

- NOTE:
- BENDS SHALL BE INSTALLED PER FIELD CONDITION.
 - SPARES NOT SHOWN.
 - INSTALL ELBOW ARRESTERS AT NORMAL OPEN SWITCH LOCATIONS ON 600A SIDE.
 - SEE C30-1010 FOR FAULT INDICATOR LOCATION.
 - FOR VAULT INSTALLATIONS ONLY, INSTALL LIDS - DEVAL.
 - GROUND GRID INSTALLED 12" FROM VAULT AND 12" BELOW GRADE.
 - CONTRACTOR IS ADVISED THIS SPECIFICATION INDICATES WHAT IS INSIDE AN EXISTING ENERGIZED SWITCH GEAR THAT IS TO BE WORKED IN BY THE CONTRACTOR.
- THE ASSEMBLY CODE UT15I - BUSHING INSERT, 15kV 200 Amperes WAS ELIMINATED AFTER S&C ADDED THE BUSHING INSERT OPTION TO ALL NEW FINE SWITCHGEAR! THE UT15I OPTION IS STILL AVAILABLE FOR USE AS A REPLACEMENT OPTION.

| | | |
|--|------------------------------------|--|
| NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS | 30 15kV AIR SWITCH MODULE ASSEMBLY | DATE: 4-22-07 Page 1 of 3 C30-0013 |
|--|------------------------------------|--|

DEVA: VAULT, AIR SWITCH

| Item Code | Description 1 | Description 2 | TE | A | TC | PC | F | AE | M | AL |
|---------------|-----------------------------|--------------------------------|----|----|----|----|---|----|---|----|
| 284 101 00120 | EXTENDER, 14 TRF VAULT | 44" X 44" X 1/2" 25' 325" OPEN | 1 | | | | | | | |
| 284 101 00010 | VAULT, AIR SWITCH | 74" X 76" X 36" (FIBER-CRETE) | 1 | | | | | | | |
| 284 101 00020 | VAULT, 10 TRF/FUSE CAN | 44" X 44" X 3/2" (FIBER-CRETE) | | | | | | | | |
| 284 101 00030 | VAULT, 30 PLUG CAN | 23" X 69" X 36" (FIBER-CRETE) | | | | | | | | |
| 284 101 00040 | VAULT, 30 FUSE CAN | 49" X 69" X 36" (FIBER-CRETE) | | | | | | | | |
| 284 101 00100 | EXTENDER, AIR SWITCH VAULT | 74" X 76" X 36" (FIBER-CRETE) | | | | | | | | |
| NON | CA-6 | CRUSHED LIMESTONE | 1 | 25 | 25 | .5 | | | | |
| NON | VAULT, 12.47KV PH. METERING | 56" X 56" X 320" (FIBER-CRETE) | | | | | | | | |
| NON | LID, AIR SWITCH VAULT | 2-PIECE DESIGN W/HARDWARE | | | | | | | | |

DnBxxP: BEND, PVC

| Assembly | Item Code | Description 1 | Description 2 | Qty |
|----------|---------------|----------------------------|------------------------|-----|
| D3B30P | 285 101 00025 | ELBOW, PVC 30 DEG 3" | STANDARD RADIUS SCH 40 | 1 |
| D3B45P | 285 101 00030 | ELBOW, 36" R PVC 45 DEG 3" | SCH 40 | 1 |
| D3B60P | 285 101 00040 | ELBOW, 36" R PVC 90 DEG 3" | SCH 40 | 1 |
| D5B30P | 285 101 00060 | ELBOW, 36" R PVC 30 DEG 5" | SCH 40 | 1 |
| D5B45P | 285 101 00090 | ELBOW, 36" R PVC 45 DEG 5" | SCH 40 | 1 |
| D5B60P | 285 101 00100 | ELBOW, 36" R PVC 90 DEG 5" | SCH 40 | 1 |
| D8B30P | 285 101 00020 | ELBOW, 48" R PVC 30 DEG 6" | SCH 40 | 1 |
| D8B45P | 285 101 00030 | ELBOW, 48" R PVC 45 DEG 6" | SCH 40 | 1 |
| D8B60P | 285 101 00040 | ELBOW, 48" R PVC 90 DEG 6" | SCH 40 | 1 |

D3BxxS: BEND, 3" STEEL

| Item Code | Description 1 | Description 2 | D3B90S | Qty |
|---------------|----------------------------|------------------|--------|-----|
| 285 101 00140 | ELBOW, 30" R STL 90 DEG 3" | GALVANIZED | | 1 |
| 285 102 00040 | COUPLING, PVC 3" | LONG LINE SCH 40 | | 1 |

D5BxxS: BEND, 5" STEEL

| Item Code | Description 1 | Description 2 | D5B30S | D5B45S | D5B60S | Qty |
|---------------|----------------------------|------------------|--------|--------|--------|-----|
| 285 101 00160 | ELBOW, 36" R STL 30 DEG 5" | GALVANIZED | | | | 1 |
| 285 101 00170 | ELBOW, 36" R STL 45 DEG 5" | GALVANIZED | | | | 1 |
| 285 101 00180 | ELBOW, 36" R STL 90 DEG 5" | GALVANIZED | | | | 1 |
| 285 102 00110 | COUPLING, PVC 5" | LONG LINE SCH 40 | | | | 1 |

D6BxxS: BEND, 6" STEEL

| Item Code | Description 1 | Description 2 | D6B11S | D6B22S | D6B33S | D6B44S | D6B55S | Qty |
|---------------|----------------------------|------------------|--------|--------|--------|--------|--------|-----|
| 285 101 00186 | ELBOW, 48" R STL 11 DEG 6" | GALVANIZED | | | | | | 1 |
| 285 101 00188 | ELBOW, 48" R 22.5 DEG 6" | GALVANIZED | | | | | | 1 |
| 285 101 00190 | ELBOW, 48" R STL 30 DEG 6" | GALVANIZED | | | | | | 1 |
| 285 101 00200 | ELBOW, 48" R STL 45 DEG 6" | GALVANIZED | | | | | | 1 |
| 285 101 00210 | ELBOW, 48" R STL 90 DEG 6" | GALVANIZED | | | | | | 1 |
| 285 102 00140 | COUPLING, PVC 6" | LONG LINE SCH 40 | | | | | | 1 |

DnF: BELL FITTING, PVC

| Item Code | Description 1 | Description 2 | D5P | D5P | D6P | Qty |
|---------------|----------------------|-----------------|-----|-----|-----|-----|
| 285 103 00040 | BELL FITTING, PVC 3" | SCH 40 & SCH 80 | | | | 1 |
| 285 103 00090 | BELL FITTING, PVC 5" | SCH 40 & SCH 80 | | | | 1 |
| 285 103 00100 | BELL FITTING, PVC 6" | SCH 40 & SCH 80 | | | | 1 |

DnP: PLUG, PVC

| Item Code | Description 1 | Description 2 | D3P | D5P | D6P | Qty |
|---------------|---------------|---------------|-----|-----|-----|-----|
| 285 103 00030 | PLUG, PVC 3" | WITH PULL TAB | | | | 1 |
| 285 103 00070 | PLUG, PVC 5" | WITH PULL TAB | | | | 1 |
| 285 103 00090 | PLUG, PVC 6" | WITH PULL TAB | | | | 1 |

| | | |
|--|------------------------------------|---|
| NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS | 30 15kV AIR SWITCH MODULE ASSEMBLY | DATE: 10-22-06 Page 2 of 3 C30-0013 |
|--|------------------------------------|---|

UFnSMU: FUSE UNIT, 15KV, SMU20

| Item Code | Description 1 | Description 2 | Qty | Qty | Qty | Qty | Qty | Qty | Qty |
|---------------|------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|
| 289 105 00030 | FUSE UNIT, SMU20, 15KV | 25K | 1 | | | | | | |
| 289 105 00040 | FUSE UNIT, SMU20, 15KV | 50K | | 1 | | | | | |
| 289 105 00050 | FUSE UNIT, SMU20, 15KV | 65K | | | 1 | | | | |
| 289 105 00060 | FUSE UNIT, SMU20, 15KV | 80K | | | | 1 | | | |
| 289 105 00070 | FUSE UNIT, SMU20, 15KV | 100K | | | | | 1 | | |
| 289 105 00080 | FUSE UNIT, SMU20, 15KV | 120K | | | | | | 1 | |
| 289 105 00090 | FUSE UNIT, SMU20, 15KV | 200K | | | | | | | 1 |

UGS: GROUNDING, SWITCHGEAR

| Item Code | Description 1 | Description 2 | UGS | UGSV | UGSE | Qty |
|---------------|--------------------------|-----------------------------|-----|------|------|-----|
| 286 107 00070 | CU BASE SB | 4/0 7'-STR | | | | 4 |
| 283 156 00010 | GROUND ROD, COPPER CLAD | 5/8" X 10' | | | | 76 |
| 284 199 00184 | CLAMP, CABLE TO FLAT GND | #6 SOL - 250 MCM CU | | | | 4 |
| 286 100 00260 | CONNECTOR, WEDGE CU | 1/0 STR (7) - 4/0 STR (7) | | | | 4 |
| 286 100 00320 | CONNECTOR, WEDGE CU | 1/0 STR (7) - 5/8" ROD | | | | 4 |
| 286 101 00010 | SHELL, WEDGE AMP | WHITE | | | | 8 |
| 286 199 00220 | BREAK-AWAY | 1/0-4/0 STR X 1/0 - 4/0 STR | | | | 12 |

UI15n: FAULTED CIRCUIT INDICATOR

| Item Code | Description 1 | Description 2 | UI15 | Qty |
|---------------|----------------------------------|-----------------|------|-----|
| 283 192 00210 | GUARD WIRE | SPIRAL | | 4 |
| 284 120 00010 | FAULT INDICATOR, 1/0 - 4/0 15KV | | | 1 |
| 284 120 00020 | FAULT INDICATOR, 750 - 1000 15KV | | | 3 |
| 284 120 00030 | INDICATOR CABLE, 3 TO 1 | 10 FOOT | | 1 |
| 284 120 00040 | INDICATOR CABLE, 1 TO 1 | 6 FOOT | | 1 |
| 284 120 00050 | INDICATOR CABLE, SMALL | | | 6 |
| 284 120 00060 | CLIP | ADHESIVE BACKED | | 6 |

UM65*A: SWITCH, PAD MOUNTED

| Item Code | Description 1 | Description 2 | 2A | 3A | 2AA | 3AA | Qty |
|---------------|-----------------------------|------------------|----|----|-----|-----|-----|
| NON | 3PH, 2 WAY AUTOMATED SWITCH | 15KV, 600A | | | | | 1 |
| NON | 3PH, 3 WAY AUTOMATED SWITCH | 15KV, 600A | | | | | 1 |
| 284 200 00050 | 3PH, 2 WAY | 0.3/15KV, 600A | | | | | 1 |
| 284 200 00060 | 3PH, 3 WAY | 0.3/15KV, 600A | | | | | 1 |
| 284 190 00010 | SHOCK NOTICE OBSTRUCTION | 0" X 24" | | | | | 2 |
| 287 109 00040 | PADLOCK, BRONZE | W/1-1/2" SHACKLE | | | | | 4 |

UTAB: BUSHING INSERT, 15KV 200

| Item Code | Description 1 | Description 2 | Qty |
|---------------|---------------------------|---------------|-----|
| 284 117 00060 | INSERT, LOADBREAK BUSHING | 15KV, 200A | 1 |

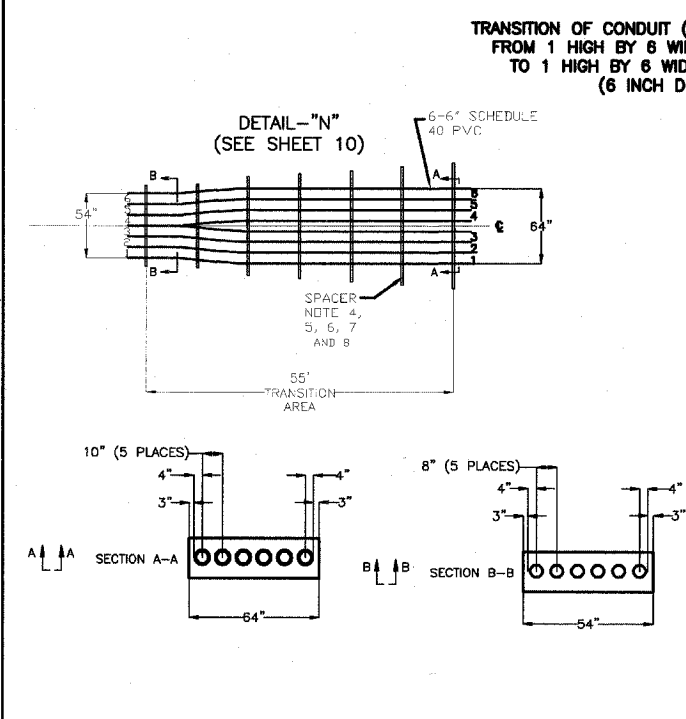
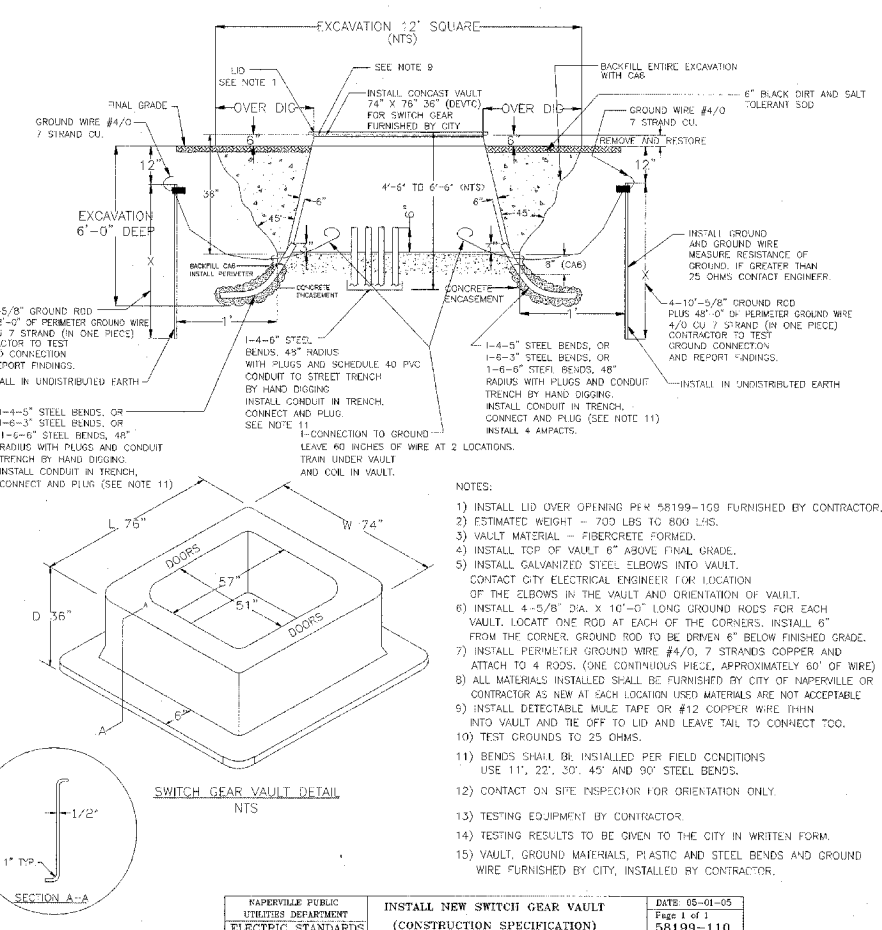
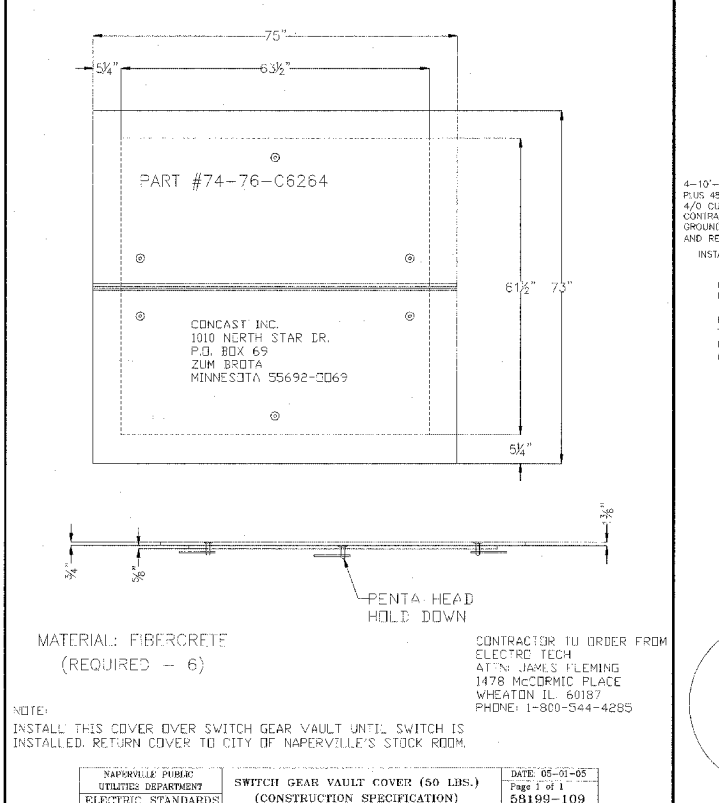
UT15AE: ARRESTER, ELBOW, 9KV

| Item Code | Description 1 | Description 2 | B | E | P | Qty |
|---------------|--------------------------|---------------|---|---|---|-----|
| 284 118 00020 | ARRESTER, ELBOW | 9/10 kV | | | | 1 |
| 284 118 00030 | ARRESTER, PARKING STAND | 9/10 kV | | | | 1 |
| 284 118 00040 | ARRESTER, BUSHING INSERT | 9/10kV | | | | 1 |
| 286 199 00220 | CONNECTOR, BREAKAWAY CU | 1/0 - 4/0 STR | | | | 1 |

UT15E: ELBOW, 15KV

| Item Code | Description 1 | Description 2 | 10 | 10P | 40 | 40P | C75 | C98 | 10 | 40 | 76 | 99 | Qty |
|---------------|---------------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 284 109 00010 | FUSE, ELBOW 8KV | 30A | | | | | | | | | | | 1 |
| 284 117 00020 | ELBOW, FUSED 0.3KV 200A | 1/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00030 | ELBOW, 15KV 200A | 1/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00031 | ELBOW, 15KV 200A EXTENDED | 1/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00040 | ELBOW, 15KV 200A | 4/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00041 | ELBOW, 15KV 200A EXTENDED | 4/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00065 | ELBOW, 15KV 600A, W/LETP | 750 MCM STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00066 | ELBOW, 15KV 600A EXTENDED | 750 MCM STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00095 | ELBOW, 15KV 600A, W/LETP | 1000 MCM STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00096 | ELBOW, 15KV 600A EXTENDED | 1000 MCM STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00100 | ELBOW, 15KV 600A | 4/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00100 | ELBOW, 15KV 600A | 4/0 STR AL 175-220 MIL | | | | | | | | | | | 1 |
| 284 117 00440 | KIT CABLE JACKET SEAL | 1/0-4/0 (0.95"-1.50") | | | | | | | | | | | 1 |
| 284 117 00440 | KIT CABLE JACKET SEAL | 250-1000 MCM (1.30"-2.67") | | | | | | | | | | | 1 |
| 285 199 00100 | CABLE CLEANER | QUARTS | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | 1 |
| 284 199 00120 | CAP, INSULATED W/GROUND | 15KV 200A | | | | | | | | | | | 1 |

| | | |
|--|------------------------------------|---|
| NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS | 30 15kV AIR SWITCH MODULE ASSEMBLY | DATE: 10-22-06 Page 3 of 3 C30-0013 |
|--|------------------------------------|---|



- THE DUCTS IN TRANSITION/TRANSPOSING FROM SECTION A-A TO SECTION B-B SHALL FOLLOW UNIFORM RADIUS REVERSE CURVES, WHICH LIE IN THE PLANE OF CURVED SURFACES, INDICATED IN THE PLAN OF DUCT AXES.
- SEPARATION BETWEEN DUCTS AND SHEATHING THICKNESS SHALL BE THE SAME AS FOR THE STANDARD FORMATION IN THE REMAINDER OF THE RUN.
- ALL EQUIPMENT, TOOLS AND MATERIAL TO COMPLETE THE TRANSPOSITION WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR THE SCHEDULE 40 PVC CONDUIT.
- CONTRACTOR TO SUPPLY SPACERS, COUPLING AND ADAPTERS.
- USE PLASTIC TIES AS REQUIRED.
- USE 5 DEGREE BENDS AS REQUIRED.
- CONTRACTOR SHALL ASSEMBLE, PRE FIT, LEVEL, CUT ARRANGE, CHOP, CHIP, SUPPORT AND SECURE DUCT FOR A COMPLETE JOB.
- ALL CONDUITS SHALL BE ENCASED IN CONCRETE AND FORMED IN FIELD BY THE CONTRACTOR. USING FORMS CUT TO FIT OF WOOD ALL MATERIALS FURNISHED BY THE CONTRACTOR.
- CONTRACTOR TO FORM BENDS IN FIELD USING A HOT BOX IF MANUFACTURED BENDS ARE NOT ACCEPTABLE. ALL DUCT TO REMAIN ROUND.
- ALL MATERIALS, EQUIPMENT AND TOOLS FURNISHED BY CONTRACTOR.
- ALL SCHEDULE 40 PVC CONDUIT SHALL BE SUPPLIED BY THE CITY, INSTALLED BY THE CONTRACTOR.
- ALL STEEL TO PLASTIC COUPLING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

| | | |
|--|---------------------------|------------------------------------|
| PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION | IMP NO. - | CAD FILE #/NO 0058190001C23.DWG |
| PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT | DRAWN BY JK | PROJECT NO. EU12-06-04 |
| DATE 6-15-07 | WORK REQUEST NO. 58199 | COMPLETED BY |
| ISSUED NPS | APPROVED NTS | SCALE - |
| REVISION | | SHEET 23 OF 23 |