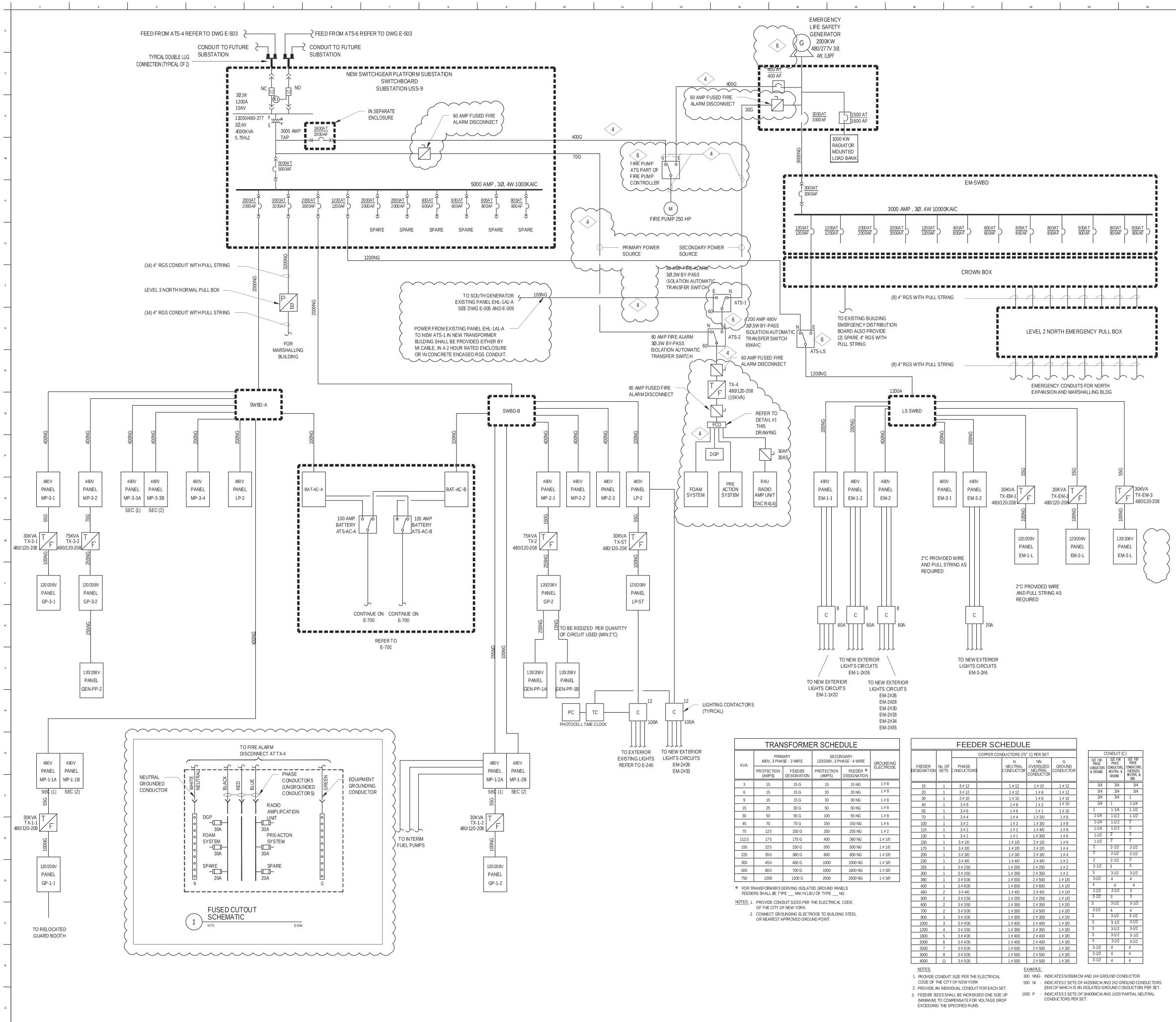


GENERAL NOTES AND LEGEND

ELECTRICAL POWER NOTES:

1. REFER TO DRAWINGS E-001 AND E-002 FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. PROVIDE (2) 120V CIRCUITS PER FLOOR FOR BMS PANEL AND DEVICES AS REQUIRED. COORDINATE WITH MECHANICAL AND BMS CONTRACTORS FOR LOCATION OF DEVICES.
3. REFER TO DRAWING G-007 FOR CONSTRUCTION CRITERIA.

4. FIRE RATED CONCRETE ENCASED FEEDERS OR MI CABLE.
5. ALL FIRE ALARM CONNECTIONS SHALL COMPLY WITH NYC 2011 ELECTRICAL CODE.
6. PROVIDE CONTROL WIRING AS REQUIRED BETWEEN AUTOMATIC TRANSFER SWITCHES (ATS) AND GENERATOR CONTROL PANELS.

TRANSFORMER SCHEDULE

KVA	PRIMARY 480/1, 3 PHASE - 3 WIRE PROTECTION (AMPS)	PRIMARY 480/1, 3 PHASE - 3 WIRE FEEDER DESIGNATION	SECONDARY 120/208V, 3 PHASE - 4 WIRE PROTECTION (AMPS)	SECONDARY 120/208V, 3 PHASE - 4 WIRE FEEDER * DESIGNATION	GROUNDING ELECTRODE
3	15	15 G	15	15 NG	1 # 8
6	15	15 G	20	20 NG	1 # 8
9	15	15 G	30	30 NG	1 # 8
15	25	30 G	50	50 NG	1 # 8
30	50	55 G	100	55 NG	1 # 8
45	70	70 G	150	150 NG	1 # 6
75	125	150 G	250	255 NG	1 # 2
112.5	175	175 G	400	380 NG	1 # 1/0
150	225	230 G	500	500 NG	1 # 1/0
225	350	380 G	800	800 NG	1 # 2/0
300	450	460 G	1000	1000 NG	1 # 3/0
500	800	700 G	1600	1600 NG	1 # 3/0
750	1200	1200 G	2500	2500 NG	1 # 3/0

* FOR TRANSFORMER S SERVING ISOLATED GROUND PANELS FEEDERS SHALL BE TYPE ___ NNI IN LIEU OF TYPE ___ NG

NOTES: 1. PROVIDE CONDUIT SIZED PER THE ELECTRICAL CODE OF THE CITY OF NEW YORK.
2. CONNECT GROUNDING ELECTRODE TO BUILDING STEEL OR NEAREST APPROVED GROUND POINT.

FEEDER SCHEDULE

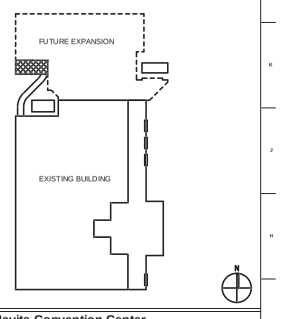
FEEDER DESIGNATION	No. OF SETS	COPPER CONDUCTORS (75° C) PER SET: PHASE CONDUCTORS	N NEUTRAL CONDUCTOR	NN OVERSIZED NEUTRAL CONDUCTOR	G GROUND CONDUCTOR
15	1	3 # 12	1 # 12	1 # 10	1 # 12
20	1	3 # 12	1 # 12	1 # 8	1 # 12
30	1	3 # 10	1 # 10	1 # 6	1 # 10
40	1	3 # 8	1 # 8	1 # 2	1 # 10
55	1	3 # 6	1 # 6	1 # 1	1 # 10
70	1	3 # 4	1 # 4	1 # 2/0	1 # 8
100	1	3 # 2	1 # 2	1 # 3/0	1 # 8
115	1	3 # 2	1 # 2	1 # 4/0	1 # 8
130	1	3 # 1	1 # 1	1 # 300	1 # 6
150	1	3 # 1/0	1 # 1/0	2 # 1/0	1 # 6
175	1	3 # 2/0	1 # 2/0	2 # 2/0	1 # 4
200	1	3 # 3/0	1 # 3/0	2 # 3/0	1 # 4
230	1	3 # 4/0	1 # 4/0	2 # 4/0	1 # 2
255	1	3 # 250	1 # 250	2 # 250	1 # 2
300	1	3 # 350	1 # 350	2 # 350	1 # 2
380	1	3 # 500	1 # 500	2 # 500	1 # 1/0
400	1	3 # 600	1 # 600	2 # 600	1 # 1/0
460	2	3 # 4/0	1 # 4/0	2 # 4/0	1 # 1/0
500	2	3 # 250	1 # 250	2 # 250	1 # 1/0
600	2	3 # 350	1 # 350	2 # 350	1 # 2/0
700	2	3 # 500	1 # 500	2 # 500	1 # 2/0
800	3	3 # 300	1 # 300	2 # 300	1 # 2/0
1000	3	3 # 4/0	1 # 4/0	2 # 4/0	1 # 3/0
1200	4	3 # 350	1 # 350	2 # 350	1 # 3/0
1600	5	3 # 4/0	1 # 4/0	2 # 4/0	1 # 3/0
2000	6	3 # 4/0	1 # 4/0	2 # 4/0	1 # 3/0
2500	7	3 # 500	1 # 500	2 # 500	1 # 3/0
3000	8	3 # 500	1 # 500	2 # 500	1 # 3/0
4000	11	3 # 500	1 # 500	2 # 500	1 # 3/0

NOTES:
1. PROVIDE CONDUIT SIZE PER THE ELECTRICAL CODE OF THE CITY OF NEW YORK
2. PROVIDE AN INDIVIDUAL CONDUIT FOR EACH SET.
3. FEEDER SIZES SHALL BE INCREASED ONE SIZE UP (MINIMUM) TO COMPENSATE FOR VOLTAGE DROP EXCEEDING THE SPECIFIED RUNS.

EXAMPLE:
300 NNG - INDICATES 5 X 350MCM AND 1/4 GROUND CONDUCTOR.
500 NI - INDICATES 2 SETS OF 4X250MCM AND 2X2 GROUND CONDUCTORS EACH OF WHICH IS AN ISOLATED GROUND CONDUCTOR PER SET.
1000 P - INDICATES 3 SETS OF 3X400MCM AND 1X2/0 PARTIAL NEUTRAL CONDUCTORS PER SET.

CONDUIT (C)		
SIZE FOR PHASE CONDUCTORS & GROUND	SIZE FOR PHASE CONDUCTORS, NEUTRAL & GROUND	SIZE FOR PHASE CONDUCTORS, OVERSIZED NEUTRAL & GND.
3/4	3/4	3/4
3/4	3/4	3/4
3/4	3/4	1
3/4	1	1-1/4
1	1-1/4	1-1/2
1-1/4	1-1/2	1-1/2
1-1/4	1-1/2	2
1-1/4	1-1/2	2
1-1/2	2	2
1-1/2	2	2
2	2-1/2	2-1/2
2	2-1/2	2-1/2
2	2-1/2	3
2-1/2	3	3
3	3-1/2	3-1/2
3-1/2	4	4
4	4	4
2-1/2	2-1/2	3
2-1/2	3	3
3	3-1/2	3-1/2
3-1/2	4	4
3	3-1/2	3-1/2
3	3-1/2	3-1/2
3	3-1/2	3-1/2
3	3-1/2	3-1/2
3-1/2	4	4
3-1/2	4	4
3-1/2	4	4

No.	Date	Revisions/Submissions
8	10.11.2016	IN SUBMISSION - ADDENDUM NO. 1
7	08.22.2016	IN SUBMISSION REPORT
6	08.12.2016	IN SUBMISSION REPORT
5	06.27.2016	IN SUBMISSION REPORT - CODE COMPLIANCE TO NYC
4	06.02.2016	IN SUBMISSION REPORT - CODE CHANGE TO NYC 2011 CODE
3	05.27.2016	IN SUBMISSION REPORT - CODE CHANGE TO NYC 2011 CODE
2	05.27.2016	IN SUBMISSION REPORT - REVISE SHUTDOWN
1	05.27.2016	IN SUBMISSION REPORT - REVISE SHUTDOWN
0	05.27.2016	IN SUBMISSION REPORT - 100% SUBMISSION
1	04.29.2016	DEEP FOUNDATIONS PERMIT AND PERMIT



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Drawing Title

ELECTRICAL NEW SINGLE LINE DIAGRAM TRANSFORMER YARD

Seal	Drawn JK	Project No. 161.05
	Checked RO	Drawing No. E-504
	Reviewed PS	
	Date 05/27/16	DOB Drawing No.
	Scale N.T.S.	of

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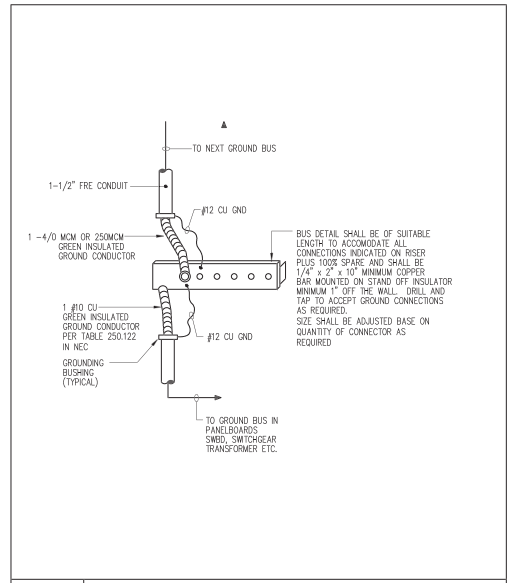
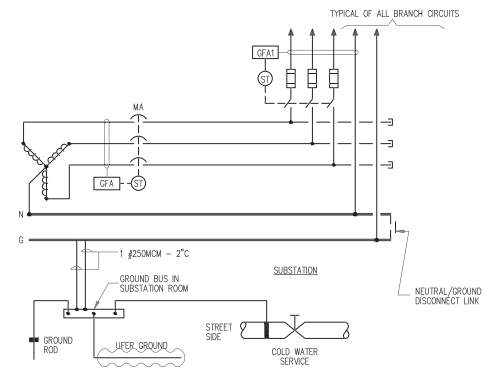


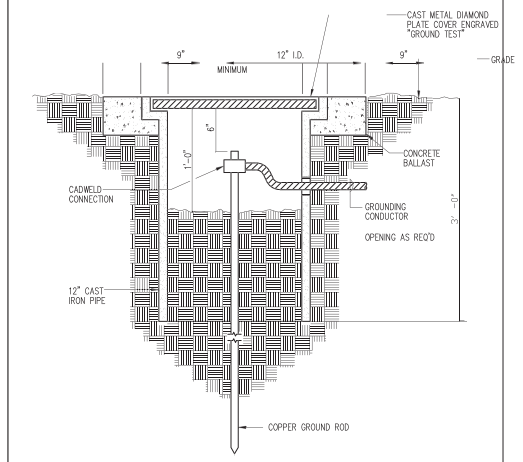
1 ELECTRIC GROUND BUS (TYP)

N.T.S.



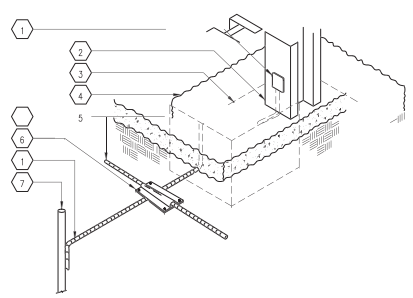
2 SUBSTATION GROUNDING

N.T.S.



3 GROUND TEST WELL

N.T.S.

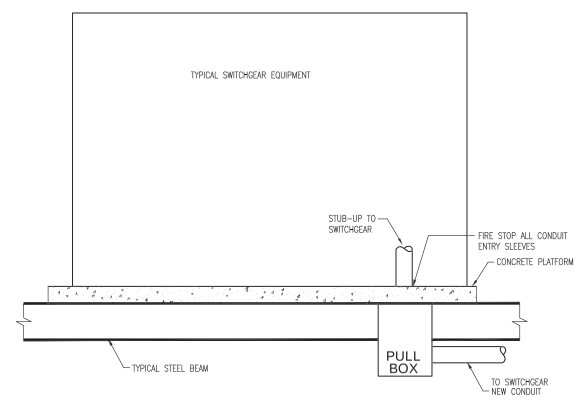


NOTES:

1. EXOTHERMIC WELD CONNECTION
2. COLUMN
3. COLUMN FOOTING
4. CONCRETE SLAB ON GRADE
5. FOUNDATION COUNTERPOISE GROUND CABLE
6. CROSS CABLE CLAMP
7. GROUND ROD

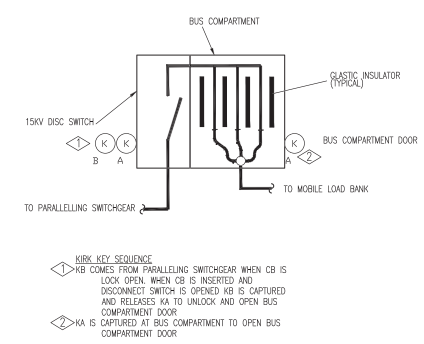
4 COLUMN BASE GROUNDING

N.T.S.



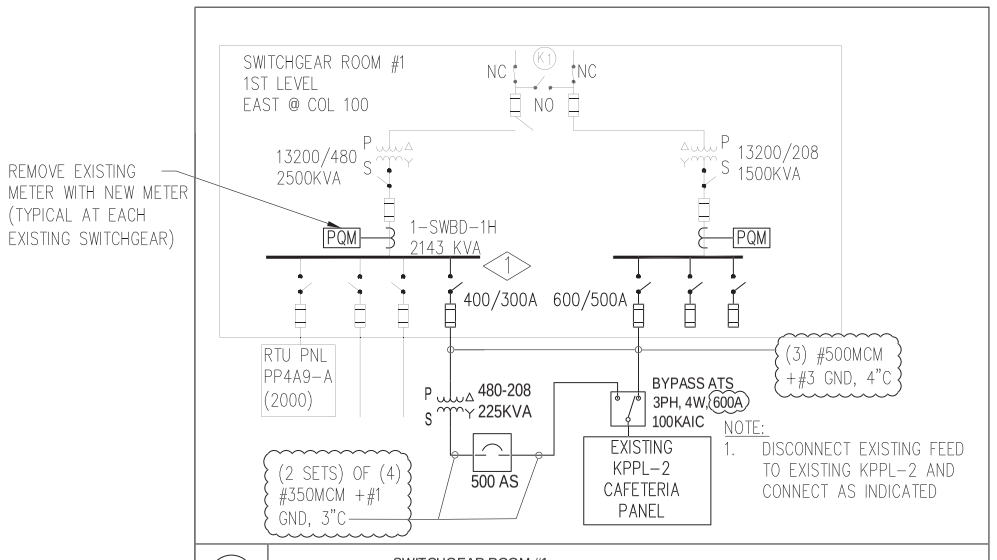
5 TYPICAL SWITCHGEAR STUB UP

N.T.S.



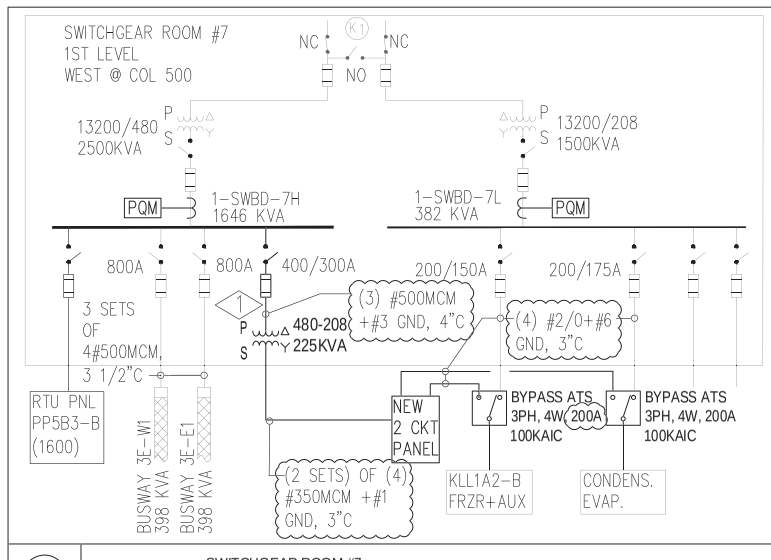
6 MOBILE 15KV LOAD BANK DISCONNECT DETAIL

N.T.S.



7 SWITCHGEAR ROOM #1

N.T.S.



7 SWITCHGEAR ROOM #7

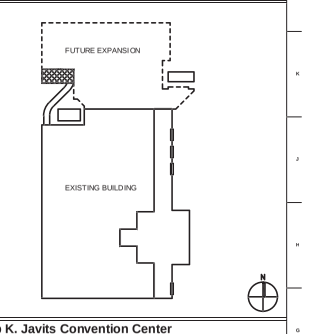
N.T.S.

1 A NEW SWITCH AND FUSE, TRANSFORMER AND ATS'S WILL BE PROVIDED ON 1-SWBD-7H AND 1-SWBD-1H FOR PROVIDE ALTERNATE POWER SOURCE FOR EXISTING FOOD SERVICE REFRIGERATION.

V.I.F.
FEEDER CONDITION MAY REQUIRE ADDITIONAL PROTECTION TO ATS

GENERAL NOTES AND LEGEND

No.	Date	Revisions/Submissions
12	06.13.2016	IS-BUILT FOR IBC - ADDENDUM NO. 1
11	06.10.2016	IS-BUILT FOR PERMIT
10	06.03.2016	IS-BUILT FOR IBC - REVISED
9	05.27.2016	IS-BUILT FOR PERMIT - ADDITIONAL REQ'D IN SUPS
8	05.07.2016	IS-BUILT FOR PERMIT - CODE CHANGE TO NYC CONSTRUCTION CODE
7	04.07.2016	IS-BUILT FOR IBC - CODE CHANGE TO NYC CONSTRUCTION CODE
6	03.31.2016	DSDP FOUNDATION, POWER AND REPAIR - REVISIONS
5	03.25.2016	DSDP FOUNDATION, POWER AND REPAIR
4	03.17.2016	IS-BUILT FOR IBC - REVISIONS AND REPAIRS
3	03.04.2016	DSDP FOUNDATIONS POWER AND REPAIR



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Drawing Title

ELECTRICAL DETAIL SHEET #2

Seal	Drawn JK	Project No. 16105
	Checked RC	Drawing No. E-701
	Reviewed PS	
	Date 05/27/16	DOB Drawing No.
	Scale N.T.S.	of

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