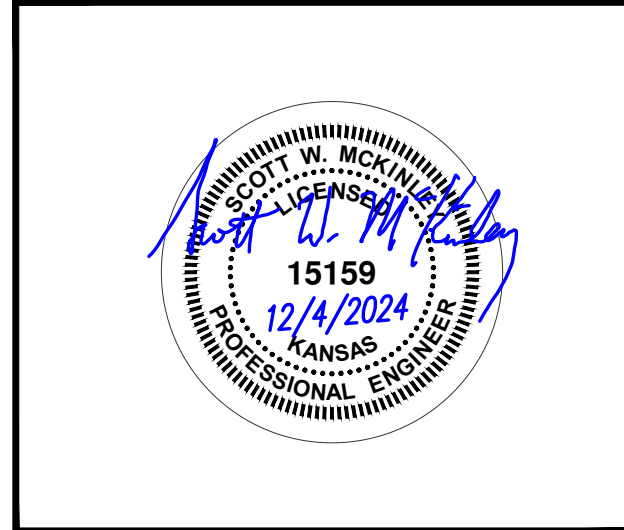


TOPEKA METRO

**REQUEST FOR BIDS
Electric Van Charging Infrastructure and Installation
TO-25-06**

**Appendix III
Engineering Plans**



TOPEKA METROPOLITAN TRANSIT AUTHORITY
VEHICLE CHARGERS
201 N KANSAS AVE
TOPEKA, KS 66603

16000 - ELECTRICAL SPECIFICATIONS

SECTION 16000 - ELECTRICAL REQUIREMENTS

GENERAL REQUIREMENTS

- ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING CODE, NATIONAL ELECTRICAL CODE, NFPA, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL OTHER APPLICABLE CODES.
- ALL MATERIALS & EQUIPMENT SHALL BE NEW & SHALL BEAR U.L. LABEL WHERE APPLICABLE. PROVIDE WATERPROOF EQUIPMENT ENCLOSURES WHERE REQUIRED.
- OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO ELECTRICAL CONNECTIONS TO BUILDING AS REQUIRED.
- CONTRACTOR SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED TO HAVE COMPLETE FUNCTIONING ELECTRICAL LIGHTING & POWER SYSTEMS TOGETHER W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS SHOWN ON PLANS.
- WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE PROVIDED AS THOUGH FULLY SHOWN & SPECIFIED.
- CONTRACTOR SHALL VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART.
- FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED & INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.
- WARRANT TO OWNER QUALITY OF MATERIALS, EQUIPMENT, WORKMANSHIP & OPERATION OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.
- ALL MATERIALS INSTALLED IN FLEUMS SHALL BE NONCOMBUSTIBLE OR HAVE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84.

SECTION 16100 - CONDUIT & CONDUCTORS

- FOLLOW CIRCUITING SHOWN ON PLANS. USE NO CONDUIT SMALLER THAN 1/2" & NO CONDUCTORS SMALLER THAN #12 GA. UNLESS NOTED OTHERWISE.
- WIRE SHALL BE IN NON-FLEXIBLE METALLIC CONDUIT (EMT, IMC OR RMC) FOR ALL CIRCUITS AND FEEDERS GREATER THAN 30A, LIGHT SWITCH RISERS, KITCHEN CIRCUITS & HOME RUNS.
- CONDUIT INSTALLED BELOW GRADE SHALL BE SCHEDULE 80 PVC HEAVY WALL PLASTIC CONDUIT MEETING NEMA STANDARDS & UL LISTED FOR UNDERGROUND & EXPOSED USE. PROVIDE GRS RADIUS BENDS & RISERS AS CONDUITS RISE ABOVE GRADE OR ABOVE FLOOR SLAB.
- PROVIDE INTERLOCKING SPACERS FOR MULT RUNS OF UG CONDUITS IN SAME TRENCH.
- CIRCUITS W/ NO. 8 OR LARGER CONDUCTORS, MOTOR CIRCUITS, POWER & FEEDER CIRCUITS & BUILDING SERVICE FEEDERS SHALL BE COPPER THINER THAN 600 VOLT 75 DEG C.
- ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE CEILINGS SHALL BE SUPPORTED FROM STRUCTURE. PIPE SLEEVES, HANGERS & SUPPORTS SHALL BE FURNISHED & SET & CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER & PERMANENT LOCATIONS.

SECTION 16200 - GROUNDING

- SUPPLEMENT GROUNDED NEUTRAL OF SECONDARY DISTRIBUTION SYSTEM W/ EQUIPMENT GROUNDING SYSTEM, INSTALLED SO THAT METALLIC STRUCTURES, ENCLOSURES, RACKWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES, PORTABLE EQUIPMENT & OTHER CONDUCTIVE ITEMS OPERATE CONTINUOUSLY AT GROUND POTENTIAL & PROVIDE LOW IMPEDANCE PATH FOR GROUND FAULT CURRENTS.
- SYSTEM SHALL COMPLY W/ NATIONAL ELECTRICAL CODE, DRAWINGS & AS SPECIFIED.
- PROVIDE EQUIPMENT GROUND BUS IN BASE OF LOW VOLTAGE SWITCHGEAR BRAZED OR OTHERWISE ADEQUATELY CONNECTED BY AN APPROVED METHOD TO GROUND RODS.
- PROVIDE IN CONDUIT GREEN INSULATED COPPER GROUND CONDUCTOR TO MAIN METALLIC WATER SERVICE ENTRANCE & CONNECT BY MEANS OF ADEQUATE GROUND CLAMPS.
- EQUIPMENT GROUNDING CONDUCTORS FOR BRANCH CIRCUIT HOME RUNS SHOWN ON DRAWINGS SHALL INDICATE AN INDIVIDUAL & SEPARATE GROUND CONDUCTOR FOR THAT BRANCH CIRCUIT WHICH SHALL BE TERMINATED AT BRANCH CIRCUIT PANELBOARD, SWITCHBOARD, OR OTHER DISTRIBUTION EQUIPMENT.
- PROVIDE LOW VOLTAGE DISTRIBUTION SYSTEM W/ SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR EACH SINGLE OR THREE-PHASE FEEDER. SINGLE PHASE 120 VOLT BRANCH CIRCUITS FOR LIGHTING & POWER SHALL CONSIST OF PHASE & NEUTRAL CONDUCTORS & GREEN GROUND CONDUCTOR INSTALLED IN COMMON CONDUIT WHICH SHALL SERVE AS GROUNDING CONDUCTOR.
- GROUNDING CONDUCTORS SHALL BE AS SHOWN ON PLANS OR IF NOT SPECIFICALLY SHOWN SHALL BE NO SMALLER THAN THAT REQUIRED BY NEC.

SECTION 16300 - ELECTRICAL EQUIPMENT

- JUNCTION BOXES & OUTLET BOXES SHALL BE GALVANIZED KNOCKOUT TYPE. LIGHTING FIXTURE BOXES IN CEILINGS SHALL NOT BE LESS THAN 4" OCTAGONAL KNOCKOUT TYPE. OUTLETS SHALL BE INSTALLED IN LOCATIONS SHOWN ON DRAWINGS EXCEPT OUTLETS MAY BE MOVED 4 FEET IN EITHER DIRECTION IF SO DIRECTED, WITHOUT ADDITIONAL COST. BOXES SHALL BE FLUSH MOUNTED ON WALLS FOR CONCEALED WORK. GANGABLE BOXES SHALL BE USED IN ALL GYBOARD SURFACES.

PANELBOARDS

- BRANCH CIRCUIT 208/240V PANELS SHALL BE CAPACITY SHOWN W/ TIN PLATED COPPER BUSSING & BRACED FOR MINIMUM OF 22,000A IAC OR AS OTHERWISE NOTED OR REQUIRED (SERIES RATED ACCEPTABLE). BOLT ON CIRCUIT BREAKERS. 480V PANELS SAME EXCEPT 25,000A IAC MIN. MINIMUM 20" WIDE W/ GALV STEEL ENCLOSURE W/ HINGED DOOR & KEYS LOCK. COORD TRIM WITH MOUNTING LOCATION. PANELS TO BE RECESSED WHENEVER POSSIBLE.
- DISTRIBUTION PANELS SHALL BE CAPACITY SHOWN & SHALL BE SQUARE D I-LINE W/ TIN PLATED COPPER BUSSING. 65KVA MIN OR AS OTHERWISE NOTED/REQ'D. BOLT ON CIRCUIT BREAKERS (SERIES RATED ACCEPTABLE). GALV STEEL ENCLOSURE.
- EQUIPMENT BY SQUARE D, SIEMENS, CUTLER HAMMER, OR GE.

TRANSFORMERS

- DRY-TYPE AS SCHEDULED. SOUND LEVEL SHALL NOT EXCEED DB PER ANSI C89.2 & NEMA TR-1. (2)1/2"-1/2%" TAPS BELOW & (2)1/2"-1/2%" TAPS ABOVE PRIMARY VOLTAGE. ALUMINUM WINDOWINGS. 150 DEG C. MINIMUM IMPEDANCE OF 2.5%. VENTILATED ENCLOSURE. SUSPEND AS REQ'D.

SECTION 16350 - ELECTRICAL IDENTIFICATION

- MANUFACTURED LABELS FOR EACH PANELBOARD & TRANSFORMER. TYPED WRITTEN PANEL SCHEDULES MOUNTED IN PANELS.
- PRINTED TAPE STYLE LABEL FOR EACH RECEPTACLE INDICATING PANEL & CIRCUIT #.
- MANUFACTURED LABELS FOR ALL DISCONNECT SWITCHES INDICATING EQUIPMENT SERVED.
- BRANCH CIRCUITS - IDENTIFY EACH CIRCUIT W/ WIRE MARKERS WHEN ENCLOSURE LABEL AND WIRE COLORS DO NOT PROVIDE ENOUGH INFORMATION TO IDENTIFY EACH CIRCUIT WITHOUT TRACING. FEEDERS & BRANCH CIRCUIT HOME RUNS W/ WIRE MARKER W/ PANEL & CRT #. BOX COVERS ABOVE LAY-IN CEILINGS NEATLY MARKED W/ INDELIBLE MARKER.

MEP SYMBOL LIST

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

	HOME RUN (2 #12, 1 #12 G UNLESS NOTED OTHERWISE)
	INDICATES 2 PHASE, 1 NEUTRAL AND 1 GROUND CONDUCTOR
	TELE TELEPHONE CONDUIT
	OHP OVERHEAD POWER
	UE UNDERGROUND ELECTRICAL
	UFO UNDERGROUND FIBER OPTIC
	G UNDERGROUND GAS
	SAN UNDERGROUND SANITARY
	W UNDERGROUND WATER
	EX EXISTING
	WP WEATHER PROOF
	GFI GROUND FAULT INTERRUPT EMERGENCY
	DISCONNECT SWITCH. 30A-3P, NON-FUSED EXCEPT AS NOTED
	RL RELOCATED EXISTING
	INDICATES CONNECT TO EXISTING
	CONTROL CIRCUIT
	JUNCTION BOX
	DISTRIBUTION PANELBOARD
	SWITCHBOARD, FEEDER/MAIN CIRCUIT BREAKER SECTION AND DISTRIBUTION SECTION.
	SURFACE PANELBOARD

GENERAL NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRICIALLY.
- THESE DRAWINGS ARE DIAGRAMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
- FINAL LOCATIONS OF ALL UTILITY EQUIPMENT ETC SHALL BE COORDINATED WITH ENERGY.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

COORDINATION NOTES

- COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
- THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISERS AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
- CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
- TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
- WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
- COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
- DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, EQUIPMENT LOCATIONS, ETC. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- ADJUST LOCATION OF CONDUIT, EQUIPMENT ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES.
- WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACTORS TO COORDINATE THE WORK BETWEEN TRADES. DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
- COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

GENERAL DEMOLITION NOTES

- CONTACT UTILITY LOCATING SERVICE TO LOCATE EXACT LOCATION OF UTILITIES BELOW GRADE.
- MAINTAIN ALL EXISTING UNDERGROUND/OVERHEAD UTILITIES SHOWN AS EXISTING TO REMAIN OR OTHERWISE UNRELATED TO THE SCOPE OF THE PROJECT IN WORKING ORDER.
- NOTES AND DRAWINGS ARE BASED UPON A FIELD EXAMINATION OF THE SITE AND MAY NOT INDICATE ALL ITEMS. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE SITE AND THE SCOPE OF WORK FOR THE CONTRACT PRIOR TO BID. ANY EXISTING CONDITION WHICH IS APPARENT OR COULD BE REASONABLY INFERRED FROM A VISIT TO THE SITE SHALL NOT BE THE BASIS FOR A CHANGE IN THE CONTRACT AMOUNT.
- PROTECT ALL EXISTING SURFACES AND EQUIPMENT DURING CONSTRUCTION. EXISTING ITEMS TO REMAIN SHALL BE ADEQUATELY PROTECTED FROM DEMOLITION AND NEW CONSTRUCTION WORK, AS REQUIRED. ANY ITEMS DAMAGED OR MARRED SHALL BE ADEQUATELY CLEANED OR REPLACED TO THE OWNERS SATISFACTION TO ORIGINAL CONDITION BEFORE CONSTRUCTION.

ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AG	ABOVE GRADE
AHJ	AUTHORITY HAVING JURISDICTION
BG	BELOW GRADE
BLDG	BUILDING
C	CONDUIT
E/C	ELECTRICAL CONTRACTOR
EX	EXISTING ITEM
G	GROUND / GANG
G/C	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
JB	JUNCTION BOX
MCB	MAIN CIRCUIT BREAKER
MH	MANHOLE
MLO	MAIN LUGS ONLY
PVC	POLYVINYLCHLORIDE
REF/REFER	REFERENCE
RSJ	RISID GALVANIZED STEEL
RL	RELOCATED ITEM
TYP	TYPICAL
WP	WEATHERPROOF

SHEET INDEX

E1	ELECTRICAL COVER SHEET
E2	ELECTRICAL PLAN
E3	ELECTRICAL DETAILS/SCHEDULES

GENERAL ELECTRICAL NOTES

- COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
- COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS.
- REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
- PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED ENDS.
- CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.

811 KANSAS ONE-CALL CENTER: ALWAYS CALL BEFORE YOU DIG

PROTECT YOURSELVES AND YOUR PROPERTY AGAINST UNDERGROUND UTILITY DAMAGE AND LIABILITY.
FIND OUT WHERE THE UNDERGROUND UTILITY LINES MIGHT BE BURIED BEFORE YOU DIG.

ANYONE DIGGING IN KANSAS MUST CALL BEFORE DIGGING. THE PERSON WHO IS DOING THE WORK IS RESPONSIBLE FOR CALLING. IF THE OWNER CONTRACTS WITH A PROFESSIONAL EXCAVATOR TO DO THE EXCAVATION THEN THE PROFESSIONAL EXCAVATOR IS RESPONSIBLE FOR CALLING.

YOU (THE DIGGER) WILL NEED TO PROVIDE INFORMATION ABOUT THE WORK SITE WHEN YOU CALL. THIS IS A FREE SERVICE.

CALL BEFORE YOU DIG, IT'S THE LAW.

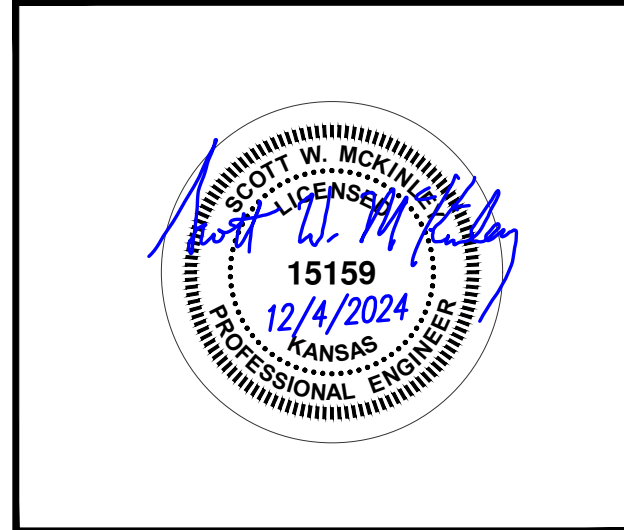
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© PEARSON KENT MCKINLEY RAAF ENGINEERS, LLC	
DRAWN BY:	KAH
CHECKED BY:	SWM
SHEET TITLE:	
ELECTRICAL COVER SHEET	
DATE:	PKMR PROJECT:
12-4-24	24.466
SHEET NUMBER:	
E1	

GENERAL PLAN NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

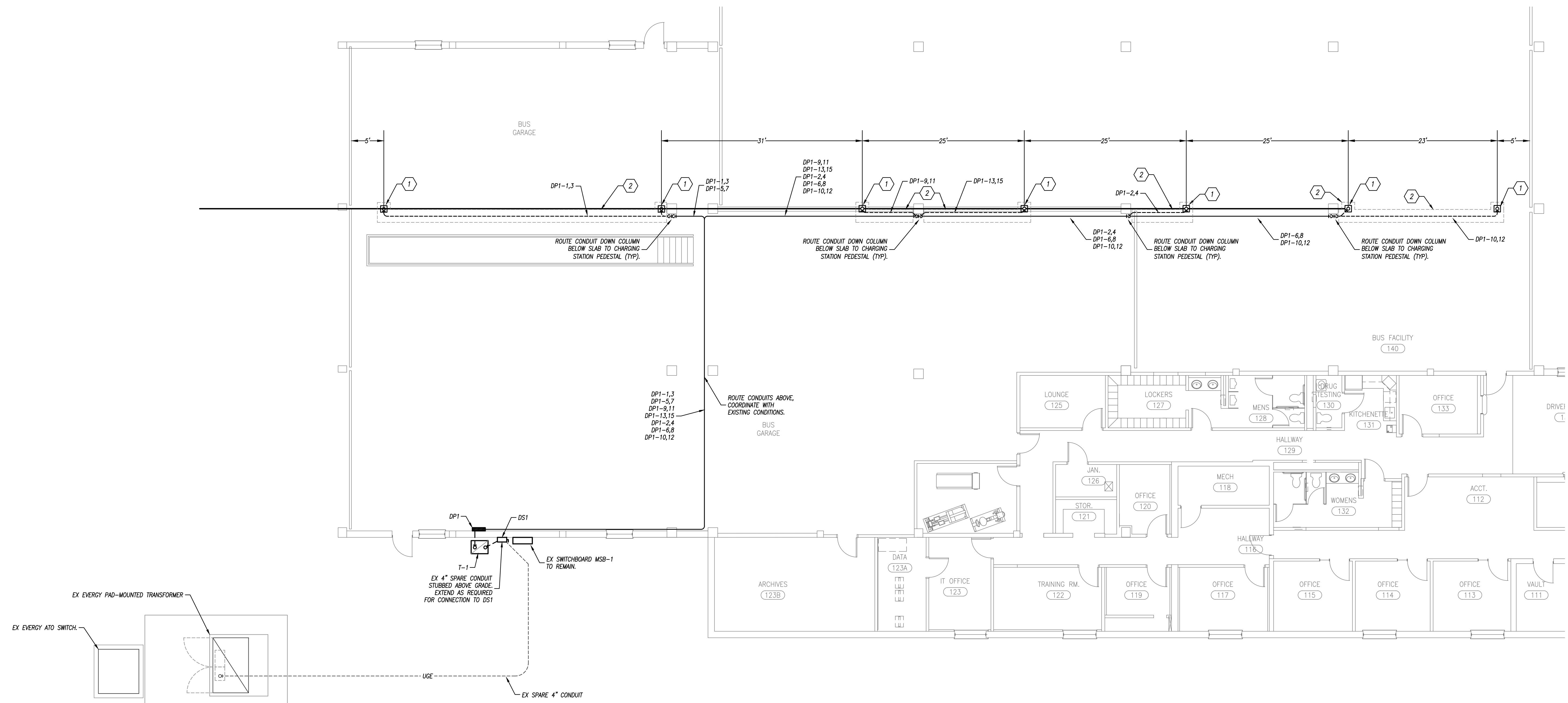
ELECTRICAL PLAN KEYED NOTES

- 1 FORD PRO AC CHARGING STATION BOA MOUNTED ON PEDESTAL. COORDINATE EXACT LOCATION WITH OWNER. PROVIDE (2) #2, #86 IN 1-1/4" CONDUIT FROM DP1 TO EACH CHARGING STATION.
- 2 CUT AND PATCH CONCRETE AS REQUIRED FOR UNDERGROUND BRANCH CIRCUITS TO CHARGING STATION. REFER TO FLOOR SLAB REPAIR DETAIL ON SHEET E3.

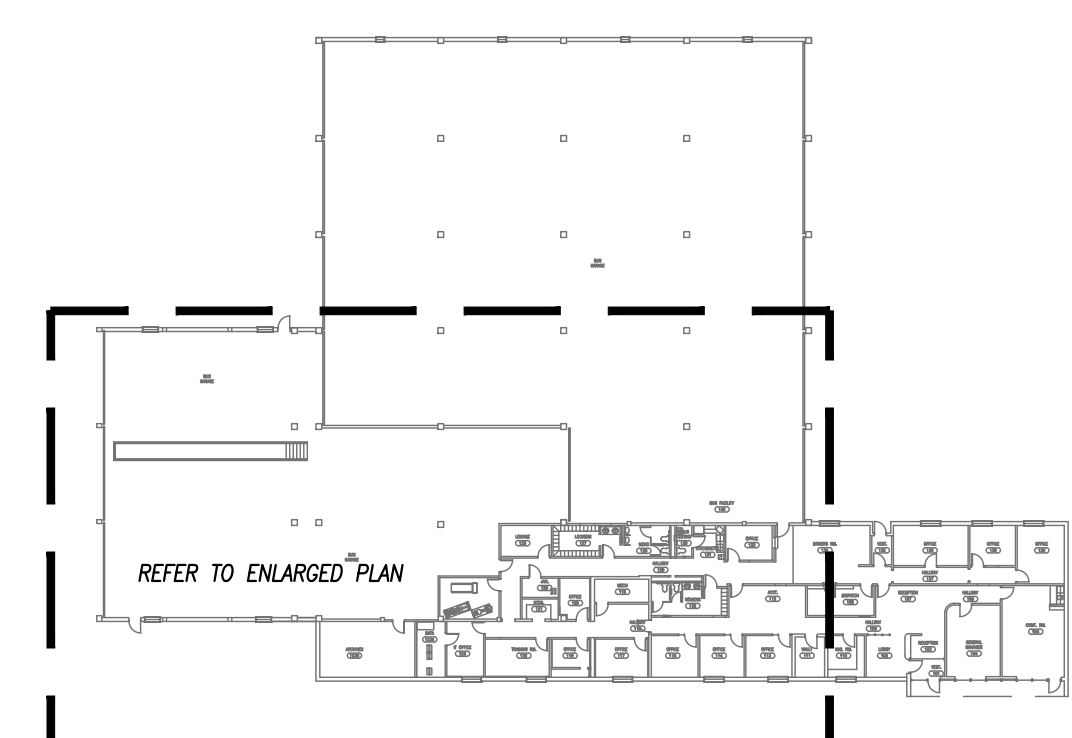


**TOPEKA METROPOLITAN TRANSIT AUTHORITY
VEHICLE CHARGERS**

201 N KANSAS AVE
TOPEKA, KS 66603



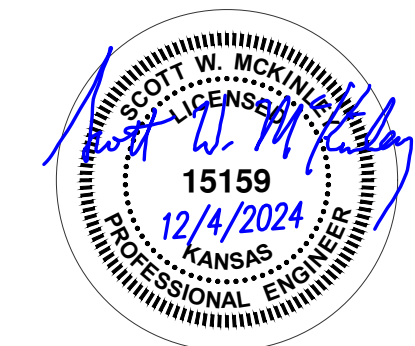
ENLARGED FLOOR PLAN - POWER
SCALE: 1/8" = 1'-0"



FLOOR PLAN - KEY PLAN
SCALE: 1" = 50'-0"

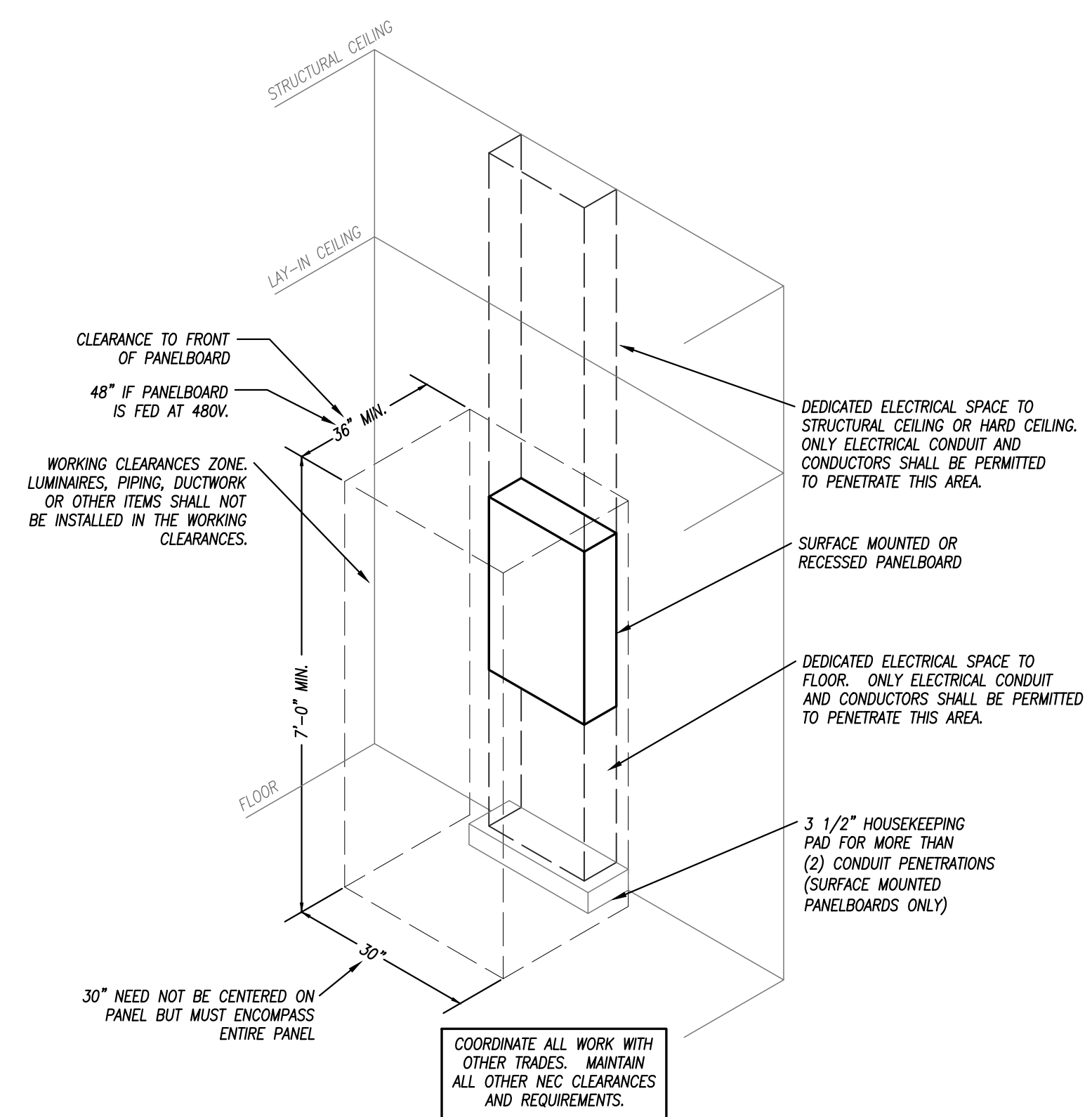
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DRAWN BY:	KAH
CHECKED BY:	SWM
SHEET TITLE:	
ELECTRICAL PLAN	
DATE:	PKMR PROJECT:
12-4-24	24.466
SHEET NUMBER:	
E2	



**TOPEKA METROPOLITAN TRANSIT AUTHORITY
VEHICLE CHARGERS**

**201 N KANSAS AVE
TOPEKA, KS 66603**



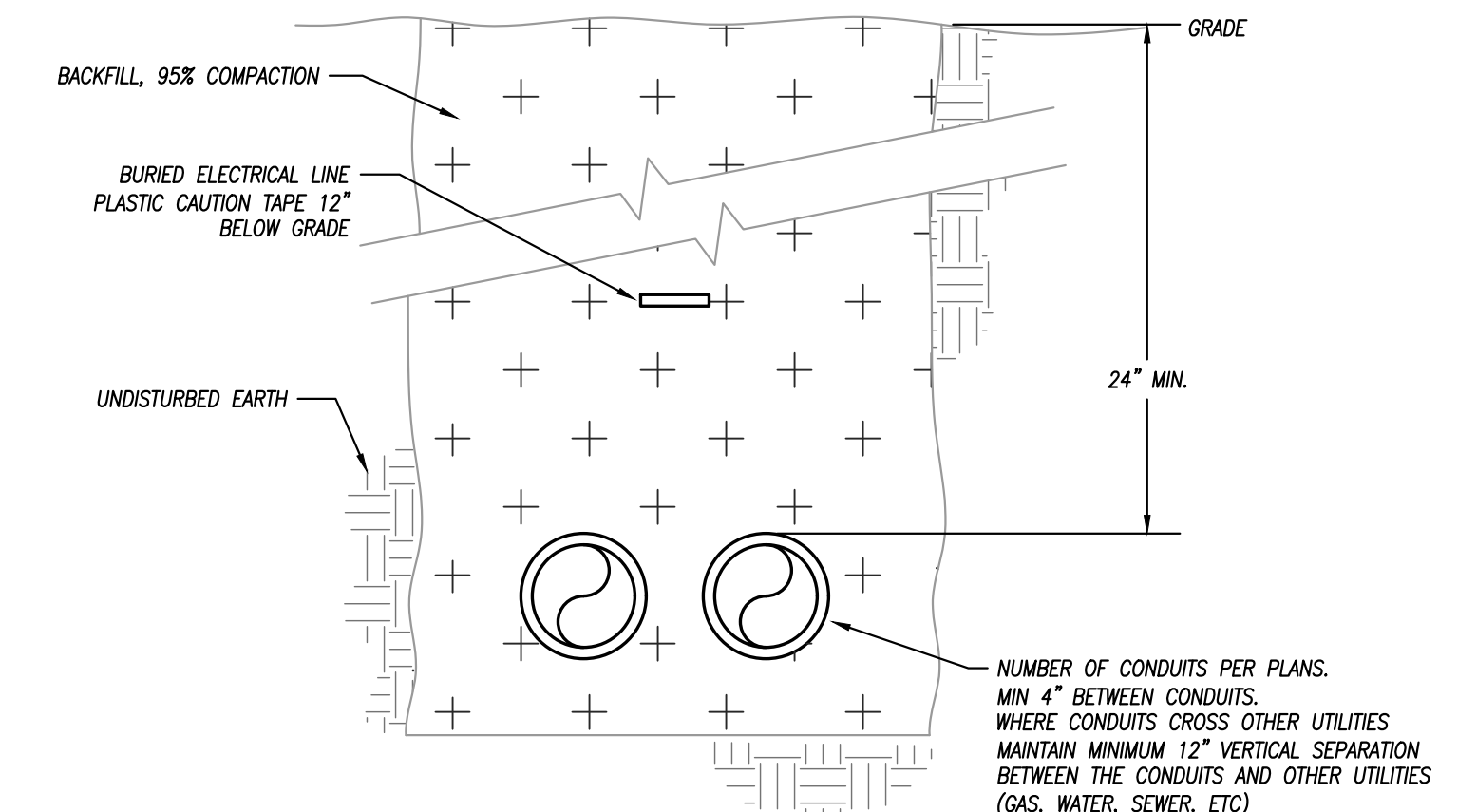
TYPICAL PANELBOARD INSTALLATION DETAIL
NOT TO SCALE

SINGLE-SECTION PANELBOARD SCHEDULE														
PANEL DESIGNATION: DP1										MAIN LUG AMPS: 600			SCCR RATING (AIC): 22,000	
MOUNTING: SURFACE										MAIN BREAKER: 600			VOLTAGE: 208/120	
LOCATION: BUS GARAGE										PHASE/WIRE: 3Ø, 4W				
DESCRIPTION	PHASE			TRIP	POLE	CIRCUIT #	C/B		PHASE			DESCRIPTION		
	A	B	C				POLE	TRIP	A	B	C			
VEHICLE CHARGER	8320			100	2	1	2	2	100	8320			VEHICLE CHARGER	
-		8320		-	-	3	4	-	-		8320		-	
VEHICLE CHARGER			8320	100	2	5	6	2	100			8320	VEHICLE CHARGER	
-	8320			-	-	7	8	-	-	8320			-	
VEHICLE CHARGER		8320		100	2	9	10	2	100		8320		VEHICLE CHARGER	
-			8320	-	-	11	12	-	-			8320	-	
VEHICLE CHARGER	8320			100	2	13	14	2	100	-	-	-	SPARE	
-		8320		-	-	15	16	-	-	-	-	-	-	
SPARE				100	2	17	18	2	100	-	-	-	SPARE	
-				-	-	19	20	-	-	-	-	-	-	
SPARE				20	1	21	22	1	20	-	-	-	SPARE	
SPARE				20	1	23	24	1	20	-	-	-	SPARE	
SPARE				20	1	25	26	1	20	-	-	-	SPARE	
SPARE				20	1	27	28	1	20	-	-	-	SPARE	
SPARE				20	1	29	30	1	20	-	-	-	SPARE	
-				-	-	31	32	1	-	-	-	-	-	
-				-	-	33	34	1	-	-	-	-	-	
-				-	-	35	36	1	-	-	-	-	-	
-				-	-	37	38	1	-	-	-	-	-	
-				-	-	39	40	1	-	-	-	-	-	
-				-	-	41	42	1	-	-	-	-	-	
TOTALS	24960	24960	16640							16640	16640	16640	TOTALS	

PANELBOARD SIZING LOAD			
LOAD DESCRIPTION	CONNECTED	DEMAND	CODE MIN. (VA)
LIGHTS	0	1.25	0
RECEPTACLES	0	10KVA + 50% REST	0
MOTORS	0	LARGEST + SUM OF REST	0
AIR CONDITIONING	0	1.00	0
SPACE HEATING	0	0.00	0
HEAT PUMP	0	1.00	0
CONTINUOUS	116,480	1.25	145,600
NON-CONTINUOUS	0	1.00	0
MISC. LOADS 1	0	1.00	0
SIZING LOAD:			145,600
SIZING LOAD (AMPS):			404

CONNECTED PHASE LOADS			
PHASE	VA	AMPS	
A	41,600	346.4	
B	41,600	346.4	
C	33,280	277.1	
TOTALS	116,480	323.3	

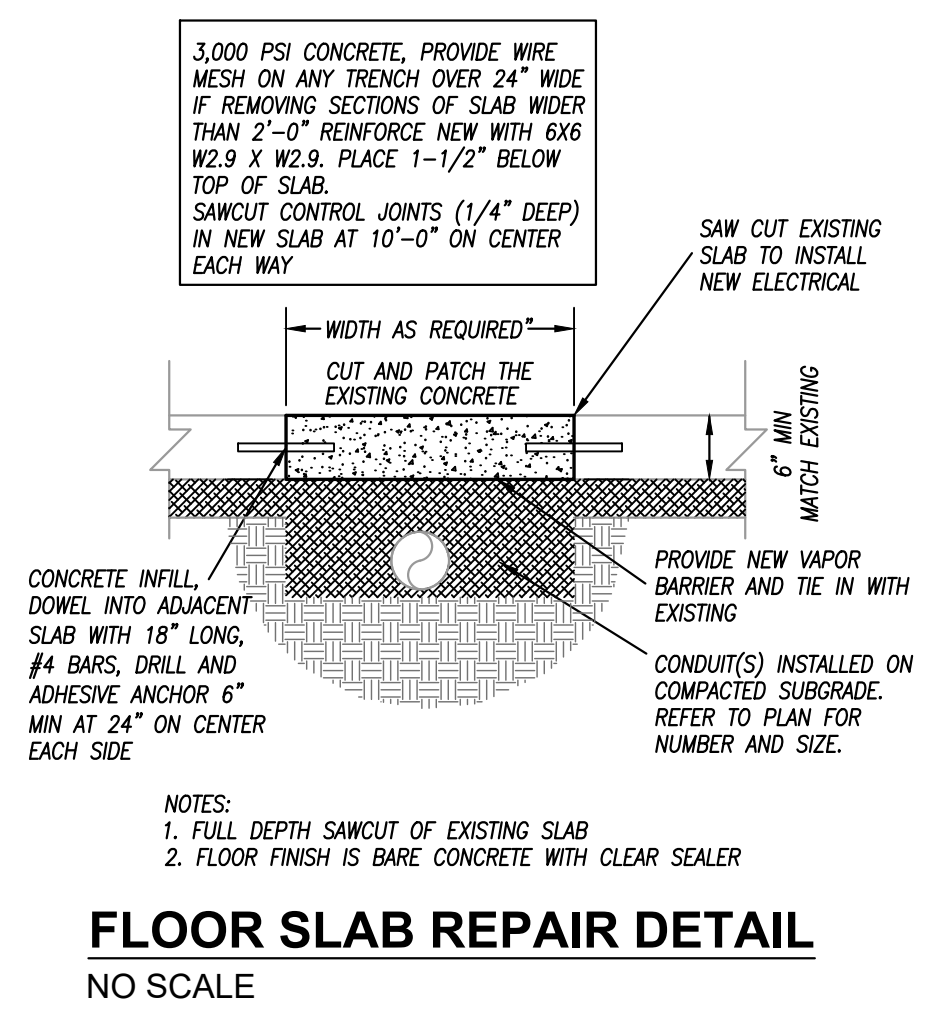
REMARKS:
1. EATON POW-R-LINE 1X OR EQUAL.



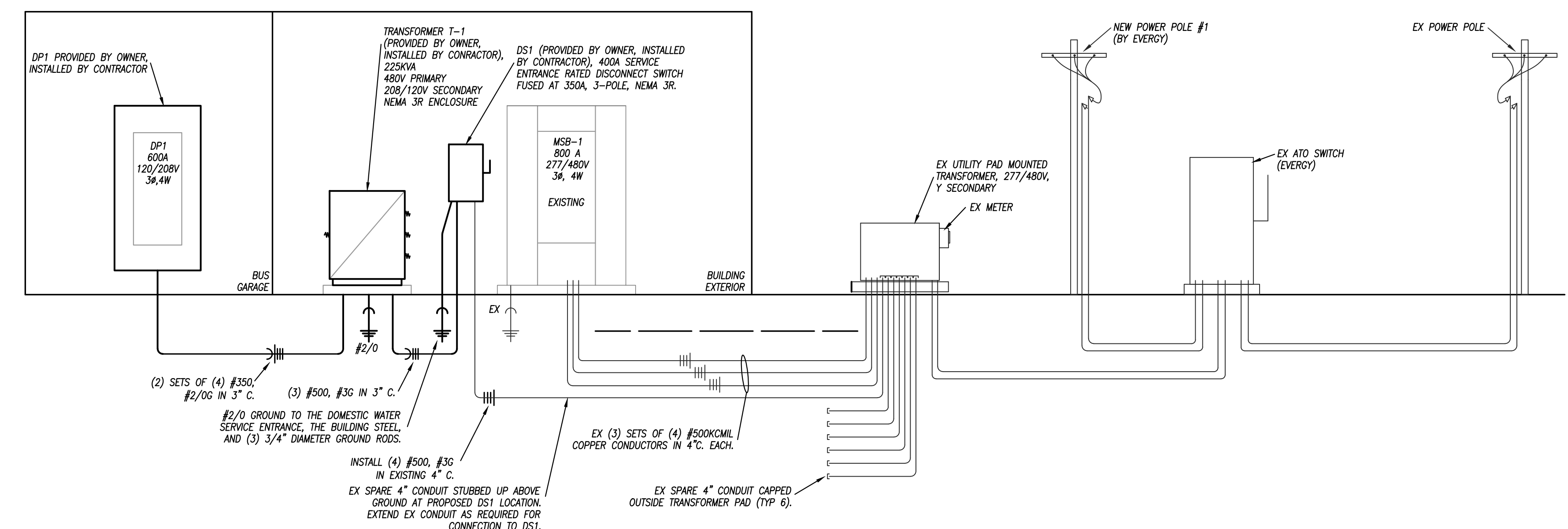
UNDERGROUND ELECTRICAL CONDUITS DETAIL
NOT TO SCALE

EQUIPMENT FAULT CURRENT RATING SCHEDULE					
EQUIPMENT	SCA **	SCCR	% OF RATING	NOTES	
MAIN SERVICE DISCONNECT	24,238	35,000	69%	1	
TRANSFORMER T-1	23,103	-	-	-	
PANELBOARD DP1	9,168	22,000	42%	1	

NOTES:
1. RATING BASED ON AN ASSUMED FAULT AT UTILITY CO. TRANSFORMER OF 34,368A.
** CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD.



FLOOR SLAB REPAIR DETAIL
NO SCALE



ELECTRICAL RISER DIAGRAM
NO SCALE

ISSUED FOR:	
DESCRIPTION	DATE

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DRAWN BY: KAH
CHECKED BY: SWM

SHEET TITLE:
**ELECTRICAL
DETAILS/SCHEDULES**

DATE: 12-4-24 PKMR PROJECT: 24.466

SHEET NUMBER:
E3