



CHEROKEE NATION ENTERPRISES, INC.

CLAREMORE, OKLAHOMA
HIGHWAY 20

WILL ROGERS DOWN CASINO EMERGENCY POWER ADDITIONS

ISSUE DATE: 01/09/2014

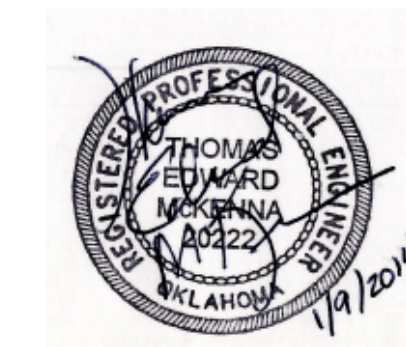
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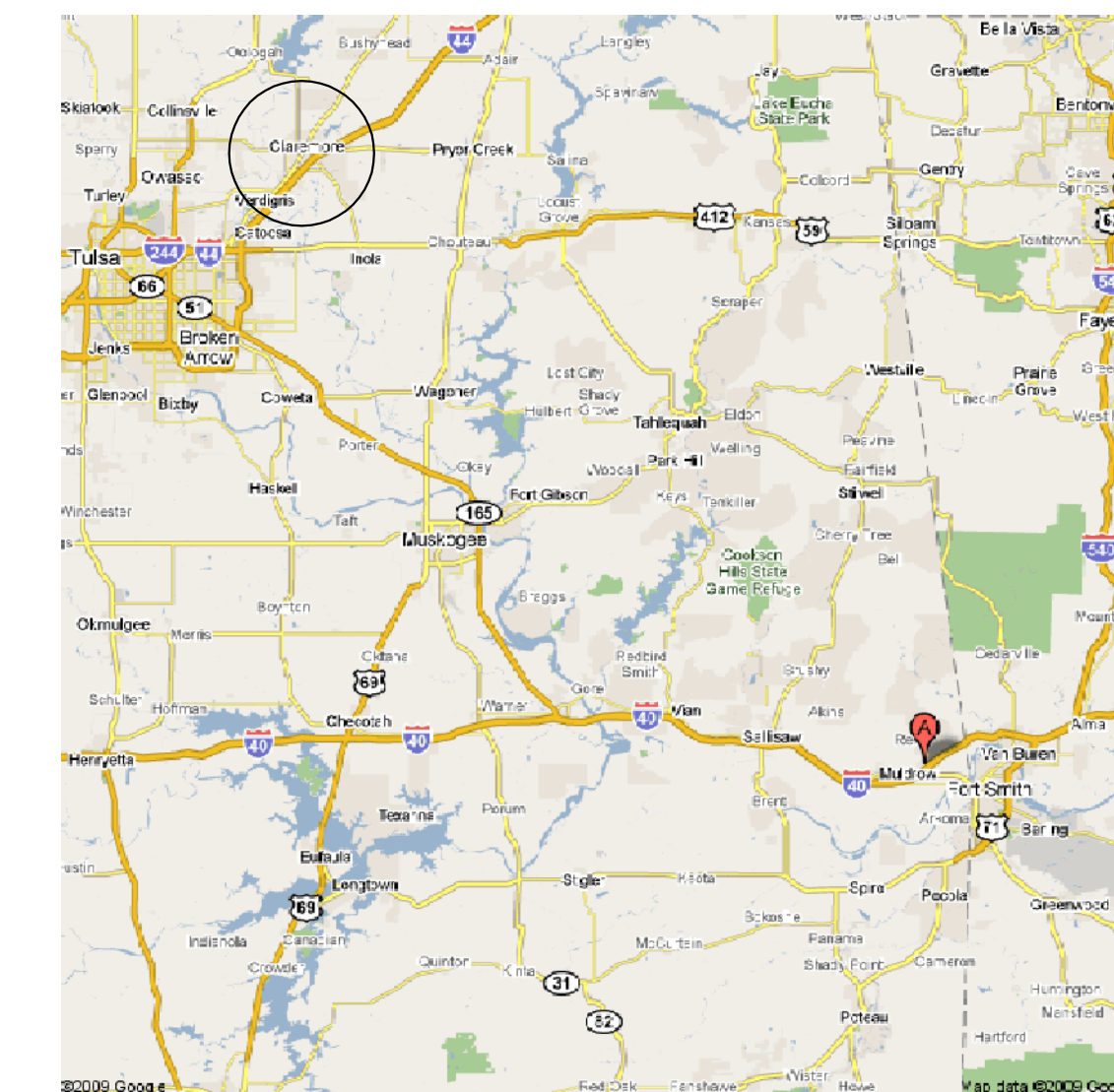
CONSULTING ENGINEER AND MEP CONSTRUCTION MANAGER



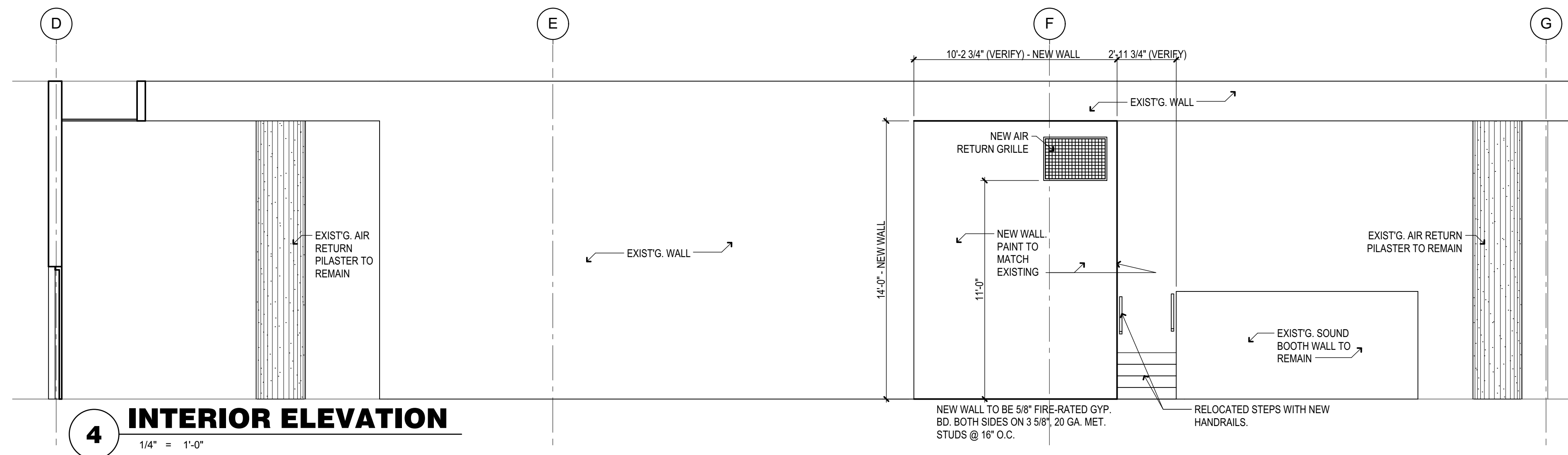
DESIGN GROUP, INC
1401 S. DENVER, SUITE A, TULSA, OK 74119
(918) 599-7770 FAX (918) 384-3186
C.A. # : 3995 Expires 06/30/2014



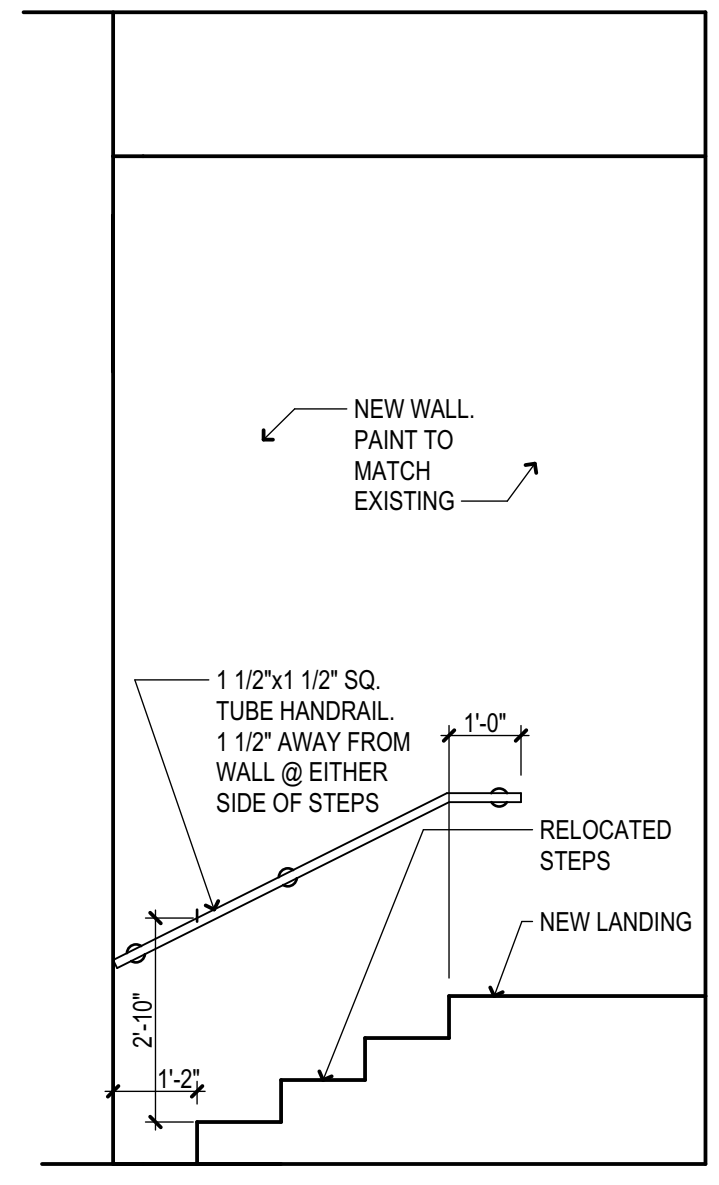
SITE MAP



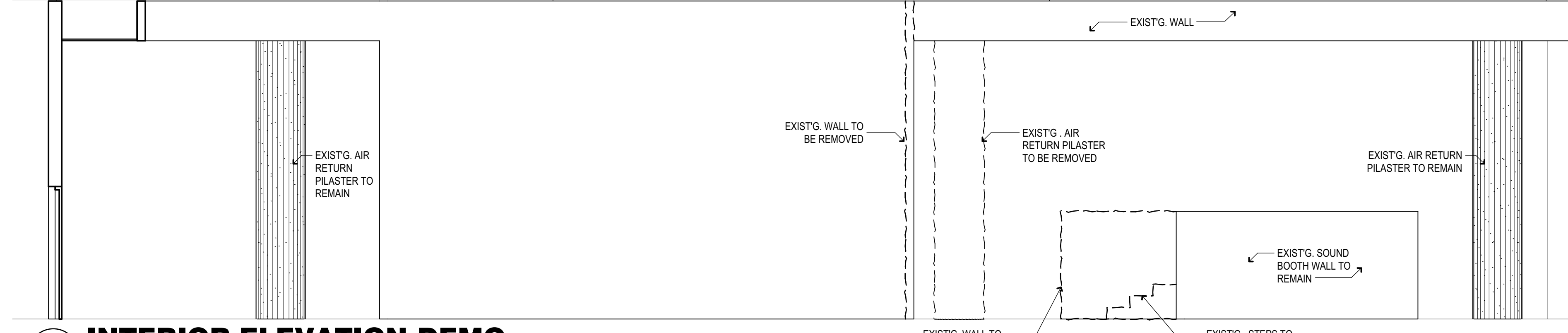
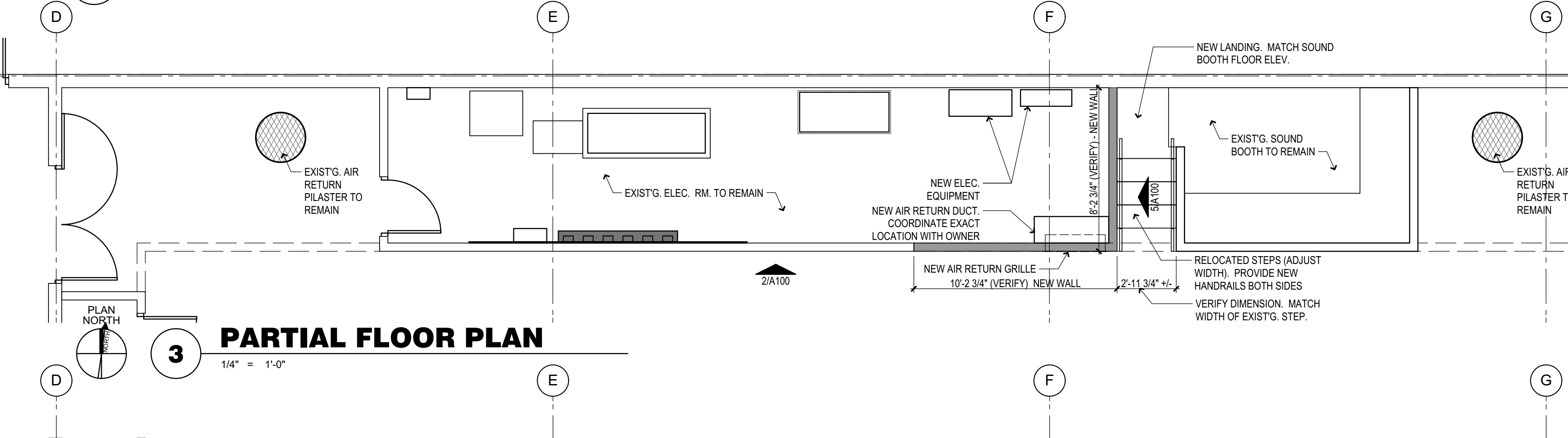
Revision Date	Revision



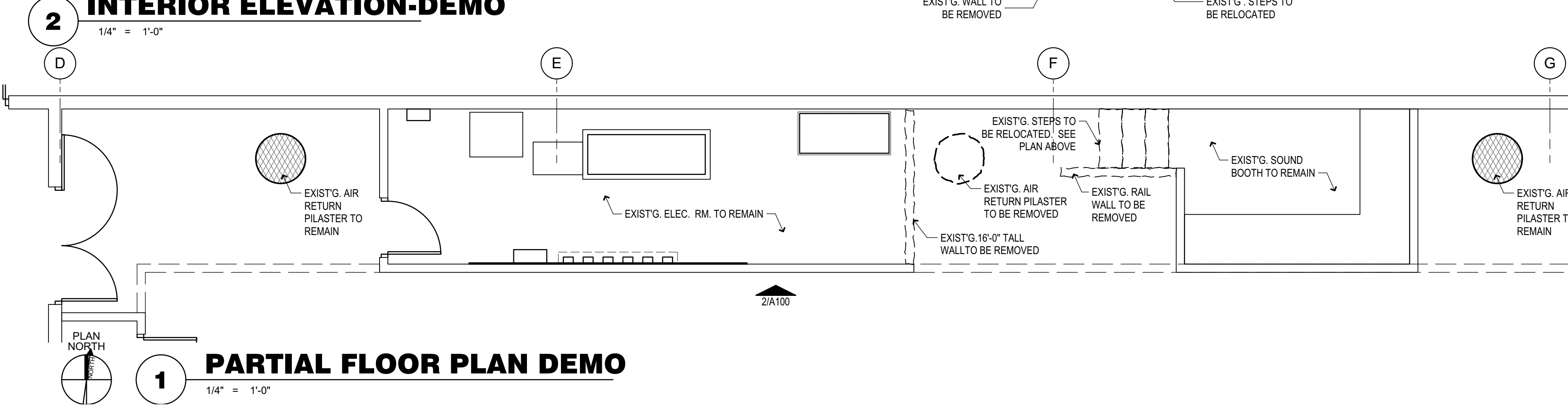
4 INTERIOR ELEVATION
1/4" = 1'-0"



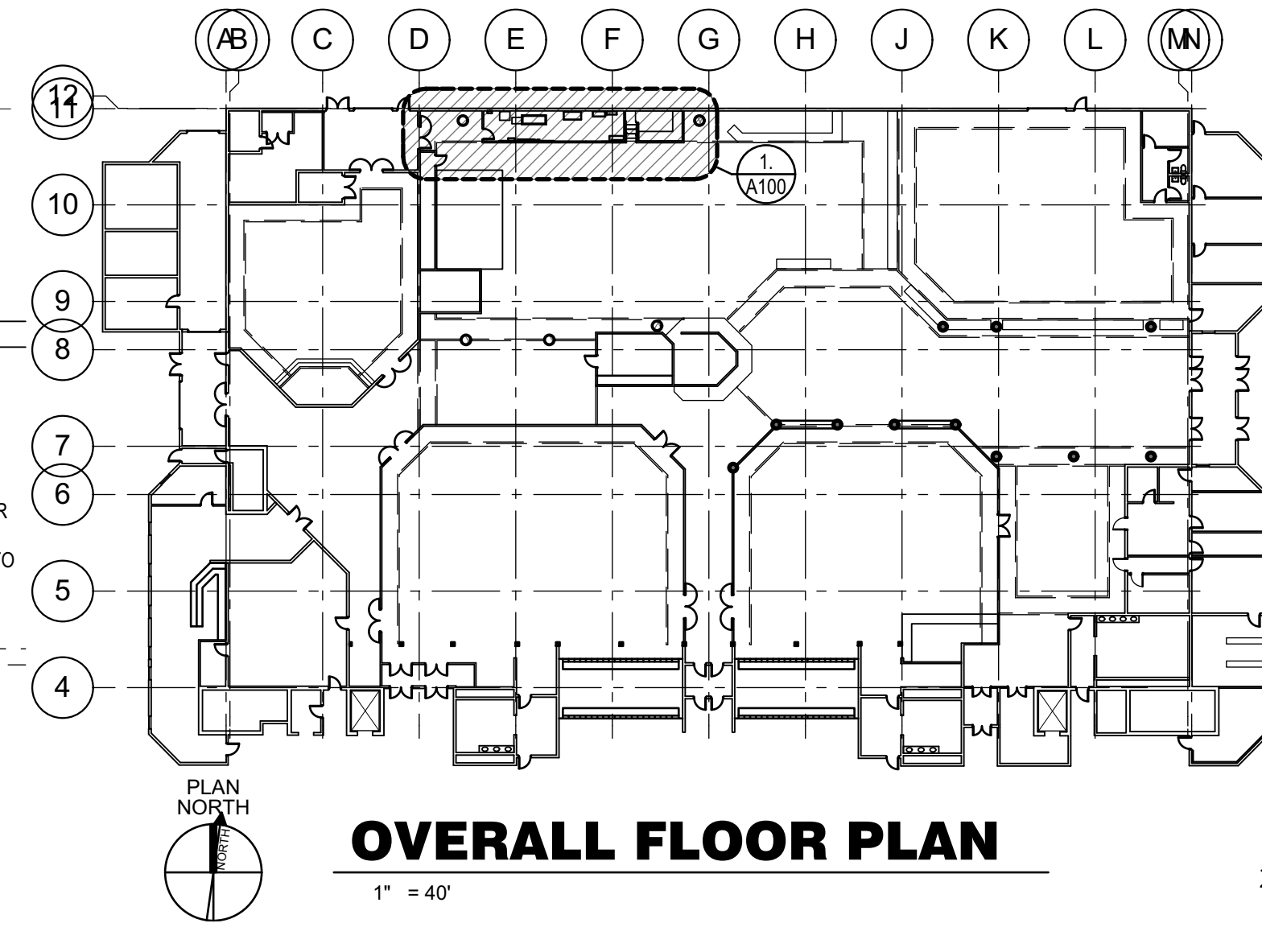
5 ELEV. - HANDRAIL
3/8" = 1'-0"



2 INTERIOR ELEVATION-DEMO
1/4" = 1'-0"



1 PARTIAL FLOOR PLAN DEMO
1/4" = 1'-0"



OVERALL FLOOR PLAN
1" = 40"

Project Title

**WILL ROGERS
DOWNS EMERGENCY
POWER ADDITIONS**

Sheet Title
**FLOOR PLANS AND
ELEVATIONS**

Drawn	Project Number	0000
Checked	Print Date	1/9/2014
CAD System Info	user: JPerez on 1/9/2014 at 5:05 PM	
	P:\1211 - CABC Junior High Senior High Worship Center\CAD\CAD\Will Rogers Downs - Floor Plan - 01-08-2014.plt	
Issue Date	11-04-2011	
Sheet Number	A100	

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DEVICE	SUBSCRIPT
'j'	LOWER CASE LETTER INDICATES DEVICE CONTROL ARRANGEMENT
A	WITH AUXILIARY CONTACTS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
A/C	HVAC
APL	APPLIANCE
AF	AMP FUSE
AT	AMP TRIP
BTC	BRANCH TO CONNECTION
C	ITEM INSTALLED FLUSH IN CEILING
C*	CONTROL POINT IDENTIFIER (*INDICATES CONTROL NUMBER)
CKT	CIRCUIT
CT	CONTACTOR
CTL	CONTROL
D	120 VOLT DISCONNECT SWITCH ARRANGEMENT
DR	DUPLEX RECEPTACLE
DPP	FOR AUTO DOOR PUSH PLATE
(E)	EXISTING
(ER)	EXISTING RELOCATED
EM	EMERGENCY CIRCUIT
EQ	ITEM INSTALLED IN EQUIPMENT
FACP	FIRE ALARM CONTROL PANEL
FL	ITEM INSTALLED IN FLUSH IN FLOOR
FMC	FLEXIBLE METAL CONDUIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE
GF	GROUND FAULT PROTECTED BREAKER
GFP	FEED THROUGH GROUND FAULT CIRCUIT INTERRUPTING PROTECTED
H	HORIZONTALLY MOUNTED
HW	HARD WIRED
IG	ISOLATED GROUND RECEPTACLE
JB	JUNCTION BOX
K	KEY OPERATED
L	LOW VOLTAGE
LFMC	LIQUID-TIGHT FLEXIBLE METAL CONDUIT
LGT	LIGHTING
M	MULLION (DESPARD TYPE) SWITCH
MTR	MOTOR
OCPD	OVER-CURRENT PROTECTION DEVICE
OE	ON EQUIPMENT
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
P	PILOT LAMP SWITCH
PNL	PANELBOARD
PP	POWER POLE
RCP	RECEPTACLE
RI	ROUGH-IN ONLY
S	SURFACE MOUNTED
S.E.R.	SERVICE ENTRANCE RATED
SP	SURGE PROTECTOR RECEPTACLE
SPD	SURGE PROTECTION DEVICE
SR	SINGLE PURPOSE RECEPTACLE
SWBD	SWITCHBOARD
SW	SPLIT WIRED RECEPTACLE FOR HALF SWITCHING
T	TAMPER PROOF RECEPTACLE
U.C.	UNDER COUNTER
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UNO	UNLESS NOTED OTHERWISE
W	ITEM INSTALLED 44" AFF OR AS DETAILED IN ARCH. ELEVATIONS
WP	WEATHERPROOF WHILE IN USE
WPS	WEATHERPROOF SPRING COVER DEVICE
(X)	EXISTING TO BE REMOVED
Z*	DEVICE ZONE IDENTIFIER (*INDICATES ZONE NUMBER)

ELECTRICAL GRAPHIC SYMBOL LEGEND	
WALL MOUNTED DEVICES	CONTROL DEVICES
WALL MOUNTED, EMERGENCY POWER DEVICES	RACEWAYS
WALL MOUNTED, ISOLATED GROUND DEVICES	
SWITCHES/MOTORS/TRANSFORMERS/ETC	

SCOPE OF WORK:

THIS PROJECT INVOLVES THE ADDITION OF A NEW 480-VOLT, THREE-PHASE FLYWHEEL UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH 3-PHASE BACK-UP POWER DEDICATED FOR SERVING THE EXISTING I.T. AND SURVEILLANCE SYSTEM SERVERS. THIS FACILITY REQUIRES BOTH GAMING COMMISSION AND RACING COMMISSION LICENSURE PRIOR TO WORK.

TO MINIMIZE OUTAGES ON THE EXISTING SERVERS, THE CONTRACT REQUIRES TO SET A NEW 400A/3P BREAKER IN EXISTING 'DPE' WITH TERMINATIONS TO THE OWNER PROVIDED BYPASS SWITCHBOARD THAT ENERGIZES THE FLYWHEEL UPS SYSTEM. THE CONTRACTOR SHALL INTERCEPT THE EXISTING PANEL 'HLG' FEEDER AT THE SWITCHBOARD 'DPE' ONCE ALL UPS DISTRIBUTION SYSTEMS HAVE BEEN PLACED AND READY FOR ENERGIZING.

A NEW EMERGENCY POWER SYSTEM SHALL BE PROVIDED TO SERVE PRIMARY I.T HVAC SYSTEMS FROM NEW DISTRIBUTION PANEL 'EHAC'. EXISTING HVAC CIRCUITS SERVED FROM PANEL 'HLG' SHALL BE RELOCATED TO THIS NEW PANEL.

THE SUMMARY OF PORTIONS OF EQUIPMENT TO BE PROVIDED:

1. NEW 400A/3P BREAKER AND 125A/3P BREAKER.
2. NEW SPLIT SYSTEM A/C SYSTEM TO SERVE EXISTING MAIN ELECTRICAL ROOM.
3. NEW 125A 480Y/277V PANELBOARD.
4. MISCELLANEOUS PULLBOXES AND MINOR ELECTRICAL DEMOLITION.
5. DEMOLITION, REMOVAL AND ADDITION OF NEW WALL SYSTEM.
6. RACEWAYS IN EXISTING CEILING CAVITY TO SERVE INDICATED LOADS.
7. U.L. LABEL EXISTING PANEL 'HLG' TO BE 3-WIRE IN LIEU OF 4-WIRE.
8. MISCELLANEOUS CONCRETE EQUIPMENT PADS.
9. NEW STAIR RAILS AND BUILDING MATERIALS TO MATCH EXISTING.

THE ELECTRICAL CONTRACTOR WILL BE THE PRIME CONTRACTOR FOR THE ENTIRE PROJECT AND SCOPE OF WORK. ELECTRICAL CONTRACTORS WILL BE REQUIRED TO VERIFY A MINIMUM OF 10-YEARS OF DOCUMENTED SIMILAR WORK WITH FLYWHEEL UPS SYSTEM INSTALLATIONS, NFPA 101 AND 70 WITH PAST EXPERIENCE SERVING AS THE PRIME CONTRACTOR FOR SIMILAR SIZE OF INSTALLATIONS.

WORK SHALL INCLUDE CAPABILITIES TO SUB-CONTRACT MECHANICAL WORK AND BUILDING MATERIALS WORK INDICATED, INCLUDING PLUMBING, PIPING, ETC. REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. ELECTRICAL CONTRACTOR SHALL BE CAPABLE TO COORDINATE SYSTEM MODIFICATIONS AND OUTAGES WITH THE OWNER A MINIMUM 24-HOURS IN ADVANCE OF ANY WORK. INCLUDE ALL COSTS ASSOCIATED WITH THE HOURS OF WORK, PLACEMENT OF EQUIPMENT, RIGGING AND DEMOLITION, BOTH TEMPORARY AND PERMANENT TO MOBILIZE EQUIPMENT INTO AND OUT OF THE INDICATED FACILITY LOCATIONS, MEETING GAMING AND OSHA REGULATIONS, WHERE INDICATED ON DRAWINGS. EXISTING GENERATOR(S) SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO OWNER.

FINAL TESTING AND COMMISSIONING SHALL BE ONSITE AND THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND OWNER. FAILURE TO MEET THE EQUIPMENT MANUFACTURER TESTING PROCEDURES WILL REQUIRE THE ELECTRICAL CONTRACTOR TO ENLIST THE SERVICES OF THE EQUIPMENT MANUFACTURERS PERSONNEL TO PROVIDE THE FINAL COMMISSIONING AND REPORTS TO SATISFY THE WARRANTY.

ABOVE CEILING WORK PERMIT PROGRAM:

PURPOSE

THIS PROGRAM SHALL ESTABLISH MINIMUM REQUIREMENTS TO ENSURE THAT ALL PENETRATIONS IN SMOKE AND FIRE PARTITIONS ARE PROPERLY SEALED. THE LIFE SAFETY CODE, NFPA 101, REQUIRES THAT ALL SMOKE AND FIRE PARTITIONS BE SEALED WITH THE PROPERLY RATED MATERIAL ON BOTH SIDES AND AROUND ALL PENETRATIONS FROM THE FLOOR TO THE UNDERSIDE OF THE NEXT FLOOR LEVEL.

PROCEDURE

THE FOLLOWING PROCEDURE MUST BE FOLLOWED ANY TIME ABOVE THE CEILING WORK IS CONDUCTED IN THE FACILITY. OUTSIDE CONTRACTORS PERFORMING WORK SHALL BE INFORMED OF THE PROGRAM AND IT'S REQUIREMENTS.

A. PRIOR TO BEGINNING ABOVE THE CEILING WORK, AN ABOVE THE CEILING WORK PERMIT MUST BE OBTAINED FROM THE SUPPORT SERVICES DEPARTMENT. THIS PERMIT MUST BE SIGNED BY THE SAFETY OFFICER, DIRECTOR OF SUPPORT SERVICES, MAINTENANCE SUPERVISOR OR THEIR DESIGNEE AND IS VALID FOR THE LENGTH OF THE CONTRACT, OR ONE WEEK IF NO CONTRACT EXISTS. THE MAINTENANCE SUPERVISOR OR DESIGNEE SHALL INFORM ALL PARTIES PERFORMING THE WORK ABOVE THE CEILING ON THE REQUIREMENTS OF THIS POLICY. ALL CONTRACTORS BIDDING PROJECTS, WHICH MAY REQUIRE ABOVE CEILING WORK, SHALL BE INFORMED OF THIS POLICY PRIOR TO BIDDING SAID PROJECT AND AGAIN AFTER BID IS AWARDED. NO ABOVE CEILING WORK MAY BEGIN UNTIL THE POLICY IS COMMUNICATED AND PERMIT IS SIGNED AND APPROVED BY SUPPORT SERVICES.

B. CONTRACTORS ARE RESPONSIBLE FOR SEALING EVERY PENETRATION ON BOTH SIDES, IN EVERY WALL OR FLOOR THEY MUST PENETRATE. SEALING MATERIALS MUST BE APPROPRIATELY RATED ACCORDING TO NFPA AND OWNER. THE SUPPORT SERVICES DEPARTMENT WILL ASSIST THE CONTRACTOR IN DETERMINING THE APPROPRIATE MATERIAL FOR THE AREA PENETRATED. MINERAL WOOL, FIBERGLASS AND STEEL WOOL ARE NOT ACCEPTABLE MATERIALS.

C. ANY EXISTING PENETRATION FOUND WHICH IS NOT PROPERLY SEALED IS TO BE REPORTED IMMEDIATELY TO THE SUPPORT SERVICES DEPARTMENT BEFORE WORK BEGINS IN THAT AREA. ONCE WORK BEGINS IN THAT AREA, THE CONTRACTOR IS RESPONSIBLE FOR SEALING ALL UNREPORTED PENETRATIONS.

D. CONTRACTORS ARE ENCOURAGED TO USE EXISTING PROPER PENETRATIONS (PIPE SLEEVES, ETC.) AND ARE RESPONSIBLE FOR RESEALING AFTER USE. CONTRACTORS ARE NOT PERMITTED TO USE IMPROPER EXISTING OPENINGS (WIRE STUFFED BESIDE DUCTWORK THROUGH WALL) FOR ANY REASON. IF A CONTRACTOR IS TO WORK ON A WALL OR FLOOR WHICH CONTAINS ANY PENETRATIONS, THEY ARE TO CONTACT SUPPORT SERVICES BEFORE MAKING A NEW PENETRATION.

E. AFTER THE WORK IS COMPLETED & PRIOR TO REPLACING CEILING TILE OR COVERING PENETRATION WORK, THE INDIVIDUAL PERFORMING THE WORK MUST CONTACT THE SUPPORT SERVICES DEPARTMENT FOR AN ABOVE THE CEILING INSPECTION OF PENETRATIONS BEFORE LEAVING THE JOB. THE SAFETY OFFICER, DIRECTOR OF SUPPORT SERVICES OR MAINTENANCE SUPERVISOR SHALL CONDUCT A FINAL CHECK OF THE AREA. IF EVERYTHING IS FOUND TO BE SATISFACTORY, THE PERMIT WILL BE SIGNED AND MAINTAINED BY THE OWNER FOR ONE MONTH.

HOT WORK PERMIT PROGRAM:

PURPOSE

THIS PROGRAM SHALL ESTABLISH THE MINIMUM REQUIREMENTS FOR THE SAFE APPLICATION OF ANY HOT WORK WITHIN THE BUILDING. HOT WORK IS DEFINED AS ANY SPARK PRODUCING OPERATION THAT INCLUDES OPERATIONS WHICH USE FLAMES OR SPARK PRODUCING EQUIPMENT, SUCH AS GRINDERS, WELDING, BURNING OR BRAZING, THAT ARE CAPABLE OF IGNITING FLAMMABLES, VAPORS, OR GASES.

PROCEDURE

THE FOLLOWING PROCEDURE MUST BE FOLLOWED ANY TIME HOT WORK IS CONDUCTED IN THE FACILITY. OUTSIDE CONTRACTORS PERFORMING WORK SHALL BE INFORMED OF THE PROGRAM AND IT'S REQUIREMENTS.

A. PRIOR TO BEGINNING HOT WORK, A HOT WORK PERMIT MUST BE OBTAINED FROM THE SAFETY OFFICER OR MAINTENANCE SUPERVISOR. THIS PERMIT MUST BE SIGNED BY THE SAFETY OFFICER OR MAINTENANCE SUPERVISOR AND IS VALID FOR ONLY THE SHIFT ON THE DATE SIGNED. EACH DAY, OR WITH EACH NEW SHIFT, OR PROJECT, A NEW PERMIT MUST BE OBTAINED.

B. THE SAFETY OFFICER OR MAINTENANCE SUPERVISOR SHALL INSPECT THE AREA WHERE THE HOT WORK WILL BE CONDUCTED TO CHECK THAT THE FOLLOWING PRECAUTIONS TO PREVENT FIRE WERE COMPLETED:

1. SPRINKLER SYSTEM IN SERVICE.
2. FIRE EXTINGUISHER CHARGED AND READY FOR USE.
3. EQUIPMENT USED FOR HOT WORK IN GOOD CONDITION.
4. ALL COMBUSTIBLES NOT WITHIN 35 FEET OF PROPOSED WORK AREA.
5. NO COMBUSTIBLE OR FLAMMABLE LIQUIDS PRESENT.
6. ALL WALL AND FLOOR OPENINGS COVERED.

C. A FIRE WATCH SHALL BE PROVIDED DURING AND FOR 30 MINUTES AFTER OPERATION.

D. AFTER THE WORK AND FIRE WATCH ARE COMPLETED, THE SAFETY OFFICER OR MAINTENANCE SUPERVISOR SHALL CONDUCT A FINAL CHECK OF THE AREA. IF EVERYTHING IS FOUND TO BE SATISFACTORY, THE PERMIT WILL BE SIGNED AND MAINTAINED BY THE OWNER FOR 3 DAYS.

PERSONAL PROTECTION EQUIPMENT

A. RESPIRATORY PROTECTION MUST BE WORN IF GASES, DUST OR FUMES ARE ABOVE EXPOSURE LIMITS OR ANY TIME THE SAFETY OFFICER FEELS THERE IS A POTENTIAL HAZARD.

B. EYE PROTECTION GOGGLES OR SHIELD MUST BE WORN AT ALL TIMES DURING HOT WORK.

C. PROPER LEVEL OF PPE SHALL BE UTILIZED WHEN WORKING ON 480-VOLT ENERGIZED SYSTEMS.

ELECTRICAL GENERAL NOTES:

A. CONTRACTOR AND ASSOCIATED DIVISION TRADE SUB-CONTRACTORS SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE SCOPE OF WORK DESIGNATED FOR THIS FACILITY PRIOR TO BIDDING.

B. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES. IN EVENT OF CONFLICT BETWEEN DRAWINGS, SPECIFICATIONS, CODES AND ORDINANCES, THE MOST STRINGENT REQUIREMENT FROM THE AUTHORITY HAVING JURISDICTION SHALL TAKE PRECEDENCE.

C. INSTALL EQUIPMENT AND DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS, ADHERING TO REQUIRED CLEARANCES FOR OPERATION AND ACCESS FOR PRODUCT SERVICING. COORDINATE FINAL LOCATION WITH OTHER DIVISION TRADE CONTRACTORS REQUIRED FOR PROPER INSTALLATION.

D. TYPICAL DEVICE MOUNTING HEIGHTS - UNLESS NOTED OTHERWISE:
 PANELBOARDS - 78" AFF TO TOP OF CABINET (MAXIMUM)
 CONTROL PANELS - 72" AFF TO TOP OF CABINET
 DISCONNECTS - 64" AFF TO TOP OF CABINET (MAXIMUM)
 POWER/COMM. OUTLETS - 18" AFF TO CENTER OF DEVICE

TOGGLE SWITCHES - 48" AFF TO CENTER OF DEVICE
 WHERE DEVICES ARE INDICATED TO BE ABOVE DOORS, CENTER BETWEEN TOP OF DOOR TRIM AND CEILING LINE. ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER TYPICAL HEIGHTS LISTED. DEVICES INDICATED ABOVE COUNTERS SHALL BE MOUNTED 8" ABOVE COUNTER TO CENTER OF DEVICE.

E. PROCURE ALL NECESSARY PERMITS AND LICENSES REQUIRED FOR WORK. PAY ALL LAWFUL FEES, INCLUDING, BUT NOT LIMITED TO UTILITY DEPOSITS, INSPECTION FEES, AND TEMPORARY AND PERMANENT CONSTRUCTION PERMITS.

F. COORDINATE WITH DIVISION TRADES AND THE ACTUAL SITE CONDITIONS OF CONSTRUCTION. RESOLVE CONFLICTS BETWEEN DIVISION TRADES FOR LOCATION OF EQUIPMENT INSTALLED AND ACCESSORIES REQUIRED, SO THAT ANY CONFLICTS ARE COORDINATED AND THE EQUIPMENT IS INSTALLED AS A COMPLETE AND OPERABLE SYSTEM. COORDINATE POWER LINE EQUIPMENTS PRIOR TO SUBMITTAL REVIEW BY ENGINEER OF RECORD. COORDINATION OF OTHER TRADES SCOPE-OF-WORK AND MATERIALS ARE A NORMAL PART OF THE CONSTRUCTION PROCESS. THE INTENT OF THE WORK IS IDENTIFIED IN THE FULL SET OF CONTRACT DOCUMENTS, AND IS NOT LIMITED BY DIVISION TRADE DOCUMENTS. FAILURE TO COORDINATE THE WORK SHALL NOT BE SUBJECT TO MONETARY CLAIMS.

G. NOTIFY ENGINEER AND REQUEST ADDITIONAL INFORMATION FOR PROPOSED ALTERNATE OR ALTERNATE EQUIPMENT OTHER THAN LISTED IN THE CONTRACT DOCUMENTS OR SUBMITTED DURING PRODUCT REVIEW WHICH REQUIRES ADDITIONAL SPACE, SUPPORT, LAYOUT CONDITIONS, OR OTHER ELECTRICAL REQUIREMENTS. PROVIDE REQUIRED WORK ONLY AFTER WRITTEN NOTICE-TO-PROCEED FROM ENGINEER OF RECORD.

H. ALL MATERIALS SHALL BE NEW AND U.L. LISTED FOR THE APPLICATION. REUSE OF EXISTING MATERIALS MUST BE APPROVED PRIOR TO BID BY THE ENGINEER OF RECORD. PROVIDE PROTECTION FOR ALL ITEMS OF APPARATUS, FIXTURES, APPLIANCES, MATERIALS, EQUIPMENT AND INSTALLATION SO AS TO PREVENT DAMAGE BY ANY TRADE. CONTRACTOR SHALL REPLACE, AT NO EXPENSE TO THE OWNER, ANY ITEM THAT IS MARRED, DEFACED, OR BROKEN PRIOR TO ACCEPTANCE BY OWNER.

I. MECHANICAL AND ELECTRICAL PLANS ARE DIAGRAMMATIC, BUT THEY SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION OF THE BUILDING AND WORK OF OTHER TRADES WILL ALLOW. CONTRACTOR SHALL COORDINATE THE GENERAL WORK IN ORDER THAT THEIR WORK AND THE WORK OF OTHER SUB-CONTRACTORS WILL BE PROPERLY INSTALLED IN THE BUILDING. THE APPROVAL OF THE ARCHITECT SHALL BE OBTAINED BEFORE ANY DEVIATIONS FROM THESE PLANS ARE MADE.

J. CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.

K. CONTRACTOR SHALL INFORM ENGINEER OF EXISTING CONDITIONS THAT ARE DISCOVERED DURING WORK IN PROGRESS THAT WOULD REQUIRE DEVIATIONS AND ADDITIONAL COSTS FROM THE ORIGINAL CONSTRUCTION DOCUMENTS BEFORE PROCEEDING WITH WORK.

L. CONTRACTOR SHALL COORDINATE ALL POWER AND LIGHTING J-BOXES WITH DIVISION 15 MECHANICAL DUCTWORK SO AS NOT TO INSTALL ANY JUNCTION BOXES ABOVE DUCT WORK UNITS.

M. CONTRACTOR SHALL USE BLUE JACKETED CAT 5E CABLE FOR ALL DATA OUTLETS AND WHITE JACKETED CAT 5E CABLE FOR TELEPHONE OUTLETS. TERMINATE ALL DATA CABLES AT OWNER'S EXISTING EQUIPMENT. CONTRACTOR SHALL PROVIDE WORK FOR ALL NEW DATA LINES. COORDINATE ADDITIONAL REQUIREMENTS WITH ACTIVE POWER EQUIPMENT AND OWNER'S REPRESENTATIVE; DEAN BURWELL.

N. CONTRACTOR SHALL PROVIDE 1/2" EMT CONDUIT CONCEALED IN WALL FROM FLUSH MOUNTED J-BOXES TO CEILING CAVITY FOR ALL THERMOSTATS. PROVIDE END BUSHINGS TO PROTECT ALL LOW VOLTAGE WIRE BEING PULLED. COORDINATE LOCATIONS AND QUANTITY WITH DIVISION 15 CONTRACTOR.

O. EXPOSED CONDUIT, JUNCTION BOXES AND ACCESSORIES IN FINISHED AREAS TO BE PAINTED AS DIRECTED BY OWNER. COORDINATE CONDUIT RUNS IN EXPOSED AREAS SO THAT ALL RUNS ARE MADE PARALLEL OR PERPENDICULAR TO STRUCTURE.

P. CONTRACTOR SHALL IDENTIFY ALL EXPANSION JOINTS AND PROVIDE FOR EXPANSION JOINTS IN ALL CONDUITS CROSSING BUILDING BOUNDARIES.

Q. CONTRACTOR SHALL IDENTIFY ALL FIRE RATED WALLS AND SMOKE RATED WALLS AND PROVIDE SEALS IN ALL PENETRATIONS THROUGH RATED WALLS.

R. ALL EXPOSED EXTERIOR CONDUIT SHALL BE RIGID UNLESS NOTED OTHERWISE.

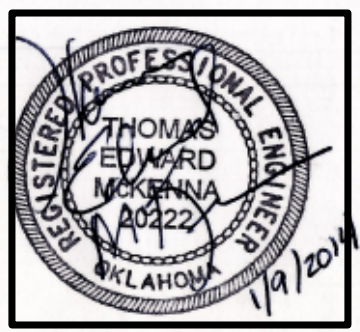
S. CONDUIT SHALL BE COMMERCIAL GRADE STEEL AND ALUMINUM U.L. LISTED FOR THE APPLICATION AND NOT LESS THAN 3/4" IN TRADE SIZE.

T. THE EMERGENCY POWER SYSTEM CIRCUITS SHALL NOT ENTER THE SAME RACEWAYS, BOXES, OR CABINETS WITH NORMAL BRANCH WIRING.

U. REMOVE ALL ABANDONED LOW VOLTAGE CABLING IN ALL AREAS OF CONSTRUCTION. PROVIDE PROPER VERIFICATION WITH LABELING FOR SYSTEM IN SERVICE THAT REMAINS.

V. ELECTRICAL SYSTEMS RATED 120V AND HIGHER SHALL BE ROUTED IN METAL RACEWAYS WITH INDIVIDUAL PHASE, NEUTRAL AND GROUND COPPER CONDUCTORS. INTERMEDIATE AND TERMINATING JUNCTION BOXES SHALL BE METAL AND U.L. LISTED FOR THE INSTALLATION.

W. COVERPLATES IN UNFINISHED AREAS AND CEILING CAVITIES SHALL BE LABELED WITH PERMANENT BLACK MARKER WITH CORRESPONDING CIRCUIT. PROVIDE ADHESIVE LABELS WITH PANEL AND CIRCUIT DESIGNATION ON COVERPLATES OF DEVICES IN FINISHED AREAS.



EMERGENCY POWER SYSTEM ADDITIONS
WILL ROGERS DOWN
CLAREMORE, OK
HIGHWAY 20

DRAWN BY: TEM
 CHECKED BY: TEM
 ISSUED: 01/09/2014

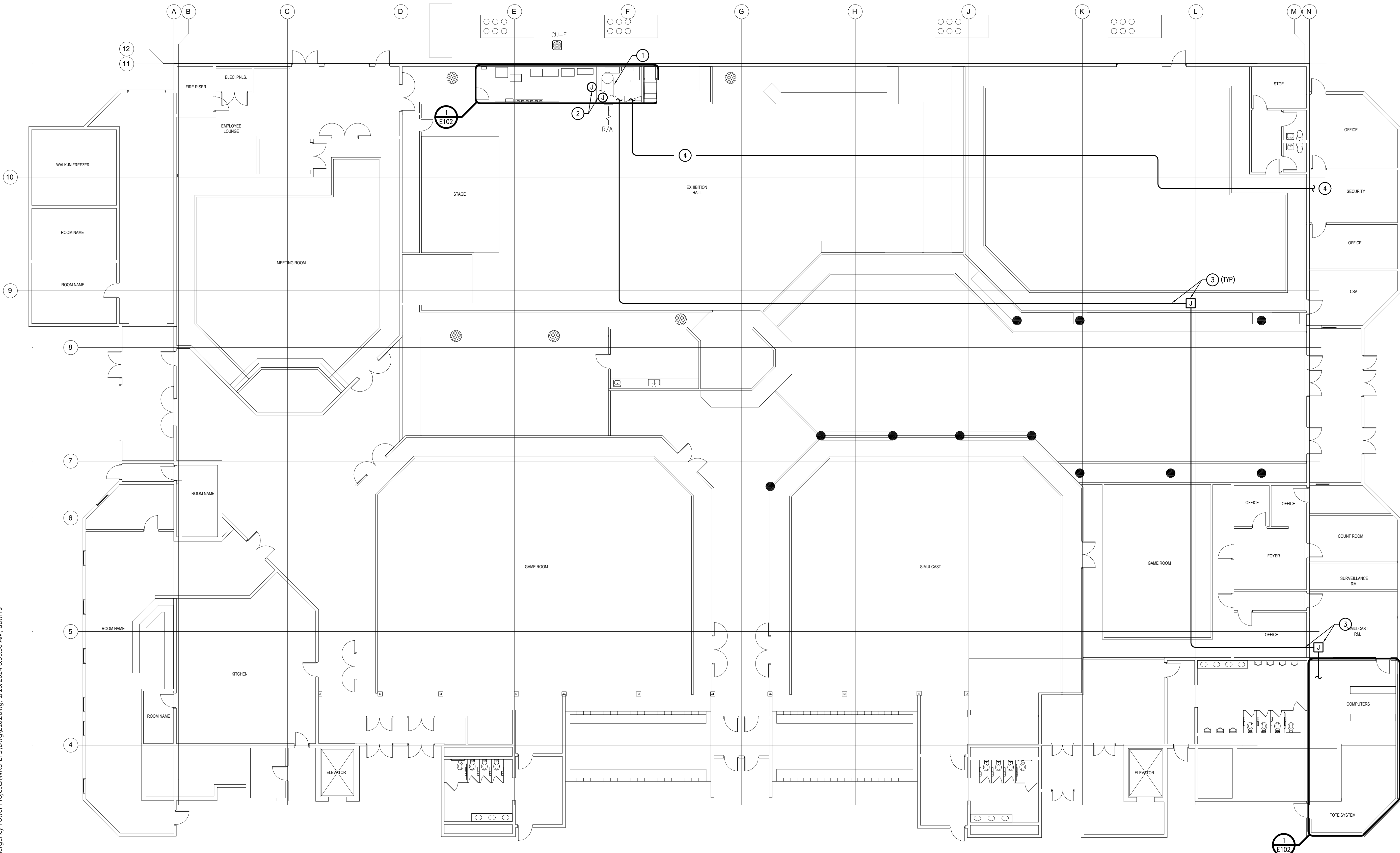
REVISIONS:

ELECTRICAL
GENERAL NOTES
AND SCHEDULES

JOB NUMBER: SDG1407.4

E001

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KEYNOTES: (X)

3. FIELD VERIFY EXISTING ACCESSIBLE CEILING CAVITY TO ROUTE NEW 2" EMT RACEWAY. SUPPORT TO BUILDING STRUCTURE. PROVIDE PULLBOXES AS REQUIRED.

4. 1-1/2". TO OWNER DESIGNATED MONITORING LOCATION FOR UPS.

KEYNOTES: (X)

1. REMOVE EXISTING RETURN AIR TUBE UP IN CEILING CAVITY. PROVIDE TEMPORARY DUCTWORK RETURN WHILE NEW WALLS ARE CONSTRUCTED. PROVIDE NEW DUCTWORK AND GRILL AT WALL PER LOCATION ON A101.

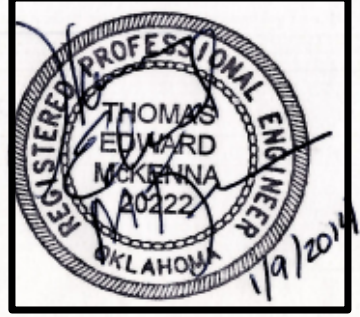
2. RELOCATE EXISTING DEVICES, EXTEND BRANCH CIRCUITS, AND RECONNECT WHERE WALL IS REMOVED.

1 OVERALL ELECTRICAL PLAN

Scale: 3/32" = 1'-0"



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 C.A.# : 3895 Expires 06/30/2014



EMERGENCY POWER SYSTEM ADDITIONS
 WILL ROGERS DOWN
 CLAREMORE, OK
 HIGHWAY 20

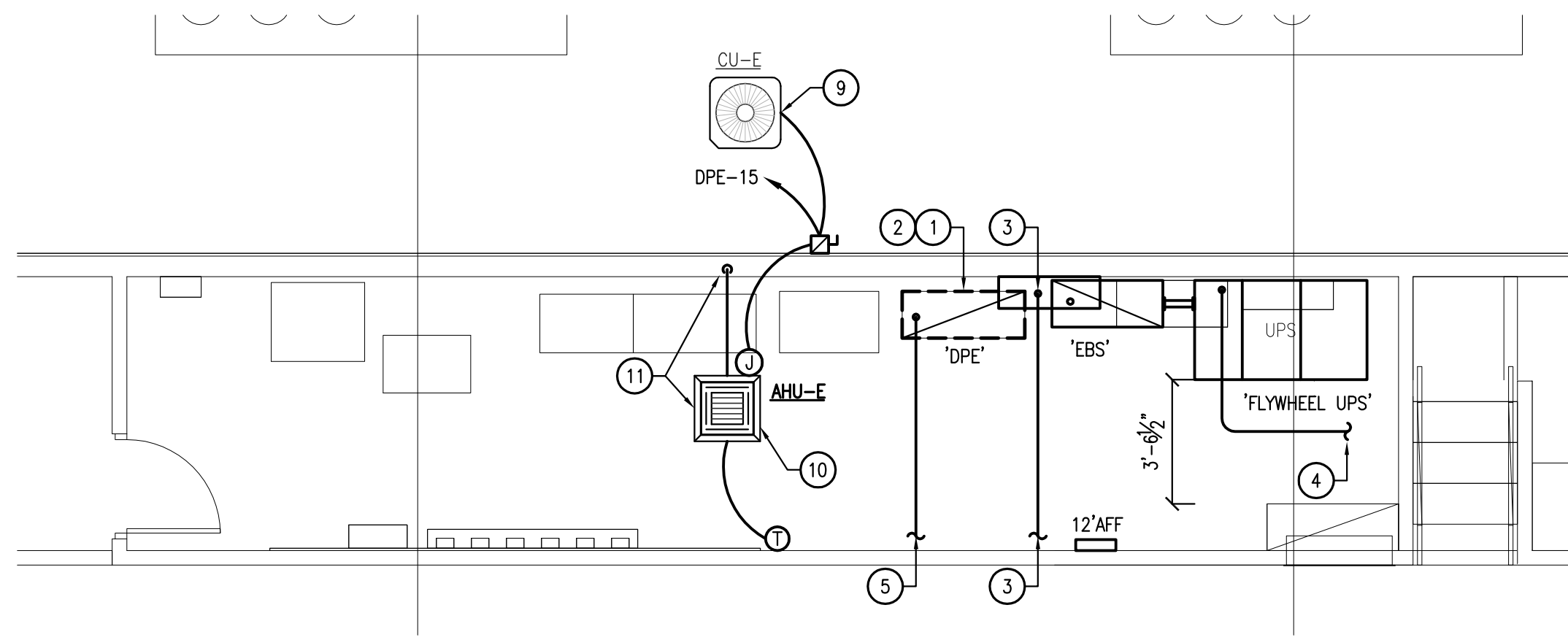
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CHECKED BY:	TEM
ISSUED:	01/09/2014
REVISIONS:	

SHEET TITLE:
**OVERALL
 ELECTRICAL PLAN**

JOB NUMBER: SDG1407.4

E101

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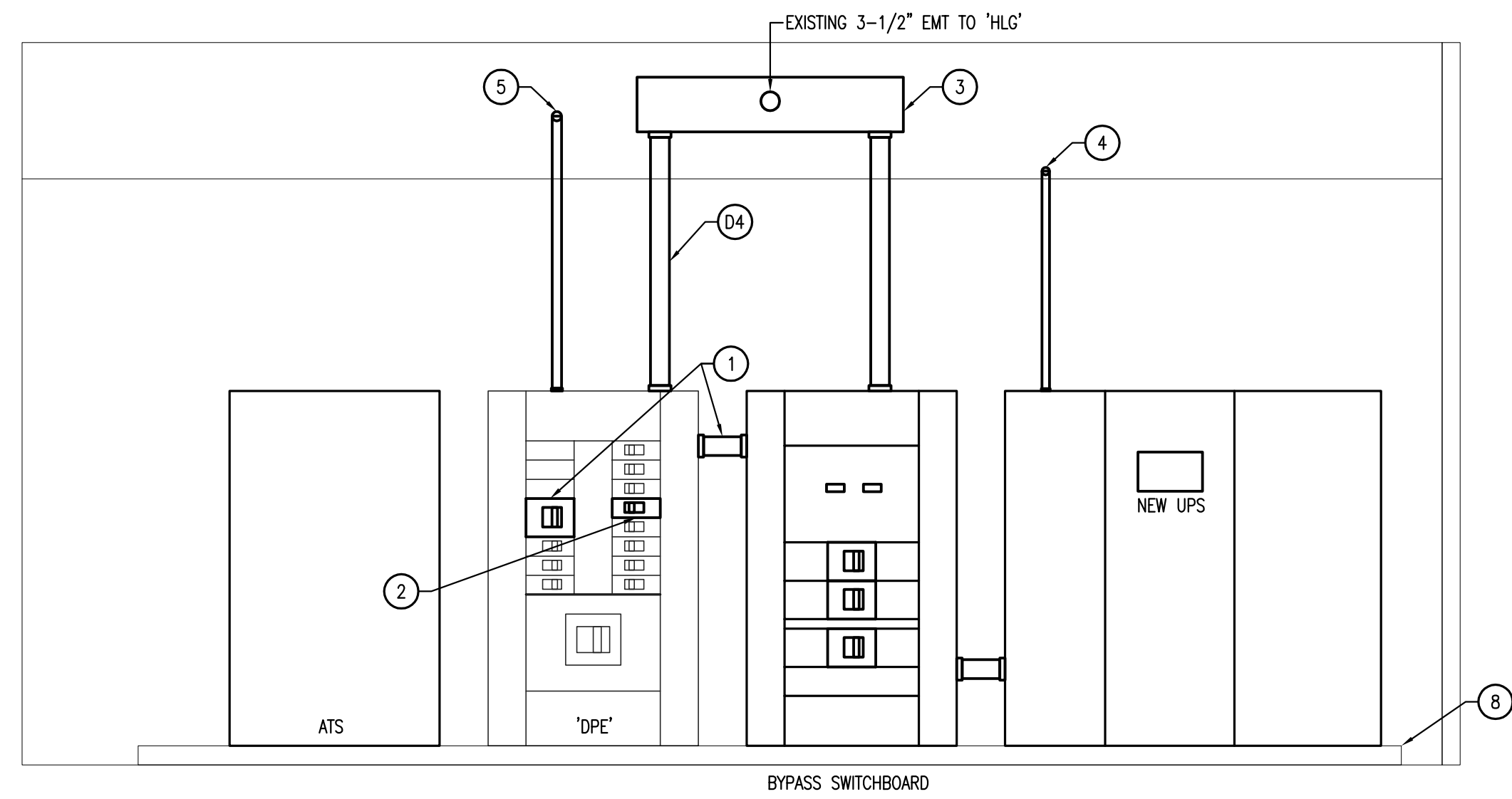
2 ELECTRICAL EQUIPMENT BUILDING PLAN
 Scale: 1/4" = 1'-0"
 NORTH

DEMOLITION KEYNOTES: (DX)

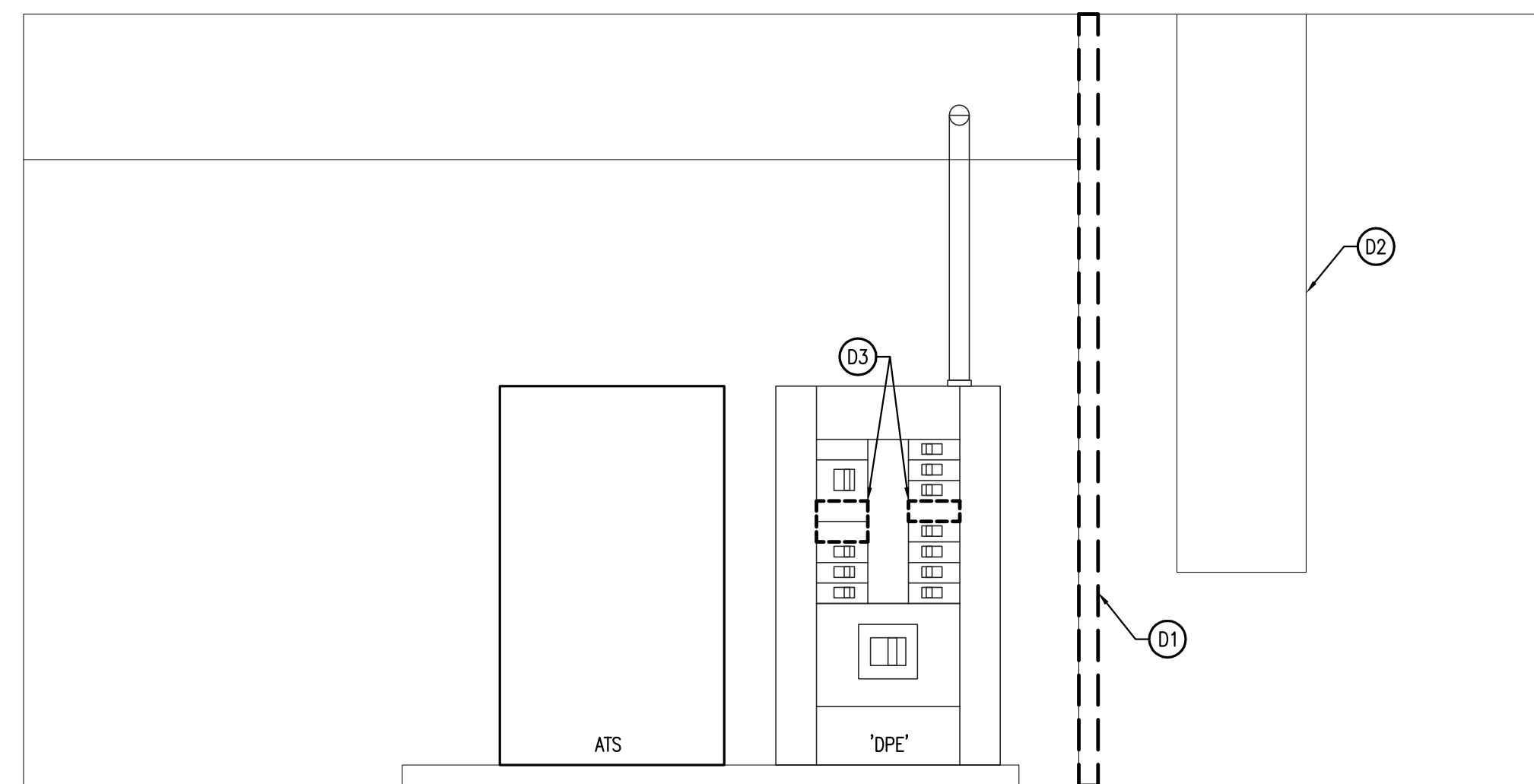
- D1. WALL TO BE REMOVED. RELOCATE DEVICES. RE: A100.
- D2. DUCTWORK TO BE REMOVED.
- D3. MODIFY EXISTING SPACE TO ACCEPT NEW BREAKERS.
- D4. REMOVE EXISTING CONDUIT ONCE NEW SERVICE IS COMPLETE.

KEYNOTES: (X)

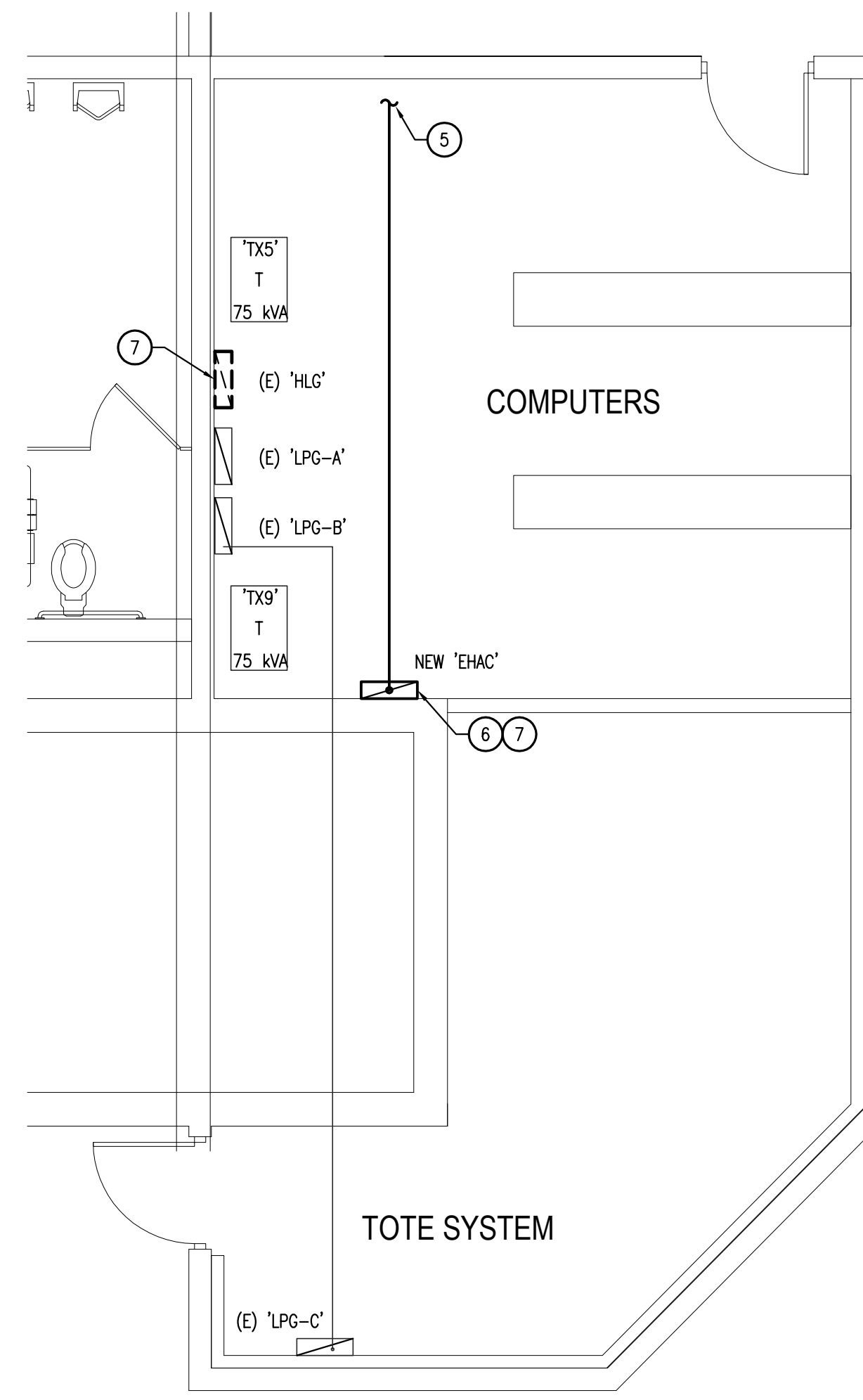
- 1. PROVIDE NEW 400A, 3P BREAKER AT AVAILABLE SPACE FOR BYPASS SWITCHBOARD.
- 2. PROVIDE NEW 125A, 3P BREAKER AT AVAILABLE SPACE FOR NEW PANEL 'EHAC'.
- 3. PROVIDE NEW PULLBOX TO INTERCEPT EXISTING FEEDER TO PANEL 'HLG'.
- 4. ROUTE 1-1/2" C. TO OWNER DESIGNATED CONTROL/MONITORING LOCATION. SUPPORT RACEWAY TO STRUCTURE.
- 5. ROUTE 2" C. TO NEW PANEL 'EHAC' IN COMPUTER ROOM. SUPPORT RACEWAY TO STRUCTURE.
- 6. NEW PANEL 'EHAC'. FIELD VERIFY LOCATION IN ROOM.
- 7. RELOCATE EXISTING A/C CIRCUITS FROM PANEL 'HLG' TO PANEL 'EHAC'. PROVIDE NEW LABEL ON PANEL 'HLG' TO INDICATE 3-WIRE. REMOVE NEUTRAL CONDUCTORS FROM PANEL COMPLETELY.
- 8. PROVIDE 3-1/2", 3000 PSI MINIMUM CONCRETE PAD FOR NEW EQUIPMENT.
- 9. MITSUBISHI PUZ-HA36NH44 OUTDOOR UNIT. PROVIDE FREE AND SERVICE SPACE PER MANUFACTURER SPECIFICATIONS. PROVIDE HEAVY-DUTY WEATHERPROOF DISCONNECT. OUTDOOR UNITS SERVES 120V ELECTRICAL ELECTRICAL TO INDOOR UNIT. PROVIDE LFMC TO UNIT.
- 10. MITSUBISHI PLA-A36B44 INDOOR UNIT.
- 11. PROVIDE VP-25 1-1/4" O.D. PVC DRAIN PIPE TO EXTERIOR DAYLIGHT. SUSPEND IN CEILING GRID AND SUPPORT TO STRUCTURE WITH A MINIMUM 3/8" ALL-THREAD PER MANUFACTURER SPECIFICATIONS. SEAL PENETRATION THRU EXTERIOR WALL TO MAINTAIN RATING.



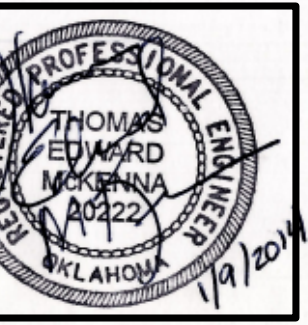
4 MODIFIED ELECTRICAL ROOM ELEVATION
 Scale: NTS



3 EXISTING ELECTRICAL ROOM ELEVATION
 Scale: NTS



1 ELECTRICAL EQUIPMENT BUILDING PLAN
 Scale: 1/4" = 1'-0"
 NORTH



EMERGENCY POWER SYSTEM ADDITIONS
WILL ROGERS DOWN
CLAREMORE, OK
HIGHWAY 20

DRAWN BY:	TEM
CHECKED BY:	TEM
ISSUED:	01/09/2014
REVISIONS:	

ENLARGED
ELECTRICAL PLANS

JOB NUMBER: SDG1407.4

E102

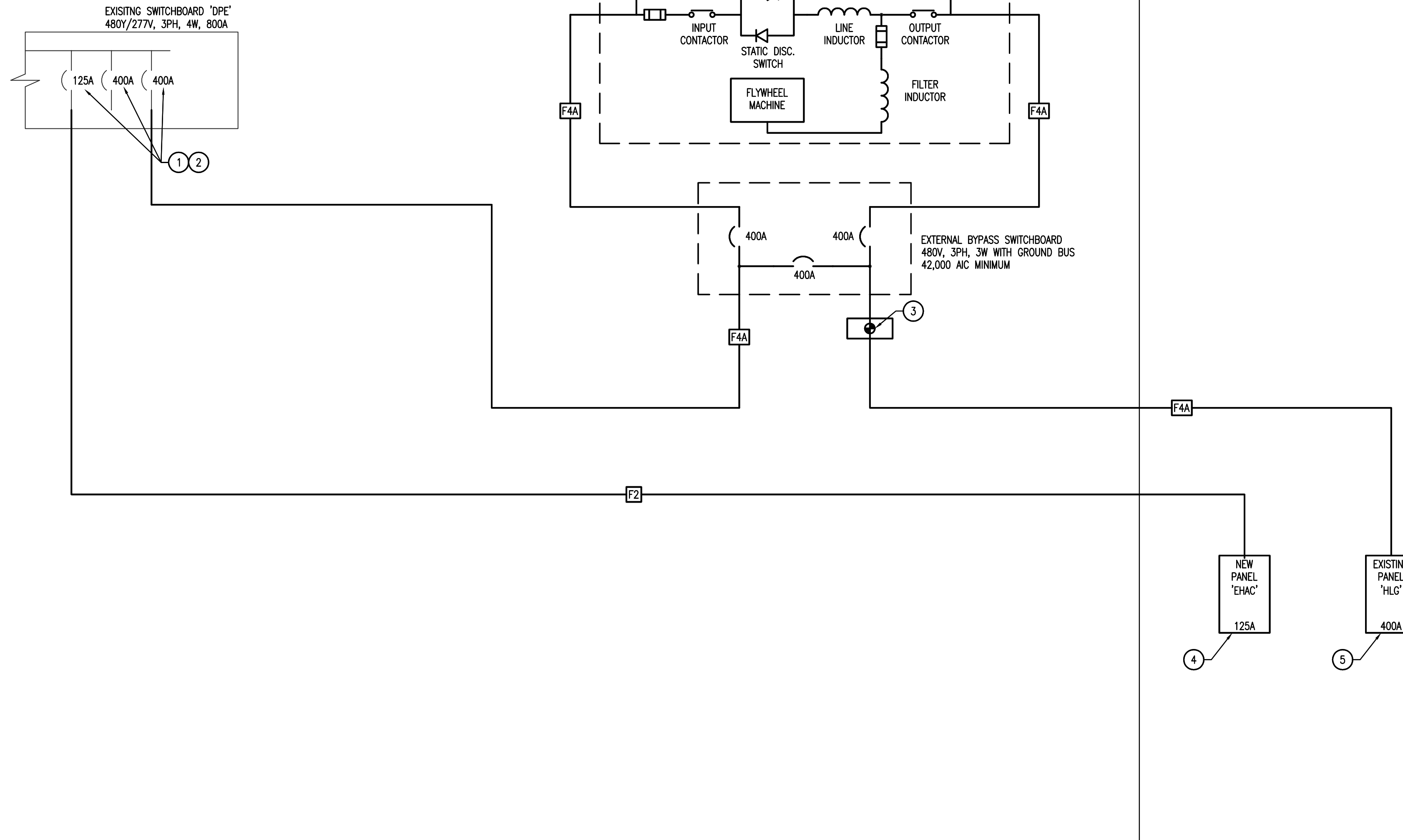
FEEDER SCHEDULE				
MARK	CONDUCTORS	CONDUIT	SETS	CAPACITY
F1	(4)#3, (1)#8 GND	1" C.	1	100A
F2	(4)#1, (1)#6 GND	1-1/2" C.	1	125A
F3	(4)#4/0, (1)#4 GND	2-1/2" C.	1	225A
F3A	(3)#4/0, (1)#4 GND	2" C.	1	225A
F4	(4)#600 MCM, (1)#3 GND	4" C.	1	400A
F4A	(3)#600 MCM, (1)#3 GND	4" C.	1	400A
F5	(4)#350 MCM, (1)#1 GND	3" C.	2	600A
F6	(4)#600 MCM, (1)#3 GND	4" C.	2	800A
F7	(3)#8 AWG, (1)#10 GND	3/4" C.	1	50A

GENERAL NOTES:

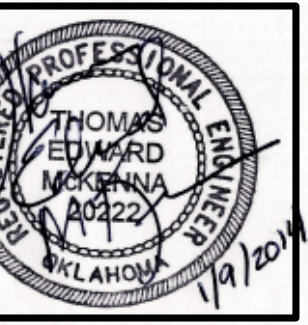
- A. COORDINATE EACH PANEL & SWITCHBOARD TO BE MODIFIED WITH EXISTING FIELD VERIFIED CONDITIONS. NOTIFY OWNER 2-WEEKS IN ADVANCE OF OUTAGES AND WHICH SYSTEM IT WILL PERTAIN.
- B. PROVIDE TEMPORARY EQUIPMENT, PANELS, RACEWAYS AND CONDUCTORS REQUIRED FOR MINIMAL OUTAGES.
- C. PROVIDE NEW RACEWAYS, CONDUCTORS AND ASSOCIATED PULLBOXES TO EXTEND AND RE-CONNECT EXISTING LOADS.
- D. FIELD VERIFY AND TRACE EXISTING CIRCUITS WHICH REMAIN TO EACH LOAD SERVED TO BE RE-CONNECTED. DOCUMENT FOR FUTURE USE TO PROVIDE INDEXES AND AS-BUILT DRAWINGS.
- E. EXISTING CONDUCTORS SHALL REQUIRE MEGGER TEST PER U.L. LISTED STANDARDS AND VERIFICATION OF CONDUCTOR INSULATION PRIOR TO RE-USE. REPLACE ALL FAILED CONDUCTORS IN THEIR ENTIRETY. SUBMIT DOCUMENTED TEST RESULTS TO THE ENGINEER OF RECORD AND OWNER.
- F. EXISTING CONDITIONS INDICATED ARE DERIVED FROM EXISTING OWNER DRAWINGS AND CASUAL OBSERVATIONS AND MAY REQUIRE ADDITIONAL FIELD VERIFICATION PRIOR TO WORK. DEVIATIONS FROM DRAWINGS SHALL BE SUBMITTED TO OWNER/ENGINEER OF RECORD PRIOR TO PROCEEDING WITH WORK.
- G. COORDINATE ELECTRICAL EQUIPMENT INSTALLATIONS WITH EXISTING MECHANICAL SYSTEMS. EXISTING MECHANICAL SYSTEMS WHICH SERVE LIFE-SAFETY OR ESSENTIAL OPERATIONS SHALL REQUIRE SCHEDULED SHUTDOWNS WITH OWNER PERSONNEL.
- H. MODIFICATIONS TO MECHANICAL SYSTEMS REQUIRED FOR ELECTRICAL SYSTEM INSTALLATION SHALL BE PROVIDED FOR IN THIS CONTRACT. PRIOR TO BID, THE DIVISION 16 CONTRACTOR SHALL FIELD VERIFY EXISTING LOCATIONS AND CLEARANCES TO ACCEPT ALL NEW WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALLOWANCE FOR DIVISION 15 WORK TO BE PROVIDED BY DIVISION 16 CONTRACTOR.

KEYNOTES: (X)

- 1. PROVIDE NEW 400A, 3P BREAKER AT AVAILABLE SPACE FOR BYPASS SWITCHBOARD.
- 2. PROVIDE NEW 125A, 3P BREAKER AT AVAILABLE SPACE FOR NEW PANEL 'EHAC'.
- 3. PROVIDE NEW PULLBOX TO INTERCEPT EXISTING FEEDER TO PANEL 'HLG'.
- 4. NEW PANEL 'EHAC'. FIELD VERIFY LOCATION IN ROOM.
- 5. RELOCATE EXISTING A/C CIRCUITS FROM PANEL 'HLG' TO PANEL 'EHAC'. PROVIDE NEW LABEL ON PANEL 'HLG' TO INDICATE 3-WIRE. REMOVE NEUTRAL CONDUCTORS FROM PANEL COMPLETELY.



STARR
 DESIGN GROUP, INC.
 1407 S. DENVER SUITE A, TULSA, OK 74119
 (918) 592-7770 FAX (918) 384-3786
 C.A.# : 3985 Expires 06/30/2014



EMERGENCY POWER SYSTEM ADDITIONS
 WILL ROGERS DOWN
 CLAREMORE, OK
 HIGHWAY 20
 © 2014 STARR DESIGN GROUP, INC.

DRAWN BY:	TEM
CHECKED BY:	TEM
ISSUED:	01/09/2014
REVISIONS:	

SHEET TITLE:
**ELECTRICAL
 ONE-LINE DIAGRAM**

JOB NUMBER: SDG1407.4

E201

1 MODIFIED ONE-LINE DIAGRAM
 Scale: NTS

PEDESTAL MOUNTED GROUND BUS NEMA 1 ENCLOSURE		EXISTING SWITCHBOARD 'DPE'						VOLT: 480Y/277V, 3PH, 4 WIRE AMPS: 800 AMP, MCB AIC: 65,000		
CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	SPACE				A			60	ELEVATOR WEST	2
3					B					
5					C					
7	PANELBOARD 'HLG'	400	6		A			200	RTU-2	4
9					B					
11					C					
13					A			200	RTU-4	6
15					B					
17					C					
19	NEW UPS	400	3		A		3	125	NEW PANEL 'EHAC'	8
21					B					
23					C					
25					A			225	PANEL 'HLG'	10
27					B					
29					C					
31	PANEL 'TET'	200			A			200	TRANSFORMER 'T4'	12
33					B					
35					C					
37	PANEL 'HLK'	200			A			200	PANEL 'CPU'	14
39					B					
41					C					
43	CU-E	30	2	2.91	A			60	ELEVATOR EAST	16
45					B					
47					C					

REMOVE ONCE NEW UPS IS COMMISSIONED

PHASE A	KVA	AMPS	CONNECTED	KVA	AMPS
PHASE B	-	-	FEEDER	-	-
PHASE C	-	-		-	-

HATCHED AREA INDICATES NO WORK

SURFACE MOUNTED GROUND BUS NEMA 1 ENCLOSURE		NEW PANELBOARD 'EHAC'						VOLT: 480Y/277V, 3PH, 4 WIRE AMPS: 125 AMP, MLO AIC: 42,000		
CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	RELOCATED A/C CKT	40	3		A		3	40	RELOCATED A/C CKT	2
3					B					4
5					C					6
7	RELOCATED A/C CKT	30	3		A		3	30	RELOCATED A/C CKT	8
9					B				(SPARE)	10
11					C					12
13	RELOCATED LIGHTING CKTS	20	1		A		1	20	SPARE	14
15	RELOCATED LIGHTING CKTS	20	1		B		1	20	SPARE	16
17	RELOCATED LIGHTING CKTS	20	1		C		1	20	SPARE	18
19	SPARE	20	1		A		1	20	SPARE	20
21	SPARE	20	1		B		1	20	SPARE	22
23	SPARE	20	1		C		1	20	SPARE	24
25	SPACE				A				SPACE	26
27	SPACE				B				SPACE	28
29	SPACE				C				SPACE	30

PHASE A	KVA	AMPS	CONNECTED	KVA	AMPS
PHASE B	-	-	FEEDER	-	-
PHASE C	-	-		-	-

* PROVIDE LOCK-___ DEVICE AT BREAKER HANDLE

SURFACE MOUNTED GROUND BUS NEMA 1 ENCLOSURE		EXISTING PANELBOARD 'HLG'						VOLT: 480Y/277V, 3PH, 4 WIRE AMPS: 400 AMP, MLO AIC: 42,000		
CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	TRANSFORMER 'T5'	90	3		A		3	90	TRANSFORMER 'T9'	2
3					B					4
5					C					6
7	LIGHTS	20	1		A		1	20	SPARE	8
9	LIGHTS	20	1		B		1	20	SPARE	10
11	LIGHTS	20	1		C		1	20	SPARE	12
13	SPARE	20	1		A		1	20	SPARE	14
15	SPARE	20	1		B		1	20	SPARE	16
17	SPARE	20	1		C		1	20	SPARE	18
19	SPARE	20	1		A		1	20	SPARE	20
21	SPARE	20	1		B		1	20	SPARE	22
23	SPARE	20	1		C		1	20	SPARE	24
25	SPARE	20	1		A		3	40	A/C	26
27	SPARE	20	1		B					28
29	A/C	30	3		C					30
31					A		3	40	A/C	32
33					B					34
35	SPARE	20	1		C					36
37	SPARE	20	1		A		3	30	A/C	38
39	SPARE	20	1		B				(OFF)	40
41	SPARE	20	1		C					42

PHASE A	KVA	AMPS	CONNECTED	KVA	AMPS
PHASE B	-	-	FEEDER	-	-
PHASE C	-	-		-	-

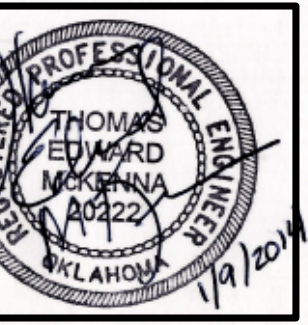
HATCHED AREA INDICATES NO WORK

SURFACE MOUNTED GROUND BUS NEMA 1 ENCLOSURE		MODIFIED PANELBOARD 'HLG'						VOLT: 480Y/277V, 3PH, 3 WIRE AMPS: 400 AMP, MLO AIC: 42,000		
CKT	DESCRIPTION	BRKR	PL	KVA	PHASE	KVA	PL	BRKR	DESCRIPTION	CKT
1	TRANSFORMER 'T5'	90	3		A		3	90	TRANSFORMER 'T9'	2
3					B					4
5					C					6
7	SPARE	20	1		A		1	20	SPARE	8
9	SPARE	20	1		B		1	20	SPARE	10
11	SPARE	20	1		C		1	20	SPARE	12
13	SPARE	20	1		A		1	20	SPARE	14
15	SPARE	20	1		B		1	20	SPARE	16
17	SPARE	20	1		C		1	20	SPARE	18
19	SPARE	20	1		A		1	20	SPARE	20
21	SPARE	20	1		B		1	20	SPARE	22
23	SPARE	20	1		C		1	20	SPARE	24
25	SPARE	20	1		A		3	40	SPARE	26
27	SPARE	20	1		B				(OFF)	28
29	SPARE	30	3		C					30
31	(OFF)				A		3	40	SPARE	32
33					B				(OFF)	34
35	SPARE	20	1		C					36
37	SPARE	20	1		A		3	30	SPARE	38
39	SPARE	20	1		B				(OFF)	40
41	SPARE	20	1		C					42

PHASE A	KVA	AMPS	CONNECTED	KVA	AMPS
PHASE B	-	-	FEEDER	-	-
PHASE C	-	-		-	-

* MODIFY LABEL TO INDICATE 3W - NO NEUTRAL

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C.A.#.: 3895 Expires 06/30/2014



EMERGENCY POWER SYSTEM ADDITIONS
WILL ROGERS DOWN
CLAREMORE, OK
HIGHWAY 20

DRAWN BY: TEM
CHECKED BY: TEM
ISSUED: 01/09/2014

REVISIONS:

ELECTRICAL
PANELBOARDS
SCHEDULES

JOB NUMBER: SDG1407.4

E301