## Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach cutout to bracket
- Connect jumpers from cutout to source and load
- Install cutout cover

#### Removal

- Detach source and load side jumpers
- Remove cutout and mounting bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (i.e. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers
- Remove existing cutout and mounting bracket
- Install new cutout and specified cutout bracket pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers
- Install cutout cover
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-1.1

## Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach cutout, 100amp w/LB, to mounting bracket
- Connect jumpers from cutout to source and load

#### Removal

- Detach source and load side jumpers
- Remove cutout and mounting bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (i.e. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers
- Remove existing cutout and mounting bracket
- Install new cutout, 100amp w/LB, and specified cutout bracket pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-1.1/M3-1.2

## Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach cutout, M3-1.1=100amp w/LB or M3-1.2=200amp w/LB, to mounting bracket
- Connect jumpers from cutout to source and load

#### Removal

- Detach source and load side jumpers
- Remove cutout and mounting bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (i.e. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers
- Remove existing cutout and mounting bracket
- Install new cutout, M3-1.1=100amp w/LB or M3-1.2=200amp w/LB, and specified cutout bracket
   pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-1.2

## Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach cutout, 200amp w/LB, to mounting bracket
- Connect jumpers from cutout to source and load

#### Removal

- Detach source and load side jumpers
- Remove cutout and mounting bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (i.e. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers
- Remove existing cutout and mounting bracket
- Install new cutout, 200amp w/LB, and specified cutout bracket pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-1.27

## Labor shall be based on the following:

#### Construction

- Install guard in accordance to the Construction Specification Drawing and relative specifications from the manufacture
- If Guard cannot be installed properly with a hot stick extra time for the appropriate safety precautions should be accounted for (cover up, de-energize line, etc.)

#### Removal

- Remove guard from equipment
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Removal old guard from equipment
- Install new guard in accordance to the Construction Specification Drawing and relative specifications from the manufacture
- If Guard cannot be installed properly with a hot stick, extra time for the appropriate safety precautions should be accounted for (cover up, de-energize line, etc.)
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-2/M3-2.1

## Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach combination cutout and arrester, M3-2=100amp / M3-2.1=100amp w/LB, to mounting bracket
- Connect jumpers from source to arrester to line side of cutout and load side of cutout to load –
   also include jumper from bottom of arrester to pole ground
- Installation of all wildlife guards

#### Removal

- Detach source and load side jumpers including jumper from arrester to pole ground
- Remove cutout and arrester combination and mounting bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (i.e. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers including jumper from arrester to pole ground
- Remove existing cutout and arrester combination and mounting bracket
- Install new cutout and arrester combination, M3-2=100amp/M3-2.1=100amp w/LB, and specified mounting bracket – pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers including jumper from bottom of arrester to pole ground
- Install/reinstall all wildlife guards
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-3.??/M3-4.1

## M3-3.24.5/M3-3.40.5/M3-3.56.5/M3-3.80.5/M3-4.5

### Labor shall be based on the following:

#### Construction

- Attach specified cutout bracket pole mounted bracket or crossarm bracket
- Attach combination cutout and arrester, with appropriate electronic sectionalizer, to mounting bracket
- Connect jumpers from source to arrester to line side of cutout and load side of cutout to load –
   also include jumper from bottom of arrester to pole ground
- Installation of all wildlife guards
- The following are sectionalizers ONLY and installed in an existing Cutout: M3-3.24.5/M3-3.40.5/M3-3.56.5/M3-3.80.5/M3-4.5

#### Removal

- Detach source and load side jumpers include jumper from arrester to pole ground
- Remove cutout, electronic sectionalizer, arrester and mounting bracket
- The following are sectionalizers ONLY and removed from the existing Cutout: M3-3.24.5/M3-3.40.5/M3-3.56.5/M3-3.80.5/M3-4.5
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Labor and temporary material needed to comply with all safety requirements (ie. cover up, deenergize line, etc.)
- Disconnect source and load side jumpers include jumper from arrester to pole ground
- Remove existing cutout, electronic sectionalizer, arrester and mounting bracket
- The following are sectionalizers ONLY and removed from the existing Cutout: M3-3.24.5/M3-3.40.5/M3-3.56.5/M3-3.80.5/M3-4.5
- Install new cutout, electronic sectionalizer, arrester and mounting bracket pole mounted bracket or crossarm bracket
- Reconnect source and load side jumpers including jumper from arrester to pole ground
- Installation of all wildlife guards
- The following are sectionalizers ONLY and installed in an existing Cutout: M3-3.24.5/M3-3.40.5/M3-3.56.5/M3-3.80.5/M3-4.5
- All Removed Material shall be returned to the District Storeroom in which the project is located

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc) existing lines are required to stay energized unless prior approval has been granted
- Assemble in accordance to Construction Specification Drawing and the Specifications for Construction
- Provide a means to hang cutout barrel on pole when not in use
- Complete continuity of all jumper connections from source to load and bottom of arrester to pole ground
- Installation of all wildlife guards

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Removal of all jumpers
- Remove all related equipment and hardware
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor and temporary material necessary to prepare for removal (i.e. de-energizing line, grounds, etc.) - existing lines are required to stay energized unless prior approval has been granted
- Removal of all jumpers
- Remove all related existing equipment and hardware
- Assemble new equipment in accordance to Construction Specification Drawing and the Specifications for Construction
- Provide a means to hang cutout barrel on pole when not in use Only needed if no hanger exists
- Complete continuity of all jumper connections from source to load and bottom of arrester to pole ground
- Installation of all wildlife guards
- Labor and temporary material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-11/M3-12

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Existing lines are required to stay energized unless prior approval has been granted
- Assemble in accordance to Construction Specification Drawing and the Specifications for Construction – M3-11 is a two phase reclosure arrangement and the M3-12 is a three phase reclosure arrangement
- Provide a means to hang the bypass cutout barrels on pole when not in use
- Complete continuity of all jumper connections from source to load and bottom of arrester to pole ground
- Installation of all wildlife guards

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Removal of all jumpers
- Remove all related equipment and hardware
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor and temporary material, installed and removed, necessary for removal and installation
  of unit (i.e. de-energizing line, grounds, etc.) existing lines are required to stay energized unless
  prior approval has been granted
- Removal of all jumpers
- Remove all related equipment and hardware
- Assemble new equipment in accordance to Construction Specification Drawing and the Specifications for Construction - M3-11 is a two phase reclosure arrangement and the M3-12 is a three phase reclosure arrangement
- Provide a means to hang the bypass cutout barrels on pole when not in use Only needed if no hanger exists
- Complete continuity of all jumper connections from source to load and bottom of arrester to pole ground
- Installation of all wildlife guards
- All Removed Material shall be returned to the District Storeroom in which the project is located

## Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Install switch to underside, bottom, of crossarms
- Complete continuity of all jumper connections from source to load

#### Removal

- Any labor necessary to prepare for removal (i.e. install cover up, de-energizing line, grounds, etc.)
- Remove Jumpers from source and load
- Remove switch
- Labor and Temporary Material removed as needed during installation (i.e. cover-ups, energize line, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor necessary to prepare for removal (i.e. install cover up, de-energizing line, grounds, etc.)
- Remove Jumpers from source and load side of switch
- Remove existing switch
- Install new switch on underside, bottom, of crossarms
- Reconnect source and load side jumpers
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, energizing line, grounds, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-14A

## Labor shall be based on the following:

#### Construction

- Associated labor for installation in existing line (i.e. switching, cover up, etc)
- Install switch attaches to line with wedge connectors as close to structure as practical
- Complete continuity of load side jumper connection

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Remove Jumper from load side of switch
- Remove wedge connectors and switch from line
- Labor and Temporary Material removed as needed during installation (i.e. cover-ups, energize line, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor necessary to prepare for removal (i.e. install cover up, de-energizing line, grounds, etc.)
- Remove Jumper from load side of switch
- Remove wedge connectors and switch from line
- Install new switch attaches to line with wedge connectors as close to structure as practical
- Reconnect load side jumper
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, energizing line, grounds, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-14B

## Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Install unit as indicated on the Construction Specification Drawing
- Tie Insulator Link to the Primary Pin Insulator
- Connect source and load side jumpers requires spade lugs and a wedge connector

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Remove source and load side Jumpers from switch
- Untie Insulator Link from Primary Insulator Pin
- Remove deadend shoes, insulink and switch
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor necessary to prepare for removal (i.e. install cover up, de-energizing line, grounds, etc.)
- Remove source and load side Jumpers from switch
- Detach Switch and Insulator Link from deadend shoes
- Untie Insulator Link from Primary Insulator Pin
- Attach new Switch and Insulator Link to deadend shoes
- Tie Insulator Link to Primary Pin Insulator
- Attach source and load side jumpers to switch
- Labor and Temporary Material removed as needed during installation (i.e. remove cover up, energize line, remove grounds, etc.)
- All Removed Material shall be returned to the District Storeroom in which the project is located

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to the Construction Specification Drawing
- Jumpers will be complete from the top circuit phase conductors to line side of the switch assembly and from the load side of the switch assembly to the phase conductors of the bottom circuit
- See M5-6 for arrester details
- Any adjustments needed to insure proper operation of switch Note bonding of the switch handle to pole ground

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Remove Jumpers from circuit conductors and switch then remove switch assembly
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Remove jumpers from switch and remove switch
- Install new switch assembly in accordance to Construction Specification Drawing
- Reconnect jumpers to line and load side of new switch
- See M5-6 for arrester details
- Any adjustments needed to insure proper operation of switch Note bonding of the switch handle to pole ground
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-15E

## Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing
- Jumpers will be complete from the phase conductors to line side of the switch assembly and from the load side of the switch assembly to the phase conductors
- See M5-6 for arrester details
- Any adjustments needed to insure proper operation of switch

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, cover up, etc.)
- Remove Jumpers then remove switch
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Removal of jumpers from switch assembly and then remove switch assembly
- Assemble in accordance to Construction Specification Drawing
- Reconnect jumpers to line and load side of the switch assembly
- See M5-6 for arrester details
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

## Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing
- Jumpers will be complete from the top circuit phase conductors to line side of the switch assembly and from the load side of the switch assembly to the phase conductors of the bottom circuit
- See M5-6 for arrester details
- Any adjustments needed to insure proper operation of switch Note bonding of the switch handle to pole ground

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Remove Jumpers from circuit conductors and switch then remove switch assembly
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Remove Jumpers from switch then remove switch assembly
- Install new switch assembly in accordance to Construction Specification Drawing
- Reconnect jumpers to source and load side of switch
- See M5-6 for arrester details
- Any adjustments needed to insure proper operation of switch Note bonding of the switch handle to pole ground
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-16E

## Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing
- Jumpers will be complete from the top circuit phase conductors to source side of the switch
  assembly and from the load side of the switch assembly to the phase conductors of the bottom
  circuit
- See M5-6 for arrester details
- Installation of all wildlife guards
- Any adjustments needed to insure proper operation of switch

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, cover up, etc.)
- Remove Jumpers from switch and then remove switch
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Removal of jumpers from switch assembly, then remove switch assembly
- Install new switch in accordance to Construction Specification Drawing
- Reconnect jumpers to source and load side of the switch assembly
- See M5-6 for arrester details
- Installation of all wildlife guards
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing
- Jumpers will be complete from the source side phase conductors to line side of the switch assembly and from the load side of the switch assembly to the load side phase conductors
- See M5-6 for arrester details
- Control and control wiring will be a separate specification
- Any adjustments needed to insure proper operation of switch

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, cover up, etc.)
- Make sure automatic switching controls are disabled
- Remove Primary Jumpers and control wires from switch, then remove switch assembly
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Make sure automatic switching controls are disabled
- Removal of primary jumpers and control wires from switch assembly, then remove switch assembly
- Assemble new switch assembly in accordance to Construction Specification Drawing
- Reconnect primary jumpers and control wires to the switch assembly
- Return controls to the normal operating setting
- See M5-6 for arrester details
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-18/M3-19

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing M3-18 is a horizontal mounted switch and the M3-19 is a vertical mounted switch
- Jumpers will be complete from the source side phase conductors to line side of the switch assembly and from the load side of the switch assembly to the load side phase conductors
- See M5-6 for arrester details
- SCADA Control and control wiring will be a separate specification
- Any adjustments needed to insure proper operation of switch

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, cover up, etc.)
- Make sure SCADA automatic switching controls are disabled
- Remove Primary Jumpers and control wires from switch, then remove switch assembly
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Include any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Make sure SCADA automatic switching controls are disabled
- Removal of primary jumpers and control wires from switch assembly, then remove switch assembly
- Assemble new switch assembly in accordance to Construction Specification Drawing M3-18 is a
  horizontal mounted switch and the M3-19 is a vertical mounted switch
- Reconnect primary jumpers and control wires to the switch assembly
- Return SCADA controls to the normal operating setting
- See M5-6 for arrester details
- Labor and Temporary Material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

# M3-20/M3-21

## Labor shall be based on the following:

### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Install bracket in accordance to Construction Specification Drawing

### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, cover up, grounds, etc.)
- Remove Equipment from bracket, separate removal spec, then remove bracket
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any associated labor required to remove Specified Units.(i.e. cover up, switching, install grounds, etc)
- Remove Equipment from bracket, separate removal spec, then remove bracket
- Install new bracket in accordance to Construction Specification Drawing
- Reinstall equipment and all jumpers separate spec's
- Labor and Temporary Material removed as required during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing and the Specifications for Construction
- Provide a means to hang cutout barrels on pole when not in use
- See M5-6 for arrester details
- Installation of all wildlife guards
- Complete continuity of all jumper connections from source to load

#### Removal

- Any labor necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Removal of all jumpers
- Remove all related equipment
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any labor and temporary material necessary to prepare for removal (i.e. de-energizing line, grounds, etc.)
- Removal of all jumpers
- Remove all related equipment
- Assemble new equipment in accordance to Construction Specification Drawing and the Specifications for Construction
- Provide a means to hang cutout barrels on pole when not in use Only needed if no hanger exists
- Complete continuity of all jumper connections from source to load
- See M5-6 for arrester details
- Installation of all wildlife guards
- Labor and temporary material removed as needed during installation (i.e. "cover-ups, etc.")
- All Removed Material shall be returned to the District Storeroom in which the project is located

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing Note: if a standard wood
  crossarm is used a crossarm protector is required. Alternative would be a specially treated wood
  crossarm or a fiberglass crossarm. Verify type of crossarm specified for the project.
- See appropriate M42 specification for deadend shoe requirements
- Jumpers will be complete from the phase conductors, source to load, through all switches and OCR
- See M5-6 for arrester details
- Installation of all wildlife guards

#### Removal

- Any labor necessary to prepare for removal of specific unit (i.e. de-energizing line, grounds, etc.)
- Remove all jumpers, equipment and framing
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any associated labor required to prepare for remove & installation of Specified Units.(i.e. cover up, switching, install grounds, etc)
- Remove all jumpers, equipment and framing
- Assemble in accordance to Construction Specification Drawing Note: if a standard wood crossarm is used a crossarm protector is required. Alternative would be a specially treated wood crossarm or a fiberglass crossarm. Verify type of crossarm specified for the project.
- Detach deadend shoes and reconnect deadend shoes to new attachment point
- Jumpers will be complete from the phase conductors, source to load, through all switches and OCR
- See M5-6 for arrester details
- Installation of all wildlife guards
- All Removed Material shall be returned to the District Storeroom in which the project is located

## M3-31 alt

### Labor shall be based on the following:

#### Construction

- Associated labor for construction in existing line (i.e. switching, cover up, etc)
- Assemble in accordance to Construction Specification Drawing switches and lightning arresters are separate units to be listed
- See appropriate M42 specification for deadend shoe requirements
- Jumpers will be complete from the phase conductors, source to load, through all switches and OCR
- See M5-6 for arrester details
- Installation of all wildlife guards
- Associated labor for construction in existing line (i.e. switching, cover up, etc)

#### Removal

- Any labor necessary to prepare for removal of specific unit (i.e. de-energizing line, grounds, etc.)
- Remove all jumpers, equipment and framing
- All Removed Material shall be returned to the District Storeroom in which the project is located

- Any associated labor required to prepare for remove of Specified Units.(i.e. cover up, switching, install grounds, etc)
- Remove all jumpers, equipment and framing
- Assemble in accordance to Construction Specification Drawing switches and lightning arresters are separate units to be listed
- Detach deadend shoes and reconnect deadend shoes to new attachment point
- Jumpers will be complete from the phase conductors, source to load, through all switches and OCR
- See M5-6 for arrester details
- Installation of all wildlife guards
- All Removed Material shall be returned to the District Storeroom in which the project is located