

ELECTRICAL GENERAL NOTES:

GENERAL

1. THESE ELECTRICAL GENERAL NOTES ARE APPLICABLE TO ALL SHEETS IN THIS PROJECT SET. ELECTRICAL WORK ON THESE DRAWINGS ARE GOING TO BE DONE BY THE OWNER'S PERSONNEL AND THE CONTRACTOR, REFER TO THE DRAWINGS FOR FURTHER INFORMATION.
2. THE ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE AND ADOPTED PROVISIONS OF THE FOLLOWING CODES:
- 2008 NATIONAL ELECTRICAL CODE
  - 2009 INTERNATIONAL BUILDING CODE
  - 2009 INTERNATIONAL PLUMBING CODE
  - 2009 INTERNATIONAL MECHANICAL CODE
  - 2009 INTERNATIONAL FIRE CODE
  - 2009 INTERNATIONAL FUEL CODE
  - 2009 INTERNATIONAL ENERGY CONSERVATION CODE
- AS ADOPTED AND INTERPRETED BY THE STATE OF TEXAS, CITY OF EL PASO AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) REGULATIONS, CURRENT ADOPTEDITIONS REGARDING ELECTRICAL SYSTEMS, FIRE PROTECTION AND ALARM SYSTEMS AND MECHANICAL SYSTEMS.
3. THE CONTRACTOR SHALL COORDINATE WITH OWNER, ARCHITECT, AND ENGINEER ANY WORK THAT HAS THE POTENTIAL TO HINDER ELECTRICAL SERVICES TO AREAS OUTSIDE OF THIS CONTRACT. ALL SHUT-DOWNS OR TIE-INS RELATING TO THESE SYSTEMS SHALL BE SCHEDULED AND SUBMITTED IN WRITING TO BE APPROVED BY THE OWNER'S FACILITY MANAGEMENT, OWNER, ARCHITECT, OR ENGINEER. CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE FOR PHASING OF CONSTRUCTION THAT INDICATES THE ORDER OF CONSTRUCTION DURING EACH PHASE AND ANTICIPATED COMPLETION TIMES. SCHEDULES SHALL BE SUBMITTED A MINIMUM OF ONE WEEK PRIOR TO COMMENCING WORK. FACILITY MANAGEMENT, OWNER, ARCHITECT OR ENGINEER SHALL REVIEW THESE SCHEDULES AND NOTIFY CONTRACTOR OF ACCEPTANCE PRIOR TO COMMENCEMENT OF WORK.
4. ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH CODES AND RULES, REGULATIONS AND ORDINANCES SHALL BE PROVIDED. WHERE THE DRAWINGS AND/OR SPECIFICATIONS INDICATE MATERIALS OR CONSTRUCTION IN EXCESS OF CODE REQUIREMENTS, THE DRAWINGS AND/OR SPECIFICATIONS SHALL GOVERN. THE CONTRACTOR SHALL HOLD AND SAVE THE OWNER, ARCHITECT AND ENGINEERS FREE AND HARMLESS FROM LIABILITY OF ANY NATURE OR KIND ARISING FROM HIS FAILURE TO COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES.
5. BIDDERS SHALL VISIT THE SITE AND SHALL BE RESPONSIBLE FOR HAVING ASCERTAINED PERTINENT LOCAL CONDITIONS SUCH AS LOCATION, ACCESSIBILITY AND GENERAL CHARACTER OF THE SITE, THE CHARACTER AND EXTENT OF THE WORK WITHIN THE BUILDING AND TO BECOME FAMILIAR WITH ALL OTHER WORK TO BE PERFORMED AT THIS TIME. NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO CONTRACTOR'S FAILURE TO DETERMINE ALL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
6. BEFORE YOU DIG ALL EXISTING UTILITIES I.E. WATER, SEWER, GAS, FIRE LINE, ELECTRICITY, TELEPHONE, CABLE, IRRIGATION LINES, SHAL BE LOCATED AND CLEARLY MARKED IN ORDER TO AVOID UNNECESSARY SHUT DOWNS AND EMERGENCY.
7. EACH CONTRACTOR SHALL GIVE ALL REQUISITE NOTICES, OBTAIN AND PAY FOR ALL PERMITS, DEPOSITS AND FEES (INCLUDING UTILITY CONNECTIONS FEES, TAP FEES, ANY UTILITY EXTENSION FEES, IMPACT FEES, AND CONNECTION FEES) NECESSARY FOR THE INSTALLATION OF WORK UNDER THESE NOTES. TWO (2) COPIES OF CERTIFICATES OF APPROVAL SHALL BE OBTAINED FROM ALL AUTHORITIES ISSUING SAME AND SHALL BE TURNED OVER TO OWNER, ARCHITECT, ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE WORK.
8. REQUIRED INSURANCE SHALL BE PROVIDED BY THIS CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF WORK. CONTRACTOR SHALL SECURE AND PAY ALL PERMITS, FEES, INSPECTIONS, AND TESTS UNLESS OTHERWISE INDICATED. COORDINATE WITH ARCHITECT, ENGINEER OR OWNER ANY SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THE CONTRACTOR.
9. ALL WORK SHALL CONFORM WITH FEDERAL, STATE, AND LOCAL CODES, RULES, AND REGULATIONS. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE SYSTEMS SHALL BE INSTALLED COMPLETE AND FULLY OPERATIVE UNLESS OTHERWISE INDICATED.
10. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROVIDE A WRITTEN REPORT TO THE ARCHITECT AND THE ENGINEERING OFFICES. THIS REPORT SHALL DESCRIBE EXISTING DAMAGE OR OTHER CONDITIONS THAT MAY INTERFERE WITH THIS PROPOSED NEW WORK. THIS SITE SURVEY SHALL ALSO INCLUDE VERIFICATION OF SIZES, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES. ANY DISCREPANCIES REGARDING THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER PRIOR TO THE AWARD OF THE CONTRACT. OTHERWISE THE ENGINEER'S INTERPRETATION OF THE MEANING AND INTENT OF THE DRAWINGS SHALL BE FINAL.
11. WHERE STRUCTURE IS ALTERED OR DAMAGED DURING CONSTRUCTION, INSTALLATION AND REMOVAL OF THE CONTRACTOR SHALL REPAIR AND RESTORE THE AREA TO MATCH SURROUNDING AREA PER ARCHITECTURAL SPECIFICATIONS. CUTTING, TRENCHING, AND PENETRATIONS THROUGH FIRE WALL, CONCRETE AND OTHER STRUCTURES ARE A PART OF THIS PROJECT SCOPE AND SHALL BE INCLUDED IN THE CONTRACTOR'S BID. ALL EXCAVATION AND BACKFILLING REQUIRED FOR ELECTRICAL WORK IS ALSO INCLUDED AS PART OF THIS CONTRACT AND SHALL BE INCLUDED IN CONTRACTOR'S BID.
12. ALL SYSTEMS AND COMPONENTS SHALL BE APPROVED FOR THE PURPOSE FOR WHICH INSTALLED. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND FROM ESTABLISHED AMERICAN SUPPLIERS UNLESS OTHERWISE INDICATED.
13. ALL EQUIPMENT PARAMETERS SHOWN ARE FOR PERFORMANCE AT SITE ALTITUDE. SUPPLIERS SHALL SELECT AND DEMONSTRATE THAT THEIR EQUIPMENT MEETS THE DESIGN CONDITIONS AT SITE ALTITUDE.
14. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR THE MECHANICAL EQUIPMENT'S ELECTRICAL REQUIREMENTS, INCLUDING, COORDINATION, LOCATION, AND MONITORING, OF EACH DEVICE PROVIDED AND/OR INSTALLED BY MECHANICAL CONTRACTOR.
15. SUPPORT SYSTEM FOR EQUIPMENT SUPPORTED BY THE BUILDING STRUCTURE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER VIA ARCHITECT FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION. NO WIRE OR PERFORATED STRIP WILL BE PERMITTED FOR ANY HANGER OR SUPPORT.
16. THE CONTRACTOR SHALL NOT SCALE THE CONTRACT DOCUMENTS. THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND DO NOT COMPLETELY DEPICT ALL EXISTING CONDITIONS IN THE AREA.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOOK THROUGH ALL DRAWINGS ASSOCIATED WITH THIS PROJECT. WORK ASSOCIATED WITH THE ELECTRICAL CONTRACTOR'S TRADE MAY BE SHOWN ON OTHER DRAWINGS. ANY ADDITIONAL COSTS RESULTING FROM THE FAILURE TO INCLUDE THESE ITEMS SHOWN ON OTHER DRAWINGS WILL BE INCURRED BY THE CONTRACTOR. SHOULD THE CONTRACTOR ENCOUNTER ANY DISCREPANCIES OR INCONSISTENCIES IN THE CONSTRUCTION DOCUMENTS, THE MORE STRINGENT SHALL GOVERN.
18. POSITIONING OF NEW LAY-IN FIXTURES TAKES PRECEDENCE OVER ARCHITECTURAL REFLECTED CEILING PLAN AND MECHANICAL DIFFUSERS PRIOR TO INSTALLATION OF FIXTURES. CONTRACTOR SHALL COORDINATE ACTUAL LOCATIONS OF LIGHTS WITH AIR DIFFUSERS AND DUCTWORK, CEILING PANELS, JOIST SPACING AND ARCHITECTURAL REFLECTED CEILING PLAN (REF. MECHANICAL PLANS AND ARCHITECTURAL PLANS).
19. PROVIDE OWNER WITH THREE (3) COPIES OF ALL INSTALLATIONS INSTRUCTIONS, PRODUCT DATA SUBMITTAL INFORMATION, WARRANTIES, CONTACT INFORMATION DURING WARRANTY PERIOD AND BALANCING REPORTS IN 3-RING BINDERS.
20. FOR OUTDOOR EQUIPMENT ON GRADE AND INDOOR FLOOR MOUNTED EQUIPMENT, THE CONTRACTOR SHALL CONSTRUCT LEVEL 3000 PSI CONCRETE SLABS (CONCRETE STRENGTH) SLABS WITH FINISHED EDGES. WIRE REINFORCED MINIMUM 6X6 W1.4/1.4 OR HEAVIER PER ASTM A185, MINIMUM 3/2" THICK, AND MINIMUM 6" LARGER ON ALL SIDES THAN THE EQUIPMENT BEING SUPPORTED. THE PAD SHALL BE HAVE 2 COATS OF EPOXY SEALANT TO SEAL THE PAD.
21. CONTRACTOR SHALL MAKE NO PENETRATIONS WHATSOEVER OF WALLS FORMING PART OF A STAIRWELL, AN EXIT PASSAGEWAY, OR OTHER TWO-HOUR RATED WALLS. ALL CONDUITS SHALL RUN PARALLEL TO WALLS.
22. CONTRACTOR SHALL SAW CUT AND PATCH ASPHALT, CONCRETE OR OTHER MATERIAL ENCOUNTERED AS REQUIRED TO INSTALL NEW UNDERGROUND RACEWAY. REFER TO ARCHITECTURAL SPECIFICATIONS REGARDING PATCHING REQUIREMENTS.
23. CONTRACTOR SHALL PROVIDE AND INSTALL IDENTIFICATION TAGS FOR EQUIPMENT AND CONDUITS PER ASME 13.1 SCHEME OF IDENTIFICATION FOR PIPING. BUNDLED ELECTRICAL CONDUITS SHALL BE MARKED PER CODE REQUIREMENTS WITH UNDERGROUND WARNING TAPE 3" BELOW FINISHED GRADE. TAPE SHALL BE 4" WIDE COLORED RED WITH SUITABLE WARNING LEGEND PER ASME A13.1 SCHEME OF IDENTIFICATION FOR PIPING.
24. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALTERNATES AND ALLOWANCES FOR THIS PROJECT.
25. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND HAVE INSTALLED ANY ACCESS DOOR REQUIRED TO ACCESS ELECTRICAL EQUIPMENT AND/OR JUNCTION BOXES THAT REQUIRES ACCESS BEHIND GYPSUM BOARD OR WARD CEILINGS AND THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE GENERAL CONTRACTOR WITH THESE ACCESS DOORS FOR INSTALLATION IN THE CEILING OR WALL. ACCESS DOORS SHALL BE RATED FOR THE WALL, FLOOR, OR CEILING TYPE AND SHALL BE A MINIMUM SIZE OF 12"x12".

26. SITE VISIT REPORTS: DURING THE COURSE OF THE JOB, THE ENGINEER WILL MAKE SITE VISITS TO OBSERVE WORK IN PROGRESS AND WILL SUBSEQUENTLY PREPARE A WRITTEN SITE VISIT REPORT, WHICH WILL BE SENT TO THE CONTRACTOR AND TO WHOMEVER ELSE THE ENGINEER DESIRES. THE CONTRACTOR SHALL PREPARE A WRITTEN AND TYPED RESPONSE WITHIN SEVEN (7) CALENDAR DAYS OF HIS RECEIVING THE SITE VISIT REPORT. THE CONTRACTORS SHALL ACCOMPANY THE ENGINEER DURING THE FINAL PUNCHLIST VISIT UPON THE REQUEST OF THE ENGINEER. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS RESPONSE TO THE FOLLOWING INFORMATION.
1. DATE OF SITE VISIT BY THE ENGINEER.
2. DATE OF RECEIPT OF THE SITE VISIT REPORT.
3. NAME AND TITLE OF THE PREPARER OF THE RESPONSE.
4. AN ITEM NUMBER REFERENCED TO THE SITE REPORT.
5. A BRIEF THREE OR FOUR WORD DESCRIPTION OF THE ITEM.
6. THE CONTRACTOR OR SUBCONTRACTOR AFFECTED.
7. THE PROPOSED COURSE OF ACTION, AND
8. AN EXPECTED TIME OF COMPLETION OF THE ACTION.
27. FINAL PUNCH REPORTS: AT THE COMPLETION OF THE JOB, THE ENGINEER WILL MAKE PUNCHLIST SITE VISITS TO OBSERVE COMPLETED WORK AND WILL SUBSEQUENTLY PREPARE A WRITTEN SITE VISIT PUNCHLIST REPORT, WHICH WILL BE SENT TO THE CONTRACTOR AND TO WHOMEVER ELSE THE ENGINEER DESIRES. THE CONTRACTOR, UPON COMPLETION OF THE LISTED PUNCHLIST ITEMS, SHALL PREPARE A TYPED WRITTEN RESPONSE TO THE LIST INDICATING COMPLETION OF EACH ITEM. THE CONTRACTOR SHALL INCLUDE IN HIS RESPONSE THE RESOLUTION AS EACH ITEM. THE CONTRACTORS SHALL ACCOMPANY THE ENGINEER DURING THIS FINAL PUNCHLIST VISIT UPON THE REQUEST OF THE ENGINEER.
28. ALL ELECTRICAL CONDUIT AND PANEL OPENINGS SHALL BE CAPPED DURING DEMOLITION AND CONSTRUCTION.
29. SUBMITTAL REQUIREMENTS:
- A. THE INTENT OF THIS SECTION IS TO GIVE GENERAL SUBMITTAL INFORMATION, REFER TO SPECIFIC SUBMITTAL INFORMATION IN THE SUBSEQUENT ELECTRICAL SECTIONS.
- B. WITHIN 10 DAYS AFTER AWARD OF THE CONTRACT, AND BEFORE ORDERS ARE PLACED, CONTRACTOR SHALL SUBMIT SPECIFIC INFORMATION ON LIST OF EQUIPMENT AND PRINCIPAL MATERIALS SPECIFIED. CONTRACTOR SHALL INDICATE AND/OR PROVIDE NAMES OF MANUFACTURERS, CATALOG AND MODEL NUMBERS, CUT SHEETS, AND SUCH OTHER SUPPLEMENTARY INFORMATION AS NECESSARY FOR EVALUATION. MINIMUM OF SIX (6) COPIES, OR AS DIRECTED BY THE ENGINEER, OF EACH SHALL BE SUBMITTED AND SHALL INCLUDE ALL ITEMS MENTIONED BY MODEL NUMBER AND/OR MANUFACTURER'S NAME IN THE SPECIFICATIONS OR IN SCHEDULES ON THE DRAWINGS.
- C. REQUIREMENTS FOR EACH SUBMITTAL:
1. BEAR A DATED STAMP OR SPECIFIC WRITTEN INDICATION THAT THE CONTRACTOR HAS REVIEWED AND APPROVED ALL SUBMITTAL PRIOR TO SUBMISSION TO ENGINEER.
2. HAVE ALL INFORMATION DELETED BY CONTRACTOR THAT PERTAINS TO THE MEANS AND METHODS OF CONSTRUCTION OR TO FABRICATION, ASSEMBLY, INSTALLATION, OR ERECTION (APPROVAL BY ENGINEER SHALL NOT EXTEND TO THESE AREAS UNLESS SPECIFICALLY NOTED BY ENGINEER).
3. BE CLEARLY AND SPECIFICALLY MARKED AS TO WHICH SPECIFIC PIECE OF EQUIPMENT IS BEING SUBMITTED, BY USE OF A PERMANENT MARKER, STAMP, ETC., SO AS TO DISTINGUISH IT FROM OTHER PIECES OF EQUIPMENT THAT MAY OCCUR ON THE SAME PAGE.
4. BE CLEARLY AND SPECIFICALLY MARKED AS TO WHICH AVAILABLE OPTIONS ARE BEING SUBMITTED THAT ARE ASSOCIATED WITH A PIECE OF EQUIPMENT, AND BE COMPLETE WITH RESPECT TO QUANTITIES, DIMENSIONS, SPECIFIC PERFORMANCE, MATERIALS, AND SIMILAR DATA TO ENABLE THE ENGINEER TO REVIEW THE PROPOSED EQUIPMENT.
5. OMISSION BY CONTRACTOR OF ANY OF THE ABOVE REQUIREMENTS OR SUBMITTALS WILL SUBJECT SUBMITTAL TO AUTOMATIC REJECTION WITHOUT REVIEW.
6. ANY SUBMITTALS RECEIVED BY ENGINEER THAT WERE NOT REQUESTED SHALL BE RETURNED WITHOUT REVIEW OF ANY KIND. SUBMITTALS SHALL INDICATE MINIMUM ACCESS AND SERVICE CLEARANCES IF REQUIRED BY THE SUBMITTED EQUIPMENT.
- D. INSTALLATION INSTRUCTIONS - FOR CERTAIN PRODUCTS OR SYSTEMS AS SPECIFIED IN SUBSEQUENT SPECIFICATIONS SECTIONS OR ON THE DRAWINGS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE COPIES OF MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH THE SUBMITTAL WHEN REQUIRED AS SUCH, THE INSTALLATION INSTRUCTIONS ARE CONSIDERED PART OF THE SUBMITTAL AND THEIR OMISSION MAY RESULT IN AUTOMATIC REJECTION OF THE SUBMITTAL WHERE MORE THAN ONE MEDICAL DEVICE ARE SCHEDULED. ONLY ONE SET OF INSTALLATION INSTRUCTIONS NEEDS TO BE SUBMITTED, E.G. IF SEVEN 200A 208V/3P PANELS ARE SCHEDULED, ONLY ONE 200A 208V/3P PANELS INSTALLATION INSTRUCTION NEEDS TO BE SUBMITTED. SIMILARLY, IF ONE SET OF INSTALLATION INSTRUCTIONS IS IDENTIFIED BY THE MANUFACTURER AND ON THE INSTRUCTIONS TO BE APPLICABLE TO MORE THAN ONE TYPE OR SIZE OF DEVICES, E.G. IF ONE SET OF PANEL INSTRUCTIONS IS GOOD FOR 100A, 150A, 200A, PANELS, THEN ONLY ONE INSTRUCTION SET IS REQUIRED FOR THESE DEVICES.
- E. THIS ENGINEER WILL REVIEW THE SUBMITTALS FOR APPROVAL. TWICE. ANY ADDITIONAL REVIEWS THAT ARE REQUIRED BY THE ENGINEER FOR WHATEVER REASON AFTER THE INITIAL TWO REVIEWS WILL RESULT IN ADDITIONAL COMENSATION FOR THE ENGINEER'S TIME BY THE SUBMITTING CONTRACTOR AT THE ENGINEER'S RATE.
30. REQUIRED SHOP DRAWING SUBMITTALS:
- A. LIGHTING FIXTURES (AS NOTED IN LIGHTING FIXTURE SCHEDULE)
- B. MAIN DISTRIBUTION PANEL, INCLUDING CIRCUIT BREAKERS
- C. PANELBOARDS INCLUDING CIRCUIT BREAKERS
- D. RECEPTACLES AND COVER PLATES
- E. DISCONNECTS INCLUDING FUSES OR MAGNETIC STARTERS
- F. GROUNDING
- G. WIRING
- H. CONDUIT
- I. FIRE ALARM SYSTEM
- J. ACCESS CONTROL AND SECURITY SYSTEM COMPONENTS
- K. DATA CABLEING, TELEPHONE WIRING, AUDIO-VISUAL CABLEING
- L. JUNCTION BOXES AND ENCLOSURES
- ELECTRICAL:
31. ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES.
32. PROVIDE BLANK METAL COVERPLATE OVER ALL UNUSED OUTLET BOXES. PAINT COVERPLATE TO MATCH ADJACENT SURFACES.
33. RECEPTACLE AND DATA OUTLET MOUNTING HEIGHTS INDICATED ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER TRADES FOR EXACT MOUNTING HEIGHTS REQUIRED. THIS REQUIREMENT ALSO APPLIES TO SWITCHES, TELEPHONE OUTLETS, DATA OUTLETS, HVAC SENSORS, ETC.. ANY DEVICE THAT HAS TO BE RELOCATED DUE TO CONTRACTOR'S FAILURE TO COORDINATE LOCATION WITH COUNTERTOPS, CHALKBOARDS, TAGCKARDS, ETC. WILL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
34. ALL RECEPTACLES TO BE 20A SPECIFICATION GRADE. WORY. WALL PLATES TO MATCH. ISOLATED GROUND DUPLEX RECEPTACLES (IG) WILL BE ORANGE BODY AND FACE PLATE. ALL EXTERIOR RECEPTACLE SHALL WEATHERPROOF GFCI AND SHALL HAVE WHILE IN USE METAL WEATHERPROOF COVERS.
35. COORDINATE WORK WITH ALL OTHER TRADES GIVING SPECIAL CONSIDERATION TO WORK DONE ABOVE CEILINGS, OUTLET LOCATIONS AT MILLWORK, AND SWITCH LOCATIONS IN REGARDS TO DOOR SWINGS.
36. WIRING SHALL BE #12 AWG, COPPER, IN MINIMUM 3/4" CONDUIT WITH CU. EGC., UNLESS NOTED OTHERWISE.
37. INSTALL WALL MOUNTED LIGHT FIXTURES, SWITCHES, OUTLETS, AND COMMUNICATION DEVICES IN STRICT COORDINATION WITH ARCHITECTURAL DETAILS, SECTIONS AND ELEVATIONS, AND ADA REQUIREMENTS.
38. FIRESTOPPING OF PENETRATIONS IN FIRE-RATED WALLS, FLOORS, ETC. SHALL BE DONE BY A FIRESTOPPING CONTRACTOR. ELECTRICAL CONTRACTOR SHALL MAKE REQUIRED PENETRATIONS IN RATED WALL, FLOORS, ETC. NEATLY AND WITH A CUTTING TOOL. THE CONTRACTOR SHALL MAKE THE PENETRATIONS NO LARGER THAN NECESSARY. THE CONTRACTOR SHALL COORDINATE ALL SUCH PENETRATIONS WITH THE FIRESTOPPING CONTRACTOR BEFORE SUCH PENETRATIONS ARE MADE.
39. REFER TO SPECIFICATIONS FOR ALL COMMUNICATION SYSTEM REQUIREMENTS. (IN LIEU OF SPEC. PROVIDE 3/4" C. W/ PULLCORD FROM COMMUNICATION OUTLETS TO 6" ABOVE LAY-IN CEILING.)
40. SUPPORT ALL FIXTURES FROM STRUCTURE ABOVE CEILING TILES OR PLASTER. CEILING SHALL NOT SUPPORT FIXTURES.
41. FINISHED FLOOR ELEVATIONS FOR OUTLETS AND OTHER DEVICES ARE TO CENTER OF BOX. BACK-SPLASH, REGARDLESS OF DIMENSION SHOWN ON DRAWINGS.
42. DOUBLE SET SCREW FITTINGS ARE ACCEPTABLE FOR STEEL CONDUIT AND COUPLINGS ONLY.
43. BEFORE INSTALLATION, EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, ANY DEVICE WITH ELECTRICAL CONNECTIONS, DUCTWORK, INSULATION, PIPING, VALVES, AIR DEVICES, ETC., SHALL NOT BE STORED DIRECTLY ON GRADE OR ON A SLAB OR FLOOR. BEFORE AND AFTER INSTALLATION, SUCH EQUIPMENT AND DEVICES SHALL BE PROTECTED FROM ENTRY OF DIRT, TRASH, WATER (EXCEPT AS REQUIRED), VERMIN, ETC.

43. BEFORE INSTALLATION, EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, ANY DEVICE WITH ELECTRICAL CONNECTIONS, DUCTWORK, INSULATION, PIPING, VALVES, AIR DEVICES, ETC., SHALL NOT BE STORED DIRECTLY ON GRADE OR ON A SLAB OR FLOOR. BEFORE AND AFTER INSTALLATION, SUCH EQUIPMENT AND DEVICES SHALL BE PROTECTED FROM ENTRY OF DIRT, TRASH, WATER (EXCEPT AS REQUIRED), VERMIN, ETC.
44. DEVICES THAT MIGHT CAUSE OR OPERATE WITH VIBRATION OR NOISE SHALL BE ISOLATED PER MANUFACTURER'S RECOMMENDATIONS AND/OR PER SPECIFICATIONS.
45. SWITCHBOARDS, PANEL BOARDS AND TRANSFORMERS SHALL BE CUTLER-HAMMER, SQUARE-D, OR SIMILAR APPROVED BY THE ENGINEER.
46. USE THE FOLLOWING WIRING COLOR CODE:
- A. FOR WIRE SIZES 10 AWG AND SMALLER, INSTALL WIRE COLORS IN ACCORDANCE WITH THE FOLLOWING:
1. BLACK AND RED FOR SINGLE PHASE CIRCUITS AT 120/240 VOLTS.
2. BLACK, RED, AND BLUE FOR CIRCUITS AT 120/208 VOLTS SINGLE OR THREE PHASE.
3. ORANGE, BROWN, AND YELLOW FOR CIRCUITS AT 277/480 VOLTS SINGLE OR THREE PHASE.
- B. FOR WIRE SIZES 8 AWG AND LARGER, IDENTIFY WIRE WITH COLORED TAPE AT TERMINALS. SPIRES AND BOXES. COLORS ARE AS FOLLOWS:
1. BLACK AND RED FOR SINGLE PHASE CIRCUITS AT 120/240 VOLTS.
2. BLACK, RED, AND BLUE FOR CIRCUITS AT 120/208 VOLTS SINGLE OR THREE PHASE.
3. BROWN, ORANGE, AND YELLOW FOR CIRCUITS AT 277/480 VOLTS SINGLE OR THREE PHASE.
- C. NEUTRAL CONDUCTORS: GREY FOR 208/120V CIRCUITS. GREY FOR 480/277V CIRCUITS.
- D. BRANCH CIRCUIT CONDUCTORS: INSTALL THREE OR FOUR WIRE HOMERUNS WITH EACH PHASE UNIQUELY COLOR CODED.
- E. FEEDER CIRCUIT CONDUCTORS: UNIQUELY COLOR CODE EACH PHASE.
- F. GROUND CONDUCTORS:
1. FOR 6 AWG AND SMALLER: GREEN.
2. FOR 4 AWG AND LARGER: IDENTIFY WITH GREEN TAPE AT BOTH ENDS AND VISIBLE POINTS INCLUDING JUNCTION BOXES.

47. THE ALARM SYSTEMS SHOWN ON THESE PLANS ARE FOR COORDINATION AND BIDDING ONLY. THE INFORMATION SHOWN DOES NOT NECESSARILY REPRESENT THE REQUIRED FINAL ALARM SYSTEM LAYOUT REQUIREMENTS. THE FINAL ALARM SYSTEM LAYOUT IS TO BE SUBMITTED FOR PERMIT PURPOSES, AT A LATER DATE BY LICENSED ALARM SYSTEM INSTALLER. THE ALARM SYSTEM LAYOUT SHOWN IS TO BE VERIFIED WITH THE LICENSED INSTALLER PRIOR TO INSTALLATION OF CONDUIT AND DEVICE BOXES. THE FINAL LOCATION OF ALL DETECTORS (EXISTING AND NEW), AUDIO AND VISUAL ALARMS, AND ANY OTHER ALARM EQUIPMENT IS THE RESPONSIBILITY OF THE LICENSED ALARM SYSTEM INSTALLER. EQUIPMENT SPECIFICATION - TYPE, SIZE, RATING, AND ANY OTHER REQUIRED INFORMATION FOR THE REVIEW OF THE ALARM PLANS FOR PERMIT PURPOSES IS TO BE SUPPLIED BY THE LICENSED ALARM INSTALLER ON THE FINAL ALARM SYSTEM PLANS.

| SYMBOL LEGEND   |   |
|---|---|
| SYMBOL  | DESCRIPTION   |
|   | MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL EQUIPMENT SCHEDULE  |
|   | WEATHERPROOF  |
|   | ABOVE FINISH FLOOR  |
|   | REMOVES RED DEVICE FOR EMERGENCY PURPOSES.  |
|   | EMERGENCY   |
|   | EXISTING  |
|   | UNLESS NOTED OTHERWISE  |
|   | ISOLATED GROUND   |
|   | GROUND FAULT CIRCUIT INTERRUPTER  |
|   | SURFACE CEILING FLOOR AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | BRACKET LIGHT FIXTURE AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | ROUND RECESSED DOWNLIGHT. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | SQUARE DOWNLIGHT. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | LAY-IN 1X4 FLUORESCENT FIXTURE. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | LAY-IN 2X4 FLUORESCENT FIXTURE. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | LIGHTING FIXTURE INDICATED WITH CROSS SHADING IS CONNECTED TO EMERGENCY POWER SOURCE, OR HAS INTEGRAL BATTERY PACK 1100 LUMEN MIN.  |
|   | CEILING MOUNTED EXIT FIXTURE AND OUTLET WITH DIRECTIONAL INDICATOR. TYPE AS INDICATED IN FIXTURE SCHEDULE   |
|   | JUNCTION BOX INSTALLED ABOVE THE CEILING WITH FLEXIBLE CONDUIT CONNECTION TO LAY-IN FIXTURES. MINIMUM 6"-0" LENGTH OF CONDUIT WITH REQUIRED CONDUCTORS ALONG WITH GREEN WIRE GROUND.  |
|   | POLE AND NUMBER OF LUMINAIRES SHOWN. TYPE AS INDICATED IN FIXTURE SCHEDULE  |
|   | SINGLE POLE WALL SWITCH. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED  |
|   | THREE WAY WALL SWITCH. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED  |
|   | DIMMER SWITCH. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED  |
|   | JUNCTION BOX  |
|   | DUPLEX CONVENIENCE OUTLET. UP 18" OR AS INDICATED.  |
|   | GROUND QUADRUPLUX OUTLET. UP 18" TO CENTER OF RECEPTACLE OR AS INDICATED.   |
|   | DUPLEX FLUSH FLOOR OUTLET OR AS NOTED. VERIFY EXACT LOCATION IN FIELD WITH ARCHITECT.   |
|   | FLUSH FLOOR 2-GANG OUTLET BOX WITH RECEPTACLE FOR POWER AND COVER FOR TELEPHONE.  |
|   | COMBINATION VOICE/DATA OUTLET FLUSH IN WALL. 4 11/16" SQUARE BOX, 2-1/8" DEEP. ONE DEVICE COVER. UP 18" AFF. WITH 2 PORTS.  |
|   | COMBINATION VOICE/DATA OUTLET FLUSH IN WALL. 4 11/16" SQUARE BOX, 2-1/8" DEEP. ONE DEVICE COVER. UP 18" AFF. WITH 4 PORTS.  |
|   | THERMOSTAT UP 44" UNLESS OTHERWISE INDICATED.   |
|   | 4"x3"x3/4" PLYWOOD TELEPHONE BACKBOARD WITH #6 GROUND. TRANSFORMER AS NOTED.  |
|   | SPECIAL CABINET AS NOTED.   |
|   | PANELBOARD. SEE PANEL SCHEDULE FOR CHARACTERISTICS.   |
|   | MOTOR CONTROLLER INTEGRAL WITH EQUIPMENT.   |
|   | MOTOR CONTROLLER, PROVIDED AND INSTALLED UNDER DW. 16. SIZE AND POLES FOR MOTOR FURNISHED.  |
|   | SAFETY SWITCH, PROVIDED AND INSTALLED UNDER DW. 16. TO HAVE POLES AND RATING REQUIRED. TO BE MOUNTED IN NEAR BY IF INSTALLED OUTDOORS.  |
|   | ELECTRICAL UNDERGROUND CIRCUIT, 2'-0" MINIMUM BELOW GRADE.  |
|   | TELEPHONE UNDERGROUND CIRCUIT, 2'-0" MINIMUM BELOW GRADE.   |
|   | PRIMARY SERVICE ELECTRICAL UNDERGROUND CIRCUIT, 2'-0" MINIMUM BELOW GRADE.  |
|   | HOME RUN TO PANEL WITH BRANCH CIRCUIT NUMBERS INDICATED. TIC MARKS REPRESENT NEUTRAL, HOT, SWITCH LEG, AND GROUND CONDUCTORS RESPECTIVELY. CONDUITS WITH NO TIC MARKS SHALL BE: "A HOT AND NEUTRAL", "A HOT AND SWITCH LEG", "A NEUTRAL AND SWITCH LEG", OR "HOT, NEUTRAL, AND GROUND OR ISOLATED GROUND", AS APPLICABLE. |
|   | FIRE ALARM CONTROL PANEL.   |
|   | FIRE ALARM ANNUNCIATOR.   |
| NOTE: SOME SYMBOLS SHOWN MAY NOT BE USED ON THIS PROJECT. |   |

IT'S THE LAW  
AND IT'S FREE - CALL BEFORE YOU DIG  
CALL TWO WORKING DAYS BEFORE YOU DIG IN TEXAS 1-800-344-8377  
(1-800-DIG-TESS)

ES LA LEY  
GRATIS PARA USTED - LLAME ANTES DE ESCARVAR  
LLAME 2 DIAS DE TRABAJO ANTES DE ESCARVAR EN TEXAS 1-800-344-8377  
(1-800-DIG-TESS)



| Section 1: Project Information                               |  |
|--|--|
| Project Type: Alteration                                     | Designer/Contractor: Haley Rick, PE  |
| Project Title: Ascarate Annex - Tax/AgrLife Offices          | Owner/Agent: COA   |
| Construction Site: 301 Marmy Malheur Drive El Paso, TX 79905 | 2211 E. Missouri Ave. Suite W107 El Paso, TX 79903 (915) 781-2050 hrick@emcpro.com |

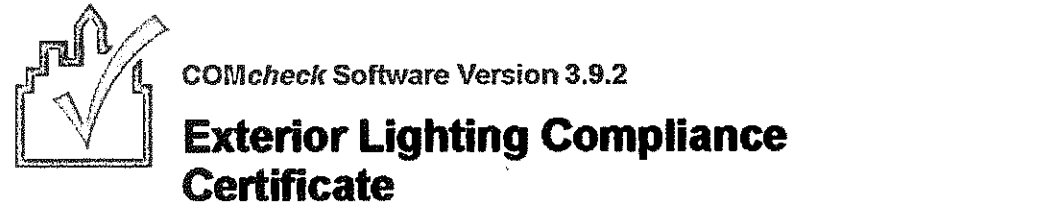
| Section 2: Interior Lighting and Power Calculation |       |
|--|-------|
| Area Category                                      | Area  |
| COUNTY TAX & AGRI LIFE OFFICES-1ST FLOOR (Office)  | 10002 |
| COUNTY TAX & AGRI LIFE OFFICES-2ND FLOOR (Office)  | 5689  |
| Total Allowed Watts =                              | 10951 |

| Section 3: Interior Lighting Fixture Schedule                            |          |
|--|----------|
| Fixture ID / Description / Lamp / Wattage Per Lamp / Ballast             | Quantity |
| COUNTY TAX & AGRI LIFE OFFICES-1ST FLOOR (Office 10002 sq ft)            |          |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 2        |
| Linear Fluorescent 2: A3: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 3        |
| Linear Fluorescent 3: A4: 4-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 4        |
| Linear Fluorescent 4: D1: 4-LAMP 2X4 SLEF MODULAR 4' 10" 32W: Electronic | 4        |
| Linear Fluorescent 5: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 6: D1: 4-LAMP 4" VANTY 4' 10" 32W: Electronic         | 1        |
| Linear Fluorescent 7: F2: 2-LAMP 4" WALL MOUNT 4' 10" 32W: Electronic    | 2        |
| LED 1: G1: LED DOWNLIGHT LED A Lamp 10W                                  | 1        |
| Incandescent 1: H1: 150W ELEVATOR HT LIGHT: Incandescent 500W            | 1        |
| LED 2: E1: EMERGENCY EXIT LIGHT: 10W                                     | 2        |
| Emergency Exit Sign, Safety or Emergency Lighting                        | 1        |
| Exception: Exit Sign, Safety or Emergency Lighting                       | 1        |
| COUNTY TAX & AGRI LIFE OFFICES-2ND FLOOR (Office 5689 sq ft)             |          |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 2        |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 4        |
| Linear Fluorescent 2: C2: 2-LAMP 2X4 SLEF MODULAR 4' 10" 32W: Electronic | 2        |
| Linear Fluorescent 3: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 4: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 5: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| LED 1: G1: LED DOWNLIGHT LED A Lamp 10W                                  | 2        |
| LED 2: E1: EMERGENCY EXIT LIGHT: 10W                                     | 2        |
| Emergency Exit Sign, Safety or Emergency Lighting                        | 1        |
| Exception: Exit Sign, Safety or Emergency Lighting                       | 1        |

| Section 4: Requirements Checklist  |                    |
|--|--------------------|
| Interior Lighting  | Passes             |
| 1. Total proposed watts must be less than or equal to total allowed watts. | 10951 15535 Passes |

- Controls, Switching, and Wiring:
- D.2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
- D.3. Daylight zones have individual lighting controls independent from that of the general area lighting.
- Exceptions:
1. Continuous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
2. Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
- D.4. Individual lighting controls for each space (with occupancy sensor).
- Exceptions:
1. Areas designated as security or emergency areas that must be continuously illuminated.
2. Lighting in hallways or corridors that are exempt from compliance has a control device independent of the control of the nonoccupant lighting.
- D.5. Interact switch at entry to hotel/motel guest room.
- D.6. Individual dwelling units separately metered.
- D.7. Medical call lighting or emergency display lighting exempt from compliance has a control device independent of the control of the nonoccupant lighting.
- D.8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by other controls of all luminaires, dim switches of alternate rows of luminaires, alternate luminaires, or alternate lamps, controlling the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.
- Exceptions:
1. Only one luminaire in space.
2. An occupant sensing device controls the area.
3. The area is a corridor, stairwell, restroom, public lobby or sleeping unit.
4. Areas that use less than 10 W/Wattage ft.
- D.9. Automatic lighting shutoff control in buildings larger than 5,000 sq ft.
- Exceptions:
1. Changing rooms, patient care areas, and spaces where automatic shutoff would endanger safety or security.
- D.10. Photoacoustic thermal time switch on exterior lights.
- Exceptions:
1. Lighting intended for 24 hour use.
- D.11. Ten-foot wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
- Exceptions:
1. Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

| Section 5: Compliance Statement   |                          |
|---|--------------------------|
| Compliance Statement: The proposed lighting alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting alteration project has been designed to meet the 2009 IECC, Chapter 6, requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist. |                          |
| Haley A. Rieck, PE<br>Name - Title  | Signature Date 2/14/2014 |
| Project Notes:<br>EMC PROJECT #1300556-A  |                          |




| Section 1: Project Information                               |  |
|--|--|
| Project Type: Alteration                                     | Designer/Contractor: Haley Rick, PE  |
| Project Title: Ascarate Annex - Tax/AgrLife Offices          | Owner/Agent: COA   |
| Construction Site: 301 Marmy Malheur Drive El Paso, TX 79905 | 2211 E. Missouri Ave. Suite W107 El Paso, TX 79903 (915) 781-2050 hrick@emcpro.com |

| Section 2: Exterior Lighting Area/Surface Power Calculation          |          |
|--|----------|
| Exterior Area/Surface  | Quantity |
| MAIN ENTRY (Entry canopy)  | 400 FT   |
| THREE SECONDARY ENTRANCES (Other door (not 1 ft of door width)       | 20       |
| BUILDING PERIMETER (Assumed length of facade 540 ft wall or surface) | 5        |
| Total Allowed Watts =  | 2720     |
| Total Allowed Watts =  | 2720     |
| Total Allowed Watts =  | 1300     |

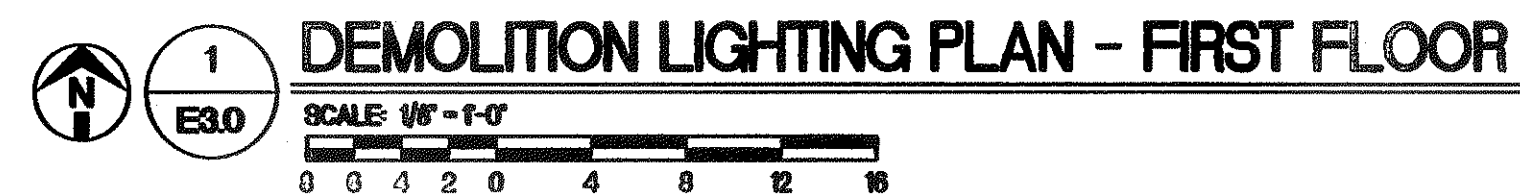
| Section 3: Exterior Lighting Fixture Schedule                            |          |
|--|----------|
| Fixture ID / Description / Lamp / Wattage Per Lamp / Ballast             | Quantity |
| COUNTY TAX & AGRI LIFE OFFICES-1ST FLOOR (Office 10002 sq ft)            |          |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 2        |
| Linear Fluorescent 2: A3: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 3        |
| Linear Fluorescent 3: A4: 4-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 4        |
| Linear Fluorescent 4: D1: 4-LAMP 2X4 SLEF MODULAR 4' 10" 32W: Electronic | 4        |
| Linear Fluorescent 5: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 6: D1: 4-LAMP 4" VANTY 4' 10" 32W: Electronic         | 1        |
| Linear Fluorescent 7: F2: 2-LAMP 4" WALL MOUNT 4' 10" 32W: Electronic    | 2        |
| LED 1: G1: LED DOWNLIGHT LED A Lamp 10W                                  | 1        |
| Incandescent 1: H1: 150W ELEVATOR HT LIGHT: Incandescent 500W            | 1        |
| LED 2: E1: EMERGENCY EXIT LIGHT: 10W                                     | 2        |
| Emergency Exit Sign, Safety or Emergency Lighting                        | 1        |
| Exception: Exit Sign, Safety or Emergency Lighting                       | 1        |
| COUNTY TAX & AGRI LIFE OFFICES-2ND FLOOR (Office 5689 sq ft)             |          |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 2        |
| Linear Fluorescent 1: A2: 2-LAMP 2X4 TROFFER 4' 10" 32W: Electronic      | 4        |
| Linear Fluorescent 2: C2: 2-LAMP 2X4 SLEF MODULAR 4' 10" 32W: Electronic | 2        |
| Linear Fluorescent 3: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 4: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| Linear Fluorescent 5: C2: 2-LAMP 2X4 WMP 4' 10" 32W: Electronic          | 2        |
| LED 1: G1: LED DOWNLIGHT LED A Lamp 10W                                  | 2        |
| LED 2: E1: EMERGENCY EXIT LIGHT: 10W                                     | 2        |
| Emergency Exit Sign, Safety or Emergency Lighting                        | 1        |
| Exception: Exit Sign, Safety or Emergency Lighting                       | 1        |

- Section 4: Requirements Checklist
- Lighting Wattage:
- D.1. Within each non-habitable area/structure, total proposed watts must be less than or equal to total allowed watts. Across all habitable areas/structures, total proposed watts must be less than or equal to total allowed watts.
- Compliance: Passes.
- Controls, Switching, and Wiring:
- D.2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
- D.3. Lighting not designated for dusk-to-dawn operation is controlled by either a photosensor (with time switch), or an astronomical time switch.
- D.4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
- D.5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.
- Exterior Lighting Efficiency:
- D.6. All exterior building general luminaires that operate at greater than 100W have minimum efficacy of 60 lumens/watt.
- Exceptions:
1. Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
2. Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
3. Emergency lighting that is automatically of during normal building operation.
4. Lighting that is controlled by motion sensor.

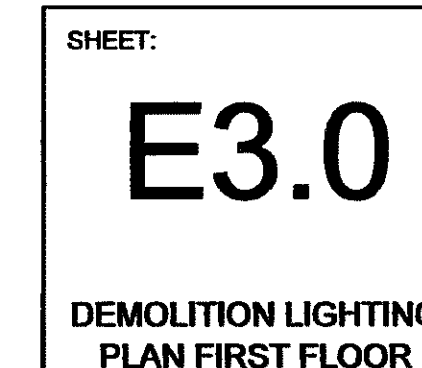
|  |           |
|--|-----------|
| Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in CODEBOOK Version 3.0.2 and to comply with the mandatory requirements in the Requirements Checklist. |           |
|   | 2/14/2014 |
| Jay A. Rieck, PE   |           |
| Signature  | Date      |
| Project Notes:   |           |
| IAC Project Number: 0130959-A  |           |





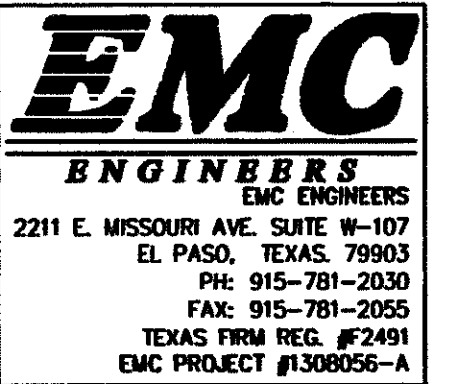
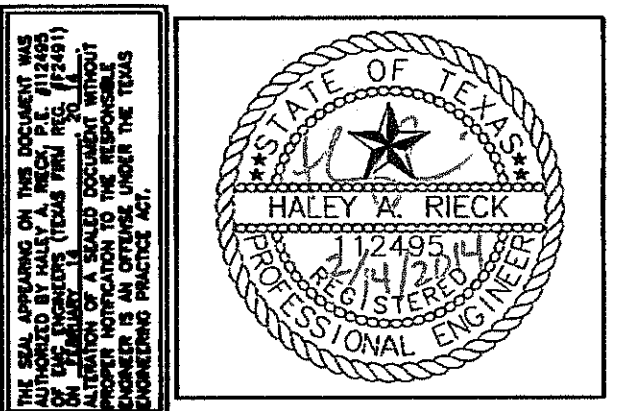


- 1 EXISTING LIGHTING FIXTURE TO REMAIN.
- 2 DEMO SWITCH IN THIS LOCATION WHERE DOOR WILL BE RELOCATED. REFER TO REMODEL PLANS FOR NEW ROOM SWITCHING.
- 3 REMOVE EXISTING EXTERIOR FIXTURE AND PREPARE FOR NEW FIXTURE TO BE INSTALLED IN THIS LOCATION. REUSE EXISTING BRANCH CIRCUIT FOR NEW FIXTURE IF IT IS IN GOOD CONDITION.
- 4 EXISTING LIGHT SWITCH LABELED "OUTSIDE LIGHTS" TO REMAIN.
- 5 ADJUST AND RELOCATE EXISTING LINEAR PENDANT FIXTURES AS NEEDED TO ACCOMMODATE NEW LOBBY CONFIGURATION. REFER TO E5.0.
- 6 EXISTING 4-LAMP 2'x4' TROFFERS AND DOWNLIGHTS TO REMAIN IN EXISTING SUSPENDED CEILING. CLEAN AND RELAMP FIXTURES AS NEEDED.

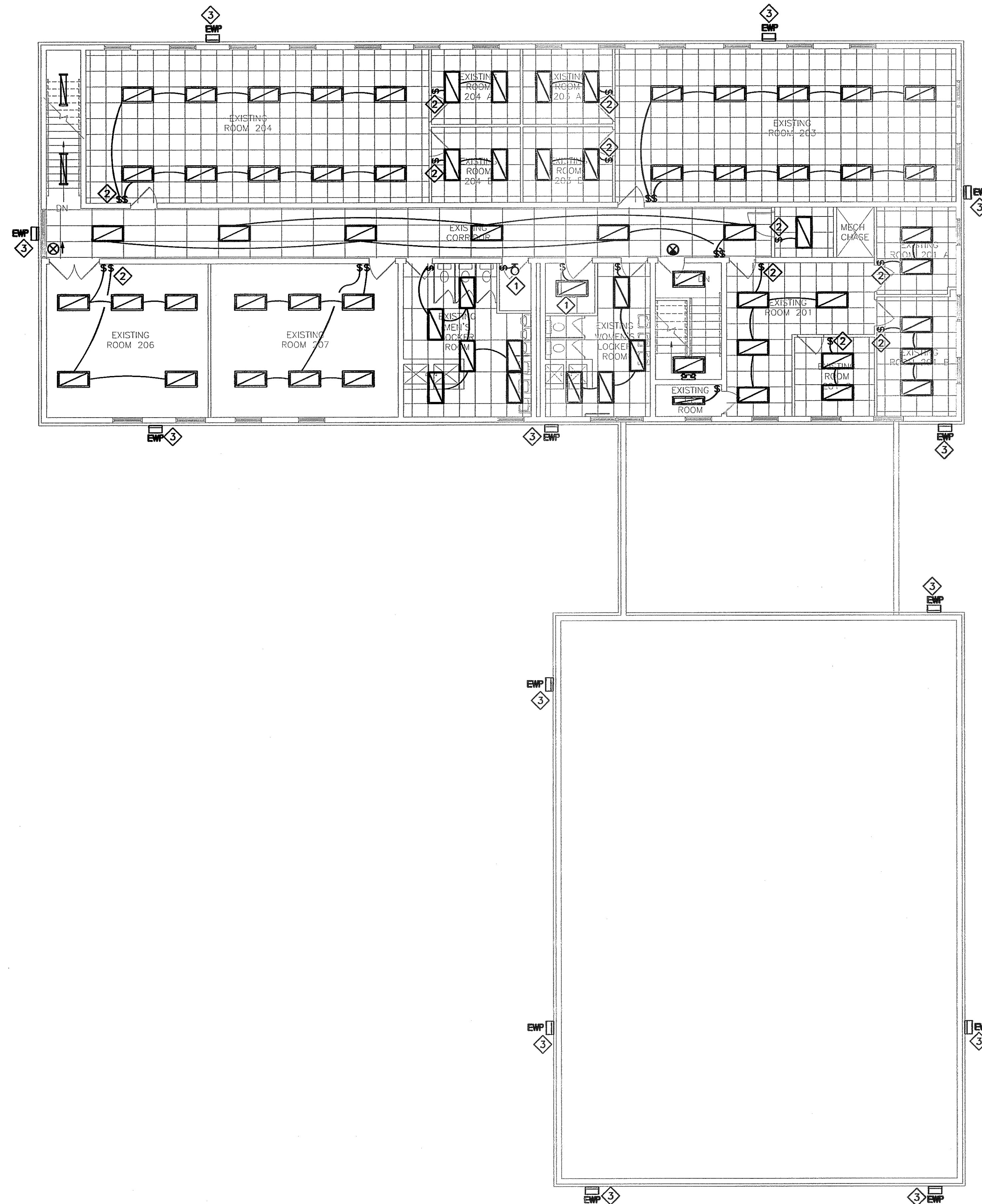




- 1 ALL WORK ON THIS SHEET TO BE PERFORMED BY COUNTY OF EL PASO (COEP) ELECTRICIANS.
- 2 UNLESS NOTED OTHERWISE, REMOVE ALL LIGHT FIXTURES. REFER TO ARCHITECTURAL PLANS FOR CEILING RENOVATIONS. SALVAGE FIXTURES IN GOOD CONDITION FOR RE-USE IN NEW LIGHTING PLAN ON E6.0.

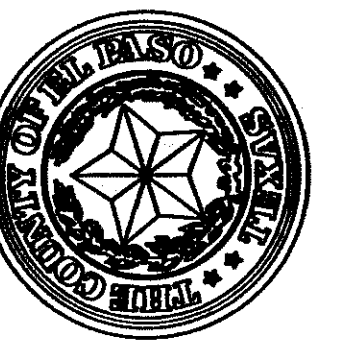


- 1 EXISTING LIGHTING FIXTURE TO REMAIN.
- 2 DEMO SWITCH IN THIS LOCATION WHERE DOOR WILL BE RELOCATED OR WALL DEMOLISHED. REFER TO REMODEL PLANS FOR NEW ROOM SWITCHING.
- 3 REMOVE EXISTING EXTERIOR WALLPACK AND PREPARE FOR NEW WALLPACK TO BE INSTALLED IN THIS LOCATION. REUSE EXISTING BRANCH CIRCUIT FOR NEW EXTERIOR WALLPACK LIGHTING IF IT IS IN GOOD CONDITION.



**DEMOLITION LIGHTING PLAN - SECOND FLOOR**

**REMODELING OF THE ASCARATE ANNEX  
FOR THE EL PASO COUNTY**  
301 MANNY MARTINEZ DR. , EL PASO, TEXAS 79905



ISSUED FOR  
CONSTRUCTION

[illegible]

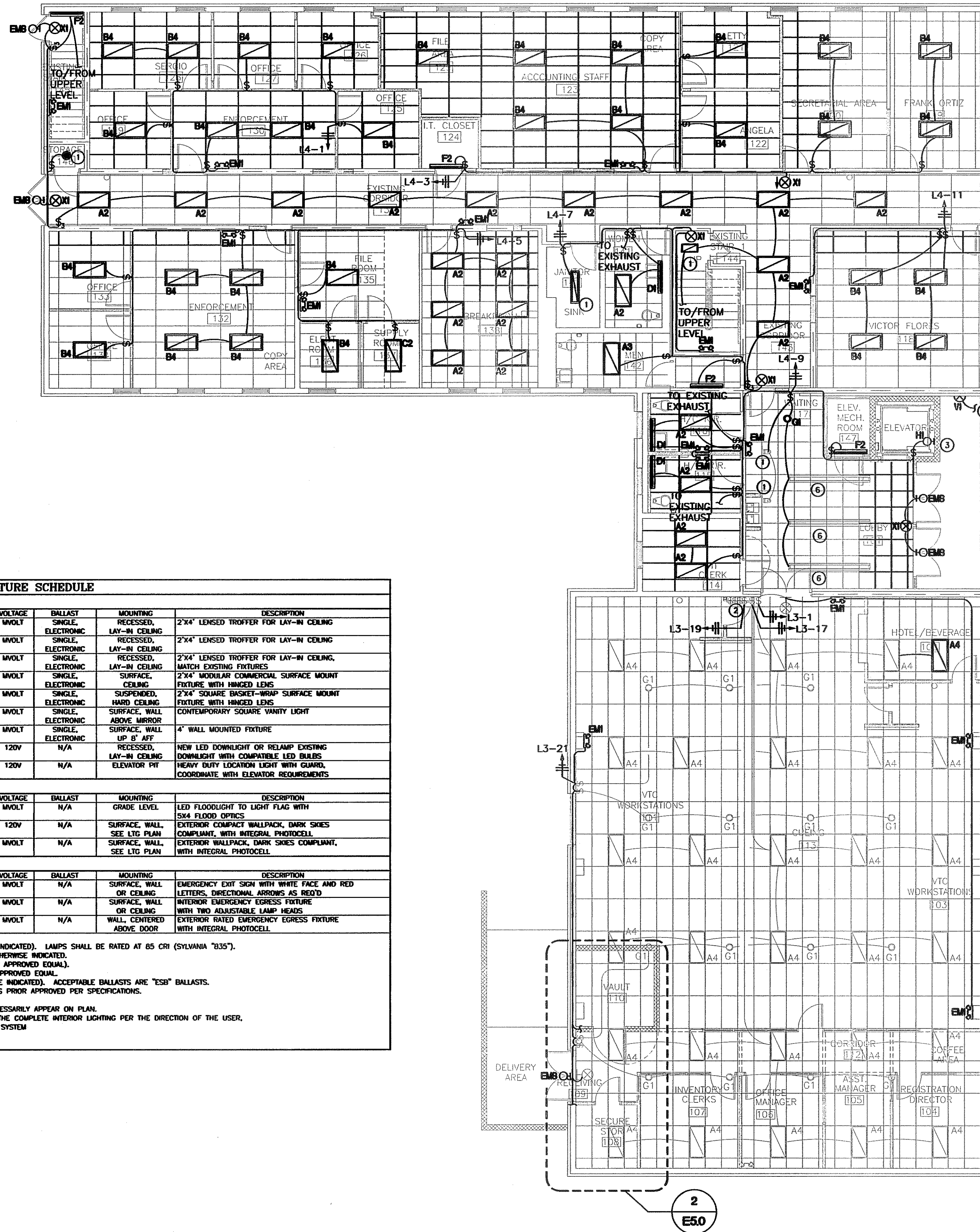
SHEET:

## E4.0

DEMOLITION LIGHTING PLAN  
SECOND FLOOR

2013-32-REMODELING OF THE ASCAH IE ANNEX FOR THE EL PASO COUNTY-Y-100% CONSTRUCTION DOCUMENT IS FEBRUARY 17, 2014





| LIGHTING FIXTURE SCHEDULE   |  |                                |         |                    |  |
|---|--|--------------------------------|---------|--------------------|--|
| GENERAL LIGHTING  |  |                                |         |                    |  |
| SYMBOL  | MANUFACTURER NAME AND NUMBER                         | LAMPS                          | VOLTAGE | BALLAST            | DESCRIPTION  |
| A2  | LITHONIA 2618 2 32 A12125 MVOLT GEB10S               | (2) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | RECESSED, LAY-IN CEILING   |
| A3  | LITHONIA 2618 3 32 A12 MVOLT GEB10S                  | (3) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | RECESSED, LAY-IN CEILING   |
| A4  | LITHONIA 2618 4 32 A12 MVOLT GEB10S                  | (4) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | RECESSED, LAY-IN CEILING   |
| B4  | LITHONIA 2M 4 32 A12125 MVOLT GEB10S                 | (4) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | RECESSED, LAY-IN CEILING   |
| C2  | LITHONIA SB2 32 MVOLT GEB10S                         | (2) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | SUSPENDED, HARD CEILING  |
| D1  | LITHONIA 11874 MVOLT GEB10S                          | (1) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | SURFACE, WALL ABOVE MIRROR   |
| F2  | LITHONIA WC 2 32 MVOLT GEB10S                        | (2) 32W T8                     | MVOLT   | SINGLE, ELECTRONIC | RECESSED, LAY-IN CEILING   |
| G1  | LITHONIA REAL6 D6 (FBA) 1000L 35K 305SC PFMM L7XR    | 10 W LED-A19 B4SE (100W EQUAL) | 120V    | N/A                | NEW LED DOWNLIGHT OR RELAMP EXISTING DOWNLIGHT WITH COMPATIBLE LED BULBS         |
| H1  | LITHONIA OVT 150                                     | (1) 150W INCANDESCENT          | 120V    | N/A                | ELEVATOR PIT   |
| EXTERIOR LIGHTING   |  |                                |         |                    |  |
| SYMBOL  | MANUFACTURER NAME AND NUMBER                         | LAMPS                          | VOLTAGE | BALLAST            | DESCRIPTION  |
| U1  | LITHONIA OLB 8 50K DOB                               | 11W LED 5000K                  | MVOLT   | N/A                | LED FLOODLIGHT TO LIGHT FLAG WITH 5M4 FLOOD OPTICS                               |
| V1  | LITHONIA TWS LED 1 50K PE                            | 19W LED 5000K                  | 120V    | N/A                | EXTERIOR COMPACT WALLPACK, DARK SKIES COMPLIANT, WITH INTEGRAL PHOTOCELL         |
| W1  | LITHONIA OLW 31                                      | 48W LED 5000K                  | MVOLT   | N/A                | EXTERIOR WALLPACK, DARK SKIES COMPLIANT, WITH INTEGRAL PHOTOCELL                 |
| EMERGENCY LIGHTING  |  |                                |         |                    |  |
| SYMBOL  | MANUFACTURER NAME AND NUMBER                         | LAMPS                          | VOLTAGE | BALLAST            | DESCRIPTION  |
| X1  | LITHONIA EDG (CBA) R EL                              | 5W LED                         | MVOLT   | N/A                | EMERGENCY EXIT SIGN WITH WHITE FACE AND RED LETTERS, DIRECTIONAL ARROWS AS REQ'D |
| EM1   | LITHONIA ELM2  | (2) 5.4W KRYPTON               | MVOLT   | N/A                | INTERIOR EMERGENCY EGRESS FIXTURE WITH TWO ADJUSTABLE LAMP HEADS                 |
| EMS   | EMERGENCY AND EXIT LIGHTING PRODUCTS (DEM, CBA) PCLW | (2) 6W XENON AND LED           | MVOLT   | N/A                | EXTERIOR RATED EMERGENCY EGRESS FIXTURE WITH INTEGRAL PHOTOCELL                  |
| NOTES:<br>1. PROVIDE SYLVANIA OCTRON LAMPS WITH ALL FLUORESCENT FIXTURES (UNLESS OTHERWISE INDICATED). LAMPS SHALL BE RATED AT 85 CRI (SYLVANIA "B35").<br>2. PROVIDE ELECTRONIC BALLASTS WITH T8 FLUORESCENT FIXTURES (TND < 1500) UNLESS OTHERWISE INDICATED.<br>3. EMERGENCY BATTERY PACKS FOR T8 FIXTURES SHALL BE BODINE #B50 (1350 LUMENS OR APPROVED EQUAL).<br>4. EMERGENCY BATTERY PACKS FOR COMPACT FLUORESCENTS SHALL BE BODINE #B94C OR APPROVED EQUAL.<br>5. PROVIDE ELECTRONIC BALLASTS WITH COMPACT FLUORESCENT FIXTURES (UNLESS OTHERWISE INDICATED). ACCEPTABLE BALLASTS ARE "ESB" BALLASTS.<br>6. LIGHT FIXTURES SHALL BE AS SPECIFIED AND NO SUBSTITUTIONS WILL BE ALLOWED UNLESS PRIOR APPROVED PER SPECIFICATIONS.<br>7. ALL FLUORESCENT BALLASTS SHALL BE ENERGY SAVINGS AND CEC LISTED.<br>8. REFER TO PLAN FOR TYPES AND QUANTITIES USED. ALL TYPES LISTED ABOVE DO NOT NECESSARILY APPEAR ON PLAN.<br>9. UPON COMPLETION OF THE PROJECT THE CONTRACTOR IS TO PROVIDE LABOR TO ADJUST THE COMPLETE INTERIOR LIGHTING PER THE DIRECTION OF THE USER, ARCHITECT AND THIS OFFICE. THIS ADJUSTMENT IS NECESSARY TO FINALIZE THE LIGHTING SYSTEM.<br>10. "MVOLT" DENOTES BALLAST AS MULTI-TAP FOR 120V, 208V, 240V AND 277V.<br>11. "CBA" INDICATES COLOR BY ARCHITECT. "FBA" INDICATES FINISH BY ARCHITECT. |  |                                |         |                    |  |

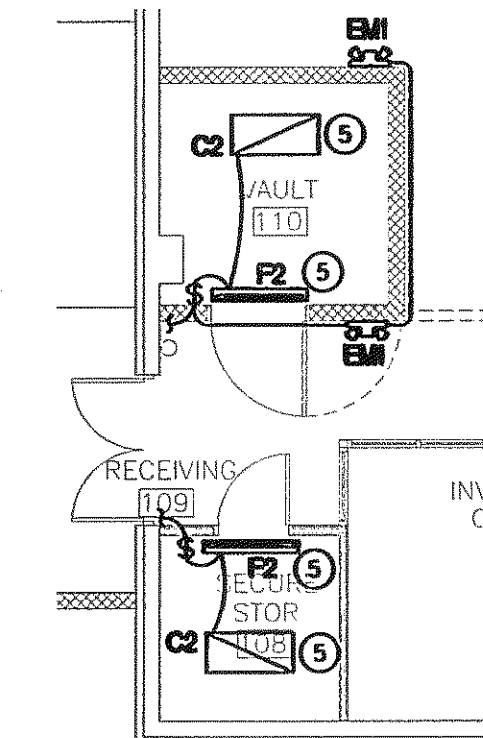
1  
E5.0  
SCALE: 1/8" = 1'-0"  
0 2 4 6 8 10

## ELECTRICAL GENERAL NOTES:

- 1 ALL WORK ON THIS SHEET TO BE PERFORMED BY COUNTY OF EL PASO (COEP) ELECTRICIANS.
- 2 LIGHT FIXTURES OF THE TYPE INDICATED MAY BE RELOCATED EXISTING FIXTURES OF THE SAME TYPE OR NEW FIXTURES ACCORDING TO THE FIXTURE SCHEDULE ON THIS SHEET.
- 3 REFER TO THERMOSTAT MOUNTING SCHEMATIC ON SHEET E11.0.

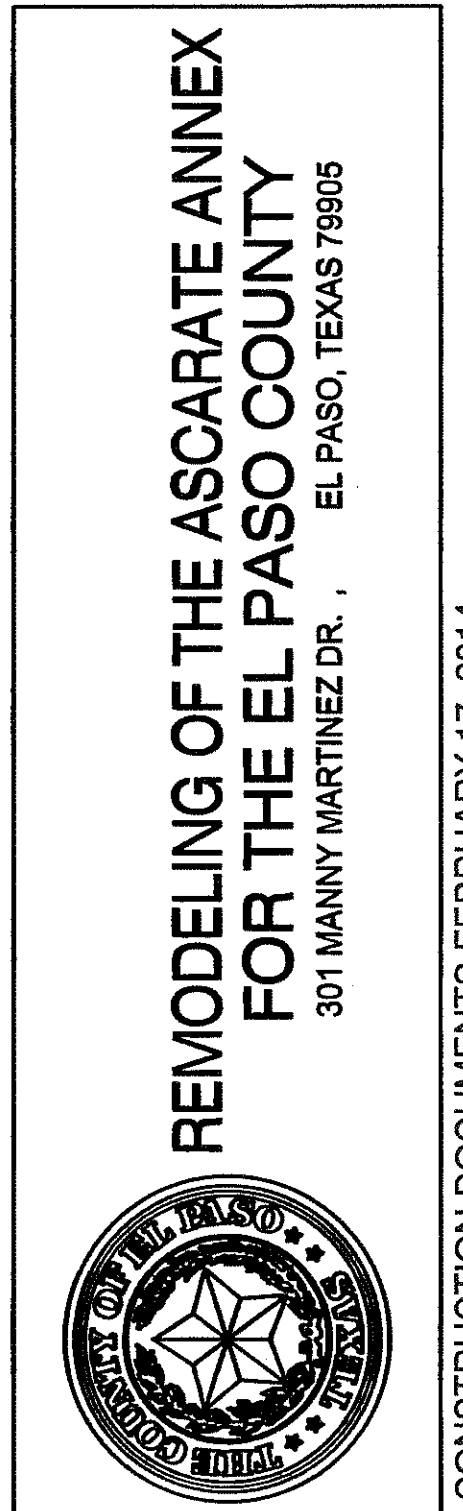
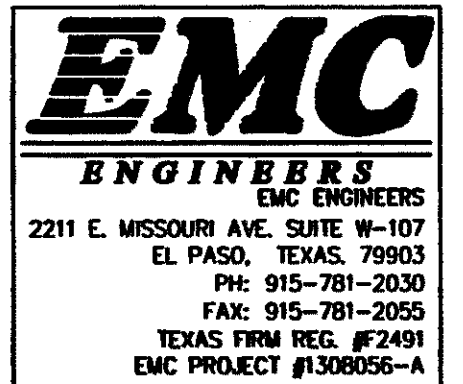
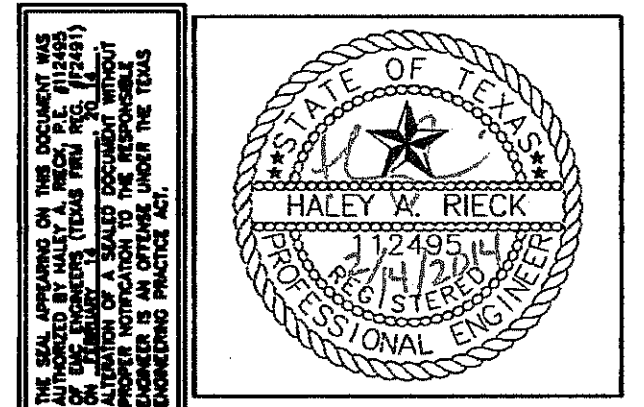
## ELECTRICAL REMODEL KEYED NOTES: ①

- ① EXISTING LIGHT FIXTURE TO REMAIN.
- ② EXISTING EXTERIOR BUILDING LIGHTING CIRCUITS TO REMAIN AND BE CONTROLLED BY EXISTING SWITCHES IN THIS LOCATION. PHOTOCELLS ON EXISTING FIXTURES ARE OPERATIONAL.
- ③ COORDINATE ELEVATOR PIT LIGHT LOCATION WITH ELEVATOR EQUIPMENT.
- ④ CIRCUIT FIXTURE WITH EXISTING BUILDING EXTERIOR LIGHTING CIRCUIT FOR W1 FIXTURES SHOWN ON E6.0.
- ⑤ SURFACE MOUNT FIXTURES IN VAULT AND SECURE STORAGE IN COORDINATION WITH SHELVING.
- ⑥ EXISTING LINEAR PENDANT LIGHTS TO BE RELOCATED AS REQUIRED TO ACCOMMODATE NEW LOBBY CONFIGURATION.



NEW LIGHTING PLAN -  
VAULT AND SECURE ROOMS

2  
E5.0  
SCALE: 1/8" = 1'-0"  
0 2 4 6 8 10

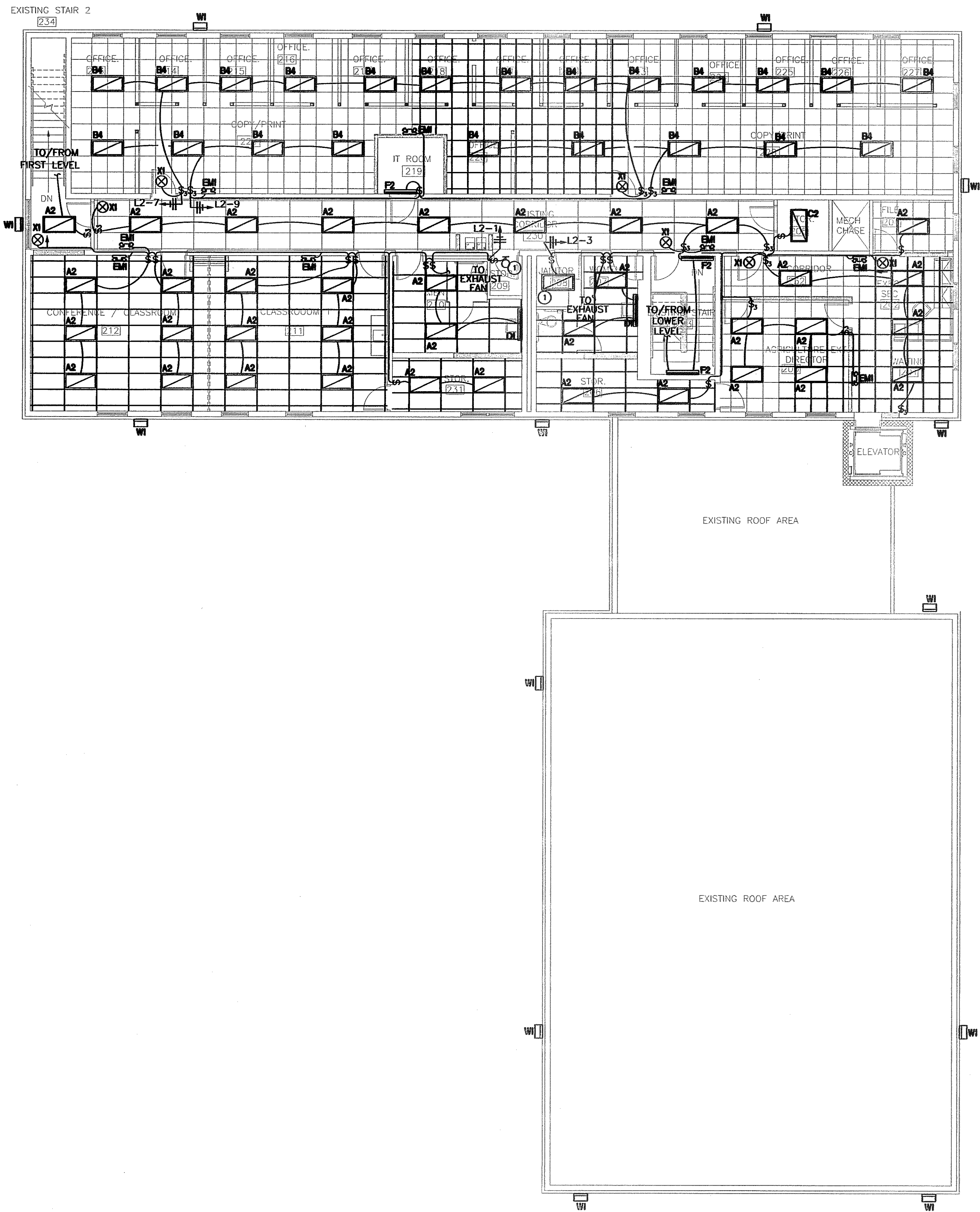


ISSUED FOR  
CONSTRUCTION

| NO. | DATE: | REVISION: |
|-----|-------|-----------|
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |
|     |       |           |

SHEET:  
**E5.0**  
NEW LIGHTING PLAN  
FIRST FLOOR







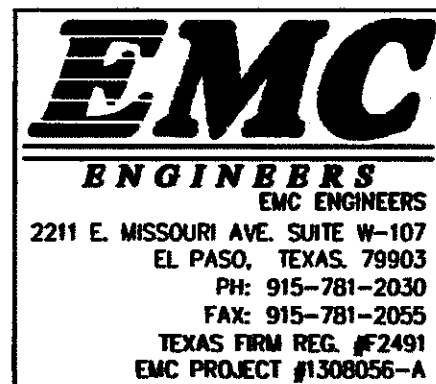
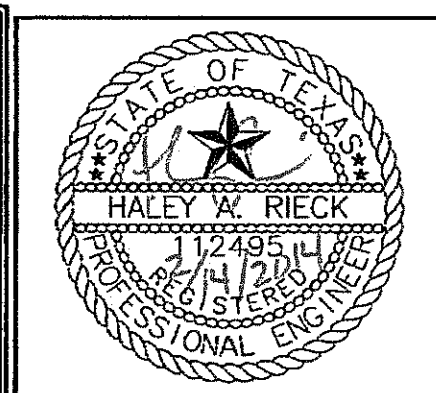
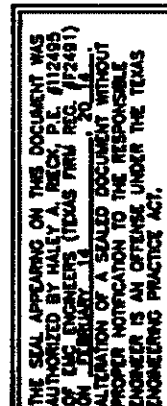
**NEW LIGHTING PLAN - SECOND FLOOR**  
 SCALE: 1/8" = 1'-0"  
 0 0 4 2 0 4 8 12 16

**ELECTRICAL GENERAL NOTES:**

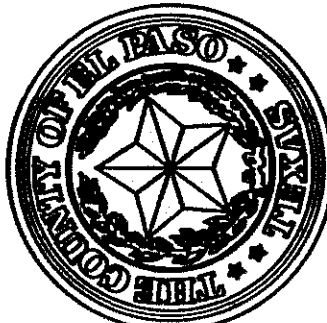
- 1 ALL WORK ON THIS SHEET TO BE PERFORMED BY COUNTY OF EL PASO (COEP) ELECTRICIANS.
- 2 LIGHT FIXTURES OF THE TYPE INDICATED MAY BE RELOCATED EXISTING FIXTURES OF THE SAME TYPE OR NEW FIXTURES ACCORDING TO THE FIXTURE SCHEDULE ON SHEET E5.0..
- 3 CONNECT NEW EXTERIOR WALLPACK FIXTURES TO EXISTING CIRCUIT ON PANEL L3 AND CONTROL WITH INTEGRAL PHOTOCELLS.
- 4 REFER TO THERMOSTAT MOUNTING SCHEMATIC ON SHEET E11.0.

**ELECTRICAL REMODEL KEYED NOTES: ①**

- ① EXISTING LIGHT FIXTURE TO REMAIN.



**REMODELING OF THE ASCARATE ANNEX  
FOR THE EL PASO COUNTY**  
 301 MANNY MARTINEZ DR. EL PASO, TEXAS 79905

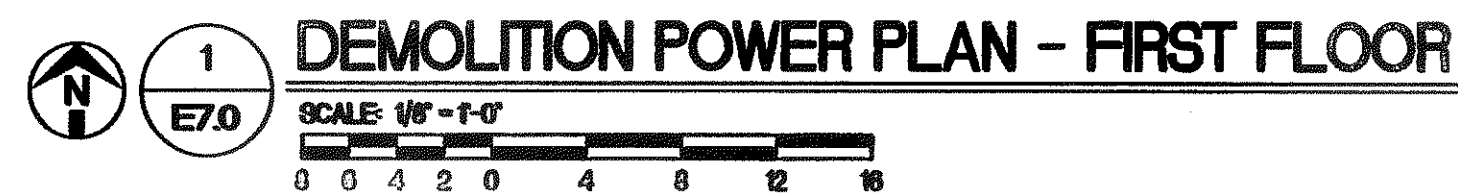


**ISSUED FOR  
CONSTRUCTION**

| NO. | DATE | REVISION: |
|-----|------|-----------|
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |
|     |      |           |

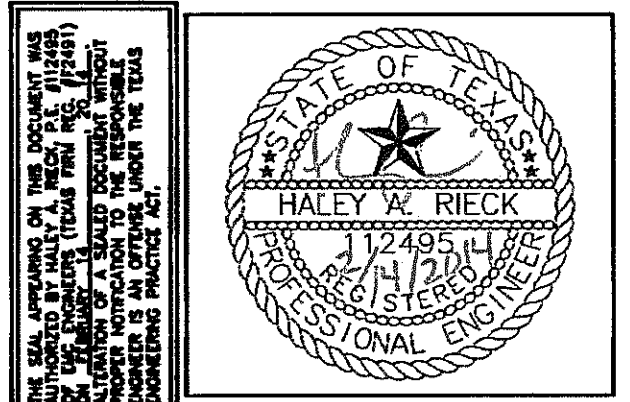
DATE: FEBRUARY 17, 2014

SHEET:  
**E6.0**  
 NEW LIGHTING PLAN  
 SECOND FLOOR



- 1 REMOVE EXISTING SURFACE MOUNTED RACEWAY AND ASSOCIATED POWER AND DATA OUTLETS. PRESERVE BRANCH CIRCUIT WIRING FOR RECONNECTION OF NEW POWER TO HOMERUN TO PANEL.
- 2 REMOVE POWER/DATA OUTLET ASSOCIATED WITH WALL TO BE DEMOLISHED. PRESERVE BRANCH CIRCUIT WIRING FOR RECONNECTION OF NEW POWER TO HOMERUN TO PANEL.
- 3 REMOVE POWER/DATA OUTLET.
- 4 COORDINATE REMOVAL OF EXISTING COMMUNICATIONS EQUIPMENT IN THIS LOCATION. VERIFY EXISTING ENCLOSURE WAS PREVIOUSLY FEDERAL PACIFIC ELECTRIC PANEL "L1A" AND ABANDON IN PLACE.
- 5 ANY DEMOLITION ASSOCIATED WITH THE NEW 480Y/277V ELECTRICAL SERVICE SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. COORDINATE TIMING WITH REMOVAL OF EXISTING HVAC UNIT AND THE INSTALLATION OF THE NEW HVAC UNIT IN THIS LOCATION.

- 1 DEMOLITION WORK RELATED TO THE NEW 480V/277V SERVICE AND RECONNECTION TO THE EXISTING 240/120V POWER DISTRIBUTION SYSTEM SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR. UNLESS NOTED OTHERWISE, ALL OTHER WORK ON THIS SHEET SHALL BE PERFORMED BY COUNTY OF EL PASO (COEP) ELECTRICIANS.
- 2 DURING DEMOLITION, TAKE CAUTION TO MINIMIZE DAMAGE TO CMU WALLS TO REMAIN. REFER TO ARCHITECTURAL PLANS.



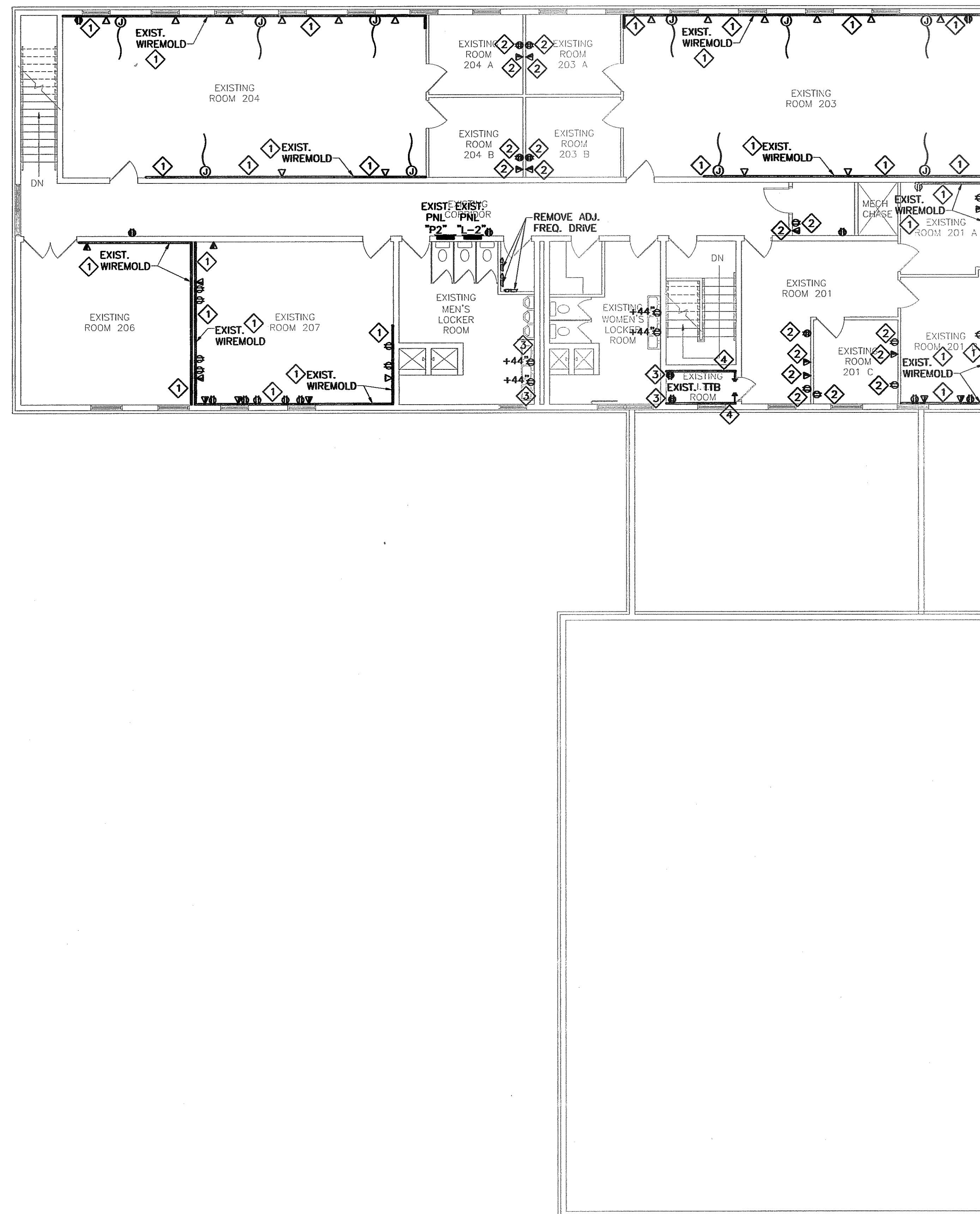
- 1 REMOVE EXISTING SURFACE MOUNTED RACEWAY AND ASSOCIATED POWER AND DATA OUTLETS. PRESERVE BRANCH CIRCUIT WIRING FOR RECONNECTION OF NEW POWER TO HOMERUN TO PANEL.
- 2 REMOVE POWER/DATA OUTLET ASSOCIATED WITH WALL TO BE DEMOLISHED. PRESERVE BRANCH CIRCUIT WIRING FOR RECONNECTION OF NEW POWER TO HOMERUN TO PANEL.
- 3 REMOVE POWER/DATA OUTLET.
- 4 COORDINATE REMOVAL OF EXISTING COMMUNICATIONS EQUIPMENT IN THIS LOCATION.

[illegible]

**SHEET:**

**E8.0**

**DEMOLITION POWER PLAN  
SECOND FLOOR**

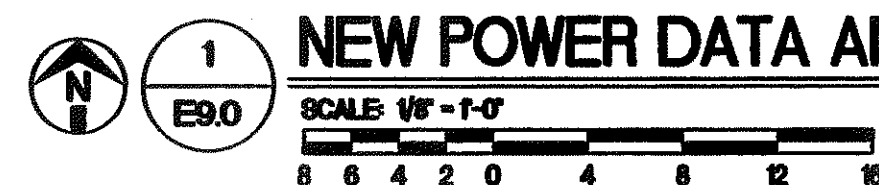


**DEMOLITION POWER PLAN - SECOND FLOOR**

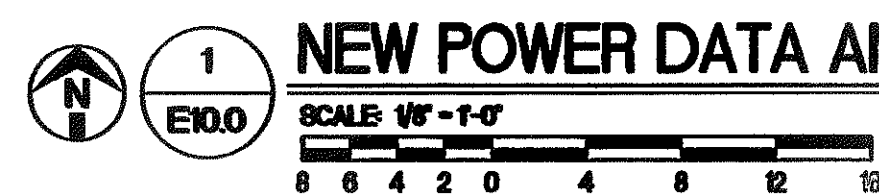
SCALE: 1/8" = 1'-0"

0 6 12 18



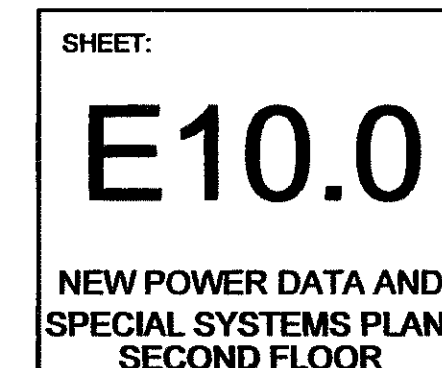


## 2013-32-REMODELING OF THE ASCARATE ANNEX FOR THE EL PASO COUNTY- 100% CONSTRUCTION DOCUMENTS FEBRUARY 17, 2014



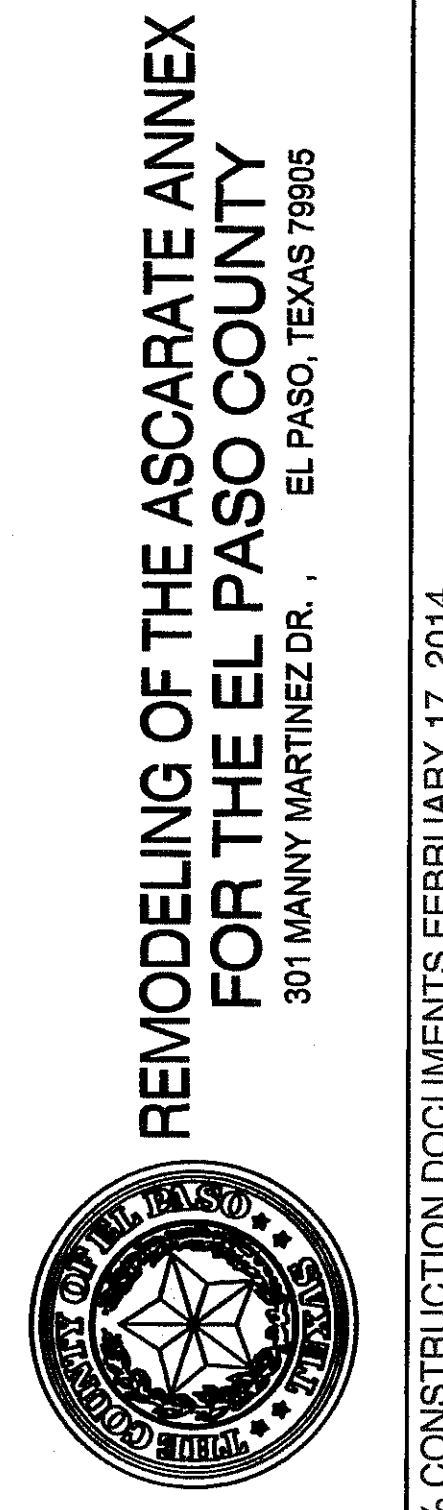
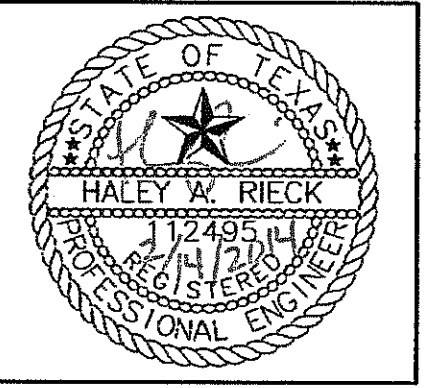
7 ENSURE THERE ARE EXISTING HVAC SERVICE RECEPTACLES WITH WEATHERPROOF COVERS FOR ROOFTOP UNITS WITHIN 50' OF EACH UNIT PER NEC REQUIREMENTS. IF THERE IS NOT, INSTALL RECEPTACLES AS REQUIRED AND CONNECT TO SPARE CIRCUIT ON PANEL P-2.

④ CIRCUIT EXHAUST FAN WITH ROOM LIGHTS.



2013-32-REMODELING OF THE ASCARATE ANNEX FOR THE EL PASO COUNTY- 100% CONSTRUCTION DOCUMENTS FEBRUARY 17, 2014



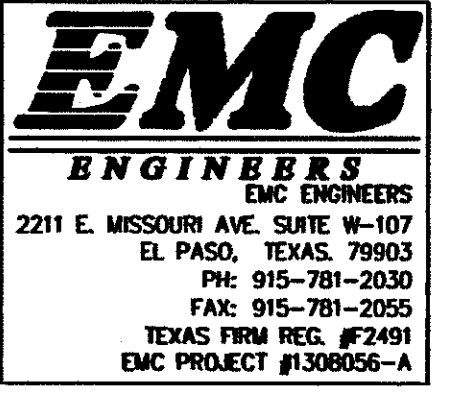
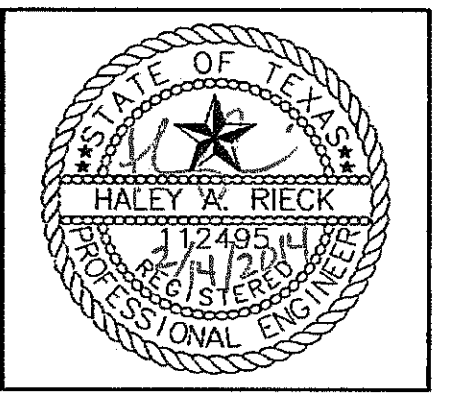


- (15) COEP ELECTRICIANS TO REPLACE INTERIOR COMPONENTS OF EXISTING FEDERAL PACIFIC ELECTRIC PANEL AND REITERMINATE ALL BRANCH CIRCUITS. REFER TO GENERAL NOTE #2 AND PANEL SCHEDULE ON SHEET E12.0 FOR FURTHER INFORMATION.
- (16) COEP ELECTRICIANS TO REUSE EXISTING CONDUCTORS TO EXISTING 240/120V PANEL AS SHOWN.
- (17) EXISTING 225A, 240/120V SINGLE PHASE PANELBOARD LOCATED IN THE HALLWAY. REFER TO PANEL SCHEDULE ON SHEET E12.0 FOR FURTHER INFORMATION.
- (18) EXISTING CONDUCTORS TO REMAIN.
- (19) REMOVE EXISTING ALUMINUM FEEDER TO EXISTING PANEL L3. REFEED PANEL WITH NEW COPPER CONDUCTORS IN NEW CONDUIT UNDERGROUND FROM ELECTRICAL ROOM: 1-1/4" CONDUIT WITH (4) #2 CU THWN AND (1) #8 CU THWN.
- (20) NEW 480 : 208Y/120V, 30KVA, 3 PHASE DRY TYPE TRANSFORMER FOR IT EQUIPMENT. THIS TRANSFORMER PROVIDES AN ISOLATED GROUND SYSTEM FOR PANEL "IT."
- (21) NEW 208Y/120V, 100A, 3 PHASE PANEL "IT." REFER TO PANEL SCHEDULES ON SHEET E12.0 FOR FURTHER INFORMATION.
- (22) 3/4" CONDUIT WITH (3) #6 CU THWN AND (1) #10 EGC.
- (23) 1-1/4" CONDUIT WITH (4) #2 CU THWN AND (1) #8 EGC.

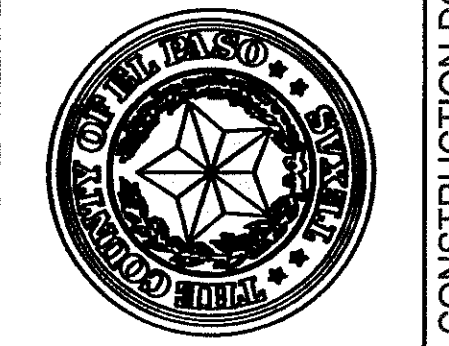




| EXISTING PANEL "L4" SCHEDULE                      |      |                  |                   |             |                     |               |           |                  |                     |  |                        |      |     |  |
|---|------|------------------|-------------------|-------------|---------------------|---------------|-----------|------------------|---------------------|--|------------------------|------|-----|--|
| LOCATION:   |      | SERVICE:         | 240/120<br>22,000 | VOLT<br>480 | 1<br>PHASE          | 225<br>AMPS   | 3<br>WIRE | 225<br>AMPS      | 10<br>MLO<br>COPPER | ENCLOSURE: NEMA 1<br>TYPE: RECESS MOUNTED<br>GROUNDING BUS: COPPER |                        |      |     |  |
| CKT<br>NO.  | TYPE | LOAD DESCRIPTION | POLE              | AMP         | VA                  | PH "A"        | PH "C"    | VA               | AMP                 | POLE   | SERVICE                | TYPE | NO. |  |
| 1   | C    | LTS. 119 KIT.    | 1                 | 20          | 800                 | 1,600         |           | 800              | 20                  | 1  | LTS. MECH. RM 108      | C    | 2   |  |
| 3   | C    | LTS. 109-111     | 1                 | 20          | 800                 |               | 1,600     | 800              | 20                  | 1  | LTS. HALL              | C    | 4   |  |
| 5   | C    | LTS. 117         | 1                 | 20          | 800                 | 1,600         |           | 800              | 20                  | 1  | LTS. 113-114           | C    | 6   |  |
| 7   | R    | RECPPTS. 117     | 1                 | 20          | 500                 |               | 1,000     | 500              | 20                  | 1  | RECPPTS. 114-113       | R    | 8   |  |
| 9   | R    | RECPPTS. 110     | 1                 | 20          | 500                 | 1,300         |           | 800              | 20                  | 2  | AC ROOF                | M    | 10  |  |
| 11  | R    | RECPPTS. 112     | 1                 | 20          | 500                 |               | 1,300     | 800              |                     |  |                        | M    | 12  |  |
| 13  | C    | LTS. 106         | 1                 | 20          | 800                 | 1,300         |           | 500              | 20                  | 1  | RECP.T. & EXT. FAN 104 | R    | 14  |  |
| 15  | C    | LTS. 105         | 1                 | 20          | 800                 |               | 1,300     | 500              | 20                  | 1  | WATER COOLER           | M    | 16  |  |
| 17  | R    | RECPPTS. HALL    | 1                 | 20          | 500                 | 750           |           | 250              | 20                  | 1  | EXT. FAN 2ND FLR.      | M    | 18  |  |
| 19  | M    | EXT. FAN LOBBY   | 1                 | 20          | 250                 |               | 500       | 250              | 20                  | 1  | EXT. FAN 2ND FLR.      | M    | 20  |  |
| 21  | M    | EXT. FAN LOBBY   | 1                 | 20          | 250                 | 750           |           | 500              | 20                  | 1  | RM 108 OUTLETS (7 EA)  | R    | 22  |  |
| 23  | M    | UNIT HEATERS     | 1                 | 20          | 800                 |               | 800       | 0                |                     |  | SPACE                  | O    | 24  |  |
| WIRING AND CONDUITS SHALL BE IN ACCORDANCE WITH   |      |                  |                   |             | CONNECTED VA        | 7,300         | 8,500     |                  |                     |  |                        |      |     |  |
| E1.0 ELECTRICAL GENERAL NOTES #36 AND #46, UNLESS |      |                  |                   |             | CONNECTED KVA       | 60.8          | 54.2      | UNBALANCE % 11.0 |                     |  |                        |      |     |  |
| NOTED OTHERWISE.                                  |      |                  |                   |             | TOTAL CONNECTED KVA | 13.8          | 60.8      | MAX AMPS / PH    |                     |  |                        |      |     |  |
| DEMAND LOADS MAY VARY FROM CONNECTED              |      |                  |                   |             | DIVERSITY AMPS      | 64.2          |           |                  |                     |  |                        |      |     |  |
| LOADS BECAUSE OF CODE DIVERSITIES                 |      |                  |                   |             | TOTAL DIVERSITY KVA | 15.4          |           |                  |                     |  |                        |      |     |  |
| TYPE OF LOAD                                      |      |                  |                   |             | VA                  | DEMAND FACTOR | DEMAND VA |                  |                     |  |                        |      |     |  |
| C CONTINUOUS                                      |      |                  |                   |             | 6400.0              | 1.25          | 8000.0    |                  |                     |  |                        |      |     |  |
| N NON-CONTINUOUS                                  |      |                  |                   |             | 0.0                 | 1.00          | 0.0       |                  |                     |  |                        |      |     |  |
| K KITCHEN   |      |                  |                   |             | 0.0                 | 0.65          | 0.0       |                  |                     |  |                        |      |     |  |
| R RECEPTACLES                                     |      |                  |                   |             | 3500.0              | 1.00          | 3500.0    |                  |                     |  |                        |      |     |  |
| O OTHER   |      |                  |                   |             | 0.0                 | 1.00          | 0.0       |                  |                     |  |                        |      |     |  |
| M MECHANICAL                                      |      |                  |                   |             | 3900.0              | 1.00          | 3900.0    |                  |                     |  |                        |      |     |  |
| TOTAL   |      |                  |                   |             | 0.0                 |               | 15400.0   |                  |                     |  |                        |      |     |  |
|   |      |                  |                   |             | 0                   |               |           |                  |                     |  |                        |      |     |  |



**MODELING OF THE ASCARATE ANNEX  
FOR THE EL PASO COUNTY**  
301 MANNY MARTINEZ DR., EL PASO, TEXAS 79905



ISSUED FOR  
CONSTRUCTION

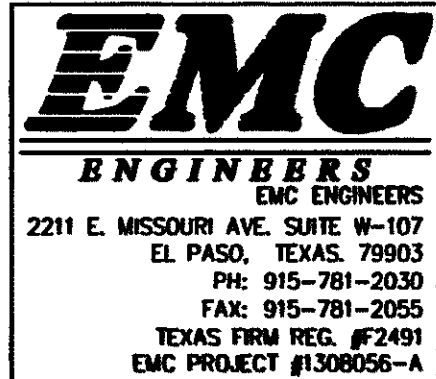
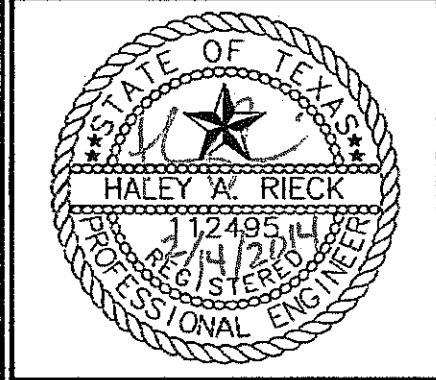
[illegible]

**SHEET:**

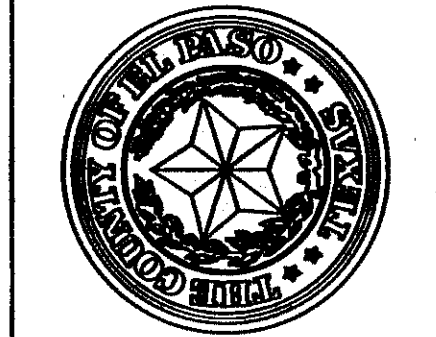
**E12.0**

**ELECTRICAL EXISTING  
PANEL SCHEDULES**





REMODELING OF THE ASCARATE ANNEX  
FOR THE EL PASO COUNTY  
301 MANNY MARTINEZ DR.,  
EL PASO, TEXAS 79905



ISSUED FOR  
CONSTRUCTION

NO. DATE: REVISION:

DATE: FEBRUARY 17, 2014

SHEET:  
**E12.1**  
NEW ELECTRICAL  
PANEL SCHEDULES

2013-32-REMODELING OF THE ASCARATE ANNEX FOR THE EL PASO COUNTY - 100% CONSTRUCTION DOCUMENTS FEBRUARY 17, 2014

| NEW PANEL "MDP" SCHEDULE  |        |                           |                                  |   |     |                      |        |                     |        |           |     |  |   |
|---|--------|---------------------------|----------------------------------|---|-----|----------------------|--------|---------------------|--------|-----------|-----|--|---|
| WIRE / CONDUIT  |        | LOCATION: ELECTRICAL ROOM |                                  | SERVICE: 480/277 VOLT<br>SIC: 14,000 AC |     | 3 PHASE<br>MAMP: 800 |        | 4 WIRE<br>MAMP: 800 |        | TYPE: MCB |     | ENCLOSURE: NEMA 1<br>TYPE: RECESS MOUNTED<br>GROUNDING BUS: COPPER |   |
| WIRE / CONDUIT  | CT NO. | TYPE                      | LOAD DESCRIPTION                 | POLE                                    | AMP | VA                   | PH "A" | PH "B"              | PH "C" | VA        | AMP | POLE   | WIRE / CONDUIT                                  |
| 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC   | 1      | N                         | FUTURE ELEVATOR                  | 3                                       | 45  | 6,173                | 6,173  | 9,173               | ---    | 3,000     | 15  | 3  | 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC |
| 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC   | 2      | N                         | ROOFTOP UNIT RTU-01              | 3                                       | 25  | 2,367                | ---    | ---                 | ---    | 2,367     | 30  | 3  | 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC |
| 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC   | 3      | N                         | ROOFTOP UNIT RTU-02              | 3                                       | 25  | 2,367                | ---    | ---                 | ---    | 2,367     | 30  | 3  | 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC |
| 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC   | 4      | N                         | ROOFTOP UNIT RTU-03              | 3                                       | 30  | 2,651                | ---    | ---                 | ---    | 2,651     | 30  | 3  | 3/4" C. WITH (3) #10 CU THIN AND (1) #10 CU EDC |
| REFER TO WIRING ON E11.0  | 5      | O                         | 30 KVA TRANSFORMER FOR IT SYSTEM | 3                                       | 45  | 7,380                | ---    | ---                 | ---    | 7,380     | 250 | 2  | 100 KVA TRANSFORMER FOR 240/120V LOADS          |
|   | 6      | O                         | SPACE                            |   |     | 6,610                | ---    | ---                 | ---    | 6,610     |     |  | SPACE   |
|   | 7      | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 8      | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 9      | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 10     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 11     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 12     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 13     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 14     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 15     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 16     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 17     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 18     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 19     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 20     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 21     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 22     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 23     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 24     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 25     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 26     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 27     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 28     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 29     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 30     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 31     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 32     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 33     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 34     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 35     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 36     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 37     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 38     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 39     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 40     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 41     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
|   | 42     | O                         | SPACE                            |   |     | ---                  | ---    | ---                 | ---    | ---       |     |  | SPACE   |
| WIRING AND CONDUITS SHALL BE IN ACCORDANCE WITH E10 ELECTRICAL GENERAL NOTES #36 AND #46, UNLESS NOTED OTHERWISE. DEMAND LOADS MAY VARY FROM CONNECTED LOADS BECAUSE OF CODE DIVERSITIES. |        |                           |                                  |   |     |                      |        |                     |        |           |     |  |   |
| TYPE OF LOAD:   |        | DESCRIPTION               |                                  | VA                                      |     | DEMAND FACTOR        |        | DEMAND VA           |        | DIVERSITY |     | UNBALANCE %  |   |
| C   |        | CONTINUOUS                |                                  | 0.0                                     |     | 1.25                 |        | 0.0                 |        | 0.0       |     | 0.0  |   |
| N   |        | NON-CONTINUOUS            |                                  | 6,172.6                                 |     | 18,517.9             |        | 1,000               |        | 6,172.6   |     | 18,517.9   |   |
| K   |        | KITCHEN                   |                                  | 0.0                                     |     | 0.0                  |        | 0.0                 |        | 0.0       |     | 0.0  |   |
| R   |        | RECEPTACLES               |                                  | 0.0                                     |     | 0.0                  |        | 0.0                 |        | 0.0       |     | 0.0  |   |
| O   |        | OTHER                     |                                  | 6,610.0                                 |     | 105,507.3            |        | 1.00                |        | 6,610.0   |     | 105,507.3  |   |
| M   |        | MECHANICAL                |                                  | 18,377.2                                |     | 55,131.5             |        | 1.00                |        | 18,377.2  |     | 55,131.5   |   |
| TOTAL   |        | TOTAL KVA                 |                                  | 31,159.8                                |     | 73,998.5             |        | 73,998.5            |        | 73,998.5  |     | 179,156.7  |   |

| REMODEL PANEL "P" SCHEDULE  |      |                                  |      |                     |                      |   |               |               |           |     |      |                              |        |
|---|------|----------------------------------|------|---------------------|----------------------|---|---------------|---------------|-----------|-----|------|------------------------------|--------|
| SERVICE: 240/120 VOLT<br>SIC: 22,000 AC   |      | 1 PHASE<br>MAMP: 400             |      | 3 WIRE<br>MAMP: 400 |                      | ENCLOSURE: NEMA 1<br>TYPE: SURFACE MOUNTED<br>GROUNDING BUS: COPPER |               |               |           |     |      |                              |        |
| LOCATION: FIRST FLOOR SERVICE ENTRANCE ROOM   |      | LOAD DESCRIPTION                 |      | LOAD DESCRIPTION    |                      | LOAD DESCRIPTION  |               |               |           |     |      |                              |        |
| CT NO.  | TYPE | SOURCE                           | POLE | AMP                 | VA                   | PH "A"  | PH "B"        | PH "C"        | VA        | AMP | POLE | SOURCE                       | CT NO. |
| 1   | 0    | MAIN FIRST FLOOR PANEL P-1       | 2    | 225                 | 11,430               | 21,500  |               |               | 10,480    | 225 | 2    | MAIN SECOND FLOOR PANEL P-2  | 1      |
| 2   | 0    | MAIN PANEL L-4, MAINTENANCE ROOM | 2    | 100                 | 11,980               | 21,610  |               |               | 9,620     | 100 | 2    | MAIN PANEL L-2, SECOND FLOOR | 2      |
| 3   | 0    |                                  |      |                     | 4,885                | 9,255   |               | 9,212         |           | 100 | 2    |                              | 3      |
| 4   | 0    | MAIN PANEL L-3, FIRST FLOOR CVM  | 2    | 100                 | 10,993               | 10,993  |               | 9,007         | 4,138     | 100 | 2    | RELABEL AS "SPARE"           | 4      |
| 5   | 0    |                                  |      |                     | 9,558                |   |               | 9,558         | 0         |     |      | RELABEL AS "SPARE"           | 5      |
| 6   | 0    | RELABEL AS "SPARE"               | 2    | 30                  | 0                    | 0   | 0             | 0             | 0         | 50  | 2    | RELABEL AS "SPARE"           | 6      |
| 7   | 0    |                                  |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | RELABEL AS "SPARE"           | 7      |
| 8   | 0    | RELABEL AS "SPARE"               | 2    | 30                  | 0                    | 0   | 0             | 0             | 0         | 30  | 2    | RELABEL AS "SPARE"           | 8      |
| 9   | 0    |                                  |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | RELABEL AS "SPARE"           | 9      |
| 10  | 0    |                                  |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | RELABEL AS "SPARE"           | 10     |
| 11  | 0    |                                  |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | RELABEL AS "SPARE"           | 11     |
| 12  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 12     |
| 13  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 13     |
| 14  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 14     |
| 15  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 15     |
| 16  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 16     |
| 17  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 17     |
| 18  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 18     |
| 19  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 19     |
| 20  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 20     |
| 21  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 21     |
| 22  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 22     |
| 23  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 23     |
| 24  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 24     |
| 25  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 25     |
| 26  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 26     |
| 27  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 27     |
| 28  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 28     |
| 29  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 29     |
| 30  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 30     |
| 31  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 31     |
| 32  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 32     |
| 33  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 33     |
| 34  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 34     |
| 35  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 35     |
| 36  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 36     |
| 37  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 37     |
| 38  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 38     |
| 39  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 39     |
| 40  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 40     |
| 41  | 0    | SPACE                            |      |                     | 0                    | 0   | 0             | 0             | 0         |     |      | SPACE                        | 41     |
| WIRING AND CONDUITS SHALL BE IN ACCORDANCE WITH 410 ELECTRICAL GENERAL NOTES #36 AND #46, UNLESS NOTED OTHERWISE. |      |                                  |      |                     | CONNECTED VA         | 43,983  | 40,175        |               |           |     |      |                              |        |
| DEMAND LOADS MAY VARY FROM CONNECTED LOADS BECAUSE OF CODE DIMENSITIES  |      |                                  |      |                     | CONNECTED AMPS       | 366.4   | 334.8         |               |           |     |      |                              |        |
|   |      |                                  |      |                     | TOTAL CONNECTED KVA  | 86.1  | 366.4         | MAX AMPS / PH |           |     |      |                              |        |
|   |      |                                  |      |                     | DIVERSITY AMPS       | 262.6   |               |               |           |     |      |                              |        |
|   |      |                                  |      |                     | TOTAL DIVERSITY KVA  | 64.1  |               |               |           |     |      |                              |        |
|   |      |                                  |      |                     | DIVERSITY KVA = 64.1 |   |               |               |           |     |      |                              |        |
| TYPE OF LOAD  |      |                                  |      |                     | VA                   |   | DEMAND FACTOR |               | DEMAND VA |     |      |                              |        |
| C CONTINUOUS  |      |                                  |      |                     | 0.0                  |   | 1.25          |               | 0.0       |     |      |                              |        |
| N NON-CONTINUOUS  |      |                                  |      |                     | 0.0                  |   | 1.00          |               | 0.0       |     |      |                              |        |
| K KITCHEN   |      |                                  |      |                     | 0.0                  |   | 0.65          |               | 0.0       |     |      |                              |        |
| R RECEPTACLES   |      |                                  |      |                     | 0.0                  |   | 1.00          |               | 0.0       |     |      |                              |        |
| O OTHER   |      |                                  |      |                     | 84137.3              |   | 1.00          |               | 84137.3   |     |      |                              |        |
| M MECHANICAL  |      |                                  |      |                     | 0.0                  |   | 1.00          |               | 0.0       |     |      |                              |        |
| TOTAL   |      |                                  |      |                     | 84137.3              |   |               |               | 84137.3   |     |      |                              |        |