



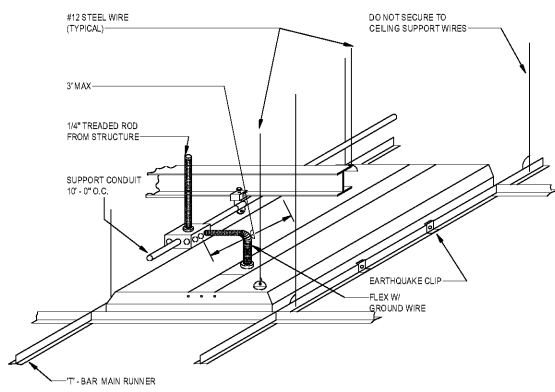
COOPER CARRY
THE CENTER FOR CONNECTIVE ARCHITECTURE

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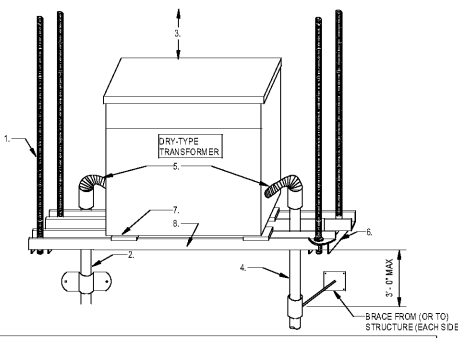
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ISSUANCES			
No.	Drawing Issue Description	Date	
1	ISSUED FOR BID	11/04/19	

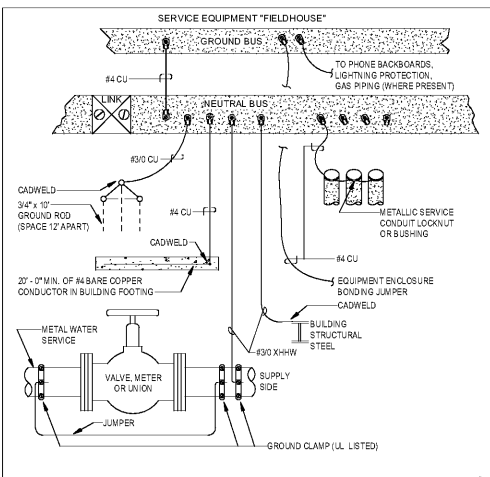


LAY-IN FIXTURE SUPPORT WITH #12 STEEL WIRE
SCALE: NTS



1. GALVANIZED THREADED ROD- FOUR REQUIRED.
2. PRIMARY RACEWAY.
3. MAINTAIN 12" CLEARANCE BETWEEN TOP OF TRANSFORMER AND CEILING OR OTHER OBSTRUCTION.
4. SECONDARY RACEWAY.
5. FLEXIBLE CONDUIT MAX. LENGTH - 10".
6. PROVIDE LATERAL (SWAY) BRACING SECURED TO STRUCTURE.
7. NEOPRENE VIBRATION INSULATING PAD WITH THROUGH BOLT.
8. GALVANIZED STEEL SUPPORT CHANNEL.

SUSPENDED TRANSFORMER INSTALLATION
SCALE: NTS



SERVICE GROUNDING AND BONDING
SCALE: NTS

OCCUPANCY SENSOR SCHEDULE						
DESCRIPTION	SYMBOL	WATT/TOPPER MODEL NUMBER	UNOBSTRUCTED RATED COVERAGE	MOUNTING	WATTAGE / VOLTAGE	WIRE GAUGE
DUAL TECHNOLOGY AREA SENSOR		DT-200	2000 SF	CORNER OF WALL / CEILING	24/DC	30 M/N.
		DT-305	1000 SF	CEILING	24/DC	30 M/N.
		DT-555	1000 SF	CEILING	120V/277V	30 M/N.

NOTES:
1. SENSOR REQUIRES POWER PACK (INSTALL IN ACCESSIBLE LOCATION)
2. SWIVEL MOUNTING BRACKET INCLUDED.

ELECTRICAL ABBREVIATIONS			
A	AMPERE	MF	MAIN FUSE
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MLO	MAN LIGSE ONLY
AFR	ABOVE FINISHED FLOOR	NTS	NOT TO SCALE
AC	AMPERE INTERRUPTING CAPACITY	MH	MOUNTING HEIGHT
AWG	AMERICAN WIRE GAUGE	ST	SHUNT TRIP
BC	BELOW CEILING	TO	TIME CLOCK
BKR	BREAKER	TV	TELEVISION
CKT	CIRCUIT	TYS	TRANSIENT VOLTAGE SURGE SUPPR.
FACP	FIRE ALARM CONTROL PANEL	UL	UNDERWRITERS LABORATORIES
GF	GROUND FAULT INTERRUPTER	UNO	UNLESS NOTED OTHERWISE
G OR GND	GROUND	V	VOLTS
HP	HORSE POWER	W	WATTS
JB	JUNCTION BOX	WP	WEATHERPROOF COVER (RECEPTABLES SHALL BE WEATHER-RESISTANT TYPE)
KV/MIL	THOUSAND CIRCULAR MILS	Y	WIRE
MCSMAN	MAIN CIRCUIT BREAKER		

- ELECTRICAL GENERAL NOTES**
61. PROJECT DESIGN IS BASED UPON THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE.
 62. WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR A BRANCH CIRCUIT HOMERUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.
 63. REFER TO THE APPROPRIATE DRAWINGS (INCLUDING ARCHITECTURAL DRAWINGS) FOR THE EXACT LOCATION OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS WHICH REQUIRE ELECTRICAL SERVICE.
 64. CAPITAL LETTERS OF LIGHTING SYMBOL INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR FIXTURE SELECTION.
 65. EQUIPMENT GROUNDING CONDUCTORS ARE TO BE INCLUDED IN ALL RACEWAYS AND CABLES.
 66. REFER TO SPRINKLER FIRE PROTECTION SHOP DRAWINGS FOR ALL FLOW AND TAMPER SWITCH LOCATIONS AND CONNECTIONS FOR THE FIRE ALARM SYSTEM.
 67. REFER TO ARCHITECTURAL DOOR SCHEDULES FOR DOORS REQUIRING FIRE ALARM SYSTEM INTERFACE AND SMOKE OPERATION. PROVIDE 120V POWER AND FIRE ALARM CONNECTION TO ALL FIRE SMOKE AND SMOKE DAMPERS INDICATED ON THE MECHANICAL DRAWINGS. WHERE ANY DAMPER IS EQUIPPED WITH INTEGRAL SMOKE DETECTOR, PROVIDE A ZONE ADDRESSABLE MODULE FOR CONNECTION TO FIRE ALARM SYSTEM WIRING.
 68. IN BUILDINGS WITH MULTIPLE SERVICES, THE CONTRACTOR SHALL PROVIDE A PLAQUE AT EACH SERVICE EQUIPMENT LOCATION IDENTIFYING ALL OTHER SERVICES IN THE BUILDING AND THE AREA SERVED BY EACH.
 69. ANY CABLE ROUTED TO A WALL SWITCH CONTROLLING LIGHTING SHALL CONTAIN A GROUNDED CONDUCTOR (NEUTRAL), IN ADDITION TO AN EQUIPMENT GROUNDING CONDUCTOR.
 70. CONTRACTOR SHALL DIVERT TO THE GREATEST EXTENT POSSIBLE THAT LOADS ON THE ELECTRICAL DISTRIBUTION SYSTEM ARE PHASE-BALANCED. WHERE MULTIMETER PACKS ARE INSTALLED, EQUIPMENT LUGS SHALL BE ADJUSTED ACCORDINGLY TO BALANCE PHASES.
 71. GROUT FILL AROUND ALL BOXES IN CMU PARTITIONS TO SOLIDLY ANCHOR IN PLACE.
 72. OFFSET DEVICES ON OPPOSITE FACES OF WALLS A MINIMUM OF 8 INCHES; NO BACK-TO-BACK RECEPTABLES OR OTHER DEVICES ARE ALLOWED.
 73. ALL ADJACENT ITEMS OF SAME SIZE SHALL BE ALIGNED.
 74. USE MINIMUM #10 AWG FOR 20-AMP BRANCH CIRCUIT WIRING HOMERUNS EXCEEDING 75 FEET.
 75. ALL WIRING THROUGH JUNCTION BOXES SHALL HAVE A MINIMUM OF 8 INCHES OF SLACK FOR FUTURE TIE-IN. DO NOT PULL WIRE THROUGH STRAIGHT THROUGH BOXES. CONTINUOUS WIRE GROUPS THROUGH JUNCTION BOXES SHALL BE TAPPED A MINIMUM OF COMPLETE "HAND-LOOPS", TIED TOGETHER WITH ELECTRICAL TAPE, ABOVE THE RESPECTIVE BOX.
 76. SPLICING OF CONTINUOUS CIRCUIT WIRING IN JUNCTION BOXES SHALL BE TO AN ABSOLUTE MINIMUM.
 77. ALL DEVICE WIRING SHALL EXTEND A MINIMUM OF 8 INCHES BEYOND THE FACE OF THE DEVICE BOX PER NEC CODE.

- ELECTRICAL SYSTEMS NOTES**
1. BONDING OF SUBCONDUITS SHALL BE IN ACCORDANCE WITH PERFORMANCE, INSULATION AND MATERIALS PAYMENT BOND. EACH IN THE AMOUNT OF 100% OF THE SUBCONTRACT VALUE. THE CONTRACTOR HAVING A CONTRACT OF \$50,000.00 OR MORE FOR ELECTRICAL WORK SHALL BE SURETY COVERED. CONTRACTOR SHALL HAVE AN NET WORTH OF \$50,000.00 AND A MINIMUM FINANCIAL SIZE IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT. CONTRACTOR SHALL HAVE AN NET WORTH OF \$50,000.00 AND A MINIMUM FINANCIAL SIZE IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT.
 2. ALL INTERIOR AND EXTERIOR WALL MOUNTED DEVICES AND LIGHTS SHALL BE SET PLUMB, LEVEL, AND SQUARE. ALL DEVICE TRIM SHALL BE SET PLUMB, LEVEL, AND SQUARE. ALL EXTERIOR ITEMS SHALL BE NEATLY SEALED AGAINST WEATHER PENETRATION.
 3. THE MINIMUM SIZE FOR RECEPTABLE AND OTHER TYPE DEVICE PLATE SHALL BE "JUNIOR" SIZE PLATES SHALL BE USED AT ALL INTERIOR AND EXTERIOR CONDITIONS. ALL SWITCH, RECEPTABLE, PHONE JACK, DATA CABLE, CATV, BLANKS, AND OTHER TYPE DEVICE TRIM SHALL BE OF THE SAME FINISH AND SAME SIZE TYPE THROUGHOUT THE PROJECT.
 4. NO ELECTRICAL DEVICES IN FIRE RATED OR OTHER PARTITIONS SHALL BE PLACED BACK-TO-BACK WHERE DEVICES SERVE OPPOSITE SIDES OF THE COMMON PARTITION. DEVICES IN FIRE-RATED PARTITIONS SHALL BE OFFSET A MINIMUM OF SIX INCHES FROM ADJACENT EDGES.
 5. ALL PANELBOARD DESIGNATION LABELS SHALL BE BLACK (OR RED PER CRITERIA) BAKED WITH INTEGRAL WHITE ETCHED-IN CARICATURES OF MINIMUM 3/8" SIZE. ALL PANELBOARD DIRECTORIES SHALL BE NEATLY TYPED AND ORDERLY SHOWING THE CIRCUIT BREAKER LAYOUT IN THE PANELBOARD. ALL "SPARES" SHALL BE LEGIBLY IDENTIFIED IN PENCIL. ALL CIRCUIT BREAKERS SHALL BE IDENTIFIED WITH THE MANUFACTURER'S STANDARD PRINTED SELF-STICK TAG MARKERS.
 6. LOCATE ELECTRIC WATER COOLER RECEPTABLES AT HEIGHTS TO BE CONCEALED FROM VIEW, BUT ACCESSIBLE BY THE INSTALLED WATER COOLER.
 7. ALL EQUIPMENT SHALL HAVE CONCRETE PADS WHICH SHALL BE SET LEVEL WITH THEIR TOP ELEVATION NOT LESS THAN 3-1/2 INCHES ABOVE FINISHED FLOOR OR GRADE. ALL CORNERS SHALL HAVE ONE-INCH CHAMFERED EDGES, AND ALL EXPOSED-TO-VIEW SURFACES DRESSED SMOOTH.
 8. CONTRACTOR SHALL PROVIDE ADDITIONAL REQUIRED SUSPENDED SUPPORTS TO PREVENT ABOVE-CEILING FLEXIBLE CONDUIT FROM CONTACTING THE CEILING GRID, FRAMING, FINISH MATERIAL, OR TILES.
 9. UNLESS SPECIFICALLY DIMENSIONALLY NOTED OTHERWISE, ALL INCANDESCENT LIGHTS SHALL BE CENTERED WITHIN THE RESPECTIVE CEILING TILES.
 10. ALL CEILING-MOUNTED DEVICES SHALL BE SUPPORTED FROM THE CEILING FRAMEWORK OR GRID, NOT FROM THE CEILING TILE OR MATERIAL ITSELF.
 11. EACH LAY-IN LIGHT FIXTURE SHALL BE ADDITIONALLY SUPPORTED (IN ADDITION TO THE CEILING GRID CORNER WIRES) WITH NOT LESS THAN TWO GALVANIZED STEEL JACK CHAINS OR RODS OR #10 WIRE (ONE AT EACH OPPOSITE DIAGONAL CORNER OF EACH LIGHT) SECURED TO THE STRUCTURE ABOVE THE CEILING.
 12. REGARDLESS OF THE QUANTITIES AND/OR LOCATIONS SHOWN FOR FIRE ALARM HORNS AND ANNUNCIATORS, IT SHALL BE THE ENGINEER'S RESPONSIBILITY TO LOCATE AS MANY FIRE HORNS AND SUPPLEMENTARY ANNUNCIATORS AS NEEDED TO ACHIEVE A MINIMUM 80 DECIBEL LEVEL ABOVE AMBIENT NOISE THROUGHOUT THE PROJECT AS REQUIRED BY THE GOVERNING FIRE MARSHAL.
 13. ALL VERTICAL CONDUIT AND/OR SUPPORTS PENETRATING THRU THE ROOF SHALL BE BRACED TO THE ROOF STRUCTURE HIGH AND LOW TO PREVENT MOVEMENT WHICH WOULD JEOPARDIZE THE ROOF FLASHING INTEGRITY.
 14. ALL CONDUIT PENETRATING THE PLANE OF THE ROOF SHALL HAVE MINIMUM 1" THICK INSULATION ON ALL PORTIONS BETWEEN THE UNDERSIDE OF ROOF DECK AND FINISHED CEILING LINE TO REDUCE POTENTIAL CONDENSATE DRIPPAGE.
 15. ALL CONDUIT INSTALLED UNDERGROUND SHALL HAVE A JUNCTION BOX INSTALLED EVERY 120 FEET.
 16. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL CONDUIT AND WIRING REQUIRED FOR THE ACCESS CONTROL SYSTEM. REFER TO SECTION 08710 - FINISH HARDWARE PART 2 - PRODUCTS 2.1 MANUFACTURER UNITS; E. EXIT DEVICES; ALSO ATTACHMENTS 'B' AND 'C'.

ELECTRICAL SYMBOL LEGEND		
SYMBOL	DESCRIPTION	HEIGHT
	SINGLE POLE SINGLE THROW / THREE-WAY / FOUR-WAY TOGGLE SWITCH (NOTE L-1)	48"
	MOTOR RATED SWITCH / KEYSWITCH / TIMER SWITCH / PROXIMITY MOTION SWITCH	48"
	DIMMER SWITCH (NOTE L-1) / THREE-WAY DIMMER SWITCH (NOTE L-1)	48"
	SINGLE / DUPLEX / QUAD RECEPTABLE OUTLET (NOTE L-1)	18"
	GFCI DUPLEX / GFCI DUPLEX ABOVE COUNTER / GFCI QUAD RECEPTABLE (NOTE L-1)	18"/43"
	DUPLEX / QUAD / GFCI QUAD RECEPTABLE OUTLET ABOVE COUNTER MOUNTED (NOTE L-1)	43"
	ISOLATED GROUND DUPLEX RECEPTABLE OUTLET	18"
	DUPLEX RECEPTABLE OUTLET WITH (2) DC USB CHARGING PORTS / ABOVE COUNTER	18"/43"
	DUPLEX GF PROTECTED RECEPTABLE OUTLET WITH (2) DC USB CHARGING PORTS / ABOVE COUNTER	18"/43"
	SPECIAL PURPOSE RECEPTABLE OUTLET, NEMA CONFIGURATION TO MATCH PLUG (NOTE L-1)	18"
	SPLIT WIRED DUPLEX RECEPTABLE, ONE RECEPTABLE SHALL BE CONTROLLED (NOTE L-1) WHERE USED, TO CONSERVE ENERGY. RECEPTABLE SHALL BE SUITABLY MARKED PER NEC REQUIREMENTS.	18"
	DUPLEX RECEPTABLE OUTLET, CEILING MOUNTED / FLOOR MOUNTED / CLOCK (WALL RECESSED)	
	QUAD RECEPTABLE OUTLET, CEILING MOUNTED / FLOOR MOUNTED	
	MULTI-OUTLET ASSEMBLY WITH OUTLETS ON CENTERS AS INDICATED IN NOTES OR SPECIFICATIONS MOUNT 8" ABOVE COUNTER OR AS INDICATED	
	FIRE-RATED POKE-THRU DEVICE	
	JUNCTION BOX, CEILING / WALL / FLOOR MOUNTED	
	POWERED CLOCK	
	ARROWHEAD INDICATES HOMERUN, X-1.5 ADJACENT TO HOMERUN. ARROWHEADS INDICATES HOMERUN TO PANEL, X CIRCUIT NUMBER.	
	INDICATES CIRCUIT CONTINUATION OUTSIDE OF PANEL.	
	RACEWAY CABLE, CONCEALED IN AND ABOVE CEILING	
	RACEWAY CABLE, CONCEALED IN DOWN GROUT IN SLAB	
	RACEWAY CABLE, CONCEALED ON WALL AND/OR ABOVE CEILING - EMERGENCY CIRCUIT	
	RACEWAY CABLE, EXPOSED	
	GROUNDING CONNECTION (SYSTEM AND/OR EQUIPMENT)	
	CONDUIT TURNING UP/DOWN	
	CONDUIT STUB, TERMINATE IN INSULATED BUSHING OR CAP IF UNDERGROUND	
	LIGHTING FIXTURE, 2'x4, 1'x4, 2'x2	
	LIGHTING FIXTURE, 2'x4, 1'x4, 2'x2 - PROVIDING EMERGENCY ILLUMINATION	
	LIGHTING FIXTURE RECESSED / SURFACE MOUNTED / OVERHEAD/WALL MOUNTED	
	EMERGENCY LIGHTING FIXTURE RECESSED / SURFACE MOUNTED / OVERHEAD/WALL MOUNTED	
	STRIP FIXTURE - OVERHEAD / WALL MOUNTED	
	DIRECTIONAL OR WALL WASH LIGHTING FIXTURE	
	LIGHT TRACK AND LIGHT TRACK FIXTURES	
	POLE MOUNTED LIGHT FIXTURE WITH ARM, SEE PLANS FOR NUMBER OF LUMINAIRES.	
	POST TOP OR BOLLARD LIGHT FIXTURE	
	CEILING/PENDANT MOUNTED PADDLE FAN	
	EXIT SIGN, CEILING/WALL MOUNTED; SHADED QUADRANT INDICATES FACES; PROVIDE ARROWS PER PLANS.	
	EMERGENCY LIGHTING FIXTURE	
	LIGHTING CONTACTOR / TIMECLOCK	
	PANELBOARD - WALL MOUNTED (RECESSED) / WALL MOUNTED (SURFACE)	
	MOTOR	
	NON-FUSIBLE DISCONNECT SWITCH, RATING/POLES/NEMA ENCLOSURE	
	FUSIBLE DISCONNECT SWITCH, RATING/POLES/NEMA ENCLOSURE/FUSE RATING	
	MAGNETIC MOTOR STARTER, NEMA SIZE RATING/ENCLOSURE (NEMA 1 IF NOT SHOWN)	
	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT MEANS, NEMA SIZE RATING/ENCLOSURE (NEMA 1 IF NOT SHOWN)	
	CURRENT TRANSFORMER CABINET	
	POWER METER AND SOCKET	
	FIRE ALARM MANUAL STATION	48"
	FIRE ALARM HORN WITH VISUAL DEVICE, WALL MOUNTED (NOTE L-3, L-5) NUMERICAL INDICATES CANDELA RATING	
	FIRE ALARM HORN/SPEAKER, WALL MOUNTED (NOTE L-3, L-5)	
	FIRE ALARM HORN WITH VISUAL DEVICE, CEILING MOUNTED (NOTE L-3, L-5) NUMERICAL INDICATES CANDELA RATING	
	FIRE ALARM HORN/SPEAKER, CEILING MOUNTED (NOTE L-3, L-5)	
	FIRE ALARM VISUAL DEVICE (CEILING / WALL), NUMERICAL INDICATES CANDELA RATING (NOTE L-3)	
	FIREMAN PHONE JACK / FIRE PHONE	42"
	FIRE ALARM SMOKE DETECTOR (CEILING / WALL) (NOTE L-4)	
	HEAT DETECTOR/ANALOG HEAT DETECTOR	
	CONNECTION TO FIRE PROTECTION SYSTEM WATER FLOW / VALVE SUPERVISORY	
	FIRE ALARM CONNECTION TO SMOKE / FIRE DOOR HOLD-OPEN DEVICE	
	DUCT MOUNTED SMOKE DETECTOR / REMOTE TEST STATION / REMOTE INDICATOR LIGHT	
	FIRE ALARM CONTROL PANEL, SURFACE / RECESSED	
	FIRE ALARM ANNUNCIATOR PANEL, RECESSED	

LEGEND NOTES

L-1 MOUNTING HEIGHTS NOTED ARE TO THE CENTER OF DEVICE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE.
L-2 3/4" CONDUIT 8" ABOVE ACCESSIBLE CEILING AND TERMINATE WITH NYLON GROMMET.
L-3 WHERE FIRE ALARM VISUAL DEVICES ARE WALL-MOUNTED, THE ENTIRE LENS SHALL BE MOUNTED A MINIMUM OF 8" AFF AND NOT GREATER THAN 8" AFF. TOPS OF WALL-MOUNTED ADJUBLY ONLY DEVICES SHALL NOT BE LESS THAN 8" AFF AND NOT LESS THAN 8" BELOW FINISHED CEILING.

ELECTRICAL SHEET INDEX	
SHEET NUMBER	SHEET NAME
EPL01	ELECTRICAL LEGENDS & DETAILS
EPL02	ELECTRICAL RISER DIAGRAM & PANEL SCHEDULES
EPL03	FIELDHOUSE - SITE ELECTRICAL
EPL01	FIELDHOUSE - ELECTRICAL
EPL02	FIELDHOUSE - FIRE ALARM
TOTAL DRAWINGS ISSUED: 5	

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Project Number: 1810370 Drawn By: DV Checked By: WRB

PEBBLEBROOK HS B007 - FIELDHOUSE
DOE Facility Code 4066
FTE = 2787
IU = 143

991 OLD ALABAMA ROAD
MABLETON, GA 30126

COBB COUNTY SCHOOL DISTRICT

ELECTRICAL LEGENDS & DETAILS

TM	20190224.01
Principal Charge	
DWG	10/25/19
Project Manager	
WRB	
Project Architect	
DV	
Staff Architect	

EF0.01

ISSUED FOR CONSTRUCTION

Order Plans @

PROJECT NUMBER: 20190224.01 PROJECT NAME: PEBBLEBROOK HS B007 - FIELDHOUSE
SHEET NUMBER: EF0.01 - ELECTRICAL LEGENDS & DETAILS
DIRT/REV PROJECTS/1810370_Pebblebrook B007_Fieldhouse_MEP_r19_Central_DuvV.rvt
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