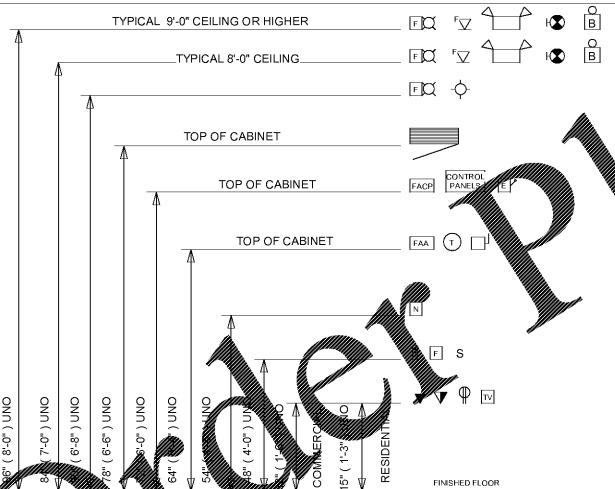


## ELECTRICAL GENERAL NOTES

- THESE DRAWINGS ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT SPECIFICATION BOOK (PROJECT MANUAL).
- DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS ON ARCHITECTURAL DRAWING AND IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
- SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER - IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK.
- REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND OTHER DRAWINGS PRIOR TO BID.
- WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
- WORK, MATERIALS, AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF TENNESSEE, AND NATIONAL CODES AND ORDINANCES.
- PROVIDE PERMITS AND INSPECTION REQUIRED.
- PROVIDE WITH SHOP DRAWING SUBMITTAL, 1/4" SCALE LAYOUT DRAWINGS OF ROOMS WITH ELECTRICAL SWITCHBOARDS AND TRANSFORMERS. LAYOUTS SHALL SHOW LOCATIONS OF, AND SHALL BE COORDINATED WITH MECHANICAL EQUIPMENT. ALL EQUIPMENT SHALL BE DRAWN TO SCALE.
- CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT, OR INSTALLATION METHODS.
- VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC. REQUIRED. BACKFILL TRENCHES TO 90 PERCENT COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS. ELECTRICAL CONTRACTOR IS TO SUBMIT A COMPLETE CONSTRUCTION DRAWING SET TO THE ELECTRICAL UTILITY COMPANY WITH-IN 10 DAYS OF AWARD TO CONTRACT. COORDINATE TIMELINE OF THEIR REVIEW, APPROVAL, CONSTRUCTION SCHEDULING AND INSTALLATION OF THE UTILITY TRANSFORMER WITH THE UTILITY COMPANY. NOTIFY OWNER OF ANY SCHEDULING CONFLICTS.
- FIELD VERIFY EXISTING EQUIPMENT OR CIRCUITS THAT ARE REMAINING TO BE RECONNECTED TO NEW OR EXISTING SWITCHBOARDS/PANELBOARDS. PROVIDE SWITCHES, RECEPTACLES, CONDUIT, WIRE, ETC. AS REQUIRED, TO RESTORE CONTINUITY OF CIRCUIT(S).
- EXISTING SYSTEMS AND CONDITIONS SHOWN ON DRAWINGS FOR EXISTING BUILDINGS ARE TO BE NOTED "FOR GUIDANCE ONLY". THE ELECTRICAL CONTRACTOR TO FIELD CHECK ALL EXISTING CONDITIONS PRIOR TO BIDDING AND TO INCLUDE IN HIS BID AN ALLOWANCE FOR REMOVAL AND/OR RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEM TO ALL OTHER WORK AS REQUIRED.
- PROVIDE ELECTRICAL DEMOLITION REQUIRED. REFER TO ARCHITECTURAL AND ELECTRICAL DEMOLITION DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.
- PROVIDE ALL NECESSARY DEMOLITION TO REMOVE EXISTING UNUSED CONDUIT, WIRE, CABLE, J-BOXES, RECEPTACLES, SWITCHES, LIGHTS, FIRE ALARMS DEVICES, ETC. COMPLETE WITH ASSOCIATED CIRCUITING TO SOURCE. WHERE IT IS NOT FEASIBLE TO REMOVE THE ABOVE, OUTLET SHALL BE ABANDONED, WIRE REMOVED, AND BLANK COVER PLATES PROVIDED.
- ALL (E) EQUIPMENT, LAMPS, BALLASTS, ETC. BEING REMOVED SHALL BE DISCARDED IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.
- EXISTING LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. BEING REMOVED SHALL BE RETURNED TO THE OWNER, EXCEPT FOR THOSE ITEMS BEING RELOCATED.
- VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
- INSTALL ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY DEVIATIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION PRIOR TO INSTALLATION.
- FINAL CONNECTIONS TO EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS, AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION, OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
- ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
- PROVIDE NEW UPDATED PANELBOARD DIRECTORIES FOR EXISTING AND NEW CIRCUITS BEING UTILIZED FOR COMPLETION OF PROJECT.
- FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE SEAL TITE FLEX AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS, OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
- SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
- GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
- SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC. SHALL BE CONNECTED AND OPERABLE.
- MAINTAIN A CURRENT SET OF AS-BUILT RECORD DRAWINGS WHICH SHALL BE AVAILABLE FOR REVIEW DURING ENGINEER'S SITE OBSERVATIONS. UPON COMPLETION, PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
- FIRE ALARM SYSTEM IS A DESIGN BUILD SYSTEM THAT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. SHOP DRAWING SHALL BE PREPARED AND STAMPED BY PERSONS WITH THE FOLLOWING QUALIFICATIONS: 1) FIRE PROTECTION P.E. OR 2) FIRE ALARM CERTIFIED BY NICET MINIMUM LEVEL III. IN ADDITION TO DISTRIBUTION REQUIREMENTS FOR SUBMITTALS SPECIFIED IN DIVISION 1 SECTION "SUBMITTALS", MAKE AN IDENTICAL SUBMITTAL TO AUTHORITIES HAVING JURISDICTION. SEE SPECIFICATION MANUAL FOR MORE INFORMATION.

## TYPICAL DEVICE MOUNTING HEIGHTS



- NOTES:
- HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
  - WHEREVER DEVICES ARE INDICATED TO BE ABOVE DOORS, DEVICE SHALL BE CENTERED BETWEEN TOP OF DOOR TRIM & CEILING LINE.
- MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL PREVAIL OVER THOSE SHOWN ABOVE.

## ELECTRICAL SPECIFICATIONS

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL STATE, LOCAL AND NATIONAL CODES AND ORDINANCES INCLUDING: NATIONAL ELECTRICAL CODE, ADA CODES, NFPA, BUILDING CODES AND AUTHORITIES HAVING JURISDICTION AS REQUIRED.
- PROVIDE ALL PROVISIONS REQUIRED FOR TEMPORARY CONSTRUCTION LIGHTING AND POWER.
- ALL EQUIPMENT AND MATERIALS USED SHALL BE UL LISTED.
- ALL EQUIPMENT SHALL BE INSTALLED WITH NECESSARY ACCESSORIES, COMPONENTS, ETC. FOR A COMPLETE FUNCTIONING SYSTEM. WARRANTY FOR LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS SHALL BE INCLUDED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION.
- PROVIDE HANGERS AND SUPPORTS FOR ALL ELECTRICAL SYSTEMS AS REQUIRED PER NEC CONDUIT SUPPORTS, UNI-STRUT, SPRING CLAMPS, STRAPS. ALL ANCHORS SHALL BE HILTI DROP IN TYPE. NO EXPLOSIVE ANCHORS ARE PERMITTED.
- CONDUIT: 3/4" MINIMUM FOR HOMERUNS, 1/2" MINIMUM FOR SWITCHLEGS AND BRANCH CIRCUITS. SHALL BE SIZED PER NEC FOR NUMBER AND SIZE OF CONDUCTORS INSTALLED. ALL CONDUIT CONCEALED WITHIN WALL OR CEILING SHALL BE EMIT TYPE WITH SET SCREW FITTINGS. SCHEDULE 40 PVC OR RIGID STEEL CONDUIT SHALL BE USED FOR UNDERGROUND INSTALLATIONS. FLEXIBLE METAL CONDUIT MAY BE USED INTERIOR IN LENGTHS 6' OR LESS. ALL AREAS SUBJECT TO DAMAGE SHALL USE RIGID STEEL MC TYPE CABLE MAY BE USED IN ACCESSIBLE LOCATIONS ONLY. NO TYPE NM OR AC TYPE ALLOWED.
- CABLE: TYPE THHW/THHN, STRANDED FOR #6 AND LARGER, SOLID FOR #10 AND SMALLER. COPPER ALUMINUM IS NOT PERMITTED. ALL CONDUCTOR SIZES HAVE BEEN BASED ON 60°C TERMINATIONS FOR CONDUCTORS LESS THAN 100A AND 75°C TERMINATIONS FOR GREATER THAN 100A PER NEC 110.14.
- MINIMUM WIRE SIZE IS #12. FOR BRANCH CIRCUIT DISTANCES FROM PANELBOARD TO FURTHEST OUTLET THAT EXCEED 100 FEET, CONDUCTORS SHALL BE INCREASED ONE SIZE UP. INCREASE ONE SIZE UP INCREASE SIZE AS REQUIRED IF VOLTAGE DROP EXCEEDS 3%.
- ALL RACEWAYS, CABLES, PANELS, DISCONNECTS, ETC. SHALL BE LABELED AND IDENTIFIED FOR USE. INCLUDE PANELBOARD DIRECTORIES, WARNING SIGNS, ETC.
- ALL CONDUIT PENETRATIONS THROUGH FLOOR SLAB OR THROUGH FIRE RATED WALL ARE TO BE CAULKED/SEALED TO MAINTAIN FIRE RATING.
- ALL ROOF PENETRATIONS SHALL BE PROPERLY SEALED AND COMPLY WITH REQUIREMENTS OF EXISTING OR NEW ROOFING WARRANTY AND BE INSTALLED IN SUCH A MANNER AS NOT TO VOID OR LIMIT WARRANTIES OTHERWISE.
- WIRING DEVICES: COLOR AS DIRECTED BY OWNER/ARCHITECT. 20A SPECIFICATION GRADE. SHALL BE COOPER, PASS & SEYMOUR, LEVITON, HUBBEL OR EQUAL.
- DISCONNECT SWITCHES: SHALL BE HEAVY DUTY, QUICK MAKE, QUICK BREAK TYPE AND BE MANUFACTURED BY SQUARE D, SIEMENS, CUTLER HAMMER, OR EQUAL.
- PANELBOARDS: SHALL HAVE BOLT-ON TYPE CIRCUIT BREAKERS, MECHANICAL STYLE LUGS, WITH 100% RATED NEUTRALS, MANUFACTURED BY SQUARE D, SIEMENS, CUTLER HAMMER, OR EQUAL.
- GROUNDING: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC COMPONENTS OF SYSTEM. MAINTAIN CONTINUITY OF EQUIPMENT GROUND THROUGHOUT THE SYSTEM. USE APPROVED GROUNDING CLAMPS DESIGNED FOR THE INSTALLATION. INCLUDE A SEPARATE GROUNDING CONDUCTOR IN ALL RACEWAYS, CONDUIT SYSTEM IS NOT TO BE USED AS A SOLE GROUNDING MEANS. ALL GROUNDING SHALL BE SIZED IN ACCORDANCE WITH NEC.
- ALL LIGHT FIXTURES SHALL BE PROVIDED ACCORDING TO "BASIS OF DESIGN" INDICATED ON DRAWINGS. PRODUCTS SHALL BE EQUAL IN PERFORMANCE, STYLE, QUALITY TO THOSE INDICATED AND SHALL INCLUDE ALL NECESSARY COMPONENTS FOR COMPLETE INSTALLATION.
- FIRE ALARM: AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH ALL NECESSARY COMPONENTS FOR A COMPLETE SYSTEM. SHALL USE 24VDC B WIRING WITH ALL INHIBITING AND NOTIFICATION CIRCUITS. WIRING MAY BE FREE AIR, CONCEALED IN A CONDUIT, OR CONCEALED AND ACCESSIBLE, BUT MUST BE PROTECTED FOR PROTECTIVE AREAS SUCH AS WALLS OR HARD LID CEILINGS. AREAS THAT ARE EXPOSED AND/OR SUSCEPT TO DAMAGE SHALL ALSO BE INSTALLED IN CONDUIT. SYSTEM SHALL COMPLY WITH SPRINKLERS, HVAC, DOORS, ELEVATORS, ETC. AS REQUIRED. SHALL BE NOTIFIED BY SIMPLEX GRINNELL, SIEMENS OR EQUAL.

## ELECTRICAL LEGEND

### POWER

	RECESSED 1
	RECESSED PLAIN
	RECESSED SOLID
	SURFACE
	SURFACE DOOR
	BUSWAY - HORIZONTAL
	BUSWAY RISER - 200A
	DISCONNECT
	DISCONNECT STARTER
	FAN
	FUSED DISCONNECT
	HEATER
	MOTOR 1
	MOTOR 2
	MOTOR WITH DISCONNECT
	PULL BOX
	RELAY
	SOLENOID VALVE
	STARTER
	STARTER - DISCONNECT
	THERMOSTAT
	TRANSFORMER - STEP DOWN
	ROUND PLAIN JUNCTION BOX
	ROUND WALL MOUNTED JUNCTION BOX
	SQUARE JUNCTION BOX

### FIRE SAFETY

	BELL - CHIME
	BELL - SINGLE STROKE GONG
	DUCT SMOKE DETECTOR - SUPPLY
	DUCT SMOKE DETECTOR - RETURN
	FIRE ALARM ANNUCIATOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM DOOR HOLDER - MAGNETIC
	FIRE ALARM HORN - STROBE 1
	FIRE ALARM MINI HORN
	FIRE ALARM PULL BOX
	FIRE ALARM STROBE - SPEAKER
	FIRE ALARM STROBE 1
	FIRE ALARM TAMPER - SQUARE
	HEAT DETECTOR
	MINI HORN
	PLAIN ROUND SMOKE DETECTOR

### LIGHTING

	LINEAR PENDANT
	RECESSED 1X4
	SURFACE 1X4
	SURFACE 2X2
	RECESSED 2X2
	SURFACE 2X4
	RECESSED 2X4
	STRIP FIXTURE
	WALL MOUNTED
	WALL WASH SLOT
	PENDANT
	DOWN LIGHT
	WALL MOUNTED
	DUAL HEAD EMERGENCY UNIT
	EXIT LIGHT CEILING MOUNTED
	EXIT LIGHT WALL MOUNTED
	HID POST
	HID WALL
	TRACK LIGHT 1
	WALL WASHER
	HATCH INDICATES EMERGENCY
	NL INDICATES 24/7 NIGHT LIGHT

### RECEPTACLES

	220 VOLT
	COUNTERTOP
	DUPLEX
	GROUND FAULT
	COUNTERTOP GROUND FAULT
	ISOLATED GROUND
	POLE
	POWER CONNECTION
	QUADRUPLEX
	RECESSED DOUBLE DUPLEX
	RECESSED DUPLEX 1
	SINGLE
	SPECIAL PURPOSE
	WEATHER PROOF/GRCI

### SWITCHES

	DIMMER
	FAN
	FOUR WAY
	KEY OPERATED
	LOW VOLTAGE
	MOTOR
	MOTORIZED SHADE
	PROJECTION SCREEN
	SINGLE POLE
	THREE WAY

### SECURITY

	TV CAMERA
	DOOR LOCK
	ELECTRIC LOCK
	KEY CARD

### NURSE CALL

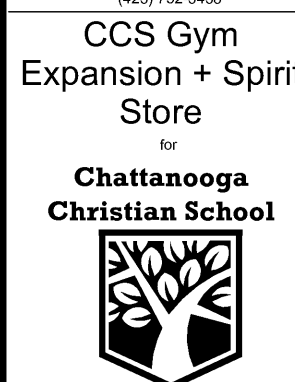
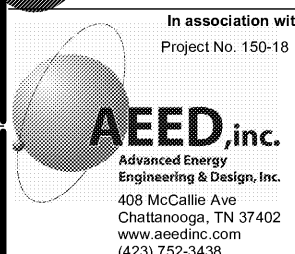
	NURSE CALL DOME LIGHT
	NURSE STATION
	TOILET STATION
	NURSE CALL - ANNUCIATOR
	NURSE CALL - SHOWER STATION

### COMMUNICATION

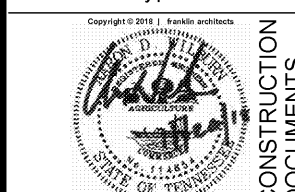
	BELL
	CLOCK 2
	FLOOR TELEPHONE
	INTERCOM 1
	OCCUPANCY SENSOR - 1 - WAY
	OCCUPANCY SENSOR - 2 - WAY
	OCCUPANCY SENSOR - CORRIDOR
	OCCUPANCY SENSOR - ROUND
	OCCUPANCY SENSOR - SQUARE
	PHOTOCELL
	PLAIN TELEPHONE
	PUSH BUTTON
	SPEAKER SQUARE
	TELCOM CONNECTION
	TELCOM OUTLET - RECESSED
	DATA NETWORK OUTLET
	TIME CLOCK 1
	TV SQUARE
	WALL DIMMER
	WALL TELEPHONE

Electrical Sheet Index		Issuance	
Sheet Number	Sheet Name	10.02.18	11.26.18
		100% DD	100% CD

Sheet Information			
Date	11.26.2018		
Job No.	6774.3 / 6774.4		
Title			
E001	COVER SHEET	X	X
ED101	DEMO PLAN	X	X
E101	LIGHTING PLAN - GYM ADDITION	X	X
E102	LIGHTING PLAN - SPIRIT SHOP	X	X
E201	POWER PLAN - GYM ADDITION	X	X
E202	POWER PLAN - SPIRIT SHOP	X	X
E300	SCHEDULES & DIAGRAMS	X	X



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Revisions		
No.	Issue	Date

Sheet Information			
Date	11.26.2018		
Job No.	6774.3 / 6774.4		
Title			

ELECTRICAL  
COVER SHEET

Sheet  
E001