMENTATION AND TESTING REQUIRED TO OBTAIN APPROVAL OF FIRE LIFE SAFETY SYSTEM AND SYSTEM ACCEPTANCE BY THE FIRE DEPARTMENT PLAN REVIEWER AND INSPECTOR.
- WHERE CONFLICTING REQUIREMENTS APPEAR IN CONTRACT DOCUMENTS AND A RESOLUTION IS NOT OBTAINED FROM ENGINEER BEFORE BIDDING DATE, THE COURSE OF ACTION WHICH PROVIDES THE GREATEST SAFEGUARD TO PERSONS AND PROPERTY BECOMES THE CONTRACTUAL REQUIREMENT. DISCREPANCIES DISCOVERED DURING CONSTRUCTION SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND WORK SHALL NOT PROCEED ON THE UNRESOLVED PORTIONS UNTIL DIRECTION IS OBTAINED FROM THE ENGINEER OR ARCHITECT.
- PROVIDE MINIMUM 6" SEPARATION FOR BACK TO BACK OUTLET BOXES.
- FIELD VERIFY AND COORDINATE ALL EXISTING ELECTRICAL ITEMS SUCH AS UNDERGROUND CONDUITS, PULLBOXES, OUTLET BOXES, ETC. WITH SCHOOL DISTRICT REPRESENTATIVES. CONTRACTOR TO NOTIFY SCHOOL DISTRICT REPRESENTATIVES AND ENGINEER ANY DISCREPANCIES PRIOR TO BID/SUBMITTING CONTRACT.
- ALL PENETRATION OF FIRE-RESISTANT FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS INSTALLATION DETAILS THAT CONFORM TO U.L. LISTING FOR THROUGH-PENETRATION FIRE STOP SYSTEM. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS FURNISHED BY THE MANUFACTURER OF THE FIRE STOP MATERIAL, WHICH SHOW COMPLETE CONFORMANCE TO THE U.L. LISTING TO THE ARCHITECT AND ENGINEER. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.
- DRAWINGS GENERALLY INDICATE REQUIRED SIZE AND TERMINATION POINTS FOR CONDUITS AND RACEWAYS ONLY. THE FEEDER LENGTH SHOWN ON DRAWINGS ARE APPROXIMATE AND FOR VOLTAGE DROP CALCULATIONS (PER PLAN CHECK REQUIREMENTS) ONLY AND SHALL NOT BE USED FOR BIDDING PURPOSES. CONTRACTOR SHALL FIELD-VERIFY THE EXTENT OF THE WORK UNDER WHICH HE WILL BE OBLIGATED TO OPERATE IN PERFORMING HIS CONTRACT.
- ELECTRICAL CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY THIS OR ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- CONTRACTOR SHALL VERIFY ALL INTERCONNECT FITTINGS REQUIRED FOR INTERCONNECTING DIFFERENT RACEWAY SYSTEM. WHERE INTERCONNECT/REDUCE FITTINGS NOT AVAILABLE, CONTRACTOR SHALL PROVIDE THE LARGER RACEWAY SYSTEM.
- WHERE THERE IS A ROOM/AREA WITH ACCESSIBLE CEILING (T-BAR), CONTRACTOR SHALL RUN CONDUIT CONCEALED.
- CONTRACTOR SHALL PROVIDE CONNECTION, WIRINGS, CONDUIT, ETC. AS REQUIRED TO ALL MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS.

DEMOLITION NOTES

- ALL CONTRACTORS SHALL VISIT THE JOB SITE TO MAKE HIMSELF THOROUGHLY FAMILIAR WITH THE EXISTING SITE CONDITION PRIOR TO SUBMITTING THE BIDS.
- ALL WORK SHALL BE PERFORMED TO CHANGE OR REVISE THE EXISTING ELECTRICAL INSTALLATION AS INDICATED OR REQUIRED TO COMPLETE THE NEW WORK.
- THE CONTRACTOR SHALL REMOVE LIGHT FIXTURES, SWITCHES, MISCELLANEOUS CONDUIT, WIRE, ETC. THAT INTERFERE WITH NEW CONSTRUCTION. EXTEND ANY INTERRUPTED CIRCUITS. PROVIDE BLANK COVER PLATES AS REQUIRED IN FINISHED AREAS. COVER PLATES SHALL MATCH FINISH SURFACE.
- INFORMATION GIVEN ON THE DRAWINGS FOR EXISTING INSTALLATION HAS BEEN OBTAINED FROM THE BEST SOURCES AVAILABLE, BUT CANNOT BE GUARANTEED ACCURATE IN ALL RESPECTS. THE CONTRACTOR SHALL VERIFY SUCH INFORMATION BEFORE PROCEEDING WITH NEW WORKS THAT MAY BE AFFECTED. ALL WORK REQUIRED TO PRODUCE THE INDICATED RESULTS SHALL BE INCLUDED AS A PART OF THE CONTRACT.
- EXCEPT MAY BE SPECIALLY INDICATED OTHERWISE ON DRAWINGS, ALL ELECTRICAL MATERIALS AND EQUIPMENT REMOVED FROM THE EXISTING INSTALLATION IN THE COURSE OF PERFORMING THE INDICATED WORK AND NOT INDICATED TO BE REUSED SHALL BE TREATED AS FOLLOWS:
 - ALL LIGHTING FIXTURES, DEVICES, CONDUITS, CONDUCTORS, OUTLET BOXES AND FITTING SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
- CLEAN ALL REMOVED ITEMS THAT ARE TO BE REUSED. CONDUITS THAT ARE TO BE REUSED SHALL BE CLEANED BEFORE INSTALLING NEW CONDUCTORS. WHERE A CHOICE IS POSSIBLE, SELECT THE BEST OF THE REMOVED ITEMS FOR REUSE.
- UNLESS NOTED OTHERWISE ON DRAWINGS, ALL UNUSED EXISTING WIRING, CONDUIT, JUNCTION BOXES AND OTHER ELECTRICAL DEVICES IN AREAS WHERE NEW WORK OCCURS, SHALL BE REMOVED EXCEPT WHEN SUCH DEVICES ARE REQUIRED TO MAINTAIN SERVICES TO OTHER AREAS. IN SUCH CASES, CONTRACTOR SHALL RELOCATE THESE DEVICES WHERE REQUIRED TO ACCOMMODATE THE NEW WORKS. THE CONTRACTOR MAY ABANDON IN PLACE ANY OF THE EXISTING ITEMS WHEN SUCH ITEMS ARE CONCEALED AND DO NOT INTERFERE WITH THE NEW WORK OF ALL TRADES.
- WHERE OUTLETS, J-BOXES, LIGHTING FIXTURES ARE BEING REMOVED BUT THE CIRCUIT FEEDS EXISTING LOADS TO REMAIN, MAINTAIN CIRCUIT CONTINUITY BY RECONNECTING CONDUCTORS.
- CONTRACTOR SHALL SEE ARCHITECTURAL DRAWINGS AND REMOVE RECEPTACLES, OUTLETS, CONDUITS, LIGHTING FIXTURES ETC. ON WALL/CEILING TO BE DEMOLISHED. REUSED EXISTING ELECTRICAL DEVICES AS INDICATED.

ABBREVIATIONS

A	AMPERE	JB	JUNCTION BOX
AC	ABOVE COUNTER		
AFF	ABOVE FINISHED FLOOR	- K -	
AL	ALUMINUM	KV	KILOVOLT
ALM	ALARM	KVA	KILOVOLT AMPERE
AMM	AMMETER	KW	KILOWATT
ASYM	ASYMMETRICAL	KWH	KILOWATT HOUR
AUTO	AUTOMATIC	KWHM	KILOWATT HOUR METER
AWG	AMERICAN WIRE GAUGE		
	- B -	- L -	
BCB	BRANCH CIRCUIT BREAKER	LTG	LIGHTING
BLDG	BUILDING	- M -	
	- C -		
C	CONDUIT	MAX	MAXIMUM
°C	DEGREE CELSIUS	MCB	MAIN CIRCUIT BREAKER
CAB	CABINET	MCM	THOUSAND CIRCULAR MILS
CAT	CATALOG	MDF	MAIN DISTRIBUTION FRAME
CB	CIRCUIT BREAKER	MECH	MECHANICAL
CKT	CIRCUIT	MER	MECHANICAL EQUIPMENT ROOM
CL	CENTER LINE	MH	MAN HOLE
CLG	CEILING	MIN	MINIMUM
CNTL	CONTROL	MTD	MOUNTED
CO	CONDUIT ONLY	MTG	MOUNTING
COMM	COMMUNICATION	- N -	
CONT	CONTINUATION	N	NEUTRAL
CT	CURRENT TRANSFORMER	NIC	NOT IN CONTRACT
CU	COPPER	NTS	NOT TO SCALE
	- D -	- O -	
DB	DECIBEL	OC	ON CENTER
DE	DOUBLE ENDED SUBSTATION	OD	OUTSIDE DIAMETER
DEG	DEGREE		
DF	DRINKING FOUNTAIN	- P -	
DIA	DIAMETER	P	POLE
DISC	DISCONNECT	PB	PULL BOX
DN	DOWN	PBS	PUSH BUTTON SWITCH
DISC	DISTRIBUTION PANEL BOARD	β	PHASE
DT	DUST TIGHT	PNL	PANEL
DWG	DRAWING	PWR	POWER
	- E -	- R -	
EA	EACH	RECEPT	RECEPTACLE
EOL	END OF LINE	REQ	REQUIRED
EG	EQUIPMENT GROUND	RM	ROOM
EL	ELEVATION	(R)	REMOVE
ELEC	ELECTRICAL		
EMER	EMERGENCY	- S -	
EQUIP	EQUIPMENT	SCH	SCHEDULE
EXIST, (E)	EXISTING TO REMAIN	SD	SMOKE DETECTOR
EXT	EXTERIOR	SEC	SECURITY
	- F -	SECT	SECTION
F	DEGREE FAHRENHEIT	SIG	SIGNAL
FA	FUSE	SP	SINGLE POLE
FAA	FIRE ALARM	SN	SOLID NEUTRAL
FACP	FIRE ALARM ANNUNCIATION PANEL	SPEC	SPECIFICATION
FAPS	FIRE ALARM CONTROL PANEL	SPKLR	SPEAKER
FATC	FIRE ALARM POWER SUPPLY	SW	SWITCH
FBO	FIRE ALARM TERMINAL CABINET	SWBD	SWITCHBOARD
	FURNISHED BY OTHER DIVISION	SYM	SYMMETRICAL
FC	FOOTCANDLE	SYS	SYSTEMS
FCU	FAN COIL UNIT		
FDR	FEEDER		
FDS	FUSED DISCONNECT SWITCH	- T -	
FIXT	FIXTURE	TBD	TERMINAL BOARD
FLOOR	FLOOR	TEL	TELEPHONE
FLEX	FLEXIBLE	TERM	TERMINAL
FLUOR	FLUORESCENT	TP	TWISTED PAIR
FT	FEET OR FOOT	TSP	TWISTED SHIELDED PAIR
	- G -		
G	GROUND	TRANSF	TRANSFORMER
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
	- H -	- U -	
HC	HUNG CEILING	U.O.N.	UNLESS OTHERWISE NOTED
HID	HIGH INTENSITY DISCHARGE	- V -	
HH	HAND HOLE	V	VOLT OR VOLTAGE
HN	HALF NEUTRAL	VA	VOLT AMPERE
HP	HORSEPOWER	- X -	
HV	HIGH VOLTAGE	XFMR	TRANSFORMER
HZ	HERTZ		
	- I -	- W -	
IC	INTERRUPTING CAPACITY	W	WATT
IDF	INTERMEDIATE DISTRIBUTION FRAME	WHM	WATT HOUR METER
INCAND	INCANDESCENT	WP	WEATHERPROOF

SYMBOLS

	FLUORESCENT SURFACE OR RECESSED MOUNTED FIXTURE α = SWITCH CONTROLLED		PULLBOX
	FLUORESCENT WALL MOUNTED FIXTURE		DISCONNECT SWITCH-100A SWITCH, 60A FUSE UNFUSED EXCEPT WHERE FUSE SIZE IS INDICATED. 3 POLE EXCEPT WHERE NOTED
	FLUORESCENT FIXTURE ON EMERGENCY POWER		SURFACE MOUNTED PANELBOARD
	FLUORESCENT STRIP FIXTURE		FLUSH MOUNTED PANELBOARD
	RECESSED OR SURFACE MOUNTED FIXTURE α = SWITCH CONTROLLED		THERMOSTAT OUTLET, COORDINATE LOCATION WITH MECHANICAL CONTRACTOR AND PROVIDE 1/2" CONDUIT TO ASSOCIATED HVAC UNIT.
	WALL MOUNTED FIXTURE α = SWITCH CONTROLLED		CONTROL DEVICE AS NOTED
	RECESSED, SURFACE OR WALL MTD. FIXT. ON EMERG. POWER.		TRANSFORMER
	SURFACE OR PENDANT MOUNTED EXIT SIGN FIXTURE- DIRECTIONAL ARROWS WHERE INDICATED, SHADED AREAS INDICATE ILLUMINATED FACES		MOTOR
	WALL EXIT SIGN FIXTURE-DIRECTIONAL ARROWS WHERE INDICATED SHADED AREAS INDICATE ILLUMINATED FACES		MOTOR CONTROLLER
	SINGLE POLE TOGGLE SWITCH +44" TYP. 2 = DOUBLE POLE 3 = THREE-WAY 4 = FOUR-WAY α = CONTROLLING OUTLET OR FIXTURE "α" D = DOOR K = KEY OPERATED P = WITH PILOT LIGHT T = TIME SWITCH LV = LOW VOLTAGE SWITCH L = LOCKAGE		COMBINATION MOTOR CONTROLLER AND UNFUSED DISCONNECT SWITCH
	WALL DIMMER SWITCH		MOTOR RATED TOGGLE SWITCH
	DUPLEX CONVENIENCE RECEPTACLE +15" AFF, U.O.N. FLUSH WALL MOUNTED.		MOTOR RATED TOGGLE SWITCH WITH THERMAL OVERLOAD PROTECTION
	QUADRAPLEX RECEPTACLE +15" AFF, U.O.N. FLUSH WALL MOUNTED		UNFUSED SWITCH-100 AMP 3 POLE UON
	JUNCTION BOX		CIRCUIT BREAKER-100 AMP FRAME/100AMP TRIP, 3 POLE UON LT=LONG TIME SETTING ST=SHORT TIME SETTING I=INSTANTANEOUS SETTING
	FLUSH WALL MOUNTED JUNCTION BOX		POWER TRANSFORMER, DISTRIBUTION
	WALL MOUNTED CLOCK WITH OUTLET, +84" AFF, U.O.N. WITH CONDUIT AND CABLE TO TERMINAL CABINET/MASTER CLOCK NEW CLOCK TO MATCH EXISTING		FUSED SWITCH 100 AMP SWITCH/100 AMP TYPE "FA" FUSE 3 POLE UON
	TELEPHONE/INTERCOM OUTLET WITH 3/4" CONDUIT UP TO ACCESSIBLE CEILING, +15" AFF, U.O.N. PROVIDE CABLE TO TERMINAL CABINET/TEL. SYSTEM.		FLUSH MOUNTED CEILING SPEAKER, MATCH EXISTING IN TYPE. 3/4" C-SPEAKER CABLES TO TERMINAL CABINET/PA SYSTEM
	DATA OUTLET WITH (1) R45 JACK AND 1-PORT FACEPLATE MOUNTED AT +15" AFF, U.O.N. PROVIDE 3/4" CAT 5E CABLE TO IDF.		WALL MOUNTED SPEAKER, MATCH EXISTING IN TYPE. 3/4" C-SPEAKER CABLES TO TERMINAL CABINET/PA SYSTEM
	CONDUIT / RACEWAY		WALL MOUNTED CABLE TV OUTLET, VERIFY HEIGHT WITH ARCHITECT. 3/4" TV CABLES TO TERMINAL CABINET/CABLE TV SYSTEM.
	UNDERGROUND CONDUIT		INTRUSION SYSTEM MOTION SENSOR WITH 3/4" C-CABLES TO EXISTING INTRUSION MAIN PANEL, FIELD ADJUST AIMING (PER MANUFACTURER'S RECOMMENDATION) SENSOR TO MATCH EXISTING.
	CONDUIT TURNING UP		FIRE SMOKE DAMPER
	CONDUIT TURNING DOWN		
	GROUND CONNECTION		
	CONDUIT HOMERUN 3/4" MIN. (U.O.N.)		
	1/2" C-2#12+1#12EG (U.O.N.)		
	1/2" C-3#12+1#12EG (U.O.N.)		
	3/4" C-4#12+1#12EG (U.O.N.)		
	3/4" C-5#12+1#12EG (U.O.N.)		
	3/4" C-6#12+1#12EG (U.O.N.)		
	1" C-7#12+1#12EG (U.O.N.)		

APPLICABLE CODES/STANDARDS

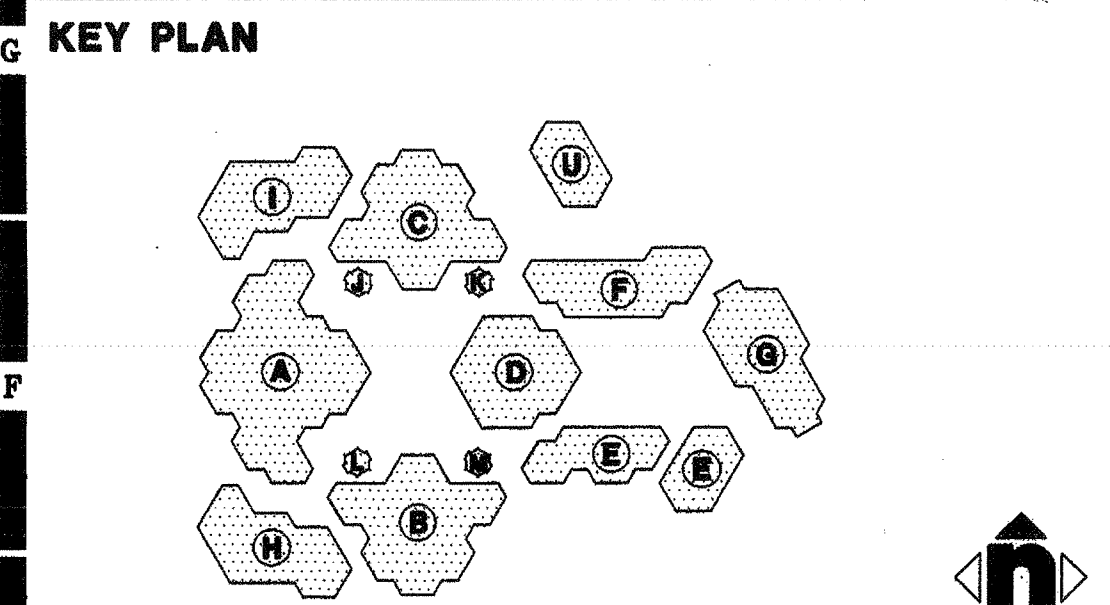
- APPLICABLE CODES AS OF JULY 1, 1999
- 1998 Building Standards Administrative Code, Part 1, Title 24 C.C.R.
 - 1998 California Building Code (CBC), Part 2, Title 24 C.C.R.; (1997 Uniform Building Code vols. 1-3 & 1998 California Amendments)
 - 1998 California Electrical Code (CEC), Part 3, Title 24 C.C.R.; (1996 National Electrical Code and 1998 California Amendments)
 - 1998 California Mechanical Code (CMC), Part 4, Title 24 C.C.R.; (1997 Uniform Mechanical Code and 1998 California Amendments)
 - 1998 California Fire Code (CFC), Part 9, Title 24 C.C.R.; (1997 National Fire Alarm Code and 1998 California Amendments)
 - 1998 California Referenced Standards Code, Part 12 Title 24, C.C.R.
- PARTIAL LIST OF APPLICABLE NFPA STANDARDS:
- NFPA 13-Automatic Sprinkler Systems (1996 Edition)
 - NFPA 14-Standpipes Systems (1996 Edition)
 - NFPA 72-National Fire Alarm Codes (1996 Edition)

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EF-1.2	BUILDING F FIRE ALARM PLAN - SEGMENT B & SECOND FLOOR
EG-1.1	BUILDING G FIRE ALARM PLAN
EH-1.1	BUILDING H FIRE ALARM PLAN
EI-1.1	BUILDING I FIRE ALARM PLAN
EJ-1.1	TOILET BUILDING J & L FIRE ALARM PLAN
EK-1.1	TOILET BUILDING M & K FIRE ALARM PLAN
EL-1.1	BUILDING U FIRE ALARM PLAN
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ED-6.1B	BUILDING D SECOND FLOOR LIGHTING PLAN
EE-6.3	BUILDING E & F ENLARGED TOILET LIGHTING PLANS

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SYMBOLS, ABBREVIATIONS AND NOTES

Architect's Seal

Designed	Project No
Drawn	Scale NONE
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Reviewed	E-0.1
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FIRE ALARM SYSTEM WIRING AND CONDUIT SCHEDULE

DESIGNATION	CONDUIT SIZE	DESIGNATION	STEEL SERIES WIREMOLD MODEL #
1S	3/4" C	W-1S	V2400
1V	3/4" C	W-1V	V2400
2D	3/4" C	W-2D	V2400
2S	3/4" C	W-2S	V2400
2V	3/4" C	W-2V	V2400
2D,1S	3/4" C	W-2D,1S	V2400
2D,1S,1V	1" C	W-2D,1V	V2400
2D,2V	1" C	W-2D,1S,1V	V2400
2D,2V,2S	1 1/4" C	W-2D,2S,2V	V2400
2D,4V,4S	1 1/4" C	W-2D,3S,3V	V2400

* PROVIDE WIREMOLD 3000 WHERE NUMBER WIRES EXCEED W-2D,3S,3V.

FIRE ALARM WIRE LEGEND

SYMBOL	DESCRIPTION	TYPE
D	DATA LINE - INITIATING DEVICE	1#16 TWISTED SHIELDED PAIR FPL CABLE
S	SIGNALING CIRCUIT - AUDIO	2#12 THHN/THWN
V	SIGNALING CIRCUIT - VISUAL	2#12 THHN/THWN
P	POWER (24VDC)	2#12 THHN/THWN
X	ANNUNCIATOR	2#18 TWISTED/SHEILED PAIR FPL CABLE

SEQUENCE OF OPERATION

DEVICE ACTION	MANUAL PULL STATION	SMOKE/HEAT DETECTOR	120VAC POWER FAILURE
SOUND CONTROL PANEL TROUBLE BUZZER	YES *	YES *	YES
ANNUNCIATE AT ADMINISTRATION BUILDING	YES	YES	YES
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM OR TROUBLE)	YES	YES	YES
ACTIVATE AUDIBLE/VISUAL ALARM SIGNAL THROUGH-OUT BUILDINGS	YES	YES	NO

* ON WIRING FAULT OR DEVICE TROUBLE ONLY

FIRE ALARM LEGEND

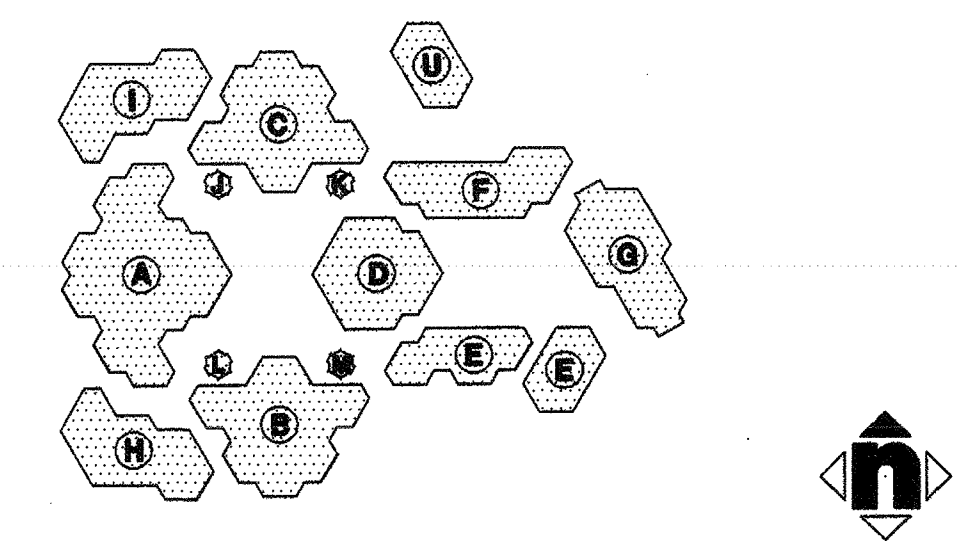
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.	CSFM LISTING NUMBER	MOUNTING HEIGHT
FCAP	FIRE ALARM CONTROL PANEL	SIMPLEX	4120	7165-0026:160 160	
H	CEILING HEAT DETECTOR	SIMPLEX	4098-9733	7270-0026:216	
110	FIRE ALARM HORN/STROBE W/ SYNC. MODULE	SIMPLEX	4903	7320-0026:203	+80" AFF
30	FIRE ALARM HORN/STROBE W/ SYNC. MODULE	SIMPLEX	4903	7320-0026:203	+80" AFF
15	FIRE ALARM HORN/STROBE W/ SYNC. MODULE	SIMPLEX	4903	7320-0026:203	+80" AFF
WP	FIRE ALARM HORN, WP	WHELOCK	MT 12/24R	7135-0785:118	+90" AFF
H	FIRE ALARM HORN	WHELOCK	MT 12/24R	7135-0785:118	+90" AFF
S	SMOKE DETECTOR PHOTO ELECT.	SIMPLEX	4098-9714	7300-0026:217	
15	FIRE ALARM STROBE LIGHT	SIMPLEX	4904-9168	7125-0026:218	+80" AFF
30	FIRE ALARM STROBE LIGHT	SIMPLEX	4904-9168	7125-0026:218	+80"
110	FIRE ALARM STROBE LIGHT	SIMPLEX	4904-9168	7125-0026:218	+80"
110	CEILING STROBE 110 CANDELA	SIMPLEX	4904-9164	7125-0026:198	
30	CEILING STROBE 30 CANDELA	SIMPLEX	4904-9163	7125-0026:198	
F	MANUAL PULL STATION	SIMPLEX	2099-9761	7150-0026:215	+48" AFF
D	DUCT SMOKE DETECTOR	SIMPLEX	2098-9806		
T	TAMPER SWITCH				
W	WATER FLOW SWITCH				
FAPS	REMOTE POWER SUPPLY	SIMPLEX	4009-9201	7300-0026:214	
FATC	TERMINAL CABINET				
W	END OF LINE DEVICE				

FIRE ALARM NOTES

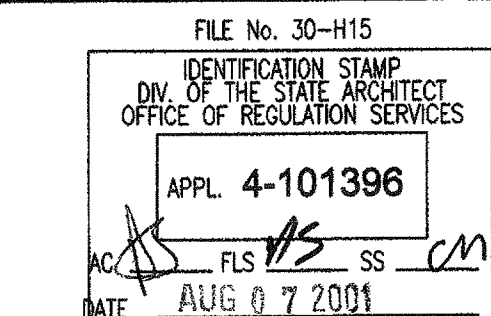
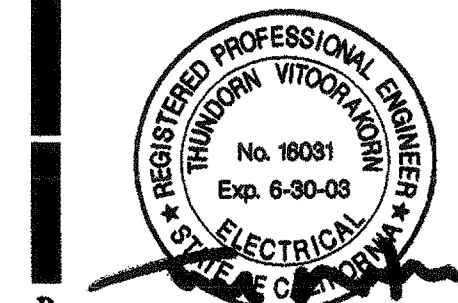
- SCOPE OF WORK: PROVIDE A NEW MANUAL WITH SUPPLEMENTAL SMOKE DETECTORS FULLY OPERABLE FIRE ALARM SYSTEM TO NFPA-72, REQUIREMENTS AS A REPLACEMENT TO THE EXISTING FIRE ALARM SYSTEMS.
- A FIRE ALARM SYSTEM IS BEING INSTALLED IN OCCUPANCIES LISTED, PER DSA POLICY 95-3. PROVIDE NEW NOTIFIER FIRE ALARM CONTROL PANEL AS INDICATED.
- EXISTING FIRE ALARM EQUIPMENT SHALL BE MAINTAINED FULLY OPERATIONAL UNTIL THE NEW EQUIPMENT HAS BEEN TESTED AND ACCEPTED.
- EQUIPMENT REMOVAL: AFTER ACCEPTANCE OF THE NEW FIRE ALARM SYSTEM, DISCONNECT AND REMOVE THE EXISTING FIRE ALARM EQUIPMENT AND RESTORE DAMAGED SURFACES. PACKAGE OPERATIONAL FIRE ALARM AND DETECTION EQUIPMENT THAT HAS BEEN REMOVED AND DELIVER TO THE OWNER. REMOVE FROM THE SITE AND LEGALLY DISPOSE OF THE REMAINDER OF THE EXISTING MATERIAL.
- PLANS AND SPECIFICATIONS FOR THE SYSTEM SHALL BE APPROVED BY DSA-FIRE AND LIFE SAFETY PRIOR TO SYSTEM INSTALLATION.
- UPON RECEIPT OF THE CERTIFICATE OF COMPLIANCE, THE MANUFACTURER AND OR INSTALLER SHALL SUPPLY THE OWNER WITH WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS-BUILT DRAWINGS, AND EQUIPMENT SPECIFICATIONS.
- THE SYSTEM SHALL CONFORM TO TITLE 19 AND TITLE 24 AS APPLICABLE TO THIS PROJECT.
- ALL THE DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA FIRE ALARM MARSHALL.
- A STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM APPROVED PLANS, SHALL BE APPROVED AND SIGNED BY THE DSA INSPECTOR OF RECORD.
- ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OF RECORD.
- CONDUIT SYSTEM TO BE FURNISHED AND INSTALLED PER PLANS AND SPECIFICATIONS.
- UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE ENFORCING AGENCY. CONTRACTOR TO PROVIDE DECIBEL METER FOR TESTING.
- PENETRATIONS OF FIRE-RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH 1998 EDITION CALIFORNIA BUILDING CODE, CHAPTER 7.
- ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
- ALL WIRING SHALL BE IN ACCORDANCE WITH THE C.E.C. AND AUTHORITIES HAVING JURISDICTION.
- ALL FIRE ALARM CONDUIT SHALL BE 3/4" MIN. U.O.N. ALL FIRE ALLURE CONDUIT INSTALLED UNDERGROUND SHALL BE 1" MIN. U.O.N. ALL FIRE ALARM CONDUCTORS SHALL BE INSTALLED IN AN APPROVED BACKWAY.
- ALL AUDIBLE DEVICES SHALL BE IN SYNCHRONOUS.
- VISUAL DEVICES SHALL NOT EXCEED 3 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THEY SHALL BE IN SYNCHRONOUS.
- UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS.
- AUDIBLE DEVICES SHALL BE AT LEAST 15dBA ABOVE THE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10' OR MORE THAN 110dBA AT MINIMUM HEARING DISTANCE.
- AUDIBLE DEVICES SHALL SOUND THE CALIFORNIA UNIFORM FIRE ALARM SIGNAL (TEMPORAL PATTERN).
- COORDINATE EXACT LOCATION OF ALL CEILING FIRE ALARM DEVICES IN FIELD.
- CIRCUIT LENGTH INDICATED ON DRAWING IS FOR PLAN CHECK PURPOSE ONLY. CONTRACTOR SHALL FIELD VERIFY EXACT LENGTH.
- ALL JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH THE C.E.C.
- ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRED SERVICING, TROUBLE SHOOTING, ETC., AS REQUIRED. COORDINATE WITH ARCHITECT FOR ACCESS PANEL.
- ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- ALL WIRING, ANNUNCIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPLE POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
- CONTRACTOR SHALL PROVIDE DUCT SMOKE DETECTORS, MODULE FOR KITCHEN HOOD ANSUL SYSTEM, AND THEIR FIRE ALARM SYSTEM CONNECTION AS REQUIRED AND IN COMPLIANCE WITH C.E.C AND DSA REQUIREMENTS.
- FIELD VERIFY AND COORDINATE FURNITURE LAYOUT OF ALL ROOMS PRIOR TO INSTALLATION OF FIRE ALARM DEVICES. VISUAL DEVICES SHALL BE LOCATED SO THAT FURNITURE WILL NOT BLOCK VISUAL PATH.
- WATER-FLOW AND VALVE SUPERVISORY SWITCHES: CONNECT FOR EACH SPRINKLER VALVE REQUIRED TO BE SUPERVISED.
- FIRE ALARM SYSTEM INSTALLER SHALL BE NICET LEVEL 2 CERTIFIED.
- FIRE ALARM SYSTEM INSTALLATION COMPANY SHALL BE UL LISTED (UJUS).
- THE FIRE ALARM EVACUATION SIGNAL SHALL BE THE STANDARD THREE-PULSE TEMPORAL PATTERN PER THE "EXCEPTION" OF 1998 CALIFORNIA BUILDING CODE SECTION 3505.1 SUBSECTION 1-5.4.7.1. EXCEPTION: WHEN A FIRE ALARM SYSTEM HAVING A DISTINCTIVE TONE, AND WHICH IS USED FOR NO MATTER SOUNDING SUCH ALARM SHALL NOT BE SUBJECT TO THE PROVISIONS OF CODE SECTIONS 32002, 32003, AND 32004.
- WHERE HUMIDITY IS NORMALLY HIGH, SUCH AS LOCKER ROOMS, SHOWER ROOMS, ETC., PROVIDE GASKET KIT INTENDED FOR SUCH USAGE ON ALL FIRE ALARM DEVICES; COORDINATE WITH MANUFACTURER.
- ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.

COMPLETE PLAN SUBMITTAL
PER DSA POLICY #95-03(FLS)

KEY PLAN



Consultant's Seal



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IRVINE, CA 92604-2239
IRVINE UNIFIED SCHOOL DISTRICT

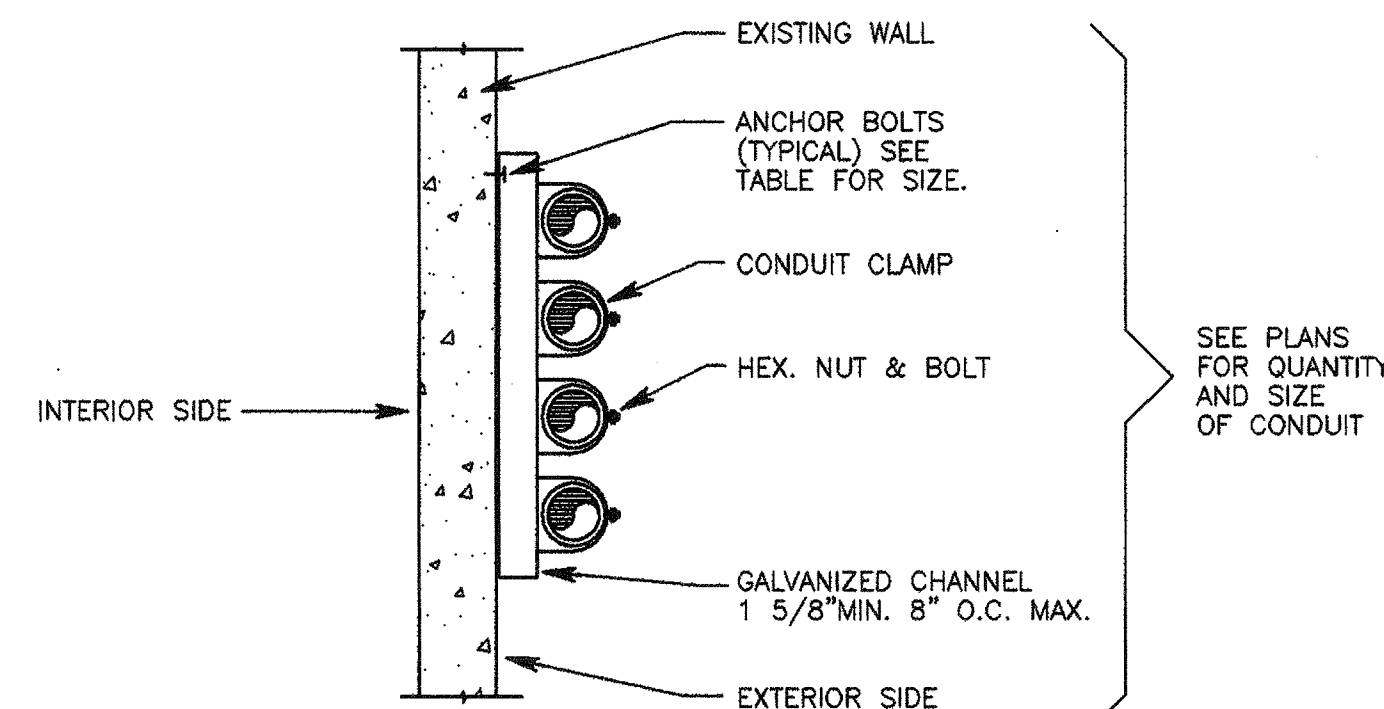
No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	06/06/01

Drawing Title
FIRE ALARM SCHEDULES

Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale NONE
	Reviewed	Drawing No
	Date	E-0.2

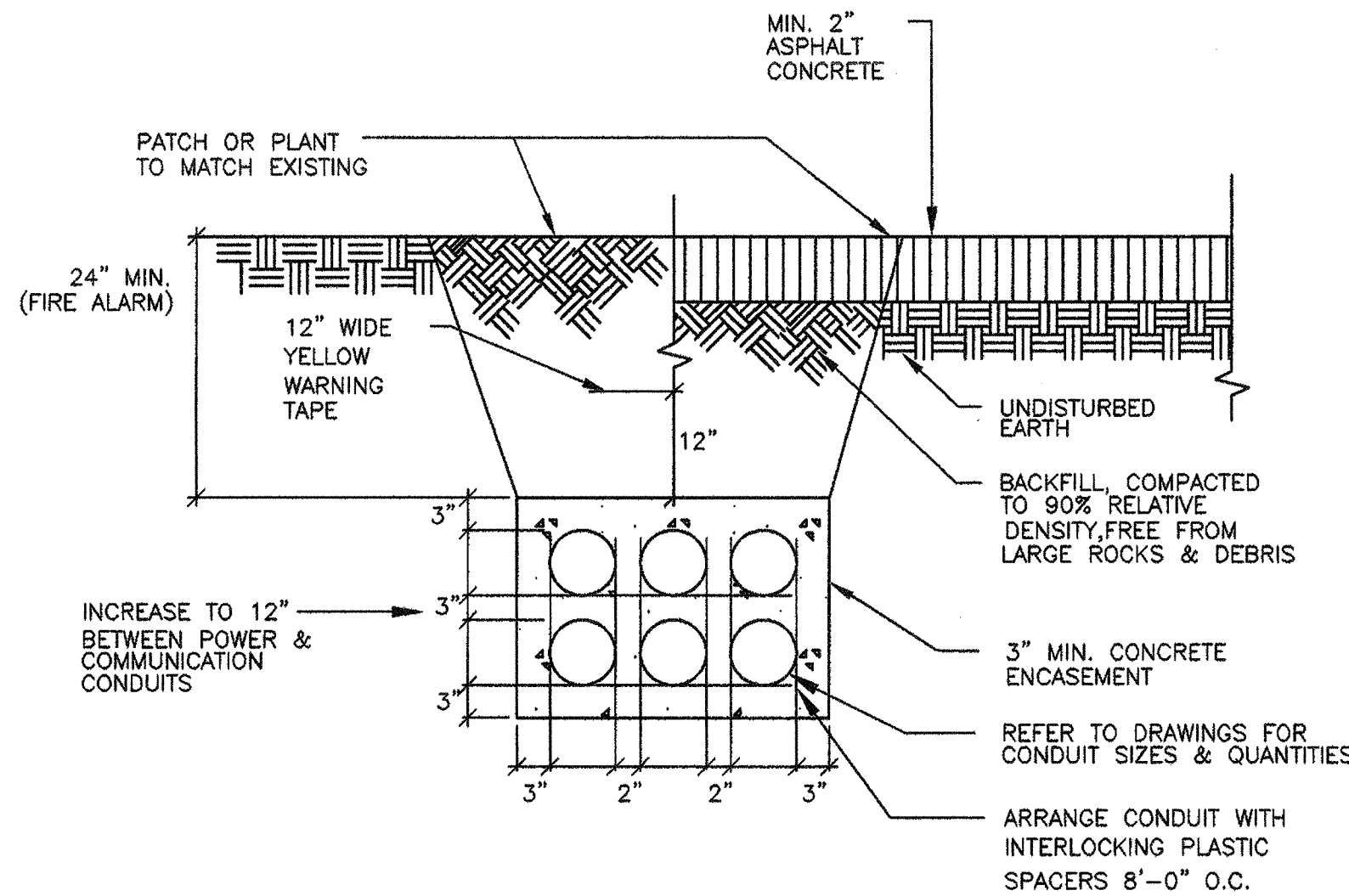
04/23/01 of

CONDUIT TRADE SIZE	SIZE & EMBEDMENT ON ANCHOR BOLTS
1/2" - 2 1/2"	1/4" x 1 3/8"
3" - 4"	5/16" x 1 1/2"

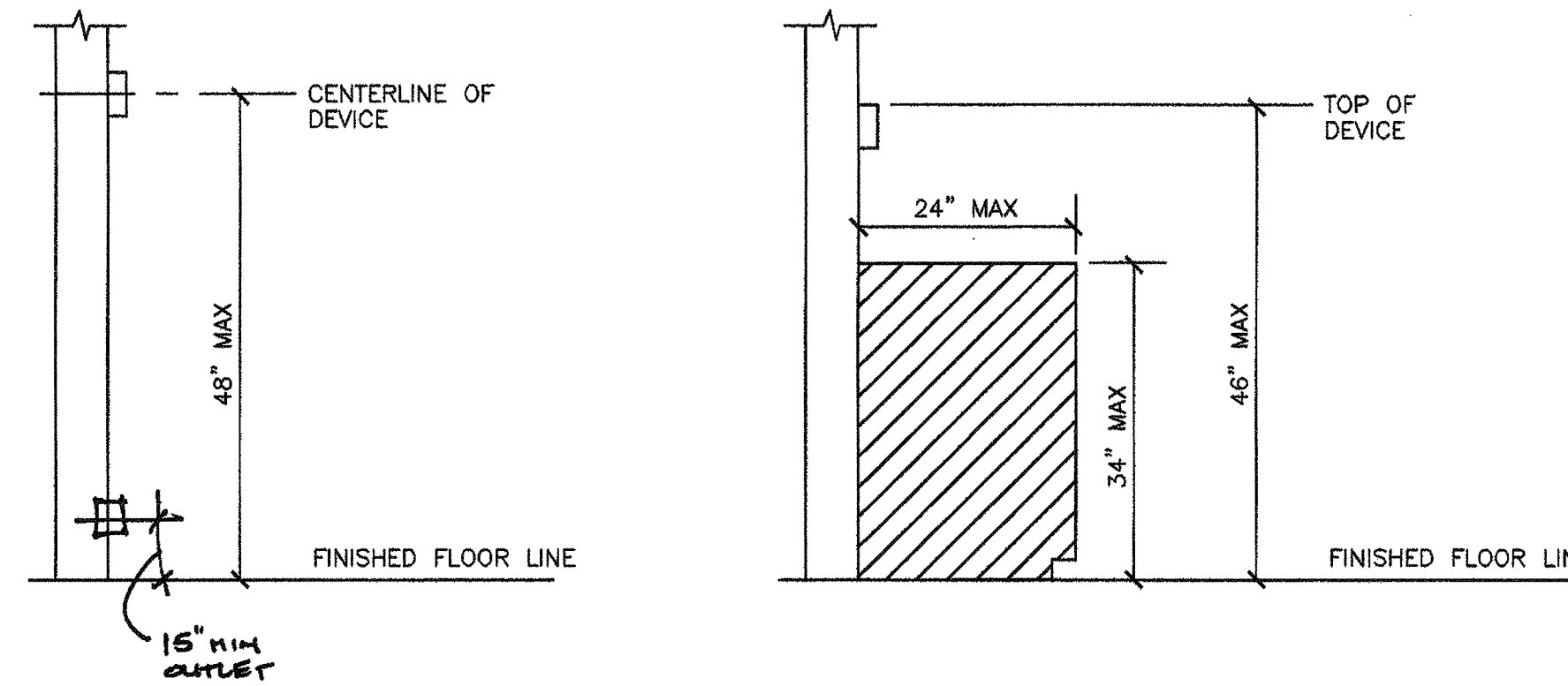


NOTE:
 1. PAINT TO MATCH EXISTING WALL COLOR AND FINISH.

CONDUIT WALL MOUNTED ARRANGEMENT DETAIL L6

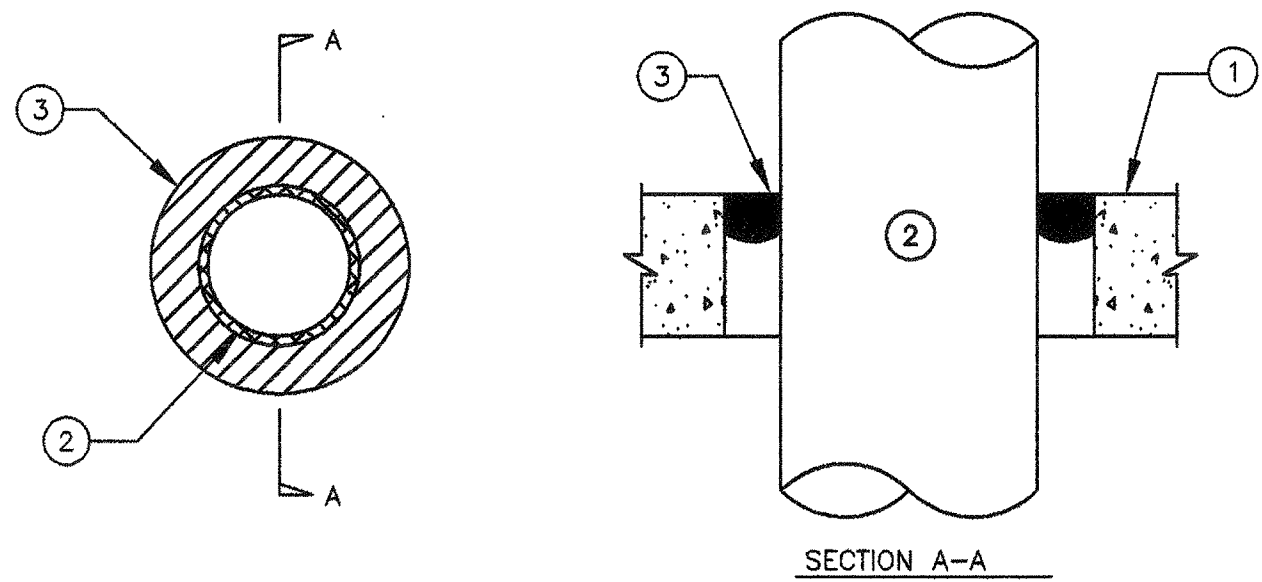


UNDERGROUND MULTI-CONDUIT PLACEMENT DETAIL L12



MOUNTING HEIGHT OVER OBSTRUCTION L17

- KEY NOTES:**
- CONCRETE FLOOR OR WALL PER ARCHITECTURAL/STRUCTURAL DRAWINGS. MAX. DIA. OF THROUGH OPENING IS 12 1/4"
 - CONDUIT SIZE PER DRAWINGS.
 - FIRE STOP SYSTEM—TWO HOUR MOLDABLE PUTTY MATERIAL, KNEADED BY HAND AND PACKED TIGHTLY INTO ANNULAR SPACE, FLUSH WITH FLOOR IN WALL ASSEMBLIES, REQUIRED PUTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL.

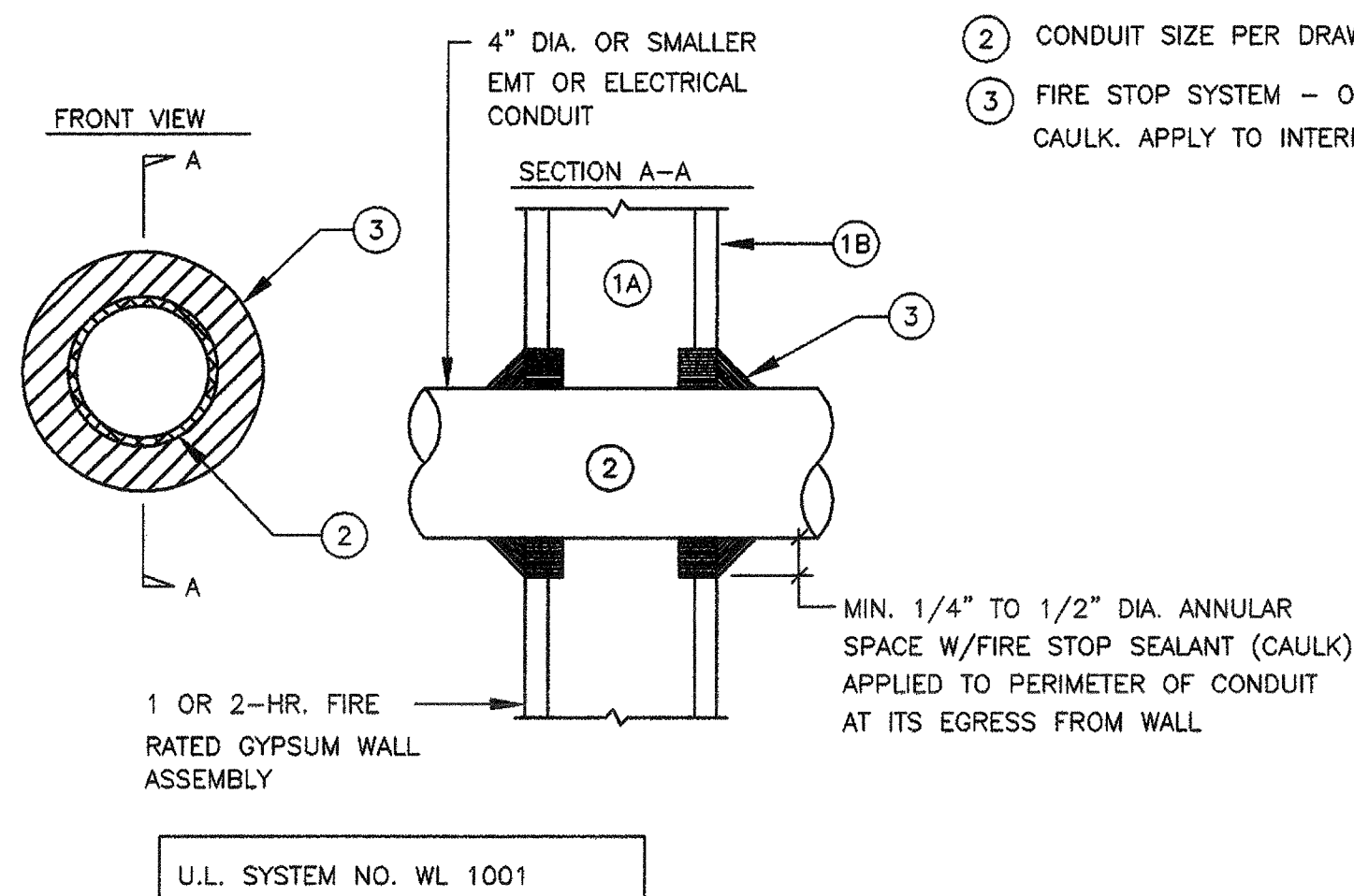


NOTE: MAX. DIA. OF OPENING IS 12 1/4". MINIMUM FILL MATERIAL THICKNESS OF 1/2" IS REQUIRED.

U.L. SYSTEM NO. CAJ1027

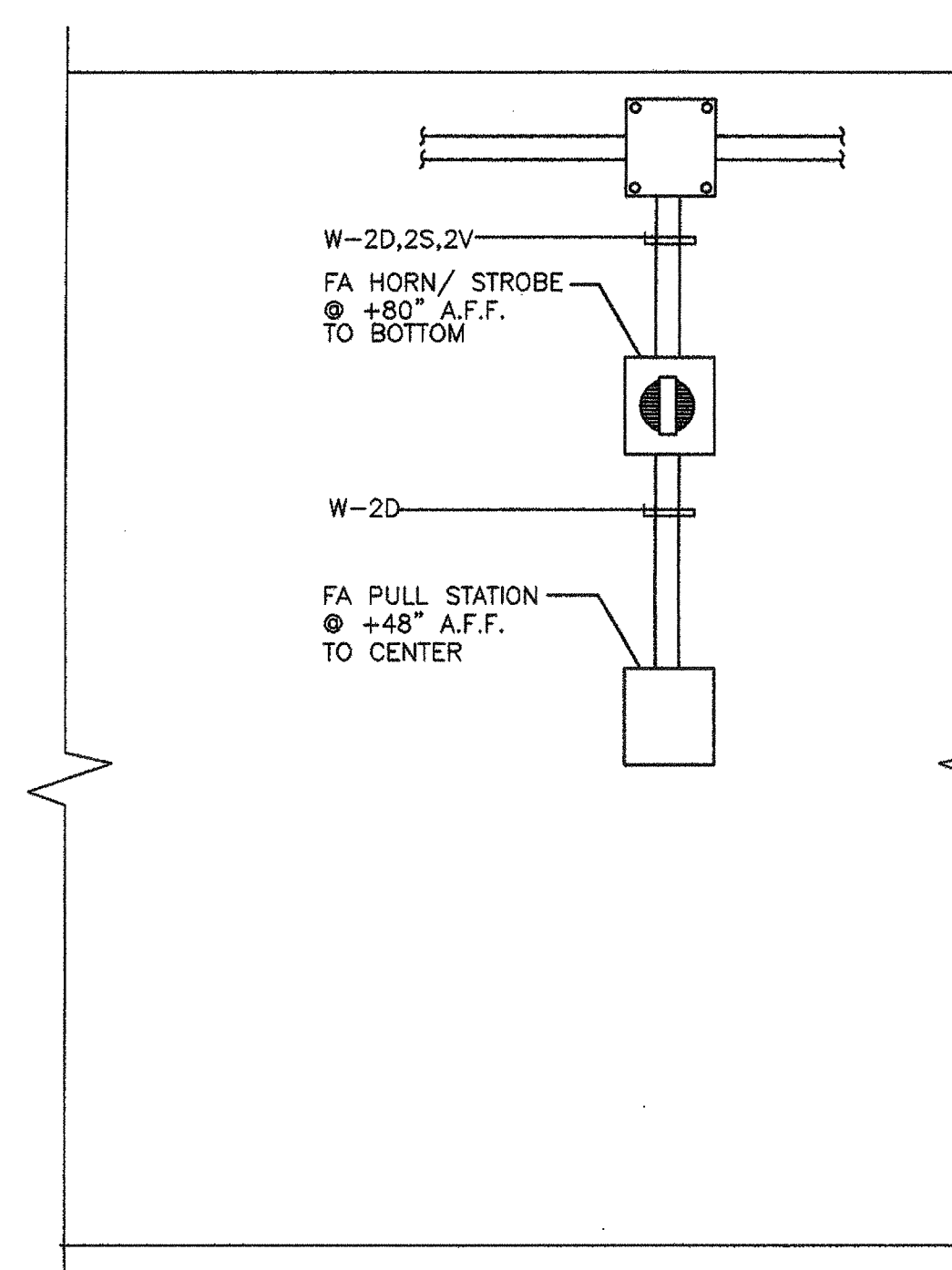
CONDUIT PENETRATION THRU 2-HOUR CONCRETE FLOOR/WALL DETAIL F6

- KEY NOTES:**
- WALL CONSTRUCTION:
 - STEEL STUDS PER ARCHITECTURAL/STRUCTURAL
 - 5/8" TYPE X GYPSUM BOARD PER ARCHITECTURAL
 - CONDUIT SIZE PER DRAWINGS
 - FIRE STOP SYSTEM - ONE HOUR CAULK. APPLY TO INTERFACE WITH WALL SURFACE



NOTE: MAX. DIA. OF OPENING IS 13 1/2". ANNULAR SPACE OF MIN. 1/4" DIA. BEAD IS REQUIRED.

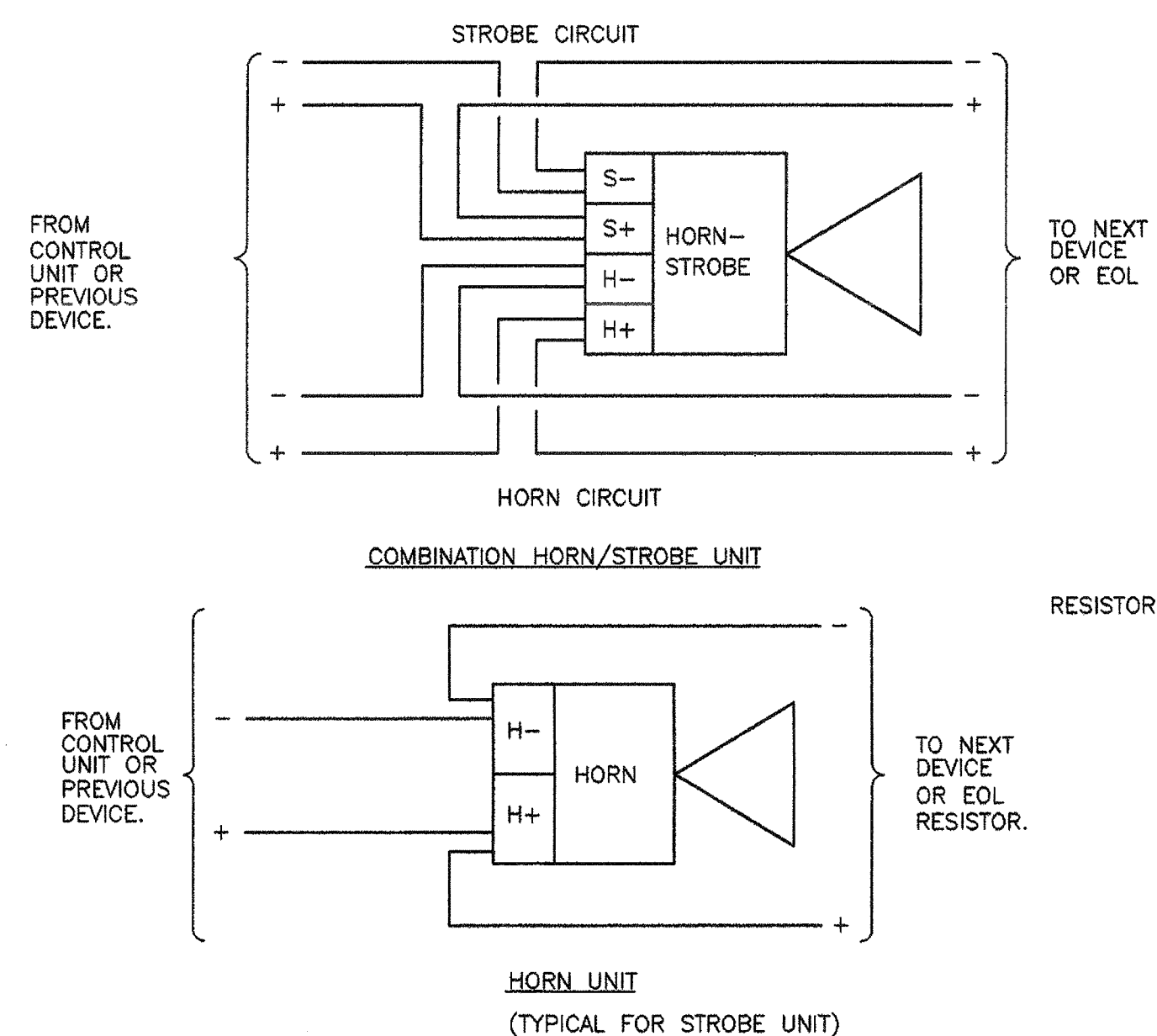
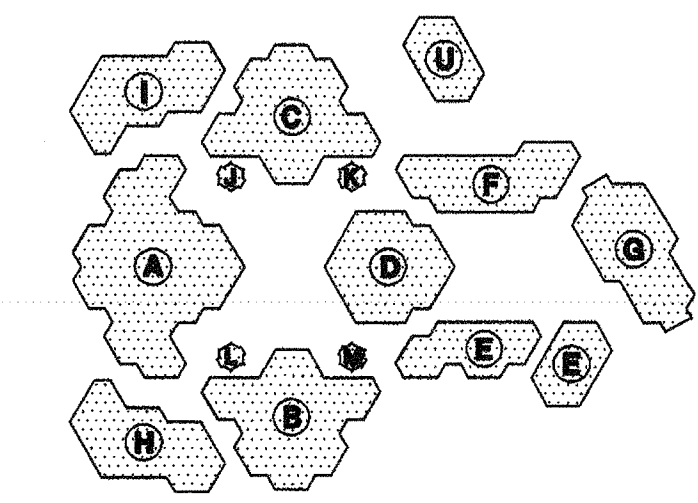
CONDUIT PENETRATION THRU 1-HOUR FIRE/SMOKE WALL DETAIL F12



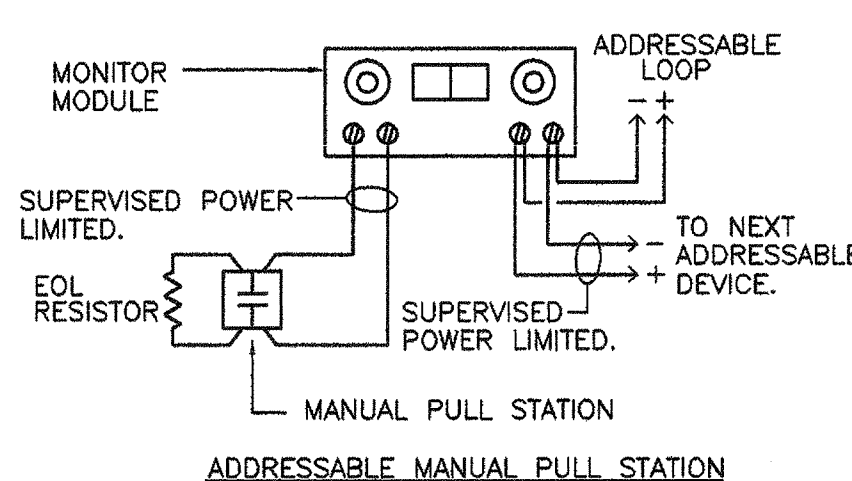
FA HORN/STROBE AND PULL STATION MOUNTING ON EXISTING WALL F17

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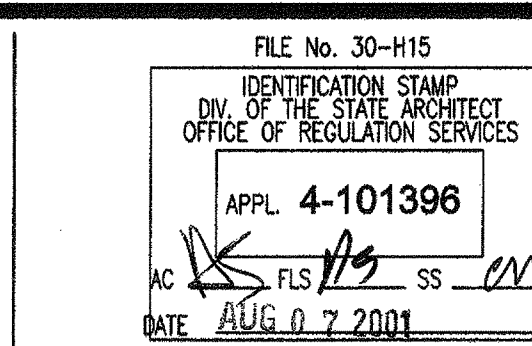
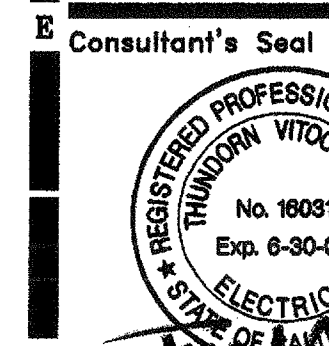
KEY PLAN



TYPICAL HORN/STROBE WIRING DIAGRAM A6



TYPICAL PULL STATION WIRING DIAGRAM A12



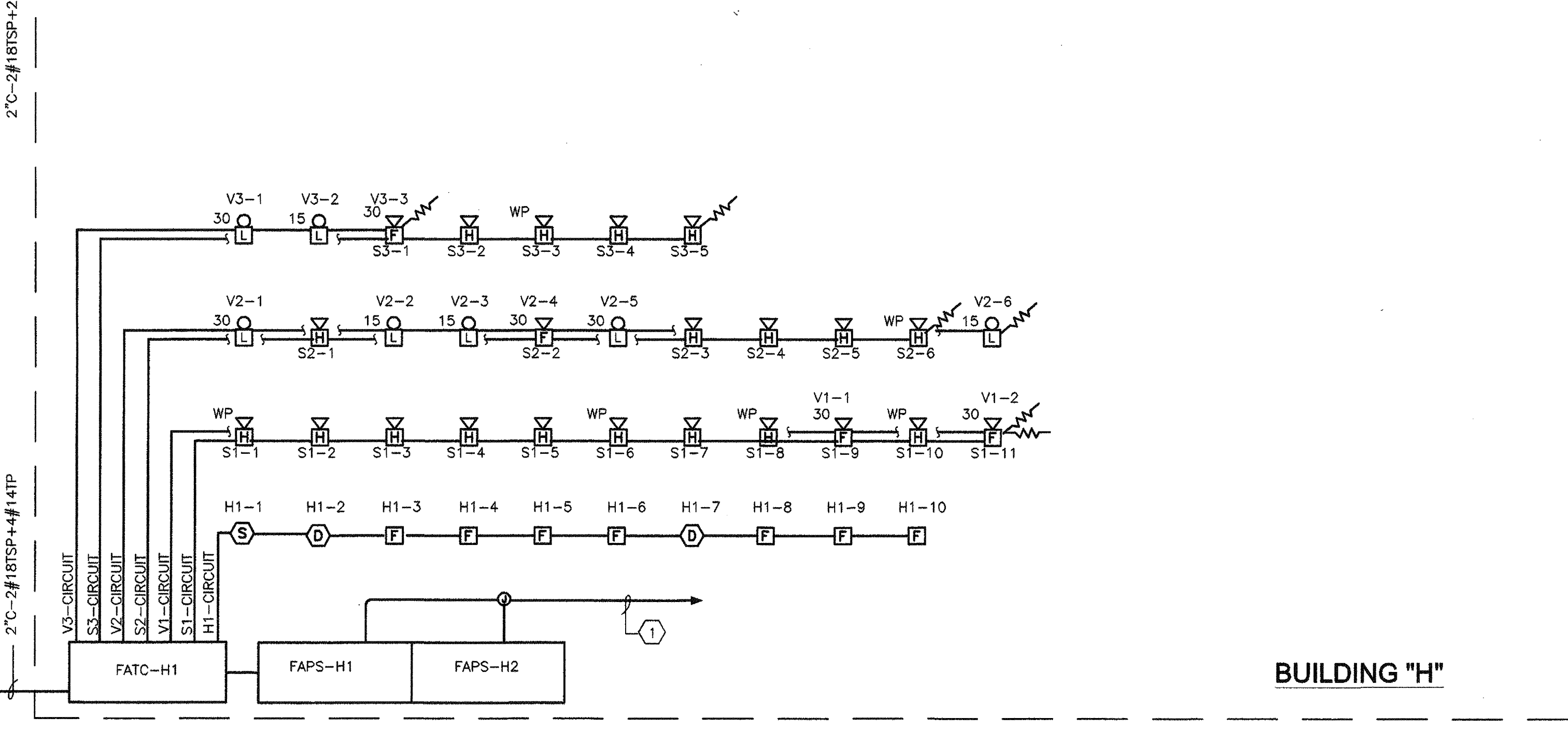
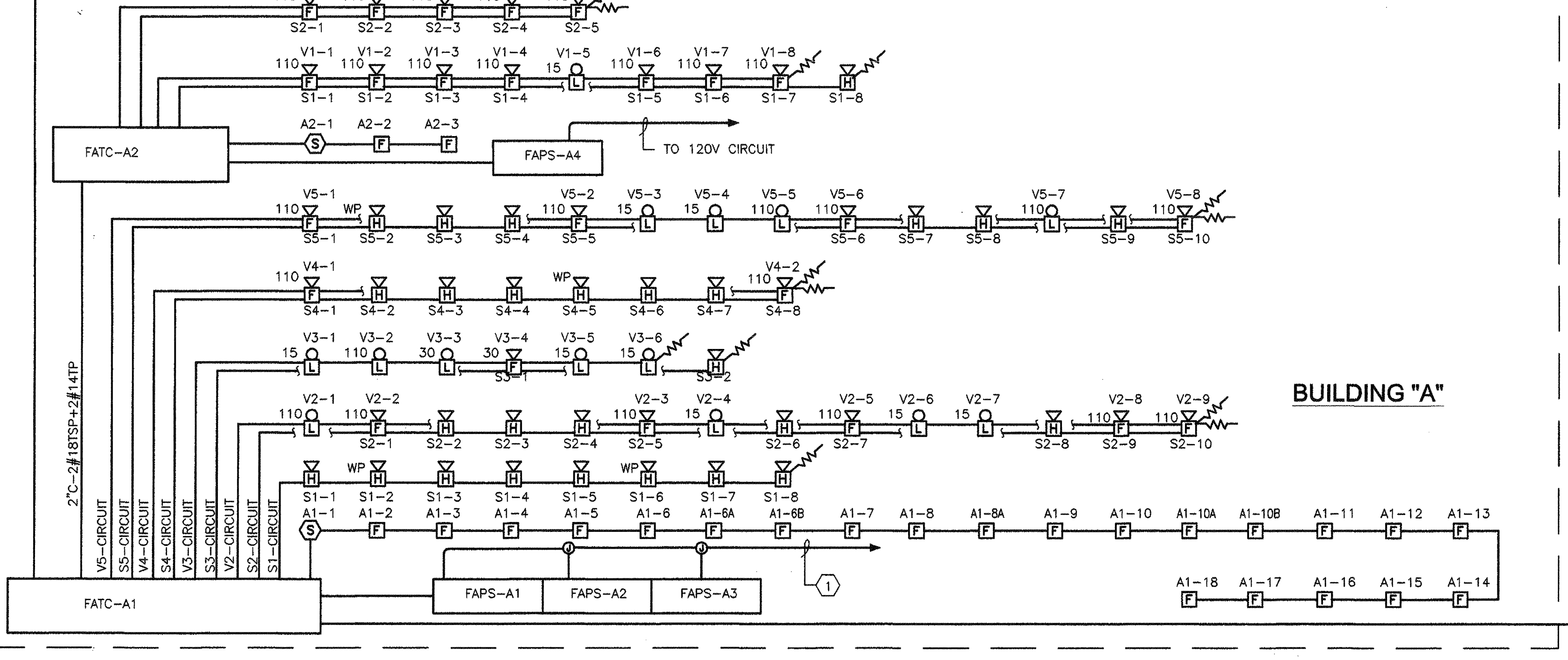
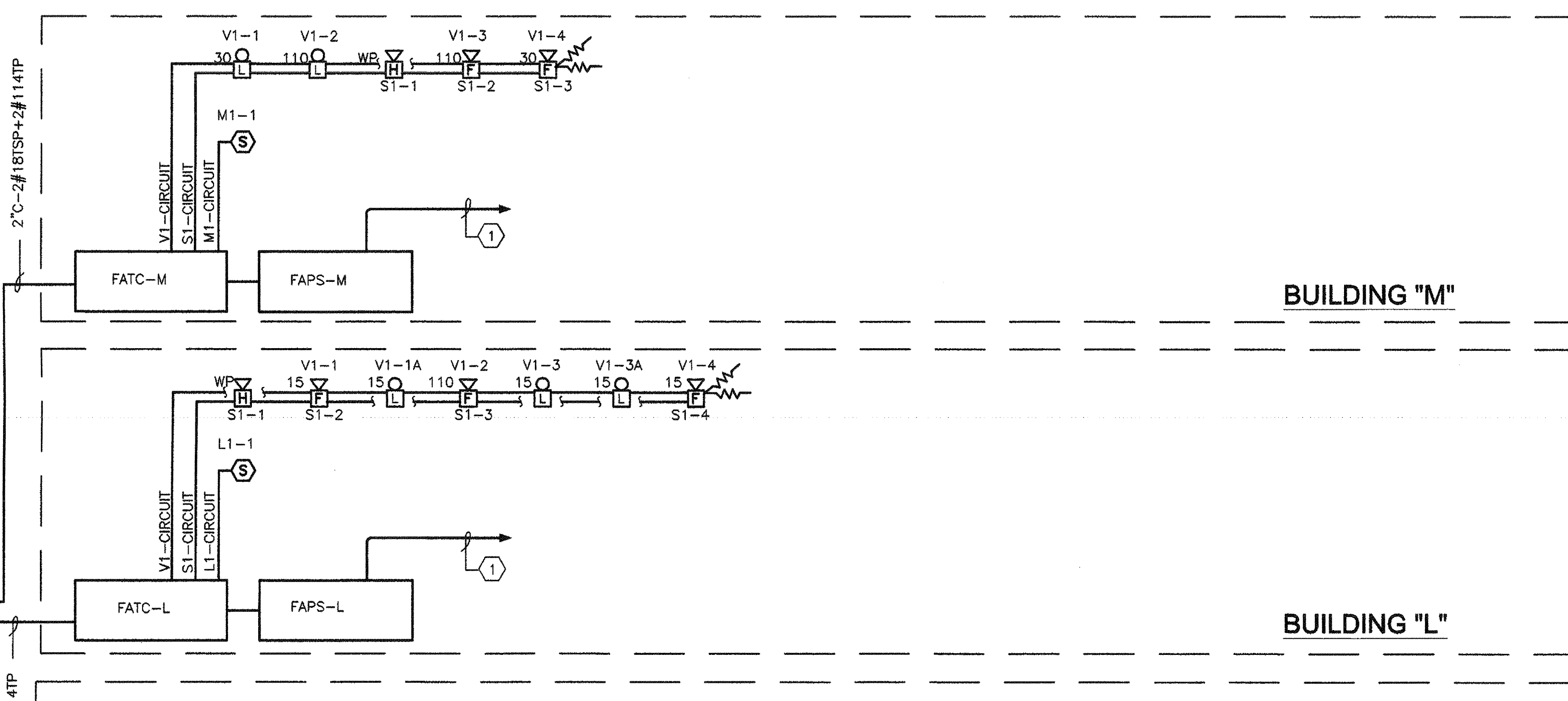
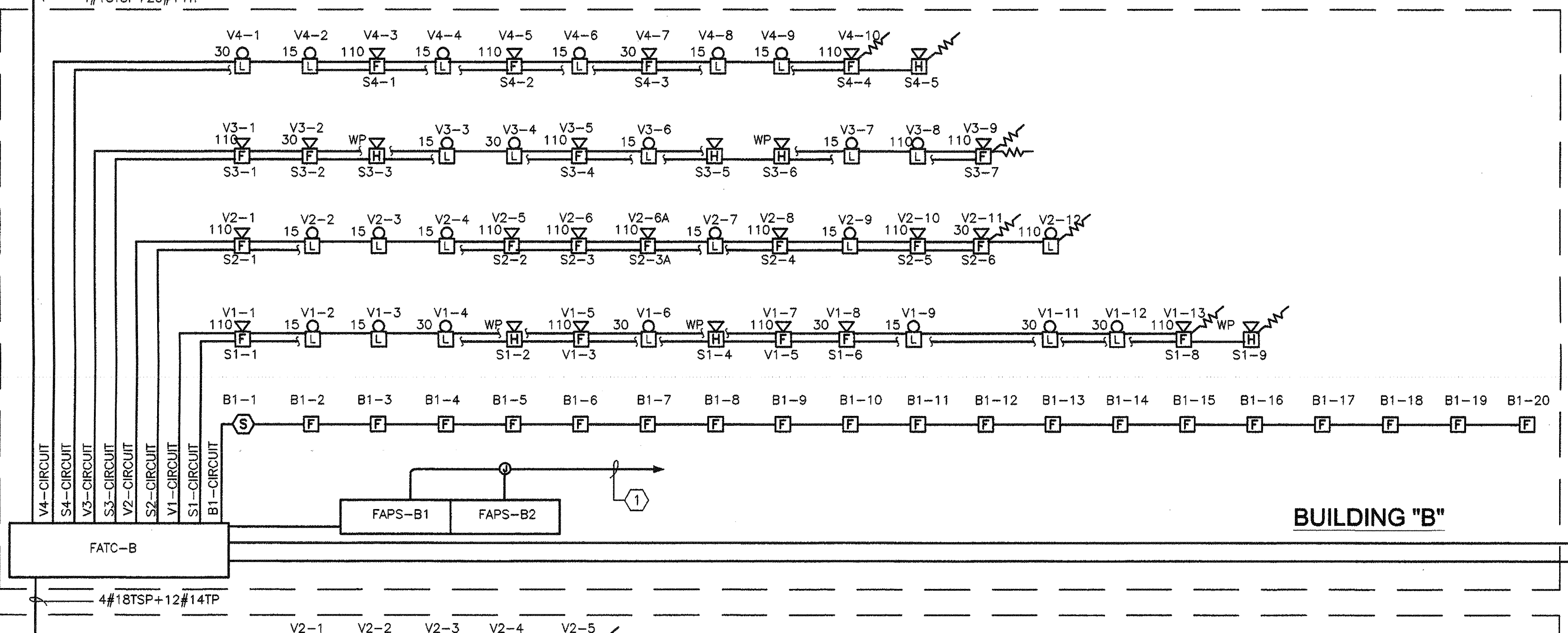
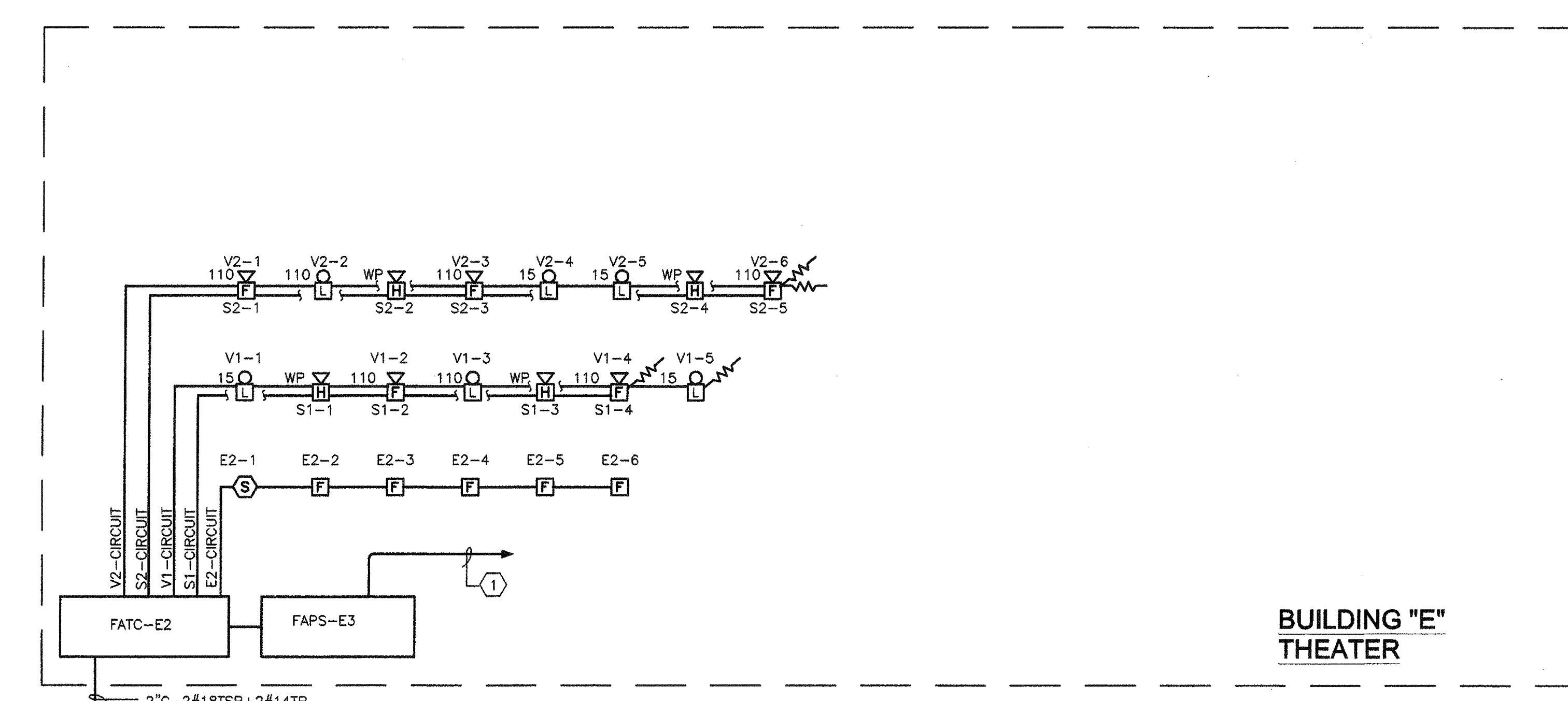
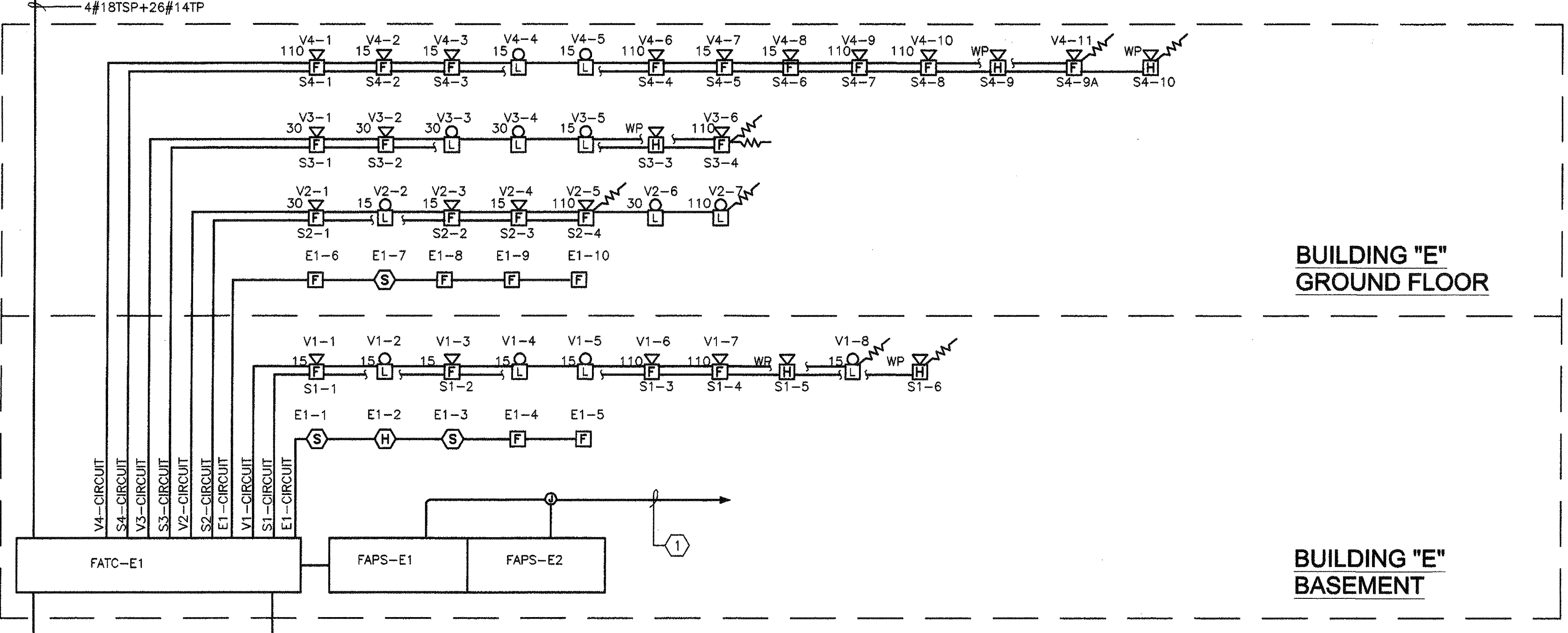
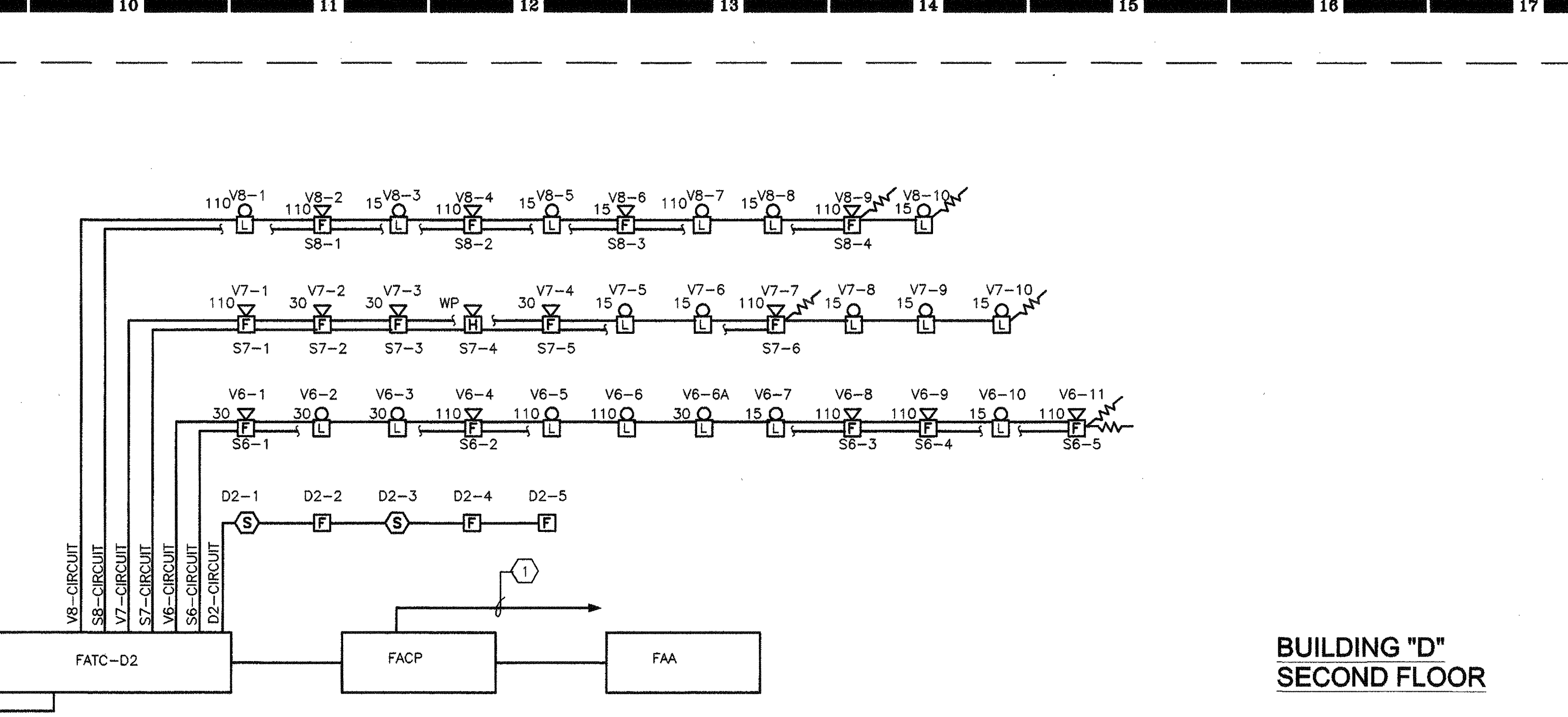
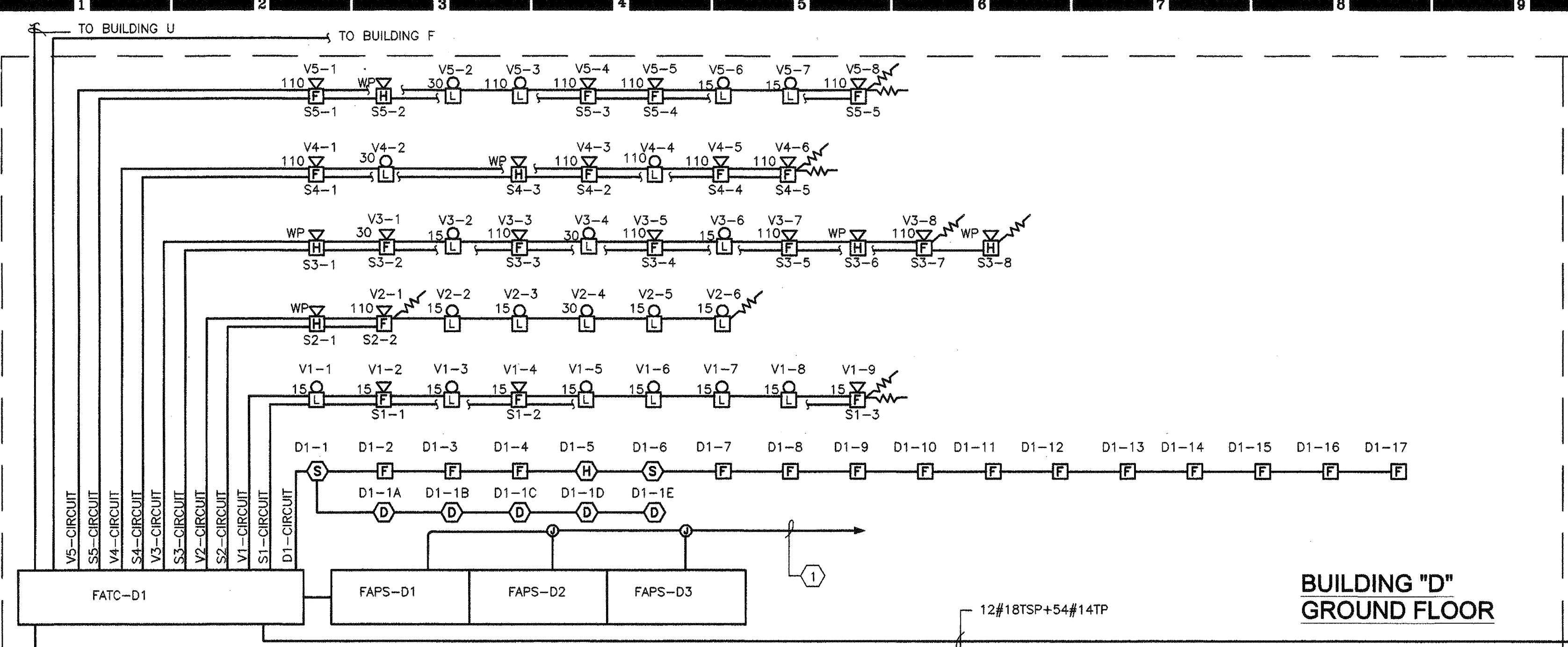
IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	06/06/01

DETAILS	
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Drawn	Scale
Checked TV	Drawn No.
Reviewed	Drawing No. E-0.3
Date 04/23/01	of

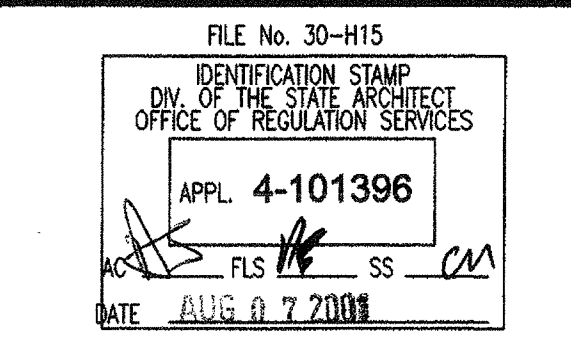
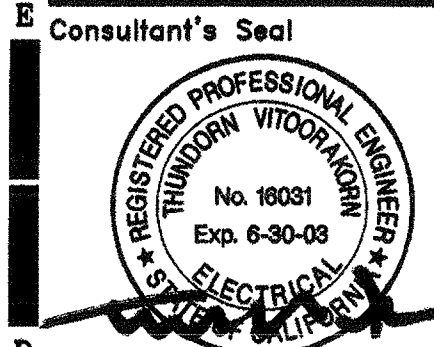
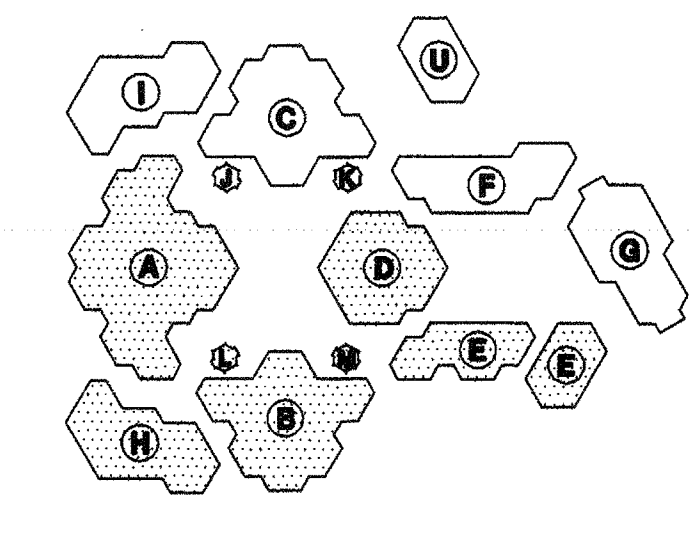
SPECIFIC NOTES

- ① TO NEAREST PANEL WITH AVAILABLE 120V CIRCUIT (SPACE). PROVIDE 20A, 1P CIRCUIT BREAKER WITH 'LOCK-ON' DEVICE. IN AVAILABLE SPACE IN PANELBOARD.



COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN



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 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	06/06/01

Drawing Title
FIRE ALARM RISER DIAGRAM

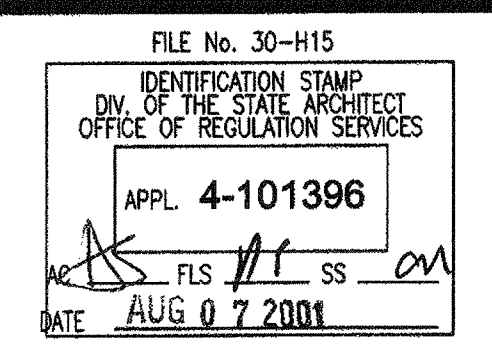
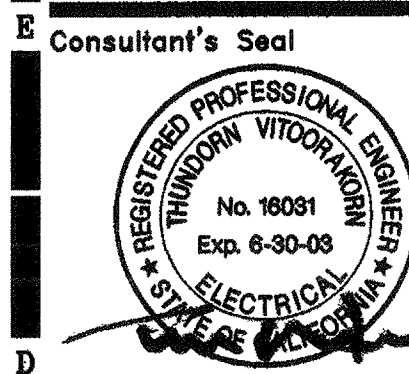
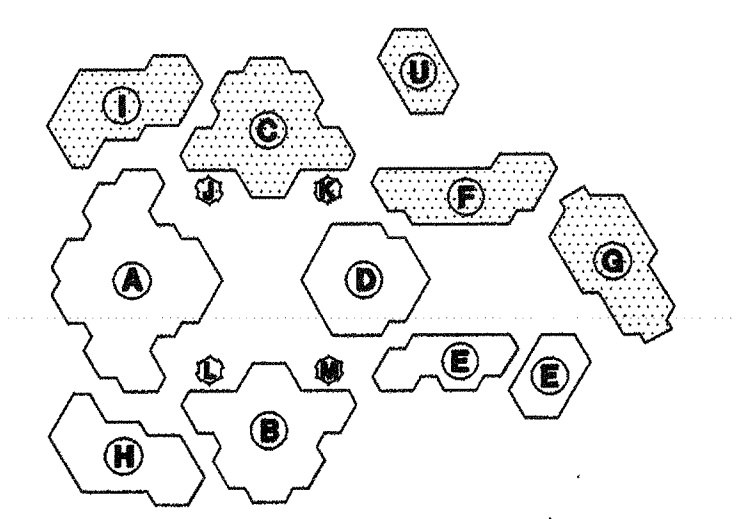
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	Drawn	Scale
	Checked	Drawing No
	Reviewed	E-0.4
	Date	04/23/01

SPECIFIC NOTES

- ① TO NEAREST PANEL WITH AVAILABLE 120V CIRCUIT (SPACE). PROVIDE 20A, 1P CIRCUIT BREAKER WITH 'LOCK-ON' DEVICE, IN AVAILABLE SPACE IN PANELBOARD.

COMPLETE PLAN SUBMITTAL PER DSA POLICY #95-03(FLS)

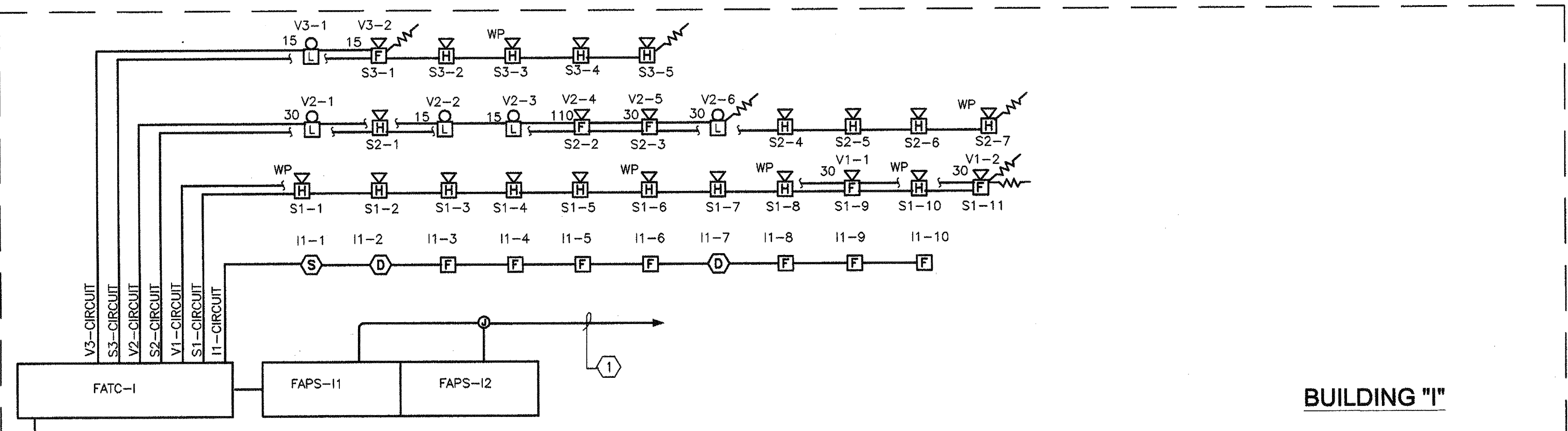
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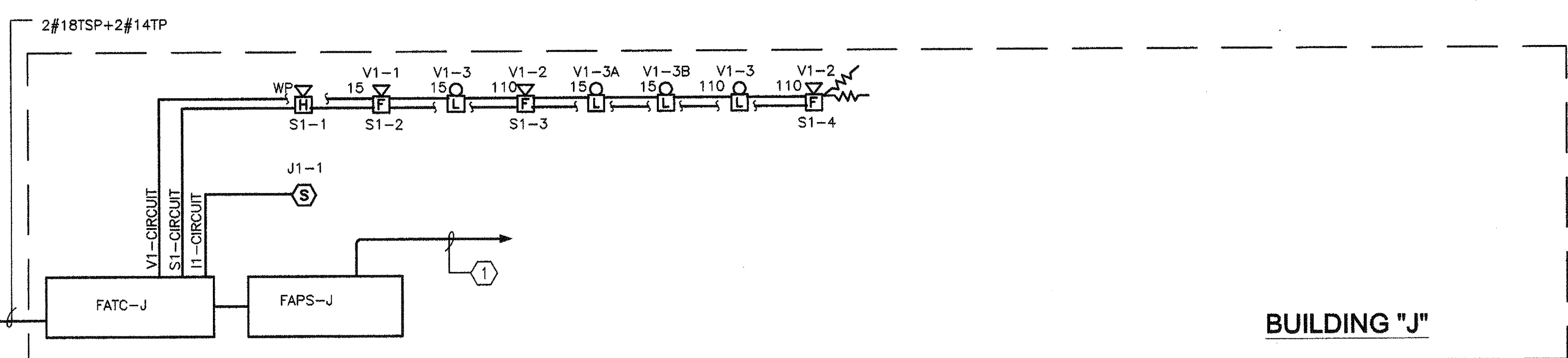
REVISED
IRVINE HIGH SCHOOL MODERNIZATION
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 IRVINE, CA 92604-2239
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No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/08/01

Drawing Title		Project No.	
FIRE ALARM RISER DIAGRAM		3184004	
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		Drawn	
		Checked	Drawing No.
		TV	E-0.5
		Reviewed	
		Date	04/23/01



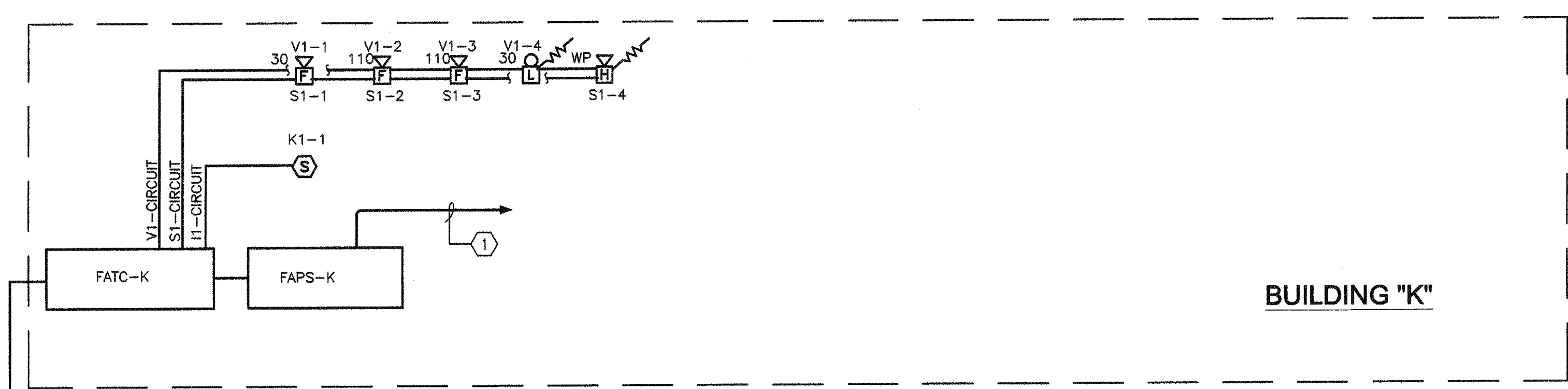
BUILDING "I"



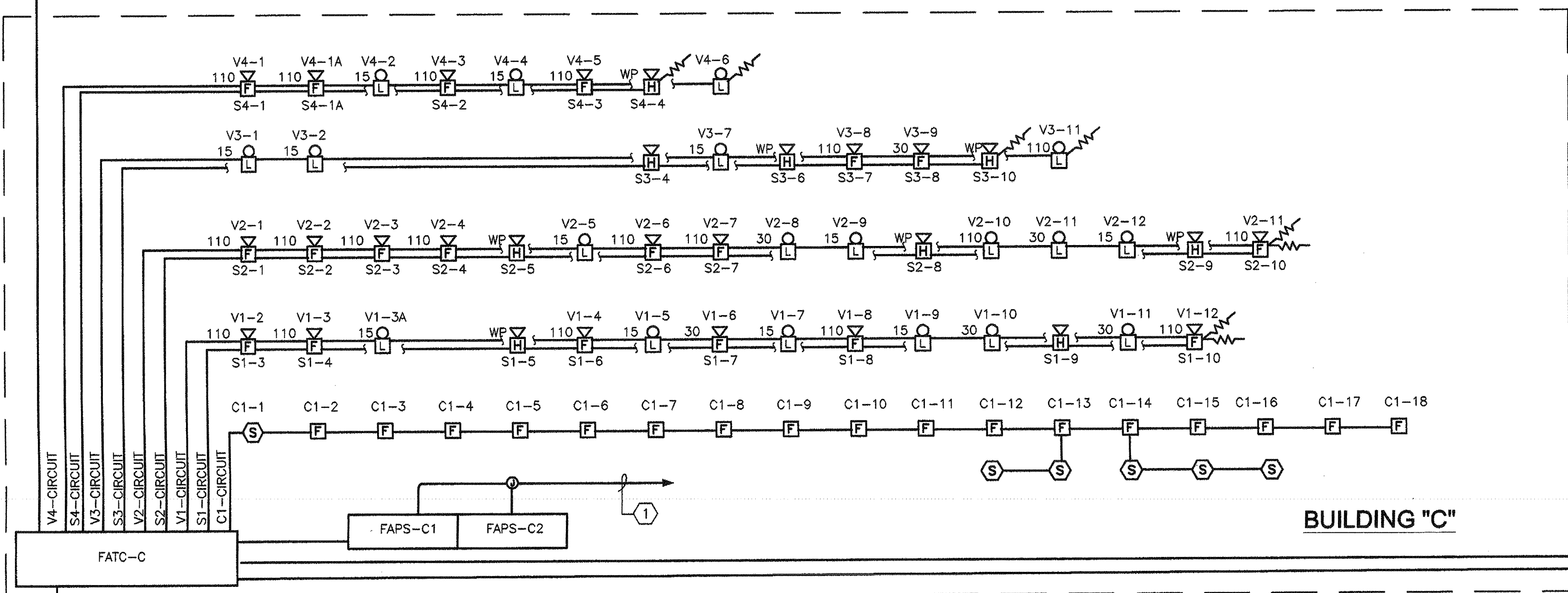
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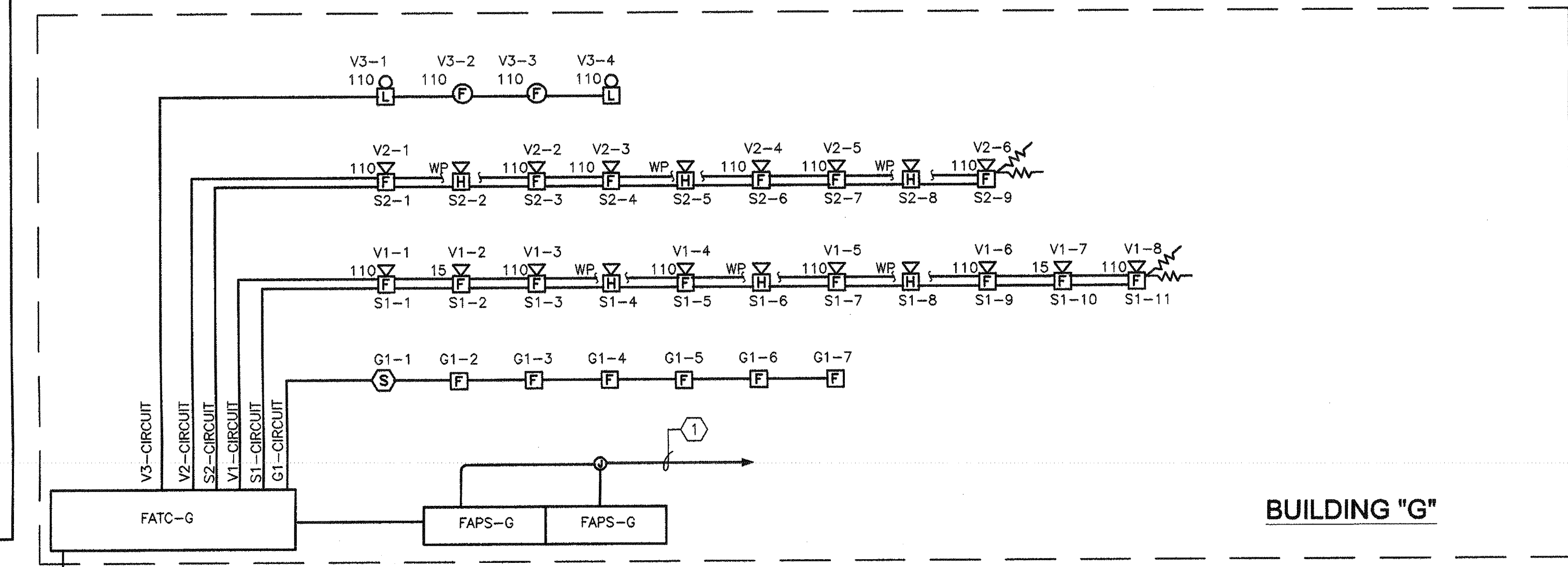
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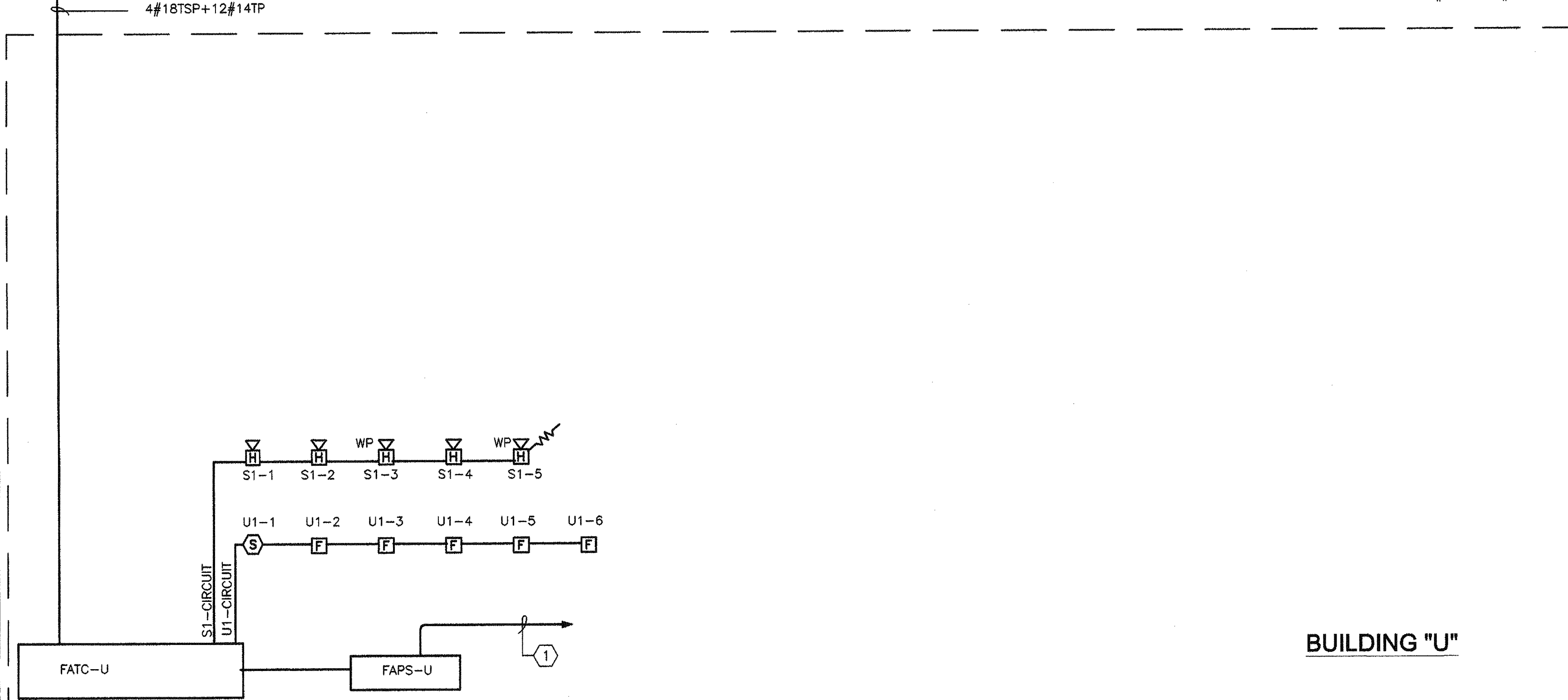
BUILDING "K"



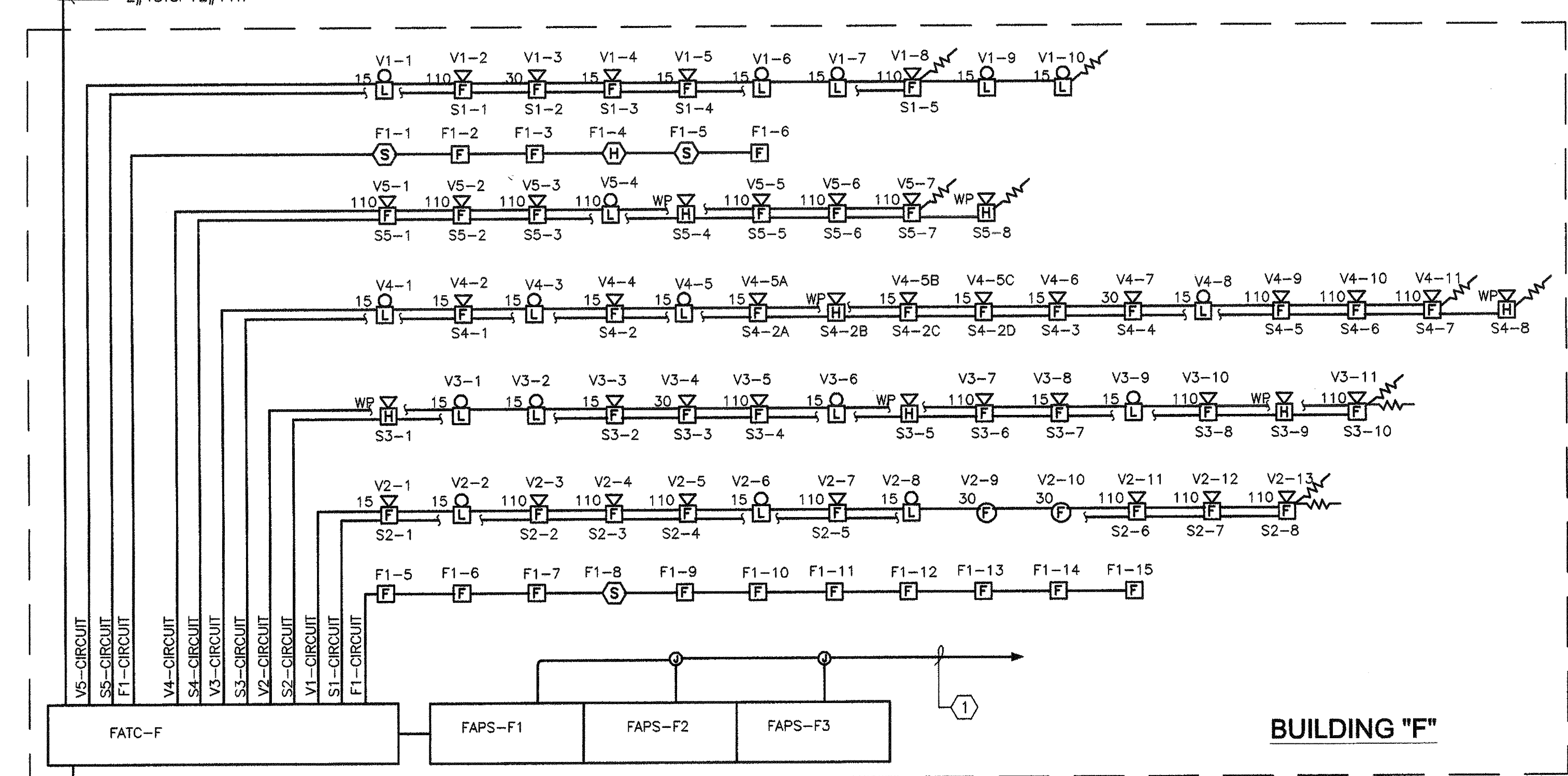
BUILDING "C"



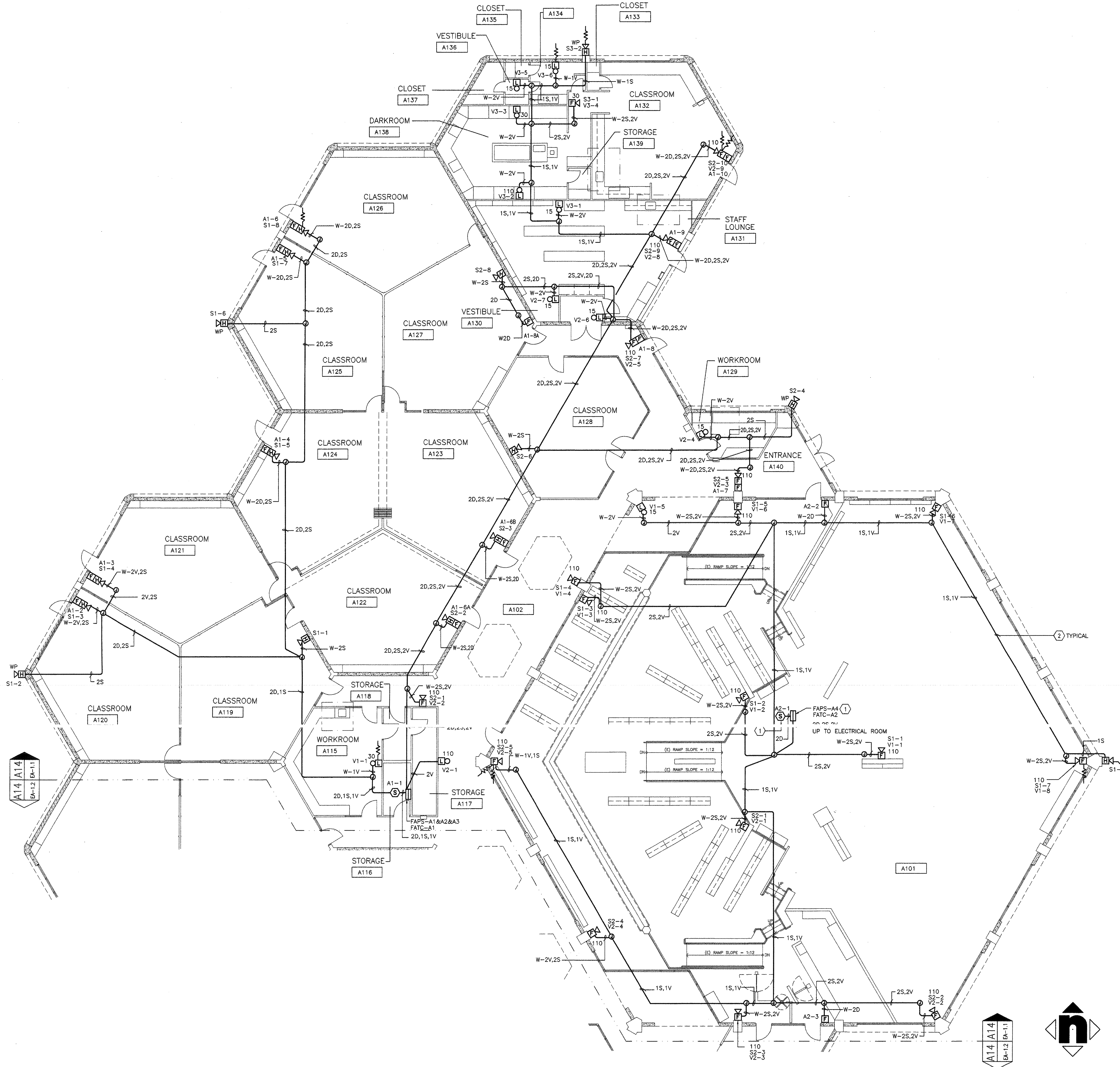
BUILDING "G"



BUILDING "U"



BUILDING "F"



BUILDING A FIRE ALARM PLAN - SEGMENT A A14
1/8"=1'-0"

VOLTAGE DROP CALCULATION

(HORN CIRCUITS)

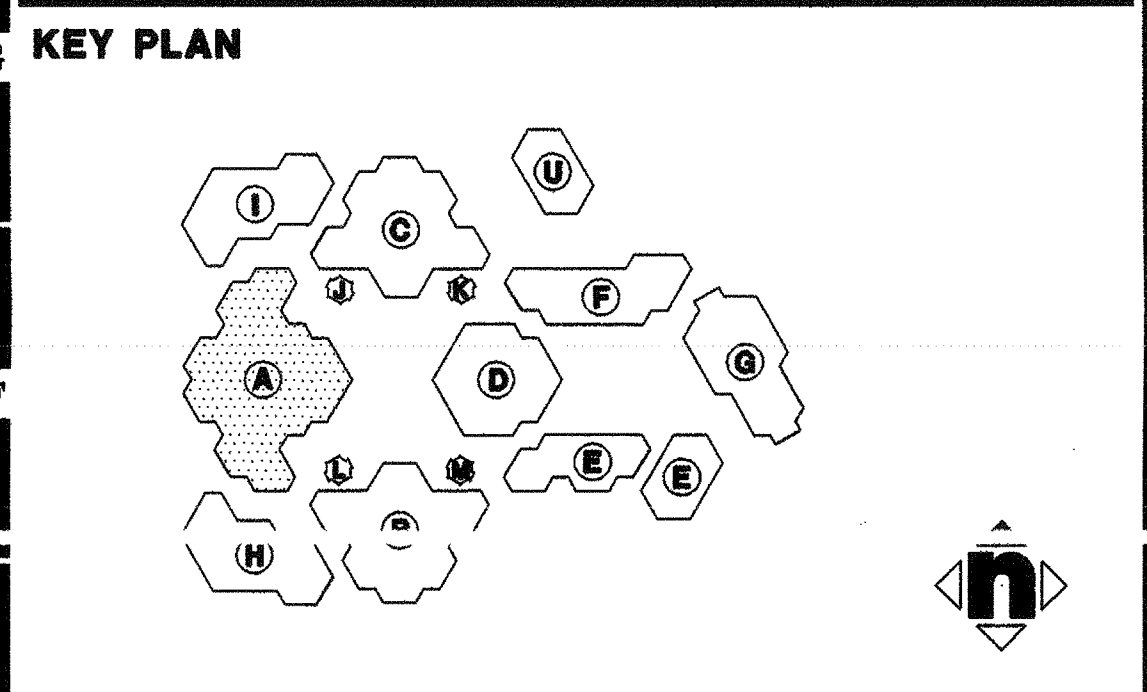
CIRCUIT #S1 (FAPS-A1)			
CIRCUIT LENGTH (#12AWG)	=	300'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	2	= 0.080
INDOOR HORNS 0.040 (EA)	X	5	= 0.200
TOTAL CIRCUIT LOAD			= 0.280
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 0.86\%$			
CIRCUIT #S2 (FAPS-A1)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.040 (EA)	X	10	= 0.400
TOTAL CIRCUIT LOAD			= 0.400
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 1.93\%$			
CIRCUIT #S3 (FAPS-A2)			
CIRCUIT LENGTH (#12AWG)	=	300'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.040 (EA)	X	2	= 0.080
TOTAL CIRCUIT LOAD			= 0.080
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 0.33\%$			
CIRCUIT #S4 (FAPS-A2)			
CIRCUIT LENGTH (#12AWG)	=	370'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	1	= 0.040
INDOOR HORNS 0.040 (EA)	X	7	= 0.280
TOTAL CIRCUIT LOAD			= 0.320
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 1.63\%$			
CIRCUIT #S5 (FAPS-A3)			
CIRCUIT LENGTH (#12AWG)	=	470'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	1	= 0.040
INDOOR HORNS 0.040 (EA)	X	9	= 0.360
TOTAL CIRCUIT LOAD			= 0.400
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 2.59\%$			
CIRCUIT #S1 (FAPS-A4)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.040 (EA)	X	8	= 0.320
TOTAL CIRCUIT LOAD			= 0.320
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 1.54\%$			
CIRCUIT #S2 (FAPS-A4)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.040 (EA)	X	5	= 0.200
TOTAL CIRCUIT LOAD			= 0.200
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 0.96\%$			

HMC GROUP
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Fax: 909-483-1400

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- SPECIFIC NOTES**
- LOCATE IN ELECTRICAL ROOM ABOVE LIBRARY.
 - RUN CONDUIT BEHIND EXTENDED WALL ABOVE WINDOW (MATCH EXISTING CONDUIT ROUTING).

COMPLETE PLAN SUBMITTAL
PER DSA POLICY #95-03(FLS)



Consultant's Seal

FILE NO. 30-H15
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 4-101396
DATE AUG 07 2001

IRVINE HIGH SCHOOL MODERNIZATION
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IRVINE, CA 92604-2239
IRVINE UNIFIED SCHOOL DISTRICT

HMC GROUP 1999

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/08/01

Drawing Title
BUILDING A FIRE ALARM PLAN - SEGMENT A

Architect's Seal

DESIGNED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
REVIEWED BY: [Signature]
DATE: 04/23/01

Project No: 3184004
Scale: 1/8"=1'-0"
Drawing No: EA-1.1

VOLTAGE DROP CALCULATION

(STROBE CIRCUITS)

CIRCUIT #V2 (FAPS-A1)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	3	= 0.285
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	0	= 0.000
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	6	= 1.320
TOTAL CIRCUIT LOAD			= 1.605
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 7.74\%$			
CIRCUIT #V3 (FAPS-A2)			
CIRCUIT LENGTH (#12AWG)	=	300'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	3	= 0.285
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	2	= 0.250
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	1	= 0.755
TOTAL CIRCUIT LOAD			= 1.290
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 3.12\%$			

BATTERY CALCULATION

FAPS-A4 #4009 (BUILDING A)					
QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT		TOTAL
	EACH UNIT	TOTAL	EACH UNIT	TOTAL	
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	0	0.000	0.040	0.040	0.040
INDOOR HORNS	1	0.000	0.040	0.040	0.040
STROBE, 15CD	1	0.000	0.095	0.095	0.095
STROBE, 30CD	0	0.000	0.125	0.000	0.000
STROBE, 110CD	0	0.000	0.220	0.000	0.000
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	0	0.000	0.141	0.000	0.000
COMBINATION STROBE/HORN, 110CD	12	0.000	0.236	2.832	2.832
TOTAL LOAD					3.070
STAND-BY					ALARM
TOTAL LOAD					3.070
OPERATING HOUR					24
TOTAL AH					0.083
STAND-BY					1.608
ALARM					0.256
TOTAL AH					1.864

SUPPLY 10AH BATTERY @ 24VDC

VOLTAGE DROP CALCULATION

(STROBE CIRCUITS)

CIRCUIT #4 (FAPS-A2)
 CIRCUIT LENGTH (#12AWG) = 370'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 0 = 0.000
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 2 = 0.440
 TOTAL CIRCUIT LOAD = 0.440

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 2.24 \%$

CIRCUIT #5 (FAPS-A3)
 CIRCUIT LENGTH (#12AWG) = 470'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 2 = 0.190
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 6 = 1.320
 TOTAL CIRCUIT LOAD = 1.510

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 9.79 \%$

CIRCUIT #1 (FAPS-A4)
 CIRCUIT LENGTH (#12AWG) = 350'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 1 = 0.095
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 7 = 1.540
 TOTAL CIRCUIT LOAD = 1.635

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 7.89 \%$

CIRCUIT #2 (FAPS-A4)
 CIRCUIT LENGTH (#12AWG) = 350'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 0 = 0.000
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 5 = 1.100
 TOTAL CIRCUIT LOAD = 1.100

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE} = 5.30 \%$

BATTERY CALCULATION

FAPS-A1 #4009 (BUILDING A)					
QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT		TOTAL
	EACH UNIT	TOTAL	EACH UNIT	TOTAL	
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	2	0.000	0.040	0.080	0.080
INDOOR HORNS	1	0.000	0.040	0.440	0.440
STROBE, 15CD	3	0.000	0.095	0.285	0.285
STROBE, 30CD	0	0.000	0.125	0.000	0.000
STROBE, 110CD	1	0.000	0.220	0.220	0.220
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	0	0.000	0.141	0.000	0.000
COMBINATION STROBE/HORN, 110CD	5	0.000	0.236	1.180	1.180
TOTAL LOAD					2.308
STAND-BY					ALARM
TOTAL LOAD					2.308
OPERATING HOUR					24
TOTAL AH					0.083
STAND-BY					1.608
ALARM					0.192
TOTAL AH					1.800

SUPPLY 10AH BATTERY @ 24VDC

FAPS-A2 #4009 (BUILDING A)					
QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT		TOTAL
	EACH UNIT	TOTAL	EACH UNIT	TOTAL	
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	1	0.000	0.040	0.040	0.040
INDOOR HORNS	5	0.000	0.040	0.200	0.200
STROBE, 15CD	3	0.000	0.095	0.285	0.285
STROBE, 30CD	1	0.000	0.125	0.125	0.125
STROBE, 110CD	1	0.000	0.220	0.220	0.220
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	1	0.000	0.141	0.141	0.141
COMBINATION STROBE/HORN, 110CD	2	0.000	0.236	0.472	0.472
TOTAL LOAD					1.586
STAND-BY					ALARM
TOTAL LOAD					1.586
OPERATING HOUR					24
TOTAL AH					0.083
STAND-BY					1.608
ALARM					0.132
TOTAL AH					1.740

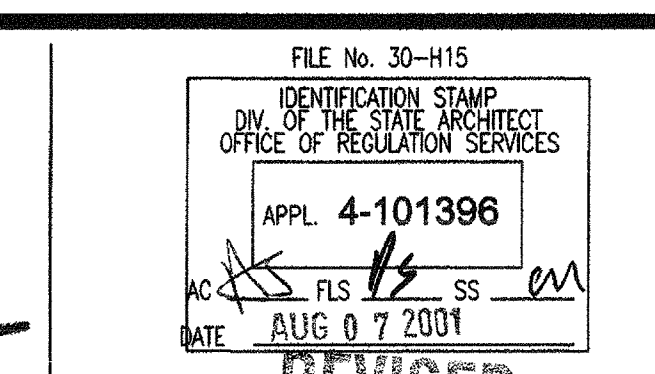
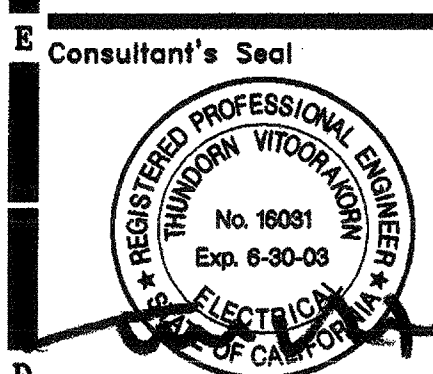
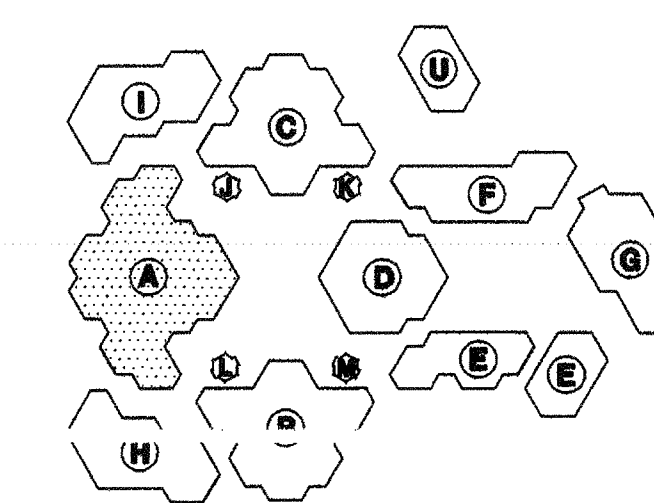
SUPPLY 10AH BATTERY @ 24VDC

FAPS-A3 #4009 (BUILDING A)					
QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT		TOTAL
	EACH UNIT	TOTAL	EACH UNIT	TOTAL	
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	1	0.000	0.040	0.040	0.040
INDOOR HORNS	5	0.000	0.040	0.200	0.200
STROBE, 15CD	2	0.000	0.095	0.190	0.190
STROBE, 30CD	0	0.000	0.125	0.000	0.000
STROBE, 110CD	1	0.000	0.220	0.220	0.220
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	0	0.000	0.141	0.000	0.000
COMBINATION STROBE/HORN, 110CD	4	0.000	0.236	0.944	0.944
TOTAL LOAD					1.697
STAND-BY					ALARM
TOTAL LOAD					1.697
OPERATING HOUR					24
TOTAL AH					0.083
STAND-BY					1.608
ALARM					0.141
TOTAL AH					1.749

SUPPLY 10AH BATTERY @ 24VDC

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN

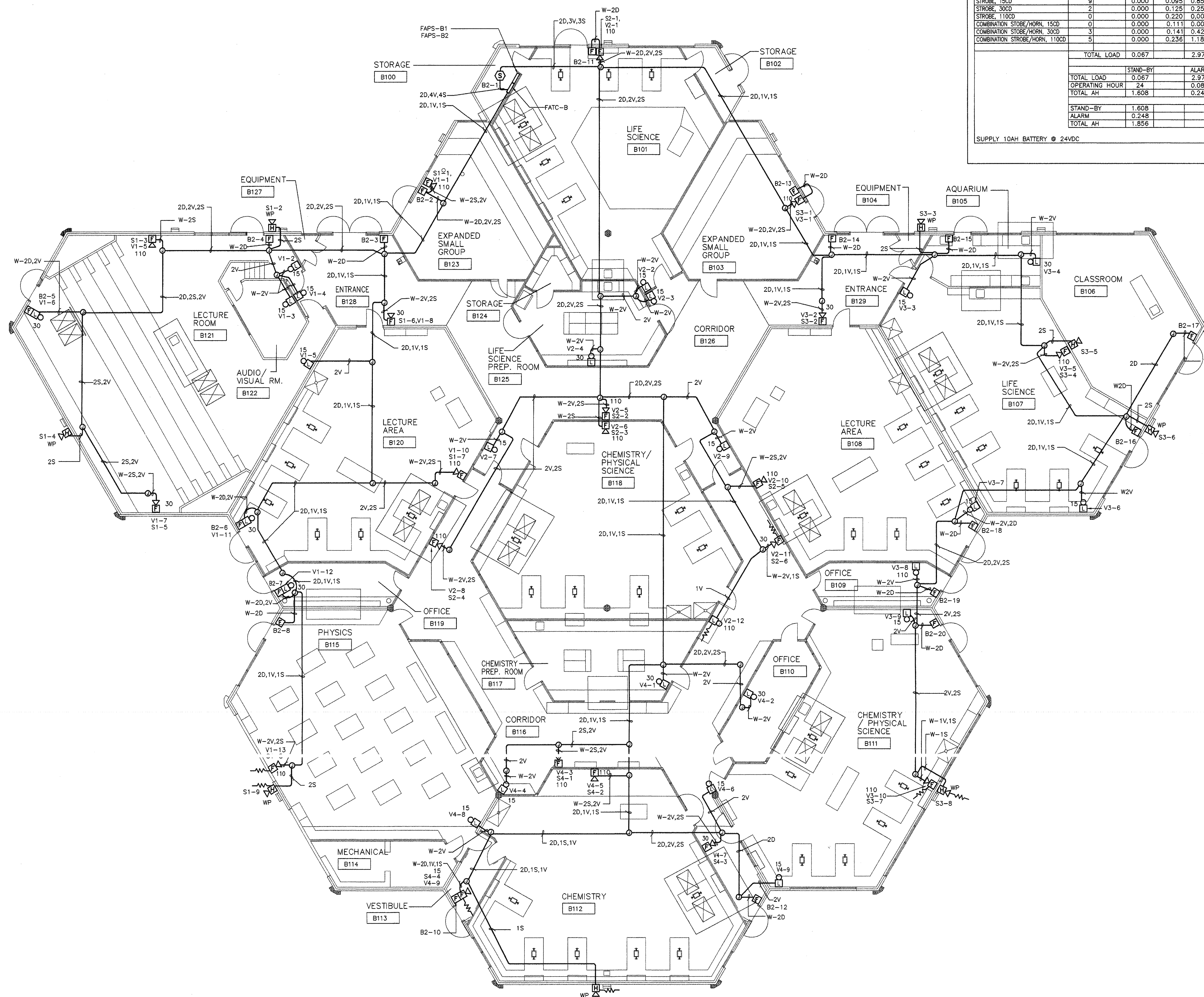


**IRVINE HIGH SCHOOL
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 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
 BUILDING A FIRE ALARM PLAN -
 SEGMENT B

Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	EA-1.2



BATTERY CALCULATION

FAPS-B2 #4009 (BUILDING B)

QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
	EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	2	0.000	0.040	0.080
INDOOR HORNS	2	0.000	0.040	0.080
STROBE 15CD	9	0.000	0.095	0.855
STROBE 30CD	2	0.000	0.125	0.250
STROBE 110CD	0	0.000	0.220	0.000
COMBINATION STROBE/HORN 15CD	0	0.000	0.111	0.000
COMBINATION STROBE/HORN 30CD	3	0.000	0.141	0.423
COMBINATION STROBE/HORN 110CD	5	0.000	0.236	1.180
TOTAL LOAD		0.067		2.971

STAND-BY	ALARM
TOTAL LOAD	2.971
OPERATING HOUR	0.083
TOTAL AH	0.248

STAND-BY 1.608
 ALARM 0.248
 TOTAL AH 1.856

SUPPLY 10AH BATTERY @ 24VDC

VOLTAGE DROP CALCULATION

(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-B1)
 CIRCUIT LENGTH (#12AWG) = 400'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 WP HORNS 0.040 (EA) X 3 = 0.120
 INDOOR HORNS 0.040 (EA) X 6 = 0.240
 TOTAL CIRCUIT LOAD = 0.360

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.84 %

CIRCUIT #S2 (FAPS-B1)
 CIRCUIT LENGTH (#12AWG) = 270'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 WP HORNS 0.040 (EA) X 0 = 0.000
 INDOOR HORNS 0.040 (EA) X 6 = 0.240
 TOTAL CIRCUIT LOAD = 0.240

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.89 %

CIRCUIT #S3 (FAPS-B2)
 CIRCUIT LENGTH (#12AWG) = 430'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 WP HORNS 0.040 (EA) X 2 = 0.080
 INDOOR HORNS 0.040 (EA) X 5 = 0.200
 TOTAL CIRCUIT LOAD = 0.280

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.66 %

CIRCUIT #S4 (FAPS-B2)
 CIRCUIT LENGTH (#12AWG) = 450'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 WP HORNS 0.040 (EA) X 0 = 0.000
 INDOOR HORNS 0.040 (EA) X 5 = 0.200
 TOTAL CIRCUIT LOAD = 0.200

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.24 %

VOLTAGE DROP CALCULATION

(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-B1)
 CIRCUIT LENGTH (#12AWG) = 370'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 3 = 0.285
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 5 = 0.625
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 4 = 0.880
 TOTAL CIRCUIT LOAD = 1.79

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 9.13 %

CIRCUIT #V2 (FAPS-B1)
 CIRCUIT LENGTH (#12AWG) = 270'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 5 = 0.475
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 1 = 0.125
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 7 = 1.540
 TOTAL CIRCUIT LOAD = 2.140

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 7.96 %

CIRCUIT #V3 (FAPS-B2)
 CIRCUIT LENGTH (#12AWG) = 430'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 3 = 0.285
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 2 = 0.250
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 4 = 0.880
 TOTAL CIRCUIT LOAD = 1.415

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 8.39 %

CIRCUIT #V4 (FAPS-B2)
 CIRCUIT LENGTH (#12AWG) = 450'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 15CD STROBE OR STROBE/HORN 0.095 (EA) X 5 = 0.475
 30CD STROBE OR STROBE/HORN 0.125 (EA) X 2 = 0.250
 110CD STROBE OR STROBE/HORN 0.220 (EA) X 3 = 0.660
 TOTAL CIRCUIT LOAD = 1.385

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 8.59 %

BATTERY CALCULATION

FAPS-B1 #4009 (BUILDING B)

QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
	EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	3	0.000	0.040	0.120
INDOOR HORNS	0	0.000	0.040	0.000
STROBE 15CD	10	0.000	0.095	0.950
STROBE 30CD	0	0.000	0.125	0.000
STROBE 110CD	3	0.000	0.220	0.660
COMBINATION STROBE/HORN 15CD	0	0.000	0.111	0.000
COMBINATION STROBE/HORN 30CD	2	0.000	0.141	0.282
COMBINATION STROBE/HORN 110CD	10	0.000	0.236	2.360
TOTAL LOAD		0.067		4.475

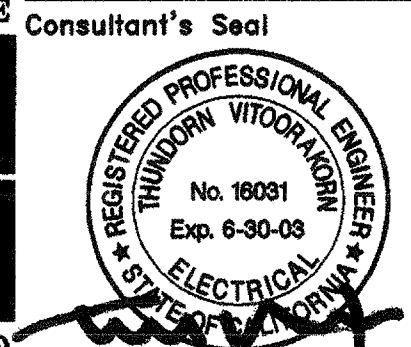
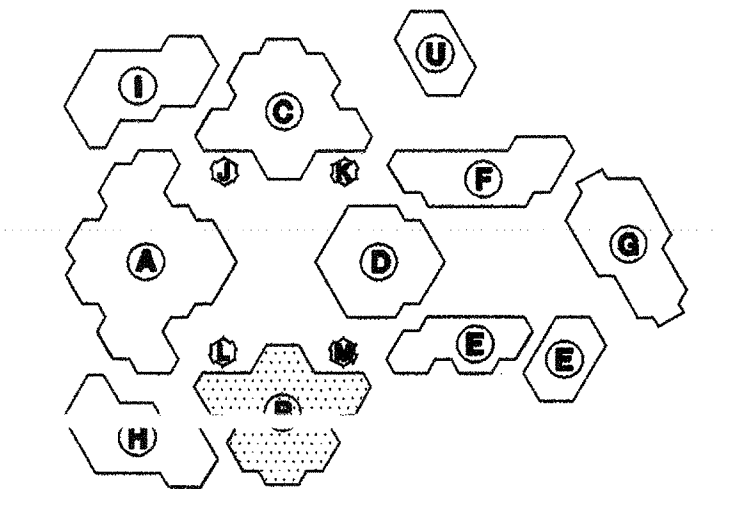
STAND-BY	ALARM
TOTAL LOAD	4.475
OPERATING HOUR	0.083
TOTAL AH	0.373

STAND-BY 1.608
 ALARM 0.373
 TOTAL AH 1.981

SUPPLY 10AH BATTERY @ 24VDC

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN



FILE No. 30-115
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE AUG 07 2001



IRVINE HIGH SCHOOL
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 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

BUILDING B FIRE ALARM PLAN

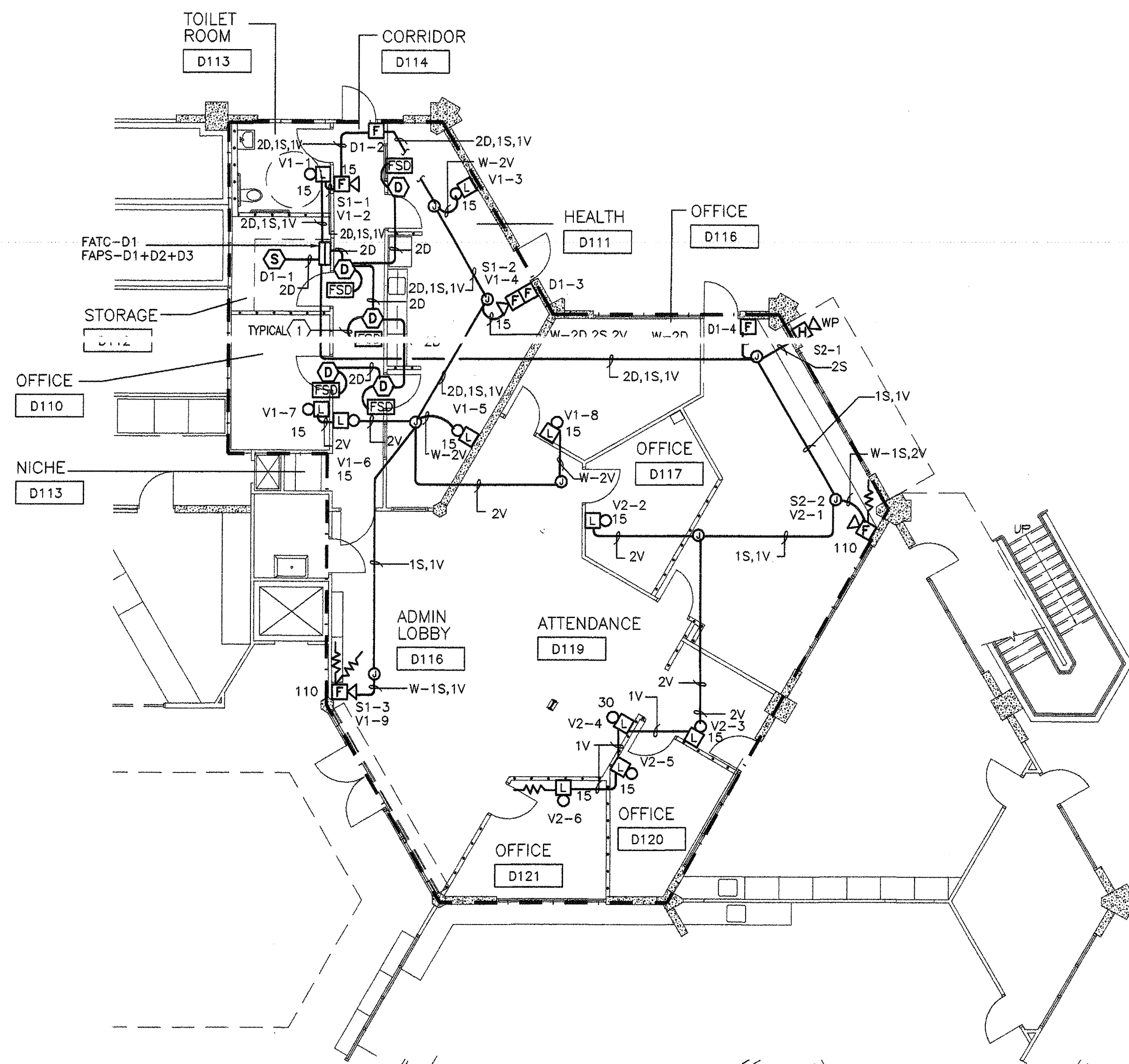
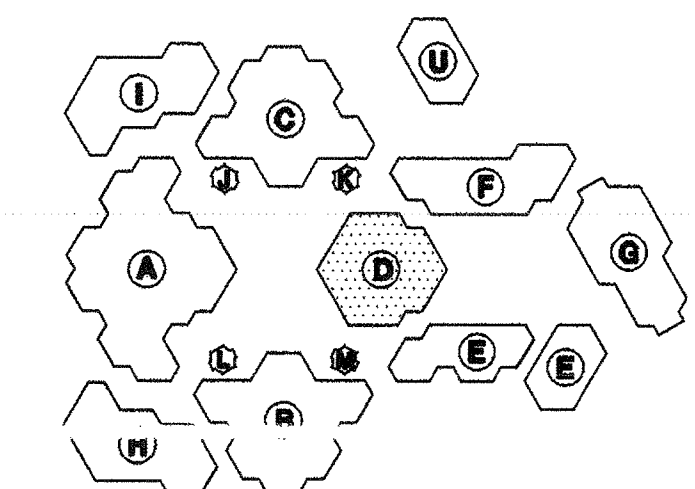
Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	EB-1.1

SPECIFIC NOTES

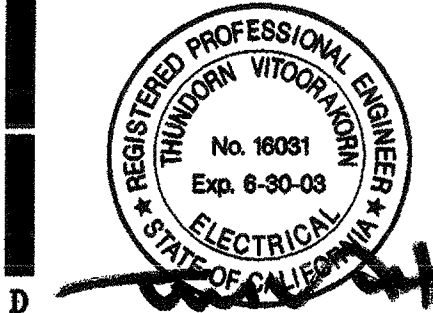
- ① PROVIDE INTERCONNECTION BETWEEN DUCT SMOKE DETECTOR AND COMBINATION FIRE SMOKE DAMPER. COORDINATE WITH MECHANICAL CONTRACTOR.

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #96-03(FLS)

KEY PLAN



Consultant's Seal



FILE NO. 30-H15
 IDENTIFICATION STAMP
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No	Revisions/Submissions
	DSA SUBMITTAL
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Drawing Title
BUILDING D PARTIAL GROUND FLOOR FIRE ALARM PLAN

Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	ED-1.2A

BUILDING D PARTIAL GROUND FLOOR FIRE ALARM PLAN A14

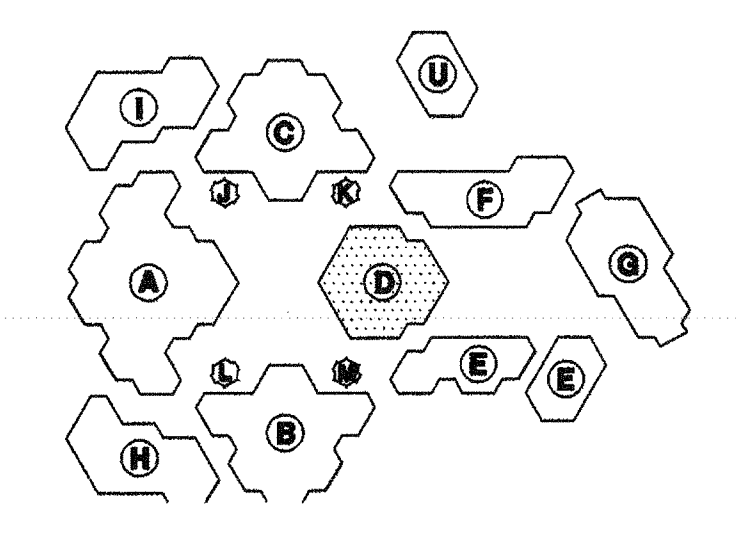
1/8"=1'-0"

SPECIFIC NOTES

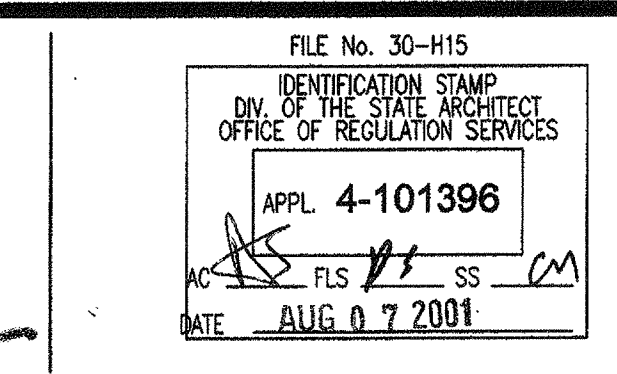
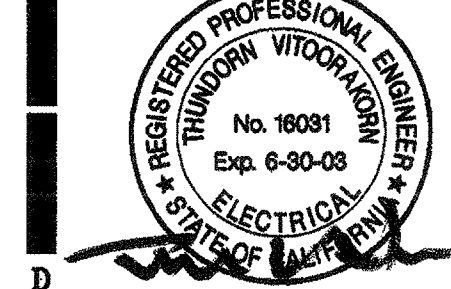
- ① 2S,2V TO FACP, SEE BUILDING D SECOND FLOOR FIRE ALARM PLAN A14 ON SHEET ED-1.2.
- ② 2D,1S,1V TO HORN S7-4 AND HORN/STROBE S7-3V7-3. SEE BUILDING D SECOND FLOOR FIRE ALARM PLAN A14 ON SHEET ED-1.2.

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN



Consultant's Seal

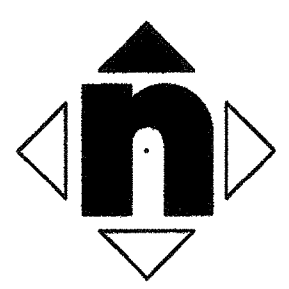
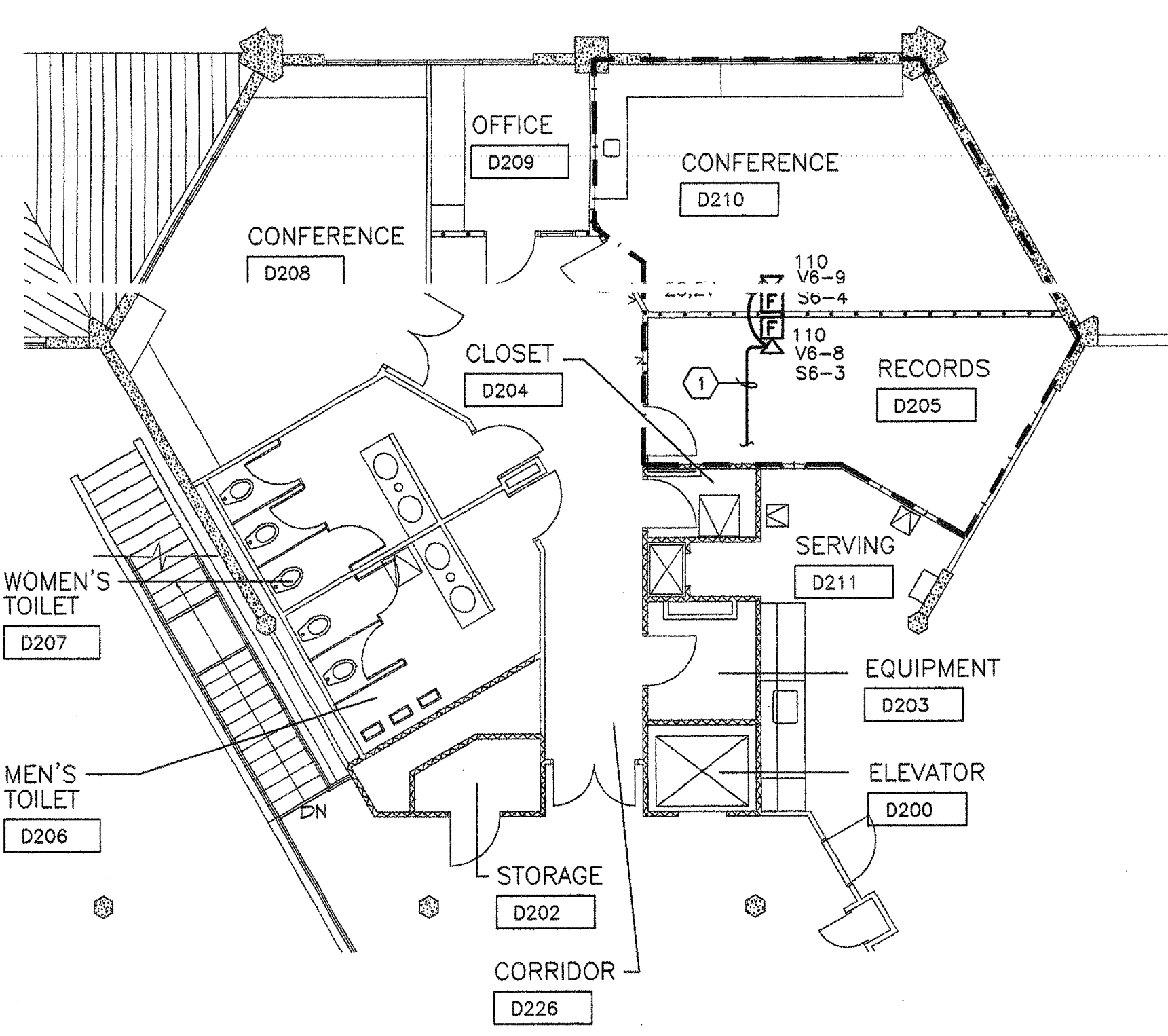


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No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING D PARTIAL SECOND FLOOR FIRE ALARM PLAN

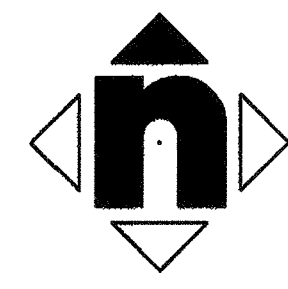
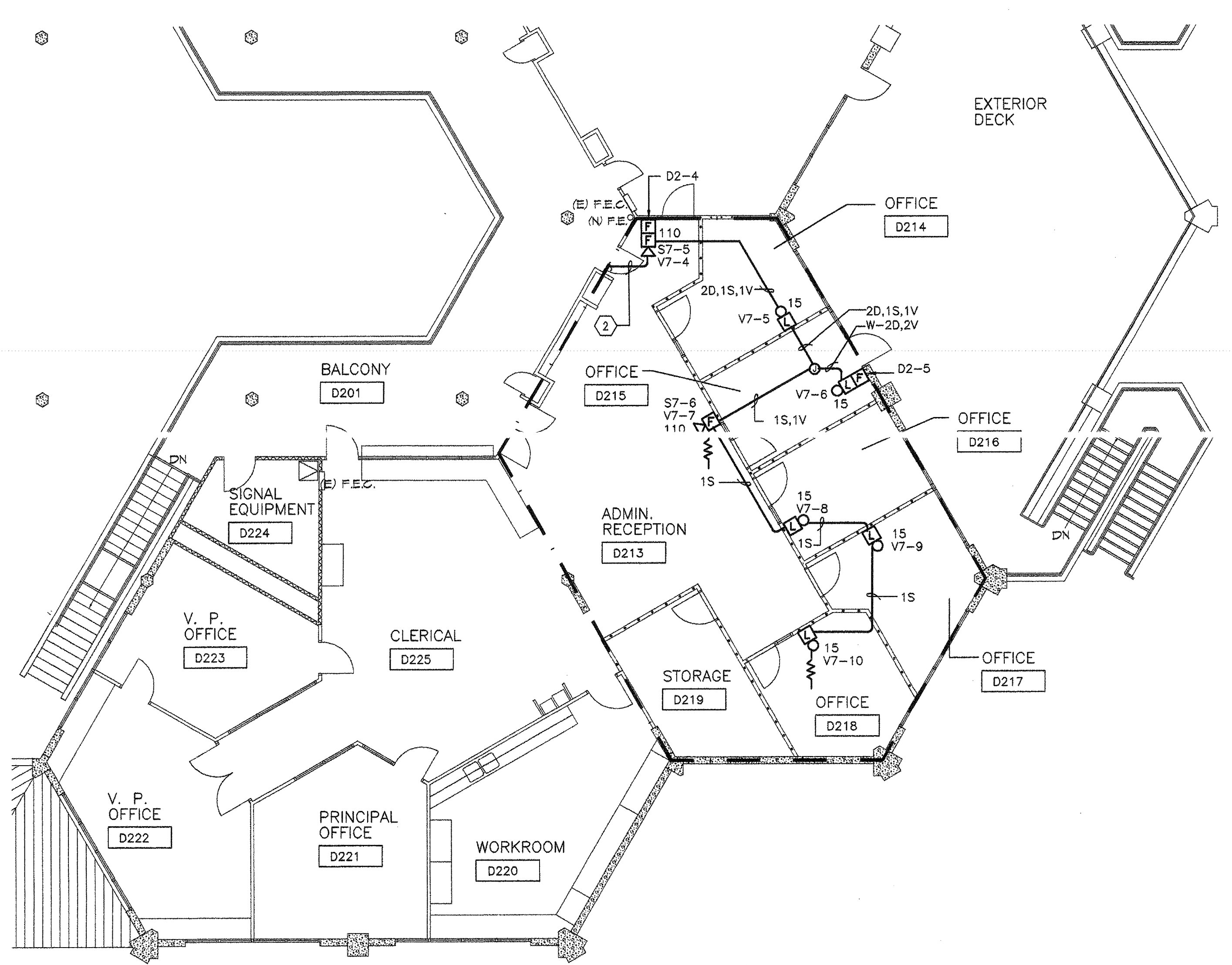
Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	ED-1.2B



BUILDING D PARTIAL SECOND FLOOR FIRE ALARM PLAN

A6

1/8"=1'-0"



BUILDING D PARTIAL SECOND FLOOR FIRE ALARM PLAN

A14

1/8"=1'-0"

BATTERY CALCULATION

FAPS-E2 #4009 (BUILDING E)

	QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
		EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.075	0.075
WP HORNS	3	0.000	0.000	0.040	0.120
INDOOR HORNS	2	0.000	0.000	0.040	0.080
STROBE, 15CD	3	0.000	0.000	0.095	0.285
STROBE, 30CD	2	0.000	0.000	0.125	0.250
STROBE, 110CD	0	0.000	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	4	0.000	0.000	0.111	0.444
COMBINATION STROBE/HORN, 30CD	2	0.000	0.000	0.141	0.282
COMBINATION STROBE/HORN, 110CD	3	0.000	0.000	0.236	0.708
TOTAL LOAD			0.067		2.272
			STAND-BY		ALARM
			0.067		2.272
			OPERATING HOUR		0.083
			TOTAL AH		1.608
			STAND-BY	1.608	
			ALARM	0.189	
			TOTAL AH	1.797	

SUPPLY 10AH BATTERY @ 24VDC

VOLTAGE DROP CALCULATION

(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-E1)

CIRCUIT LENGTH (#12AWG) = 150'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

WP HORNS	0.040 (EA)	X	2	=	0.080
INDOOR HORNS	0.040 (EA)	X	4	=	0.160
TOTAL CIRCUIT LOAD				=	0.240

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.50 %

CIRCUIT #S2 (FAPS-E1)

CIRCUIT LENGTH (#12AWG) = 170'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

WP HORNS	0.040 (EA)	X	0	=	0.000
INDOOR HORNS	0.040 (EA)	X	4	=	0.160
TOTAL CIRCUIT LOAD				=	0.160

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.37 %

CIRCUIT #S3 (FAPS-E2)

CIRCUIT LENGTH (#12AWG) = 190'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

WP HORNS	0.040 (EA)	X	1	=	0.040
INDOOR HORNS	0.040 (EA)	X	3	=	0.120
TOTAL CIRCUIT LOAD				=	0.160

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.42 %

CIRCUIT #S3 (FAPS-E2)

CIRCUIT LENGTH (#12AWG) = 350'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

WP HORNS	0.040 (EA)	X	2	=	0.080
INDOOR HORNS	0.040 (EA)	X	8	=	0.320
TOTAL CIRCUIT LOAD				=	0.40

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.93 %

VOLTAGE DROP CALCULATION

(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-E1)

CIRCUIT LENGTH (#12AWG) = 150'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

15CD STROBE OR STROBE/HORN	0.095 (EA)	X	6	=	0.570
30CD STROBE OR STROBE/HORN	0.125 (EA)	X	0	=	0.000
110CD STROBE OR STROBE/HORN	0.220 (EA)	X	2	=	0.440
TOTAL CIRCUIT LOAD				=	1.010

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 2.09 %

CIRCUIT #V2 (FAPS-E1)

CIRCUIT LENGTH (#12AWG) = 170'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

15CD STROBE OR STROBE/HORN	0.095 (EA)	X	3	=	0.285
30CD STROBE OR STROBE/HORN	0.125 (EA)	X	2	=	0.250
110CD STROBE OR STROBE/HORN	0.220 (EA)	X	2	=	0.440
TOTAL CIRCUIT LOAD				=	0.975

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 2.28 %

CIRCUIT #V3 (FAPS-E2)

CIRCUIT LENGTH (#12AWG) = 190'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

15CD STROBE OR STROBE/HORN	0.095 (EA)	X	1	=	0.095
30CD STROBE OR STROBE/HORN	0.125 (EA)	X	4	=	0.500
110CD STROBE OR STROBE/HORN	0.220 (EA)	X	1	=	0.220
TOTAL CIRCUIT LOAD				=	0.815

VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 2.13 %

CIRCUIT #V4 (FAPS-E2)

CIRCUIT LENGTH (#12AWG) = 390'

CIRCUIT VOLTAGE = 24

CIRCUIT LOAD:

15CD STROBE OR STROBE/HORN	0.095 (EA)	X	6	=	0.570
30CD STROBE OR STROBE/HORN	0.125 (EA)	X	0	=	0.000
110CD STROBE OR STROBE/HORN	0.220 (EA)	X	5	=	1.100
TOTAL CIRCUIT LOAD				=	1.670

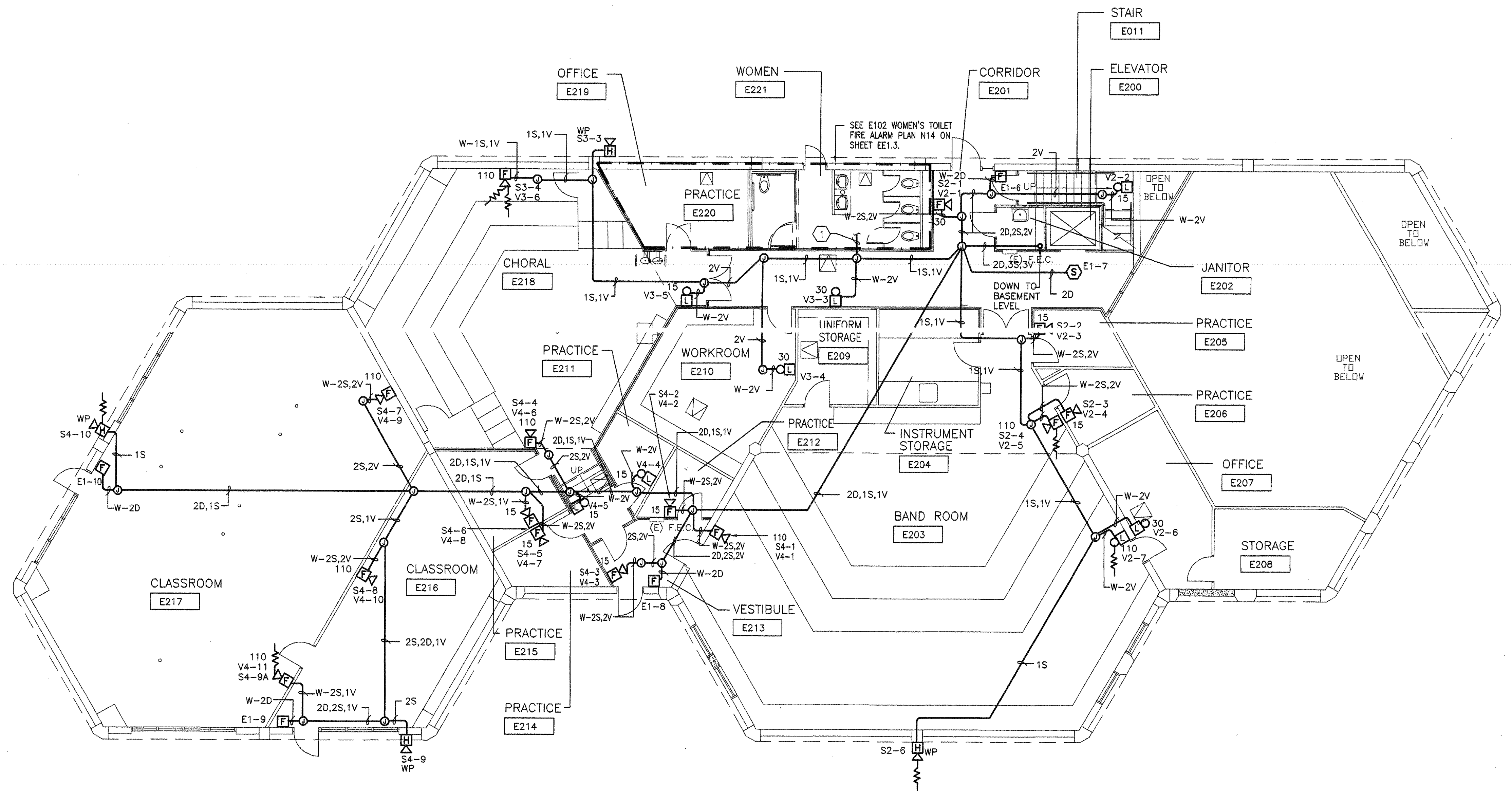
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 8.98 %

BATTERY CALCULATION

FAPS-E1 #4009 (BUILDING E)

	QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
		EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.075	0.075
WP HORNS	2	0.000	0.000	0.040	0.080
INDOOR HORNS	0	0.000	0.000	0.040	0.000
STROBE, 15CD	5	0.000	0.000	0.095	0.475
STROBE, 30CD	1	0.000	0.000	0.125	0.125
STROBE, 110CD	1	0.000	0.000	0.220	0.220
COMBINATION STROBE/HORN, 15CD	4	0.000	0.000	0.111	0.444
COMBINATION STROBE/HORN, 30CD	1	0.000	0.000	0.141	0.141
COMBINATION STROBE/HORN, 110CD	3	0.000	0.000	0.236	0.708
TOTAL LOAD			0.067		2.296
			STAND-BY		ALARM
			0.067		2.296
			OPERATING HOUR		0.083
			TOTAL AH		1.608
			STAND-BY	1.608	
			ALARM	0.191	
			TOTAL AH	1.799	

SUPPLY 10AH BATTERY @ 24VDC



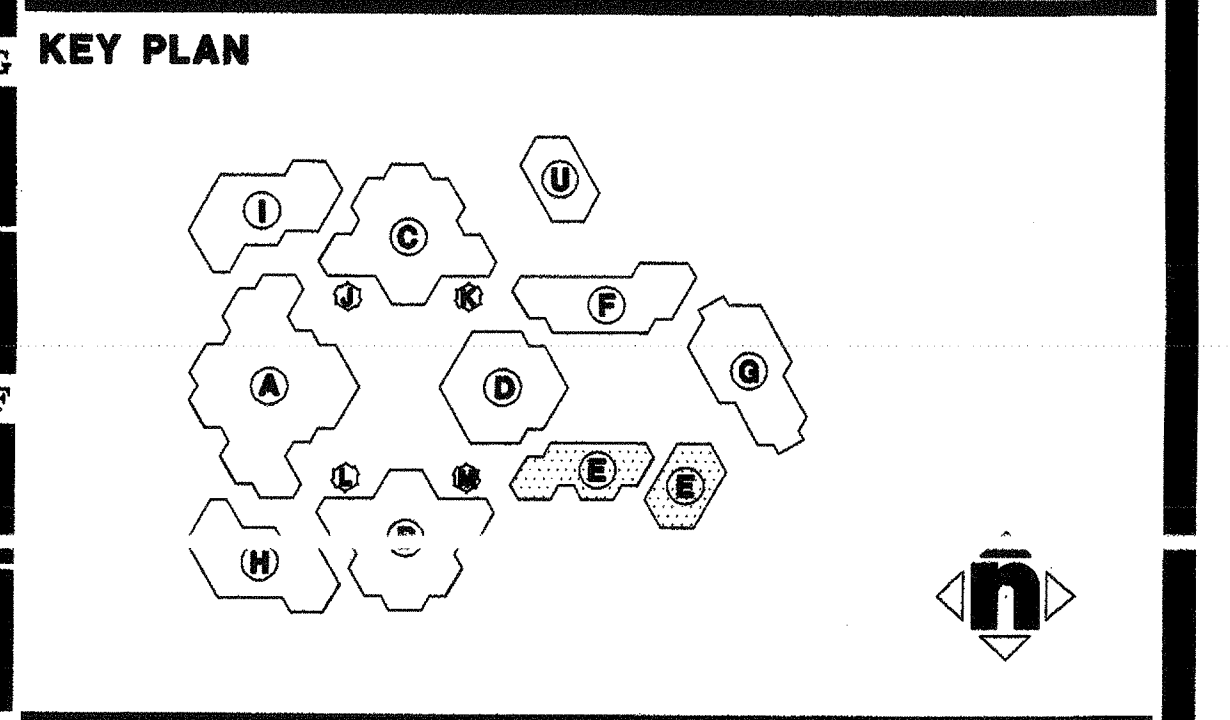
HMC GROUP
 3270 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91764
 Telephone: 909-989-9979
 Fax: 909-485-1400

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SPECIFIC NOTES

① 2S.1V TO HORN/STROBE V3-1, S3-1. SEE E102 WOMEN'S TOILET FIRE ALARM PLAN N14 ON SHEET EE-1.3.

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)



Consultant's Seal:

FILE No. 30-115
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE: APR 17 2001
 STATUS: REFUSED

**IRVINE HIGH SCHOOL
 MODERNIZATION**
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title

**BUILDING E GROUND FLOOR
 FIRE ALARM PLAN**

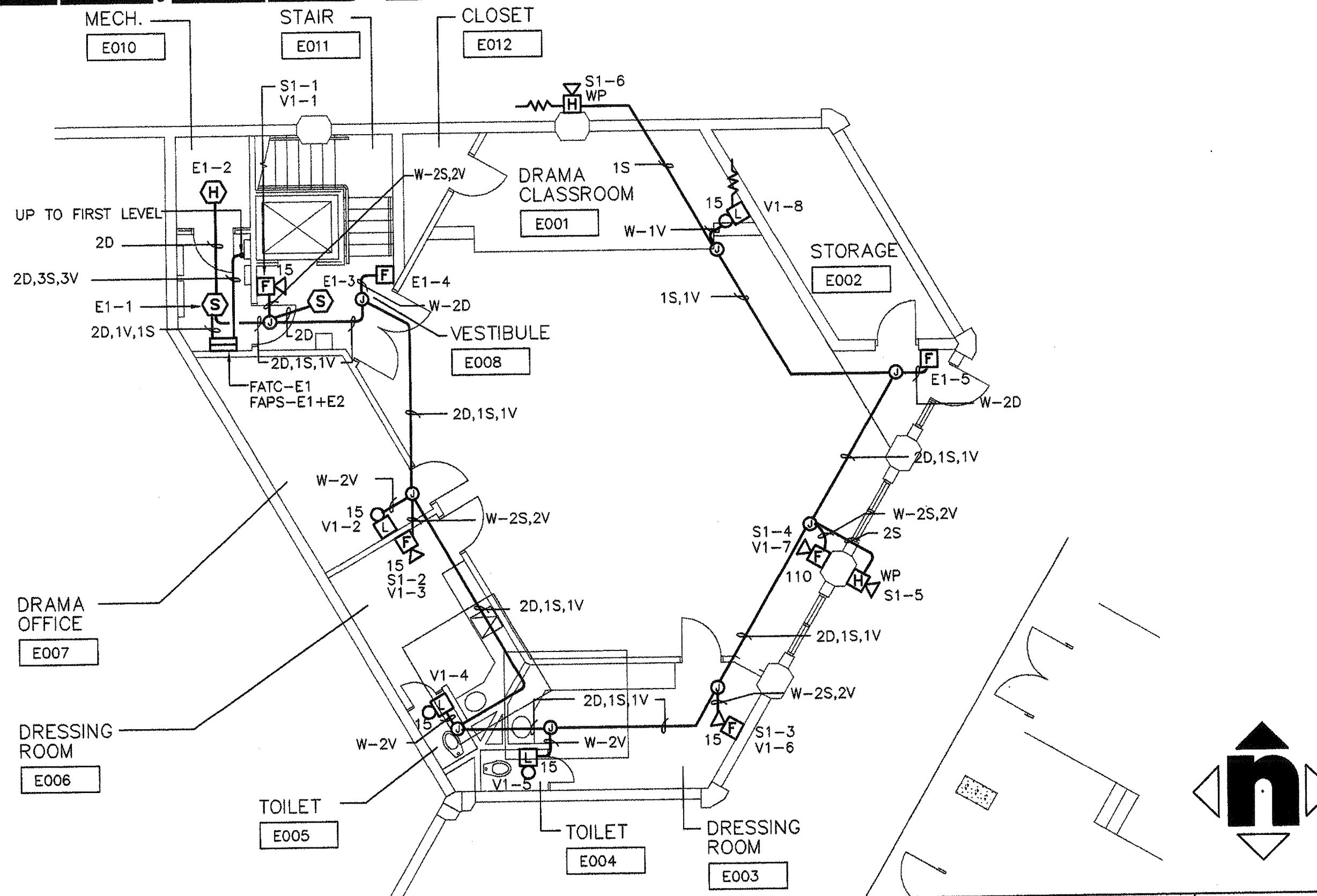
Architect's Seal:

Designed	Project No
	3184004
Drawn	Scale
	1/8"=1'-0"
Checked	Drawing No
	EE-1.1
Date	of
04/23/01	

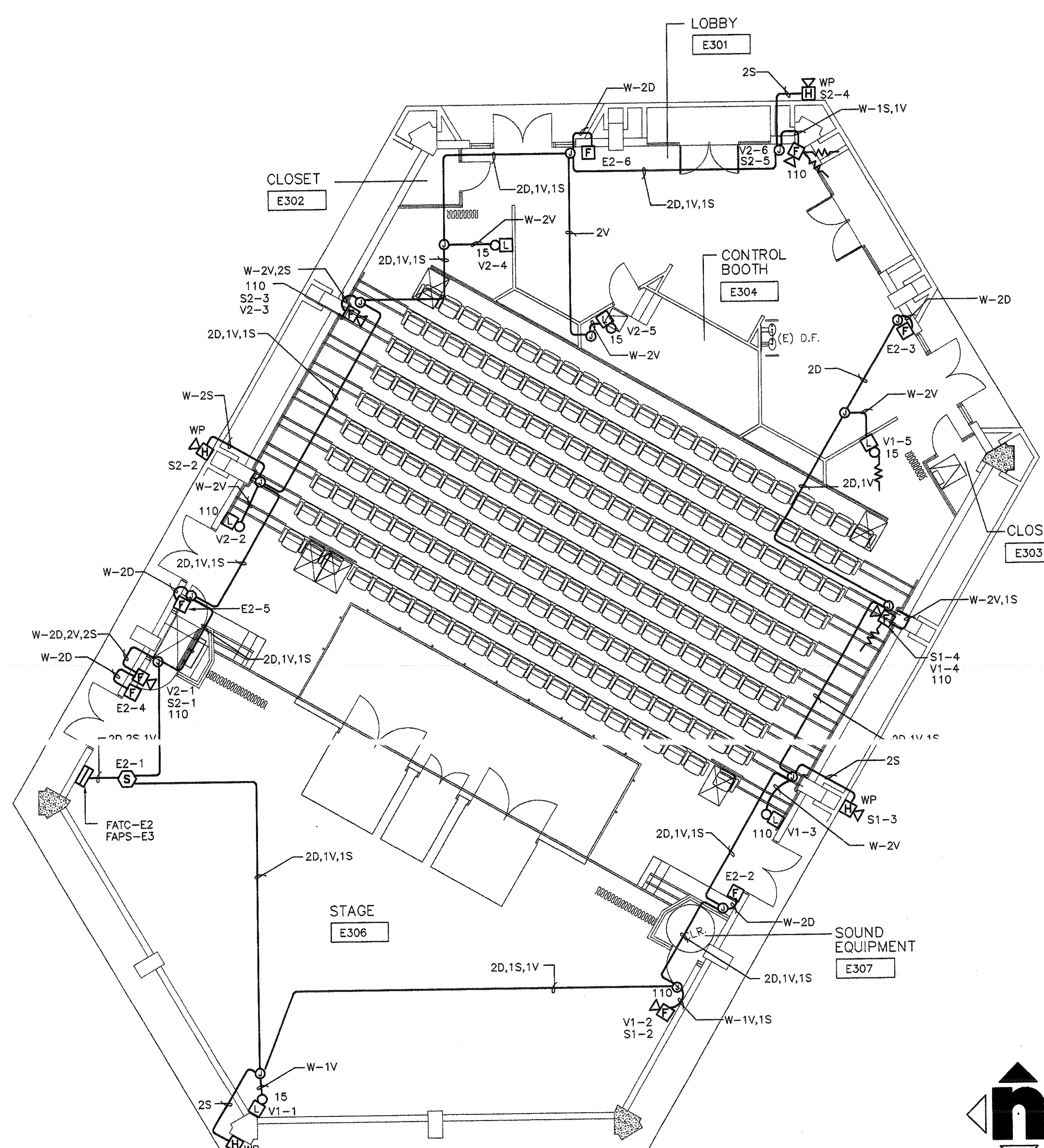
BUILDING E GROUND FLOOR FIRE ALARM PLAN

A14

1/8"=1'-0"



BUILDING E BASEMENT FIRE ALARM PLAN M14
1/8"=1'-0"



BUILDING E THEATER FIRE ALARM PLAN A14
1/8"=1'-0"

VOLTAGE DROP CALCULATION
(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-E3)
CIRCUIT LENGTH (#12AWG) = 200'
CIRCUIT VOLTAGE = 24
CIRCUIT LOAD:
WP HORNS 0.040 (EA) X 2 = 0.080
INDOOR HORNS 0.040 (EA) X 2 = 0.080
TOTAL CIRCUIT LOAD = 0.160

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.44\%$

CIRCUIT #S2 (FAPS-E3)
CIRCUIT LENGTH (#12AWG) = 150'
CIRCUIT VOLTAGE = 24
CIRCUIT LOAD:
WP HORNS 0.040 (EA) X 2 = 0.080
INDOOR HORNS 0.040 (EA) X 3 = 0.120
TOTAL CIRCUIT LOAD = 0.200

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.41\%$

VOLTAGE DROP CALCULATION
(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-E3)
CIRCUIT LENGTH (#12AWG) = 200'
CIRCUIT VOLTAGE = 24
CIRCUIT LOAD:
15CD STROBE OR STROBE/HORN 0.095 (EA) X 2 = 0.190
30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
110CD STROBE OR STROBE/HORN 0.220 (EA) X 3 = 0.660
TOTAL CIRCUIT LOAD = 0.850

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 2.34\%$

CIRCUIT #V2 (FAPS-E3)
CIRCUIT LENGTH (#12AWG) = 150'
CIRCUIT VOLTAGE = 24
CIRCUIT LOAD:
15CD STROBE OR STROBE/HORN 0.095 (EA) X 2 = 0.190
30CD STROBE OR STROBE/HORN 0.125 (EA) X 0 = 0.000
110CD STROBE OR STROBE/HORN 0.220 (EA) X 4 = 0.880
TOTAL CIRCUIT LOAD = 1.070

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 2.21\%$

BATTERY CALCULATION

FAPS-E3 #4009 (BUILDING E - THEATER)

	QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
		EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	4	0.000	0.000	0.040	0.160
INDOOR HORNS	0	0.000	0.000	0.040	0.000
STROBE, 15CD	4	0.000	0.000	0.095	0.380
STROBE, 30CD	0	0.000	0.000	0.125	0.000
STROBE, 110CD	3	0.000	0.000	0.220	0.660
COMBINATION STROBE/HORN, 15CD	0	0.000	0.000	0.111	0.000
COMBINATION STROBE/HORN, 30CD	0	0.000	0.000	0.141	0.000
COMBINATION STROBE/HORN, 110CD	3	0.000	0.000	0.236	0.708
TOTAL LOAD			0.067		2.263
			STAND-BY		ALARM
			0.067		2.263
			OPERATING HOUR		0.083
			24		1.608
			TOTAL AH		1.791
			STAND-BY	1.608	
			ALARM	0.189	
			TOTAL AH	1.797	

SUPPLY 10AH BATTERY @ 24VDC

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COMPLETE PLAN SUBMITTAL
PER DSA POLICY #95-03(FLB)

KEY PLAN

Consultant's Seal: [Professional Engineer Seal]

OPERATOR STAMP: [Professional Engineer Seal]

IRVINE HIGH SCHOOL
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4321 WALNUT AVENUE
IRVINE, CA 92604-2239
IRVINE UNIFIED SCHOOL DISTRICT

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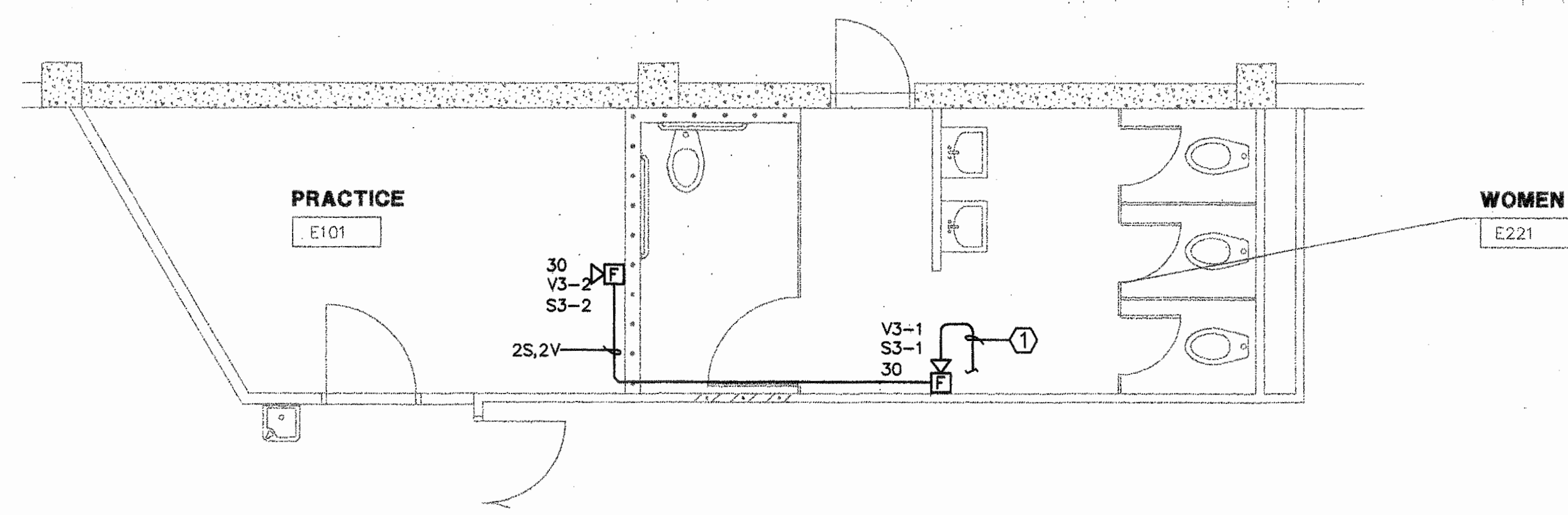
No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	06/06/01

Drawing Title: **BUILDING E THEATER & BASEMENT FIRE ALARM PLANS**

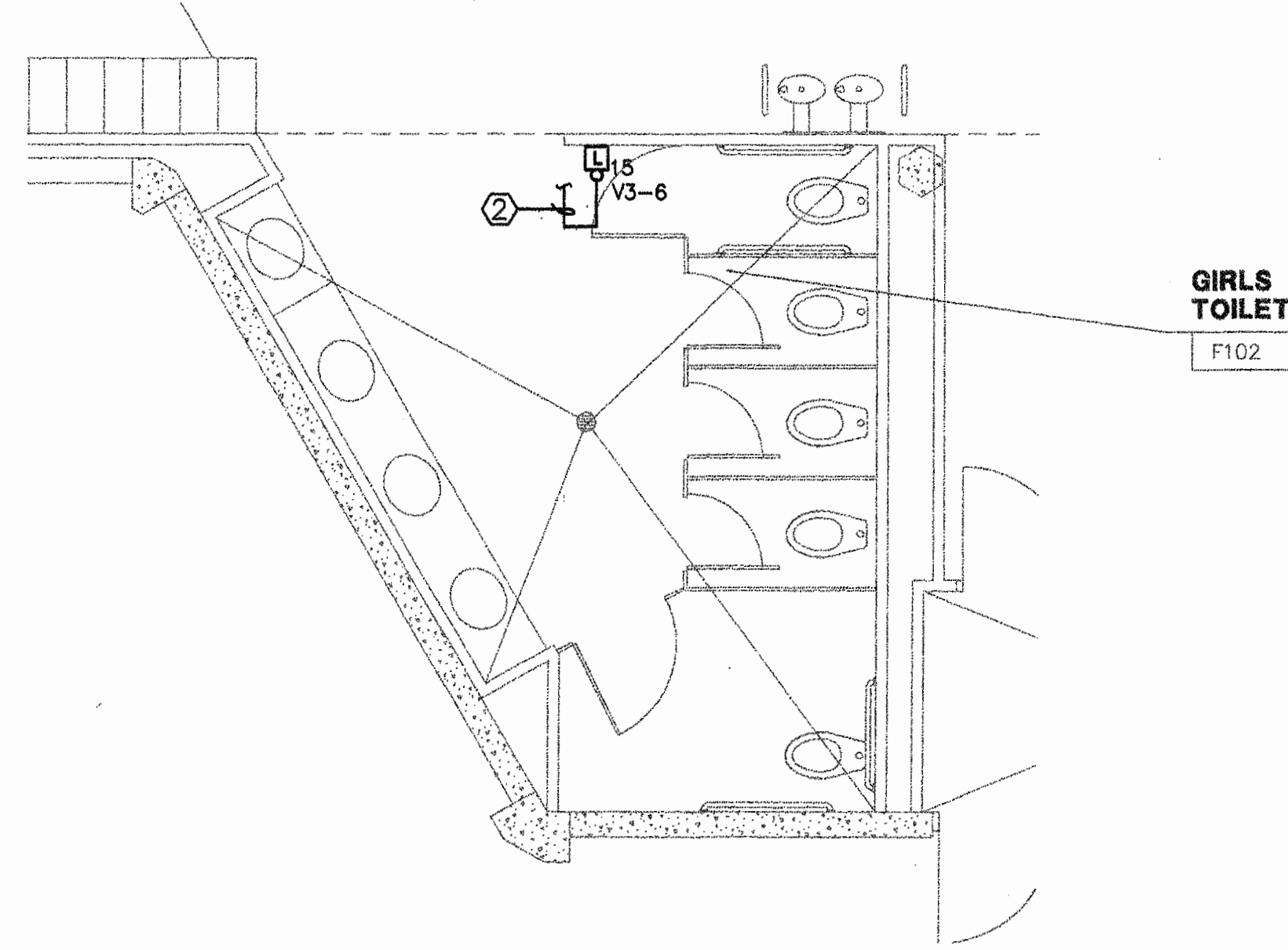
Architect's Seal	Designed	Project No
[Professional Engineer Seal]	IRVINE, M. WILKES	3184004
	Drawn	Scale 1/8"=1'-0"
	Checked	Drawing No
	Reviewed	EE-1.2
	Date	04/23/01

REMODEL NOTES

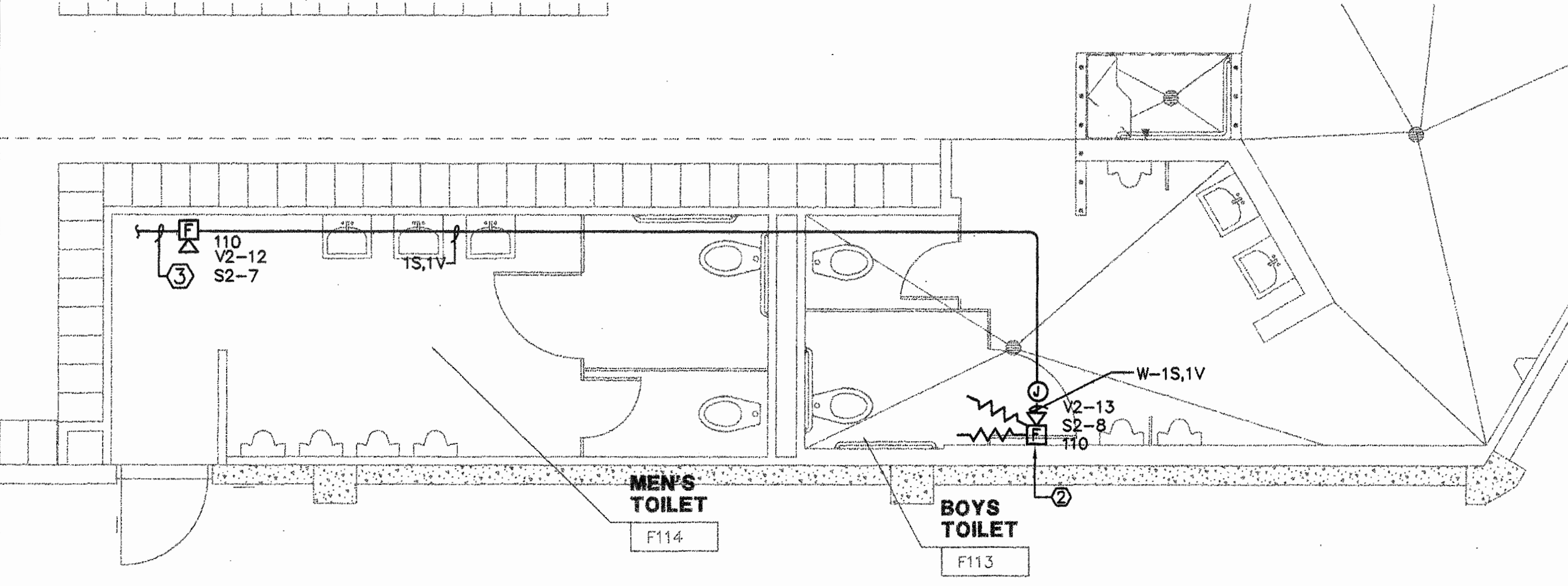
- ① 2S.2V TO FATC-E1 MA J-BOX. SEE BUILDING E GROUND FLOOR FIRE ALARM PLAN A14 ON SHEET E-1.1 AND BUILDING E BASEMENT FIRE ALARM PLAN M14 ON SHEET E-1.2
- ② 2V TO HORN/STROBE V3-5, S3-4. SEE BUILDING F GROUND FLOOR FIRE ALARM PLAN A14 ON SHEET EF-1.1
- ③ 1S.1V TO HORN/STROBE S2-6, V2-11. SEE BUILDING F GROUND FLOOR FIRE ALARM PLAN A14 ON SHEET EF-1.1.
- ④ 2S.2V TO HORN/STROBE S2-2, V2-3. SEE BUILDING F GROUND FLOOR FIRE ALARM PLAN A14 ON SHEET EF-1.1.



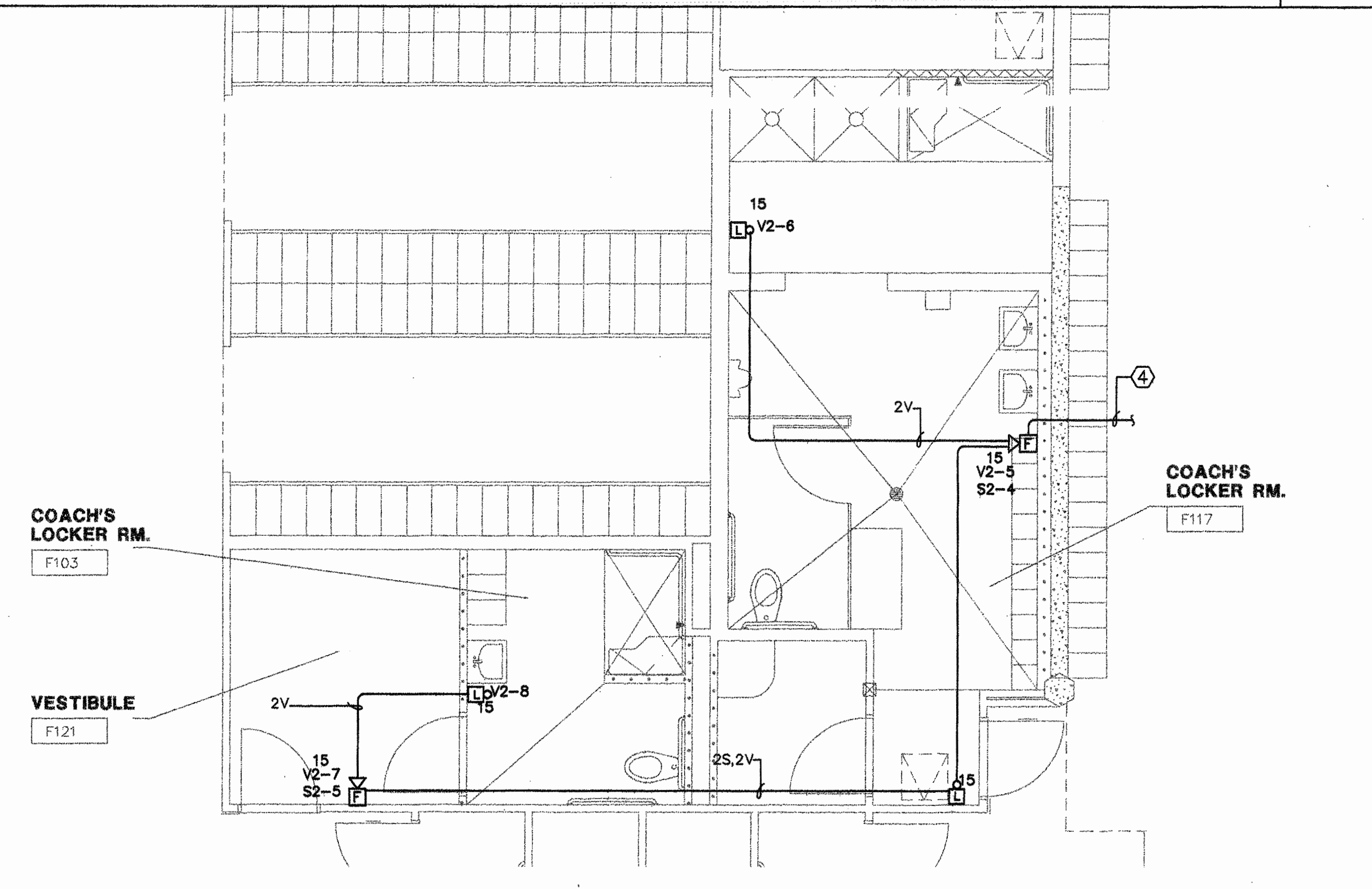
E221 WOMENS TOILET FIRE ALARM PLAN **N14**



F102 GIRL'S TOILET FIRE ALARM PLAN **K14**

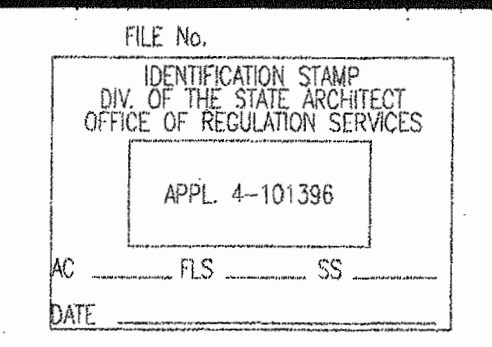
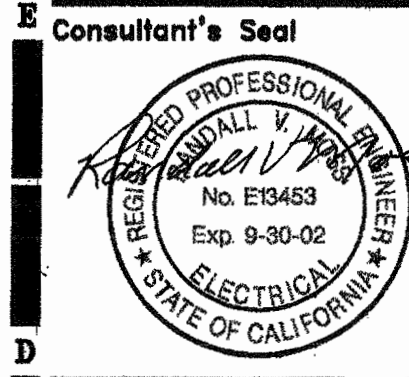
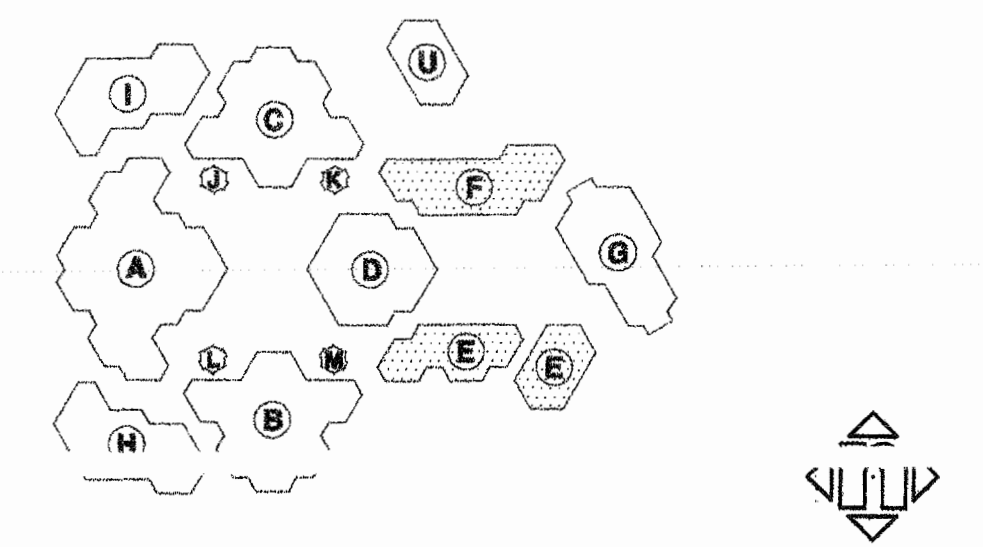


F114 MEN'S AND F113 BOYS TOILET FIRE ALARM PLAN **F14**



F103 COACH'S LOCKER ROOM AND F117 COACH'S LOCKER FIRE ALARM PLAN **A14**

KEY PLAN



IRVINE HIGH SCHOOL MODERNIZATION
 4821 WALNUT AVENUE
 IRVINE, CA 92604-3224
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RE-SUBMITTAL	08/06/01

Drawing Title
BUILDING E & F ENLARGED TOILET FIRE ALARM PLANS

Architect's Seal	Designed MM	Project No 3184005-P2
Drawn DVL	Scale AS NOTED	
Checked	Drawing No	
Reviewed		
Date 04/23/01		

EE-1.3

VOLTAGE DROP CALCULATION

(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-F1)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.004 (EA)	X	5	= 0.020
TOTAL CIRCUIT LOAD	=	0.200	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.96 %			
CIRCUIT #S2 (FAPS-F1)			
CIRCUIT LENGTH (#12AWG)	=	250'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	0	= 0.000
INDOOR HORNS 0.040 (EA)	X	8	= 0.320
TOTAL CIRCUIT LOAD	=	0.320	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.10 %			
CIRCUIT #S3 (FAPS-F2)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	2	= 0.080
INDOOR HORNS 0.040 (EA)	X	4	= 0.160
TOTAL CIRCUIT LOAD	=	0.240	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.16 %			
CIRCUIT #S4 (FAPS-F2)			
CIRCUIT LENGTH (#12AWG)	=	300'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	2	= 0.080
INDOOR HORNS 0.040 (EA)	X	4	= 0.160
TOTAL CIRCUIT LOAD	=	0.240	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 0.99 %			
CIRCUIT #S5 (FAPS-F3)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
WP HORNS 0.040 (EA)	X	2	= 0.080
INDOOR HORNS 0.040 (EA)	X	6	= 0.240
TOTAL CIRCUIT LOAD	=	0.320	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 1.54 %			

VOLTAGE DROP CALCULATION

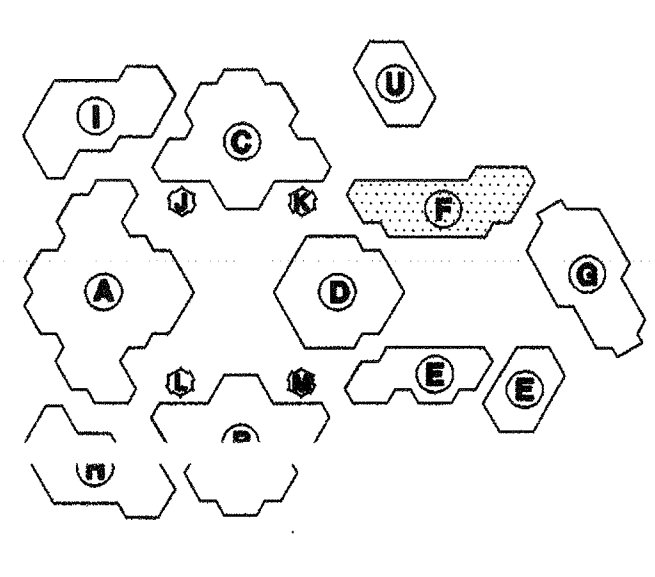
(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-F1)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	7	= 0.665
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	1	= 0.125
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	2	= 0.440
TOTAL CIRCUIT LOAD	=	1.230	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 5.93 %			
CIRCUIT #V2 (FAPS-F1)			
CIRCUIT LENGTH (#12AWG)	=	250'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	4	= 0.380
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	2	= 0.250
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	7	= 1.540
TOTAL CIRCUIT LOAD	=	2.170	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 7.48 %			
CIRCUIT #V3 (FAPS-F2)			
CIRCUIT LENGTH (#12AWG)	=	370'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	6	= 0.570
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	1	= 0.125
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	5	= 1.100
TOTAL CIRCUIT LOAD	=	1.795	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 9.15 %			
CIRCUIT #V4 (FAPS-F2)			
CIRCUIT LENGTH (#12AWG)	=	360'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	10	= 0.950
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	1	= 0.125
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	3	= 0.660
TOTAL CIRCUIT LOAD	=	1.635	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 8.61 %			
CIRCUIT #V5 (FAPS-F3)			
CIRCUIT LENGTH (#12AWG)	=	350'	
CIRCUIT VOLTAGE	=	24	
CIRCUIT LOAD:			
1500 STROBE OR STROBE/HORN 0.095 (EA)	X	0	= 0.000
3000 STROBE OR STROBE/HORN 0.125 (EA)	X	0	= 0.000
11000 STROBE OR STROBE/HORN 0.220 (EA)	X	7	= 1.540
TOTAL CIRCUIT LOAD	=	1.540	
VOLTAGE DROP = $\frac{AMP \times LENGTH \times 21.6 \times 100}{CONDUCTOR CIR MIL \times CIRCUIT VOLTAGE}$ = 7.43 %			

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KEY PLAN



Consultant's Seal

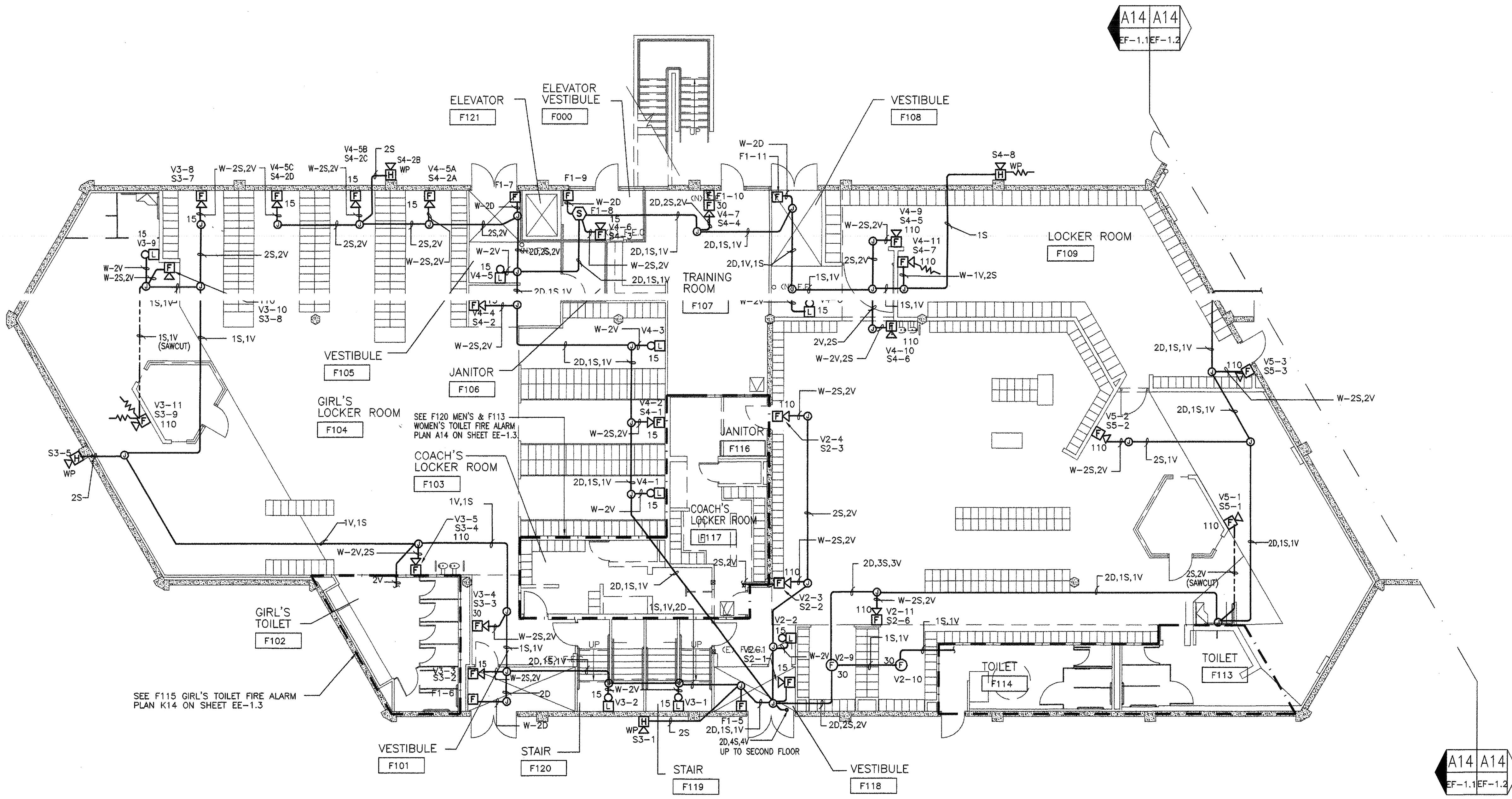
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 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE AUG 07 2001
 REVISED

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 4321 WALNUT AVENUE
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 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/08/01

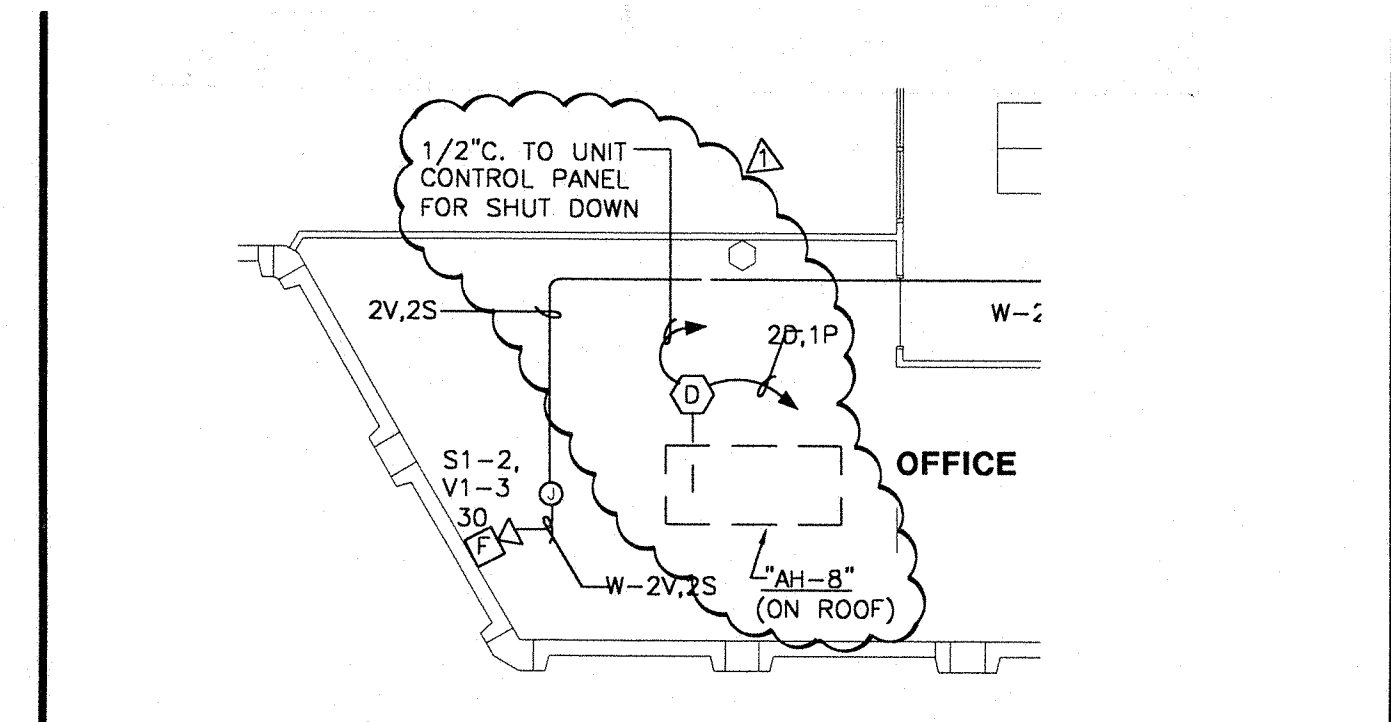
Drawing Title
**BUILDING F GROUND FLOOR
 FIRE ALARM PLAN**

Architect's Seal 	Designed Project No. 3184004
Drawn Scale 1/8"=1'-0"	Checked Drawing No.
Reviewed Date 04/23/01	EF-1.1



BUILDING F GROUND FLOOR FIRE ALARM PLAN A14

1/8"=1'-0"



Don C. Gilman & Assoc., Inc.
 CONSULTING ELECTRICAL ENGINEERS
 2515 Wilshire Avenue
 Torrance, CA 90503
 Tel: 310-585-8222

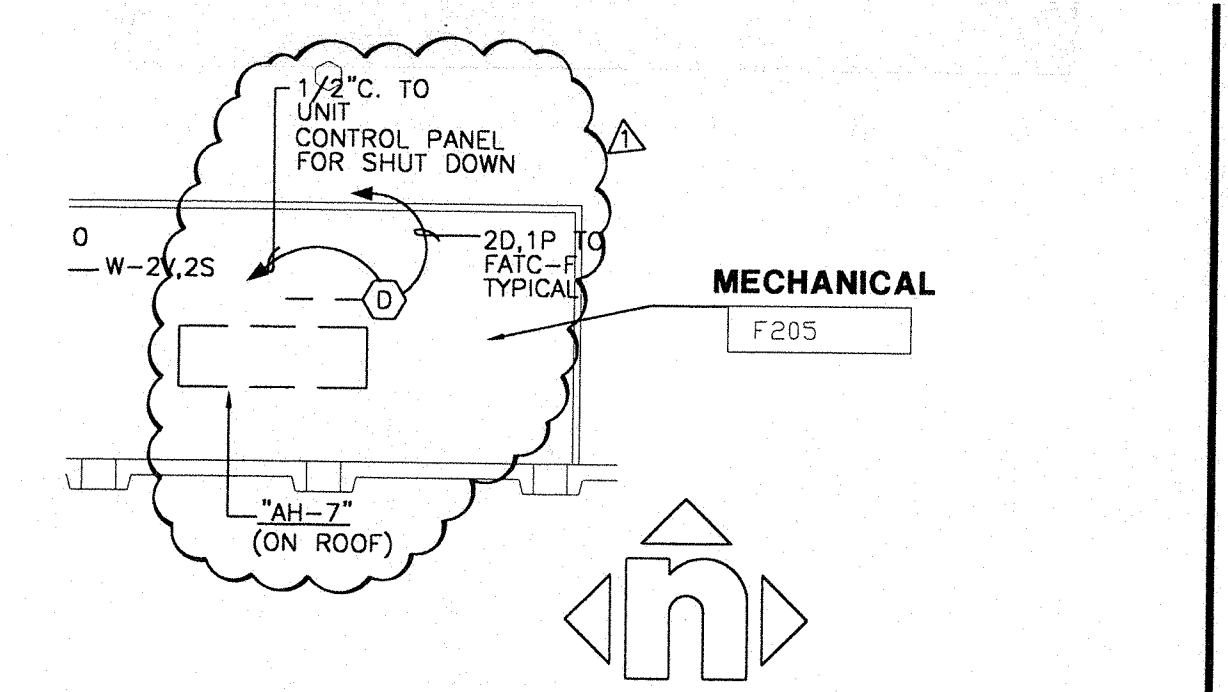
PROFESSIONAL ENGINEER
 No. E13453
 Exp. 8-30-02

**BUILDING F SECOND FLOOR
 FIRE ALARM PLAN**

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

Project No.: 3184004
 Title: 1/2"=1'-0"
 Drawing No.: SKE-03
 NSP SC-11

HMC GROUP
 3125 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91764
 Telephone: 909-888-9878
 Fax: 909-455-1400



Don C. Gilman & Assoc., Inc.
 CONSULTING ELECTRICAL ENGINEERS
 2515 Wilshire Avenue
 Torrance, CA 90503
 Tel: 310-585-8222

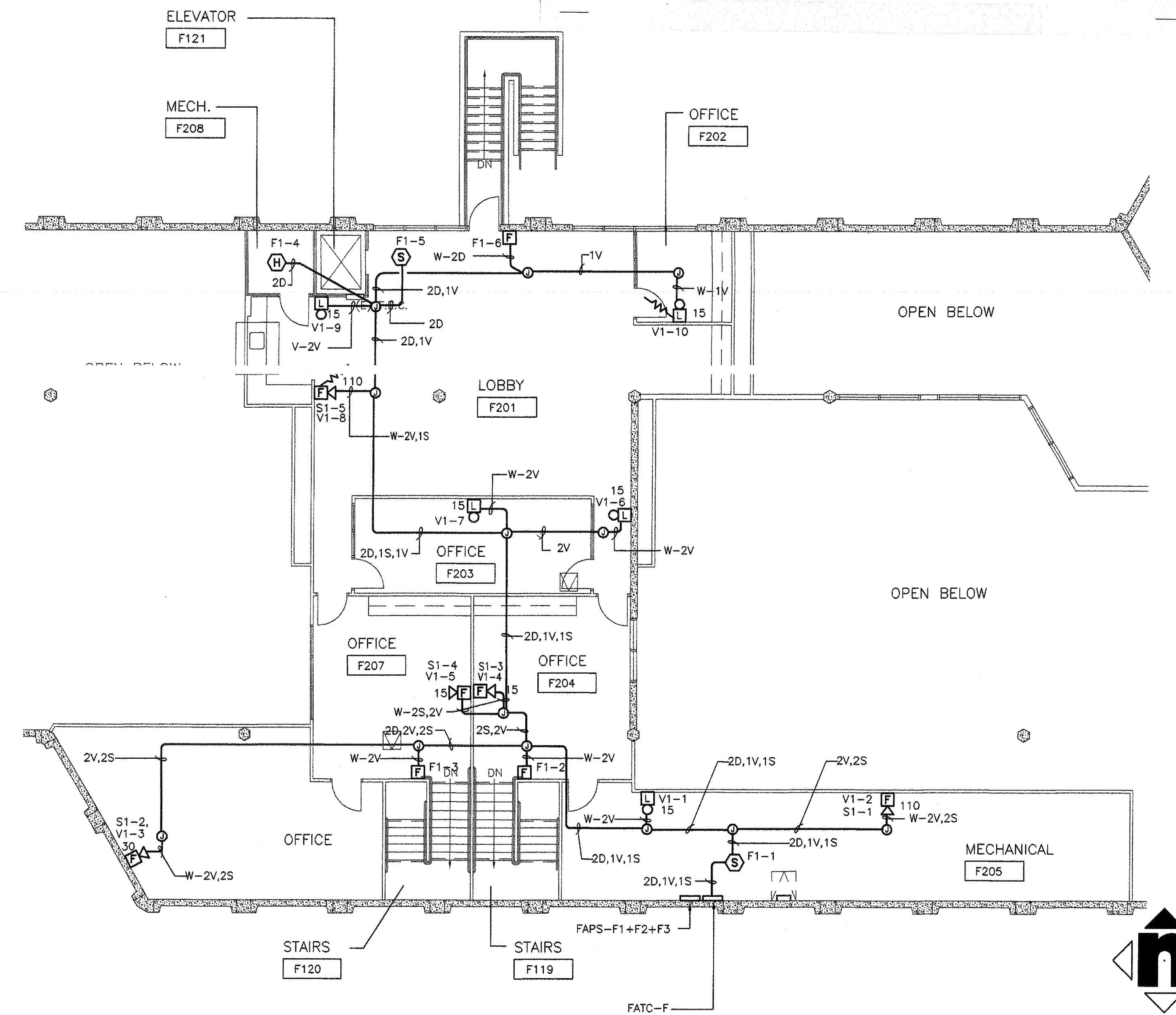
PROFESSIONAL ENGINEER
 No. E13453
 Exp. 8-30-02

**BUILDING F SECOND FLOOR
 FIRE ALARM PLAN**

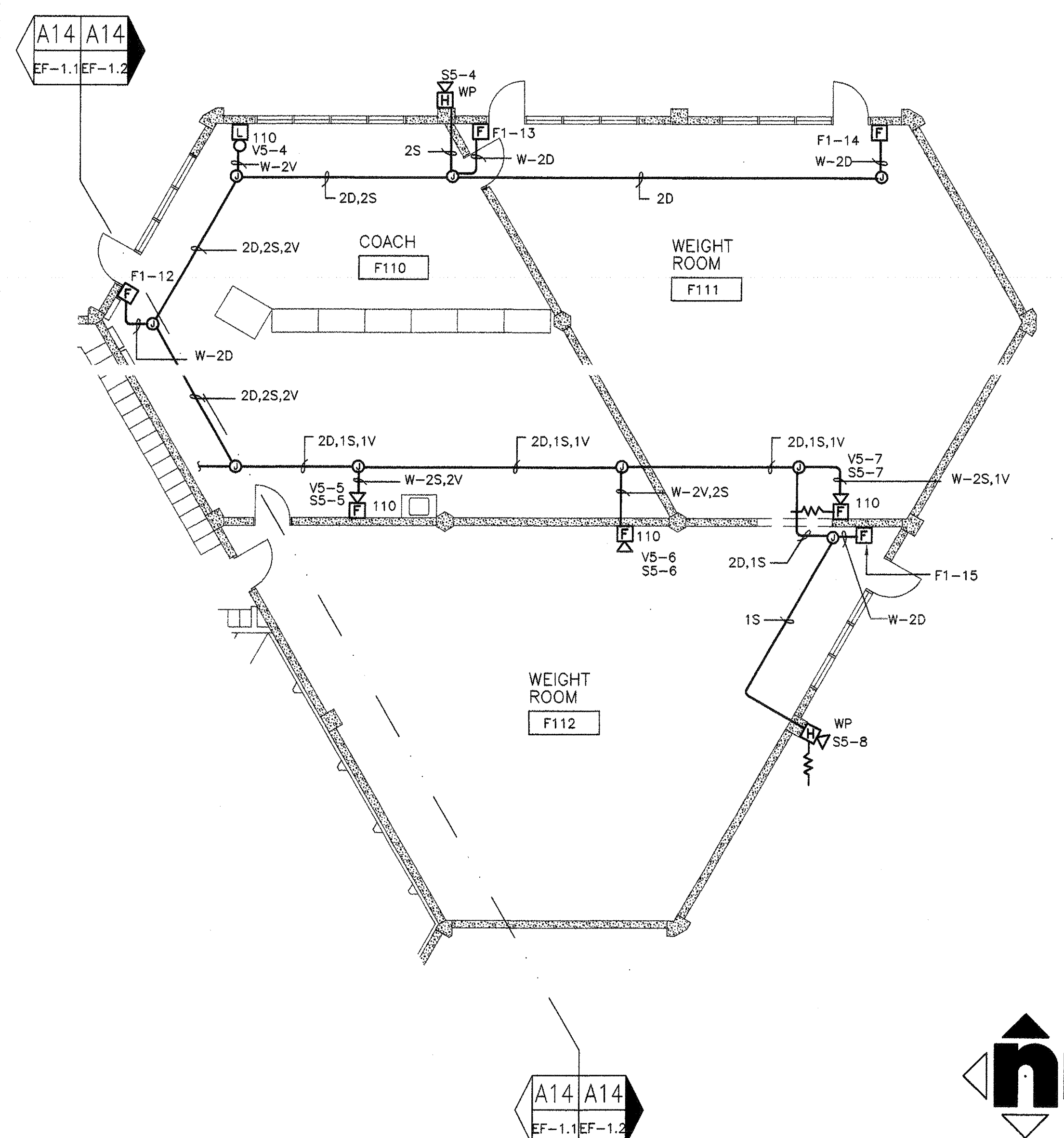
Scale: 1/8"=1'-0"

Project No.: 3184004
 Title: 1/2"=1'-0"
 Drawing No.: SKE-04
 NSP SC-11

HMC GROUP
 3125 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91764
 Telephone: 909-888-9878
 Fax: 909-455-1400



BUILDING F SECOND FLOOR FIRE ALARM PLAN A9
 1/8"=1'-0"



BUILDING F GROUND FLOOR FIRE ALARM PLAN - SEGMENT B A14
 1/8"=1'-0"

BATTERY CALCULATION

FAPS-F1 #4009 (BUILDING F)

QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
	EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	3	0.000	0.040	0.120
INDOOR HORNS	0	0.000	0.040	0.000
STROBE 15CD	6	0.000	0.095	0.570
STROBE 30CD	0	0.000	0.125	0.125
STROBE 110CD	0	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	2	0.000	0.111	0.222
COMBINATION STROBE/HORN, 30CD	1	0.000	0.141	0.141
COMBINATION STROBE/HORN, 110CD	13	0.000	0.236	3.068
TOTAL LOAD		0.067		4.349
		STAND-BY		ALARM
TOTAL LOAD		0.067		4.349
OPERATING HOUR		24		0.083
TOTAL AH		1.608		0.362
STAND-BY		1.608		
ALARM		0.362		
TOTAL AH		1.970		

SUPPLY 10AH BATTERY @ 24VDC

FAPS-F2 #4009 (BUILDING F)

QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
	EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	3	0.000	0.040	0.120
INDOOR HORNS	0	0.000	0.040	0.000
STROBE 15CD	4	0.000	0.095	0.380
STROBE 30CD	0	0.000	0.125	0.000
STROBE 110CD	1	0.000	0.220	0.220
COMBINATION STROBE/HORN, 15CD	3	0.000	0.111	0.333
COMBINATION STROBE/HORN, 30CD	1	0.000	0.141	0.141
COMBINATION STROBE/HORN, 110CD	9	0.000	0.236	2.124
TOTAL LOAD		0.067		3.421
		STAND-BY		ALARM
TOTAL LOAD		0.067		3.421
OPERATING HOUR		24		0.083
TOTAL AH		1.608		0.285
STAND-BY		1.608		
ALARM		0.285		
TOTAL AH		1.893		

SUPPLY 10AH BATTERY @ 24VDC

FAPS-F3 #4009 (BUILDING F)

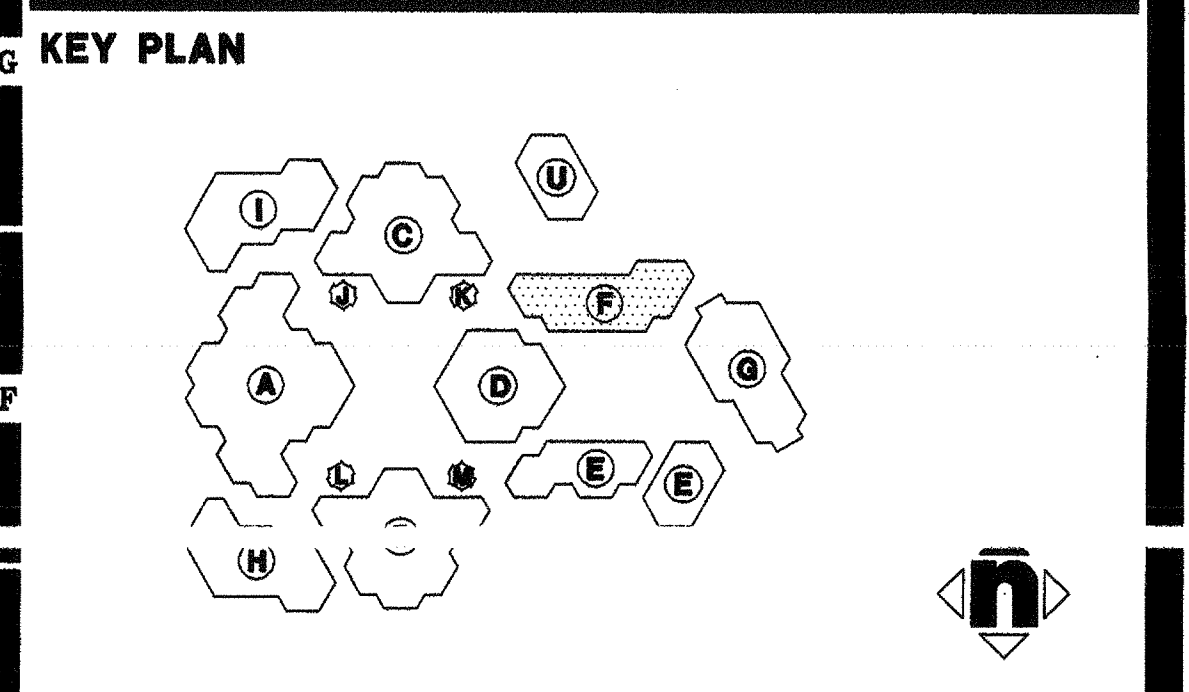
QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
	EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	0	0.000	0.040	0.000
INDOOR HORNS	0	0.000	0.040	0.000
STROBE 15CD	5	0.000	0.095	0.475
STROBE 30CD	0	0.000	0.125	0.000
STROBE 110CD	0	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	2	0.000	0.111	0.222
COMBINATION STROBE/HORN, 30CD	1	0.000	0.141	0.141
COMBINATION STROBE/HORN, 110CD	2	0.000	0.236	0.472
TOTAL LOAD		0.067		1.413
		STAND-BY		ALARM
TOTAL LOAD		0.067		1.413
OPERATING HOUR		24		0.083
TOTAL AH		1.608		0.118
STAND-BY		1.608		
ALARM		0.118		
TOTAL AH		1.726		

SUPPLY 10AH BATTERY @ 24VDC

HMC GROUP
 3270 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91764
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 PER DSA POLICY #95-03(FLS)



Consultant's Seal

PROFESSIONAL ENGINEER
 No. 18001
 Exp. 8-30-03

FILE No. 30-H15
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE 8/6/01
 REVISED

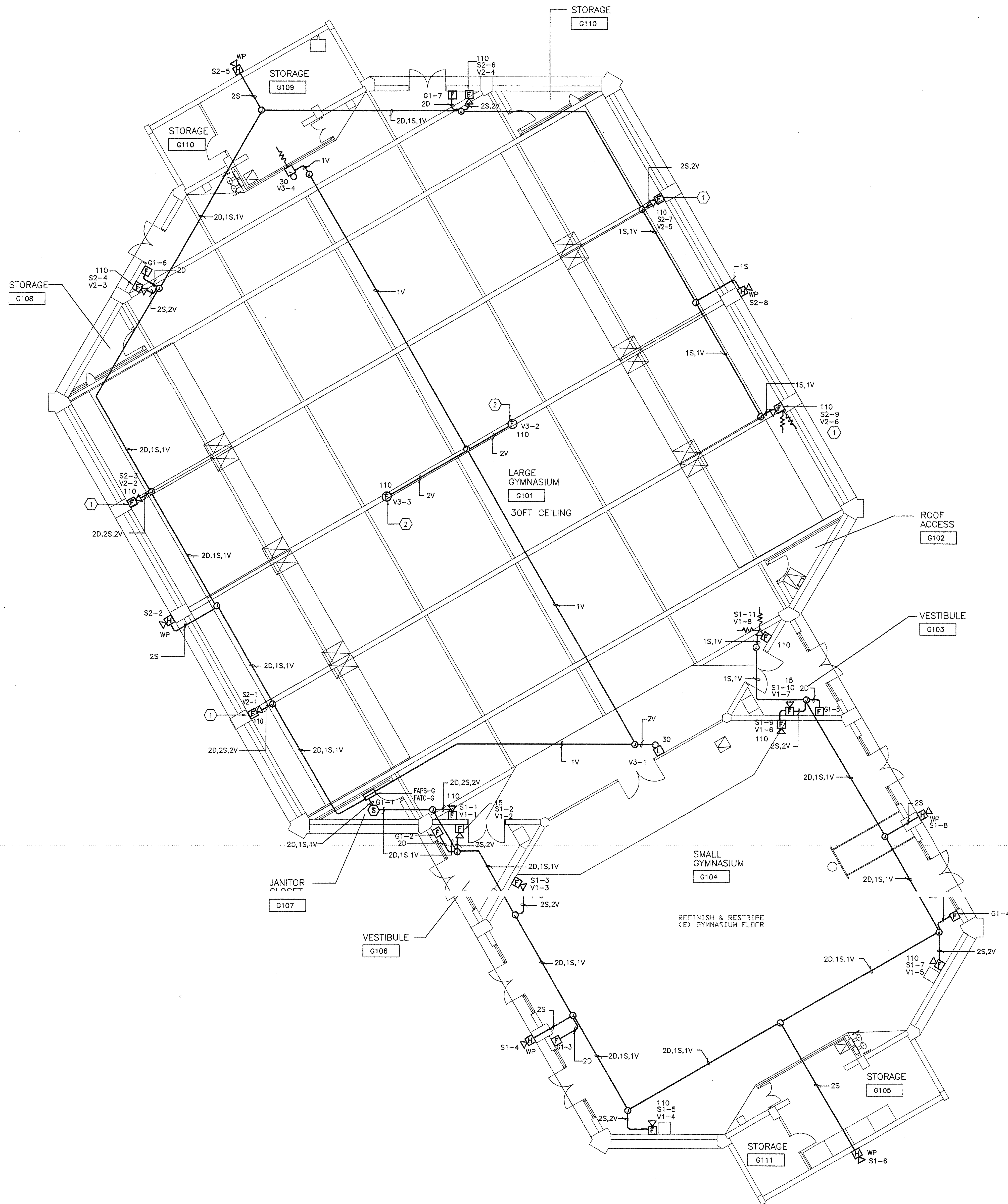
**IRVINE HIGH SCHOOL
 MODERNIZATION**
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
**BUILDING F FIRE ALARM PLAN -
 SEGMENT B & SECOND FLOOR**

Architect's Seal
REGISTERED ARCHITECT
 No. C-20601
 Exp. 3-31-05

Designed: Project No. 3184004
 Scale: 1/8"=1'-0"
 Drawn: Scale 1/8"=1'-0"
 Checked: Drawing No.
 Reviewed: **EF-1.2**
 Date: 04/23/01



VOLTAGE DROP CALCULATION

(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-G)

CIRCUIT LENGTH (#12AWG)	=	450'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS	0.040 (EA) X 3	= 0.120
INDOOR HORNS	0.040 (EA) X 8	= 0.320
TOTAL CIRCUIT LOAD		= 0.440

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}}$ = 2.73 %

CIRCUIT #S2 (FAPS-G)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS	0.040 (EA) X 3	= 0.120
INDOOR HORNS	0.040 (EA) X 6	= 0.240
TOTAL CIRCUIT LOAD		= 0.360

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}}$ = 1.98 %

VOLTAGE DROP CALCULATION

(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-G)

CIRCUIT LENGTH (#12AWG)	=	450'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 2	= 0.190
30CD STROBE OR STROBE/HORN	0.125 (EA) X 0	= 0.000
110CD STROBE OR STROBE/HORN	0.220 (EA) X 6	= 1.320
TOTAL CIRCUIT LOAD		= 1.510

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}}$ = 9.36 %

CIRCUIT #V2 (FAPS-G)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 0	= 0.000
30CD STROBE OR STROBE/HORN	0.125 (EA) X 0	= 0.000
110CD STROBE OR STROBE/HORN	0.220 (EA) X 6	= 1.320
TOTAL CIRCUIT LOAD		= 1.320

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}}$ = 7.28 %

CIRCUIT #V3 (FAPS-G)

CIRCUIT LENGTH (#12AWG)	=	460'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 0	= 0.000
30CD STROBE OR STROBE/HORN	0.125 (EA) X 2	= 0.250
110CD STROBE OR STROBE/HORN	0.220 (EA) X 2	= 0.440
TOTAL CIRCUIT LOAD		= 0.690

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}}$ = 4.12 %

BATTERY CALCULATION

FAPS-B #4009 - BUILDING G	QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
		EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	2	0.037	0.074	0.073	0.146
WP HORNS	6	0.000	0.000	0.065	0.390
INDOOR HORNS	9	0.000	0.000	0.016	0.000
STROBE, 15CD	3	0.000	0.000	0.095	0.285
STROBE, 30CD	1	0.000	0.000	0.125	0.125
STROBE, 110CD	0	0.000	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	2	0.000	0.000	0.111	0.222
COMBINATION STROBE/HORN, 30CD	0	0.000	0.000	0.141	0.000
COMBINATION STROBE/HORN, 110CD	8	0.000	0.000	0.236	1.888
TOTAL LOAD			0.104		3.086
TOTAL LOAD			0.104		3.086
OPERATING HOUR			24		0.083
TOTAL AH			2.496		0.256
STAND-BY			2.496		
ALARM			0.256		
TOTAL AH			4.720		

SUPPLY 10AH BATTERY @ 24VDC

HMC GROUP
 3270 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91764
 Telephone: 909-989-9979
 Fax: 909-453-1400

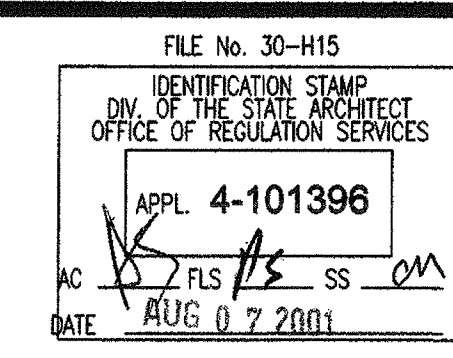
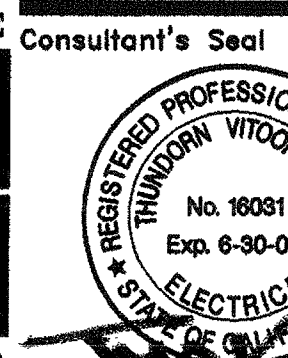
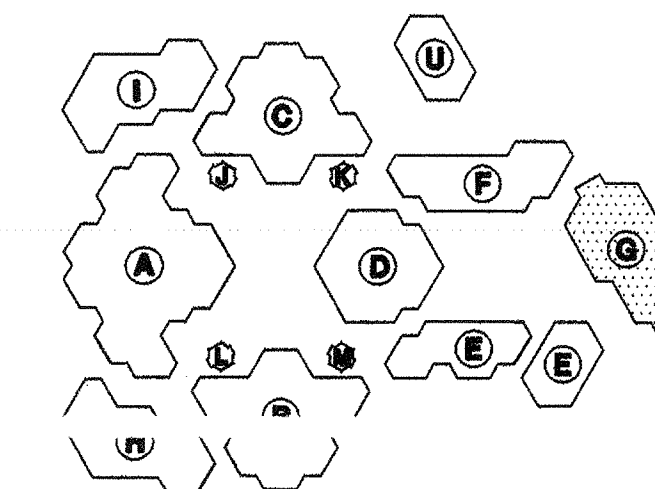
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SPECIFIC NOTES

- ① +80" ABOVE BLEACHER
- ② COORDINATE WITH ARCHITECT FOR CEILING MOUNTINGS.

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #96-03(FLS)

KEY PLAN

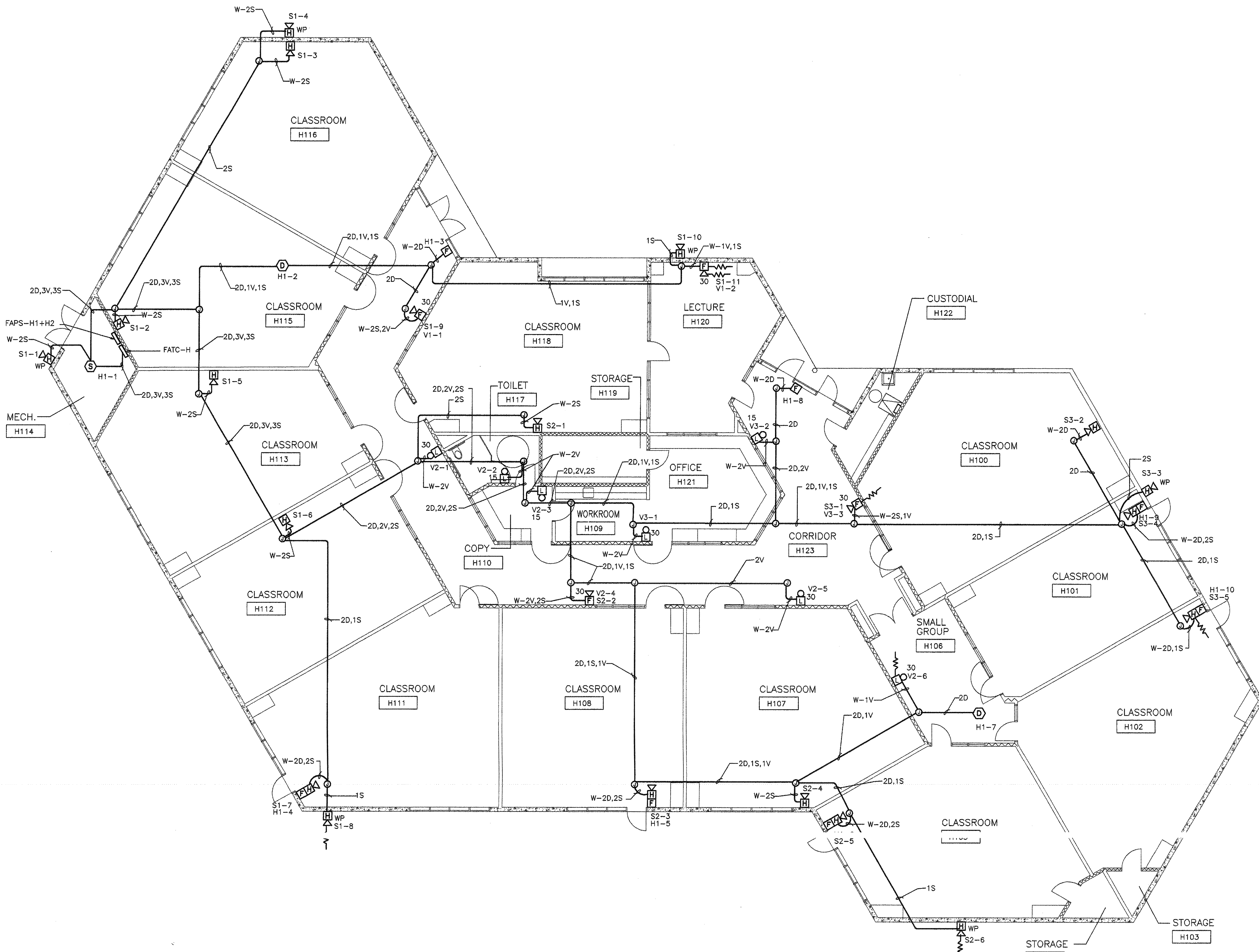


IRVINE HIGH SCHOOL
 MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING G FIRE ALARM PLAN

Architect's Seal: **KEVIN M. WILKERSON**, No. C-20601, State of California
 Designed: **TV**, Project No: **3184004**
 Drawn: **TV**, Scale: **1/8"=1'-0"**
 Checked: **TV**, Drawing No: **EG-1.1**
 Reviewed: **TV**
 Date: **04/23/01**



VOLTAGE DROP CALCULATION (HORN CIRCUITS)

CIRCUIT #S1 (FAPS-H1)

CIRCUIT LENGTH (#12AWG)	=	570'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS	0.040 (EA) X 4	= 0.160
INDOOR HORNS	0.040 (EA) X 7	= 0.280
TOTAL CIRCUIT LOAD		= 0.440

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 3.46\%$

CIRCUIT #S2 (FAPS-H1)

CIRCUIT LENGTH (#12AWG)	=	380'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS	0.040 (EA) X 1	= 0.040
INDOOR HORNS	0.040 (EA) X 5	= 0.200
TOTAL CIRCUIT LOAD		= 0.240

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.26\%$

CIRCUIT #S3 (FAPS-H2)

CIRCUIT LENGTH (#12AWG)	=	180'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS	0.040 (EA) X 1	= 0.040
INDOOR HORNS	0.040 (EA) X 4	= 0.160
TOTAL CIRCUIT LOAD		= 0.200

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.50\%$

VOLTAGE DROP CALCULATION (STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-H1)

CIRCUIT LENGTH (#12AWG)	=	200'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 1	= 0.095
300D STROBE OR STROBE/HORN	0.125 (EA) X 2	= 0.250
110CD STROBE OR STROBE/HORN	0.220 (EA) X 0	= 0.000
TOTAL CIRCUIT LOAD		= 0.345

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.95\%$

CIRCUIT #V2 (FAPS-H1)

CIRCUIT LENGTH (#12AWG)	=	520'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 3	= 0.285
300D STROBE OR STROBE/HORN	0.125 (EA) X 3	= 0.375
110CD STROBE OR STROBE/HORN	0.220 (EA) X 0	= 0.000
TOTAL CIRCUIT LOAD		= 0.660

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 4.73\%$

CIRCUIT #V3 (FAPS-H2)

CIRCUIT LENGTH (#12AWG)	=	280'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN	0.095 (EA) X 1	= 0.095
300D STROBE OR STROBE/HORN	0.125 (EA) X 2	= 0.250
110CD STROBE OR STROBE/HORN	0.220 (EA) X 0	= 0.000
TOTAL CIRCUIT LOAD		= 0.345

VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.33\%$

BATTERY CALCULATION

FAPS-H1 #4009 (BUILDING H)

QUANTITY	SUPERVISORY CURRENT EACH UNIT	TOTAL SUPERVISORY CURRENT	ALARM CURRENT EACH UNIT	TOTAL ALARM CURRENT
POWER SUPPLY	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	0.037	0.037	0.073	0.073
WP HORNS	0.000	0.000	0.040	0.200
INDOOR HORNS	0.000	0.000	0.040	0.350
STROBE, 15CD	0.000	0.000	0.095	0.285
STROBE, 30CD	0.000	0.000	0.125	0.250
STROBE, 110CD	0.000	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	0.000	0.141	0.423	0.000
COMBINATION STROBE/HORN, 110CD	0.000	0.236	0.000	0.000
TOTAL LOAD		0.067		1.621

TOTAL LOAD	STAND-BY	ALARM
0.067	1.608	1.621
OPERATING HOUR	24	0.083
TOTAL AH	1.608	0.135

SUPPLY 10AH BATTERY @ 24VDC

FAPS-H2 #4009 (BUILDING H)

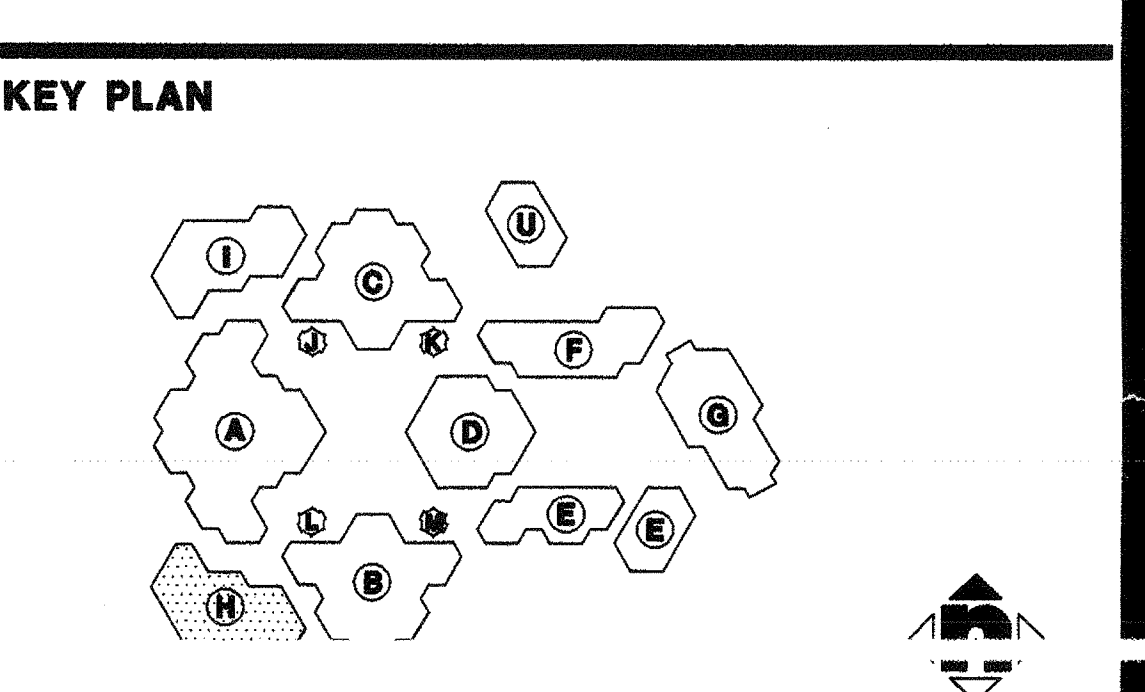
QUANTITY	SUPERVISORY CURRENT EACH UNIT	TOTAL SUPERVISORY CURRENT	ALARM CURRENT EACH UNIT	TOTAL ALARM CURRENT
POWER SUPPLY	0.030	0.030	0.030	0.030
4 CIRCUIT CARD	0.037	0.037	0.073	0.073
WP HORNS	0.000	0.000	0.040	0.040
INDOOR HORNS	0.000	0.000	0.040	0.120
STROBE, 15CD	0.000	0.000	0.095	0.095
STROBE, 30CD	0.000	0.000	0.125	0.125
STROBE, 110CD	0.000	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	0.000	0.111	0.000	0.000
COMBINATION STROBE/HORN, 30CD	0.000	0.141	0.423	0.000
COMBINATION STROBE/HORN, 110CD	0.000	0.236	0.000	0.000
TOTAL LOAD		0.067		0.624

TOTAL LOAD	STAND-BY	ALARM
0.067	1.608	0.624
OPERATING HOUR	24	0.083
TOTAL AH	1.608	0.052

SUPPLY 10AH BATTERY @ 24VDC

HMC GROUP
 3270 INLAND EMPIRE BLVD.
 ONTARIO, CALIFORNIA 91704
 Telephone: 909-989-9079
 Fax: 909-483-1400

COMPLETE PLAN SUBMITTAL PER DSA POLICY #95-03(FLS)



Consultant's Seal
 IRVINE HIGH SCHOOL MODERNIZATION
 No. 16091
 Exp. 6-30-08
 DATE: AUG 07 2001

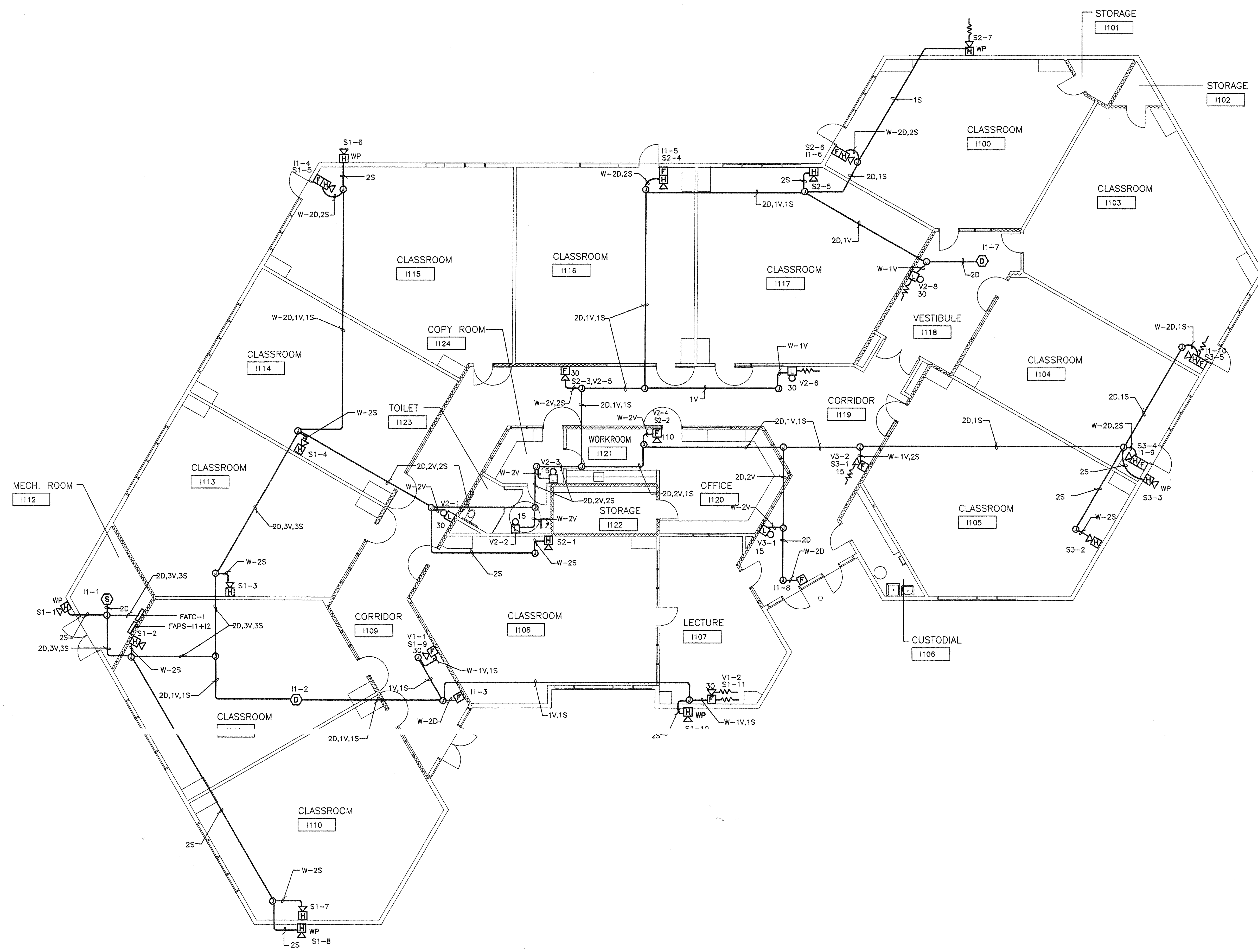
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 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

BUILDING H FIRE ALARM PLAN

Architect's Seal: **KEVIN M. WILKES**, No. C-20601, State of California

Designed: Project No. 3184004
 Drawn: Scale 1/8"=1'-0"
 Checked: TV
 Reviewed: Drawing No. **EH-1.1**
 Date: 04/23/01



VOLTAGE DROP CALCULATION (HORN CIRCUITS)

CIRCUIT #S1 (FAPS-11)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS 0.040 (EA)	X	4 = 0.160
INDOOR HORNS 0.040 (EA)	X	7 = 0.280
TOTAL CIRCUIT LOAD	=	0.440

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 2.42\%$$

CIRCUIT #S2 (FAPS-11)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS 0.040 (EA)	X	1 = 0.040
INDOOR HORNS 0.040 (EA)	X	6 = 0.240
TOTAL CIRCUIT LOAD	=	0.280

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.54\%$$

CIRCUIT #S3 (FAPS-12)

CIRCUIT LENGTH (#12AWG)	=	300'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
WP HORNS 0.040 (EA)	X	1 = 0.040
INDOOR HORNS 0.040 (EA)	X	4 = 0.160
TOTAL CIRCUIT LOAD	=	0.200

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.83\%$$

VOLTAGE DROP CALCULATION (STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-11)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN 0.095 (EA)	X	0 = 0.000
30CD STROBE OR STROBE/HORN 0.125 (EA)	X	2 = 0.250
110CD STROBE OR STROBE/HORN 0.220 (EA)	X	0 = 0.000
TOTAL CIRCUIT LOAD	=	0.250

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.38\%$$

CIRCUIT #V2 (FAPS-11)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN 0.095 (EA)	X	2 = 0.190
30CD STROBE OR STROBE/HORN 0.125 (EA)	X	3 = 0.375
110CD STROBE OR STROBE/HORN 0.220 (EA)	X	1 = 0.220
TOTAL CIRCUIT LOAD	=	0.785

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 4.33\%$$

CIRCUIT #V3 (FAPS-12)

CIRCUIT LENGTH (#12AWG)	=	400'
CIRCUIT VOLTAGE	=	24
CIRCUIT LOAD:		
15CD STROBE OR STROBE/HORN 0.095 (EA)	X	2 = 0.190
30CD STROBE OR STROBE/HORN 0.125 (EA)	X	0 = 0.000
110CD STROBE OR STROBE/HORN 0.220 (EA)	X	0 = 0.000
TOTAL CIRCUIT LOAD	=	0.190

$$\text{VOLTAGE DROP} = \frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.05\%$$

BATTERY CALCULATION

FAPS-11 #4009 (BUILDING I)

QUANTITY	EACH UNIT	TOTAL	ALARM CURRENT	ALARM CURRENT
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	5	0.000	0.040	0.200
INDOOR HORNS	9	0.000	0.040	0.360
STROBE, 15CD	2	0.000	0.095	0.190
STROBE, 30CD	2	0.000	0.125	0.250
STROBE, 110CD	0	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000
COMBINATION STROBE/HORN, 30CD	3	0.000	0.141	0.423
COMBINATION STROBE/HORN, 110CD	0	0.000	0.236	0.000
TOTAL LOAD		0.067		1.526

TOTAL LOAD	STAND-BY	ALARM
0.067	0.067	1.526
OPERATING HOUR	24	0.083
TOTAL AH	1.608	1.127

STAND-BY 1.608
ALARM 0.127
TOTAL AH 1.735

SUPPLY 10AH BATTERY @ 24VDC

FAPS-12 #4009 (BUILDING I)

QUANTITY	EACH UNIT	TOTAL	ALARM CURRENT	ALARM CURRENT
POWER SUPPLY	1	0.030	0.030	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073
WP HORNS	3	0.000	0.040	0.040
INDOOR HORNS	3	0.000	0.040	0.120
STROBE, 15CD	1	0.000	0.095	0.095
STROBE, 30CD	0	0.000	0.125	0.000
STROBE, 110CD	0	0.000	0.220	0.000
COMBINATION STROBE/HORN, 15CD	1	0.000	0.111	0.111
COMBINATION STROBE/HORN, 30CD	0	0.000	0.141	0.000
COMBINATION STROBE/HORN, 110CD	0	0.000	0.236	0.000
TOTAL LOAD		0.067		0.469

TOTAL LOAD	STAND-BY	ALARM
0.067	0.067	0.469
OPERATING HOUR	24	0.083
TOTAL AH	1.608	0.039

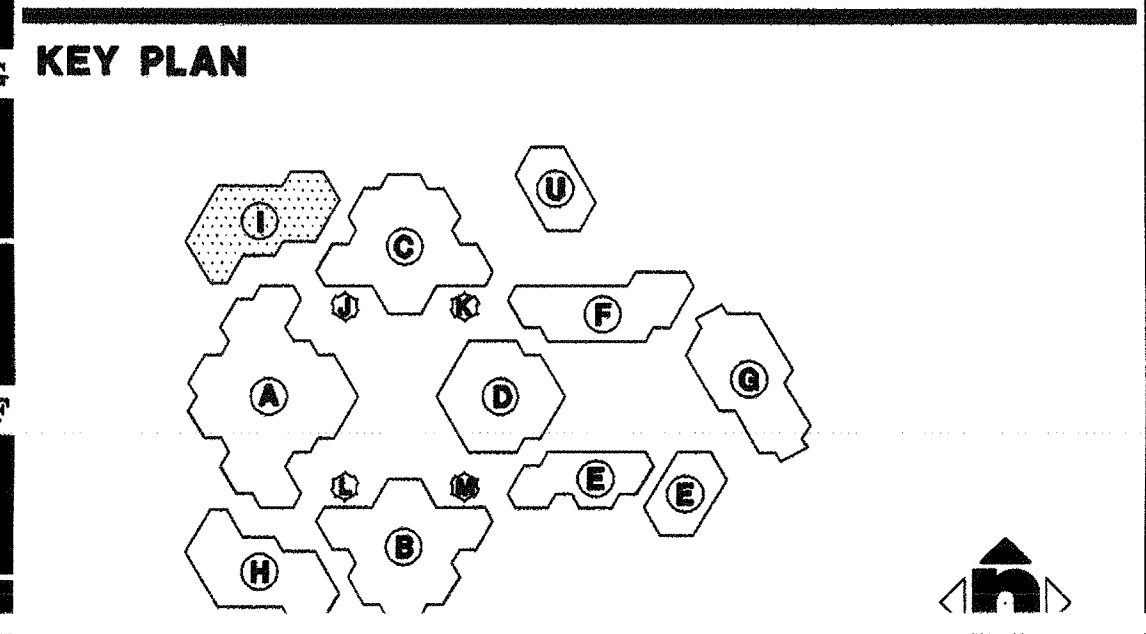
STAND-BY 1.608
ALARM 0.039
TOTAL AH 1.647

SUPPLY 10AH BATTERY @ 24VDC

HMC HMC GROUP
3270 INLAND EMPIRE BLVD.
ONTARIO, CALIFORNIA 91764
Telephone: 909-989-9979
Fax: 909-489-1400

Architecture • Interiors • Planning

COMPLETE PLAN SUBMITTAL
PER DSA POLICY #95-03/FLS



Consultant's Seal
No. 19081
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

FILE No. 30-115
DIVISION OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. 4-101396
DATE AUG 07 2001

IRVINE HIGH SCHOOL MODERNIZATION
4321 WALNUT AVENUE
IRVINE, CA 92604-2239
IRVINE UNIFIED SCHOOL DISTRICT

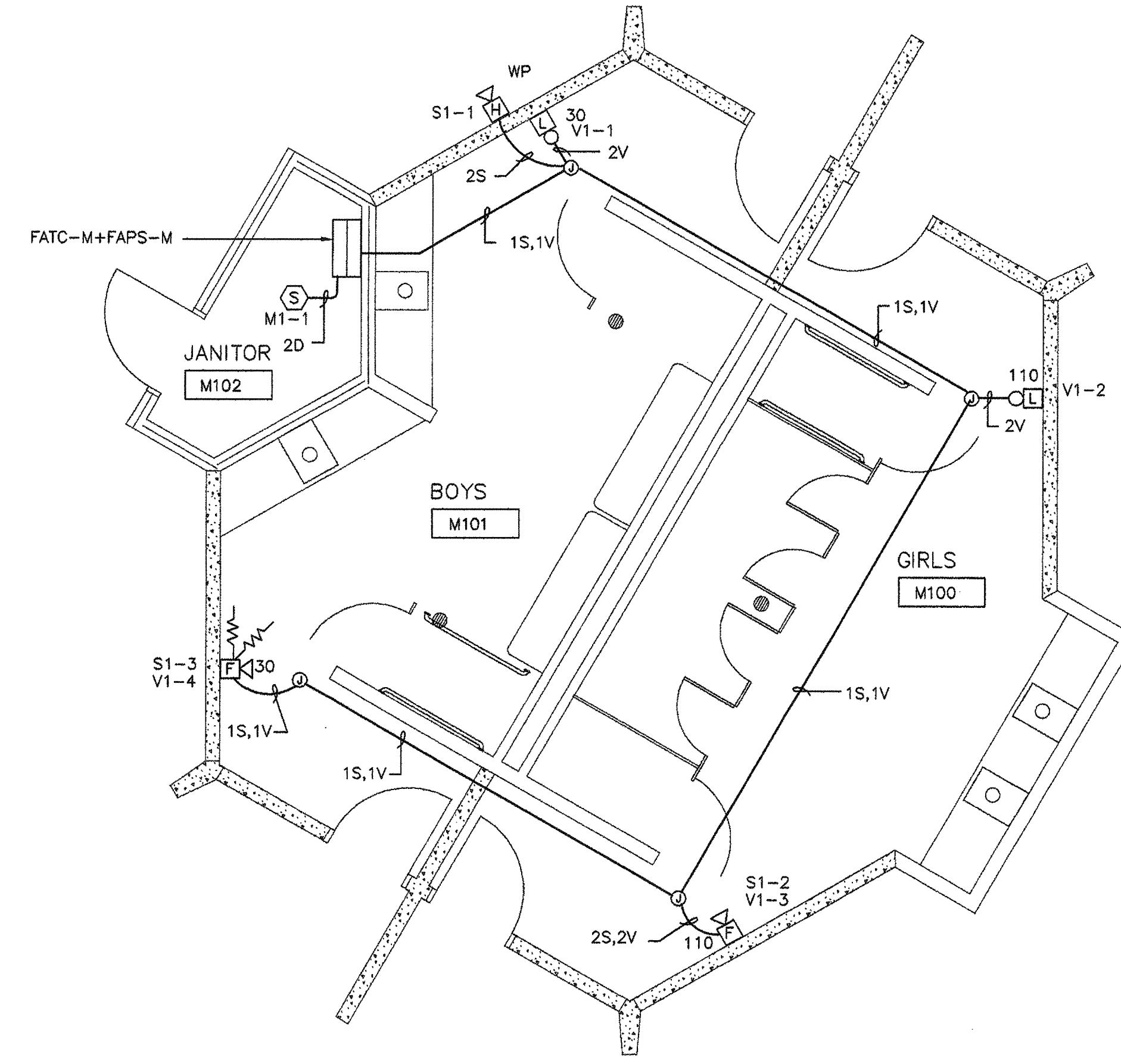
No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING I FIRE ALARM PLAN

Architect's Seal
DESIGNED PROFESSIONAL ENGINEER
No. C-20801
STATE OF CALIFORNIA

Designed
Project No. 3184004
Scale 1/8"=1'-0"
Checked
Drawing No.
Reviewed
Date 04/23/01

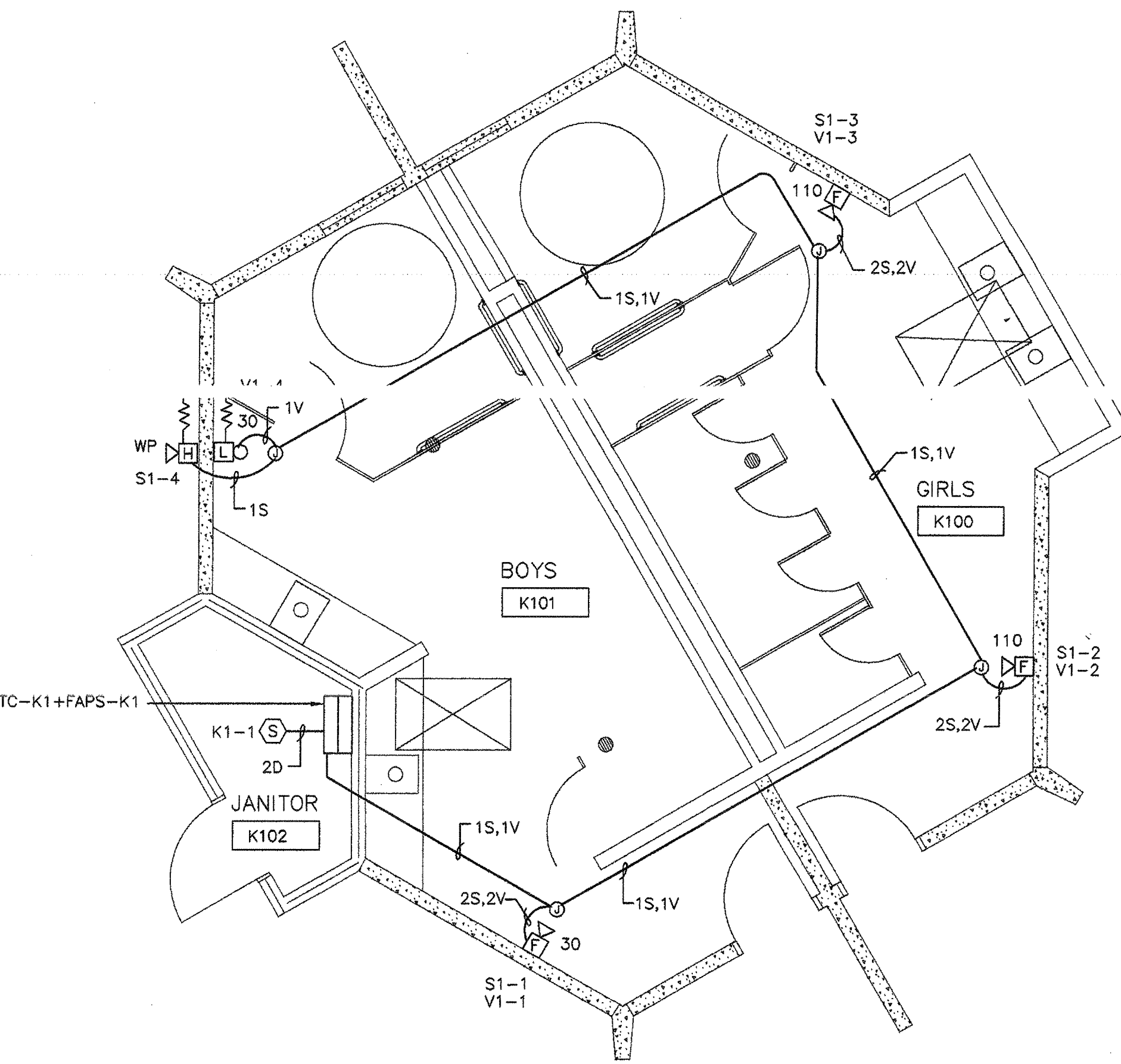
EI-1.1



TOILET BUILDING M FIRE ALARM PLAN

J14

1/4"=1'-0"



TOILET BUILDING K FIRE ALARM PLAN

A14

1/4"=1'-0"

VOLTAGE DROP CALCULATION
(HORN CIRCUITS)

CIRCUIT #S1 (FAPS-K)	
CIRCUIT LENGTH (#12AWG)	= 150'
CIRCUIT VOLTAGE	= 24
CIRCUIT LOAD:	
WP HORNS	0.040 (EA) X 1 = 0.040
INDOOR HORNS	0.040 (EA) X 3 = 0.120
TOTAL CIRCUIT LOAD	= 0.160
VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.33\%$	
CIRCUIT #S1 (FAPS-M)	
CIRCUIT LENGTH (#12AWG)	= 150'
CIRCUIT VOLTAGE	= 24
CIRCUIT LOAD:	
WP HORNS	0.040 (EA) X 1 = 0.040
INDOOR HORNS	0.040 (EA) X 2 = 0.080
TOTAL CIRCUIT LOAD	= 0.120
VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 0.25\%$	

VOLTAGE DROP CALCULATION
(STROBE CIRCUITS)

CIRCUIT #V1 (FAPS-K)	
CIRCUIT LENGTH (#12AWG)	= 150'
CIRCUIT VOLTAGE	= 24
CIRCUIT LOAD:	
150CD STROBE OR STROBE/HORN	0.095 (EA) X 0 = 0.000
300CD STROBE OR STROBE/HORN	0.125 (EA) X 2 = 0.250
110CD STROBE OR STROBE/HORN	0.220 (EA) X 2 = 0.440
TOTAL CIRCUIT LOAD	= 0.690
VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.43\%$	
CIRCUIT #V1 (FAPS-M)	
CIRCUIT LENGTH (#12AWG)	= 150'
CIRCUIT VOLTAGE	= 24
CIRCUIT LOAD:	
150CD STROBE OR STROBE/HORN	0.095 (EA) X 0 = 0.000
300CD STROBE OR STROBE/HORN	0.125 (EA) X 2 = 0.250
110CD STROBE OR STROBE/HORN	0.220 (EA) X 2 = 0.440
TOTAL CIRCUIT LOAD	= 0.690
VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR MIL} \times \text{CIRCUIT VOLTAGE}} = 1.43\%$	

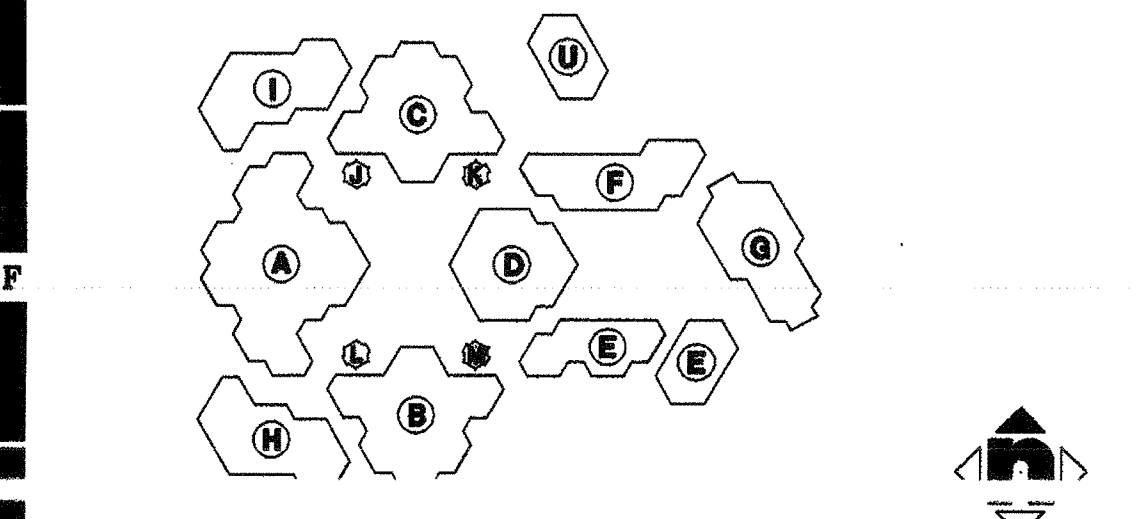
BATTERY CALCULATION

FAPS-K #4009 (BUILDING K)			
	QUANTITY	SUPERVISORY CURRENT	ALARM CURRENT
		EACH UNIT	TOTAL
POWER SUPPLY	1	0.0301	0.0301
4 CIRCUIT CARD	1	0.037	0.037
WP HORNS	1	0.000	0.040
INDOOR HORNS	0	0.000	0.040
STROBE, 150CD	0	0.000	0.095
STROBE, 300CD	1	0.000	0.125
STROBE, 110CD	0	0.000	0.220
COMBINATION STROBE/HORN, 150CD	0	0.000	0.111
COMBINATION STROBE/HORN, 300CD	1	0.000	0.141
COMBINATION STROBE/HORN, 110CD	2	0.000	0.236
TOTAL LOAD		0.067	0.881
TOTAL LOAD		STAND-BY	ALARM
TOTAL LOAD		0.067	0.881
OPERATING HOUR		24	0.083
TOTAL AH		1.608	0.073
STAND-BY		1.608	
ALARM		0.073	
TOTAL AH		1.681	
SUPPLY 10AH BATTERY @ 24VDC			

FAPS-M #4009 (BUILDING M)			
	QUANTITY	SUPERVISORY CURRENT	ALARM CURRENT
		EACH UNIT	TOTAL
POWER SUPPLY	1	0.0301	0.0301
4 CIRCUIT CARD	1	0.037	0.037
WP HORNS	1	0.000	0.040
INDOOR HORNS	0	0.000	0.040
STROBE, 150CD	0	0.000	0.095
STROBE, 300CD	1	0.000	0.125
STROBE, 110CD	0	0.000	0.220
COMBINATION STROBE/HORN, 150CD	0	0.000	0.111
COMBINATION STROBE/HORN, 300CD	1	0.000	0.141
COMBINATION STROBE/HORN, 110CD	1	0.000	0.236
TOTAL LOAD		0.067	0.865
TOTAL LOAD		STAND-BY	ALARM
TOTAL LOAD		0.067	0.865
OPERATING HOUR		24	0.083
TOTAL AH		1.608	0.072
STAND-BY		1.608	
ALARM		0.072	
TOTAL AH		1.680	
SUPPLY 10AH BATTERY @ 24VDC			

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN



Consultant's Seal

FILE NO. 30-H15
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 AUG 17 2001
 REVISED

IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No.	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

TOILET BUILDING M & K FIRE ALARM PLAN

Architect's Seal

DESIGNED: Project No. 3184004
 DRAWN: Scale 1/8"=1'-0"
 CHECKED: TV
 REVIEWED: EK-1.1
 DATE: 04/23/01

VOLTAGE DROP CALCULATION
(HORN CIRCUIT)

CIRCUIT #S1 (FAPS-U)
 CIRCUIT LENGTH (#12AWG) = 300'
 CIRCUIT VOLTAGE = 24
 CIRCUIT LOAD:
 WP HORNS 0.040 (EA) X 2 = 0.080
 INDOOR HORNS 0.040 (EA) X 3 = 0.120
 TOTAL CIRCUIT LOAD = 0.200
 VOLTAGE DROP = $\frac{\text{AMP} \times \text{LENGTH} \times 21.6 \times 100}{\text{CONDUCTOR CIR. MIL} \times \text{CIRCUIT VOLTAGE}} = 0.83\%$

BATTERY CALCULATION

FAPS-U #4009 (BUILDING U)	QUANTITY	SUPERVISORY CURRENT		ALARM CURRENT	
		EACH UNIT	TOTAL	EACH UNIT	TOTAL
POWER SUPPLY	1	0.0301	0.030	0.0301	0.030
4 CIRCUIT CARD	1	0.037	0.037	0.073	0.073
WP HORNS	2	0.000	0.040	0.080	
INDOOR HORNS	3	0.000	0.040	0.120	
STROBE, 15CD	0	0.000	0.000	0.000	
STROBE, 30CD	0	0.000	0.125	0.000	
STROBE, 110CD	0	0.000	0.220	0.000	
COMBINATION STROBE/HORN, 15CD	0	0.000	0.111	0.000	
COMBINATION STROBE/HORN, 30CD	0	0.000	0.141	0.000	
COMBINATION STROBE/HORN, 110CD	0	0.000	0.236	0.000	
TOTAL LOAD			0.067		0.303
			STAND-BY		ALARM
			0.067		0.303
			OPERATING HOUR		24
			1.608		0.083
			TOTAL AH		0.025
			STAND-BY	1.608	
			ALARM	0.025	
			TOTAL AH	1.633	

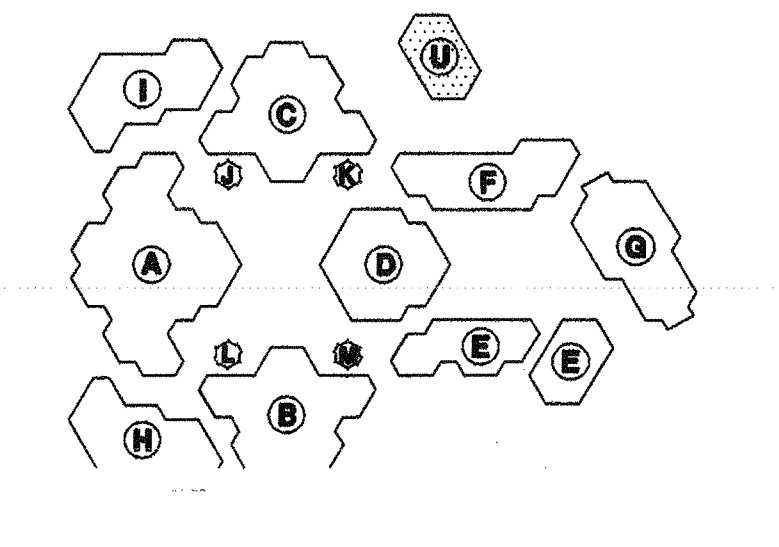
SUPPLY 10AH BATTERY @ 24VDC

SPECIFIC NOTES

① DEVICE SUITABLE FOR DAMP LOCATION.

COMPLETE PLAN SUBMITTAL
 PER DSA POLICY #95-03(FLS)

KEY PLAN



Consultant's Seal

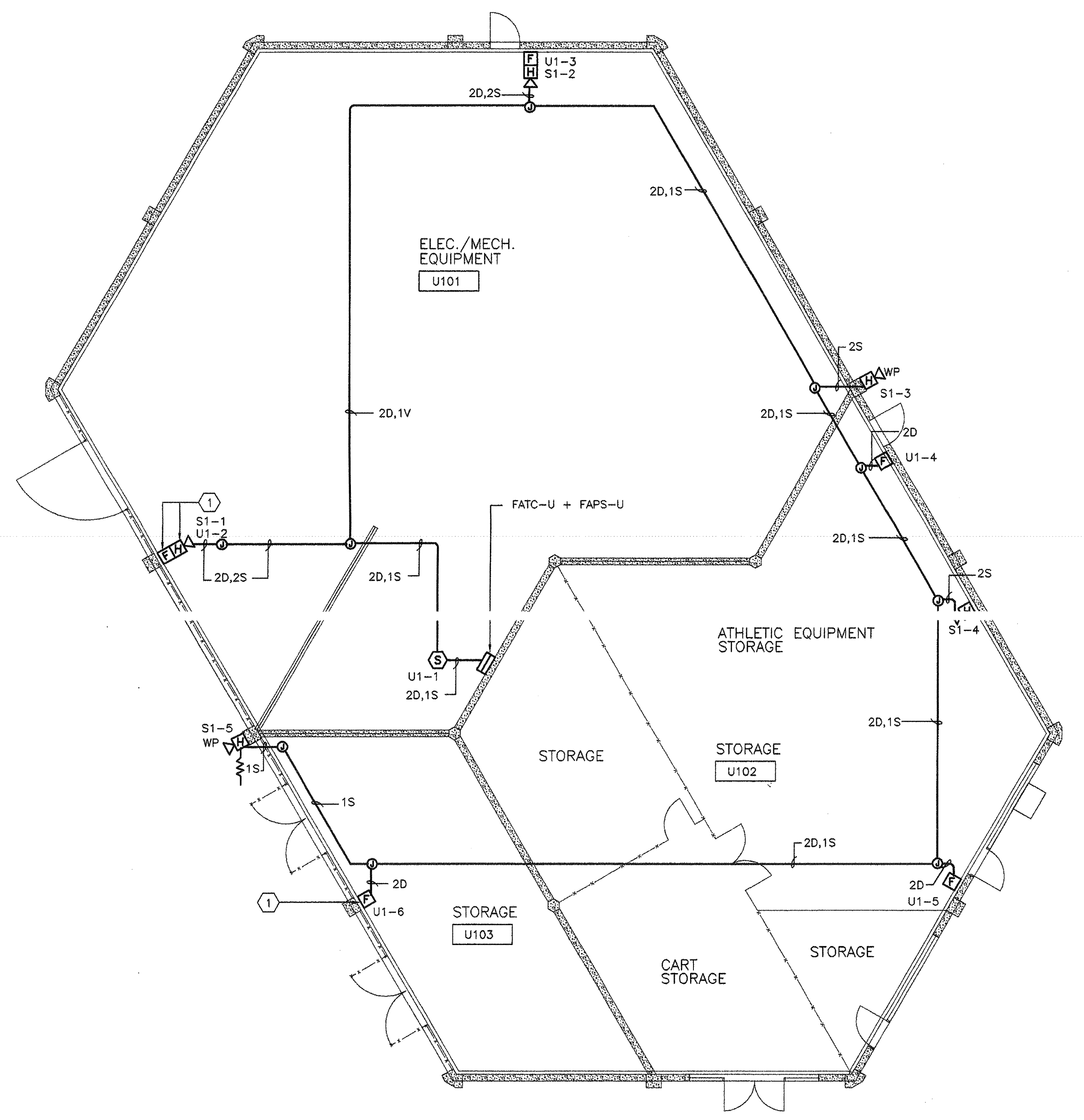
FILE No. 30-115
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 No. 10891
 Exp. 6-30-09
 APPL. 4-101396
 FLS SS
 DATE AUG 07 2001
REVISED

IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/08/01

Drawing Title
BUILDING U FIRE ALARM PLAN

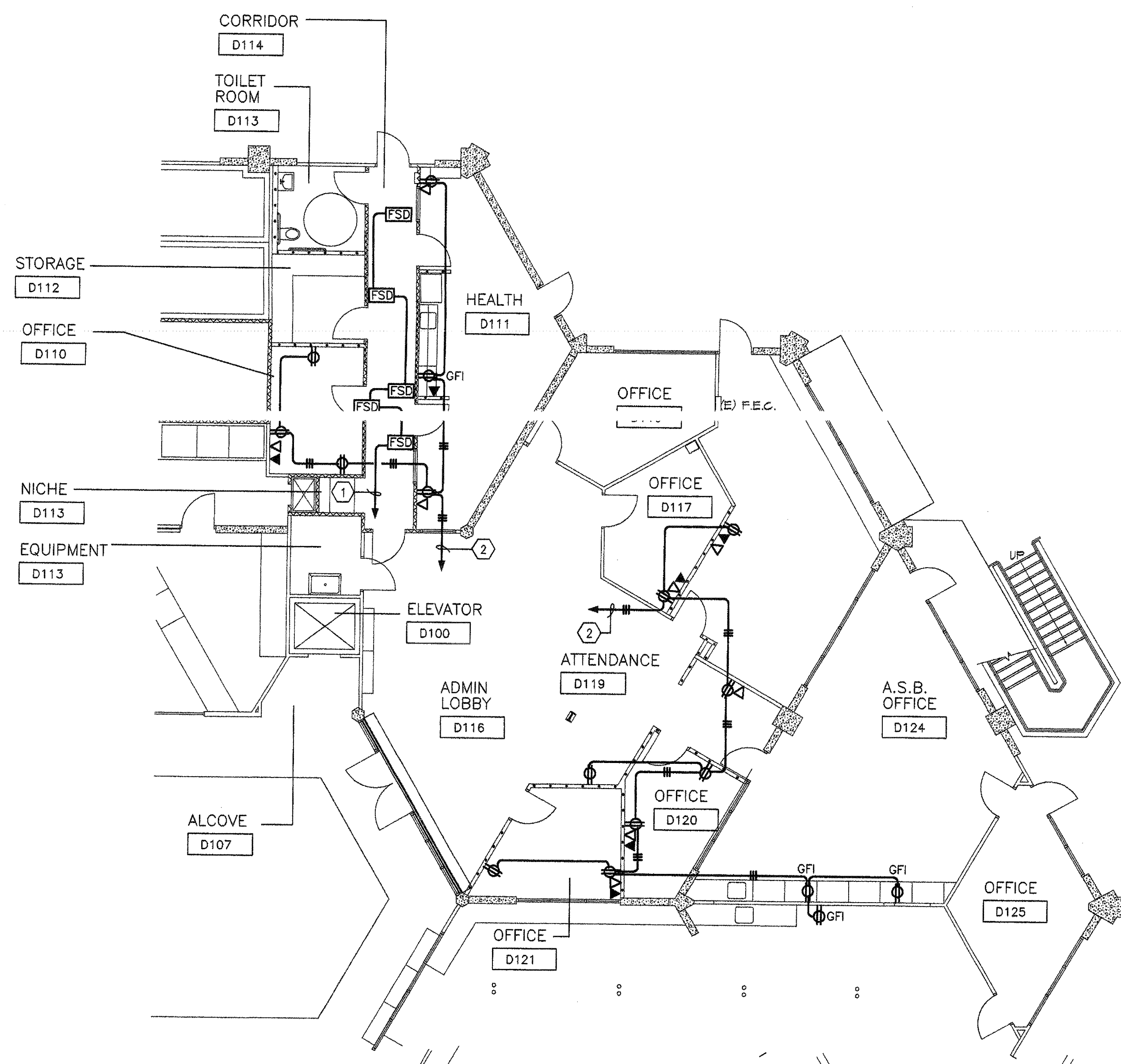
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Drawn Scale 1/8"=1'-0"	Checked TV
Reviewed Date 04/23/01	Drawing No. EU-1.1



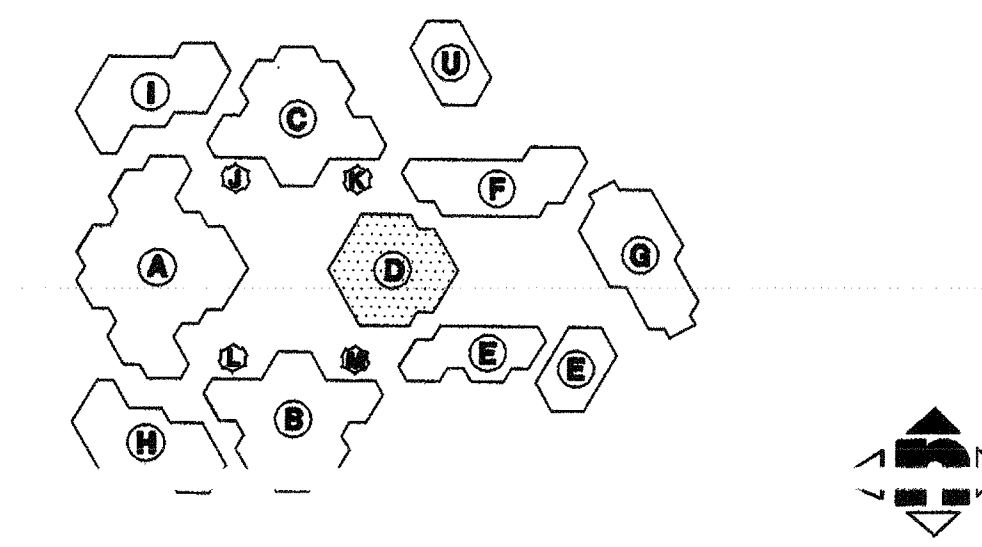
BUILDING U FIRE ALARM PLAN
A14
 1/8"=1'-0"

SPECIFIC NOTES

- ① CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 20A, 1P CIRCUIT BREAKER.
- ② CONTRACTOR TO PROVIDE CONNECTION TO 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL (2) 20A, 1P CIRCUIT BREAKER.
- ③ PROVIDE POWER CONNECTION TO NEAREST EXIT SIGN; FIELD VERIFY.



KEY PLAN



Consultant's Seal

FILE No. 30-H15
 IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE AUG 07 2001

IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING D - GROUND FLOOR POWER PLAN

Architect's Seal	Designed	Project No.
	Drawn	3184004
	Checked	Scale
	Reviewed	1/8"=1'-0"
	Date	Drawing No.
	04/23/01	ED-2 .2A

BUILDING D - GROUND FLOOR POWER PLAN

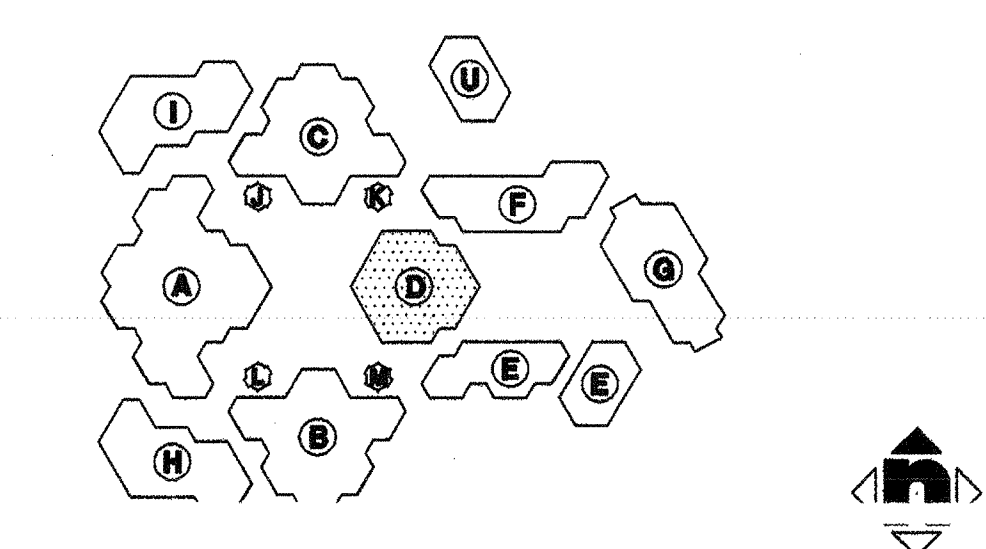
A14

1/8"=1'-0"

SPECIFIC NOTES

- 1 CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 20A, 1P CIRCUIT BREAKER.
- 2 FIELD VERIFY LOCATION.
- 3 CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 15A, 1P CIRCUIT BREAKER.
- 4 CONTRACTOR TO PROVIDE CONNECTION TO 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL (2) 20 AMP, 1 POLE CIRCUIT BREAKER.
- 5 CONTRACTOR TO PROVIDE AND INSTALL 3/4" C.O. STUB-UP TO CEILING SPACE (PROVIDE PULL CORD).

KEY PLAN



Consultant's Seal

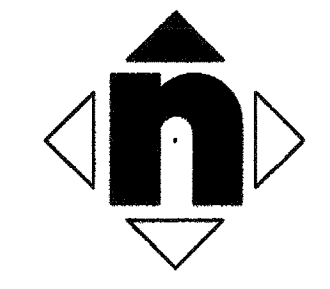
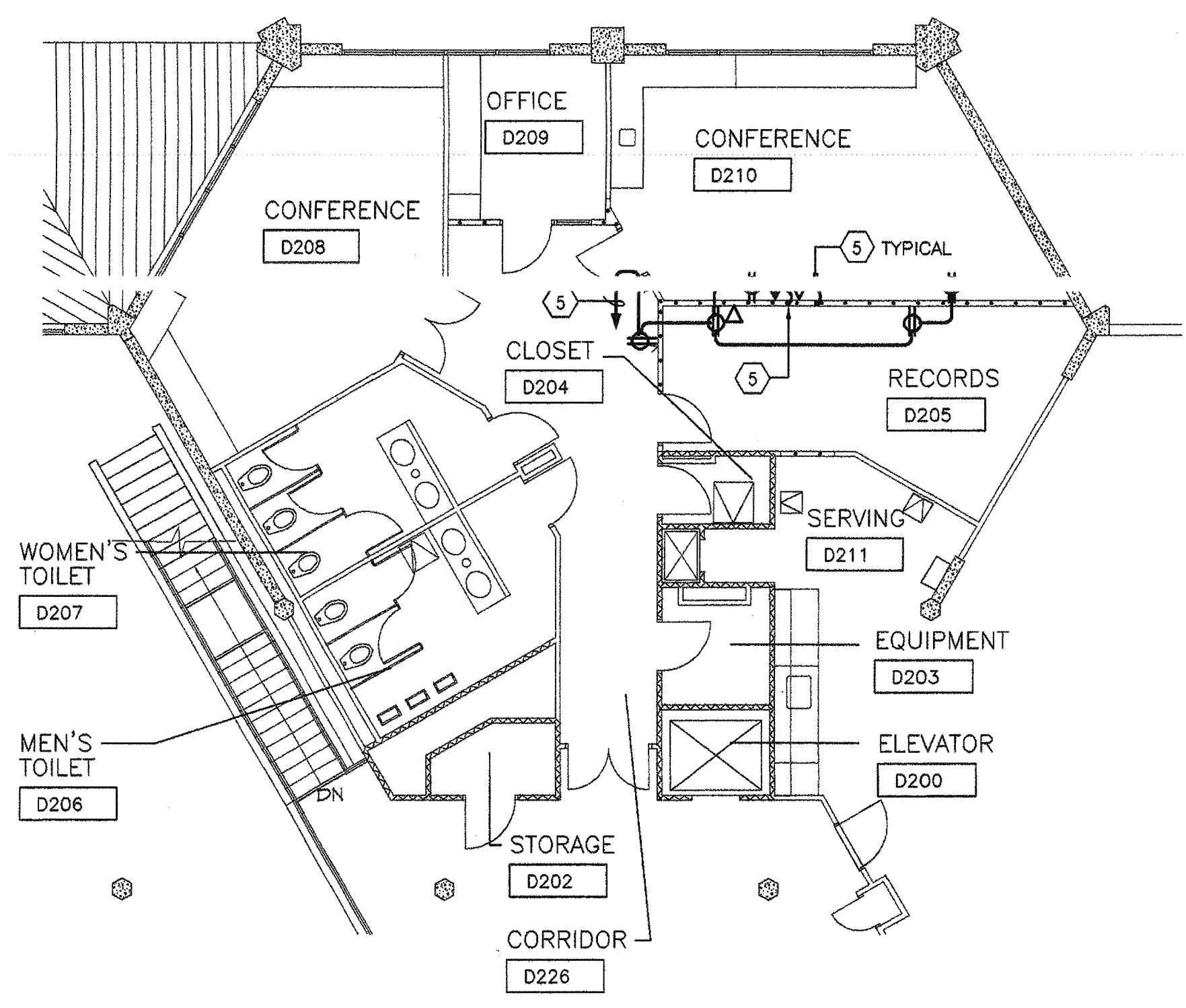
FILE No. 30-115
 DIV. OF PROFESSIONAL ENGINEERS
 STATE OF CALIFORNIA
 No. 19091
 Exp. 6-30-03
 APPL. 4-101396
 DATE AUG 07 2001
REVISED

IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/08/01

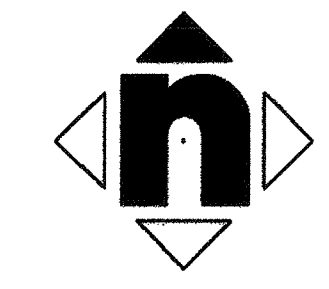
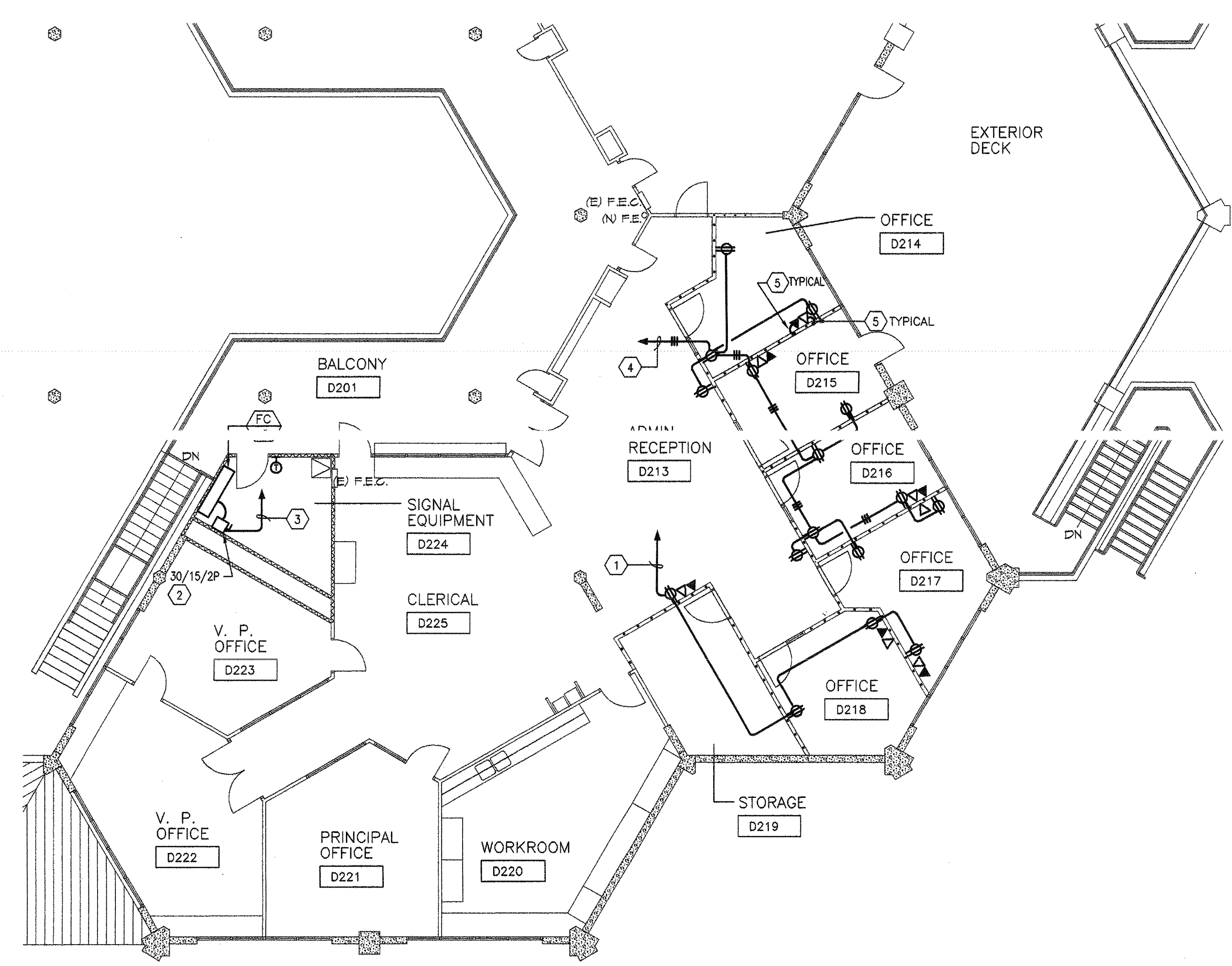
Drawing Title
BUILDING D - SECOND FLOOR POWER PLAN

Architect's Seal	Designed	Project No.
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	ED-2.2B



BUILDING D - SECOND FLOOR POWER PLAN

A6
 1/8"=1'-0"



BUILDING D - SECOND FLOOR POWER PLAN

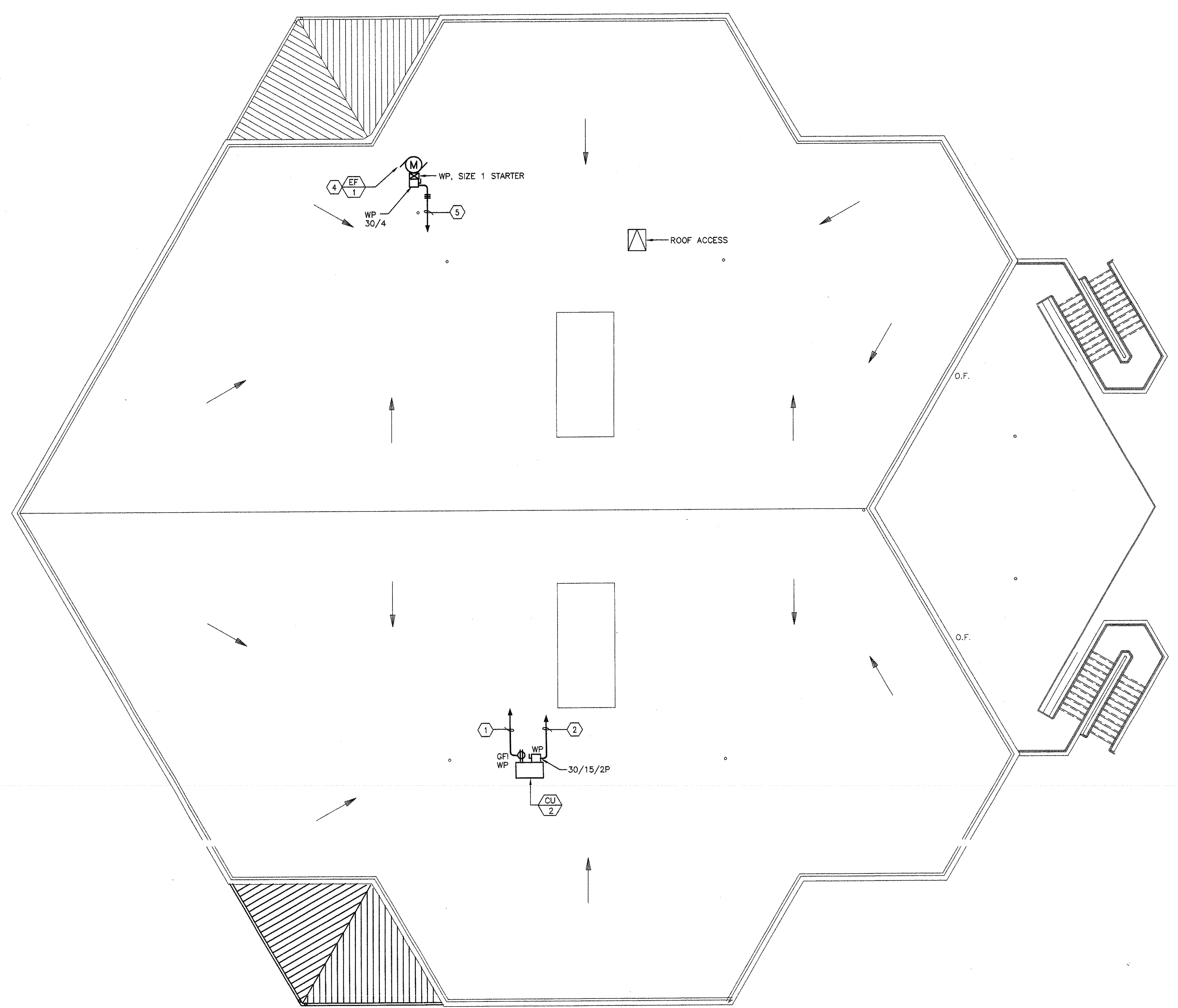
A14
 1/8"=1'-0"

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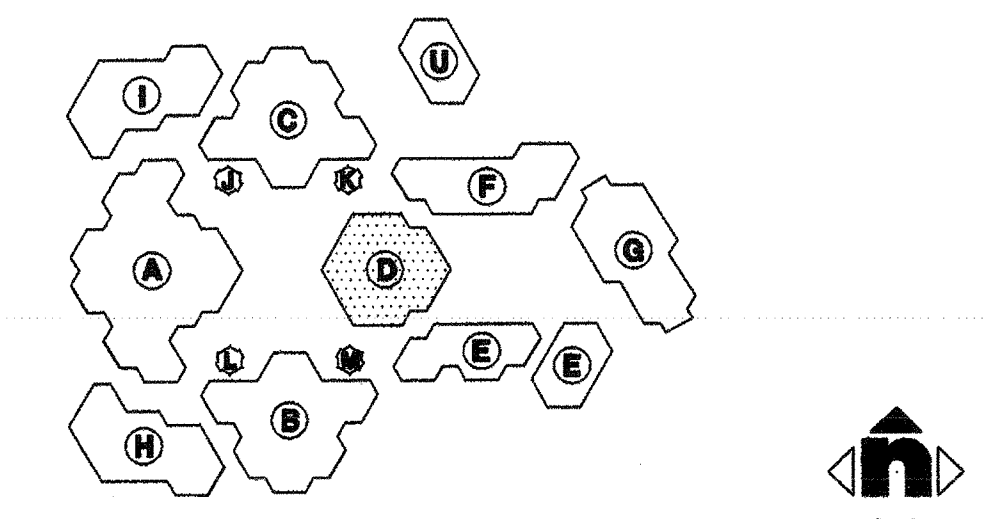
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SPECIFIC NOTES

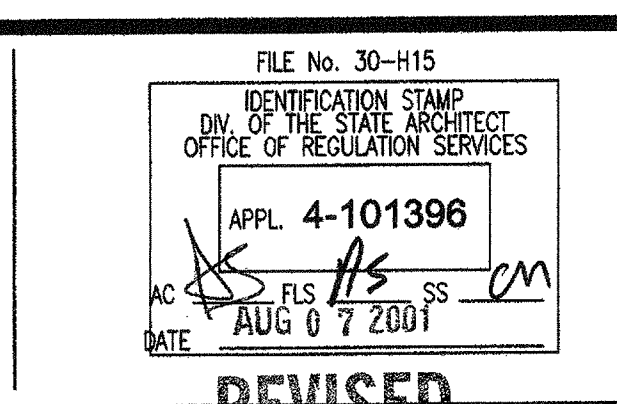
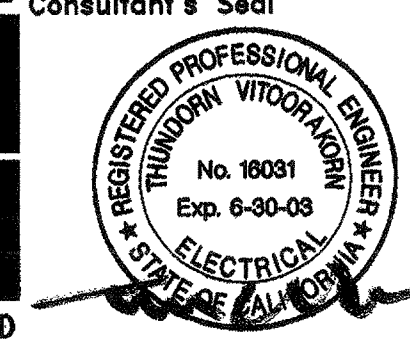
- ① CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 15A, 1P CIRCUIT BREAKER.
- ② CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 208V, 15A, 2P CIRCUIT BREAKER.
- ③ PROVIDE 3/4" C.O. TO FAN COIL UNIT FC-1 FOR CONTROL. COORDINATE WITH MECHANICAL CONTRACTOR.
- ④ CONTRACTOR SHALL PROVIDE CONNECTION, WIRINGS, CONDUIT, ETC. AS REQUIRED TO ALL MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS.
- ⑤ CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 480/277V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 15A, 3P CIRCUIT BREAKER.



KEY PLAN



Consultant's Seal

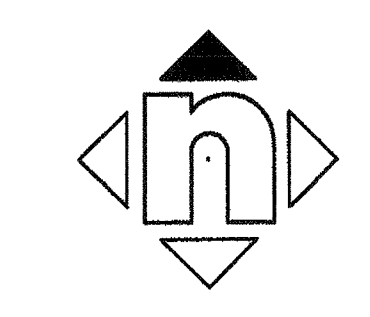


IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2259
 IRVINE UNIFIED SCHOOL DISTRICT

No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

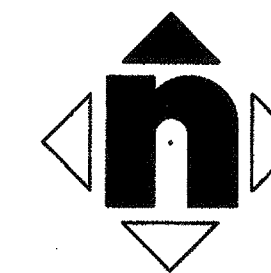
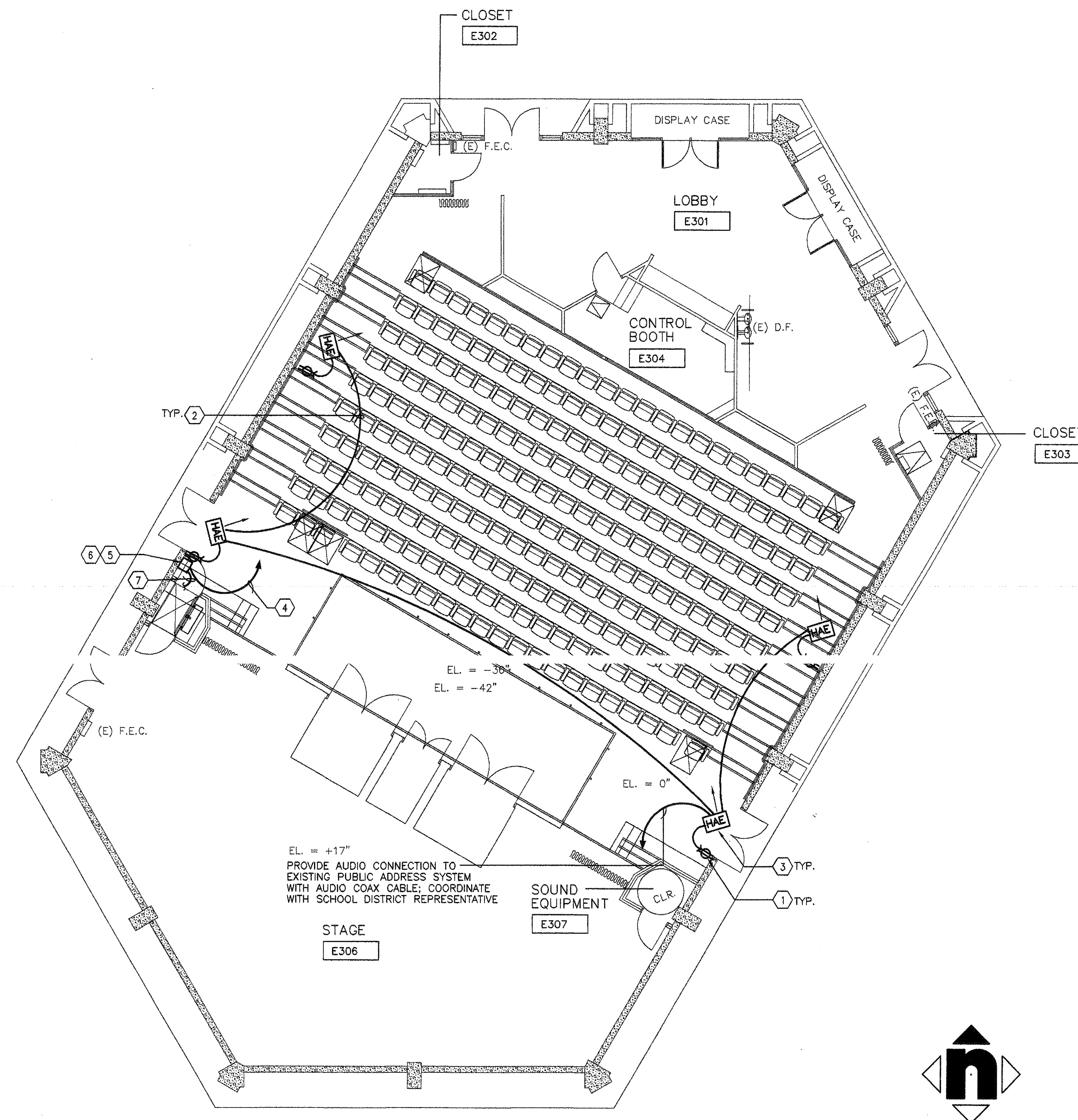
Drawing Title
BUILDING D ROOF POWER PLAN

Architect's Seal	Designed	Project No
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No
	Date	ED-22C

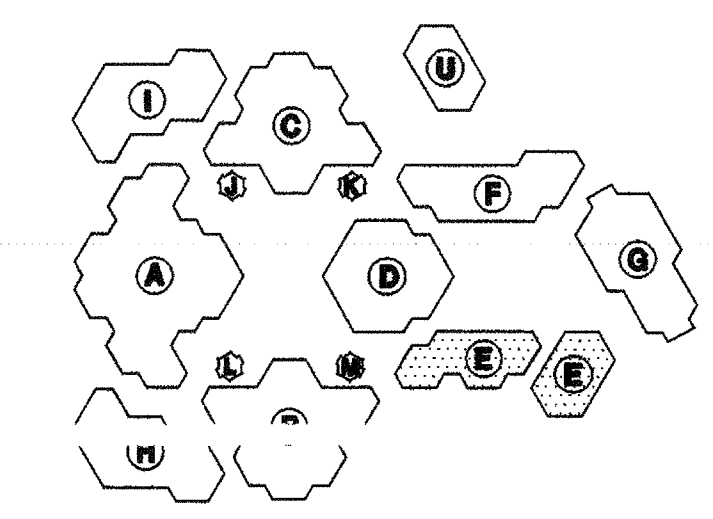


SPECIFIC NOTES

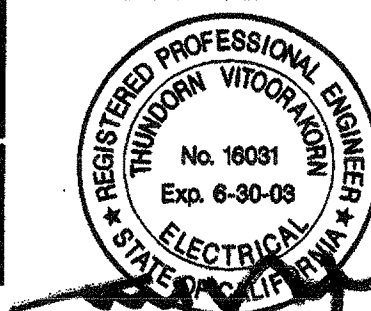
- ① PROVIDE NEW RECEPTACLE ON WALL CLOSE TO EMITTER LOCATION. PROVIDE CONNECTION TO NEAREST 120V OUTLET.
- ② DAISY CHAIN HEARING ASSISTANCE EMITTERS WITH AUDIO COAX CABLE.
- ③ WALL MOUNT EMITTER AT 20FT AFF OR AS HIGH AS POSSIBLE BELOW CEILING. COORDINATE EXACT PLACEMENT OF EMITTER WITH MANUFACTURER AND SCHOOL DISTRICT REPRESENTATIVE FOR BEST FLOOR COVERAGE. FIELD ADJUST AIMING OF EMITTER.
- ④ CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 20A, 1P CIRCUIT BREAKER.
- ⑤ COORDINATE WITH WHEEL CHAIR LIFT MANUFACTURER AND PROVIDE FUSED DISCONNECT PER RECOMMENDATIONS.
- ⑥ VERIFY EXACT LOCATION WITH WHEEL CHAIR LIFT MANUFACTURE INSTALLER.
- ⑦ PROVIDE FINAL CONNECTION TO WHEEL CHAIR LIFT.



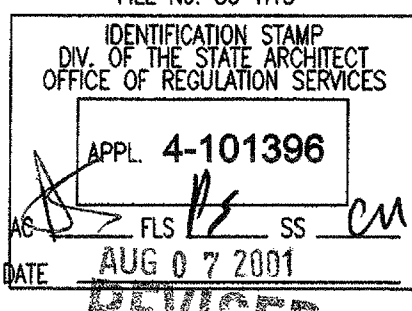
KEY PLAN



Consultant's Seal



FILE No. 30-H15



IRVINE HIGH SCHOOL MODERNIZATION
 4321 WALNUT AVENUE
 IRVINE, CA 92604-2239
 IRVINE UNIFIED SCHOOL DISTRICT

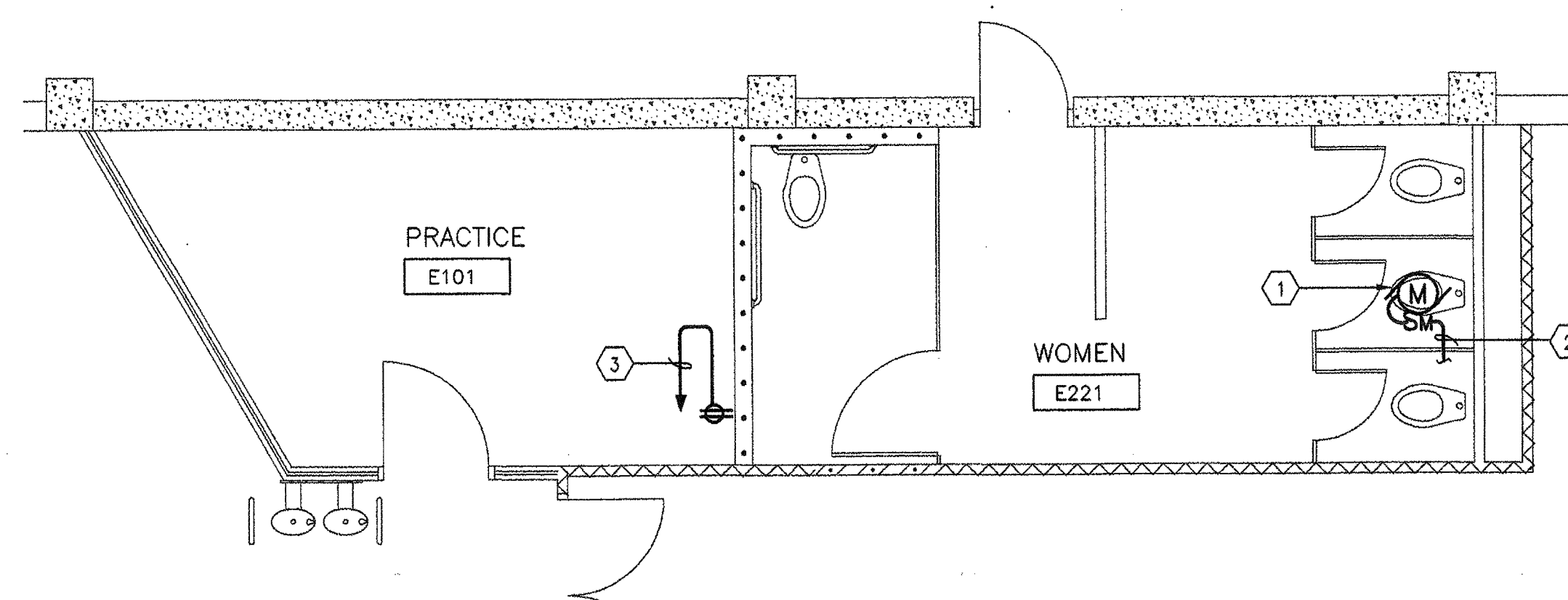
No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING E POWER PLAN

Architect's Seal 	Designed Project No 3184004 Drawn Scale 1/8"=1'-0" Checked TV Reviewed EE-2.2 Date 04/23/01
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SPECIFIC NOTES

- ① CONTRACTOR SHALL PROVIDE CONNECTION, WIRINGS, CONDUIT, ETC. AS REQUIRED TO ALL MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS.
- ② PROVIDE CONNECTION TO EXISTING EXHAUST FAN 120V CIRCUIT. FIELD VERIFY. SEE MECHANICAL CONTROL WIRING DIAGRAMS.
- ③ CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 15A, 1P CIRCUIT BREAKER.
- ④ CONTRACTOR TO PROVIDE CONNECTION TO NEAREST 120/208V PANEL. HE SHALL ALSO PROVIDE AND INSTALL NEW (1) 20A, 1P CIRCUIT BREAKER.

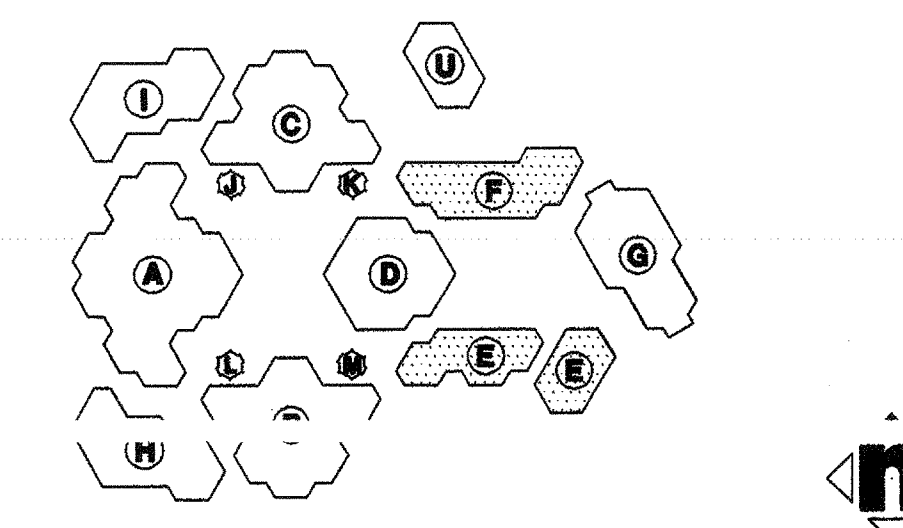


E221 WOMEN'S TOILET POWER PLAN

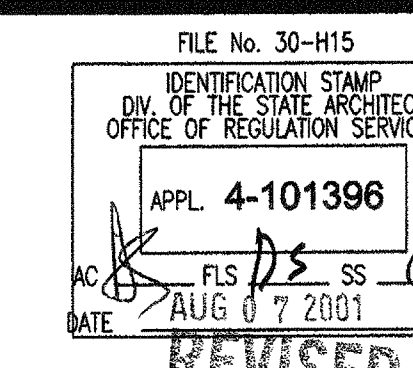
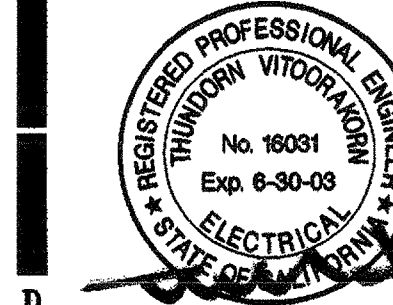
N14

1/4"=1'-0"

KEY PLAN



Consultant's Seal

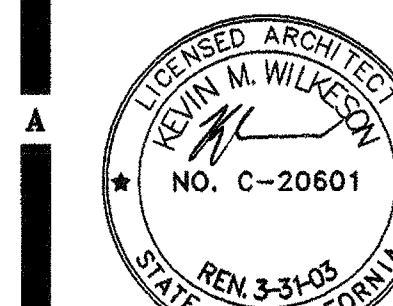


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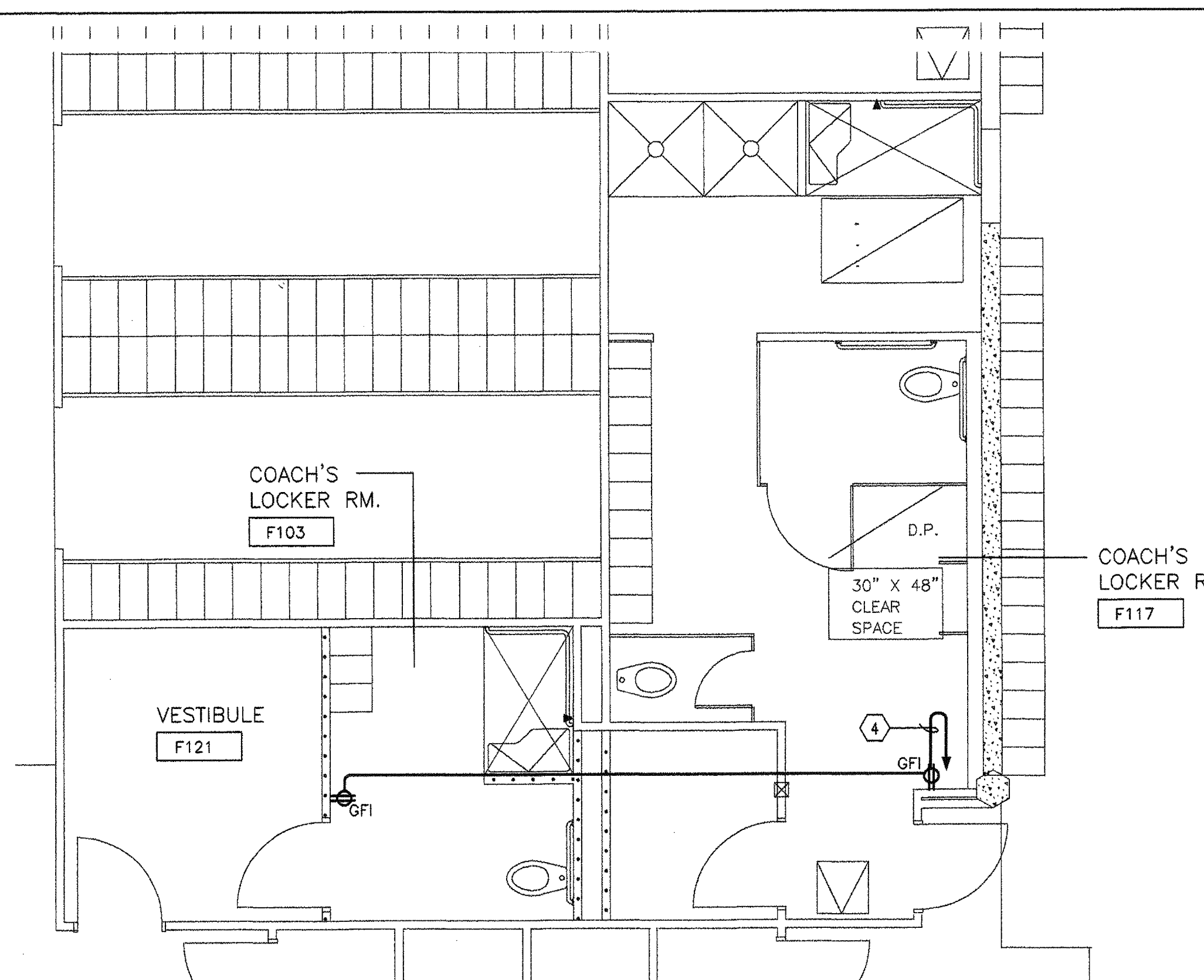
No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/08/01

Drawing Title
BUILDING E & F ENLARGED TOILET POWER PLANS

Architect's Seal



Designed	Project No.
3184004	3184004
Drawn	Scale
1/4"=1'-0"	1/4"=1'-0"
Checked	Drawing No.
TV	EE-2.3
Reviewed	
Date	04/23/01



F103 COACH'S LOCKER ROOM & F117 COACH'S POWER PLAN

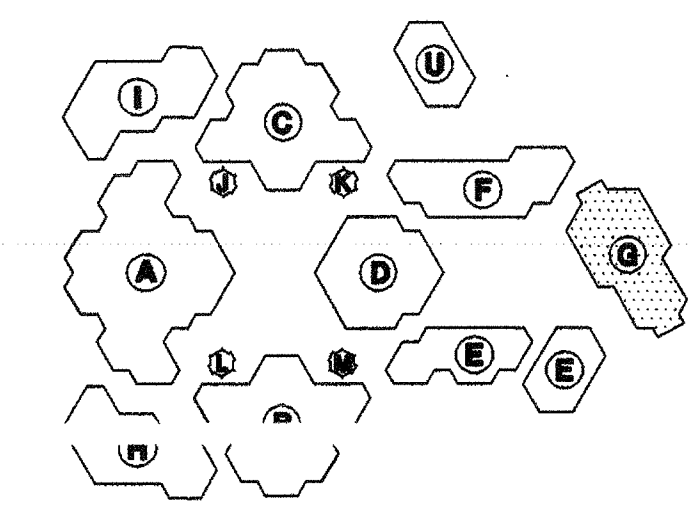
A14

1/4"=1'-0"

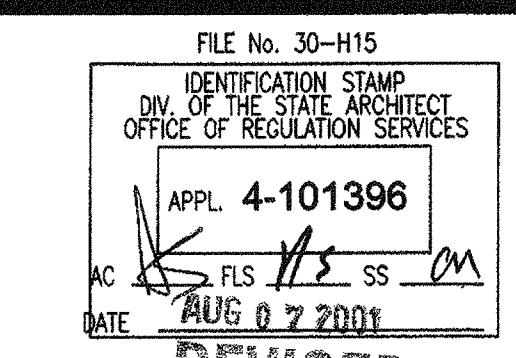
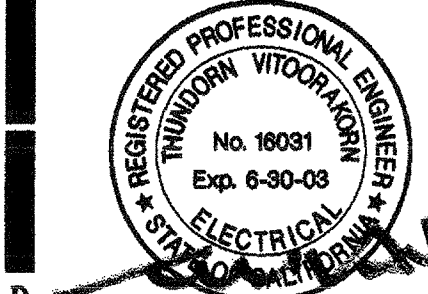
SPECIFIC NOTES

- ① PROVIDE NEW RECEPTACLE ON WALL CLOSE TO EMITTER LOCATION. PROVIDE CONNECTION TO NEAREST 120V OUTLET.
- ② DAISY CHAIN HEARING ASSISTANCE EMITTERS WITH AUDIO COAX CABLE.
- ③ WALL MOUNT EMITTER AT 20FT AFF OR AS HIGH AS POSSIBLE BELOW CEILING. COORDINATE EXACT PLACEMENT OF EMITTER WITH MANUFACTURE AND SCHOOL DISTRICT REPRESENTATIVE FOR BEST FLOOR COVERAGE. FIELD ADJUST AIMING OF EMITTER.

KEY PLAN



Consultant's Seal

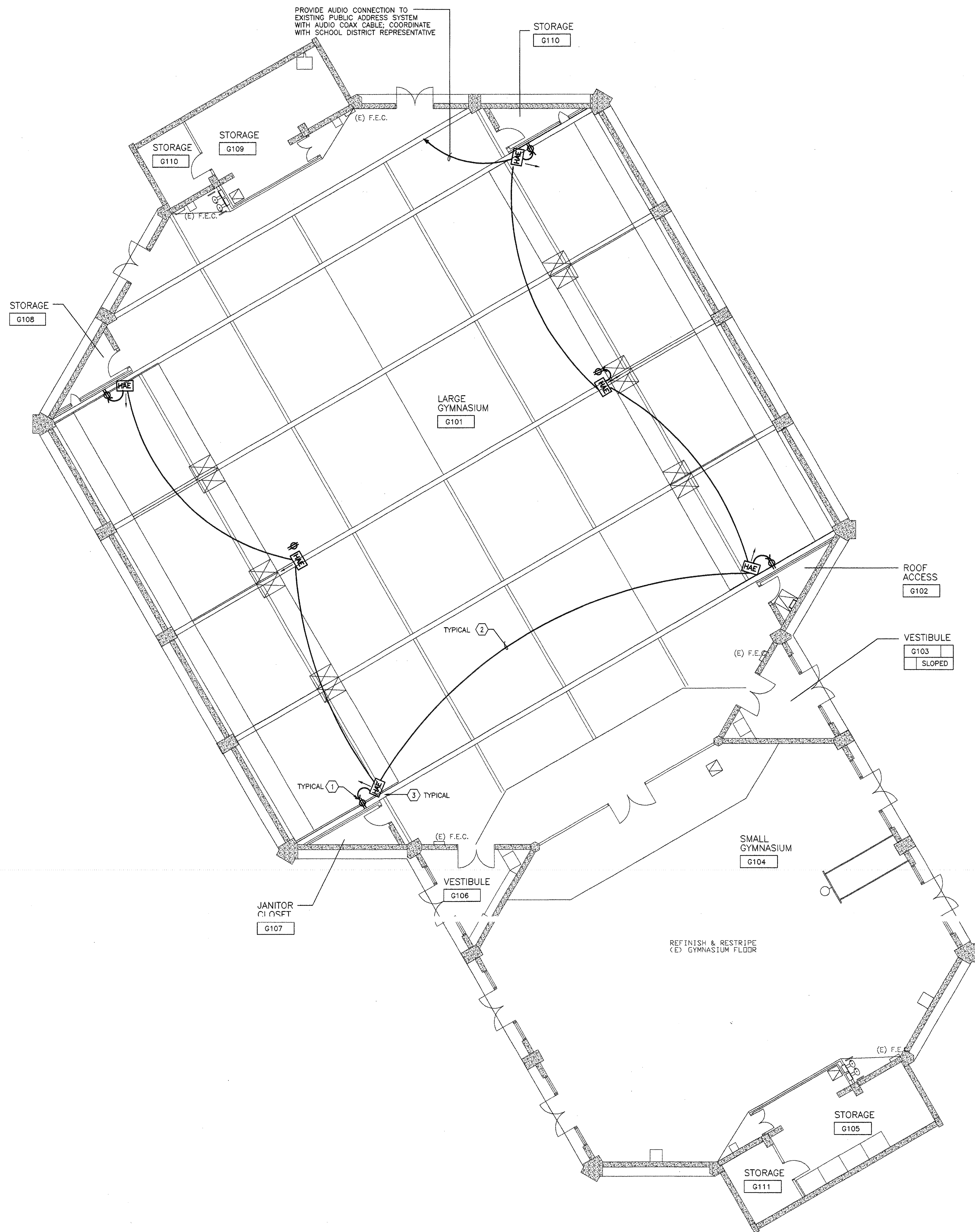


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No	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING G POWER PLAN

Architect's Seal	Designed	Project No
	Designed	3184004
	Drawn	Scale 1/8"=1'-0"
	Checked TV	Drawing No
	Reviewed	EG-2.1
Date	04/23/01	of



SPECIFIC NOTES

① MAINTAIN CIRCUIT CONTINUITY AND PROVIDE CONNECTION TO EXISTING LIGHTING FIXTURES. FIELD VERIFY NUMBER OF CIRCUIT, WIRES, ETC. AND MATCH EXISTING.

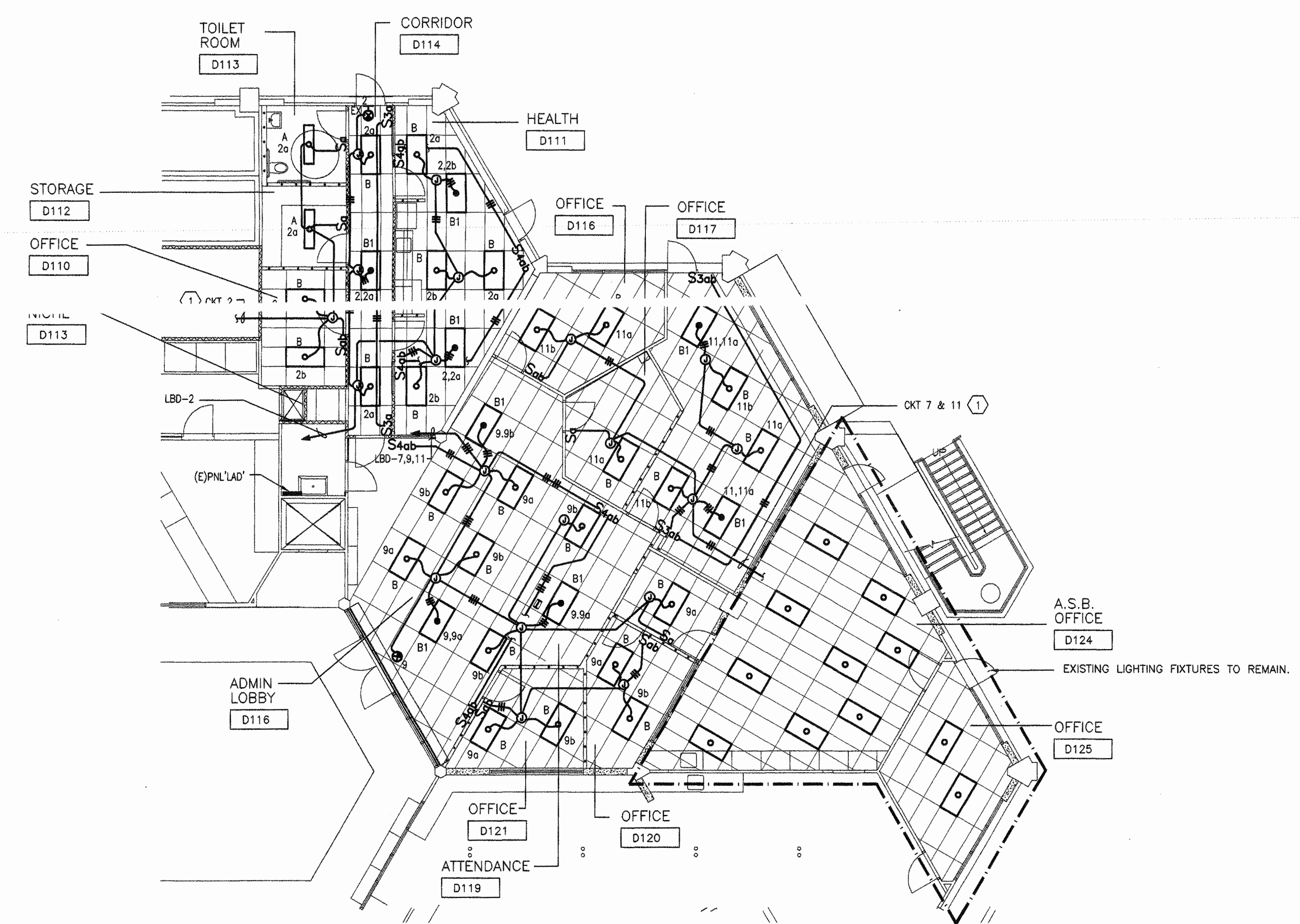
SYMBOL	TYPE	DESCRIPTION	MANUFACTURER/ MODEL NUMBER	LAMP TYPE	TOTAL WATTAGE	MOUNTING
	A	4 FEET SURFACE MOUNTED WRAPAROUND FIXTURE WITH ELECTRONIC BALLAST	LITHONIA LB-2-40-277V	(2) F32T8/TL 735	60	SURFACE
	A1	SAME AS TYPE "A" FIXTURE EXCEPT COMPLETE WITH EMERGENCY BATTERY PACK (SEE NOTE 1)	LITHONIA LB-2-40-EL-277V	(2) F32T8/TL 735	60	SURFACE
	B	2'x4' RECESSED FLUORESCENT LIGHTING FIXTURE WITH 0.156" THICK ACRYLIC LENSE	LITHONIA 2SP8-3-32-A12125 277V	(3) F32T8/TL 735	90	RECESSED
	B1	SAME AS TYPE "B" FIXTURE EXCEPT COMPLETE WITH EMERGENCY BATTERY PACK (SEE NOTE 1)	LITHONIA 2SP8-3-32-A12125 277V-EL-PS1400	(3) F32T8/TL 735	90	RECESSED
	C	FLUORESCENT RECESSED DOWNLIGHT WITH PRISMATIC LENS, 7" APERTURE	LITHONIA LFG-2-26DIT-7-FW-T73-277V	(2) 26DIT	60	RECESSED
	EX	LED EXIT SIGN, VANDAL-RESISTANT, 0.130" THICK POLYCARBONATE COVER AND TAMPERPROOF SCREWS, GREEN LETTER ON WHITE BACKGROUND AND WHITE PANEL, NICKEL-CADMIUM BATTERY	LITHONIA LV-GW-277-ELN	LED		

NOTE:
 1. INTEGRAL EMERGENCY BATTERY PACK SHALL BE U.L. LISTED FOR A MINIMUM OF 90 MINUTES OPERATION AT 1400 LUMEN OUTPUT FOR TWO LAMPS.
 2. FIELD VERIFY VOLTAGE OF LIGHTING CIRCUIT PRIOR TO PURCHASING.

LIGHTING FIXTURE SCHEDULE

K14

NOT TO SCALE

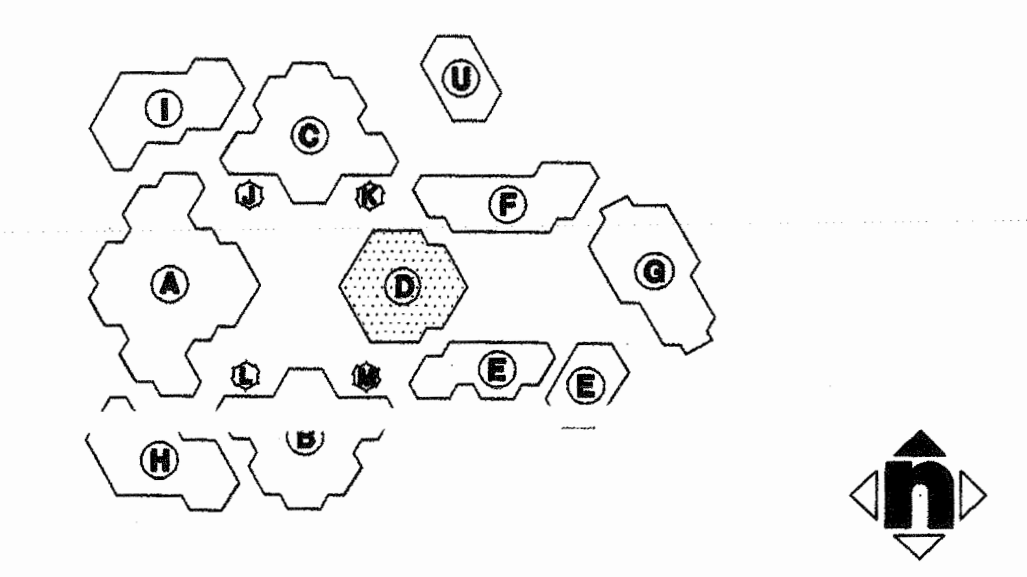


BUILDING D - GROUND FLOOR LIGHTING PLAN

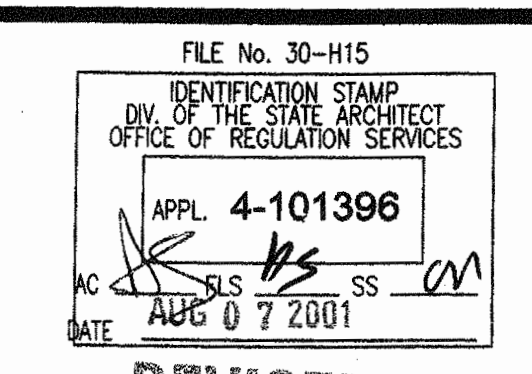
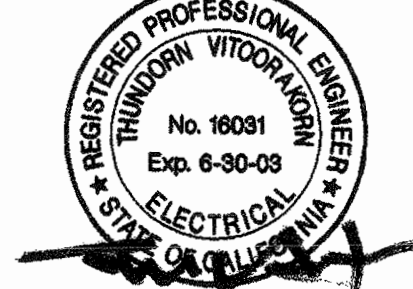
A14

1/8"=1'-0"

KEY PLAN



Consultant's Seal



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No	Revisions/Submissions	Date
1	DSA SUBMITTAL	04/23/01
2	DSA RESUBMITTAL	08/06/01

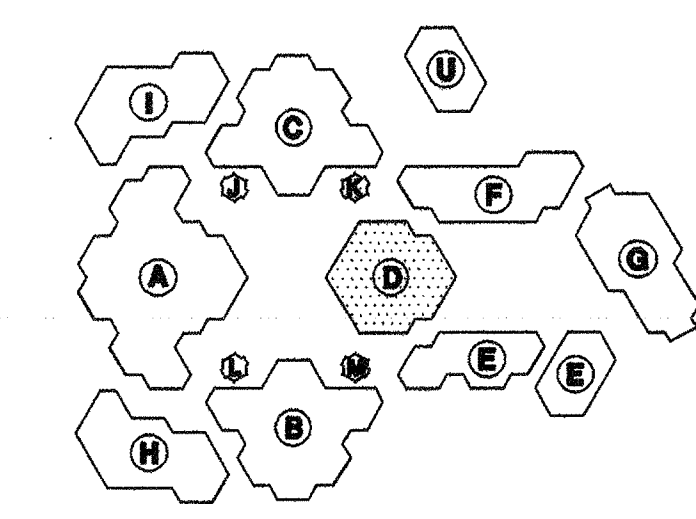
Drawing Title
BUILDING D - GROUND FLOOR LIGHTING PLAN

Architect's Seal	Designed	Project No.
	TV	3184004
	Checked	Scale
	Reviewed	1/8"=1'-0"
		Drawing No.
		ED-6.1A
	Date	04/23/01
		of

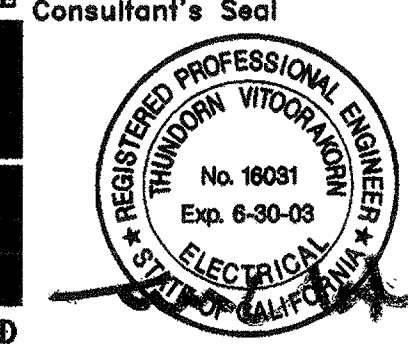
SPECIFIC NOTES

- ① MAINTAIN CIRCUIT CONTINUITY AND PROVIDE CONNECTION TO EXISTING LIGHTING FIXTURES. FIELD VERIFY NUMBER OF CIRCUIT, WIRES, ETC. AND MATCH EXISTING.

KEY PLAN



Consultant's Seal



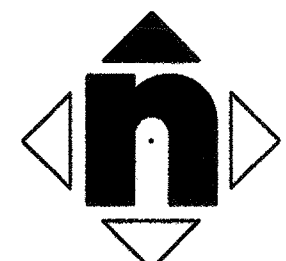
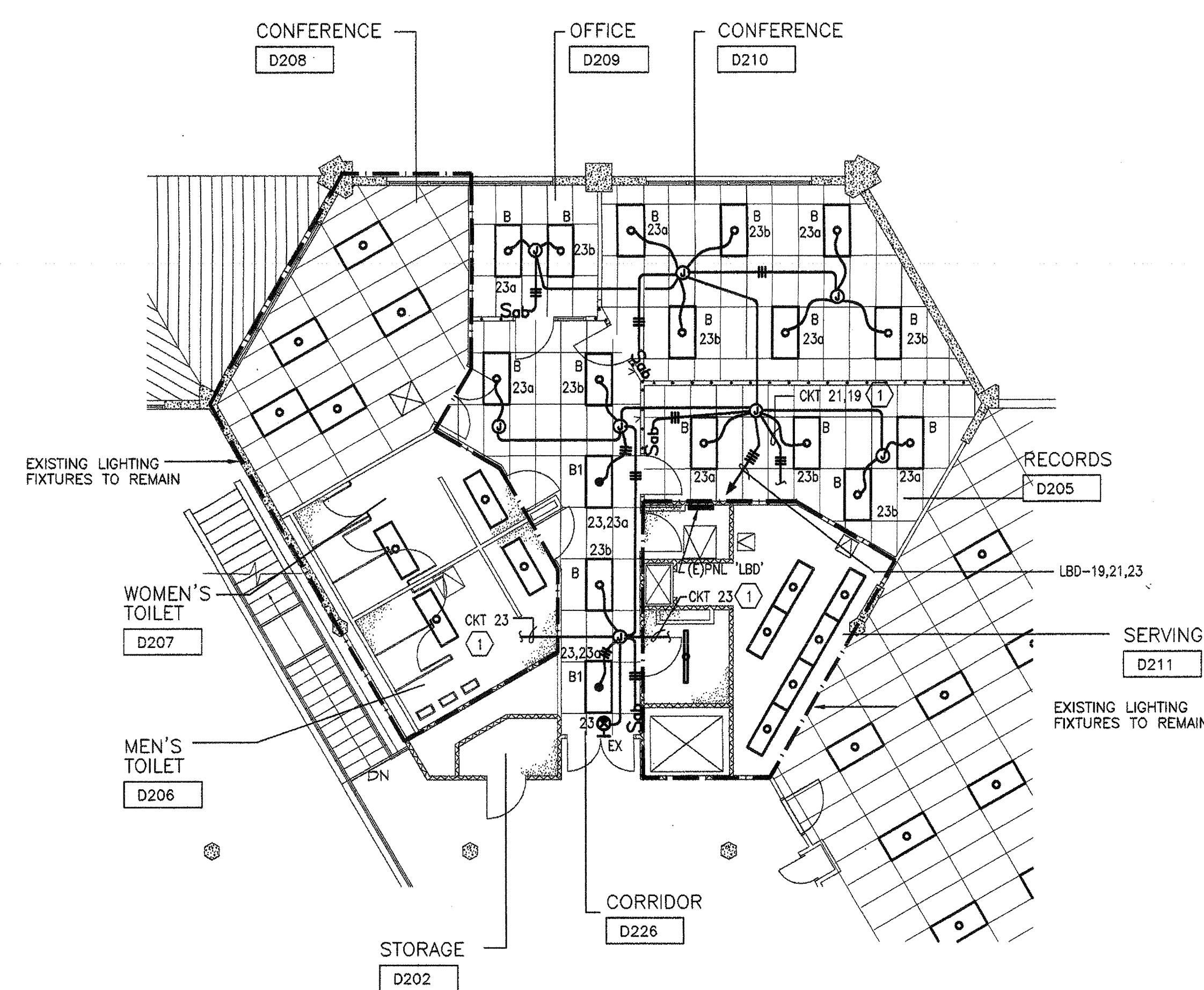
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 OFFICE OF REGULATION SERVICES
 APPL. 4-101396
 DATE AUG 17 2001
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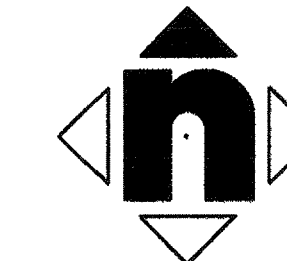
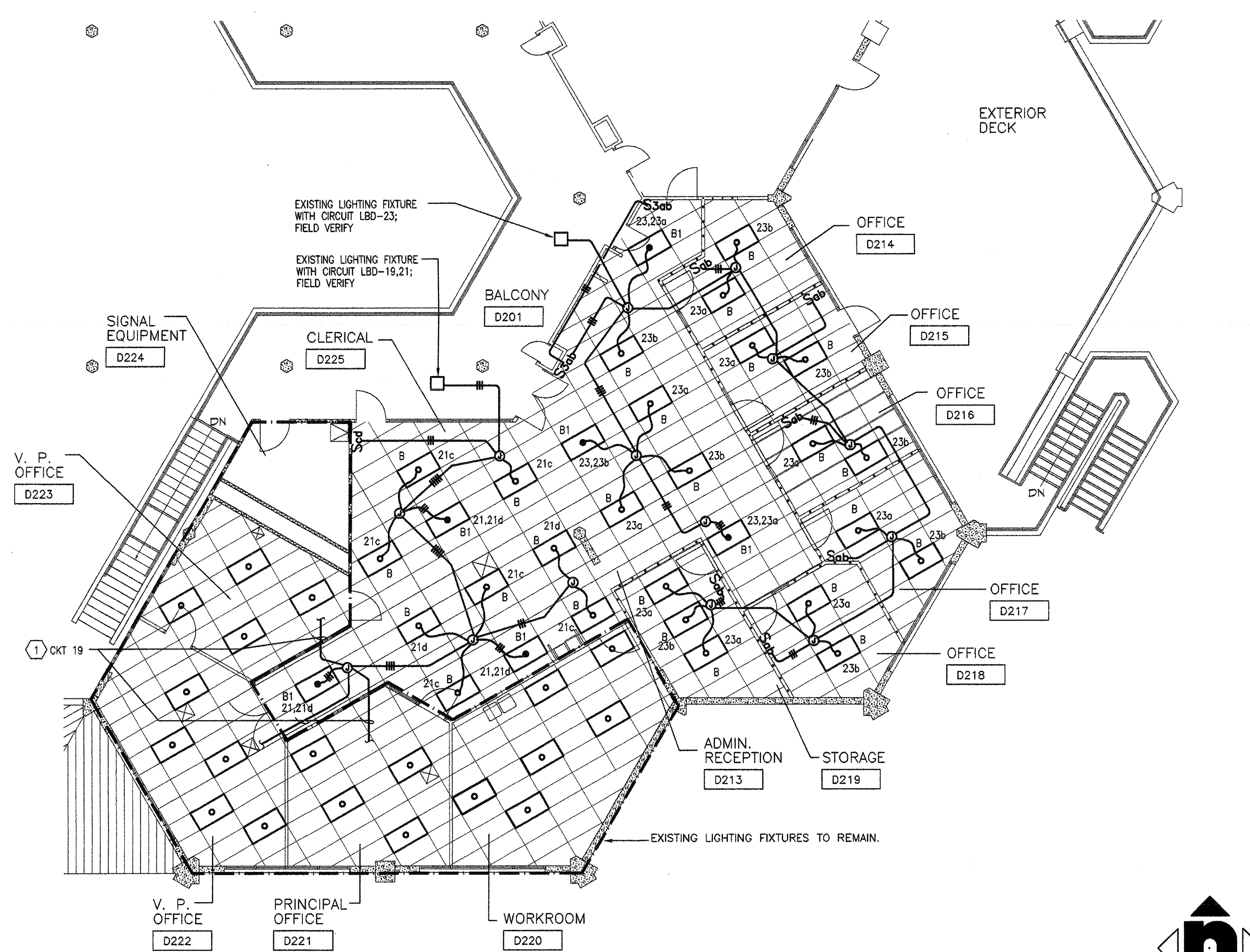
No.	Revisions/Submissions	Date
	DSA SUBMITTAL	04/23/01
	DSA RESUBMITTAL	08/06/01

Drawing Title
BUILDING D - SECOND FLOOR LIGHTING PLAN

Architect's Seal	Designed	Project No.
	Drawn	3184004
	Checked	Scale 1/8"=1'-0"
	Reviewed	Drawing No.
	Date	ED-6.1B



BUILDING D - SECOND FLOOR LIGHTING PLAN A6
 1/8"=1'-0"



BUILDING D - SECOND FLOOR LIGHTING PLAN A15
 1/8"=1'-0"