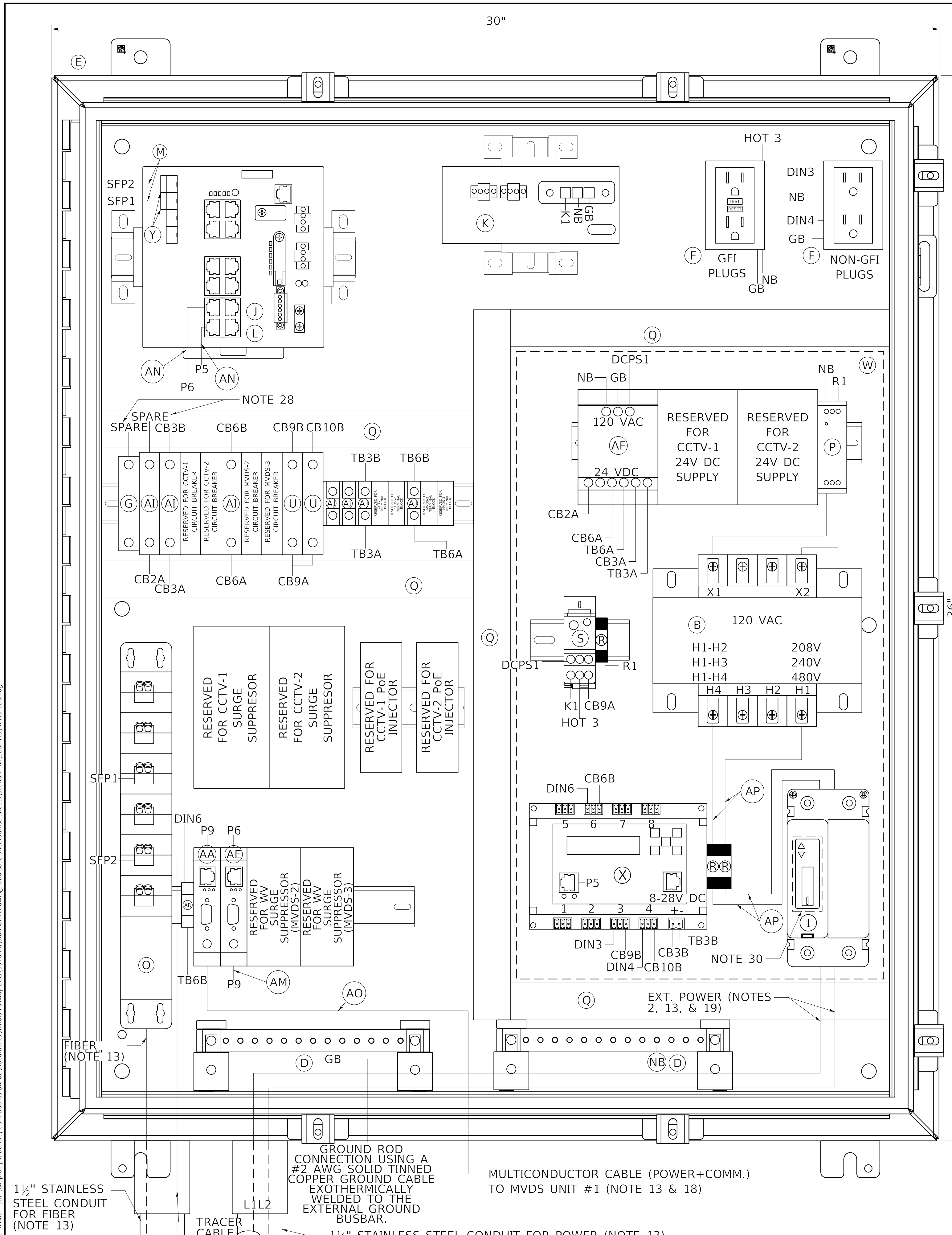
Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	**Modification Summary** **Effective: 03-01-2023**
	Cabinet Wiring (ITS)-Series 1200	
	M-ITS-1203 to M-ITS-1210	**CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE**
		Item AQ: Added 24VDC to PoE Injector Axis T8144 description
	~~**M-ITS-1211 to M-ITS-1213**~~	**CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE SOLAR GENERATOR AND FIBER**
		Drawings retired
	M-ITS-1217	**CABINET WIRING DIAGRAM IN-PAVEMENT DETECTOR SYSTEM AP. PoE. AND INJECTOR ITS ASSEMBLY**
		Item AQ: Added 24VDC to PoE Injector Axis T8144 description

New Sheet

~~Retired Standard~~



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	NOT USED FOR THIS SHEET APPLICATION
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	NOT USED FOR THIS SHEET APPLICATION
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

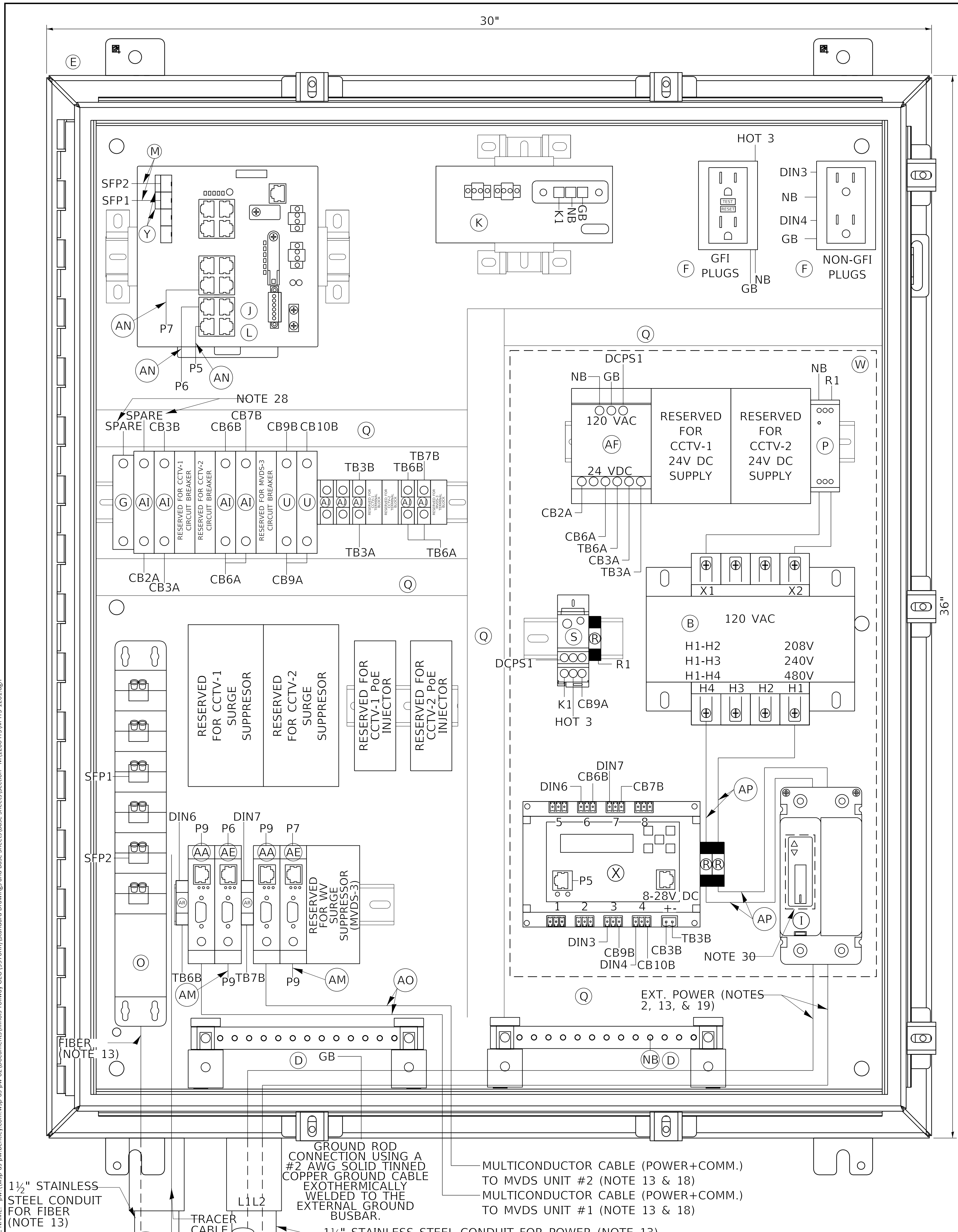
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-MVDS)

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1200	1 OF 1



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H	NOT USED FOR THIS SHEET APPLICATION
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J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
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U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
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Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-MVDS)

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1201	1 OF 1

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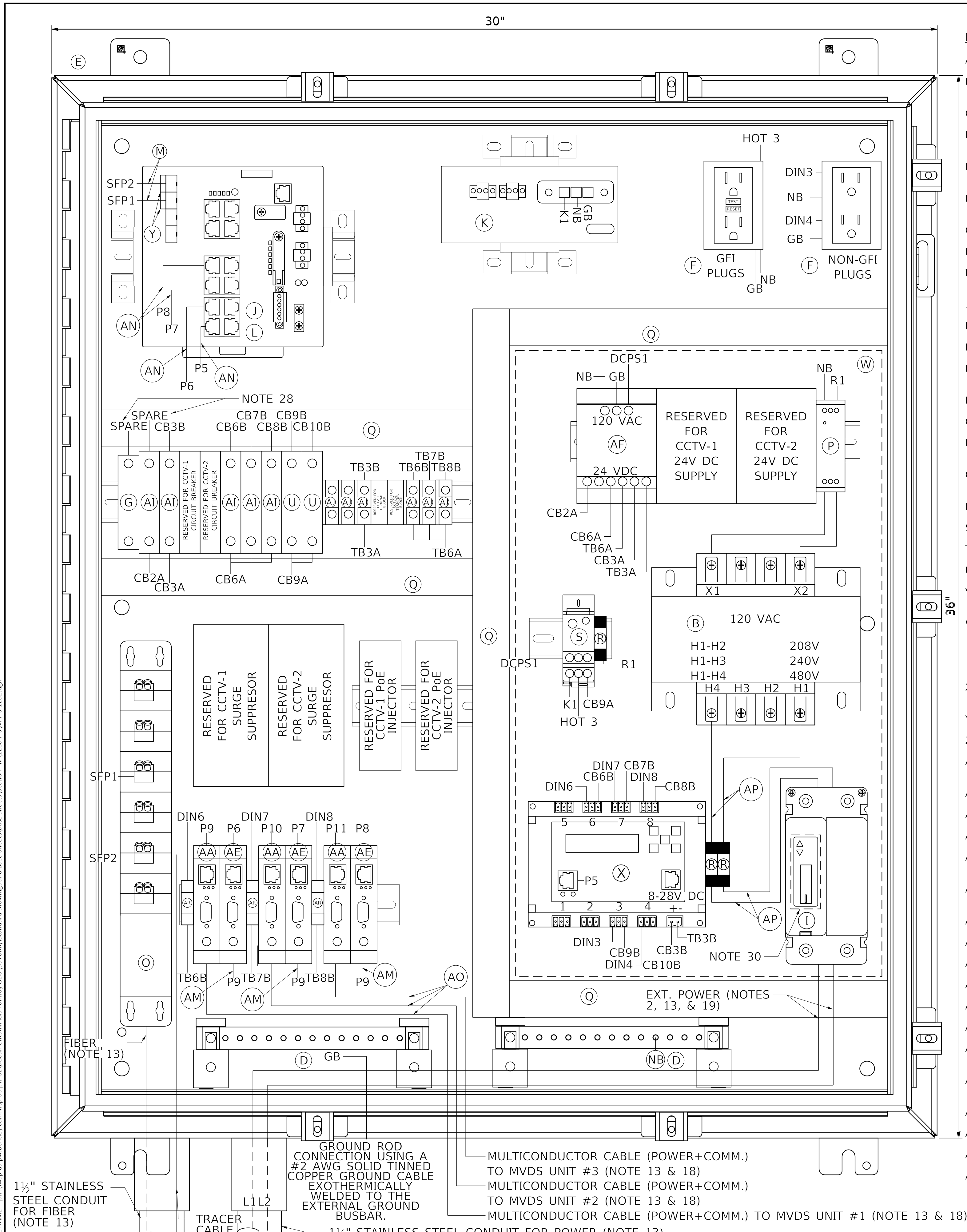

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15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

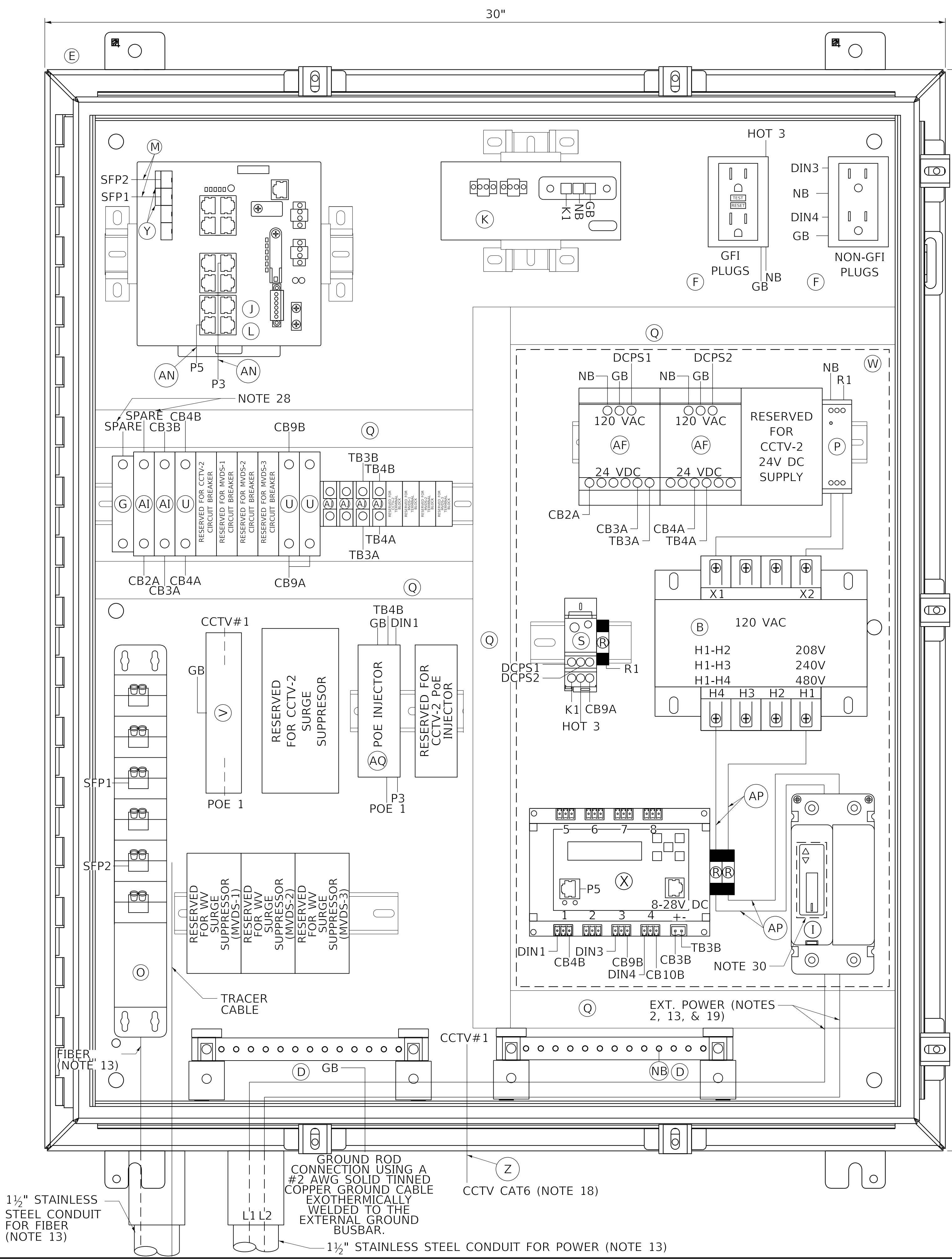
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (3-MVDS)

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1202	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

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0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-CCTV CAMERA)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1203	1 OF 1

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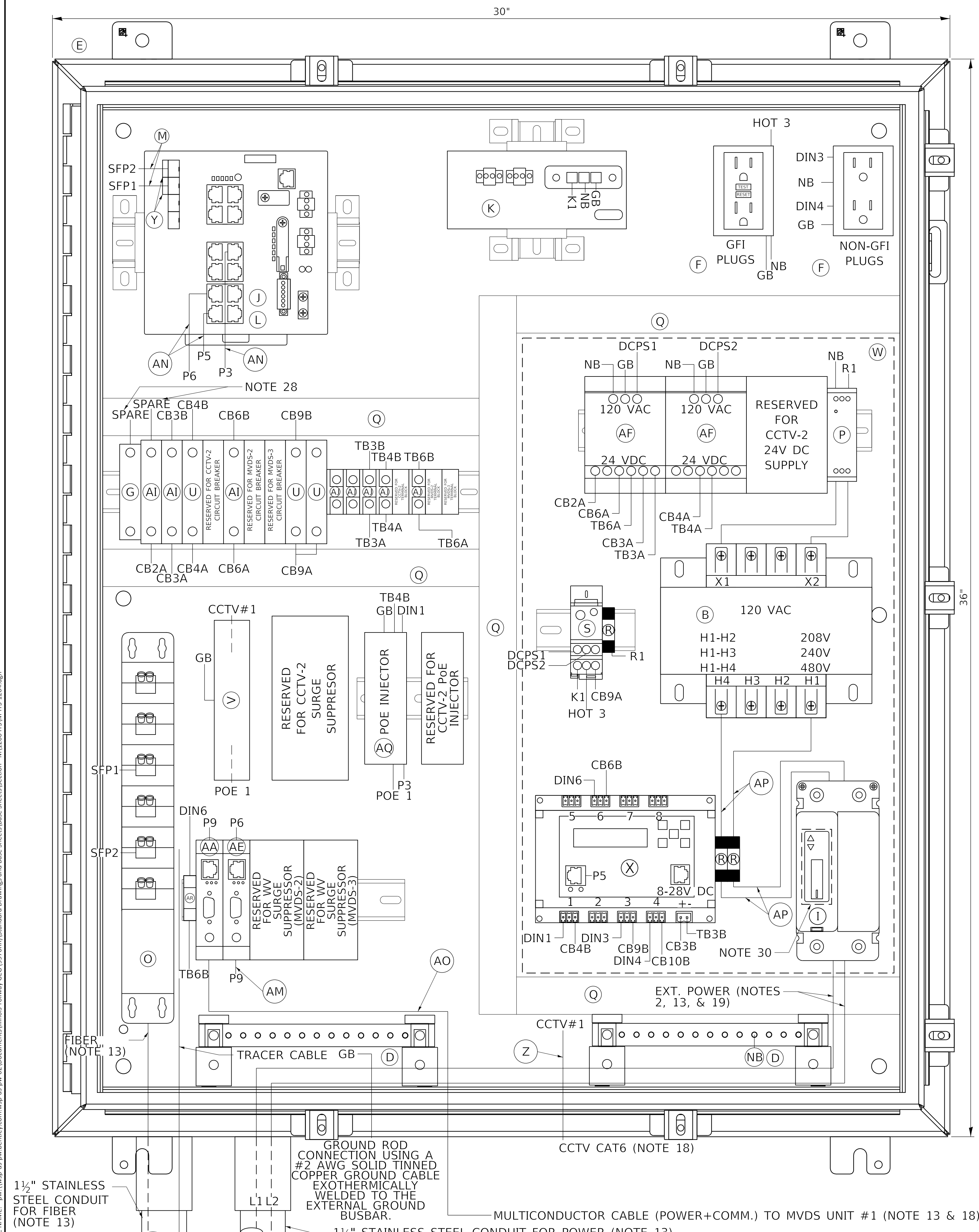

ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

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SCALE IN INCHES
SCALE: 1" = 2"

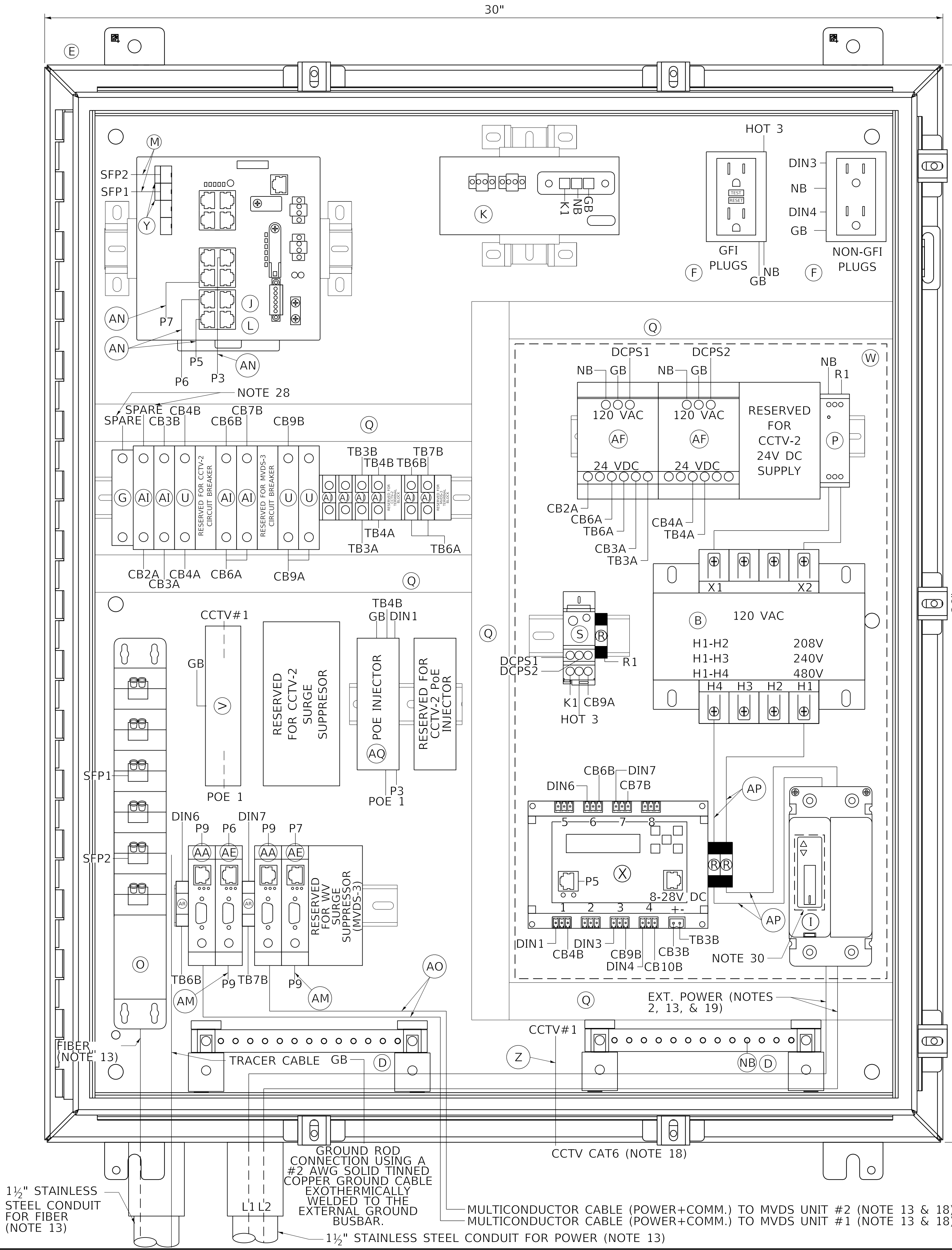
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-CCTV CAMERA AND 1-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1204	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
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AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
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AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

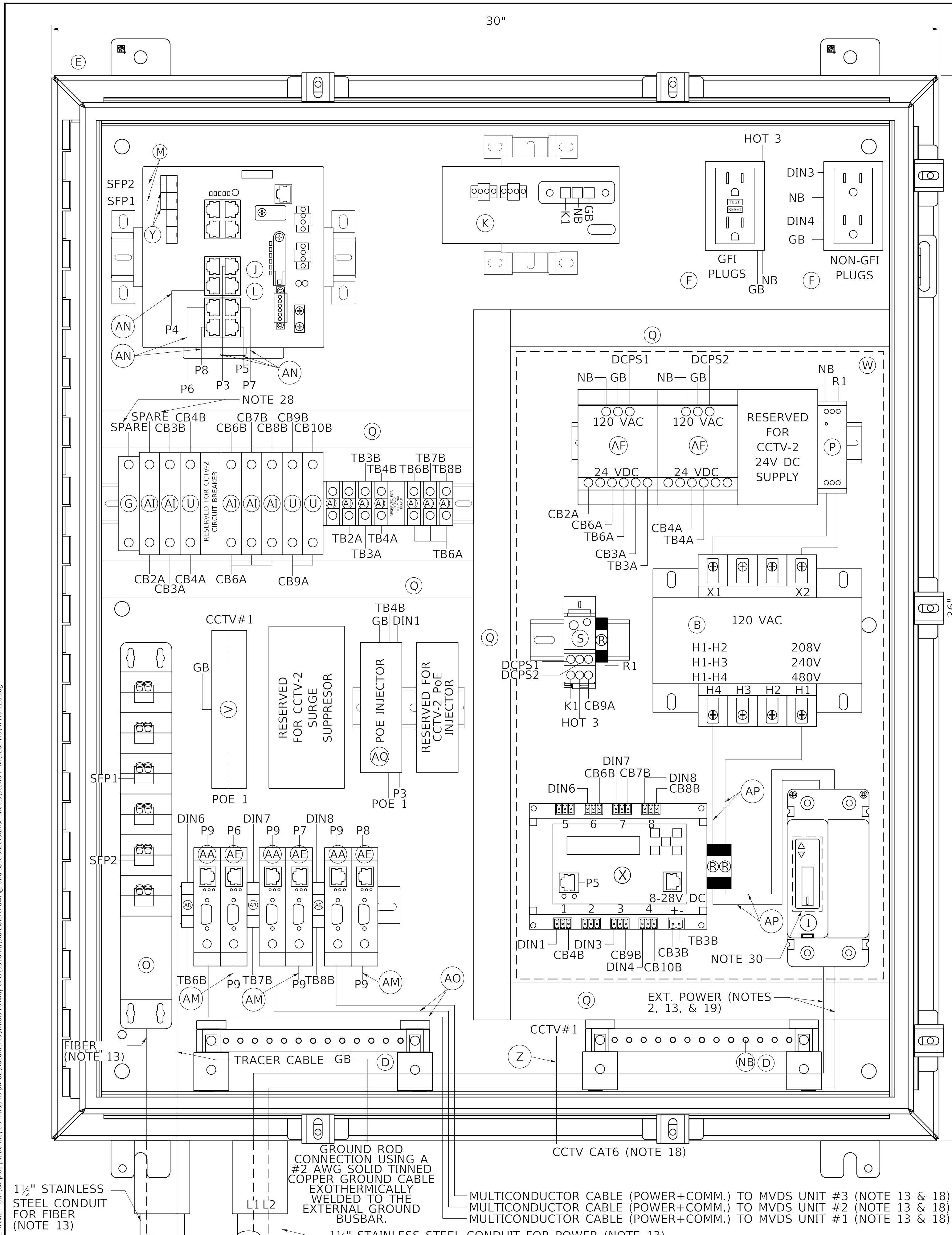
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-CCTV CAMERA AND 2-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1205	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, Gnd, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

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SCALE IN INCHES
SCALE: 1" = 2"

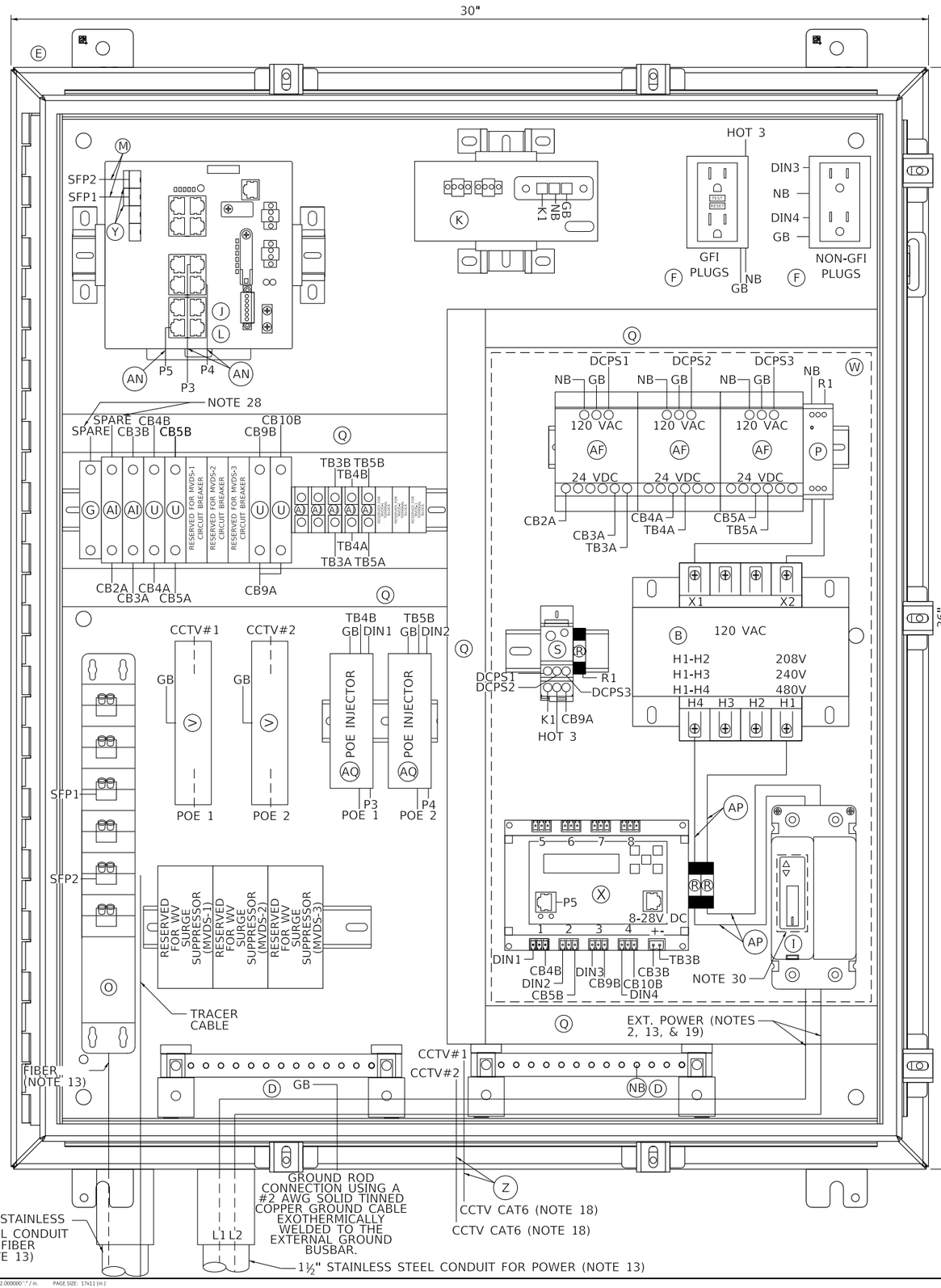
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-CCTV CAMERA AND 3-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1206	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
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10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

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0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-CCTV CAMERAS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1207	1 OF 1

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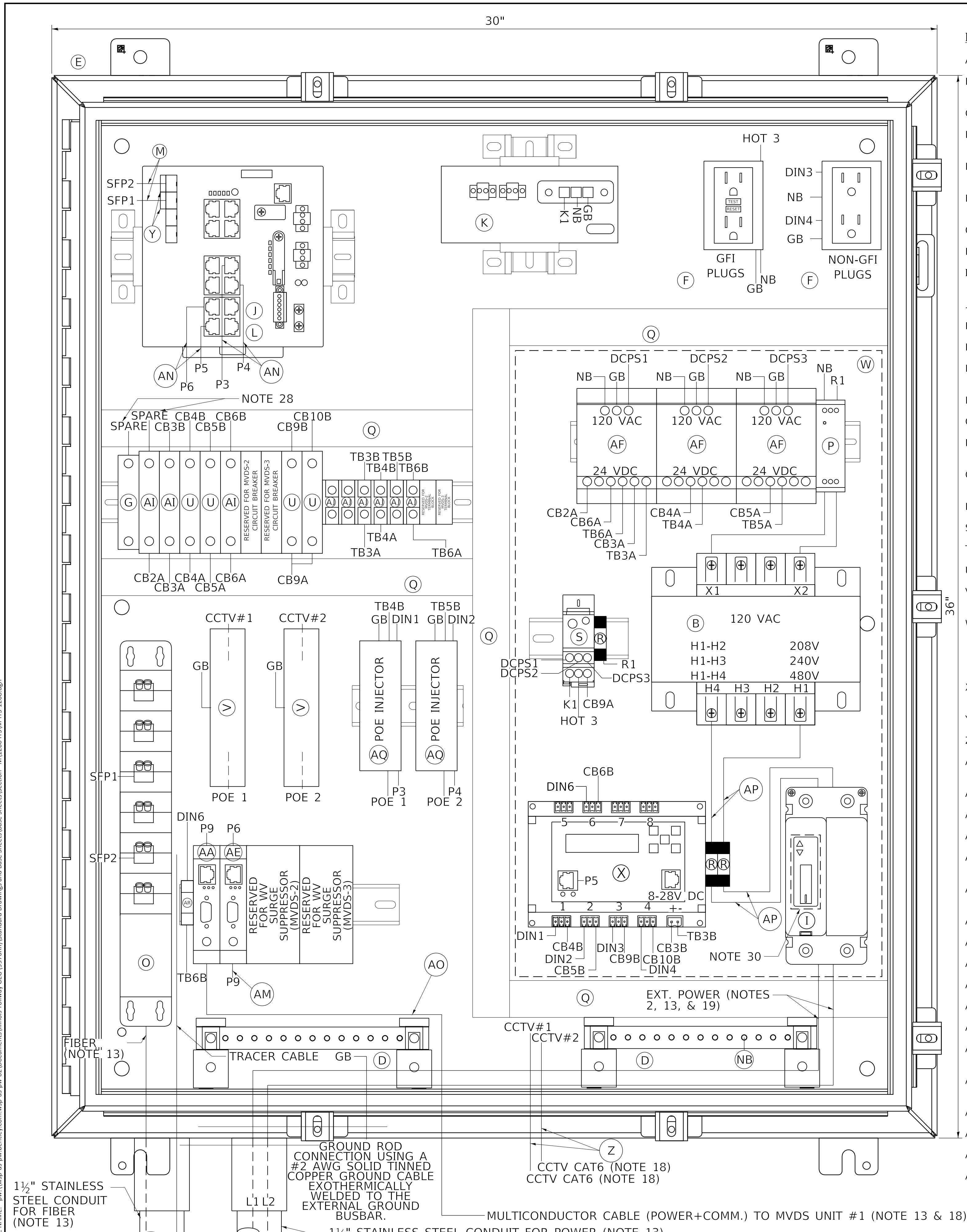

ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-CCTV CAMERAS AND 1-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1208	1 OF 1

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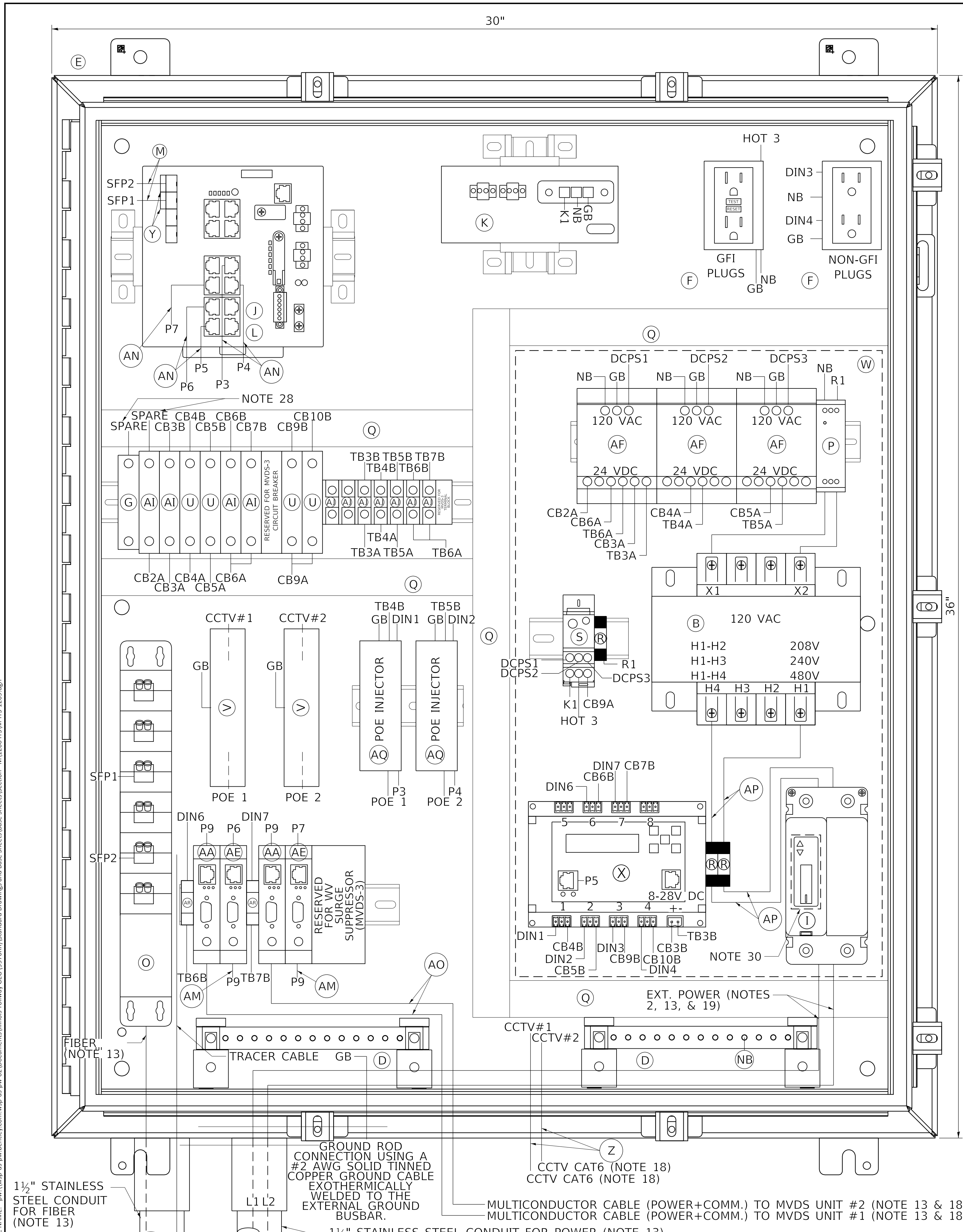


ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE *"CADD STANDARDS MANUAL"* ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

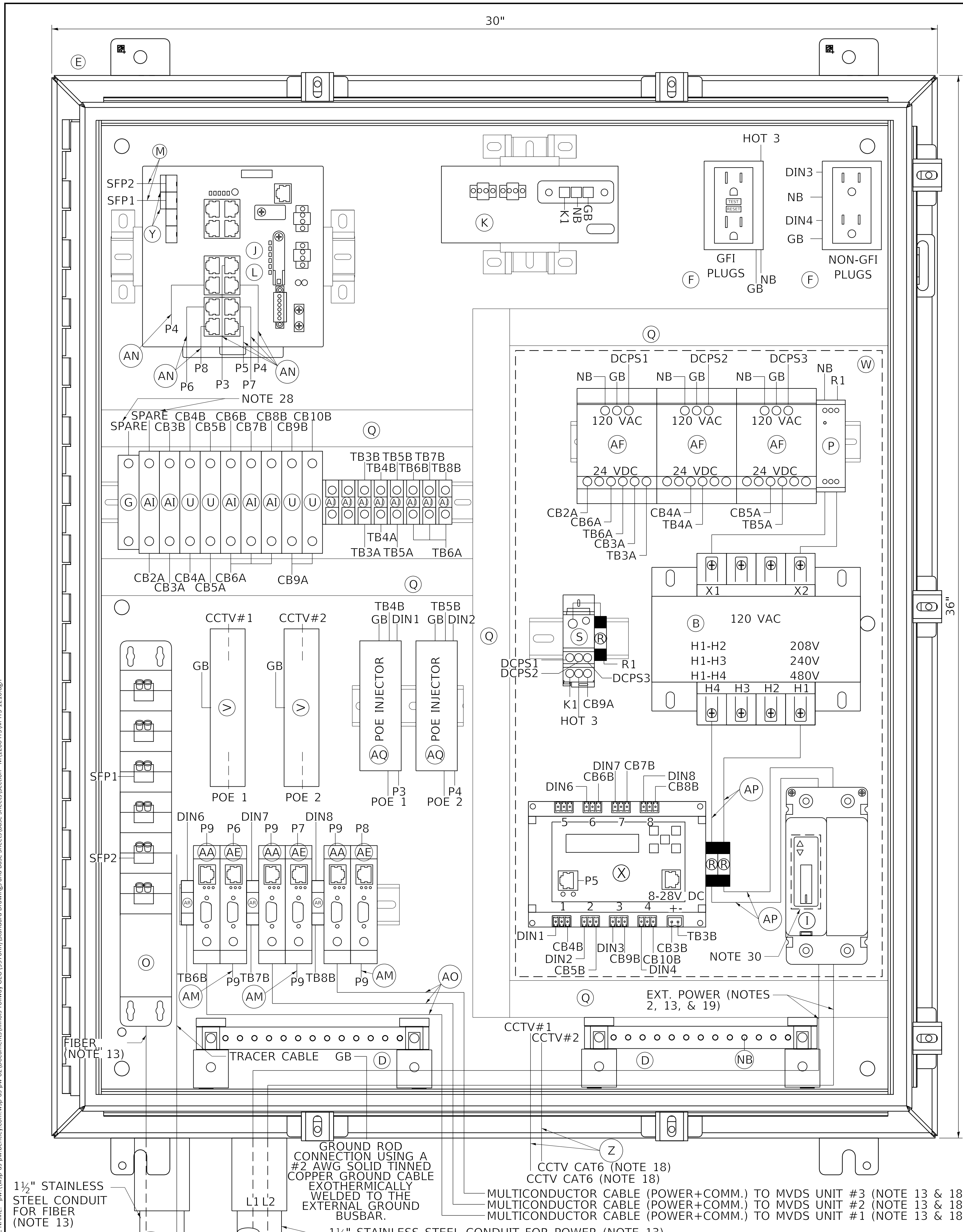
NOTE TO DESIGNER

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-CCTV CAMERAS AND 2-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1209	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B220G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS, SEE SPECIAL PROVISIONS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE, SEE SPECIAL PROVISIONS
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION.
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION.
21. NOT USED FOR THIS SHEET APPLICATION.
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

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NOTE TO DESIGNER

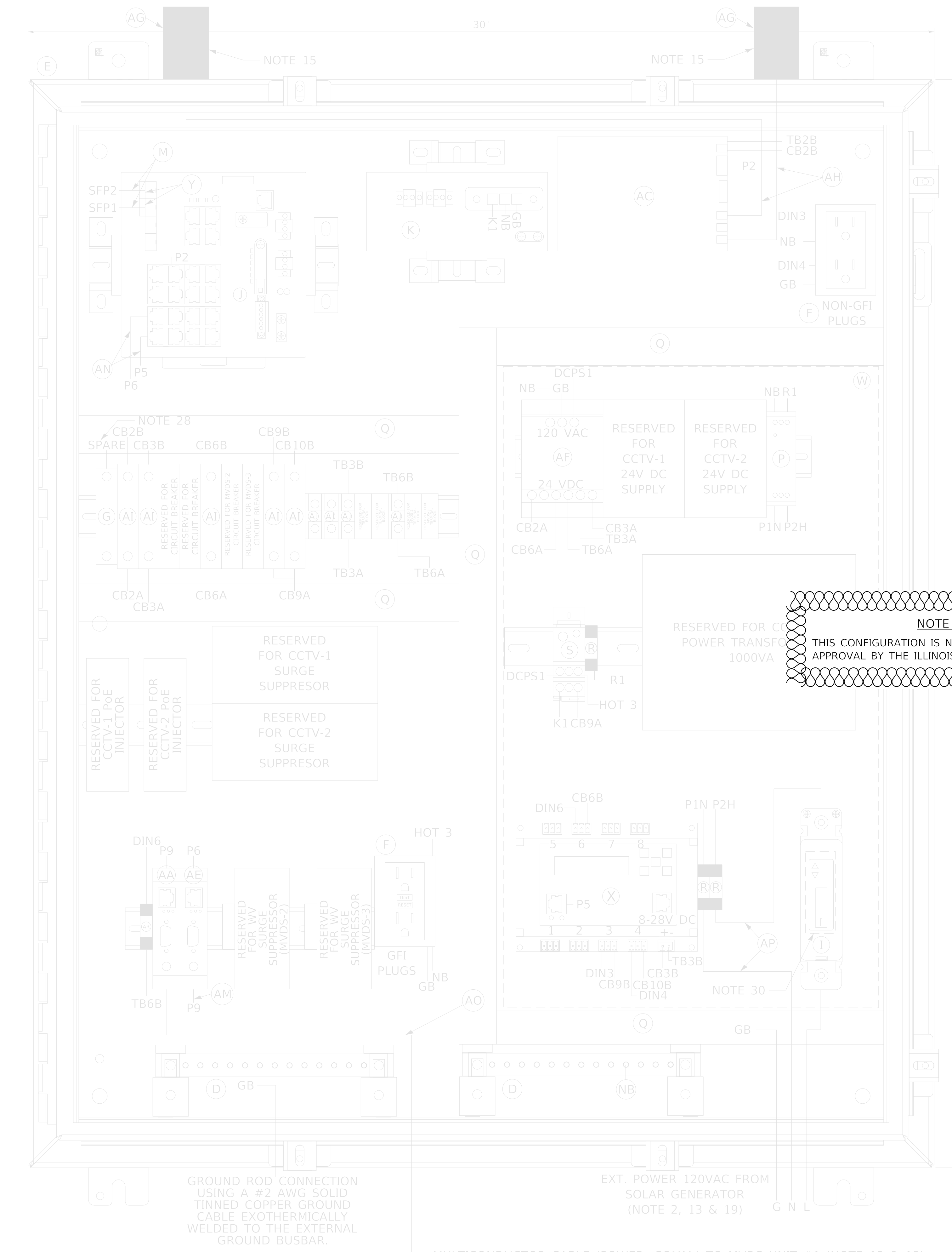
DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-CCTV CAMERAS AND 3-MVDS)

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1210	1 OF 1



NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	120VAC, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD
J	NOT USED FOR THIS SHEET APPLICATION
K	NOT USED FOR THIS SHEET APPLICATION
L	CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D/CLASS 9070-T250D13
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	NOT USED FOR THIS SHEET APPLICATION
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	NOT USED FOR THIS SHEET APPLICATION
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	NOT USED FOR THIS SHEET APPLICATION
AA	...SSION, WAVETRONIX - CLICK-200 OR ISS ZONE ...
	...T APPLICATION
	...(FOR VERIZON NETWORK)
	...T APPLICATION
	...RNET CONVERTOR WAVETRONIX - CLICK-301
	...35A
	...24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	WIRELESS MODEM ANTENNAS, PCTEL/BMLPVDB700/2500
AH	WIRELESS MODEM ANTENNA CABLE, WITH SMA CONNECTORS PCTEL/PROFLEX PLUS 195-RG58/U
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS WAVETRONIX (SMART SENSOR HDSS-126) OR ISS (SX-300)
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	NOT USED FOR THIS SHEET APPLICATION
AO	MVDS CABLE, WAVETRONIX - WX-SS-706-60 OR ISS G4-CBL-60
AP	#10 AWG
AQ	NOT USED FOR THIS SHEET APPLICATION
AR	T-BUS CONNECTOR (WAVETRONIX)
AS	NOT USED FOR THIS SHEET APPLICATION

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED FOR THIS SHEET APPLICATION.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE 1900 QUAD BOX GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. ALL CABLES SHALL ENTER THE ENCLOSURE FROM THE BOTTOM. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THE HANDHOLE.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. THE CELL MODEM ANTENNAS SHALL BE PROPERLY SEALED WITH HIGH DENSITY NEOPRENE GASKETS RATED FOR HIGH TEMPERATURE TO PREVENT WATER PENETRATION INTO THE CABINET.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION
21. NOT USED FOR THIS SHEET APPLICATION
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW. CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED PRIOR TO INSERTION OF THE DRAWING INTO THE PLAN SET.

DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (1-MVDS) SOLAR GENERATOR AND WIRELESS

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1214	1 OF 1

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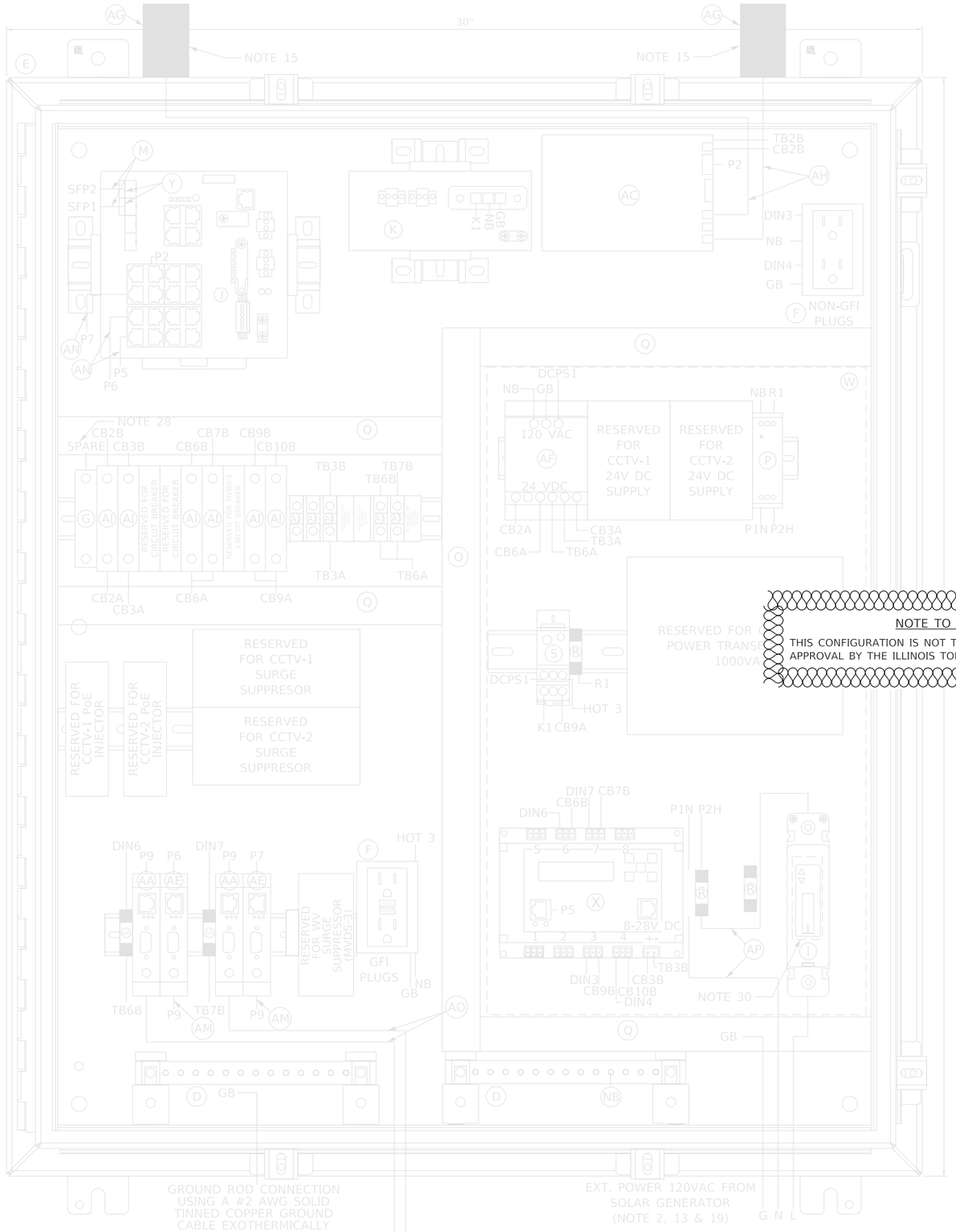

ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K, BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	120VAC, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD
J	NOT USED FOR THIS SHEET APPLICATION
K	NOT USED FOR THIS SHEET APPLICATION
L	CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D/CLASS 9070-T250D13
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	NOT USED FOR THIS SHEET APPLICATION
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	NOT USED FOR THIS SHEET APPLICATION
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	NOT USED FOR THIS SHEET APPLICATION
AA	SION, WAVETRONIX - CLICK-200 OR ISS ZONE
AB	ET APPLICATION
AC	(FOR VERIZON NETWORK)
AD	ET APPLICATION
AE	ERNET CONVERTOR WAVETRONIX - CLICK-301
AF	K-35A AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	WIRELESS MODEM ANTENNAS, PCTEL/BMLPVDB700/2500
AH	WIRELESS MODEM ANTENNA CABLE, WITH SMA CONNECTORS PCTEL/PROFLEX PLUS 195-RG58/U
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS WAVETRONIX (SMART SENSOR HDSS-126) OR ISS (SX-300)
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	NOT USED FOR THIS SHEET APPLICATION
AO	MVDS CABLE, WAVETRONIX - WX-SS-706-60 OR ISS G4-CBL-60
AP	#10 AWG
AQ	NOT USED FOR THIS SHEET APPLICATION
AR	T-BUS CONNECTOR (WAVETRONIX)
AS	NOT USED FOR THIS SHEET APPLICATION

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED FOR THIS SHEET APPLICATION.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE 1900 QUAD BOX GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. ALL CABLES SHALL ENTER THE ENCLOSURE FROM THE BOTTOM. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THE HANDHOLE.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. THE CELL MODEM ANTENNAS SHALL BE PROPERLY SEALED WITH HIGH DENSITY NEOPRENE GASKETS RATED FOR HIGH TEMPERATURE TO PREVENT WATER PENETRATION INTO THE CABINET.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION
21. NOT USED FOR THIS SHEET APPLICATION
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

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DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (2-MVDS) SOLAR GENERATOR AND WIRELESS

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1215	1 OF 1

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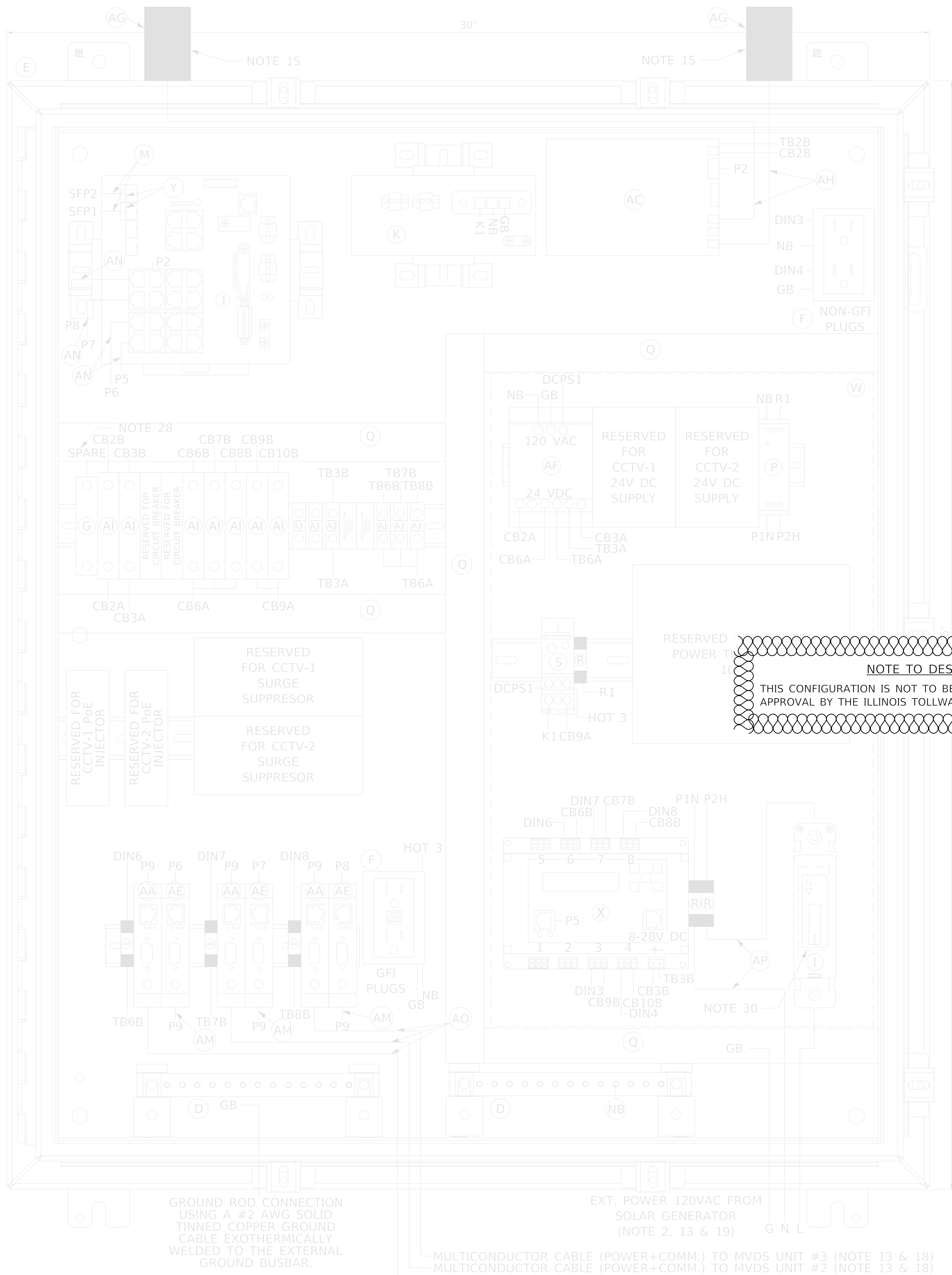


NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	120VAC, 1P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD
J	NOT USED FOR THIS SHEET APPLICATION
K	NOT USED FOR THIS SHEET APPLICATION
L	CONTROL POWER TRANSFORMER, 250VA, 120-24VAC, 1PH SQUARE D/CLASS 9070-T250D13
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	NOT USED FOR THIS SHEET APPLICATION
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	NOT USED FOR THIS SHEET APPLICATION
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	NOT USED FOR THIS SHEET APPLICATION
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB 24510
AB	NOT USED FOR THIS SHEET APPLICATION
[illegible]	[illegible]SEMBLY (FOR VERIZON NETWORK)
[illegible]	[illegible]HIS SHEET APPLICATION
[illegible]	[illegible]O ETHERNET CONVERTOR WAVETRONIX - CLICK-301
[illegible]	[illegible]0A, OK-35A
[illegible]	[illegible]PPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA [illegible]
[illegible]	[illegible] ANTENNAS, PCTEL/BMLPVDB700/2500
AH	WIRELESS MODEM ANTENNA CABLE, WITH SMA CONNECTORS PCTEL/PROFLEX PLUS 195-RG58/U
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS WAVETRONIX (SMART SENSOR HDSS-126) OR ISS (SX-300)
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	NOT USED FOR THIS SHEET APPLICATION
AO	MVDS CABLE, WAVETRONIX - WX-SS-706-60 OR ISS G4-CBL-60
AP	#10 AWG
AQ	NOT USED FOR THIS SHEET APPLICATION
AR	T-BUS CONNECTOR (WAVETRONIX)
AS	NOT USED FOR THIS SHEET APPLICATION

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED FOR THIS SHEET APPLICATION.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE 1900 QUAD BOX GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (e.g. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. ALL CABLES SHALL ENTER THE ENCLOSURE FROM THE BOTTOM. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THE HANDHOLE.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. THE CELL MODEM ANTENNAS SHALL BE PROPERLY SEALED WITH HIGH DENSITY
    NEOPRENE GASKETS RATED FOR HIGH TEMPERATURE TO PREVENT WATER PENETRATION INTO THE CABINET.
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION
21. NOT USED FOR THIS SHEET APPLICATION
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW. CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

NOTE TO DESIGNER

THIS CONFIGURATION IS NOT TO BE USED WITHOUT PRIOR APPROVAL BY THE ILLINOIS TOLLWAY. SEE SHEET M-ITS-1004.

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED PRIOR TO INSERTION OF THE DRAWING INTO THE PLAN SET.

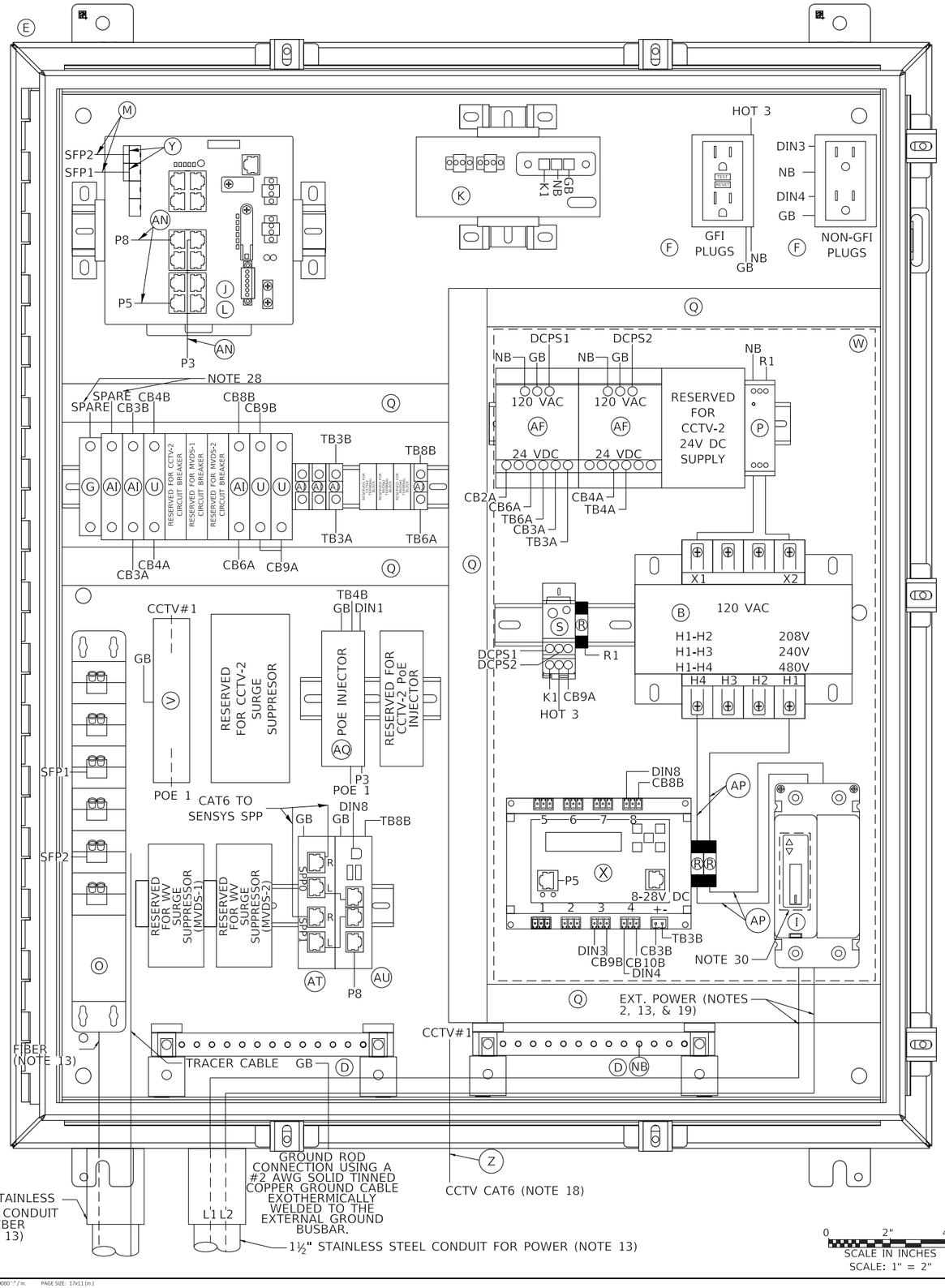
DSE SHALL SPECIFY THE GATOR PATCH CABLE LENGTH PER SITE AND UPDATE ITEM (O) TO INCLUDE THIS LENGTH.

0 2" 4"
SCALE IN INCHES
SCALE: 1" = 2"

Illinois Tollway

CABINET LAYOUT AND WIRING ITS POLE MOUNTED ENCLOSURE (3-MVDS) SOLAR GENERATOR AND WIRELESS

VERSION:	STANDARD:	SHEET:
2022-03	M-ITS-1216	1 OF 1



ITEM	DESCRIPTION
A	NOT USED FOR THIS SHEET APPLICATION
B	CONTROL POWER TRANSFORMER, 1000VA, 208/240/480-120VAC, 1PH SQUARE D/CLASS 9070 - T1000 D95
C	NOT USED FOR THIS SHEET APPLICATION
D	TWO (2) GROUNDING BAR SYSTEM HOFFMAN/PGS2K. BONDED OR SEPARATED AS REQUIRED.
E	NEMA 4X STAINLESS STEEL, 36"H X 30"W X 12"D ENCLOSURE WITH 33"X27" PANEL, HOFFMAN/A36H3012SS6LP & A36P30
F	TWO DUPLEX 120V RECEPTACLES, ONE GFCI AND NON-GFI (SEE NOTE 9) HUBBELL/GFR5362 & BR20WR
G	24VDC, 1P, 15A CIRCUIT BREAKER SCHNEIDER ELECTRIC/MGN61510
H	NOT USED FOR THIS SHEET APPLICATION
I	480V, 2P, 30A CIRCUIT BREAKER WITH TERMINAL SHIELD EATON/HFD2030L & 625B229G07
J	NETWORK SWITCH CISCO IE-4000-8T4G-E
K	CISCO POWER SUPPLY, PWR-IE170W-PC-AC=
L	IP SERVICES LICENSE: L-IE4000-RTU=
M	2 METER - SMFO LC-LC DUPLEX JUMPERS, CORNING/040402R5Z20002M
N	NOT USED FOR THIS SHEET APPLICATION
O	SMF PATCH PANEL WITH LC CONNECTORS
P	120VAC SURGE SUPPRESSOR, MOUNTED ON DIN RAIL COOPER CROUSE HINDS/MA15/D/1/SI OR APPROVED EQUAL
Q	PANDUIT WIRING DUCT (OR EQUIVALENT) PANDUIT/F1X2LG6 WITH COVER-C1LG6
R	10 AMP FUSE, GOULD (MERSEN)/ATM-10
S	SPLICE BLOCK, ALTECH/38041
T	NOT USED FOR THIS SHEET APPLICATION
U	5A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B050
V	CAT6 PoE+ SURGE SUPPRESSOR: USE AXIS T8061 FOR AXIS PoE CAMERA.
W	CLEAR POLY METHYL METHACRYLATE (PMMA, PLEXIGLAS) SAFETY COVER ENCOMPASSING ITEMS AF, P, S, R, B, X, & I. (THE INSTALLER SHALL PERMANENTLY AFFIX A LABEL STATING "DANGER 480 VAC" OR "DANGER 240 VAC" OR "DANGER 120 VAC" FOR 120 VAC AS FIELD CONDITIONS WARRANT.)
X	POWER CONTROLLER, 8-CHANNEL DIN ETHERNET RELAY DIGITAL LOGGERS/DIN 4
Y	(2) CISCO GLC-LX-SM-RGD = 1 GBPS SM SFP MODULES
Z	CATEGORY 6 CABLE, 23 AWG, OUTDOOR RATED CABLE BELDEN/7953A
AA	SENSOR SURGE SUPPRESSION, WAVETRONIX - CLICK-200 OR ISS ZONE BARRIER ZB24510
AB	NOT USED FOR THIS SHEET APPLICATION
AC	NOT USED FOR THIS SHEET APPLICATION
AD	NOT USED FOR THIS SHEET APPLICATION
AE	RS-232 / RS-485 TO ETHERNET CONVERTOR WAVETRONIX - CLICK-301 OR ISS-MOXA P5150A-T, DK-035T
AF	AC/DC POWER SUPPLY, 24VDC WAVETRONIX - CLICK-204 OR ISS LAMBDA DSP100-24
AG	NOT USED FOR THIS SHEET APPLICATION
AH	NOT USED FOR THIS SHEET APPLICATION
AI	2A CIRCUIT BREAKER, ALLEN BRADLEY/1492-SPM1B020
AJ	TERMINAL BLOCK, ALLEN BRADLEY/1492-CD8
AK	MVDS ASSEMBLY (NOT SHOWN), SEE SPECIAL PROVISIONS
AL	TRANSFORMER COVERS, SQUARE D/9070FSC2
AM	5-CONDUCTOR JUMPER (Tx, Rx, GND, RTS, CTS), RS-232 SERIAL COMMUNICATIONS (APPLICABLE TO ISS/MOXA)
AN	INDOOR/OUTDOOR RATED CAT6 (1000MBS, TEMPERATURE HARDENED) THESE ARE THE CAT6 CABLES ROUTED INSIDE CABINET
AO	MVDS CABLE
AP	#10 AWG
AQ	PoE INJECTOR AXIS T8144 24VDC
AR	T-BUS CONNECTOR (WAVETRONIX)
AS	NOT USED FOR THIS SHEET APPLICATION
AT	SENSYS FLEX ISOLATOR
AU	SENSYS FLEX-CTRL-M-E

NOTES:

1. ALL POWER WIRING SHALL BE RHH/RHW WITH WIRE TERMINALS OR TINNED.
2. CONTRACTOR TO VERIFY CORRECT TRANSFORMER TAPS ARE USED BASED ON INCOMING POWER SOURCE.
3. ALL CABLES AND EQUIPMENT SHALL BE PROPERLY DRESSED AND LABELED. ALL CONDUITS SHALL BE PROPERLY PLUGGED WITH DUCT SEAL PUTTY (RAINBOW TECHNOLOGIES OR EQUIVALENT).
4. NOT USED FOR THIS SHEET APPLICATION.
5. EACH 120VAC OUTLET, PS OR TRANSFORMER (ITEM F, K, L, & AF) SHALL BE FED FROM A SEPARATE INPUT LINE.
6. THE DIN RAIL(S) FOR ITEMS J & K SHALL BE INSTALLED WITH THE CENTER LINE NO LESS THAN 5 INCHES FROM ANY OBSTACLE ABOVE AND NO LESS THAN 4 INCHES FROM ANY OBSTACLE BELOW. ALL DIN RAIL SHALL BE GROUNDED.
7. ALL CABLES INSTALLED WITHIN THE CABINET AND POLE SHALL BE OUTDOOR RATED.
8. WIFI COMMUNICATION SHALL BE DISABLED ON DIN ETHERNET RELAY.
9. THE GFI OUTLETS LOAD SHALL NOT BE CONNECTED TO ANY OTHER LOAD IN THE ENCLOSURE. THE GFI'S ARE INTENDED TO BE UTILIZED FOR EXTERNAL EQUIPMENT ONLY. EACH OUTLETS TAB SHALL BE BROKEN SO THEY ARE INDEPENDENT.
10. ALL BREAKERS SHALL BE LABELED (E.G. CAMERA-AC, CAMERA-DC, DIN RELAY-AC, DIN RELAY-DC, CELL MODEM-AC ETC.).
11. NOT USED FOR THIS SHEET APPLICATION
12. USE THE MOUNTING TABS ON THE IP RELAY UNIT TO MOUNT THE UNIT DIRECTLY TO THE BACK PLATE. REFER TO THE IP RELAY WIRING TABLE FOR WIRING DETAILS.
13. THE FIBER CABLE SHALL RUN STRAIGHT DOWN FROM THE GATOR PATCH THROUGH THE LEFT MOST CONDUIT. THE POWER CABLE SHALL BE PULLED THROUGH THE CONDUIT TO THE RIGHT OF THE FIBER CONDUIT. NO SLACK SHALL BE PLACED IN THE CABINET. ALL POWER AND COMMUNICATION CABLE SLACK SHALL BE PLACED IN THEIR RESPECTIVE HANDHOLES.
14. POWER FEED TO THE CISCO IE4000 SWITCH SHALL BE FROM THE 120VAC INPUT WHEN THE ENCLOSURE IS AC POWERED.
15. NOT USED FOR THIS SHEET APPLICATION
16. IF A SOLAR GENERATOR IS CONNECTED, THEN ITEM P AND THE SECONDARY SIDE OF ITEM B SHALL BE CONNECTED UNTIL A FINAL AC CONNECTION IS MADE.
17. ITEM X IS USED TO CONTROL POWER TO THE CAMERAS AND DETECTORS. ALL 120VAC CONNECTIONS ON ITEM X SHALL BE PROTECTED.
18. CABLES TO BE ROUTED THROUGH POLE.
19. WHEN A 24VDC TO 120VAC POWER GENERATOR IS CONNECTED, THEN THE 480VAC TO 120VAC STEP DOWN TRANSFORMER IS BYPASSED.
20. NOT USED FOR THIS SHEET APPLICATION
21. NOT USED FOR THIS SHEET APPLICATION
22. DIN RAIL SHALL BE INSTALLED AS ILLUSTRATED ON DRAWING. DIN RAIL SHALL BE GROUNDED TO THE GROUND BUS.
23. BOND NEUTRAL AND GROUND BUSES TOGETHER, WHEN REQUIRED. TIE THE ENCLOSURE INTO THE GROUND BUS.
24. ITEM W SHALL BE FORMED AND MOLDED TO FIT AROUND THE AREA DENOTED BY THE DASHED LINE. THE PLEXIGLASS SHALL BE MOUNTED TO THE BACKPLATE WITH SUFFICIENT AIR HOLES TO ALLOW HEAT TO ESCAPE THE AREA. THERE SHALL ALSO BE OPENINGS ON THE BOTTOM TO ALLOW CABLES TO BE PASSED FROM THE AC SECTION TO THE OTHER SECTIONS OF THE ENCLOSURE.
25. ITEM AL SHALL BE PLACED ON ITEM B.
26. ALL INTERNAL ENCLOSURE ROUTED AND TERMINATED CAT6 CABLE SHALL BE TEMPERATURE RATED.
27. ALL INTERNAL 24VAC, 120VAC (STARTING ON SECONDARY SIDE OF ITEM B) AND ANY DC VOLTAGE POWER FEEDS USE #16 AWG CABLE.
28. SPARE BREAKER RESERVED.
29. ALL CONDUIT EXITING THE BOTTOM OF THE CABINET SHALL BE INSTALL IN-LINE WITH THE EQUIPMENT IT IS CONNECTED TO. THE CABLES SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.
30. PROVIDE WINDOW IN PMMA SHIELD FOR ACCESS TO BREAKER. MOUNT BREAKER FLUSH WITH PMMA SHIELD USING MOUNTING BRACKET.

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NOTE TO DESIGNER

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Illinois Tollway

CABINET WIRING DIAGRAM IN PAVEMENT DETECTION SYSTEM AP. POE. AND INJECTOR ITS ASSEMBLY

VERSION:	STANDARD:	SHEET:
2023-03	M-ITS-1217	1 OF 1

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