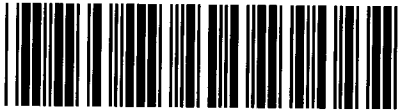




Control Number: 45601



Item Number: 282

Addendum StartPage: 0

**SOAH DOCKET NO. 473-16-2983
DOCKET NO. 45601**

**APPLICATION OF LCRA
TRANSMISSION SERVICES
CORPORATION TO AMEND ITS
CERTIFICATE OF CONVENIENCE
AND NECESSITY FOR THE ZORN-
MARION 345-KV TRANSMISSION
LINE PROJECT IN GUADALUPE
COUNTY**

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CROSS REBUTTAL TESTIMONY

OF

CHARLES R. KRACKAU

**ON BEHALF OF THE
KRACKAU INTERVENORS**

May 20, 2016

**SOAH DOCKET NO. 473-16-2983
DOCKET NO. 45601**

CROSS REBUTTAL TESTIMONY OF CHARLES R. KRACKAU

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1 **SOAH DOCKET NO. 473-16-2983**
2 **DOCKET NO. 45601**

3
4 **CROSS REBUTTAL TESTIMONY OF CHARLES R. KRACKAU**
5

6 **I. INTRODUCTION**

7 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

8 A. My name is Charles R. Krackau. My business address is 8720 Barbarossa Road, New
9 Braunfels, Texas, 78130.
10

11 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

12 A. I am testifying on behalf of myself and my wife, Charles R. and Lori L. Krackau, and on
13 behalf of Jerry W. Krackau, Lynnette K. Cranford (formerly Krackau), the Clarence A.
14 Krackau Family Trust, Charles R. Krackau, Trustee, and the Estate of Lorine K. Krackau,
15 Charles R. Krackau, Executor (collectively, the “Krackaus” or the “Krackau
16 Intervenors”).
17

18 **Q. ARE YOU THE SAME CHARLES R. KRACKAU THAT FILED TESTIMONY ON**
19 **ROUTE ADEQUACY AND DIRECT TESTIMONY EARLIER IN THIS DOCKET?**

20 A. Yes.
21

22 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

23 A. The purpose of my testimony is to respond to and rebut the direct testimonies and
24 statements of position of various parties in this proceeding, including Commission Staff,
25 the Southern Guadalupe River Alliance (“SGRA”), Texas Parks and Wildlife Department
26 (“TPWD”), White Wing 2016, LLC (“White Wing”), Guadalupe River Ranch, LP
27 (“Guadalupe River Ranch”), the City of New Braunfels (“New Braunfels”), various
28 unrepresented intervenors, and the intervenors from Bandit Golf Club, including Golf
29 Associates, Ltd. (“Golf Associates”), Foresight Golf Partners 2001, Ltd. (“Foresight”),

1 and Long Creek Owners Association ("Long Creek").

2
3 Q. **WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

4 A. First, I rebut Staff's testimony asserting that there is no data permitting comparison of
5 Krackau Route 10-5H and Christensen and Schroeder proposed alternative to Route 10M
6 to the other routes. As I testify, there is data in the record (or LCRA could provide data
7 for the record) allowing these two good routes to be evaluated and compared to the
8 remaining routes.

9
10 Next, I rebut the testimony of the parties that supported Route 10 in their prefled direct
11 testimony, statements of positions, or submissions (including the Southern Guadalupe
12 River Alliance ["SGRA"], Texas Parks and Wildlife Department ["TPWD"], White
13 Wing, Guadalupe River Ranch, and certain unrepresented intervenors), claiming it is the
14 route identified by LCRA TSC as the route most compliant with PURA and the
15 Commission's rules. I testify that, as reflected in LCRA's responses (and corrected
16 response) to Staff RFIs 2-1 and 2-2 (see Exhibit CRK-CR-1, attached), Route 10 is not,
17 as LCRA concluded when it filed its application and when the intervenors filed their
18 direct testimonies, the best route. As LCRA's responses to Staff RFIs 2-1 and 2-2 and
19 Staff's prefled direct testimony show, Route 10M is the best route by a significant
20 margin. As the Krackaus pointed out in their objections to intervenor testimony, by the
21 three standards LCRA applied to reach its erroneous initial determination that Route 10
22 was the best route, namely length, cost, and number of newly affected habitable
23 structures, Route 10M is by far the best route (see Exhibit CRK-CR-1):

- 24
25 1. Route 10M is only 9.5 miles in length, making it 0.4 miles shorter than Route 10,
26 with a length of 9.9 miles, and making it the route with the shortest length of new
27 ROW of all routes;
- 28 2. Route 10M affects only 33 newly-affected habitable structures within 500 feet of
29 the route centerline, the least number of newly-affected structures of any route,
30 and affects 8 fewer newly-affected habitable structures than Route 10, which
31 affects 41 new habitable structures; and

1 3. The estimated cost of Route 10M is only \$46,810,000, approximately \$865,000
2 less than the cost of Route 10 at \$47,675,000, and the lowest-cost route of all
3 routes.

4
5 Contrary to these parties' claims, Route 10 is not the best route, not only because Route
6 10M is shorter, cheaper, and affects fewer habitable structures, but because Route 10
7 adversely affects the Krackau properties and violates the requirement of the
8 Commission's rules to follow property boundaries and avoid crossing the middle of
9 affected properties. As I testified in my direct testimony, if Route 10 is approved,
10 significant stretches of the line will cross over the middle of the Krackau Intervenor's
11 farm and ranch land, severely impairing the efficiency of our farm and ranch operations.
12 To mitigate the impact, I recommended in my direct testimony that the ALJs and the
13 Commission approve other routes besides Route 10, particularly routes 10M, 5 and 5A,
14 10-5H (a hybrid of Routes 10 and 5), and 6, routes that would use segments that would
15 not cross over the middle of the Krackaus' farm land. These routes would moderate the
16 impact on my family's farms and farming operations while still meeting the goals of
17 LCRA's application and the ERCOT study. In my rebuttal of intervenor testimony,
18 statements of position, and submissions that have erroneously recommended and
19 supported Route 10, I recognize that the error is largely due to the fact that the parties did
20 not have enough time to review and evaluate Route 10M or to recognize its superiority
21 over Route 10 and the other routes.

22
23 Finally, I rebut the statements of position of the Bandit Golf Club intervenors, Golf
24 Associates, Foresight Golf, and Long Creek for reasons I discuss below.

25 26 **II. REBUTTAL OF STAFF TESTIMONY**

27 **Q. ARE YOU REBUTTING THE TESTIMONY OF THE COMMISSION STAFF?**

28 **A.** Yes. I am rebutting the portion of the Commission Staff's testimony on Page 14 where
29 Staff asserts that "neither the Krackau nor the Christenson's routes will be mentioned in

1 the remainder of Staff's testimony *due to the lack of available routing data needed to*
2 *compare them to the other 17 existing alternative routing options.*" Emphasis added.
3

4 **Q. WHICH "ALTERNATIVE ROUTES" DOES STAFF'S TESTIMONY REFER TO?**

5 A. Staff's claim relates to Krackau Route 10-5H (the Krackaus' hybrid of Routes 10 and 5,
6 with segments S2-I-M-T-V-Y-P1-S1-U1-L2-T2-F2-G2) and Christenson alternative 10M
7 (S2-I-N-O-W-X-Y-P1-T1-W1). Krackau Route 10-5H would combine segments from
8 Routes 10 and 5 to create a hybrid route that follows Route 10 on the western side of the
9 study area but diverts to a more northerly path at the eastern end of segment P1, using the
10 eastern segments of Route 5 and ending in Segments F2-G2. Christensen alternative 10M
11 (which is also supported by Twyla Schroeder in her Statement of Position and should be
12 called Christenson/Schroeder alternative 10M) uses the elements of Route 10M (S2-I-M-
13 T-V-Y-P1-T1-W1) but, where it comes near the Christenson and Schroeder properties,
14 travels further south and uses segments N-O-W-X instead of segments M-T-V.
15

16 **Q. WHAT IS THE BASIS OF YOUR REBUTTAL OF THIS PORTION OF THE**
17 **STAFF'S TESTIMONY?**

18 A. Staff's claim that there is a lack of available routing data to compare Krackau Route 5-10H
19 and Christenson/Schroeder alternate 10M to the other 17 existing alternative routing
20 options is either incorrect or not entirely correct. The data required to make the
21 comparison, or a significant part of it, is included in Table 5-2 in LCRA's application
22 (which lists the evaluation criteria for each of LCRA's proposed segments, including the
23 segments included in both the Krackau and the Christenson's/Schroeder's alternative
24 routes), in Attachment 2 in LCRA's application (which lists the costs of each of the primary
25 routes), in Exhibit RH-3 attached to Ms. Hernandez's testimony, in LCRA's responses and
26 corrected response to Staff RFI 2-1 and 2-2, and in LCRA's response to White Wing RFI
27 1-7. Any other data needed could be provided by LCRA.
28

29 **Q. ARE KRACKAU ROUTE 10-5H AND CHRISTENSEN/SCHROEDER**

1 **ALTERNATE ROUTE 10M VIABLE ROUTES?**

2 A. Yes. As I point out in my direct testimony, Krackau Route 10-5H is my third best solution.
3 It is short, using only 10.6 miles and, at \$50.4 million, relatively inexpensive. It affects
4 few habitable structures and does not cross over the middle of the Krackaus' property.
5 Christensen/Schroeder alternate route 10M is only 0.4 miles longer than Route 10M and
6 is, therefore, the same length as Route 10 (9.9 miles). Because it is short, it would be
7 expected to remain inexpensive. And, it would appear to affect only a few more habitable
8 structures than Route 10M, which affects only 33 new habitable structures.
9

10 **III. REBUTTAL OF SOUTHERN GUADALUPE RIVER ALLIANCE**

11 **Q. ARE YOU REBUTTING THE TESTIMONIES, STATEMENTS OF POSITION,**
12 **OR RECOMMENDATIONS OF THE SOUTHERN GUADALUPE RIVER**
13 **ALLIANCE IN THIS PROCEEDING?**

14 A. Yes. I am rebutting each of SGRA's witnesses' testimonies¹ to the extent SGRA's
15 witnesses supported Route 10 in their testimonies. Again, as asserted in the Krackaus'
16 objections to intervenor testimony, Staff's testimony and LCRA's responses to Staff RFIs
17 2-1 and 2-2 indicate that Route 10M is the route that best protects overall community values
18 and best complies with PURA and the Commission's Substantive Rules. At 9.5 miles,
19 Route 10M is significantly shorter than Route 10 and every other route. At \$46.8 million,
20 Route 10M is significantly cheaper than Route 10 and every other route. And, at 33 newly
21 affected habitable structures, Route 10M affects 9 fewer habitable structures than Route
22 10, and many less than all other routes. Route 10M also ranks high in the other evaluation
23 criteria, as discussed in Staff's testimony. Route 10M is supported by the Krackaus, Staff,
24 LCRA, the City of New Braunfels, White Wing, Guadalupe River Ranch, and many of the
25 unrepresented intervenors. Thus, Route 10M, *not* Route 10, is the best route.

¹ Including, but not limited to, Barden Todd Patterson, Regina Rehfeld, James & Christine Chessher, Timothy Rehfeld, Marcus & Rachel Dillon, Brett Kowald, Carter & Chris Burke, Charles & Terri Bump, Kirk & Andrea Kelly, Dennis Rohlf, Robert & Kerry Scheel, W.W. Scott, Jr., Rebecca B. Meckel, Rita Zwicke, Robert & Joan Friesenhahn, Raymond P. Friesenhahn, Joyce, Friesenhahn, Daniel J. Friesenhahn, and Patricia Kempf.

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Q. DO YOU BELIEVE THAT THE SOUTHERN GUADALUPE RIVER ALLIANCE WITNESSES' INITIAL SUPPORT OF ROUTE 10 IS INDICATIVE THAT THEY CONTINUE TO BELIEVE ROUTE 10 IS THE BEST ROUTE TO RESOLVE THIS PROCEEDING?

A. No. It is my belief that the SGRA and its witnesses were not fully aware of Route 10M when they filed their direct testimonies because the data identifying Route 10M as the best route were provided at or around the same time that direct testimony was due to be filed. It is my belief that had they had more time to evaluate Route 10M, the SGRA and its witnesses would have supported Route 10M, not Route 10, as the route that best consistent with community values and best complies with PURA and the Commission's Substantive Rules.

Q. IS IT YOUR UNDERSTANDING THAT THE SOUTHERN GUADALUPE RIVER ALLIANCE SUPPORTS OR DOES NOT OPPOSE ROUTE 10M AS THE ROUTE TO RESOLVE THIS PROCEEDING?

A. Yes. It is my understanding based on conversations with SGRA that SGRA recognizes the merits of Route 10M and that SGRA supports or would not object to the Commission's approval of Route 10M as the best route to resolve this docket.

IV. REBUTTAL OF TPWD SUBMISSION

Q. ARE YOU REBUTTING THE TESTIMONY, STATEMENT OF POSITION, OR LETTER RECOMMENDATION OF THE TEXAS PARKS AND WILDLIFE DEPARTMENT IN THIS PROCEEDING?

A. Yes. To the extent that TPWD's filing is treated as evidence, as a statement of position, or as a recommendation, I rebut TPWD's recommendation of Route 10 in its comments. Like the other intervenors that recommended Route 10 in their prefiled direct testimony, I believe that TPWD was not aware of Route 10M and its superiority over Route 10 and all other routes when it filed its letter because Route 10M had not been completely recognized

1 nor its merits fully developed when TPWD filed its recommendation. I believe TPWD
2 would have found that Route 10M was the best route to address its concerns, had TPWD
3 been aware of Route 10M at the time it prepared its submission.
4

5 **Q. DO YOU BELIEVE THAT TPWD'S RECOMMENDATION IS CONSISTENT**
6 **WITH APPROVAL OF ROUTE 10M?**

7 A. Yes. As Staff points out in its testimony, the standards TPWD applied to support its
8 recommendation of Route 10 are also satisfied by Route 10M and Route 10M addresses
9 TPWD's concerns and recommendations regarding the project. I support Staff's
10 conclusion that Route 10M meets TPWD's concerns and recommendations.
11

12 **V. REBUTTAL OF WHITE WING/GUADALUPE RIVER RANCH STATEMENTS**

13 **Q. ARE YOU REBUTTING THE TESTIMONIES AND/OR STATEMENTS OF**
14 **POSITION OF WHITE WING AND GUADALUPE RIVER RANCH IN THIS**
15 **PROCEEDING?**

16 A. Yes, I am rebutting the positions supporting Route 10 that White Wing and Guadalupe
17 River Ranch took in the initial statements of positions they filed accompanying their
18 testimonies on May 4, 2016, and in their supplemental statements of position filed on May
19 11, 2016, but only to the extent of rebutting any remaining support of Route 10 and to point
20 out that in the tenor of their supplemental statements of position, White Wing and
21 Guadalupe River Ranch effectively indicate that they fully support Route 10M.
22

23 **Q. DID WHITE WING AND GUADALUPE RIVER RANCH WITHDRAW OR**
24 **REVOKE THEIR INITIAL SUPPORT FOR ROUTE 10 IN THIS PROCEEDING?**

25 A. No. But their statement of the reasons that they support Route 10M in their supplemental
26 submissions indicates that they fully support Route 10M as the best route and the route that
27 should be approved in this docket.
28

1 **VI. REBUTTAL OF CITY OF NEW BRAUNFELS TESTIMONY**

2 **Q. ARE YOU REBUTTING THE TESTIMONIES AND/OR STATEMENTS OF**
3 **POSITION OF THE CITY OF NEW BRAUNFELS?**

4 A. Yes. I am rebutting the testimonies of the City of New Braunfels, but only to the limited
5 extent that the City recommends and supports Route 12 and Segments V1 and Z1 included
6 in Route 12. Route 12 and Segments V1 and Z1 at the eastern end of Route 12, like
7 Segments A2-M2-J2-I2 at the eastern end of Route 10 (which New Braunfels has expressly
8 rejected) would severely harm the Krackau Intervenors. Segments V1 and Z1 would cross
9 over the middle of the Krackaus' farmland, severely interfering with the efficiency of their
10 farming operations. Moreover, Route 12 is 10.9 miles long, 1.4 miles longer than Route
11 10M, would cost \$52.154 Million, significantly more than Route 10M, and would affect
12 50 newly-affected habitable structures, 17 more structures than Route 10M.

13
14 **Q. DO YOU AGREE WITH THE POSITION OF THE CITY OF NEW BRAUNFELS**
15 **SUPPORTING ROUTE 10M BUT OPPOSING ROUTE 10 AND REJECTING**
16 **OTHER ROUTES PROPOSED BY LCRA?**

17 A. Yes. I agree with New Braunfels that Route 10M is the best route and should be approved.
18 I also agree that Route 10 would not be an appropriate choice because of the interference
19 pointed out by New Braunfels with the operations of the New Braunfels Airport. And,
20 with the exceptions or Routes 5 and 5A, which I still support as good options, I agree that
21 routes 1, 3, 4, 11, 13, and 14 would also interfere with the New Braunfels Airport and
22 should not be approved.

23
24 **VII. REBUTTAL OF UNREPRESENTED INTERVENOR SUBMISSIONS**

25 **Q. ARE YOU REBUTTING THE TESTIMONIES AND/OR STATEMENTS OF**
26 **POSITION OF CERTAIN UNREPRESENTED INTERVENORS IN THIS**
27 **PROCEEDING?**

28 A. Yes. I am rebutting the testimonies and/or the statements of position of Katherine Soliz,

1 La Ferne Nance, Gery and Tanya Moczygemba, Melanie Perry, Sarah Ortiz, Melanie
2 Schulze, Lisa Rubey, and Randall Borresen,² but only to the limited extent that they
3 recommend and support Route 10 instead of Route 10M.
4

5 **Q. IS IT YOUR UNDERSTANDING THAT MANY OF THE UNREPRESENTED**
6 **INTERVENORS SUPPORT OR DO NOT OPPOSE ROUTE 10M AS THE BEST**
7 **ROUTE TO RESOLVE THIS PROCEEDING?**

8 A. Yes. I have not spoken with La Ferne Nance (I note that, though they filed a statement of
9 position, the Nances never appeared to file a motion to intervene in this docket and do not
10 appear to be recognized intervenors), the Moczygembas, Ms. Perry, or Ms. Rubey.
11 However, it is my understanding based on conversations I have had with other
12 unrepresented intervenors that they recognize that Route 10M is the best route, the route
13 that is consistent with community values, the route that best complies with PURA and the
14 Commission's Substantive Rules, and is the route the Commission should approve to
15 resolve this docket. More specifically, it is my understanding that Ms. Soliz, Ms. Ortiz,
16 Ms. Schulze, and Mr. Borresen all acknowledge that Route 10M is the best solution. Ms.
17 Cuccia expressly recommended Route 10M.
18

19 **VIII. REBUTTAL OF BANDIT GOLF CLUB INTERVENORS SUBMISSIONS**

20 **Q. ARE YOU REBUTTING THE TESTIMONIES AND/OR STATEMENTS OF**
21 **POSITION OF FORESIGHT, GOLF ASSOCIATES, AND LONG CREEK?**

22 A. Yes. First, I recognize and agree with their concerns about Segment P1. The Krackaus

² The listed intervenors are those that supported Route 10 in their testimonies and/or statements of position. Other intervenors either did not file testimony or statements of position and, under the terms of SOAH Order No. 2, should be dismissed as intervenors, or discussed, supported, or objected to other particular routes or segments. Brandi Stringer supported Route 10 in a letter attached to her motion to intervene. However, because Ms. Stringer did not file testimony or a statement of position, she was included in LCRA's May 10, 2016, list of intervenors that did not submit testimony or a statement by May 3, 2016. If Ms. Stringer's letter is deemed to be a timely-filed testimony submission or statement of position, I include her in my list of intervenors whose testimony I rebut in this filing. Finally, to the extent that any intervenor that I did not list above submitted a filing supporting Route 10 that is deemed to be a submission that entitles the intervenor to participate as a party, I include those submissions in the submissions that I rebut in this testimony.

1 tried to address some of their concerns with Segment P1 by proposing three new segments
2 in their route adequacy filing. I also agree with their opposition to Route 10, generally. As
3 I testified in my direct testimony, Route 10 would severely harm the Krackau Intervenor's
4 farming operations by crossing over the middle of the Krackaus' farmland. And I agree
5 with the Bandit intervenors that Route 5A is a very good alternative for the reasons I
6 addressed in my direct testimony. However, in spite of my agreement, I still have to rebut
7 the stand they take against P1 (a segment in Route 10M) because their position is against
8 what increasingly appears to be the unavoidable fact that Route 10M is the best route by
9 heads and shoulders over the other routes. Also, I point out that Route 10M and Segment
10 P1 are not on and do not cross Foresight's, Golf Associates', and Long Creek's properties.
11 Rather, Route 10M and Segment P1 are across the street from their properties and are on
12 the Mullins' property (the Mullins did not file testimony or statements of position).
13

14 **IX. RECOMMENDATION AND CONCLUSION**

15 **Q. WHAT DO YOU CONCLUDE AND WHAT DO YOU RECOMMEND**
16 **REGARDING THE MARION TO ZORN CIRCUIT TO BE APPROVED IN THIS**
17 **PROCEEDING?**

18 **A.** I conclude that Staff's testimony that there is insufficient data to consider Krackau Route
19 10-5H and Christensen/Schroeder alternative Route 10M is incorrect or partially incorrect
20 because the data (all, a substantial part, or a sufficient amount to allow extrapolation of
21 the needed data) is included in LCRA's application and in its responses to White
22 Wing/Guadalupe River Ranch discovery. Any other needed information could be
23 provided by LCRA. Krackau Alternative Route 5-10H is a valid route and has merit,
24 though not as much merit as Route 10M. Schroeder/Christensen alternative Route 10M
25 is also a valid alternative route that should be seriously considered.

26
27 I also conclude that each of the intervenors that testified or supported Route 10 in their
28 direct testimonies and/or statements of position or that asserted that Route 10 should be
29 considered the best route in their testimonies or statements of position (SGRA, TPWD,

1 White Wing, Guadalupe Ranch, and certain unrepresented intervenors) are incorrect. The
2 testimonies or statements of position were submitted before there had been sufficient time
3 for the intervenors or their witnesses to recognize that Route 10M was significantly
4 superior to Route 10 and was, as Staff recommends, the route that should be approved.
5

6 Finally, I conclude that, though it would be preferable to avoid Segment P1 and the
7 Bandit Golf Club, the fact remains that Route 10M is the best route and Segment P1,
8 which is the key segment of Route 10M, does not cross the Club's property but crosses
9 the property across the street.
10

11 **Q. WOULD ROUTE 10M, YOUR ROUTE 10-5H, CHRISTENSEN/SCHROEDER**
12 **ALTERNATIVE ROUTE 10M, AND YOUR OTHER RECOMMENDED ROUTES**
13 **(ROUTES 5, 5A, AND 6) MITIGATE THE DAMAGE TO THE KRACKAU**
14 **PROPERTY THAT YOU DESCRIBED IN YOUR TESTIMONY?**

15 A. Yes. Route 10M, my Route 10-5H, Christensen/Schroeder alternative Route 10M, and
16 Routes 5, 5A, and 6, the other routes that I recommended in my direct testimony, would
17 all mitigate the damage to the Krackau properties because they avoid crossing over the
18 middle of the Krackau farmland. Route 10M is the best route, period.
19 Christensen/Schroeder alternate Route 10M is almost as good. Routes 10-5H, 5, 5A, and
20 6, my other recommended routes, are all very reasonable routes that are either shorter,
21 nearly the same length, or almost as short as Route 10 (LCRA's initial "best route"),
22 affect fewer, almost the same number, or only slightly more new habitable structures than
23 Route 10, and are cheaper, about the same cost, or only slightly more costly than the cost
24 of Route 10.
25

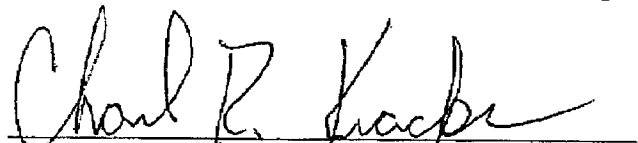
26 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

27 A. Yes.

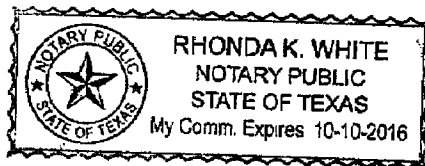
AFFIDAVIT**STATE OF TEXAS****COUNTY OF GUADALUPE**

BEFORE ME, the undersigned notary public personally appeared Charles R. Krackau to me known, who being duly sworn according to law, deposes and says:

My name is Charles R. Krackau. I am of legal age and a resident of the State of Texas. I certify that the foregoing testimony offered by me on behalf of myself and my wife, Charles R. and Lori L. Krackau, and on behalf of Jerry W. Krackau, Lynnette K. Cranford (formerly Krackau), the Clarence A. Krackau Family Trust, Charles R. Krackau, Trustee, and the Estate of Lorine K. Krackau, Charles R. Krackau, Executor (collectively, the "Krackaus" or the "Krackau Intervenors"), is true and correct to the best of my knowledge and belief after reasonable inquiry.


Charles R. Krackau

Subscribed and sworn to before me, Charles Krackau, notary public, on this the 20 day of May, 2016.

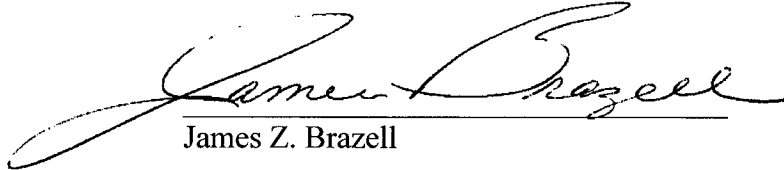


Rhonda K White
Notary Public for the State of Texas

My Commission expires: 10-10-16

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on all parties of record in this proceeding by U.S. mail, postage prepaid, facsimile, hand delivery, e-mail, or and/or non-traditional service, as ordered by the presiding officers, this, the 20th day of May, 2016.



James Z. Brazell

Zorn to Marion
Estimated Costs for Transmission Line and Substation Facilities

Table 1: Transmission and Substation Facilities Total Estimated Costs- Poles

Route	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
5a-Pole	19.3	\$49,037,000	\$9,746,000	\$3,584,000	\$810,000	\$12,371,000	\$1,557,000	\$20,969,000	\$0
10m-Pole	19.9	\$46,810,000	\$9,151,000	\$3,569,000	\$785,000	\$11,537,000	\$1,557,000	\$20,211,000	\$0

Table 2: Transmission and Substation Facilities Total Estimated Costs- Poles (Sorted Least to Most Expensive)

Route	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
10m-Pole	19.9	\$46,810,000	\$9,151,000	\$3,569,000	\$785,000	\$11,537,000	\$1,557,000	\$20,211,000	\$0
10-Pole	19.0	\$47,675,000	\$9,368,000	\$3,556,000	\$797,000	\$11,953,000	\$1,557,000	\$20,444,000	\$0
5-Pole	19.5	\$47,853,000	\$9,252,000	\$3,595,000	\$815,000	\$12,281,000	\$1,557,000	\$20,353,000	\$0
5a-Pole	19.3	\$49,037,000	\$9,746,000	\$3,584,000	\$810,000	\$12,371,000	\$1,557,000	\$20,969,000	\$0
2-Pole	21.1	\$50,072,000	\$10,442,000	\$3,640,000	\$811,000	\$12,914,000	\$1,557,000	\$20,708,000	\$0
4-Pole	18.7	\$50,144,000	\$9,848,000	\$3,589,000	\$824,000	\$12,850,000	\$1,557,000	\$21,476,000	\$0
14-Pole	18.4	\$50,566,000	\$8,847,000	\$3,572,000	\$817,000	\$12,809,000	\$1,557,000	\$22,964,000	\$0
11-Pole	20.9	\$50,811,000	\$9,059,000	\$3,636,000	\$815,000	\$12,760,000	\$1,557,000	\$22,984,000	\$0
6-Pole	20.9	\$51,826,000	\$11,613,000	\$3,627,000	\$806,000	\$13,077,000	\$1,557,000	\$21,146,000	\$0
12-Pole	21.3	\$52,154,000	\$9,734,000	\$3,650,000	\$815,000	\$13,193,000	\$1,557,000	\$23,205,000	\$0
7-Pole*	20.9	\$56,196,000	\$10,792,000	\$4,007,000	\$805,000	\$14,410,000	\$2,856,000	\$23,326,000	\$0
1-Pole	23.6	\$59,705,000	\$13,805,000	\$3,796,000	\$869,000	\$15,185,000	\$1,557,000	\$24,493,000	\$0
3-Pole	23.1	\$60,990,000	\$12,044,000	\$3,778,000	\$869,000	\$15,365,000	\$1,557,000	\$27,377,000	\$0
15-Pole*	22.6	\$61,360,000	\$12,178,000	\$4,108,000	\$842,000	\$15,301,000	\$2,856,000	\$26,075,000	\$0
9-Pole*	22.3	\$61,375,000	\$12,205,000	\$4,090,000	\$836,000	\$15,198,000	\$2,856,000	\$26,190,000	\$0
13-Pole*	23.1	\$61,556,000	\$10,382,000	\$4,138,000	\$851,000	\$16,298,000	\$2,856,000	\$27,031,000	\$0
8-Pole*	22.4	\$61,605,000	\$11,333,000	\$4,092,000	\$836,000	\$15,687,000	\$2,856,000	\$26,801,000	\$0

*Includes costs for Clear Springs substation.

Table 3: Transmission Facilities Estimated Total Costs - Poles

Route	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
5a-Pole	19.3	\$44,450,000	\$9,746,000	\$2,957,000	\$810,000	\$9,968,000	\$0	\$20,969,000	\$0
10m-Pole	19.9	\$42,223,000	\$9,151,000	\$2,942,000	\$785,000	\$9,134,000	\$0	\$20,211,000	\$0

Table 4: Substation Facilities Estimated Total Costs

Sub Site	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
Zorn	\$2,626,000	\$0	\$344,000	\$0	\$1,398,000	\$884,000	\$0	\$0
Clear Springs	\$3,318,000	\$230,000	\$382,000	\$0	\$1,407,000	\$1,299,000	\$0	\$0
Marion	\$1,961,000	\$0	\$283,000	\$0	\$1,005,000	\$673,000	\$0	\$0

CORRECTED Land Use and Environmental Data for Alternate Route Evaluation
Staff Alternative Route 10M - S2, I, M, T, V, Y, P1, T1, W1

Evaluation Criteria

Land Use	10M
1 Length of alternative route (miles)	9.5
2 Number of habitable structures ¹ within 500 feet of the centerline	34
3 Number of newly affected habitable structures ² within 500 feet of the centerline	33
Length of ROW using existing transmission line ROW	0.0
4 Percent ROW using existing transmission line ROW	0.0%
Length of ROW parallel to existing transmission line ROW	0.0
5 Percent ROW parallel to existing transmission line ROW	0.0%
Length of ROW parallel to other existing ROW (roadways, railway, etc.)	1.2
6 Percent ROW parallel to other existing ROW (roadways, railway, etc.)	13.0%
Length of ROW parallel to apparent property lines ³	1.7
7 Percent ROW parallel to apparent property lines ³	17.6%
8 Length of ROW across parks/recreational areas ⁴	0
9 Number of additional parks/recreational areas ⁴ within 1,000 feet of the centerline	1
10 Length of ROW through cropland	3.8
11 Length of ROW through pasture/rangeland	3.1
12 Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0.0
13 Number of pipeline crossings	2
14 Number of transmission line crossings (Total)	3
15 Number of transmission line crossings (Existing Clear Springs to Marion 345-kV transmission lines)	1
16 Number of transmission line crossings (Other existing 345-kV transmission lines)	1
17 Number of transmission line crossings (Existing 138-kV transmission lines)	1
18 Number of U.S. and state highway crossings	1
19 Number of farm-to-market road (FM) crossings	2
20 Number of cemeteries within 1,000 feet of the centerline	1
21 Number of FAA registered airports with at least one runway more than 3,200 feet in length located within 20,000 feet of the centerline	2
22 Number of FAA registered airports having no runway more than 3,200 feet in length located within 10,000 feet of the centerline	0
23 Number of private airstrips within 10,000 feet of the centerline	4
24 Number of heliports within 5,000 feet of the centerline	0
25 Number of commercial AM radio transmitters within 10,000 feet of the centerline	0
26 Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of the centerline	2
Aesthetics	
27 Estimated length of ROW within foreground visual zone ⁵ of U.S. and State highways	1.4
28 Estimated length of ROW within foreground visual zone ⁵ of FM roads	2.1
29 Estimated length of ROW within foreground visual zone ⁶ of park/recreational areas ⁴	2.4
Ecology	
30 Length of ROW through upland woodlands/brushland	1.5
31 Length of ROW through bottomland/riparian woodlands	0.2
32 Length of ROW across National Wetlands Inventory mapped wetlands	0.08
33 Length of ROW across known habitat of federally listed endangered or threatened species	0.0
34 Length of ROW across open water (rivers, canals, lakes, ponds)	0.10
35 Number of stream crossings	8
36 Number of river crossings	1
37 Length of ROW parallel (within 100 feet) to streams or rivers	0.1
38 Length of ROW across 100-year floodplains	1.1
Cultural Resources	
39 Number of recorded historic or prehistoric sites crossed by ROW	0
40 Number of additional recorded historic or prehistoric sites within 1,000 feet of the centerline	2
41 Number of National Register-listed or determined-eligible sites crossed by ROW	0
42 Number of additional National Register-listed or determined-eligible sites within 1,000 feet of the centerline	0
43 Length of ROW through areas of high archaeological/historic site potential	4.7

¹ Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 500 feet of the centerline of a transmission project of 230 kV or more.

² Newly affected habitable structures are habitable structures within 500 feet of an alternative route that are not already within 500 feet of an existing transmission line.

³ Property lines created by existing roads, highway, or railroad ROW are not "double-counted" in the length of ROW parallel to property lines criterion. Where there are contiguous parcels in common ownership, only paralleling of the outside boundary of the parcels were tabulated. Paralleling interior parcel lines within a group of two or more contiguous parcels were not tabulated as parallel to apparent property.

⁴ Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church located within 1,000 feet of the centerline of the project.

⁵ One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of Interstates, U.S. and State highways criterion are not "double-counted" in the length of ROW within the visual foreground zone of FM roads criterion.

⁶ One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground-zone of Interstates, U.S. and State highways criterion and/or with the total length of ROW within the visual foreground zone of FM roads criterion.