GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND VERIFYING ALL EXISTING FIELD CONDITIONS PRIOR TO SUBMISSION OF HIS BID. THE CONTRACT DOCUMENTS INDICATE APPROXIMATE LOCATION OF EXISTING SWITCHGEAR, PANELS, CONDUIT, WIRING DEVICES, ETC AND ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATION AND ROUTING OF THE EXISTING SYSTEMS.
2. CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF ALL OTHER TRADES AND MAKING ANY NECESSARY MODIFICATIONS TO HIS WORK AT NO ADDITIONAL COST, INCLUDING ALL RELOCATION, SPLICING, ETC.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF ANY EXISTING MINOR INTERFERENCES, INCLUDING CONDUIT, WIRES, LIGHT FIXTURES, CONTROLS, ETC., AT NO ADDITIONAL COST.
4. ELECTRICAL CONTRACTOR SHALL REMOVE EXISTING EQUIPMENT AND MATERIALS PERTAINING TO HIS CONTRACT AS SPECIFIED OR AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT, TO PREPARE FOR THE NEW WORK.
5. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES. THESE CODES SHALL BE FOLLOWED AS MINIMUM PROVIDING HIGHER GRADES OF MATERIAL AND WORKMANSHIP WHERE REQUIRED BY THESE DOCUMENTS. PROVIDE ALL TESTS REQUIRED BY LOCAL CODES.
6. ALL PERMITS, FEES, LICENSES, APPROVALS AND OTHER ARRANGEMENTS FOR WORK SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE.
7. SUBMIT EQUIPMENT SPECIFICATIONS FOR REVIEW (AND/OR APPROVAL).
8. SUBMIT ASSEMBLED PRINTED INSTRUCTIONS FOR THE OPERATION AND MAINTENANCE OF EACH ITEM INSTALLED ALONG WITH EQUIPMENT CUTS AND CONTROL WIRING DIAGRAMS.
9. SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW. THE SHOP DRAWINGS SHALL INDICATE CONDUITS, NUMBER OF WIRES, PANELBOARD, TRANSFORMERS, DISCONNECT SWITCHES AND RELOCATED POSITION OF LIGHT FIXTURES MUST BE SUBMITTED PRIOR TO FABRICATION AND INSTALLATION.
10. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE YEAR AFTER FINAL ACCEPTANCE AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT AND WORKMANSHIP.
11. PROVIDE COMPETENT OPERATING TECHNICIAN TO INSTRUCT THE GSA PERSONNEL IN THE OPERATION AND MAINTENANCE OF THE INSTALLED EQUIPMENT.
12. CONTRACTOR SHALL SUBMIT TEST RESULTS OF SWITCHBOARD FOR APPROVAL.
13. C.T. TRIP SETTING AND SENSOR REQUIRED TO MEET BREAKER TRIP VALUE AS REQUIRED BY ELEVATOR MANUFACTURER.
14. THE DRAWING INDICATES GENERAL CHARACTER AND LOCATION OF WORK INCLUDED, BUT HAVING MINOR SPECIALTIES OMITTED WHICH ARE TO BE PROVIDED WITHOUT EXTRA COST.
15. CONTRACTOR IS RESPONSIBLE FOR COORDINATING LIGHTING AND OTHER DEVICES. LIGHTING LOCATIONS ON SHOP DRAWINGS ARE SUBJECT TO APPROVAL BY A/E.
16. PROVIDE ALL HOLES, SLEEVES AND CAULKING FOR INSTALLATION OF THIS WORK. CAULKING TO CONFORM TO FIRE RATING OF WALLS AND SLAB.
17. ALL EQUIPMENT SHALL BE CLEANED AND ADJUSTED AS REQUIRED TO OPERATE SATISFACTORILY AND WITNESSED BY GSA BUILDING PERSONNEL.
18. VERIFY EXACT LOCATION OF THERMOSTATS, SWITCHES, OUTLETS, TELEPHONE TERMINAL CABINET WITH A/E PRIOR TO INSTALLATION.
19. CONTRACTOR TO SUBMIT AS-BUILT DRAWINGS FOR SWITCHBOARD, TRANSFORMER, POWERBOARD, LIGHT FIXTURES, OUTLETS, SWITCHES, FIRE ALARM ANNUNCIATOR PANEL, TELEPHONE TERMINAL CABINET, CONDUITS FOR APPROVAL BY THE A/E.
20. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
21. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
22. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
23. ALL WORK INSTALLED WITHIN THE CEILING PLENUM SHALL BE PERFORMED IN ACCORDANCE WITH WIRING METHOD REQUIREMENTS FOR AIR HANDLING CEILING SPACES.
24. THE CONTRACTOR SHALL NOTIFY THE A/E OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
25. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
26. THE CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING, POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION.
27. THE EXISTING BUILDING POWER, SIGNAL AND COMMUNICATION SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE GSA'S FUNCTION. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE CO. AND SHALL BE ONLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN.
28. ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
29. ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE A/E.
30. FOLLOW EXISTING BUILDING STANDARDS FOR MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT.
31. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
    - A. ALL NEW RECEPTACLES SHALL BE PROVIDED AS INDICATED ON PLANS AS NEMA 5-20R COMMERCIAL GRADE UNLESS INDICATED OTHERWISE.
    - B. ALL NEW SWITCHES SHALL BE PROVIDED AS INDICATED ON PLANS AS 277 VOLT SINGLE POLE 20 AMPERE TOGGLE COMMERCIAL GRADE UNLESS INDICATED OTHERWISE.
32. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE INSTALLATIONS AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS.
33. PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL LIGHTING/POWER/TELEPHONE/SIGNAL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED SYSTEMS.
34. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR ALL WALL OUTLETS & TELEPHONE OUTLETS RUNNING IN PARTITIONS, BELOW RAISED FLOOR OR ABOVE CEILINGS. EMT FITTINGS SHALL BE OF THE STEEL COMPRESSION TYPE, EXCEPT THAT SET SCREW FITTINGS MAY BE USED IN WALL PARTITIONS. CONDUITS LARGER THAN 2" DIAMETER (OR CONDUITS OF ANY SIZE ROUTED OUTDOORS) SHALL BE INTERMEDIATE METAL CONDUIT (IMC).
35. MINIMUM CONDUIT SIZE SHALL BE 1/2" FOR THREE CONDUCTOR BRANCH CIRCUITS, SWITCH LEGS, ETC. AND 3/4" FOR FOUR CONDUCTOR BRANCH CIRCUITS OR GREATER IN ACCORDANCE WITH CONDUIT FILL REQUIREMENTS OF THE ELECTRICAL CODE.
36. FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 3/8 INCH MINIMUM IN PLENUM CEILINGS.
37. CORDINATE FINAL LOCATIONS OF ELEVATORS MOTORS WITH ELEVATOR CONTRACTOR FINAL CONNECTIONS TO MOTORS SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE STEEL CONDUIT. 1/2 INCH MINIMUM.
    - A. CONTRACTOR SHALL WIRE TO, SET AND CONNECT ALL MOTORS, CONTROLS AND EQUIPMENT.
    - B. PROVIDE LOCAL DISCONNECT SWITCHES FOR ALL MOTORS (PLENUM APPROVED WHERE REQUIRED).
38. WIRE NO. 8 AND SMALLER FOR USE IN INTERIOR DRY LOCATIONS SHALL BE TYPE THWN THERMOPLASTIC 600 VOLT INSULATED COPPER CONDUCTORS. FEEDERS AND POWER WIRING NO. 6 OR LARGER SHALL BE TYPE THW 600 VOLT INSULATED COPPER. NO WIRE SMALLER THAN NO. 12 AWG SHALL BE USED FOR LIGHTING OR POWER WIRING. WIRE NO. 12 MAY BE SOLID OR STRANDED, WIRE NO. 10 AND LARGER SHALL BE STRANDED.
39. ALL NEW CIRCUIT BREAKERS FOR EXISTING PANELBOARDS SHALL MATCH EXISTING BUILDING PANELBOARD MANUFACTURER AND BREAKER TYPE. ALL NEW PANELBOARDS SHALL BE SIMILAR TO EXISTING WITHSTAND RATINGS TO MATCH AND WITHSTAND AVAILABLE SHORT CIRCUIT. IF SERIES RATED DEVICES ARE USED, THESE DEVICES MUST BE LISTED. THE CONTRACTOR SHALL PROVIDE NEW TYPE WRITTEN PANEL DIRECTORIES FOR ALL PANELS CHANGED OR ADDED.
40. EQUIP ALL EXISTING LIGHTING FIXTURES WITH NEW LAMPS AT THE COMPLETION OF CONSTRUCTION.
41. EACH SWITCH, LIGHT, RECEPTACLE OR OTHER MISCELLANEOUS DEVICE SHALL BE PROVIDED WITH A GALVANIZED OR SHERARDIZED PRESSED STEEL OUTLET BOX OF THE KNOCKOUT TYPE, OF NOT LESS THAN NO. 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS MUST BE LEFT SEALED. THERE MUST BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE INSTALLED WHERE REQUIRED. BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED. PROVIDE SEALED BOXES IN PLENUM CEILINGS. STAGGER OUTLET BOXES FOR WIRING DEVICES LOCATED BOTH SIDES OF A COMMON PARTITION TO PREVENT SOUND TRANSMISSION.
42. IN SUSPENDED CEILINGS SUPPORT CONDUIT AND JUNCTION BOXES DIRECT FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
43. NUMBERED CIRCUITS ARE CREATED FOR THE CONVENIENCE OF DESIGN ONLY. DESIGN INTENT MUST BE FOLLOWED THROUGHOUT, INDICATE THE CIRCUIT NUMBERS USED ON THE "AS-BUILT" DRAWINGS. EMERGENCY PANEL CIRCUIT NUMBERS MAY VARY. ACTUAL FIELD CONDITIONS SHALL BE VERIFIED.
44. BRANCH CIRCUIT WIRING:
    - A. GENERAL PURPOSE BRANCH CIRCUIT HOMERUNS CONSISTING OF TWO NETWORKS SHALL HAVE PHASE, NEUTRAL AND GROUND CONDUCTORS INCREASED TO •10 MINIMUM. WHERE HOMERUN EXCEEDS 100 LINEAR FEET, CONDUCTOR SIZE SHALL BE INCREASED ONE WIRE GAUGE.
45. EXISTING/NEW MECHANICAL EQUIPMENT
    - A. PROVIDE NEW WIRING, RACEWAYS AND DISCONNECTS WHERE REQUIRED TO MATCH EXISTING. UTILIZE EXISTING CIRCUITS MADE AVAILABLE IN BASE BUILDING PANELS.
    - B. RE-USE USER LOCAL DISCONNECT SWITCHES WHERE THEY MATCH DESIGN INTENT. PROVIDE NEW TO MATCH EXISTING IN LOCATIONS INDICATED ON PLAN.
    - C. PROVIDE NAMEPLATE ON EACH SWITCH TO READ "BUILDING SERVICES DO NOT OPERATE".
46. CONDUIT SYSTEM FOR TELEPHONE OUTLETS SHALL INCLUDE (SINGLE GANG FLUSH WALL OPENING) OR (DOUBLE GANG FLUSH WALL OPENING) WITH 3/4" CONDUIT INTO CEILING SPACE (WITHIN CEILING SPACE PROVIDE RACEWAY SYSTEM OF CONDUITS UTILIZING WIDE RADIUS BENDS AND OVERSIZED JUNCTION BOXES FOR GROUPING CONDUITS AS FOLLOWS):

    (FOR 3 PR OR 4 PR CABLES)

    A. 1 TO 4 CABLES IN 3/4" CONDUIT
    UP TO 8 CABLES IN 1" CONDUIT
    UP TO 16 CABLES IN 1-1/4" CONDUIT
    UP TO 24 CABLES IN 1-1/2" CONDUIT

    OR

    (FOR (2) 3PR OR 4PR CABLES)

    B. 1 TO 3 DEVICES IN 3/4" CONDUIT
    UP TO 5 DEVICES IN 1" CONDUIT
    UP TO 9 DEVICES IN 1-1/4" INCH CONDUIT
    UP TO 13 DEVICES IN 1-1/2" CONDUIT

    OR

    (FOR 6PR CABLES)

    C. 1 TO 4 CABLES IN 3/4" CONDUIT
    UP TO 7 CABLES IN 1" CONDUIT
    UP TO 12 CABLES IN 1-1/4" CONDUIT
    UP TO 20 CABLES IN 1-1/2" CONDUIT
47. ALTERATIONS AND DEMOLITION
    - A. CONFER WITH THE MANUFACTURERS OF EXISTING EQUIPMENT THAT IS TO BE REVISED OR EXTENDED, AND INCLUDE ALL WORK NECESSARY FOR THE PROPER COMPLETION OF SAME.
    - B. A COMPLETE AND ACCURATE DESCRIPTION OF ALL ELECTRICAL WORK WITHIN THE AFFECTED AREAS CANNOT BE ACCOMPLISHED THROUGH THE MEDIA OF DRAWINGS AND SPECIFICATIONS. IN EVERY CASE WHERE SUCH EXISTING ELECTRICAL WORK PREVENTS PROPER CONSTRUCTION OF NEW WORK AS INDICATED, PERFORM WHATEVER WORK AND PROVIDE WHATEVER MATERIALS ARE REQUIRED IN ORDER TO REMOVE, REROUTE, RELOCATE OR IN OTHER WAYS ALTER THAT EXISTING WORK, SUCH PERFORMANCE AS GENERALLY OUTLINED HEREIN AND AS IS FOUND NECESSARY UNDER FIELD CONDITIONS SHALL BE CONSIDERED AS INCLUDED UNDER THE CONTRACT.
    - C. THE ELECTRICAL DRAWINGS ARE GENERALLY INSTRUCTIVE OF THE ALTERATIONS WHICH INVOLVE THE EXISTING ELECTRICAL WORK. IT IS NOT INTENDED THAT SUCH ALTERATIONS BE LIMITED TO THESE INSTRUCTIONS.
    - D. WHERE EXISTING ELECTRICAL WORK MUST BE REMOVED AS A RESULT OF THE ALTERATIONS, IT SHALL BE COMPLETELY REMOVED, BACK TO THE FIRST OUTLET WHICH IS LEFT UNAFFECTED BY THE REVISION. ALL CONDUIT, WIRE, SUPPORTS, HANGERS, ETC. ARE INCLUDED UNDER THIS REQUIREMENT. CONDUIT WHICH IS BURIED IN CONCRETE OR OTHERWISE INACCESSIBLY POSITIONED MAY BE ABANDONED. IN SUCH CASES, ALL WIRE SHALL BE PULLED OUT OF CONDUIT AND THE CONDUIT ITSELF PLUGGED AT EACH END.
    - E. EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, INCLUDING LIGHTING FIXTURES, SWITCHES, RECEPTACLES, SIGNAL LIGHTS, SPEAKERS, INTERCOM EQUIPMENT, CONTROLS, CONDUIT OUTLETS, FITTINGS, WIRE, CABLE AND OTHER DEVICES WHICH ARE REMOVED AS A RESULT OF THE ALTERATIONS SHALL REMAIN THE PROPERTY OF THE "GSA" AND SHALL BE STORED ON THE SITE AS DIRECTED.
    - F. EXISTING ELECTRICAL MATERIALS AND EQUIPMENT, WITH THE EXCEPTION OF WIRE AND CABLE. AS GENERALLY OUTLINED IN THE PREVIOUS PARAGRAPH, SHALL BE RE-USED AS COMPLETELY AS IS FOUND PRACTICAL, EXAMINE THE CONDITION OF SUCH MATERIALS AND EQUIPMENT AND MAKE A PRIOR DETERMINATION OF WHETHER IT IS SUITABLE FOR RE-USE. PRESENT FINDINGS PERIODICALLY TO THE A/E WHO IN TURN WILL MAKE THE FINAL DECISION REGARDING RE-USABILITY. ALL WIRE AND CABLE SHALL BE NEW.
    - G. VARIOUS SIGNAL, COMMUNICATIONS AND OTHER SERVICES SHALL REMAIN IN SERVICE TO PROVIDE CONTINUOUS OPERATION FOR THE "GSA" FUNCTIONS. NO INTERRUPTIONS OF ANY SERVICES WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE CO.
48. REPLACE EXISTING DISCONNECT SWITCH FOR ELEVATOR 34 WITH A FUSED LOCKABLE DISCONNECT SWITCH OF SAME RATING. RECONNECT EXISTING WIRING.
49. BREAKERS FOR ELEVATOR PANELBOARD SUPPLYING POWER TO ELEVATOR CONTROLLERS, LIGHTS, SIGNALS, AND FAN FOR THE ELEVATOR CAR (EXISTING OR NEW) SHALL BE LOCKABLE IN THE OPEN POSITION.
50. MAIN LINE DISCONNECT SWITCHES FOR EACH ELEVATOR IN THE ELEVATOR MACHINE ROOM SHALL BE FUSED AND LOCKABLE IN THE 'OPEN' POSITION.
51. PROVIDE DUPLEX GROUND FAULT INTERRUPTER TYPE WORK RECEPTACLES IN EACH ELEVATOR PIT. EXISTING PIT LIGHT BULBS MUST BE EXTERNALLY GUARDED TO PREVENT CONTACT OR ACCIDENTAL DAMAGE. PROVIDE NECESSARY GUARD FOR EACH PIT LIGHT.
52. COORDINATE LOCATION OF NEW DUCTS AS SHOWN ON MECHANICAL PLANS. RELOCATE ELECTRICAL DEVICES AS REQUIRED WITHOUT ANY ADDITIONAL COST TO THE GSA.
53. CONTRACTOR TO HIRE AN INDEPENDENT TESTING AGENCY TO TEST ELEVATOR SWITCHBOARDS AND REPLACE CIRCUIT BREAKERS REQUIRING REPAIR. PROVIDE UNIT PRICE FOR ADJUSTMENT. ALL EXISTING SWITCHBOARDS AS SHOWN ON PLAN ARE TO BE RETAINED. BREAKERS AT ELEVATOR SWITCHBOARD ARE GENERALLY ALLIS CHALMERS TYPE LA-600F. CONTRACTOR TO VERIFY.
54. VERIFY LOCATION OF EXISTING TELEPHONE CABINETS AND CONNECT ELEVATOR CONTROLLERS AS REQUIRED BY ELEVATOR MANUFACTURER.
55. COORDINATE AND VERIFY REQUIREMENTS WITH ELEVATOR MANUFACTURER PRIOR TO ROUGH IN WORK. OBTAIN REQUIREMENT OF ALL ELECTRICAL CHARACTERISTICS INCLUDING TRIP SETTING, CONTROLS, VOLTAGE, FULL LOAD AMPS, ETC. ADJUST/PROVIDE BREAKER TRIP AS REQUIRED.
56. PROVIDE STARTERS TO MATCH EXISTING FOR NEW MECHANICAL EQUIPMENT AS SHOWN ON PLAN. VERIFY SPACE AVAILABILITY AND CONFER WITH EXISTING MANUFACTURER OF NEW REQUIREMENTS. EXISTING MOTOR CONTROL CENTERS ARE FROM SQUARE D.
57. PROVIDE CIRCUIT BREAKERS OF RATING AS SHOWN ON PLAN TO CONNECT NEW AC UNIT AND CONDENSATE PUMPS. VERIFY SPACE AVAILABILITY AND CONFER WITH EXISTING MANUFACTURER OF NEW REQUIREMENTS.
58. RETAIN ALL EXISTING LIGHTING RECEPTACLES AND LOW CURRENT SERVICES IN MACHINE ROOM UNLESS ASKED OTHERWISE.
59. RELAMP ALL EXISTING FLUORESCENT FIXTURE IN MACHINE ROOM.
60. ALL CONDUIT WORK SHALL BE EXPOSED. COORDINATE RUN WITH EXISTING AND NEW SERVICES. 480V SHALL BE IN STEEL CONDUIT, 208 VOLT SHALL BE IN EMT CONDUIT.
61. PROVIDE NEW PULL/SPLICE BOX WHEN REQUIRED.
62. POWER ONE LINE DIAGRAM AS SHOWN ARE DIAGRAMMATIC AND MEANT TO SHOW EXISTING ARRANGEMENT. CONTRACTOR TO VERIFY THE ARRANGEMENT AND NOTIFY A/E OF ANY DISCREPANCY. EQUIPMENTS AS SHOWN FOR ELEVATOR CONTROL 1-LINE ARE NEW UNLESS NOTED OTHERWISE
63. COORDINATE LOCATION OF ELEVATOR DISCONNECT SWITCHES AT SITE. MOUNT ON ANGLE IRON WHERE REQUIRED.
64. ALL STARTERS SHALL MATCH EXISTING COMPLETE IN ALL RESPECT.
65. VERIFY LUGS OF DISCONNECT SWITCHES TO ACCOMMODATE WIRE SIZE.
66. VERIFY CAPACITY OF ALL DRY TYPE TRANSFORMERS AND ELEVATOR PANEL USED FOR ELEVATOR CONTROLS.
68. RETAIN ALL EXISTING ATS
69. RETAIN ALL FIRE ALARM ANNUCIATOR PANEL

LEGEND

MOTOR NUMBER WITHIN CIRCLE INDICATES HORSEPOWER

NON FUSED DISCONNECT SWITCH

200/130 LOCKABLE FUSED DISCONNECT SWITCH
200 - INDICATES RATING OF FUSE SWITCH
130 - INDICATES FUSE SIZE

FLEXIBLE CONDUIT CONNECTION

CC CONTROLLER (FURNISHED BY OTHERS)

MD MOTOR DRIVE (FURNISHED BY OTHERS)

RR REACTOR (FURNISHED BY OTHERS)

GP GROUP PROCESSOR (FURNISHED BY OTHERS)

▼ TELEPHONE OUTLET (EXISTING)

DRY TYPE TRANSFORMER

P POLE

CIRCUIT BREAKER

DRAW OUT CIRCUIT BREAKER.(EXISTING)

(XX) FEEDER SIZE. REFER TO FEEDER SCHEDULE

F FIRE ALARM BELL (EXISTING)

F FIRE ALARM PULLSTATION (EXISTING)

FIRE ALARM ANNUCIATOR PANEL (EXISTING TO BE RETAINED)

ATS AUTOMATIC TRANSFER SWITCH (EXISTING TO BE RETAINED)

JUNCTION BOX

LIQUID TIGHT FLEXIBLE CONDUIT

MOTOR STATER COMBINATION

AUTOMATIC TRANSFER SWITCH, EXISTING TO BE RETAINED

ABBREVIATIONS

GSA GENERAL SERVICES ADMINISTRATIONS
CO CONTRACTING OFFICER
COR CONTRACTING OFFICER REPESENTATIVE
A/E ARCHITECT ENGINEER

NATIONAL CODE FEEDER SCHEDULE

(CONDUCTOR SIZES IN AWG/KCMIL) 4/20/90

FEEDER NO.	AMP	CONDUCTOR (CU) THW 75°C	CONDUIT SIZE
1A	30	3 # 10	3/4"
2A	40	3 # 8	3/4"
3A	55	3 # 6	1"
4A	70	3 # 4	1"
5A	85	3 # 3	1-1/4"
6A	95	3 # 2	1-1/4"
7A	130	3 # 1	1-1/4"
8A	150	3 # 1/0	1-1/2"
9A	175	3 # 2/0	1-1/2"
10A	200	3 # 3/0	2"
11A	230	3 # 4/0	2"
12A	255	3 #250	2-1/2"
13A	310	3 #350	2-1/2"
14A	335	3 #400	3"
15A	350	2 SETS 3 #2/0	1-1/2" EACH
16A	380	3 # 500	3"
17A	460	2 SETS 3 #4/0	2" EACH
18A	510	2 SETS 3 #250	2-1/2" EACH
19A	620	2 SETS 3 #350	2-1/2" EACH
20A	670	2 SETS 3 #400	3" EACH
21A	690	3 SETS 3 #4/0	2" EACH
22A	760	2 SETS 3 #500	3" EACH
23A	1005	3 SETS 3 #400	3" EACH
24A	1020	4 SETS 3 #250	2-1/2" EACH
25A	1140	3 SETS 3 #500	3" EACH
26A	1240	4 SETS 3 #350	2-1/2" EACH
27A	1340	4 SETS 3 #400	3" EACH
28A	1550	5 SETS 3 #350	2-1/2" EACH
29A	1675	5 SETS 3 #400	3" EACH
30A	1860	6 SETS 3 #350	2-1/2" EACH
31A	1900	5 SETS 3 #500	3" EACH
32A	2010	6 SETS 3 #400	3" EACH
33A	2170	7 SETS 3 #350	2-1/2" EACH
34A	2280	6 SETS 3 #500	3" EACH
35A	2660	7 SETS 3 #500	3" EACH
36A	3040	8 SETS 3 #500	3" EACH
37A	3420	9 SETS 3 #500	3" EACH
38A	3800	10 SETS 3 #500	3" EACH
39A	4180	11 SETS 3 #500	3" EACH
40A	4560	12 SETS 4 #500	3" EACH

FEEDER NO.	AMP RESISTIVE LOADS P.F.=1.0	AMP NON-SIN. LOADS	CONDUCTOR (CU) THW 75°C	CONDUIT SIZE
1B	30	24	4 # 10	3/4"
2B	40	32	4 # 8	1"
3B	55	44	4 # 6	1"
4B	70	56	4 # 4	1-1/4"
5B	85	68	4 # 3	1-1/4"
6B	95	76	4 # 2	1-1/4"
7B	130	104	4 # 1	1-1/2"
8B	150	120	4 # 1/0	2"
9B	175	140	4 # 2/0	2"
10B	200	160	4 # 3/0	2"
11B	230	184	4 # 4/0	2-1/2"
12B	255	204	4 #250	2-1/2"
13B	310	248	4 #350	3"
14B	335	268	4 #400	3"
15B	350	280	2 SETS 4 #2/0	2" EACH
16B	380	304	4 # 500	3-1/2"
17B	460	368	2 SETS 4 #4/0	2-1/2" EACH
18B	510	408	2 SETS 4 #250	2-1/2" EACH
19B	620	496	2 SETS 4 #350	3" EACH
20B	670	536	2 SETS 4 #400	3" EACH
21B	690	552	3 SETS 4 #4/0	2-1/2" EACH
22B	760	608	2 SETS 4 #500	3-1/2" EACH
23B	1005	804	3 SETS 4 #400	3" EACH
24B	1020	816	4 SETS 4 #250	2-1/2" EACH
25B	1140	912	3 SETS 4 #500	3-1/2" EACH
26B	1240	992	4 SETS 4 #350	3" EACH
27B	1340	1072	4 SETS 4 #400	3" EACH
28B	1550	1240	5 SETS 4 #350	3" EACH
29B	1675	1340	5 SETS 4 #400	3" EACH
30B	1860	1488	6 SETS 4 #350	3" EACH
31B	1900	1520	5 SETS 4 #500	3-1/2" EACH
32B	2010	1608	6 SETS 4 #400	3" EACH
33B	2170	1736	7 SETS 4 #350	3" EACH
34B	2280	1824	6 SETS 4 #500	3-1/2" EACH
35B	2660	2128	7 SETS 4 #500	3-1/2" EACH
36B	3040	2432	8 SETS 4 #500	3-1/2" EACH
37B	3420	2736	9 SETS 4 #500	3-1/2" EACH
38B	3800	3040	10 SETS 4 #500	3-1/2" EACH
39B	4180	3344	11 SETS 4 #500	3-1/2" EACH
40B	4560	3648	12 SETS 4 #500	3-1/2" EACH

FEEDER NO.	AMP RESISTIVE LOADS P.F.=1.0	AMP NON-SIN. LOADS	CONDUCTOR (CU) THW 75°C	CONDUIT SIZE
1C	30	24	4 # 10 & 1 # 10 GRD.	3/4"
2C	40	32	4 # 8 & 1 # 10 GRD.	1"
3C	55	44	4 # 6 & 1 # 10 GRD.	1-1/4"
4C	70	56	4 # 4 & 1 # 8 GRD.	1-1/4"
5C	85	68	4 # 3 & 1 # 8 GRD.	1-1/4"
6C	95	76	4 # 2 & 1 # 8 GRD.	1-1/2"
7C	130	104	4 # 1 & 1 # 6 GRD.	2"
8C	150	120	4 # 1/0 & 1 # 6 GRD.	2"
9C	175	140	4 # 2/0 & 1 # 6 GRD.	2"
10C	200	160	4 # 3/0 & 1 # 6 GRD.	2-1/2"
11C	230	184	4 # 4/0 & 1 # 4 GRD.	2-1/2"
12C	255	204	4 #250 & 1 # 4 GRD.	3"
13C	310	248	4 #350 & 1 # 4 GRD.	3"
14C	335	268	4 #400 & 1 # 3 GRD.	3"
15C	350	280	2 SETS 4 #2/0 & 1 # 3 GRD.	2" EACH
16C	380	304	4 # 500 & 1 # 3 GRD.	3-1/2"
17C	460	368	2 SETS 4 #4/0 & 1 # 2 GRD.	2-1/2" EACH
18C	510	408	2 SETS 4 #250 & 1 # 2 GRD.	3" EACH
19C	620	496	2 SETS 4 #350 & 1 # 1 GRD.	3" EACH
20C	670	536	2 SETS 4 #400 & 1 # 1/0 GRD.	3-1/2" EACH
21C	690	552	3 SETS 4 #4/0 & 1 # 1/0 GRD.	2-1/2" EACH
22C	760	608	2 SETS 4 #500 & 1 # 1/0 GRD.	3-1/2" EACH
23C	1005	804	3 SETS 4 #400 & 1 # 2/0 GRD.	3-1/2" EACH
24C	1020	816	4 SETS 4 #250 & 1 # 2/0 GRD.	3" EACH
25C	1140	912	3 SETS 4 #500 & 1 # 3/0 GRD.	3-1/2" EACH
26C	1240	992	4 SETS 4 #350 & 1 # 3/0 GRD.	3" EACH
27C	1340	1072	4 SETS 4 #400 & 1 # 4/0 GRD.	3-1/2" EACH
28C	1550	1240	5 SETS 4 #350 & 1 # 4/0 GRD.	3" EACH
29C	1675	1340	5 SETS 4 #400 & 1 # 4/0 GRD.	3-1/2" EACH
30C	1860	1488	6 SETS 4 #350 & 1 # 250 GRD.	3-1/2" EACH
31C	1900	1520	5 SETS 4 #500 & 1 # 250 GRD.	3-1/2" EACH
32C	2010	1608	6 SETS 4 #400 & 1 # 250 GRD.	3-1/2" EACH
33C	2170	1736	7 SETS 4 #350 & 1 # 250 GRD.	3-1/2" EACH
34C	2280	1824	6 SETS 4 #500 & 1 # 350 GRD.	3-1/2" EACH
35C	2660	2128	7 SETS 4 #500 & 1 # 350 GRD.	3-1/2" EACH
36C	3040	2432	8 SETS 4 #500 & 1 # 400 GRD.	4" EACH
37C	3420	2736	9 SETS 4 #500 & 1 # 500 GRD.	4" EACH
38C	3800	3040	10 SETS 4 #500 & 1 # 500 GRD.	4" EACH
39C	4180	3344	11 SETS 4 #500 & 1 # 500 GRD.	4" EACH
40C	4560	3648	12 SETS 4 #500 & 1 # 700 GRD.	4" EACH

FEEDER NO.	AMP RESISTIVE LOADS P.F.=1.0	AMP NON-SIN. LOADS	CONDUCTOR (CU) THW 75°C	CONDUIT SIZE
1D	30	24	3 # 10 & 1 # 10 GRD.	3/4"
2D	40	32	3 # 8 & 1 # 10 GRD.	3/4"
3D	55	44	3 # 6 & 1 # 10 GRD.	1"
4D	70	56	3 # 4 & 1 # 8 GRD.	1-1/4"
5D	85	68	3 # 3 & 1 # 8 GRD.	1-1/4"
6D	95	76	3 # 2 & 1 # 8 GRD.	1-1/4"
7D	130	104	3 # 1 & 1 # 6 GRD.	1-1/2"
8D	150	120	3 # 1/0 & 1 # 6 GRD.	1-1/2"
9D	175	140	3 # 2/0 & 1 # 6 GRD.	2"
10D	200	160	3 # 3/0 & 1 # 6 GRD.	2"
11D	230	184	3 # 4/0 & 1 # 4 GRD.	2"
12D	255	204	3 # 250 & 1 # 4 GRD.	2-1/2"
13D	310	248	3 ##350 & 1 # 4 GRD.	3"
14D	335	268	3 #400 & 1 # 3 GRD.	3"
15D	350	280	2 SETS 3 #2/0 & 1 # 3 GRD.	2" EACH
16D	380	304	3 # 500 & 1 # 3 GRD.	3"
17D	460	368	2 SETS 3 #4/0 & 1 # 2 GRD.	2" EACH
18D	510	408	2 SETS 3 #250 & 1 # 2 GRD.	2-1/2" EACH
19D	620	496	2 SETS 3 #350 & 1 # 1 GRD.	3" EACH
20D	670	536	2 SETS 3 #400 & 1 #1/0 GRD.	3" EACH
21D	690	552	3 SETS 3 #4/0 & 1 # 1/0 GRD.	2-1/2" EACH
22D	760	608	2 SETS 3 #500 & 1 # 1/0 GRD.	3" EACH
23D	1005	804	3 SETS 3 #400 & 1 #2/0 GRD.	3" EACH
24D	1020	816	4 SETS 3 #250 & 1 # 2/0 GRD.	2-1/2" EACH
25D	1140	912	3 SETS 3 #500 & 1 # 3/0 GRD.	3" EACH
26D	1240	992	4 SETS 3 #350 & 1 # 3/0 GRD.	3" EACH
27D	1340	1072	4 SETS 3 #400 & 1 # 4/0 GRD.	3" EACH
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40D	4560	3648	12 SETS 3 #500 & 1 # 700 GRD.	3-1/2" EACH

* INDICATES CONDUITS ENCASED IN 3" CONCRETE ENVELOPE.

/ESD1/USR2/ESD/NTLELEC.DGN

NO.	REVISION	DATE
	FINAL	2/23/96

ENVIRONMENTAL SYSTEMS DESIGN
ESD CONSULTING ENGINEERS MECHANICAL - ELECTRICAL
55 EAST MONROE ST.-SUITE 1660
CHICAGO, ILLINOIS 60603
(312) 372-1200

J.MARTIN ASSOCIATES

GENERAL SERVICES ADMINISTRATION
PUBLIC BUILDING SERVICE
CHICAGO IL

BUILDING NAME	E. M. DIRKSEN (EMD) BUILDING
ADDRESS	219 S. DEARBORN ST, CHICAGO, IL
NUMBER	
PROJECT DESCRIPTION	ELEVATOR IMPROVEMENT FOR EMD BLDG
NUMBER	IIL94004
DRAWN BY	RC — CKD BY JS/MA — DATE 2/23/96
TITLE	SPECIFICATIONS & SYMBOLS
TYPE	ELECTRICAL
NUMBER	9 / E / 1

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