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PROJECT NO. 52667

FILING OF ATTESTATIONS	§	PUBLIC UTILITY COMMISSION
DEMONSTRATING COMPLIANCE	§	
WITH HB 4150	§	OF TEXAS

**PROGRESS REPORT OF
DENTON COUNTY ELECTRIC COOPERATIVE, INC., D/B/A
COSERV ELECTRIC**

Denton County Electric Cooperative, Inc d/b/a CoServ Electric files this progress report regarding compliance with Section 6 of House Bill 4150 (“HB 4150”), providing additional information and plans regarding distribution lines on United States Corps of Engineers (“USACE”) property that CoServ Electric identified as non-compliant in its report and attestation filed in this docket on January 14, 2022 (“Initial Report”). By letter dated March 4, 2022, the Division of Compliance and Enforcement (“DICE”) of the Public Utility Commission of Texas (“Commission”) requested a progress report and additional information to be filed by March 11, 2022. Therefore, this progress report is timely filed.

I. Summary of Progress Report

CoServ Electric is committed to public safety and the safe and reliable operation of its distribution system. Accordingly, CoServ Electric self-identified as non-compliant 43 distribution lines or line segments that cross USACE property at Lake Grapevine, Lake Lewisville, and Lake Ray Roberts. Three of these lines have been de-energized, and another line has already been reconstructed to be compliant. Of the remaining 39 lines that CoServ Electric originally identified, 29 are in areas not suitable for a sailboat and thus comply with the applicable clearance standards in Rule 232 of NESC Standard ANSI (c)(2) (“NESC Rule 232”). The ten remaining lines are in areas that could be deemed suitable for a sailboat by USACE.

Because the lines cross USACE property, CoServ Electric must also consider the USACE’s clearance standards. The USACE has a more stringent clearance standard for water areas suitable for sailboats. CoServ Electric is in the process of submitting these lines for review or permitting by USACE. While CoServ Electric is pursuing permits or detailed review from USACE, it is also reviewing any instance where it may be possible to adjust a line to be located outside USACE property without the need for a USACE permit.

To obtain a permit to reconstruct or a detailed review by USACE, CoServ Electric must complete engineering and design for each line, obtain a survey by a licensed surveyor reflecting the meets and bounds of the lines and water elevation detail, and submit a permit package to USACE. Attachment A reflects the status of engineering design, surveying, and permit application for each line. CoServ Electric will continue to file monthly progress reports in this docket until all identified lines are determined to be compliant with USACE's requirements, whether due to reconstruction or additional review by USACE. CoServ Electric is also taking steps to warn the public about the identified lines by conspicuously flagging each line section in areas that could be deemed suitable for sailboats.

II. Progress Report

A. NESC Rule 232

HB 4150 requires compliance with NESC Rule 232 for all lakes named in Tex. Util. Code 38.004(b). Items 6 and 7 of Table 232-1 of NESC Rule 232 distinguish between (a) lines crossing water areas not suitable for sailboating or where sailboating is prohibited, and (b) lines crossing water areas suitable for sailboating, based on unobstructed surface area. In the latter instance, the minimum vertical clearance height for a distribution line changes based on the amount of unobstructed surface area available. In general, under NESC Rule 232, the following clearance standards apply:

- Water area not suitable for sailboat: 17 feet above reference pool elevation
- Water area suitable for sailboat: 20.5 to 40.5 feet above reference pool elevation

However, the USACE implements more stringent clearance requirements for certain line crossings over USACE property. All of CoServ Electric's lines at issue cross USACE property. In general, under USACE Regulation ER 1110-2-4401, issued February 28, 2021 ("USACE Regulation"), the following clearance standards apply:

- Water area not suitable for sailboat: 17 feet above reference pool elevation
- Water area suitable for sailboat: 52 feet + obstruction above reference pool elevation

The applicable language of the USACE Regulation is quoted below:

8. Clearance Requirements

* * *

b. Upstream Lake Areas. Minimum vertical clearances over lake areas, where sailboats are commonly operated, must be no less than the following:

(1) Power line clearances must be calculated with 15.85 M (52 ft) Reference Vessel Height substituted for Reference components in NESC Table A-2a. The required clearance must also include the mechanical and electrical components in NESC Table A-1. The minimum vertical clearance in NESC Table 232-1 item 7 must not be used.

(2) Low voltage communication lines, as defined in Section 2 of the NESC, must have a minimum vertical clearance of 15.85 m (52 ft).

(3) Where feasible, install primary and secondary distribution lines underground.

(4) Sailboat rigging and launching areas must have clearances 1.524 m (5 ft) greater than those given in paragraph 8.b.(1) and (2) above.

(5) In water areas where it is not reasonable or normal for sailboats to be rigged, launched, or operated, consideration will be given to installing power and communication lines with a minimum vertical clearance of not less than that required in the current edition of the NESC, Rule 232, Table 232-1, item 6. NESC clearances must be those above the reference pool elevation as defined above. This consideration must be reviewed and approved by the District Commander.

USACE Regulation at 3-4 (Section 8.b). Thus, whether the USACE's more stringent clearance standard applies depends on whether the water area is suitable for a sailboat.

B. CoServ Electric's ongoing compliance efforts

CoServ Electric, in coordination with its engineering contractors, identified and reviewed all instances where a distribution line greater than 1 kV crosses the boundaries of a lake identified in PURA § 38.004(b). CoServ Electric obtained shapefiles from the USACE reflecting the flowage easement elevation and reference pool elevation for each lake at issue. CoServ Electric used professional engineers, light detection and ranging technology (LIDAR), geospatial information system (GIS) mapping, and field surveys to delineate CoServ Electric's distribution system, obstructions and other land features (trees, bridges, houses, etc.), and ground elevations in relation to reference pool and flowage easement elevations of each lake. CoServ Electric also performed field surveys at each line location and created an inventory of the facilities (poles, framing, conductors, communication lines, etc.) at each location.

CoServ Electric originally identified 43 lines segments that had potential compliance issues, which CoServ Electric conservatively identified as a "fail" in its initial report in this docket. Of these 43 lines, three are now de-energized and one has been reconstructed to be compliant as

part of an existing construction project. The tables at Attachment A have been updated to reflect this status.

Of the remaining 39 line segments, CoServ Electric has confirmed through its professional engineering firm that 29 of such lines are in areas that are not suitable for a sailboat, either because of obstructions or water depth at pool reference elevation, or because the line segment is located on the opposite side of a bridge or roadway that makes the area inaccessible by sailboat. These lines meet NESC and USACE clearance requirements for areas not suitable for a sailboat. See Attachment A.

This leaves 10 lines that are in areas that could be deemed suitable for a sailboat in the event of flooding. With respect to these 10 lines, CoServ Electric has not yet identified a USACE permit from its historical records, likely because the lines were constructed before the applicable reservoir was created. CoServ Electric is continuing this review and will also ask USACE to search its records for any permits for these lines.

CoServ Electric is concurrently: (1) conducting additional field verification, completing engineering and design, and applying for permits to bring the lines into compliance with the USACE Regulation; (2) continuing discussions with USACE to obtain detailed review of the lines that may render reconstruction unnecessary; and (3) taking steps to warn the public regarding the potentially non-compliant lines. The status of these efforts is detailed in Attachment A.

1. Status of engineering and design, permitting, and reconstruction.

CoServ Electric is moving forward with requesting detailed review or a permit for reconstruction from the USACE. The permits for construction will be to initiate construction to meet the USACE standard for water areas suitable for sailboats. This process first requires an engineering and design package which will identify the clearance adjustments required and number of poles to be replaced. Once the engineering and design is completed, CoServ Electric must obtain a survey from a licensed surveyor that reflects meets and bounds and water elevations. After completion of surveying, CoServ Electric can complete and submit the permit application to the USACE for approval. CoServ Electric cannot begin construction until the USACE has approved the permit for reconstruction. In CoServ Electric's experience, it can take USACE up to 12 months to approve a permit, but intends to request expedited review. CoServ Electric will submit permit applications as they are completed and begin construction immediately upon approval of a permit.

2. Request USACE to perform detailed review of each line that could be deemed suitable for sailboats.

Concurrently with its permitting efforts, CoServ Electric will seek detailed review by USACE of each line that could be deemed suitable for sailboats. CoServ Electric will continue to seek permits and complete construction for each such line unless and until USACE confirms that an area is not suitable for sailboats.

3. Measures to make the public aware of the non-compliant lines while the lines are in the process of being brought into compliance.

Until the lines are reconstructed or confirmed to comply with the USACE Regulation, CoServ Electric will flag all 10 lines that cross areas that could be deemed suitable for sailboats. CoServ Electric will flag the spans or segments at the lowest sag point that could create a compliance issue. CoServ Electric expects to complete flagging of all lines by March 31, 2022.

Respectfully submitted,



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ATTORNEYS FOR COSERV ELECTRIC

ATTACHMENT B
NESC - LAKE GRAPEVINE CLEARANCES

		New Job Code				Flowage Easement Elev		Reference Pool Elevation	
Lake Grapevine		COS-2-L.41			SR #4191424		572.00'		560.00'

Suitable for Sailboating

Lake Grapevine Crossing Number	Date Analyzed	ACTION NEEDED	WARNING FLAGS INSTALLED (EST.)	COSERV DESIGN COMPLETE	SURVEY COMPLETE	PERMIT SUBMITTED	PERMIT APPROVED	COSERV CONSTRUCTION COMPLETE	NOTES	SUITABLE / NOT SUITABLE (ENGINEERING FIRM DETERMINATION)	LAKE ACRES AT CROSSING¹	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (NESC)	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (USACOE)
Grapevine 1	11/4/2021	NA								NOT SUITABLE	1,937.50	PASS	FAIL
Grapevine 3	11/4/2021	NA								NOT SUITABLE	1,937.50	PASS	FAIL

Note¹: Acreage of Lake Grapevine at the given CoServ overhead electric crossing defined by 2017 National Electric Safety Code (NESC) Table 232-1, Footnote 20.

ATTACHMENT B
NESC - LAKE LEWISVILLE CLEARANCES ANALYSIS

	New Job Code					Flowage Easement Elevation		Reference Pool Elevation	
Lake Lewisville	COS-2-L.42	SR #4191426					537.00'	532.00'	

Lake Lewisville Crossing Number	Date Analyzed	ACTION NEEDED	WARNING FLAGS INSTALLED (EST.)	COSERV DESIGN COMPLETE	SURVEY COMPLETE	PERMIT SUBMITTED	PERMIT APPROVED	COSERV CONSTRUCTION COMPLETE	NOTES	SUITABLE / NOT SUITABLE (ENGINEERING FIRM DETERMINATION)	LAKE ACRES AT CROSSING ¹	Suitable for Sailboating		NOT Suitable for Sailboating	
												ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (NESC)	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (USACOE)	ELECTRIC LINE CLEARANCE TO GROUND LINE ELEVATION	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION
Lewisville 1	11/5/2021	NA								NOT SUITABLE	9509.9	FAIL	FAIL	PASS	PASS
Lewisville 3	11/5/2022	NA							Line was no longer needed and was removed.		545.4				
Lewisville 4	11/5/2022	NA								NOT SUITABLE	4609.6	FAIL	FAIL	PASS	PASS
Lewisville 5	11/5/2022	NA								NOT SUITABLE	4609.6	FAIL	FAIL	PASS	PASS
Lewisville 6	11/5/2022	NA								NOT SUITABLE	4609.6	FAIL	FAIL	PASS	PASS
Lewisville 7	11/5/2022	Need New Engineering Package	3/31/2022	3/31/2022					Design and Power Line Revisions Required. Estimated 2 Poles to be Replaced. Design in progress.	SUITABLE	4609.6	FAIL	FAIL	PASS	PASS
Lewisville 10	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 12B	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 13	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 15A	11/5/2022	Need New Engineering Package	3/31/2022	3/31/2022					Design and Power Line Revisions Required. Estimated 2 Poles to be Replaced.	SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 16	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 17A	11/5/2022	Need New Engineering Package	3/31/2022	4/30/2022					Design and Power Line Revisions Required. Estimated 3 Poles to be Replaced.	FIELD CHECK REQUIRED	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 21	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 31	11/5/2022	NA							Not on Lake Lewisville property. HB 4150 is not applicable.		22291.6				
Lewisville 31A	11/5/2022	Need New Engineering Package	3/31/2022	4/30/2022					Design and Power Line Revisions Required. Estimated 4 Poles to be Replaced.	FIELD CHECK REQUIRED	22291.6	FAIL	FAIL	PASS	PASS (COMM FAILS)
Lewisville 32	11/5/2022	NA								NOT SUITABLE	22291.6	FAIL	FAIL	PASS	PASS
Lewisville 34	11/5/2022	New Engineering Package is Done	3/31/2022	Completed					See COS-2-D.21 - WO#107.30: Estimated 8 Poles to be Replaced.	FIELD CHECK REQUIRED	22291.6	FAIL	FAIL	PASS	
Lewisville 35	11/5/2022	NA								NOT SUITABLE	3016.5	FAIL	FAIL	PASS	PASS (COMM FAILS)

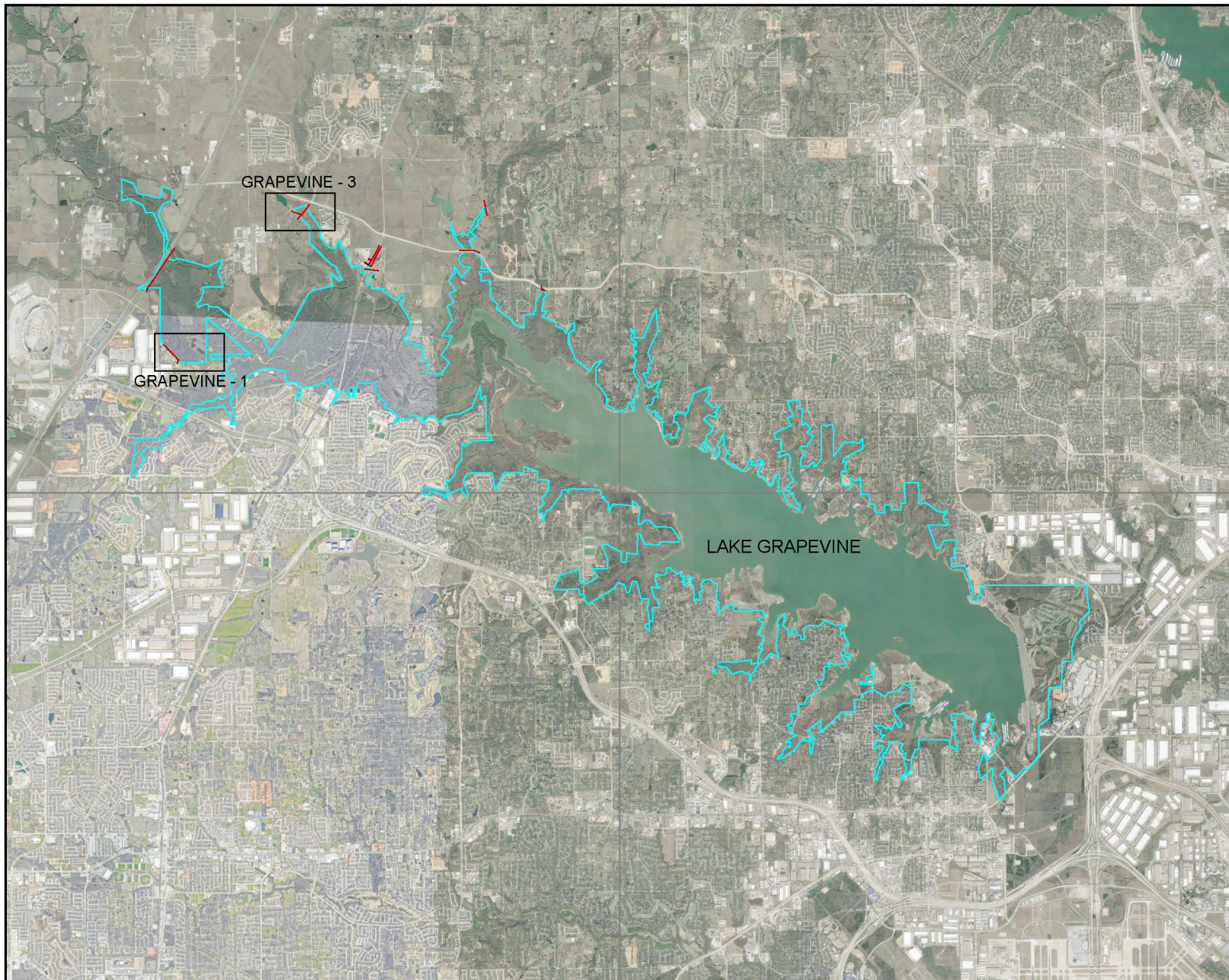
Note¹: Acreage of Lake Grapevine at the given CoServ overhead electric crossing defined by 2017 National Electric Safety Code (NESC) Table 232-1, Footnote 20.

ATTACHMENT B
NESC - LAKE RAY ROBERTS CLEARANCES

		New Job Code							Flowage Easement Elevation	Reference Pool Elevation
Lake Ray Roberts		COS-2-L.43	SR #4191432						645.50'	640.5'

Lake Ray Roberts Crossing Number	Date Analyzed	ACTION NEEDED	WARNING FLAGS INSTALLED (EST.)	COSERV DESIGN COMPLETE	SURVEY COMPLETE	PERMIT SUBMITTED	PERMIT APPROVED	COSERV CONSTRUCTION COMPLETE	NOTES	SUITABLE / NOT SUITABLE (ENGINEERING FIRM DETERMINATION)	LAKE ACRES AT CROSSING ¹	Suitable for Sailboating		NOT Suitable for Sailboating	
												ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (NESC)	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION (USACOE)	ELECTRIC LINE CLEARANCE TO GROUNDLINE ELEVATION	ELECTRIC LINE CLEARANCE TO REFERENCE POOL ELEVATION
Ray Roberts 1A	11/8/2021	NA							Line was no longer needed and was removed.		10131.7				
Ray Roberts 3	11/9/2021	Need New Engineering Package	3/31/2022	4/30/2022					Design and Power Line Revisions Required. Estimated 4 Poles to be Replaced.	FIELD CHECK REQUIRED	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 4A	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 4B	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 5	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 8	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 9	11/9/2002	Need New Engineering Package	3/31/2022	5/31/2022					Design and Power Line Revisions Required. Estimated 1 Pole to be Replaced.	FIELD CHECK REQUIRED	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 10	11/9/2021	Need New Engineering Package	3/31/2022	5/31/2022					Design and Power Line Revisions Required. Estimated 8 Poles to Be Replaced.	FIELD CHECK REQUIRED	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 11	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 12	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 15	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 16	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 17	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 18	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL (Section over water body PASS)	FAIL (Section over water body PASS)	PASS	PASS
Ray Roberts 19	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 20	11/9/2021	Need New Engineering Package	3/31/2022	5/31/2022					Design and Power Line Revisions Required. Estimated 8 Poles to Be Replaced.	FIELD CHECK REQUIRED	1929.5	FAIL	FAIL	PASS	PASS
Ray Roberts 21	11/9/2021	NA								NOT SUITABLE	1929.5	FAIL	FAIL	PASS	PASS
Ray Roberts 23	11/9/2021	NA								NOT SUITABLE	1929.5	PASS	FAIL	PASS	PASS
Ray Roberts 24	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 24B	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 26A	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 27	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS
Ray Roberts 28A	11/9/2021	NA								NOT SUITABLE	33233.6	FAIL	FAIL	PASS	PASS

Note¹: Acreage of Lake Grapevine at the given CoServ overhead electric crossing defined by 2017 National Electric Safety Code (NESC) Table 232-1, Footnote 20.



ATTACHMENT A

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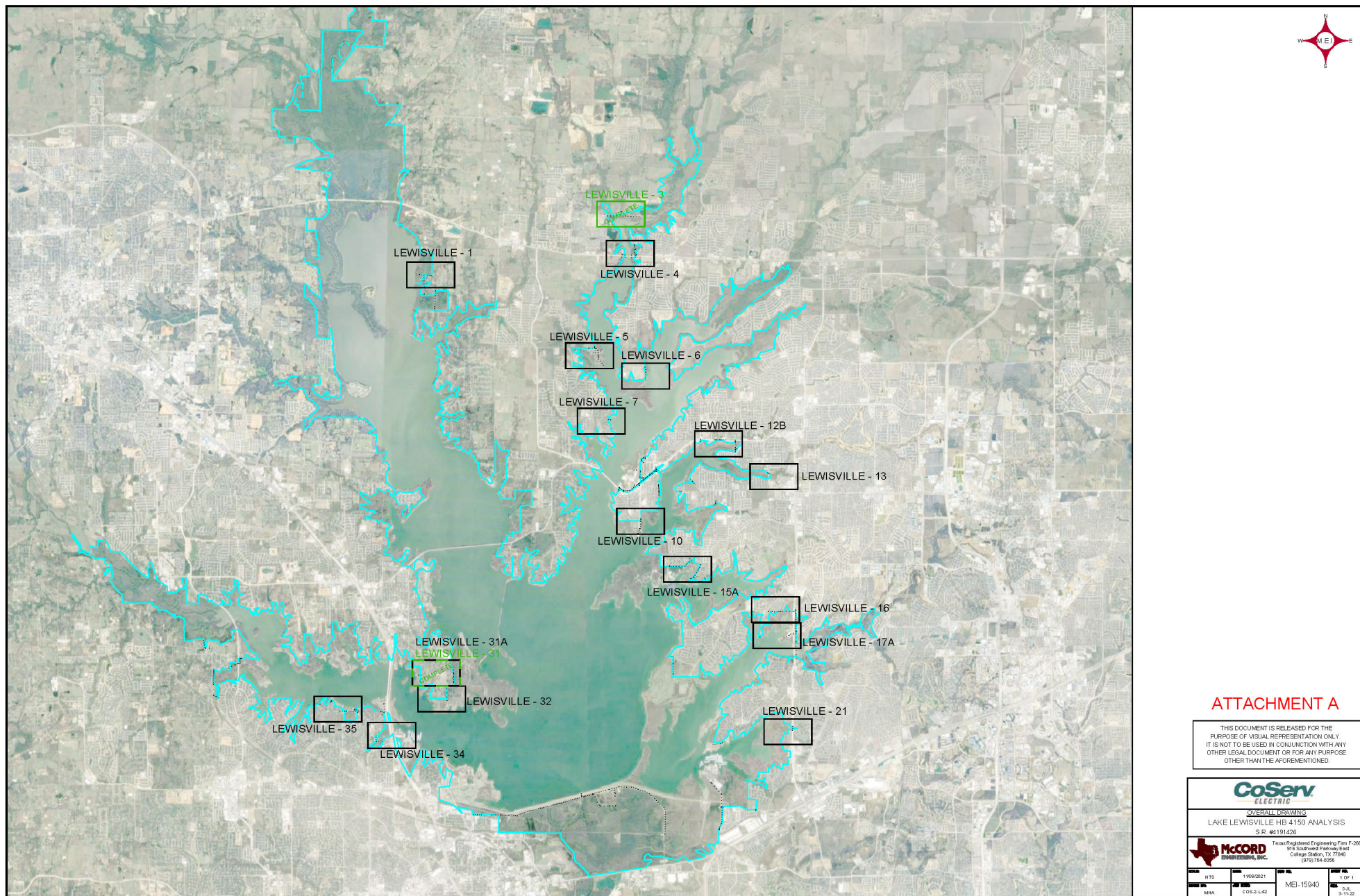
CoServ
ELECTRIC

OVERALL DRAWING
LAKE GRAPEVINE HB 4150 ANALYSIS
SR #4191424

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NTS	11/28/21	MEI-15939	1 OF 1
MSA	C05-2-L41		



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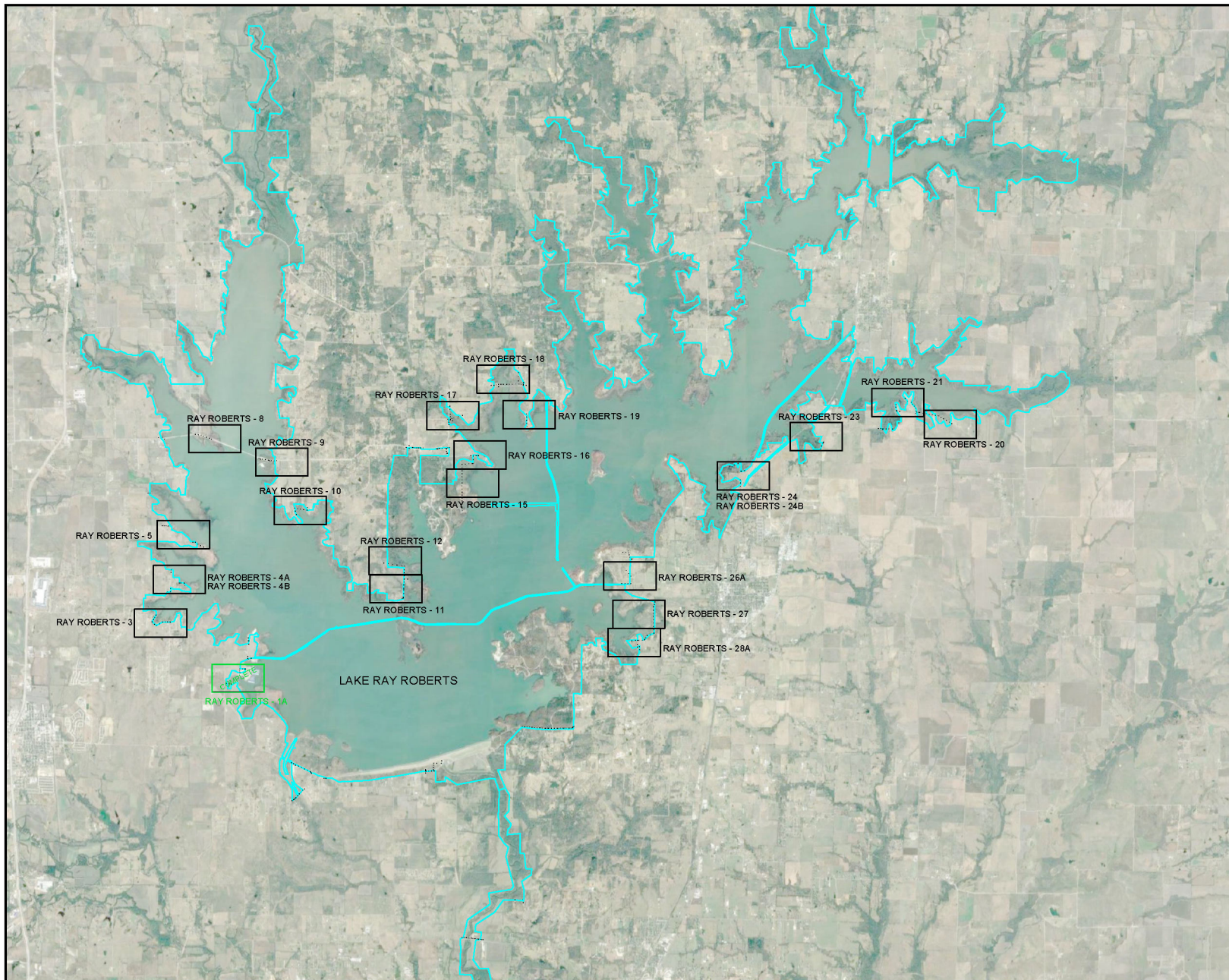
CoServ
ELECTRIC

OVERALL DRAWING

LAKE LEWISVILLE HB 4150 ANALYSIS
S.R. #4191426

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NTS	1/10/2021	MEI-15940	1 OF 1
MMA	C05-2-L42	D/L	3-11-22



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OVERALL DRAWING			
LAKE RAY ROBERTS HB 4150 ANALYSIS			
SR #4191432			
Texas Registered Engineering Firm F-2654 916 Southwest Parkway East College Station, TX 77840 (979) 764-0266			
NTS	11-08-21	MEI-15941	1 OF 1
MHA	C05-2-L43		S/L 3-11-22