

# Transmission Condition Assessment Form

Ground and Aerial Inspections

Effective Date:  
2-4-2021

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## Approvals

Department, Title	Name	Date of Approval
Law Department, Senior Attorney	Margarita “Rita” Gevondyan	2/1/2021
Enterprise Risk Management, Senior Manager	Edward P “Ted” Gribble	1/29/2021
AA&DS, Principal Manager	Raymond Fugere	2/1/2021
T&D Apparatus & Linear Strategies, Principal Manager	Thuan Tran	2/1/2021
Compliance & Quality, Principal Manager	Mel Stark	1/29/2021
Transmission, Construction & Technical Support, Manager	Jason Jimenez	2/1/2021
Aerial Inspections, Principal Manager	Alyssa Grigoryan	1/29/2021

## Change Log Revisions

Section	Impacted Group	Rational For Change	Change From	Change To
Structure Information	Ground and Aerial	Adjusting the “NOTE” listed under the question for Aerial; Removing “incorrect grid” Option for Ground	<ol style="list-style-type: none"> <li>Are you able to proceed with this inspection? <ul style="list-style-type: none"> <li>■Note: Incorrectly Tagged, Missing Photo Angles, Poor Photo Quality, Duplicate Video</li> <li>★Note: Incorrect Number, No Access, Obstructed, Incorrect Grid, Non-Transmission, Pole Removed</li> </ul> </li> <li>a. Yes</li> <li>b. No <ol style="list-style-type: none"> <li>Incorrect Structure Number <ol style="list-style-type: none"> <li>Number in the field Note: "Use Collect feature to complete inspection for Number in Field"</li> </ol> </li> <li>No Access <ol style="list-style-type: none"> <li>Property Owner</li> <li>Responsible Patrolman</li> <li>Brush Overgrown</li> <li>Helicopter Only</li> </ol> </li> <li>Obstructed View</li> <li>★Incorrect Grid <ol style="list-style-type: none"> <li>Select Correct Grid **Grid Drop Down (ME, MW, E, NC, SJ, O, H)</li> </ol> </li> <li>Non-Transmission <ol style="list-style-type: none"> <li>Telecommunication</li> <li>Foreign</li> <li>Distribution</li> </ol> </li> <li>Duplicate Record</li> <li>Non-HF</li> <li>Removed Structure (Not in field/active in SAP)</li> <li>■Incorrectly Tagged (Heli/UAV)</li> <li>■Missing Photo Angles (Heli/UAV)</li> <li>■Poor Photo Quality (Heli/UAV)</li> <li>■Duplicate Video (Heli/UAV)</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Are you able to proceed with this inspection? <ul style="list-style-type: none"> <li>■Note: Incorrectly Tagged, Missing Photo Angles, Poor Photo Quality, Structure Media Issue, Structure Under Repair</li> <li>★Note: Incorrect Number, No Access, Obstructed, Incorrect Grid, Non-Transmission, Pole Removed</li> </ul> </li> <li>a. Yes</li> <li>b. No <ol style="list-style-type: none"> <li>Incorrect Structure Number <ol style="list-style-type: none"> <li>Number in the field Note: "Use Collect feature to complete inspection for Number in Field"</li> </ol> </li> <li>No Access <ol style="list-style-type: none"> <li>Property Owner</li> <li>Responsible Patrolman</li> <li>Brush Overgrown</li> <li>Helicopter Only</li> </ol> </li> <li>Obstructed View Incorrect Grid Select Correct Grid **Grid Drop Down (ME, MW, E, NC, SJ, O, H)</li> <li>Non-Transmission <ol style="list-style-type: none"> <li>Telecommunication</li> <li>Foreign</li> <li>Distribution</li> </ol> </li> <li>Duplicate Record</li> <li>Non-HF</li> <li>Removed Structure (Not in field/active in SAP)</li> <li>■Incorrectly Tagged (Heli/UAV)</li> <li>■Missing Photo Angles (Heli/UAV)</li> <li>■Poor Photo Quality (Heli/UAV)</li> <li>■Structure Media Issue Duplicate Video (Heli/UAV)</li> <li>■Structure Under Repair (Heli/UAV)</li> </ol> </li> </ol>

★ This symbol and blue text indicate that the question/question is for ground only



■ This symbol and purple text indicate that the question/question is for aerial only

Section	Impacted Group	Rational For Change	Change From	Change To
Structure Information	Ground and Aerial	Add option to structure type	<b>2. Structure Type Pole</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Monopole/Single Pole</li> <li><input type="checkbox"/> H-Frame <ul style="list-style-type: none"> <li>■ Add Associated FLOC to other Structures</li> </ul> </li> <li><input type="checkbox"/> 3-Pole</li> <li><input type="checkbox"/> Guy Stub</li> <li><input type="checkbox"/> Other (comment)</li> </ul>	<b>2. Structure Type Pole</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Monopole/Single Pole</li> <li><input type="checkbox"/> H-Frame <ul style="list-style-type: none"> <li>■ Add Associated FLOC to other Structures</li> </ul> </li> <li><input type="checkbox"/> 3-Pole</li> <li><input checked="" type="checkbox"/> Flying Berry Pole</li> <li><input type="checkbox"/> Guy Stub</li> <li><input type="checkbox"/> Other (comment)</li> </ul>
Data Collection	Aerial	Combine TTC Cable and 3 <sup>rd</sup> Party Cable options because Aerial is unable to identify communication tag	7. Is there a Buddy Pole? <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. What is attached to Buddy Pole? <ul style="list-style-type: none"> <li>1. TTC Cable</li> <li>2. 3rd Party Cable</li> <li>3. Distribution</li> <li>4. Nothing (Bare Pole)</li> </ul> </li> </ul> </li> <li>b. No</li> </ul>	7. Is there a Buddy Pole? <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. What is attached to Buddy Pole? <ul style="list-style-type: none"> <li>1. ⚙️TTC Cable</li> <li>2. ⚙️3rd Party Cable</li> <li>3. ■Communication</li> <li>4. Distribution</li> <li>5. Nothing (Bare Pole)</li> </ul> </li> </ul> </li> <li>b. No</li> </ul>
Data Collection	Ground and Aerial	Combine Arresters and Risers/Potheads options	13. Indicate the Equipment Type(s) and attachments on the Structure <ul style="list-style-type: none"> <li>a. Switch <ul style="list-style-type: none"> <li>i. ⚙️KPF</li> <li>ii. ⚙️Turner</li> <li>iii. ⚙️Cleveland Price</li> </ul> </li> <li>b. Arresters</li> <li>c. Risers/Potheads</li> <li>d. RTS</li> </ul>	13. Indicate the Equipment Type(s) and attachments on the Structure <ul style="list-style-type: none"> <li>a. Switch <ul style="list-style-type: none"> <li>i. ⚙️KPF</li> <li>ii. ⚙️Turner</li> <li>iii. ⚙️Cleveland Price</li> </ul> </li> <li><b>Arresters</b></li> <li><b>b. Risers/Potheads/Arresters</b></li> <li>c. RTS</li> </ul>
Notification	Ground	Current responses are Yes or No; Adding option for ground to identify duplicate notification number. Aerial will have these options on the Field Specialist form.	Current response options: Yes No	Change response options to: ⚙️Yes No ⚙️Duplicate Indicate Duplicate Notification Number
Notification	Ground & Aerial	Added clarification of arms	33. Do Supporting Members (braces/crossarms/hardware) require notification (excluding guys/guying)?	33. Do Supporting Members (braces/crossarms/ <b>arms</b> /hardware) require notification (excluding guys/guying)?

⚙️ This symbol and blue text indicate that the question/option is for ground only

■ This symbol and purple text indicate that the question/option is for aerial only

Section	Impacted Group	Rational For Change	Change From	Change To
Notification	Ground and Aerial	Adjust language due to audit finding	<p>44. Do visible Bonds/Bonding require notification? Examples: Signs of damage, missing/loose connections, etc.</p> <p>a. Yes</p> <ol style="list-style-type: none"> <li>Damage</li> <li>Missing/Loose Connections</li> <li>Unable to Determine <ol style="list-style-type: none"> <li>No Access</li> <li>Property Owner</li> <li>Obstructed</li> <li>Brush Overgrown</li> </ol> </li> </ol> <p>*Notification Build Out Required</p> <p>b. No</p>	<p>44. Do visible Bonds/Bonding <b>and/or copper grounding</b> require notification? Examples: Signs of damage, missing/loose connections, etc.</p> <p>a. Yes</p> <ol style="list-style-type: none"> <li>Damage</li> <li>Missing/Loose Connections</li> <li>Unable to Determine <ol style="list-style-type: none"> <li>No Access</li> <li>Property Owner</li> <li>Obstructed</li> <li>Brush Overgrown</li> </ol> </li> </ol> <p>*Notification Build Out Required</p> <p>b. No</p> <p>c.  Duplicate</p> <ol style="list-style-type: none"> <li>Duplicate Notification Number</li> </ol>
Notification	Ground and Aerial	Added option for aerial to indicate covered equipment. Added P2, P3, and Duplicate option for Ground.	<p>45. Do Jumpers require notification? <i>Note: Inadequate shape/clearance, needs I-string/stiffener/weights, missing/damaged spacers, loose connections</i></p> <p>a. Yes</p> <ol style="list-style-type: none"> <li>Inadequate Shape/Clearance</li> <li>Needs I-string/stiffener/weights</li> <li>Missing/damaged spacers</li> <li>Loose connections</li> </ol> <p>*Notification Build Out Required</p> <p>b. No</p>	<p>45. Do Jumpers require notification? <i>Note: Inadequate shape/clearance, needs I-string/stiffener/weights, missing/damaged spacers, loose connections</i></p> <p>a. Yes</p> <ol style="list-style-type: none"> <li>Inadequate Shape/Clearance</li> <li>Needs I-string/stiffener/weights</li> <li>Missing/damaged spacers</li> <li>Loose connections</li> </ol> <p>*Notification Build Out Required</p> <p>b. No</p> <p>c.  Duplicate</p> <ol style="list-style-type: none"> <li>Duplicate Notification Number</li> </ol> <p>d.  Covered Equipment</p> <p>*Notification Build Out NOT Required</p>

Section	Impacted Group	Rational For Change	Change From	Change To
Notification	Ground and Aerial	Added option for aerial to indicate covered equipment. Added P2, P3, and Duplicate option for Ground.	<p>47. Does Line Hardware require notification?  <i>Examples: Signs of corrosion/loss of material, wear/tear/grooving, slotted holes, burn/flash/arc marks, missing/damaged cotter keys/nuts/bolts, etc.</i></p> <p>a. Yes</p> <ul style="list-style-type: none"> <li>i. Corrosion/loss of material</li> <li>ii. Wear/tear/grooving</li> <li>iii. Slotted holes</li> <li>iv. Burn/flash/arc marks</li> <li>v. Missing/damaged cotter keys/nuts/bolts  *Notification Build Out Required</li> </ul> <p>b. No</p>	<p>47. Does Line Hardware require notification?  <i>Examples: Signs of corrosion/loss of material, wear/tear/grooving, slotted holes, burn/flash/arc marks, missing/damaged cotter keys/nuts/bolts, etc.</i></p> <p>a. Yes</p> <ul style="list-style-type: none"> <li>i. Corrosion/loss of material</li> <li>ii. Wear/tear/grooving</li> <li>iii. Slotted holes</li> <li>iv. Burn/flash/arc marks</li> <li>v. Missing/damaged cotter keys/nuts/bolts  *Notification Build Out Required</li> </ul> <p>b. No</p> <p>c.  Duplicate</p> <ul style="list-style-type: none"> <li>i. Duplicate Notification Number</li> </ul> <p>d.  Covered Equipment  *Notification Build Out NOT Required</p>

Section	Impacted Group	Rational For Change	Change From	Change To
Notification	Ground and Aerial	New Question		<p>51. Does Communication Cable and/or Equipment (Non-SCE) require a notification?</p> <p>a. Yes</p> <ul style="list-style-type: none"> <li>i. Inadequate clearance between communication equipment or structures and SCE electrical equipment or structures</li> <li>ii. Excessive sag of communication cables</li> <li>iii. Loose lashing wire</li> <li>iv. Broken or separated messenger wire</li> <li>v. Broken, damaged or severely strained communication guy wires</li> <li>vi. Excessive bowing or bending of pole from potential overloading at communication equipment attachment points</li> <li>vii. Improperly secured communication conductor or equipment</li> <li>viii. Vegetation straining communication messenger or guy wire and/or causing structural integrity issues</li> <li>ix. Unauthorized Attachment</li> <li>x. Other</li> </ul> <p>*Notification Build Out Required</p> <p>b. No</p> <p>c. Unable to Determine</p> <p>d. ★ Duplicate</p> <ul style="list-style-type: none"> <li>i. Duplicate Notification Number</li> </ul>



Section	Impacted Group	Rational For Change	Change From	Change To
Notification	Aerial	Added option to indicate covered cotter key	<p>54. ■Do Visible Cotter Keys Require Notification?</p> <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. Cotter Key Missing</li> <li>ii. Cotter Key Backing Out</li> <li>*Notification Build Out Required</li> </ul> </li> <li>b. No</li> <li>c. Unable to Determine</li> </ul>	<p>54. ■Do Visible Cotter Keys Require Notification?</p> <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. Cotter Key Missing</li> <li>ii. Cotter Key Backing Out</li> <li>*Notification Build Out Required</li> </ul> </li> <li>b. No</li> <li>c. Unable to Determine</li> <li>d. Covered Cotter Keys</li> <li>*Notification Build Out NOT Required</li> </ul>
Notification	Aerial	Added option to indicate covered pins	<p>55. ■Do Pins Require Notification?</p> <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. Pin Backing Out</li> <li>ii. Significant Corrosion</li> <li>iii. Misaligned Insulator</li> <li>*Notification Build Out Required</li> </ul> </li> <li>b. No</li> <li>c. Unable to Determine</li> </ul>	<p>55. ■Do Pins Require Notification?</p> <ul style="list-style-type: none"> <li>a. Yes <ul style="list-style-type: none"> <li>i. Pin Backing Out</li> <li>ii. Significant Corrosion</li> <li>iii. Misaligned Insulator</li> <li>*Notification Build Out Required</li> </ul> </li> <li>b. No</li> <li>c. Unable to Determine</li> <li>d. Covered Pins</li> <li>*Notification Build Out NOT Required</li> </ul>

Section	Impacted Group	Rational For Change	Change From	Change To
Vegetation	Ground and Aerial	Adjusted verbiage for clarity	<p>59. Is the removal of Trees/Foliage required to prevent contact with Transmission Conductors?</p> <p><i>Examples: Vines, branches, or foliage presenting an overhang or other imminent threat, Immediate danger concerning palm fronds falling or blowing into conductors, Vegetation arcing or in contact with energized conductor</i></p> <p>a. Yes</p> <ol style="list-style-type: none"> <li>Greater than 10 feet</li> <li>6 feet to 10 feet</li> <li>Between 2 feet and 6 feet</li> <li>2 feet or less</li> </ol> <p><input type="checkbox"/> Vines, branches, or foliage presenting an overhang or other imminent threat</p> <p><input type="checkbox"/> Immediate danger concerning palm fronds falling or blowing into conductors</p> <p><input type="checkbox"/> Vegetation arcing or in contact with energized conductor</p> <p><input type="checkbox"/> Trees or palm fronds encroaching on structure or underbuild</p> <p>*Notification Build Out Required</p> <p>b. No</p>	<p>59. Is vegetation trimming or removal required to prevent contact above and/or below transmission conductor or equipment?</p> <p><i>Examples: Vines, branches, or foliage presenting an overhang or other imminent threat, Immediate danger concerning palm fronds falling or blowing into conductors, Vegetation arcing or in contact with energized conductor</i></p> <p>a. Yes</p> <ol style="list-style-type: none"> <li><del>Greater than 10 feet</del></li> <li><del>6 feet to 10 feet</del></li> <li><del>Between 2 feet and 6 feet</del></li> <li><del>2 feet or less</del></li> </ol> <p><input type="checkbox"/> Vines, branches, or foliage presenting an overhang or other imminent threat</p> <p><input type="checkbox"/> Immediate danger concerning palm fronds falling or blowing into conductors</p> <p><input type="checkbox"/> Vegetation arcing or in contact with energized conductor</p> <p><input checked="" type="checkbox"/> Vegetation or trees (10ft or greater) encroaching on structure or underbuild</p> <p><input checked="" type="checkbox"/> Trees or palm fronds encroaching on structure or underbuild</p> <p>*Notification Build Out Required</p> <p>b. No</p> <p>c. <a href="#">Duplicate</a></p> <ol style="list-style-type: none"> <li><a href="#">Duplicate Notification Number</a></li> </ol>

## Survey Questions

### General Inspection Information

1. Inspection Date
2. Inspection Method
  - a. Ground
  - b. Helicopter (Ground Inspections)
  - c. HEC
  - d. Aerial Footage
  - e. ■ Helicopter (Aerial)
  - f. ■ UAV/Drone
  - g. ■ Climb
3. Accounting Type
4. User ID
5. Inspector First Name
6. Inspector Last Name
7. Inspector SCE User ID
8. Grid Name
9. Circuit
10. ★ Is circuit information correct?
  - a. Yes
  - b. No
    - i. Circuit List Drop Down
    - ii. Circuit Not Listed (check box)
    - iii. Open Comment Field
11. Voltage
12. FLOC
13. ★ Is the Structure Number correct on structure?
  - a. Yes
  - b. No
    - i. Select "Are you able to proceed with this inspection" - No "Incorrect Structure Number"
  - c. NA (Tower)
14. Mile Tower Number
15. SCE High Fire Designation
16. SCE High Fire Sub Area
17. Latitude
18. Longitude
19. Object Type

## Structure Information

### 1. Are you able to proceed with this inspection?

★Note: Incorrect Number, No Access, Obstructed, Incorrect Grid, Non-Transmission, Pole Removed

■Note: Incorrectly Tagged, Missing Photo Angles, Poor Photo Quality, Structure Media Issue, Structure Under Repair

- a. Yes
- b. No
  - i. Incorrect Structure Number
    - 1. Number in the fieldNote: "Use Collect feature to complete inspection for Number in Field"
  - ii. No Access
    - 1. Property Owner
    - 2. Responsible Patrolman
    - 3. Brush Overgrown
    - 4. Helicopter Only
  - iii. Obstructed View
  - iv. Non-Transmission
    - 1. Telecommunication
    - 2. Foreign
    - 3. Distribution
  - v. Duplicate Record
  - vi. Non-HF
  - vii. Removed Structure (Not in field/active in SAP)
  - viii. ■Incorrectly Tagged (Heli/UAV)
  - ix. ■Missing Photo Angles (Heli/UAV)
  - x. ■Poor Photo Quality (Heli/UAV)
  - xi. ■Structure Media Issue
  - xii. ■Structure Under Repair

### 2. Structure Type

#### Steel Lattice/Tower

- a. Lattice Tower
- b. Lattice H-Frame/Pole
- c. Aesthetic/A-Frame
- d. Portal Tower
- e. Other (comment)

#### Pole

- a. Monopole/Single Pole
- b. H-Frame
  - a. ■Add Associated FLOC to other Structures
- c. 3-Pole
- d. Flying Berry Pole

★ This symbol and blue text indicate that the question/question is for ground only

■This symbol and purple text indicate that the question/question is for aerial only

- e. Guy Stub
  - a. ■Note: Disallow the following questions from showing up: "Do visible bonds/bonding require a notification" and "Is the removal of tree/foliage required to prevent contact with transmission conductors"
- f. Other (comment)

*Main Pole Material Type:*

- a. Wood
- b. Light Weight Steel (LWS)
- c. Engineered Tubular Steel Pole (TSP)
- d. Composite
- e. Concrete
- f. Hybrid (Concrete/Steel)
- g. ★ Other (comment)

★ *Supporting Members Material Type:*

- a. Wood
- b. Light Weight Steel (LWS)
- c. Composite
- d. Concrete
- e. Hybrid (Concrete/Steel)
- f. Steel Crossarm
- g. Post Insulators Only
- h. Other/Guyed Deadend/Jumper Pole (comment)

3. Structure Attachments

- ☐ Bulk Transmission (220kV and up)
- ☐ Sub-Transmission (33kV-161kV)
- ☐ Distribution (<33kV)
- ☐ Telecommunication
- ☐ ★Transmission Pilot Wire/Open Wire
- ☐ ★Foreign Electrical Utility

4. Transmission Attachment Details

- ☐ Single Circuit
- ☐ Double Circuit
- ☐ ■Multi Circuit (3 or more)
- ☐ Bundled Conductor
- ☐ Transposition Structure (■Phase rotation occurs on the same structure)
- ☐ Bird Nest/Wildlife Debris at or above Bulk/Sub-Trans facilities, including equipment
- ☐ Transmission Down Guy
- ☐ Transmission Span Guy
- ☐ Equipment (switches, arrestors, pothead/risers, etc.)
- ☐ Suspension Structure
- ☐ Deadend Structure

- ☐ Post Type Structure
- ☐ Porcelain/■Glass Insulators
- ☐ Polymer Insulators
- ☐ Tough Glass Insulators
- ☐ Dampers
- ☐ Overhead Shield/Optical/Ground Wire (OPGW/OHGW)
- ☐ Fault Return Conductor (FRC)
- ☐ Transmission Riser
- ☐ Fault Indicator
- ☐ ■Line Hose/Bird Deterrent/Bird Guard
- ☐ ■Transmission Crossarm/X-Brace
- ☐ Antenna/Microwave
- ☐ Solar
- ☐ FAA Lights
- ☐ Wind Turbine
- ☐ Distribution 4th Wire/Neutral
- ☐ Distribution Riser
- ☐ Shared Crossarm
- ☐ ■Distribution Span/Down Guy
- ☐ Telecomm Conductive Wire/Messenger/Lashing Wire (non-ADSS)
- ☐ Telecomm Riser
- ☐ Telecomm Span/Down Guy
- ☐ ■Crossarm/X-Brace Material Type
  - Wood
  - Steel
  - Composite

## Data Collection

5. Is there a FLOC number on the structure?
  - a. Yes
  - b. No
  - c. Unable to Determine
6. Construction Type
  - a. Suspension
  - b. Post Type
  - c. Dead End
  - d. N/A
7. Is there a Buddy Pole?
  - a. Yes
    - i. What is attached to Buddy Pole?
      1. ⚡TTC Cable
      2. ⚡3<sup>rd</sup> Party Cable
      3. ■ Communication
      4. Distribution
      5. Nothing (Bare Pole)
  - b. No
8. ⚡Describe the area surrounding the structure within 100 feet?
  - a. Concrete and/or Pavement
  - b. Sand, Gravel/Rock, or Water
  - c. Residential or Commercial Area/Structures
  - d. Vegetation
9. ⚡Is the Structure within an Enclosed Area?  
Example: Behind private fencing/gate, in backyard, in orchards, etc.
  - a. Yes
    - ii. Behind Private Fence/Gate
    - iii. In Backyard
    - iv. In Orchards
    - v. Customer Facilities
  - b. No
10. ⚡Type of Footing
  - a. Foundation/Concrete
  - b. Direct Bury (Wood/LWS)
  - c. Grillage
  - d. Cassion
  - e. Other - Specify (open text field)
  - f. Unable to Determine
    - i. No Access
    - ii. Property Owner
    - iii. Obstructed
    - iv. Brush Overgrown
11. ⚡Does foundation have a ground to the structure?

⚡ This symbol and blue text indicate that the question/option is for ground only

■ This symbol and purple text indicate that the question/option is for aerial only

- a. Yes
  - b. No
  - c. Unable to Determine
12. ★ Identify the appearance of the Footings/Foundations
- a. Erosion
  - b. Buried Footing (excluding direct bury)
  - c. Corrosion of the Steel at the Structure Base
  - d. Exposed decay pocket at ground line where part of shell is gone
  - e. Cracked/Broken Concrete
  - f. Footings/Foundation is in good condition

*Priority 3 Needed*

*if 'Equipment (switches, arrestors, pothead/risers, etc.)'...*

13. Indicate the Equipment Type(s) and attachments on the Structure
- a. Switch
    - i. ★ KPF
    - ii. ★ Turner
    - iii. ★ Cleveland Price
  - b. Risers/Potheads/Arresters
  - c. RTS
14. How many Transmission Lightning Arresters are installed on this structure?
- a. 10+,9,8,7,6,5,4,3,2,1,0
15. Do the insulators connect to the structure using a hook?
- a. Yes
  - b. No
16. ■ Are All Cotter Keys Visible?
- a. Yes
    - i. Cotter Key(s) Missing (Notification Required)
    - ii. Cotter Key(s) Do Not Belong to Structure
    - iii. Cotter Key(s) is blurry/does not zoom/obstructed
      - 1. Where Are Cotter Keys Not Visible?
        - a. Cold-Side
        - b. Within Insulator String
        - c. Hot-Side
        - d. Shield Wire Hardware
        - e. Structure Hardware
  - b. No
17. ■ Are All Pins Visible?
- a. Yes
    - i. Pin(s) Not Applicable to the Structure
  - b. No
    - i. Where Are Cotter Keys Not Visible?
      - 1. Cold-Side
      - 2. Within Insulator String

★ This symbol and blue text indicate that the question/option is for ground only

■ This symbol and purple text indicate that the question/option is for aerial only



- 3. Hot-Side
- 4. Shield Wire Hardware
- 5. Structure Hardware

18. How many LEVELS are Crossarms installed on Transmission voltages?  
Example: Crossarms on top, middle and bottom phases equals 3 levels
- a. 10+,9,8,7,6,5,4,3,2,1,0
19. Is Transmission Line hose/Bird Deterrent present?
- a. Yes
    - i. Line Hose
    - ii. Bird Deterrent
    - iii. Bird Guard
  - b. No

*if 'Bulk Transmission (220kV and up)'...*

20. If Shield Wires are on a 500kV Structure, is the Shield Wire:
- Note: Pertains to circuits built to 500kV standards and energized at 220kV
- a. Grounded to the tower (may or may not have an insulator)
  - b. Insulated and Continuous
  - c. Insulated and Open
  - d. N/A (220kV tower)
  - e. N/A (OPGW)

21. ★ Indicate the type(s) of Conductor Splice present on the Span

Note: Only in span to the North or West

- a. Wrap
- b. Twist/Mac
- c. Quickie
- d. Compression
- e. Implosive
- f. Not Present

*How many?*

*if 'Deadend/Jumper Structure'...*

22. Indicate the type(s) of Splice present on the Jumper Loop (includes Parallel Grove Clamps)?
- a. Wrap
  - b. Twist/Mac
  - c. Quickie
  - d. Compression
  - e. Implosive
  - f. Parallel Grove / Bolted Clamp
  - g. Not Present
  - h. Unable to Determine

*How many?*

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■ This symbol and purple text indicate that the question/question is for aerial only

*if Conductor splice present on span/jumpers*

23. ★What is the distance of Line Splices from point of support?
- a. Bulk (if Bulk Transmission (220kV and up))
    - i. At least 100 feet from pint of support? (Y/N)
  - b. Sub Trans (if Main Pole Material Type)
    - i. Wood
      - 1. At least 3 feet from point of support? (Y/N)
    - ii. LWS
      - 1. At least 20 feet from point of support? (Y/N)

*if 'Transmission Down Guy'...*

24. How many Transmission DOWN guys are installed?
- a. User selects from: 10+,9,8,7,6,5,4,3,2,1,0

*if 'Transmission Span Guy'...*

25. How many Transmission SPAN guys are installed?
- a. User selects from: 10+,9,8,7,6,5,4,3,2,1,0

*if Span Guy*

26. Are Span/Arm Guys installed parallel to the line conductor?
- a. Yes
    - i. How many?
  - b. No

*if 'Distribution (<33kV)'*

27. Do Guys pass near/through Distribution circuits?
- a. Yes
  - b. No

*If down guy or span guy*

28. Do Guys have insulation between structure and ground?  
Examples: Johnny balls, strain insulators, fish rods, etc.
- a. Yes
    - i. Strain Insulators/Johnny Balls
    - ii. Fish Rods
  - b. No

*If down guy or span guy*

29. Indicate Guy Type and Attachments
- a. Preformed
  - b. Automatic/Quickie
    - \*Notification Build Out Required
  - c. ■Automatic Quickie Bypassed with Preformed
  - d. ■3-Bolt Clamp
  - e. Other (comment)

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if 'Distribution (<33kV)

30. ★ Is the 4th Wire bonded to the structure?

- a. Yes
- b. No
- c. Unable to Determine

## Notification

Main Structure & Supporting Members:

*Bird Nest/Wildlife Debris at or above Bulk/Sub-Trans facilities, including equipment*

31. Does bird nest/wildlife debris require notification?

Examples: Fire hazard, reduced electrical clearances, above energized facilities, on or near equipment, blocking view, etc.

- a. Yes
  - i. Fire Hazard
  - ii. Reduced Electrical Clearances
  - iii. Above Energized Facilities
  - iv. On or Near Equipment
  - v. Blocking View

\*Notification Build Out Required
- b. No
- c. ★ Duplicate
  - i. ★ Duplicate Notification Number

Default

32. Does Main Structure require notification (cross arm/arm/x-braces)?

Examples: Signs of damage, loss of material, burn/flash/arc marks, bowing, leaning, or out of plum, etc.

- a. Yes
  - Steel:
    - i. Corrosion
    - ii. Bent/Broken
    - iii. Missing Members or Bolts
    - iv. Connections
    - v. Bowing
    - vi. Leaning
    - vii. Out of Plum
  - Wood:
    - i. Rot
    - ii. Bending/Splitting/Twisting
    - iii. Woodpecker
    - iv. Bowing
    - v. Leaning
    - vi. Out of Plum

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■ This symbol and purple text indicate that the question/question is for aerial only

Composite:

- i. Unraveling of Fibers

Concrete:

- i. Spalling/Cracks

\*Notification build out required

b. No

c. ★ Duplicate

- i. Duplicate Notification Number

*default (should not show for Tower)*

33. Do Supporting Members (braces/crossarms/arms/hardware) require notification (excluding guys/guying)?

Examples: Signs of damage, loss of material, braces worn, burn/flash/arc marks, etc.

a. Yes

Steel:

- i. Corrosion
- ii. Bent/Broken
- iii. Missing Members or Bolts
- iv. Connections

Wood:

- i. Rot
- ii. Bending/Splitting/Twisting
- iii. Woodpecker
- iv. Bowing
- v. Leaning
- vi. Out of Plum

Composite:

- i. Unraveling of Fibers

Concrete:

- i. Spalling/Cracks

\*Notification build out required

b. No

c. ★ Duplicate

- i. Duplicate Notification Number

*If 'Steel Lattice/Tower' or 'TSP' or 'LWS'...*

34. ★ Does Structure Base require notification due to clearance (<5ft) from non-SCE metallic objects? Examples: Conductive objects, metallic fencing, gates, etc.

a. Yes

- i. Conductive Objects
- ii. Metallic Fencing

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■ This symbol and purple text indicate that the question/question is for aerial only

- iii. Gates
  - iv. Other (comment)
  - \*Notification build out required
- b. No
- c. Unable to Determine
  - ii. No Access
  - iii. Property Owner
  - iv. Obstructed
  - v. Brush Overgrown
- d. ★Duplicate
  - i. Duplicate Notification Number

#### Guys/Guying

*if 'Transmission Down Guy'...*

35. Do DOWN guys/guying require notification (excluding anchors)?

Examples: Signs of corrosion/fraying, slack, broken/loose attachments/supports, inadequate clearances during wind events, burn/flash/arc marks

- a. Yes
  - i. Corrosion/Fraying
  - ii. Slack
  - iii. Broken/Loose Attachments Supports
  - iv. Inadequate Clearances During Wind Events
  - v. Burn/flash/arc marks
  - \*Notification Build Out Required
- b. No
- c. Unable to Determine
  - i. No Access
  - ii. Property Owner
  - iii. Obstructed
  - iv. Brush Overgrown
- d. ★Duplicate
  - i. Duplicate Notification Number

*if 'Transmission Span Guy'...*

36. Do SPAN guys/guying require notification (excluding anchors)?

Examples: Signs of corrosion/fraying, slack, broken/loose attachments/supports, inadequate clearances during wind events, burn/flash/arc marks

- a. Yes
  - i. Corrosion/Fraying
  - ii. Slack
  - iii. Broken/Loose Attachments Supports
  - iv. Inadequate Clearances During Wind Events
  - v. Burn/flash/arc marks

\*Notification Build Out Required

- b. No
- c. Unable to Determine
  - i. No Access
  - ii. Property Owner
  - iii. Obstructed
  - iv. Brush Overgrown
- d. ★Duplicate
  - i. Duplicate Notification Number

*if 'Transmission Down Guy'...*

37. ★Do Anchors require notification?

Examples: Signs of damage, corrosion, buried, too many attachments, etc.

- a. Yes
  - i. Damage
  - ii. Corrosion
  - iii. Buried
  - iv. Too Many Attachments

\*Notification Build Out Required

- b. No
- c. Unable to Determine
  - i. No Access
  - ii. Property Owner
  - iii. Obstructed
  - iv. Brush Overgrown
- d. Duplicate
  - i. Duplicate Notification Number

*if 'Down Guy' or 'Span Guy' or 'Steel Lattice/Tower' or 'TSP' or 'LWS'..."*

38. ★Do Guys/Anchors require notification due to Clearance (<5ft) from non-SCE metallic objects?

Example: conductive/metallic fencing/gates, other conductive objects

- a. Yes
  - i. Is the Object in Direct Contact with Guys/Anchors?  
\*Notification Build Out Required
- b. No
- c. Unable to Determine
  - v. No Access
  - vi. Property Owner
  - vii. Obstructed
  - viii. Brush Overgrown
- d. Duplicate
  - i. Duplicate Notification Number

Equipment

*if Equipment (switches, arrestors, pothead/risers, etc.)*

39. Does Equipment require notification?

Examples: Switch blades not fully closed/open, whisker/arrestor/riser/pothead issues, etc.

- a. Yes
  - i. Loose/Corroded Hardware
  - ii. Cotter Keys/Bolts Missing/Loose
  - iii. Excessive Wear on Structure Attachments and Yoke Plates
  - iv. In contact with Animal Nest
  - v. Porcelain Pothead Insulators Chipped or Broken
  - vi. Pothead swollen/leaking
  - vii. Blades not fully engaged

\*Notification Build Out Required
- b. No
- c. ★Duplicate
  - i. Duplicate Notification Number

*if 'Transmission Riser'...*

40. ★Does the Riser require a notification?

Examples: In contact with animal nest, Riser swollen, Riser broken, Non-Schedule 80 Riser installed, Cables in Riser exposed

- a. Yes
  - i. In Contact with Animal Nest
  - ii. Riser Swollen
  - iii. Riser Broken
  - iv. Cables in Riser Exposed
  - v. Unable to Determine
    - 1. No Access
    - 2. Property Owner
    - 3. Obstructed
    - 4. Brush Overgrown

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\*Notification Build Out Required

- b. No
- c. Duplicate
  - i. Duplicate Notification Number

*if Equipment (switches, arrestors, pothead/risers, etc.)*

41. Do the Equipment Brackets or Braces require a notification?

Examples: Worn, missing, loose, broken

- a. Yes
    - i. Braces Worn
    - ii. Braces Missing
    - iii. Braces Loose
    - iv. Braces Broken
- \*Notification Build Out Required

- b. No
- c. ★Duplicate
  - i. Duplicate Notification Number

Insulators/Hardware/Wires/Misc:

*default*

42. Do Insulators require notification?

Examples: Polymer: Tracking, missing/loose corona rings, ripped sheds, burn/flash/arc marks, excessive pollution/contamination, chalking

Porcelain/glass: Broken chipped bells, missing/loose corona rings (500kV only), burn/flash/arc marks, excessive pollution/contamination, deadend bell skirts facing up, severe rust on insulator caps, out of plumb (in line with span), missing/loose cotter keys, wear on structure (slotting holes), hook shows visible wear/loss of material

- a. Yes
  - Polymer:
    - i. Tracking
    - ii. Missing/Loose Corona Rings
    - iii. Ripped Sheds
    - iv. Burn/Flash/Arc Marks
    - v. Excessive Pollution/Contamination
  - Porcelain/Glass:
    - i. Broken/chipped bells
    - ii. Missing/loose corona rings (500kV only)
    - iii. Burn/flash/arc marks
    - iv. Excessive pollution/contamination
    - v. Deadend bell skirts facing up, etc.)

\*Notification Build Out Required

- b. No
- c. ★Duplicate
  - i. Duplicate Notification Number



*if 'Do the insulators connect to the structure using a hook?'...*

43. Does the Hook or the structure where it attaches require a notification?

- a. Yes
  - \*Notification Build Out Required
- b. No
- c. Unable to Determine
- d. ★Duplicate
  - i. Duplicate Notification Number

*if 'Wood' or 'Composite' Poles & Supporting Members...*

44. Do visible Bonds/Bonding and/or copper grounding require notification?

Examples: Signs of damage, missing/loose connections, etc.

- a. Yes
  - i. Damage
  - ii. Missing/Loose Connections
  - iii. Unable to Determine
    - 1. No Access
    - 2. Property Owner
    - 3. Obstructed
    - 4. Brush Overgrown
  - \*Notification Build Out Required
- b. No
- c. ★Duplicate
  - i. Duplicate Notification Number

*if 'Deadend Structure'...*

45. Do Jumpers require notification?

*Note: Inadequate shape/clearance, needs I-string/stiffener/weights, missing/damaged spacers, loose connections*

- c. Yes
  - v. Inadequate Shape/Clearance
  - vi. Needs I-string/stiffener/weights
  - vii. Missing/damaged spacers
  - viii. Loose connections
  - \*Notification Build Out Required
- d. No
- e. ★Duplicate
  - i. Duplicate Notification Number
- f. ■Covered Equipment
  - \*Notification Build Out NOT Required

if 'Dampers'...

46. Do Dampers require notification?

*Examples: Signs of damage, drooping, missing weights, broken strands at attachment*

- a. Yes
  - i. Damage
  - ii. Drooping
  - iii. Missing weights
  - iv. Broken strands at attachment

\*Notification Build Out Required
- b. No
- c. ★ Duplicate
  - i. Duplicate Notification Number

Default

47. Does Line Hardware require notification?

*Examples: Signs of corrosion/loss of material, wear/tear/grooving, slotted holes, burn/flash/arc marks, missing/damaged cotter keys/nuts/bolts, etc.*

- a. Yes
    - i. Corrosion/loss of material
    - ii. Wear/tear/grooving
    - iii. Slotted holes
    - iv. Burn/flash/arc marks
    - v. Missing/damaged cotter keys/nuts/bolts

\*Notification Build Out Required
  - b. No
  - c. ★ Duplicate
    - i. Duplicate Notification Number
  - d. ■ Covered Equipment
- \*Notification Build Out NOT Required

Default

48. Do Wires or Splices require notification?

*Examples: Signs of birdcaging, broken strands, span splices is automatic/quiekie, corrosion, burn/flash/arc marks, etc.*

- a. Yes
  - i. Birdcaging
  - ii. Broken strands
  - iii. Span splice is automatic/quiekie
  - iv. Corrosion
  - v. Burn/flash/arc marks

\*Notification Build Out Required
- b. No
- c. ★ Duplicate
  - i. Duplicate Notification Number

*if 'Suspension Structure'...*

49. ★ Does Suspension Insulator plum require a notification?

*Examples: Out of plum, no uplift, float*

- a. Yes
  - i. Out of plum
  - ii. No Uplift
  - iii. Float

\*Notification Build Out Required
- b. No
- c. Duplicate
  - i. Duplicate Notification Number

*if 'SCE Telecommunication' or 'Transmission Pilot Wire/Open Wire*

50. ★ Does Pilot Wire/Open Wire require notification?

*Examples: Broken, Corroded, Hardware, etc.*

- a. Yes
  - i. Broken
  - ii. Corroded
  - iii. Hardware Issues

\*Notification Build Out Required
- b. No
- c. Duplicate
  - i. Duplicate Notification Number

*if Telecommunication...*

51. Does Communication Cable and/or Equipment (Non-SCE) require a notification?

- a. Yes
  - i. Inadequate clearance between communication equipment or structures and SCE electrical equipment or structures
  - ii. Excessive sag of communication cables
  - iii. Loose lashing wire
  - iv. Broken or separated messenger wire
  - v. Broken, damaged or severely strained communication guy wires
  - vi. Excessive bowing or bending of pole from potential overloading at communication equipment attachment points
  - vii. Improperly secured communication conductor or equipment
  - viii. Vegetation straining communication messenger or guy wire and/or causing structural integrity issues
  - ix. Unauthorized Attachment
  - x. Other

\*Notification Build Out Required
- b. No
- c. Unable to Determine
- d. ★ Duplicate
  - i. Duplicate Notification Number

if "Bundled Conductor"

52. ★ Does Conductor Spacers require a notification?

*Examples: Uneven sag or uneven sub-conductors in bundle circuits, Poor condition of spacers for bundled conductors (in spans ahead and back), etc.*

- a. Yes
  - i. Poor condition of spacers for bundled conductors (in spans ahead and back)
  - ii. Other

\*Notification Build Out Required

- b. No
- c. Duplicate
  - i. Duplicate Notification Number

if 'Is Transmission Line hose/Bird Deterrent present?

53. Does Transmission Bird Avian Guard/Deterrent require a notification?

*Examples: Incorrectly installed, damaged*

- a. Yes
  - i. Incorrectly Installed
  - ii. Damaged
  - iii. ■ Missing

\*Notification Build Out Required

- b. No
- c. ★ Duplicate
  - i. Duplicate Notification Number

if 'Are All Cotter Keys Visible?'

54. ■ Do Visible Cotter Keys Require Notification?

- a. Yes
  - i. Cotter Key Missing
  - ii. Cotter Key Backing Out

\*Notification Build Out Required

- b. No
- c. Unable to Determine
- d. Covered Cotter Keys

\*Notification Build Out NOT Required

55. ■ Do Pins Require Notification?

- a. Yes
  - i. Pin Backing Out
  - ii. Significant Corrosion
  - iii. Misaligned Insulator

\*Notification Build Out Required

- e. No
- f. Unable to Determine
- g. Covered Pins

\*Notification Build Out NOT Required

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Grounding/Other

if 'Overhead Shield/Optical/Ground Wire (OPGW/OHGW)'...

56. Does Shield Wire require notification?

*Examples: Signs of damaged strands, hardware, dampers, attachment points, loose tails, etc.*

- a. Yes
  - i. Damaged strands
  - ii. Hardware
  - iii. Dampers
  - iv. Attachment Points
  - v. Loose Tails

\*Notification Build Out Required
- b. No
- c. ★ Duplicate
  - i. Duplicate Notification Number

if 'Fault Return Conductor (FRC)'...

57. Does FRC require notification?

*Examples: Signs of damaged strands, hardware, attachment points, loose tails, etc.*

- a. Yes
  - i. Damaged Strands
  - ii. Hardware
  - iii. Attachment Points
  - iv. Loose Tails

\*Notification Build Out Required
- b. No
- c. Duplicate
  - i. Duplicate Notification Number

Footings/Foundations:

58. ★ Does the Footing/Base require a P3 notification?

*Examples: Erosion, Corrosion of the steel at the structure base, Exposed decay pocket at ground line where part of shell is gone*

- a. Yes
  - i. Erosion
  - ii. Buried Footing (excluding direct bury)
  - iii. Corrosion of the Steel at the Structure Base
  - iv. Exposed decay pocket at ground line where part of shell is gone
  - v. Unable to Determine
    - 5. No Access
    - 6. Property Owner
    - 7. Obstructed
    - 8. Brush Overgrown

\*Notification Build Out Required
- b. No
- c. Unable to Determine
  - i. No Access
  - ii. Property Owner

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- iii. Obstructed
- iv. Brush Overgrown
- h. Duplicate
  - i. Duplicate Notification Number

#### Vegetation Management

59. Is vegetation trimming or removal required to prevent contact above and/or below transmission conductor or equipment?

*Examples: Vines, branches, or foliage presenting an overhang or other imminent threat, Immediate danger concerning palm fronds falling or blowing into conductors, Vegetation arcing or in contact with energized conductor*

- a. Yes
  - ☐ Vines, branches, or foliage presenting an overhang or other imminent threat
  - ☐ Immediate danger concerning palm fronds falling or blowing into conductors
  - ☐ Vegetation arcing or in contact with energized conductor
  - ☐ Vegetation or trees (10ft or greater) encroaching on structure or underbuild

\*Notification Build Out Required

- b. No
- c. ★ Duplicate
  - i. Duplicate Notification Number

#### Transmission ROW

60. ★ Is a notification required for brush clearing?

*Examples: Access Road to Structure (do we need to take it out from both or just aerial), Pole/Footing Base, Anchors*

*Note: Anchors should be treated like structure bases for weed abatement/clearing*

- a. Yes
  - i. Access Road to Structure
  - ii. Pole/Footing Base
  - iii. Anchors

\*Notification Build Out NOT Required in GIS, will be created on backend

- b. No

#### Priority 1

61. Was a Priority 1 Notification identified during this inspection?

- a. Yes
  - i. Notification Number
- b. No

#### Inspection Form End

62. Work Status