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ORA Project Mgr. : Ana Maria Johnson
ORA Expert : Dr. Ayat Osman
Witness



**Office of Ratepayer Advocates
California Public Utilities Commission**

**Office of Ratepayer Advocates Testimony and
Recommendations Regarding Service Quality on
Voice Services**

-PUBLIC-

San Francisco, California
July 28, 2015

MEMORANDUM

This report was prepared by Dr. Ayat Osman of the Communications & Water Policy Branch of the Office of Ratepayer Advocated (ORA) under the general supervision of Program & Project Supervisor, Ana Maria Johnson. ORA is represented in this proceeding by legal counsel, Lindsay Brown.

A statement of qualifications of Dr. Ayat Osman is presented in Attachment A to this testimony.

This testimony is comprised of the following sections:

- Executive Summary-** provides a summary of key findings and recommendations
- Introduction—**provides a brief synopsis of the Joint Applicants’ services and their current and future plans to address service quality for customers in California.
- Chapter 1 Voice Services Reliability and Outages in California-**provides an analysis of voice service outages in recent years, related to voice services provided by the Joint Applicants in California.
- G.O. 133-C Out of Service Repair Intervals-**provide a summary of the Joint Applicants results on the CPUC service quality rules on Out of Service Repair Intervals
- Chapter 2 Provision of Voice Services-** provides a summary of the Joint Applicants results on service quality metrics pertaining to provisioning of voice services
- Chapter 3 Customer Complaints-**provides a summary of customer complaints on the Joint Applicants’ services in recent years in California.

Given the expedited schedule of this proceeding, ORA prioritized its analysis and recommendations in preparing this testimony. The absence from this report of analysis or recommendations on any particular item contained within the Application, the proceeding’s Scoping Ruling, and/or data request responses, may be addressed during Joint Supplemental Testimony currently scheduled for September 1, 2015 and Reply Supplemental Testimony on September 8, 2015.

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1 **EXECUTIVE SUMMARY**

2 On March 18, 2015, Frontier Communications Corporation (Frontier), Frontier
3 Communications of America, Inc. (U 5429 C) (“Frontier America”), Verizon California
4 Inc. (U 1002 C) (Verizon California), Verizon Long Distance, LLC (U 5732 C) (Verizon
5 LD), and Newco West Holdings LLC (collectively, Joint Applicants) filed an application
6 seeking approval from California Public Utilities Commission (Commission or CPUC)
7 for the sale and transfer of Verizon California, and Verizon LD’s customer account in
8 Verizon California’s service territory to Frontier. If the transaction is approved, Verizon
9 California’s physical assets will be transferred to Frontier and approximately 2.2 million
10 customers of Verizon California will become customers of Frontier.

11 This testimony discusses the analysis conducted on how the proposed transaction of
12 the Joint Applicants will impact the quality and reliability of voice services, both
13 traditional circuit switched plain old telephone service (POTS) and Voice over Internet
14 Protocol (VoIP).¹ After examining the Application, testimony filed by Verizon’s
15 Witness, Timothy McCallion, and Frontier Witnesses, Melinda White and Michael
16 Golob, as well as, data responses to ORA’s data requests, the Commission should adopt a
17 number of mitigating measures identified below as a condition of approving the proposed
18 transaction to ensure that California consumers receive reliable voice service. The
19 following is a summary of ORA’s key findings and recommendations.

20

¹ I am informed by counsel that the CPUC has jurisdiction, and in fact, must review the impact of this Transaction on the reasonable timely deployment of VoIP services and take regulatory action where necessary pursuant to Section 706(a) of the 1996 Telecommunications Act and Section 710(a) of the Public Utilities Code.

1 **A. Key Findings**

2 **1. The Joint Applicants Did Not Meet the CPUC’s Standards on**
3 **Service Repairs and Answer Time in 2014**

- 4 • Public utility telephone corporations in the State of California are required to
5 meet minimum standards for service repairs, referred to as *Out of Service*
6 (*OOS*) *Repair Intervals*, of 90% of repair tickets restored within 24 hours.²
7 Both Frontier and Verizon *did not meet* the minimum standards for OOS
8 Repair Intervals in 2014; Frontier averaged at 83% and Verizon averaged at
9 68%. Refer to Chapter 1 (A) for further details.
- 10 • Telephone corporations in California are also required to meet answer time
11 standards for trouble reports, billing and non-billing inquiries, where a live
12 agent/service representative is to answer 80% of calls within 60 seconds.
13 Both Frontier and Verizon *did not meet* the minimum standards for answer
14 time in 2014; Frontier averaged at 74% and Verizon averaged at 64%.

15 **2. Verizon Reported Considerable Number of Major Service**
16 **Outages in California**

- 17 • Verizon reported a total of [REDACTED] major outages, that met the Federal
18 Communications Commission (FCC) Network Outage Reporting System
19 (NORS) reporting criteria, during the 2010-2014 period; whereas, Frontier
20 reported a total of [REDACTED] outages in the period covering 2011, 2013 and 2014.
21 Frontier did not report any major outages in 2010 and 2012.³
- 22 • The majority of Verizon’s California reported major outages, during the
23 2010-2014 period, occurred in [REDACTED] County and [REDACTED]

² CPUC’s current service quality rules are codified in General Order (G.O.) 133-C.

³ Refer to Chapter 1 for the FCC’s NORS reporting criteria of major outages.

1 County. The largest number of major outages in ██████████ County
2 occurred in the cities of ██████████ In ██████████

3 ██████████ County, the largest number of major outages occurred in
4 ██████████

5 • Verizon’s maximum major outage durations ranged between ██████████
6 ██████████ whereas Frontier’s maximum major outage durations
7 ranged between ██████████

8 • In years 2010 through 2014, the majority of Verizon’s reported major
9 outages occurred due to failure in ██████████ network versus other
10 companies’ networks, ██████████
11 ██████████. Most of the major outages that occurred in ██████████
12 network, ██████████ outages or about ██████████ took place inside buildings (owned,
13 leased, or otherwise controlled by ██████████ versus ██████████ outages in outside
14 plant.⁴

15 • The primary root cause of the major outages in Verizon’s network was
16 ██████████ which occurred ██████████
17 ██████████ was the second main root cause of major outages in Verizon’s
18 network, which occurred mostly in ██████████

19 • Although Verizon’s outages that did not meet the FCC NORS outage
20 reporting criteria ██████████ that of Frontier’s in the years 2011 through 2014,
21 Frontier’s number of outages per 1000 lines was ██████████ than Verizon’s
22 during that period, refer to Figure 20. In 2014, Frontier’s number of outages
23 per 1000 lines ██████████ was ██████████ that of Verizon’s ██████████ Also, in 2014,
24 Frontier’s average outage duration was about ██████████ whereas Verizon’s
25 average outage duration was about ██████████

26 For additional details on Frontier’s and Verizon’s FCC major outages, see Chapter 1.

⁴ FCC NORS reporting requirements specify that reporting entities indicate whether the outage occurred inside building owned, leased, or otherwise controlled by the reporting entity. A building is a structure that is temperature controlled. http://www.fcc.gov/pshs/outage/nors_manual.pdf

1 **3. Findings on Service Provisioning**

- 2 • Verizon California, Citizens Telecommunication Company of California
3 (*dba* Frontier California), and Frontier Communication of the South West
4 (*dba* Frontier Southwest), which are Uniform Regulatory Framework (URF)
5 Incumbent Local Exchange Carriers (ILECs), do not currently report G.O.
6 133 measures for installation intervals and installation commitment met. The
7 standard for telephone service installation interval is five business days, and
8 the standard for installation commitment met is 95%. Frontier
9 Communication West Coast, which is a General Rate Case (GRC) ILEC,
10 reports on these rules.
- 11 • Based on the response to ORA’s data request, Verizon’s average service
12 installation intervals in 2014 was [REDACTED] calendar days for copper voice and
13 VoIP services, and [REDACTED] calendar days for Fiber to the Premise (FTTP)
14 voice.⁵ Frontier [REDACTED] the service installation interval standard of five
15 business days in the years 2011 through 2014. Based on average annual
16 results, Frontier [REDACTED] the installation commitment standard of 95% for the
17 years 2013 and 2014 but slightly [REDACTED] the standard in 2011 and 2012.
- 18 • Verizon identified multiple service quality metrics that it tracks at a
19 company level (other than the three metrics that it currently reports to the
20 CPUC under G.O. 133-C service quality rules). Verizon metrics applies to
21 core voice services (copper voice), FiOS service (FTTP voice and/or VoIP).
22 Verizon tracks these metrics for services that require dispatch and those that
23 do not. Verizon’s service quality metrics include metrics on: customer
24 trouble reports and repeat trouble reports, repair tickets (out of service and
25 service affecting), repair commitments, Mean Time to Repair (MTTR), and
26 provisioning and installation commitments. Verizon did not identify internal

⁵ Verizon did not provide service installation intervals in business days and did not provide the installation commitment met for the years 2010 through 2014. Verizon did not provide the service installation intervals for the years 2010 through 2013. As such it is not feasible for ORA to determine if Verizon’s provisioning service have improved or deteriorated from prior years.

standards that it applies to these metrics. Key results on Verizon’s company specific service quality metrics are given in Chapter 2 (C).

4. Frontier’s Customer Complaints per 1000 Lines Exceeded Verizon’s in California

- In 2014, Frontier’s customer complaints per 1000 lines were almost [REDACTED] that of Verizon’s.

B. Summary of Recommendations

Approval of this transaction should not be granted without conditions requiring Frontier to meet specific targets for improving service quality and reliability of voice services, and including vigilant monitoring of service quality measurements and customer satisfaction performance outcomes.

Given that Frontier will acquire a much larger number of new customers, including traditional wireline copper voice, FTTP FiOS voice, Voice over Internet Protocol (VoIP) and large businesses customers, the Commission should ensure that post-transaction the new Frontier will maintain or improve the quality of services to California customers.

The Commission should adopt the following conditions:

1. Frontier Should Implement a Multi-Year Strategic Plan

If the Commission approves the Transaction, it should ensure California has access to high-quality, reliable voice services by requiring Frontier to devise and implement a multi-year Strategic Plan. Frontier should submit to the Commission and the ORA a multi-year Strategic Plan by no later than October 31, 2015 with the specific plans for improving voice (traditional copper voice, FiOS voice, and VoIP) service quality, reliability, and availability throughout its new California service area. More specifically, the Strategic Plan is to include the following:

- a. Specific plans, including the specific types of network upgrades needed, to improve reliable and safe voice services in the following counties:

- Los Angeles County
- San Bernardino County

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- Riverside County

- b. The Strategic Plan shall include at minimum the following components:
- i. Goals: general goal articulating the desired outcome.
 - ii. Objectives: for each goal identify specific objectives that meet the S.M.A.R.T criteria: Specific, Measurable, Achievable, Realistic and Time-bound.
 - iii. Follows are examples of goals and objectives:
 - Goal (1):** Improve service reliability and access to E-911 service in Los Angeles County, San Bernardino County and Riverside County.
 - Objective (1):** By September of 2016, complete the assessment and identify the remaining useful life of critical components of outside plant and Verizon’s buildings associated with major outages in Los Angeles County, San Bernardino County and Riverside County.
 - Objective (2):** By April of 2017, replace “x” number of base units, and “y” number of remote switches, etc. in Los Angeles County.
 - Objective (3):** By September of 2017, renovate the following types of outside plant: “x” number of conduits, “y” number of vaults, “z” number of pedestals and/or cabinets, and “t” number of poles, in the cities of M, N, and L in Los Angeles County.
 - iv. Specific goals and objectives to address outages (including, impacts-user-minutes/DS3-minutes, durations, and affected users) pertaining to Frontier’s wireline and VoIP services in California the following FCC’s categories:
 - 1350 DS3-minutes outages
 - E-911 outage

- 1 o 900,000 user-minutes/VoIP-minutes outages
- 2 o Blocked Calls
- 3 v. Specific goals and objectives to improve and meet on G.O. 133-C
- 4 standards of 90% of Out of Service Trouble Reports to be restored
- 5 within 24 hours.

6 **2. Frontier Should Provide an Annual Report to the CPUC and**
7 **ORA for a Period of Five Years**

8 For a period of five years, with year one due one year from the date of CPUC
9 approval of the Transaction, Frontier should provide the Commission and ORA with an
10 annual report detailing:

- 11 a. Frontier’s capital expenditures related to planned actions on condition number
12 (1) above. Frontier should include in the report a comparison of the amount of
13 planned California capital expenditures as a percentage of total system
14 expenditures and a comparison of the amount of capital expenditures per
15 working line in California.
- 16 b. Performance metrics quantifying the desired outcome of each objective
17 identified in condition number 1 (a).

18 **3. Frontier Should Report on VoIP Major Outages**

19 Frontier should provide a copy of Federal Communications Commission (FCC)
20 Network Outage Reporting System (NORS) reports for VoIP services to the Commission
21 and ORA concurrent with such filing with the FCC.

22 **4. Frontier Should Report on Outages that Do Not Meet the FCC**
23 **NORS Reporting Criteria**

24 For a period of five years, Frontier should meet the following voice services
25 outage performance metric and report to the Commission and ORA, outages that do not
26 meet the FCC NORS outage reporting requirement for voice services (traditional copper
27 voice, FiOS voice (non-VoIP and VoIP)):

- 1 a. Performance Metric: The number of outages that do not meet the FCC
- 2 NORS reporting requirements should not exceed 0.5 outages per 1,000
- 3 lines per year
- 4 b. Reporting Requirement:
 - 5 i. Type of service: Type of service: copper voice, FiOS voice (non-VoIP),
 - 6 and/or VoIP
 - 7 ii. Number of customers affected
 - 8 iii. Type of customers affected: residential/business
 - 9 iv. Incident Date
 - 10 v. Incident Time
 - 11 vi. Duration of outage in hours and minutes
 - 12 vii. Outage restoration time
 - 13 viii. Whether the outage was due to failure in Frontier’s network or other
 - 14 companies’ network
 - 15 ix. Whether the outage occurred inside Frontier’s buildings (owned,
 - 16 leased, or otherwise controlled by Frontier) or outside plant
 - 17 x. Location of outage
 - 18 xi. Equipment failed
 - 19 xii. Network involved
 - 20 xiii. Affected E911/911
 - 21 xiv. Description of the Cause
 - 22 xv. Description of the Root cause
 - 23 xvi. Description of the incident
 - 24 xvii. Methods used to restore the outage
 - 25 xviii. Steps taken to prevent the outage from re-occurring

26 **5. Frontier Should Report on Service Provisioning Metrics**

27 For a period of five years, Frontier should provide to the Commission and ORA, on a
 28 quarterly basis the following service quality metrics for voice services:

- 29 a. Traditional Voice Copper Service and FiOS voice (non-VoIP):
 - 30 i. Installation Interval
 - 31 ii. Installation Commitments
- 32 b. VoIP services:
 - 33 i. Installation Intervals
 - 34 ii. Installation Commitment Met

- 1 iii. Customer Trouble Reports
- 2 iv. Out of Service Repair Intervals
- 3 v. Answer-time for Trouble Reports
- 4 vi. Billing and Non-Billing Inquiries
- 5 vii. Recurring Trouble Reports by the same customer after closing
- 6 of an initial trouble report

7 **6. Frontier Should Report on Verizon’s Service Quality Metrics**

8 For a period of five years, Frontier should report to the Commission and ORA, as
9 well as improve on Verizon’s current voice service performance metrics as follows:

- 10 a. At a minimum, track the 39 different metrics that Verizon currently uses to
11 assess the quality of its voice services. See Attachment B for a list and
12 description of these metrics.
- 13 b. Frontier should improve performance on the following voice services
14 metrics for traditional copper voice, FTTP voice (non-VoIP) and VoIP
15 services:
- 16 c. Out of Service Repair Tickets (OOS) cleared within 24-hours
 - 17 i. Service Affecting but Not Out of Service (NOOS), cleared within 24-
18 hours.
 - 19 ii. Percentage Repeats < 7 days: Percentage of customer who report a
20 second problem within 7-days of a prior cleared trouble report.
 - 21 iii. Mean Time to Repair (MTTR)
 - 22 iv. Percentage Commitment Met: the percentage of installations that were
23 cleared on or before the date/time promised.
 - 24 v. Percentage Repair Commitment: the percentage of trouble reports that
25 were cleared on or before the date/time promised.

26 **7. Frontier Should Report on Customer Complaints**

27 For a period of five years, Frontier should meet the following complaint performance
28 metric and provide to the Commission and ORA, on a quarterly basis customer
29 complaints for voice services including traditional copper voice, and FiOS voice (non-
30 VoIP and VoIP):

- 31 a. Performance Metric: The number of complaints should not exceed 1.75
32 complaints per 1,000 lines.
- 33 b. Reporting Requirement:

- 1 i. Type of Customer: residential/business
- 2 ii. Type of Service: copper voice, FTTP voice and VoIP
- 3 iii. Type of Complaint Categories: billing (identify type of billing
- 4 complaints, such as unauthorized charges, disconnection, rate protest),
- 5 access to 911/emergency services, delayed orders/missed
- 6 appointments, number portability, operator service, refusal to service,
- 7 service outages, call quality (i.e. service conditions that affect or
- 8 prevent the quality of service provided such as static and noise)
- 9 iv. Resolution time for a complaint
- 10 v. Date of Complaint
- 11 vi. Location
- 12 vii. Recurring complaints by the same customer after closing of an initial
- 13 complaint

14 **8. Frontier Should Fund an Independent Survey Consultant to**
15 **Measure Customer Satisfaction in California**

16 Frontier should pay for the cost of an independent consult, selected, directed, and
17 managed by ORA, to design and conduct a multi-lingual customer satisfaction survey.
18 The survey would be conducted over a 36 month period, and designed to measure
19 customer satisfaction for voices services (including, traditional wireline copper voice,
20 FTTP FiOS voice, and VoIP customers), and to measure the effectiveness of efforts to
21 educate customers on the limitations of VoIP during power outages and the necessity for
22 maintaining battery back-up. Over the 36 month period, the independent consultant (with
23 ORA) would then issue quarterly reports to the CPUC detailing the results of the survey.
24 These quarterly reports would provide the Frontier and the CPUC with the ability to
25 detect trends and identify and address problems early.

26

1 **OVERVIEW AND POLICY**

2 **A. Introduction**

3 The July 02, 2015 Amended Scoping Ruling of Assigned Commissioner Sandoval
4 (Scoping Ruling) seeks to determine, among other issues, how the Joint Applicants’
5 proposed transaction (filed at the Commission on March 18, 2015) will impact the quality
6 and reliability of the services in California. This report addresses the impact of the
7 proposed transaction on the quality and reliability of voice services California consumers
8 obtain from the Joint Applicants.

9 **B. Discussion**

10 As of December of 2014, Frontier operated a total of 106,765 working telephone
11 lines (residential and small business) in California. Frontier’s number of California
12 working lines has decreased by 35,778 or 25% between 2010 and 2014.⁶ Frontier stated
13 that currently it has very few commercial VoIP customers in California.⁷ Frontier
14 indicated that [REDACTED]

15 [REDACTED]⁸

16 As of December 2014, the majority of Frontier’s customers were located in Northern
17 California.⁹ In its response to ORA data request, Verizon stated that it offers [REDACTED]

⁶ Telecommunications carriers’ service quality reports (2010-2014)
[http://www.cpuc.ca.gov/PUC/Telco/Consumer+Information/Telecommunications+Service+Quality+Rep
orts.htm](http://www.cpuc.ca.gov/PUC/Telco/Consumer+Information/Telecommunications+Service+Quality+Reports.htm)

⁷ Frontier has [REDACTED] commercial VoIP customers. See Frontier Confidential Response to ORA Meet and Confer Letter dated July 6, 2015.

⁸ *Ibid.*

⁹ Frontier’s customers are mostly located in [REDACTED]
[REDACTED] of Frontier’s customers. About [REDACTED] of Frontier’s
customers were located in three counties in Southern California: [REDACTED]
[REDACTED]

1 [REDACTED]
2 [REDACTED]¹⁰ Verizon also offers
3 VoIP services and traditional copper voice services.

4 Figure 1 shows Verizon's number of working lines for both residential and non-
5 residential customers, including copper voice lines, FiOS Voice (non-VoIP), and FiOS
6 VoIP lines, in the years 2011 through 2014.¹¹ As of December 2014, Verizon had about
7 [REDACTED] working lines, including copper voice, FiOS voice and FiOS VoIP lines. The
8 majority of Verizon's working lines in 2014 were [REDACTED]

9 [REDACTED]
10 [REDACTED]

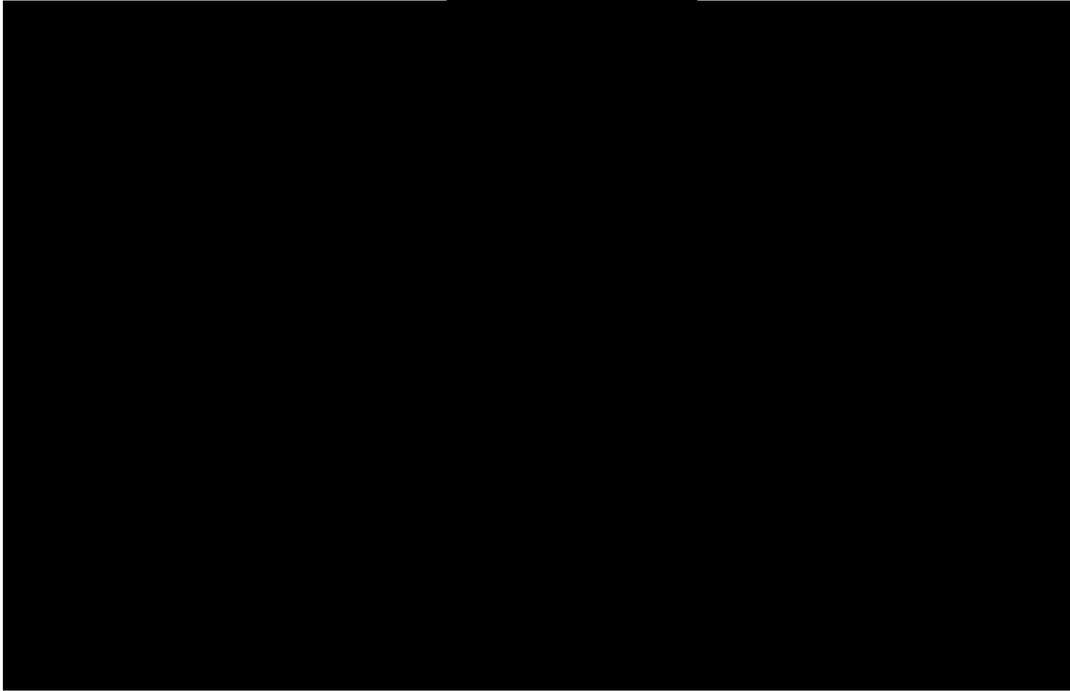
11 The number of Verizon's copper lines dropped from approximately [REDACTED]
12 [REDACTED] The number of FiOS Voice (non-
13 VoIP) lines also decreased by [REDACTED]
14 On the other hand, the number of FiOS VoIP lines almost doubled, from about [REDACTED]
15 [REDACTED]

¹⁰ Verizon Confidential Response to ORA Letter dated July 6, 2015.

¹¹ Verizon Confidential Response to ORA DR 004 [A. 15-03-005], Question No. 13.

Figure 1: Verizon's Voice and VoIP Working Lines (2011-2014)

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Figure 2 shows Verizon's residential and non-residential FiOS Voice (non-VoIP) working lines for the years 2011 through 2014. The number of working lines for residential FiOS voice services was consistently [redacted] than business FiOS voice services, in the years 2011 through 2014.¹²

¹² As of December 2014, Verizon had [redacted] residential FiOS voice working lines and [redacted] business FiOS voice lines. However, the number of residential FiOS voice [redacted] whereas, the number of non-residential FiOS voice line more than [redacted]

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Figure 2: Verizon's FiOS Voice (non-VoIP) Working Lines (2011-2014)



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5 Figure 3 shows Verizon's residential and non-residential copper voice working lines
6 for the years 2011 through 2014. The number of non-residential copper voice working
7 lines was slightly [redacted] for copper voice services, in the years 2011 through 2014.¹³

¹³ As of December 2014, Verizon had [redacted] residential copper voice working lines and [redacted] business lines. The number of residential copper voice lines decreased by [redacted]. The number of non-residential copper lines [redacted].

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Figure 3: Verizon's Copper Voice Working Lines (2011-2014)



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Verizon's VoIP customers are primarily [redacted]. The number of residential VoIP working lines has more than [redacted] [redacted], refer to Figure 4.¹⁴

¹⁴ Verizon had only [redacted] non-residential VoIP lines in 2014.

Figure 4: Verizon's VoIP Working Lines (2011-2014)



In 2014, about [REDACTED] of Verizon's voice customers (voice and VoIP) were located in Southern California.¹⁵ The remaining [REDACTED] of Verizon's subscribers were spread amongst over 17 counties in Northern California. Verizon's VoIP subscribers, mostly [REDACTED] customers, accounted for about [REDACTED] of total voice services.¹⁶

In their Application, the Joint Applicants assert that the Transaction satisfies Section 854 (c) (2) requirements. Frontier makes a number of claims that "customer service will not be discontinued or interrupted as a result of the Transaction and Frontier will integrate the acquired operations with Frontier's tested and proven systems."¹⁷ The Application along with Frontier's testimony (by Michael Golob) on service quality point to items related to applying its local engagement model in the Verizon California

¹⁵ Verizon's the highest concentration of voice and VoIP customers are in [REDACTED]
[REDACTED] FCC Form 477, 2014 data

¹⁶ Verizon's VoIP customers are mostly located [REDACTED]
[REDACTED]. *Ibid*

¹⁷ A. 15-03-005, pages 29-31.

1 territories, which includes expanded customer service hours, shorter scheduling windows
2 for in-home appointments, and call reminders and follow-up calls for service
3 appointments. In addition, Frontier indicated that it intends to explore ways to improve
4 customer satisfaction by providing self-help guides, expanded on-line chat, and
5 implementing more refined customer feedback processes.¹⁸

6 Verizon’s current plans to improve service quality and reliability include various
7 initiatives to [REDACTED]
8 [REDACTED]
9 [REDACTED].¹⁹

10 Frontier claims that some of the activities it has implemented to improve the quality
11 of service to its current customers include: implementation of maintenance projects to
12 repair and replace network facilities and improve the quality of the network. In addition,
13 to these activities, Frontier’s testimony references improvements on VoIP services
14 including: [REDACTED]

15 [REDACTED]”²⁰ Frontier indicated that [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED].²¹

19 Frontier stated that it will continue to seek opportunities, including the California
20 Advanced Services Fund (“CASF”) program and the Federal Connect America Fund
21 (“CAF”), to expand broadband offerings to more customers and increase the speed and
22 bandwidth capabilities in underserved areas in the Verizon California service territory.
23 Frontier indicated that that network enhancements related to expanded deployment of
24 broadband such as augmented interoffice capacity and deploying fiber distribution

¹⁸ *Ibid.*

¹⁹ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 35.

²⁰ Michael P. Golob Testimony, page 22.

²¹ Frontier Confidential Response to ORA DR 002 [A. 15-03-005], No. 32.

1 facilities closer to the premises will also improve the network capacity to provide
2 improved voice services.

3 Based on consumer testimonials heard in the latest Public Participation
4 Hearing's (PPHs) on this proceeding, it is apparent that Verizon has neglected to
5 maintain its network. Consumers in Northern California have reported a number of
6 complaints relating crosstalk, static on calls, as well as dropped calls.²² For example,
7 customers at the recent PPHs have stated:

8 When I moved over to housing, you could pick up the phone
9 and hear other people talking on the line. You can actually
10 hear the conversations going on between two people. I went as
11 far as telling them, hey, when you get done with the phone,
12 call me back so I can make my phone call, please. It is a
13 common thing to be happening locally here. It is kind of
14 ridiculous when you can't make a phone call out of your own
15 house.

16 The other problems we have are things -- it is really super hard
17 to hear, because static, or when you are talking all of a sudden
18 the person can't hear you. You can hear them, and then back
19 and forth you can't hear each other.²³

20 The other thing I want to speak to is emergency services. It is
21 a real problem out here. I'm speaking to the -- for the volunteer
22 fire department. Our 911 service is abysmal. It is often
23 nonexistence. We've had some really critical situations where
24 911 was not available. There is to dial tone, or we get sent to
25 Redding. How did that happen? That just shouldn't happen.²⁴
26 ...

27 For another thing, there is very poor service. For example, I
28 often have to redial repeatedly, maybe even five or six times,
29 to get a line that is free enough of static to be able to connect
30 to the Internet. Some of their lines are quite clear, and why
31 others are full of static is never really clear. Clearly, they are

²² Reporter's Transcript (RT), Orleans PPH, July 8, 2015, Vol. 4.

²³ Reporter's Transcript (RT), Orleans PPH, July 8, 2015, Vol. 4 at 169.

²⁴ RT, Orleans PPH, July 8, 2015, pp. 155-233 at 184.

1 not maintaining them correctly. And you can even tell them
2 these things, there is no mechanism to easily report these.²⁵

3 Moreover, on July 23, 2015, the Communications Workers of America (CWA)
4 issued a motion to add to the record a number of photos showing Verizon's plan in the
5 Rancho Mirage PPH area showing equipment and wires exposed.²⁶

6 The claims made by Frontier and Verizon to maintain or improve service quality and
7 reliability are highly questionable based on the data analysis conducted on both
8 companies and, in particular, the deteriorating condition of Verizon's wireline network.
9 Approval of this transaction should not be granted without conditions requiring Frontier
10 to meet specific targets for improving service quality and reliability, and requiring an
11 independent, vigilant monitoring and measurement of service quality and reliability and
12 customer satisfaction performance outcomes.

13 The following chapters in this testimony include findings on:

- 14 • Major outages submitted by the Joint Applicants to the FCC, as well as
15 outages that did not meet the FCC outage reporting criteria for the years
16 2010 through 2014 (Chapter 1);
- 17 • Summary of the Joint Applicants' results of G.O. 133-C on Out of Service
18 Repair Intervals for the years 2010 through 2014 (Chapter 1);
- 19 • Summary of the Joint Applicants results on service quality metrics
20 pertaining to provisioning of voice services (Chapter 2);
- 21 • Summary of customer complaints on the Joint Applicants' services in recent
22 years in California (Chapter 3); and
- 23 • Sections on summary of findings and recommended conditions (Chapters 1-
24 3).

²⁵ RT, Garberville PPH, July 6, 2015 at 25.

²⁶ See Attachment G for evidence provided by CWA.

1 **CHAPTER 1: SERVICE RELIABILITY AND OUTAGES-VOICE SERVICES**

2 Service outages provide critical measures of service reliability and the degree of risk
3 to public health and safety. To gain an understanding of the current level of the Joint
4 Applicant’s network conditions and service reliability as it pertains to traditional wireline
5 voice services and VoIP services in California, ORA requested the Joint Applicants’
6 voice service outage data for the period between January 2010 and December 2014.

7 Under General Order (G.O.) 133-C, telecommunication service providers in
8 California are required to report Out of Service (OOS) Repair Intervals on quarterly
9 basis. The minimum standard for OOS Repair Intervals is 90% of repair tickets to be
10 restored within 24-hours. G.O. 133-C OOS Repair Intervals reporting requirements allow
11 carriers to exclude repair tickets that are delayed to “circumstances beyond the carrier’s
12 control,” including but not limited to outages caused by cable theft, third-party cable cut,
13 lack of premise access, customer requested appointment, as well as, widespread outages
14 (affecting at least 3% of the carrier’s customers in the state) and catastrophic events (a
15 declaration of emergency by a federal or state authority).

16 Apart from the limited category of outages reported under G.O. 133-C, the CPUC
17 has not established specific standards, reporting requirements and/or enforcement
18 strategies to address major service outages. Instead, the only requirement for
19 telecommunication carriers, which applies to all facilities-based certified and registered
20 public utility telephone corporations, is to provide copies of their FCC NORS reports to
21 the CPUC.

22 Currently, VoIP service providers in California are not required to submit the FCC
23 NORS reports to the CPUC.²⁷

24 The FCC has established rules requiring communication service providers to report
25 certain disruptions to their network depending on the type of communication, duration of
26 the outage, and the number of affected users (FCC NORS reports). The FCC uses such

²⁷ My legal counsel advises me that the CPUC has the authority to require VoIP providers to provide NORS reports to the CPUC.

1 information to analyze communication vulnerabilities and share aggregate information
2 with industry to help prevent future outages and preserve network integrity. Table 1
3 shows a summary of FCC’s outage reporting requirements for wireline voice and
4 interconnected VoIP service providers.

5 **Table 1: FCC NORS Reporting Requirements for Wireline and Interconnected**
6 **VoIP Service Providers**

Wireline

All wireline communications providers to submit electronic notification to the FCC within 120-minutes of discovering that they have experiences on any facilities that they own, operate, lease, or otherwise utilize, an outage of 30-minutes duration that:

- Potentially affects at least 900,000 user minutes of either telephony or paging;
- Affects at least 1,350 DS3* minutes;
- Potentially affects any special offices and facilities;²⁸
- Potentially affects a 911 special facility²⁹, in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 911 facility as the provider’s contact person for information that may be useful to the management of the affected facility in mitigating the effects of the outage on efforts to communication with the facility.

Wireline communications service providers are required to submit electronically Initial Communications Outage Reports to the FCC, no later than 72 hours of discovering the outage. They are also required to submit electronically a Final Communications Outage Report no later than 30-days of discovering the outage. If after discovering an outage, and after filing a Notification and/or an Initial Report, the service provider determines that the outage did not meet the reporting criteria, the service provider must submit electronically a Withdrawn Report.

²⁸ See 47 C.F.R. §4.5 (b) Special offices and facilities are defined as major military installations, key government facilities, nuclear power plants, and those airports that are listed as current primary (PR), commercial service (CM), and reliever (RL) airports in the FAA's National Plan of Integrated Airports Systems (NPIAS) (as issued at least one calendar year prior to the outage). The member agencies of the National Communications System (NCS) will determine which of their locations are “major military installations” and “key government facilities.”

²⁹ See 47 C.F.R. §4.5 (e) An outage that potentially affects a 911 special facility occurs whenever: (1) There is a loss of communications to PSAP(s) potentially affecting at **least 900,000 user-minutes** and: The failure is neither at the PSAP(s) nor on the premises of the PSAP(s); no reroute for all end users was available; and the outage lasts 30 minutes or more; or (2) There is a loss of 911 call processing capabilities in one or more E-911 tandems/selective routers for at least 30 minutes duration; or (3) One or more end-office or MSC switches or host/remote clusters is isolated from 911 service for at least 30 minutes and potentially affects at least 900,000 user-minutes; or (4) There is a loss of ANI/ALI (associated name and location information) and/or a failure of location determination equipment, including Phase II equipment, for at least 30 minutes and potentially affecting at least 900,000 user-minutes (provided that the ANI/ALI or location determination equipment was then currently deployed and in use, and the failure is neither at the PSAP(s) or on the premises of the PSAP(s)).

Interconnected VoIP

All interconnected VoIP service providers who experience an outage of at least 30 minutes duration on any facilities that they own, operate, lease, or otherwise utilize, to submit electronically a Notification to the FCC:

- Within 240 minutes of discovering the outage that potentially affects 911 Special Facility,
- Within 24 hours of discovering the outage that potentially affects at least 900,000 user minutes of interconnected VoIP service and results in complete loss of service; or
- affects any special offices and facilities

Interconnected VoIP service providers are also required to submit electronically a Final Communications Outage Report no later than 30-days of discovering the outage. If after discovering an outage, and after filing a Notification and/or an Initial Report, the service provider determines that the outage did not meet the reporting criteria, the service provider must submit electronically a Withdrawn Report.

*A DS3 is a network connection that transmits digital signals at a rate of 44.736 megabits per second. A DS3 is the equivalent to 28 T1 lines, or 672 standard phone lines. Large businesses, including service providers, such as Local Exchange Carriers (LECs), Competitive Local Exchange Carriers (CLECs), Interexchange Carriers (IXCs), and Wireless companies might purchase DS3 lines from a service provider to support a high capacity data and voice services to connect many end users to the Internet or a private network.

1 ORA requested from the Joint Applicants NORS outage reports that they submitted
2 to the FCC for the years 2010 through 2014. ORA also requested outage reports tracked
3 at the company level, that did not meet the FCC's NORS requirement, given that the
4 FCC's reporting threshold for outages is typically too high to capture most of the outages
5 that occur in areas with smaller population (unless the outage duration is extensive). The
6 FCC's NORS outage threshold for wireline services is 900,000 user-minutes, which is the
7 equivalent to a 30-minute outage affecting 30,000 users. Thus, a community of 625 users
8 had to sustain an outage for 24-hours (1440 minutes) to meet the FCC's NORS reporting
9 threshold.

10 To assess the FCC NORS outages, ORA aggregated the outage data as follows:

- 11 • Outage locations to understand the locations where customers are
12 experiencing unreliable service. Note that the FCC outage reports only
13 contain the city locations. ORA mapped the cities to counties to assess the
14 number of outages at a county level.
- 15 • Outages that resulted from failure in the reporting entity's network versus
16 those occurring in other companies' network. For example, when Verizon

1 reports an outage, it would indicate whether the outage occurred in its
2 network or in another company's network.

- 3 • Outage site to assess whether the outage occurred inside a building or
4 outside plant.
- 5 • Reporting category, such as 900,000 user-minutes, 1350 DS3-minutes, E-
6 911 etc. to analyze the cumulative impacts of outages while considering the
7 outage durations as well as the number of affected users and/or DS3s.

8 This chapter provides an analysis of voice outages resulting from the Joint
9 Applicants' services in California, to determine what mitigation measures are required to
10 ensure that the transfer of Verizon's asset facilities to Frontier results in high quality,
11 reliable voice service to customers.

12

1

A. G.O. 133-C Out of Service Repair Intervals

2

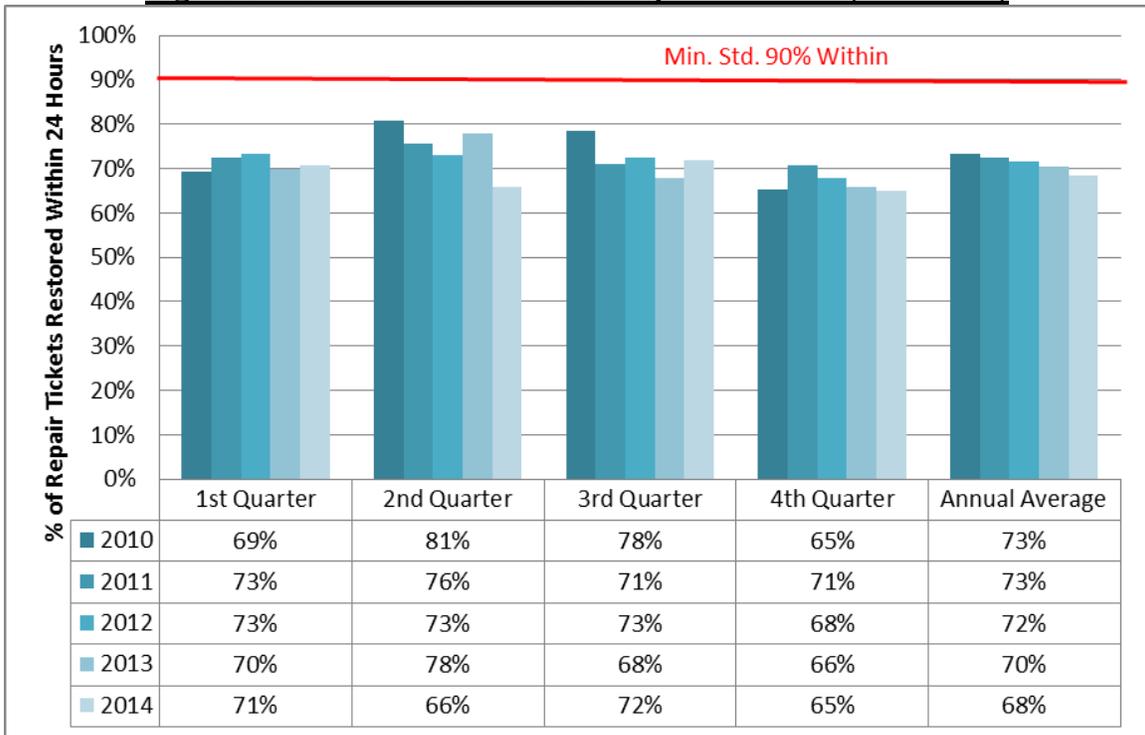
1. Verizon’s G.O. 133-C Outages

3

Verizon did not meet the OOS repair interval minimum standard, which is 90% of repair tickets to be restored within 24 hours, for the years 2010-2014, based on annual as well as quarterly average results, See Figure 5 for a graph of these results.

6

Figure 5: Verizon California OOS Repair Intervals (2010-2014)



7

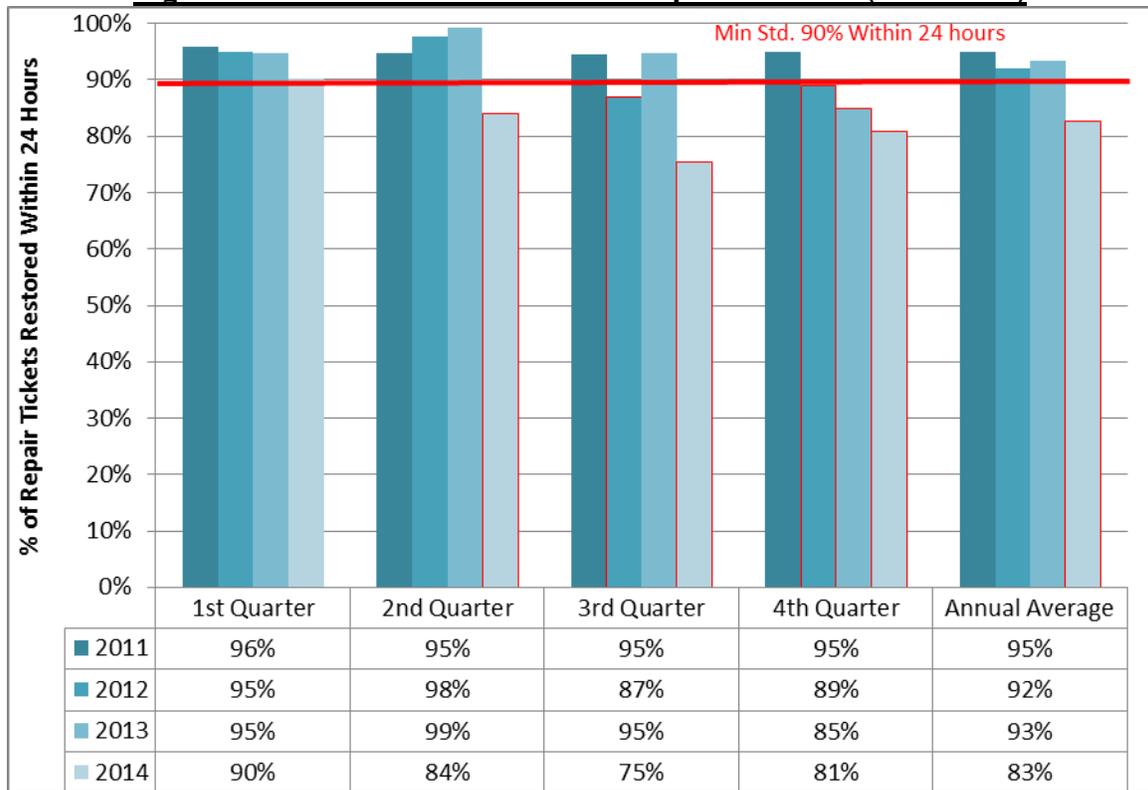
8

1 **2. Frontier’s G.O. 133-C Outages**

2 Frontier Southwest met the Out of Service (OOS) repair interval minimum standard
 3 of 90% of repair tickets to be restored within 24 hours, for the years 2011 to 2013, based
 4 on annual average results, but in 2014, Frontier Southwest fell below the minimum
 5 standard (83%).

6 G.O. 133-C requires that the results be reported quarterly. The average quarterly
 7 results indicate that Frontier Southwest met the OOS repair interval minimum standard
 8 for all quarters in 2011, but did not meet the standard in two quarters in 2012 and one
 9 quarter in 2013. Frontier Southwest did not the minimum standards in three quarters in
 10 2014. Figure 6 shows the annual and quarterly average results of Frontier Southwest’s
 11 OOS Repair Intervals, for the years 2011 to 2014.

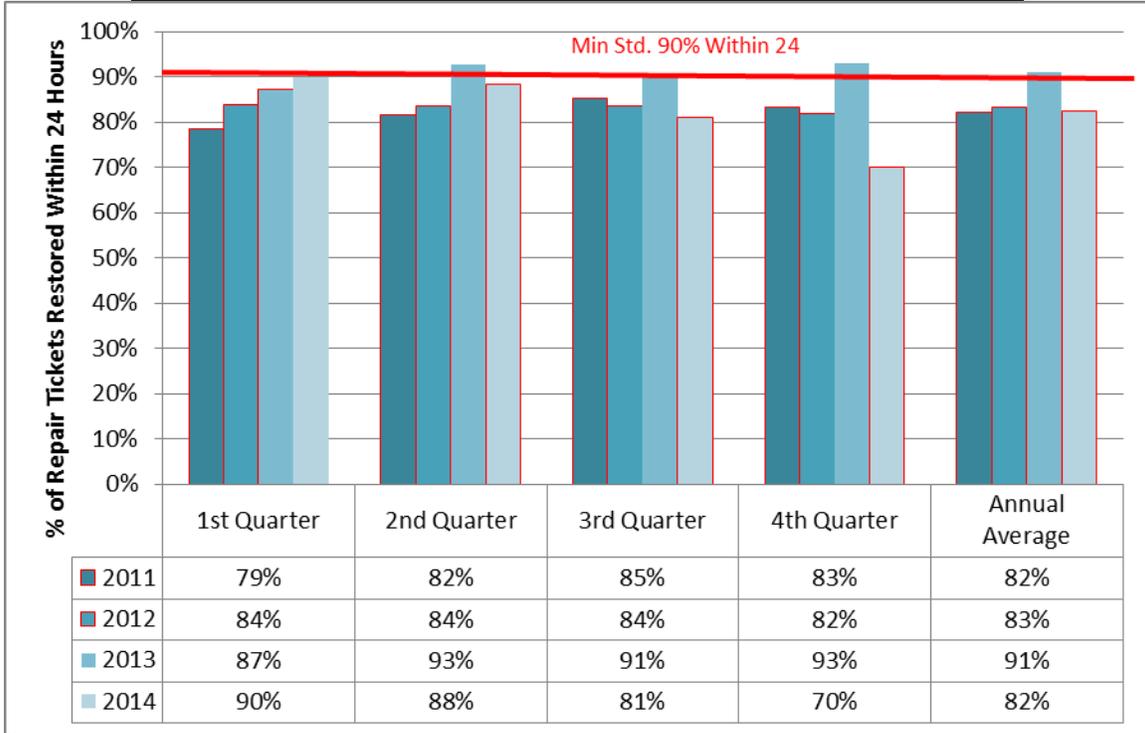
12 **Figure 6: Frontier Southwest’s OOS Repair Intervals (2011-2014)**



13 Frontier California did not meet the OOS repair interval minimum standard, for the
 14 years 2011 and 2012, based on annual, as well as, quarterly average results. In 2014,
 15 Frontier California fell below the minimum standard based on annual average and did not
 16 meet the standards for three quarters of that year. In 2013, Frontier California met the
 17

1 minimum standards based on annual, as well as, quarterly averages. Figure 7 shows the
 2 annual and quarterly average results of Frontier California’s OOS Repair Intervals, for
 3 the years 2011 to 2014.

4 **Figure 7: Frontier California’s OOS Repair Intervals (2011-2014)**

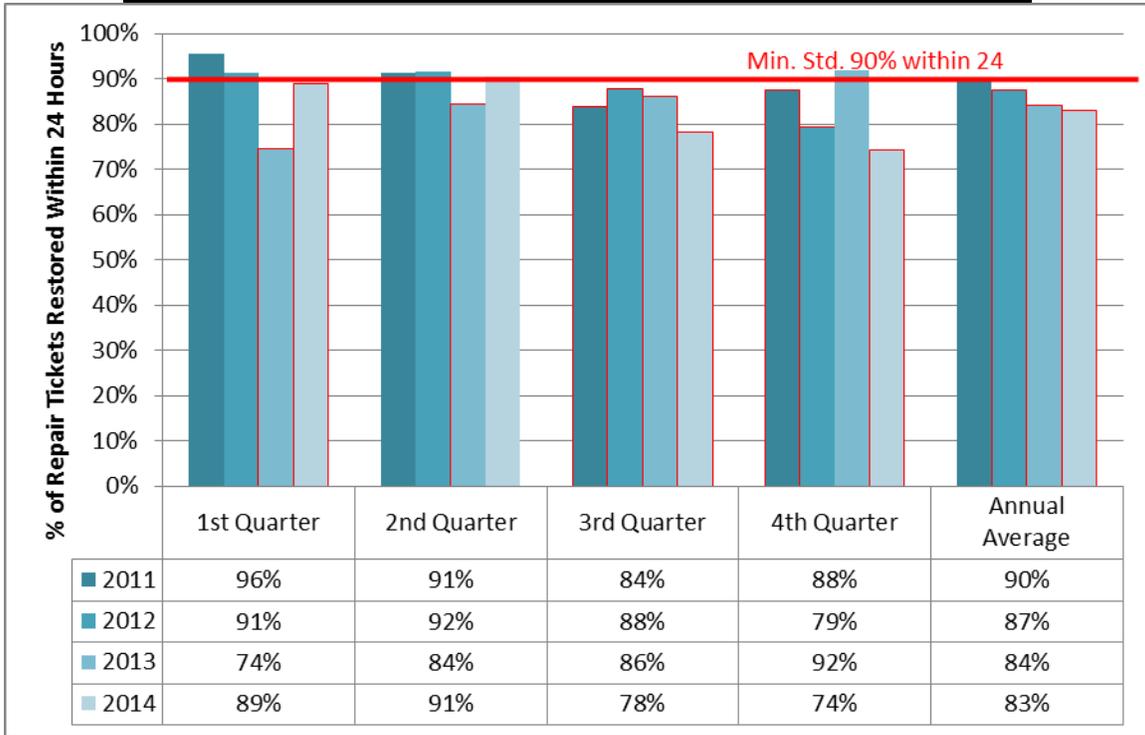


5
 6 Frontier West Coast did not meet the OOS repair interval minimum standard, for the
 7 years 2013 and 2014, based on the annual average results.³⁰ For the years 2011 and
 8 2012, although Frontier West Coast met the minimum standard based on the average
 9 annual results, it did not meet the standard for two quarters in each of those years. Figure
 10 8 shows the annual and quarterly average results of Frontier West Coast’s OOS Repair
 11 Intervals, for the years 2011 to 2014.

³⁰ In both years, Frontier West Coast did not meet the minimum standards for three quarters in each year.

1

Figure 8: Frontier West Coast's OOS Repair Intervals (2011-2014)



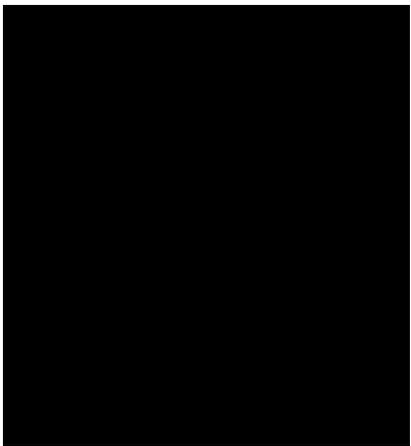
2

3

1 **B. Verizon's FCC NORS Outages**

2 **1. Outage Locations (2010-2014)**

3 Between January 2010 and December 2014, Verizon
4 reported a total of [REDACTED] major outages in California that met
5 the FCC NORS reporting threshold. The majority of
6 Verizon's outages occurred in counties located in southern
7 California.³¹



8 The majority of Verizon's California reported outages between years 2010-2014
9 occurred [REDACTED]

10 [REDACTED] The largest number of outages in [REDACTED]
11 [REDACTED] In [REDACTED]
12 [REDACTED] the largest number of outages occurred in [REDACTED]

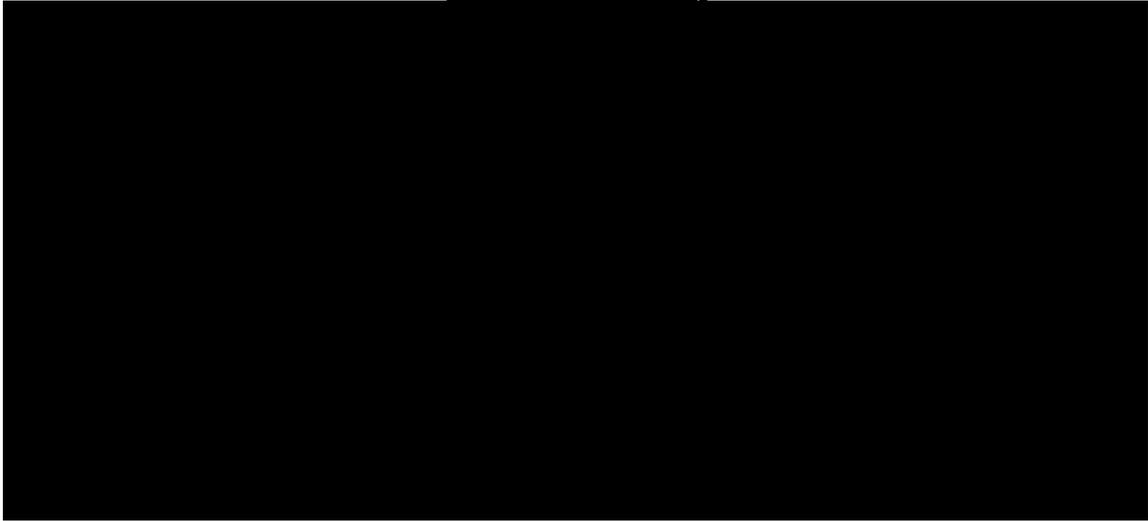
13 [REDACTED]³² Figure 9 shows the number of outages by county.

³¹ [REDACTED] Verizon's total outages occurred in Southern California, Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 27.

³² [REDACTED] had an annual average about [REDACTED] outages for the years 2010 through 2014; the annual average for [REDACTED] was [REDACTED] outages; and the annual average for [REDACTED] was [REDACTED] outages.

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Figure 9: Location of Verizon's FCC NORS Outages by County (2010-2014)



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Figure 10 shows the top three California Counties with most of Verizon outages occurring during the 2010-2014 period. The chart also show the number of Verizon's lines during the period between 2011 and 2014. There was a [REDACTED] in number of outages as well as number of working lines from 2011 to 2014. The total number of outages [REDACTED] and the total number of working lines [REDACTED].³³

10

³³ Verizon Confidential Response to ORA DR 004 [A. 15-03-005], No. 13. The total number of working lines includes the number of copper voice lines, FiOS voice (non-VoIP), and FiOS VoIP lines in service.

1
2

Figure 10: Verizon's Outages in Top Three Locations by County (2010-2014)



3
4

5 **2. Affected Networks and Sites of Outages (2010-2014)**

6 In the 2010-2014 period, the majority of Verizon's reported outages occurred due to
7 failure in Verizon's [redacted] ³⁴ Most of the outages
8 that occurred in [redacted] network, [redacted] took place inside
9 buildings (owned, leased, or otherwise controlled by [redacted] versus [redacted] outages in
10 outside plant. ³⁵

11 Figure 11 shows the total number of outages for the years 2010 through 2014,
12 indicating the portion of outages that occurred due to failure in Verizon's network versus
13 other companies' network, as well as their sites (inside buildings versus outside plant).

³⁴ [redacted] major outages or about [redacted] of Verizon's reported outages occurred due to failure in [redacted] network.

³⁵ FCC NORS reporting requirements specify that reporting entities indicate whether the outage occurred inside building owned, leased, or otherwise controlled by the reporting entity. A building is a structure that is temperature controlled. http://www.fcc.gov/pshs/outage/nors_manual.pdf

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Figure 11: Verizon’s FCC NORS Outages: Failure in Networks and Sites (2010-2014)



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3. Causes of Outage and FCC’s Reporting Categories (2010-2014)

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9

For the years 2010 through 2014, [redacted] issues accounted for about [redacted] of the total outages reported by Verizon.³⁶

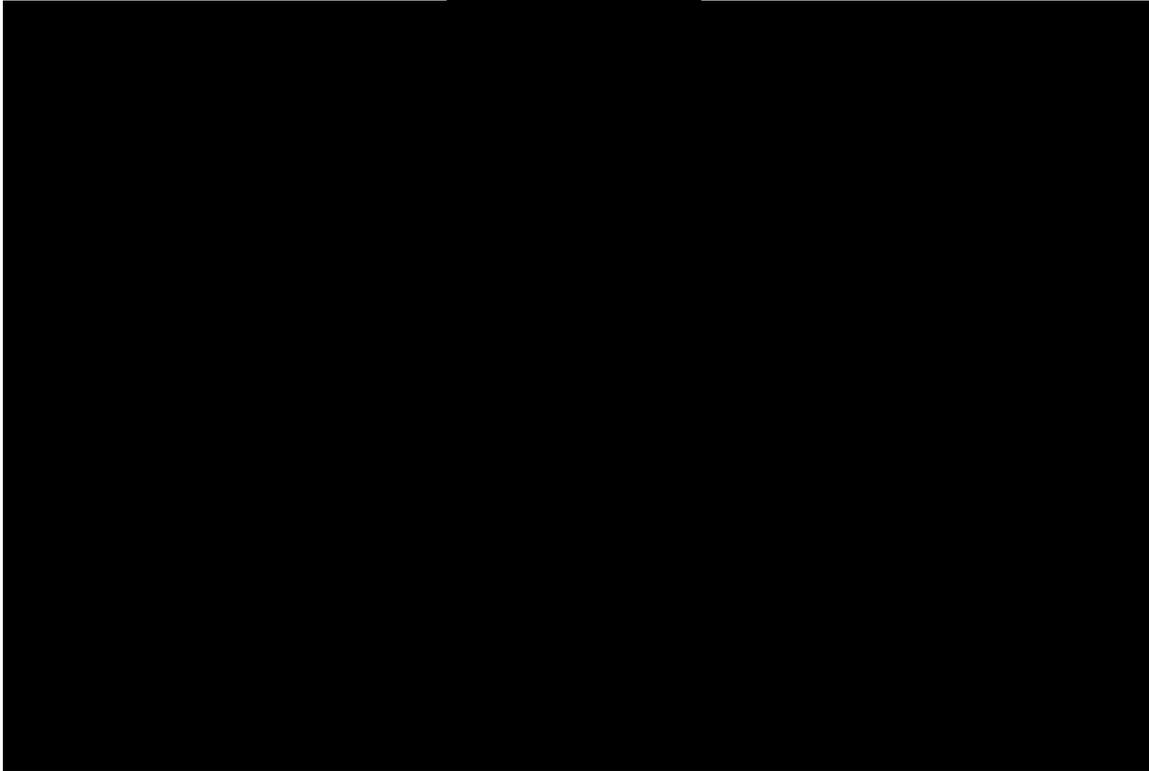
10
11

Figure 12 shows the direct causes of outages reported by Verizon’s for the period between January 2010 and December 2014.

³⁶ Other reported direct causes included [redacted]
[redacted]
[redacted]

1
2

Figure 12: Verizon's FCC NORs Outages: Direct Causes (2010-2014)



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4
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Between January 2010 and December 2014, Verizon's FCC NORs met the FCC's reporting criteria for the following categories:

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- 12 [Redacted]

³⁷ A DS3 is a network connection that transmits digital signals at a rate of 44.736 megabits per second. A DS3 is the equivalent to 28 T1 lines, or 672 standard phone lines. Large businesses, including service providers, such as Local Exchange Carriers (LECs), Competitive Local Exchange Carriers (CLECs), Interexchange Carriers (IXCs), and Wireless companies might purchase DS3 services from a service provider to support a high capacity data and voice services to connect many end users to the Internet or a private network.



6

7 Figure 13 shows a summary of Verizon's FCC outages by reporting category, for the
8 years 2010 through 2014. For each reporting category, the schematic also indicates the
9 number of outages that occurred due to failure in Verizon's network and the site of the
10 outages (inside buildings or outside plant).

11 **Figure 13: Verizon FCC NORS Outages by Reporting Category (2010-2014)**

12

13



14

15

1 In the 2010-2014 period, Verizon reported [REDACTED] outages that met the 1350 DS3-
2 minutes criteria. About [REDACTED] of these outages were due to failures in [REDACTED] network,
3 where most of the outages occurred inside [REDACTED] buildings ([REDACTED] versus
4 outside plants. The main causes were [REDACTED].³⁸

5 E-911 outages accounted for the second [REDACTED] number of reported outages [REDACTED]
6 [REDACTED] where more than [REDACTED] of these
7 outages were due to failure in [REDACTED] network. Most of these outages took place
8 inside [REDACTED] buildings, mainly due to [REDACTED].³⁹

9 In the 2010-2014 period, Verizon reported [REDACTED] that met
10 the 900,000 user-minutes criteria. With the exception of [REDACTED] outages, all of the outages in
11 this category [REDACTED] were due to failure in [REDACTED] networks. The majority of
12 these outages [REDACTED] took place in [REDACTED] outside plant. External
13 environmental factors accounted for [REDACTED], whereas the remaining [REDACTED]
14 outages were mainly due to [REDACTED].

15 In summary for the 2010-2014 period, the primary root cause of the outages that
16 occurred due to failure in [REDACTED] network was [REDACTED] accounting for [REDACTED]
17 [REDACTED]. The majority of the [REDACTED] took place
18 inside buildings versus outside plant. [REDACTED] accounted for [REDACTED]
19 of the outages that occurred in [REDACTED] network, mostly in outside plant. Additionally,
20 only an estimated [REDACTED] of the outages that occurred in [REDACTED] network were due to
21 external environmental factors, such as storms, vandalism and vehicular accidents.⁴⁰
22 [REDACTED] accounted for [REDACTED] of the outages that occurred in [REDACTED].

³⁸ Verizon did not identify the root cause on a large number of its outages in this category [REDACTED]
[REDACTED]

³⁹ Verizon did not identify the root causes on a large number of E-911 outages [REDACTED]
[REDACTED]

⁴⁰ Deterioration in the copper outside plant could lead to significant outages in rainy seasons compared to dry climate conditions. California has been in an extended drought for several years, so outages due to external factors could worsen in rainy seasons. Therefore, it is important to assess and restore the conditions of outside plant to minimize the impacts of outages that could occur during future rainy seasons.

■ network. Verizon did not identify the causes for a large number of outages ■

■

3 ■

4 Refer to Attachment C for further analysis of Verizon's FCC NORS outages.

5

1 **4. Outage Durations (2010-2014)**

2 Figure 14 and Figure 15 show Verizon’s maximum and average outage durations (in
3 days), respectively, delineated by reporting category, covering the period between
4 January 2010 and December 2014. The average outage durations for all categories
5 ranged between 1.9 days in 2010 and 1.3 days in 2014.

6 **Figure 14: Verizon's FCC NORS Maximum Outage Duration (2010-2014)**

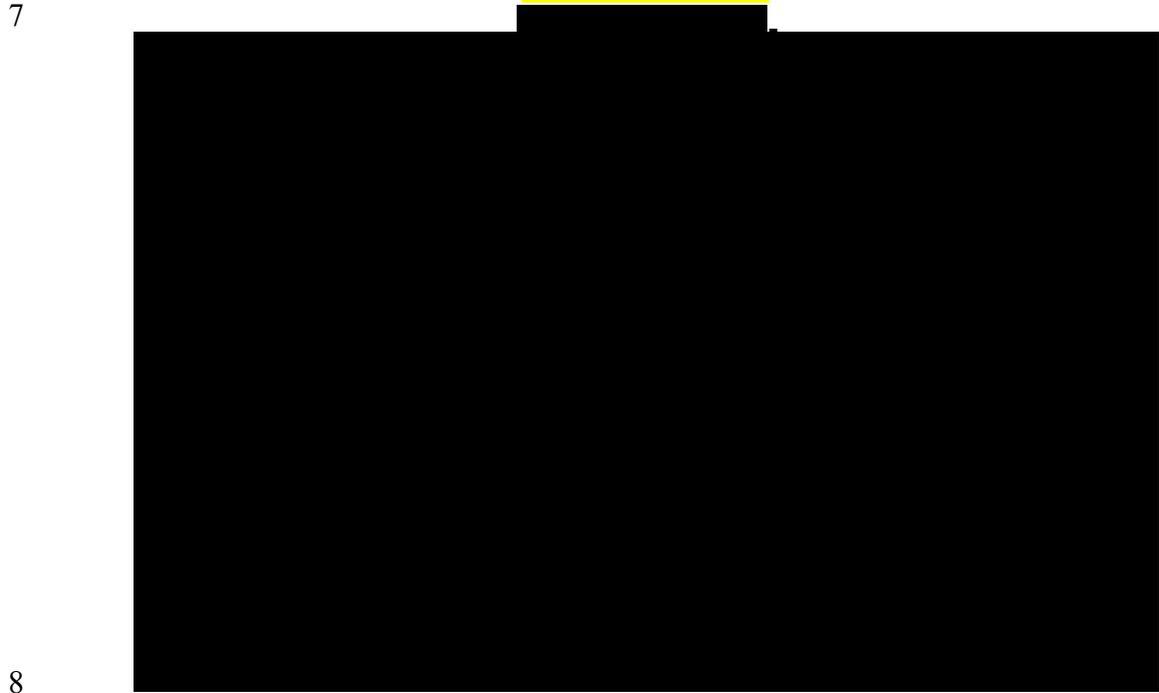


Figure 15: Verizon's FCC NORS Average Outage Duration (2010-2014)



During all years, with the exception of 2010, the most [redacted] outage durations were reported under the “900,000 user-minutes” category, where the maximum outage durations ranged between [redacted]. The [redacted] average outage durations were also reported under the “900,000 user-minutes” category, which ranged between [redacted]

The maximum outage durations for the E-911 outages ranged between [redacted] [redacted]. The maximum outage durations for Blocked Calls outages ranged between [redacted] in 2014. The maximum outage durations for 1350 DS3-outages ranged between [redacted] in 2014.⁴¹

⁴¹ Verizon’s annual average E-911 outage durations ranged between [redacted] [redacted] the annual average Blocked Calls outage durations ranged between [redacted] in 2014; and the annual average 1350 DS3-outage durations ranged between [redacted] in 2014.

1

2 **C. Frontier’s FCC NORS Outages**

3 During the period between January 2010 and December 2014, Frontier reported a
4 total of [redacted] major outages in California that met the FCC NORS reporting threshold.

5 Frontier [redacted] major outages in 2010 and 2012. [redacted]

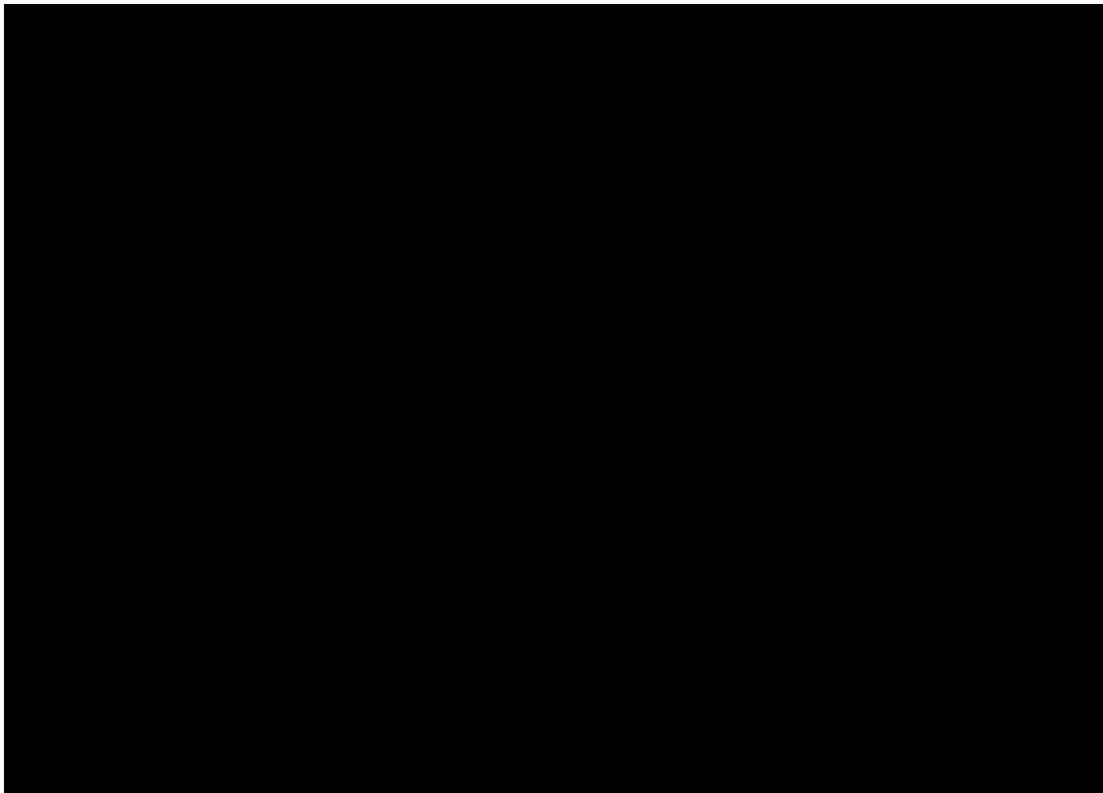
6 [redacted] Frontier reported
7 [redacted] outages that met the FCC reporting threshold for two main categories: [redacted]

8 [redacted] A summary of Frontier’s FCC NORS outages are provided in Attachment
9 D.

10 Figure 16 shows Frontier’s FCC NORS outages in 2011, 2013 and 2014. The chart
11 shows the outage impacts in terms of user-minutes (line chart, secondary y-axis) and the
12 number of potentially affected wireline users (bar chart, primary y-axis); the outage
13 durations (minutes) are shown in the x-axis.

14 **Figure 16: Frontier FCC NORS Outages: 2011, 2013 and 2014**

15 [redacted]



16

	2010	2011	2012	2013	2014	Total by County (2010-2014)
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						
[Redacted]						

1
2 Figure 17 shows the total number of outages by year, during the period between
3 January 2010 and December 2014.

4 **Figure 17: Verizon's Other Outages (2010-2014)**



6
7
8 Table 3 shows Verizon's average (hours) and maximum (days) outage durations each
9 year, for the period between January 2010 and December 2014.

10 **Table 3: Verizon's Other Outages Maximum and Average Durations (Jan-Dec 2014)**

	2010	2011	2012	2013	2014
Max Duration (days)					
Average Duration (Hours)					

12

1 **E. Frontier’s Outages that Did Not Meet FCC NORS Reporting**
2 **Criteria**

3 Frontier tracked and reported outages that did not meet the FCC NORS reporting
4 criteria. Between January 2010 and December 2014, Frontier reported voice outages in
5 California, ranging between a total of [REDACTED], for a
6 total of [REDACTED] outages in 2010 through 2014, refer to Figure 18.

7 **Figure 18: Frontier’s Outages (Not Meeting FCC NORS Criteria) in California,**
8 **2010-2014**
9



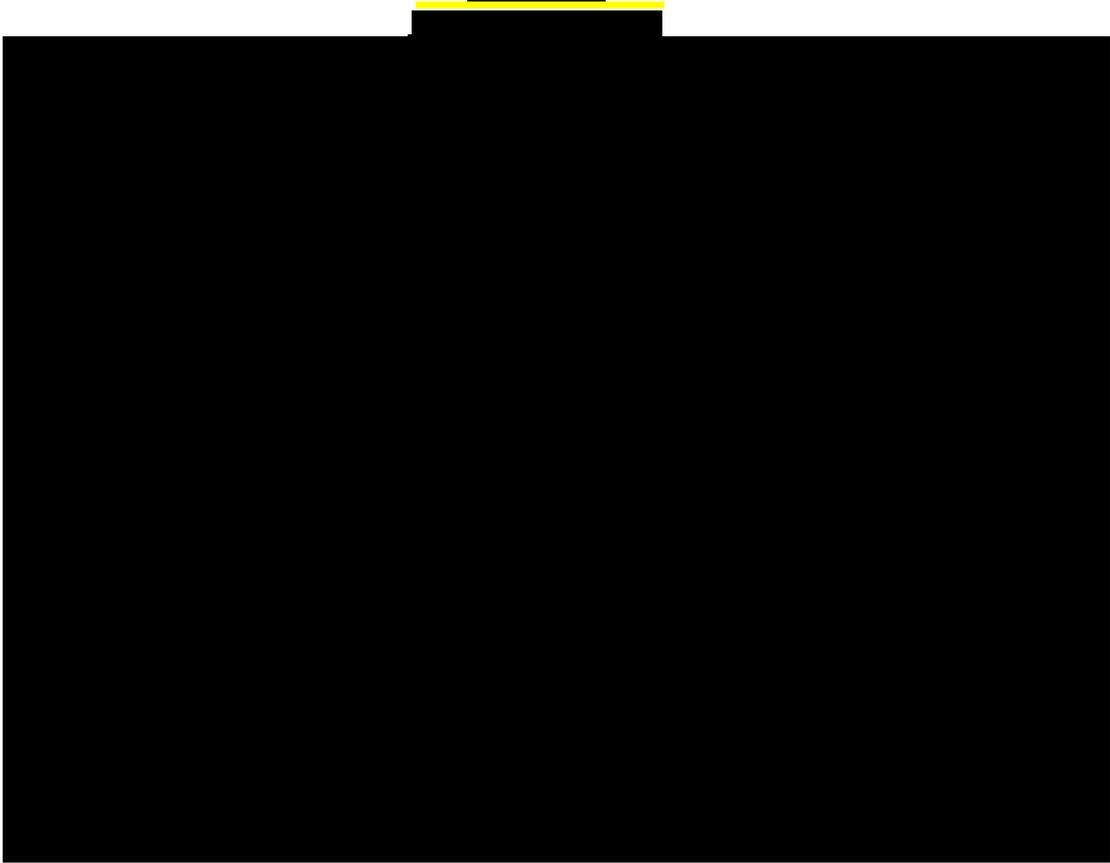
10
11

12 The majority of Frontier’s outages [REDACTED]
13 [REDACTED] ⁴³ Figure 19 shows Frontier’s
14 number of outages by county, during the period between January 2010 and December
15 2014.

⁴³ Other counties which experienced relatively high number of outages included [REDACTED]
[REDACTED]

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3

Figure 19: Frontier's Outages (Not Meeting the FCC NORS Criteria) by County, 2010-2014



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5
6

1 Frontier's maximum (days) and average (hours) outage durations for each year
2 (2010-2014) are shown in Table 4.

3 **Table 4: Frontier Outages (Not Meeting the FCC NORs Criteria), Maximum and**
4 **Average Outage Durations (2010-2014)**

5

Duration	2010	2011	2012	2013	2014
Maximum (days)	█	█	█	█	█
Average (hours)	█	█	█	█	█

6 A description of Frontier's lengthiest outages are provided in Attachment E.

7

1 **F. Comparison of Verizon’s and Frontier’s Outage Impacts**

2 ORA conducted comparisons of voice outages affecting Frontier and Verizon
3 customers in California to provide the Commission with information on whether the
4 Commission can expect to see fewer outages post-Transaction, or if the Commission can
5 expect to see improvement in reliability of services, and to help determine whether the
6 proposed Transaction is in the public interest and which mitigating conditions are needed
7 to ensure public safety and service reliability.

8 In order to provide a comparison of Verizon and Frontier outages that did not meet
9 the FCC’s NORS reporting criteria, ORA calculated the number of outages per 1000
10 lines, by comparing the outages to the number of working lines each year for the years
11 2011 through 2014.

12 To compare Verizon’s and Frontier’s FCC NORS outages in California, ORA
13 assessed the impacts of outages in terms of potentially affected user-minutes, number of
14 potentially affected users and outage durations. Given that Frontier only reported FCC
15 outages that met the criteria for two categories: [REDACTED], ORA
16 compared Verizon’s outages reported under these categories to Frontier’s outages. [REDACTED]

17 [REDACTED]
18 [REDACTED]

19

1 **1. Joint Applicant's Voice Outages that Did Not Meet FCC**
2 **NORS Reporting Criteria**

3 Although Verizon's outages that did not meet the FCC NORS reporting criteria
4 [REDACTED] that of Frontier's in the years 2011 through 2014, Frontier's number of outages
5 per 1000 lines was [REDACTED] than Verizon's during that period, see Figure 20. In 2014,
6 Frontier's number of outages per 1000 lines ([REDACTED] [REDACTED]) that of Verizon's
7 ([REDACTED]). Also, note in 2014, Frontier's average outage duration was about [REDACTED]
8 whereas Verizon's average outage duration was about [REDACTED].

9 **Figure 20: Comparison of Frontier's and Verizon's Outages that Did Not Meet the**
10 **FCC NORS Reporting Criteria**



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1 **2. Joint Applicant’s FCC NORS Voice Outages**

2 **E-911 Outages**

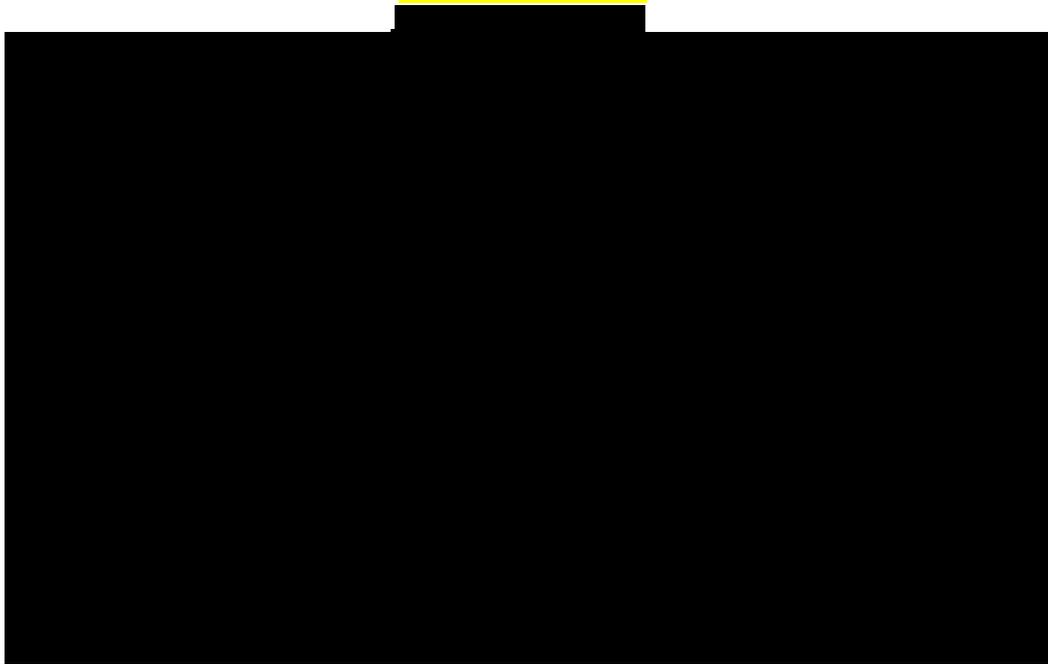
3 Frontier only reported [REDACTED] outages in California that met the FCC’s E-911 criteria
4 in the years 2011, 2013 and 2014. Verizon reported a total of [REDACTED] E-911 outages in the
5 years 2010 through 2014 (a total of [REDACTED] outages in 2011, 2013 and 2014). Figure 21
6 shows the number of outages and the average outage duration for E-911 outages reported
7 by Verizon and Frontier in 2011, 2013 and 2014.

8 Frontier’s average outage duration decreased by almost [REDACTED]

9 [REDACTED] in 2014; whereas Verizon’s average outage duration [REDACTED]

10 [REDACTED] in 2011 and 2014.

11 **Figure 21: Verizon’s and Frontier’s Average Outage Durations for E-911 Outages**
12 **(2011, 2013 and 2014)**



14
15
16 Figure 22 shows the impacts of Verizon’s and Frontier’s E-911 outages in terms of
17 average user-minutes and average affected E-911 users in 2011, 2013 and 2014.⁴⁴ The

⁴⁴ Although the number of Frontier’s working lines [REDACTED]
[REDACTED] the average number of affected E-911 users [REDACTED]
[REDACTED] However, since Frontier’s average outage duration [REDACTED]
(continued on next page)

1 impact of Verizon’s E-911 outages, in terms of user-minutes, highly [REDACTED]
2 Frontier’s during 2011, 2013 and 2014, largely because of the [REDACTED] number of affected
3 users and [REDACTED] outage durations. In 2014, [REDACTED] average outage impact, in terms of
4 user-minutes, was about [REDACTED] than Frontier’s.

5 **Figure 22: Verizon’s and Frontier’s E-911 Outage Impacts (2011, 2013 and 2014)**
6



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8

9 **900,000 User-Minutes Outages**

10 Frontier reported a total of [REDACTED] outages in California that met the FCC’s 900,000
11 user-minutes criteria in the years 2011, 2013 and 2014. Verizon reported a total of [REDACTED]
12 (900,000 user-minutes) outages in the years 2010 through 2014 (a total of [REDACTED] outages in
13 2011, 2013 and 2014). Figure 23 shows the number of outages and the average outage
14 duration for the 900,000 user-minutes outages reported by Verizon and Frontier in 2011,

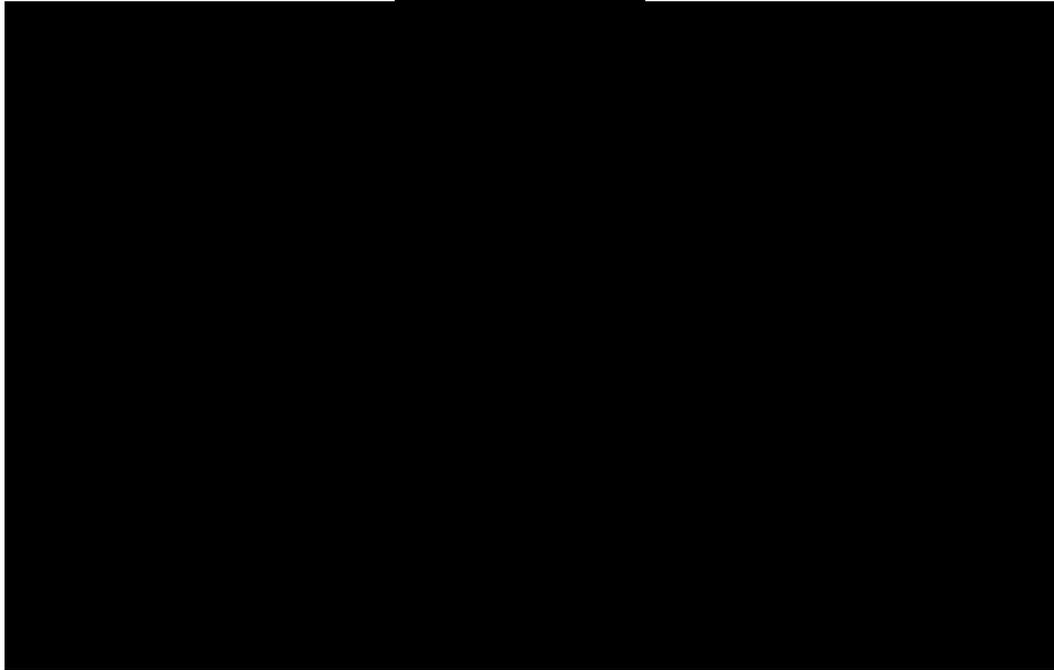
(continued from previous page)

[REDACTED] during this period, the total impacts of the outages, in terms of average user-minutes, also
[REDACTED] between 2011 and 2014.

1 2013 and 2014. Verizon's average outage duration in 2014 almost [REDACTED] that of
2 Frontier's.⁴⁵

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Figure 23 Verizon's and Frontier's Average Outage Durations for 900,000 User-Minutes Outages (2011, 2013 and 2014)

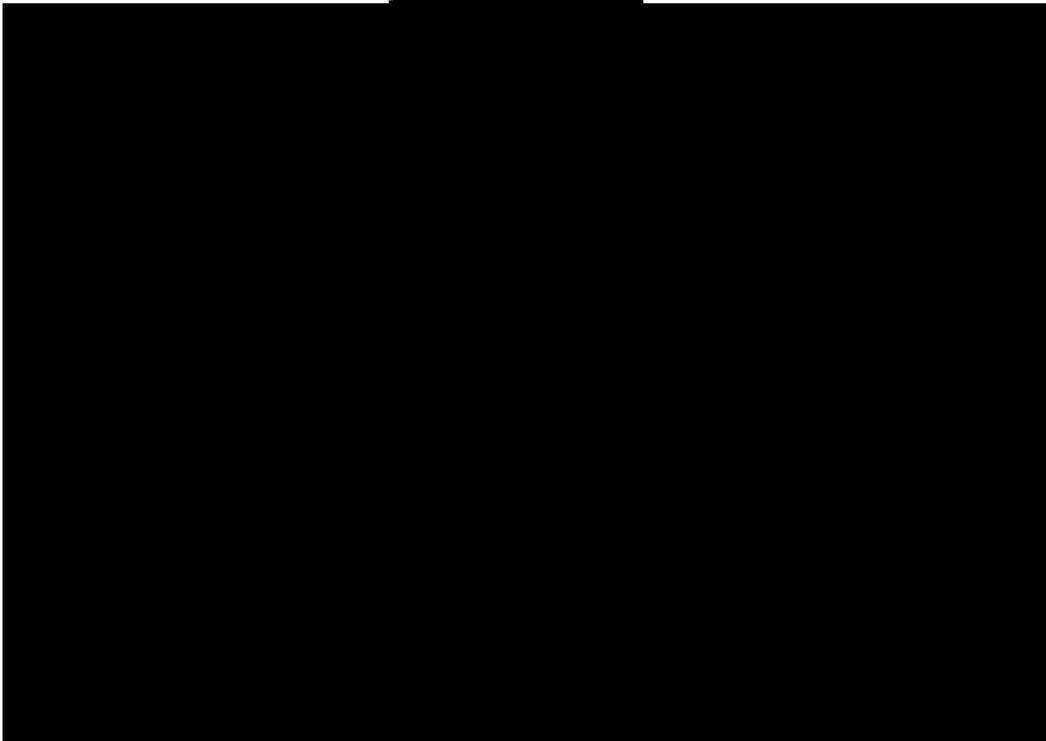


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Figure 24 shows the impacts of Verizon's and Frontier's 900,000 user-minutes outages in terms of average potentially affected user-minutes and average potentially affected wireline user, in 2011, 2013 and 2014.

⁴⁵ Frontier's average outage duration [REDACTED] whereas Verizon's average outage duration slightly [REDACTED]. Both Frontier and Verizon had relatively [REDACTED] average outage durations in 2013 compared to 2011 and 2014.

**Figure 24 Verizon's and Frontier's Outage Impacts for 900,000 User-Minutes
Outages (2011, 2013 and 2014)**



Frontier's average number of potentially affected wireline users [redacted]
[redacted]; whereas [redacted] average number of
potentially affected wireline users [redacted]
[redacted]

The impacts of Verizon's and Frontier's outages were [redacted] in terms of user
minutes: Frontier's average user-minutes in 2011 was [redacted] the FCC's threshold,
whereas Verizon's average was [redacted] that of the FCC's. Similarly, in 2014, Frontier's
average user-minutes were about [redacted] the FCC's threshold, whereas Verizon's
average was [redacted] that of the FCC's.

1 **VoIP Outages**

2 Frontier stated that it only has [REDACTED] commercial VoIP customers in California and did
3 not report any FCC VoIP outages for the period between 2010 and 2014. As of
4 December 2014, Verizon had [REDACTED] VoIP lines. Verizon only reported [REDACTED] VoIP
5 outages, [REDACTED] in 2013, and [REDACTED]
6 [REDACTED] in 2014. Note that the impact of the VoIP outage [REDACTED]
7 County was about [REDACTED] the FCC threshold of 900,000 VoIP user minutes, whereas
8 the outage in [REDACTED] County was [REDACTED] the FCC's threshold.⁴⁶

9 To ensure that service reliability is maintained or improved post-transaction, the
10 Commission should require Frontier to report FCC's NORS outages on its VoIP services
11 in California for at least five years post-transaction.

12 **1350 DS3-Minutes Outages**

13 Frontier did not report any FCC DS3-outages, whereas Verizon reported a total of
14 [REDACTED] that met the FCC's criteria of 1350 DS3-minutes, in the years 2010 through
15 2014. As stated earlier in this chapter, this is the [REDACTED] reporting category for Verizon's
16 outages in California.

17 Figure 25 shows the number and durations of Verizon's DS3 in 2010-2014. Outage
18 durations ranged between [REDACTED]

⁴⁶ The [REDACTED] impact of the outage in [REDACTED] was mainly due to the [REDACTED] number of affected VoIP-users, which was [REDACTED] affected users, compared to only [REDACTED] affected users in [REDACTED] County.

1
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Figure 25: Verizon's Average Outage Durations for DS3 Outages (2010-2014)



3

4

Figure 26 shows Verizon's average number of affected DS3s and the average number of DS3-minutes in 2010-2014. The outage impacts [redacted] in 2014 compared to 2010, [redacted]

6

7

The average number of affected DS3s in 2014 was about [redacted] that in 2010.

8

9

Figure 26: Verizon's Outage Impacts for DS3 Outages (2010-2014)



10

11

ORA's recommendations addressing DS3 outages are presented in the following section.

12

1

2 **G. Recommendations on Service Outages**

3 Frontier will acquire a much larger number of “new” services, including a much
4 higher number of VoIP customers and services to businesses. Therefore, the Commission
5 should ensure that post-transaction the new Frontier maintain or improve the quality of
6 services to its customers in California.

7 Given that Verizon’s outage impacts and average outage durations were [REDACTED]
8 [REDACTED] than Frontier’s (for outages that met the FCC’s NORS criteria for E-911 and
9 900,000 user-minutes), it is critical for the Commission to impose a conditions to prevent
10 outages from re-occurring and to minimize the outage duration times. As such, we
11 recommend that the new Frontier identify measurable objectives and preventive measures
12 to improve and/or reduce outage durations and the potential impacts of outages that met
13 the FCC’s NORS reporting criteria.

14 The Commission should adopt the following conditions to address service reliability
15 and safety:

16 **1. Frontier Should Implement a Multi-Year Strategic Plan**

17 Frontier should submit to the Commission and the ORA a multi-year Strategic Plan
18 by no later than October 31, 2015 with the specific plans for improving voice (traditional
19 copper voice, FiOS voice, and VoIP) service quality, reliability, and availability
20 throughout its new California service area. More specifically, the Strategic Plan is to
21 include the following:

- 22 a. Specific plans, including the specific types of network upgrades needed, to
23 improve reliable and safe voice services in the following counties:
 - 24 i. Los Angeles County
 - 25 ii. San Bernardino County
 - 26 iii. Riverside County
- 27 b. The Strategic Plan shall include at minimum the following components:
 - 28 i. Goals: general goal articulating the desired outcome.

1 ii. Objectives: for each goal identify specific objectives that meet the
2 S.M.A.R.T criteria: Specific, Measurable, Achievable, Realistic and
3 Time-bound.

4 iii. Follows are examples of goals and objectives:

- 5 • **Goal (1):** Improve service reliability and access to E-911 service in Los
6 Angeles County, San Bernardino County and Riverside County.
 - 7 ○ **Objective (1):** By September of 2016, complete the assessment
8 and identify the remaining useful life of critical components of
9 outside plant and Verizon’s buildings associated with major
10 outages in Los Angeles County, San Bernardino County and
11 Riverside County.
 - 12 ○ **Objective (2):** By April of 2017, replace “x” number of base units,
13 and “y” number of remote switches, etc. in Los Angeles County.
 - 14 ○ **Objective (3):** By September of 2017, renovate the following
15 types of outside plant: “x” number of conduits, “y” number of
16 vaults, “z” number of pedestals and/or cabinets, and “t” number
17 of poles, in the cities of M, N, and L in Los Angeles County.

18 iv. Specific goals and objectives to address outages (including, impacts-user-
19 minutes/DS3-minutes, durations, and affected users) pertaining to
20 Frontier’s wireline and VoIP services in California the following FCC’s
21 categories:

- 22 • 1350 DS3-minutes outages
- 23 • E-911 outage
- 24 • 900,000 user-minutes/VoIP-minutes outages
- 25 • Blocked Calls

26

1 **2. Frontier Should Provide Annual Reports to the CPUC and**
2 **ORA for a Period of Five Years**

3 For a period of five years, with year one due one year from the date of CPUC
4 approval of the Transaction, Frontier should provide the Commission and ORA with an
5 annual report detailing:

- 6 a. Frontier’s capital expenditures related to planned actions on condition number
7 (1) above. Frontier should include in the report a comparison of the amount of
8 planned California capital expenditures as a percentage of total system
9 expenditures and a comparison of the amount of capital expenditures per
10 working line in California.
11 b. Performance metrics quantifying the desired outcome of each objective
12 identified in condition number 1 (a).

13 **3. Frontier Should Report FCC NORS Outage Reports on VoIP**
14 **Services**

15 Frontier should provide copies of FCC NORS reports for its VoIP services in
16 California to the Commission and ORA concurrent with such filing with the FCC.

17 **4. Frontier Should Report on Outages that Do Not Meet the FCC**
18 **NORS Reporting Criteria**

19 For a period of five years, Frontier should meet the following voice services outage
20 performance metric and report to the Commission and ORA, outages that do not meet the
21 FCC NORS outage reporting requirement for voice services (traditional copper voice,
22 FiOS voice (non-VoIP and VoIP)):

- 23 a. Performance Metric: The number of outages that do not meet the FCC
24 NORS reporting requirements should not exceed 0.5 outages per 1,000
25 lines per year
26 b. Reporting Requirement:
27 i. Type of service: Type of service: copper voice, FiOS voice (non-VoIP),
28 and/or VoIP

- 1 ii. Number of customers affected
- 2 iii. Type of customers affected: residential/business
- 3 iv. Incident Date
- 4 v. Incident Time
- 5 vi. Duration of outage in hours and minutes
- 6 vii. Outage restoration time
- 7 viii. Whether the outage was due to failure in Frontier's network or other
- 8 companies' network
- 9 ix. Whether the outage occurred inside Frontier's buildings (owned, leased, or
- 10 otherwise controlled by Frontier) or outside plant
- 11 x. Location of outage
- 12 xi. Equipment failed
- 13 xii. Network involved
- 14 xiii. Affected E911/911
- 15 xiv. Description of the Cause
- 16 xv. Description of the Root cause
- 17 xvi. Description of the incident
- 18 xvii. Methods used to restore the outage
- 19 xviii. Steps taken to prevent the outage from re-occurring
- 20 Frontier should provide all data in a spreadsheet format.

1 **CHAPTER 2: SERVICE PROVISIONING**

2 Verizon California, Frontier California and Frontier Southwest, which are URF
3 ILECs currently do not report G.O. 133-C measures for installation intervals and
4 installation commitments because these two measures only apply to General Rate Case
5 (GRC) ILECs. Frontier Communication West Coast, which is GRC ILEC, reports on
6 these two standards. G.O. 133-C standards for these two measures are as follows:

- 7 • Telephone service installation interval: five business days; and
- 8 • Installation commitments: 95% commitment met.

9 ORA asked from Verizon and Frontier to provide service installation intervals and
10 installation commitment met for the period covering 2010 through 2014.

11 **A. Verizon Service Installation and Commitment Met**

12 G.O. 133-C requires that installation intervals to be expressed in business days and
13 excludes customer requested appointments later than the provider’s commitment date. In
14 its response to ORA data requests, Verizon provided service installation intervals,
15 including customer requested appointments later than the provider’s commitment date, as
16 well as intervals expressed in calendar days (not business days). Verizon stated that it

17 [REDACTED]
18 [REDACTED]⁴⁷ As
19 such, it is not feasible to ascertain whether Verizon have met the G.O. 133-C standards
20 for installation intervals. Based on the data ORA received, Verizon’s average installation
21 intervals (expressed in calendar days) in 2014 [REDACTED] the CPUC standards for service
22 installation of five business days.

23 Verizon’s average annual installation intervals were [REDACTED] for FTTP voice and
24 [REDACTED] for both voice over copper and VoIP (FiOS Digital Voice) in 2014. Figure 27
25 shows Verizon’s average installation intervals for new voice services in 2014, in
26 quarterly and annual basis.

⁴⁷ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 12.

1 Verizon did not produce the service installation intervals for the years 2010 through
2 2013, as requested by ORA. Therefore, it is not possible to assess whether Verizon's
3 service provisioning have improved or deteriorated compared to prior years.

4
5 **Figure 27: Verizon Voice Service Installation Intervals (Calendar Days) (January-**
6 **December, 2014)**
7



8
9
10 Verizon did not produce the number of service orders received and completed
11 (commitment met), for the period between January 2010 through December 2014, as
12 requested by ORA. Verizon provided data on new service orders, for the period between
13 March 2012 and December 2014.⁴⁸ As such, it is not feasible to assess whether
14 Verizon's service commitment met have met the CPUC G.O. 133-C requirement of 95%
15 commitment met. It is also not possible to determine whether Verizon's customer service
16 has improved or deteriorated compared to prior years.

17

⁴⁸ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 19.

1

2 **B. Frontier’s Service Installation and Commitment Met**

3 Based on Frontier’s response to ORA data request, Frontier’s average service
4 installation interval [REDACTED] the CPUC’s G.O. 133-C standard of 5-business days, for years
5 2011 through 2014, refer to Figure 28.⁴⁹

6 **Figure 28: Frontier Service Installation Intervals (Business Days), 2011-2014**

7



8

9

10 For the years 2011 and 2012, Frontier [REDACTED] the minimum standard of 95%
11 commitment met, based on annual average results.⁵⁰ Frontier [REDACTED] the standard in 2014,
12 based on annual average results; it [REDACTED] the standard in one quarter of that year.
13 Figure 29 shows the annual and quarterly average results of Frontier commitment met,
14 for the years 2011 to 2014.

⁴⁹ Frontier Confidential Response to ORA DR 002 [A. 15-03-005], No. 12.

⁵⁰ For both of these years, Frontier [REDACTED] the standard for two of the four quarters each year. Frontier Confidential Response to ORA DR 004 [A. 15-03-005], No. 7.

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Figure 29: Frontier's Commitment Met for Service Orders (2011-2014)



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Based on service quality reports submitted to the CPUC, Frontier West Coast met the minimum standards for installation interval and commitment met in 2010-2014.⁵¹

⁵¹<http://www.cpuc.ca.gov/PUC/Telco/Consumer+Information/Telecommunications+Service+Quality+Reports.htm>

1 **C. Verizon’s Company Specific Metrics for Service Quality**

2 Verizon identified 39 company-specific service quality metrics, other than those that
3 it currently report under G.O. 133-C, which pertain to trouble tickets and repair for both
4 traditional wireline voice and FiOS voice.⁵² Some of these metrics address the following
5 areas:⁵³

- 6 • Customer trouble reports and repeat trouble reports
- 7 • Repair tickets (out of service and non-out of service but affecting service)
- 8 • Mean Time to Repair (MTTR)
- 9 • Provisioning and installation commitments
- 10 • Dispatchable and non-dispatchable service orders
- 11 • Durations for provisioning and repairing services.

12 A comprehensive list of Verizon’s service quality metrics and their definition are
13 provided in Attachment B.

14 Key results from Verizon’s company specific service quality metrics, in 2014,
15 indicate that:

- 16 • About [REDACTED] of residential out of service repair tickets were cleared within
17 24-hours. Note that this figure is for repair tickets that were dispatched out;
18 the figure slightly [REDACTED] for repair-tickets that were not dispatched out
19 (about [REDACTED] cleared within 24-hours). Note that the CPUC standard is: [REDACTED]
20 of out of service repair tickets to be restored within 24 hours.

⁵² Verizon email response to ORA clarifying questions dated July 21, 2015. Verizon indicated that the metrics in “NORM FiOS” tab of ORA_VZ2.5_Attachment1_A1503005VZ20084_CONFIDENTIAL.xlsx, are FTTP-voice metrics. However, in its response to ORA DR 002 [A.15-03-005] No.5, Verizon indicated that the requested data is provided for broadband and VoIP. It is not clear whether the “NORM FiOS” tab include VoIP service quality metrics or FTTP FiOS Voice (non-VoIP) metrics or a combination of both.

⁵³ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 3 and No. 4.

- 1 • For service affecting but not out of service residential repair tickets, the
2 figure is relatively [REDACTED] for dispatched out services: about [REDACTED] of
3 dispatched out tickets were cleared within 24-hours. The figure [REDACTED] for
4 service affecting tickets that were not dispatched out: about [REDACTED] of the
5 tickets were cleared within 24-hours.
- 6 • About [REDACTED] of FiOS customers report a second problem within seven days of
7 a prior cleared trouble report, whereas about [REDACTED] of copper voice customers
8 report a second problem. Note that customers include residential and
9 business customers for this metric.
- 10 • On average about [REDACTED] of combined residential and business customers
11 (copper and FiOS) reported three or more problems within 30-days of a prior
12 cleared trouble report.
- 13 • For copper voice customers (residential and business), about [REDACTED] of trouble
14 reports were cleared on or before the date/time promised (repair commitment
15 met), whereas, FiOS customers had about [REDACTED] of their repair commitment
16 met.
- 17 • The MTTR for FiOS (residential and business) customers was [REDACTED]
18 whereas the MTTR for copper customers was [REDACTED]
- 19 • For the combined residential and business customers, the average installation
20 interval was about [REDACTED]
- 21 • The percentage of provisioning commitment met for copper voice customers
22 (residential and business) was about [REDACTED] for dispatchable services and about
23 [REDACTED] for non-dispatchable services.
- 24 • For copper voice customers, about [REDACTED] of dispatchable service orders were
25 installed within seven days or less, whereas about [REDACTED] of FiOS orders were
26 installed within that interval.

- 1 • For copper voice customers, about [REDACTED] of dispatchable service orders met
2 the promised appointment window, whereas about [REDACTED] of FiOS orders met
3 the promised appointment window.

4 Further analysis on Verizon's company specific service quality metrics are given in
5 Attachment F.

6

1 **D. Recommendations on Service Provisioning**

2 It is imperative that service quality is maintained or improved post this Transaction.
3 The detailed information received on service quality metrics and measures pertaining to
4 service provisioning, in addition to Verizon’s company specific service quality metrics,
5 provided much needed data not currently available to the Commission to determine the
6 availability and responsiveness of the Joint Applicants services in providing timely voice
7 service installations.

8 Given that Frontier California, Frontier Southwest and Verizon California do not
9 currently report on G.O. 133-C standards for installation intervals and installation
10 commitment met for wireline voice services as well as VoIP services,⁵⁴ the Commission
11 should require the new Frontier to report on these measures.

12 The Commission should require Frontier to provide to the Commission and ORA, on
13 a quarterly basis, for a period of five years post-Transaction close date, the following
14 service quality metrics for voice services:

- 15 a. Traditional Voice Copper Service and FiOS voice (non-VoIP):
 - 16 i. Installation Interval
 - 17 ii. Installation Commitments
- 18 b. VoIP services:
 - 19 i. Installation Intervals
 - 20 ii. Installation Commitment Met
 - 21 iii. Customer Trouble Reports
 - 22 iv. Out of Service Repair Intervals
 - 23 v. Answer-time for Trouble Reports
 - 24 vi. Billing and Non-Billing Inquiries
 - 25 vii. Recurring Trouble Reports by the same customer after closing of an

⁵⁴ Frontier will acquire a much larger number of residential VoIP customers.

1 initial trouble report

2 To ensure that customer service is maintained or improved post-transaction, Frontier
3 should report to the Commission and ORA, as well as improve on Verizon's current
4 voice service performance metrics as follows:

5 At a minimum, track the 39 different metrics that Verizon currently uses to assess the
6 quality of its voice services. See Attachment B for a list and description of these
7 metrics.

8 Frontier should improve performance on the following voice services metrics for
9 traditional copper voice, FTTP voice (non-VoIP) and VoIP services:

- 10 i. Out of Service Repair Tickets (OOS) cleared within 24-hours
- 11 ii. Service Affecting but Not Out of Service (NOOS), cleared within 24-
12 hours.
- 13 iii. Percentage Repeats < 7 days: Percentage of customer who report a
14 second problem within 7-days of a prior cleared trouble report.
- 15 iv. Mean Time to Repair (MTTR)
- 16 v. Percentage Commitment Met: the percentage of installations that were
17 cleared on or before the date/time promised.
- 18 vi. Percentage Repair Commitment: the percentage of trouble reports
19 that were cleared on or before the date/time promised.

20 Frontier should provide all raw data, calculations, and results in a spreadsheet
21 format.

1 **CHAPTER 3: CUSTOMER COMPLAINTS**

2 **A. CPUC Customer Complaints**

3 The CPUC Consumer Affairs Branch (CAB) receives and tracks complaints and
4 inquiries on utility services.⁵⁵ During the period from 2010 through 2014, CAB received
5 a total of [REDACTED] customer complaints and inquiries (cases) regarding Verizon’s services;
6 and [REDACTED] cases regarding Frontier’s services.

7 Figure 30 shows the number of customer complaints for the years 2010 through
8 2014, pertaining to communication services provided by Verizon and Frontier in
9 California. Note that these complaints could include broadband as well as voice services.

10 Verizon’s number of customer complaints to CAB [REDACTED] by about [REDACTED], during
11 the period between 2011 and 2014, and Frontier’s number of customer complaints
12 [REDACTED] by about [REDACTED] during the same period.

13 Note that during the period between 2011 and 2015, Verizon’s number of working
14 lines, including broadband and voice over copper, [REDACTED]⁵⁶

15

⁵⁵ CPUC CAB customer complaints data on Verizon and Frontier, January 2010 through 2014.

⁵⁶ See the Introduction Section on trends in Verizon’s number of working lines.

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Figure 30: CAB Customer Complaints on Verizon and Frontier Services (2010-2014)



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1 **B. Verizon’s Customer Complaints**

2 Verizon reported a total of [REDACTED] customer complaints in California for the years
 3 2010 through 2014.⁵⁷ These complaints covered various categories including broadband,
 4 voice, VoIP, as well as combined voice and broadband services.⁵⁸ Table 5 shows the
 5 number of customer complaints aggregated by complaint categories for the years 2010
 6 through 2014.

7 **Table 5: Verizon’s Customer Complaints by Type of Service (2010-2014)**

8

Category	2010	2011	2012	2013	2014	2010-2014 By Category
Voice	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Broadband	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Voice & Broadband	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
VoIP	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Other	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Not Available		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Grand Total by Year	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

9

10 Figure 31 shows the trends in Verizon’s customer complaints (percent of total
 11 complaints in a year), for the years 2010 through 2014. Customer complaints on voice
 12 services accounted for more than [REDACTED] of the customer complaints during this period,
 13 ranging between [REDACTED] of total customer complaints across all categories in 2010 to [REDACTED]
 14 in 2014. Customer complaints on VoIP services ranged between [REDACTED] in 2010 to [REDACTED] in
 15 2014.

⁵⁷ Verizon Confidential Response to ORA DR 004 [A. 15-03-005], No. 10. Updated in Verizon response to Meet and Confer Letter DATED July 6, 2015, attachment: ORA_VZ4 10_Attachment_M&C revision 7-9-15_A1503005VZ160000_CONFIDENTIAL_CONFIDENTIAL.

⁵⁸ The “Other” category includes miscellaneous complaints that Verizon grouped together under this category, such as complaints with rates, [REDACTED]
 [REDACTED]
 [REDACTED]

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Figure 31: Verizon’s Customer Complaints by Type of Service (Percent of Total Complaints) (2010-2014)



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6 [redacted] accounted for the majority of customer complaints on voice services,
7 followed [redacted] and miscellaneous causes referred to as
8 “other.”⁵⁹

9 The three top topics of customer complaints related to billing on voice services in
10 2014 were: [redacted]

11 The three top topics of customer complaints related to provisioning voice services in
12 2014 were: [redacted]

13 [redacted]
14 The three top topics of customer complaints related to voice services’ repair in 2014
15 were [redacted]

16 [redacted]
17 The highest number of “voice” customer complaints in 2014 occurred in [redacted]

18 [redacted]

⁵⁹ “Engineering” included topics, such [redacted]
[redacted]
[redacted]
[redacted]

1 [REDACTED] The remaining
2 counties accounted for [REDACTED] each of the total voice-related complaints in 2014.
3 This correlates with the percentage of Verizon's total number of customers by county, as
4 well as outage data. For example, in 2014, about [REDACTED] of Verizon's voice customers
5 were located in [REDACTED] County, which accounts for [REDACTED] of the total voice-related
6 complaints in the State.

7 Figure 32 shows the location of Verizon's voice customers (percent of total voice
8 customers in the state) and the locations of voice related complaints (percent of total
9 voice related complaints in the state) in 2014. Note that five counties shown in Figure x
10 represent about [REDACTED] of Verizon's total voice customers and about [REDACTED] of Verizon's total
11 complaints including complaints on other services, such as broadband.

12 **Figure 32: Verizon's Customer Complaints in Top Five Counties in 2014**
13

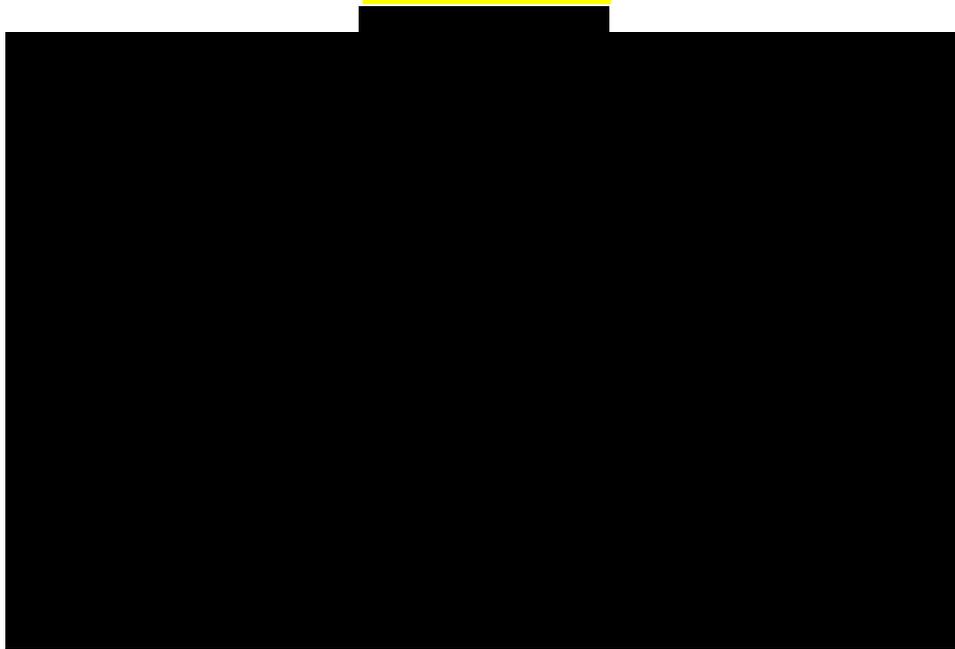


14
15
16

1 **C. Frontier's Customer Complaints**

2 Frontier reported [REDACTED] wireline voice customer complaints in California for the
3 years 2010 to 2014.⁶⁰ The majority of the complaints were from residential customers,
4 refer to Figure 33.

5 **Figure 33: Frontier's Customer Complaints (2010-2014)**
6



7
8
9 Table 6 shows the complaint categories for the years 2010 to 2014. The majority of
10 customer complaints, during the 2010-2014 period, were regarding [REDACTED]
11 some of the complaint reasons included: [REDACTED]
12 [REDACTED]
13 [REDACTED] is another major complaint category; some of the complaint reasons included: [REDACTED]
14 [REDACTED]
15 [REDACTED]. Some of the reasons for complaints on installation and repair
16 included [REDACTED]. Complaints on provisioning
17 included [REDACTED]

⁶⁰ Frontier Confidential Response to ORA DR 002 [A. 15-03-005], No.19. Updated in Frontier response to ORA meet and confer letter dated May 29, 2015 and June 5, 2015.

Table 6: Categories of Frontier’s Customer Complaints (2010-2014)

Complaint Category	2010	2011	2012	2013	2014	Total
Billing/Rates	█	█	█	█	█	█
Customer Service	█	█	█	█	█	█
Installation/Repair	█	█	█	█	█	█
Contract Issue	█	█	█	█	█	█
Connectivity-Speed		█	█	█	█	█
Promotions/Advertising	█	█	█	█	█	█
Provisioning	█	█	█	█	█	█
Lifeline/Medical Alert/Disability Assistance	█	█	█	█	█	█
Outside Plant		█	█	█	█	█
Other	█	█	█	█	█	█

Note that although the number of complaints in the █ category was highest for the years 2010 through 2014, █ category accounted for higher complaints in 2014 compared to █ category, as well as other categories. The topics of █ complaints in 2014 included: █

█ accounted for the majority of Frontier’s voice complaints. In 2014, █ complaints (█ of total complaint in 2014) originated from █ County.

D. Comparison of Frontier’s and Verizon’s Customer Complaints and Recommendations

To compare Verizon’s and Frontier’s customer complaints in California, ORA assessed each company’s number of complaints relative to the number of working lines in the years 2011 through 2014. To normalize the data for comparison purpose, the complaints data is expressed as number of complaints per 1000 lines.

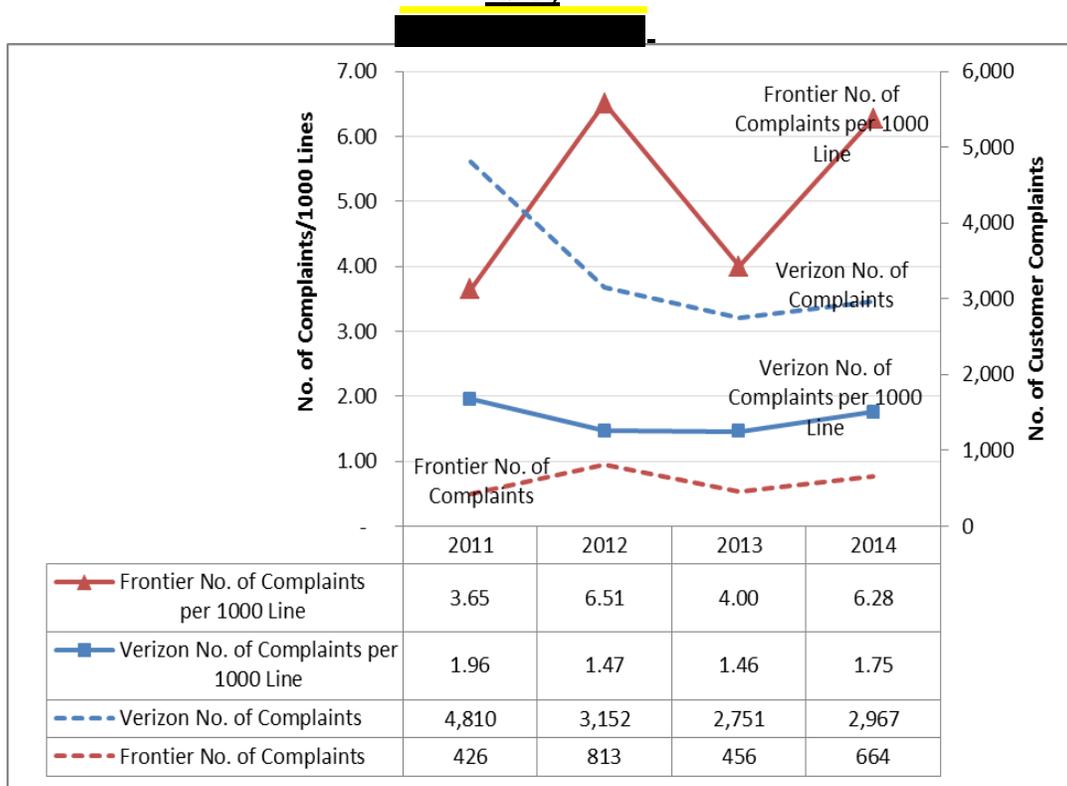
Figure 34 shows the number of customer complaints for Frontier and Verizon, as well as the number of complaints per 1000 lines, for the years 2011 through 2014.⁶¹ The

⁶¹ Verizon customer complaints reflect customer complaints on voice services only. Verizon Confidential Response to ORA DR 004 [A. 15-03-005], No. 10. Updated in Verizon response to Meet and Confer (continued on next page)

1 number of customer complaints per 1000 lines for Frontier was consistently [REDACTED] than
 2 that of Verizon's. Frontier's number of customer complaints per 1000 lines ranged
 3 between [REDACTED] in 2011 to [REDACTED] in 2014; whereas Verizon's ranged between [REDACTED] in 2011 to
 4 [REDACTED] in 2014 .

5 **Figure 34: Verizon's and Frontier's Customer Complaints (Company Data) (2011-**
 6 **2014)**

7



8

9

10 Given that the number of Frontier's current customer complaints per 1000 customers
 11 are almost [REDACTED] that of Verizon's (2014 data), it is critical for the Commission to
 12 impose a condition to ensure that Frontier's service quality is improved post-transaction.

(continued from previous page)

Letter DATED July 6, 2015, attachment: ORA_VZ4 10_Attachment_M&C revision 7-9-15_A1503005VZ160000_CONFIDENTIAL_CONFIDENTIAL.

Source for Frontier customer complaints Frontier is Confidential Response to ORA DR 002 [A. 15-03-005], No.19. Updated in Frontier response to ORA meet and confer letter dated May 29, 2015 and June 5, 2015.

Verizon's number of voice lines includes copper and FiOS voice (non-VoIP) lines, source: Verizon Confidential Response to ORA DR 004 [A. 15-03-005], No. 13.

Source for Frontier number of lines ORA DR 004 [A. 15-03-005], No. 10

1 The new Frontier’s annual number of customer complaints should not exceed 1.75
2 complaints per 1000 lines.⁶²

3 Verizon’s consumer complaints on voice services accounted for the [REDACTED]
4 of complaints compared to other services, such as broadband. VoIP related complaints
5 have [REDACTED] in numbers between 2013 and 2014. In 2014, counties in Southern
6 California had the [REDACTED] number of “voice” customer complaints compared to other
7 areas of Verizon’s service locations. The detailed information received on consumer
8 complaints provided much needed data to help determine the issues that consumers face,
9 as well as locations where California consumers are receiving unreliable voice service,
10 specifically data on VoIP services which the Commission has the ability to monitor and
11 track.

12 The Commission should require Frontier to provide data on its customer
13 complaints on annual basis for a period of five years after closing the transaction.

14 Frontier should report customer complaints including the following categories:

15 Type of Customer: residential/business

16 Type of Service: copper voice, FTTP voice and VoIP

17 Type of Complaint Categories: billing (identify type of billing complaints, such as
18 unauthorized charges, disconnection, rate protest), access to 911/emergency services,
19 delayed orders/missed appointments, number portability, operator service, refusal to
20 service, service outages, call quality (i.e. service conditions that affect or prevent the
21 quality of service provided such as static and noise)

22 Resolution time for a complaint

23 Date of Complaint

24 Location

⁶² [REDACTED] Note that the number of customer complaints per 1000 lines should be normalized to account for the number of working lines during the reporting period. For example, if the total number of lines operated by the new Frontier (post transaction) is 2-million lines, Frontier must not exceed 3,500 complaints per year, to maintain the threshold of 1.75 complaints per 1000 lines.

1 Repeat complaint by the same customer after closing of an initial complaint

2 As stated above, Frontier should ensure that the number of customer complaints not
3 exceed 1.75 complaints per 1000 lines per year. Frontier should provide all data in
4 spreadsheet format.

5 In addition, close monitoring of performance and customer satisfaction is critical and
6 would allow the Commission to intervene when necessary to ensure customers are truly
7 better off from this transaction. If the Commission approves the Transaction, it should
8 monitor California's access to high-quality, reliable voice services by requiring Frontier
9 to pay for the cost of an independent consult, selected, directed, and managed by ORA, to
10 design and conduct a multi-lingual customer satisfaction survey. The survey would be
11 conducted over a 36 month period, and designed to measure customer satisfaction for
12 voices services (including, traditional wireline copper voice, FTTP FiOS voice, and VoIP
13 customers), and to measure the effectiveness of efforts to educate customers on the
14 limitations of VoIP during power outages and the necessity for maintaining battery back-
15 up. Over the 36 month period, the independent consultant (with ORA) would then issue
16 quarterly reports to the CPUC detailing the results of the survey. These quarterly reports
17 would provide the Frontier and the CPUC with the ability to detect trends and identify
18 and address problems early.

1

2 **CHAPTER 4: CONCLUSION**

3 Currently under G.O.133-C rules, the Commission receives a subset of
4 customer reported trouble reports data leaving out a significant number of incidents and
5 outages unknown or reported to the Commission. The Commission only receives FCC
6 NORS reports on outages that meet high reporting thresholds, affecting a considerable
7 number of customers, leaving out outages that affect small communities (unless those
8 outages have extensive durations) and smaller outages that perhaps have less impact but
9 are recurrent. The Commission does not receive any service quality measures on VoIP
10 services.

11 ORA was able to conduct the needed analysis based on detailed information received
12 from the Joint Applicants on service quality metrics in this proceeding. This information,
13 otherwise unreported to the Commission, was critical for analyzing the current state of
14 service quality of the Joint Applicants in order to determine the level and issues of
15 customer complaints, the impacts and durations of voice service outages, as well as
16 locations where California consumers are receiving unreliable voice service.
17 Specifically, service quality and outage data on VoIP services, which the Commission
18 has the ability to monitor and track pursuant to P.U. Code § 710(f) and Section 706(a) of
19 the 1996 Telecommunications Act.

20 Given that Frontier will acquire a much greater number of VoIP customers that
21 it currently has, the Commission should monitor and track service quality metrics for
22 those customers to ensure that customer service is improved post Transaction.

23 Based on the service quality analysis and results presented in this testimony, the
24 proposed transaction should be approved with conditions. It is critical that the
25 Commission impose the recommended conditions (See Section-B in the Executive
26 Summary) to monitor improvement in voice service quality to ensure that customers in
27 California receive safe and reliable and voice services.

Attachment A

ATTACHMENT A: STATEMENT OF QUALIFICATION

My name is Ayat Osman. My business address is 505 Van Ness Avenue, San Francisco, CA 94102.

I am currently employed by the California Public Utilities Commission (CPUC) as a Regulatory Analyst V assigned to the Communications and Water Branch of the Office of the Ratepayer Advocates (ORA). I received a Ph.D. in Civil Engineering from the University of Pittsburgh in 2006. I also have two Master of Science degrees: Environmental Engineering from the University of Pittsburgh (2000) and Environmental Science and Management from Duquesne University (1998). I joined Energy Division at the CPUC in March of 2007 and worked as Regulatory Analyst IV for more than five years. I also held an associate position with an energy consultant company (Cadmus) from September 2012 to February 2014.

My Declaration addresses the P.U. Code Section 854 (c) (3) requirements that the transaction maintain or improve the service quality and reliability voice service customers in the State.

Attachment B

ATTACHMENT B: VERIZON’S COMPANY SPECIFIC SERVICE QUALITY

METRICS

The following table includes Verizon’s Company specific service quality metrics.⁶³

Table 7: Verizon’s Company Specific Service Quality Metrics

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

⁶³ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 4; attachment titled “ORA_VZ2.4_Attachment 1_A1503005VZ20083_CONFIDENTIAL.”

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

Attachment C

[Redacted text block]

[REDACTED]

[REDACTED]

[REDACTED]

Attachment D

ATTACHMENT D: FURTHER ANALYSIS ON FRONTIER’S FCC NORS

OUTAGES

Frontier FCC outages The following list provides a summary of the reported outages in 2011, 2013, and 2014:

The table contains multiple rows of redacted information, likely representing individual outage events. Each row is obscured by a thick black bar, with a thin yellow border visible around the redaction. The redactions cover the entire content of the table, including what would be the outage dates, descriptions, and durations.

⁶⁴ Direct cause is the immediate event that results in an outage. Root cause is the underlying reason why the outage occurred or why it was reportable. http://www.fcc.gov/pshs/outage/nors_manual.pdf

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[REDACTED]

Attachment E

**ATTACHMENT E: FURTHER ANALYSIS OF FRONTIER’S OUTAGES THAT
DID NOT MEET THE FCC’S NORS REPORTING CRITERIA**

The following summary provides a description of Frontier’s lengthiest outages that did not meet the FCC’s NORS outage reporting criteria in 2010-2014:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Attachment F

ATTACHMENT F: FURTHER ANALYSIS ON VERIZON’S COMPANY
SPECIFIC SERVICE QUALITY METRICS

The following section includes detailed analysis of Verizon’s company specific service quality metrics (these metrics are additional to those that Verizon’s report to the Commission under G.O. 133-C rules).

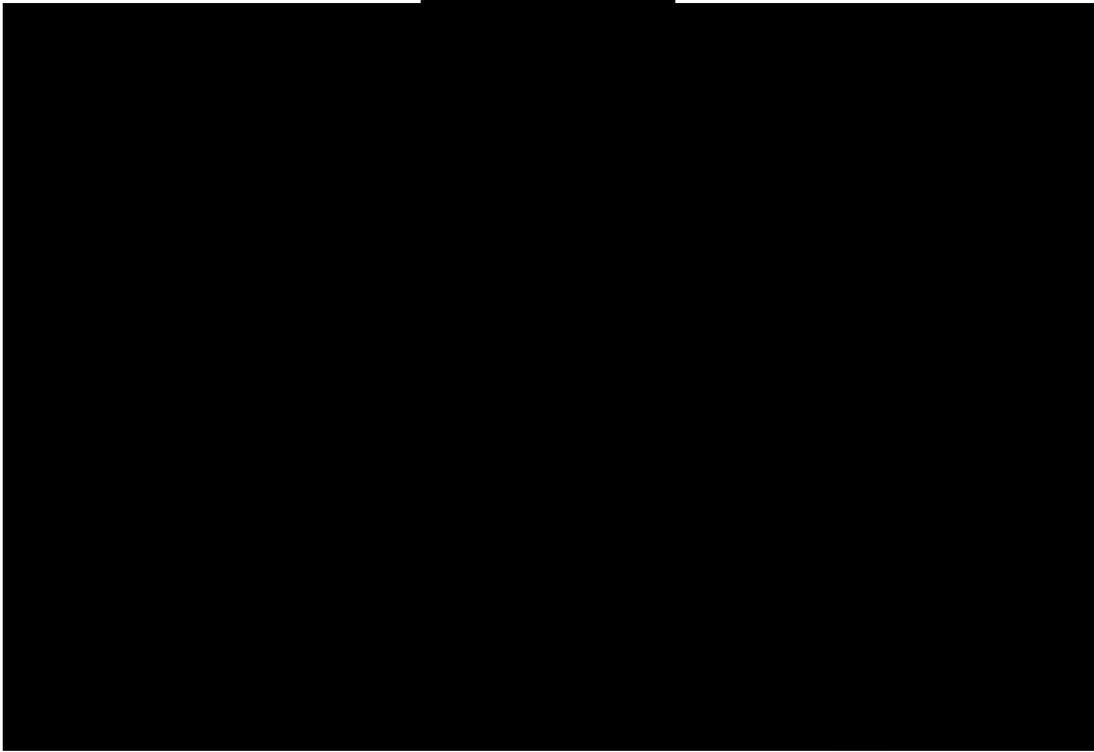
Trends in Repair Tickets

In response to an ORA data request, Verizon provided the data for its service quality metrics that it tracks at a company level for the years 2010 through 2014.⁶⁵ Figure 35 shows the percent of residential repair tickets that were cleared out within 24-hours, including Out of Service (OOS) Dispatched Out (DO) conditions and OOS that were tested out and cleared, for the years 2010 through 2014. The chart also shows the percentage of customers who had an Affecting Service (AS) or Not Out of Service (NOOS) condition that was cleared within 24 hours of reporting the problem.

For the 2010-2014 period, on average about [REDACTED] of residential OOS repair tickets, which were dispatched out, were cleared within 24 hours and [REDACTED] of the OOS, which were not dispatched out, were cleared within 24 hours.

⁶⁵ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 5.

Figure 35: Verizon’s Service Quality Metrics for Repairing Service Affecting (NOOS) and Out of Service (OOS) Conditions for Residential Consumers, Traditional Wireline Voice Services (2010-2014)



For the period covering 2010 through 2014, on average, about [REDACTED] of the residential customers’ NOOS repair tickets (service affecting but not out of service and dispatched out) were cleared within 24 hours; and about [REDACTED] of NOOS tickets that were not dispatched out were cleared within 24 hours.

When comparing Verizon’s OOS and NOOS (dispatchable and non-dispatchable conditions) repair tickets results to the CPUC’s G.O. 133-C standards for OOS Repair Interval (90% of out of service repair tickets to be restored within 24-hours) Verizon’s metrics [REDACTED] the standard for the period covering 2010 through 2014.⁶⁶

⁶⁶ Verizon’s calculation of OOS metrics might be different than OOS Repair Interval metric, measured under G.O. 133-C; for instance Verizon measurement might include calendar days instead of business days and could include repair tickets that are otherwise exempted from the calculations under G.O. 133-C rules. To that extent, the comparison provided here is for purpose of illustration and ORA cannot ascertain whether this particular metric is comparative to G.O. 133-C OOS Repair Interval.

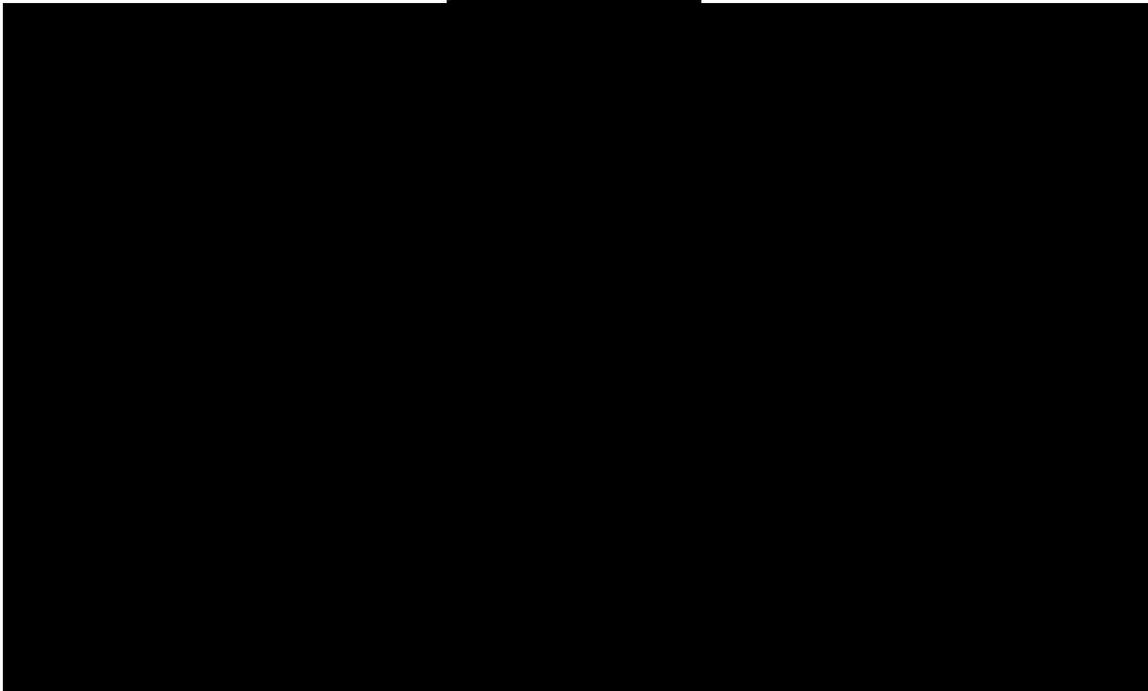
In contrast, on average, about [REDACTED] of business customers OOS repair tickets were cleared out within 6-hours of being reported; and about [REDACTED] of NOOS repair tickets were cleared out within 6-hours, during the 2010-2014 period, as shown in Figure 36.

Figure 36: Verizon Service Quality Metrics for Service Affecting (NOOS) and Out of Service Repair (OOS) for Business Traditional Wireline Voice Services (2010-2014)



Verizon also tracked residential and business repair tickets that were dispatched out and closed within 48 hours. In 2014, [REDACTED] of residential (voice over copper customers) repair tickets were closed out within 48-hours, whereas [REDACTED] of repair tickets for residential FiOS voice customers were cleared within 48 hours, refer to Figure 37. The results were better for business customers with voice over copper, where [REDACTED] of the repair tickets were cleared within 48 hours, and [REDACTED] of tickets for FiOS voice business customer were cleared within 48 hours.

Figure 37: Verizon’s Service Quality Metrics for Customer Repair Tickets Dispatched Out and Closed within 48-hours for Traditional Voice over Copper and FiOS Voice Services (2014)



Verizon tracked the percentage of customers who report a second problem within 7-days of a prior cleared trouble report. Figure 38 shows that data for the years 2012-2014, for residential and business customers for both Verizon’s traditional wireline voice (over copper) services and FiOS services. The percentage of customers with repeat problems⁶⁷ was [redacted] for FiOS voice customers compared to traditional wireline voice customers.⁶⁸

⁶⁷ Customers who report a second problem within 7-days of a prior cleared trouble report.

⁶⁸ In 2014, about [redacted] of wireline voice customers reported a second problem, whereas [redacted] of FiOS voice customers reported a second problem.

Figure 38: Verizon’s Service Quality Metric for Measuring Repeat Problems for Residential and Business Customers, Traditional Wireline and FiOS Voice Services (2012-2014)

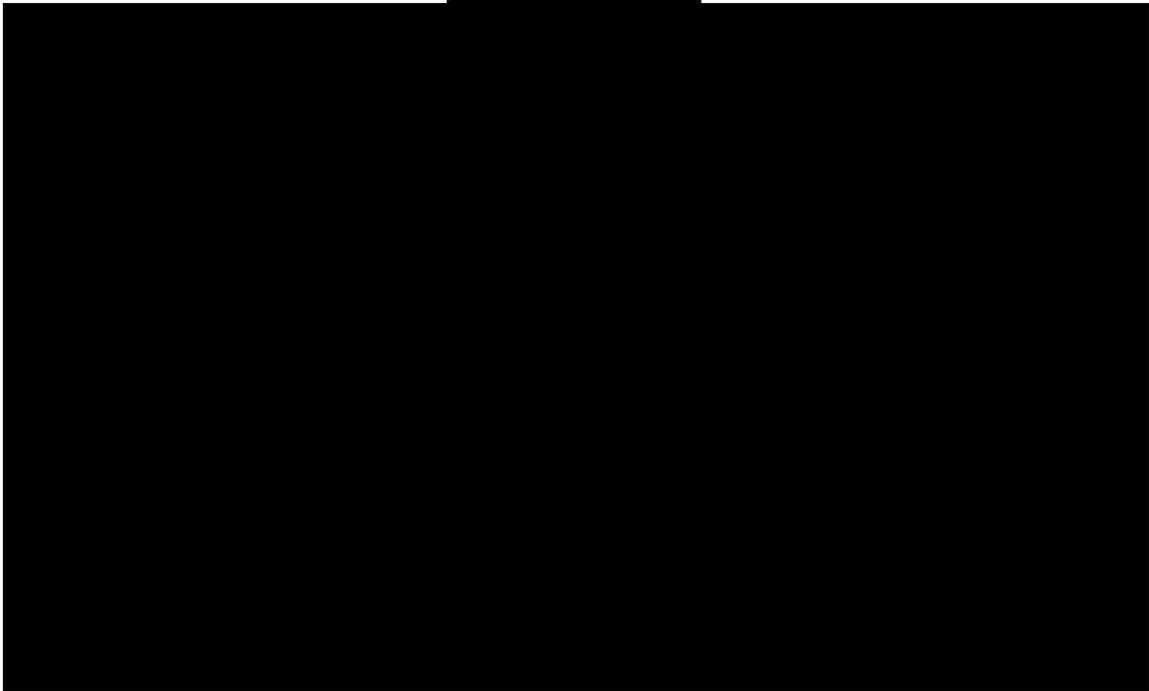


Verizon also measured the percentage of customers who report a three or more problem within 30-days of a prior cleared trouble report (referred to as 30-day Chronic). The percentage of customers with such repeat problems was slightly [redacted] for wireline voice customers than for FiOS voice customers. In 2014, [redacted] of wireline voice customers and [redacted] of FiOS voice customers had 30-day Chronic conditions.

Verizon measured the percentage of trouble reports (dispatched out and not dispatched out) that were cleared on or before the date/time promised, referred to as “percent Repair Commitments Met-Total”. Figure 39 shows that 2012-2014 data for residential and business customers for Verizon’s traditional wireline voice services and FiOS voice services. The percentage of trouble reports cleared by the commitment date was [redacted] for wireline customers when compared to the FiOS voice customers.⁶⁹

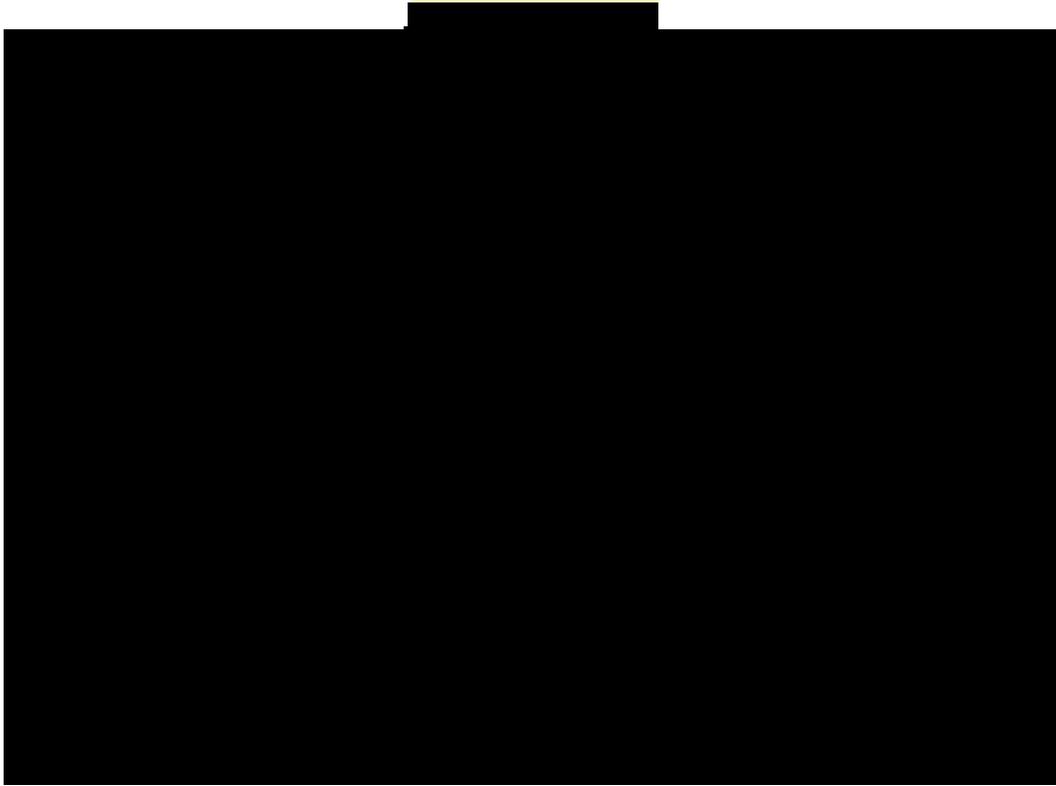
⁶⁹ In 2014, only about [redacted] of the trouble repair tickets were cleared within the promised date/time, whereas [redacted] of the trouble reports for FiOS voice customers were cleared within the promised date/time.

Figure 39: Verizon's Service Quality Metric for Measuring Repair Commitment Met for Residential and Business Customers, Traditional Wireline and FiOS Voice Services (2012-2014)



Verizon tracked the MTTR for residential and business customers in 2012-2014 for its traditional wireline voice services and FiOS voice services, refer to Figure 40. The MTTR for FiOS voice residential and business customers was much [redacted] than that for traditional wireline voice services. For instance, in 2014, the MTTR for FiOS voice residential and business customers was [redacted] whereas the MTTR for traditional wireline voice service was [redacted]

Figure 40: Verizon MTTR for Residential and Business Customers Traditional Wireline and FiOS Voice Customers (2012-2014)



Trends in Provisioning of Services

Verizon provided company specific service quality metrics pertaining to service provisioning (installation and commitment met).⁷⁰ Table 8 shows the definitions of Verizon's service provisioning metrics. Verizon provided the data for these metrics for its traditional wireline voice service for the years 2010 through 2014, and for its FiOS voice for the years 2012 through 2014.⁷¹

Table 8: Verizon's Service Quality Metrics on Service Installations and Commitment Met

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

⁷⁰ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 3 and No. 4.

⁷¹ Verizon Confidential Response to ORA DR 002 [A. 15-03-005], No. 5.

Standardized Metric Name	Definition
[REDACTED]	[REDACTED]

Figure 41 shows the average number of days per year for installing wireline voice services to residential customers (consumers) and businesses (2010-2014). In 2014, the average installation intervals were [REDACTED] for residential customers compared to business customers [REDACTED]⁷² Verizon did not provide the data for this metric for FiOS voice service installations.

Figure 41: Verizon’s Average Installation Intervals for Wireline Voice Services (2010-2014)



Figure 42 shows Percentage of Provisioning Commitment Met for Verizon’s wireline voice services, 2010-2014. This metric measures the percentage of dispatched out installations that were cleared on or before date/time promised. For the residential and businesses voice over copper customers, the Percentage of Provisioning Commitments Met [REDACTED] in 2010 to [REDACTED] in 2014.

⁷² The average installation intervals for residential customers have [REDACTED] in 2014 to [REDACTED] compared to [REDACTED] in 2012 and about [REDACTED] in 2013.

However, when compared to G.O. 133-C installation commitment met standards of 95%, Verizon [REDACTED] the standard. ORA presents this comparison for illustration purposes but cannot ascertain whether Verizon's calculation of this metric matches G.O. 133-C calculations for commitment met.

Figure 42: Verizon's Percentage of Provisioning Commitments Met for Wireline Voice Services (Dispatchable) (2010-2014)

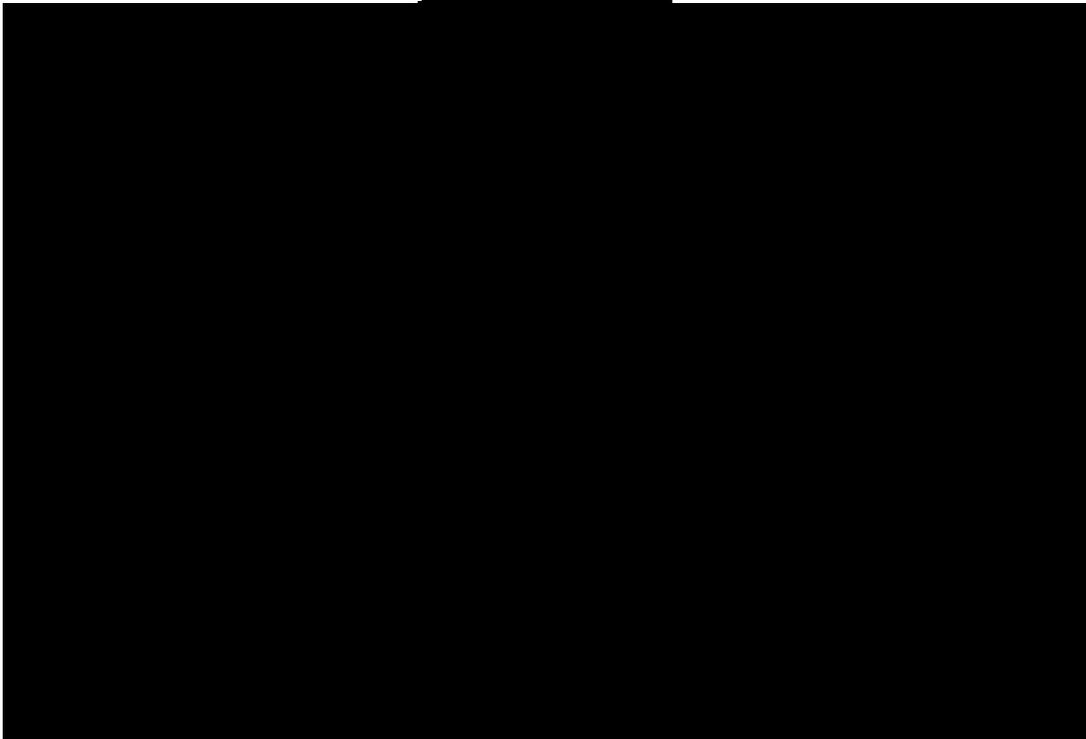


Figure 43 shows Percentage of Provisioning Commitment Met for Verizon's wireline voice services, 2010-2014 for total displaced out and not dispatched out orders. When accounting for non-dispatchable service orders, the results showed [REDACTED] in commitment met.⁷³ On average residential consumers received [REDACTED] scores (higher Provisioning Commitments Met) compared to business customers in 2010-2014.

⁷³ For instance, the Percentage of Provisioning Commitments Met for residential customers was [REDACTED] in 2010 and [REDACTED] in 2014. Similarly, the Percentage of Provisioning Commitments Met for businesses was [REDACTED] in 2010 and [REDACTED] in 2014.

Figure 43: Verizon's Percentage of Provisioning Commitments Met for Wireline Voice Services (Dispatchable and Non-Dispatchable) (2010-2014)

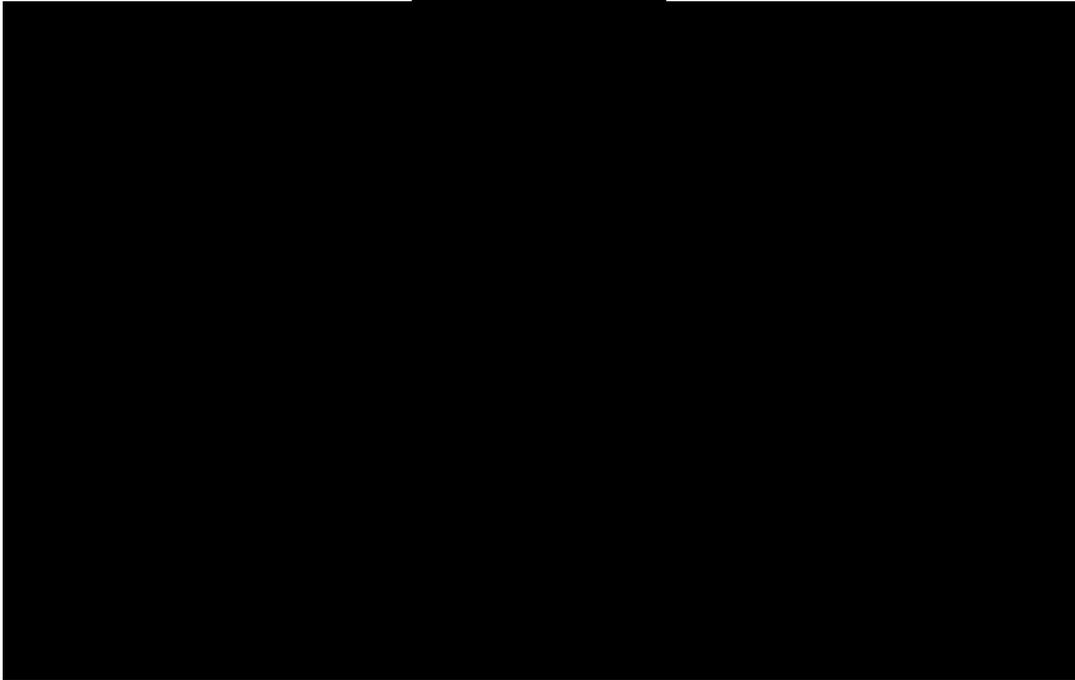


Table 6 shows Verizon's metric, Percent Timely Installation (7-days or less), which measures the percentage of dispatchable orders placed with less than 7-days, offered and reserved due date intervals, based on order issue date. Verizon provided 2014 data only (ORA requested 2010-2014 results). The data indicate wireline business customers received [redacted] installations ([redacted] than FiOS voice business customers [redacted]. However, wireline residential consumers received [redacted] installations ([redacted] than FiOS voice consumers [redacted]. For the combined consumer and business customers, FiOS voice customers received more [redacted] service installations than wireline customers. Note that the threshold for Verizon's metric on service installation for dispatchable orders is within 7-days, whereas G.O. 133-C for installation commitment met is 5-business days. Verizon's metric for service installations [redacted] the G.O. 133-C standard of 95% commitments met in 2014.

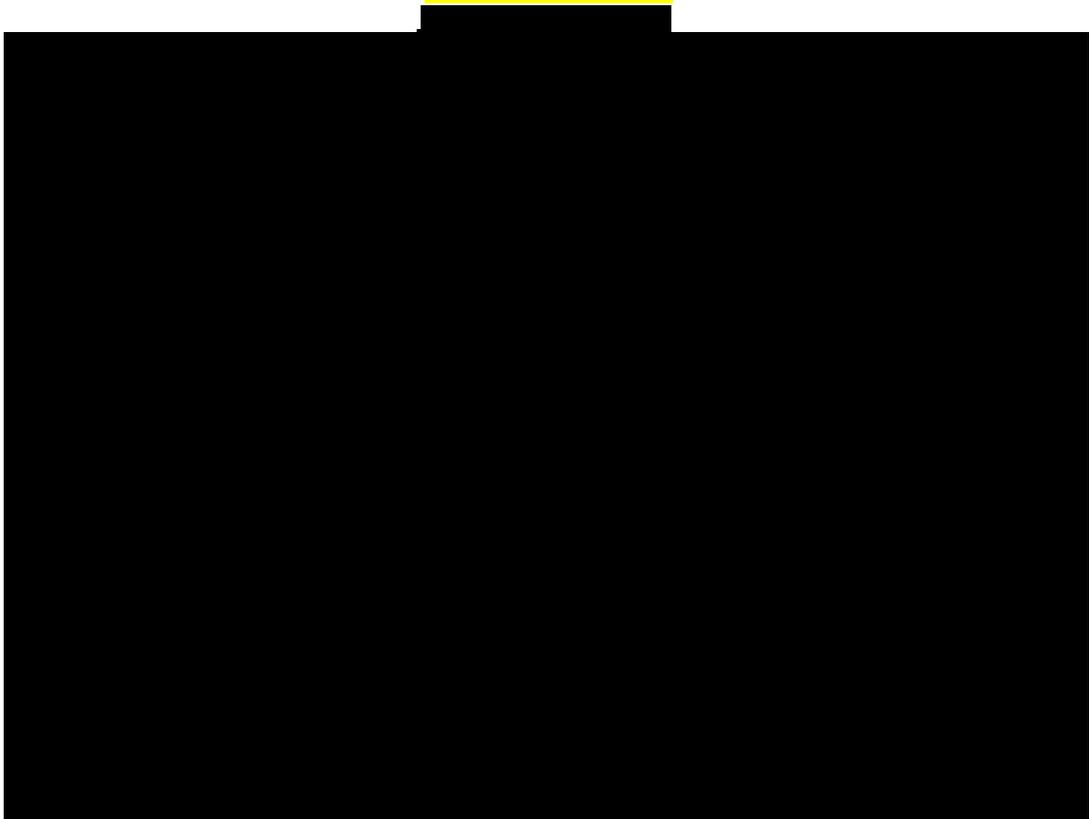
Table 9: Verizon’s Timely Installation Metric for Dispatchable Service Orders for Wireline and FiOS voice Services (2014)

Customers Type	Percentage Timely Installation (7 Days or Less)
[REDACTED]	[REDACTED]

Figure 44 shows the Provisioning Appointment Window Met, expressed as the percentage of dispatched installation orders, where the technician Arrival Time Stamp was within the promised Appointment Window. The chart indicates the Provisioning Appointment Window Met for Verizon’s traditional voice and FiOS voice services for consumer and businesses, for 2012-2014. Verizon did not provide data for the 2010 and 2011. FiOS voice (consumer and business) services received [REDACTED] results than traditional wireline voice services. For instance, in 2014, the Provisioning Appointment Window Met was [REDACTED] for wireline consumers and about [REDACTED] for FiOS voice consumers.⁷⁴

⁷⁴ The trend indicates that the Provisioning Appointment Window Met slightly [REDACTED] from 2012 to 2014 for residential consumers for both the traditional wireline services and FiOS voice services.

Figure 44: Verizon Provisioning Window Met (% Dispatched Installation Orders Time within the Appointment Window), for Wireline and FiOS Voice Services: 2012-2014



Attachment G

**ATTACHMENT G: EVIDENCE OF VERIZON'S DETERIORATING PLANT
CONDITIONS BY CWA**

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

In the Matter of the Joint Application of
Frontier Communications Corporation,
Frontier Communications of America, Inc. (U
5429 C), Verizon California Inc. (U 1002 C),
Verizon Long Distance, LLC (U 5732 C), and
Newco West Holdings LLC for Approval of
Transfer of Control Over Verizon California
Inc. and Related Approval of Transfer of
Assets and Certifications.

Application 15-03-005

**MOTION OF THE COMMUNICATIONS WORKERS OF AMERICA TO
ENTER PHOTOS INTO THE RECORD**

July 23, 2015

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Attorneys for the Communications Workers
of America

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

In the Matter of the Joint Application of Frontier Communications Corporation, Frontier Communications of America, Inc. (U 5429 C), Verizon California Inc. (U 1002 C), Verizon Long Distance, LLC (U 5732 C), and Newco West Holdings LLC for Approval of Transfer of Control Over Verizon California Inc. and Related Approval of Transfer of Assets and Certifications.

Application 15-03-005

**MOTION OF THE COMMUNICATIONS WORKERS OF AMERICA TO
ENTER PHOTOS INTO THE RECORD**

Pursuant to Commission Rules of Practice and Procedure 11.1(a) and 13.7, the Communications Workers of America (“CWA”) hereby moves for an order admitting the attached photos into the record of this proceeding.

CWA representatives presented the attached photos at the Workshops and Public Participation Hearings located at Rancho Mirage on July 20, 2015 and Claremont on July 21, 2015. The CWA representatives were asked by Commissioner Sandoval to seek entry of the photos into the record. These photos represent Verizon plant in the areas surrounding the location where each Workshop and Public Participation Hearing was held.

CWA moves for the admission of these photos into the record.

Dated: July 23, 2015

Respectfully submitted,

_____/s/_____
Marc D. Joseph
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Attorneys for the Communications Workers
of America

Verizon Bad Plant

Palm Springs and Surrounding Areas

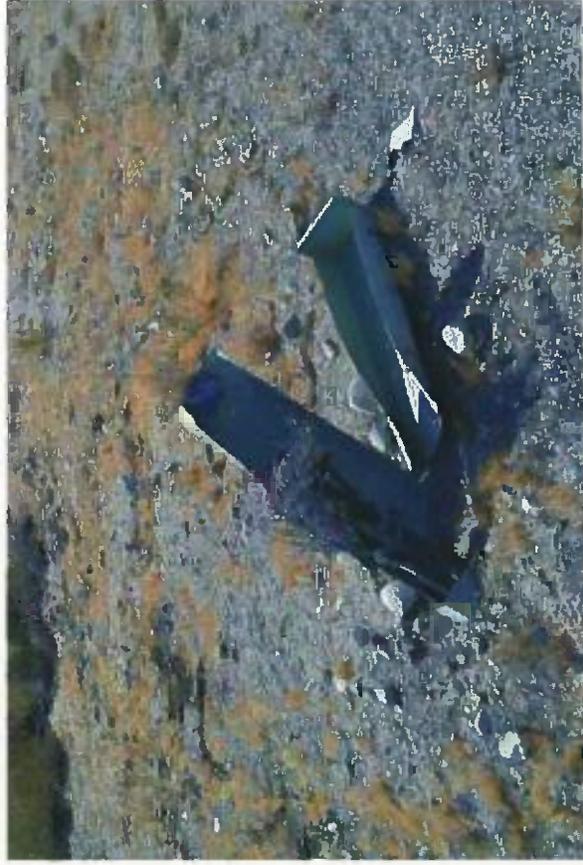


This is a Splice on the corner of Diablo and 20th in Palm Springs the splice has been hit by a vehicle and the pedestal needs to be replaced

Here is another splice on the same cable run as the first picture. The cover for the pedestal is missing and a technician has attempted to maintain the integrity of the network with a temporary wrap. This is located near the corner of Wall and 20th in Palm Springs.



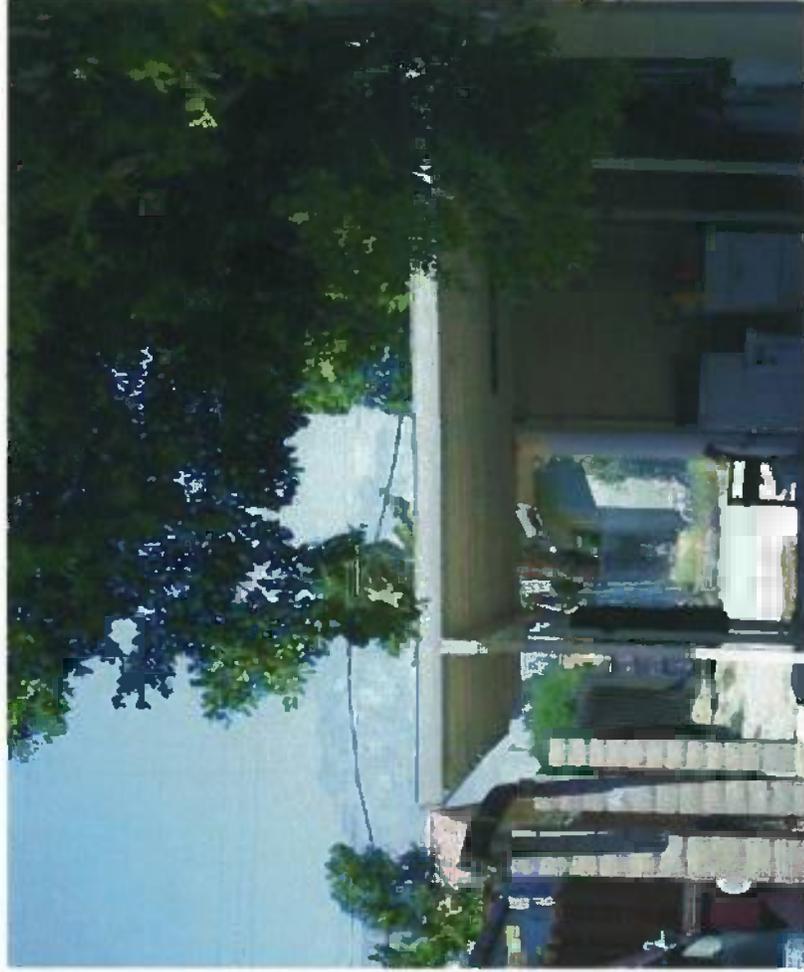
Here is a splice on the corner of Copper and Garnet in Palm Springs. The pedestal has been run over and exposed the splices to the elements. This cable run feeds a small neighborhood in Palm Springs where there is no alternative provider. This also feed critical circuits for SCE's wind farm.

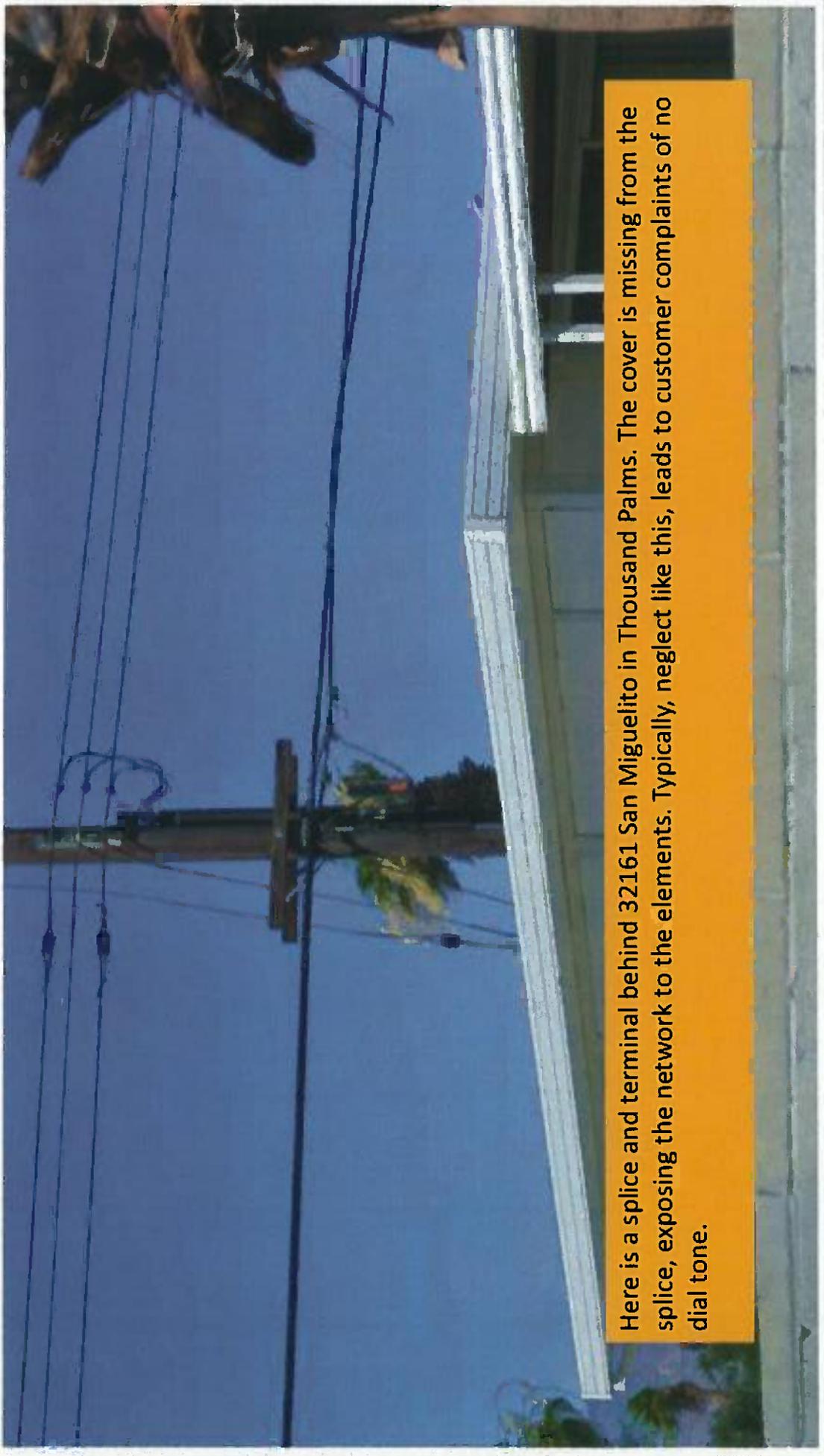


Here is a pedestal located near 72473 Vista Chino in Thousand Palms, CA. The pedestal has been damaged and again we find splices exposed to the elements as well as rodents which tend to habituate these locations.



Here we see a section of cable that has detached from the cable strand, generally this type of trouble is not service affecting, however it is a safety hazard for those customers who live near it. This was taken at 31779 Arbol Real in Thousand Palms.





Here is a splice and terminal behind 32161 San Miguelito in Thousand Palms. The cover is missing from the splice, exposing the network to the elements. Typically, neglect like this, leads to customer complaints of no dial tone.

Here are three pictures of abandoned plant in and around Broadmoor Dr in Thousand Palms. Rather than wreck out the bad plant Verizon chose to leave it in place. Customers generally call in and report low hanging lines and technicians have to explain to the customer that they are unable to remove it, because of how Verizon replaced it.



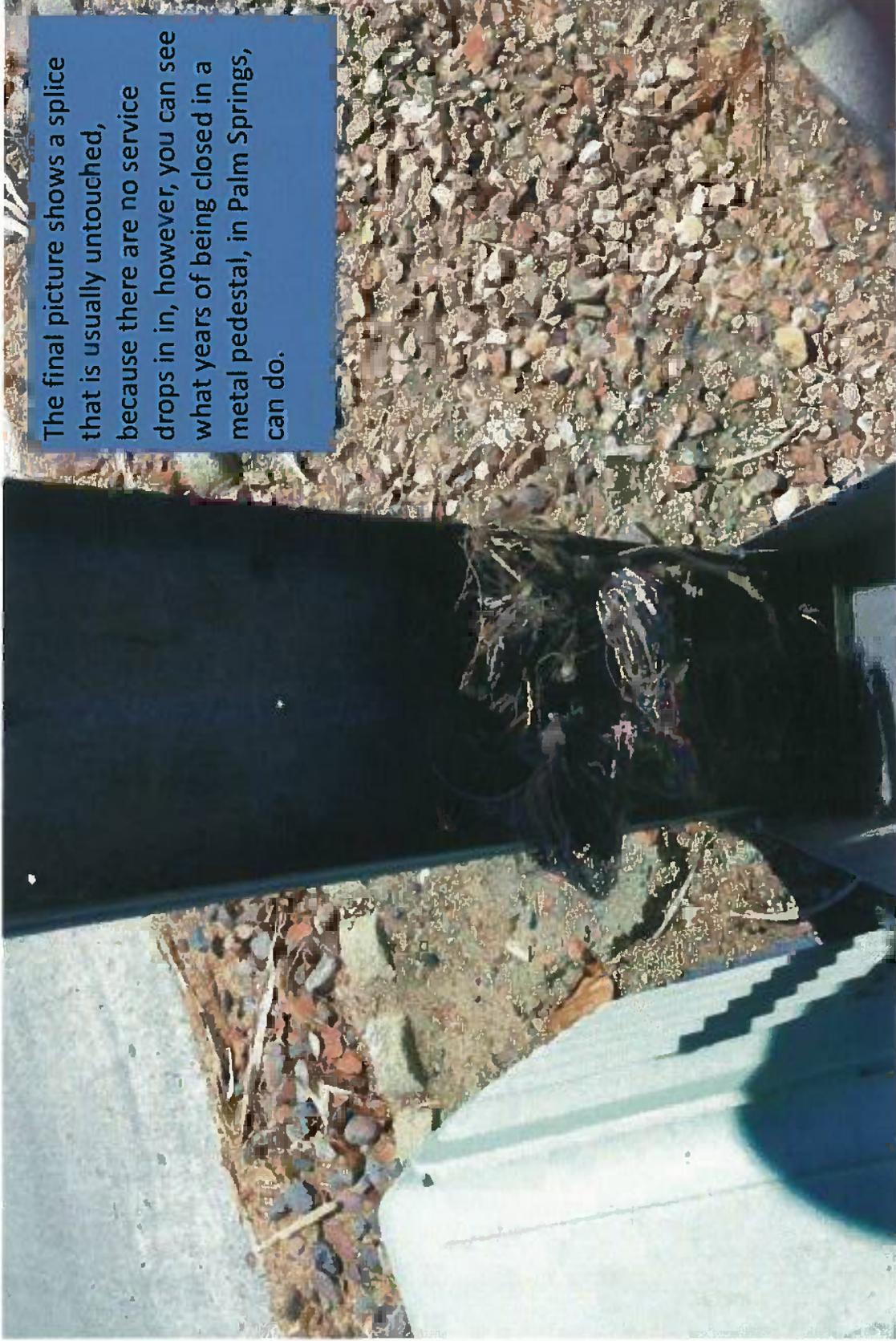
Here are some pictures we took at a mobile home park in Palm Springs. The first one you see is located at 133 Fodulac. This is typical of what happens to splices where there is no money for maintenance. The cable is subject to the element due in part to the type of closure used. The metal pedestal heats the cables up in the summer time causing the plastic insulation to deteriorate at an accelerated rate.



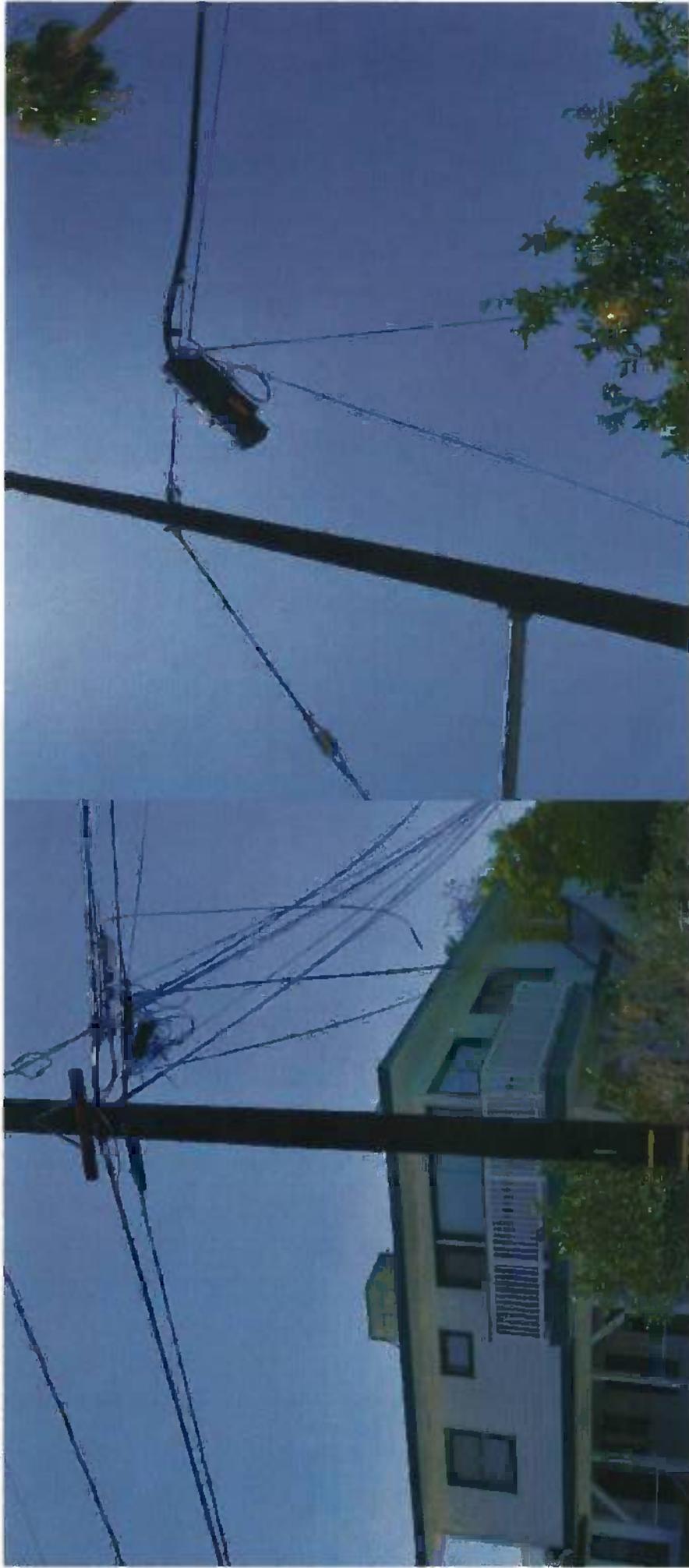


The second picture is part of the problem, the splices become "balled up" to the point that is almost impossible to close them. This was taken at 181 Fondulac.

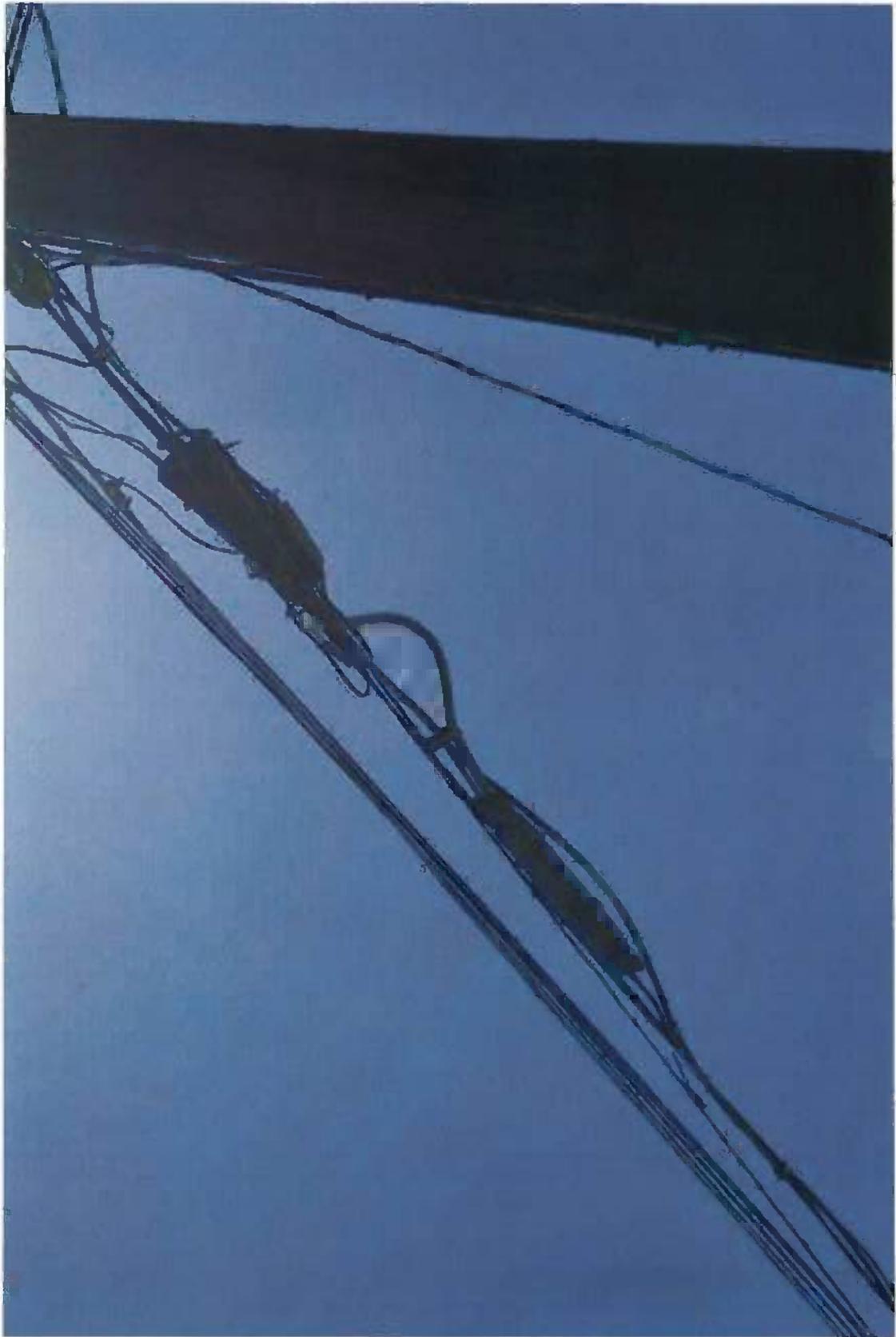
The final picture shows a splice that is usually untouched, because there are no service drops in in, however, you can see what years of being closed in a metal pedestal, in Palm Springs, can do.

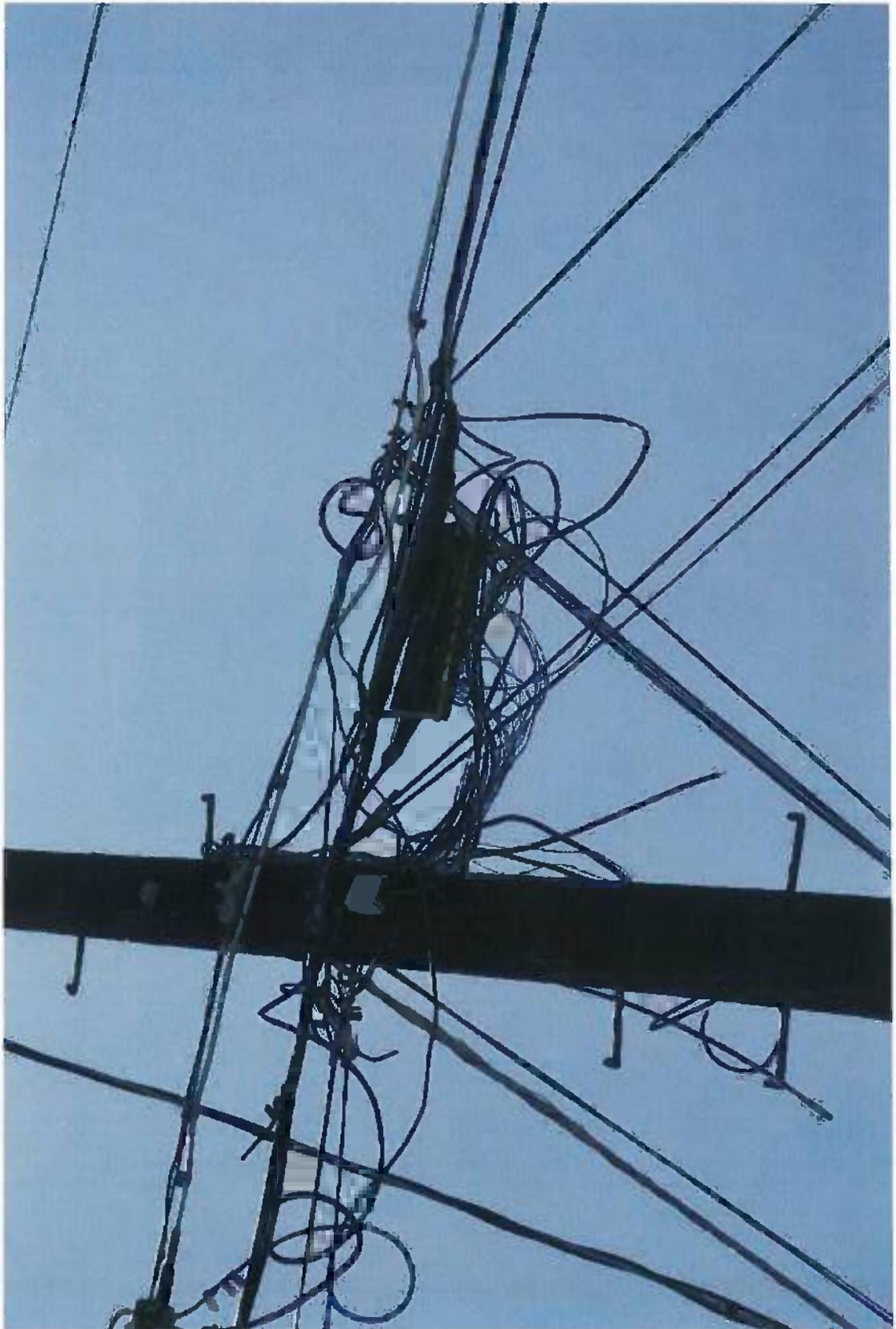


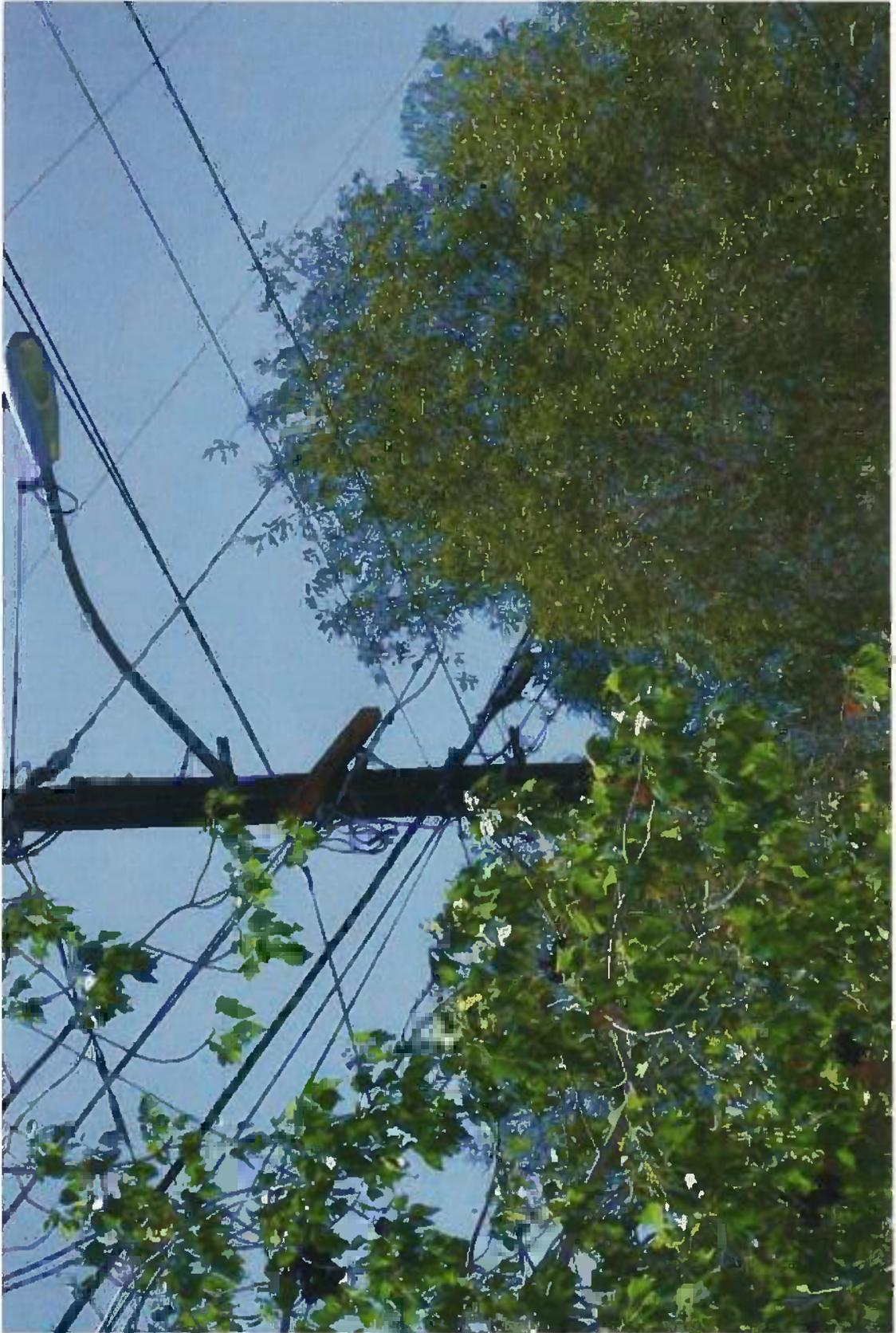
Here are some pictures from C St in Palm Springs, the terminal have detached from the strand due to broken hardware and need to be replaced



Here are some pictures we took around Chiporosa St and H St in Palm Springs. The first and second show what happens to “ready access” plant after time. The splices in the closures have become too much to encase in the closure, exposing the cable to the elements. Typically, technicians find birds living in these closures and customers report noise on the line or no dial tone. There is also lead sheathed cable, which Verizon claims they removed due to the health risks it poses to the technicians and the public. The third splice is at 39550 Elena Way and shows ready access plant with the cover entirely missing.







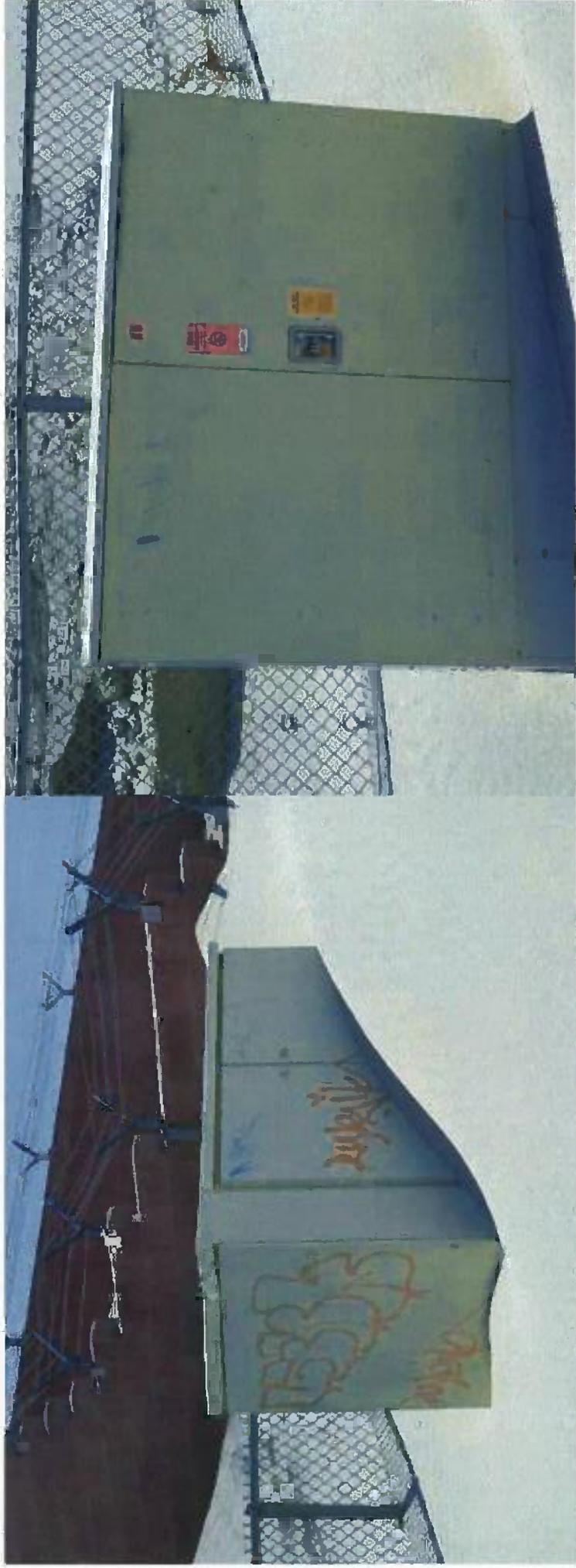
Here are two attempts of a technician trying to protect the plant. We refer to these as “temp wraps” the first is at 67865 Foothill Rd in Palm Springs and the second is at 39440 Bel Air. As you can see, over time what was the first temp wrap ends up looking like the second, because the company doesn’t provide the technicians with the time or materials to fix these issues correctly.



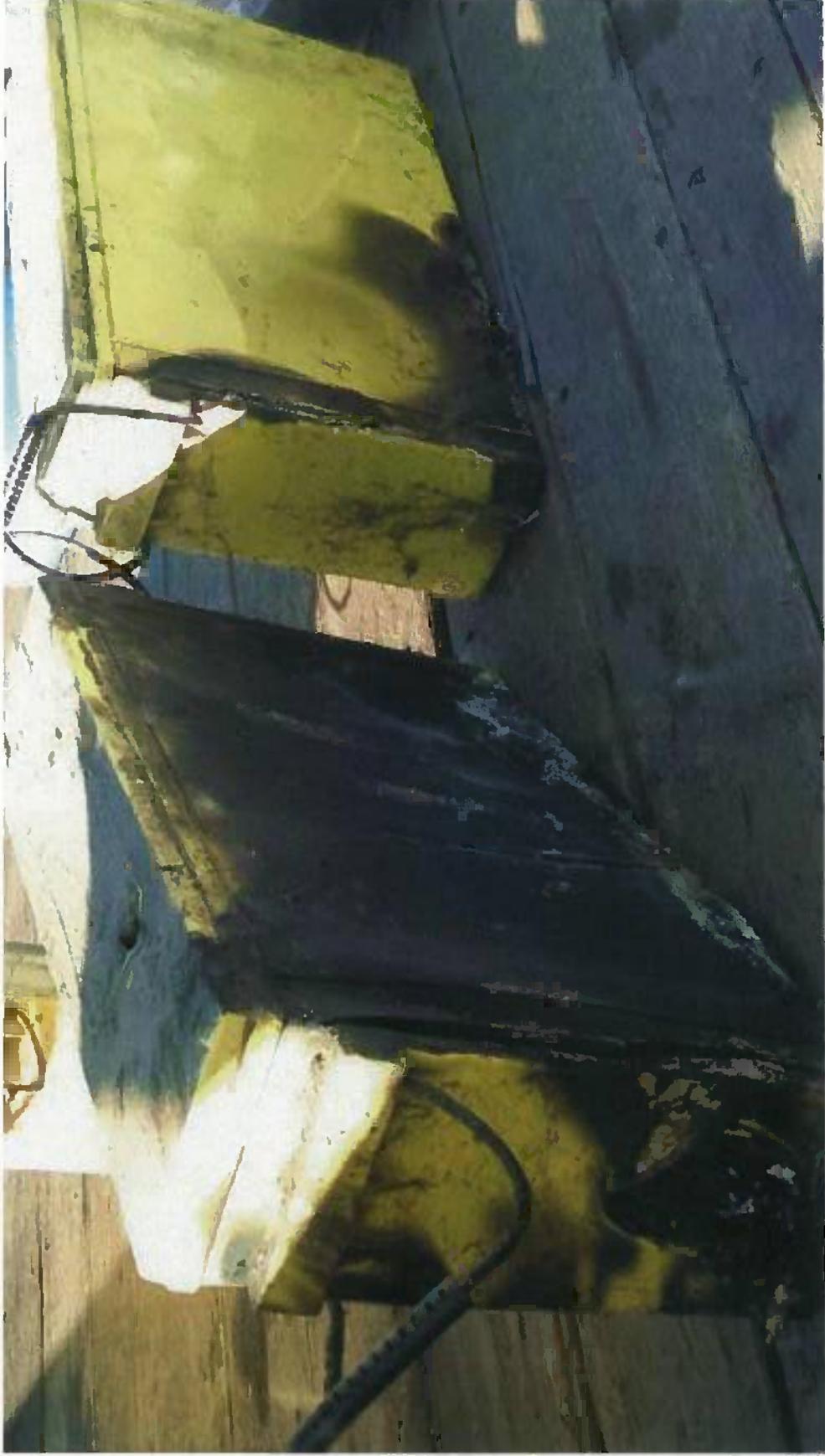


Here is some more lead cable that doesn't exist (it's the white/silver looking one). This is on Terrace Rd in Palm Springs.

Here we see a remote AFC Cabinet located at 26399 Landu Rd in Palm Springs. The cabinet (in the first picture) supplies dial tone to the BBox (in the second picture) in and around this neighborhood. Verizon is required to perform routine maintenance on the cabinets to ensure, in the event of an emergency or commercial power outage, that the customers fed from this location still have access to 911 service, from the looks of it, it appears that Verizon is not performing the required maintenance.



Aldergate Dr. Menifee, CA – These batteries had thermal runaway and caught fire.



Cawston Ave, Hemet, CA – These batteries are cracked and 13 years old.



Corner of Glenview Lane and Hwy 189, Twin Peaks, CA -- The BBox has been hit by a vehicle and the Company has built a wooden "A" frame to support is and wrapped it in plastic to keep the moisture out.



These are some of the examples Verizon technicians face everyday in the areas where Verizon neglects its network.



11231 Chico, Pomona CA --- Aerial Splice --- Closure broken and conductors exposed

**11035 Roswell, Pomona, CA ---
Abandoned Pole --- Pole transfer.
Edison replaced the bad pole and
Verizon needs to transfer facilities.
Pole was replaced over one year
ago.**





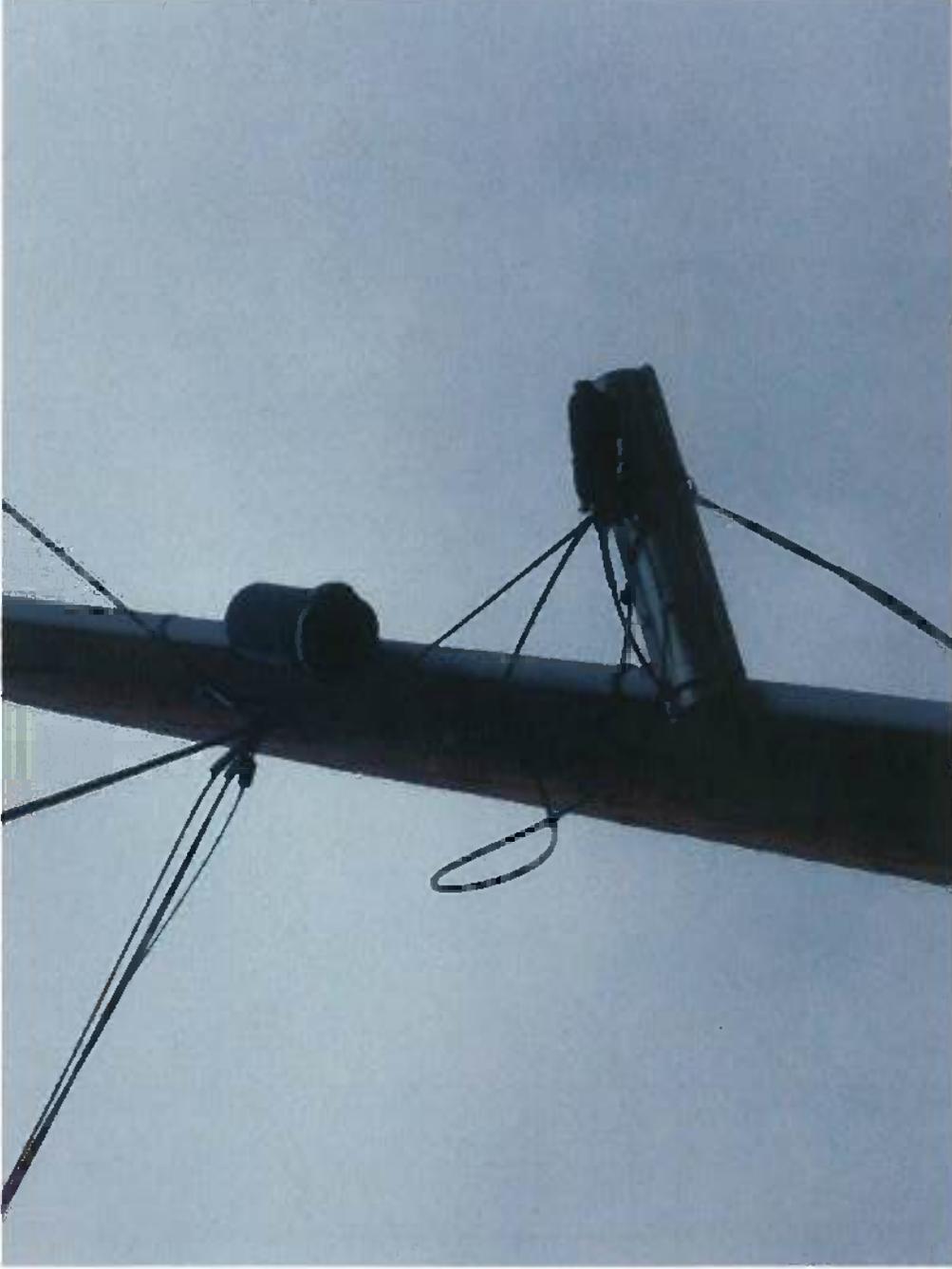
3930 Grand, Pomona, CA --- Aerial Splice --- "Temporary" Bag placed over closure came off. Replaced with "temporary" bag. Bad conductors need to be fixed/replaced and new splice closure placed. Placed over one year ago.



11190 Pipeline, Pomona, CA –Aerial Splice --- Splice closure broken, conductors exposed



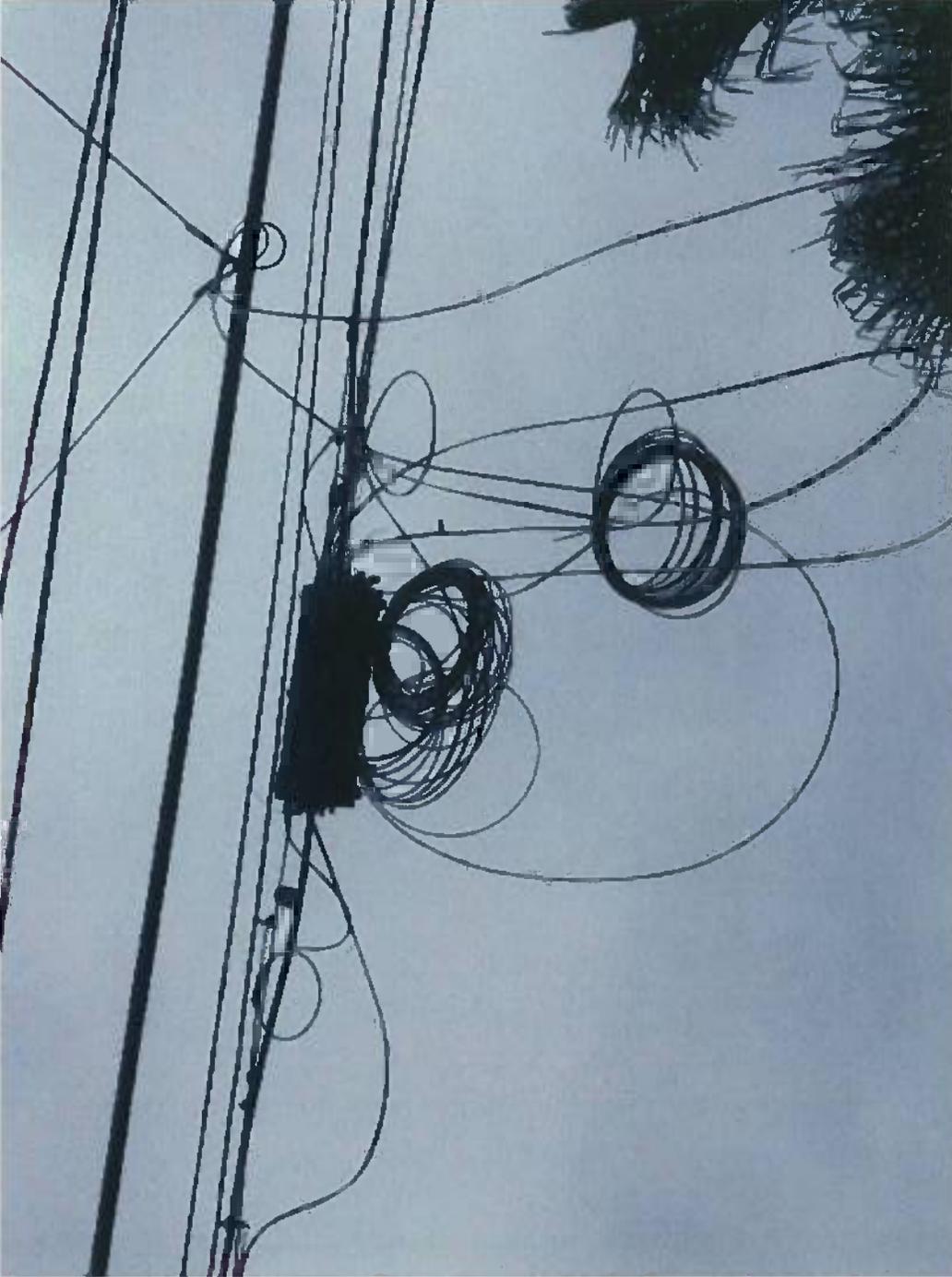
11146 Pipeline, Pomona, CA –Aerial Terminal --- Hole in Splice closure/birds making a nest.



12226 Pipeline, Chino, CA --Aerial Drop --- Closure and terminal not secured to pole/drop under tension



12226 Pipeline, Chino, CA --- Aerial drop --- Closure and terminal not secured to pole/drop under tension



13144 Pipeline, Chino, CA --- Aerial Drop --- Drops hanging for years.



13187 Pipeline, Pomona, CA --- Aerial Splice --- Closure not secured, door open.

**N/S of Riverside Dr., W/O Yorba,
Chino, CA --- Aerial Splice**



**N/S of Riverside Dr., W/O Yorba,
Chino, CA --- Aerial Splice**





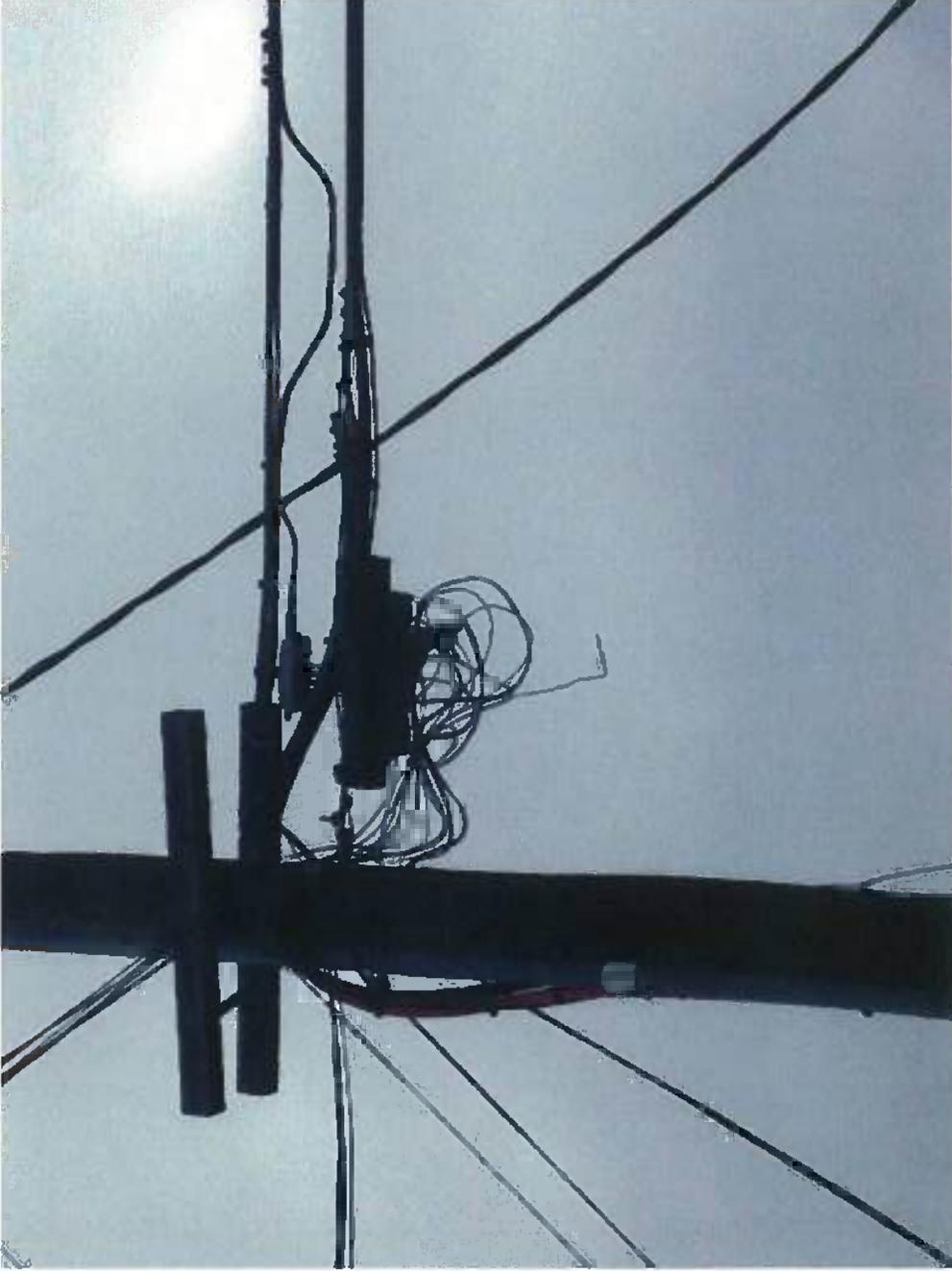
12852 Yorba, Chino, CA --- Aerial Splice --- Temp repair of lead closure. Needs to be replaced with permanent closure.



Walnut and Baker --- Aerial Splice --- Temp bag placed over one year.



Alley way R/O 12940 Central, Chino, CA --- Aerial Splice ---- Temp bags on both ends falling off.



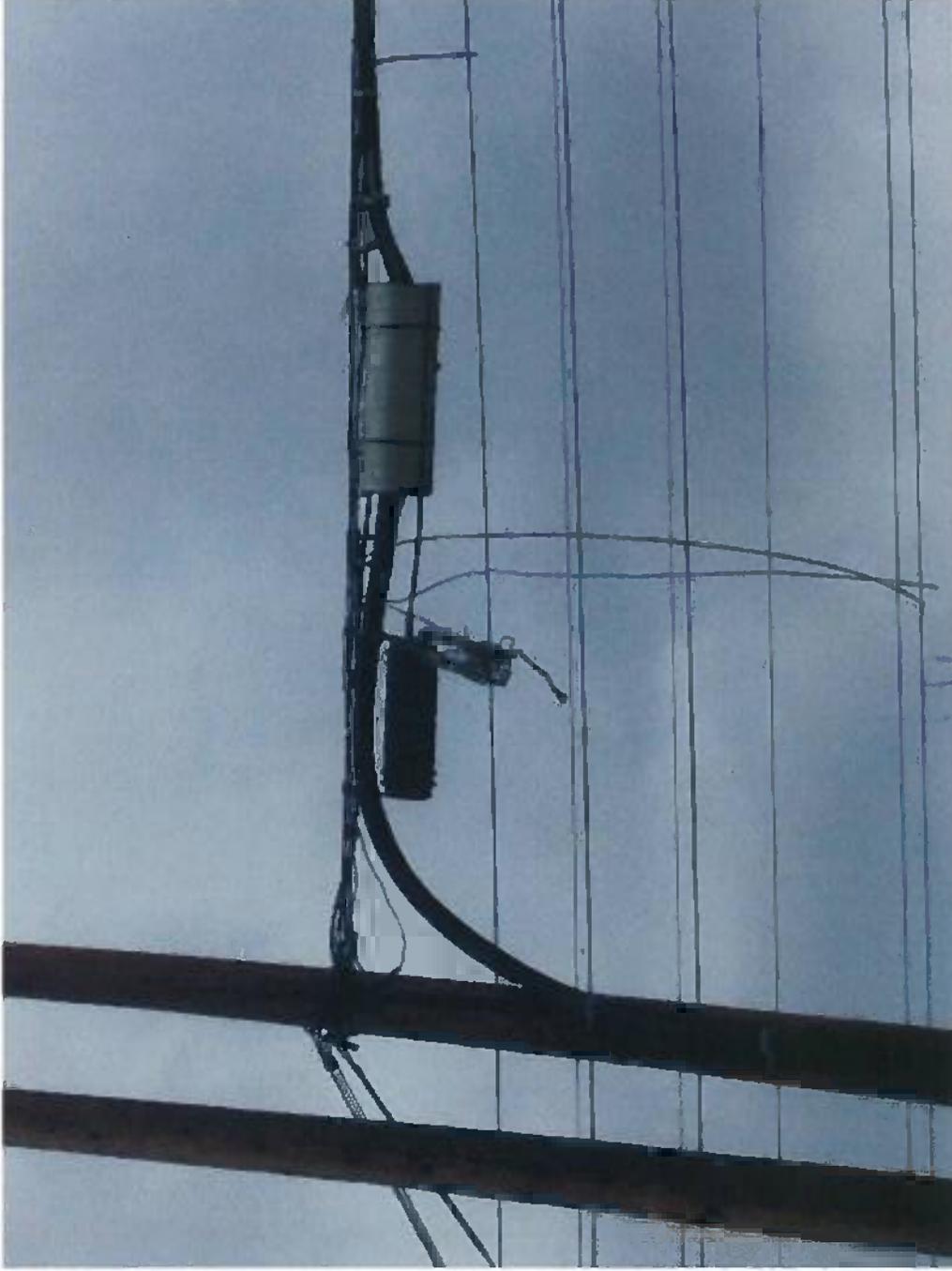
Alley way R/O 5275 Riverside Dr. Chino, CA --- Aerial splice --- Closure broken, temp wrap falling off.



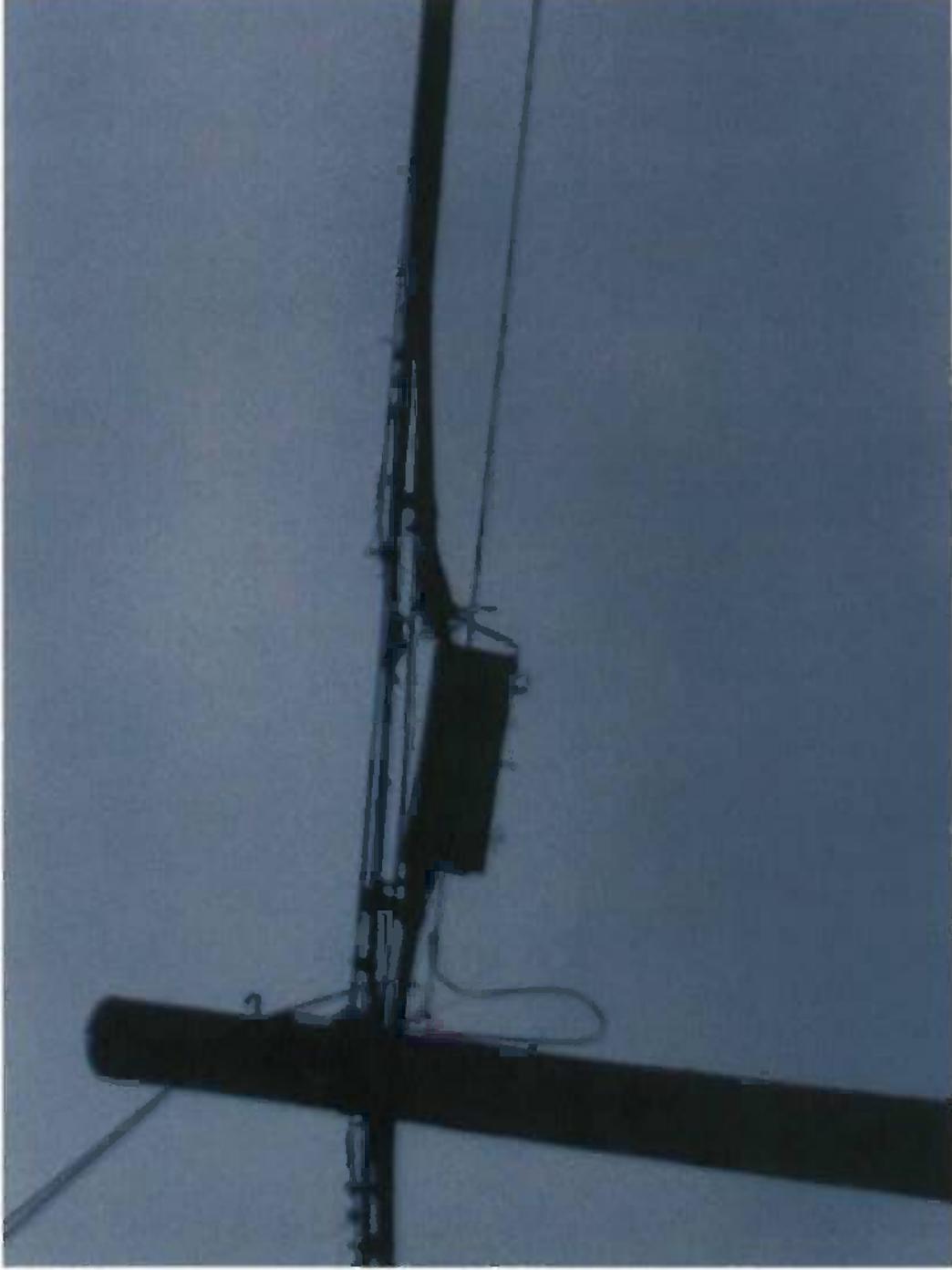
Alley way R/O 13990 Central --- Aerial Cable --- large coils of cable hanging from strand for so long rope is frayed and ready to break.



N/S of Schaefer --- Pole transfer --- Three poles W/O Mountain. Pole transfer/closure broken/ end plate missing.



S/S of Edison /E/O Euclid --- Aerial Terminal --- Term cover missing, term hanging.



Across Street from 7990 Edison --- Aerial Terminal/Ariel Splice --- term end off



14651 Grove, Chino, CA --- Aerial Splice --- closure not secured/failing



14651 Grove, Chino, CA --- Aerial Splice --- Old temp wrap



Across street from 7439 Chino Ave. Chino, CA --- Aerial Splice/Abandoned Pole --- Old temp wrap with bird making a nest in closure and pole transfer.



**Across Street from 1161 Riverside Dr. -
-- Aerial Splice/pole lean --- Pole and
temp pole leaning**



E/S of Vineyard N/O Tam O'Shanter, Ontario, CA --- Aerial Splice --- Closure missing/temp cone/conductors exposed.



Laundromat 1228 6th St, Ontario, CA --- Aerial Splice --- Temp wrap, holes and conductors exposed.



8353 Arrow Hwy, Rancho Cucamonga, CA --- Aerial Spice --- Two closures with temp wraps falling off/conductors exposed.



7271 Beryl, Rancho Cucamonga, CA --- Aerial Cable --- Working cable not secured/hanging.



7073 Beryl, Rancho Cucamonga, CA --- Aerial Cable ---lashing wire broken cable coming down.

**7205 Beryl, Rancho Cucamonga,
CA --- Abandoned Pole --- Pole
transfer**





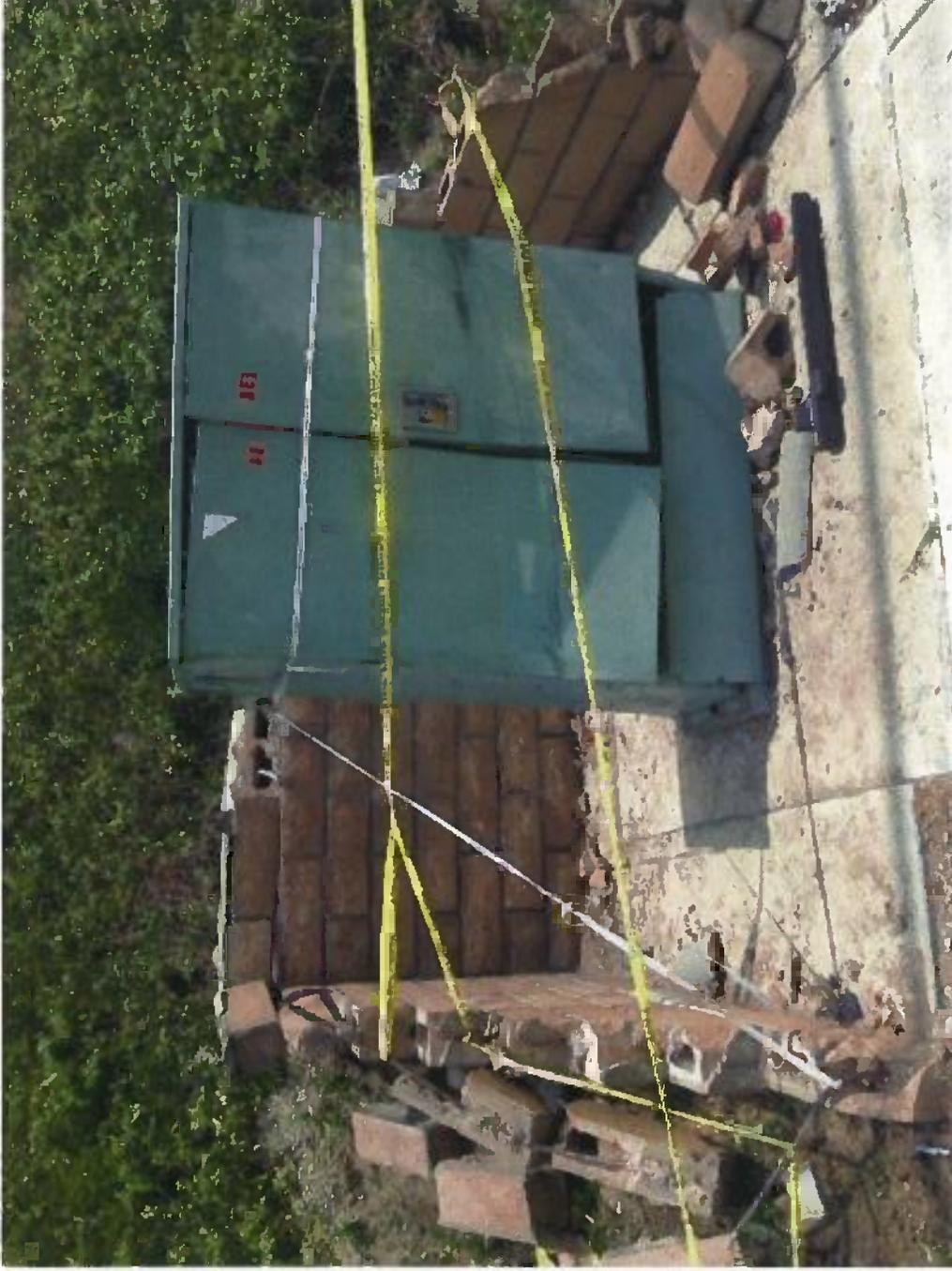
9340 19th St, Rancho Cucamonga, CA --- Aerial Splice --- Temp wrap

E/S of Haven N/O 19th St, Rancho Cucamonga, CA --- Aerial Riser --- Riser not secured to pole/rope is wormed over one year.



**Across street from 200 Cannon,
San Dimas, CA --- Pole
transfer/temp wrap/term upside
down**





S/S La Puente W/O La Tortola Walnut ---- Cross Connect Box ---- B Box AE hit/damaged fairly recently.



Across street from 319 Pierre Walnut, CA --- Aerial Splice --- Temp wrap over 3 years



Alley way R/O 19830 Valley Blvd., Walnut, CA --- Aerial Splice --- Temp Wrap



3100 Pomona Blvd., Pomona, CA --- Aerial Splice --- Temp wrap