# CITY OF MADISON

# STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL CONTROLS AND UPGRADE CITY OF MADISON CONTRACT NO. 7910 BID DRAWINGS

STATE STREET CAPITOL GARAGE 214 NORTH CARROLL STREET



PARTIAL CITY OF MADISON LOCATION MAP



## DRAWING INDEX

T100	TITLE SHEET
A200	FLOOR PLAN AND DOOR NOTES
A201	FLOOR PLAN AND DOOR NOTES
E000	ELECTRICAL SYMBOLS, NOTES AND ABBREVIATION
E100	LEVEL L ELECTRICAL PLAN
E101	LEVEL 1 ELECTRICAL PLAN
E102	LEVEL 2 ELECTRICAL PLAN
E103	LEVEL 3 ELECTRICAL PLAN
E104	LEVEL 4 ELECTRICAL PLAN
E105	LEVEL 5 ELECTRICAL PLAN
E106	LEVEL 6 ELECTRICAL PLAN
E200	ENLARGED ELECTRICAL PLANS
E201	ENLARGED ELECTRICAL PLANS
E500	ELECTRICAL DETAILS
E600	ELECTRICAL SCHEDULES
E700	ELECTRICAL PANEL SCHEDULES
E800	ELECTRICAL RISER DIAGRAM

INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. JSD PROFESSIONAL SERVICES, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THE NEW WORK. REPORT DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ENGINEER FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE ENGINEER IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT.

CONTRACTORS ARE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO TEMPORARY SUPPORTS, SHORING, AND FORMING TO SUPPORT IMPOSED LOADS AND OTHER SIMILAR ITEMS.

- COMMITMENT TO CLIENT SATISFACTION
- **CONSTRUCTION SERVICES**
- WATER RESOURCES PLANNING & DEVELOPMENT
- TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING
  - LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101

608.848.5060 PHONE 608.848.2255 FAX KENOSHA APPLETON



1232 Fourier Drive, Suite 101 Madison. Wisconsin 53717-1960

Website: http://www.henneman.com JOB NO. 13-8001

SERVICES PROVIDED TO: CITY OF

MADSION, WISCONSIN 53801-298

STATE STREET CAPITOL **GARAGE RELIGHTING** AND ELECTRICAL

CONTROLS AND UPGRADE

STATE STREET CAPITOL

SEAL/SIGNATURE:

SD PROJECT NO.:

PROJECT LOCATION:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL

DETAIL AND DIMENSIONS OF THEIR TRADE

AND BE RESPONSIBLE FOR THE SAME.

APPROVED:

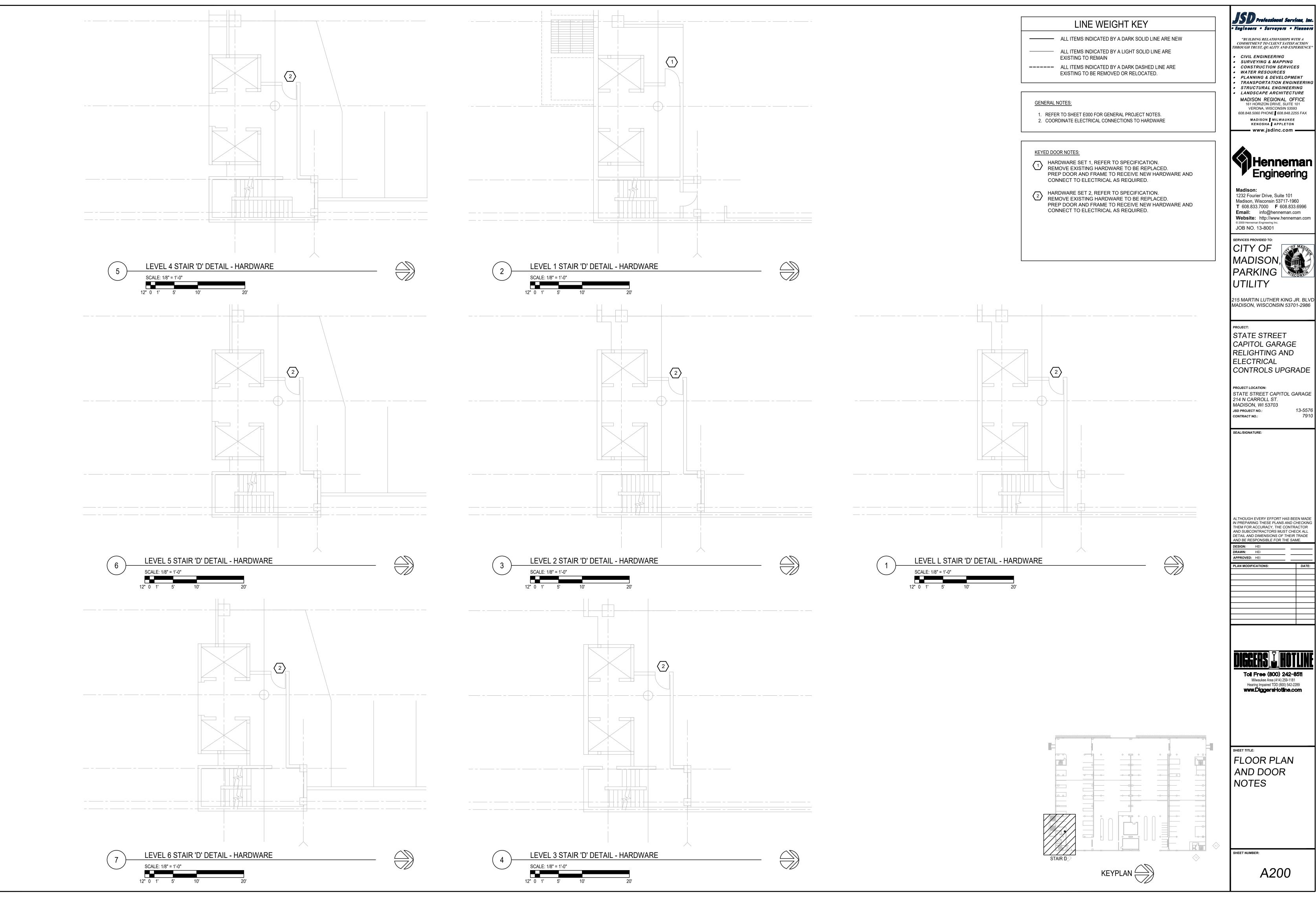
**PLAN MODIFICATIONS:** 



Toll Free (800) 242-8511 Milwaukee Area (414) 259-1181 Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

SHEET TITLE:

TITLE SHEET



SURVEYING & MAPPING CONSTRUCTION SERVICES • WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX MADISON | MILWAUKEE KENOSHA | APPLETON



**T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com

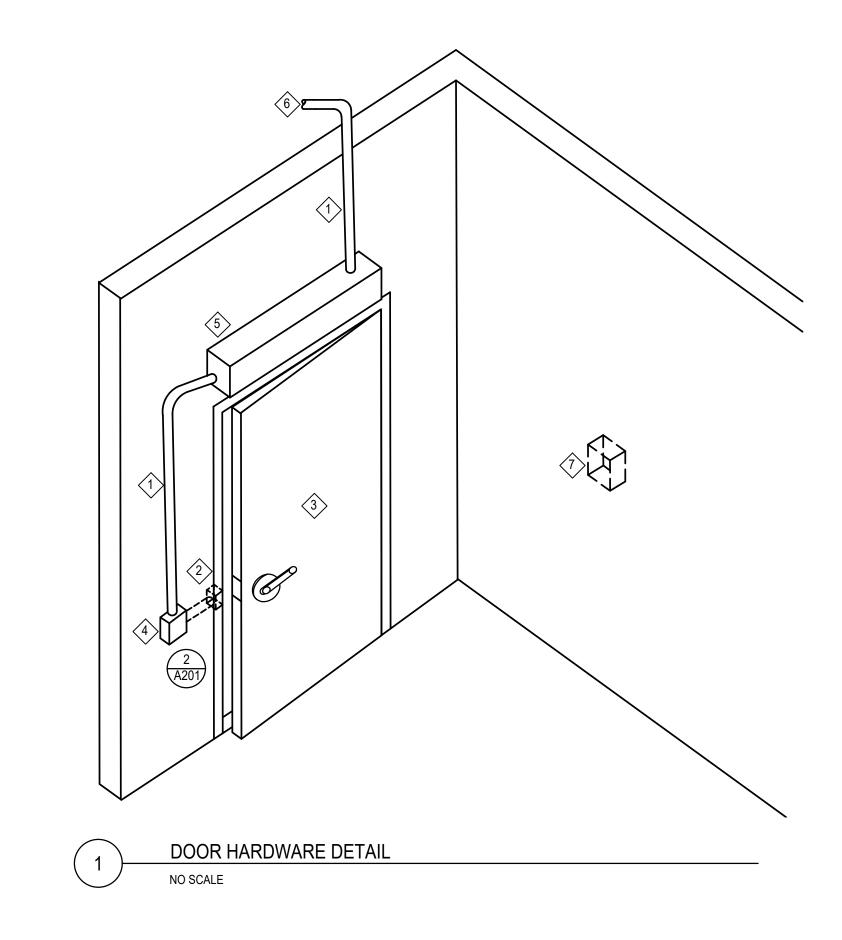
MADISON, WISCONSIN 53701-2986

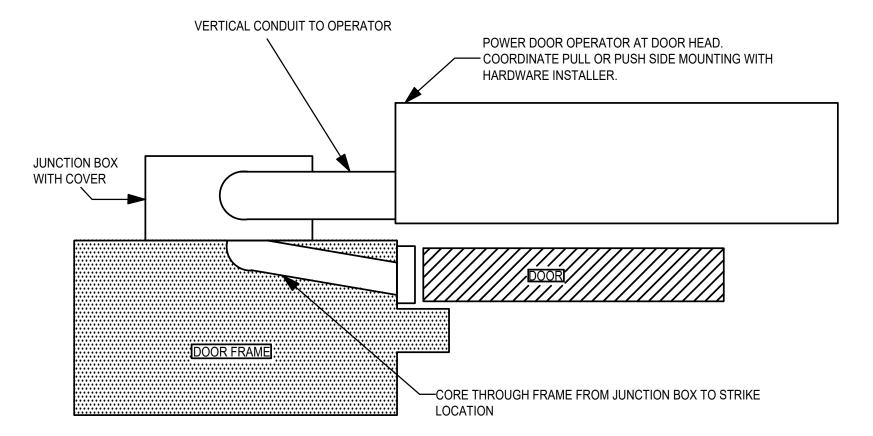
STATE STREET CAPITOL GARAGE RELIGHTING AND

STATE STREET CAPITOL GARAGE

AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

FLOOR PLAN





DOOR FRAME DETAIL NO SCALE

**GENERAL NOTES:** 

1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES. 2. COORDINATE ELECTRICAL CONNECTIONS TO HARDWARE

7 WIRELESS BUTTON WITH BACK BOX (BOTH SIDES OF DOOR)

#### KEYED DOOR NOTES:

1/2" CONDUIT

2 ELECTRIC STRIKE

3 EXISTING DOOR 4 JUNCTION BOX

5 POWER DOOR OPERATOR

6 120V POWER TO OPERATOR



"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE

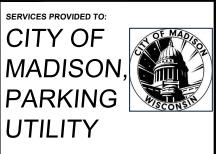
MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593

608.848.5060 PHONE 608.848.2255 FAX

MADISON MILWAUKEE KENOSHA APPLETON

CIVIL ENGINEERING
SURVEYING & MAPPING CONSTRUCTION SERVICES • WATER RESOURCES

Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996 Email: info@henneman.com
Website: http://www.henneman.com JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET CAPITOL GARAGE

RELIGHTING AND ELECTRICAL CONTROLS UPGRADE

PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703 13-5576 JSD PROJECT NO.:

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR

AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

Toll Free (800) 242-8511

Milwaukee Area (414) 259-1181

Hearing Impaired TDD (800) 542-2289

www.DiggersHotline.com

SHEET TITLE: FLOOR PLAN AND DOOR NOTES

A201

Sheet No.	Sheet Name
A200	FLOOR PLAN AND DOOR NOTES
A201	FLOOR PLAN AND DOOR NOTES
E000	ELECTRICAL SYMBOLS, NOTES AND ABBREVIATIONS
E100	LEVEL L ELECTRICAL PLAN
E101	LEVEL 1 ELECTRICAL PLAN
E102	LEVEL 2 ELECTRICAL PLAN
E103	LEVEL 3 ELECTRICAL PLAN
E104	LEVEL 4 ELECTRICAL PLAN
E105	LEVEL 5 ELECTRICAL PLAN
E106	LEVEL 6 ELECTRICAL PLAN
E200	ENLARGED ELECTRICAL PLANS
E201	ENLARGED ELECTRICAL PLANS
E500	ELECTRICAL DETAILS
E600	ELECTRICAL SCHEDULES
E700	ELECTRICAL PANEL SCHEDULES
E800	ELECTRICAL RISER DIAGRAM

### PROJECT NOTES

#### GENERAL PROJECT ELECTRICAL NEW WORK NOTES:

- 1. ALL NEW BRANCH CIRCUITS SHALL CONSIST OF NEW RACEWAY, CONDUCTORS, FITTINGS, ETC... INSTALLED ON EXISTING BUILDING FINISHES. REUSE OF EXISTING RACEWAY, CONDUCTORS, FITTINGS, ETC... IS NOT PERMITTED UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
- 2. PROJECT SEQUENCE AND LUMINAIRE SPACING WILL ALLOW FOR NEW LUMINAIRES AND ASSOCIATED INFRASTRUCTURE TO BE INSTALLED WHILE THE EXISTING LIGHTING SYSTEM IS STILL IN PLACE. THE RAMP SHALL BE PROVIDED WITH LIGHTING AT ALL TIMES BY WAY OF THE EXISTING LIGHTING SYSTEMS OR THE NEW SYSTEM. REFER TO FRONT END SPECIFICATION AND INSTRUCTIONS TO BIDDERS FOR THE QUANTITY OF PARKING SPACES AVAILABLE EACH DAY TO PERFORM WORK.
- 3. ALL BRANCH CIRCUITS SHALL HAVE EQUIPMENT GROUND CONDUCTORS.
- 4. PROVIDE SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT PHASE CONDUCTOR.
- 5. ALL LUMINAIRES SHALL BE PROVIDED WITH LABELS IDENTIFYING THE PANEL NAME AND CIRCUIT BRANCH, FIRMLY ATTACHED, TO THE OUTSIDE OF THE LUMINAIRE. PRIOR TO LABELING, PROVIDE EXAMPLE MOCK-UP ON ONE FIXTURE FOR OWNER REVIEW AND ACCEPTANCE. AFTER ACCEPTANCE REMAINING LABELS ARE PERMITTED TO BE INSTALLED.
- 6. WHERE NEW DEVICES ARE SHOWN THE ELECTRICAL CONTRACTOR SHALL DO ALL CUTTING AND DO ALL PATCHING AND PAINTING OF EXISTING WALLS.
- 7. THE ELECTRICAL CONTRACTOR SHALL INCLUDE LABOR AND MATERIAL PROVISIONS WITHIN THEIR BID TO BACK FEED EXISTING BRANCH CIRCUITS NOT INDICATED WITHIN THESE DOCUMENTS. FOR THE PURPOSE OF BIDDING, ASSUME (20)120V-20A CIRCUITS WITH NEW CONDUCTORS AND 3/4" PVC RACEWAY AT A INSTALLED LENGTH OF 100 FEET. EACH CIRCUIT SHALL BE INSTALLED IN A DEDICATED RACEWAY ON EXPOSED BUILDING SURFACES.

#### GENERAL PROJECT ELECTRICAL DEMOLITION REQUIREMENTS:

- 1) ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
- 2) THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY DEVICES NOT SHOWN. ALL DEVICES NEED TO BE REMOVED IN THE DEMOLITION AREA UNLESS NOTED ON THE DRAWINGS.
- 3) IT IS MANDATORY THAT THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, FIRE ALARM, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION, SHALL BE HELD TO A MINIMUM AND ARRANGED WITH THE OWNER TWO (2) WEEKS IN ADVANCE. TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.
- 4) ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTING, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
- 5) EXCEPT WHERE OTHERWISE SHOWN OR NOTED ON DRAWING "TO BE RETAINED, RELOCATED" OR HEREINAFTER NOTED, ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED WHERE THEY INTERFERE WITH PROPOSED NEW CONSTRUCTION AND/OR INTERFERE WITH PROPOSED USAGE OF SPACE BY OWNER AS FOLLOWS:
- A) REMOVE ANY CONDUITS PROTRUDING ABOVE FINISHED FLOOR, CAP AND FINISH OVER WITH FLOOR MATERIAL TO MATCH EXISTING.
- B) REMOVE ALL LIGHT FIXTURES, SWITCHES, ETC. AND ASSOCIATED WIRING NOTED FOR DEMOLITION.
- C) ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGH THE REMODELED AREAS TO SERVE (OR BE SERVED FROM) EXISTING ADJACENT, REMOTE OR SURROUNDING AREAS THAT ARE TO REMAIN, SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
- D) WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO REMAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.
- 6) ALL WIRING (POWER, LIGHTING) NOT REUSED FOR REMODELING AREAS SHALL BE COMPLETELY REMOVED BACK TO ASSOCIATED PANELS. EMPTY BOXES AND CONDUITS SHALL BE REMOVED BEYOND REMODELED AREA.
- 7) THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.

#### GENERAL PROJECT FUEL PIPING NEW WORK NOTES:

FOR A COMPLETE INSTALLATION.

- PITCH HORIZONTAL PIPING DOWN 1" IN 60 FEET IN THE DIRECTION OF FLOW. INSTALL A 4" MINIMUM DEPTH DIRT LEG AT THE BOTTOM OF EACH VERTICAL RUN AND AT EACH APPLIANCE. WHEN INSTALLING MAINS AND BRANCHES, CAP GAS TIGHT EACH TEE OR PIPE END WHICH WILL NOT BE IMMEDIATELY EXTENDED. ALL BRANCH CONNECTIONS TO THE MAIN SHALL BE FROM THE TOP OR SIDE OF THE MAIN.
- 2. INSTALL A SHUT OFF VALVE AT EACH APPLIANCE. PROVIDE A VALVED CONNECTION AT THE MAIN FOR EQUIPMENT AND APPLIANCES FURNISHED BY OTHERS.
- 3. EACH GAS PRESSURE REDUCING VALVE VENT AND RELIEF VALVE VENT SHALL BE RUN SEPARATELY TO A POINT OUTSIDE OF THE BUILDING, TERMINATED WITH A SCREENED VENT CAP, AND LOCATED ACCORDING TO GAS UTILITY REGULATIONS.

## GENERAL PROJECT DOOR HARDWARE NEW WORK NOTES: 1. DOOR HARDWARE MODIFICATIONS ILLUSTRATED ON ARCHITECTURAL AND ELECTRICAL SHEETS ALONG WITH THOSE NOTED IN THE SPECIFICATIONS SHALL BE PROVIDED AS PART OF THIS PROJECT. ALL HARDWARE, CONNECTIONS, RACEWAYS, ROUGH IN, CONDUCTORS, ETC... SHALL BE PROVIDED

	ELECTRICAL A	BBRE	VIATIONS
ABBR	DESCRIPTION	ABBR	DESCRIPTION
A,	AMP AMPERE	MMC	MANUAL MOTOR CONTROLLER
AC	ABOVE COUNTER	MOA	MULTI-OUTLET ASSEMBLY
AFF	ABOVE FINISHED FLOOR	MSS	MANUAL STARTER SWITCH
AIC	AMPERE INTERRUPTING CAPACITY	MTR	MOTOR
AL	ALUMINUM	MC	MECHANICAL CONTRACTOR
ARCH	ARCHITECT, ARCHITECTURE	MFR	MANUFACTURER
ATS	AUTOMATIC TRANSFER SWITCH	N/C	NORMALLY CLOSED
AUX AV	AUXILIARY  AUDIO - VISUAL	N/O NEC	NORMALLY OPEN  NATIONAL ELECTRICAL CODE
AP	ACCESS PANEL	NEMA	NATIONAL ELECTRICAL CODE  NATIONAL ELECTRICAL MFR'S ASSOC.
BC	BELOW COUNTER	NFSS	NON- FUSED SAFETY SWITCH
ВТМ	воттом	NIC	NOT IN CONTRACT
С	CONDUIT	NL	NIGHT LIGHT
СВ	CIRCUIT BREAKER	NTS	NOT TO SCALE
CCTV	CLOSED CIRCUIT TELEVISION	O.C.	ON CENTER
CRT	CATHODE-RAY TUBE	OL	OVERLOADS
C/T	CURRENT TRANSFORMER	Р	POLE
CU	COPPER	PF	POWER FACTOR
CTR	COUNTER	PH	PHASE
DC	DIRECT CURRENT	PNL	PANEL
DISC	DISCONNECT	PP 	POWER POLE
DIST	DISTRIBUTION	PR	PAIR
DN	DOWN CONTRACTOR	PRI	PRIMARY
EC ECB	ELECTRICAL CONTRACTOR  ENCLOSED CIRCUIT BREAKER	P/T PVC	POTENTIAL TRANSFORMER POLYVINYL CHLORIDE
ELEC	ELECTRIC, ELECTRICAL	PC	PLUMBING CONTRACTOR
EM	EMERGENCY	RMC	RIGID METALLIC CONDUIT
EMT	ELECTRICAL METALLIC TUBING	REQD	REQUIRED
EQ	EQUIPMENT	RVT	REDUCED VOLTAGE TRANSFORMER
EWC	ELECTRIC WATER COOLER	S/N	SOLID NEUTRAL
EX	EXISTING	SPEC	SPECIFICATION
EXP	EXPLOSION PROOF	SPKR	SPEAKER
EXT	EXTERIOR	SP	SPARE
F	FUSE	SW	SWITCH
FA	FIRE ALARM	SWBD	SWITCHBOARD
FLR	FLOOR	SWGR	SWITCHGEAR
FVNR	FULL VOLTAGE NON-REVERSING	SQFT	SQUARE FOOT
FVR	FULL VOLTAGE REVERSING	SS	STAINLESS STEEL
FBO GFCI	FURNISHED BY OWNER/ OTHERS  GROUND FAULT CIRCUIT INTERRUPTER	SC TEL	SECURITY CONTRACTOR  TELEPHONE TERM TERMINAL
GND, GRD		XFMR	TRANSFORMER
GC GC	GENERAL CONTRACTOR	TV	TELEVISION
GWH	GAS WATER HEATER	TYP	TYPICAL
НОА	HAND-OFF-AUTOMATIC SWITCH	UE	UNDERGROUND ELECTRICAL
HP	HORSEPOWER	UG	UNDERGROUND
HV	HIGH VOLTAGE	UH	UNIT HEATER
HVAC	HEATING, VENTILATING, AIR CONDITIONING	UT	UNDERGROUND TELEPHONE
НС	HEATING CONTRACTOR	UOD	UNLESS OTHERWISE DENOTED
IMC	INTERMEDIATE METALLIC CONDUIT	V	VOLT
JB	JUNCTION BOX	VA	VOLT AMPERES
KV	KILOVOLT	VFD	VARIABLE FREQUENCY DRIVE
KVA	KILOVOLT-AMPERE	VOL	VOLUME
KVAR	KILOVOLT-AMPERE REACTIVE	VC	VENTILATION CONTRACTOR
KW	KILOWATT HOUR	W	WATT
KWH LV	KILOWATT HOUR  LOW VOLTAGE	W/ W/O	WITH
	MOTOR CONTROL CENTER	W/O WG	WITHOUT WIRE GUARD/PROTECTIVE SHIELDING
		VVG	
MCC		WP	WEATHERPROOF
	MOTOR CIRCUIT PROTECTOR  MAIN CIRCUIT BREAKER	WP 2S1W	WEATHERPROOF 2 SPEED SINGLE WINDING
MCC MCP	MOTOR CIRCUIT PROTECTOR		
MCC MCP MCB	MOTOR CIRCUIT PROTECTOR  MAIN CIRCUIT BREAKER	2S1W	2 SPEED SINGLE WINDING
MCC MCP MCB MIN	MOTOR CIRCUIT PROTECTOR  MAIN CIRCUIT BREAKER  MINIMUM	2S1W 2S2W	2 SPEED SINGLE WINDING 2 SPEED DOUBLE WINDING

NOTE:
THIS IS A COMPOSITE LIST OF ABBREVIATIONS, NOT ALL PERTAIN SPECIFICALLY TO THIS JOB.

	HVAC SYMBOL LIST
SYMBOL	DESCRIPTION
— NG —	NATURAL GAS WITH PRESSURE INDICATED
0	ELBOW TURNED UP
G <del>l</del>	ELBOW TURNED DOWN
<del></del>	TEE - TOP OUTLET
<del></del>	TEE - BOTTOM OUTLET
-#-	SCREWED UNION
	FLANGED UNION
<b>→</b> X	PRESSURE REDUCING VALVE
•	NEW CONNECTION TO EXISTING
CO-S	CARBON DIOXIDE SENSOR

	POWER SYSTEMS
SYMBOL	DESCRIPTION
SWBD 1	LARGE ELECTRICAL EQUIPMENT WITH DESIGNATION - DRAWN TO SCALE
	DISTRIBUTION PANEL WITH DESIGNATION
<b>6</b>	BRANCH PANEL WITH DESIGNATION
V	MOTOR WITH DESIGNATION
XXX #	MECHANICAL EQUIPMENT CONNECTION WITH DESIGNATION
	DISCONNECT SWITCH
$\boxtimes$	MOTOR STARTER
Ā	COMBINATION MOTOR STARTER / DISCONNECT SWITCH
VFD	VARIABLE FREQUENCY DRIVE
<del>ເ⇔</del> MMS	MANUAL MOTOR STARTER WITH THERMAL OVERLOADS
₩ MTS	MOTOR RATED TOGGLE SWITCH
<u> </u>	JUNCTION BOX
РВ	PULL BOX
С	CONTACTOR
CP	EQUIPMENT CONTROL PANEL
T	TRANSFORMER
P	POKE THRU
□ x	EQUIPMENT CONNECTION
GEN	GENERATOR REMOTE ANNUNCIATOR
TAP	BUSSED TAP CABINET
GDS	GENERATOR DOCKING STATION
PP <b>(</b> →	AUTOMATIC DOOR OPERATOR ACTIVATION PUSH PLATE
EPO (H	EMERGENCY POWER OFF STATION
••	UP - DOWN - STOP PUSH BUTTON CONTROL STATION
1	DENOTES WALL MOUNTING
X <del></del>	GROUND BUS BAR - WALL MOUNTED
<b>t</b>	— GROUNDING SYSTEM TYPE:
	GEB - GROUNDING ELECTRODE MGEB - MAIN GROUNDING ELECTRODE TGB - TELECOMMUNICATIONS GROUND
=	GROUND

	SHEET KEYED NOTED
$\Diamond$	NEW WORK NOTE
	DEMOLITION WORK NOTE

DE	TAILING ANNOTATION
SYMBOL	DESCRIPTION
##	ENLARGED FLOOR PLAN OR DETAIL MARK  DETAIL REFERENCE  SHEET REFERENCE
##	SECTION MARK  ———————————————————————————————————
## ##	INTERIOR ELEVATION MARK  ———————————————————————————————————

	ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW
· ·	ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN
· ·	ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

	RECEPTACLES
SYMBOL	DESCRIPTION
Ф	SIMPLEX RECEPTACLE
<del> </del>	SIMPLEX RECEPTACLE EMERGENCY
Ф	SIMPLEX RECEPTACLE ABOVE COUNTER
	DUPLEX RECEPTACLE  DUPLEX RECEPTACLE TYPES:  EWC - ELECTRIC WATER COOLER  G - GROUND FAULT CIRCUIT INTERRUPTER  TV - TELEVISION OUTLET, ISOLATED GROUND TYPE.  T - TAMPER RESISTANT  W - WEATHER RESISTANT  IG - ISOLATED GROUND  PRJ - CEILING MOUNTED VIDEO PROJECTOR, ISOLATED GROUND TYP
<b>#</b>	DUPLEX RECEPTACLE ABOVE COUNTER
<del> </del>	DOUBLE DUPLEX RECEPTACLE
<b>⊕</b>	FLOOR MOUNTED DUPLEX RECEPTACLE
<del>+</del>	CEILING MOUNTED DUPLEX RECEPTACLE
<del> </del>	DUPLEX RECEPTACLE EMERGENCY
<del> </del>	DUPLEX RECEPTACLE ABOVE COUNTER EMERGENCY
<del>                                      </del>	QUADRUPLEX RECEPTACLE EMERGENCY
FB#	RECESSED FLOOR BOX - SEE FLOOR BOX SCHEDULE  — FLOOR BOX DESIGNATION, SEE FLOOR BOX SCHEDULE
SR D	RECEPTACLES IN SURFACE RACEWAY ASSEMBLY  RACEWAY DESIGNATION, SEE SURFACE RACEWAY SCHEDULE

	SWITCHES
SYMBOL	DESCRIPTION
<del>Ю</del> Х	SINGLE POLE (LOWER CASE LETTER INDICATES SWITCH LEG)  — SWITCH TYPES:  2 - DOUBLE POLE 3 - THREE WAY 4 - FOUR WAY D - DIMMER PL - PILOT LIGHT T - TIMER K - KEYED
osa Os #	OCCUPANCY SENSOR - SEE SCHEDULE  — SENSOR TYPE — SWITCHING DESIGNATION
pca PC #	INDOOR PHOTO SENSOR - DAYLIGHT SENSOR - SEE SCHEDULE  — SENSOR TYPE  — SWITCHING DESIGNATION
# SS	CLASSROOM SWITCH STATION - SEE SCHEDULE  — SWITCH DESIGNATION
ER	EMERGENCY LIGHTING CONTROL RELAY, UL924 LISTED

SYMBOL	DESCRIPTION
∏ F1 —	— FIXTURE TYPE
23 — a —	CIRCUIT CONTROL DEVICE
	SURFACE/ RECESSED LINEAR FLUORESCENT, NORMAL POWER
	SURFACE/ RECESSED LINEAR FLUORESCENT, EMERGENCY POWER
^	LINEAR WALL WASH, NORMAL POWER
	LINEAR WALL WASH, EMERGENCY POWER
	LINEAR PENDANT, NORMAL POWER
	COVE STRIP, NORMAL POWER
	LINEAR WALL MOUNTED, NORMAL POWER
<u></u>	RECESSED MULTI SPOT, NORMAL POWER
•	SURFACE/SUSPENDED PENDANT, NORMAL POWER
$\vdash \hookrightarrow \vdash$	SURFACE/SUSPENDED FLUORESCENT, NORMAL POWER
<b>⊢</b> •⊢	SURFACE/SUSPENDED FLUORESCENT, EMERGENCY POWER
0	SURFACE / RECESSED DOWNLIGHT, NORMAL POWER
•	SURFACE / RECESSED DOWNLIGHT, EMERGENCY POWER
0>	SURFACE / RECESSED WALL WASH, NORMAL POWER
•>	SURFACE / RECESSED WALL WASH, EMERGENCY POWER
$\Theta$	WALL MOUNTED SCONCE OR WALLPACK, NORMAL POWER
⊢●	WALL MOUNTED SCONCE OR WALLPACK, EMERGENCY POWER
$\Diamond$	RECESSED DOWNLIGHT, NORMAL POWER
	TASK LIGHT - POSITIONAL BASE TYPE.
፟	EXIT SIGN, CEILING MOUNTED - FACES AND ARROWS AS SHOWN
<b>⊗</b> &	EXIT SIGN, WALL MOUNTED - FACES AND ARROWS AS SHOWN
\$	BATTERY PACK EMERGENCY LIGHTING
Ţ	DENOTES WALL MOUNTING OF LIGHT

JSD Professional Services, Inc.
• Engineers • Surveyors • Planners

"BUILDING RELATIONSHIPS WITH A

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

• CIVIL ENGINEERING
• SURVEYING & MAPPING
• CONSTRUCTION SERVICES
• WATER RESOURCES
• PLANNING & DEVELOPMENT
• TRANSPORTATION ENGINEERING
• STRUCTURAL ENGINEERING
• LANDSCAPE ARCHITECTURE

• STRUCTURAL ENGINEERING
• LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE

161 HORIZON DRIVE, SUITE 101

VERONA, WISCONSIN 53593

608.848.5060 PHONE 608.848.2255 FAX

MADISON MILWAUKEE

KENOSHA APPLETON

WWW.jsdinc.com



Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996
Email: info@henneman.com
Website: http://www.henneman.com
© 2009 Henneman Engineering Inc.
JOB NO. 13-8001

CITY OF
MADISON,
PARKING
UTILITY

215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT:
STATE STREET
CAPITOL GARAGE
RELIGHTING AND
ELECTRICAL
CONTROLS UPGRADE

PROJECT LOCATION:
STATE STREET CAPITOL GARAGE
214 N CARROLL ST.
MADISON, WI 53703
JSD PROJECT NO.: 13-5576
CONTRACT NO.: 7910

SEAL/SIGNATURE:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR

THEM FOR ACCURACY, THE CONTRACTOR
AND SUBCONTRACTORS MUST CHECK ALL
DETAIL AND DIMENSIONS OF THEIR TRADE
AND BE RESPONSIBLE FOR THE SAME.

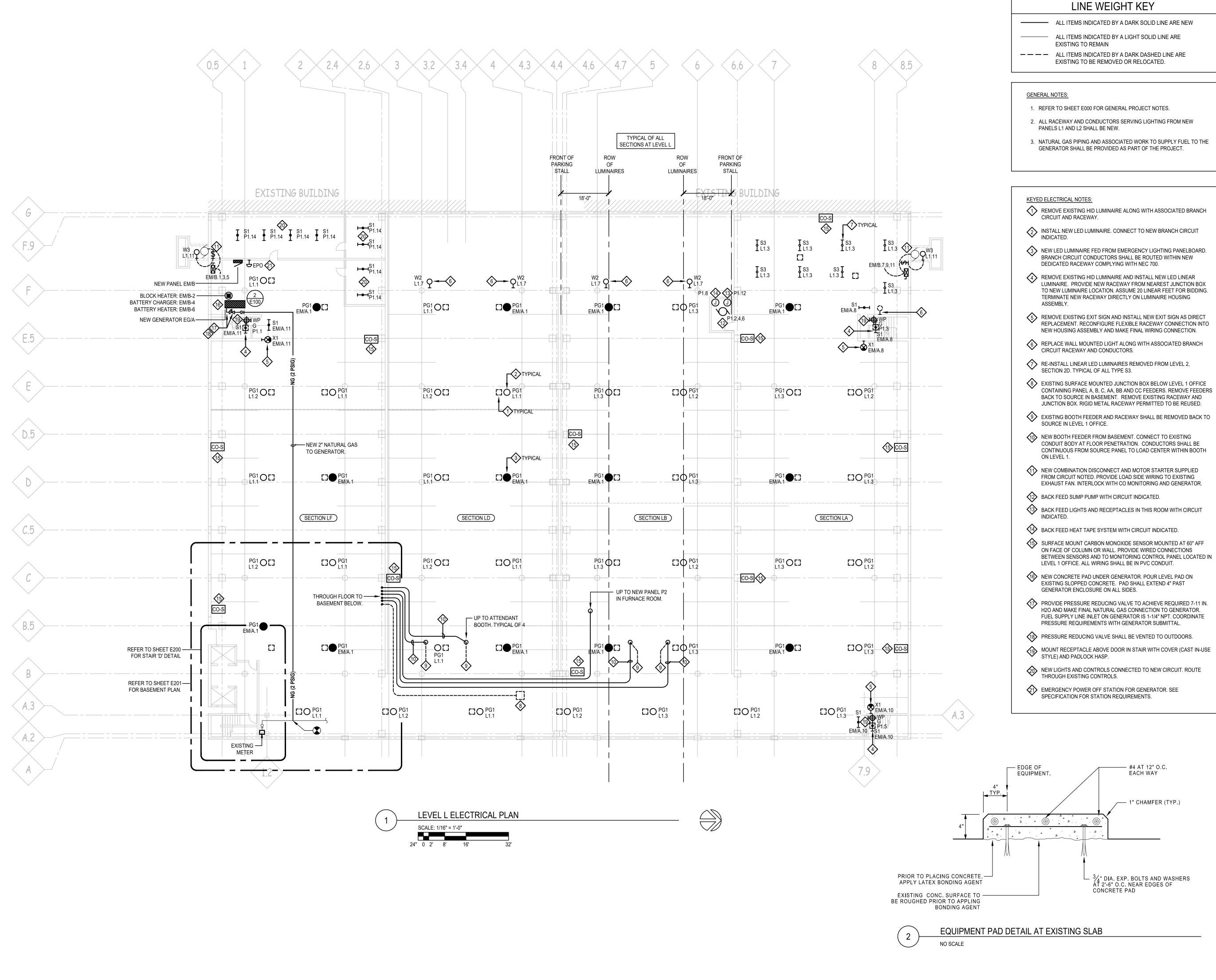
DESIGN: HEI
DRAWN: HEI
APPROVED: HEI



www.DiggersHotline.com

ELECTRICAL
SYMBOLS,
NOTES
AND
ABBREVIATIONS

SHEET NUMBE



"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE

CIVIL ENGINEERING SURVEYING & MAPPING • CONSTRUCTION SERVICES • WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593

🗕 www.jsdinc.com 🚤

608.848.5060 PHONE 608.848.2255 FAX MADISON MILWAUKEE

Henneman Engineering 1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com

Website: http://www.henneman.com

JOB NO. 13-8001 SERVICES PROVIDED TO: CITY OF PARKING UTILITY

215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET CAPITOL GARAGE RELIGHTING AND

ELECTRICAL CONTROLS UPGRADE PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST.

MADISON, WI 53703 JSD PROJECT NO.: CONTRACT NO.:

SEAL/SIGNATURE:

ALTHOUGH EVERY EFFORT HAS BEEN MADE N PREPARING THESE PLANS AND CHECKING

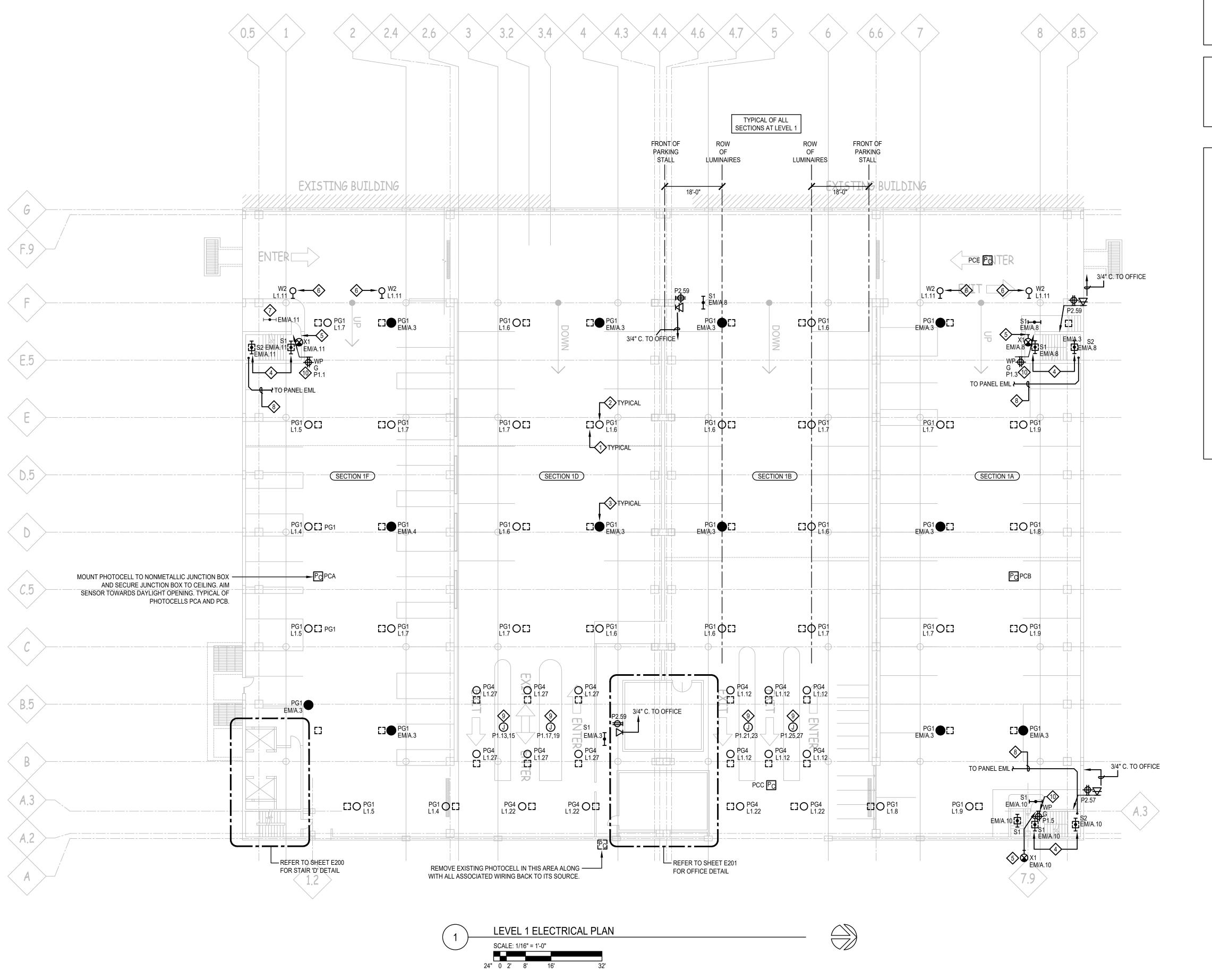
THEM FOR ACCURACY. THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME

Toll Free (800) 242-8511 Milwaukee Area (414) 259-1181

Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

LEVEL L ELECTRICAL PLAN

SHEET NUMBER:



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

#### GENERAL NOTES:

- 1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.
- 2. ALL RACEWAY AND CONDUCTORS SERVING LIGHTING FROM NEW PANELS L1 AND L2 SHALL BE NEW.

#### KEYED ELECTRICAL NOTES:

- REMOVE EXISTING HID LUMINAIRE ALONG WITH ASSOCIATED BRANCH CIRCUIT AND RACEWAY.
- 2> INSTALL NEW LED LUMINAIRE. CONNECT TO NEW BRANCH CIRCUIT INDICATED.
- NEW LED LUMINAIRE FED FROM EMERGENCY LIGHTING PANELBOARD.
  BRANCH CIRCUIT CONDUCTORS SHALL BE ROUTED WITHIN NEW
  DEDICATED RACEWAY COMPLYING WITH NEC 700.
- REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING ASSEMBLY.
- REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.
- REPLACE WALL MOUNTED LIGHT ALONG WITH ASSOCIATED BRANCH CIRCUIT RACEWAY AND CONDUCTORS.
- LINEAR LED LUMINAIRE TO REMAIN. CONNECT TO NEW BRANCH CIRCUIT CONTROL INDICATED.
- 8 INTERCEPT EXISTING STAIR LIGHTING PANEL E BRANCH CIRCUITS
  WITHIN STAIR AND RECONFIGURE TO BE SUPPLIED FROM NEW PANEL
  EMI
- BACK FEED EXISTING ATTENDANT BOOTH LOAD CENTER WITH FEEDER CIRCUIT INDICATED.
- MOUNT RECEPTACLE ABOVE DOOR IN STAIR WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.

"BUILDING RELATIONSHIPS WITH A

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

CIVIL ENGINEERING
SURVEYING & MAPPING
CONSTRUCTION SERVICES
WATER RESOURCES
PLANNING & DEVELOPMENT
TRANSPORTATION ENGINEER

TRANSPORTATION ENGINEERING

STRUCTURAL ENGINEERING

LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE

161 HORIZON DRIVE, SUITE 101

VERONA, WISCONSIN 53593

608.848.5060 PHONE 608.848.2255 FAX

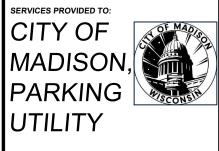
MADISON MILWAUKEE

KENOSHA APPLETON



— www.jsdinc.com —

Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996
Email: info@henneman.com
Website: http://www.henneman.com
© 2009 Henneman Engineering Inc.
JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT:
STATE STREET
CAPITOL GARAGE
RELIGHTING AND
ELECTRICAL

PROJECT LOCATION:
STATE STREET CAPITOL GARAGE
214 N CARROLL ST.
MADISON, WI 53703
JSD PROJECT NO.: 13-5576

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL

DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

DESIGN: HEI

DRAWN: HEI

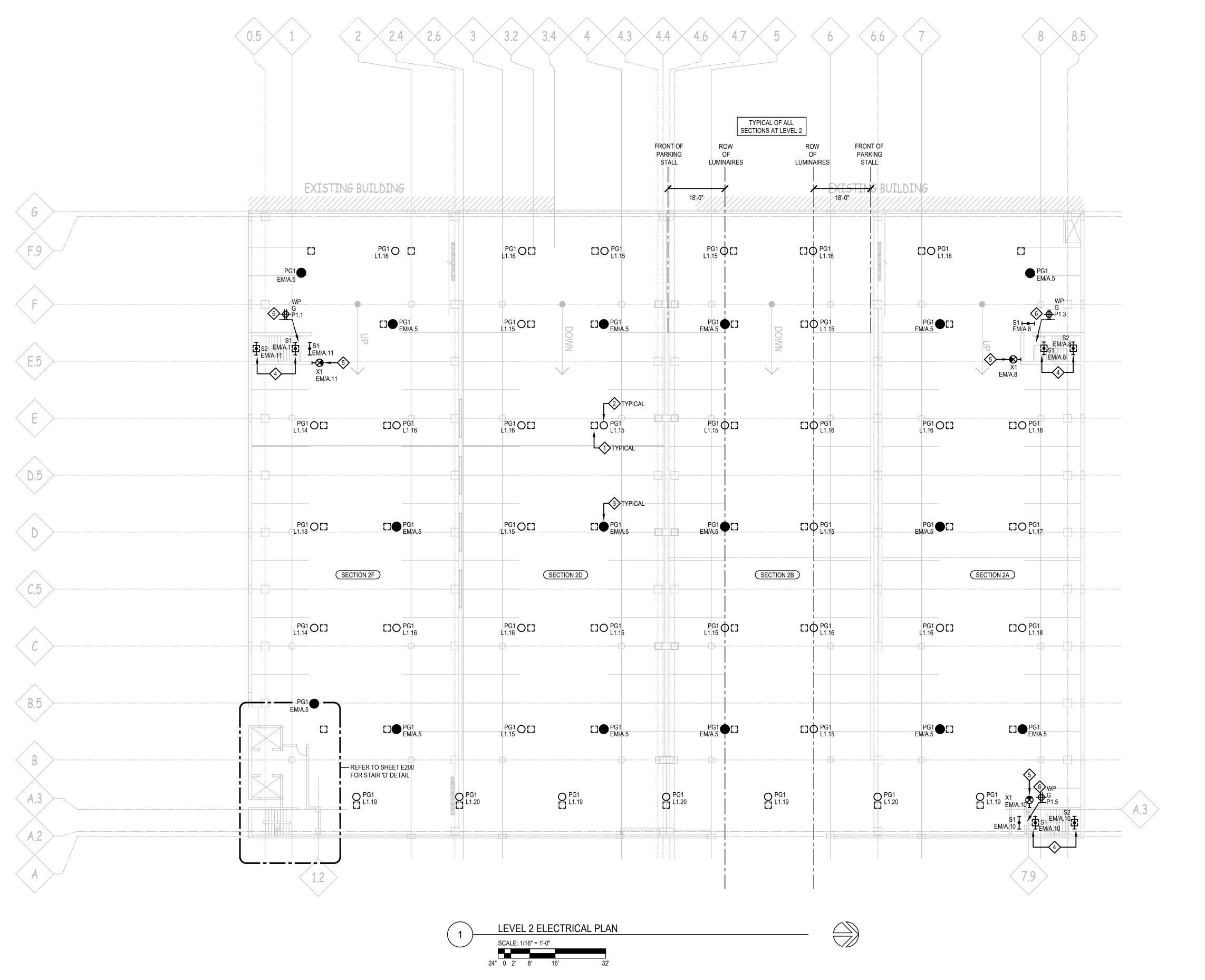
APPROVED: HEI

PLAN MODIFICATIONS: DATE



LEVEL 1
ELECTRICAL
PLAN

\_\_\_\_



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

----- ALLITEMS INDICATED BY A DARK DASHED

----- ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

#### GENERAL NOTES:

- REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.
- 2. ALL RACEWAY AND CONDUCTORS SERVING LIGHTING FROM NEW PANELS L1 AND L2 SHALL BE NEW.

#### KEYED ELECTRICAL NOTES:

- REMOVE EXISTING HID LUMINAIRE ALONG WITH ASSOCIATED BRANCH CIRCUIT AND RACEWAY.
- 2 INSTALL NEW LED LUMINAIRE. CONNECT TO NEW BRANCH CIRCUIT INDICATED.
- NEW LED LUMINAIRE FED FROM EMERGENCY LIGHTING PANELBOARD.
  BRANCH CIRCUIT CONDUCTORS SHALL BE ROUTED WITHIN NEW
  DEDICATED RACEWAY COMPLYING WITH NEC 700.
- REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING ASSEMBLY.
- REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.
- 6 MOUNT RECEPTACLE ABOVE DOOR IN STAIR WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.



"BUILDING RELATIONSHIPS WITH A

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

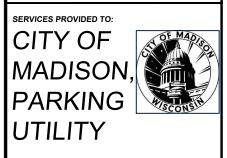
CIVIL ENGINEERING
SURVEYING & MAPPING
CONSTRUCTION SERVICES
WATER RESOURCES
PLANNING & DEVELOPMENT
TRANSPORTATION ENGINEERING
STRUCTURAL ENGINEERING
LANDSCAPE ARCHITECTURE
MADISON REGIONAL OFFICE

TRANSPORTATION ENGINEERING
STRUCTURAL ENGINEERING
LANDSCAPE ARCHITECTURE
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
608.848.5060 PHONE 608.848.2255 FAX
MADISON MILWAUKEE
KENOSHA APPLETON

www.jsdinc.com



Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996
Email: info@henneman.com
Website: http://www.henneman.com
© 2009 Henneman Engineering Inc.
JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT:
STATE STREET
CAPITOL GARAGE
RELIGHTING AND
ELECTRICAL
CONTROLS UPGRADE

PROJECT LOCATION:
STATE STREET CAPITOL GARAGE
214 N CARROLL ST.
MADISON, WI 53703
JSD PROJECT NO.: 13-5576

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK AND DIMENSIONS OF THEIR TRADE

DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

DESIGN: HEI
DRAWN: HEI
APPROVED: HEI

PLAN MODIFICATIONS: DATE

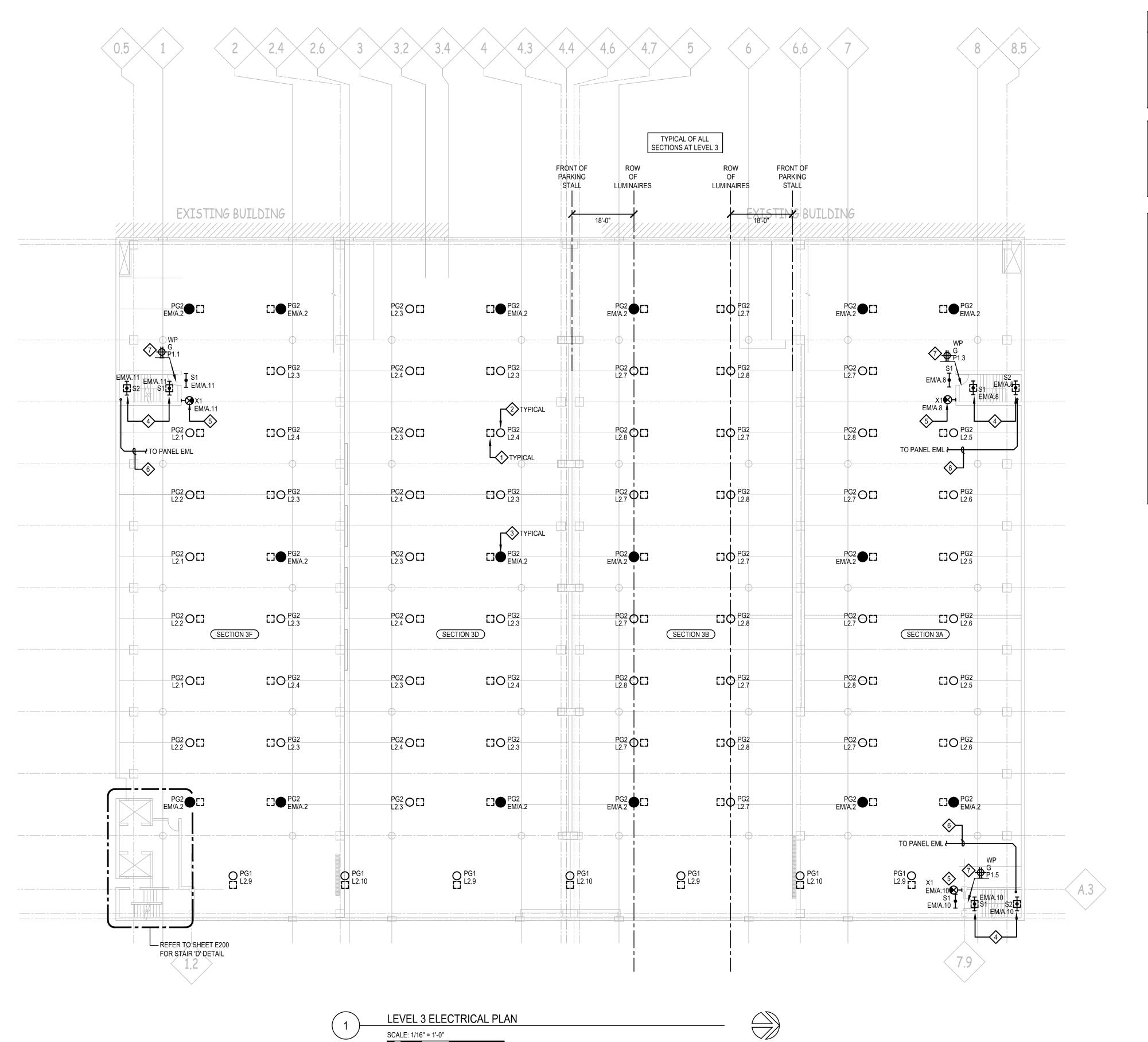
NEELDE 7 WATIIN

Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

SHEET TITLE:

LEVEL 2 ELECTRICAL PLAN

SHEET NUMBER:



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

GENERAL NOTES:

- 1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.
- ALL RACEWAY AND CONDUCTORS SERVING LIGHTING FROM NEW PANELS L1 AND L2 SHALL BE NEW.

KEYED ELECTRICAL NOTES:

- REMOVE EXISTING HID LUMINAIRE ALONG WITH ASSOCIATED BRANCH CIRCUIT AND RACEWAY.
- INSTALL NEW LED LUMINAIRE. CONNECT TO NEW BRANCH CIRCUIT INDICATED.
- NEW LED LUMINAIRE FED FROM EMERGENCY LIGHTING PANELBOARD.
  BRANCH CIRCUIT CONDUCTORS SHALL BE ROUTED WITHIN NEW
  DEDICATED RACEWAY COMPLYING WITH NEC 700.
- REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING ASSEMBLY.
- REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.
- 6 INTERCEPT EXISTING STAIR LIGHTING PANEL E BRANCH CIRCUITS WITHIN STAIR AND RECONFIGURE TO BE SUPPLIED FROM NEW PANEL EML.
- MOUNT RECEPTACLE ABOVE DOOR IN STAIR WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.

"BUILDING RELAT

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE

· Engineers · Surveyers · Planne

THROUGH TRUST, QUALITY AND EXPERIENT
CIVIL ENGINEERING
SURVEYING & MAPPING
CONSTRUCTION SERVICES
WATER RESOURCES

PLANNING & DEVELOPMENT
TRANSPORTATION ENGINEERING
STRUCTURAL ENGINEERING
LANDSCAPE ARCHITECTURE
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
608.848.5060 PHONE 608.848.2255 FAX
MADISON MILWAUKEE

Henneman Engineering

Madison:
1232 Fourier Drive Suite 101

Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996
Email: info@henneman.com
Website: http://www.henneman.com
© 2009 Henneman Engineering Inc.
JOB NO. 13-8001

SERVICES PROVIDED TO:

CITY OF

MADISON,

PARKING

UTILITY

215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT:
STATE STREET
CAPITOL GARAGE
RELIGHTING AND
ELECTRICAL

PROJECT LOCATION:
STATE STREET CAPITOL GARAGE
214 N CARROLL ST.
MADISON, WI 53703

13-5576

SIGNATURE:

SEAL/SIGNATURE:

JSD PROJECT NO.: CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE
IN PREPARING THESE PLANS AND CHECKING
THEM FOR ACCURACY, THE CONTRACTOR
AND SUBCONTRACTORS MUST CHECK ALL

THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

DESIGN: HEI

DEAWN: HEI

DRAWN: HEI
APPROVED: HEI
PLAN MODIFICATIONS:

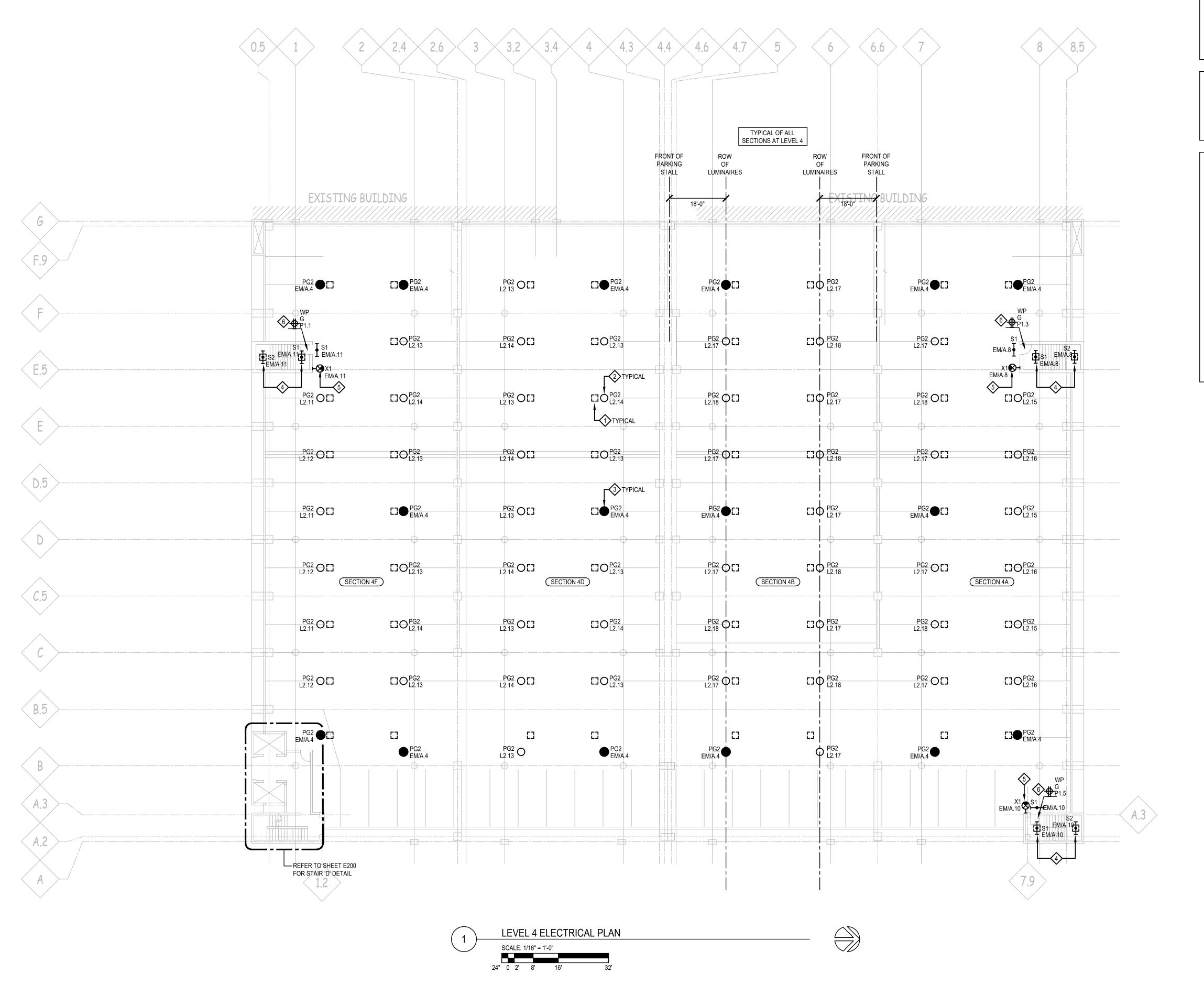
Toll Free (800) 242-8511

Milwaukee Area (414) 259-1181 Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

HEET TITLE:

LEVEL 3 ELECTRICAL PLAN

SHEET NUMBER:



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

---- ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

#### **GENERAL NOTES:**

1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.

2. ALL RACEWAY AND CONDUCTORS SERVING LIGHTING FROM NEW PANELS L1 AND L2 SHALL BE NEW.

#### KEYED ELECTRICAL NOTES:

REMOVE EXISTING HID LUMINAIRE ALONG WITH ASSOCIATED BRANCH CIRCUIT AND RACEWAY.

2 INSTALL NEW LED LUMINAIRE. CONNECT TO NEW BRANCH CIRCUIT INDICATED.

NEW LED LUMINAIRE FED FROM EMERGENCY LIGHTING PANELBOARD. BRANCH CIRCUIT CONDUCTORS SHALL BE ROUTED WITHIN NEW

DEDICATED RACEWAY COMPLYING WITH NEC 700.

REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING ASSEMBLY.

REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.

MOUNT RECEPTACLE ABOVE DOOR IN STAIR WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.

• Engineers • Surveyers • Planne

"BUILDING RELATIONSHIPS WITH A

COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE" • CIVIL ENGINEERING

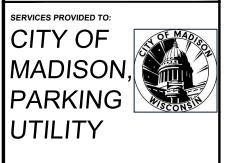
• SURVEYING & MAPPING • CONSTRUCTION SERVICES WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX MADISON MILWAUKEE

KENOSHA APPLETON

**—** www.jsdinc.com **—** 



**Madison:** 1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 T 608.833.7000 F 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT: STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL

CONTROLS UPGRADE PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703

13-5576

SEAL/SIGNATURE:

JSD PROJECT NO.: CONTRACT NO.:

IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR

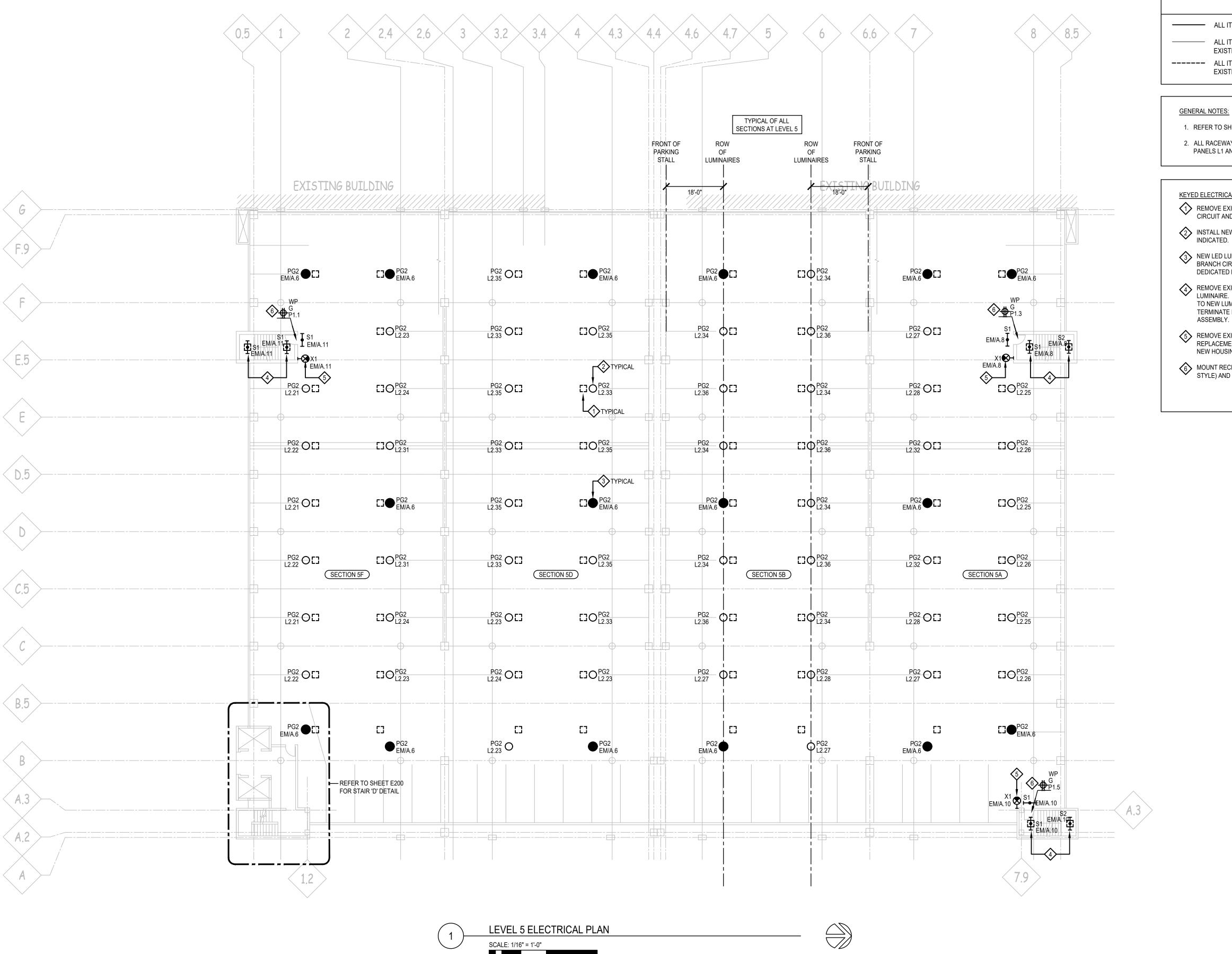
AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

APPROVED: HEI



www.DiggersHotline.com

LEVEL 4 ELECTRICAL PLAN



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

---- ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.

2. ALL RACEWAY AND CONDUCTORS SERVING LIGHTING FROM NEW PANELS L1 AND L2 SHALL BE NEW.

KEYED ELECTRICAL NOTES:

REMOVE EXISTING HID LUMINAIRE ALONG WITH ASSOCIATED BRANCH CIRCUIT AND RACEWAY.

2 INSTALL NEW LED LUMINAIRE. CONNECT TO NEW BRANCH CIRCUIT INDICATED.

NEW LED LUMINAIRE FED FROM EMERGENCY LIGHTING PANELBOARD. BRANCH CIRCUIT CONDUCTORS SHALL BE ROUTED WITHIN NEW DEDICATED RACEWAY COMPLYING WITH NEC 700.

REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING

REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.

MOUNT RECEPTACLE ABOVE DOOR IN STAIR WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.

SURVEYING & MAPPING CONSTRUCTION SERVICES WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING

CIVIL ENGINEERING

STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX MADISON MILWAUKEE

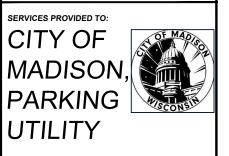
· Engineers • Surveyers • Planne

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"



KENOSHA APPLETON 

1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL

CONTROLS UPGRADE PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703

13-5576

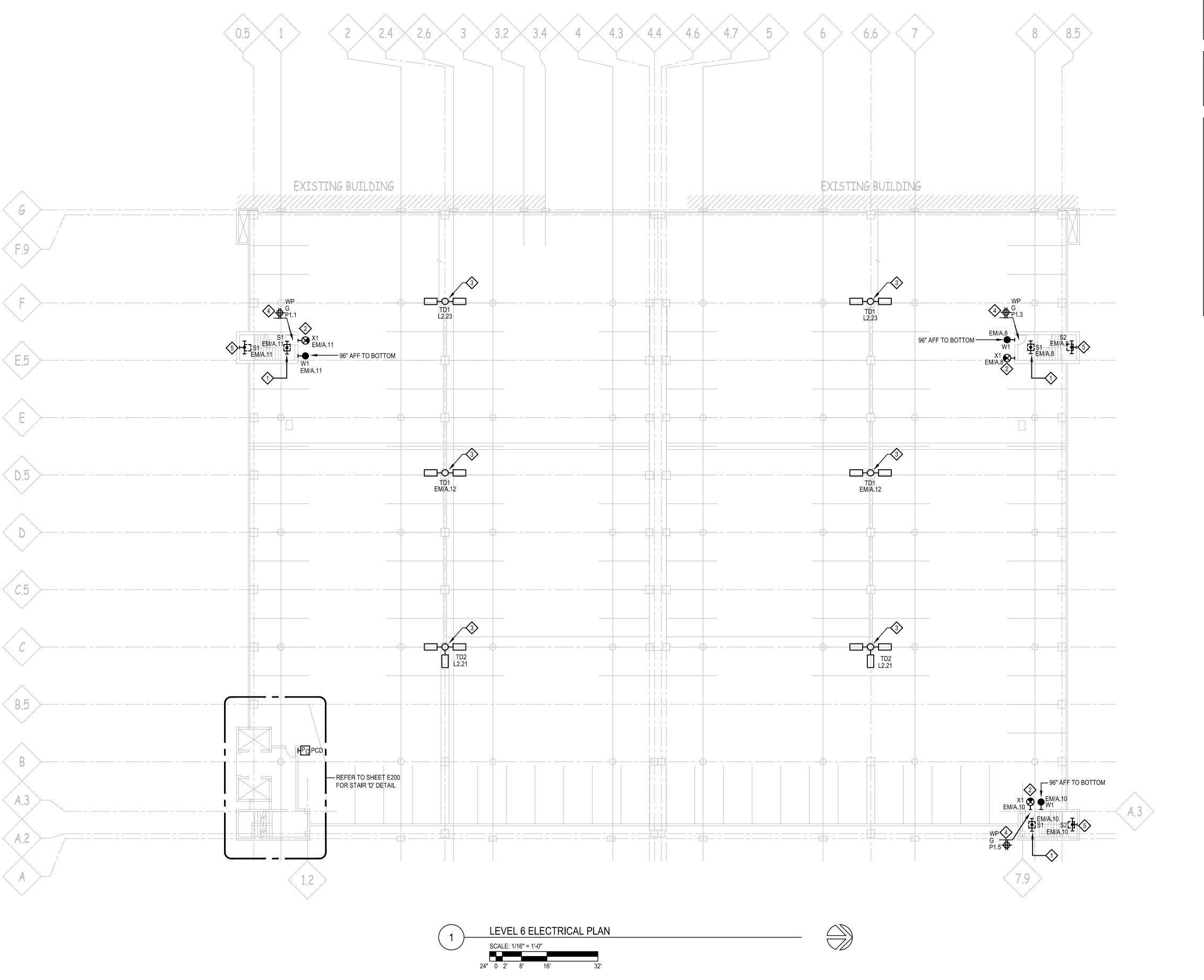
SEAL/SIGNATURE:

JSD PROJECT NO.: CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

Toll Free (800) 242-8511 Milwaukee Area (414) 259-1181 Hearing Impaired TDD (800) 542-2289 www.DiggersHotline.com

LEVEL 5 ELECTRICAL PLAN



ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

— — — ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.

#### **GENERAL NOTES:**

1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.

#### KEYED NEW WORK NOTES:

- REMOVE EXISTING HID LUMINAIRE AND INSTALL NEW LED LINEAR LUMINAIRE. PROVIDE NEW RACEWAY FROM NEAREST JUNCTION BOX TO NEW LUMINAIRE LOCATION. ASSUME 20 LINEAR FEET FOR BIDDING. TERMINATE NEW RACEWAY DIRECTLY ON LUMINAIRE HOUSING ASSEMBLY.
- REMOVE EXISTING EXIT SIGN AND INSTALL NEW EXIT SIGN AS DIRECT REPLACEMENT. RECONFIGURE FLEXIBLE RACEWAY CONNECTION INTO NEW HOUSING ASSEMBLY AND MAKE FINAL WIRING CONNECTION.
- INSTALL NEW POLE WITH ATTACHED LIGHTING TO EXISTING CONCRETE BASE AND ANCHOR BOLTS. REVIEW DETAIL ON E500 FOR EXISTING ANCHOR BOLT PATTERN. PROVIDE NEW POLE WITH BASE PLATE MATCHING EXISTING CONDITION.
- MOUNT RECEPTACLE ABOVE DOOR IN STAIRS WITH COVER (CAST IN-USE STYLE) AND PADLOCK HASP.
- WALL MOUNTED ABOVE INTERMEDIATE LANDING AT 8'-0". EXTEND CEILING MOUNTED CIRCUIT TO WALL LOCATION.

JSD professional

\*\*BUILDING RELATIONSHIPS WITH A
COMMITMENT TO CLIENT SATISFACTION
THROUGH TRUST, QUALITY AND EXPERIENCE"

CIVIL ENGINEERING
SURVEYING & MAPPING
CONSTRUCTION SERVICES
WATER RESOURCES
PLANNING & DEVELOPMENT
TRANSPORTATION ENGINEERING
STRUCTURAL ENGINEERING
LANDSCAPE ARCHITECTURE
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
608.848.5060 PHONE ■ 608.848.2255 FAX



Madison:
1232 Fourier Drive, Suite 101
Madison, Wisconsin 53717-1960
T 608.833.7000 F 608.833.6996
Email: info@henneman.com
Website: http://www.henneman.com

© 2009 Henneman Engineering Inc.
JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT:
STATE STREET
CAPITOL GARAGE
RELIGHTING AND
ELECTRICAL
CONTROLS UPGRADE

PROJECT LOCATION:
STATE STREET CAPITOL GARAGE
214 N CARROLL ST.
MADISON, WI 53703
JSD PROJECT NO.: 13-5576

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL

AND SUBCONTRACTORS MUST CHECK ALL
DETAIL AND DIMENSIONS OF THEIR TRADE
AND BE RESPONSIBLE FOR THE SAME.

DESIGN: HEI
DRAWN: HEI
APPROVED: HEI

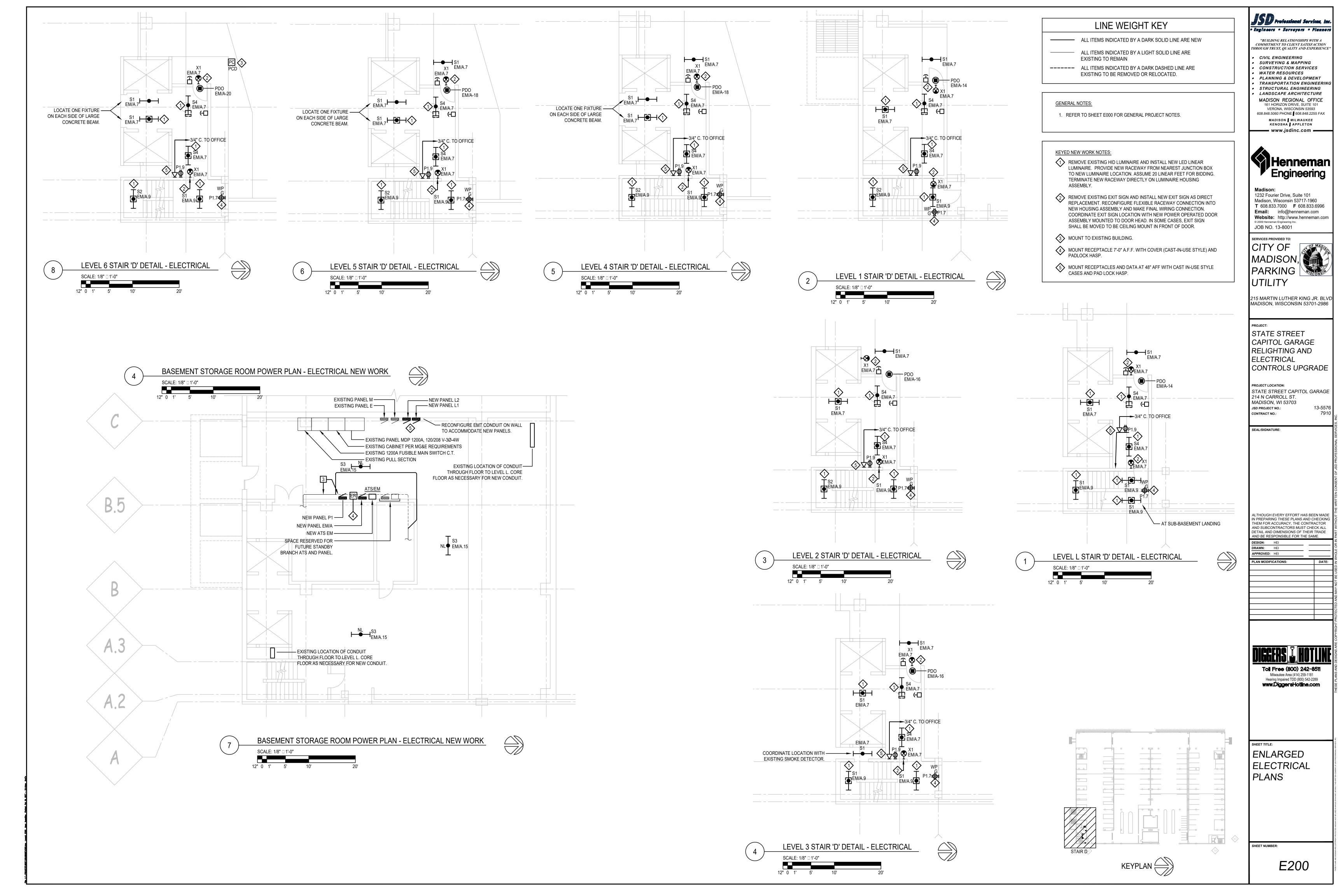
N MODIFICATIONS:

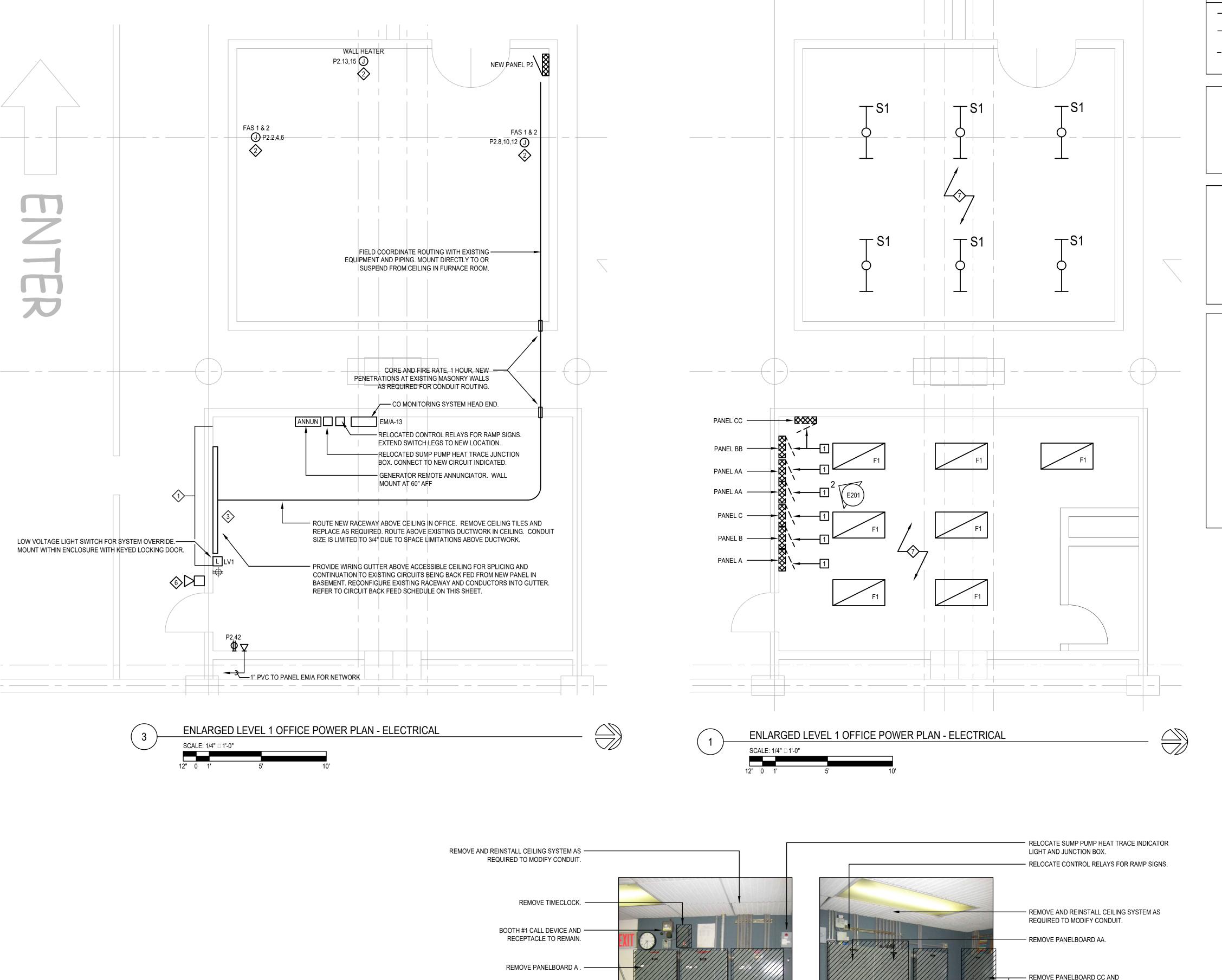
Tol Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

SHEET TITLE:

LEVEL 6 ELECTRICAL PLAN

SHEET NUMBER:





REMOVE PANELBOARD B AND -

ASSOCIATED CONTACTOR.

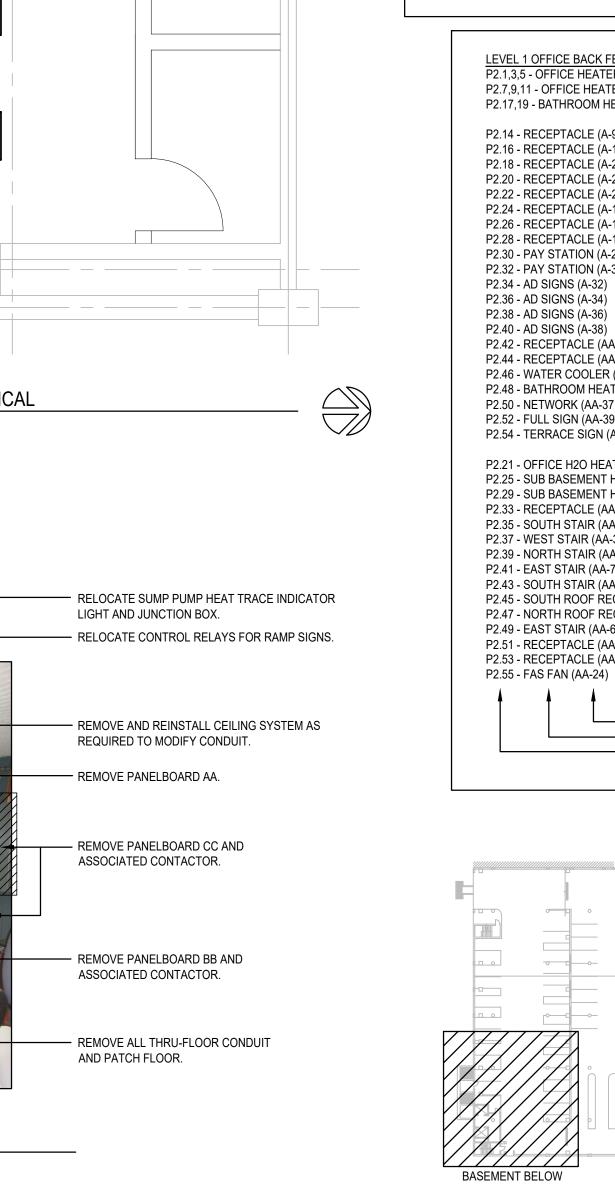
REMOVE PANELBOARD C AND —— ASSOCIATED CONTACTOR.

AND PATCH FLOOR.

NO SCALE

LEVEL 1 OFFICE SOUTH ELEVATION - ELECTRICAL DEMOLITION

REMOVE ALL THRU-FLOOR CONDUIT ·





ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW

ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN

----- ALL ITEMS INDICATED BY A DARK DASHED LINE ARE

EXISTING TO BE REMOVED OR RELOCATED.

#### **GENERAL NOTES:**

- 1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.
- 2. ANY DAMAGE, CAUSED BY CONSTRUCTION, TO THE EXISTING CEILING SYSTEM WITHIN THE OFFICE SHALL BE REPAIRED AT THE ELECTRICAL CONTRACTORS EXPENSE.

#### **KEYED DEMOLITION NOTES:**

- 1 REMOVE PANELBOARD AND ASSOCIATED CONTACTOR. REFER TO RISER DIAGRAM FOR FEEDER AND BRANCH CIRCUIT MODIFICATIONS.
- 2 ALL LIGHTING AND DEVICES TO REMAIN UNLESS NOTED OTHERWISE.
- 3 ELECTRICAL CONTRACTOR SHALL SUBCONTRACT WITH A PLUMBING CONTRACTOR FOR WATER PIPING RECONFIGURATION. EXISTING 1" WATER PIPE, WITH INSULATION, SHALL BE CUT AND EXTENDED AS SHOWN TO PROVIDE NEC CLEARANCE ABOVE ELECTRICAL EQUIPMENT.

#### KEYED NEW WORK NOTES:

- NO ELECTRICAL EQUIPMENT, DEVICES OR CONDUIT ON THIS WALL BELOW CEILING ON OFFICE SIDE. FUTURE WINDOWS TO BE INSTALLED.
- BACK FEED EXISTING EQUIPMENT DISCONNECTS WITH CIRCUITS INDICATED.
- 3 IN ADDITION TO THE BACK FEED CIRCUITS NOTED IN THE LEVEL 1 OFFICE BACK FEED CIRCUIT SCHEDULE, PROVIDE 10 SPARE BRANCH CIRCUITS IN THE GUTTER FOR UNSPECIFIED USE.
- 4 UL924 SWITCHING RELAY DEVICE FOR CONTROL TO TOP DECK EMERGENCY LIGHTING CIRCUIT. REFER TO DETAIL ON E500.
- PROVIDED 120V CONTROL CIRCUIT TO EACH LIGHTING PANEL FROM PANEL P1.
- 6 CO MONITORING ALARM HORN.
- ONE FOR ONE REPLACEMENT OF EXISTING LIGHTING FIXTURES AS SHOWN. CONNECT TO EXISTING CONTROLS.

LEVEL 1 OFFICE BACK FEED CIRCUIT SCHEDULE: P2.1,3,5 - OFFICE HEATER (AA2-31,33,35) P2.7,9,11 - OFFICE HEATER (AA2-37,39,41) P2.17,19 - BATHROOM HEATER (AA2-10,12)

P2.14 - RECEPTACLE (A-9) P2.16 - RECEPTACLE (A-11)

P2.18 - RECEPTACLE (A-23) P2.20 - RECEPTACLE (A-25) P2.22 - RECEPTACLE (A-27) P2.24 - RECEPTACLE (A-14)

P2.26 - RECEPTACLE (A-16) P2.28 - RECEPTACLE (A-18) P2.30 - PAY STATION (A-28) P2.32 - PAY STATION (A-30)

P2.34 - AD SIGNS (A-32) P2.36 - AD SIGNS (A-34) P2.38 - AD SIGNS (A-36)

P2.40 - AD SIGNS (A-38) P2.42 - RECEPTACLE (AA-27)

P2.44 - RECEPTACLE (AA-29) P2.46 - WATER COOLER (AA-25) P2.48 - BATHROOM HEATER (AA-35)

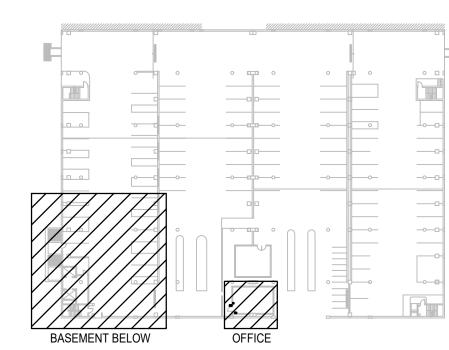
P2.50 - NETWORK (AA-37) P2.52 - FULL SIGN (AA-39) P2.54 - TERRACE SIGN (AA-41)

P2.21 - OFFICE H2O HEATER (AA2-1) P2.25 - SUB BASEMENT HEAT TAPE (AA2-7) P2.29 - SUB BASEMENT HEAT TAPE (AA2-9) P2.33 - RECEPTACLE (AA2-6) P2.35 - SOUTH STAIR (AA-1)

P2.37 - WEST STAIR (AA-3) P2.39 - NORTH STAIR (AA-5) P2.41 - EAST STAIR (AA-7) P2.43 - SOUTH STAIR (AA-9)

P2.45 - SOUTH ROOF RECEPT. (AA-11) P2.47 - NORTH ROOF RECEPT. (AA-8) P2.49 - EAST STAIR (AA-6) P2.51 - RECEPTACLE (AA-18) P2.53 - RECEPTACLE (AA-20)

> — EXISTING CIRCUIT DESCRIPTION --- NEW CIRCUIT



"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

• CIVIL ENGINEERING • SURVEYING & MAPPING CONSTRUCTION SERVICES • WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX



MADISON | MILWAUKEE

KENOSHA APPLETON

1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com JOB NO. 13-8001

ERVICES PROVIDED TO:

CITY OF PARKING **S** UTILITY

215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

PROJECT: STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL

CONTROLS UPGRADE PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703 13-5576 JSD PROJECT NO.:

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE N PREPARING THESE PLANS AND CHECKING

THEM FOR ACCURACY. THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME. DRAWN: HEI

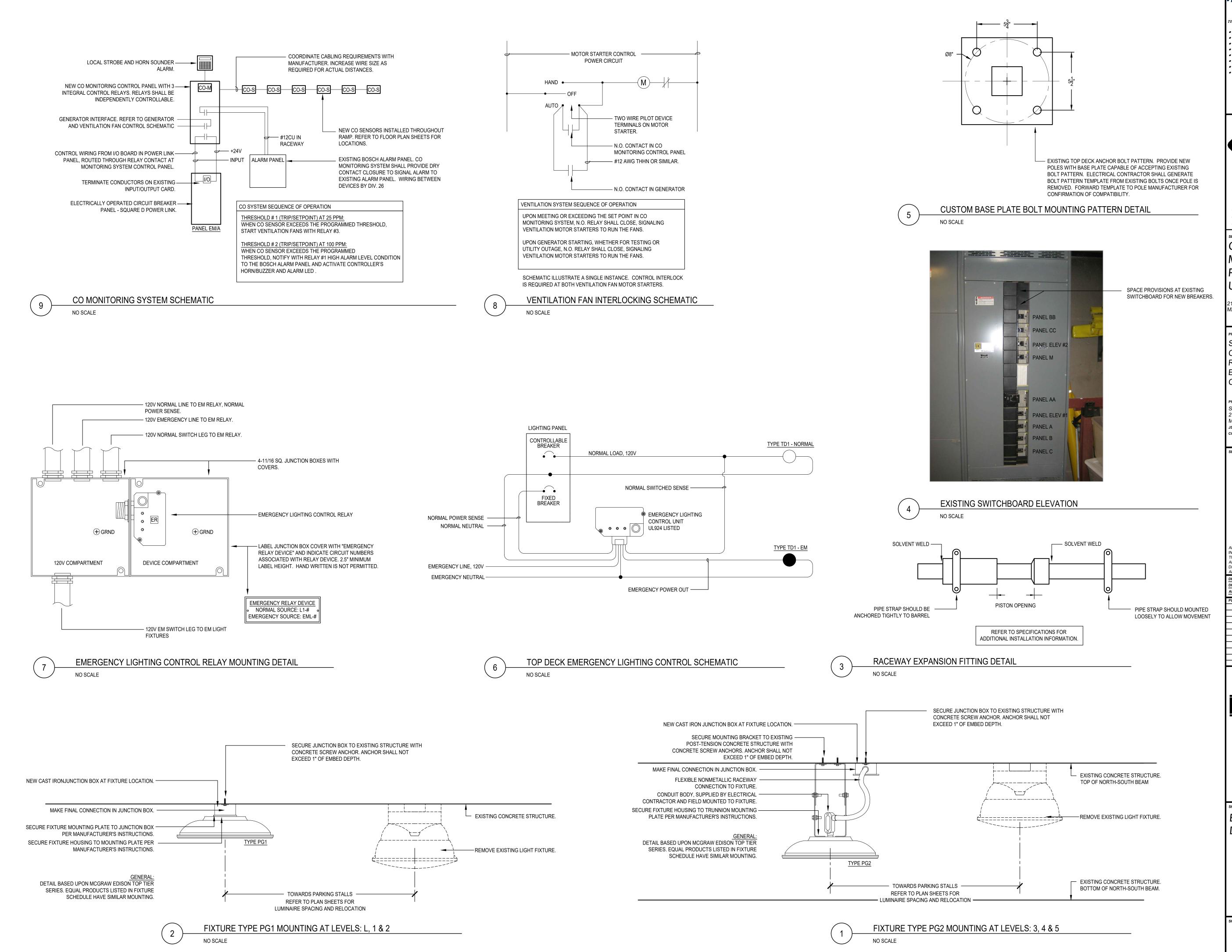
APPROVED: HEI PLAN MODIFICATIONS:

Toll Free (800) 242-8511

Milwaukee Area (414) 259-1181 learing Impaired TDD (800) 542-2289

www.DiggersHotline.com

**ENLARGED ELECTRICAL PLANS** 



"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION "THROUGH TRUST, QUALITY AND EXPERIENCE"

CIVIL ENGINEERING SURVEYING & MAPPING CONSTRUCTION SERVICES WATER RESOURCES PLANNING & DEVELOPMENT

TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX MADISON MILWAUKEE KENOSHA APPLETON



— www.jsdinc.com —

1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com JOB NO. 13-8001

SERVICES PROVIDED TO: CITY OF

215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET **CAPITOL GARAGE** RELIGHTING AND ELECTRICAL **CONTROLS UPGRADE** 

PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703 JSD PROJECT NO.: CONTRACT NO.:

SEAL/SIGNATURE:

ALTHOUGH EVERY EFFORT HAS BEEN MADE

N PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY. THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME. PLAN MODIFICATIONS:

Toll Free (800) 242-8511 Milwaukee Area (414) 259-1181 Hearing Impaired TDD (800) 542-2289

www.DiggersHotline.com

ELECTRICAL DETAILS

											LIGHT	ING FIXTURE	SCHEDULE				
(	FIXTURE					LAMP				BALLAST/DRIVER			MOUNTING			MANUFACTURER	REMARKS
	TYPE	DIFFUSER	WATTS	TYPE	TEMP	CRI	QTY	TYPE	BF	INPUT WATTS	VOLTAGE	LOCATION	CONFIGURATION	SURFACE TYPE	NAME	MODEL NUMBER	
	LED PARKING GARAGE	HIGH IMPACT													KENALL LIGHTING	TOP DECK SERIES	FURNISH WITH MOUNTING ACCESSORIES AS REQUIRED.
1	SURFACE MOUNT	HIGH PERFORMANCE	58	LED	4000K	70	6,848 LUMENS	ELD		77	120	CEILING	SURFACE	CONCRETE	McGRAW-EDISON	TT.C4.LED.E1.WQ.GM	
	WIDE DISTRIBUTION	ACRYLIC													HOLOPHANE	PLED2 SERIES	
	LED PARKING GARAGE	HIGH IMPACT													KENALL LIGHTING	TOP DECK SERIES	FURNISH WITH TRUNNION MOUNTING BRACKET PER DETAIL.
2	TRUNNION MOUNT	HIGH PERFORMANCE	58	LED	4000K	70	5,782 LUMENS	ELD		77	120	CEILING	SURFACE	CONCRETE	McGRAW-EDISON	TT.C3.LED.E1.WQ.TMB.GM	
	WIDE DISTRIBUTION	ACRYLIC													HOLOPHANE	PLED2 SERIES	
	LED PARKING GARAGE	HIGH IMPACT													KENALL LIGHTING	TOP DECK SERIES	FURNISH WITH MOUNTING ACCESSORIES AS REQUIRED.
1	SURFACE MOUNT	HIGH PERFORMANCE	34	LED	4000K	70	4,760 LUMENS	ELD		37	120	CEILING	SURFACE	CONCRETE	McGRAW-EDISON	TT.C2.LED.E1.MQ.GM	
	MEDIUM DISTRIBUTION	ACRYLIC													HOLOPHANE	PLED2 SERIES	
	RECESSED LED 2X4														FOCAL POINT	AMICA SERIES	
	ARCHITECTURAL TROFFER	RIBBED ACRYLIC	34	LED	4000K	80	4000 LUMENS	ELD		34	120	CEILING	RECESSED	ACT	METALUX	24CZ.LD4.40.UNV.L840.CD.1	
	, , , , , , , , , , , , , , , , , , , ,	1,122227,131,112			100011		1000 201112110					02.20			LITHONIA	BLT SERIES	
															EIIIIONEX	DET GENTEG	
	48" LED LINEAR ENCLOSED	IMPACT RESISTANT													KENALL LIGHTING	MLHA5 SERIES	FURNISH WITH OPTIONS AND ACCESSORIES AS REQUIRED
	WET LOCATION INDUSTRIAL	DIFFUSE	39	LED	4100K	70	2,975 LUMENS	ELD		39	120	CEILING	SURFACE	CONCRETE	HOLOPHANE	EVT4.39LED.SYM.	FOR MOUNTING ON EXISTING SURFACES WITH EXPOSED CONDUIT.
	WEI EGG/MON INDOOTMAL	POLYCARBONATE		LLD	71001	'0	2,5.5 25///2/10				120	CLILINO	JOIN AGE	OOITOILE	LUMINAIRE LIGHTING	TSL9 SERIES	TOTAL MODITING ON EXIGNING SOME MODES WITH EXICOLD COMBOIT.
+	48" LED LINEAR ENCLOSED	IMPACT RESISTANT								+					KENALL LIGHTING	MLHA5 SERIES	FURNISH WITH OPTIONS AND ACCESSORIES AS REQUIRED
	WET LOCATION INDUSTRIAL WITH	DIFFUSE	39	LED	4100K	70	2,975 LUMENS	ELD		30	120	CEILING	SURFACE	CONCRETE	HOLOPHANE	EVT4.39LED.SYM.PC.OS	FOR MOUNTING ON EXISTING SURFACES WITH EXPOSED CONDUIT.
	INTEGRAL OCCUPANCY & PHOTO SENSOR	POLYCARBONATE	39	LLD	41001	10	2,373 EOWENO	LLD		39	120	CLILING	SURI ACL	CONCRETE	LUMINAIRE LIGHTING	TSL9 SERIES	FURNISH WITH COLD WEATHER OCCUPANCY AND DAYLIGHT SENSORS
	48" LED LINEAR ENCLOSED	POLICARBONATE													LOWINAIRE LIGHTING	13L9 SERIES	FURNISH WITH COLD WEATHER OCCUPANCY AND DATEIGHT SENSORS
											400	OF IL INIO	OUDEAGE	CONODETE	LICLOPHANE	EVTA OFRICO	
	WET LOCATION INDUSTRIAL		-					_			120	CEILING	SURFACE	CONCRETE	HOLOPHANE	EVT4 SERIES	
	EXISTING TO BE RELOCATED	INDA OT DECICEANT													LISTANA LI LIGUETINO	MILLAS OFFICE	FURNISH WITH ORTIONS AND ACCESSORIES AS DESCRIPED
	48" LED LINEAR ENCLOSED	IMPACT RESISTANT					0.075								KENALL LIGHTING	MLHA5 SERIES	FURNISH WITH OPTIONS AND ACCESSORIES AS REQUIRED
	WET LOCATION INDUSTRIAL WITH	DIFFUSE	39	LED	4100K	70	2,975 LUMENS	ELD		39	120	CEILING	SURFACE	CONCRETE	HOLOPHANE	EVT4.39LED.SYM.OS	FOR MOUNTING ON EXISTING SURFACES WITH EXPOSED CONDUIT.
_	INTEGRAL OCCUPANCY	POLYCARBONATE													LUMINAIRE LIGHTING	TSL9 SERIES	FURNISH WITH COLD WEATHER OCCUPANCY SENSORS.
	LED EVITERIOR AREA SITE														LITUONIA.	D OFFICE	THE UTING AT 100 DECIDED
	LED EXTERIOR AREA SITE														LITHONIA	D SERIES	TWO HEADS AT 180 DEGREES
	POLE MOUNTED	CLEAR GLASS	210	LED	4100K	70	16,330 LUMENS	ELD		420	120	TOP DECK	SURFACE	POLE	GARDCO	P32.A2.2.4.210LA.NW.UNV.BLP	
	TYPE 4 DISTRIBUTION - 2 HEAD						PER HEAD								McGRAW-EDISON	VTS LED SERIES	
	LED EXTERIOR AREA SITE														LITHONIA	D SERIES	THREE HEADS AT 90 DEGREES
	POLE MOUNTED	CLEAR GLASS	210	LED	4100K	70	16,330 LUMENS	ELD		630	120	TOP DECK	SURFACE	POLE	GARDCO	P32.A2.3.4.210LA.NW.UNV.BLP	
	TYPE 4 DISTRIBUTION - 3 HEAD						PER HEAD								McGRAW-EDISON	VTS LED SERIES	
	LED EXTERIOR WALL PACK														LITHONIA	D SERIES	
	FULL CUTOFF OPTIC	CLEAR GLASS	35	LED	4100K	70	3,135 LUMENS	ELD		35	120	WALL	SURFACE	CONCRETE	GARDCO	121.MT.35LA-350.NW.UNV.BLP	
	SURFACE MOUNT														McGRAW-EDISON	IST TRAPEZOID SERIES	
	LED EXTERIOR WALL PACK	MIICROPRISMATIC															
:	SURFACE MOUNT	DIFFUSION GLASS	37	LED	4000K	75	2,688 LUMENS	ELD		37	120	WALL	SURFACE	CONCRETE	RAB LIGHTING	SLIM37N	
	LED JELLY JAR WALLPACK W/ GUARD	CLEAR GLASS	11	LED	4000K	70	757 LUMENS	ELD		11	120	WALL	SURFACE	CONCRETE	HUBBELL	VWGL-1	
	LED EXIT SIGN	IMPACT RESISTANT													LITHONIA	LV SERIES	
1	SINGLE FACE	POLYCARBONATE	2.7	LED				_			120	WALL	SURFACE	CONCRETE	SURE-LITES	UX SERIES	
1	WHITE HOUSING, RED LETTERS										1		1	1	ISOLITE	MAX SERIES	

A. REFER TO INTERIOR AND EXTERIOR LIGHTING SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FIXTURE, BALLAST OR DRIVER REQUIREMENTS AND INSTALLATION REQUIREMENTS.

B. NOTED LUMEN QUANTITY IS DELIVERED LUMEN OUTPUT

C. NOTED DIMMING RANGE INDICATES MINIMUM PARAMETERS. LUMINAIRES WITH GREATER DIMMING RANGE ARE PERMITED.

D. UNLESS NOTED AS CAMPUS STANDARD, FIXTURES NOTED IN THIS SCHEDULE ARE TO ESTABLISH A BASIS OF DESIGN. PRODUCTS OTHER THAN THOSE LISTED IN THE SCHEDULE ARE PERMITTED SUBJECT TO MEETING THE REQUIREMENTS OF THE SCHEDULED FIXTURE'S QUALITY, PERFORMANCE, ENERGY, AESTHETICS, DIMENSIONS, ETC...

ELD - ELECTRONIC LED DRIVER OR POWER SUPPLY

EPS - ELECTRONIC PROGRAM START FLUORESCENT BALLAST SD - DUAL CIRCUIT (SWITCH LEG) STEP DIMMING BALLAST OR DRIVER: 0/50/100

DIM - DIMMING

0-10V - ZERO TO TEN VOLT DC DIMMING FEATURE

FDB - FLUORESCENT DIMMING BALLAST

GWB - GYPSUM WALL BOARD, DRYWALL

ACT - ACOUSTICAL CEILING TILE IN SUSPENDED GRID SYSTEM, ACCESSIBLE LMNS - LUMENS

BF - BALLAST FACTOR

ECO - LUTRON ECOSYSTEM COMPATIBLE BALLAST

CMU - CONCRETE MASONRY BLOCK

	LOW VOLTAGE SENSOR CONTROL SCHEDULE													
PLAN DESIGNATION	LOCATION / DESCRIPTION	INPUT DEVICE	DEVICE FUNCTION	SEQUENCE OF OPERATION	ASSIGNED CHANNEL(S)									
PCA	LEVEL 1 PARKING, SECTION 1F / DAYLIGHT ZONE	PHOTOSENSOR	TOGGLE ON/OFF	SO1	ON/OFF: TBD									
PCB	LEVEL 1 PARKING, SECTION 1A / DAYLIGHT ZONE	PHOTOSENSOR	TOGGLE ON/OFF	SO1	ON/OFF: TBD									
PCC	LEVEL 1 EAST ENTRY	PHOTOSENSOR	TOGGLE ON/OFF	SO1	ON/OFF: TBD									
PCD	LEVEL 1 WEST ENTRY	PHOTOSENSOR	TOGGLE ON/OFF	SO1	ON/OFF: TBD									
PCE	TOP DECK	PHOTOSENSOR	TOGGLE ON/OFF	SO1	ON/OFF: TBD									

### SEQUENCE OF OPERATION:

TBD - TO BE DETERMINED

SO1: PHOTOSENSOR SENSOR SHALL CONTINOUSLY MONITOR THE TOTAL SPACE ILLUMINATION LEVEL. THE SENSOR SHALL SIGNAL THE LIGHTING CONTROL SYSTEM TO AUTOMATICALLY ADJUST ELECTRIC LIGHTS AS SETPOINT THRESHOLDS ARE ACHIEVED. THE TARGET ILLUMINATION LEVEL IS 3 FOOTCANDLES, MEASURED AT THE FLOOR WITH ILLUMINANCE METER. WHEN ILLUMINATION LEVELS FALL BELOW THE ON SETPOINT THRESHOLD OF 3 FOOTCANDLES FOR 60 SECONDS, THE SENSOR SHALL SIGNAL THE LIGHTING CONTROL SYSTEM TO CLOSE THE ASSIGNED BREAKERS, TURNING LIGHTS ON. WHEN THE ILLUMINATION LEVELS RISE ABOVE THE OFF SETPOINT THRESHOLD OF 3 FOOTCANDLES FOR 5 MINUTES, THE SENSOR SHALL SIGNAL THE LIGHTING CONTROL SYSTEM TO OPEN THE ASSIGNED BREAKERS, TURNING LIGHT OFF. ILLUMINANCE LEVELS INDICATED ARE ACTUAL MEASURED LEVELS AND MAY NOT CORRESPOND WITH THE DAYLIGHT SENSOR READINGS. SENSOR SHALL BE CALIBRATED TO COINCIDE WITH ACTUAL LEVELS INDICATED.

LOW VOLTAGE SWITCH STATION CONTROL SCHEDULE												
PLAN DESIGNATION	LOCATION / DESCRIPTION	BUTTON	BUTTON FUNCTION	ASSIGNED CHANNEL(S)								
lv1	PARKING OFFICE / DAYLIGHT OVERRIDE	1	SCENE RECALL	TBD								



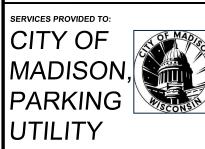
"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

CIVIL ENGINEERING SURVEYING & MAPPING • CONSTRUCTION SERVICES • WATER RESOURCES PLANNING & DEVELOPMENT • TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX



MADISON MILWAUKEE KENOSHA APPLETON 

Madison: 1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com
Website: http://www.henneman.com JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL CONTROLS UPGRADE

PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703 13-5576 JSD PROJECT NO.:

SEAL/SIGNATURE:

CONTRACT NO.:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.



ELECTRICAL SCHEDULES

BRANCH PANEL NAME	VOLTAGE PHASE WIRE	BUS SIZE MAIN OCP	AIC RATING	BRANCH PANEL NAME	VOLTAGE PHASE	WIRE BUS SIZE MAIN OCP	AIC RATING	BRANCH PANEL NAME	VOLTAGE PHASE WIRE	BUS SIZE MAIN OCP	AIC RATING
FM/B	120/ 208 3 4	100 A MLO	22,000	EM/A	120/ 208 3	4 225 A MLO	22.000	P1	120/ 208 3 4	225 A MLO	22,000
2.11.13			,				,	42 SPACE TUB	CODE: L=LIGHTING, R=RECEPTACLES		•
CONTROLLABLE BREAKER TYPE	CODE: L=LIGHTING, R=RECEPTACLE, M=	·	FLUSH MOUNTING TRIM	CONTROLLABLE BREAKER TYPE	· ·	CODE: L=LIGHTING, R=RECEPTACLE, M=MOTOR, E=EQUIPMENT SURFACE MOUNTING TRIM  COPPER GROUND BAR			·	SURFACE MOUNTING TRIM	
NEMA 1	COPPER GROUND E	BAR		NEMA 1	<del>-  </del>	OPPER GROUND BAR		NEMA 1	COPPER GROUNI	DRAK	
LOAD	CODE BKR CKT# A B	C CKT# BKR POLE CODE	LOAD	LOAD	CODE BKR CKT# A	B C CKT# BKR POLE	LOAD	LOAD	CODE BKR CXT# A B	C CKT# BKR CODE	LOAD
EXHAUST FAN JOHNSON ST.	M 3 20 1 1,321 1,200	2 20 1 M	GENSET BLOCK HEATER	LEVEL L LIGHTING	L 1 20 1 907 1,292	2 20 1 1	LEVEL 3 LIGHTING	RECEPTACLES	R 1 20 1 1,260	2 20 3 M	LEVEL L-A SUMP PUMPS
-	M 3 1,321 1,200	4 20 1 M	GENSET BATT CHARGER	LEVEL 1 LIGHTING	L 1 20 3	1,292 984 4 20 1 I		RECEPTACLES	R 1 20 3 1,260	4 M	
-	M 5	1,321	GENSET BATT HEATER	LEVEL 2 LIGHTING	L 1 20 5	1,600   1,292   6   20   1   1	LEVEL 5 LIGHTING	RECEPTACLES	R 1 20 5	1,260	
EXHAUST FAN	M 3 20 7 1,321		SPARE	ELEVATOR LOBBY LIGHTING	L 1 20 7 819			RECEPTACLES	R 1 20 7 1,260	6 M	LEVEL L-A SUMP ROOM
DAYTON ST.	M - 9 1,321	8 20 1 R	SPARE	SE STAIR LIGHTING	L 1 20 9	702 8 20 1 I		RECEPTACLES	R 1 20 9 1,260	8 20GFI 1 M	HEAT TRACE (GFCI)
-	M 11	1,321 20 1 R	SPARE	SW STAIR LIGHTING	L 1 20 11	702 10 20 1 L	. NE STAIR LIGHTING	SPARE	M 1 20 11	10 M	L-A SUMP ROOM
SPARE	R 1 20 13	12 20 1 R	SPARE	CO MONITORING	R 1 20 13	840 12 20 1 L	TOP DECK LIGHTING	BOOTH #1	M 2 20 13	12 20 1 M	L-F SWEEPER ROOM
SPARE	R 1 20 15	14 20 1 R	SPARE	STORAGE BASEMENT LIGHTING	1 20 15	14 20 1	POWER DOOR OP. L, 1		M 15	14 20 1 M	SPARE
		16 20 1 R				1,200 16 20 1	POWER DOOR OP. 2, 3			16 20 1	
SPARE	R 1 20 17	18 20 1 R	SPARE	SPARE	1 20 17	1,200 18 20 1	POWER DOOR OP. 4, 5	BOOTH #2	M 2 20 17	18 20 1	SPARE
SPARE	R 1 20 19	20 20 1 R	SPARE	SPARE	1 20 19 600	20 20 1	POWER DOOR OP. 6	-	M 19	20 20 1	SPARE
SPARE	R 1 20 21	22 20 1 R	SPARE	SPARE	1 20 21	22 20 1	SPARE	BOOTH #3	M 2 20 21	22 20 1	SPARE
SPARE	R 1 20 23	24 20 1 R	SPARE	SPARE	1 20 23	24 20 1	SPARE	-	M 23	24 20 1	SPARE
SPARE	R 1 20 25	26 20 1 R	SPARE	SPARE	1 20 25	26 20 1	SPARE	BOOTH #4	M 2 20 25	26 20 1	SPARE
SPARE	R 1 20 27		SPARE	SPARE	1 20 27				M 27		SPARE
SPARE	R 1 20 29		SPARE	SPARE	1 20 29		SPARE	SPARE	1 20 29	28 20 1	SPARE
		30 20 1 R		PROVISION	31	30 20 1	SPARE	SPARE	1 20 31	30 20 1	SPARE
				PROVISION	33	32	PROVISION	SPARE	1 20 33	32 20 1	SPARE
				PROVISION	35	34	PROVISION	SPARE	1 20 35	34 20 1	SPARE
				PROVISION	37	36	PROVISION	SPARE	1 20 37	36 20 1	SPARE
				PROVISION	3,842	38 60 3 N	/ PANEL EM/B			38 20 1	SPARE
						3,842 40 N		SPARE	1 20 39	40 20 1	
				PROVISION	41	3,842 42 N		SPARE	1 20 41	42 20 1	SPARE
3,842	PHASE A RECEPT-VA @ per NEC	- TCL VA	11,526	9,362	PHASE A RECEPT-VA @		27,512	2,520	PHASE A RECEPT-VA @ per NEC		6,300
3,842	PHASE B LIGHTS-VA @ 100%	- DEMAND VA	11,526	8,830	PHASE B LIGHTS-VA @		26,124	2,520	PHASE B LIGHTS-VA @ 100%	- DEMAND VA	6,300
3,842	PHASE C MOTOR-VA @ 100%	11,526 HI-PH CONN. A	32	9,320	PHASE C MOTOR-VA @	100% 11,526 HI-PH CONN. A	78	1,260	PHASE C MOTOR-VA @ 95%	- HI-PH CONN. A	21
11,526	TCL EQUIPMNT-VA @ 100%	- DEMAND A	32	27,512	TCL EQUIPMNT-VA	@   100% -   DEMAND A	73	6,300	TCL KITCHEN-VA @ 100%	- DEMAND A	18

9,320	PHASE C MOTOR-VA @	100%   11,526   HI-PH COI	NN. A	1,260	PHASE C	MOTOR-VA @	95%	- HI-PH CONN. A	21	W. 211211 12111			,	00 20 1 2	+	——————————————————————————————————————
27,512	TCL EQUIPMNT-VA @			6.300	TCI	KITCHEN-VA @		- DEMAND A	18	WEST STAIR RECEPT	R 1 20	) 37			AD SIGN A2, B1	
,	1.2-				1.05	1	1,0070	52/11571	.0	& POWER VENT				38 20 1 E		
										NORTH STAIR RECEPT	R 1 20	) 39			AD SIGN B1	—— I
											10 1 20	, 33		40 20 4 5	- AD GIGIN BT	
BRANCH PANEL NAME	VOLTAGE PHASE		AIN OCP AIC RATING	BRANCH PANEL NAME	VOLTA		WIRE	BUS SIZE MAIN OCP	AIC RATING	& POWER VENT				40 20 1 E	+	
L2	120/ 208 3	4 100 A	MLO 22,000	L1	120/ 208	3	4	100 A MLO	22,000	EAST STAIR RECEPT	R 1 20	) 41			RECEPT OFFICE	
CONTROLLABLE BREAKER TYPE	CODE: L=LIGHTING, R=	RECEPTACLE, M=MOTOR, E=EQUIPMEN	IT SURFACE MOUNTING TR	RIM CONTROLLABLE BREAKER TYPE	CC	DDE: L=LIGHTING, R=R	RECEPTACLE, M=	MOTOR, E=EQUIPMENT	SURFACE MOUNTING TRIM	& POWER VENT				42 20 1 R		
NEMA 1	CC	OPPER GROUND BAR		NEMA 1	-		PPER GROUND E			RECEPT SOUTH STAIR	R 1 20	) 43	1		RECEPT OFFICE	
			<del>-   -   -   -   -   -   -   -   -   -  </del>	TALIMAT I	1.11	1 1				NEGEL LOGGILLOW	11 1 20	, 10		44 20 4 D	-	
LOAD	응   공   BKR   옷   A	│ в │ с │ ៜ │ вк	R [주] 음 LOAD	LOAD		ᇪᅵᆽᅵᅟᇪ		c   옷   <sub>BKR</sub>  질 일	LOAD					44 20 1 R		
20/18			R [유[유]	II LOAD	유 듀  '''	```  #		○   #   M\   E   B	LOAD	RECEPT SOUTH ROOF	R 1 20	) 45			WATER COOLER	
LEVEL 3 LIGHTING	L 1 20 1 251		+ + +	LEVEL L LIGHTING	L 1 2	0 1 907		<del>-                                    </del>						46 20 1 E		
LEVEL 3 LIGITING	251	2 20	) 1 L LEVEL 3 LIGHTING	LEVEL E LIGITING		902	-	2 20 1 1	LEVEL L LIGHTING	RECEPT NORTH ROOF	R 1 20	) 47			BATHROOM HEATER	
LEVEL 3 LIGHTING	L 1 20 3	1,066		LEVEL L LIGHTING	L 1 2		902		LLVLL L LIGITINO					48 20 1 E		
LEVEL 3 LIGITING	20 0		) 1 L LEVEL 3 LIGHTING	LEVEL E EIGHTING		.0 3	169	4 20 1 L	LEVEL 1 LIGHTING	l———————			,	40 20 1 L		
LEVEL 3 LIGHTING	L 1 20 5	251		LEVEL 1 LIGHTING	L 1 2	0 5	109	246	LEVEL I LIGHTING	RECEPT EAST STAIR	R 1 20	)   49			NETWORK	
ELVEL 3 LIGITINO	L 1 20 3	251 6 20	) 1 L LEVEL 3 LIGHTING	LEVEL I LIGITING		.0 3	-	820 6 20 1 L	LEVEL 1 LIGHTING	PENTHOUSE LIGHTS				50 20 1 R		
LEVEL 3 LIGHTING	L 1 20 7 1,066		T L LEVEL 3 LIGHTING	LEVEL 1 LICHTING	1 1 2	0 7 920		620 6 20 1 L	LEVEL I LIGHTING	RECEPT OFFICE	R 1 20	) 51			FULL SIGN CARROLL	
LEVEL 3 LIGHTING	656		) 1 L LEVEL 3 LIGHTING	LEVEL 1 LIGHTING	L 1 2		4	9 20 4 1	LEVEL 4 LICHTING					52 20 1 E	1	
LEVEL 3 LICHTING			) 1 L LEVEL 3 LIGHTING	LEVEL 4 HOUTING		169	1 240	8 20 1 L	LEVEL 1 LIGHTING	DECEDT MESULPOSIT		\	L	92   20   1   E	D TERRA 01 01011	
LEVEL 3 LIGHTING	L 1 20 9	328 246 10 20	) 1 L LEVEL 3 LIGHTING	LEVEL 1 LIGHTING	L 1 2	0 9	246 492	10 20 1	LEVEL A LIQUEINO	RECEPT MECH ROOM	R 1 20	0   53	<u></u>		P TERRACE SIGN	
LEVEL A LIQUITING	1 1 20 141		LEVEL 3 LIGHTING	LEVEL A HOUTING		0 11	492	10 20 1 L	LEVEL 1 LIGHTING	& OUTSIDE OFFICE			_	54 20 1 E		
LEVEL 4 LIGHTING	L 1 20 11	251		LEVEL 1 LIGHTING	L 1 2	0 11		658	LEVEL ALIQUEINO	FAS FAN	M 1 20	) 55			OVERHEAD ENTRANCE /	/
LEVEL ALIQUITING	1 1 20 42 1000	251 12 20	) 1 L LEVEL 4 LIGHTING	LEVEL OLIOUTING		0 40 00	ᆨ	522 12 20 1 L	LEVEL 1 LIGHTING	ll .			1	56 20 1 E	EXIT SIGNS	
LEVEL 4 LIGHTING	L 1 20 13 1,066			LEVEL 2 LIGHTING	L 1 1 2	0 13 92	4		LEVEL OLIGITATIO	DAY CTATIONS	1 1 1 22	)   F7	1			
LEVEL ALIQUEINO	656	14 20		LEVEL ALIQUEDIC		164	1 001	14 20 1 L	LEVEL 2 LIGHTING	PAY STATIONS	1 20	57			SPARE	
LEVEL 4 LIGHTING	L 1 20 15	251	15/5/4/10/5/10	LEVEL 2 LIGHTING	L 1 2	0 15	984							58 20 1		
LEVEL ALIQUEDIO	11110010	251 16 20	) 1 L LEVEL 4 LIGHTING				984	16 20 1 L	LEVEL 2 LIGHTING	PAY STATIONS	1 20	59			SPARE	
LEVEL 4 LIGHTING	L 1 20 17	1,066	<del></del>	LEVEL 2 LIGHTING	L 1 2	0 17		92						60 20 1	1	
LEVEL ALIQUETING	1 1 1 00 10 200	656 18 20	1 L LEVEL 4 LIGHTING				_	164 18 20 1 L	LEVEL 2 LIGHTING	SPARE	1 20	) 61	լ		SPARE	
LEVEL 4 LIGHTING	L 1 20 19 328			LEVEL 2 LIGHTING	L 1 2		4			T SPAKE	1   20	)   01	-		- SPAKE	1 1
	328	20 20	) 1 L LEVEL 4 LIGHTING			246	+	20 20 1 L	LEVEL 2 LIGHTING					62 20 1		
LEVEL 5 LIGHTING	L 1 20 21	251	<del></del>	TOP DECK LIGHTING	L 1 2	0 21				SPARE	1 20	)   63	[		SPARE	
	<del>                                      </del>	251 22 20	1 L LEVEL 5 LIGHTING					22 20 1 L	LEVEL 1 WEST ENTRY	ll .				64 20 1	1	
LEVEL 5 LIGHTING	L 1 20 23	527	<del></del>	TOP DECK LIGHTING	L 1 2	0 23	<u> </u>			SPARE	1 20	) 65			SPARE	
		579 24 20	) 1 L LEVEL 5 LIGHTING				_	24 20 1	SPARE	J SPANL	1 20	7 03			SFAIL	
LEVEL 5 LIGHTING	L 1 20 25 251		<del></del>	EM RELAY - FIXED	L 1 2	0 25	_						,	66 20 1		
	251		1 L LEVEL 5 LIGHTING				1	26 20 1	SPARE	SPARE	1 20	) 67			SPARE	
LEVEL 5 LIGHTING	L 1 20 27	450		LEVEL 1 LIGHTING	L 1 2	0 27	462							68 20 1		
		385 28 20	) 1 L LEVEL 5 LIGHTING					28 20 1	SPARE	SPARE	1 20	) 69			SPARE	
LEVEL 5 LIGHTING	L 1 20 29	328		SPARE	1 2	0 29			<del></del>	JFARE	1   20	, 09	<del></del>	70 00 4	- SFARE	1 1
		246 30 20	) 1 L LEVEL 5 LIGHTING				_ [	30 20 1	SPARE					70 20 1		
LEVEL 5 LIGHTING	L 1 20 31 154			SPARE	1 2	0 31	_			SPARE	1   20	) 71			SPARE	[
	154	32 20	) 1 L LEVEL 5 LIGHTING					32 20 1	SPARE	ll .				72 20 1		
LEVEL 5 LIGHTING	L 1 20 33	385		SPARE	1 2	0 33				SPARE	1 20	) 73	ן		SPARE	$\overline{}$
		462 34 20	1 L LEVEL 5 LIGHTING					34 20 1	SPARE	]		-   '	1	74 50 3	1	
LEVEL 5 LIGHTING	L 1 20 35	462		SPARE	1 2	0 35						<del>                                     </del>		14 50 3	+	
		385 36 20					_ [	36 20 1	SPARE	SPARE	1 20	) 75				[
SPARE	1 20 37		SPARE	SPARE	1 2	0 37	_						[	76		
		38 20						38 20 1	SPARE	SPARE	1 20	) 77				
SPARE	1 20 39		SPARE	SPARE	1 2	0 39				<b>  </b>	2	+ + +	<u> </u>	78	1	1
		40 20						40 20 1	SPARE			.	լ ∟	10	+	
SPARE	1 20 41		SPARE	SPARE	1 2	0 41				SPARE	3 60	79	]		SPARE	1 1
		42 20	1					42 20 1	SPARE	ll .				80 50 3		1 1
5,412	PHASE A RECEPT-VA @		15,647	3,628	PHASE A	RECEPT-VA @	per NEC	- TCL VA	10,369		_	81				
4,982		125% 19,559 DEMAND	VA 19,559	4,239	PHASE B	LIGHTS-VA @	125%	12,961 DEMAND VA	12,961	11		+		82	1	
5,253	PHASE C MOTOR-VA @	100% - HI-PH CO		2,502	PHASE C	MOTOR-VA@	100%	- HI-PH CONN. A	35			<del>     </del>		02	+	
15,647	TCL EQUIPMNT-VA @	2 100% - DEMAND		10,369	TCL	EQUIPMNT-VA @		- DEMAND A	36			83				
1					1.02		, ,			'				84		
										0	PHASE A	RECEPT-VA @	per NEC	- TCL VA	0	$\overline{}$
										-			<u> </u>		<u> </u>	<b>——</b>
										0	PHASE B		125%	- DEMAND VA	0	
										0	PHASE C	MOTOR-VA @	100%	- HI-PH CONN. A	0	
										0	TCL	EQUIP-VA @	100%	- DEMAND A	0	
										Ľ ,	1.05		.00,0	52.00 U.S. / C		

AIC RATING

22,000

SURFACE MOUNT TRIM

LOAD

FAS #1 & #2

FAS #3 & #4

RECEPT D-2

RECEPT F101

RECEPT F-L WEST

RECEPT D-3, F-2

RECEPT A-2

FLASHING STOP SIGN

BOOTH 1 CALL

DEVICE RECEPT

RECEPT A002, A016

PAY STATION 1

PAY STATION 2

AD SIGN D1, F1

AD SIGN D1, F1

MLO

2 20 3 M

4 -- -- M

6 -- -- M

8 20 3 M

10 -- -- M

14 20 1 R

26 20 1 E

28 20 1 R

30 20 1 E 32 20 1 E 34 20 1 E

36 20 1 E

C CKT# BKR CODE

VOLTAGE PHASE WIRE BUS SIZE MAIN OCP

CODE: L=LIGHTING, R=RECEPTACLES, M=MOTORS, D=DORM

3 4 225A

COPPER GROUND BAR

120/ 208

CODE CODE

M 3 20 1

M 3 20 7

M 2 30 13

M 2 20 17

R 1 30GFI 21

R 1 20GFI 25

BRANCH PANEL NAME

P2

84 SPACE TUB

NEMA 1

LOAD

OFFICE HEATER

OFFICE HEATER

MECH ROOM

HEATER

OFFICE BATHROOM

HEATER

OFFICE WATER HEATER

FAS EXHAUST HEAT TAPE (GFCI)

SUB BASEMENT HEAT TAPE

(GFCI)

SUB BASEMENT HEAT TAPE

(GFCI)

RECEPT MECH ROOM

ALARM AND NETWORK SOUTH STAIR RECEPT

& POWER VENT

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE" • CIVIL ENGINEERING SURVEYING & MAPPING • CONSTRUCTION SERVICES WATER RESOURCES PLANNING & DEVELOPMENT TRANSPORTATION ENGINEERING STRUCTURAL ENGINEERING LANDSCAPE ARCHITECTURE MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101 VERONA, WISCONSIN 53593 608.848.5060 PHONE 608.848.2255 FAX MADISON MILWAUKEE



KENOSHA APPLETON 

Madison: 1232 Fourier Drive, Suite 101 Madison, Wisconsin 53717-1960 **T** 608.833.7000 **F** 608.833.6996 Email: info@henneman.com Website: http://www.henneman.com JOB NO. 13-8001



215 MARTIN LUTHER KING JR. BLVD MADISON, WISCONSIN 53701-2986

STATE STREET CAPITOL GARAGE RELIGHTING AND ELECTRICAL CONTROLS UPGRADE

PROJECT LOCATION: STATE STREET CAPITOL GARAGE 214 N CARROLL ST. MADISON, WI 53703 13-5576 JSD PROJECT NO.: CONTRACT NO.:

SEAL/SIGNATURE:

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

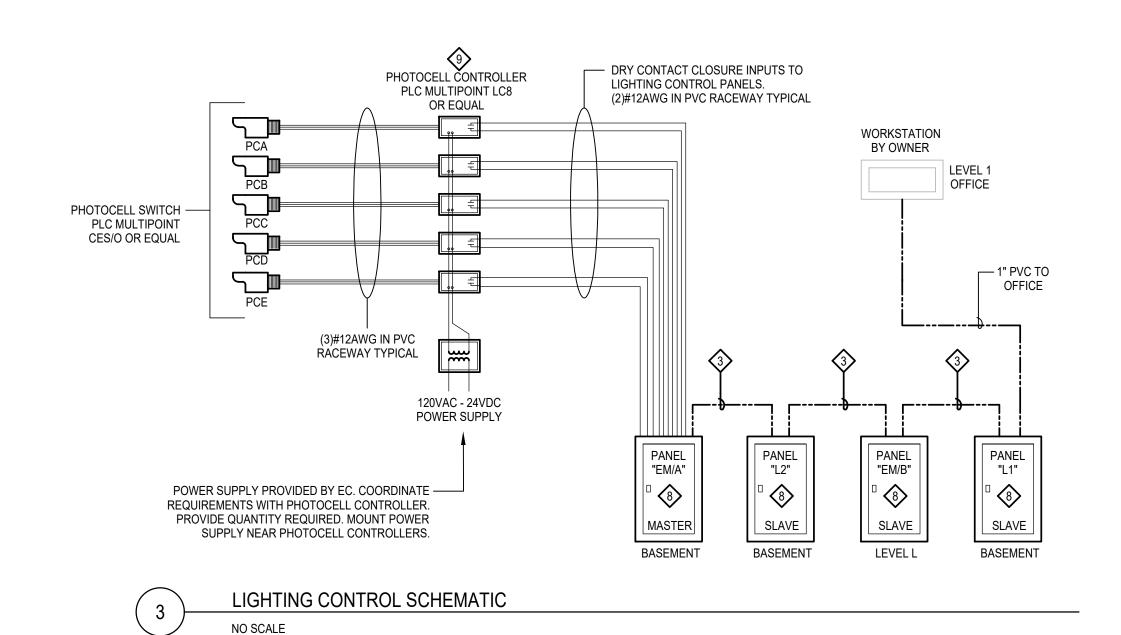
Toll Free (800) 242-8511

Milwaukee Area (414) 259-1181

Hearing Impaired TDD (800) 542-2289

www.DiggersHotline.com

ELECTRICAL PANEL SCHEDULES



MLO

**EXISTING** 

MAIN SWITCHBOARD

400/3 KA

SPARE

150/3 KA

PNL M

125/3 KA

ELEV. #1

125/3 KA

ELEV. #2

100/3 KA

SPARE

NO SCALE

120/208 V-3Ø-4W

1200A

100/3 KA

SPARE

100/3 FA

PNL L1

100/3 FA

PNL L2

100/3 FA

SPARE

225/3 KA PNL P1 10

ELECTRICAL RISER DIAGRAM - NEW WORK

PANEL

"M"

EXISTING

PANEL

EXISTING

MG&E C.T. CABINET

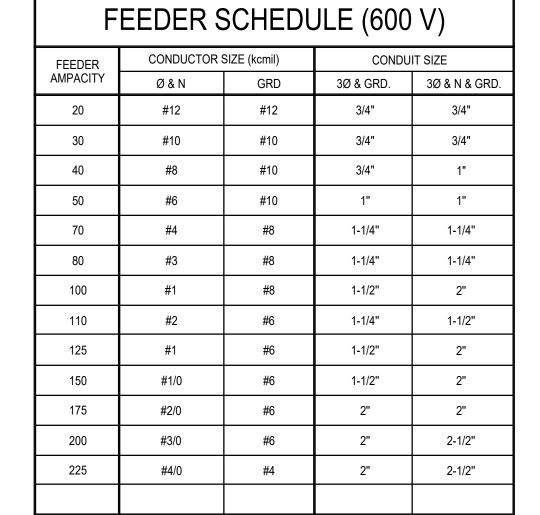
PULL STATION

MAIN SERVICE

DISCONNECT

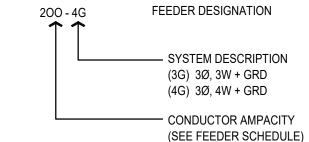
1200/3 FUSED 1000A

KRP-C



#### GENERAL NOTES:

- 1. THE ABOVE FEEDER SCHEDULE IS A SCHEDULE OF TYPICAL FEEDERS AND SOME SIZES MAY NOT BE UTILIZED.
- 2. ALL CONDUCTOR AMPACITIES ARE BASED ON TABLE 310-16 OF THE NEC FOR COPPER CONDUCTOR TYPE THW/THWN.
- 3. FEEDER SIZES SHOWN ON THE RISER DIAGRAM INDICATE FEEDER AMPACITIES AND DO NOT NECESSARILY CORRESPOND TO CIRCUIT BREAKER AMPACITIES. CERTAIN FEEDERS MAY BE SIZED FOR THE DERATION FACTORS REQUIRED BY CODE AND/OR ARE OVERSIZED FOR VOLTAGE DROP.
- WHERE MULTIPLE CONDUITS ARE INDICATED FOR A SINGLE FEEDER EACH CONDUIT SHALL CONTAIN AN AØ, BØ, CØ, GROUND CONDUCTOR, AND NEUTRAL CONDUCTOR.



225-4G

PANEL "P1"

MLO

42 KVA INTERRUPTING

260A, 4W, 3P ATS

OPEN TRANSITION

(100-4G)

PANEL "L1"

8

MLO

(100-4G)

PANEL

"L2"

#### KEYED NEW WORK NOTES:

- EXTEND BRANCH CIRCUITS FROM NEW PANEL P2 TO WIRING GUTTER ABOVE CEILING IN OFFICE.
- NEW FEEDER FROM MAIN SWITCHBOARD TO EMERGENCY ATS. CONNECT TO NEW BREAKER IN SWITCHBOARD.
- 3 SYSTEM NETWORK WIRING PER MANUFACTURER'S RECOMMENDATIONS.
- EMERGENCY BRANCH CIRCUITS SERVED FROM PANEL EML SHALL BE IN DEDICATED RACEWAY COMPLYING WITH NEC 700.
- NEW NATURAL GAS GENERATOR PER MGO VARIANCE FOR EMERGENCY LIGHTING AND LOADS. NOT A SEPARATELY DERIVED SYSTEM.
- 6 NEW FEEDER FROM MAIN SWITCHBOARD TO LIGHTING PANELBOARD. CONNECT TO EXISTING 100/3P CIRCUIT BREAKER VACATED BY THE REMOVAL OF PANELBOARDS B, BB, C OR CC.
- PROVIDE CABLING (PER MANUFACTURER'S REQUIREMENTS) BETWEEN GENERATOR AND REMOTE ANNUNCIATOR LOCATION. ROUTE IN 1/2"
- 8 REFER TO SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH ELECTRICALLY OPERATED CIRCUIT BREAKER
- OD LOCATE PHOTOCELL CONTROLLERS ON WALL WITHIN OFFICE, NEAR GENERATOR ANNUNCIATOR. COORDINATE REQUIRED CONDUCTOR QUANTITIES AND SIZE BASED UPON CONDUCTOR RUN LENGTH.
- INSTALL NEW CIRCUIT BREAKER WITHIN EXISTING SQUARE D SWITCHBOARD BUS PROVISION TO SUPPLY LOADS INDICATED.
- PROVIDE GENERATOR WITH PROGRAMMABLE INTERFACE MODULE CONSISTING OF NO LESS THAN 4 ADDRESSABLE RELAY OUTPUTS. REFER TO VENTILATION FAN INTERLOCKING DETAIL.
- ROUTE GENERATOR FEEDER THROUGH 12" X 12" JUNCTION BOX FOR FUTURE STANDBY BRANCH TAP. LOCATE JUNCTION BOX NEAR ATS IN

**1** 

MAIN SERVICE

DISCONNECT

1200/3 FUSED 1000A

KRP-C

1

L\_\_\_\_\_

MG&E C.T. CABINET

#### GENERAL NOTES:

- 1. REFER TO SHEET E000 FOR GENERAL PROJECT NOTES.
- 2. REFER TO SHEET E700 FOR PANELBOARD SCHEDULES.

#### LINE WEIGHT KEY

- ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW
- ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN
- ----- ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED OR RELOCATED.
- KEYED DEMOLITION NOTES:

"AA"

**EXISTING** 

120/208 V-3Ø-4W

1200A

100/3 FA

PNL BB 100/3 FA

PNL CC

PNL A

100/3 FA

PNL B

EXISTING

EXISTING

400/3 KA

PNL AA

PNL M

ELEV. #1

125/3 KA

ELEV. #2

100/3 KA

PNL C

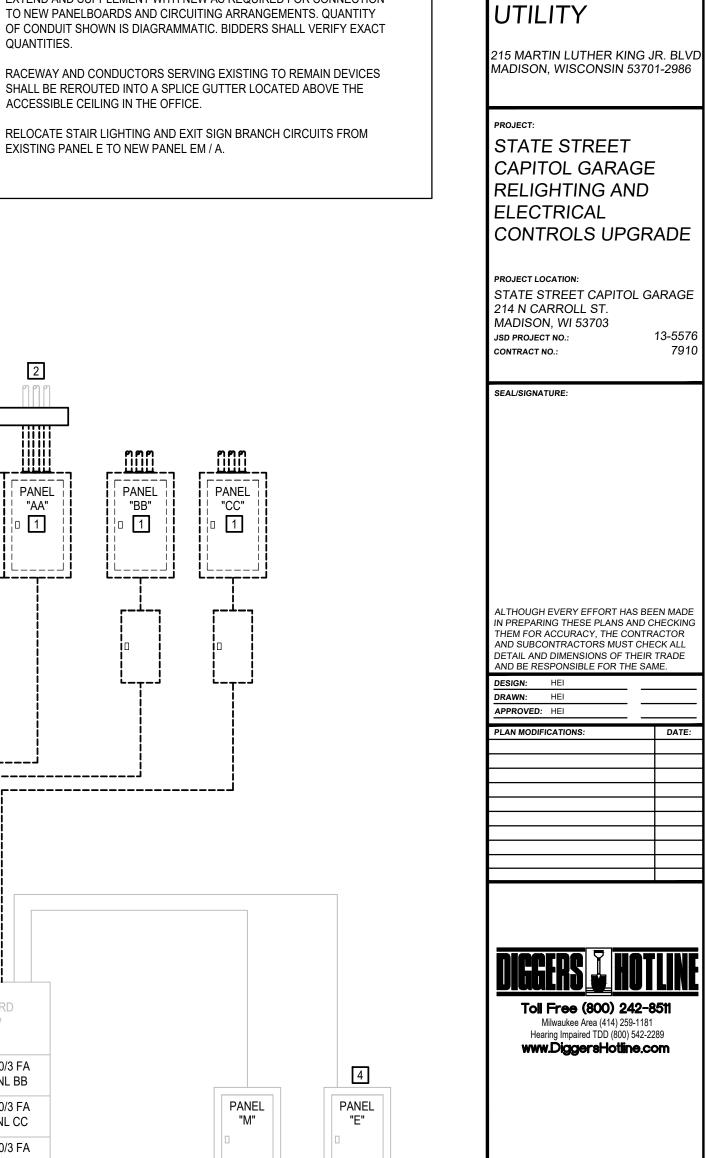
"AA"

1

"BB"

<u>|</u> 1

- 1 REMOVE PANELBOARD, ASSOCIATED CONTACTOR AND FEEDER CONDUCTORS WITH RACEWAY BACK TO MAIN SWITCHBOARD IN BASEMENT.
- 2 CONDUCTORS AND RACEWAYS SERVING EXISTING TO REMAIN BRANCH CIRCUITS ARE PERMITTED TO BE REUSED AT CONTRACTOR'S DISCRETION. ANY REUSED CONDUCTORS SHALL BE OF SUFFICIENT SIZE TO MEET VOLTAGE DROP REQUIREMENTS IDENTIFIED WITHIN THE SPECIFICATION. THE ELECTRICAL CONTRACTOR SHALL MODIFY, EXTEND AND SUPPLEMENT WITH NEW AS REQUIRED FOR CONNECTION TO NEW PANELBOARDS AND CIRCUITING ARRANGEMENTS. QUANTITY OF CONDUIT SHOWN IS DIAGRAMMATIC. BIDDERS SHALL VERIFY EXACT QUANTITIES.
- 3 RACEWAY AND CONDUCTORS SERVING EXISTING TO REMAIN DEVICES SHALL BE REROUTED INTO A SPLICE GUTTER LOCATED ABOVE THE ACCESSIBLE CEILING IN THE OFFICE.
- 4 RELOCATE STAIR LIGHTING AND EXIT SIGN BRANCH CIRCUITS FROM EXISTING PANEL E TO NEW PANEL EM / A.



"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION HROUGH TRUST, QUALITY AND EXPERIENCE

CIVIL ENGINEERING

WATER RESOURCES

SURVEYING & MAPPING CONSTRUCTION SERVICES

PLANNING & DEVELOPMENT

STRUCTURAL ENGINEERING

LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE 161 HORIZON DRIVE, SUITE 101

VERONA, WISCONSIN 53593

608.848.5060 PHONE 608.848.2255 FAX

MADISON MILWAUKEE

KENOSHA APPLETON

— www.jsdinc.com —

Engineering

1232 Fourier Drive, Suite 101

JOB NO. 13-8001

SERVICES PROVIDED TO:

PARKING |

Madison, Wisconsin 53717-1960

CITY OF

13-5576

**T** 608.833.7000 **F** 608.833.6996

Website: http://www.henneman.com

Email: info@henneman.com

TRANSPORTATION ENGINEERING

**ELECTRICAL RISER DIAGRAM - DEMOLITION** NO SCALE

**PULL STATION** 

REMOTE ANNUNCIATOR

208Y/120V - 3PH - 4W

AT STREET LEVEL

225A-3P G + 11 | 2001/120V - 3F11-60 kW/ 75 kVA NATURAL GAS

- START CONDUCTORS PER MANUFACTURER. ROUTED IN CONDUIT.

—(100-4G)-

"EM/A"

PANEL

"EM/B"

8

MLO

E800

SHEET TITLE:

RISER

DIAGRAM

ELECTRICAL