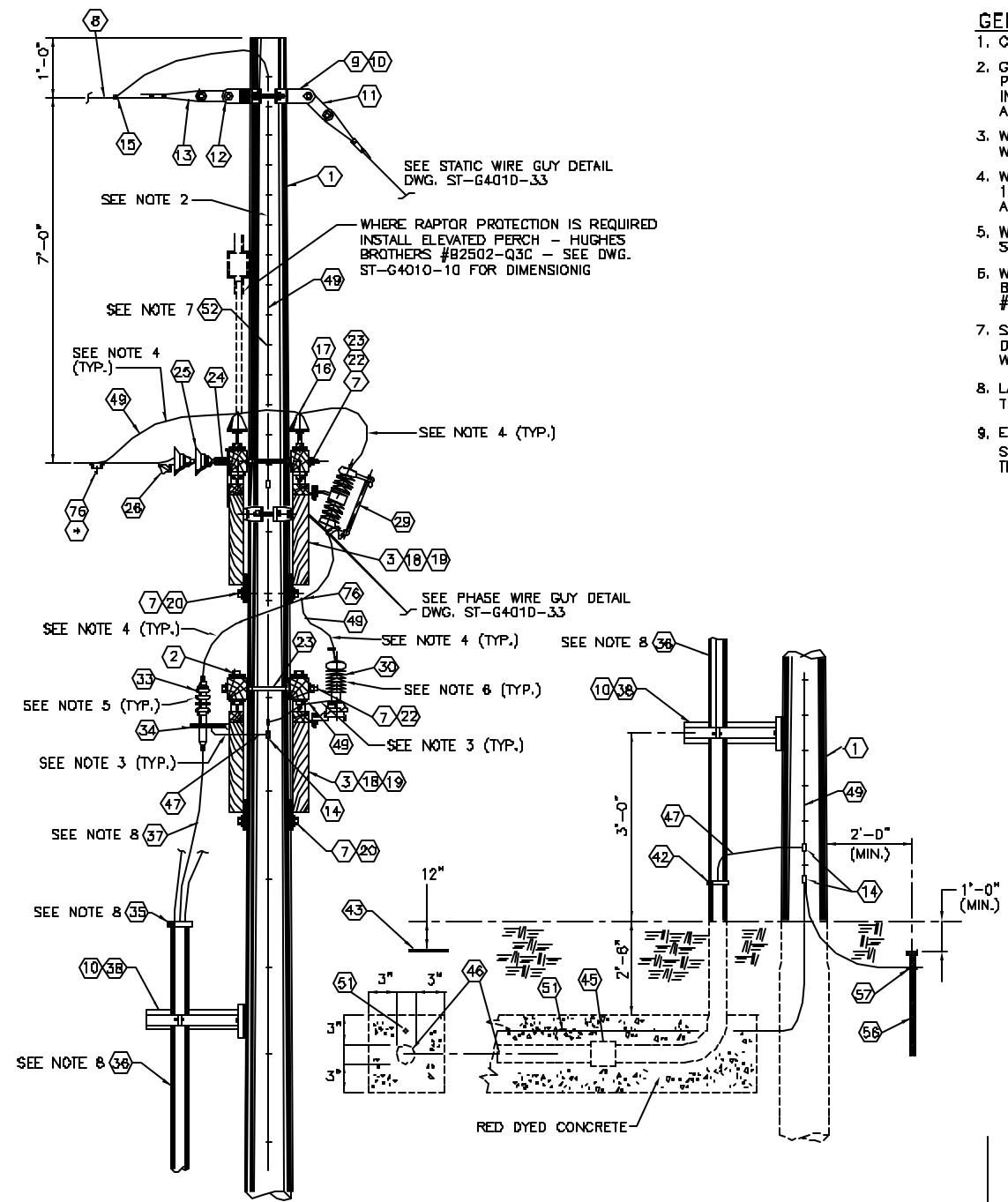


C:\LANL\Engineering\Standards\Eng. Manual [LEU]2. Approved ST-G4010-24E.dwg, 11/04/02, 14:46 003388

| BILL OF MATERIALS | | | |
|-------------------|---|----------|--|
| ITEM | DESCRIPTION | QTY | MFR. CATALOG No. |
| 1 | WOOD POLE, DF _____' CLASS 3 | 1 | |
| 2 | CROSS ARM, WOOD, 3 1/2" X 4 1/2" X 8'-0", 4 PIN | 4 | HUGHES #2202C |
| 3 | CROSS ARM BRACE, 1 11/16" X 2 11/16" X 48" SPAN | 4 | BROOKS #445-48-24 |
| 7 | SPRING WASHER, 5/8" SIZE | 16 | JOSLYN #J177 |
| 8 | WIRE, 3/8" (#8) H.S. STATIC, 30% COND. | AS REQ'D | COPPERWELD |
| 9 | POLE BAND, 4-WAY, FOR 7 1/2" TO 12" DIA. | 2 | HUGHES #1111 |
| 10 | LAG SCREW, 1/2" X 4" | 4 | JOSLYN #J8784 |
| 11 | CONNECTING LINK | 1 | HUGHES #3170 |
| 12 | GUY ROLLER, WHEEL TYPE, WITH 3/4" X 2" BOLT | 1 | HUGHES #28082 |
| 13 | GUY GRIP DEAD END, "B" COAT, 3/8" SIZE, GALV. | 1 | PREFORMED #CDE3115 |
| 14 | CRIMP CONNECTOR | 5 | HYTAP |
| 15 | CRIMP CONNECTOR | 1 | HYTAP |
| 16 | LOW VOLTAGE STEEL PIN, 5/8", 8" HEIGHT | 6 | JOSLYN #J207Z |
| 17 | PIN INSULATOR, ANSI CLASS 55-5 | 6 | VICTOR #9R |
| 18 | MACHINE BOLT, 1/2" X 8" | 8 | JOSLYN #JB706 |
| 19 | SPRING WASHER, 1/2" SIZE | 8 | JOSLYN #J176 |
| 20 | MACHINE BOLT, 5/8" X 14" | 2 | JOSLYN #J8814 |
| 22 | SQUARE WASHER, 5/8" SIZE | 6 | JOSLYN #J1074 |
| 23 | DOUBLE ARMING BOLT, 5/8" X 22" | 3 | JOSLYN #JB872 |
| 24 | EYE NUT, 5/8" SIZE | 3 | JOSLYN #J1092 |
| 25 | SUSPENSION INSULATOR, POLYMER | 3 | JOSLYN #L151D |
| 26 | STRAIN CLAMP, DEAD END | 3 | HUBBELL/ANDERSON #GDW-2D4D |
| 28 | HOT LINE CLAMP ADAPTER, 1/0-4/0 ACSR | 3 | FCI-BURNDY #YCB-28U2B |
| 29 | DIST. FUSE CUTOFF, 100 AMP. | 3 | KEARNEY #KX151E1-17 |
| 40 | DIST. TYPE METAL OXIDE SURGE ARRESTER WITH MOUNTING BRACKET | 3 | HUBBELL/OHIO BRASS MODEL PDV-100, #213613-7224 |
| 33 | PORCELAIN TERMINATION KIT, 1/0-4/0 | 3 | JOSLYN #ES200 |
| 34 | TERMINATION, CROSSARM MOUNTING BRACKET | 3 | |
| 35 | SEALING BUSHING FOR 4" OR 6" CONDUIT | 1 | 4"C. - O.Z. BEDNEY #CSB400P 6"C. - O.Z. BEDNEY #CSB600P |
| 36 | CONDUIT, 4" IMC OR 6" RIGID | AS REQ'D | |
| 37 | 4/0 CABLE, 15KV UNDERGROUND, EPR, MV-105 | AS REQ'D | OKONITE |
| 38 | CONDUIT STANDOFF BRACKET WITH STRAP KIT | 2 | ALUMAFORM #6-CS0-12 |
| 42 | GROUND CLAMP FOR 4" OR 6" CONDUIT | 1 | 4"C. - O.Z. BEDNEY #CG4104 6"C. - O.Z. BEDNEY #CG6122 |
| 43 | WARNING TAPE, ELECTRIC | AS REQ'D | |
| 45 | CONDUIT ADAPTER, FEMALE PVC TO IMC, 4" OR 6" | 1 | |
| 46 | PVC CONDUIT, TYPE EB, 4" OR 6" | AS REQ'D | |
| 47 | NO. 4 BARE COPPER WIRE, 7 STRAND | AS REQ'D | |
| 49 | NO. 1/0 BARE COPPER WIRE, 7 STRAND | AS REQ'D | |
| 51 | NO. 4/0 BARE COPPER WIRE, 28 STRAND | AS REQ'D | |
| 52 | GROUND WIRE STAPLE, 2" | AS REQ'D | JOSLYN #J6655 |
| 56 | GROUND ROD, 3/4" X 8' | 1 | JOSLYN #J5338 |
| 57 | GROUND ROD CLAMP, HEX HEAD, 3/4" | 1 | JOSLYN #JB493 |
| 73 | HOT LINE CLAMP BAIL FOR COPPER | 3 | THOMAS & BETTS/BLACKBURN #7D3DC |
| 74 | COMPRESSION TAP, 1/0 TO #2 SOLID COPPER | 3 | THOMAS & BETTS/BLACKBURN #CF102-1 |
| 75 | COMPRESSION TAP, 2/0 TO #2 SOLID COPPER | 3 | THOMAS & BETTS/BLACKBURN #CF402-1 |
| 76 | WEJTAP CONNECTOR | 6 | FCI-BURNDY (# AS REQUIRED) |



NEW DEADEND POLE WITH PRIMARY RISER DETAIL
SCALE: NONE

* USE ITEM 73 AND 74 OR 75 FOR COPPER CONDUCTORS. USE ITEM 28 FOR ACSR CONDUCTORS.

DRAWING DEVELOPED FOR ML-3/ML-4 PROJECTS. FOR ML-1/ML-2, ADDITIONAL REQUIREMENTS AND QA REVIEWS ARE REQUIRED. (REMOVE THIS NOTE WHEN INSERTED INTO A DRAWING PACKAGE).

- GENERAL NOTES:**
- CONSTRUCTION FOR WIRE SIZES #4 SOLID COPPER TO #3/0 ACSR (6/1).
 - GROUND OVERHEAD STATIC AT EVERY POLE. WHERE WILDLIFE/RAPTOR PROTECTION IS REQUIRED, GROUNDING DOWN CONDUCTOR SHALL BE INSULATED FROM OVERHEAD SHIELD WIRE TO 3'-0" BELOW LOWER CROSS ARM.
 - WHERE WILDLIFE/RAPTOR PROTECTION IS REQUIRED USE 800V. INSULATED WIRE.
 - WHERE WILDLIFE/RAPTOR PROTECTION IS REQUIRED USE NON-SHIELDED 15KV INSULATED CABLE FOR CONNECTIONS TO FUSE CUTOFFS, SURGE ARRESTORS, AND CABLE TERMINATION KITS.
 - WHERE WILDLIFE/RAPTOR PROTECTION IS REQUIRED PROVIDE ELECTRO-STATIC ANIMAL GUARD SIMILAR TO 3M #GG-2545.
 - WHERE WILDLIFE/RAPTOR PROTECTION IS REQUIRED USE HUBBELL/OHIO BRASS #7325 MOUNTING BRACKET WITH PROTECTIVE CAPS IN LIEU OF #7224 MOUNTING BRACKET.
 - STAPLES ON GROUND WIRE SHALL BE 2'-0" APART EXCEPT FOR A DISTANCE OF 8'-0" ABOVE GROUND AND 8'-0" FROM TOP OF POLE WHERE THEY SHALL BE 8" APART.
 - LANL UTILITY SERVICES INSTALLS ALL PRIMARY CONDUIT & CONDUCTORS. TRENCH AND CONCRETE SHALL BE INSTALLED BY CONTRACTOR.
 - EQUIPMENT ITEM NUMBERS (1) REFER TO EQUIPMENT NUMBERS IN LANL SUPPORT SERVICES CONTRACTOR'S MASTER BILL OF MATERIALS. ONLY THOSE NUMBERS USED ON THIS DRAWING ARE SHOWN.

NOTES FOR DESIGNER:
(DO NOT INCLUDE ON CONSTRUCTION DRAWING)

- COMPLY WITH CURRENT EDITION OF LANL DRAFTING MANUAL FOR CALL-OUTS PROTOCOL AND LOCATION OF SCHEDULES/MATERIAL.
- ASSIGN AN APPROPRIATE DRAWING NUMBER PER CURRENT EDITION OF LANL DRAFTING MANUAL PROTOCOL FOR DETAILS.

| NO | DATE | CLASS REV | DESCRIPTION | OWN | VER | CHKD | SUB | APP |
|--|------|-----------|-------------|---|-----|-------------|-----|-----|
| FACILITY & WASTE OPERATIONS SYSTEMS ENGINEERING & MAINTENANCE | | | | | | | | |
| LANL ENGINEERING MANUAL SITE ELECTRICAL DISTRIBUTION STDS. | | | | DRAWN | | M. BAKER | | |
| DISTRIBUTION NEW DEADEND POLE WITH PRIMARY RISER DETAIL | | | | DESIGN | | D. BRYANT | | |
| BLDG. X SUBMITTED | | | | CHECKED | | J. LANDMAN | | |
| DISCIPLINE POCI DAVID POWELL | | | | DATE | | 9/30/02 | | |
| | | | | SHEET | | 1 | | |
| CLASSIFICATION U PROJECT ID | | | | APPROVED FOR RELEASE STANDARDS MANAGER TOMMY GRUCH | | 1 of 1 | | |
| CHAPTER 7 | | | | DRAWING NO | | ST-G4010-24 | | |
| REVIEWER MICHAEL LADACH | | | | DATE | | 8/30/02 | | |
| CHAPTER 7 | | | | REV | | 0 | | |