

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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August 31, 2016

CA2016-015

Asia Powell
Manager - External Affairs
Frontier Communications
2535 Hillcrest Drive
Newbury Park, CA 91320

Subject: Audit of Frontier Communications' Elk Grove/Delta Exchange

Ms. Powell:

On behalf of the Electric Safety and Reliability Branch of the California Public Utilities Commission (CPUC), Jamie Lau of my staff conducted a Communication Infrastructure Provider (CIP) audit of Frontier Communications' Elk Grove/Delta Exchange from August 8, 2016, to August 11, 2016. The audit included a review of Frontier Communications' maintenance records and field inspections of the Elk Grove/Delta Exchange's facilities.

During audit, we identified violations of one or more General Orders (GOs). A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than October 3, 2016, by electronic or hard copy, of all corrective measures taken by Frontier to remedy and prevent such violations.

If you have any questions concerning this audit, please contact Jamie Lau at (415) 703-2233 or jamie.lau@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Fadi Day".

Fadi Day, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Enclosures: CPUC Audit Findings

Cc: Elizaveta Malashenko, Director, Safety and Enforcement Division, CPUC
Charlotte TerKeurst, Program Manager, Electric Safety and Reliability Branch, CPUC
Jamie Lau, P.E., Utilities Engineer, CPUC

AUDIT FINDINGS

I. Records Review

During the audit, my staff reviewed the following records:

- Open and completed work orders resulting from third-party notifications, trouble calls and inspections.
- Construction records and pole loading calculations.

II. Records Review – Violations List

GO 95, Rule 18-A1b, Resolution of Safety Hazards and General Order 95 Non-conformances, states:

Upon completion of the corrective action, the company's records shall show, with sufficient detail, the nature of the work, the date, and the identity of persons performing the work. These records shall be preserved by the company for at least ten (10) years and shall be made available to Commission staff upon 30 days notice.

The rule requires Frontier Communications (Frontier) to show completion dates for their work orders. I found Frontier completed the following works without recording their completion dates:

<i>Ref. Number</i>	<i>Date Reported</i>	<i>Description</i>	<i>Address</i>	<i>Completed By</i>
#1712	1/13/2015	Conduit exposed due to a missing handhole cover	353 Desert Forest Ct, Rio Vista	La Chapelle
#1791	3/9/2015	19 Spans of broken lashing wire	On Hwy 12, between Birds Landing Rd and Olsen Rd, Rio Vista	(No Name)
#1920	8/17/2015	7 Spans of broken lashing wire	On Hwy 113, between Hwy 12 and Flannery Rd, Rio Vista	Westech

GO 95, Rule 18-A2a, Resolution of Safety Hazards and General Order 95 Non-conformances, states:

All companies shall establish an auditable maintenance program for their facilities and lines. All companies must include a timeline for corrective actions to be taken following the identification of a Safety Hazard or nonconformances with General Order 95 on the company's facilities.

The auditable maintenance program shall prioritize corrective actions consistent with the priority levels set forth below and based on the following factors, as appropriate:

Frontier's maintenance program did not have any provision to prioritize corrective action as required by this rule.

GO 95, Rule 31.2, Inspections of Lines, states:

Lines shall be inspected frequently and thoroughly for the purpose of insuring that they are in good condition so as to conform with these rules. Lines temporarily out of service shall be inspected and maintained in such condition as not to create a hazard.

GO 95, Rule 80.1-A2, Statewide Inspection Requirements, states in part:

Each company shall prepare, follow, and modify as necessary, procedures for conducting patrol or detailed inspections for all of its Communication Lines throughout the State. Consistent with [Rule 31.2](#), the type, frequency and thoroughness of inspections shall be based upon the following factors:

- *Fire threat*
- *Proximity to overhead power line facilities*
- *Terrain*
- *Accessibility*
- *Location*

Outside of high fire-threat areas, Frontier does not inspect its overhead facilities frequently and thoroughly (on a periodic basis). Frontier only inspects its aerial lines when technicians arrive at a location for a trouble call. This procedure does not ensure all aerial lines are inspected frequently and thoroughly as required by the rules.

GO 128, Rule 17.2, Inspections, states:

Systems shall be inspected by the operator frequently and thoroughly for the purpose of insuring that they are in good condition and in conformance with all applicable requirements these rules.

Frontier does not inspect its underground systems frequently and thoroughly. Frontier only inspects its underground systems when technicians arrive at a location for a trouble call. This procedure does not ensure all underground systems are inspected frequently and thoroughly as required by the rule.

III. Field Inspection

The following are the facilities we inspected during the field inspection:

Structure Number	Type of Structure	Approximate Address
N/A (Not Available)	Frontier Owned Pole	6762 Flannery Rd, Suisun City
N/A	Joint Pole	6762 Flannery Rd, Suisun City
T364	Pedestal	6762 Flannery Rd, Suisun City
N/A	Joint Pole	On Hwy 113, 6 th Pole South of McCormack Rd, Rio Vista
N/A	Underground Handhole	353 Desert Forest Ct, Rio Vista
#17096	Pedestal	349 Desert Forest Ct, Rio Vista
#17098	Pedestal	333 Desert Forest Ct, Rio Vista
#17339	Pedestal	316 Cypress Dr, Rio Vista
N/A	Joint Pole	646 Hwy 12, Rio Vista
N/A	Joint Pole	314 River Rd, Rio Vista
JP-3 (Job Package)	Frontier Owned Pole	1000-1074 Church Rd, Rio Vista
JP-4 (Job Package)	Frontier Owned Pole	1000-1074 Church Rd, Rio Vista
JP-5 (Job Package)	Frontier Owned Pole	Corner of Church Rd and Harris Rd, Rio Vista
UD-076530	Joint Pole	9951 Pleasant Grove School Rd, Elk Grove
UD-058729	Joint Pole	9948 Pleasant Grove School Rd, Elk Grove
UD-058728	Joint Pole	9948 Pleasant Grove School Rd, Elk Grove
UD-138645	Joint Pole	9930 Pleasant Grove School Rd, Elk Grove
UD-066202/T16989	Joint Pole	6952 Mitchlen Ct, Sloughhouse
UD-045718/T3275	Joint Pole	10489 Alta Mesa Rd, Wilton
UD-045731	Joint Pole	10489 Alta Mesa Rd, Wilton
N/A	Joint Pole	10525 Colony Rd, Wilton
N/A	Pedestal	1301 Overland Way, Wilton
UD-077087/T17118	Joint Pole	8949 Mooney Rd, Elk Grove
UD-077089/T17119	Joint Pole	8930 Mooney Rd, Elk Grove
N/A	Joint Pole	10380 Calvine Rd, Sacramento
N/A	Pad-mounted "B-Box" (as known as service area interface)	China Lake Way, Sacramento
XT33600	Pad-mounted "B-Box"	On Auberry Dr, S/O Calvine Rd, Sacramento
T18461	Pedestal	8459 Modena Way, Elk Grove
UD-044309	Joint Pole	8666 West Stockton Blvd, Elk Grove
UD-044307/T836	Joint Pole	8668 West Stockton Blvd, Elk Grove
UD-038112	Joint Pole	Corner of Point Pleasant Rd and Fogg Rd, Elk Grove
UD-038110	Joint Pole	On Point Pleasant Rd, S/O Fogg Rd, Elk Grove
UD-038108	Joint Pole	On Point Pleasant Rd, S/O Fogg Rd, Elk Grove
N/A	Pedestal	3454 Point Pleasant Rd, Elk Grove
UD-087939	Joint Pole	3454 Point Pleasant Rd, Elk Grove
UD-038107	Joint Pole	3447 Point Pleasant Rd, Elk Grove

Field Inspection – Undocumented Violations List

We observed the following violations during the field inspection. None of these violations were documented and/or addressed by Frontier during its last inspections:

GO 95, Rule 31.1, Design, Construction, and Maintenance, states in part:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.

- Frontier’s construction practice requires a stepped joint pole to have detachable pole step mountings no less than 26 inches above the ground. The following stepped poles did not have a detachable pole step mounting:
 - Pole #UD-066202/T16989 at 6952 Mitchlen Court, Sloughhouse
 - Pole #UD-087939 at 3454 Point Pleasant Road, Elk Grove
- A lashing wire supporting a Frontier cable on Pole #UD-077089/T17119 at 8930 Mooney Road, Elk Grove, was broken.
- A lashing wire supporting a Frontier cable on the 6th Pole south of McCormack Road, on Highway 113, was broken.
- A lashing wire supporting a Frontier cable on Pole #UD-038110 at Point Pleasant Road, south of Fogg Road, Elk Grove, was broken.

GO 95, Rule 84.7-A, Climbing Space, states in part:

Climbing space shall be maintained on one side or quadrant of all poles or structures supporting communications conductors excepting at the level of the one pair of conductors attached to the pole below the lowest crossarm (Rules [84.4-C1c](#), [84.4-D1](#) and [87.4-C3](#)) and the top 3 feet of poles carrying communication conductors only which are attached directly to pole in accordance with the provisions of [Rule 84.4-C1c](#).

The following poles had their climbing space obstructed by Frontier’s cables:

- Pole at 6762 Flannery Rd, Suisun City
- Pole #UD-038107 at 3447 Point Pleasant Road, Elk Grove

GO 95, Rule 84.8-C1, Service Drops Clearance above Public Thoroughfares, states:

Above Public Thoroughfares: Vertical clearance shall not be less than 18 feet.

EXCEPTION: Not more than 12 feet horizontally from the curb line, the 18 foot clearance may be gradually reduced to not less than 16 feet at the curb line. In no case shall the clearance at the center line be less than 18 feet. Where there are no curbs, the foregoing provisions shall apply using the outer limits of normal longitudinal vehicular movement in lieu of a curb line.

A Frontier service drop crossed over a public thoroughfare and connected to 8930 Mooney Road, Elk Grove, had an above ground clearance of 15 feet and 2 inches at the curb line.

GO 95, Rule 84.8-C3b, Service Drops Clearance above Areas Accessible to Pedestrians Only, states in part:

Residential Premises: Over areas accessible to pedestrians only, the vertical clearance shall not be less than 10 feet.

A Frontier service drop crossed over a pedestrian-accessible- only residential area and connected to 8668 West Stockton, Elk Grove, had an above ground clearance of 9 feet and 3 inches.

GO 95, Rule 87.7-D1, Risers, states:

Covered from Ground Level to 8 Feet above the Ground:

Risers shall be protected from the ground level to a level not less than 8 feet above the ground by:

- a) Securely or effectively grounded iron or steel pipe (or other covering at least of equal strength). When metallic sheathed cable rising from underground non-metallic conduit is protected by metallic pipe or moulding, such pipe or moulding shall be effectively grounded as specified in Rule 21.4-A , or*
- b) Non-metallic conduit or rigid U-shaped moulding. Such conduit or moulding shall be of material as specified in Rule 22.8.*

The risers on the following poles had either broken, or inadequate cover that exposed the Frontier cables:

- Pole #066202/T16989 at 6952 Mitchlen Court, Sloughhouse
- Pole #UD-038107 at 3447 Point Pleasant Road, Elk Grove

GO 95, Rule 91.3-A1, Use of Steps, states in part:

Poles with Vertical Runs or Risers: All jointly used poles which support supply conductors shall be provided with pole steps if vertical runs or risers are attached to the surface of such poles.....

The following jointly used poles with vertical runs did not have pole steps:

- Pole at 6762 Flannery Rd, Suisun City
- Pole #UD-038107 at 3447 Point Pleasant Road, Elk Grove

GO 128, Rule 17.1, Design, Construction, and Maintenance, states in part:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

For all particulars not specified in these rules, design, construction, and maintenance should be done in accordance with accepted good practice for the given local conditions known at the time by those responsible for the design, construction, or maintenance of communication or supply lines and equipment.

- Pedestal #17096 at 349 Desert Forest Ct, Rio Vista was not securely locked.
- Pedestal #T1739 at 316 Cypress Drive, Rio Vista was detached from the ground exposing cables from within.
- A pad-mounted “B-box” at China Lake Way, Sacramento, had a dislodged door with a one-inch gap opening.
- Pedestal #T18462 at 8459 Modena Way, Elk Grove, was detached from the ground and leaning toward a residential driveway.

GO 128, Rule 17.8, Identification of Manholes, Handholes, Subsurface and Self-contained Surface-mounted Equipment Enclosures, states:

Manholes, handholes, subsurface and self-contained surface-mounted equipment enclosures shall be marked as to ownership to facilitate identification by persons authorized to work therein and by other persons performing work in their vicinity.

The following pedestals or pad-mounted equipment were not marked to ownership:

- Pedestal #T364 at 6762 Flannery Road, Suisun City
- Pedestal #17096 at 349 Desert Forest Court, Rio Vista
- Pedestal #17098 at 333 Desert Forest Court, Rio Vista
- Pedestal #T1739 at 316 Cypress Drive, Rio Vista

- Pedestal at 1301 Overland Way, Wilton
- Pedestal #T18461 at 8439 Modena Way, Elk Grove
- Pedestal #T18462 at 8459 Modena Way, Elk Grove
- Pedestal at 3454 Point Pleasant Road, Elk Grove