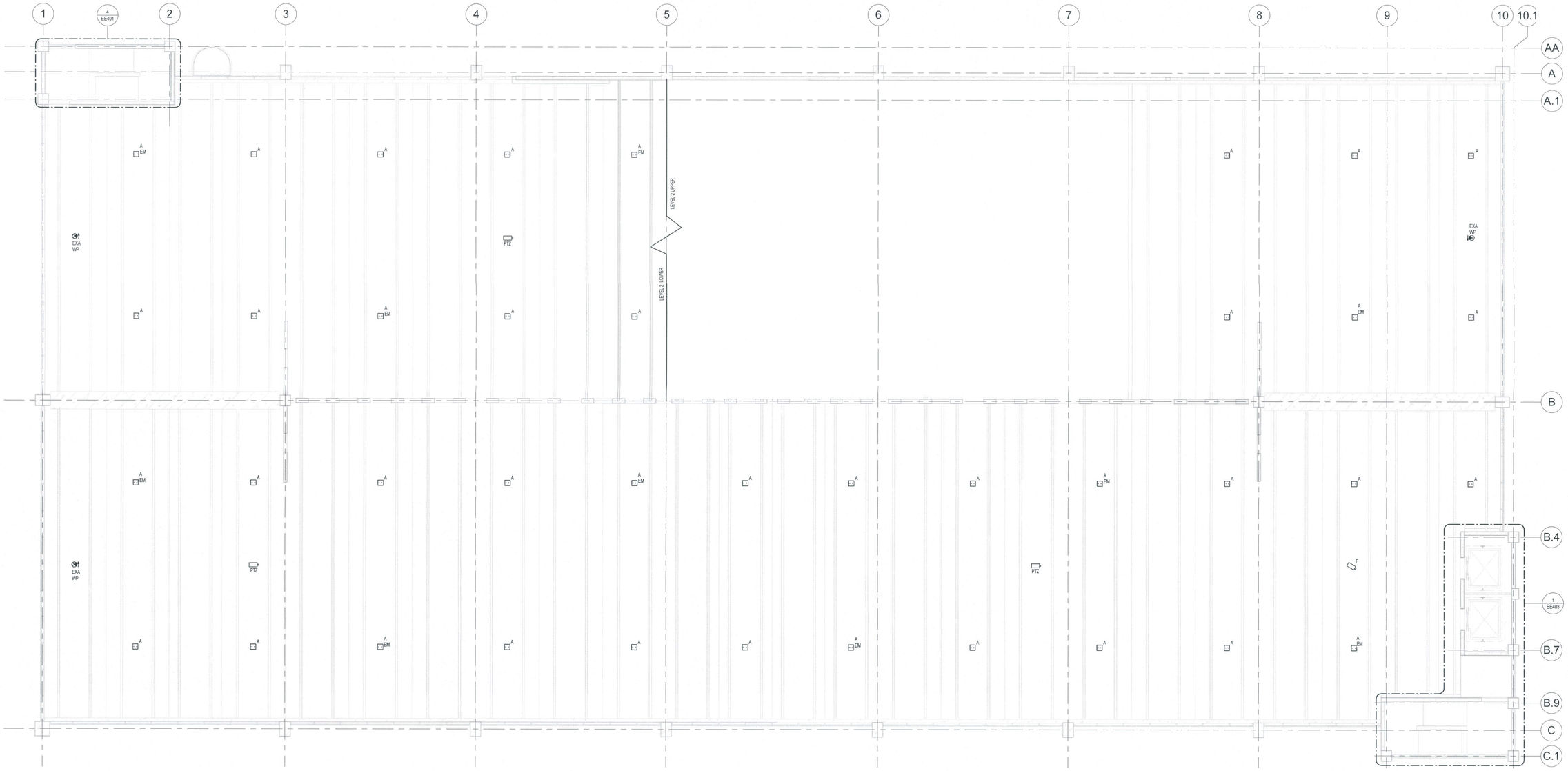


1 / EE105 LEVEL 2 ELECTRICAL PLAN
1/8" = 1'-0"

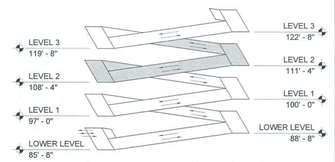
KEYED NOTES

GENERAL NOTES

A UNO, ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2-12 AWG, 12 AWG EG, 3/4" C.

B ALL NORMAL POWER LIGHTS ON THIS SHEET SHALL BE CIRCUITED TO YH-1-2-6.

C ALL EMERGENCY POWER LIGHTS AND EXIT SIGNS ON THIS SHEET SHALL BE CIRCUITED TO EPH-LS-1-2-6.



KEY PLAN - LEVEL 2

BID SET

Revisions:	Date

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Drawing Title: LEVEL 2 ELECTRICAL PLAN	Project Title: PARKING STRUCTURE - LOT 7	A/E Project Number: 14-692	OFFICE OF FACILITIES MANAGEMENT
		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE105	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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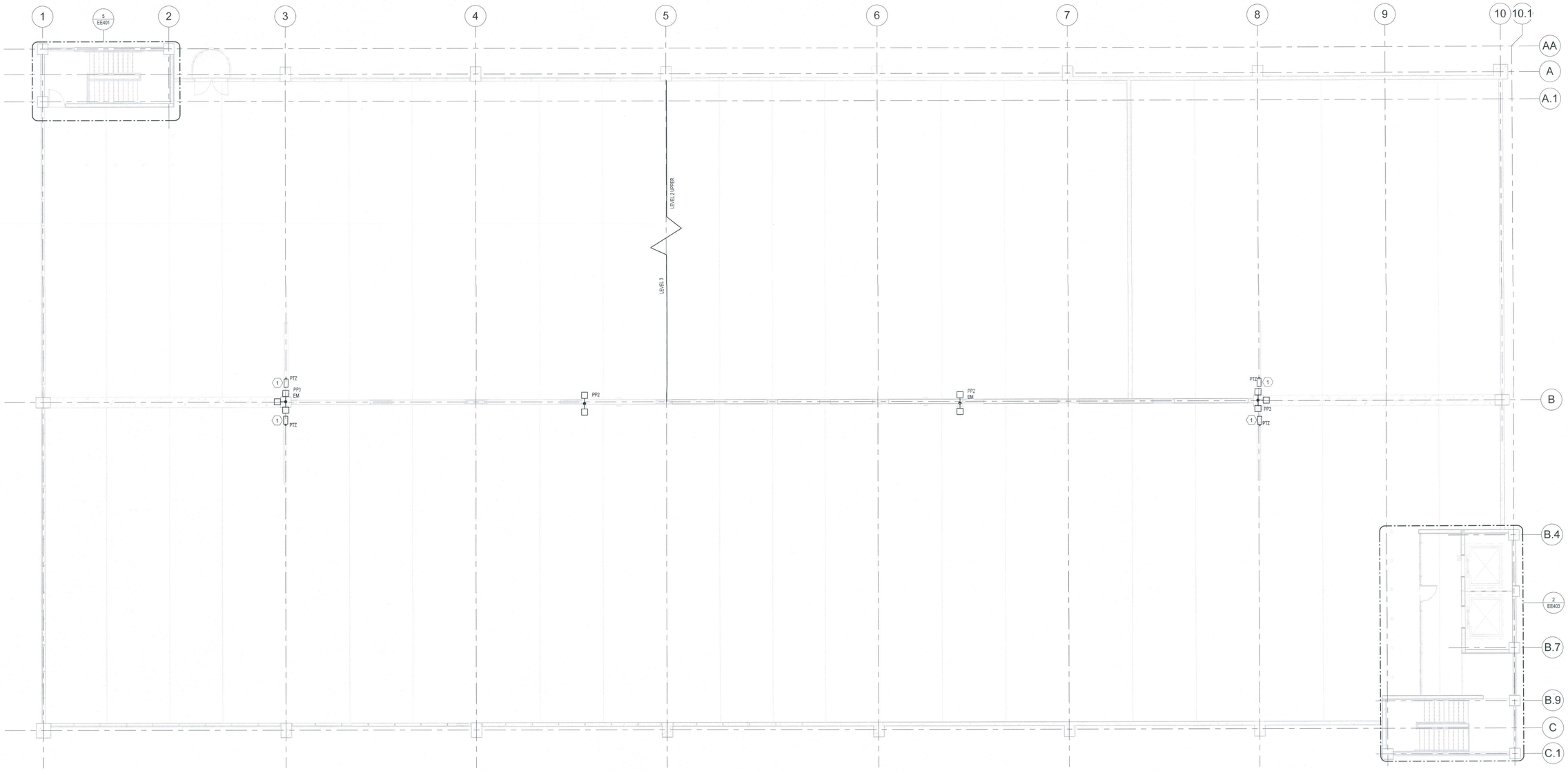


1 EE106 LEVEL 3 ELECTRICAL PLAN
1/8" = 1'-0"

LIGHTNING PROTECTION SYSTEM:

INSTALL A U.L. MASTER LABEL LIGHTNING PROTECTION SYSTEM WHICH COMPLIES WITH CURRENT NATIONALLY RECOGNIZED CODES AND STANDARDS. SYSTEM TO CONSIST OF AIR TERMINALS (LIGHTNING RODS) SPACED AT 20 FEET ON CENTER ALONG THE PERIMETER, WITHIN 2 FEET OF EACH CORNER AND AT 50 FOOT SPACING IN MID-ROOF CONNECTED TO HEAVY CABLES EXTENDED TO GROUNDING RODS MINIMUM 10 FEET IN DEPTH. INSTALL TRANSIENT SURGE SUPPRESSORS AT ELECTRICAL AND TELEPHONE SERVICE ENTRIES. BOND LIGHTNING PROTECTION SYSTEM TO BUILDING GROUNDING ELECTRODE SYSTEM. ALL WORK TO COMPLY WITH U.L. STANDARD 780 AND NATIONAL ELECTRIC CODE, CURRENT EDITION.

KEYED NOTES

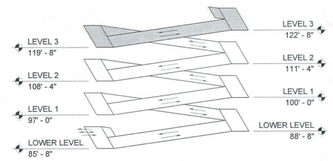
1 INSTALL CAMERA ON POLE, 15' ABOVE LEVEL. COPPER CABLING SHALL BE INSTALLED IN INNERDUCT AND SHALL HAVE 600V-RATED INSULATION.

GENERAL NOTES

A UNO, ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2-12 AWG, 12 AWG EG, 3/4" C.

B ALL NORMAL POWER LIGHTS ON THIS SHEET SHALL BE CIRCUITED TO 'PH-1-2'-8.

C ALL EMERGENCY POWER LIGHTS AND EXIT SIGNS ON THIS SHEET SHALL BE CIRCUITED TO 'EPH-LS-1-2'-8.



KEY PLAN - LEVEL 3

BID SET

Revisions:	Date

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Drawing Title: LEVEL 3 ELECTRICAL PLAN	Project Title: PARKING STRUCTURE - LOT 7	A/E Project Number: 14-692	OFFICE OF FACILITIES MANAGEMENT
		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE106	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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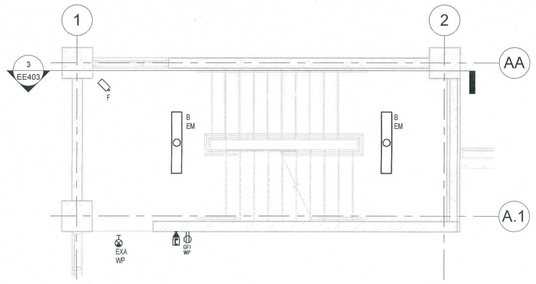
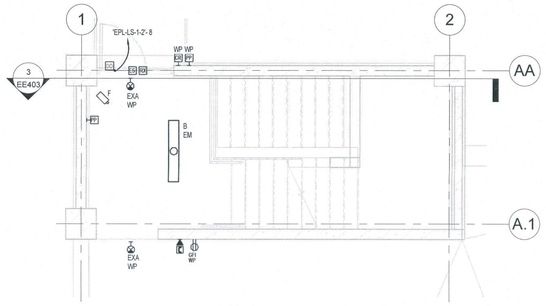
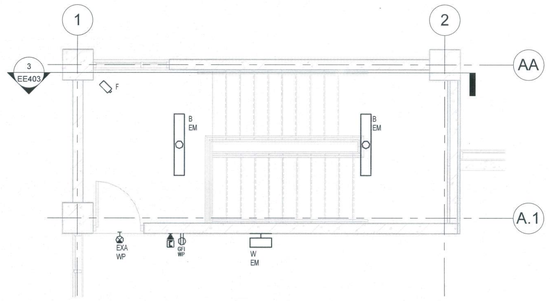


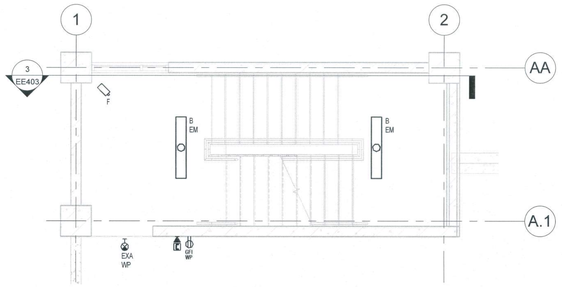
4 EE401 NORTH STAIR LEVEL 2
1/4" = 1'-0"



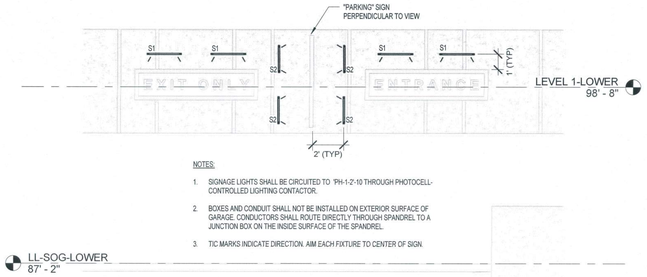
2 EE401 NORTH STAIR LEVEL LL
1/4" = 1'-0"



5 EE401 NORTH STAIR LEVEL 3
1/4" = 1'-0"



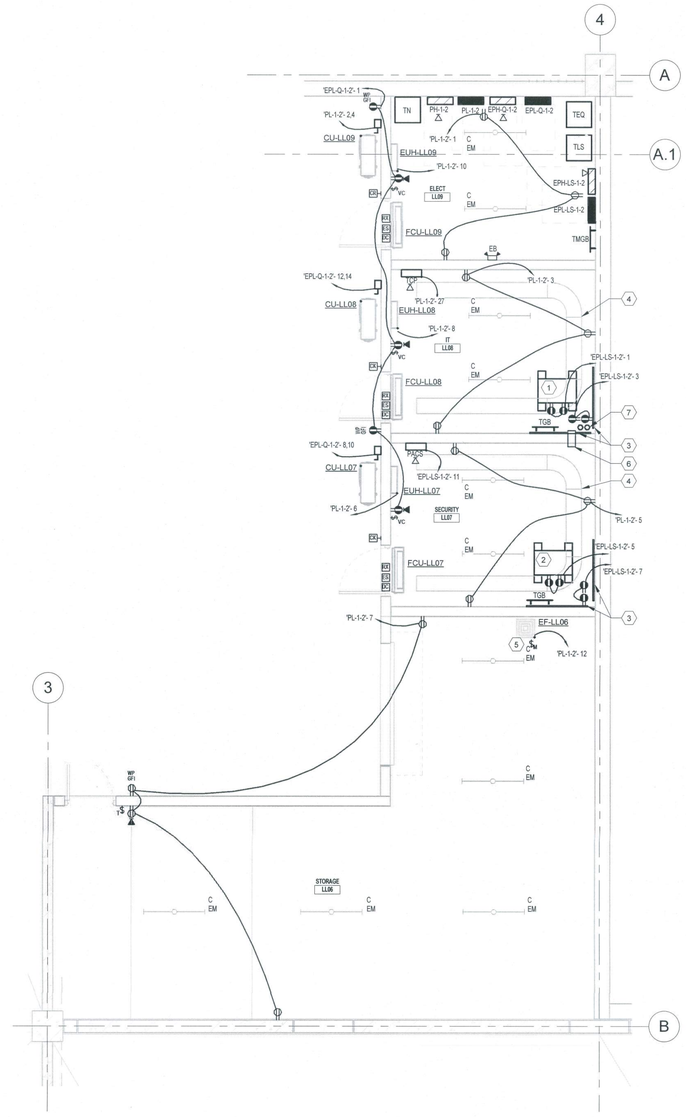
3 EE401 NORTH STAIR LEVEL 1
1/4" = 1'-0"



NOTES:

1. SIGNAGE LIGHTS SHALL BE CIRCUITED TO 'PH-1-Z-10 THROUGH PHOTOCELL-CONTROLLED LIGHTING CONTACTOR.
2. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON EXTERIOR SURFACE OF GARAGE. CONDUCTORS SHALL ROUTE DIRECTLY THROUGH SPANDREL TO A JUNCTION BOX ON THE INSIDE SURFACE OF THE SPANDREL.
3. TIC MARKS INDICATE DIRECTION. AIM EACH FIXTURE TO CENTER OF SIGN.

6 EE401 SIGNAGE LIGHTING ELEVATION
1/4" = 1'-0"



1 EE401 EQUIPMENT ROOMS ENLARGEMENT
1/4" = 1'-0"

GENERAL NOTES

A UND. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2-12 AWG, 12 AWG EG, 3/4" C.

B ALL NORTH STAIR RECEPTACLES SHOWN IN ENLARGEMENT SHALL BE CIRCUITED TO 'PL-1-Z-9.

C ALL NORTH STAIR LIGHTING SHOWN IN ENLARGEMENT SHALL BE CIRCUITED TO 'EPH-1-Z-10.

D LIGHTING ROOMS LL06-LL07 SHALL BE CIRCUITED TO 'EPH-1-Z-14.

E ALL NORTH STAIR EMERGENCY PHONES SHALL BE CIRCUITED TO 'EPL-LS-1-Z-14.

KEYED NOTES

1 19" TELECOMMUNICATIONS RACK. SEE DETAIL, EE502.

2 19" CCTV CABINET. SEE DETAIL, EE502.

3 PROVIDE 4'x8'x3/4" PLYWOOD COMMUNICATIONS BACKBOARD. PLYWOOD SHALL BE FIRE-RATED WITH RATING LABEL.

4 LADDER TRAY. SEE DETAILS, EE502.

5 PROVIDE 120V RELAY WITH 277V COIL CIRCUITED TO SWITCHED LIGHTING CIRCUIT IN ORDER FOR EXHAUST FAN TO OPERATE WITH LIGHTS IN ROOM.

6 PROVIDE 4" Z-SLEEVE

7 TELCO CONDUIT STUB-UPS

Revisions: Date

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BID SET

Drawing Title: ELECTRICAL ENLARGEMENTS	Project Title: PARKING STRUCTURE - LOT 7	A/E Project Number: 14-692	OFFICE OF FACILITIES MANAGEMENT
		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE401	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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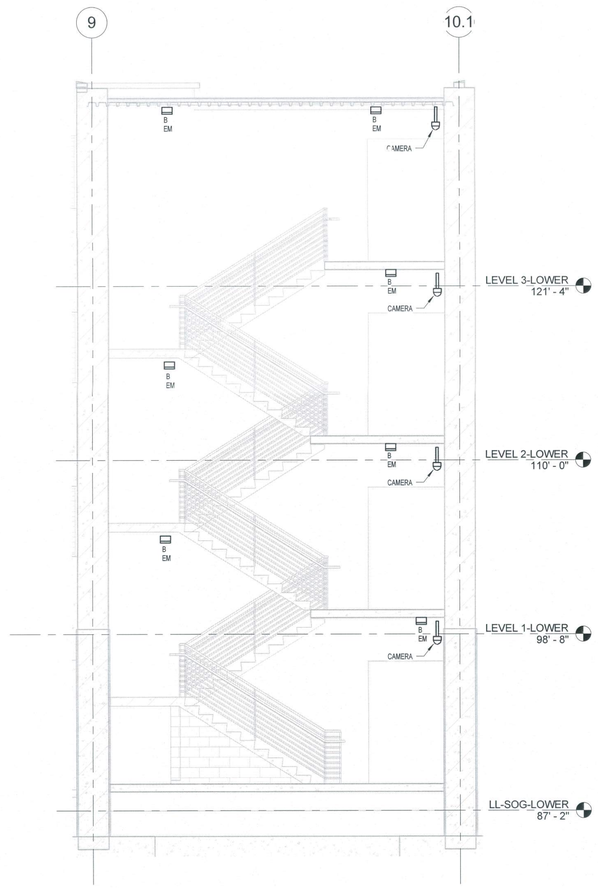
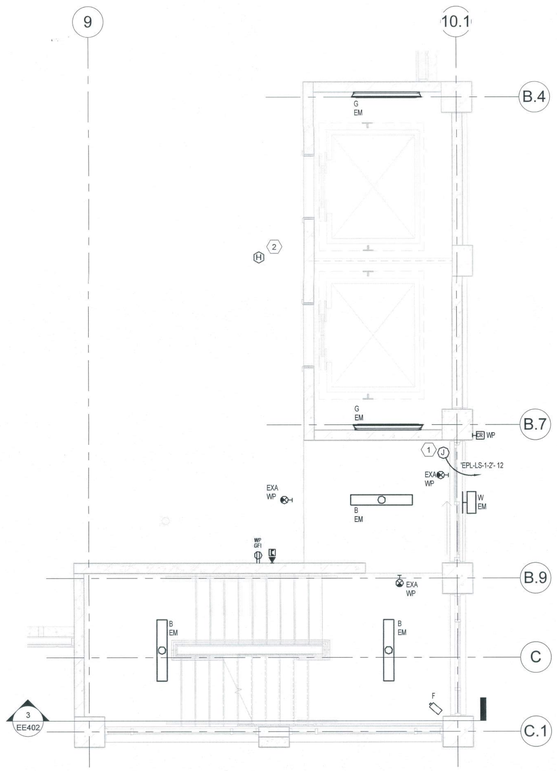
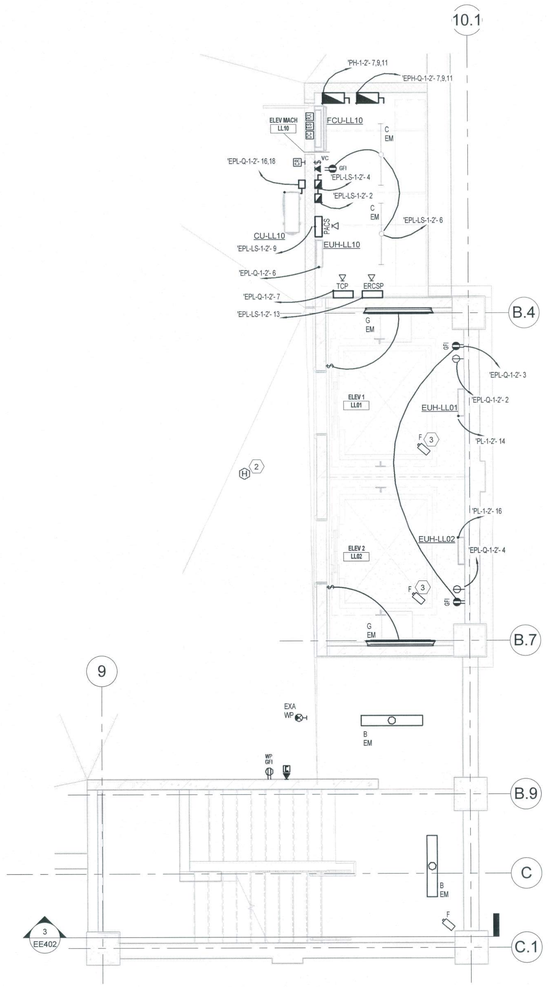


3 EE402 SOUTH STAIR SECTION
1/4" = 1'-0"



2 EE402 SOUTH STAIR AND ELEVATOR LEVEL 1
1/4" = 1'-0"



1 EE402 SOUTH STAIR AND ELEVATOR LEVEL LL
1/4" = 1'-0"

GENERAL NOTES

A UNO, ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2-12 AWG, 12 AWG EG, 3/4" C.

B ALL SOUTH STAIR RECEPTACLES SHALL BE CIRCUITED TO 'PL-1-Z-11.

C ALL SOUTH STAIR AND ELEVATOR LOBBY LIGHTING SHOWN IN ENLARGEMENT SHALL BE CIRCUITED TO 'EPH-LS-1-Z-12.

D ALL ELEVATOR PIT AND SHAFT LIGHTS SHALL BE CIRCUITED TO 'EPH-LS-1-Z-16.

E ALL SOUTH STAIR EMERGENCY PHONES SHALL BE CIRCUITED TO 'EPL-LS-1-Z-16.

KEYED NOTES

1 PROVIDE CONNECTION AS REQUIRED FOR SLIDING DOOR.

2 PROVIDE COLD-WEATHER HEAT DETECTOR WITHIN 21' OF THE CENTERLINE OF EACH ELEVATOR DOOR. SEE ELEVATOR RECALL DETAIL, EE502. COORDINATE WITH ELEVATOR INSTALLER.

3 PROVIDE CAMERA IN EACH ELEVATOR CAB. ROUTE 4PR THROUGH ELEVATOR CONTROLLER AND TRAVELING CABLE. TRAVELING CABLE CONDUCTORS SHALL BE PROVIDED BY ELEVATOR PROVIDER OR SHALL BE SHIELDED, INDUSTRIAL FOR CONTINUOUS FLEX. COORDINATE WITH ELEVATOR INSTALLER.

Revisions:	Date

VA U.S. Department of Veterans Affairs

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BID SET

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		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE402	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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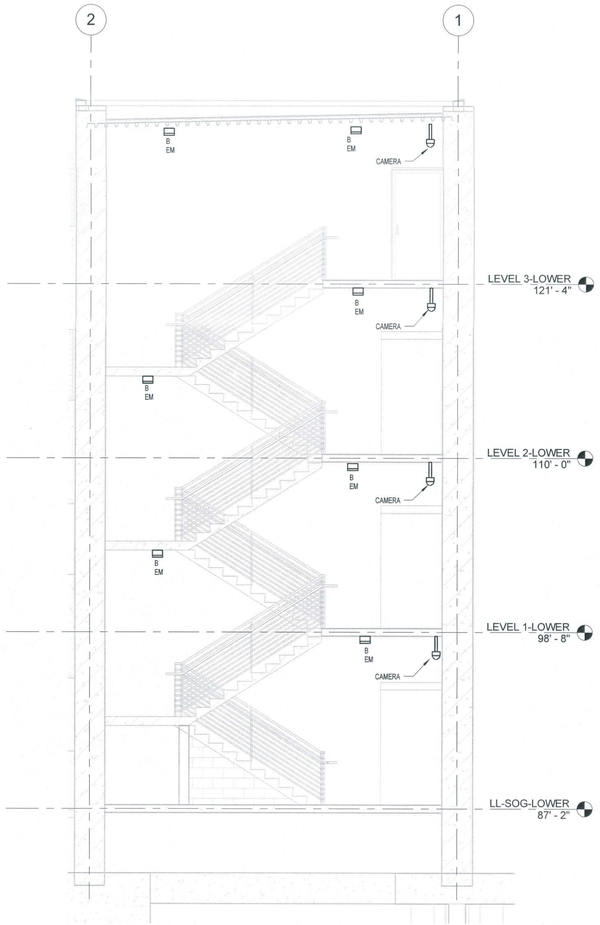
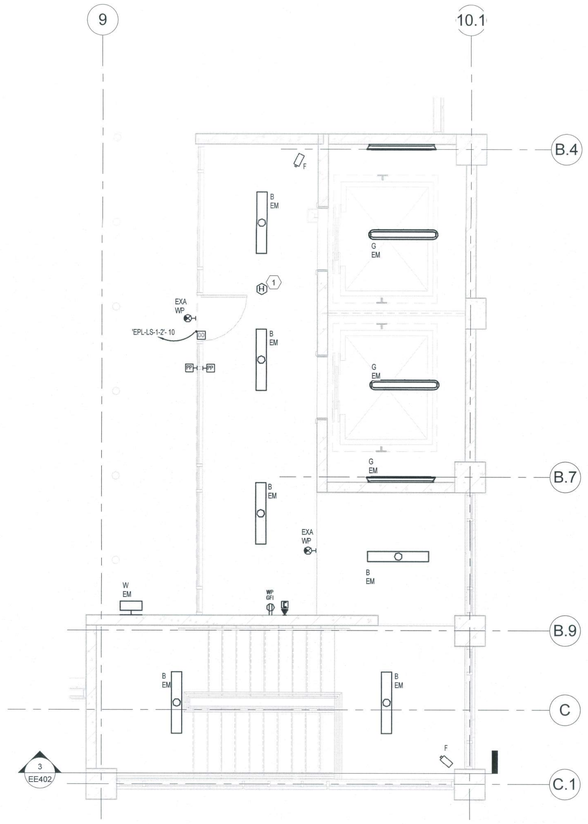
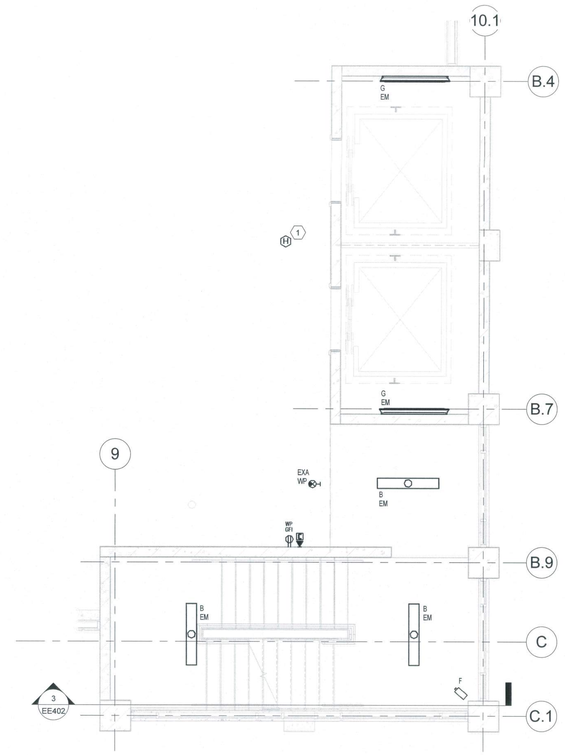


3 EE403 NORTH STAIR SECTION
1/4" = 1'-0"



2 EE403 SOUTH STAIR AND ELEVATOR LEVEL 3
1/4" = 1'-0"



1 EE403 SOUTH STAIR AND ELEVATOR LEVEL 2
1/4" = 1'-0"

GENERAL NOTES

A ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE 2-12 AWG, 12 AWG EG, 3/4" C.

B ALL SOUTH STAIR RECEPTACLES SHALL BE CIRCUITED TO 'PL-1-2'-11.

C ALL SOUTH STAIR AND ELEVATOR LOBBY LIGHTING SHOWN IN ENLARGEMENT SHALL BE CIRCUITED TO 'EPH-LS-1-2'-12.

D ALL ELEVATOR PIT AND SHAFT LIGHTING SHALL BE CIRCUITED TO 'EPH-LS-1-2'-16.

E ALL SOUTH STAIR EMERGENCY PHONES SHALL BE CIRCUITED TO 'EPL-LS-1-1'-16.

KEYED NOTES

1 PROVIDE COLD-WEATHER HEAT DETECTOR WITHIN 21' OF THE CENTERLINE OF EACH ELEVATOR DOOR. SEE ELEVATOR RECALL DETAIL, EE502. COORDINATE WITH ELEVATOR INSTALLER.

Revisions:	Date

VA U.S. Department of Veterans Affairs

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		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE403	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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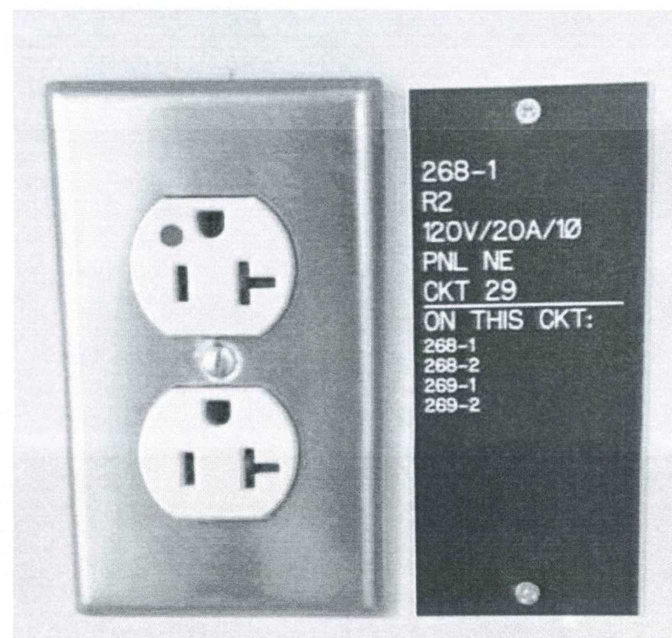
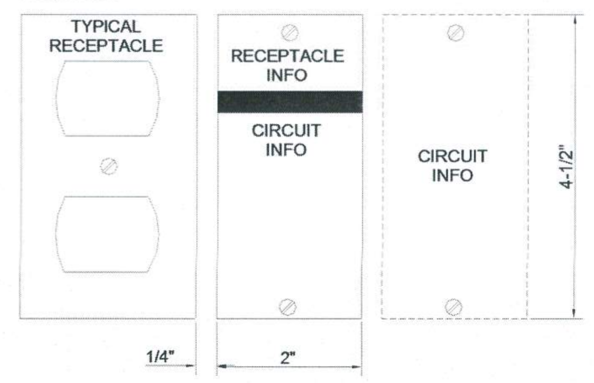


REQUIRED LABELS FOR ALL RECEPTACLES AND SWITCHES:

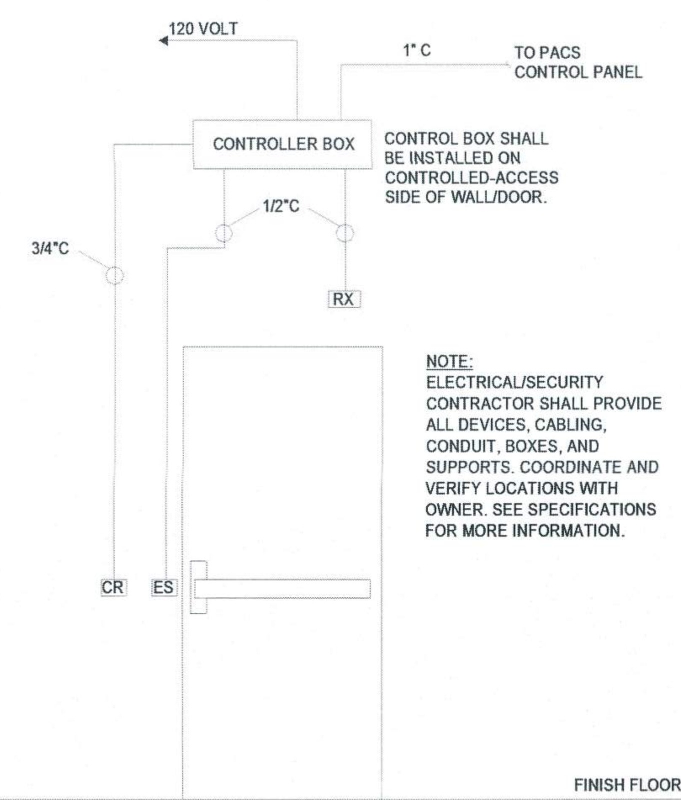
FIRST PART OF LABEL INDICATES RECEPTACLE INFORMATION SUCH AS RECEPTACLE I.D. NO, TYPE, VOLTS, AMPS, PHASE, PANEL BOARD, CIRCUIT NO, PANEL BOARD ROOM NO.

SECOND PART OF LABEL INDICATES CIRCUIT INFORMATION SUCH AS IDENTITY OF RECEPTACLES ON THE SAME CIRCUIT, PANEL BOARD, AND CIRCUIT I.D. PROVIDE SECOND LABEL AS REQUIRED.



ALL LABELS TO BE 1/16" PHENOLIC PLASTIC, RECEPTACLES ON EMERGENCY POWER TO USE RED PLASTIC WITH WHITE LETTERING. RECEPTACLES ON NORMAL POWER TO USE BLACK PLASTIC WITH WHITE LETTERING TO BE 3/16" HIGH. LOCATION OF LABELS AS SHOWN OR AS DIRECTED BY VA RESIDENT ENGINEER. SCREW LABELS TO WALL WITH #6 X 3/4" LENGTH SCREWS, SET IN PLASTIC DRYWALL TYPE ANCHORS.

9 TYPICAL RECEPTACLE LABEL DETAIL
EE501 NTS

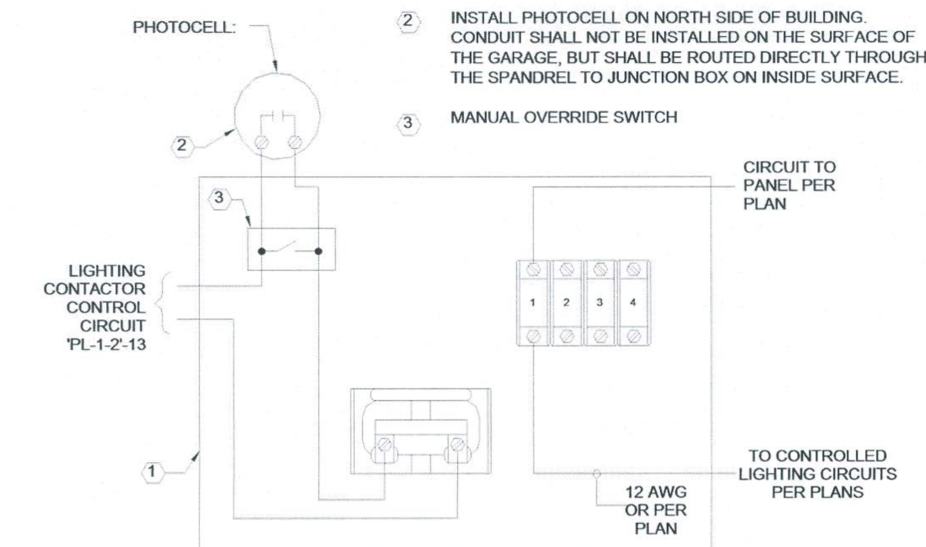


NOTE:
ELECTRICAL/SECURITY CONTRACTOR SHALL PROVIDE ALL DEVICES, CABLING, CONDUIT, BOXES, AND SUPPORTS. COORDINATE AND VERIFY LOCATIONS WITH OWNER. SEE SPECIFICATIONS FOR MORE INFORMATION.

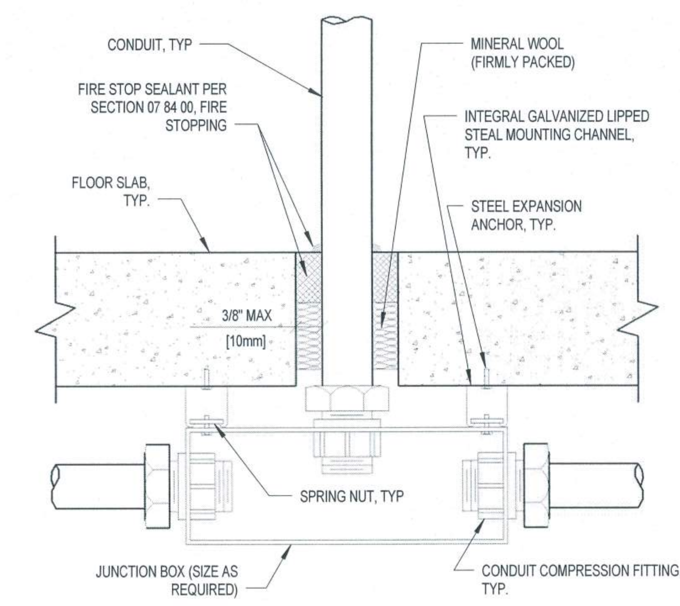
7 DOOR CARD READER ACCESS DETAIL
EE501 N.T.S.

LIGHTING CONTACTOR/CONTROL NOTES:

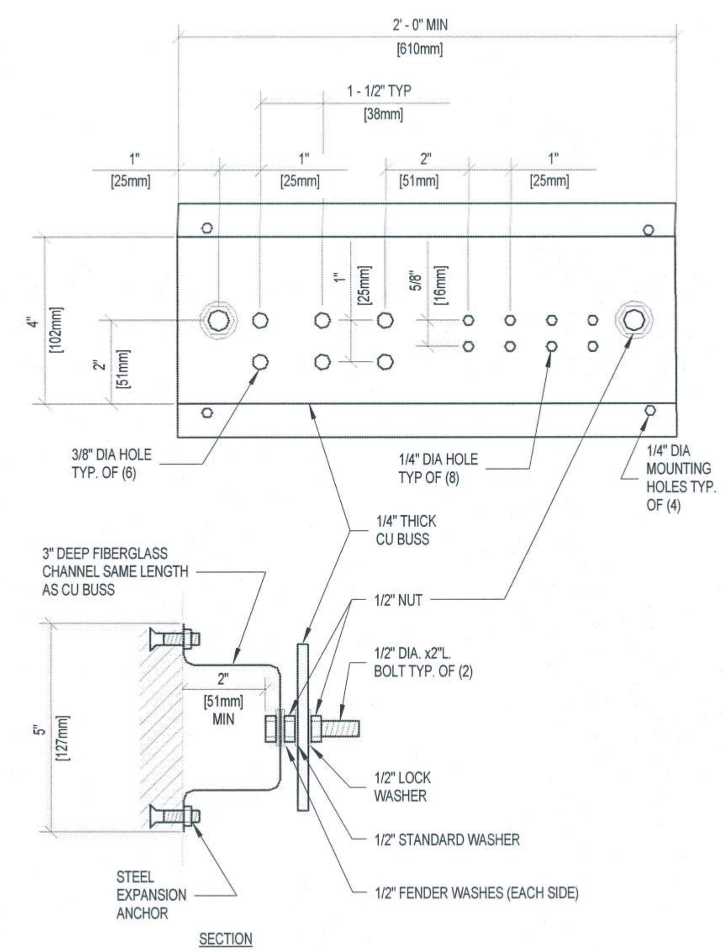
1. ELECTRICALLY HELD 4-POLE LIGHTING CONTACTOR WITH 30 AMP CONTACTS AND NEMA 1 ENCLOSURE. INSTALL IN ELECTRICAL ROOM. PROVIDE A PHENOLIC LABEL DESCRIBING CIRCUITS SERVED.
2. INSTALL PHOTOCELL ON NORTH SIDE OF BUILDING. CONDUIT SHALL NOT BE INSTALLED ON THE SURFACE OF THE GARAGE, BUT SHALL BE ROUTED DIRECTLY THROUGH THE SPANDREL TO JUNCTION BOX ON INSIDE SURFACE.
3. MANUAL OVERRIDE SWITCH



4 LIGHTING CONTACTOR DETAIL
EE501 NTS



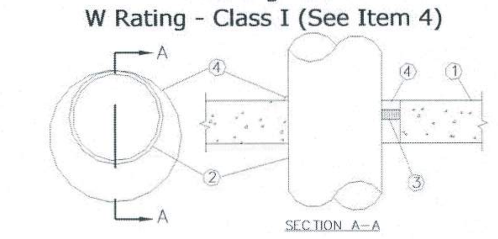
2 FLOOR SLAB PENETRATION DETAIL
EE501 N.T.S.



GENERAL NOTES:
1. ALL HARDWARE SHOWN SHALL BE STAINLESS STEEL.
2. MOUNTING POINTS SHALL BE SPACED 12" MAX.
3. HOLES MAY BE ADDED IF REQUIRED.

5 PARKING GARAGE ELECTRICAL ROOM GROUNDING BAR DETAIL
EE501 N.T.S.

System No. C-AJ-1001
June 15, 2005
F Rating - 3 Hr
T Rating - 0 Hr
W Rating - Class I (See Item 4)



1. Floor or Wall Assembly – Min 4-1/2 in. (114 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*** . Max diam of circular through opening is 32-1/2 in. (826 mm).

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

1A. Steel Sleeve (Optional, not shown) – Nom 12 in. (305 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. (51mm) from top surface of floor or from both surfaces of wall.

2. Through Penetrant – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm)(point contact) to max 1-3/8 in. (35 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe – Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
A1. Iron Pipe – Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
B. Conduit – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
C. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.

3. Packing Material – Polyethylene backer rod or nom 1 in. (25 mm) thickness of tightly-packed ceramic (alumina silica) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of caulk fill material (Item 4). As an alternate when max pipe size is 10 in. (254 mm) diam and when max annular space is 1 in. (25 mm), a min 1 in. (25 mm) thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min 1/2 in. (13 mm) from bottom surface of floor or from either side of solid concrete wall.

4. Fill,Void or Cavity Materials* - Caulk or Sealant – Applied to fill the annular space to the min thickness shown in the following table:

Max Pipe Diam in. (mm)	Max Annular Space in. (mm)	Packing Matl Type (a)	Min Caulk Thkns in. (mm)
10 (254)	1 (25)	BR, CF, GF or MW	1/2 (13) (b)
10 (254)	1 (25)	CF or MW	1/2 (13) (c)
30 (762)	2-1/2 (64)	BR, CF, GF or MW	1 (25) (b)

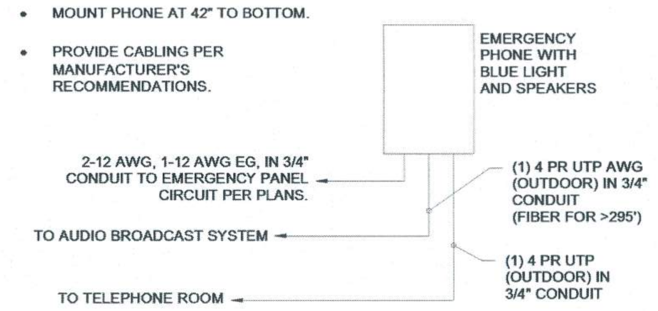
(a) BR = Polyethylene backer rod.
CF = Ceramic fiber blanket.
GF = Glass fiber insulation.
MW = Mineral-wool batt.
(b) Caulk installed flush with top surface of floor or both surfaces of wall.
(c) Caulk installed flush with bottom surface of floor or one surface of solid (non-concrete block) wall.

3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant.
(Note: W Rating applies only when FB-3000 WT sealant is used.)

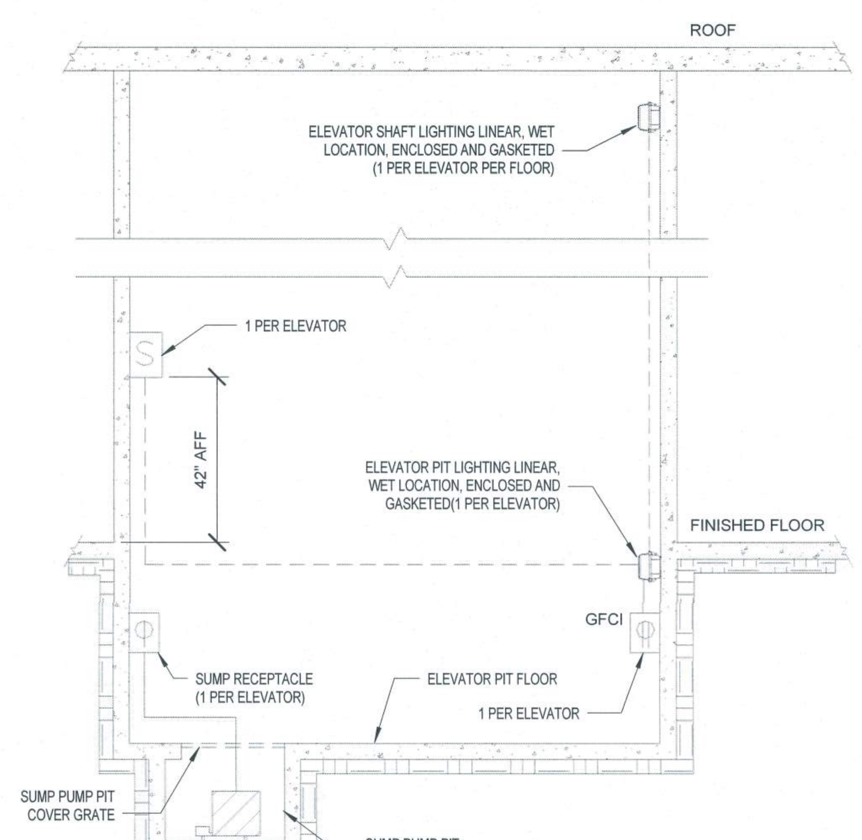
*Bearing the UL Classification Marking

1 CONDUIT PENETRATION THROUGH CONCRETE BLOCK ASSEMBLY (UL #C-AJ-1001)
EE501 N.T.S.

NOTES:
- ALL CABLING SHALL BE IN CONDUIT.
- MOUNT PHONE AT 42" TO BOTTOM.
- PROVIDE CABLING PER MANUFACTURER'S RECOMMENDATIONS.



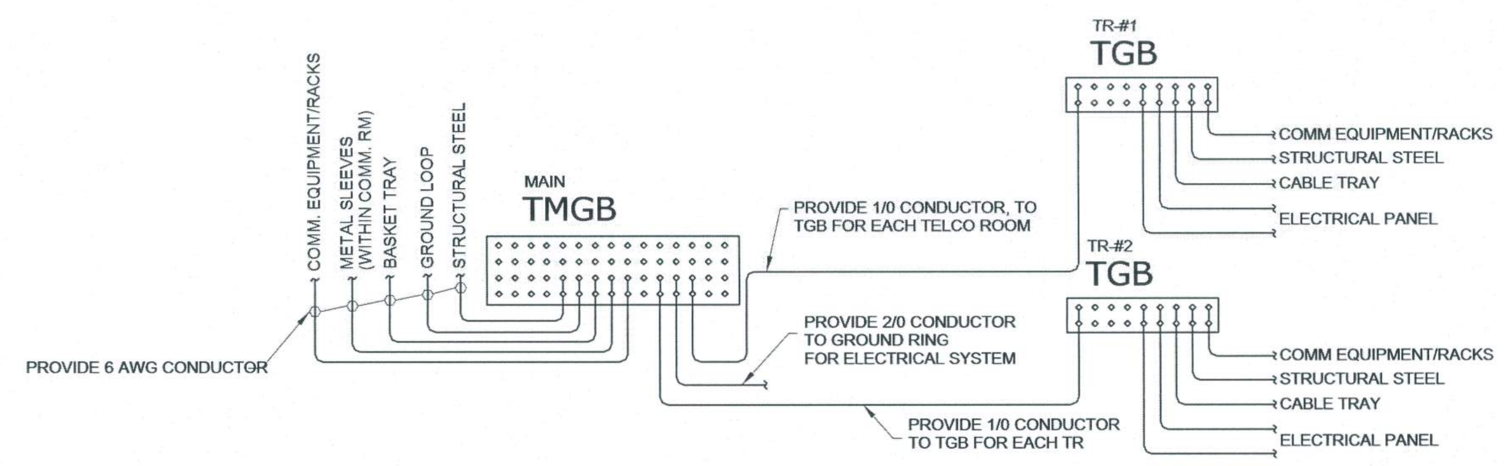
6 EMERGENCY PHONE
EE501 N.T.S.



NOTES:
1. IN CASE OF A FIRE ALARM THE ELEVATORS PRIMARY RECALL SHALL BE LEVEL 1 AND THE SECONDARY RECALL SHALL BE LEVEL LL.
2. SEE ARCHITECTURAL PLANS FOR EXACT FLOOR NAMES AND ADDITIONAL HOISTWAY AND PIT INFORMATION.

8 ELEVATOR PIT DETAIL3
EE501 N.T.S.

NOTES:
1. ALL CONNECTIONS TO THE TMGB AND TGB SHALL BE MADE WITH COMPRESSION STYLE LONG BARREL CONNECTORS ON THE CONDUCTOR AND 2- LUG BOLTED CONNECTIONS TO THE GROUNDING BARS. CONNECTIONS TO STEEL SHALL BE WITH *SILICON BRONZE HARDWARE. CONNECTION TO* SLEEVES OR CONDUITS SHALL BY AN APPROVED GROUNDING BUSHING.
2. LOCATE TMGB AND TGB ON THE LEFT OF THE TTB AND 16" AFF
3. ALL CONDUCTORS USED FOR GROUNDING SHALL BE MARKED AT CONNECTION POINT AND EVERY 10' THEREAFTER WITH A LABEL IDENTIFYING IT AS THE TELECOMMUNICATION GROUNDING BACKBONE (TBB) USE PANDUIT #LTYK OR EQUAL.
4. PROVIDE 4"H x 20"L x 1/4"W TMGB.
5. PROVIDE 2" H x 24"L x 1/4"W TGB
6. CONTRACTOR SHALL CLEAN THE BUS BAR AND APPLY ANTIOXIDANT PRIOR TO FASTENING THE CONNECTORS TO THE BUS BAR.



3 TELECOM GROUNDING DETAIL
EE501 N.T.S.

Revisions:	Date

VA | U.S. Department of Veterans Affairs
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BID SET

Drawing Title	Project Title	A/E Project Number	OFFICE OF FACILITIES MANAGEMENT
ELECTRICAL DETAILS	PARKING STRUCTURE - LOT 7	14-692	
		Building Number: #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC	Drawing Number: EE501	VA Project Number: 695-325
	Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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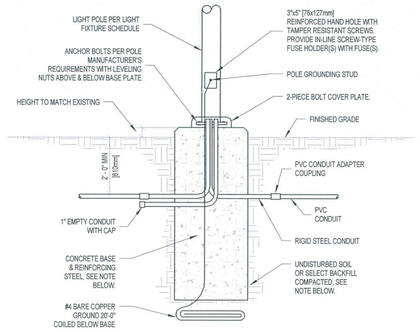
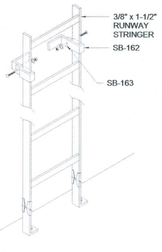


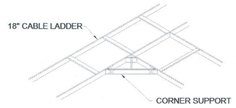
GENERAL NOTES:

1. BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.
2. REFER TO SPECIFICATION SECTION 26 56 00 FOR MOUNTING AND LEVELING REQUIREMENTS.

13 / EE502 — POLE BASE DETAIL - TURF
N.T.S.

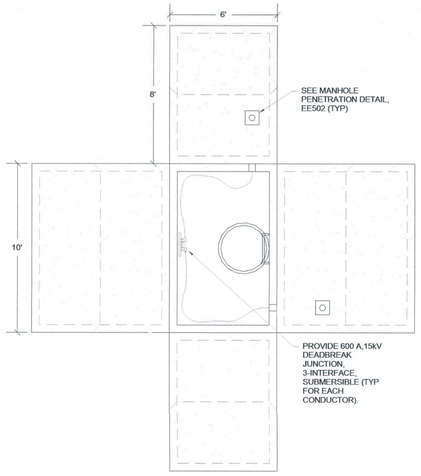


10 / EE502 — VERTICAL LADDER DETAIL
N.T.S.

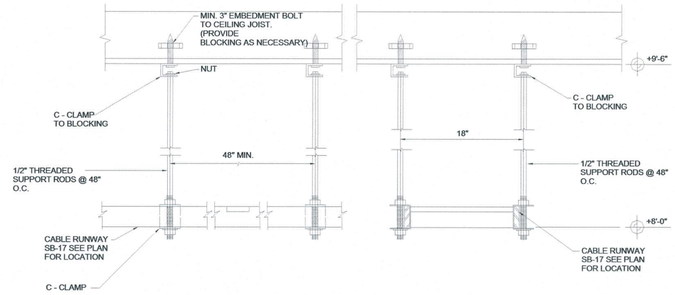


NOTE: SCHEMATIC SAMPLE LADDER SYSTEM

9 / EE502 — TYPICAL CABLE LADDER DETAIL
N.T.S.

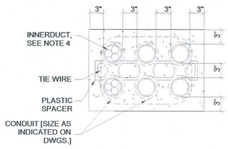


8 / EE502 — MANHOLE
1/4" = 1'-0"



7 / EE502 — CABLE LADDER DETAIL - ELEVATION
N.T.S.

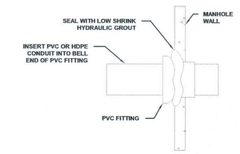
6 / EE502 — CABLE LADDER DETAIL - PLAN VIEW
N.T.S.



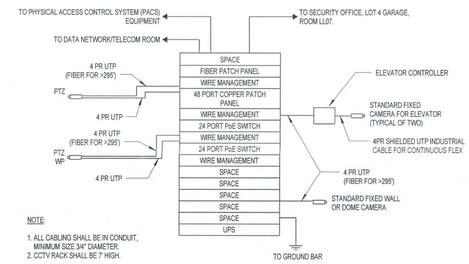
DUCT BANK NOTES:

1. CONCRETE SHALL BE 3000 P.S.I. AT 30 DAYS, OR AS SPECIFIED.
2. MINIMUM COVER TO TOP OF ENVELOPE SHALL BE 24". DUCT MAY SLOPE UP TO ENTER BUILDING.
3. INNERDUCT QUANTITY AND SIZE AS INDICATED ON PARTIAL LAN RISER DIAGRAM, EE502.
4. RESTORE FINISHED GRADE TO MATCH EXISTING.
5. ASPHALT AND CONCRETE SHALL BE SAWCUT PRIOR TO REMOVING.

5 / EE502 — DUCT BANK DETAIL
NTS



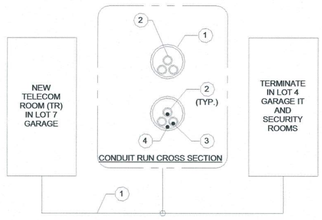
4 / EE502 — MANHOLE PENETRATION
N.T.S.



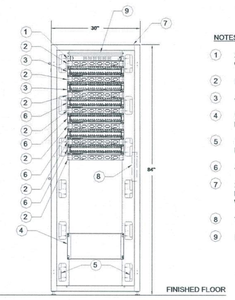
NOTE:

1. ALL CABLING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4" DIAMETER.
2. CCTV RACK SHALL BE 7' HIGH.

3 / EE502 — CCTV SYSTEM RISER DIAGRAM
N.T.S.



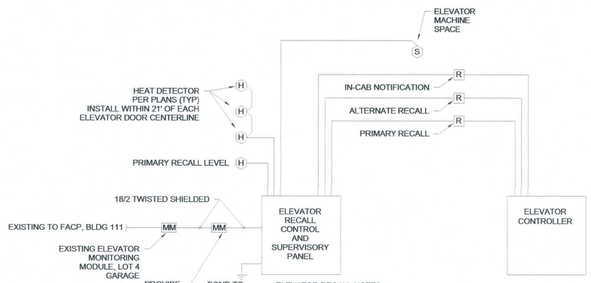
12 / EE502 — PARTIAL LAN RISER DIAGRAM
N.T.S.



NOTES:

1. 24 PORT FIBER OPTIC PATCH PANEL WITH COUPLERS.
2. HORIZONTAL WIRE MANAGEMENT
3. 48 PORT COPPER PATCH PANEL, VOICE
4. UNINTERRUPTIBLE POWER SUPPLY, PROVIDED BY OWNER
5. DUPLEX RECEPTACLE, SEE ELECTRICAL DRAWINGS
6. 48 PORT COPPER PATCH PANEL, DATA
7. 2-POST RACK, 19 OR 23 INCH WIDE WITH POWER STRIP, HORIZONTAL AND VERTICAL WIRE MANAGEMENT, GROUND BUS, ETC.
8. VERTICAL POWER STRIP.
9. HORIZONTAL GROUND BUS.

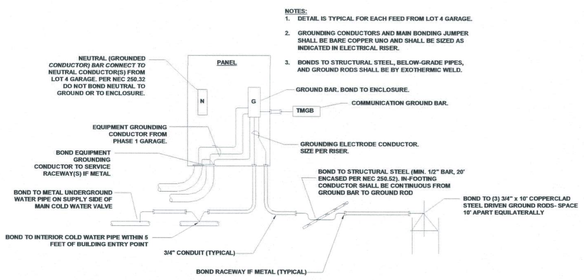
2 / EE502 — DATA RACK DETAIL - TYPICAL
N.T.S.



ELEVATOR RECALL NOTES:

1. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT, FACTORY PAINTED RED.
2. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE ELEVATOR RECALL RELAYS PER MANUFACTURER'S RECOMMENDATIONS.
4. COORDINATE WITH ELEVATOR INSTALLER.
5. FIRE ALARM DEVICES AND EQUIPMENT SHALL MATCH FACILITY EXISTING SIEMENS FIRE ALARM SYSTEM.

11 / EE502 — ELEVATOR RECALL
N.T.S.



NOTES:

1. DETAIL IS TYPICAL FOR EACH FEED FROM LOT 4 GARAGE.
2. GROUNDING CONDUCTORS AND MAIN BONDING JUMPER SHALL BE BARE COPPER UNO AND SHALL BE SIZED AS INDICATED IN ELECTRICAL RISER.
3. BONDS TO STRUCTURAL STEEL, BELOW-GRADE PIPES, AND GROUND RODS SHALL BE BY EXOTHERMIC WELD.

1 / EE502 — SERVICE GROUNDING DETAIL
NTS

Revisions:	Date

VA — U.S. Department of Veterans Affairs

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BID SET

Drawing Title	Project Title	A/E Project Number	OFFICE OF FACILITIES MANAGEMENT
ELECTRICAL DETAILS AND LAN RISERS	PARKING STRUCTURE - LOT 7	14-692	
		Building Number #152	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location CLEMENT J ZABLOCKI VAMC	Drawing Number EE502	VA Project Number 695-325
	Date 1 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA — U.S. Department of Veterans Affairs

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PANELBOARD: EPH-LS-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 100 A MAIN CB
BUS AMPS: 125 AMPS
VOLTAGE: 480Y/277 V. 3 ø 4 W.
A.I.C. RATING: 14 kAIC
SPECIAL:

LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
PANEL 'EPL-LS-1-2' THRU XFMR 'TLS'		90 A	3	1	5.21			0.50			2	1	20 A		LTS LEVEL LL
				3		3.76			0.61		4	1	20 A		LTS LEVEL 1
				5			3.66			0.51	6	1	20 A		LTS LEVEL 2
SPARE		20 A	1	7	0.00			1.01			8	1	20 A		LTS LEVEL 3
SPARE		20 A	1	9		0.00			0.47		10	1	20 A		LTS NORTH STAIR
SPARE		20 A	1	11			0.00			0.66	12	1	20 A		LTS SOUTH STAIR AND LOBBY
SPARE		20 A	1	13	0.00			0.71			14	1	20 A		LTS EQUIPMENT ROOM
SPARE		20 A	1	15		0.00			0.40		16	1	20 A		LTS ELEVATOR SHAFT
SPARE		20 A	1	17			0.00			0.00	18	1	20 A		SPARE
SPARE		20 A	1	19	0.00			0.00			20	1	20 A		SPARE
SPARE		20 A	1	21		0.00			0.00		22	1	20 A		SPARE
SPARE		20 A	1	23			0.00			0.00	24	1	20 A		SPARE
SPARE		20 A	1	25	0.00			0.00			26	1	20 A		SPARE
SPARE		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	3	60 A		SPD
SPARE		20 A	1	39		0.00			0.00		40				
SPARE		20 A	1	41			0.00			0.00	42				
		TOTAL LOAD:			7.43 kVA		5.24 kVA		4.83 kVA						
		TOTAL AMPS:			27 A		19 A		17 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	0.84 kVA	117.86%	0.99 kVA		
RECEPTACLE (GENERAL)	0.18 kVA	100.00%	0.18 kVA	CONNECTED LOAD:	17.63 kVA
RECEPTACLE (DEDICATED)	9.60 kVA	100.00%	9.60 kVA	ESTIMATED DEMAND:	19.54 kVA
LIGHTING	7.01 kVA	125.00%	8.77 kVA	CONNECTED CURRENT:	21 A
				EST. DEMAND CURRENT:	23 A

NOTES:

PANELBOARD: EPH-Q-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 200 A MAIN CB
BUS AMPS: 225 AMPS
VOLTAGE: 480Y/277 V. 3 ø 4 W.
A.I.C. RATING: 14 kAIC
SPECIAL:

LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
PANEL 'EPL-Q-1-2' THRU XFMR 'TEQ'		90 A	3	1	4.73			0.80			2	3	20 A		GP-1
				3		4.05			0.80		4				
				5			3.67			0.80	6				
ELEVATOR 2		125 A	3	7	23.90			0.00			8	1	20 A		SPARE
				9		23.90			0.00		10	1	20 A		SPARE
				11			23.90			0.00	12	1	20 A		SPARE
SPARE		20 A	1	13	0.00			0.00			14	1	20 A		SPARE
SPARE		20 A	1	15		0.00			0.00		16	1	20 A		SPARE
SPARE		20 A	1	17			0.00			0.00	18	1	20 A		SPARE
SPARE		20 A	1	19	0.00			0.00			20	1	20 A		SPARE
SPARE		20 A	1	21		0.00			0.00		22	1	20 A		SPARE
SPARE		20 A	1	23			0.00			0.00	24	1	20 A		SPARE
SPARE		20 A	1	25	0.00			0.00			26	1	20 A		SPARE
SPARE		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	3	60 A		SPD
SPARE		20 A	1	39		0.00			0.00		40				
SPARE		20 A	1	41			0.00			0.00	42				
		TOTAL LOAD:			29.42 kVA		28.75 kVA		28.37 kVA						
		TOTAL AMPS:			106 A		104 A		102 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	12.63 kVA	105.76%	13.36 kVA		
ELEVATOR	71.70 kVA	100.00%	71.70 kVA	CONNECTED LOAD:	86.70 kVA
RECEPTACLE (GENERAL)	1.44 kVA	100.00%	1.44 kVA	ESTIMATED DEMAND:	87.60 kVA
RECEPTACLE (DEDICATED)	0.24 kVA	100.00%	0.24 kVA	CONNECTED CURRENT:	104 A
ELECTRIC HEAT	0.68 kVA	125.00%	0.86 kVA	EST. DEMAND CURRENT:	105 A

NOTES:

PANELBOARD: PH-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 200 A MAIN CB
BUS AMPS: 250 AMPS
VOLTAGE: 480Y/277 V. 3 ø 4 W.
A.I.C. RATING: 14 kAIC
SPECIAL:

LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
PANEL 'PL-1-2' THRU XRMR 'TN'		90 A	3	1	5.17			1.45			2	1	20 A		LTS LEVEL LL
				3		6.09			1.60		4	1	20 A		LTS LEVEL 1
				5			4.41			1.45	6	1	20 A		LTS LEVEL 2
ELEVATOR 1		125 A	3	7	23.90			1.01			8	1	20 A		LTS LEVEL 3
				9		23.90			0.17		10	1	20 A		LTS SIGNAGE (THRU CONTACTOR)
				11			23.90			0.00	12	1	20 A		SPARE
SPARE		20 A	1	13	0.00			0.00			14	1	20 A		SPARE
SPARE		20 A	1	15		0.00			0.00		16	1	20 A		SPARE
SPARE		20 A	1	17			0.00			0.00	18	1	20 A		SPARE
SPARE		20 A	1	19	0.00			0.00			20	1	20 A		SPARE
SPARE		20 A	1	21		0.00			0.00		22	1	20 A		SPARE
SPARE		20 A	1	23			0.00			0.00	24	1	20 A		SPARE
SPARE		20 A	1	25	0.00			0.00			26	1	20 A		SPARE
SPARE		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	3	60 A		SPD
SPARE		20 A	1	39		0.00			0.00		40				
SPARE		20 A	1	41			0.00			0.00	42				
		TOTAL LOAD:			31.53 kVA		31.76 kVA		29.77 kVA						
		TOTAL AMPS:			115 A		116 A		107 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	9.42 kVA	107.17%	10.10 kVA		
ELEVATOR	71.70 kVA	100.00%	71.70 kVA	CONNECTED LOAD:	93.79 kVA
RECEPTACLE (GENERAL)	3.78 kVA	100.00%	3.78 kVA	ESTIMATED DEMAND:	96.69 kVA
LIGHTING	6.29 kVA	125.00%	7.86 kVA	CONNECTED CURRENT:	113 A
ELECTRIC HEAT	2.59 kVA	125.00%	3.24 kVA	EST. DEMAND CURRENT:	116 A
SPEC	0.00 kVA	0.00%	0.00 kVA		

NOTES:

PANELBOARD: EPL-LS-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 100 A MAIN CB
BUS AMPS: 100 AMPS
VOLTAGE: 208Y/120 V. 3 ø 4 W.
A.I.C. RATING: 10 kAIC
SPECIAL:

LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
TELECOM RACK		20 A	1	1	1.44			1.00			2	1	20 A		ELEV 1 CAB
TCBB IT ROOM		20 A	1	3		1.44			1.00		4	1	20 A		ELEV 2 CAB
CCTV RACK		20 A	1	5			1.44			0.30	6	1	20 A		LTS AND RECEP ELEV MACH
TCBB SECURITY ROOM		20 A	1	7	1.44			0.12			8	1	20 A		DOOR OPERATOR NORTH STAIR
PACS - ELEVATOR ROOM		20 A	1	9		0.72			0.12		10	1	20 A		DOOR OPERATOR SOUTH STAIR
PACS - SECURITY ROOM		20 A	1	11			0.72			0.60	12	1	20 A		SLIDING DOOR
ERCSP - ELEVATOR ROOM	1	20 A	1	13	0.24			0.48			14	1	20 A		EMERGENCY PHONES NORTH STAIR
SPARE		20 A	1	15		0.00			0.48		16	1	20 A		EMERGENCY PHONES - SOUTH STAIR
SPARE		20 A	1	17			0.00			0.60	18	1	20 A	1	SITE EM. PHONE (NORTH)
SPARE		20 A	1	19	0.00			0.60			20	1	20 A	1	SITE EM. PHONE (SOUTH)
SPARE		20 A	1	21		0.00			0.00		22	1	20 A		SPARE
SPARE		20 A	1	23			0.00			0.00	24	1	20 A		SPARE
SPARE		20 A	1	25	0.00			0.00			26	1	20 A		SPARE
SPARE		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE
		TOTAL LOAD:			5.32 kVA		3.76 kVA		3.66 kVA						
		TOTAL AMPS:			44 A		31 A		31 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	0.84 kVA	117.86%	0.99 kVA		
RECEPTACLE (GENERAL)	0.18 kVA	100.00%	0.18 kVA	CONNECTED LOAD:	12.74 kVA
RECEPTACLE (DEDICATED)	9.60 kVA	100.00%	9.60 kVA	ESTIMATED DEMAND:	13.42 kVA
LIGHTING	2.12 kVA	125.00%	2.65 kVA	CONNECTED CURRENT:	35 A
				EST. DEMAND CURRENT:	37 A

NOTES:
1. BREAKER SHALL BE LOCKABLE ACCORDING TO 2014 NEC 110.25.

PANELBOARD: EPL-Q-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 100 A MAIN CB
BUS AMPS: 100 AMPS
VOLTAGE: 208Y/120 V. 3 ø 4 W.
A.I.C. RATING: 10 kAIC
SPECIAL:

LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
REC EQUIPMENT ROOMS		20 A	1	1	0.90			0.96			2	1	20 A		SUMP PUMP ELEV 1
REC ELEVATOR PIT		20 A	1	3		0.36			0.96		4	1	20 A		SUMP PUMP ELEV 2
REC HOT BOX, GRINDER PUMP		20 A	1	5			0.36			0.50	6	1	20 A		EUH-LL10
TCP, ELEV		20 A	1	7	0.24			1.35			8	2	20 A		CU-LL07
SPARE		20 A	1	9		0.00			1.35		10				
SPARE		20 A	1	11			0.00			1.35	12	2	20 A		CU-LL08
SPARE		20 A	1	13	0.00			1.35			14				
SPARE		20 A	1	15		0.00			1.46		16	2	20 A		CU-LL10
SPARE		20 A	1	17			0.00			1.46	18				
SPARE		20 A	1	19	0.00			0.00			20	1	20 A		SPARE
SPARE		20 A	1	21		0.00			0.00		22	1	20 A		SPARE
SPARE		20 A	1	23			0.00			0.00	24	1	20 A		SPARE
SPARE		20 A	1	25	0.00			0.00			26	1	20 A		SPARE
SPARE		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE
		TOTAL LOAD:			4.80 kVA		4.13 kVA		3.67 kVA						
		TOTAL AMPS:			41 A		35 A		31 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	10.24 kVA	107.11%	10.97 kVA		
RECEPTACLE (GENERAL)	1.44 kVA	100.00%	1.44 kVA	CONNECTED LOAD:	12.60 kVA
RECEPTACLE (DEDICATED)	0.24 kVA	100.00%	0.24 kVA	ESTIMATED DEMAND:	13.50 kVA
ELECTRIC HEAT	0.68 kVA	125.00%	0.86 kVA	CONNECTED CURRENT:	35 A
				EST. DEMAND CURRENT:	37 A

NOTES:

PANELBOARD: PL-1-2

LOCATION: ELECTRICAL ROOM LL09
MOUNTING: SURFACE NEMA 1
MAIN DEVICE: 100 A MAIN CB
BUS AMPS: 100 AMPS
VOLTAGE: 208Y/120 V. 3 ø 4 W.
A.I.C. RATING: 10 kAIC
SPECIAL:

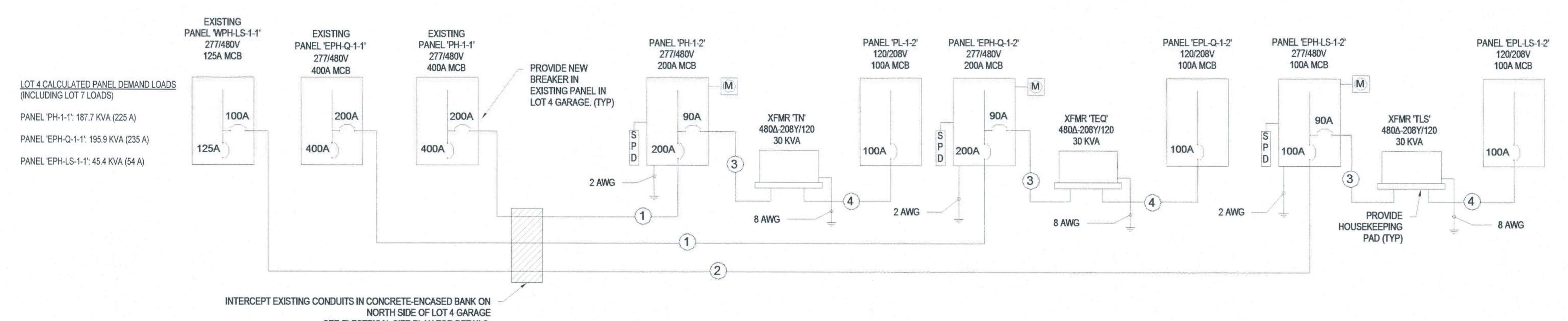
LOAD DESCRIPTION	NOTE	BKR	POLES	CKT	A kVA	B kVA	C kVA	A kVA	B kVA	C kVA	CKT	POLES	BKR	NOTE	LOAD DESCRIPTION
REC ELEC ROOM		20 A	1	1	0.54			1.35			2	2	20 A		CU-LL09
REC IT ROOM		20 A	1	3		0.54			1.35		4				
REC SECURITY ROOM		20 A	1	5			0.54			0.50	6	1	20 A		EUH-LL07
REC STORAGE ROOM		20 A	1	7	0.72			0.50			8	1	20 A		EUH-LL08
REC NORTH STAIR		20 A	1	9		0.72			0.50		10	1	20 A		EUH-LL09
REC SOUTH STAIR		20 A	1	11			0.72			0.12	12	1	20 A		EF-LL06
LIGHTING CONTACTOR		20 A	1	13	0.01			0.54			14	1	20 A		EUH-LL01
AUTOGATE ENTRY 1	1	20 A	1	15		1.68			0.54		16	1	20 A		EUH-LL02
AUTOGATE ENTRY 2	1	20 A	1	17			1.68			0.00	18	1	20 A		SPARE
"FULL" SIGN	1	20 A	1	19	0.60			0.00			20	1	20 A		SPARE
AUTOGATE EXIT 1	1	20 A	1	21		1.08			0.00		22	1	20 A		SPARE
AUTOGATE EXIT 2	1	20 A	1	23			1.08			0.00	24	1	20 A		SPARE
AUTOGATE EXIT 3	1	20 A	1	25	1.08			0.00			26	1	20 A		SPARE
TCP, IT ROOM		20 A	1	27		0.00			0.00		28	1	20 A		SPARE
SPARE		20 A	1	29			0.00			0.00	30	1	20 A		SPARE
SPARE		20 A	1	31	0.00			0.00			32	1	20 A		SPARE
SPARE		20 A	1	33		0.00			0.00		34	1	20 A		SPARE
SPARE		20 A	1	35			0.00			0.00	36	1	20 A		SPARE
SPARE		20 A	1	37	0.00			0.00			38	1	20 A		SPARE
SPARE		20 A	1	39		0.00			0.00		40	1	20 A		SPARE
SPARE		20 A	1	41			0.00			0.00	42	1	20 A		SPARE
		TOTAL LOAD:			5.35 kVA		6.42 kVA		4.64 kVA						
		TOTAL AMPS:			45 A		54 A		39 A						

LOAD CLASSIFICATION	CONNECTED	DEMAND	ESTIMATED	PANEL TOTALS	
MOTOR/HVAC	9.42 kVA	107.17%	10.10 kVA		
RECEPTACLE (GENERAL)	3.78 kVA	100.00%	3.78 kVA	CONNECTED LOAD:	16.41 kVA
LIGHTING	0.61 kVA	125.00%	0.77 kVA	ESTIMATED DEMAND:	17.89 kVA
ELECTRIC HEAT	2.59 kVA	125.00%	3.24 kVA	CONNECTED CURRENT:	46 A
SPEC	0.00 kVA	0.00%	0.00 kVA	EST. DEMAND CURRENT:	50 A

NOTES:
1. BREAKER SHALL BE LOCKABLE PER 2014 NEC 110.25.

EQUIPMENT CONDUCTOR SCHEDULE

TAG	DESCRIPTION	VOLTS	PHASE	LOAD	MOCP	CONDUCTORS	NEUTRAL	GROUND	CONDUIT	DISCONNECT TYPE	NOTES
--	ELEVATOR 1	480	3	75 kVA	125 A	3-1/0 AWG	--	6 AWG	2"	NEMA 1 FUSIBLE	FUSE PER ELEVATOR NAMEPLATE
--	ELEVATOR 1 CAB	120	1	1 kVA	20 A	1-12 AWG	12 AWG	12 AWG	3/4"	NEMA 1 FUSIBLE	
--	ELEVATOR 2	480	3	75 kVA	125A	3-1/0 AWG	--	6 AWG	2"	NEMA 1 FUSIBLE	FUSE PER ELEVATOR NAMEPLATE
--	ELEVATOR 2 CAB	120	1	1 kVA	20 A	1-12 AWG	12 AWG	12 AWG	3/4"	NEMA 1 FUSIBLE	
--	SLIDING DOOR	120	1	600 W	20 A	1-10 AWG	10 AWG	10 AWG	3/4"	MRS	WIRE INCREASED FOR VOLTAGE DROP
CU-LL07	CONDENSING UNIT	208	1	13 A	20 A	2-12 AWG	--	12 AWG	3/4"	NEMA 3R UNFUSED	
CU-LL08	CONDENSING UNIT	208	1	13 A	20 A	2-12 AWG	--	12 AWG	3/4"	NEMA 3R UNFUSED	
CU-LL09	CONDENSING UNIT	208	1	13 A	20 A	2-12 AWG	--	12 AWG	3/4"	NEMA 3R UNFUSED	
CU-LL10	CONDENSING UNIT	208	1	13 A	20 A	2-8 AWG	--	8 AWG	3/4"	NEMA 3R UNFUSED	WIRE INCREASED FOR VOLTAGE DROP
EF-LL06	EXHAUST FAN	120	1	38 W	20 A	1-12 AWG	12 AWG	12 AWG	3/4"	MRS	
EUH (MULTIPLE)	ELECTRIC UNIT HEATER	120	1	4.2 A	20 A	1-12 AWG	12 AWG	12 AWG	3/4"	MRS	
FCU (MULTIPLE)	FAN COIL UNIT	208	1	--	--	2-12 AWG	--	12 AWG	3/4"	--	POWER FROM CU
GP-1	GRINDER PUMP	480	3	1.5 HP	15 A	3-12 AWG	--	12 AWG	3/4"	NEMA 3R UNFUSED	
SP (MULTIPLE)	SUMP PUMP (ELEVATOR PIT)	120	1	4/10 HP	20 A	1-8 AWG	8 AWG	8 AWG	3/4"	SIMPLEX RECEPTACLE	WIRE INCREASED FOR VOLTAGE DROP



ELECTRICAL EQUIPMENT FEEDER SCHEDULE

1	200A	4-3/0 AWG, 6 AWG EG, 3" C
2	100A	4-2 AWG, 6 AWG EG, 1-1/2" C *
3	90A	3-4 AWG, 8 AWG EG, 1" C
4	100A	4-3 AWG, 8 AWG SSBJ, 1-1/2" C

ALL CONDUCTORS SHALL BE COPPER (CU) UNLESS NOTED OTHERWISE.
WIRE SIZE TO METER AND SPD SHALL BE 6 AWG MINIMUM.
* WIRE INCREASED FOR VOLTAGE DROP.

Revisions:	Date

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BID SET

Drawing Title: SINGLE-LINE, PANEL SCHEDULES, EQUIPMENT CONDUCTOR SCHEDULE	Project Title: PARKING STRUCTURE - LOT 7	A/E Project Number: 14-692 Building Number: #152	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: CLEMENT J ZABLOCKI VAMC Date: 1 DEC 2015 / Checked By: JKM / Drawn By: SCB	Drawing Number: EE601	VA Project Number: 695-325 VA U.S. Department of Veterans Affairs