SDGE

A Sempra Energy utility®

Corrective Maintenance Program Manual

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I. CMP PROGRAM

A. GENERAL DESCRIPTION

SDG&E electric distribution system consists of 12 kV, 4 kV, some 2.4 kV circuits, and 0-750V secondary and service systems. The Program Management Group (PMG), through the Corrective Maintenance Program (CMP), administers program oversight of inspection and maintenance of electrical distribution facilities. PMG collaborates with other departments for the Qualification of inspectors to perform inspection and follow-up repairs. Follow-up crews are located in the Construction and Operating centers (Districts).

The CMP inspection program consists of eight (8) different inspection categories:

- **Overhead Visual Inspections (OHVI)**
- **Underground Above Ground Dead-front, Internal and External Inspections (AGDF)**
- **Underground Above Ground Live-front, Internal and External Inspections (AGLF)**
- **Underground Subsurface with Equipment, Internal Inspections (SS3)**
- **Underground Subsurface without Equipment, Internal Inspections (SS10)**
- **Underground Oil and Gas Switch Inspections (SW3)**
- **Wood Pole Intrusive Inspections (POIN)**
- **Patrol[1] (PATROL)**

For a detailed description of these cycles, refer to the SDG&E CMP INSPECTION CYCLES section of this manual.

[1]CPUC Decision D.09-08-029 required all overhead facilities located in Extreme and Very High Fire Threat area be patrolled on an annual basis. Starting in 2010, SDG&E decided all Urban and Rural patrol maps would be completed annually regardless of fire threat designation.

1. REFERENCES

Reference the latest version of the ESP's by click on this link: ESP's

Once you open ESP book; click any section in the Main Table of Contents and/or the Sub Table of Contents to go to that ESP section, or page number.

- **Electric Standard Practice (ESP) 120 - Infrared Testing**
- **Electric Standard Practice (ESP) 122 - Clean-up Procedures for PCB or Non- PCB Fluid Spills**
- **Electric Standard Practice (ESP) 209 - Disposal of Water from Underground Structures**
- **Electric Standard Practice (ESP) 601 - Overhead Maintenance-Visual Inspection of Poles and Equipment**
- **Electric Standard Practice (ESP) 602 - Underground Maintenance- Inspection of Structures and Equipment**
- **Electric Standard Practice (ESP) 603 - Oil and gas Electric Switch Inspection and Tagging Procedures**
- **Electric Standard Practice (ESP) 606 - Field Repair of Corroded Pad-mount Equipment**

- **Electric Standard Practice (ESP) 607 - Communication Infrastructure Provider (CIP) General Order Correction Process**
- **Electric Standard Practice (ESP) 609 - Care And Use Of The Fiberglass Measuring Stick**
- **Electric Standard Practice (ESP) 610 - Deferring CMP Facility and Equipment Repairs**
- **Electric Standard Practice (ESP) 611 - Land Services Notification Process**
- **Electric Standard Practice (ESP) 612 - District Internal Quality Assurance Audits**

Reference the latest version of the following documents or click on the Link below:

- **Service Planning Manual - SPM 200 - Abandoned Overhead Facilities**
- **Overhead Construction Standards**
- **Underground Construction Standards**
- **CPUC General Order (GO) 95 - Rules for Overhead Electric Line Construction**
- **CPUC General Order (GO) 128 - Rules for Construction of Underground Electric Supply and Communication Systems**
- **CPUC General Order (GO) 165 - Electric Distribution System Inspection and Maintenance Cycles**
- **Specification No. TE-018 and Specification No. 337 - Transmission Engineering and Electric Distribution Standards Specification for Inspection Treatment and Reinforcement of In-Service Wood Pole Structures (latest revision)**

2. DEFINITIONS

C&O -- Construction & Operation

CIP -- Communication Infrastructure Provider

CMG -- Compliance Management Group

CMP -- Corrective Maintenance Program

EGISS -- Enterprise GIS Services

ESP -- Electric Standard Practice

GIS -- Geographic Information System

GMDT -- GIS Mapping Discrepancy Transmittal

MDT -- Mobile Data Terminal

SAP -- Systems Applications and Products

CPUC -- California Public Utilities Commission

GO -- General Order

B. GO165 REVIEW

SDG&E is required to inspect their electric distribution system according to the California Public Utilities Commission (CPUC) General Order 165 (GO 165). GO 165 establishes inspection cycles and record-keeping requirements for utility distribution equipment. In general, utilities must PATROL[1] their systems once a year in urban areas and once every two years in rural areas (SDG&E performs all patrols on an annual basis). Utilities must conduct detailed inspections every 3-5 years, depending on the type of equipment. For detailed inspections, utilities' records must specify the condition of inspected equipment, any problems found, and a scheduled date for corrective action. Utilities are required to perform intrusive inspections of distribution wood poles depending on the age and condition of the pole and prior inspection history.

GO 165 states “the purpose of this General Order is to establish requirements for electric distribution and transmission facilities (excluding those facilities contained in a substation), regarding inspections in order to ensure safe and high quality electrical service.” Furthermore, GO 165 states, “the requirements of this order are in addition to the requirements imposed upon utilities under GO 95 and GO 128 to maintain a safe and reliable electric system. Nothing in this General Order relieves any utility from any requirements or obligations that it has under GO 95 and 128.” This CMP manual only applies to distribution assets excluding transmission-only assets.

GO 165 states "For the purpose of implementing the patrol and detailed inspection intervals… the term “year” is defined as 12 consecutive calendar months starting the first full calendar month after an inspection is performed, plus three full calendar months, not to exceed the end of the calendar year in which the next inspection is due. A required inspection may be completed any time before the expiration of the associated inspection interval using this definition of “year,” but not after. The completion of an inspection starts a new inspection interval that must be completed within the prescribed timeframe using this definition of “year.” The Intrusive Wood Pole Inspections (POIN) and Underground Subsurface Internal 10 year Inspections (SS10) are not subject to the interval requirement. SDG&E meets this “Anniversary” requirement through the use of assigned intervals, see Section C. SDG&E CMP INSPECTION CYCLES & INTERVALS.

SDG&E CMP cycles are designed in according to match GO 165 requirements. The following section describes SDG&E CMP cycles by equipment.

C. SDG&E CMP INSPECTION CYCLES & INTERVALS

1. SDG&E CYCLES PER GO 165

SDG&E System Inspection Cycles

	Patrol[1]	DETAILED	INTRUSIVE
Transformers			
Overhead	Patrol	OHVI 5	
Underground (subsurface)	Patrol	SS3	N/A
Pad Mounted (live-front)	Patrol	AGLF 5	
Pad Mounted (dead-front)	Patrol	AGDF 5	
Switching/Protective Devices			
Overhead	Patrol	OHVI 5	
Underground (subsurface)	Patrol	SS3	
Pad Mounted (live-front)	Patrol	AGLF 5	N/A
Pad Mounted (dead-front)	Patrol	AGDF 5	
Oil & Gas Switches (above or below surface)	Patrol	SW3	
Regulators/Capacitors			
Overhead	Patrol	OHVI 5	
Underground (subsurface)	Patrol	SS3	N/A
Pad Mounted (live-front)	Patrol	AGLF 5	
Pad Mounted (dead-front)	Patrol	AGDF 5	
Overhead Conductors and Cables	Patrol	OHVI 5	N/A
SDG&E owned Street Lighting	Patrol	N/A	N/A
Wood Poles under 15 years	Patrol	OHVI 5	N/A
Wood Poles over 15 years which have not been subject to intrusive inspection	Patrol	OHVI 5	POIN 10
Wood Poles which passed intrusive inspection	Patrol	OHVI 5	POIN 20

Where the cycles are:

Patrol[1] Patrol- one-year
OHVI 5 Overhead Visual detailed inspection - five-year
AGDF 5 Above Ground Dead-Front internal and external detailed inspection - five-year
AGLF 5 Above Ground Live-Front internal and external detailed inspection - five-year
SS3 Subsurface with Equipment internal detailed inspection - three-year
SW3 Switch (Oil & Gas) internal detailed inspection - three-year
POIN 10 Wood pole intrusive inspection - ten-year

Note: SS10 (Subsurface without Equipment internal detailed inspection - ten-year) is not required by GO165

2. PROGRAM CYCLE SUMMARY

Program Cycle	Cycle Interval	Start Year
Patrol[1] (Urban, Rural)	1, 2	1998
Overhead Visual (OHVI)	5	1998
Above Ground Dead-front (AGDF)	5	1998
Above Ground Live-front (AGLF)	5	1998
Oil and Gas Switch (SW3)	3	1998
Subsurface With Equipment (SS3)	3	1998
Subsurface Without Equipment (SS10)	10	1998
Wood Pole Intrusive (POIN)	10	1998

Corrective Maintainence Program
GO 165
Cycles at-a-Glance

Urban Patrol 1-Year	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11	Cycle 12
Rural Patrol 2-Year	Cycle 1		Cycle 2		Cycle 3		Cycle 4		Cycle 5		Cycle 6	
Overhead Visual 5-Year (OHVI)	Cycle 1					Cycle 2					Cycle 3	
Above Ground 5-Year (AGE/AGI)	Cycle 1					Cycle 2					Cycle 3	
Subsurface 3-Year (SS3)	Cycle 1			Cycle 2			Cycle 3			Cycle 4		
Subsurface 10-Year (SS10)	Cycle 1										Cycle 2	
Switch 3-Year (SW3)	Cycle 1			Cycle 2			Cycle 3			Cycle 4		
Wood Pole 10-Year (POIN)	Cycle 1										Cycle 2	
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009

Patrol[1] 1-Year	Cycle 13	Cycle 14	Cycle 15	Cycle 16	Cycle 17	Cycle 18	Cycle 19	Cycle 20	Cycle 21	Cycle 22	Cycle 23	Cycle 24
Overhead Visual 5-Year (OHVI)	Cycle 3			Cycle 4					Cycle 5			
Above Ground 5-Year (AGEAGI)	Cycle 3			Cycle 4					Cycle 5			
Subsurface 3-Year (SS3)	Cycle 5			Cycle 6			Cycle 7			Cycle 8		
Subsurface 10-Year (SS10)	Cycle 2								Cycle 3			
Switch 3-Year (SW3)	Cycle 5			Cycle 6			Cycle 7			Cycle 8		
Wood Pole 10-Year (POIN)	Cycle 2								Cycle 3			
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021

- 1998 was the first year of all inspection cycles (as filed with the CPUC).
- Starting in 2010, SDG&E has a goal of completing all Urban and Rural patrol maps on an annual basis regardless of fire threat designation.
- In 2010, SAP-PM replaced the legacy system (DIMS) and reestablished the cycles in SAP-PM only; for further information reference the SAP-PM Maintenance and Inspection Quick Start User Guide.
- SS10 inspections are not mandated under GO165, but are required under GO 128 to maintain a safe and reliable system.

3. INSPECTION INTERVALS

Every structure or equipment mandated for a detailed inspection within a given year is also bound to a four-month period of when it must be performed to comply with the GO165 “anniversary” requirement added to GO165 initially in January 2012. SDG&E meets this requirement with the use of assigned intervals. In order to meet the anniversary requirement of GO165 while also trying to gain efficiencies for routing purposes, SDG&E’s filed Advice Letter was approved by the CPUC in December 2013 that allowed for each following year to be the base year that established the new requirement starting with 2014.

Below is the Program Cycle Summary showing the year in which each inspection cycle must strictly adhere to the anniversary requirement set forth in GO165 based on the approved Advice Letter.

Program Cycle	Cycle Interval	Anniversary Requirement Start Year
Patrol[1]	1	2015
Overhead Visual (OHVI)	5	2019
Above Ground Dead-front (AGDF)	5	2019
Above Ground Live-front (AGLF)	5	2019
Oil and Gas Switch (SW3)	3	2017
Subsurface With Equipment (SS3)	3	2017
Subsurface Without Equipment (SS10)	10	N/A
Wood Pole Intrusive (POIN)	10	N/A

It is intended for the inspection and patrols to be completed within the first month of the assigned interval, however GO165 allows an additional three full calendar months, not to exceed the end of the calendar year in which the inspection is due based on the previous inspection date.

Interval	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Jan 1st - April 30th											
2		Feb 1st - May 31st										
3			Mar 1st - Jun 30th									
4				Apr 1st – Jul 31st								
5					May 1st - Aug 31st							
6						Jun 1st - Sep 30th						
7							Jul 1st – Oct 31st					
8								Aug 1st - Nov 30th				
9									Sep 1st – Dec 31st			
10										Oct 1st - Dec 31st		

4. DESCRIPTION OF MAJOR SDG&E CMP CYCLES

OVERHEAD VISUAL (OHVI)

- OHVI (Overhead Visual, 5-year)

This cycle consists of a detailed walk-around inspection of all SDG&E owned pole-mounted facilities on distribution poles with primary and secondary conductors and distribution equipment on transmission poles. These inspections identify conditions out of compliance with GO165, GO95 or SDG&E Construction Standards. This is a five-year cycle. For overhead condition codes identified during inspection, refer to Section III. OVERHEAD CONDITIONS of this manual.

ABOVE GROUND INTERNAL AND EXTERNAL
This cycle consists of AGDF (Above Ground Dead-front) and AGLF (Above Ground Live-front) detailed external and internal inspections of dead-front and live-front pad-mounted facilities to identify conditions out of compliance with GO165, GO128 or SDG&E Construction Standards.

- AGDF (Above Ground Dead-front, 5- year)

This cycle consists of a detailed external and internal inspection of dead-front pad-mounted facilities to identify conditions out of compliance with GO165, GO128 or SDG&E Construction Standards. This is a five-year inspection cycle. The AGDF cycle originated to accommodate those structures, which were dead-front, and required only an external inspection. This changed in 1999, such that all dead-front pad-mount equipment requires an external and internal inspection. The cycle is still named AGDF to separate the dead-front equipment data from live-front equipment data.

- AGLF (Above Ground Live-front, 5- year)

This cycle consists of a detailed external and internal inspection of live-front pad-mounted facilities to identify conditions out of compliance with GO165, GO128 or SDG&E Construction Standards. This is a five-year inspection cycle.

For underground condition codes identified during inspection, refer to Section IV. UNDERGROUND CONDITIONS of this manual.

Background: there are two Above Ground 5 cycles (AGDF and AGLF). There are two cycles because effective 7/1/1999, SDG&E agreed to open dead-front pad-mounted equipment as part of its Above Ground 5 inspection cycle. This change resulted because the CPUC Utilities Safety Branch (USB) interpreted GO128 (referenced in GO165) such that internal inspection of these structures is required. SDG&E interpretation in the filed compliance plan of 7/1/1997 was that only external inspections were required on dead-front equipment. This was under the reliance that no high voltage components were exposed. Between 1/1/1998 and 6/30/1999, SDG&E inspected AGDF (dead-front) equipment externally only. There was no requirement to go back and inspect these facilities internally. It was agreed that all above ground pad-mounted equipment inspected after 7/1/1999 would be inspected externally and internally. Therefore, the current inspection requirement is that all AGDF and AGLF facilities are to be inspected externally and internally. As a result of the original two inspection cycles (AGDF and AGLF), there exists two data fields, AGDF for dead-front equipment and AGLF for live-front equipment. SDG&E plans to keep the data fields separate for the following three main reasons 1) to be able to evaluate dead-front equipment independently from live-front equipment 2) since some district's AGDF and AGLF initial paths were so different, they cannot be combined without a large impact on costs and resources 3) dead-front equipment may be inspected by one person.

In 1999, a subset population of primary handholes with tees (PHH) was moved to the SS10 cycle (with the companion population of PHH with taps). Only dead-front equipment (mostly transformers) remains in the AGDF cycle.

SUBSURFACE, WITH EQUIPMENT (SS3)

- SS3 (Subsurface, 3-year)

This cycle consists of a detailed inspection of subsurface structures (manholes, vaults, primary handholes and subsurface enclosures) containing distribution equipment (structures with cable taps only or pass through only are in the SS10 cycle). The SS3 cycle consists of a detailed inspection of the subsurface structure and equipment to identify conditions out of compliance with GO165, GO128 or SDG&E Construction Standards. This is a three-year inspection cycle. For underground condition codes identified during inspection, refer to Section IV. UNDERGROUND CONDITIONS of this manual.

SUBSURFACE, WITHOUT EQUIPMENT (SS10)

- SS10 (Subsurface, 10-year)

Subsurface enclosures, vaults, handholes and manholes without equipment are not required to be inspected under GO165. However, GO128 does require that all equipment be in safe condition. Therefore, SDG&E has implemented a 10-year inspection cycle to inspect these facilities. This cycle consists of a detailed inspection of the structure and any appurtenances to identify conditions out of compliance with GO128 or SDG&E Construction Standards. For underground condition codes identified during inspection, refer to Section IV. UNDERGROUND CONDITIONS of this manual.

SWITCH (SW3)

- SW3 (Oil and Gas Switch, 3-year)

This cycle consists of a specialized inspection of all subsurface and pad-mounted oil and gas switches, including Vista switches. The inspections were performed by Kearny Electric Construction and Maintenance prior to 2002, after which the Districts began performing switch inspections. Oil samples and gas pressure readings are obtained and recorded in the system of record. The laboratory performs analysis of oil samples for low dielectric strength and high water content. Since the laboratory can analyze the samples in several days, field dielectric tests have been eliminated. Elimination of the field dielectric test minimizes tagging and retagging of switches if the field and lab results do not agree. The system of record stores these results with the inspection records. The Mapping system tracks the status of “Do Not Operate Energized” (DOE) switches for prioritizing replacements. Other conditions out of compliance with GO128 or SDG&E Construction Standards are identified as well. For underground condition codes identified during inspection, refer to Section IV. UNDERGROUND CONDITIONS of this manual.

WOOD POLE INTRUSIVE (POIN)

- POIN (Wood Pole Intrusive, 10/20-year)

SDG&E performs wood pole intrusive inspections on a 10-year (average) cycle. Each pole is inspected visually and, if conditions warrant, intrusively. GO165 requires that any pole 15 years of age or older is inspected intrusively. The form of the intrusive inspection is normally an excavation about the pole base and/or a sound and bore of the pole at ground-line. Treatment is applied at this time in the form of ground-line pastes and/or internal pastes. The 10 year cycle fulfills the requirements of GO165: 1) all wood poles over 15 years of age are intrusively inspected within 10 years and 2) all poles which previously passed intrusive inspection are to be inspected intrusively again on a 20 year cycle.

The wood pole intrusive inspections are currently performed by an SDG&E contractor, who performs routine inspections for wood pole integrity, applies wood preservative treatments and installs reinforcements (C-truss) as appropriate. SDG&E Vegetation Management Group (VMG) administers the program.

SDG&E Transmission Engineering and Electric Distribution Standards Specification for Inspection, Treatment and Reinforcement of In-Service Wood Poles (Specification No. TE-0108 and Specification No. 337) specifies the criteria for the rejection of a pole based on the intrusive inspection results. It also addresses a pole’s suitability for C-truss (Reinforcement) based on the remaining shell thickness for various lengths of pole. If a pole does not have sufficient shell thickness for C-truss, it is rejected and recommended for replacement.

PATROL[1]

- Patrol [1] (1 year)

GO 165 specifies different patrol cycle requirements based on the location of the facility within Urban areas, Rural areas within the Extreme and Very High Fire Threat area, and Rural areas outside the Extreme and Very High Fire Threat area (GO165 calls for 'urban' as those areas with 1,000 persons or more per square mile and 'rural' as those areas with less than 1,000 persons per square mile). Starting in 2010, SDG&E began performing patrols on an annual basis regardless of location.

The purpose of the patrol is to identify obvious structural problems and hazards. This cycle consists of a patrol of every applicable overhead, underground, and SDG&E owned streetlight facility. The General Order defines a patrol as a "simple visual inspection, of applicable utility equipment and structures, that is designed to identify obvious structural problems and hazards." Patrol Inspection Record forms are used to identify obvious structural problems and hazards. For patrol condition codes refer to Section V. PATROLS of this manual.

5. EQUIPMENT DETAIL

EQUIPMENT DETAIL OVERHEAD (OHVI)

Overhead Distribution System:

Overhead Visual (OHVI)

Distribution Poles & Distribution Equipment	Inspection Program (in years)		
	Patrol[1]	Detailed	Intrusive
Pole	1	5	10, 20
Double Pole	1	5	10, 20
Pole Stub	1	5	10, 20
Crossarm	1	5	
Anchor/Guy	1	5	
Conductor	1	5	
Connector/Splice	1	5	
Transformer	1	5	
Switch	1	5	
Lightning Arrestor	1	5	
SDG&E owned streetlight facility	1	5	
Fuse Holder	1	5	
Cutout	1	5	
Fixed Capacitor	1	5	
Switched Capacitor	1	5	
Riser	1	5	
Cable Terminal/Pothead	1	5	
Insulator	1	5	
Auto Throw Over	1	5	
Service Restorer	1	5	
Pole Hardware	1	5	

- Distribution equipment on transmission poles shall be inspected and condition recorded via MDT.
- Damaged transmission poles or transmission equipment found via a CMP inspection shall be reported to Transmission Construction & Maintenance (TCM) via e-mail to TCMAdmin@semprautilities.com. If damage codes were entered, district to notify TCM and clear condition with appropriate comments on the system of record.
- Distribution equipment on Communication Infrastructure Provider (CIP) poles shall be inspected and its condition(s) recorded via MDT. If a damaged (CIP) pole is encountered with SDG&E equipment on it, record in MDT, and process per ESP 607.
- For hazardous tree contacts with primary level distribution or open wire secondary shall be recorded in the MDT. Call in emergencies (i.e., Trees/Veg in Proximity to Primary - 18" or closer to primary conductors, and 48" or closer to primary conductors in the FTZ use code 318, and open wire secondary Trees/Veg. Contacting Open Wire use code 319) to Veg Mgmt. Help Desk – 858-654-8608. Do not send in an IO.
- Periodic testing and operation verification of capacitor controls is not performed under the CMP.
- Periodic testing, operation verification, and internal maintenance of service restorer, auto throw over, and SCADA equipment are not performed under the CMP.
- SDG&E owned or operated streetlights are inspected for structural problems or hazards. Non-emergency repairs for the streetlight and fixture should be coordinated by Mass Market Billing, Streetlights (Lighting Specialist) by phone (619-654-1218/1219) or, after hours, in an email to StreetlightRepair@semprautilities.com send an I/O to Mass Market Billing,

EQUIPMENT DETAIL ABOVE GROUND DEAD-FRONT (AGDF)

Underground Distribution System:

Above Ground Dead-front (AGDF)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Pad Structure - D Facility ID	-	-
• Pad with no Equip.	1	5
• Pad with following Equip.	1	5
• 1 Phase Xfmr (Dead)	1	5
• 3 Phase Xfmr (Dead)	1	5
• Auto Throw Over	1	5
• Service Restorer	1	5
• Boost/Buck Station (Dead)	1	5
• Step Up/Down Station (Dead)	1	5
• Regulator (Dead)	1	5
Manhole – W or Y Facility ID	-	-
• Manhole with following Equip.	1	5
• 1 Phase Xfmr (Dead)	1	5
• 3 Phase Xfmr (Dead)	1	5
Primary HH - B or W Facility ID	-	-
• Primary HH w/following Equip.	1	5
• 1 Phase Xfmr (Dead)	1	5
• 3 Phase Xfmr (Dead)	1	5
• Auto Throw Over	1	5

All AGDF facilities require an internal and external inspection.

Per Underground Standards 3211.1:

- B Facility ID - HANDHOLE WITH PAD (FOR FIELD MAINTENANCE ONLY)
- D Facility ID - PAD-MOUNTED FACILITY PAD-MOUNTED FACILITY
- E Facility ID - EQUIPMENT ENCLOSURE (GATES)
- H Facility ID - PRIMARY HANDHOLE
- M Facility ID - PRIMARY MANDHOLE
- S Facility ID - SUBSURFACE ENCLOSURE (FOR FIELD MAINTENANCE ONLY)
- U Facility ID - VAULT
- W Facility ID - PAD W/ 3315 OR 3316 PRIMARY HANDHOLE (PAD-MOUNTED SWITCH ONLY)
- Y Facility ID - PAD W/ COMPLETE PRIMARY MANHOLE (PAD-MOUNTED SWITCH ONLY)

EQUIPMENT DETAIL ABOVE GROUND LIVE-FRONT (AGLF)

Above Ground Live-front (AGLF)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Pad Structure - D Facility ID	-	-
• Pad with following Equip.	1	5
• Non-Oil/Gas Switch	1	5
• Non-Oil/Gas Group Switch	1	5
• 1 Phase Xfmr (Live)	1	5
• 3 Phase Xfmr (Live)	1	5
• Fixed Capacitor	1	5
• Switched Capacitor	1	5
• Fuse Cabinet	1	5
• Fused Switch Cabinet	1	5
• Terminator	1	5
• Boost/Buck Station (Live)	1	5
• Step Up/Down Station (Live)	1	5
• Regulator (Live)	1	5
Manhole – W or Y Facility ID	-	-
Manhole with following equipment	1	5
• Non-Oil/Gas Switch	1	5
• Non-Oil/Gas Group Switch	1	5
• 1 Phase Xfmr (Live)	1	5
• 3 Phase Xfmr (Live)	1	5
• Fuse Cabinet	1	5
• Fused Switch Cabinet	1	5
• Terminator	1	5
Manhole – M Facility ID	-	-
* Manhole with following Equip.	1	5
* Terminator	1	5
Primary HH - B or W Facility ID	-	-
Primary HH w/ following equipment	1	5
• Non-Oil/Gas Switch	1	5
• Non-Oil/Gas Group Switch	1	5
• 1 Phase Xfmr (Live)	1	5
• 3 Phase Xfmr (Live)	1	5
• Fuse Cabinet	1	5

EQUIPMENT DETAIL ABOVE GROUND LIVE-FRONT (AGLF) (CONTINUED)

Above Ground Live-front (AGLF) (Continued)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Primary HH - B or W Facility ID	-	-
• Fused Switch Cabinet	1	5
• Terminator	1	5
• Auto Throw Over	1	5
Enclosure - E Facility ID	-	-
• Enclosure with following Equip.	1	5
• 1 Phase Xfmr (Dead or Live)	1	5
• 3 Phase Xfmr (Dead or Live)	1	5
• Terminator	1	5
• AGLF Equipment	1	5
• Step Up/Down Station	1	5

All AGLF facilities require an internal AND external inspection.

Per Underground Standards 3211.1:

- B Facility ID - HANDHOLE WITH PAD (FOR FIELD MAINTENANCE ONLY)
- D Facility ID - PAD-MOUNTED FACILITY PAD-MOUNTED FACILITY
- E Facility ID - EQUIPMENT ENCLOSURE (GATES)
- H Facility ID - PRIMARY HANDHOLE
- M Facility ID - PRIMARY MANDHOLE
- S Facility ID - SUBSURFACE ENCLOSURE (FOR FIELD MAINTENANCE ONLY)
- U Facility ID - VAULT
- W Facility ID - PAD W/ 3315 OR 3316 PRIMARY HANDHOLE (PAD-MOUNTED SWITCH ONLY)
- Y Facility ID - PAD W/ COMPLETE PRIMARY MANHOLE (PAD-MOUNTED SWITCH ONLY)

EQUIPMENT DETAIL SUBSURFACE (SS3)

Subsurface (SS3)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Manhole - M Facility ID	-	-
Manhole with following Equip.	1	3
• Non-Oil/Gas Switch		3
• Non-Oil/Gas Group Switch		3
• 1 Phase Xfmr (Dead or Live)		3
• 3 Phase Xfmr (Dead or Live)		3
• Fuse Cabinet		3
• Auto Throw Over		3
• Cable Tap with SS3 equipment		3
Primary Handhole - H Facility ID	-	-
Primary HH with following Equip.	1	3
• Non-Oil/Gas Switch		3
• Non-Oil/Gas Group Switch		3
• 1 Phase Xfmr (Dead or Live)		3
• 3 Phase Xfmr (Dead or Live)		3
• Terminator		3
• Step Up/Down Station		3
• Service Restorer		3
• Cable Tap with Subsurface 3 Equipment		3
Vault – U Facility ID	-	-
Vault with following Equip.	1	3
• Non-Oil/Gas Switch		3
• Non-Oil/Gas Group Switch		3
• 1 Phase Xfmr (Dead or Live)		3
• 3 Phase Xfmr (Dead or Live)		3
• Fixed Capacitor		3
• Switched Capacitor		3
• Fuse Cabinet		3
• Step Up/Down Station		3
• Auto Throw Over		3
Subsurface Encl.- S Facility ID	-	-
Subsurface Encl. containing	1	3
• Non-Oil/Gas Switch		3
• Non-Oil/Gas Group Switch		3
• 1 Phase Xfmr (Dead or Live)		3
• 3 Phase Xfmr (Dead or Live)		3

EQUIPMENT DETAIL SUBSURFACE (SS10)

Subsurface (SS10)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Manhole - W or Y Facility ID	-	-
• Manhole with no Equipment	1	10
Manhole - M Facility ID	-	-
• Manhole with no Equipment	1	10
• Manhole with Cable Tap only.	1	10
Primary Handhole - H Facility ID	-	-
• Primary HH with Cable Tap only	1	10
Vault - U Facility ID	-	-
• Vault with Cable Tap only	1	10
Subsurface Encl.- S Facility ID	-	-
• Subsurf. Encl with Cable Tap only	1	10

EQUIPMENT DETAIL OIL & GAS SWITCHES (SW3)

Oil and Gas Switches (SW3)

UG Distribution Structure & Distribution Equipment	Inspection Program (in years)	
	Patrol[1]	Detailed
Manhole - W or Y Facility ID	-	-
Manhole with following Equip.	1	3
• Oil/Gas Switch	1	3
• Oil/Gas Group Switch	1	3
Manhole - M Facility ID	-	-
Manhole with following Equip.	1	3
• Oil/Gas Switch		3
• Oil/Gas Group Switch		3
Primary HH - B or W Facility ID	-	-
Primary HH with following Equip.	1	3
• Oil/Gas Switch	1	3
• Oil/Gas Group Switch	1	3
Primary Handhole - H Facility ID	-	-
Primary HH with following Equip.	1	3
• Oil/Gas Switch		3
• Oil/Gas Group Switch		3
Vault - U Facility ID	-	-
Vault with following Equip.	1	3
• Oil/Gas Switch		3
• Oil/Gas Group Switch		3
Subsurface Encl.- S Facility ID	-	-
Subsurface Encl. with following Equip.	1	3
• Oil/Gas Switch		3
• Oil/Gas Group Switch		3

6. ANNUAL INSPECTION GOALS:

SDG&E has had annual inspection goals on a District/cycle basis since the beginning of GO165 inspections in 1998. Goals were originally established by taking the number of facilities in a cycle and dividing by the cycle length. When the second inspection cycle began, a slightly different method of establishing annual inspection goals was used. Once an inspection history is established, future inspections are based on the required cycle length unless additional inspections are completed to improve the previous path (aka "pathing inspections").

D. SDG&E CMP REPAIRS / MAINTENANCE

1. CMP FOLLOW-UP REPAIRS:

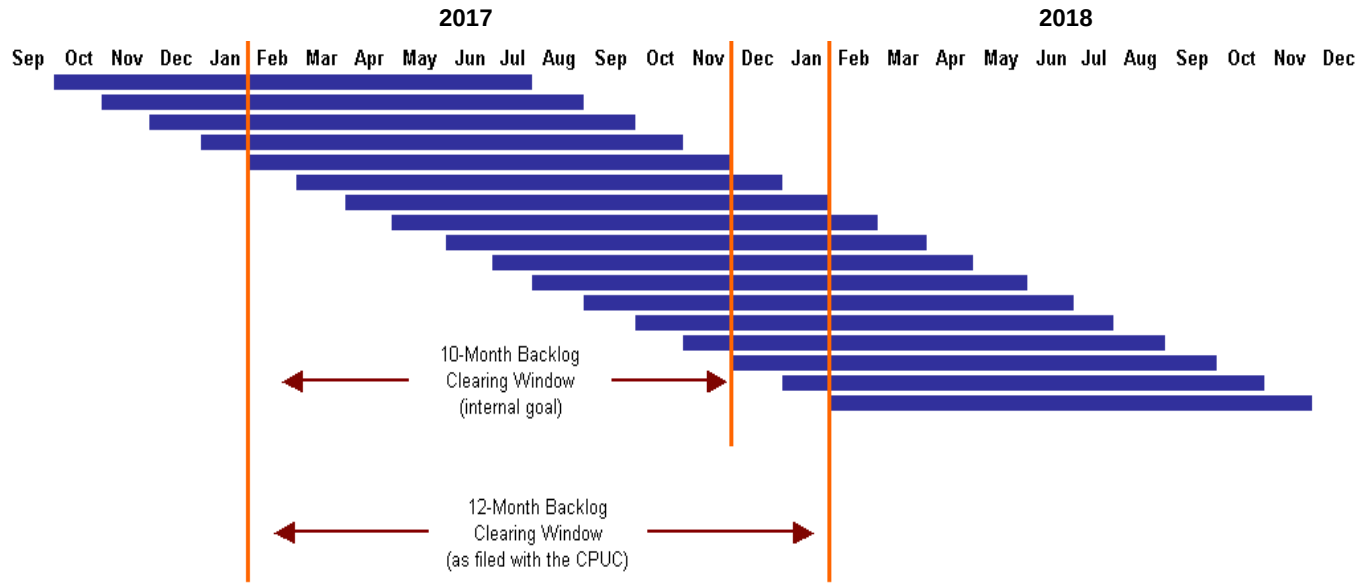
When SDG&E originally filed the Corrective Maintenance Program plan for complying with GO165, it stated that all infractions would be corrected within 12 months from the date the infraction was identified (" Inspection Date"). An infraction is any condition that violates GO165, GO95, GO128, or SDG&E Standards. In order to meet the repair deadline, SDG&E established an internal goal in which all infractions must be corrected within 10 months from the Inspection Date. To achieve this, a 10-month cumulative backlog is monitored periodically. The graph in Section 3 depicts the follow-up repair backlog requirements.

Under certain circumstances, infractions may be unable to be corrected within the internal company deadline. These occurrences will be evaluated for a deferred status on an individual basis. There are six reasons that could permit deferral of an infraction. Refer to "Electric Standard Practice 610 (ESP 610), Deferring CMP Facility and Equipment Repairs" for additional information regarding deferrals.

2. SDG&E 10 MONTH FOLLOW-UP REPAIR BACKLOG MOVING WINDOW

SDG&E filing with the CPUC for GO165 requires infractions to be cleared within 12 months of the inspection. The company's internal goal requires an inspection to be corrected within the 10-month backlog-clearing window. If any infraction exceeds 12 months, the CMP inspection and follow-up goals will not have been met. The following chart shows the 10-month clearing window.

Any infraction with an inspection date prior to the beginning of the bar must be cleared by the date by the end of the bar.



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3. CMP BUDGETS:

CMP costs are captured and managed by the Districts and Program Management with the following budgets:

O&M Budgets:

1) Inspection and follow-up repair budgets (Districts)
2) Wood pole integrity inspections budget (Program Management)
3) Graffiti removal budget (Program Management)

Capital Budgets:

4) 229 CMP Repairs budget (Program Management)
5) 87232 CMP Pole Reinforcement/Replacement budget (Program Management)
6) 289 Switch Replacement and Manhole Restoration budget (Distribution Engineering))

E. GENERAL AREAS OF CMP RESPONSIBILITIES

The general areas of responsibilities for the Corrective Maintenance Program are as follows:

1. PROGRAM MANAGEMENT GROUP WITHIN ELECTRIC REGIONAL OPERATIONS

- **Provide overall guidance and management of the Corrective Maintenance Program**
- **Establish and track CMP goals and provides periodic reporting**
- **Create and maintain associated standard practices**
- **Guide and support districts with implementing program/compliance changes**
- **Maintain and update procedures related to the CMP**
- **Coordinates CMP related training sessions to ensure inspectors and all CMP personnel are adequately trained in conjunction with Skills Training Center**
- **Analyze CMP historical data to identify maintenance trends, conducts efficiency studies and analyzes inspection and repair data for improvement opportunities**
- **Provide support and guidance to district personnel responsible for inspection and follow-up work**
- **Manages Capital and reports on O&M budgets for CMP work**
- **Provides weekly/monthly/annual CMP status reports for the C&O districts, ARSO, and the various CMP support groups**
- **Responds to Legal and other data requests relating to CMP**
- **Ensure Districts Conduct periodic quality assurance checks per guidelines in ESP 612**

2. COMPLIANCE MANAGEMENT GROUP WITHIN ELECTRIC REGIONAL OPERATIONS

- **Submit yearly inspection progress reports to the CPUC, as mandated by General Order 165**
- **Monitor CPUC activities (i.e. changes in GO requirements, interpretations of the Codes, etc.)**
- **Assist Districts with preparation for CPUC audits / company liaison during audits.**
- **Conduct Quality Assurance audits for inspections, follow-up work and new construction**
- **Manage deferral approval process (ESP 610)**
- **Manage third party general order correction process for facilities (ESP 607)**

3. CONSTRUCTION AND OPERATING CENTERS (DISTRICTS)

- **Effectively manage personnel performing inspections and follow-up work, by insuring qualified personnel are performing inspections and repairs in accordance with approved CMP Program and Electric Standard Practice documents**
- **Plan, schedule and perform all facility maintenance inspections within the prescribed cycles**
- **Ensure O&M and capital expenditures do not exceed authorized limits**
- **Manage, account for and report facility inspections**
- **Ensure that immediate safety hazards are made safe**
- **Ensure inspections are completed within required timeframes**
- **Submit GMDT form to EGISS for mapping discrepancies**
- **Follow standard practice procedures to inspect, report and conduct repairs**
- **Access reports of facilities with pending abnormal conditions and:**
  - **Coordinate with various groups as necessary to plan, schedule, and perform all facility maintenance inspections and repairs within the prescribed cycles**
  - **Ensure infraction repairs do not exceed 10 months, with the exception of facilities that are approved for deferral**
  - **Clear conditions once corrected**
- **Conduct periodic quality assurance checks per guidelines in ESP 612**
- **Work with Program Management to provide required documentation for CPUC audits**

4. ENTERPRISE SYSTEMS SOLUTIONS (ESS)

- **Develop and support software and system enhancements for storage, management, retrieval, and reporting of CMP inspections and follow-up data in the CMP systems of records**
- **Provide data backup and recovery of all CMP inspection information**
- **Develop and support hardware used for program inspection data collection devices such as MDT's**
- **Provide HelpDesk support for user problems and questions**
- **Manage maintenance plans in system of record for issuing CMP inspections**
- **Ensure synchronization between CMP system of record and asset system of record**

5. CONSTRUCTION SERVICES (including Vegetation Management)

- **Assist C&O districts with follow-up repairs, such as pole replacements**
- **Administer Wood Pole Intrusive Inspection Program to meet CMP and GO165 requirements**
- **Administer the Vegetation Management program to provide clearance of vegetation surrounding SDG&E facilities**
- **Ensure infraction repairs completed within 10 months of the inspection date**

A. WOOD POLE INTEGRITY CONTRACTOR

- **Ensure that all wood pole visual and intrusive inspections, reinforcements, and treatments are in accordance with SDG&E Transmission Engineering and Electric Distribution Standards Specification for Inspection, Treatment and Reinforcement of In-Service Wood Poles (Specification No. TE-0108 and Specification No. 337)**
- **Ensure that all contract supervisors, foreman, and personnel are qualified to conduct intrusive wood pole inspections, reinforcement, and treatment**
- **Ensure that all crews are supervised in a manner acceptable to SDG&E**
- **Ensure that all work is performed safely and in a manner that will avoid injury to persons and damage to property**
- **Report and transmit all to data to SDG&E electronically**

B. VEGETATION CONTRACTOR

- **Ensure that vegetation is cleared from SDG&E facilities to provide safe and reliable electric service**
- **Respond to immediate requests and emergency situations**
- **Ensure that all contract supervisors, foreman, and personnel are qualified to trim vegetation whether around energized conductors or otherwise**
- **Ensure that all crews are supervised in a manner acceptable to SDG&E**
- **Ensure that all work is performed safely and in a manner that will avoid injury to persons and damage to property**

6. LAND DEPARTMENT

- **Resolve Right-Of-Way and easement issues with customers and government agencies to provide safe access to SDG&E facilities for inspection or follow-up repairs (ESP 611)**

7. AREA RESOURCE SCHEDULING ORGANIZATION (ARSO)

- **Schedule and dispatch inspection and follow-up repairs to meet GO165 and CMP deadlines**
- **Utilize available software and other information to route crews efficiently.**
- **Ensure inspections and follow-up repairs are assigned and dispatched to qualified personnel meeting the minimum CPUC and SDG&E requirements.**
- **Obtain pre-requisite items required for inspection or follow-up repairs.**

8. SKILLS AND COMPLIANCE TRAINING (SCT)

- **Develop and provide training to ensure ERO workforce meets CPUC and SDG&E qualification requirements to perform CMP-related tasks.**

F. INSPECTIONS – MISCELLANEOUS

1. INSPECTION OF INACCESSIBLE FACILITIES

Under certain circumstances after several attempts to access a facility, the appropriate infraction or condition code may be applied to indicate the facility could not be inspected due to a location or access issue (refer to Sections III, IV, and V of this manual for details). After the appropriate code is entered into the system of record by the inspector, a follow-up repair is generated to ensure the appropriate and necessary additional effort is applied and completed so an inspection crew may return to the site and inspect the facility. These infractions should remain pending until the facility is inspected.

2. UPLOAD OF INSPECTION DATA

Inspectors use the available software to ensure inspection data will be automatically uploaded from the MDT to the system of record.

G. CMP AUDIT PROCESS

1. CMG DISTRICT AUDITS:

CMG conducts two types of audit inspections for CMP:

CMP Inspections - CMG personnel review CMP inspection data in the system of record to identify potential errors or issues with the data. Additionally, groups of recently completed inspections are audited in the field and discepancies with findings are provided in a summary report and reviewed in person with district management.

CMP Repairs - CMG personnel review CMP follow-up repair data in the system of record to identify potential errors or issues with the data. Additionally, groups of recently completed repairs are field-audited and issues are noted in the summary report and reviewed in person with district management.

New Construction – CMG peronnel field-audit recently completed new construction and identify potential errors or issues, which is summarized in the summary report and reviewed with district management or Construction Services.

2. DISTRICT INTERNAL QUALITY ASSURANCE AUDITS:

Each District is responsible for auditing CMP inspections and follow up repairs to ensure quality and compliance to the established program. The purpose of the Electric Standard Practice is to provide a uniform set of procedures for the District Internal Quality Assurance Audits. in addition it will also define the procedures for equipment selection, documentation, field review, and follow-up action items; Please refer to ESP 612 for more details.

H. THIRD PARTY FOLLOW-UP PROCEDURES

Various third party follow-up procedures are listed in this section.

1. EGISS GMDT FORMS

Forward completed GMDT forms to EGISS as per the COMPLETING GMDTS FORMS AND FACILITY FIELD CHANGES TO MDTS & MAPS section in this manual.

2. CIP/PRIVATE PRPOPERTY INFRACTIONS

CIP caused infractions are recorded under the 400 series codes. Refer to the OVERHEAD CONDITION CODE DETAIL and the UNDERGROUND CONDITION CODE DETAIL in this manual for descriptions of each code and the proper follow-ups.

Private Property are under 200 series codes. Refer to the OVERHEAD CONDITION CODE DETAIL and the UNDERGROUND CONDITION CODE DETAIL in this manual for descriptions of each code and the proper follow-ups.

3. TRANSMISSION- DISTRIBUTION EQUIPMENT

Any distribution equipment on transmission poles shall be inspected and its condition recorded via MDT. Damaged transmission poles or transmission equipment found via a CMP inspection shall be reported to Transmission Construction and Maintenance (TCM) via e-mail outlook@ TCMAdmin and should not be recorded via MDT. If damage codes were entered in error, district to notify TCM and clear condition with appropriate comments on the system of record.

4. ABANDONED FACILITIES

Refer to "SPM 200, Abandoned Facilities" for follow-up related to abandoned facilities. Use code 238 for abandoned facilities such as poles and conductors owned by SDG&E. For CIP equipment i.e. abandoned or quit claimed pole refer to ESP 607 for proper follow-up. Use code 239 for idle equipment such as transformers, transformer insulators, mounting bolts, steps dead ends, clevises and hardware.

[Note: Abandoned cable is different than abandoned facilities. Typically, the cable is rerouted and this is not a change in service to a customer. The old cable should be removed as part of a job when cable is rerouted in a separate conduit. In rare cases, when cable cannot be removed and is abandoned in place, the cable should be cut flush with the conduit and the conduit sealed. In order to avoid dig-ins, the map needs to be updated to show "abandoned cable". When an abandoned cable is encountered by an inspector and it is not abandoned as described above, the inspector should code as 58, "infraction, no applicable code" to correct the condition.]

5. TREE TRIM/ VEGETATION INFRACTIONS

All series 300 codes, code 219 and 19 due to trees/vegetation should be recorded in the MDT. In additon, codes 219 and 19 require an IO to Vegetation Management for structures that are inaccessible and cannot be inspected. Refer to the OVERHEAD CONDITION CODE DETAIL and the UNDERGROUND CONDITION CODE DETAIL in this manual for a description of each code.

Vegetation Management is responsible for correcting all tree/vegetation infactions, and Vegetation Management will run periodic reports of pending 300 series codes and manage this work to be completed within the required and typical CMP timeframe. It is the reponsibility of the District personnel to notify Vegetation Management via IO of emergency/immediate

corrective work required and/or 219 and 19 codes relating to trees/vegetation. It is the responsibility of Vegetation Management to notify the appropriate District personnel when an infraction has been corrected so that the appropriate District personnel can clear the infraction.

6. PRIVATE PROPERTY REFUSAL AND DEFERRALS

- **The C&O CMP personnel and Vegetation Management (VM) should try to resolve all private property vegetation issues identified by CMP inspections**
- **Upon refusal by the owner, the District is responsible for submitting a CMP Land Request to Land Management (LM)**
- **LM will try to resolve the matter within the 10-month backlog goal for the Corrective Management Program.**
- **If within the 10-month period LM cannot resolve the matter, LM will notify the C&O Center. (The C&O should be monitoring their backlog keeping track of when the facility involved is due)**
- **If the facility in question is going to exceed 10 months, the C&O Center can request a Deferral from CMG**
- **CMG will review the request and either Approve or Deny the deferral request**
- **If a deferral is approved, CMG will make the notation in the system of record that the facility is in a Deferred status**
- **Once LM has resolved the infraction, LM will notify the C&O Center, the C&O Center will clear the infraction in the system of record**

7. SDG&E OWNED STREET LIGHTS

SDG&E owned or operated streetlights are patrolled annually for obvious structural problems or hazards. Non-emergency repairs for the streetlight and fixture are coordinated by Mass Market Billing, Streetlights (Lighting Specialist) by phone (619-654-1218/1219) or, after hours, in an email to StreetlightRepair@semprautilities.com. Record infractions found on the Patrol Inspection Record form and send an I/O to Mass Market Billing, Streetlights via the Electric Supervisor. Any emergency repairs should be coordinated by the districts to make safe immediately, follow-up with notification to Mass Market Billing as needed.

8. DEFERRALS

Refer to "ESP610, Deferring CMP Facility and Equipment Repairs" for details.

9. HAZMAT

In the event hazardous material evaluations must be made, or contaminated soils or materials must be transported, call the Environmental Services, Environmental Operations (Hazmat Hotline) 858 549-6519 or Trouble Dept., after regular business hrs. This includes testing and evaluation of severely leaking transformers and follow ESP 122 procedures.

I. COMPLETING GMDT FORMS

1. GMDT FORMS

The GIS Mapping Discrepancy Transmittal (GMDT) is the form used to inform Enterprise GIS Services (EGISS) of a change which is needed on a map. This may include, but is not limited to, facilities which have been removed, installed or relocated, are shown in an incorrect location or in an incorrect structure, have incorrect attributes, etc. The GMDT should be flagged 'CMP' so that it will be treated as a high priority. Generally, do not report new facilities via a GMDT because the process of digitizing new facilities and issuing new maps depends on the C&O centers notifying Distribution Operations/EGISS of the energizing of equipment in the field. When Distribution Operations/EGISS is notified of completion of a work order, publication and distribution of hard copy maps is generated. If you come across an unmapped facility, fill out a GMDT form and provide inspection codes to Operations Assistants form them to be manually entered into the system of record. In general, if you come across a discrepancy between the tagging in the field and a current map, tag the equipment with what is on the map. Refreshing the MDT maps on a regular basis should reduce the need for GMDT usage. If incomplete information is received on the GMDT, a GMDT Resolution Request Form will be sent to the Operations Assistant to coordinate the resolution at the district.

Form: GIS Mapping Discrepancy Transmittal (GMDT) and GMDT Resolution Form - See examples below.
GMDT Form is available at http://utilinet.sempra.com/departments/egim/GMDT_forms.cfm
Completed by: Inspector
Send to: District Operations Assistant for review and DPSS number assignment. Operations Assistant will send hardcopy form and map to EGISS- CP51C or email to EGISS GMDT

II. CMP ACCOUNTS

A. CMP O&M ACCOUNT NUMBERS

FERC ACCT # or IO # (For Labor)	CYCLE	DESCRIPTION	SAP STANDING ORDERS (For Materials)
		OVERHEAD SYSTEM INSPECTIONS	
593.942	OHVI	EDM OCMP OH INSPECTIONS	FE5939422100
593.947	OH (CPUC AUDIT)	EDM OCMP CPUC OVERHEAD INSPECTION	FE5939472100
IO# 200160852	POIN	EDM OCMP POLE INSPECTION & TREATMENT (DISTRICT COST CENTERS) EDM OCMP POLE INSPECTION & TREATMENT (2100-3655)	IO# 200160852
		OVERHEAD SYSTEM REPAIRS	
593.943	OHVI	EDM OCMP FOLLOW-UP REPAIRS	FE5939432100
593.944	OH (CPUC AUDIT)	EDM OCMP CPUC FOLLOW-UP REPAIRS	FE5939442100
IO# 200160851	POIN	EDM OCMP POIN MISC REPAIRS (DISTRICT COST CENTERS)	IO# 200160851
593.951		EDM OCMP ENVIRONMENTALLY SENSITIVE AREA	FE5939512100
593.952		EDM OCMP VEGETATION/ TREE TRIM OR REMOVAL	FE5939522100
593.953		EDM OCMP FIELD CLEARED (CONDITIONS CLEARED AT TIME OF INSPECTION)	FE5939532100
593.954		ED OCMP OH RIGHT-OF-WAY	FE5939542100
		UNDERGROUND SYSTEM INSPECTIONS	
594.612	AGDF	EDM UCMP ABOVE GROUND DEADFRONT INSPECTIONS	FE5946122100
594.613	AGLF	EDM UCMP ABOVE GROUND LIVEFRONT INSPECTIONS	FE5946132100
594.614	SS3	EDM UCMP SUBSURFACE 3 INSPECTIONS	FE5946142100
594.615	SS10	EDM UCMP SUBSURFACE 10 INSPECTIONS	FE5946152100
594.632	SW3	EDM UCMP OIL AND GAS SWITCH INSPECTIONS	FE5946322100
594.616	UG (CPUC AUDIT)	EDM CMP CPUC UNDERGROUND INSPECTIONS	FE5946162100
		UNDERGROUND SYSTEM REPAIRS	
594.642	AGDF	EDM UCMP EXTERNAL INSPECTIONS FOLLOW-UP REPAIRS	FE5946422100
594.644	AGLF	EDM UCMP ABOVE GROUND INTERNAL INSPECTION FOLLOW-UP	FE5946442100
594.645	SS3	EDM UCMP SUBSURFACE 3 FOLLOW-UP	FE5946452100
594.646	SS10	EDM UCMP SUBSURFACE 10 FOLLOW-UP	FE5946462100
594.634	SW	EDM UCMP SWITCH FOLLOW-UP REPAIRS	FE5946342100
594.643	UG (CPUC AUDIT)	EDM UCMP CPUC UG FOLLOW-UP REPAIRS	FE5946432100
594.633		EDM UCMP CORROSION REPAIR & PAINT	FE5946332100
594.635		EDM UCMP GRAFFITI REMOVAL	FE5946352100
594.648		EDM UCMP ENVIRONMENTALLY SENSITIVE AREAS	FE5946482100
594.649		EDM UCMP VEGETATION/ TREE TRIM OR REMOVAL	FE5946492100
594.650		EDM UCMP FIELD CLEARED (CONDITIONS CLEARED AT TIME OF INSPECTION)	FE5946502100
594.651		ED UCMP UG RIGHT-OF-WAY	FE5946512100
		PATROLS	
593.948	Patrol	EDM CMP PATROL INSPECTIONS	FE5939482100
593.949	Patrol	EDM OH CMP PATROL FOLLOW-UP REPAIRS	FE5939492100
594.647	Patrol	EDM UG CMP PATROL FOLLOW-UP REPAIRS	FE5946472100
		INSPECTOR TRAINING	
593.91		EDM OCMP OH PREVENTATIVE MAINT-MANAGEMENT	FE5939102100
594.61		EDM UCMP UG PREVENTATIVE MAING-MANAGEMENT	FE5946102100

B. CMP WORK ORDERS AND PERMANENT ELECTRIC (PE) ORDERS

SAP Work Type	PE or WO	Description	Order Type	Budget	Account Numbers
DC-UF-P006	500006X*	ED/UG – Corrective Maintenance Program Improvement of Underground Service	U1	229	108.4, 184.632, 366, 367.1, 367.2, 368.2, 369.2, 371, 373.2, 584.2, 594.6X (CMP O&M Account Numbers)
DC-OF-P007	500007X*	ED/OH - Corrective Maintenance Program Improvement of Overhead Service	V1	229	108.4, 184.631, 364, 365, 367.1, 368.2, 369.1, 371, 373.2, 583.3, 593.9X (CMP O&M Account Numbers)
P017	500017X*	ED/OH – Replace Bare Services	75	229	108.4, 364, 369.1
n/a	2595140	Annual Pole Reinforcement	n/a	87232	108.4, 364, 593.943, 593.945
DI-OF-P524	500524X*	ED/OH – Pole Replacement **(CMP Only)**	87	87232	108.4, 184.631, 364, 365, 367.1, 369.1, 373.2, 583.3, 593.5
DI-OF-P524	5005240	ED/OH – Final Pole Removal **(CMP Only)**	87	87232	108.4
DI-UF-P566	SPECIFIC WORK ORDER	CMP Switch Replacement & Manhole Repair	87	289	108.4, 366.0, 367.1, 367.2, 397.0, 594.5

* 1 = Metro
2 = Beach Cities
3 = Northeast/Ramona
4 = Eastern/Mt. Empire
6 = North Coast
7 = Orange County

**** Do not use CMP PE and/or Accounts for forced outage or proactive cable replacement jobs.**

III. OVERHEAD CONDITIONS

A. OVERHEAD CONDITION CODES

1. OVERHEAD CONDITION CODE DETAIL

The following tables are divided into three sections:

Infraction Conditions

These are conditions, which must be corrected within 12 months (internal goal of 10 months), unless approved for deferral per ESP 610, and are conditions governed by General Order (GO) 95 or SDG&E Overhead Construction Standards.

Based on field conditions, certain infractions may require immediate attention and/or completion prior to the 12-month timeframe. For critical conditions, notify Trouble Department and Supervisor, and standby on-site as appropriate.

Nonconformance and Safety Hazard Definitions relating to Communication Infrastructure Providers (CIP):

- Nonconformance – a condition in which any characteristics does not conform to GO 95 requirements or specifications.
- Safety Hazard – category of nonconformance that poses a significant threat to human life or property.

  If in the opinion of the inspector, any of the following CIP safety hazards present an immediate safety and/or reliability risk with high probability for significant impact, it is appropriate to take immediate action to fully repair the condition or make temporary repairs to make the condition safe to lower the priority. If such actions are necessary, the inspector should report the condition to the District immediately.

  Any CIP nonconformance can be raised to the level of "Safety Hazard", if in the opinion of the inspector; the condition constitutes a significant threat to human life or property.

Reliability Conditions

These conditions do not fall within the General Order but can affect system reliability and may be repaired based on engineering evaluation or experience.

Discretionary Conditions

These conditions, which neither are governed by the General Order nor have been determined to have a significant impact on system reliability, may be corrected at the discretion of the district.

The matrices on the following pages are divided by Infractions, Reliability, and Discretionary codes. Please refer to Section 3. OVERHEAD CONDITION CODE TEMPLATE for all overhead condition codes combined into a single matrix. This combined matrix is utilized by the CMP inspectors in the field and typically referred to as the CMP Overhead “Cheat Sheet”.

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
26	Ground Rods or Studs Missing	GO 128 Rule 36.5-C (2) requires conductors and equipment to be effectively grounded by connections at one or more locations to driven ground rods or other suitable grounding electrodes.		Follow-up fix if exposed, missing or corroded out; install new rod	ESP601 OH 1002.1
96	Conduit Damaged	Use this code if cable pole conduit is damaged.		Follow-up fix by crew	
98	Conduit Not Strapped Down	Use this code if conduit is not strapped down.	Strap conduit.	Follow-up by crew	
201	Pole Steps Lower than 10ft	SDG&E Elec Standard sets minimum height at 10 feet. GO 95 requires the removal of steps below 7.5' to ground level or above a walkable surface	Remove step(s) below 10 feet.		OH363 OH310.3
203	Damaged/ Missing Visibility Strips	Visibility strips are required on all poles on state highways within 12 feet of traveled roadway.	Install/replace visibility strips as appropriately.		OH208 OH217
206	Damaged/ Missing Pole Hardware	GO 95 Rule 49.8 requires all pole line hardware to be galvanized, otherwise protected by a corrosion resisting treatment or composed of corrosion resistant material. Use this code when hardware is damaged or missing or to replace damaged or depleted galvanized hardware.	If corrosion affects serviceability now or within cycle length or it is not built to standard, record as infraction.	Follow-up fix by crew; replace damaged/missing hardware	OH390-OH396
207	SDG&E Leaning Pole or Potential Overload	GO 95 Rule 47.3 & 48 requires that loads imposed on poles are balanced. Poles being pulled over and leaning more than 10 degrees from the vertical position shall be considered leaning badly. 10 degrees is equal to 7 feet off center for a 45' pole; however, 7 feet is adequate for all poles. Use this code for SDG&E poles that appear to require guying, anchoring, or reinforcement and/or are showing signs of bowing or distortion. GO Rule 44.3 requires lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to deterioration or changes in construction arrangement or other conditions subsequent to installation). For customer owned pole, send notification to Land if district cannot resolve issue with customer. Use code 407 for CIP owned leaning or potential overload pole.	Notify Elec Supv for critical conditions and stand by until Supv is on-site.	Perform pole-loading calcs within 90 days of inspection to determine if there is a loading issue and who caused overload. Follow ESP 607 & ESP 149; If CIP overloaded the pole, If SDG&E is responsible for repairs, follow-up fix as appropriate.	ESP149 ESP607 ESP611 OH901

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
209	Foreign Attachment/ Unauthorized Equipment	GO 95 Rule 34 prohibits antenna, signs, posters, banners, decorations, wires, lighting fixtures, guys, rope or any other equipment foreign to the purpose of OH Elec line construction. Temporary attachments older than one-year-old are also prohibited.	Remove foreign attachment, if practicable, and field clear. If district cannot resolve, take picture(s).	Follow-up by crew if truck is required to remove foreign attachments. District to work with customer on resolution prior to sending notification to Land Services.	OH225 ESP611
218	Private Property Caused Pole Inaccessible	GO 95 Rule 31.2 requires that the entire supply system be inspected by the operator frequently and thoroughly for the purpose of ensuring that they are in good condition and in conformance with all applicable requirements. Use this code if the customer caused the pole to be inaccessible for an inspection i.e. locked gate, animal, material stacked or structure built around pole. Inspect after the cause of the inaccessibility is cleared. If caused by Private Property or Veg., use code 219.	Fix on site if object causing this condition is removable. If issue cannot be resolved, take picture(s) and follow-up appropriately.	District to work with customer on resolution prior to sending notification to Land Services. Code should remain pending until inspected.	ESP601 ESP611
219	SDG&E / Vegetation Caused Pole Inaccessible or Cannot Locate	GO 95 Rule 31.2 requires that the entire supply system be inspected by the operator frequently and thoroughly for the purpose of ensuring that they are in good condition and in conformance with all applicable requirements. Inaccessibility can occur due to river, lake, terrain or vegetation that prevents access to the pole. Inspect after the cause of the inaccessibility is cleared or facility is located. For Veg, record as 219 in MDT and send IO to Veg. Management. If caused by Private Property, use code 218.	Fix on site if object causing this condition is removable. For Veg, leave door hanger for affected customers, for vegetation removal obtain signed removal card, qty of trees, use abbrev key.	Code should remain pending until inspected. Send IO for trees/veg, use street address.	ESP601
225	Private Property Climbing Space Obstruction	GO 95 Rule 54.7 & OH Standard 251-261 allow only specific climbing space obstructions in climbing space; GO 95 allows quadrant climbing space up through the communications level. For maintenance only, do not enter this code where there is quadrant-climbing space available below secondary and communications lines are attached to pole. Use this code when climbing space infractions are caused by private property owners. If caused by SDG&E use code 226, vegetation use code 327, or CIP use code 402. Refer to climbing space diagrams.	Take picture(s) and make note in comments on MDT and follow-up appropriately.	District to work with customer on resolution prior to sending notification to Land Services.	ESP611 OH225 OH251 thru OH261

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
226	SDG&E Climbing Space Obstruction	GO 95 Rule 54.7 & OH Standard 251-261 allow only specific climbing space obstructions in climbing space; GO 95 allows quadrant climbing space up through the communications level. For maintenance only, do not enter this code where there is quadrant-climbing space available below secondary and communications lines are attached to pole. Use this code when climbing space infractions are caused by SDG&E. If caused by Private Property use code 225, vegetation use code 327, or CIP use code 402. Refer to climbing space diagrams.	Take picture(s) and make note in comments on MDT and follow-up appropriately.	Follow-up fix by crew.	OH225 OH251 thru OH261
228	Exposed Conductor	GO 95 Rule 54.6. Use this code whenever there are uncovered vertical and lateral runs, broken or missing PVC conduit.	Notify Elec Supv for critical conditions and stand by until Supv is on site	Follow-up fix by crew; replace PVC conduit.	OH225
230	Damaged Ground Molding	GO 95 Rule 22.8 requires that ground wires attached on the surface of poles be covered throughout their length by a suitable protective covering. Use this code if ground molding is broken and ground wire is exposed.	Make temporary repairs (Make safe) for areas accessible from the ground. Leave code 230 pending for F/U crew replacement of wood molding and replace with the #4 PVC covered ground wire.	F/U crew to make permanent repairs accordance with OH Standard 1002, The #4 PVC ground wire cannot be installed in the climbing space as required by GO 95 Rule 54.7A	OH393 OH1002
231	Open/ Damaged Ground	GO 95 Rule 52.7F requires equipment grounding. Use this code whenever the pole ground has been broken, burned through, or cut.	Notify Elec Supv for critical conditions and stand by until Supv is on site	Follow-up fix by crew	OH1002
234	Damaged/ Missing High Voltage Signs - 2 Man	GO 95 Rule 51.6A requires marking the pole no more than 40" below the lowest conductor of circuit(s) 750 volts or more for poles with no equipment or 6" below equipment. Linearms may be marked front and back in lieu of marking the pole. Use this condition code where 2 or more linemen are needed to clear the condition.		Follow-up fix by crew	OH208.3
235	Damaged Arrestor/ Insulator/ Dead-end	Use this code if there is a broken/chipped arrestor and/or insulator or if there is evidence of burning or flashover. Make further comments in the MDT comment box.		Follow-up fix by crew	OH1251 OH750 OH1247
236	Damaged/ Missing High Voltage Sign - 1 Man	GO 95 Rule 51.6A requires marking the pole to no more than 40" below the lowest conductor of each circuit 750 volts or more for poles with no equipment or 6" below equipment. Use this code where a 1-man crew can be used to clear the condition.		Follow-up fix by crew	OH208.3

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
237	Oil Leak	Use this code if there is visible oil leaking from any pole mounted Electrical equipment. Refer to ESP 122 on follow-up requirements.	Notify Elec Supv for critical conditions and stand by until Supv is on site	Follow-up fix by crew	ESP122
238	Abandoned Facilities	GO 95 Rule 31.6 requires that lines or portions of lines permanently abandoned shall be removed by their owners so they do not become a hazard. Applies to poles and conductors with no future potential use. Use this code for abandoned poles in field (includes double pole situations). If foreign utility owned pole is confirmed by Ops Asst, then generate code 446 as follow-on.		For abandoned poles, Ops Asst check against Quit Claim list. If pole is quit claimed to a CIP, follow ESP 607. Follow SPM 200 for SDG&E poles.	ESP607 ESP611 GO95 Rule31.6 SPM200
239	Idle Equipment	Use this code if equipment or hardware is no longer in use		Follow-up by Elec Supv. & Follow SPM200 for SDG&E	GO95 Rule31.6 SPM200
240	Damaged Cutout	Use this code if there are broken or chipped cutouts and if there is evidence of burning or flashover. Make further comments in the MDT.		Follow-up fix by crew	OH1240 OH1212
241	Damaged Crossarm	Use this code if the crossarm is broken, if there is severe cracking, evidence of charring, burning, excessive blooming (fiberglass) or severe tracking. Make further comments in the MDT.	Notify Elec Supv for critical conditions and stand by until Supv is on site	Follow-up fix by crew	OH380 OH384
243	Damaged Switch	Use this code if any part of the switch is damaged or broken including insulators, switch blades, etc.		Follow-up fix by crew	OH1442 OH1444 OH1451 OH1220 OH1222 OH1228 OH1230
244	Damaged switch gang operator mechanism	Use this code if the switch gang operator mechanism is broken, bent or missing.		Follow-up fix by crew	OH1228 OH1271 OH1230

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
246	SDG&E Pole or Stub Pole Damaged or Broken	Use this code if SDG&E pole/stub pole is broken or damaged or if the strength of the pole is questionable i.e. vehicular contact, severe cracking, shell rot, top rot, and evidence at the groundline of butt rot, charred wood, severe tracking, or wood pecker damage, or any excessive build up corrosion (pack-out) or any excessive pitting on Galvanized or Weathering steel poles, and excessive blooming (fiberglass poles). Make further comments in the MDT as to type of damage. Do not turn in to wood pole inspection contractor for damage 8 feet or more above ground line. If already red tagged (pole replacement recommended), note "red tag on pole" and date of POIN inspection in MDT comments and contact wood pole contract administrator for follow-up if POIN code not in the system. For customer owned pole, send notification to Land if district cannot resolve issue with customer. Follow-on Code: Can also be use on CIP pole that was overloaded by SDG&E based on pole loading calc and when SDG&E will perform change out for CIP and take over ownership on pole as directed per ESP607.	For severe damage, contact Elec Supv for immediate temporary shoring and stand by until Supv is on site Galvanized or Weathering steel poles make sure no vegetation is in contact with pole clear on site if possible or use code 327 veg follow-up. Remove any soil in contact to bare steel; there should be 12" separation above the soil line and the polyurethane coating (Corro-cote)	Perform pole loading calcs within 90 days of inspection to determine if there is a loading issue that caused the damage. Follow ESP 607/ ESP 149; If CIP is responsible for replacement. If SDG&E is responsible for repairs, follow-up fix as appropriate. Galvanized or Weathering steel poles follow-up report any standing water around pole to Engineering.	ESP149 ESP601 ESP607 ESP611 OH225
254	SDG&E Insufficient Clearance	GO 95 sets clearance requirements for various subjects. Refer to OH Standard for review of these requirements. Use this code when there is not adequate wire to wire clearance or ground to conductor clearances caused by SDG&E except for low service drops (code 262). If caused by CIP use codes 454 - 460.		Follow-up fix by crew	OH221 OH224 OH228 OH262 OH236 OH264 OH908 OH1406 OH1509 OH1530 OH1533
258	Avian Protection Damaged	Use this code when the Avian Protection is missing or damaged on poles. For maintenance only, not for identifying new locations that require Avian Protection.		Follow-up fix by crew	OH1620 OH1630 OH1640
260	Easement Encroachment	Use this code when there is a potential encroachment onto SDG&E easements (buildings, fences, walls, etc.)	Notify Elec Supv and Land Services immediately for critical conditions and standby until Supv is on site. Take picture(s).	District to work with customer on resolution prior to sending notification to Land Services.	ESP611

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
261	Grading Change	Use this code when a private party has or is in the process of changing the grade under or in proximity of overhead lines that could potentially result in insufficient clearances.	Notify Elec Supv and Land Services immediately for critical conditions and standby until Supv is on site. Take picture(s).	District to work with customer on resolution prior to sending notification to Land Services.	ESP611
262	Low Service	GO 95 Rule 54.8B requires service drops above ground, buildings, etc., shall not be less than the following minimum clearances: • over fences -2' (non-walkable), 8' (walkable) • over pedestrian walkways - 10' (residential), 12' (commercial) • over driveways - 12' (residential), 16' (commercial) • over thoroughfares - 18' (centerline), 16' (at curb) Use this code only for SDG&E low services.	Notify Elec Supv for critical conditions and stand by until Supv is on site	Follow-up fix by crew; notify customers affected. District to work with customer and Service Standards on resolution prior to sending notification to Land Services.	ESP611 OH241 OH645 OH646
263	Private Property Hazardous Condition	Use this code for any hazardous conditions caused by private property or non-CIPs that are in proximity of Electric facilities and are not covered by other codes.	Notify Elec Supv and Claims immediately for critical conditions and standby until Supv is on site. Describe condition and note private party name, if known, in comments and take picture(s).	District to work with customer on resolution prior to sending notification to Land Services; copy Claims if urgent and note as such.	ESP611
264	Bare or Wrapped Service	Use this code if the service conductor has evidence of fraying or its insulation or weatherproofing is missing. Use this code also for open wire service that is wrapped or touching. Make further comments in the MDT.		Follow-up fix by crew;	OH225
266	Foreign Objects	Use this code when kites, palm fronds, balloons, tennis shoes, etc. are on the conductors.		Follow-up fix by crew; Remove foreign objects	OH225
267	Damaged Capacitor	Use this code when bushings show sign of damage and cases are swollen or damaged due to foreign contacts.	Notify Elec Supv for immediate repair for critical condition and stand by until Supv is on site.	Follow-up fix by crew	OH1301
268	Slack Conductors	Use this code when overbuild has greater sag than the lower cond(s) on the same span, or when there is unequal sag of cond(s) on the same span, or inspector determines during windy conditions cond(s) may make contact (slap). Use this code also when lower (secondary) cond(s) sag. Make further comments in the MDT.		Follow-up fix by crew; in accordance with OH Standards	OH225 OH820.2 OH755.1
269	Damaged Conductors	Use this code if conductors are broken, severely bent, or severely corroded. Make further comments in the MDT.	Notify Elec Supv for immediate repair for critical condition and stand by until Supv is on site.	Follow-up fix by crew	OH225

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
270	Damaged / Missing Guy Guard	GO 95 Rule 56.9 requires a guy guard to be securely attached to all anchor guys. Use this code when guy guard is twisted, bent, cut, unsecured, or missing.	Replace damaged guy guard or install new.		OH225 OH975 OH927
274	Guy Grounded	GO 95 Rule 56.7B requires an insulator to be installed on each anchor guy. Use this code when a portion of guy above the insulators is grounded by trees, building, messenger, metal-sheathed cables or other similar objects. If caused by trees, send an I/O to Veg Mgmt and follow-up with district crew work. If caused by CIP wires, district to schedule joint meet w/CIP as needed for resolution.		Notify Supv to field for determining resolution. Follow-up fix by crew along with joint meets if needed. Install insulators as appropriate.	OH909 OH910 OH928
276	Slack Anchor Guy	GO 95 Rule 56.2 requires where mechanical loads imposed on poles are greater than can be supported, additional strength shall be provided by the use of guys or other suitable condition. Use this code when an anchor guy is loose.		Follow-up fix by crew	OH225 OH920
277	Damaged / Missing Guying	Use this code when strands are missing, broken, severely bent, or corroded, when there is evidence of vehicular contact, when there is corrosion or damage to guy grips, anchors or hardware. Make comments in the MDT. Also use if it is determined through pole loading that SDG&E guy/anchoring is required.		Follow-up fix by crew	OH925-OH928 OH961-OH966
278	Slack Span Guy	Use this code when any guy other than an anchor guy is loose.		Follow-up fix by crew	OH908
282	Bolt Covers Missing	Use this code whenever bolt covers are missing.		Follow-up fix by crew.	OH1145
283	Damaged/ Missing/ Incorrect Station Pole ID	Per SDG&E standards, use this code whenever the station identification, size, or pole number is damaged, missing or incorrect. Make further comments in the MDT.	Fix on site if damaged. Replace old Cal-grid or other non-standard pole number. Use pole number shown on the map.	If pole number is unknown or missing, submit GMDT to EGIM. Follow-up fix	OH211 OH208
298	Infraction, No Applicable Code	Use this code to identify infraction conditions that do not have an existing code but need immediate repair. Provide comments in MDT. Do not use this code for CIP issues.	Notify Elec Supv for critical conditions and stand by until Supv is onsite	Follow-up fix by crew.	CMP Manual

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
318	Trees/Veg in Proximity to Primary	Use this code when trees are 18 inches or closer to primary Conductors outside of the FTZ, OR 48 inches or closer to primary conductors in the SDGE Fire Threat Zone.	For trees/veg, use street address, leave door hanger for affected customers, for vegetation removal obtain signed removal card, qty of trees, use abbrev key. Record in the MDT. Do not send in an IO. Call in emergencies (i.e., tree in contact or occasional contact with primary voltage conductor) to Veg Mgmt Help Desk – 858-654-8608.	Repairs completed by Veg Mgmt.	GO 95 Rule 35
319	Trees/Veg. Contacting Open Wire Secondary	Use this code when trees/veg is contacting open wire secondary pole-to-pole.			
320	Veg in Secondary (SSC/Aerial Cable) - Trim	Use this code for Secondary SSC/Aerial Cable (Pole-to-Pole) with only immediate heavy strain or abrasion for which a tree trim is recommended. Record in the MDT. Do not send in an IO.			
321	Veg in Secondary (SSC/Aerial Cable) - Guard	Use this code for Secondary SSC/Aerial Cable (Pole-to-Pole) with only immediate heavy strain or abrasion for which a tree guard is recommended.			
322	Veg in Secondary (SSC/Aerial Cable) - Reroute	Use this code for Secondary SSC/Aerial Cable (Pole-to-Pole) with only immediate heavy strain or abrasion for which a reroute is recommended.			
323	Veg in Service - Guard	Use this code for Services (Pole-to-House) with only immediate heavy strain or abrasion for which a tree guard is recommended.			
324	Veg in Service - Slack	Use this code for Services (Pole-to-House) with only immediate heavy strain or abrasion for which slacking the line is recommended.			
325	Veg in Service - Reroute	Use this code for Services (Pole-to-House) with only immediate heavy strain or abrasion for which a reroute is recommended.			
326	Veg in Service - Trim	Use this code for Services (Pole–to-House) with only immediate heavy strain or abrasion for which a tree trim is recommended.			
327	Vegetation Climbing Space Obstruction	Use this code for any tree or vegetation in climbing space or any vegetation is in contact with Galvanized or Weathering steel pole the buildup of vegetation and organic material on and around weathering steel concentrates moisture. Constant exposure to moisture is adverse to the patina and excessive corrosion will occur. For maintenance only, do not enter this code where there is quadrant climbing space available below secondary. Use code 225 for private property, code 226 for SDG&E, or code 402 for CIP caused.			

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
332	Veg in Guy - Heavy Strain or Abrasion	Use this code for guying with immediate heavy strain or abrasion for which a tree trim is recommended. Use code 274 and send Veg Mgmt I/O if guy is grounded by veg.	See previous page for On-Site Maintenance	Repairs completed by Veg Mgmt.	GO 95 Rule 35
402	CIP Climbing Space Obstruction	NONCONFORMANCE. GO 95 Rule 54.7A-3 OH Standard 251 allows specific climbing space obstructions. GO 95 Rule 54.7 allows quadrant climbing space (30"x30") up through the communications level. Do not enter this code where there is quadrant climbing space available below secondary and CIP lines that are attached to pole. Refer to "climbing space diagram". Use this code when climbing space infractions are caused by CIP i.e. PVC Riser, Service Drop, and/or other CIP equipment. Equipment could be mounted on pole or at base of pole. Use code 226 for SDG&E, code 225 for Private Property, or code 327 for Vegetation.	Note equipment in climbing space and company name in comments and take picture(s).	District to process Nonconformance within 45 business days; follow ESP 607.	ESP607
407	CIP Owned Pole Leaning or Potential Overload	SAFETY HAZARD. GO 95 Rule 18 A4 & Rule 47.3 & 48 requires that loads imposed on poles are balanced. Poles being pulled over and leaning more than 10 degrees from the vertical position shall be considered leaning badly. 10 degrees is equal to 7 ft. off center for a 45' pole; however, 7 ft. is adequate for all poles. Use this code for CIP poles that appears to require guying, anchoring or reinforcement and/or showing signs of bowing or distortion. GO Rule 44.3 requires lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to deterioration or changes in construction arrangement or other conditions subsequent to installation). For SDGE owned pole, use code 207. Use this code also for CIP only poles (up to 3 spans away) that are adversely affecting SDG&E pole - Closest SDGE pole number will be the parent pole for the code.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP who owns pole. Stand by until CIP or SDG&E Supv is on-site. Non-Critical: Note in comments action taken if any, details, CIP name, and take picture(s).	District to process Safety Hazards within 5 business days as per ESP607. District to perform loading calculations within 90 days to determine if SDG&E overloaded the CIP pole. District to follow ESP 607 with CMG after reviewing pole loading results.	ESP607

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
408	CIP Anchor required on SDG&E Owned Pole	SAFETY HAZARD. Use this code for poles that confirm after loading analysis that the respective CIP needs to guy / anchor their equipment on SDG&E owned poles or increase lead or increase size of current guy/anchor. GO 95 Rule 44.3 requires lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to deterioration or changes in construction arrangement or other conditions subsequent to installation). This is a follow-up condition code only. Not available to field inspectors	This is a follow-up condition code, only to be uploaded as a 1J.	District to process Safety Hazards within 5 business days of reviewing load calculation; follow ESP 607.	ESP607
409	SDG&E Pole Requires Replacement due to Confirmed CIP Damage	SAFETY HAZARD. Use this code for poles that confirm after loading analysis has been performed, that the respective CIP has damaged the SDG&E owned pole. GO 95 Rule 44.3 requires lines or parts thereof shall be replaced or reinforced before safety factors have been reduced (due to deterioration or changes in construction arrangement or other conditions subsequent to installation). This is a follow-up condition code only. Not available to field inspectors.	This is a follow-up condition code, only to be uploaded as a 1B.	District to process as per ESP 149. The district will manage as per ESP 149 and ESP 607 guidelines.	ESP149 ESP607
420	CIP Wire Heavy Strain/ Abrasion due to Vegetation	NONCONFORMANCE. GO 95 Rule 35. Use this code when there is heavy strain or abrasion on CIP wires due to vegetation that could impact SDG&E system (includes pole to pole and pole to building). Heavy strain on CIP conductors has a potential to affect pole loading and Electrical conductor stability.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP who is responsible for condition and stand by until CIP or SDG&E Supv is on-site. Note in comments action taken, details, CIP name, and take picture(s)	District to process Notice within 45 business days follow ESP 607.	ESP607
438	CIP Not Transferred to New Pole Non-Immediate Transfer Required	NONCONFORMANCE. Use this code where SDG&E has installed a new pole and the CIP has not transferred off the old pole and there is not a significant threat to life or property. if in the opinion of the inspector; the condition constitutes a significant threat to human life or property, use Code 439 instead.	Provide the CIP name and a description in the comment field. Take picture(s).	District to process Notice within 45 business days follow ESP 607.	ESP607

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
439	CIP Not Transferred to New Pole – Immediate Transfer Required	SAFETY HAZARD. Use this code where SDG&E has installed a new pole and the CIP has not transferred off the old pole, and in the opinion of the inspector, the old pole condition constitutes a significant threat to human life or property.	Notify Elec Supv for critical cond and contact TROUBLE to make emergency call to CIP who is responsible for condition or who owns pole and stand by until CIP or SDG&E Supv is on-site. Note in comments action taken and condition details, CIP name, and take picture(s).	District to process Safety Hazards within 5 business days; follow ESP607 flowchart.	ESP607
446	CIP Owned Pole or Stub Pole Damaged or Broken or Abandoned	SAFETY HAZARD. Use this code if the pole is a CIP owned pole and the pole is broken or damaged or abandoned. Make further comments in the MDT as to type of damage. If pole or stub pole is SDG&E owned or customer owned, then use code 246. Use as a follow-on code by Ops Asst if the CIP Owned pole is an abandoned / idle pole stub.	Notify Elec Supv for critical conditions and contact TROUBLE to make emergency call to CIP who owns pole. Stand by until CIP or SDG&E Supv is on-site. Note in comments action taken and condition details, CIP name, and take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607. Perform loading calculations & review within 90 days to determine who caused damage.	ESP607
454	CIP Insufficient Clearance between Primary Wire and CIP Wire	SAFETY HAZARD. GO 95 Rule 38 Table 2 sets wire to wire clearance requirements. Refer to OH Standard for review of these requirements. Use this code when there is insufficient clearance on pole or mid-span less than 6-feet between primary and CIP wires.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP and stand by. Provide the CIP's name and a description in the comment. Take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607.	OH221 OH224 OH228 OH262 OH236 OH908 OH1406 OH1530 OH1533 ESP607
455	CIP Insufficient Clearance Midspan between Open Wire Secondary and CIP Wire	SAFETY HAZARD. GO 95 Rule 38 Table 2 sets wire to wire clearance requirements. Refer to OH Standard for review of these requirements. Use this code when there is insufficient clearance mid-span less than 4-feet between open wire secondary and CIP wires.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP and stand by. Provide the CIP's name and a description in the comment. Take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607	OH224 ESP607
456	CIP Insufficient Clearance at Pole between Open Wire Secondary and CIP Wire	SAFETY HAZARD. GO 95 Rule 38 Table 2 sets wire to wire clearance requirements. Refer to OH Standard for review of these requirements. Use this code when there is insufficient clearance on pole less than 4-feet between open wire secondary and CIP wires. Guard arm may be required.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP and stand by. Provide the CIP's name, description, measurement, take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607	OH221 OH224 OH262 ESP607

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
457	CIP Insufficient Clearance at Weatherhead between Open Wire Secondary and CIP Wires	SAFETY HAZARD. GO 95 Rule 38 Table 2 sets wire to wire clearance requirements. Refer to OH Standard for review of these requirements. Use this code when there is insufficient clearance at the weatherhead (1 foot) between open wire secondary and CIP wires.	Provide the CIP's name, description/ house number of weatherhead location, measurement, and take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607.	ESP607
458	CIP Insufficient Clearance between SDG&E Insulated Wires and CIP Wires	NONCONFORMANCE. GO 95 Rule 38 Table 2 sets wire to wire clearance requirements. Refer to OH Standard for review of these requirements. Use this code when there is Insufficient clearance: (a) on pole no less than 4-feet from triplex secondary, requires guard arm; (b) mid-span with triplex secondary; (c) from primary insulated cable riser opening; (d) from secondary insulated cable riser opening; (e) at weatherhead - triplex If guy is grounded above insulator – use code 274 and make critical.	Note the location of the condition: at midspan, pole, or weatherhead. Provide the CIP's name, measurement, description, and take picture(s).	District to process Notice within 45 business days; follow ESP 607.	OH224 OH262 OH908 OH1406 OH1509 OH1530 OH1533 ESP607
459	CIP Insufficient Ground Clearance CIP Wires - Vehicular Traffic	SAFETY HAZARD. GO 95 Rule 37 Table 1 cases 1-4, 11, and 12, sets vertical ground clearances. Refer to OH Standards for review of these requirements. Use this code for (a) pole to pole CIP ground clearance over an area where vehicles can or do travel or (b) pole to building CIP ground clearance issues and if line is low over a street, alley, driveway, parking lot, etc. where vehicles could routinely travel and snag line.	Notify Elec Supv for critical conditions and contact TROUBLE to make emergency call to CIP who is responsible for condition and stand by until CIP or SDG&E Supv is on-site. Note the location of the condition: at midspan, at the pole. Provide the CIP's name, ground measurement, description and take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607	OH224 ESP607
460	CIP Insufficient Ground Clearance CIP Wires – Non-Vehicular Traffic	NONCONFORMANCE. GO 95 Rule 37 Table 1 cases 1-4, 11, and 12, sets vertical ground clearances. Refer to OH Standard to review these requirements. Use this code for: (a) pole to pole CIP ground clearance or (b) pole to building CIP ground clearance issues NOT over an area where vehicles can or do travel. NOTE: if line could be reached by pedestrians who could pull on wire and cause poles to move and could jeopardize SDG&E equipment, condition should be elevated to Safety Hazard Code 459.	Note the location of the condition: at midspan or at pole. Provide the CIP's name, description, ground measurement, and take picture(s).	District to process Notice within 45 business days; follow ESP 607.	OH224 ESP607

Overhead Infraction Conditions

Code	Description	GO 95 Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
464	CIP Lashing Wire Broken/Loose	SAFETY HAZARD. Hazardous condition(s) created by CIP broken/loose lashing wire. Lashing wire is used to support CIP wire. Lashing wire can become unraveled creating the potential to contact SDG&E lines or equipment.	For Critical Conditions, notify Elec Supv and contact TROUBLE to make emergency call to CIP and stand by. Provide the CIP's name and a description in the comment. Take picture(s).	District to process Safety Hazard within 5 business days; following ESP 607	ESP607
465	CIP Equipment /Wires Hanging Loose - Not Secured	SAFETY HAZARD. CIP wires and junction boxes hanging loose and unsecured with the potential to contact SDG&E lines/ equipment or could pose a public threat should be reported using this code. CIP equipment on the ground should also be reported using this code. NOTE: If the inspector temporarily secures the equipment, they should use nonconformance Code 466 to downgrade the condition.	Note the location of the condition description and CIP's name in comments and take picture(s). If critical, stand by and contact Elec Supv to call assistance to temporarily secure lines.	District to process Safety Hazard within 5 business days; following ESP 607	ESP607
466	CIP Wires Hanging Loose - Temporarily Secured	NONCONFORMANCE. CIP wires hanging loose have the potential to contact SDG&E lines or equipment. Use this code if the inspector found the equipment already secured **or** temporarily secured the loose wire (staple, strap, etc.), such that it cannot make contact with Elec wires. If it is not temporarily secured, use safety hazard Code 465.	Temporarily secure loose wires if job classification allows. Note the location of the condition, description and CIP's name in comments field. Take picture(s).	District to process Notice within 45 business days; follow ESP 607.	ESP607
481	Pole replacement from POIN	Use this code when a pole coded 682 for C-truss repair is determined by the Elec Supv to need Replacement or when the pole in question cannot be c-truss. This is a follow-up condition code only. Not available to field Inspectors.	This is a follow-up condition code only.	Use system of record and enter as pending. The date of reassessment warranting a change from a 682 to 481 shall be the effective date for the new code 481. Add comments to 682 referring to a change to 481 code. Then complete cancel 682 code.	

Overhead Reliability Conditions

Code	Description	Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
32	Pothead Leaking	Use this code where the insulating gel is leaking from the pothead.		Turn in follow-up to Elec Supv	ESP601
33	Pothead Chipped/Broken	Use this code where the pothead shows signs of cracks, chips or are broken.		Turn in follow-up to Elec Supv	ESP601
36	Need Barrier Post For Vehicular Traffic	Use for all equipment that may be subjected to vehicular traffic or vehicular contact in alleys, parking lots, etc. and need barrier posts.		Turn in follow-up to Elec Supv.	ESP601
150	Other Reliability, no applicable code	Use this code to identify reliability conditions that do not have existing codes. Provide comments in MDT.		Follow-up as required	
208	Tags Missing (PN Sign)	SDG&E Elec Standards requires that when the primary phase and primary neutral cannot be distinguished then the primary neutral shall be identified by a “PN” sign.		Follow-up fix by crew; install “PN” sign on primary neutral.	OH208
220	Guy Buried	Use this code when the anchor rod eye is buried or less than six inches above the ground. Install an anchor rod extension.	Uncover on-site is possible	Follow-up fix by crew	OH927.1
227	Damaged / Missing Warning Signs (Mr Ouch)	OH Standards, item 10, requires warning sign (Mr. Ouch sign) on poles with energized electrical facilities (secondary and above). Place sign 9’ above ground.		Fix on site	
233	Stand-off Pin Missing /Damaged	Use this code when the stand-off is damaged or missing.		Follow-up fix by crew	OH1145
255	Multiple Splices on OH Span of Wire	Use this code when there are 3 or more splices on one phase between two poles on primary conductors (12kV- 2.4kV).	Note type of splice (i.e. union splice, compression sleeve, automatic sleeve, etc.) and quantity of each in MDT comments. Take picture(s) and make note in comments on MDT. If there are 5 or more splices, notify district engineer.	Engineering review with Elec Supv.	OH 720 ESP 007
257	Overhead Connectors Directly on the Line	Use this code when hot line clamps, parallel groove connectors, split bolts or other mechanical connectors are tapped directly on the primary conductors (12kV – 2.4kV).	Note type of connector and quantity of each in MDT comments.	Follow-up crew to install stirrup or wedge connector/ stirrup combination	OH788
600	Yellow Tag on Pole	Use this code to identify when a yellow tag is on the pole from the Wood Pole Inspection contractor. The yellow tag identifies that a pole reinforcement was recommended by the contractor.	If pole reinforcement is installed, yellow tag can be removed, collect date stamp on tag	F/U with Supv or Wood Pole Contract Administrator for status of pole reinforcement	ESP601 OH208
681-699 Series	POIN Intrusive Wood Pole Inspection (contractor)	Reference Intrusive Wood Pole Inspection Codes 681-699 in CMP Manual POIN Table. To be entered only by Wood Pole Inspection Contractor.			CMP Manual

Overhead Discretionary Conditions

Code	Description	Requirements and Overhead Standards	On-Site Maintenance	Follow-up Maintenance	Ref.
006	Cable Pole Tag Missing	Equipment requires labeling. Use this code when the cable pole tag is missing.		Follow-up fix by crew	ESP601 OH208
299	No Repairs Needed				

2. POIN INTRUSIVE POLE INSPECTION (CONTRACTOR)

Condition	Code	Description
I	681	Restoration rejected, replace
I	682	Restoration recommended, C-truss
R	684	Restoration recommended, pole top
R	691	Restored
R	692	Not restored
R	693	DUG rejected
R	694	Climbing inspection recommended
R	696	Inspection not complete, gas pole
R	697	Pole leaning badly
R	699	No repairs needed

3. OVERHEAD CONDITION CODE TEMPLATE

OHVI and QC Condition Code Inspection Reference

Contact Trouble/Supervisor/CIP/Claims for any critical conditions and standby until Supv or CIP is on-site as appropriate

Code	Cond	Code Name – Description	On-site Maintenance / Follow-Up Actions	Cycle	
				OHVI	QC
6	D	**Cable Pole Tag Missing**	F/U fix by crew	X	
26	I	**Ground Rods or Studs Missing**	F/U fix if expd, missg, or corr out; instl new rod	X	
32	R	**Pothead Leaking**– insulating gel is leaking	F/U to Supervisor	X	
33	R	**Pothead Chipped/Broken**		X	
36	R	**Need Barrier Post for Vehicular Traffic**	F/U fix by crew	X	
96	I	**Conduit Damaged** – cable pole conduit damage	Make temp repairs if possible. F/U fix by crew	X	
98	I	**Conduit Not Strapped Down**	Secure conduit if possible. F/U fix by crew	X	
150	R	**Other Reliability, no applicable code**	F/U as required	X	
201	I	**Pole Steps Lower than 10ft.** or above a walkable surface	Remove step(s) below this height	X	
203	I	**Damaged/Missing Visibility Strips** – required on state hwy.	Install/replace visibility strips as appropriate	X	
206	I	**Damaged/Missing Pole Hardware**	F/U fix by crew; replace damaged/missing hardware	X	X
207	I	**SDG&E Leaning Pole or Potential Overload** – leaning 10° from center or appear to require guying, anchoring, or reinforcement and/or showing signs of bowing/distortion.	Stand-by as appropriate/ F/U fix by crew.	X	X
208	R	**Tags missing (PN sign)** – only if PN cannot be dist by other means	F/U fix by crew; install PN sign on primary neutral	X	
209	I	**Foreign Attachment/Unauthorized Equipment** i.e. antenna, signs, posters, etc.	Remove attachment / F/U by crew as required Take pic(s).	X	
218	I	**Private Property Caused Pole Inaccessible** i.e. locked gate, animal, material stacked or structure built around pole.	Fix on site if object is removable. If issue cannot be resolved, take pic(s) and F/U appropriately. Code will remain pend until inspected.	X	X
219	I	**SDG&E/Vegetation Caused Pole Inaccessible or Cannot Locate** Inaccessibility can occur due to river, lake, terrain or vegetation that prevents access.	Fix on site if object is removable. For Veg, leave door hanger & remove bottom portion or obtain signed remove card. Code will remain pending until inspected. Take pic(s) & F/U appropriately.	X	X
220	R	**Guy Buried** – anchor rod eye is 6" or less above ground	Uncover if possible. F/U by crew as needed	X	
225	I	**Private Property Climbing Space Obstruction** refer to OH Standard 251-261 for allowable climbing space obstructions; GO 95 allows quadrant climbing space up through the CIP level.	Take pic(s) and make note in MDT and F/U appropriately.	X	
226	I	**SDG&E Climbing Space Obstruction** – Use when climbing space infraction is caused by SDG&E.	Take pic(s) and make note in MDT and F/U appropriately.	X	
227	R	**Damaged/Missing Warning Signs** (Mr. Ouch)	Fix on-site, install 9' from ground level	X	
228	I	**Exposed Conductor** – uncovered vertical or lateral runs	F/U fix by crew; replace PVC conduit	X	
230	I	**Damaged Ground Molding** – ground wires attached to pole are required to be covered throughout length by protective covering.	Make temporary repairs (Make safe) for areas accessible from the ground on-site. F/U crew to make permanent repairs	X	
231	I	**Open/Damaged Ground** – broken, burned through, or cut	Stand-by as appropriate	X	X
233	R	**Stand-off Pin Missing/Damaged**	F/U fix by crew	X	
234	I	**Damaged/Missing High Voltage Signs-2 man** repair – high volt sign missing from line arms or pole (40" below lowest conductor w/no equipment or 6" below equipment)		X	
235	I	**Damaged Arrestor/Insulator/Dead-end** – broken or chipped or evidence of burning or flashover		X	X
236	I	**Damaged/Missing High Voltage Signs-1 man** repair – high volt sign missing from line arms or pole (40" below lowest conductor w/ no equipment or 6" below equipment)		X	
237	I	**Oil Leak** - leaking oil from any pole mounted equipment	Follow ESP 122 for oil leaks	X	X
238	I	**Abandoned Facilities** (pole and conductors) - applies to pole and conductors with no future potential use as determined by SPM200.	Note in MDT what is abandoned. Take pic(s). Ops Asst to follow ESP607 or SPM200.	X	
239	I	**Idle Equipment** – equipment or hardware not in use	Note in MDT what type of equip is idle.	X	
240	I	**Damaged Cutout** - broken or chipped or evidence of burning or flashover	F/U fix by crew	X	X
241	I	**Damaged Crossarm** – severe cracking, evidence of charring, burning, excessive blooming (fiberglass) or severe tracking		X	X
243	I	**Damaged Switch**– switch or switch components (insulators, switch blade, etc.) are damaged or broken		X	X
244	I	**Damaged Switch Gang Operator Mechanism** – broken, bent or missing mechanism		X	X
246	I	**SDG&E Pole/ Stub Pole Damaged or Broken** – include vehicle contact, severe cracking, shell, top, butt rot, charred wood; severe track, wood pecker damage, and/or any excessive build up corrosion (pack-out) or any excessive pitting on Galvanized or Weathered steel poles, and/or excessive blooming (fiberglass poles).	If red tag, note "red tag on pole". F/U fix by crew. Steel poles make sure no veg is in contact w/pole. Clear on site or use code 327 veg F/U. Remove soil in contact to bare steel; should be 12" above the soil line/poly coating. F/U report standing water around steel pole to Eng.	X	X

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OHVI and QC Condition Code Inspection Reference

Contact Trouble/Supervisor/CIP/Claims for any critical conditions and standby until Supv or CIP is on-site as appropriate

Code	Cond	Code Name – Description	On-site Maintenance / Follow-Up Actions	Cycle OHVI	Cycle QC
254	I	**SDG&E Insufficient Clearance** – if there is not adequate wire to wire clearance or ground to conductor clearances caused by SDG&E	F/U fix by crew. Use Code 262 for low services or Codes 454-460, if CIP caused.	X	X
255	R	**Multiple Splices on OH Span of Wire** - when there are 3 or more splices i.e. union, compression sleeve, automatic sleeve, etc. on one phase between 2 poles on primary conductors (12kV-2.4kV).	Note type of splice and quantity of each in MDT. Take pic(s). If there are 5 or more splices, notify district engineer.	X	X
257	R	**Overhead Connectors Directly on the Line** - (i.e. hot line clamp, parallel groove, split bolts) located on primary wire (12kV-2.4kV)	Note quantity and type in MDT. F/U crew to install stirrup or wedge connector/ stirrup combination	X	X
258	I	**Avian Protection Damaged** - or missing on poles w/wildlife symbol in mapping system. Not for identifying new locations.	F/U crew to replace Avian protection	X	X
260	I	**Easement Encroachment** – buildings, fences, walls, etc.	Notify Land and Claims as appropriate	X	
261	I	**Grading Change** – construction in proximity of conductors that could result in insufficient clearance	Notify Land and Claims as appropriate	X	
262	I	**Low Service** •over fences -2' (non-walkable), 8' (walkable) •over pedestrian walkways - 10' (residential), 12' (commercial) •over driveways - 12' (residential), 16' (commercial) •over thoroughfares - 18' (centerline), 16' (at curb)	F/U fix by crew. Use Code 254 for primary and secondary clearances. Take Pic(s) if the customer will be responsible for work and notify Land.	X	
263	I	**Private Property Hazardous Condition** - that affect SDG&E facilities and not covered by other codes	Describe condition and note private party name, if known, in MDT. Take pic(s).	X	X
264	I	**Bare or Wrapped Service** – evidence of fraying or weatherproofing is missing. Open wire service is wrapped or touching.	F/U fix by crew	X	
266	I	**Foreign Objects** i.e. mylar balloons, kites, shoes		X	X
267	I	**Damaged Capacitor** – bushing show signs of damage or case is swollen or damaged		X	X
268	I	**Slack Conductors** – Pri or Sec overbuild has greater sag than lower cond.(s) or unequal sag of conductors on same span, or inspector determines during windy conditions cond(s) may make contact (slap).		X	X
269	I	**Damaged Conductors** – broken, severely bent, or severely corroded.		X	X
270	I	**Damaged/Missing Guy Guard** – twisted, bent, cut, unsecured, or missing	Required on all anchor guys. Fix on-site.	X	
274	I	**Guy Grounded** – Portion of guys *above the insulators* are grounded by trees, build, messenger, metal-sheathed cables or other similar objects	Notate what is above insulators in MDT. Take pic(s). F/U fix by crew along with joint meets with CIP or send I/O to Veg Mgmt, as needed.	X	X
276	I	**Slack Anchor Guy**	F/U fix by crew. Use Code 278 for span guy.	X	X
277	I	**Damaged / Missing Guying** – includes damage to guy grips, anchors, hardware or guying/anchors required per load calcs.	F/U fix by crew	X	X
278	I	**Slack Span Guy**	F/U fix by crew. Use Code 276 for anchor guy.	X	X
282	I	**Bolt Cover Missing**	F/U fix by crew	X	
283	I	**Damaged/Missing/incorrect Station Pole ID**	Fix on-site. If number is unknown submit GMDT	X	
298	I	**Infraction - No Applicable Code**	F/U fix by crew	X	X
299	D	**No Repairs Needed**	No action needed	X	X
318	I	**Trees/Veg in Proximity to Primary** -18" or closer to primary conductors, and 48" or closer to primary conductors in the FTZ.	For trees/veg, use street address, leave door hanger for affected customers, for veg. removal obtain signed removal card, quantity of trees, use abbreviation key. Record in MDT. Do not send in an I/O.	X	X
319	I	**Trees/Veg. Contacting Open Wire**		X	X
320	I	**Veg in Secondary (SSC/Aerial Cable) - Trim** (Heavy Strain or Abrasion Only)		X	X
321	I	**Veg in Secondary (SSC/Aerial Cable) - Guard** (Heavy Strain or Abrasion Only)		X	X
322	I	**Veg in Secondary (SSC/Aerial Cable) - Reroute** (Heavy Strain or Abrasion Only)	Call in emergencies (i.e., tree in contact or occasional contact with primary voltage conductor) to Veg Mgmt Help Desk – 858-654-8608.	X	X
323	I	**Veg in Service - Guard** (Heavy Strain/Abrasion Only)		X	X
324	I	**Veg in Service - Slack** (Heavy Strain/Abrasion Only)		X	X
325	I	**Veg in Service - Reroute** (Heavy Strain/Abrasion Only)	Repairs completed by Veg Mgmt.	X	X
326	I	**Veg in Service - Trim** (Heavy Strain/Abrasion Only)		X	X
327	I	**Vegetation Climbing Space Obstruction** or any vegetation is in contact with Galvanized or Weathering steel pole.		X	
332	I	**Veg in Guy - Heavy Strain or Abrasion**		X	X
402	I	**CIP Climbing Space Obstruction** – One quadrant climbing space	Note CIP and equip type, take pic(s). Use code 225	X	

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OHVI and QC Condition Code Inspection Reference

Contact Trouble/Supervisor/CIP/Claims for any critical conditions and standby until Supv or CIP is on-site as appropriate

Code	Cond	Code Name – Description	On-site Maintenance / Follow-Up Actions	Cycle OHVI	Cycle QC
		allowed up through CIP level per GO 95	for private prop, 226 for SDG&E, or 327 for Veg		
407	I	**CIP Owned Pole Leaning or Potential Overload** – Use on J suffix pole w/more than 10° from vertical (i.e. 7' off center for 45' pole) or poles that appear to require guying, anchoring, or reinforcement and/or showing signs of bowing/distortion. Also use code to I.D. *CIP only pole 3 spans away* that are adversely affecting SDG&E pole.	Note action taken if any, details, CIP name, and take pic(s).	X	X
408	I	**CIP Anchor required on SDG&E Owned Pole** - That confirm after loading analysis that the respective CIP needs to only anchor	This is a F/U condition code only. **Not available to field inspectors.**		
409	I	**SDG&E Pole requires Replacement due to confirmed CIP Damage** - confirmed after loading analysis that the respective CIP has damaged SDG&E owned pole and a change out is required.	This is a F/U condition code only. ESP 149 should be followed. **Not available to field inspectors.**		
420	I	**CIP Wire Heavy Strain/ Abrasion due to Vegetation** - Heavy strain on CIP conductors that has a potential to affect pole loading and electric conductor stability.	Note action taken if any, details, CIP name, and take pic(s).	X	X
438	I	**CIP Not Transferred to New Pole - Non-Immediate Transfer Required**	Note the CIP name, details, and take pic(s).	X	
439	I	**CIP Not Transferred to New Pole – Immediate Transfer Required.** Use this code if it is a critical condition only.	Note action taken if any, CIP name, details, and take pic(s).	X	X
446	I	**CIP Owned Pole or Stub Pole Damaged, Broken, or Abandoned**	Note action taken, CIP, details on damage, and take pic(s).	X	X
454	I	**CIP Insufficient Clearance between Primary Wire and CIP Wire** - there is insufficient clearance on pole or mid-span less than 6'	Note location: at midspan or at pole, CIP, measurement, and take pic(s).	X	X
455	I	**CIP Insufficient Clearance Midspan between Open Wire Secondary and CIP Wire** - when clearance less than 4'	Note pole to pole number of condition, CIP, description, measurement, and take pic(s).	X	X
456	I	**CIP Insufficient Clearance at Pole between Open Wire Secondary and CIP Wire** - when clearance less than 4'	Provide the CIP, measurement, description, and take pic(s).	X	X
457	I	**CIP Insufficient Clearance at Weatherhead between Open Wire Secondary and CIP Wires** - when there is insufficient clearance at the weatherhead less than 1'	Provide the CIP, measurement, address of weatherhead location, and take pic(s).	X	X
458	I	**CIP Insufficient Clearance between SDG&E Insulated Wires and CIP Wires** - (a) on pole no less than 4' from triplex sec. require guard arm; (b) mid-span with triplex sec; (c) from primary cable riser opening; (d) from sec cable riser opening; (e) at weatherhead-triplex	Note the location of the condition: at midspan, pole, or weatherhead. Provide the CIP name, measurement, description, and take pic(s). For CIP contact above insulator, use code 274.	X	
459	I	**CIP Insufficient Ground Clearance CIP Wires - Vehicular Traffic** - Use for (a) pole to pole CIP ground clearance or (b) pole to building CIP ground clearance, over an area where vehicles can or do travel and that could snag SDG&E wires.	Note action taken if any, details on location, measurement, CIP, and take pic(s).	X	X
460	I	**CIP Insufficient Ground Clearance CIP Wires – Non-Vehicular Traffic** - if line can be reached by pedestrians who could pull on wire, and cause poles to move and could jeopardize SDG&E equipment, should be elevated to Safety Hazard Code 459.	Note action taken if any, details on location, measurement, CIP, and take pic(s).	X	
464	I	**CIP Lashing Wire Broken/Loose** - Lashing wire is used to support CIP wire and can become unraveled creating the potential to contact SDG&E lines or equipment.	Note action taken if any, details on location/condition, CIP, and take pic(s).	X	X
465	I	**CIP Equipment /Wires Hanging Loose - Not Secured** - CIP wires and junction boxes hanging loose and unsecured with the potential to contact SDG&E lines/ equipment or could pose a public threat.	Note action taken if any, details on location/ situation in field, CIP, and take pic(s).	X	X
466	I	**CIP Wires Hanging Loose - Temp Secured** - if inspector found the equipment already secured or temporarily secures the loose wire (staple, strap, etc.) on pole, use this code instead of code 465.	Temporarily secure loose wires if job class allows. Note action taken if any, details on location/ situation in field, CIP, and take pic(s).	X	
481	I	Pole replacement from POIN	This is a F/U condition code only. **Not available to field inspectors.**		
600	R	**Yellow Tag on Pole** (pole reinforcement recommended)	If pole reinforcement is installed, yellow tag can be removed, collect date stamp on tag. F/U with Supervisor or Wood Pole Contract Administrator for status of pole reinforcement.	X	

Condition Abbreviations: I – Infraction, R – Reliability, D – Discretionary

Vegetation Abbreviation Key

Type: Eucalyptus – EU#, Palm – PA#. Pine – PI#, Oak – OA#, Other – OT#, Qty – Quantity (#)

Access: Back lot – BL, Backyard – BY, Truck Access – TA Special instructions: Removal Required – RR, Stump Grinding Required – SG, Door Hanger Left – DH, Authorization Card Left – AC, Customer Contact – CC

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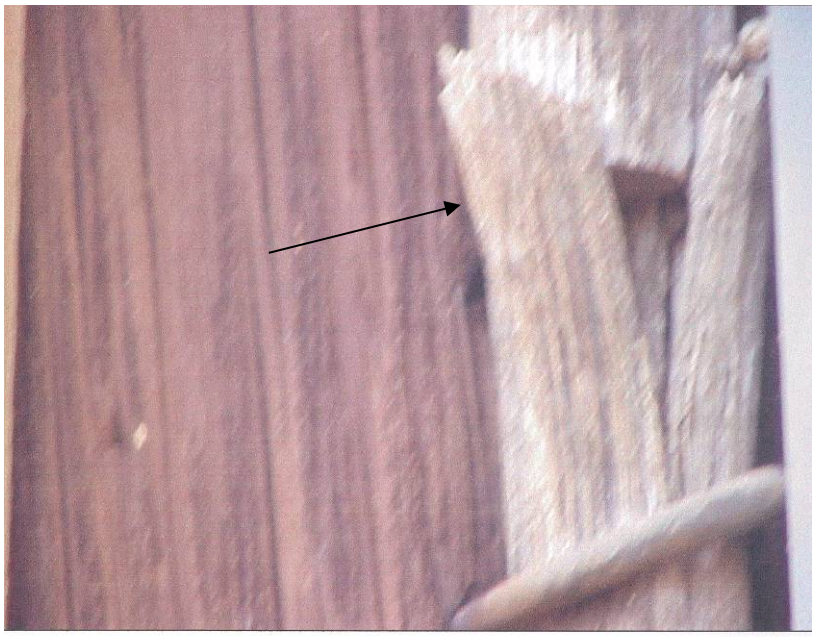
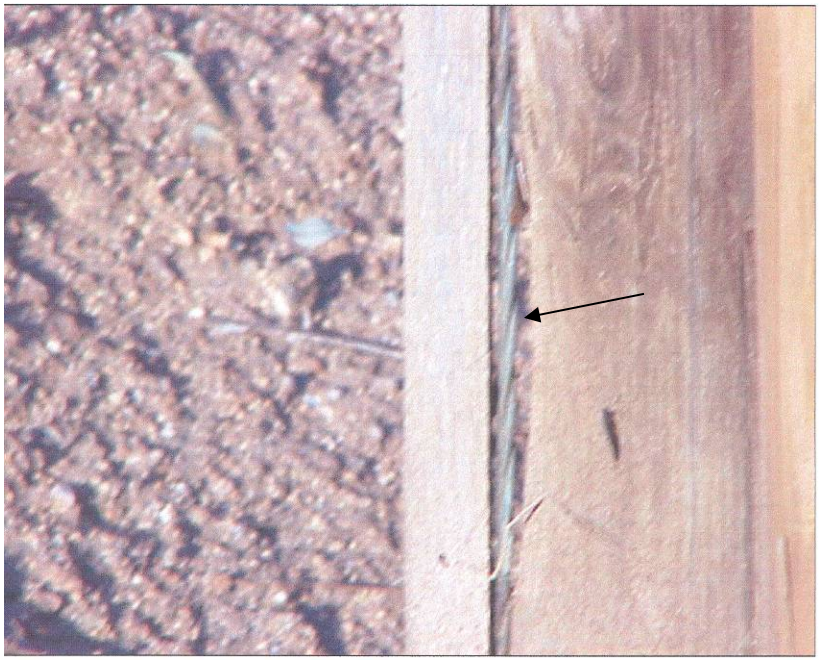
B. OVERHEAD PHOTOS- FREQUENTLY ASKED QUESTIONS

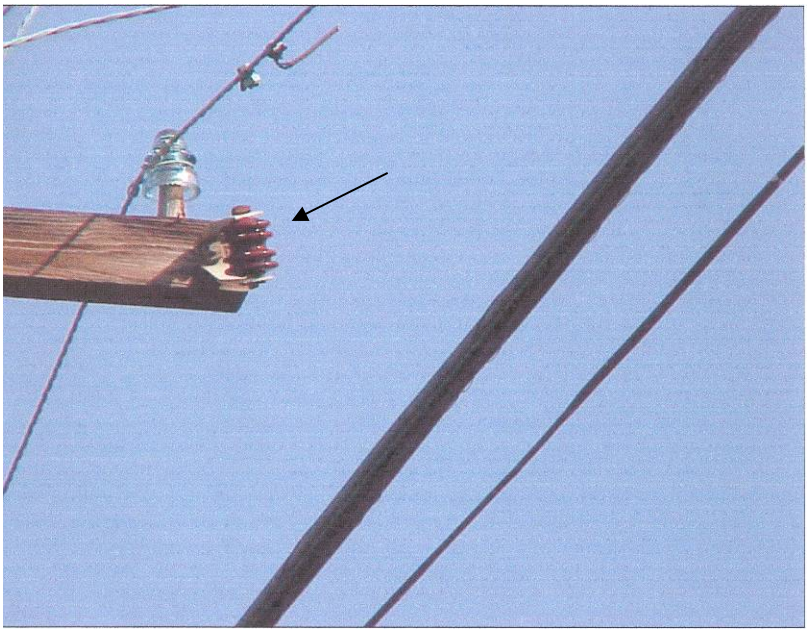
Damaged Ground Molding

Code 230

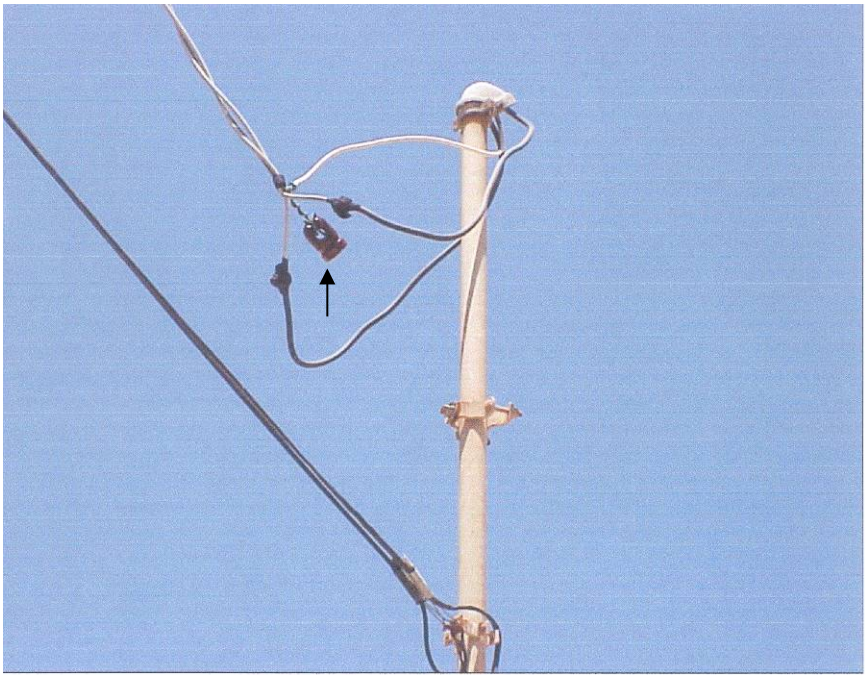




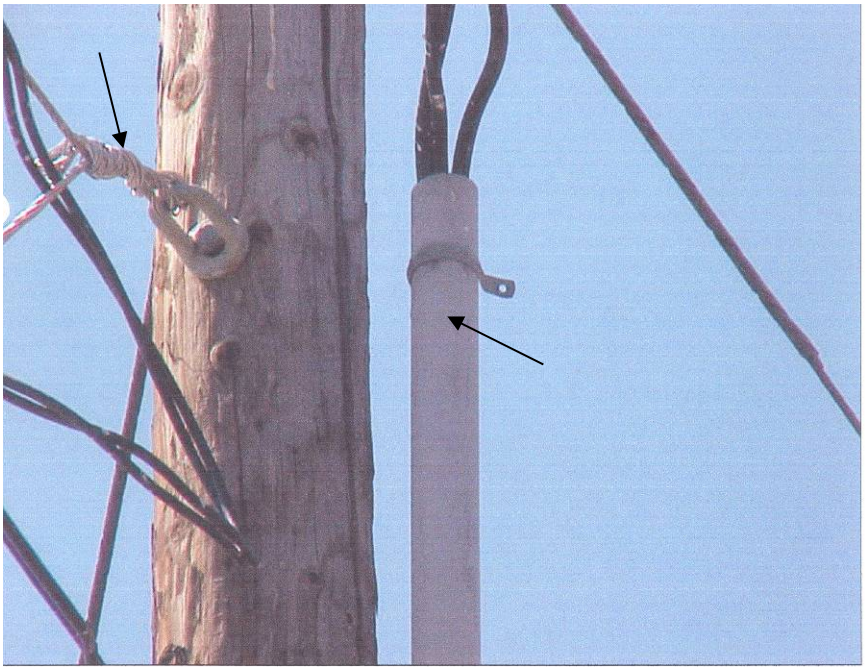
Idle Facility
Code 239



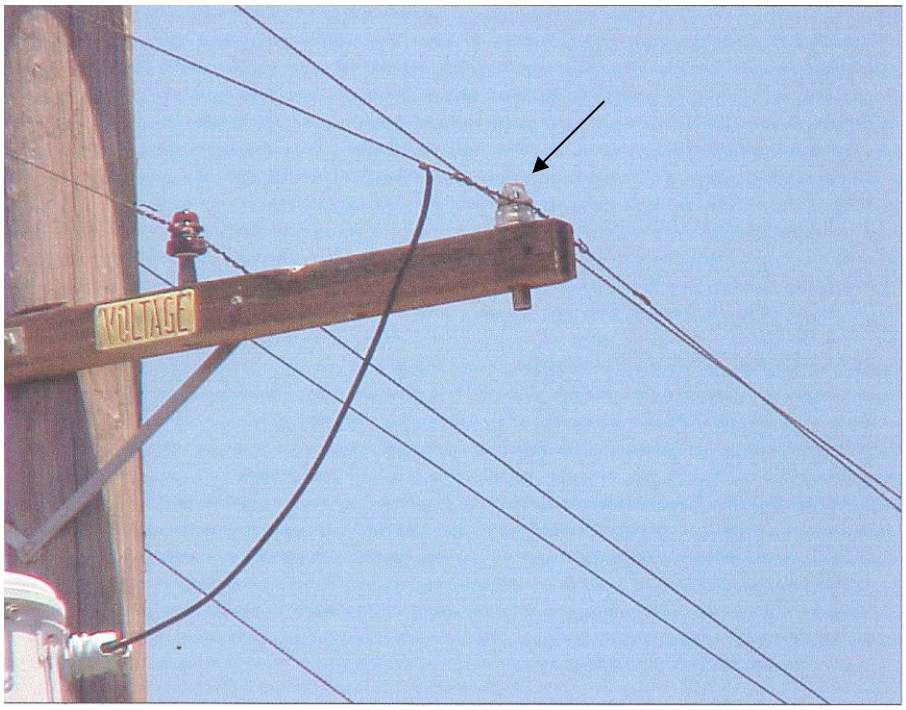
Other Infraction – No Applicable Code
Code 298 – Broken Periscope Bracket



Conduit Not Strapped Down
Code 98
Infraction No Applicable Code (Neutral Attached to Hog-eye)
Code 298



Infraction No Applicable Code (Insulator Resting On Crossarm)
Code 298 With Comments



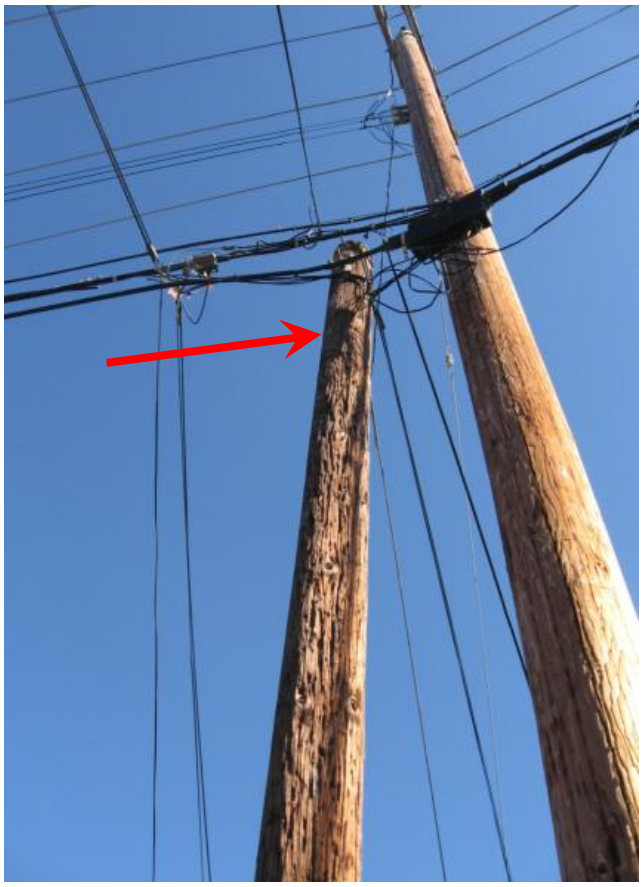
Damaged Conduit/Conduit Not Strapped Down
Code 96/98

Idle Equipment – Code 239
This Condition No Longer an Infraction as Long as The Clevis is backing up Strain

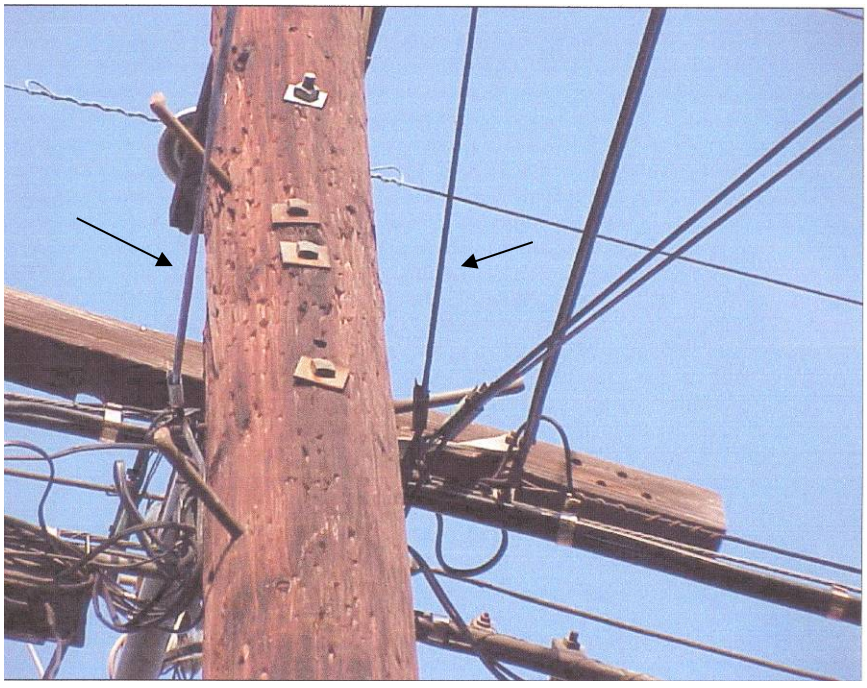
Need Tree Guard (Slipped Down)
Code 323

Reroute – Vegetation in Service Pole to House
Code 325

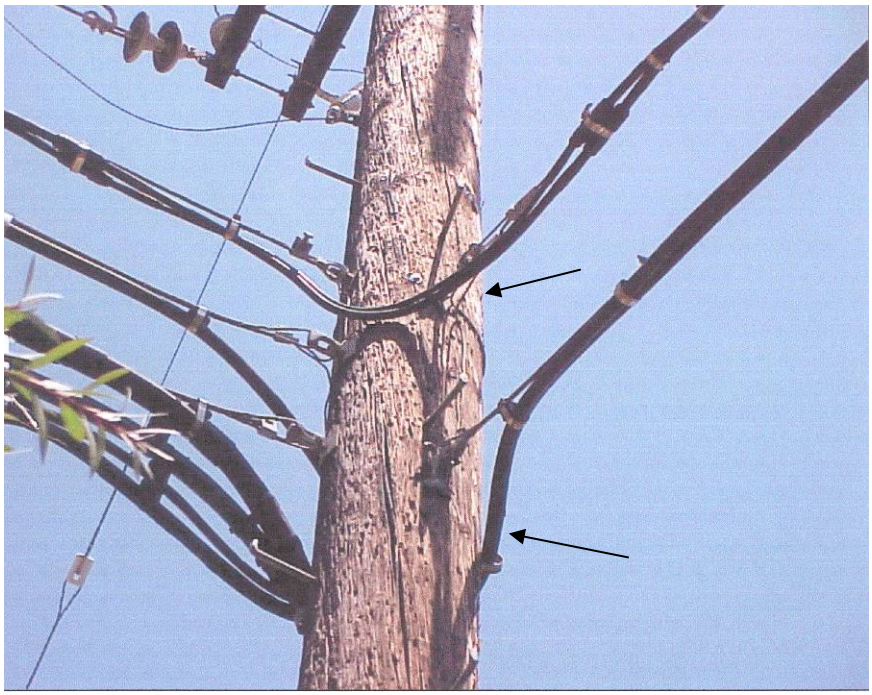
CIP Not Transferred to New Pole
Code 438



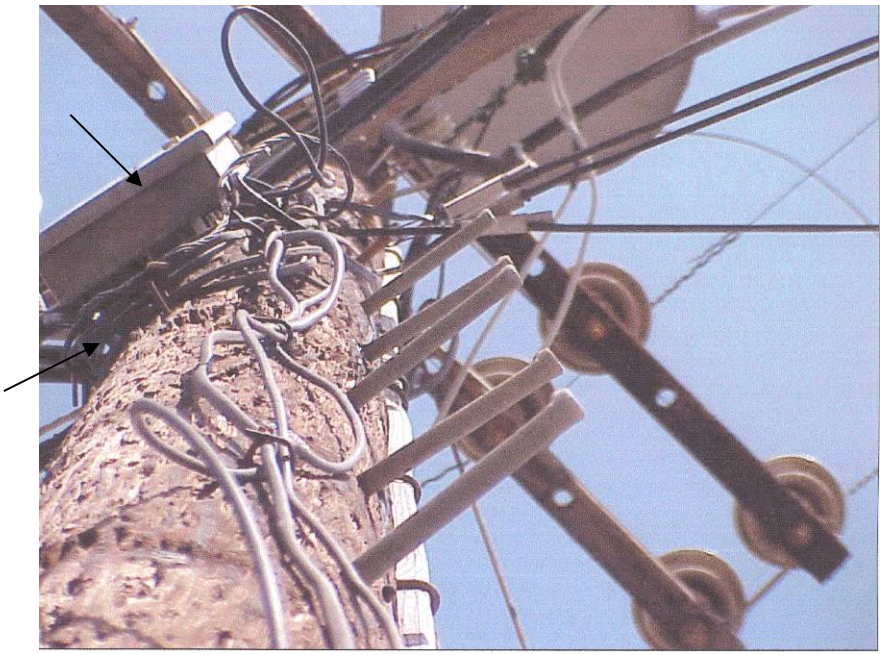
Climbing Space Caused By CIP
Code 402



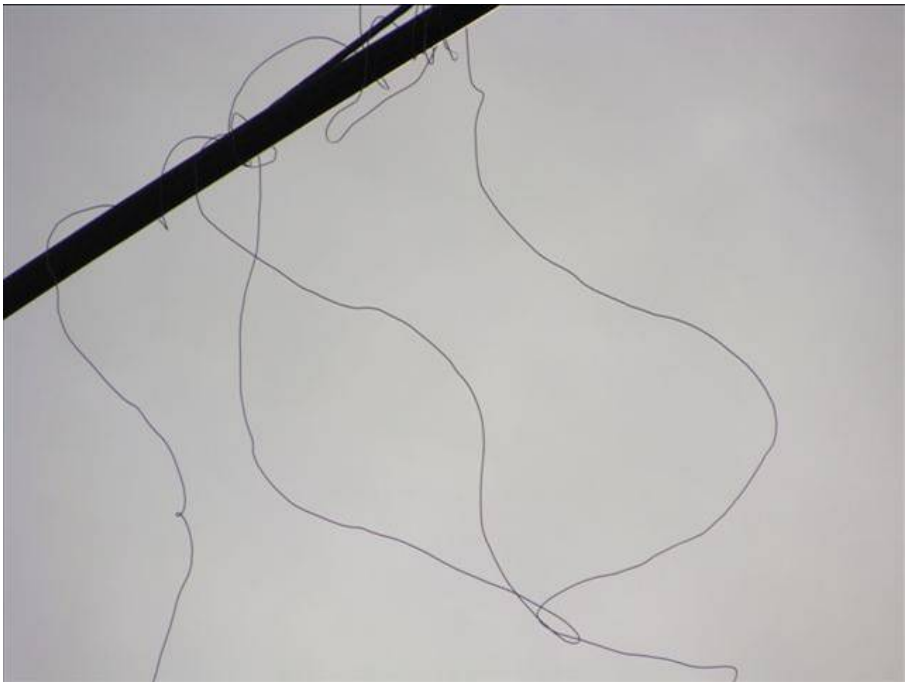
Climbing Space Caused By CIP
Code 402



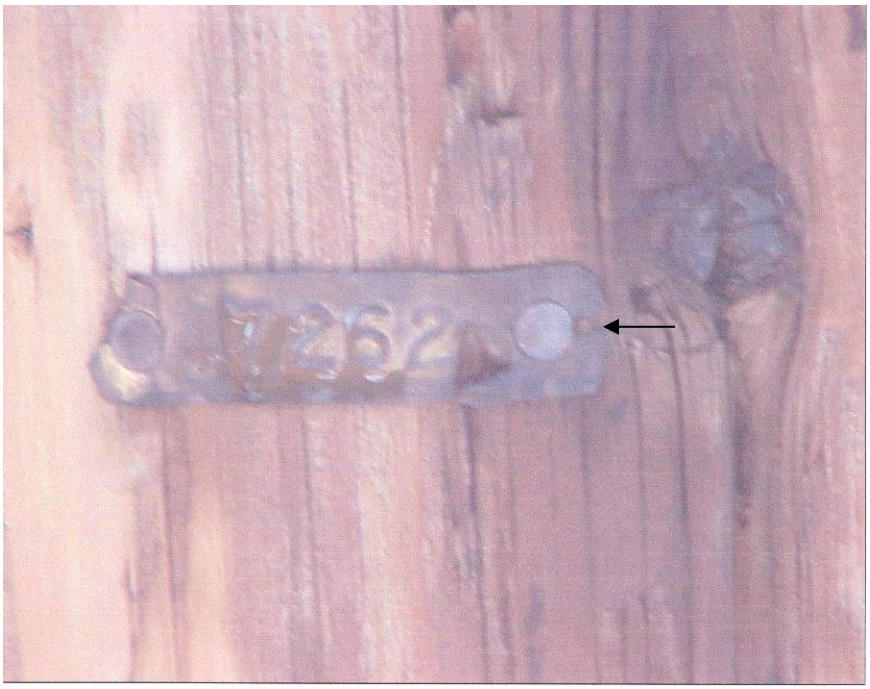
Climbing Space Caused By CIP
Code 402



CIP Lashing Wire Broken/Loose Code 464

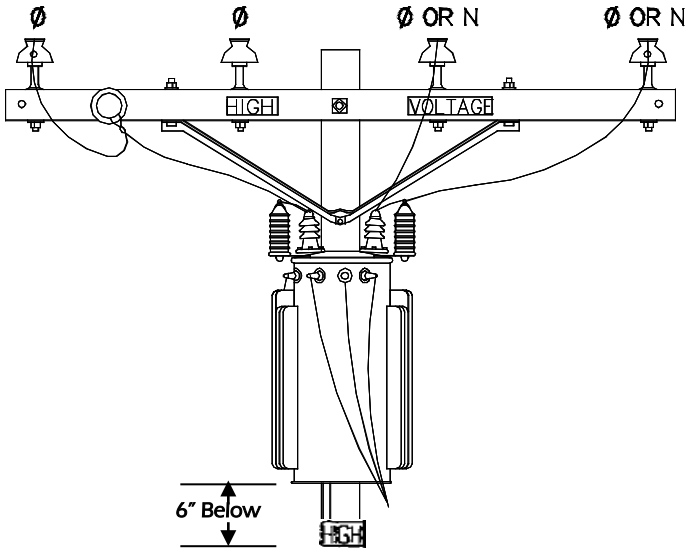


ID Missing, Damaged, or Incorrect
Code 283



C. OVERHEAD REFERENCES

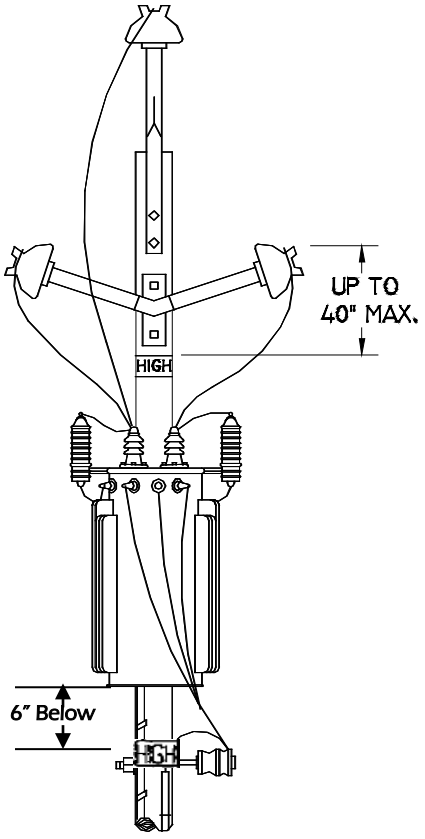
1. HIGH VOLTAGE SIGN REQUIREMENTS



CROSSARM CONSTRUCTION

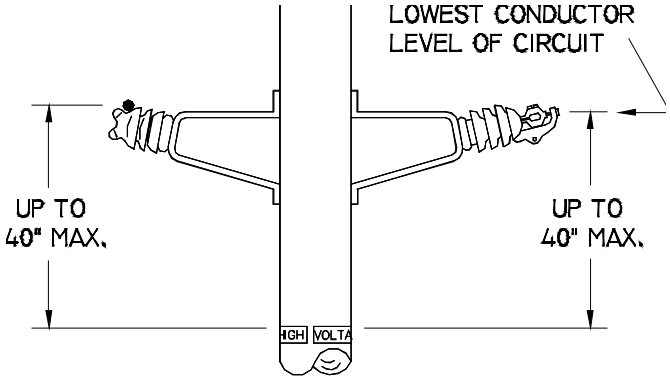
If there are large pieces of equipment on the pole such as transformers, regulators, capacitors or service restorers, the signs are to be placed on the line arms.

Crossarm construction may have the HIGH VOLTAGE signs placed on either the line arms or the pole, as shown in these illustrations. Signs are not required on equipment arms, switch arms, equipment mounting brackets, etc., nor does their existence relieve SDGE of the requirement to place high voltage signs on the line arms or the pole.

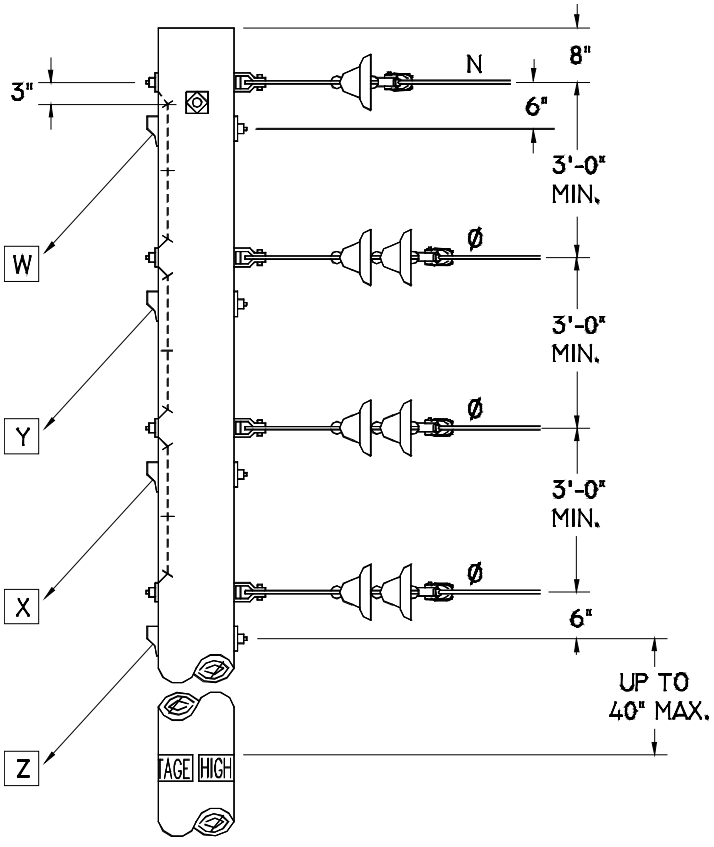


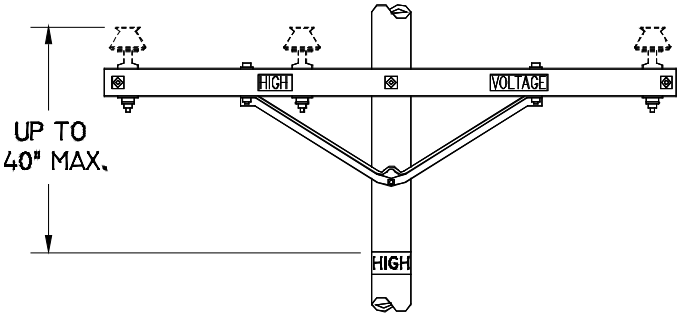
ARMLESS CONSTRUCTION

High voltage signs must be placed either within 40 inches of the lowest conductor of the circuit or 6 inches below the equipment. Place the high voltage signs above the transformer or other large pieces of equipment but below the lowest conductor of the circuit. Signs placed on the pole need to encircle the pole so that the yellow warning color is visible from all directions.

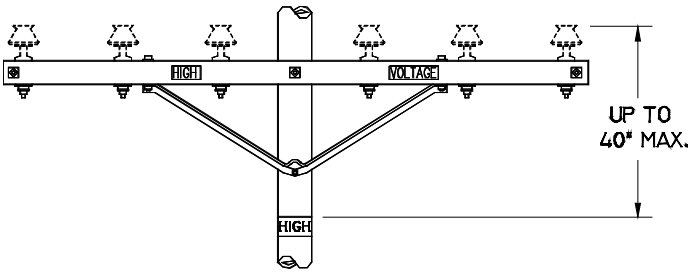


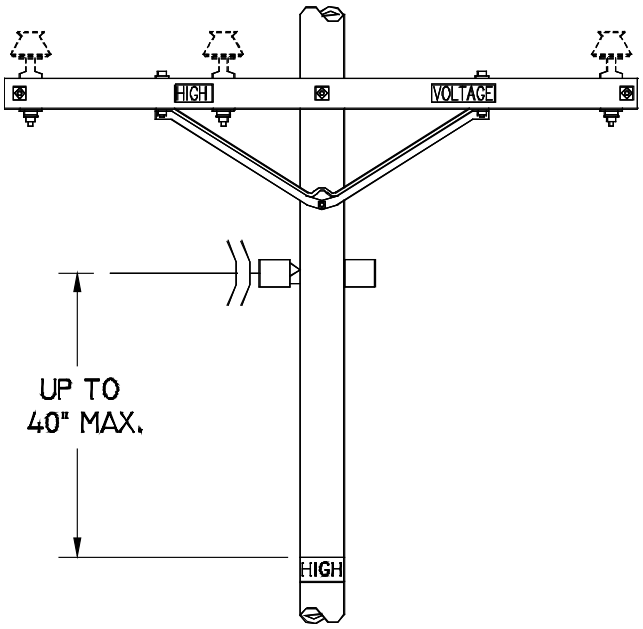
Signs placed on the pole need to encircle the pole so that the yellow warning color is visible from all directions.



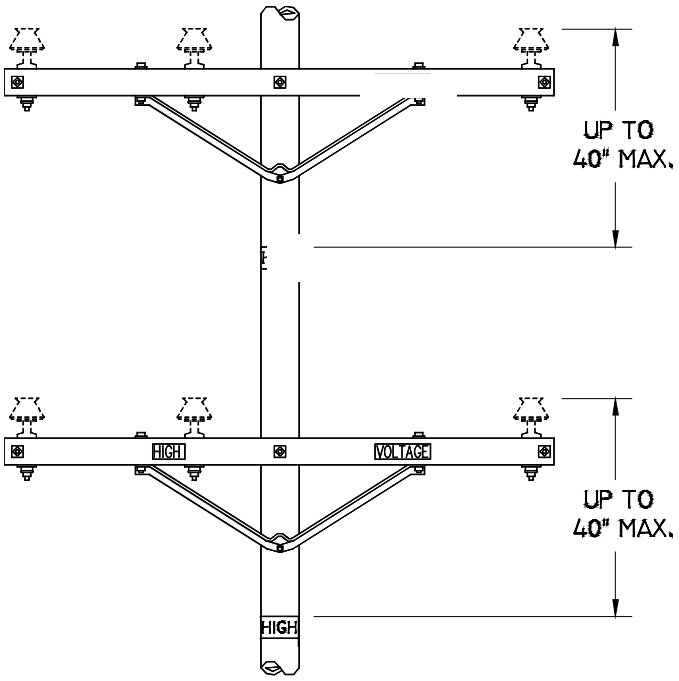


Signs may be placed on linearms or on the pole. It is not required to have signs in both locations.





Signs may be placed on linearms or on the pole. It is not required to have signs in both locations

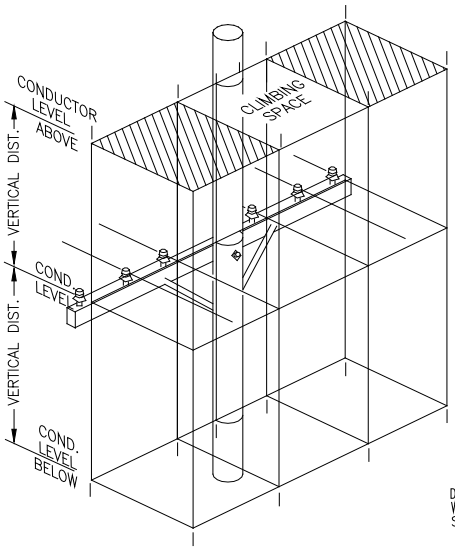


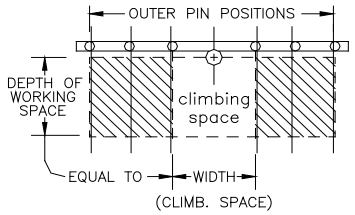
2. WORKING AND CLIMBING SPACE

DIMENSIONS OF WORKING SPACE

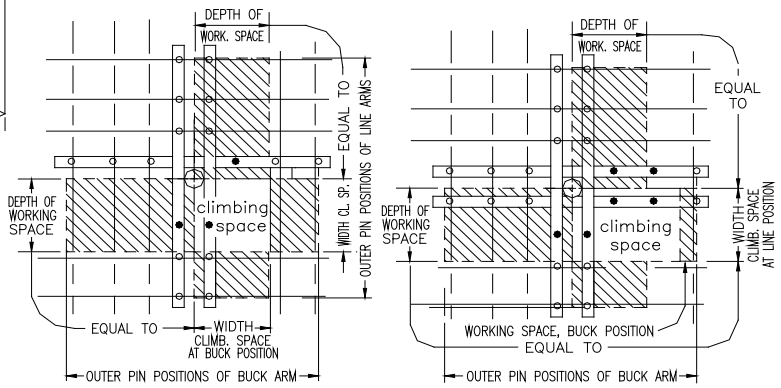
THE VERTICAL DIMENSIONS OF WORKING SPACE ABOVE AND BELOW ANY CONDUCTOR LEVEL SHALL BE EQUAL TO THE VERTICAL DISTANCES BETWEEN CONDUCTORS SHOWN ON PAGES 221 AND 224 FOR VOLTAGES INVOLVED. THE WIDTH OF THE WORKING SPACE WHERE CROSSARMS ARE INVOLVED SHALL BE THE DISTANCE BETWEEN OUTSIDE PIN POSITIONS.

THE DEPTH OF THE WORKING SPACE WHERE CROSSARMS ARE INVOLVED SHALL BE EQUAL TO THE WIDTH OF THE CLIMBING SPACE AND SHALL BE MEASURED HORIZONTALLY FROM THE CENTERLINE OF THE POLE.





WORKING SPACE AS RELATED TO POLE POSITION CLIMBING SPACE



LEGEND
WORKING SPACE

WORKING SPACE AS RELATED TO QUADRANT POSITION CLIMBING SPACE

ALLOWABLE CLIMBING SPACE OBSTRUCTIONS FOR CROSSARM CONSTRUCTION (G.O. 95 RULE 54.7-A3)

1) CROSSARMS AND BRACES
2) 2 GUYS PERMITTED IN ANY ONE 4 FT. VERTICAL SECTION OF CLIMBING SPACE.
3) SUITABLE PROTECTED VERTICAL CONDUCTORS SUCH AS RISERS, RUNS AND GROUND WIRE, WHICH ARE ATTACHED TO THE SURFACE OF THE POLE, PROVIDED THAT NOT MORE THAN TWO GUYS AND ONE VERTICAL RISER, RUN OR GROUND WIRE IS PERMITTED IN ANY ONE 4 FT. VERTICAL SECTION OF CLIMBING SPACE (SEE NOTE (A)).
4) ONE HALF DIAMETER OF INSULATORS AND THEIR ATTACHING BRACKETS SUPPORTING LINE CONDUCTORS.
5) ONE HALF DIAMETER OF STREET LIGHT BRACKETS AND ASSOCIATED STREET LIGHT BRACKET STRUTS.
6) ONE HALF DIAMETER OF SWITCH OPERATING RODS.
7) BANDS, LIMITED TO 6 INCHES IN WIDTH WITH NO MORE THAN ONE BAND PERMITTED IN ANY ONE 24 INCH VERTICAL SECTION OF CLIMBING SPACE.

ALLOWABLE CLIMBING SPACE OBSTRUCTIONS (G.O. 95 RULE 54.7-B2)

1) TAPS FROM CONDUCTORS ON LINE ARMS TO CONDUCTORS ON RELATED BUCK ARMS.
2) 0–750 VOLT SERVICE DROPS FROM LINE ARMS.
3) CUTOUTS AND THEIR LEADS.
4) LIGHTNING ARRESTERS AND THEIR LEADS.
5) SWITCHES AND THEIR LEADS.
6) TRANSFORMERS AND CAPACITOR LEAD WIRES.
7) TERMINAL FITTINGS OF RISERS AND RUNS AND THEIR TAPS MAY EXTEND INTO WORKING SPACE PROVIDED THESE FITTINGS ARE THE ONLY OBSTRUCTION OF THE WORKING SPACE AT THEIR LEVEL ON THE SAME SIDE OF THE CLIMBING SPACE.
8) STREET LIGHTS AND THEIR ASSOCIATED HARDWARE.

NOTES:

(A) TERMINALS OR TERMINAL FITTINGS OF RISERS OR RUNS, PVC, AND GUYS CONTACTING METAL PINS ARE NOT PERMITTED WITHIN THE CLIMBING SPACE. G.O. 95 RULE 54.7 A3.

B. CLIMBING SPACE SHALL BE MAINTAINED IN THE SAME POSITION FOR A DISTANCE OF 4FT. VERTICAL BOTH ABOVE AND BELOW EACH CONDUCTOR LEVEL THROUGH WHICH IT PASSES AND MAY BE SHIFTED NOT MORE THAN 1/4 OF THE DISTANCE AROUND THE POLE WHERE THE VERTICAL DISTANCE BETWEEN CONDUCTOR LEVELS IS 4 FT. OR MORE AND LESS THAN 8 FT. CLIMBING SPACE SHALL EXTEND UP TO A SINGLE LEVEL OF POLE–TOP CIRCUITRY, BUT NOT THROUGH AND ABOVE SUCH LEVEL.

	Indicates Latest Revision	Completely Revised	New Page	Information Removed

REVISION DATE 1–1–98 APPD PEA / DMK	SDG&E ELECTRIC STANDARDS WORKING AND CLIMBING SPACE	251

3. CLIMBING SP[ACE FOR HORIZONTAL INSULATOR CONSTRUCTION

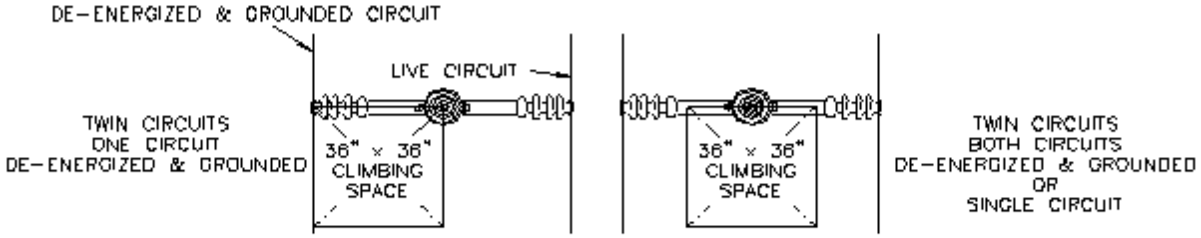
SCOPE: THIS STANDARD SHOWS AND EXPLAINS CLIMBING SPACE FOR HORIZONTAL INSULATOR CONSTRUCTION.

BONDED CIRCUITS – ANYWHERE ON POLE.

WORKMAN SHALL NOT GO ABOVE LOWEST CONDUCTOR LEVEL UNLESS:

1. CONDUCTORS ARE MOVED OUT FROM POLE BY ACCEPTED "HOTLINE" TECHNIQUES OR.
2. ONE OR BOTH CIRCUITS ARE DE-ENERGIZED AND BOND WIRES AND DE-ENERGIZED CIRCUIT ARE GROUNDED AND CLIMBING SPACE PROVIDED AS SHOWN BELOW.

CLIMBING SPACE IS TO EXTEND FROM 4' BELOW LOWEST CONDUCTOR TO 4" ABOVE TOP CONDUCTOR IF NOT AT TOP OF POLE

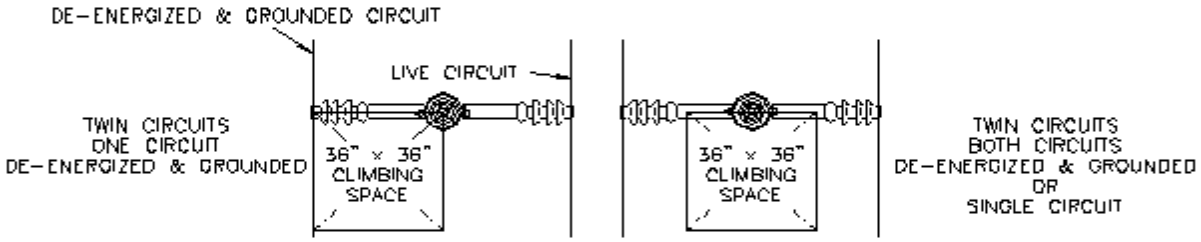


UNBONDED CIRCUITS – AT TOP OF POLE.

WORKMAN SHALL NOT GO ABOVE LOWEST CONDUCTOR OF CIRCUIT SUPPORTED AT TOP OF POLE UNLESS:

1. CONDUCTORS ARE MOVED OUT FROM POLE BY ACCEPTED "HOTLINE" TECHNIQUES OR.
2. ONE OR BOTH CIRCUITS ARE DE-ENERGIZED AND GROUNDED AND CLIMBING SPACE PROVIDED AS SHOWN BELOW.

CLIMBING SPACE IS TO EXTEND FROM 4' BELOW LOWEST CONDUCTOR TO CONDUCTOR AT TOP OF POLE.



UNBONDED CIRCUITS – BELOW POLE TOP

FOR 750–46,000 VOLTS EXCEPT FOR DEAD-ENDS

CLIMBING SPACE IS TO EXTEND FROM 4' BELOW THE LOWEST CONDUCTOR TO 4' ABOVE THE TOP CONDUCTOR AND SHALL HAVE DIMENSIONS AS SHOWN BELOW.

DIMENSIONS "A"
750 – 46,000 VOLTS – 36"
46,000 – 75,000 VOLTS – 48"
MORE THAN 75,000 VOLTS – 48"
PLUS 1/2" PER KV IN
EXCESS OF 75 KV

INSTALLATION:

A. WHERE TWO POST INSULATORS OR INSULATOR BRACKETS ARE ATTACHED TO POLE WITH A COMMON BOLT OR BOLTS, THESE INSULATORS ARE CONSIDERED TO BE BONDED.

REFERENCE:

B. SEE G.O. 95 RULE 54 11 F.1-4 FOR CLIMBING SPACE REQUIREMENTS

	Indicates Latest Revision	Completely Revised	New Page	Information Removed
252	SDG&E ELECTRIC STANDARDS CLIMBING SPACE FOR HORIZONTAL INSULATOR CONSTRUCTION			REVISION DATE 1-1-91 APPD PLA 1/1/09

4. OVERHEAD CLEARANCE AND CLIMBING SPACE REQUIREMENTS

Table - Summary of clearance requirements

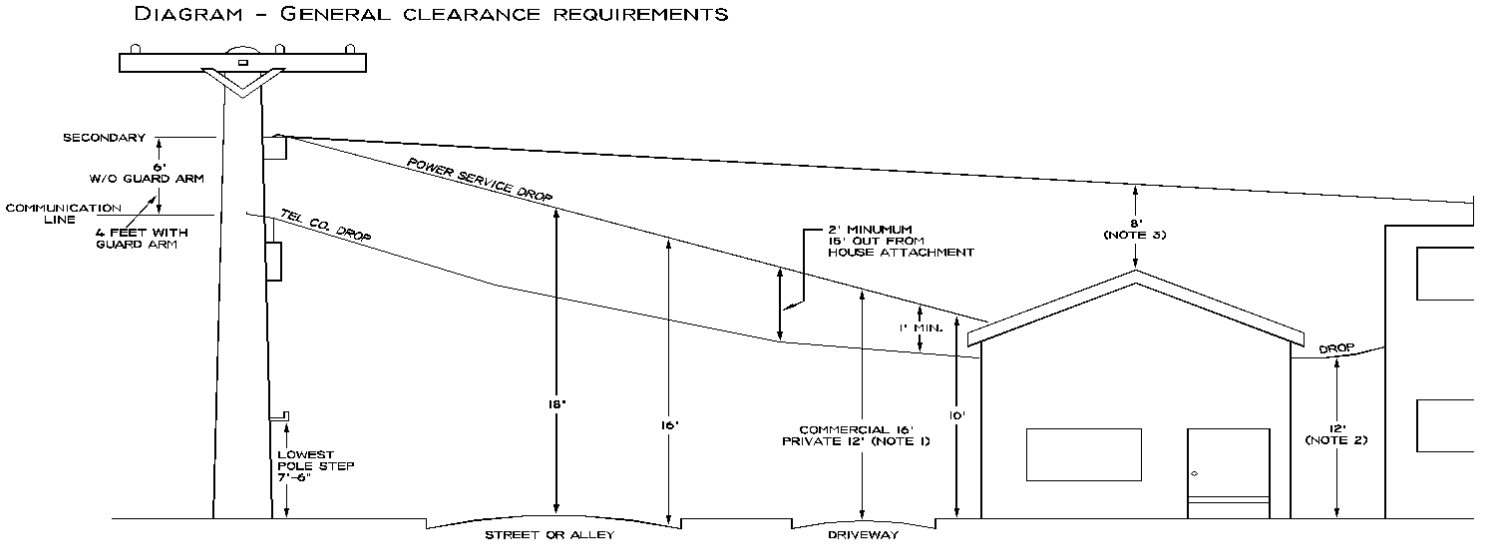
VERTICAL CLEARANCES ABOVE GROUND, TRAILS, ROOF, ETC.		
WHERE WIRES OR CABLES CROSS OVER	MINIMUM VERTICAL CLEARANCE	
	TEL WIRES OR CABLES AND DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS
(1) Highways, streets, roads or alleys in urban or rural areas	18 ft.	18 ft.
(1) Steam railways	25 ft.	25 ft.
(1) Driveways in urban or rural areas:		
(a) Commercial or agricultural premises	18 ft.	16 ft.
(a) Residential premises	18 ft.	12 ft.
(1) Private vehicular entrance to fields, orchards, etc., in rural districts	15 ft.	15 ft.
(1) Areas not under cultivation and over which there is no likelihood of vehicular or agriculture traffic, includes areas accessible to horseback riders.	13 ft.	13 ft.
(1) Areas accessible to pedestrians only:		
(a) Industrial and commercial only	10 ft.	12 ft.
(a) All other areas	10 ft.	10 ft.
(1) Roofs of all buildings on premises served:		
(a) Roofs having pitch less than 3/8	8 ft.	3 in.
(a) Roofs having pitch of 3/8 or greater	2 ft.	3 in.
(a) Where conductors do not overhang buildings by more than 6 feet, roofs of any pitch	2 ft.	3 in.
(1) Roofs of buildings on premises other than premises served:		
(a) Roofs having pitch less than 3/8	8 ft.	8 ft.
(a) Roofs having pitch of 3/8 or greater	2 ft.	2 ft.
(a) Where conductors do not overhang buildings by more than 6 feet, roofs of any pitch		2 ft.
(1) Where wires or cables run along highways, streets or alleys:		
(a) In urban districts generally	18 ft.	
(a) In rural districts generally	15 ft.	
(a) In rural districts only where no part of the line overhangs the part of the thoroughfare ordinarily traveled and where it is unlikely that vehicles will cross under the line	13 ft.	
(a) Where the ground underneath is accessible to pedestrians only	10 ft.	

MINIMUM CLEARANCES IN FEET AT CROSSINGS OF WIRES AND CABLES CARRIED ON DIFFERENT SUPPORTS OR MIDSPAN ON SAME SUPPORTS		
TYPE OF CROSSING WIRES AND CABLES	TELEPHONE OPEN WIRES, CABLES, MESSENGER, DROPS AND GUYS	
	CROSSING UNDER	CROSSING OVER
(1) Open supply wires 0-750 volts and supply cables having effectively grounded sheath or messenger - all voltages:		
(a) Line wires	4	4
(a) Service wires	4	2
(1) Open supply line or service wires:		
(a) 750-7500 volts	4	Not GTC practices
(a) 7500-22500 volts	6	Not GTC practices
(a) Over 22500 volts	8	Not GTC practices
(1) * Foreign guys, span wires, lightning protection wires	2	2
(1) Foreign communication wires, cable & fire alarm wires	2	
(1) Trolley contact conductors		
(a) 750 volts or less		4

* Clearances from foreign communications, wires & cables which do not meet telephone company protection standards shall be the same as for supply wires or cables.

MINIMUM HORIZONTAL CLEARANCE OF POLES FROM OTHER OBJECTS	
Fire hydrants	4 ft.
Curbs	6 in. from surface of pole to field side of curb
Railroad tracks	12 ft. measured to nearest rail.

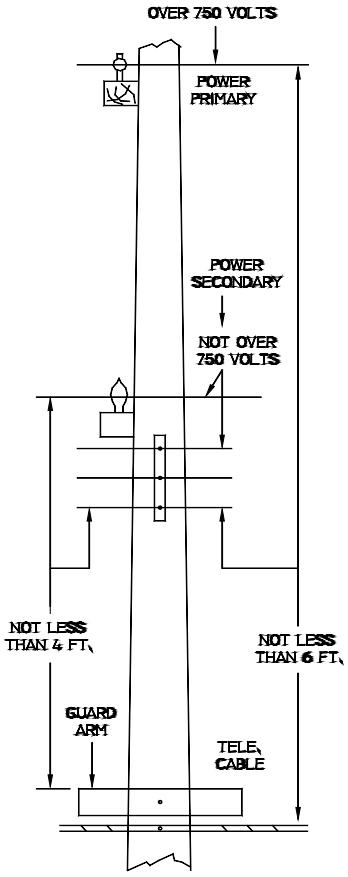
DIAGRAM - GENERAL CLEARANCE REQUIREMENTS

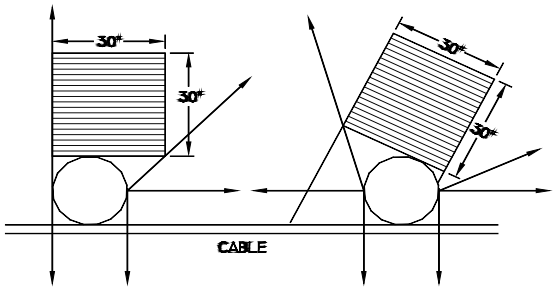


NOTES: 1 MAY BE REDUCED TO 10' FOR SSC SERVICES.
2 MAY BE REDUCED TO 8'-6" FOR SSC SERVICES (PEDESTRIAN ACCESS ONLY).
3 MAY BE REDUCED TO 2' FOR SSC SERVICES (BOTH BUILDINGS ON THE SAME PROPERTY, NO REDUCTION FOR BUILDINGS ON DIFFERENT PROPERTY).

IF REPORTING A CODE 262 (LOW RESIDENTIAL SERVICE) AND THE WEATHERHEAD (HOUSEKNOB) IS DAMAGED, NOTE THE DAMAGED WEATHERHEAD IN THE COMMENTS AREA OF DIMS/MDT.

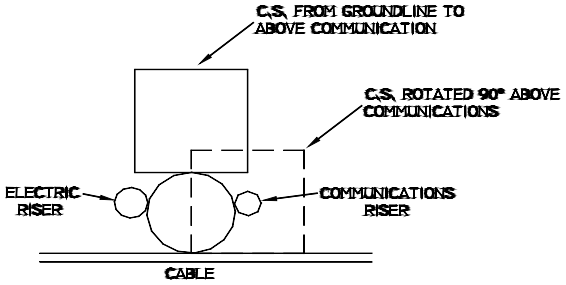
DIAGRAM - GENERAL CLIMBING SPACE REQUIREMENTS





CLIMBING SPACE

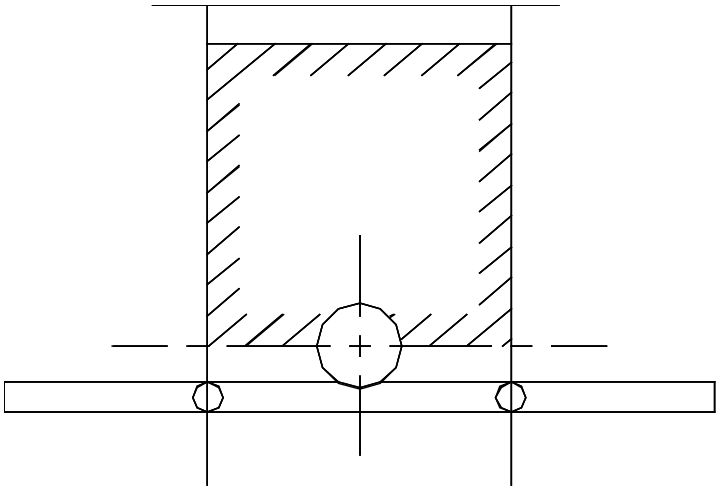
PLACE DROPS IN THE SAME QUADRANT AS POWER SERVICE DROP FOR THE SAME SERVICE LOCATION.



ADDITIONAL CLIMBING SPACE DIMENSIONS

Dimensions where line arms only are involved

Voltage of Conductors	Dimensions of square
0 - 7,500 Volts	30 inches
7,500 - 46,000 Volts	36 inches
More than 46,000 Volts	36 inches plus 1/2 inch per kV in excess of 46 kV



Climbing space, line arms only.

Dimensions where buck arms are involved

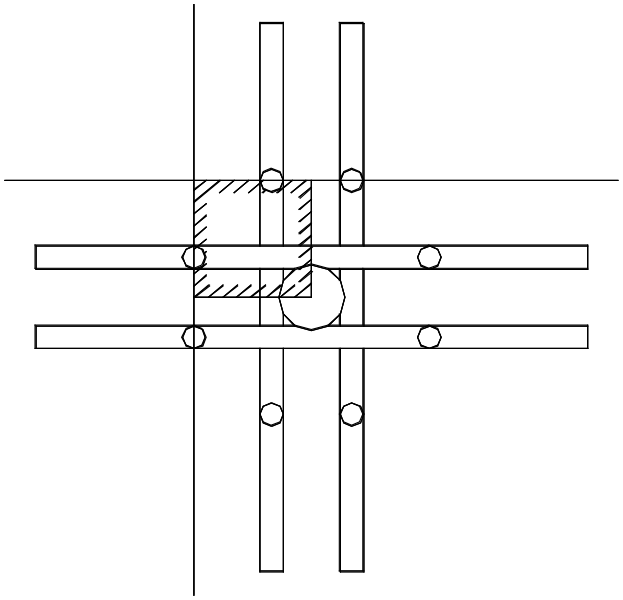
Dimensions where buck arms are involved: The climbing space where line arms and related buck arms are involved on poles or structures shall be on one side or face of the pole, or in a quadrant as defined below:

(a) Where the vertical clearance between conductors on line and buck arms is four feet or more: The climbing space shall be provided on one side or face of the pole for each arm, as for line arms only.

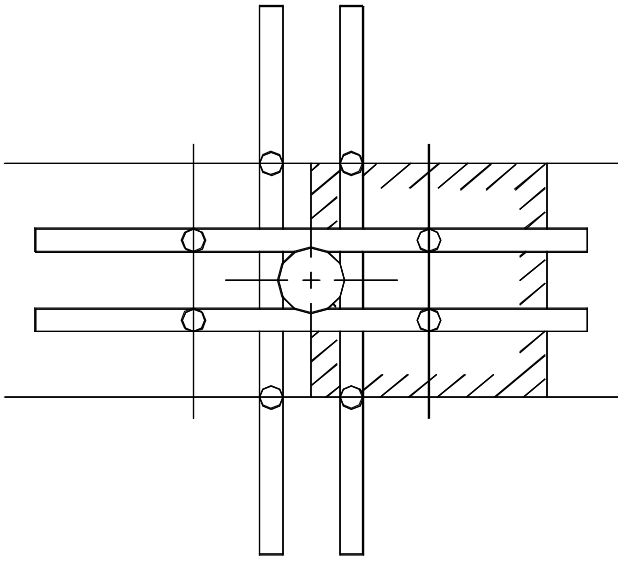
(b) Where the vertical clearance between conductors on line and buck arms is less than four feet: The climbing space shall be provided through such levels and located in a quadrant and shall have at least the following dimensions (see figure at left, below):

Voltage of Conductors	Dimensions of square
0 - 7,500 Volts	30 inches
7,500 - 35,000 Volts	42 inches

For circuitry located at pole top, the climbing space specified for line arms only may be applied to the lower arms and up to, but not through, the conductors on the top arm (see figure at right, below).



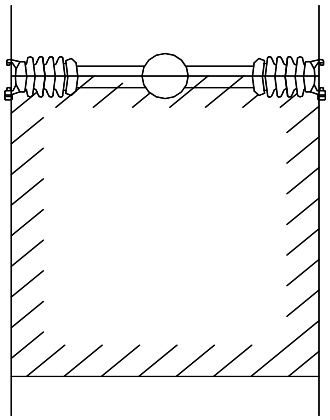
Pole top or below pole top



(Optional) At pole top

Where insulators are in vertical or horizontal position (vertical or triangular configuration) more than 750 Volts

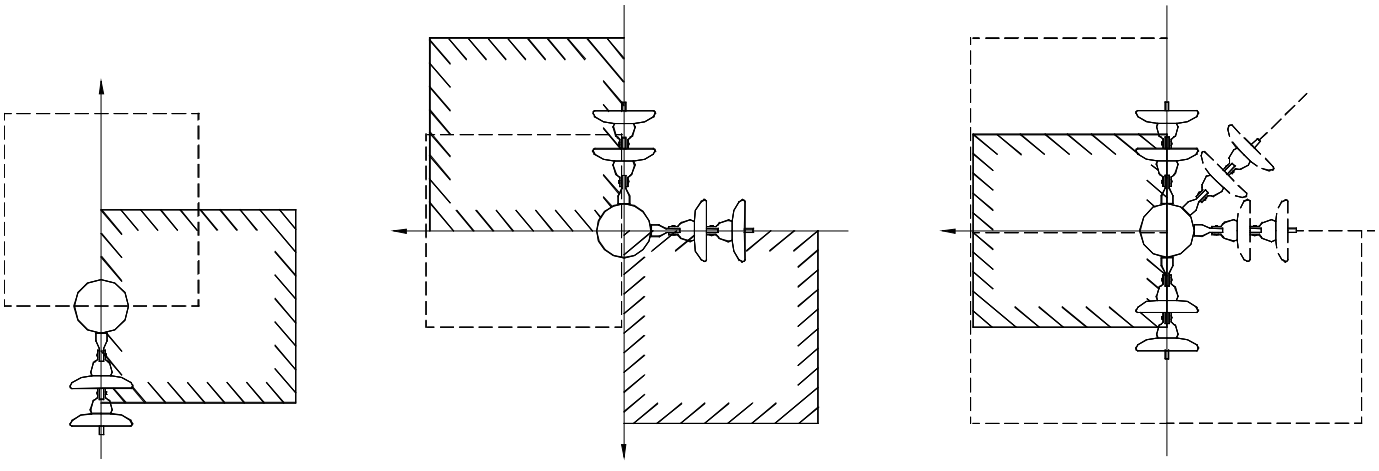
Voltage of Conductors	Dimensions of square
750 - 46,000 Volts	36 inches
46,000 - 75,000 Volts	48 inches
More than 75,000 Volts	48 inches plus 1/2 inch per kV in excess of 75 kV



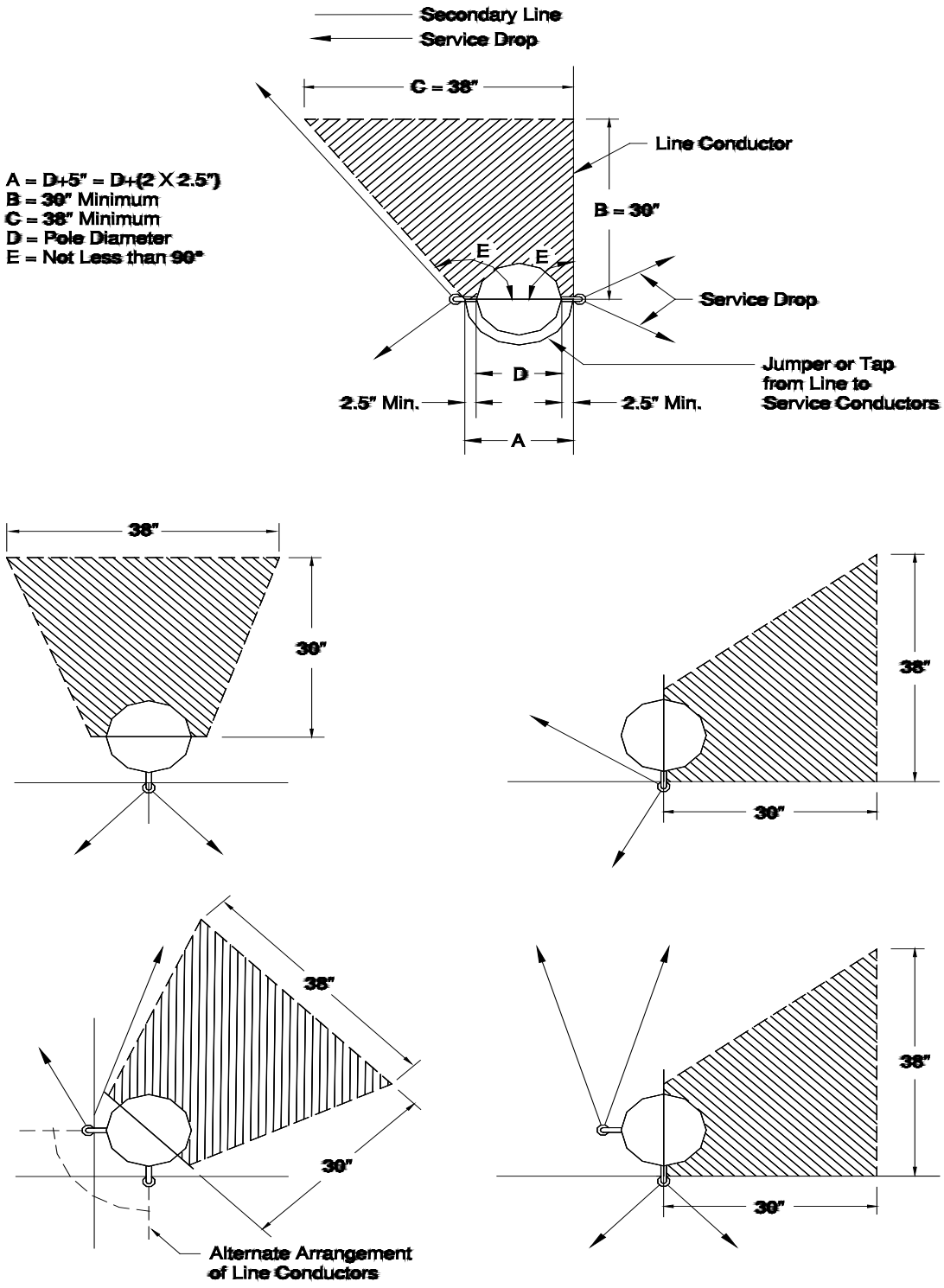
Where conductors are deadended in vertical configuration

Climbing space through conductors shall be a square:

Voltage of Conductors	Dimensions of square
750 - 7,500 Volts	30 inches
7,500 - 46,000 Volts	36 inches
More than 46,000 Volts	36 inches plus 1/2 inch per kV in excess of 46 kV



Climbing space low voltage racks 0-750 Volts


Secondary Line
Service Drop
C = 38"
Line Conductor
A = D+5" = D+(2 X 2.5")
B = 30" Minimum
C = 38" Minimum
D = Pole Diameter
E = Not Less than 90°
B = 30"
E
E
Service Drop
Jumper or Tap from Line to Service Conductors
D
2.5" Min.
2.5" Min.
A
38"
30"
38"
30"
38"
30"
Alternate Arrangement of Line Conductors
38"
30"

Allowable climbing space obstructions

Allowable climbing space obstructions in triangular and vertical configuration without the use of wood crossarms are:

(1) Crossarms, brackets, and their supporting members.

(2) Insulators which support line conductors, jumpers, and incidental wires may extend one-half of their diameter into the climbing space.

(3) Conductors may extend one-half their diameter into the climbing space.

(4) Suitably protected (covered only by wood):
- Vertical risers; or
- Vertical runs; or
- Ground wires

Such risers, runs and grounds are allowable, provided that not more than one is installed in any 4-foot section of climbing space.

(5) Guys. However, not more than two guys having a vertical separation of 18 inches or less can be installed in any 4-foot section of climbing space.

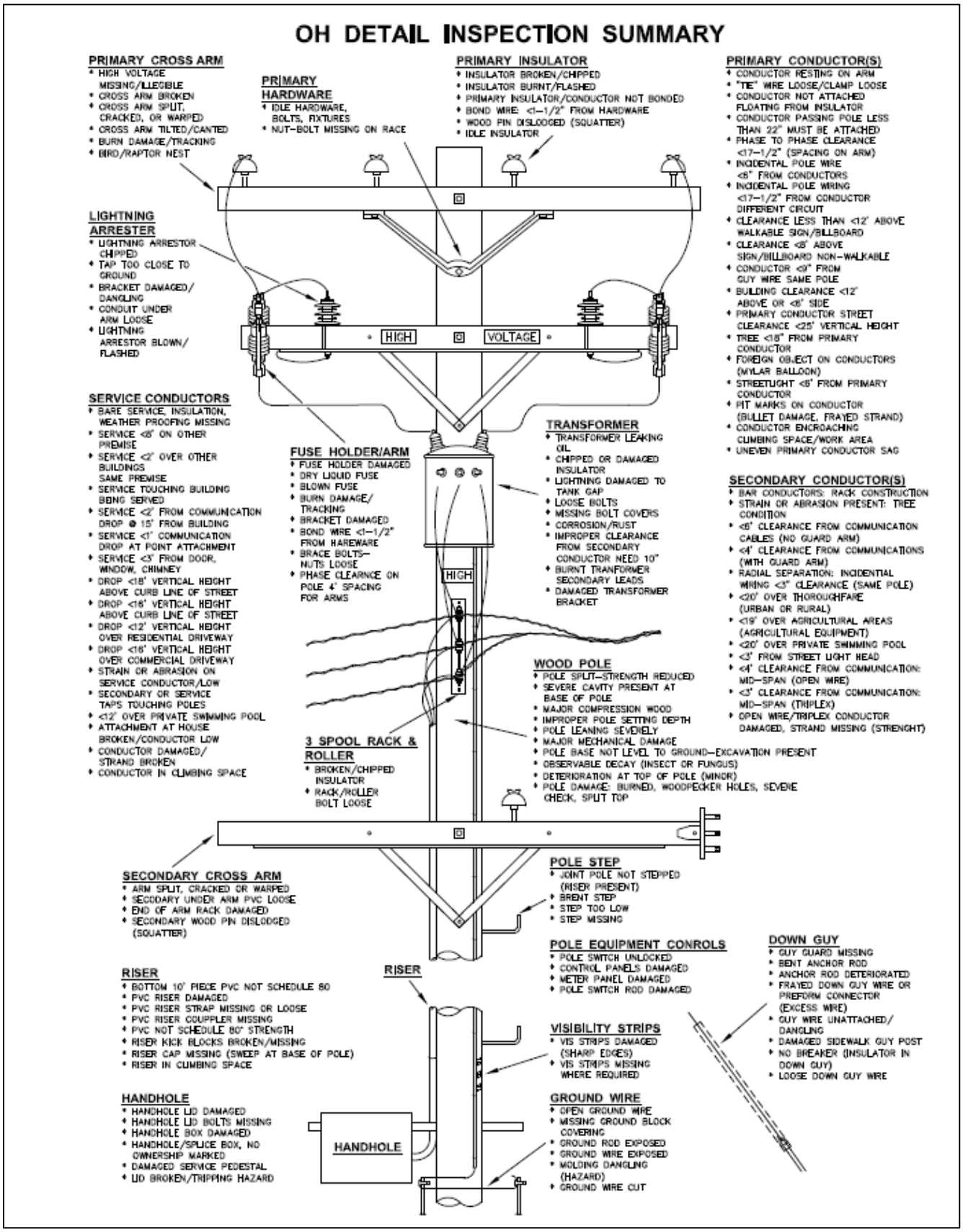
(6) Steet light brackets may extend one-half their diameter into the climbing space. Associated street light bracket struts are allowed in the climbing space.

(7) Operating rods (e.g. switch rods) and their associated hardware may extend one-half their diameter into the climbing space.

(8) Bands, limited to 6 inches in width with no more than one band allowed in any 24-inch section of climbing space (these limitations are excluded for pole stubbing and pole splicing bands when pole steps are installed).

(9) Bolts and their washers. If bolts are bonded, a secure Elecal contact shall be made. The covering of bolts and bond wire is not required in triangular and vertical configuration without the use of wood crossar

5. OVERHEAD DETAIL INSPECTION SUMMARY



IV. UNDERGROUND CONDITIONS

A. UNDERGROUND CONDITION CODES

1. UNDERGROUND CONDITION CODE DETAIL

The following tables are divided into three sections:

Infraction Conditions
These are conditions, which must be corrected within 12 months (internal goal of 10 months), unless approved for deferral per ESP610, and are conditions governed by General Order (GO) 128 or SDG&E Underground Construction Standards.

Based on field conditions, certain infractions may require immediate attention and/or completion prior to the 12-month timeframe. For critical conditions, notify Trouble Department and Supervisor, and standby on-site as appropriate.

Nonconformance and Safety Hazard Definitions relating to Communication Infrastructure Providers (CIP):

- Nonconformance – a condition in which any characteristics does not conform to GO 128 requirements or specifications.

- Safety Hazard – category of nonconformance that poses a significant threat to human life or property.

  If in the opinion of the inspector, any of the following CIP safety hazards present an immediate safety and/or reliability risk with high probability for significant impact, it is appropriate to take immediate action to fully repair the condition or make temporary repairs to make the condition safe to lower the priority. If such actions are necessary, the inspector should report the condition to the District immediately.

  Any CIP nonconformance can be raised to the level of "Safety Hazard", if in the opinion of the inspector, the condition constitutes a significant threat to human life or property.

Reliability Conditions
These conditions do not fall within the General Order but can affect system reliability and may be repaired based on engineering evaluation or experience.

Discretionary Conditions
These conditions, which are neither governed by the General Order nor have been determined to have a significant impact on system reliability, may be corrected at the discretion of the district.

The matrices on the following pages are divided by Infractions, Reliability, and Discretionary codes. Please refer to Section 2. UNDERGROUND CONDITION CODE TEMPLATE for all underground condition codes combined into a single matrix. This combined matrix is utilized by the CMP inspectors in the field and typically referred to as the CMP Underground “Cheat Sheet”.

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
1	ID/Circuit/Switch # Missing or Incorrect	SDG&E Electric Standards requires all major distribution equipment and structures to be properly identified and numbered and GO128 Rule 17.8 requires identification of ownership. Use this code if ID/circuit/switch #'s are missing or incorrect or if SDGE identification is missing.	Fix on-site if missing	Follow-up fix if incorrect	ESP602 UG3103 UG3211 UG3212
5	High Voltage Sign Missing/ Damaged	GO 128 Rule 35.3 requires warning signs indicating high voltage shall be installed on the interior, or barrier if present, inside the entrance of vaults, manholes, handholes, pad-mounted transformer compartments, and other above ground enclosures containing exposed live parts above 750 volts. Such warning signs shall also be installed on the exterior surface of all such pad-mounted transformer compartments and other above ground enclosures. SDG&E standards require warning sides on the inside and outside of all equipment for voltage above 750V. High voltage sign is not needed for any SS10 cycle.	Fix on-site if missing.		ESP602 UG3221
8	Cable/Cable Pole Not Tagged/Illegal/ Incorrect	GO 128 Rule 35.1 requires cables operating at a voltage in excess of 750 Volts be permanently and clearly identified by tags or other suitable means to indicate their operating voltage and the circuit with which they are normally associated at each manhole or other commonly accessible location of the underground system. Applies ONLY to multiple circuits.		Follow-up fix by crew	ESP602 UG3202
12	Temp Rise (as referenced in ESP120)	Using the infrared thermometer or infrared camera, measure the temperature rise difference between the cable and connectors in accordance with ESP120. Note the temp. differential, load reads, and if the connector is primary (pri) or secondary (sec) in MDT comments.	Notify Electric Supervisor of temperature differentials that require immediate action.	Follow-up fix by crew. Notify Electric Supervisor.	ESP602 ESP120
14	Door/Cover/ Enclosure/ Cabinet is Warped, Bent, or Damaged	Use this code when door, cover, enclosure, or cabinet is warped, bent, or damaged. Use this code for pad mount equipment only	Make safe; prevent GO 128 wire entry	Follow-up fix by crew. Change out or re-bend	ESP602 UG3408 GO128 Rule 17.1
16	External Corrosion Replace (Severe)	There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit must be replaced if repairs are unlikely to last for five years. If any corrosion results in any wire entry or hole in the unit, code as 55 and immediately perform a temporary fix for the wire entry and schedule the unit to be replaced. Do not leave site in an unsafe condition.	The equipment must be replaced if the time to repair the unit exceeds the following criteria: 2 Man-hours for all single-phase equipment, 4 Man-hours for three-phase transformers 300kVA and below, 8 Man-hours for three-phase transformer 500kVA and above, 4 Man-hours for all other three-phase equipment	Follow-up fix by crew. The unit cannot be physically repaired based on the criteria in ESP602.	ESP606 UG3408 UG3553 GO 128 Rule 17.1

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
19	SDG&E/ Vegetation Caused Cannot Open, Locate or Inspect – Inaccessible	GO 128 Rule 17.2 requires all supply systems be inspected for the purpose of ensuring that they are in good condition and in conformance with all applicable requirements. Use if the unit cannot be opened, located, or inspected and caused by SDG&E or Vegetation. For trees, record in MDT and send IO to Veg Mgmt. Leave code open until the cause is corrected and the facility is inspected. If caused private property use code 291, for CIP use code 491.	Fix on-site if object causing this condition is removable. For tree/veg ensure accurate address, leave door hanger, obtain signed removal card (if applicable), quantity of trees, use abbreviation key.	Record in MDT. Code 19 will remain pending until inspected.	ESP602
20	Penta Bolts/Latch/ Lock Missing - Unit Unsecured	GO 128 Rule 34.3A requires equipment case or enclosure to be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	Install bolt/tie-down/lock to prevent GO 128 nonconformances; Secure to prevent entry	Follow-up fix by crew. Install latch	ESP602 UG3501
21	Elbows, Caps or Racks Damaged/ Missing	Use this code when elbows and racks are damaged and/or caps are missing or damaged.		Follow-up fix by crew	
24	Hinge Broken	GO 128 Rule 34.3A requires equipment case or enclosure to be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	Secure to prevent entry	Follow-up fix by crew. Weld hinge or change out cabinet	ESP602
26	Ground Rods or Studs Missing	GO 128 Rule 36.5-C (2) allows conductors and equipment to be effectively grounded by connections at one or more locations to driven ground rods or other suitable grounding electrodes.		Follow-up fix by crew, if missing or corroded out then install new rod	ESP602 UG4501
29	Hold Downs Broken, Corroded or Missing	GO 128 Rule 34.3A requires equipment case or enclosure to be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons.	Install missing or bad hardware. Install two tie-downs where practical however one tie-down is acceptable	Follow-up fix by crew. Drill/install new tie-downs	ESP602
30	External Corrosion Repairable (Severe)	There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit should be repaired if the life of the unit can reasonably be extended 5 years.	The equipment must be replaced if the time to repair the unit exceeds the following criteria: 2 Man-hours for all single-phase equipment, 4 Man-hours for three-phase transformers 300kVA and below, 8 Man-hours for three-phase transformers 500kVA and above, 4 Man-hours for all other three-phase equipment	Follow-up fix by crew. The unit cannot be physically repaired based on the criteria in ESP602.	GO 128 Rule 17.1 ESP602
35	Internal Corrosion Repairable (Severe) (2-man)	Repairable internal severe corrosion not visible from the outside of the equipment There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment wall thickness on more than 25% of the surface area of any 2 or more panels. should be coded as The unit should be repaired if the life of the unit can reasonably be extended 5 years.			

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
38	Internal Corrosion Replace (Severe)	There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit must be replaced if repairs are unlikely to last for five years. Internal severe corrosion not visible from the outside of the equipment that cannot be repaired should also use this code.	Same criteria as code 30 and 35	Follow-up fix by crew. The unit cannot be physically repaired based on the criteria in ESP602.	GO 128 Rule 17.1 ESP602
48	Substructure Lid Damage	This code addresses substructure lids or top sections that are damaged or corroded. Includes lids that have a gap, are uneven, or bent that could pose a trip or slip hazard. For additional structural damage to the top section use code 148, or use codes 60, 61, or 62 for civil repairs.	Notify Electric Supervisor for critical conditions and stand by until Supervisor is on site.	Follow-up fix by crew. F/U ASAP for public safety concerns.	GO 128 Rule 17.1,17.2
49	Traffic Lid Gasket Deteriorated or Missing	This code addresses substructure lids that have a gasket which has deteriorated or is missing, causing the lid to have a gap or become uneven, posing a potential safety hazard.		Follow-up fix by crew ASAP	GO 128 Rule 17.1,17.2
50	Improper Grounding	GO 128 Rule 36 requires conductors used for grounding connections to be made of copper or other corrosion resistant material or be suitably protected against corrosion; to have sufficient conductivity to carry the fault currents and in no case less than the conductivity equivalent of #6 AWG Copper; and to be attached by means of suitable lugs, pressure connectors, clamps, welds or other suitable means.		Follow-up crew repair or replace	ESP602 UG4501
51	Vent Fan/Vault Blower Damaged/Not Running	GO 128 Rule 17.1 requires that all equipment and materials that are part of the supply system be maintained in a condition which will provide adequate service and secure safety to workmen, property, and the general public. If vent fan/vault blower exists, it must be maintained. If missing and there is not adequate ventilation, then one must be installed.		Follow-up crew repair or replace if owned by SDG&E. If privately owned, District to work with customer on resolution prior to sending notification to Land Services	ESP602 ESP611
55	Possible Wire Entry to Energized and Exposed Parts	May be associated with corrosion codes. Field clear code 55 if permanent repairs made on-site. Leave pending if temporary repair was made. Never leave unsafe. Use to identify any gap between the pad & equipment for #18AWG size entry or larger (associated to the pad) and fix on-site. Use to identify localized through-wall corrosion (associate to the equipment).	Caulk entry holes between pad & cabinet; use epoxy to patch holes. Caulk single-phase transformers all the way around the pad	Follow-up fix by crew. Change out equipment or weld/rivet metal patch.	UG3408 GO 128 Rule 17.1

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
56	Ground Wire Requires Covering	GO 128 Rule 36.5-C (1) allows for bare neutral conductors, metallic cable sheaths and shields, metal pipes and metal conduits to be grounded by burying them directly in the earth. Bare ground wire in the earth must be covered with dirt.	Cover with dirt	Re-concrete by street repair	UG4501
58	Infraction, No Applicable Code Available	Use this code to identify infraction conditions that do not have an existing code, but need repairs. Provide comments in MDT.	Leave equipment in a safe condition. Notify supervisor if immediate repairs are needed.	Follow-up by crew	
59	Internal High Voltage Barrier Board Missing or Damaged	GO 128 Rule 35.2 and 21.6 states that live parts shall be isolated, guarded or insulated to prevent accidental contact by means of a suitable cover or barrier.	Fix on-site if barriers are available.	Contact Kearny to make replacement barriers	
60	Extremely Severe Structural Deterioration	Substructure has several locations where at least half of the diameter of an exposed piece of rebar is visible; delamination/ detachment of concrete and /or rebar visible on at least two walls and in ceiling; wall failed or near failure; large pieces of concrete missing from neck rings. Use Code 148 for top section damage.	When Inspector deems unsafe tag DEE and notify switching center	Notify & provide photos to Civil/ Struct. Eng; note if traffic control and /or pumping are necessary.	
63	Oil Leak From Bushing/Case/ Duct/Cable	Use this code where there is oil leaking from bushings/case/duct/cable. Reference ESP122 on follow-up repair requirements.	Equipment leak must be stopped prior to transport or oil removed from the equipment. Change out ASAP if required as per ESP122.	Follow-up fix by crew replace leaking unit.	ESP122
93	Switch Legs or Hold Downs Corroded	GO128 Rule 34.3A requires equipment case or enclosure to be secured in place and be of sufficient strength to resist entrance or damage to the equipment by unauthorized persons. Corroded switch legs and hold down bolts should be repaired or replaced.	Scrape and paint legs with galvanized paint, replace corroded hold down bolts.	Follow-up fix by crew. Change out legs	ESP602
95	SDG&E Working Space Obstruction	GO128 Rule 33.6A requires working space to be available at all times for the safe operation, maintenance, and replacement of equipment. Refer to UG Standards in reference column for working space requirements. Typical 8’ clearance from doors and minimum 18” - 52” on the sides and back depending on the type of UG equipment. If caused by vegetation, use code 330. If caused private property use code 290; for CIP use code 490.		Turn in follow-up to Electric Supv. Electric Supervisor may clear if equipment can be worked safely. Pictures required	ESP602 UG3240 UG3481 UG3483 UG3486

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
148	Top Section Damage	This code addresses substructure top sections that are damaged. Includes handholes, SDG&E Vaults, and manholes. For additional structural damage, use codes 60, 61, or 62 as applicable.	Notify Electric Supervisor for critical conditions and stand by until Supervisor is on site.	Follow-up fix by crew. Pictures required	GO 128 Rule 17.1,17.2
238	Abandoned Facilities	GO128 17.1 requires all structures to be maintained. Follow SPM 200, Pictures required		Turn in to Electric Supv to determine if structure(s) should be removed or if there is a future use. If there is a future use and structure is kept, it needs to be maintained.	GO95 Rule 31.6
263	Private Property Hazardous Conditions	Use this code for any hazardous conditions caused by private property or non-foreign utility that are in proximity of electric facilities and are not covered by other codes.	Notify Electric Supervisor and Claims immediately for critical conditions and standby until Supv is on site. Describe condition and note private party name, if known, in comments and take picture(s).	District to work with customer on resolution prior to sending notification to Land Services; copy Claims if urgent and note as such.	ESP611
290	Private Property Caused Working Space Obstruction	GO 128 Rule 33.6A requires working space to be available at all times for the safe operation, maintenance, and replacement of equipment. Refer to UG Standards in reference column for working space requirements. Typical 8’ clearance from doors and minimum 18” - 52” on the sides and back depending on the type of UG equipment. Use this code when there is no external workspace due to private property. Use code 95 if SDG&E caused, code 330 for vegetation, code 490 for CIP.	Provide description of condition in the comments. Work space encroachment issues involving primary hand holes should indicate on which side of the hand hole the equipment is at (i.e. cable taps, etc.) to assist with determining in which area the workspace needs to be resolved Take picture(s).	Electric Supv to field and determine if equipment can be worked safely. District to work with customer on resolution and then send notification to Land Services, if working space cannot be resolved.	ESP602 ESP611 UG3486 UG3486.2 UG3486.3
291	Private Property Cannot Open, Locate, or Inspect	GO 128 Rule 17.2 requires all supply systems to be inspected for the purpose of ensuring that they are in good condition and in conformance with all applicable requirements. Use this code if the unit cannot be opened, located, or inspected due to private property. Use code 19 if caused by Vegetation or SDG&E or code 491 for CIP.	Provide description of condition in the comments. Take picture(s).	District to work with customer on resolution prior to sending notification to Land Services.	GO128 Rule 17.2 ESP611

Underground Infraction Conditions

Code	Description	GO 128 Requirements / UG Standards / Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
330	Vegetation Caused Working Space Obstruction	Use this code when trees/vegetation are in the working space. Refer to UG Standards in reference column for working space requirements. Typical 8' clearance from doors and minimum 18" - 52" on the sides and back depending on the type of UG equipment. Unit can be inspected. Record in the MDT. Use code 19 if unable to inspect. For non-vegetation workspace issues: use code 95 for SDG&E caused, code 290 for private property caused, or Code 490 for CIP caused.	For trees/veg, use street address, leave door hanger for affected customers, for vegetation removal obtain signed removal card, qty of trees, use abbrev key. Record in the MDT. Do not send in an IO. Call in emergencies to Veg Mgmt Help Desk –858-654-8608.	Repairs completed by Veg Mgmt.	GO 128 Rule 33.6A UG3486 UG3486.2 UG3486.3
490	CIP Caused Working Space Obstruction	NONCONFORMANCE. GO 128 Rule 33.6A requires working space to be available at all times for the safe operation, maintenance, and replacement of equipment. Refer to UG Standards in reference column for working space requirements. Typical 8' clearance from doors and minimum 18" - 52" on the sides and back depending on the type of UG equipment. Use this code when there is no external workspace due to CIP equipment. Use code 95 if SDG&E caused code 290 for private property, or code 330 for vegetation.	Provide CIP name and description of condition in the comments. Take picture(s). For primary handholes, indicate on which side of the handhole the equipment is at (i.e. cable taps, etc.) to assist with determining in which area the workspace needs to be resolved	Electric Supv may clear if equipment can be worked safely. Notes must be documented. Follow ESP 607; the district will review within 45 business days in SAP.	ESP602 ESP607 UG3486 UG3486.2 UG3486.3
491	CIP Caused Cannot Open, Locate, or Inspect - Inaccessible	NONCONFORMANCE. GO 128 Rule 17.2 requires all supply systems to be inspected for the purpose of ensuring that they are in good condition and in conformance with all applicable requirements. Use this code if the unit cannot be opened, located, or inspected due to CIP equipment. Use code 19 if caused by Vegetation or SDG&E, or code 291 for private property.	Provide CIP name and description of condition in the comments. Take picture(s).	Follow ESP 607; the district will review within 45 business days in SAP.	GO128 Rule 17.2 ESP607

Underground Reliability Conditions

Code	Description	Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
22	Handles on Handholes Damaged/Missing	Use this code when the handhole handles are damaged or missing.	Repair on-site, if possible.	Follow-up for repair crew	
23	External Working Space Sign Missing	SDG&E Standards require workspace around pad-mounted equipment to be defined. Workspace requirement sign shall be posted on pad-mount equipment.	Fix on-site.	Turn in follow-up to Electric Supervisor	UG3240 UG3240.1
31	Internal Working Clearance Not Adequate - DEE	Use this code to identify conditions where the internal work clearances are not adequate. The structure must be tagged DEE (“Do Not Enter Energized”) in order to denote as a reliability condition.	If possible, rearrange/ tie-down cable on-site, no tagging necessary and field clear the infraction. If not, use DEE information tag and notify Switching Center.	Turn in follow-up to Electric Supervisor. Note in the comment field the cause of the infraction and whether or not the handhole can be worked with sticks.	UG3605 to UG3649
34	SCADA Inoperable	Use this code when tagged by Kearny as SCADA inoperable		Turn in to Electric Supervisor to remove or replace switch	ESP603
36	Need Barrier Posts For Vehicular Traffic	All equipment that may be subjected to vehicular traffic or vehicular contact in alleys, parking lots, etc. and need barrier posts.		Turn in follow-up to Electric Supervisor.	ESP602
37	Need Retaining Wall	A retaining wall should be installed if soil could erode and come into contact with the facility.	Remove soil that has eroded on or over structure.	Turn in follow-up to Electric Supervisor to have retaining wall installed.	ESP602
39	Gas Level Low	Record gas pressure for all gas switches. Non-S&C Vista Switches: padmount switches: if pressure < 5 psig, tag switch DOE; Subsurface wet or dry environment: if pressure < 7 psig, tag switch DOE. S&C Vista Switches: padmount or subsurface: if needle is in the yellow or red area, tag switch DOE. For all gas switches **DO NOT ADD GAS; ENSURE THE SWITCH REMAINS TAGGED DOE**	Tag DOE / DEE (reference Code 46) per ESP603 if applicable and notify Switching Center	The O&E Engineer will determine if the switch should be removed or changed out. Follow-up to Electric Supv to replace switch	ESP603
40	Contaminated Dielectric	If lab dielectric test result is < 22kV or water content is > 50 PPM, or if the lab test results > 100 PPM water content, regardless of dielectric kV results, tag switch DOE add Code 40. Condition status will remain pending until problem is corrected. Code 78 can then be updated to Cleared status, Not for field use		Tag switch/ Replace switch	ESP603 UG3501
43	Dielectric Meets Limit	If lab dielectric test result is equal to or greater than 22kV and water content is less than 50 PPM, add a Code 43 to the inspection record of code 78. The Condition Status of both codes should then be changed to cleared, Not for field use.		Untag switch, if applicable.	ESP603
45	Cannot Take Oil Sample	Use this code when the switch oil sample cannot be taken for any reason.		Follow-up to be determined by the Electric Supervisor.	ESP603
46	Do Not Enter Energized (DEE) - Switch	Use this code for substructures that contain switches tagged DOE where the switch has been submerged. Use code 31 for work space.	Tag substructure DEE with reason for DEE on tag comment field	Follow-up to Electric Supervisor	ESP603

Underground Reliability Conditions

Code	Description	Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
52	Pressure Relief Valve (PRV) Missing	Use this code when the pressure relief valve is missing from transformers		Follow-up to Electric Supv. to have PRV installed or change out station if PRV cannot be installed.	
61	Moderate to Severe Structural Deterioration	Some rebar showing; large/deep cracks and/or a lot of cracking in walls or ceiling; concrete around equipment/cable anchors or unistruts cracked; neck rings cracking and/or have rebar visible. Use Code 148 for top section damage.		Notify and provide photos to Civil Engineering; note if traffic control and/or pumping are necessary.	
73	Oil Level Low	Check sight glass for oil level. Estimate percentage of oil remaining from the middle of the sight glass (25 degrees' line) to the bottom on the sight glass. If oil level cannot be determined or oil level is confirmed below the lowest point of the sight glass, then tag the switch "DO NOT OPERATE ENERGIZED (DOE)".	Tag DOE and notify Switching Center. Do not add oil to energized switch.	The O&E Engineer will determine if the switch should be removed or changed out. Follow-up with Electric Supv to determine if oil can be added to de-energized switch/ or replace switch.	ESP602 ESP603
78	Sample Taken and Sent to lab	Use this code whenever oil sample (1/2 liter) is taken for lab test. Place a label on cylinder. Enter the date, structure number, switch serial number, district code and cylinder number and check accurate and send to the lab. Once lab results are received, Code 78 will be updated from Pending to Cleared by O&E staff and enter either code 40 Contaminated Dielectric or code 43 Dielectric Meets Limit.			ESP603
85	Sump Pump Required / Damaged	Sump pumps are not a GO 128 requirement. If they are in place, they must work properly. Or determine if sump pump can be removed.	Clean intake & replace fuse. **If automatic, it must be disabled.**	Follow installation/ application per UG3362. Notify Electric Supervisor.	ESP602 ESP209 UG3362
89	Fault Indicator Damaged/Missing	Fault indicators are not a GO 128 requirement. If they are in place, they must work properly.		Follow installation/ application per UG4352 and 4355. Notify Electric Supv.	ESP602 UG4352 UG4355
102	Overload Condition	Use this code to address an electrical overload, check with IR gun and amp meter.	Notify Electric Supervisor of conditions that require immediate action.	Follow-up by Electric Supv.	ESP120
121	Damaged or Missing Pull Ring on Elbow/Caps or Bail Missing on Elbow/Splices	Use this code when the pull ring is damaged or missing on elbows and caps but can still be operated using elbow pulling tool with hot sticks. Also, use this code if the bail is missing on elbows or splices.		Follow-up fix by crew	
150	No Applicable Reliability/ Discretionary Code	Use this code to identify reliability or discretionary conditions that do not have an existing code. Provide comments in MDT.		Follow-up by Electric Supervisor	

Underground Discretionary Conditions

Code	Description	Standard Practice	On-Site Maintenance	Follow-up Maintenance	Ref.
17	External Corrosion Repair (Light/ Moderate)	For external corrosion ranging from light where there is distinct discoloration of the coating, blisters or scaling resulting in a loss of paint to moderate where there is pitting less than 25% of the original equipment's wall thickness on less than 25% of the surface area of any 2 or more panels and the unit can be repaired to reasonably last until the next cycle. There are no signs of oil leaks or low gas pressure. (Check gas pressure with a second gage).	Correct condition on-site if the unit can be repaired within the following times: 2 Man-hours for all single-phase equipment, 4 Man-hours for three-phase transformers 300kVA and below, 8 Man-hours for three phase transformers 500kVA and above, 4 Man-hours for all other three-phase equipment		ESP602 ESP606
18	Internal Corrosion Repair (Light/ Moderate) (2-man)	For internal corrosion ranging from light where there is distinct discoloration of the coating, blisters or scaling resulting in a loss of paint to moderate where there is pitting less than 25% of the original equipment's wall thickness on less than 25% of the surface area of any 2 or more panels and the unit can be repaired to reasonably last until the next cycle. Note level of corrosion in the comments field.			ESP602 ESP606
28	Paint Unit (2-man)	Ensure inside and outside surfaces are thoroughly prepared and clear of dirt and loose rust. Apply Loctite Extend Rust or POR-15 and allow time for the curing before applying paint.	Paint unit on site	Follow-up paint if not completed on site	ESP606
42	Raise Unit	Use this code for any unit that needs to be raised or leveled.	Correct condition on-site if practicable.	Follow-up to Electric Supv	ESP602
44	Cracked / Damaged Structure (PAD)	Use this code when the structure is damaged or is cracked having a surface crack width of 1/64 inch (about the thickness of a standard business card) or more extending for a length of 18 inches or more regardless of position. Through cracks are cracks or hairline cracks that are 1/32-inch-wide and less than 18 inches in length and not extending through the rebar area(s).	Correct condition on-site, if practicable.	Follow-up to Electric Supv	
47	Weeds, Trees, Bushes, Dirt, or Obstacle Outside Unit	Use this code when there are weeds, trees, bushes, dirt, or obstacles on or outside the unit and it can be field cleared. If the obstruction cannot be corrected on-site, use code 19 or 95. Only put under either equipment or sometimes structure, if applicable, but not both equipment and structure.	Correct condition on-site		ESP602
57	Grout Needed	Use this code where grout is needed to repair cracks, chips, and spalls.	Correct condition on-site, if practicable.	Follow-up to Electric Supv	
62	Minor to Moderate Structural Deterioration	Minor cracking, small pockets of concrete missing, no rebar showing on interior of substructure. Use Code 148 for top section damage.		Notify and provide photos to Civil/ structural Engineering; note if traffic control and/or pumping are necessary.	
74	Weeds, Grass, Dirt Inside Unit (2-man)	Use this code when there are weeds, dirt, and grass inside the unit and can be corrected on-site. Only put under either equipment or sometimes structure, if applicable, but not both equipment and structure.	Correct condition on-site		
99	No repairs needed				

2. UNDERGROUND CONDITION CODE TEMPLATE

Underground Condition Code Reference

Notify Trouble/Supervisor/CIP/Claims for any critical conditions and standby until Supv or CIP is on-site as appropriate

Code	Cond	Description	Onsite Maintenance / Follow-Up Actions
1	I	**ID/Circuit/Switch # Missing or Incorrect** or SDGE ID tag missing/incorrect	Fix on-site
5	I	**High Voltage Sign Missing/Damaged** - External or internal high voltage sign missing for any equipment	Fix on-site
8	I	**Cable/Cable Pole Not Tagged/Illegal/ Incorrect** – Applies to multiple ckt only	F/U fix by crew
12	I	**Temp Rise (as referenced in ESP120)** - Note the temp. differential, load reads, and if the connector is (pri) or (sec) in MDT comments	Notify Supv. of temp rise diff that req immediate action. F/U crew to repair, capture IR image and email or deliver to Dist Engineer
14	I	**Door, Cover, Enclosure, or Cabinet is Warped, Bent, or Damaged** - Use for pad mount equipment only	Make safe; prevent GO 128 wire entry. F/U fix by crew
16	I	**External Corrosion Replace (Severe)** – excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels.	Make safe. F/U to replace unit. Equip must be replaced if repairs are unlikely to last for 5 yrs and if the time to repair the unit exceeds the equip replacement criteria ref bottom of pg2 & ESP 602
17	D	**External Corrosion Repair (Light/Moderate)** - ranging from light where there is distinct discoloration of the coating, blisters or scaling resulting in a loss of paint to moderate where there is pitting < than 25% of the orig. equip. wall thickness on < than 25% of the surface area of any 2 or more panels, and the unit can be repaired to reasonably last until the next cycle. There are no signs of oil leaks or low gas pressure. (Check gas pressure with a 2nd gage)	Correct condition on-site if possible. The equip must be replaced if the time to repair the unit exceeds the equip replacement criteria in ESP 602
18	D	**Internal Corrosion Repair (Light/Moderate)** – same criteria as code 17.	
19	I	**SDG&E/Vegetation Cannot Open, Locate or Inspect – Inaccessible.** If caused by vegetation, record remarks in MDT and send IO. If private property caused use code 291 and for CIP- caused use code 491.	Fix on-site. If object is not removable, then turn in for F/U. Recd in MDT. Code 19 will remain pend until Insp. For tree/veg ensure accurate address, leave door hanger, obtain signed removal card (if applicable), qty of trees, use abbrev Key bottom of pg2
20	I	**Penta Bolts/Latch/Lock Missing – Unit Unsecured**	F/U fix by crew, install bolt/tie-down/lock/latch
21	I	**Elbows, Caps or Racks Damaged/Missing**	F/U fix by crew
22	R	**Handles on Handhole Damaged/Missing**	Fix on-site if possible or F/U fix by crew
23	R	**External Working Space Sign Missing**	Fix on-site. F/U to Supv if inaccessible
24	I	**Hinge Broken**	F/U fix by crew. Make safe/weld hinge or C/O cabinet
26	I	**Ground Rods or Studs Missing**	F/U fix by crew. If missing or corroded out, then install new rod
28	D	**Paint Unit** – Correct condition on-site if possible.	Ensure inside and outside surfaces are thoroughly prepared and clear of dirt and loose rust. Apply Loctite Extend Rust or POR 15 and allow time for curing before applying paint .
29	I	**Hold-Downs Broken/Corroded or Missing**	F/U fix by crew. Where practical install missing or bad hardware install new tie-downs (2 tie downs are preferred, but 1 tie down is acceptable)
30	I	**External Corrosion Repairable (Severe)** - There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit should be repaired if the life of the unit can be extended 5 years	Correct condition on-site if possible. The equipment must be replaced if the time to repair the unit exceeds the equip replacement criteria listed in ESP 602. F/U fix by crew
31	R	**Internal Work Clearance Not Adequate – DEE** - Use this code to identify conditions where the internal work clearances are not adequate. The structure must be tagged DEE (Do Not Enter Energized). Use DEE information tag and notify Switching Center.	If possible, rearrange/tie-down cable on-site and field clear the infraction or turn in F/U to Elec Supv. Note in the comment field the cause of the infraction and whether or not the handhole can be worked with sticks.
34	R	**SCADA Inoperable** - tagged by Kearny	Turn in to Elec Supv to remove or replace switch
35	I	**Internal Corrosion Repairable (Severe)** - There is excessive discoloration, excessive loss of paint, and pitting greater than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit should be repaired if the life of the unit can be extended 5 years.	Correct condition on-site if possible. The equip must be replaced if the time to repair the unit exceeds the equip replacement criteria listed in ESP 602
36	R	**Need Barrier Posts for Vehicular Traffic**	F/U to Elec Supv
37	R	**Need Retaining Wall**	Remove soil if possible, F/U to Elec Supv
38	I	**Internal Corrosion Replace (Severe)** – C/O required There is excessive discoloration, excessive loss of paint, and pitting > than 25% of the original equipment's wall thickness on more than 25% of the surface area of any 2 or more panels. The unit must be replaced if repairs are unlikely to last five years. Internal severe corrosion that is not visible from the outside of the equipment should also use this code.	Make safe. F/U to replace unit. Equip must be replaced if repairs are unlikely to last for 5 yrs and if the time to repair the unit exceeds the equip replacement criteria ref bottom of pg2 & ESP 602
39	R	**Gas Level Low** – *Non-S&C Vista Swt*: pad Swt: If pressure < 5 psig, tag swt DOE; Subsurface wet or dry environment: If press < 7 psig, tag swt DOE. *S&C Vista Swt*: pad or subsurface: If needle is in the yellow or red area, tag swt DOE.	Do not add gas to switch. Follow and tag per ESP 603 and ESP 230 (DOE/DEE) and notify switching center. F/U with Elec Supv.
40	R	**Contaminated Dielectric** –follow-up code based on lab results. Not for field use	Reference ESP 603. Tag appropriately and replace unit
42	D	**Raise Unit**	Correct condition onsite if practicable or F/U to Elec Supv
43	R	**Dielectric Meets Limit** – follow-up code based on lab results. Not for field use.	Reference ESP 603
44	D	**Cracked / Damaged Structure**	Correct condition onsite if practicable or F/U to Elec Supv
45	R	**Cannot Take Oil Sample**	F/U to Elec Supv
46	R	**Do Not Enter Energized (DEE) - Switch** - Use this code for substr that contain a swt tagged DOE because it has been submerged. Use code 31 for work space	Tag structure DEE and write reason for DEE on tag comment field. F/U to Elec Supv
47	D	**Weeds, Trees, Bushes, Dirt or Obstacle Outside Unit** – Enter remarks	Fix on-site
48	I	**Substructure Lid Damage** - substructure lids that are damaged or corroded. Includes lids that have a gap, are uneven, or bent that could pose a trip or slip hazard. Top section use code 148, or use codes 60, 61, or 62 for civil repair	F/U with Elec Supv and fix by crew. F/U ASAP for public safety concerns stand by until Supv is on site
49	I	**Traffic Lid Gasket Deteriorated or Missing**	F/U fix by crew ASAP

01/14/15 Key: Fix on Site, Pictures Required, IR picture) Corrective Maintenance Program Page 1 of 2

Underground Condition Code Reference

Notify Trouble/Supervisor/CIP/Claims for any critical conditions and standby until Supv or CIP is on-site as appropriate

Code	Cond	Description	Onsite Maintenance / Follow-Up Actions
50	I	**Improper Grounding**	F/U fix by crew
51	I	**Vent Fan/Vault Blower Damaged/Not Running**	F/U crew repair or replace if owned by SDG&E. If cust owned, Elec. Supv. to F/U with cust and Land Services; follow ESP 611
52	R	**Pressure Relief Valve (PRV) Missing** from transformer	F/U by crew to install PRV or c/o station if PRV cannot be installed
55	I	**Possible Wire Entry to Energized and Exposed Parts.** May be associated with corrosion codes. Use to identify any gap between the pad & equip for #18AWG size entry or larger (associate to pad) and fix on-site. Use to identify localized through-wall corrosion (associate to equip)	Caulk entry holes btw pad & cab; use epoxy to patch holes. Caulk sing pha trans all the way around pad. Leave in safe cond. F/U by crew chng out equip or weld/rivet metal patch. Field clear if permt rep made on-site. Leave pend if temp repair was made.
56	I	**Ground Wire Requires Covering**	Cover with dirt. F/U by street repair for concrete
57	D	**Grout Needed** - to repair cracks, chips, spalls	Fix on-site if possible or F/U fix by crew
58	I	**Infraction, No Applicable Code Available.** Enter remarks in MDT.	Leave in safe cond. Notify Supv for urgent repair. F/U by crew
59	I	**Internal High Voltage Barrier Board Missing/Damaged**	Fix on-site if barriers are available at Kearny
60	I	**Extremely Severe Structural Deterioration** - If Inspector deems unsafe then tag DEE and notify Switching Center	Notify and provide photos to Civil Engineering; note if traffic control and/or pumping are necessary. Use code 148 for top section damage.
61	R	**Moderate to Severe Structural Deterioration**	
62	D	**Minor to Moderate Structural Deterioration**	
63	I	**Oil Leak From Bushing/Case/Duct/Cable**	F/U by crew. Follow ESP 122
73	R	**Oil level low**	F/U by crew, do not add oil to energized switch. Tag DOE and notify switching center
74	D	**Weeds, Grass, Dirt Inside Unit** -Clear on-site or Enter remarks	Fix on-site
78	R	**Sample Taken and Sent to lab**	Obtain ½ liter sample size. Note oil sample #, switch attribute #, and comments in MDT. Submit tagged cylinder to lab.
85	R	**Sump Pump Required/Damaged.** - If automatic, it must be disabled.	Clean intake & replace fuse/ F/U to Elec Sup
89	R	**Fault Indicator Damaged/Missing**	If not working notify Elec Sup
93	I	**Switch Legs/Hold Downs Corroded** - provide measurements (Switch legs)	F/U by crew, repair legs/replace bolts/change out legs
95	I	**SDG&E Working Space Obstruction** – Typical 8' clearance from doors and min. 18" - 52" on the sides and back depending on the type of UG equip. For private property caused use code 290. For vegetation caused use code 330. For CIP caused use code 490	Turn in F/U to Elec Supv. Elec Supv to field to determine if equip can be worked safely and clear code. Pictures required.
99	D	**No Repairs Needed**	No action needed
102	R	**Overload Condition** - Tables I (Equip), II (Cable), III (Conn), IV (Hand Splice), V (Compression Conn), in ESP 120)	Notify Supv. of temp rise diff that req immediate action F/U crew to repair, capture IR image and email or deliver to Dist Engineer
121	R	**Damaged or Missing Pull Ring on Elbow/Caps or Ball Missing on Elbow/Splices**- but can still be operated using elbow pulling tool with hot sticks or ball missing on elbows or splices	F/U by Elec Supv
148	I	**Top Section Damage** - substructure top sections that are damaged. Includes handholes, SDG&E Vaults, and manholes. For additional structural damage, use codes 60, 61, or 62 as applicable, pictures required.	F/U with Elec Supv and fix by crew. F/U ASAP for public safety concerns stand by until Supv is on site
150	R	**No Applicable Reliability/Discretionary Code**	Use this code to identify reliability or discretionary conditions that do not have an existing code. Provide comments in MDT
238	I	**Abandoned Facilities** Follow SPM 200 Pictures required	Turn in to Elec Supv to determine if structure(s) should be removed or if there is a future use (Follow SPM 200). If there is a future use and structure is kept then it needs to be maintained
263	I	**Private Property Hazardous Conditions** – hazardous conditions caused by private property or non-CIP that are in proximity of Elec facilities and are not covered by other codes	Notify Elec Supv stand by until Supv is on site and Notify Claims immediately for critical conds. Take picture(s) and Dist to work with cust on resol prior to sending not to Land Serv, copy Claims if urgent. Follow ESP 611.
290	I	**Private Property Working Space Obstruction** - Typical 8' clearance from doors and minimum 18" - 52" on the sides and back depending on the type of UG equip. Use this code when there is no external workspace due to priv property. Use code 95 if SDG&E caused, code 330 for veg, code 490 for CIP	Provide description of condition in the comments. Take picture(s). Elec Supv to field to determine if equip can be worked safely and clear code. District to work with customer on resolution prior to sending notification to Land Services; follow ESP 611.
291	I	**Private Property Caused Cannot Open, Locate, or Inspect** - Use this code if the unit cannot be opened, located, or inspected due to private property. Use code 19 if caused by Vegetation or SDG&E. Use code 491 for CIP.	Provide description of condition in the comments. Take picture(s). District to work with customer on resolution prior to sending notification to Land Services; follow ESP 611.
330	I	**Vegetation Working Space Obstruction** - Typical 8' clrc from doors and min 18" - 52" on the sides and back dep on the type of UG equip. For non-veg W/S issues, use code 95 for SDG&E caused, code 290 for priv prop, or code 490 for CIP	Record in MDT. Do not send IO to Veg Management. Leave door hanger for affected customers, for vegetation removal obtain signed removal card, and quantity of trees, use Veg Abbreviation Key
490	I	**CIP Working Space Obstruction** – Typical 8' clearance from doors and min 18" - 52" on the sides and back depending on the type of UG equip. Use code 95 if SDG&E caused, code 290 for private property, or code 330 for vegetation	Prov CIP name,desp of cond in the comts. Tk pic(s). Elec Supv may clear if equip can be wrk safely. If cannot be wrk safely, Send nonconformance F/U within 45 bus days; follow ESP 607
491	I	**CIP Caused Cannot Open, Locate, or Inspect - Inaccessible.** Use this code if the unit cannot be opened, located, or inspected due to CIP equip. Use code 19 if caused by Vegetation or SDG&E and code 291 for private property.	Provide CIP name and description of condition in comments and take pictures. Send nonconformance F/U within 45 business days; follow ESP 607

- **Equip replacement criteria:** equip must be replaced if the time to repair the unit exceeds the following criteria: 2 manhours (MH) for all single-phase equip, 4 MH for 3 phase transformers 300kVA and below, 8 MH for 3 phase xfmrs 500kVA and above, 4 MH for all other 3 phase equip.
- Cond Abbreviations: I – Infraction, R – Reliability, D – Discretionary
- Vegetation Abbreviation Key: Type: Eucalyptus – EU#, Palm – PA#, Pine – PI#, Oak – OA#, Other – OT#, Qty – Quantity (#) Access: Back lot – BL, Backyard – BY, Truck Access – TA Special Instructions: Removal Required – RR, Stump Grinding Required – SG, Door Hanger Left – DH, Authorization Card Left – AC, Customer Contact – CC

01/14/15 Key: Fix on Site, Pictures Required, IR picture) Corrective Maintenance Program Page 2 of 2


Code 19


Code 291


Code 491

3. UNDERGROUND CODE CLARIFICATIONS

Code 19: (GO Condition) – Cannot open, locate, inspect – SDG&E or Vegetation

- **Cannot inspect for any reason other than CIP/private property**
- **If due to vegetation – leave door hanger for affected customer(s), obtain signed removal authorization card if removing vegetation, give detailed address, use abbreviation key- Record in MDT and send Vegetation I/O only for 19s**

Code 291: (GO Condition) – Cannot open, locate or inspect due to private property

- **Record in MDT and District to work with customer on resolution prior to sending notification to Land Services.**

Code 491: (GO Condition) – Cannot open, locate or inspect due to due to CIP

- **Record in MDT and District to process Nonconformance within 45 business days by following ESP 607.**


Code 95


Code 290


Code 330


Code 490

Code 95: (GO Condition) – SDG&E Caused Working Space Obstruction

- **Cannot be corrected on site, but unit can be inspected**
- **For Vegetation, use code 330. For CIP use code 490. For Private Property, use code 290.**
- **Provide details of obstruction**.
- **Electric Supervisor may clear if equipment can be worked safely.**

Code 290: (GO Condition) - Private Property Caused Working Space Obstruction

- **Electric Supervisor to field and determine if equipment can be worked safely and code cleared. Otherwise, district to work with customer on resolution prior to sending notification to Land Services.**

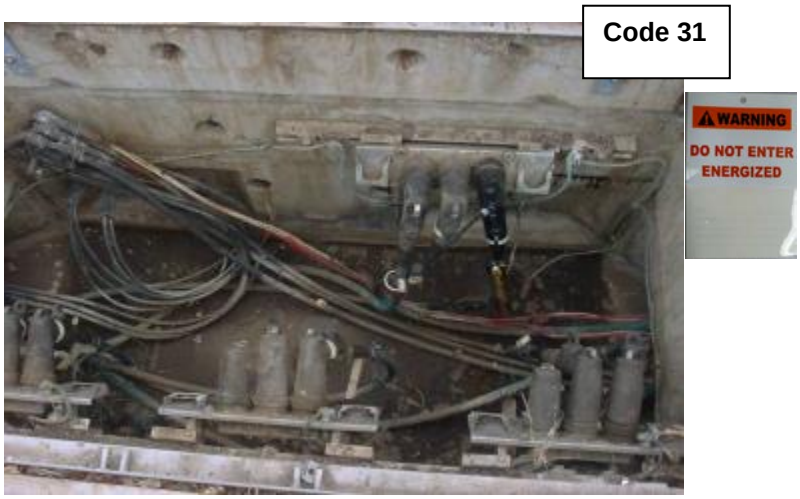
Code 330: (GO Condition) - Vegetation Caused Working Space Obstruction

- **If due to vegetation – leave door hanger for affected customers, obtain signed removal authorization card if removing vegetation, give detailed address, use abbreviation key- Record in MDT and do not send I/O.**

Code 490: (GO Condition) - CIP Caused Working Space Obstruction

- **Electric Supervisor may clear if equipment can be worked safely. Notes must be documented. District to process Nonconformance within 45 business days by following ESP 607**

<u>Code 47: (Discretionary Condition)</u> – Weeds, trees, bushes, dirt, or obstacle (outside); <u>CONDITION CAN BE CORRECTED ON SITE</u>. If obstruction <u>CANNOT</u> be corrected on site, it should be coded 19 or 95. Only put in under equipment (sometimes structure) but not both equipment and structure. Use code 74 for inside the unit.



<u>Code 31 (Reliability)-</u> Example of Inadequate Internal Work Space. This is not an infraction because the condition is identified and the structure is tagged "Do Not Enter Energized".

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Code 31 (Reliability)- Example of Inadequate Internal Work Space. This is not an infraction because the condition is identified and the structure is tagged “Do Not Enter Energized”.

B. UNDERGROUND PHOTOS- FREQENTLY ASKED QUESTIONS

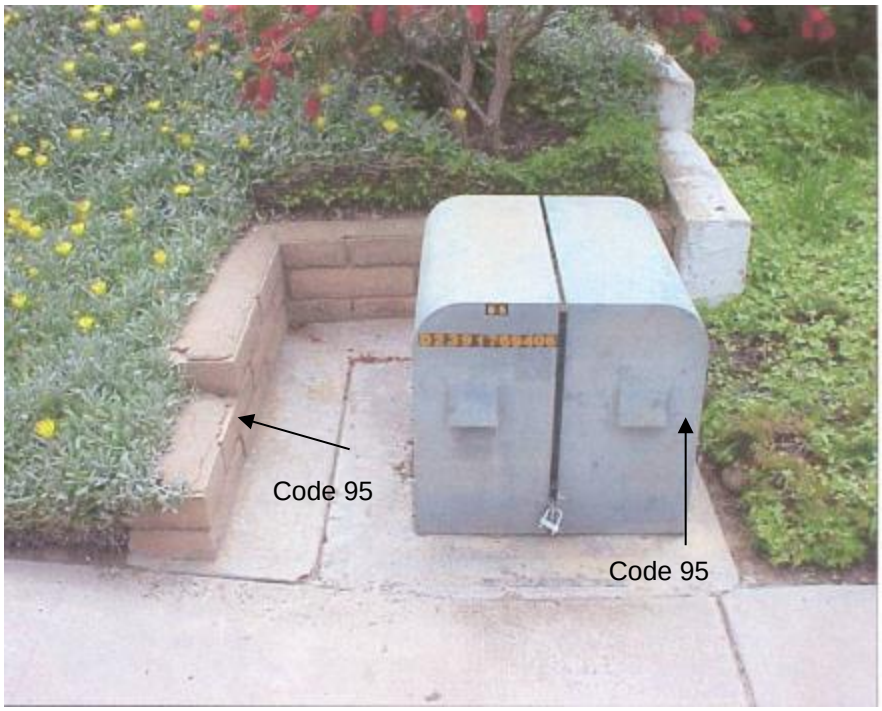
Wire Entry Code 55

Wire Entry/Severe Corrosion
Code 55 – Wire Entry
Code 16 – Severe Corrosion

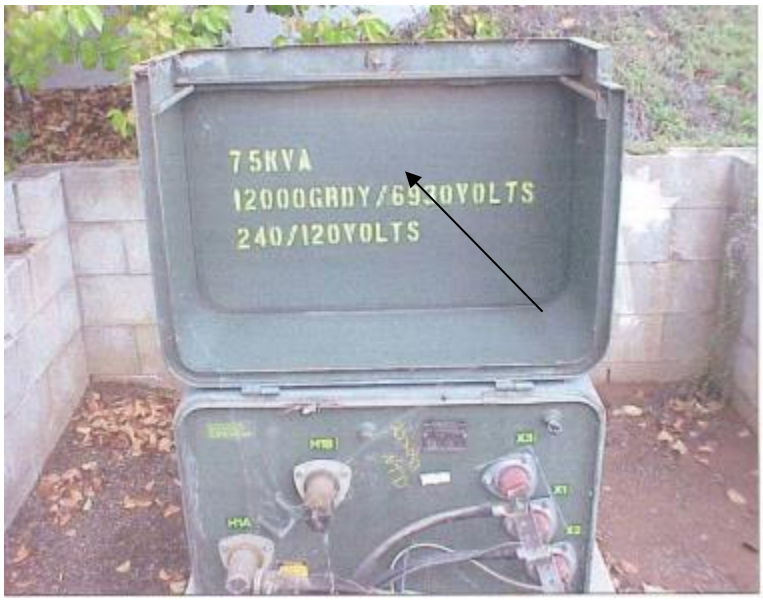
Work Space Obstructions
Private Property Working Space Obstruction Code 290
CIP Working Space Obstruction Code 490

Vegetation Working Space Obstruction
Code 330

External Working Space (SDG&E Caused)
Code 95



High Voltage Sign Damaged or Missing (Deadfront)
Code 5 (Infraction)



High Voltage Sign Damaged or Missing (Livefront) Code 5 (Infraction)

No High Voltage Sign Missing Code 5 (Infraction)

Weeds, Trees, Bushes, Dirt or Obstacle Outside Unit Code 47

Weeds, Grass, Dirt Inside Unit (Clear On Site)
Code 74

Cannot Open, Locate or Inspect – Inaccessible
(Leave Pending Until Cause of Inaccessibility Is Corrected and Facility Is Inspected)
Code 19 if caused by SDG&E or Code 291 if caused by private property or Code 491 if caused by CIP

C. UNDERGROUND REFERENCES

1. Padmount Working Space Requirements

Working space requirements

The following are copies of actual labels which are to be applied to padmount equipment cabinets, and illustrate the working space requirements around various types of equipment.

Figure 1 – Single Phase Transformer

Figure 2 – Three Phase Transformer

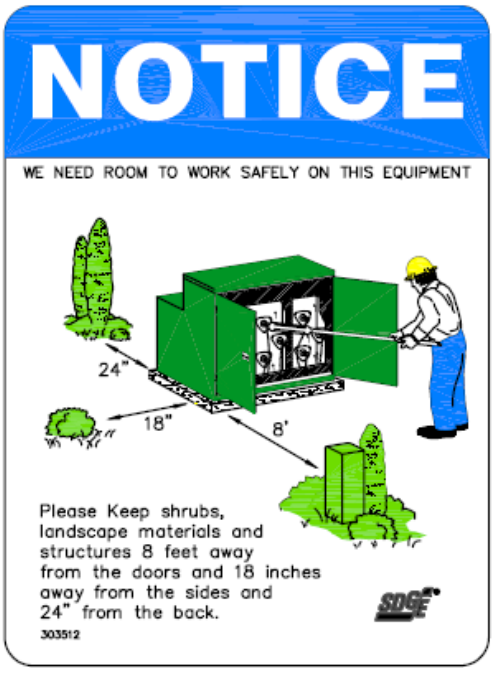


Figure 3 – Switch Cabinet

Figure 4 – Fuse Cabinet

2. Internal Work Space and DEE Tagging

1. **All new construction and repair of existing facilities, including emergency repairs, shall be built to current SDG&E construction standards.**

2. **No infraction shall be built and no authorization should be given by any person to build an infraction.**

3. **Workspace is defined as the space available for working safely on or around underground facilities for the purpose of construction, operation, and maintenance (G.O. 128, Rule 24.1).**

4. **SDG&E UG Construction Standards provide detail on workspace for different types of facilities see link: Pg. 3645. The minimum workspace of 18"x 42" shall be maintained for a 3314, 18"x 48" for a 3315, and 22"x 72" for a 3316. Primary cable may enter the workspace up to 6" from the corners to accommodate bending radius. The 18" depth dimension shall be maintained between equipment and the opposite wall/equipment, or other immovable object.**

5. **Removable cable steps in the workspace are not an infraction.**

6. **Bending or training cable across empty duct openings is not an infraction.**

7. **Secondary cable in workspace is not an infraction, but should be fixed, racked, or moved.**

8. **3316 hand holes with a transformer in the hole is not an infraction. Current SDG&E practice requires that the transformer be de-energized before any work can be performed.**

9. **If an existing DEE structure is encountered, personnel may enter if the cable causing the infraction can be de-energized. Other cables/equipment in the structure can remain energized if they are not in the workspace.**

10. **If an infraction is found that is a safety hazard to the public or SDG&E personnel, it shall be repaired immediately. If a condition exists that is a risk to the reliability of the electric system, it should be repaired on site or turned in for follow-up repairs, depending on the severity of the situation.**

11. **When facilities are encountered by company personnel that contain internal workspace nonconformances, every reasonable effort should be made to correct the condition(s). Workspace infractions shall be repaired if any other work is planned involving the structure where the infraction exists in.**

12. **The comments field on the DEE tag needs to contain the reason for the tag and the employee ID of the person who is issuing the tag.**

13. **DEE tags shall be called into the switching center when found and reported to the District that the facility is located in.**

14. **A weekly report of facilities that are tagged DEE are sent to Distribution Operations.**

V. PATROLS

A. GENERAL

- **One of the significant features of General Order (GO) 165 implementation was the establishment of Patrols. These patrols are required to be performed in accordance with GO165 inspection cycles as defined below.**

- **GO 165 defines a patrol as a "simple visual inspection, of applicable utility equipment and structures, that is designed to identify obvious structural problems and hazards. Patrols may be carried out in the course of other company business."**

- **The Patrols shall be performed in a safe manner to identify structural problems and hazards noted on the Patrol Inspection Record (reference Section E). All applicable distribution equipment needs to be patrolled. Per GO 165, applicable utility distribution equipment and structures include all transformers, switching/protective devices, regulators/capacitors, overhead conductors and cables, streetlighting (SDG&E owned), and wood poles. Patrols are not intended to be detailed inspections.**

- **The appropriate steps shall be taken to expedite corrective action of conditions that pose an immediate safety hazard to the public.**

B. PATROLS – URBAN AND RURAL

- **Patrols were previously divided into two types: Urban and Rural. These two types of patrols identify the same obvious structural problems and hazards and only differed in frequency of the patrols as defined below.**

    - **Patrol 1[1] (Urban, and Rural patrol, 1 year)**
      Urban patrols are completed on a 1-year cycle. Under agreement of interpretation with the CPUC, 'urban' is defined as incorporated areas. GO165 calls for urban as those areas with 1,000 persons or more per square mile and 'rural' is defined as unincorporated areas. GO165 calls for rural as those areas with less than 1,000 persons per square mile.

[1]CPUC Decision D.09-08-029 requires all overhead facilities located in Extreme and Very High Fire Threat areas be patrolled on an annual basis. Starting in 2010, SDG&E has a goal of completing all Urban and Rural patrol maps on an annual basis regardless of fire threat designation.

C. PATROL RESPONSIBILITIES

- **Patrols are accomplished by Electric Trouble Shooters, Linemen, or Line Checkers (all inclusively referred to as patrollers in this document), and managed completed with the use of paper GIS maps. Patrollers are responsible for patrolling each GIS map on the appropriate interval and reporting any obvious structural problems or hazards found on the Patrol Inspection Record. SDG&E owned or operated streetlights are patrolled as part of patrols for obvious structural problems or hazards.**

D. PATROL RECORDS

There are several steps to creating records for patrols, reference the following Data Flow Diagram.

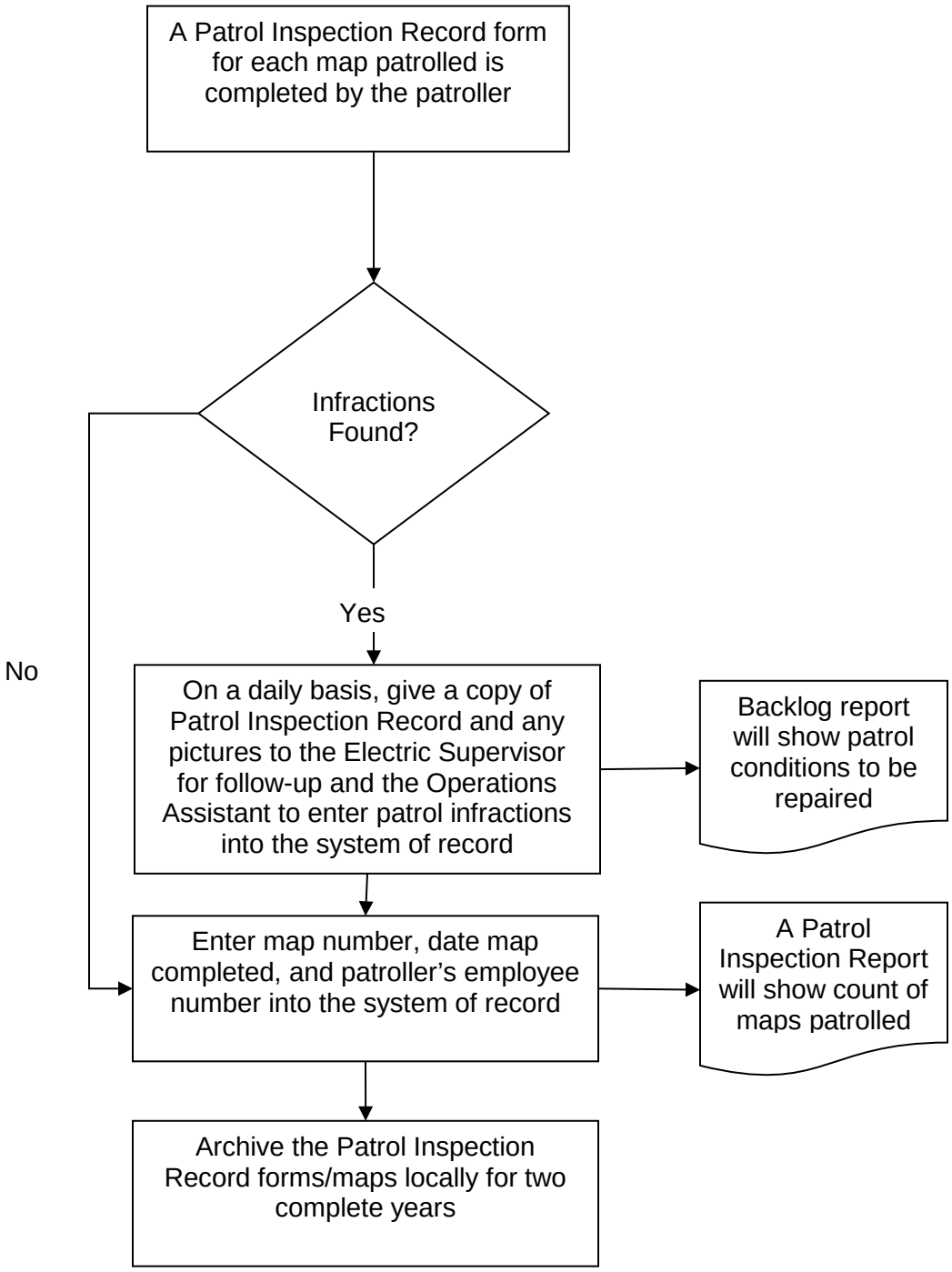
- **Recording the map as having been patrolled: The patroller will complete a Patrol Inspection Record form for each map indicating a particular map has been patrolled. The patroller will identify each facility on each map and indicate the date that the facility was patrolled and initial (or use employee number). This can be done by circling or highlighting several facilities patrolled on the same day, initialing (or using employee number) and dating as long as it is clear when the facilities were patrolled and by whom. The map number, date map completed, and patroller's employee number are entered into the system of record. This action simply records that the map has been patrolled. Patrol inspections are limited to one patroller per facility map. A Patrol Inspection Record form will be completed for each map inspected, even if no infractions were found. If no infractions are found, a Patrol Inspection Record form will be signed and dated for that map with the date the map was completed. If infractions are encountered, turn in a copy of the Patrol Inspection Record form each day so that follow-up will begin immediately and record infractions in the system of record. Thus, several copies of the Patrol Inspection Record forms may be required to complete the follow-up work on a map. The original will remain with the map. Completed map books will be stamped as completed when they are 100% complete, including the date complete and the patroller's name. Patrol Inspection Record forms and paper maps will be retained for a period of 2 years (current year plus 2 years). After such time, the documents will be purged and discarded. The original electronic map is the record and will be maintained accordingly by Program Management.**

- **Documentation: Obvious structural problems or hazards found are recorded by the patroller on the Patrol Inspection Record form. These infractions should be transcribed from that form into the system of record by the District daily. The date the infraction is identified in the field should be entered as the Inspection Date. These infractions should also be marked as "critical" as appropriate in the system of record as opposed to "pending". The employee number of the patroller should be used when recording these infractions, for further information reference the SAP-PM Maintenance and Inspection Quick Start User Guide under "MANAGING PATROLS" section.**

- **Private Property Follow-up: It is the C&O centers responsibility to make initial contact (or attempt to) with all private property owners to resolve access issues and obvious structural hazards. C&O centers should document all attempts prior to contacting Land Services.**

- **CIP Follow-up:. All CIP issues require that a picture be taken by the patroller and submitted with the form along with address information and details about the condition.**

PATROL DATA FLOW



E. PATROL INSPECTION RECORD

Front of form

Patrol Inspection Record

OVERHEAD

POLE NUMBER:
List individual pole numbers below
Write applicable infraction codes from the reference sheet
Record patrol conditions found. Report exceptions only.

Infraction Code Number(s): (reference back of form)

1				
Notes:				
2				
Notes:				
3				
Notes:				
4				
Notes:				
5				
Notes:				
6				
Notes:				
7				
Notes:				
8				
Notes:				

UNDERGROUND

FACILITY NUMBER:
List individual facility numbers below
Write applicable infraction codes from the reference sheet.
Record patrol conditions found. Report exceptions only.

Infraction Code Number(s): (reference back of form)

9				
Notes:				
10				
Notes:				
11				
Notes:				
12				
Notes:				
13				
Notes:				
14				
Notes:				
15				
Notes:				
16				
Notes:				

This map has been patrolled. Map Number:	Date Map Completed:	By:	Empl. No.

The patroller is to identify each facility on each map and indicate the date that the facility was patrolled and initial. This can be done by circling facilities patrolled on the same day, initialing (or using employee number) and dating as long as it is clear when the facilities were patrolled and by whom. Infractions will be recorded on this form. Turn in a copy of the Patrol Inspection Record found each day if infractions are encountered, so that follow-up can begin, and record infractions in system of record. Construction Supervisor will determine if the condition identified requires immediate repair or will be prioritized accordingly. A Patrol Inspection Record form will be completed (map ID, date map completed, signature, employee ID) and attached to each map including those maps with no infractions. Inspection is limited to one patroller per facility map.

*Use the appropriate infraction code if not listed. Otherwise, use other infraction code 298 (OH) or 58 (UG) and describe the infraction in the comment field.

Rev. 08/22/16

Back of form

CMP PATROL REFERENCE

Patrols shall be performed in a safe manner to identify obvious structural problems and hazards noted on the Patrol Inspection Record Form. For any critical condition, notify Service Dispatch/Supervisor and as appropriate, Claims or Land, and stand-by until repair crew is on-site. For non-critical conditions, mark Patrol Inspection Record and turn into Supervisor and Operations Assistant daily for follow-up. **For CIP conditions, pictures** are required, provide address information, and turn into Ops Asst for GO Form processing.

OVERHEAD

Overhead patrols can be performed by walk-by or fly-by methods as long as there is a top to bottom view of the pole.

Code	Description
206	**Damaged/Missing Pole Hardware –** broken guy, brace, pin, transformer hanger, or insulator; obviously damaged streetlight that may result in injury
207	**SDG&E Leaning Pole or Potential Overload** – SDG&E owned pole that is leaning badly due to potential overload or other cause; pole that may fail
218	**Private Property Caused Pole Inaccessible** (locked gate, animal, material stacked or struc built around pole, etc.)
219	**SDG&E/Vegetation Caused Pole Inaccessible or Cannot Locate.** Inaccessibility can occur due to river, lake, terrain, vegetation, etc. that prevents access.
228	**Exposed Conductor –** uncovered vertical or lateral runs that pose a risk to the general public and employees
231	**Open/Damaged Ground –** broken, burned through, or cut
234/236	**Missing High Voltage Signs- 2 man/1-man repair –** high voltage sign missing from line arms or pole (40" below lowest conductor w/ no equipment or 6" below equipment)
235, 240, 243, 244, 267	***Obviously Damaged Equipment:*** **Damaged Arrestor/Insulator/Dead-end, Damaged Cutout. Damaged Switch,/ Damaged Switch Operator Mechanism./ Damaged Capacitor**
237	**Oil Leak –** leaking transformers or oil switches; follow ESP 122
241	**Damaged Crossarm** – crossarm is broken or damaged and may fail
246	**SDG&E Pole / Stub Pole Damaged or Broken** – SDG&E owned pole that may fail before next inspection cycle (if existing red tag on pole for replacement, note "red tag on pole") (All types of poles: Wood, steel, fiberglass)
254	**SDG&E Insufficient Clearance** – obvious insufficient clearance at pole or midspan (horizontal or vertical clearances issues that need to be resolved by SDG&E)
260	**Easement Encroachment –** buildings, fences, walls built or being constructed in proximity of conductors
261	**Grading Change** - in proximity of conductors that could result in electrical contact
262	**Low Service** – that are obviously low or could be snagged
263	**Private Property Hazardous Condition** – that could affect SDG&E facilities and not covered by other codes
266	**Foreign Objects** - i.e. Mylar balloons, kites, vegetation on primary or open wire secondary
269	**Damaged Conductors –** at pole or along span that are broken, severely bent, or severely corroded.
270	**Damaged/Missing Guy Guard** – located in pedestrian area, alley, or routinely travelled location.
298	**Other Infraction - No Applicable Existing Code** - describe condition that is an obvious structural problem/hazard
407	**CIP Owned Pole Leaning or Potential Overload** - CIP owned pole that is leaning badly due to potential overload or other cause
439	**CIP Not Transferred to New Pole – Immediate Transfer Required** – use for critical pole conditions only
446	**CIP Owned Pole or Stub Pole Damaged, Broken** - CIP owned pole that may fail
454, 455, 456, 459	***CIP Caused Clearance Issues*** *- obvious issues that could impact SDG&E facilities* **CIP Insufficient Clearance between Primary Wire and CIP Wire –** Note location: at midspan or pole **CIP Clearance at Midspan between Open Wire Sec and CIP CIP Clearance at Pole between Open Wire Sec and CIP CIP Insufficient Ground Clearance CIP Wires - Vehicular Traffic**
464	**CIP Lashing Wire Broken/Loose**
465	**CIP Equipment /Wires Hanging Loose - Not Secured** – equipment/wires that have the potential to contact SDG&E facilities or could pose a public threat.

UNDERGROUND

A 360 degree walk around external patrol inspection is required for all padmounted equipment and primary substructures. Vaults require walking to the vault to ensure the door is secure and proper signage is in place.

Code	Description
5	**High Voltage Sign Missing/Damaged** - fix on-site if possible
14	**Door, Cover, Enclosure, or Cabinet is Warped, Bent, or Damaged –** severe damage that could result in possibility of electrical contact
19	**SDG&E/Vegetation Cannot Open, Locate or Inspect** – Inaccessible or vegetation.
20	**Penta Bolts/Latch/Lock Missing – Unit Unsecured** - resulting in risk of public contacting energized conductors
48	**Substructure Lid Damage –** bent, warped, or missing lid that could result in tripping hazard or injury to general public
55	**Possible Wire Entry to Energized and Exposed Parts –** leave in safe condition and use appropriate material for repairs. Also use for severe corrosion that has the potential to be a wire entry.
58	**Infraction, No Applicable Code Available** – describe condition that is an obvious structural problem/hazard
63	**Oil Leak From Bushing/Case/Duct/Cable** – leaking transformer or oil switch; follow ESP 122
263	**Private Property Hazardous Condition** – cond that could impact SDG&E facilities and not covered by other codes
291	**Private Property Caused Cannot Open, Locate, or Inspect**

Revision 08/22/16 Key: Fix on Site if possible Pictures Required Corrective Maintenance Program – Patrols