

State of Minnesota
Court of Administrative Hearings
For the Public Utilities Commission

In the Matter of the Application for a Certificate of Need for the PowerOn Midwest 765 kV and
345 kV High Voltage Transmission Line Project

MPUC Docket No. E002, ET2, ET6675/CN-25-117

CAH Docket No.: 28-2500-41617

Direct Testimony of Daniel Leshar

August 13, 2026

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2

3 **Q. Please state your name and business address.**

4 A. My name is Daniel Leshner. My business address is 12300 Elm Creek Boulevard, Maple
5 Grove, Minnesota 55369.

6

7 **Q. By whom are you employed and in what capacity?**

8 A. I am employed as Manager, Transmission Permitting and Land Rights, by Great River
9 Energy.

10

11 **Q. Please briefly describe your educational background and professional experience.**

12 A. I earned a Bachelor of Science in Land Use Planning and Resource Management, with a
13 minor in Natural Science, from the University of Wisconsin–Stevens Point in December
14 1999. From 2000 to 2007, I worked with American Tower Corporation before transitioning
15 to TH Inc./Wireless FMHC Corporation as a Project/Site Acquisition Manager supporting
16 wireless infrastructure siting. I joined Great River Energy in August 2007 as a Senior Field
17 Representative and later assumed a dual role as Routing Lead for the CapX2020 Brookings
18 to Twin Cities 345 kilovolt (kV) Transmission Project beginning in February 2010. In these
19 roles, I led route development for a major regional transmission project, facilitated
20 stakeholder outreach and public engagement, and managed communications with state and
21 federal agencies. I also oversaw land rights acquisition efforts to support successful project
22 execution. In 2018, I was promoted to Leader of Transmission Permitting and Compliance,
23 where I provided leadership and oversight of Great River Energy’s transmission permitting
24 department. In 2020, I advanced to Manager of Transmission Permitting and Land Rights,
25 with responsibility for leading the company’s transmission permitting and land rights
26 functions. I have been an active member of the International Right of Way Association
27 (IRWA) since 2007, serving in various leadership roles at both the local chapter and
28 regional levels. I earned my Senior Right of Way (SR/WA) certification in 2012. My
29 statement of qualifications is attached as **Schedule 1** to my Direct Testimony.

1 **Q. What are your responsibilities as a Manager, Transmission Permitting and Land**
2 **Rights, at Great River Energy?**

3 A. I provide strategic leadership and oversight for the company's permitting and land rights
4 functions in support of large-scale transmission development across the Upper Midwest.
5 My work directly supports the advancement of critical regional infrastructure projects that
6 enhance electric grid reliability and meet the evolving energy needs of the region. In this
7 role, I lead and support a multidisciplinary team to ensure effective execution of permitting,
8 compliance, and land acquisition activities.

9
10 My responsibilities also include close coordination with internal leadership, our member-
11 owner cooperatives, and other cross-functional teams to support the planning and execution
12 of major regional transmission initiatives. Through this work, I help ensure projects are
13 developed in a manner that balances regulatory compliance, stakeholder engagement, and
14 long-term system reliability.

15
16 **Q. For whom are you testifying?**

17 A. I am testifying on behalf of Great River Energy, Northern States Power Company, doing
18 business as Xcel Energy, and ITC Midwest LLC (collectively, Applicants), in support of
19 their Joint Certificate of Need Application (Application) to the Minnesota Public Utilities
20 Commission (Commission) for the PowerOn Midwest Project (Project).

21
22 **Q. What is your role with respect to the Project?**

23 A. Great River Energy is the Project Development Lead for the Certificate of Need. My role
24 in the Project is to lead the regulatory, land rights, and environmental permitting process
25 and Project stakeholder and tribal engagement.

II. TESTIMONY OVERVIEW

Q. How is your Direct Testimony organized?

A. My Direct Testimony is organized as follows:

- Section III: Public Outreach
- Section IV: Tribal and Agency Coordination
- Section V: Paralleling Highway Rights-of-Way and MnDOT Coordination
- Section VI: Agricultural Impacts Analysis
- Section VII: Land Rights Acquisition
- Section VIII: Visual Simulations

Q. What schedules are attached to your Direct Testimony?

A. The following schedules are attached to my Direct Testimony:

- **Schedule 1**: Statement of Qualifications
- **Schedule 2**: Right-of-Way Cross Section for State and Local Roads
- **Schedule 3**: Summary of Applicants' Coordination with MnDOT
- **Schedule 4**: Open House Board – Why did the I-90 route between Lakefield Junction and Pleasant Valley advance?

Q. Are you sponsoring any sections of the Application?

A. Yes, I am sponsoring the following sections and appendices of the Application:

- Section 1.8 – Public Input and Involvement and Notice Area (*portion related to public input and involvement*)
- Section 9.1 – Engineering Design and Regulatory Approvals
- Section 9.2 – Land Rights Acquisition
- Chapter 11 – Public Input and Involvement
- Appendix H – Outreach Materials

III. PUBLIC OUTREACH

Q. Prior to filing the Application, did the Applicants conduct outreach to members of the public?

A. Yes. This outreach is described further in Section 11 and Appendix H of the Application. More specifically, the Applicants:

- Developed a Project website (PowerOnMidwest.com) which was launched on October 15, 2025. The website provides information on the Project and an interactive map where members of the public can leave comments pinned to a geographic marker.
- Maintain a Project telephone number, email address, and mailing address that members of the public can contact with questions and comments about the Project.
- Held 17 in-person open houses in November 2025, prior to filing the Application, to provide information to the public about the Certificate of Need for the Project. The Applicants sent invitations to landowners and mailing addresses in the Notice Area (approximately 47,400 mailers) and published advertisements in 44 local newspapers. Approximately 600 people attended these open houses. Section 11.4.2.1 of the Application includes additional detail about the information available to the public at the open houses.
- Held a virtual open house in November 2025, which had approximately 350 views by the time the Application was filed.
- Attended 19 county meetings that included presentations with county boards/commission and/or staff and committee(s).

Q. Are the Applicants continuing public outreach during this proceeding?

A. Yes. The Applicants continue to maintain the Project website, email address, telephone number, and mailing address. The Applicants also held in-person open houses, agency meetings, and a series of county update meetings in June 2026 to share potential routes with stakeholders and solicit feedback regarding those routes. The Applicants plan to hold

1 another series of open houses—again focused on routing—in August 2026, which will
2 include routes that have been further refined since the June 2026 open houses.

3
4 **Q. Is public outreach an important part of Project development?**

5 A. Most certainly. Public engagement and outreach is important on every single transmission
6 line project, regardless of voltage or length, and we understand that not all landowners are
7 willing participants in a transmission line project. For this Project, although many members
8 of the public are familiar with high-voltage transmission lines, because the 765 kV voltage
9 is new to Minnesota, the Project team believed it was particularly important to provide
10 members of the public with multiple opportunities to learn about the Project, why it is
11 needed, and its design. That engagement is continuing as part of the route development
12 process, and will further occur during land rights acquisition, construction, restoration, and
13 operation.

14
15 **IV. TRIBAL & AGENCY COORDINATION**

16
17 **Q. Prior to filing the Application, did the Applicants conduct outreach to Tribal**
18 **Nations?**

19 A. Yes. As described in Section 11.2.3 of the Application, the Applicants developed a Tribal
20 outreach approach to provide information and gather input about the Project from Tribes.
21 This has included sending letters with Project information, providing invitations to open
22 houses, and making presentations regarding the Project to Tribal organizations.

23
24 **Q. Prior to filing the Application, did the Applicants conduct outreach to federal and**
25 **state agencies?**

26 A. Yes. Section 11.2.2 of the Application describes this outreach, which included introduction
27 letters and meetings with several agencies.

1 **Q. Prior to filing the Application, did the Applicants conduct outreach to local**
2 **governments?**

3 A. Yes. The Applicants sent Project introduction letters with open house invitations to
4 counties, cities, and townships within the exterior boundaries of the Project Notice Area.
5 The Applicants also attended multiple county meetings to provide an overview of the
6 Project and give an update on the Project progress.

7
8 **Q. Are the Applicants continuing Tribal, agency, and local government outreach and**
9 **coordination during this proceeding?**

10 A. Yes. In connection with the development of route permit applications, the Applicants have
11 continued to provide information regarding the Project to Tribes, federal and state agencies,
12 and local governments. The Applicants have met with representatives of many of these
13 entities, provided in-person presentations and answered questions about the Project, and
14 are considering this feedback into Project development. The Project team very much
15 appreciates each entity's engagement and input and will continue this outreach and
16 coordination as the Project goes forward.

17
18 **V. PARALLELLING HIGHWAY RIGHTS-OF-WAY & MINNESOTA DEPARTMENT OF**
19 **TRANSPORTATION (MNDOT) COORDINATION**
20

21 **Q. Did the Commission require the Applicants to provide additional information in this**
22 **proceeding in its April 21, 2026, Order Accepting Application, Varying Rules,**
23 **Requiring Filings, and Notice of and Order for Hearing (Completeness Order)?**

24 A. Yes. Among other things, the Completeness Order requires the Applicants to file certain
25 additional information into this docket. In this section of my Direct Testimony, I address
26 the requirements related to highway rights-of-way and coordination with MnDOT. The
27 Applicants previously provided additional information in response to the Completeness
28 Order in our May 29, 2026, Response to Scoping Comments, and I will provide an update
29 to some of that information in Section VI, below.

1 **Q. The Commission required the Applicants to “provide a detailed description of how**
2 **they propose to analyze paralleling highway rights-of-way in accordance with Minn.**
3 **Stat. § 216L.05, subd. 11(e).”¹ What is your response?**

4 A. The Applicants have undertaken a multidisciplinary effort to evaluate where it may be
5 feasible and reasonable for Project facilities to follow highway rights-of-way and, if so,
6 how the Project right-of-way would be configured with respect to road rights-of-way. This
7 analysis considered both state/local roads, as well as interstate highways. I will discuss
8 state/local roads here, and address interstate highways in the following discussion
9 regarding our coordination with MnDOT. Overall, when developing potential routes, the
10 Applicants identified road and highway rights-of-way within the Project area that could be
11 followed by the Project and met the objectives of the overall route (e.g., east/west roads for
12 a route that goes east/west, etc.). The Applicants then reviewed other constraints – homes,
13 engineering, length, sensitive natural resources, etc. – to modify routes to avoid and reduce
14 impacts. In general, roads were not identified as a preferred corridor due to the high
15 instances of residential structures being located within close proximity to road access.

16
17 For routes that follow state and local roads, the Applicants evaluated typical road right-of-
18 way widths and determined that, because of the width of the Project’s right-of-way (among
19 other factors), it is not feasible to locate Project structures within, or in close proximity to,
20 state/local road right-of-way because doing so would require utility easements on both
21 sides of the road and would be more likely to interfere with farming operations because
22 farming equipment would not be able to travel in the area between the Project structure and
23 the road right-of-way. As a starting point, where the Project follows state/local roads, the
24 Project right-of-way may generally overlap with road right-of-way for approximately 35
25 feet. *See* Schedule 2. I caution, however, that this is our initial analysis, and modifications

¹ *See* Order Accepting Application, Varying Rules, Requiring Filings, and Notice of and Order for Hearing, at Ordering ¶ 4(f) (Apr. 21, 2026) (eDocket No. [20264-230753-01](#)).

1 to this general framework may be needed or reasonable depending on site-specific
2 circumstances.

3
4 **Q. The Commission also required the Applicants to “describe their coordination with**
5 **MNDOT in accordance with Minn. Stat. § 161.45, the Next Gen Highway Act.” What**
6 **is your response?**

7 A. The Applicants began early coordination with MnDOT regarding the Project in October
8 2025. Schedule 3 contains additional detail regarding the Applicants’ coordination with
9 MnDOT to date. As part of that coordination, the Applicants evaluated six conceptual
10 configurations of Project facilities/right-of-way in relation to interstate right-of-way and
11 presented those configurations to MnDOT. We are awaiting feedback from MnDOT on
12 these configurations. As I mentioned above, however, specific alignments may be different
13 based on site-specific conditions. Our coordination with MnDOT is ongoing, and further
14 detail will also be provided in forthcoming route permit applications.

15
16 **Q. Are the Applicants evaluating routes that follow Interstate 90 for the forthcoming**
17 **route permit applications?**

18 A. Yes. At our June 2026 routing open houses, the Applicants presented preliminary route
19 options (or, “routes”) that followed Interstate 90 for the: (1) South Dakota/Minnesota
20 Border to Lakefield Project (Minnesota portion of LRTP 22 being developed by Xcel
21 Energy and ITC Midwest); (2) and the Lakefield to Pleasant Valley Project (east-west
22 portion of LRTP 24 being developed by Great River Energy and ITC Midwest).

23
24 **Q. Will the Applicants propose a route that parallels Interstate 90 between Lakefield**
25 **Junction and Pleasant Valley?**

26 A. No. Based on the considerations evaluated during route refinement and the feedback from
27 the public that we received during the June 2026 routing open houses, the Interstate 90
28 route will not be proposed between Lakefield Junction and Pleasant Valley. Schedule 4 to
29 my Direct Testimony was presented to the public at our August 2026 open houses and

1 summarizes our most recent analysis as to why the Applicants are no longer considering a
2 route along Interstate 90 between Lakefield Junction and Pleasant Valley.

3
4 **Q. Please provide more information regarding the factors that the Applicants considered**
5 **regarding a route along Interstate 90 between Lakefield Junction and Pleasant**
6 **Valley.**

7 A. We received feedback during the June 2026 open houses that indicated significant concerns
8 regarding the Interstate 90 route. Comments identified potential environmental,
9 agricultural, and land use impacts associated with routing a 765 kV transmission line in
10 close proximity to the interstate corridor. Stakeholders also noted concerns regarding the
11 amount of development and infrastructure that is already located along the highway
12 corridor and the challenges associated with accommodating a transmission line while
13 minimizing impacts to existing land uses.

14
15 In addition to the public feedback, our further evaluation identified engineering and routing
16 constraints that reduced the viability of the Interstate 90 route relative to the other routes
17 under consideration. While portions of the route could generally follow the interstate
18 corridor, numerous pinch points, developed areas, and airport-related height restrictions
19 near communities such as Albert Lea and Austin would require substantial deviations from
20 the interstate. As a result, the route would follow Interstate 90 for only approximately 38
21 percent of its length; the length actually overlapping right-of-way would likely be even less
22 than 38 percent. These deviations materially increase overall route length, engineering
23 complexity, cost, and environmental and landowner impacts, reducing many of the benefits
24 traditionally associated with following an existing transportation corridor.

25
26 The Project team also heard from stakeholders at the June 2026 open houses who perceived
27 the Interstate 90 route to be the Applicants' preferred route simply because of its
28 association with an existing interstate corridor. Retaining a route that is no longer
29 considered competitive relative to the other routes under consideration could unnecessarily

1 complicate future public engagement efforts and divert attention from the routes that have
2 the greatest likelihood of being proposed by the Applicants in the Route Permit
3 Application.
4

5 For these reasons, we elected to remove the Interstate 90 route from further consideration
6 and focus future route refinement and public engagement activities on the remaining two
7 routes. This approach will allow the Project team and stakeholders to concentrate on the
8 routes that best balance engineering feasibility, environmental stewardship, land use
9 considerations, stakeholder feedback, and overall project objectives while supporting
10 identification of a preferred route for inclusion in the Route Permit Application.
11

12 Additional analysis and detail will be included in the Route Permit Application for
13 Lakefield Junction to Pleasant Valley, and the Applicants understand that similar routes
14 may be evaluated as part of the route permit-specific environmental review.
15

16 **Q. Are the Applicants continuing to evaluate a route that generally parallels Interstate**
17 **90 between the South Dakota/Minnesota border and Lakefield?**

18 A. Yes. This route is being developed by Xcel Energy and ITC Midwest, and it is my
19 understanding that they are continuing to evaluate a route that includes following Interstate
20 90 in this area at this time.

1 **VI. AGRICULTURAL IMPACTS ANALYSIS**

2

3 **Q. In its Completeness Order, the Commission required the Applicants to provide an**
4 **analysis of the estimated agricultural acres per mile that would be taken out of**
5 **production for a lattice, H-frame, and monopole structure. Did the Applicants**
6 **provide this analysis?**

7 A. Yes. Our Response to Scoping Comments provided our analysis regarding conceptual
8 agricultural impacts for the three structure types. Our filing explained the methodology and
9 assumptions used to prepare this analysis.

10

11 **Q. Since the Applicants' Response to Scoping Comments, have the Applicants continued**
12 **to evaluate potential agricultural impacts?**

13 A. Yes. The Applicants retained a consultant, Ulteig, to conduct an aerial imagery analysis of
14 existing transmission line structures (lattice, monopole, and H-frame) to assess the acres
15 per structure of agricultural land that are taken out of production for each structure type.
16 The analysis was meant to supplement and provide a real-world comparison to the
17 conceptual analysis provided in the Applicants' Response to Scoping Comments.

18

19 **Q. Please summarize the aerial imagery analysis conducted by Ulteig.**

20 A. Ulteig reviewed aerial imagery of sections of existing transmission lines constructed 2009
21 to the present, with street view imagery where available. The existing transmission lines
22 reviewed included 400 kV self-supporting lattice with a 40 by 40 foot footprint, 345 kV
23 monopole structures, and 115 kV and 345 kV H-frame structures with a width of
24 approximately between 13-15 feet.² The lines reviewed are located in southern Minnesota
25 agricultural settings. Multiple years of imagery were used to identify changes in farming
26 practices over time and to better understand long-term field operations.

² A 765 kV H-frame would be approximately 50 feet wide. No such existing structure was available for the aerial imagery analysis.

Q. What were the results of the aerial imagery analysis, and how do they relate to the conceptual analysis included in the Applicants' Response to Scoping Comments?

A. The aerial imagery analysis observed per-structure acreage impacts as follows:

- Lattice: approximately 0.04 to 0.09 acres per structure.
- Monopole: approximately 0.01 to 0.03 acres per structure.
- H-Frame: approximately 0.02 to 0.04 acres per structure.

Table 1, below, compares these results to the conceptual analysis included in the Applicants' Response to Scoping Comments. A comparison of the H-frame results is not included in this table because there was no existing H-frame of similar size to 765 kV structures for the aerial imagery analysis, and the results are thus not comparable.

Table 1

Structure Type	Acres Per Structure		Acres Per Mile ³	
	Conceptual Analysis	Aerial Imagery	Conceptual Analysis	Aerial Imagery
Self-Supporting Lattice	0.0444	0.04 – 0.09	0.2247	0.2024 – 0.4554
Monopole	0.0026	0.01 – 0.03	0.0198	0.076 – 0.228

VII. LAND RIGHTS ACQUISITION

Q. Will the Applicants need to acquire new easements for the Project?

A. Yes. The Applicants will work with landowners to acquire easements for an approximately 250-foot-wide corridor for the 765 kV transmission lines across the Project and an approximately 150-foot-wide corridor for the 345 kV double circuit transmission line between the Pleasant Valley Substation and North Rochester Substation. In some areas, the width may vary depending on span length and other design requirements. I understand that

³ Assumes 5.06 lattice structures per mile and 7.60 monopole structures per mile, consistent with the Applicants' Response to Scoping Comments.

1 Xcel Energy does not anticipate the need to acquire new easements for the North Rochester
2 to Hampton transmission line. More detail on the land rights acquisition process is in
3 Section 9.2 of the Application.
4

5 **Q. Have the Applicants begun land rights acquisition for the Project?**

6 A. We have not begun acquiring easements for the Project. However, as I described above,
7 our landowner engagement and outreach efforts are well underway. Those efforts are a
8 necessary and valuable precursor to the easement acquisition process.
9

10 **Q. Will the Applicants ensure landowners are aware of applicable options for Buy the**
11 **Farm and relocation assistance?**

12 A. Yes. As part of the open house materials, the land rights process materials make it clear
13 that there are options open to landowners to sell their property in fee. In some instances,
14 the Project team is already starting to have preliminary conversations with landowners on
15 these topics.
16

17 **Q. When do you anticipate that the Applicants will begin land rights acquisition?**

18 A. Generally, the Applicants intend to contact landowners to obtain right-of-entry agreements
19 to support the Applicants' survey efforts as early as 2027, and more detailed land rights
20 discussions will occur as the route permit process continues into 2028. During 2028
21 through 2030, the Project will be working with landowners to secure easement rights for
22 the approved route. In some areas, these conversations may occur earlier due to Project-,
23 property, and/or landowner-specific issues.

1 **VIII. VISUAL SIMULATIONS**

2

3 **Q. The Commission required the Applicants to prepare visual simulations for three**
4 **structure types in three different areas within the Notice Area. Did the Applicants**
5 **prepare these visual simulations?**

6 A. Yes. The Applicants retained a consultant, Barr Engineering (Barr), with experience in
7 preparing visual simulations. With Barr's assistance, the Applicants prepared a proposed
8 methodology that we believed complied with the Commission's direction and, for
9 transparency, we filed the proposed methodology into the record. Commission staff
10 indicated agreement with the proposed methodology in a filing dated June 30, 2026. I
11 coordinated these efforts. After the visual simulations were complete, they were filed in
12 the docket and provided to the Commission's Energy Infrastructure Permitting Staff so that
13 they could be included in the Environmental Report.⁴

14

15 **Q. The Commission stated that the purpose of the visual simulations was to "identify**
16 **how each of the proposed structures would comparatively mitigate impacts on**
17 **agricultural land and on human residences and structures across the representative**
18 **landscapes." In your view, are visual simulations helpful in comparing the impacts of**
19 **different structure types in different landscapes?**

20 A. Yes and no. The visual simulations can help illustrate what different structures will look
21 like in various landscapes. However, because this is a Certificate of Need proceeding, the
22 simulations are based on hypothetical routes. In that way, the routes and alignments in the
23 simulations have not been subject to the Applicants' typical route review and refinement,
24 which often serve to avoid and minimize certain impacts. Further, as discussed in the Direct
25 Testimony of Mr. Kyle Oraskovich, the visual simulations for the monopole and H-frame
26 structures underestimate visual impacts because the limited distance of line depicted in the
27 simulations does not reflect that lattice structures would also be needed throughout a route

⁴ Order Point 4(c) Visual Simulations filing (July 30, 2026) (eDocket No. [20267-234781-01](#)).

1 to provide critical support. Finally, the visual simulations account for only one factor—
2 aesthetic impacts. As Mr. Oraskovich will discuss, there are many additional relevant and
3 important considerations beyond aesthetic impacts, including span length, reliability, cost,
4 material availability, construction impact, etc.

5
6 **IX. CONCLUSION**

7
8 **Q. Does this conclude your Direct Testimony?**

9 **A. Yes.**

Daniel R. Leshner, SR/WA

EMPLOYMENT HISTORY:

Manager, Transmission Permitting and Land Rights, Great River Energy (2020 – Present)

- Provides leadership, coaching, and support to Transmission Permitting and Land Rights department.
- Develops annual budgets for the department.
- Establishes new policies and procedures to adjust to new transmission development.
- Testified at the legislature regarding transmission permit reform in Minnesota.
- Evaluates, hires, and onboards resources in response to department resource loading.

Leader, Transmission Permitting and Compliance, Great River Energy (2018 – 2020)

- Provided leadership, coaching, and support to the Transmission Permitting and Compliance team.
- Collaborated with the Land Rights Manager to establish and track goals necessary for the success of the department.
- Established new policies and procedures to ensure compliance with regulatory and environmental policy.
- Collaborated and developed relationships within Great River Energy and member-owners to analyze and execute the successful permitting and compliance for transmission projects.
- Worked with State and Federal Agencies on environmental policy and permitting requirements.

Senior Field Representative, Great River Energy (2007-2017)

- Lead the routing and land rights efforts for the CapX2020 345kV transmission project from Brookings County, SD to the Twin Cities, Minnesota.
- Negotiated property rights acquisition, via easement and fee purchase, for electric infrastructure projects.
- Developed routes for transmission line projects that minimize environmental impacts.
- Facilitated public hearings and open houses to inform stakeholders of upcoming transmission projects.
- Integrated Geographic Information Systems Mapping into the department.
- Provided testimony to the Minnesota Public Utilities Commission on transmission projects and land rights matters.

EDUCATION:

Bachelor of Science, University of Wisconsin - Stevens Point

1999

Major: Land Use Planning-Resource Management

Minor: Natural Science

MEMBERSHIPS:

- International Right of Way Association (IRWA) 2007- Present
 - SR/WA status March 2012 by completing coursework in the following categories:
 - o Asset Management
 - o Conflict Management
 - o Eminent Domain
 - o Environmental Process
 - o Ethics

- o Expert Testimony
 - o Real Estate Engineering
 - o Real Estate Law
- Electric Power Research Institute (EPRI) ***2018-Present***

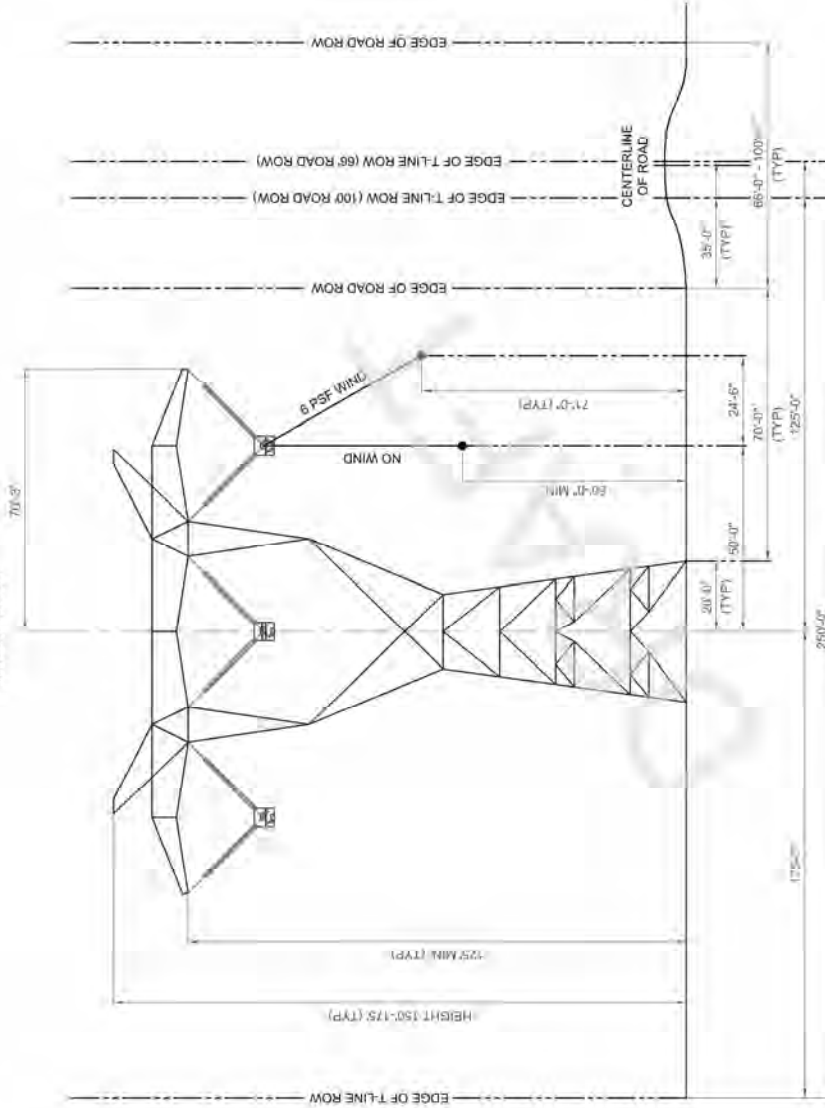
ACHIEVEMENTS:

- IRWA Region 3 Board Chair ***2020***
- IRWA International Education Conference Co-Chair ***2020***
- IRWA Chapter 20 President ***2012 -2014***
- IRWA Chapter 20 Professional of the Year ***2013***
- Minnesota Notary, Commission Number 31003108 ***2005- Present***

COMMUNITY INVOLVEMENT:

- City of Waconia Planning Commission ***2017- 2025***

PROPOSED 765KV
TANGENT TOWER



LAYOUT OPTION
RIGHT OF WAY
765KV AND STATE AND LOCAL ROADS



POWERON MIDWEST
765KV TRANSMISSION LINE
ROW CROSS SECTION OPTION
STATE AND LOCAL ROADS

XXXXXXXX-XX01

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CAH Docket No. 28-2500-41617
MPUC Docket No. E002, ET2, ET6675/CN-25-117
APP- (Leshner)
Direct Schedule 2

NOTES:

TRANSMISSION LINE DIMENSIONS ARE PRELIMINARY
TYPICAL SPAN LENGTH: 1200' - 1400'
70'-0" DIMENSION BASED OFF 24 ROW PLANTER (60'-0" WIDTH + 10'-0" BUFFER)
ROADS WITH A ROW WIDTH OUTSIDE THE RANGE SHOWN WILL BE EVALUATED ON A CASE-BY-CASE BASIS
TRANSMISSION LINE ROW AND ROAD ROW OVERLAP 35'

Summary of Minnesota Department of Transportation Coordination

This document summarizes the Applicants' coordination with the Minnesota Department of Transportation (MnDOT) regarding the PowerOn Midwest Project (Project), through August 11, 2026. Coordination has already occurred as part of the Project's Certificate of Need Application, and the Applicants are now continuing coordination with MnDOT with respect to routing and three route permit applications, which the Applicants anticipate filing as early as February 2027. The Applicants will provide further updates regarding their coordination with MnDOT related to Project routing in those route permit applications.

- October 27, 2025: Applicants introduce the Project to MnDOT via email.
- January 22, 2026: Applicants and MnDOT hold virtual meeting focused on Project overview. The Applicants and MnDOT agreed to schedule a route-focused discussion once preliminary routes were available for review.
- March 17, 2026: Applicants and MnDOT held meeting where the Applicants provided a Project update and described high-level route corridors under consideration at that time. The Applicant and MnDOT agreed that additional coordination would be needed regarding the placement of the project near highway rights-of-way. The Applicants also offered to update MnDOT on routes as they continued to be developed.
- April 27, 2026: Applicants requested additional meeting with MnDOT to discuss both how the Next Gen Highway Act influences MnDOT's position on historical and current routing constraints along highway rights-of-way.
- May 5, 2026: Applicants provided MnDOT with data package including shapefiles for preliminary routes and route corridors to be shared at June 2026 open houses, as well as a document highlighting areas along the I-90 routes where there are pinch points/routing constraints that the Applicants would like to discuss and would also like further guidance from MnDOT. The Applicants updated the spatial files on May 19, 2026, to reflect some preliminary route changes between Brookings and Lakefield.
- May 20, 2026: Applicants and MnDOT held a meeting to review possible arrangements of the Project right-of-way relative to MnDOT right-of-way, as well as discuss MnDOT's review of the preliminary routes. The agenda included reviewing preliminary draft right-of-way cross sections, and the preliminary I-90 route that would be shown at the June open houses. The Project asked for MnDOT's initial feedback on its preliminary routes that would be shared at the June open houses to support future route refinement. MnDOT confirmed it would conduct a preliminary route review and provide the results to the Applicants. Minutes from this meeting were provided to MnDOT on June 17, 2026, for review and comment and are attached. Applicants have not received comments from MnDOT to date.

Summary of Minnesota Department of Transportation Coordination

- May 21, 2026: Applicants sent a notice to MnDOT, along with other federal, state, and local agencies, regarding a series of open houses in June 2026. The notice contained information on the open houses and a reference to preliminary routes published on the Project website,
- June 3, 2026: MnDOT provided an update on its route review and requested additional information from the Applicants. Questions included those regarding potential structure placement and safety and operational considerations regarding routing along the I-90 corridor.
- June 22, 2026: Applicants responded to MnDOT's June 3, 2026, questions.
- June 23, 2026: MnDOT provided the Applicants feedback regarding its desktop review of preliminary routes. MnDOT's comments addressed topics such as planned construction and highway maintenance and areas with special vegetation management (i.e., living snow fence or monarch butterfly habitat). The comments focused on the I-90 corridor within the notice area.
- June 24, 2026: Applicants provided MnDOT with six conceptual cross section drawings related to the I-90 routes that were currently being considered to facilitate further input and discussion from MnDOT at the June 30, 2026, meeting.
- June 30, 2026: Applicants and MnDOT held a meeting to review the June 24, 2026, conceptual cross section drawings of the Project right-of-way relative to MnDOT right-of-way and discuss a list of questions developed by the Project. The Applicants described the cross-sections and discussed MnDOT's questions and concerns regarding the hypothetical arrangements. The Applicants committed to revising the cross-sections to include additional MnDOT comments, as well as provide information requested by MnDOT. Minutes from this meeting were provided to MnDOT on July 20, 2026, for review and comment and are attached. Applicants have not received comments from MnDOT to date.
- July 16, 2026: Applicants provided MnDOT with revised conceptual cross-sections. MnDOT replied on July 20, 2026 that the conceptual cross-sections were under review; MnDOT was receiving guidance from the Federal Highway Administration; and having larger discussions within the agency regarding proposals to date.
- August 11, 2026: Applicants provide correspondence to MnDOT responding to questions posed by MnDOT at June 30, 2026, meeting. The correspondence is attached.

MnDOT I-90 Coordination Meeting Notes

Project	PowerOn Midwest
Subject	I-90 Coordination Meeting
Date	Wednesday, May 20, 2026
Location	Hybrid—Teams/MnDOT Office

Attendees

- Karissa Hogan (MNDOT)
- Dan Leshar (GRE)
- Tim Rogers (Xcel)
- Mark Rothfork (ITC Midwest)
- Ellen Heine (Xcel Energy)
- Aaron Mielke (Barr)
- Britta Bergland (Merjent)
- Kat Lewis (Merjent)
- Derrick Johnson (GRE)
- Adam Cross (ITC Midwest)
- Dan Schmidt (HDR)
- Stacy Kotch-Egstad (MnDOT)
- Ann Driver (MnDOT)
- David Evans (MnDOT)
- Terry Condon (MnDOT)
- Emily Eichner (MnDOT)
- Russell Smith (MnDOT)
- Steve Schoeb (MnDOT)
- Jesse Lyon (Xcel Energy)
- Andrew Levi (Merjent)
- Ben Gallay (Xcel Energy)
- Michelle Bissonette (Xcel Energy)

Notes

- The purpose of the meeting was to review possible arrangements of the Project right-of-way (ROW) relative to Minnesota Department of Transportation (MnDOT) ROW, as well as discuss MnDOT's review of the preliminary routes provided by the Project team in advance of the meeting.

- Regarding ROW arrangements relative to MnDOT ROW, Mark Rothfork and Derrick Johnson displayed two preliminary engineering drawings.
 - o In Scenario 1, the structures would be placed approximately 55 feet outside of the edge of MnDOT ROW. The National Electric Safety Code (NESC) 6 pounds per square foot (psf; or, wind pressure) transmission line blowout would reach the edge of MnDOT ROW. Maximum blowout would be within the MnDOT ROW.
 - MnDOT notes that blowout into MnDOT ROW is possible, and that they have issued “blowout permits” to utilities.
 - o In Scenario 2, the structures would be on the edge of MnDOT ROW. Depending on the width of the MnDOT ROW at any given structure location, the NESC 6 psf transmission line blowout would be approximately 40 to 55 feet inside the MnDOT ROW. Maximum blowout would be within the MnDOT ROW and would approach the edge of the nearest driving lane. There would also be structure overhang within the MnDOT ROW.
 - MnDOT asked about the max sag. The NESC clearance requirement is 35–40 feet. Johnson confirmed that the max sag for the Project would be a minimum of 60 feet above any road surface.
 - In this scenario, because of the amount of ROW overlap, all vegetation would need to be removed from the MnDOT ROW.
 - The Project would need to coordinate with MnDOT on anything going on in the ROW (i.e.; snow fence plantings, signs, etc.).
- The group also generally discussed the impacts of placing the structures fully within MnDOT ROW. MnDOT expressed concerns about this approach, including restrictions on performing ditch maintenance with a backhoe and line clearance for ongoing roadway maintenance work.
- The group discussed general concerns about sharing MnDOT ROW.
 - o The National Transportation Safety Board (NTSB) will need to approve any ROW sharing for federal highways. The Federal Highway Administration (FHWA) would need to review any activities which deviate from MnDOT’s approved manual.
 - o Federal highways were originally designed with the purpose of allowing emergency airplane landings at a certain frequency. MnDOT will need to look into if, and where, that still applies/is still required.

- o MnDOT expressed concerns about what easement access will look like if the transmission line ROW reaches the other side of the road surface.
- o MnDOT notes that access from I-90 to the ROW would not be possible. The Project discussed using the transmission line easement as the main travel path but travel within the road ROW would be restricted.
- o In cases where part of the structure was on the outer edges of the road ROW, MnDOT talked about having the interstate fence moved around the structure base so that access could be maintained without the need to go through the fence.
- o The group discussed the need for coordination with MnDOT along should there be the need for future additions and changes along the highway such as new interchanges or lane expansions.
 - MnDOT will do research on anticipated growth, but does not have data for all projects, as some are decided at the city and county level.
 - MnDOT does not have control of the timeline on city/county projects.
 - MnDOT is concerned about maintenance once the line is energized, especially if they require the utilities to shut down the line for road maintenance.
 - MnDOT is aware of an interchange project proposed in Byron along Highway 14.
- o Helicopter use near the roadway and conductor compression fitting explosions can be a concern, and were on the CapX projects, but coordination with the highway patrol can address this issue.
- o The Project asked if it is possible for half of a structure to sit in the ROW, or, how much overlap is possible.
 - MnDOT would have to look at each tower placement individually. This is not preferred; internal conversations need to occur.
- o MnDOT asked about the likelihood of the Project's use of the preliminary designs shared at the meeting. The Project shared that these were intended to be preliminary designs used to start conversation about what is and is not possible.
- o The Project asked what level of signage would be required for construction. MnDOT replied that The "clear zone" signage requirement would not be an issue for Scenario 1. Hypothetically, it would not be an issue for Scenario 2.

- o The Project asked if bonding would be required for construction. MnDOT replied that that typically utility companies have a continuing bond, and bonding should not be an issue.
- The group discussed typical road and ROW widths along I-90.
 - o The I-90 MnDOT typical ROW is 184 feet. This is comprised of 84 feet from centerline to road centerline, and 100 feet on either side. Roads typically have a 13-foot-wide driving lane and 12-foot-wide passing lane.
 - o MnDOT's publicly available road easement layer is typically representative of easement dimensions.
 - o Trunk highways usually have a minimum ROW of 75 feet, and township roads typically have a ROW of 66 feet.
- The group reviewed the preliminary routes against the MnDOT viewer, and MnDOT staff offered their initial assessments. Some concerns raised included:
 - o Following I-90 completely is impossible due to constraints such as cities, airports, and existing infrastructure. The group reviewed areas where deviating from I-90, sometimes at a significant distance, would be required.
 - o An "I-90 route" would add significant mileage to the project as compared to other options being considered.
 - o The Project will have to avoid areas designed for snow/wind breaks and tree lines. MnDOT can provide these locations, as they are marked in their data.
 - o MnDOT notes that there are many of gates along I-90, where old township roads dead-end on the highway. Access is still provided through these gates; FHWA tracks these gates. These landowners have permissions to access the highway ROW through the gates.
 - o Extra space would need to be planned around interchanges. This is due to crane usage and elevation changes.
 - o MnDOT expressed concerns about environmental impacts of features along I-90, and if the line would have to deviate to avoid these features more than practical.
 - o The group discussed properties where there are scenic easements. MnDOT stated there can typically be no ROW overlap in a scenic easement.
 - o MnDOT staff are available for site visits if requested.
- The group discussed next steps.

- o The Project would like MnDOT's initial feedback on its preliminary routes to support route refinement.
- o MnDOT discussed its Early Notification Memo (ENM) process, but this might be too early in the process due to the number of routes being considered at this early stage.
- o Another option would be for MnDOT to provide a broad, high-level constraints review, focusing on broad feasibility and flagging areas of concerns. Some information may be privileged. This will allow the routing teams to incorporate MnDOT concerns in initial routing exercises. The group decided to pursue this approach.
- o MnDOT will hold internal discussions on the ability for ROW sharing.
- o Mark Rothfork will send a map with project contacts to MnDOT (**Action Item 1**).

Action items

- **Action Item 1:** Send MnDOT the segment contacts map (complete).

MnDOT Coordination Meeting

Notes

Project/Segment	PowerOn Midwest
Subject	MnDOT Coordination Meeting
Date	June 30, 2026
Location	Virtual –Teams

Attendees

- Stacy Kotch Egstad (MnDOT)
- Ann Driver (MnDOT)
- Karissa Hogan (MnDOT)
- David Evans (MnDOT)
- Corey Kack (MnDOT)
- Terry Condon (MnDOT)
- Emily Eichner (MnDOT)
- Russell Smith (MnDOT)
- Steve Schoeb (MnDOT)
- Angela Piltaver (MnDOT)
- Joe Pignato (MnDOT)
- Jim Zigman (MnDOT)
- Kyle Oraskovich (GRE)
- Derrick Johnson (GRE)
- Dan Leshner (GRE)
- Michelle Bissonnette (Xcel Energy)
- Tim Rogers (Xcel Energy)
- Mark Rothfork (ITC Midwest)
- Adam Cross (ITC Midwest)
- Aaron Meilke (Barr)

- Britta Bergland (Merjent)
- Kat Lewis (Merjent)
- Andrew Levi (Merjent)

Notes

- The group reviewed the roles and responsibilities of MnDOT meeting attendees:
 - Corey Kack – District 8 permits
 - Emily Eichner – District 7 permits
 - Karissa Hogan – Central office coordinator
 - Ann Driver – Utilities management
 - Steve Schoeb – Mankato District 7 permits
 - Terry Condon – District 6 permits
 - David Evans – District 6 ROW supervisor
 - Russel Smith – District 6 / eastside
 - Stacy Kotch Egstad – Permit Manager
 - Joe Pignato – Land Management Office Director
 - Jim Zigman – Engineer
- In advance of the meeting, Mark shared 6 conceptual cross-section drawings related to I-90 routes currently being considered (**Attachment 1**). The alignments shown in the drawings continue to be analyzed by the PowerOn Midwest team; the drawings were provided as tools to facilitate further input and discussion from MnDOT. Mark also sent a list of questions that PowerOn Midwest wanted to discuss at the meeting (**Attachment 2**).
- Kyle reviewed each of these drawings, describing the hypothetical arrangements relative to MnDOT ROW. MnDOT posed the following questions related to the drawings.
 - Stacy asked to clarify the width of the PowerOn Midwest ROW at 250 feet, relative to the portion shown in MnDOT ROW. When stating amount of collocation of feet within MnDOT, is the project aware that it cannot get an easement from MnDOT, just a permit? Dan replied yes, this is just

meaning to show shared ROW. If this were private property, this is the easement we would try to secure from a landowner. Beyond that line there is nothing utility needs. Within that line, coordination between MnDOT and the utilities would be required, for example for billboards/large signs.

- Jim asked why 250 feet was selected for the ROW. Kyle replied that most 765 in the US today uses a 200-foot corridor, but this was designed considering audible noise requirements; project specific clearance based on safety code; what would be needed to maintain safe clearance to conductors; and maintenance activities.
- Jim asked if this project would always be a single circuit. Kyle replied yes.
- Jim asked about concerns with ice throw. Kyle replied there could be ice shedding within the ROW.
- Jim asked about foundation grounding. Kyle responded that the grounding design is in progress. Each tower leg will be grounded, but as of now, there is no specific design.
- Jim asked about tower fall during tornadoes. Kyle responded that the project has used very robust design criteria. Conductors are being designed for 300-year wind case and a 500-year ice and wind case.
- Jim stated concern about highway clearances and arcing. Dan replied that the project expects combines and semis to be traversing under equipment on private land, so these should not be a concern on the highway.
- Jim stated that due to his concerns, he would be less concerned with design scenarios which show blowout over ROW, but not with those which show structures and components in MnDOT ROW. He offered that Scenario 1 is the only option he initially sees as acceptable.
- Jim asked what access looks like. Dan replied that the project would use the area of the easement on private property. Fences may need to be modified along the highway to allow access.
- Steve offered concerns about over-dimension loads on I-90 and proximity to conductors/conductivity. Dan stated that it would not

propose an arrangement which is unsafe to the public. But sharing a corridor requires MnDOT and the utilities to coordinate on activities that will add structures with height in the ROW, such as cameras, poles, lights, and signs.

- Kyle reiterated that grounding studies are still pending, but there are specific codes that the project has to meet. Induced current has to be less than 5 mA for stationary and mobile items. The minimum 60 foot – is based on state electric field requirements, but the clearance could be made greater to meet 5 mA requirements.
- Joe stated that MnDOT needs to determine what arrangement allows it to feel safe for roadway maintenance operations. Angela offered that within District 7, there are about 12 I-90 projects planned (not funded) or programmed (funded, executed within the next 4 years). Both shared concern about complexity of highway ROW sharing relative to farm fields and stated that there were many differences. Unique features include roadside infrastructure, signs, cameras, utilities, drainage/ditch maintenance, weather stations, snow drift closures, snow fence locations, etc. Angela stated that most of the bridges on I-90 were built in the 60s/70s and are coming due for maintenance work – from repair to replacement. While MnDOT may not have certain bridges in its 10-year plan now, they will be coming due soon.
- Mark shared that the project is also aware of these differences, but the purpose of the meeting is to try to understand how both parties – the project and MnDOT – can find answers to these questions considering the direction from the MPUC to study the I-90 corridor and the directives from the NextGen Highway Act.
- Jim agreed but needs to know more about his concerns with grounding and ice throw. He asked how close could something be to a grounding wire where MnDOT could install anything they want with no concern? Jim asked if different types of soil can be more conductive? Kyle responded that the project has not designed the grounding system.

- The group discussed several details regarding the project, such as the footings being 30 to 60 feet deep on average, the size and type of equipment used to build the project (helicopters will be used), the need for additional temporary workspace outside the easement to build the project, and access from local roadways to the easement. Joe offered that MnDOT does not like to give access off of I-90.
- Dan shared that it would be helpful if MnDOT could provide its feedback on each of the scenarios and offered to share his initial thoughts to begin the discussion. The project needs to understand where MnDOT is at with collocation arrangements so that the project and MnDOT can show the Commission that they are coordinating.
 - Scenario 1 is preferred to Scenario 2. He is concerned about leaving a narrow strip between the structure and MnDOT ROW that will be unusable by farmers. Scenario 1 offers more room for farmers to maneuver in between the structure and the edge of MnDOT ROW. With Scenario 2, that may be too narrow to be usable. The project is cognizant of the MPUC's desire to lessen impacts on landowners.
 - Scenario 4 is best to maximize collocation with MnDOT ROW.
 - Scenarios 5 and 6 raise concerns regarding ongoing coordination with MnDOT. If there was a MnDOT project in the future the structures could need to be moved, and that poses cost and logistic concerns. Scenario 6 seems to be not feasible.
- In response, Joe offered that Scenario 3 is a possibility, depending on answers to his concerns on grounding/induction and ice throw. Scenarios 4-6 are absolute "no".
- The project will provide additional information on grounding/induction (**Action Item 2**).

- Steve and Angela offered that the project should update its drawings to add an 8-foot shoulder on outside of each lane. A 6–10-foot area off of the shoulder is a “no-go area” as MnDOT need to maintain signs. Mark asked if MnDOT could share a typical cross section of I-90 that MnDOT, as these were created using information MnDOT provided at the last meeting. Steve stated that large cranes are used to install and maintain highway signs. Dan and Mark asked for information on crane size. Steve said that it varies. Steve needs to know the safe distance off the line. Kyle offered that work within the 250-foot ROW would be accounting for safe work. Steve offered later in the meeting that after connecting with the Traffic/Sign Department, 10 feet above the sign height would be the top of the lifts or cranes used to install them. The project team will revisit the drawings (**Action Item 3**).

- Joe asked if MnDOT workers need to be qualified to work in the Minimum Approach Distance (MAD). Kyle stated that no MnDOT staff work be working within MAD. The project has the responsibility to design lines so that the public can safely work around. Such restrictions would not be in place, and no worker certification would be required as they are not performing maintenance on the line.

- The group reviewed the questions posed by PowerOn Midwest before the meeting.
 - Regarding lane closures/traffic control: The MnDOT Traffic Manual lays out when lane closure is required. Should be the same as Cap-X20.
 - Are there MnDOT grounding standards? Yes, MnDOT has concerns about additional standards. May be in spec book.
 - Would MNDOT allow temp/perm access/restrictions? MnDOT would not allow access off I-90, would allow access along frontage roads.
 - Regarding coordination with FHWA. MnDOT stated that FHWA approval is needed for everything; MnDOT is not final word. Mark asked when the right time is to start collaboration with FHWA. Joe said that we are not at that point yet but will research next steps (**Action Item 4**).

- Will MnDOT allow access on key ROW points? Yes, potentially along frontage roads, on a case-by-case basis.
 - Are there restrictions/limitations for traffic control? Yes, see the Traffic Control Manual. 3 days or less is the temporary traffic control field manual. There is another manual on Uniform Traffic Control Devices (UTCD) if longer – "MIN MUT Code"
 - Are there limitations to aerial work? Yes, same as CapX – the project should refer to that.
 - Are there stringing requirements? Yes, same as CapX – the project should refer to that.
 - Are there vegetation management restrictions? Yes, should always coordinate if we need to take down vegetation.
 - Can there be transmission lines on both sides of the highway (or "boxing in"). No, it is in state statutes – MnDOT cannot be boxed in.
- Joe asked what other state DOTs he can coordinate with to learn about collocating 765. The project team offered Ohio and Indiana.
 - To close, the group concluded that project staff and MnDOT will need to testify before the MPUC on these topics and that all need to be prepared to answer these questions in light of NextGen Highway. All agreed that future coordination is necessary (**Action Item 1**).
 - The group agreed on the following next steps:
 - Mark – schedule follow-up meetings and provide follow-up information (**Action Item 1**)
 - Kyle – revisit questions on induction and updating cross sections (**Action Item 2, Action Item 3**).
 - Joe – contact counterparts about FHWA so that MnDOT can get feedback before next meeting (**Action Item 4**)
 - PowerOn Midwest Legal – will review federal codes that could affect foundation policy and what federal approvals are needed (**Action Item 5**).

Action items

- **Action Item 1:** Schedule Follow Up Meetings (Mark)
- **Action Item 2:** Research Structure Grounding (Kyle)
- **Action Item 3:** Update Cross Sections to add shoulder (Kyle)
- **Action Item 4:** Look into FHWA coordination (Joe)
- **Action Item 5:** Review Federal Nexus related to FHWA review (PowerOn Midwest Legal Team)

Attachments

- **Attachment 1:** Draft Cross Section Drawings
- **Attachment 2:** Questions Posed Before Meeting



August 11, 2026

Stacy Kotch Egstad
Minnesota Department of Transportation
395 John Ireland Blvd
Mailstop 678
St. Paul, MN 55155
Via email at: stacy.kotch@state.mn.us

Greetings,

Staff from PowerOn Midwest (or, the Project) most recently met with staff from the Minnesota Department of Transportation (MnDOT) on June 30, 2026, regarding the Project and potential for right-of-way sharing and/or paralleling roads under MnDOT jurisdiction. During that meeting, MnDOT representatives raised questions regarding several topics. For ease of later reference, we are providing additional information regarding these topics in this correspondence. Each topic is addressed under the bold heading, below.

The Project team appreciates MnDOT's engagement regarding the Project, and we are available to address any further questions as part of our ongoing coordination.

Induction

MnDOT requested additional information regarding highway clearances and the potential for induction. The Project team expects two types of induction mechanisms for conductive objects located within, or adjacent to, the transmission line right-of-way (ROW). The first is due to electrostatics and the second is by magnetism. Each induction mechanism will be evaluated by the Project.

Where necessary, electrostatic effects on an object will be mitigated utilizing industry-accepted grounding and bonding practices.

Magnetic induction is of concern for long, continuous, conductive structures, such as fences, located parallel or adjacent to the transmission line. To mitigate the magnetic induced voltage on such structures, the structure is typically grounded at regular

intervals utilizing industry-accepted grounding and bonding practices to prevent voltage build-up. For electrified fences, filters are used to separate the 60 hertz (Hz) component from the high frequency injected voltage.

Induction on third-party facilities adjacent to, or within the transmission line ROW, such as pipelines or railroads, will be specifically studied by the Project team on a case-by-case basis in the form of alternating current (AC) induction studies. Any required mitigation measures identified by the studies would be implemented in coordination with the owner of the third-party facility in accordance with applicable industry requirements and standards.

The Project has considered induction on non-static conductive structures such as vehicles in the preliminary stages of the Project design. The Project team has performed calculations assuming the largest anticipated vehicle in accordance with the requirements of the National Electrical Safety Code (NESC). The Project will be designed to comply with all applicable NESC requirements, including limits intended to protect the public from AC induction effects.

Grounding

MnDOT asked whether Project structures would be grounded. The Project anticipates that each tower leg (four-legged towers) will be grounded via the use of ground rods and associated ground wires in accordance with industry accepted practices. Note that the Project team has not yet developed a tower grounding design for the transmission towers.

Updates to Conceptual Cross-Section Drawings

At the June 30, 2026, meeting, the Project shared six conceptual cross-section drawings depicting the ROW scenarios the Project team had evaluated in relation to interstate ROW. MnDOT asked the Project team to update the drawings to add an eight-foot shoulder on the outside of each lane. The updated drawings were emailed to MnDOT on July 17, 2026. The updated drawings are also included with this correspondence as **Attachment 1**. We are seeking MnDOT's review of these conceptual cross-sections and feedback on which would be acceptable to MnDOT.

Installation & Maintenance of Road Signs

MnDOT indicated that Project clearances need to accommodate the installation and maintenance of road signs and other highway facilities, including the use of cranes for such work. The operation of cranes or other similar equipment near a power line, including distribution lines, must follow specific safety rules, independently of the line voltage. Occupational Safety and Health Administration (OSHA) regulates the minimum approach distance (MAD) that workers and crane operators must follow. Therefore, the use of such equipment by road crews near the proposed transmission line would be subject to applicable OSHA requirements.

The Project will design the transmission line to meet or exceed all applicable NESC clearance requirements with respect to objects under or adjacent to the transmission line. The Project does not propose unique operating restrictions beyond those already imposed by OSHA or other applicable safety regulations. If road crews should need to complete specialized maintenance activities that could require equipment to operate within the OSHA clearance limits, the Project team would coordinate with MnDOT to evaluate appropriate work procedures on a case-by-case basis.

Ice Shedding

MnDOT asked the Project team to provide additional information regarding the potential for ice shedding from the conductors within road ROW. Ice accumulation on conductors and ice shedding are common phenomena of overhead transmission lines that are located in cold weather locations such as Minnesota and are not unique to 765 kilovolt (kV) facilities. While the Project includes more conductors than would be present on lower voltage lines, the ice accumulation on each conductor is not expected to be materially different than that on the conductors of other transmission facilities.

The distance from which ice can fall from conductors is dependent on specific weather conditions and is difficult to predict due to multiple variables, including, but not limited to, the variability of ice accumulation, the size and shape of the ice buildup, the speed and direction of wind gusts, span lengths, and the height of the conductor. Despite these variables, the Project expects that any ice shedding would occur within the transmission line ROW.

Fiber

MnDOT asked for additional information regarding whether the Project may impact underground (UG) fiber installed within road ROW. The Project does not expect that data transmission within UG fiber will be affected by the operation of the transmission lines.

UG fiber is protected from electrostatic effects because the upper soil serves as an effective shield against such effects. Although magnetic fields can pass through the soil, the Project does not expect that interference will occur because:

- The magnetic field frequency is very low compared to the extremely high frequencies of the light used inside the fiber. The possibility of any interference on the data transmission is null.
- The fiber itself is made of silica, which is a very good insulating material. Therefore, induced currents are unable to flow through the fiber.
- The different protective layers used in UG fiber cables are made of polyethylene or similar materials, the central core is made of fiberglass, and the protection against water is by a plastic tape. All of these materials are dielectrics that do not allow for current flow. Typically, UG fiber cables installed in duct banks do not have conductive protection (armor/strength members). However, direct-buried UG fiber cables can have conductive protection, which are normally grounded following the manufacturer's instructions. The grounding is required independently of the voltage of the transmission line running parallel to it, because the induced voltage depends on the transmission line current (magnetic).

The Project would evaluate any potential interactions with UG fiber systems that include metallic trace wires, armor, or other conductor components on a case-by-case basis.



Conclusion

We value MnDOT's coordination regarding the Project and can address any further questions during our ongoing engagement.

Sincerely,

Great River Energy

ITC Midwest

Xcel Energy

Dan Leshner

Mark Rothfork

Andrew Welch

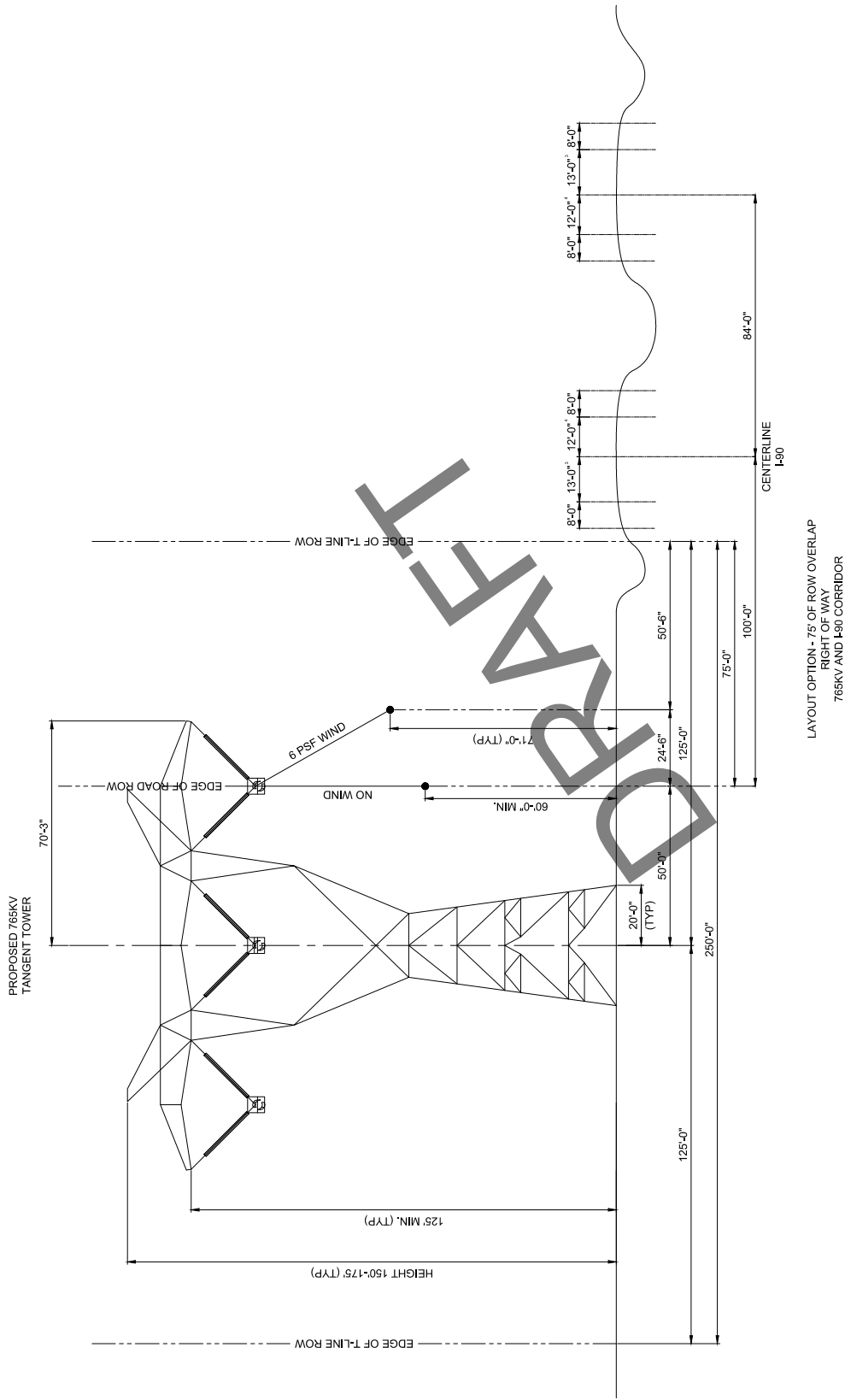
Manager, Transmission
Permitting & Land Rights

Manager, Environmental
Permitting

Senior Siting & Land
Rights Agent

Attachment 1: PowerOn Midwest Conceptual ROW Cross-Section Drawings Provided to
MnDOT on July 16, 2026

Attachment 1



- NOTES:
1. TRANSMISSION LINE DIMENSIONS ARE PRELIMINARY. I-90 DIMENSIONS ASSUMED FOR TYPICAL CROSS SECTION.
 2. TYPICAL SPAN LENGTH: 1200' - 1400'
 3. DIMENSION FOR EXISTING ROADWAY SHOWN. 14' FOR NEW ROAD CONSTRUCTION.
 4. DIMENSION FOR NEW ROADWAY SHOWN. 13' FOR NEW ROAD CONSTRUCTION.
 5. 8'-0" MIN. FOR NEW ROADWAY CONSTRUCTION.

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POWERON MIDWEST
765KV TRANSMISSION LINE
ROW CROSS SECTION OPTION 2
INTERSTATE-90

REV	DATE	BY	APP	DESCRIPTION
0	5-22-2026	ACE	JBS	ISSUED FOR REVIEW
1	7-14-2026	ACE	JBS	ISSUED FOR REVIEW
2				ADDED 8' FROM SHOULDER
3				
4				
5				
6				
7				
8				
9				

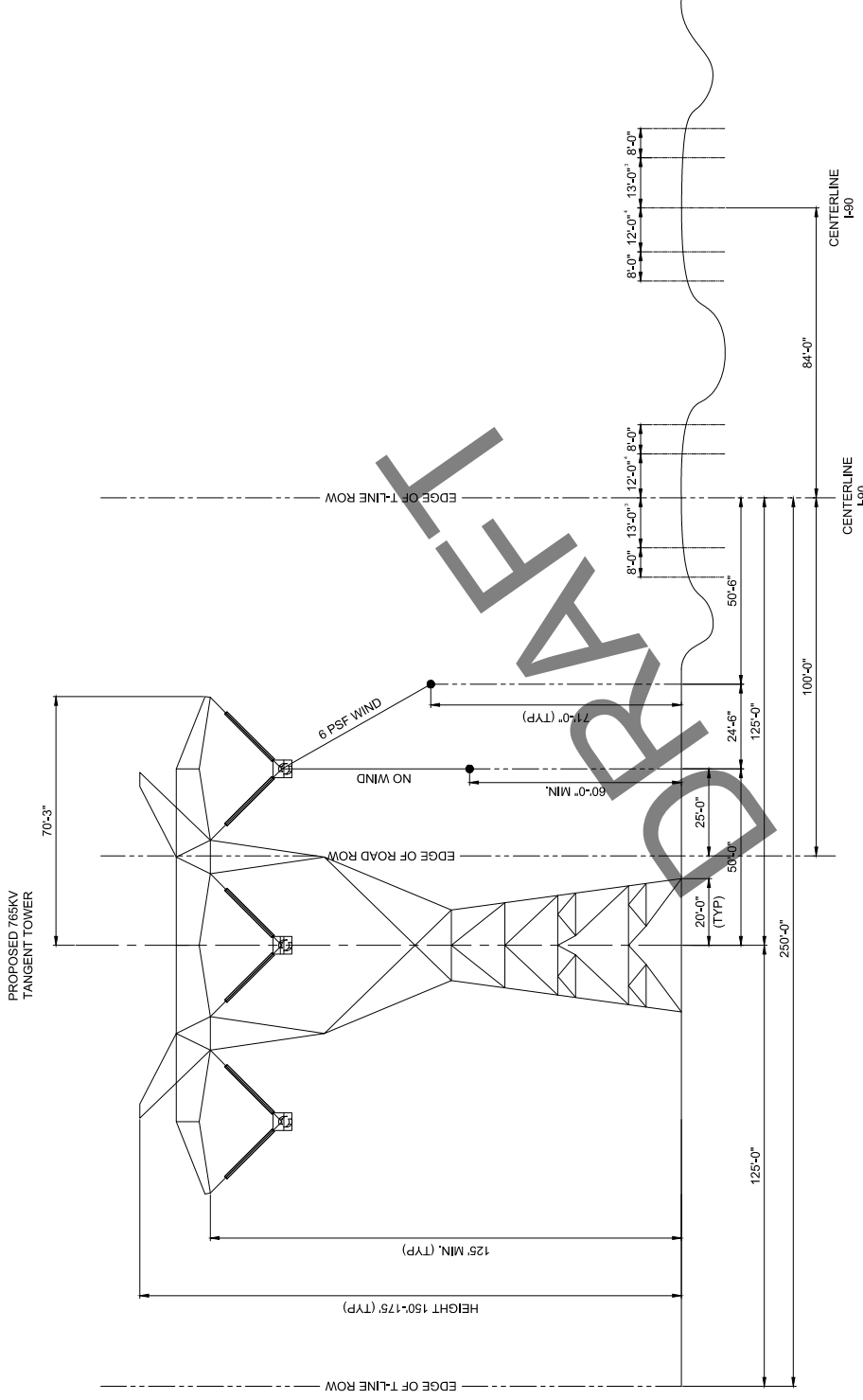
DRAWING NUMBER

182350-ROW-DWG

REVISION

1

ENCLOSURE OF THIS DOCUMENT TO A THIRD PARTY EXCLUSIVE OF DIRECT USE FOR OPERATIONAL, MAINTENANCE OR NEW CONSTRUCTION IS SUBJECT TO WRITTEN PERMISSION FROM GREAT RIVER ENERGY.



LAYOUT OPTION - EDGE OF T-LINE ROW AT CENTER OF TRAVEL LANE
RIGHT OF WAY
765KV AND I-90 CORRIDOR

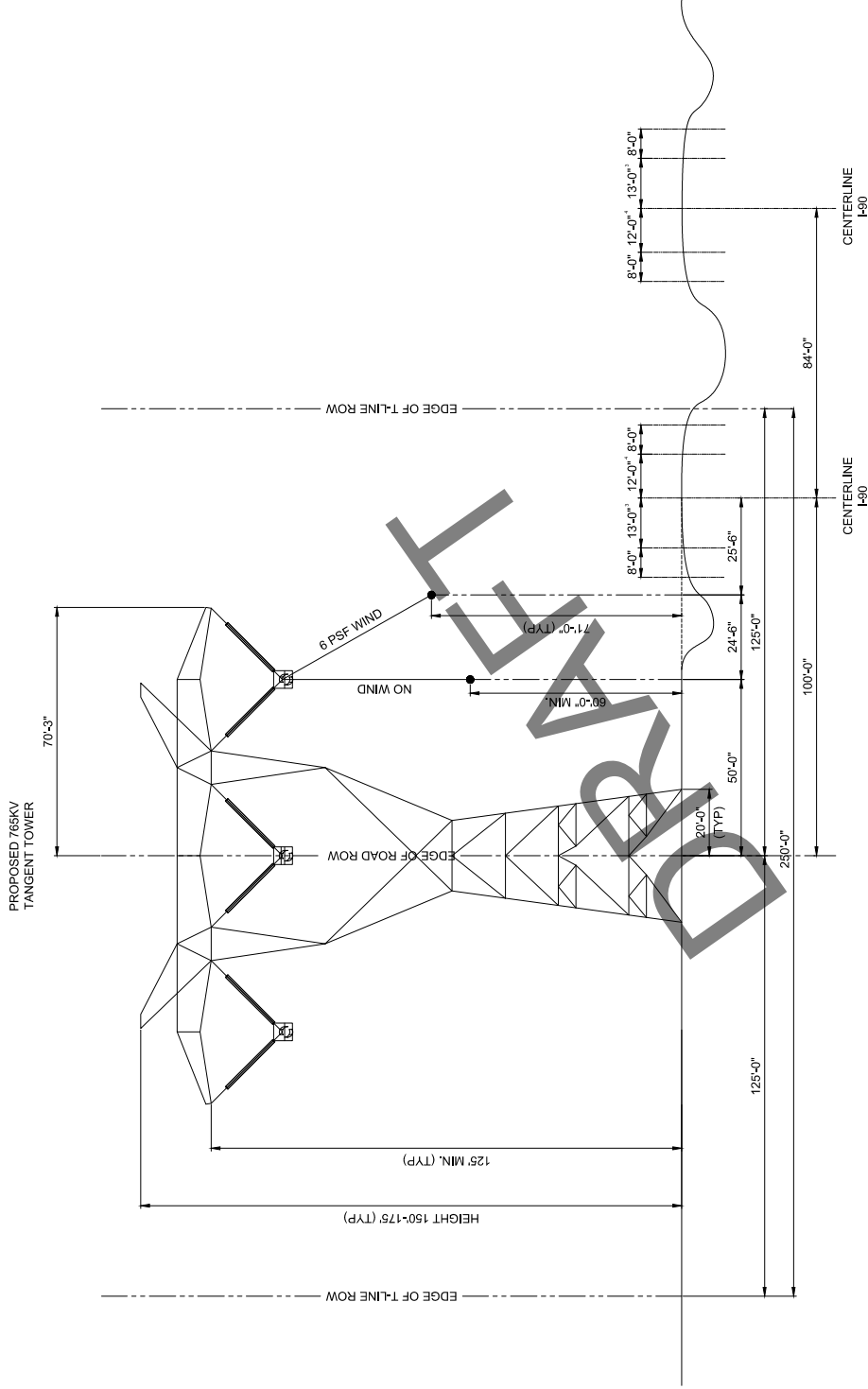


GREAT RIVER ENERGY™

POWERON MIDWEST
765KV TRANSMISSION LINE
ROW CROSS SECTION OPTION 4
INTERSTATE-90

NOTES:

1. TRANSMISSION LINE DIMENSIONS ARE PRELIMINARY. +90 DIMENSIONS ASSUMED FOR TYPICAL CROSS SECTION.
2. TYPICAL SPAN LENGTH: 1200' - 1400'
3. DIMENSION FOR EXISTING ROADWAY SHOWN. 14' FOR NEW ROAD CONSTRUCTION.
4. DIMENSION FOR EXISTING ROADWAY SHOWN. 13' FOR NEW ROAD CONSTRUCTION.
5. 8'-0" ROADWAY SHOWN. 10'-0" FOR NEW ROAD CONSTRUCTION.



LAYOUT OPTION - ROAD ROW AT CENTER OF STRUCTURE
RIGHT OF WAY
765KV AND I-90 CORRIDOR

NOTES:

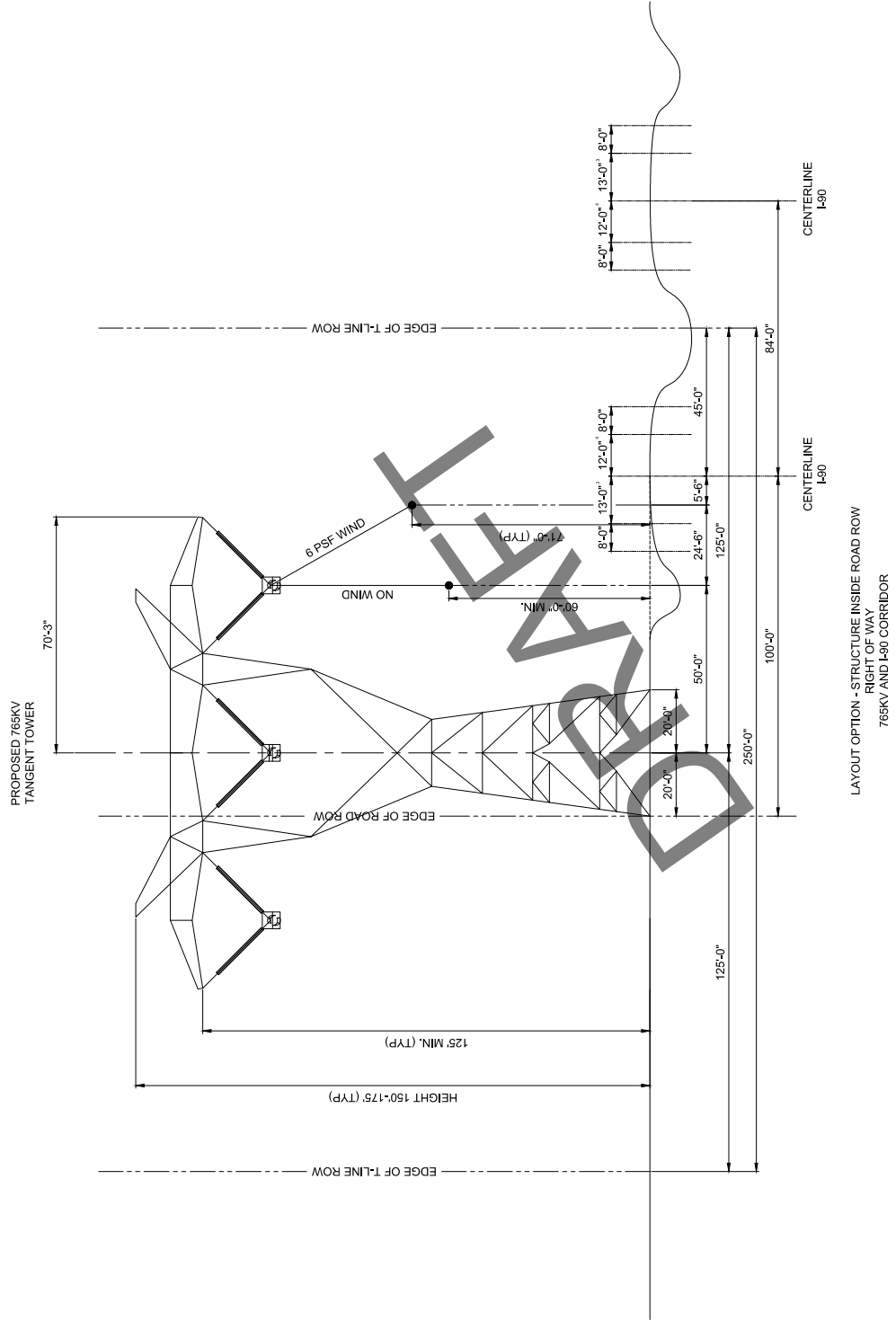
1. TRANSMISSION LINE DIMENSIONS ARE PRELIMINARY. I-90 DIMENSIONS ASSUMED FOR TYPICAL CROSS SECTION.
2. TYPICAL SPAN LENGTH: 1200' - 1400'
3. DIMENSION FOR EXISTING ROADWAY SHOWN. 14' FOR NEW ROAD CONSTRUCTION.
4. DIMENSION FOR EXISTING ROADWAY SHOWN. 13' FOR NEW ROAD CONSTRUCTION.
5. 8'-0" MIN. FOR NEW ROAD CONSTRUCTION.

MPUC Docket No. E002, ET2, ET6675/CN-25-117

Directed Schedule 3-C

 GREAT RIVER ENERGY™		POWERON MIDWEST 765KV TRANSMISSION LINE ROW CROSS SECTION OPTION 5 INTERSTATE-90		DRAWING NUMBER XXXXXX-XX06		REVISION
REV	DATE	ISSUED FOR REVIEW	DATE	ISSUED FOR REVIEW	DATE	REVISION
0	5-22-2026	ISSUED FOR REVIEW	0	5-22-2026	0	1
1	7-14-2026	REVISED 8'-0" ROAD SHOULDER	1	7-14-2026	1	

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 GREAT RIVER ENERGY™		POWERON MIDWEST 765KV TRANSMISSION LINE ROW CROSS SECTION OPTION 6 INTERSTATE-90		DRAWING NUMBER 183396-ROW-DWG		REVISION 1
REV	BY	DATE	DESCRIPTION	REV	BY	DATE
0	ADG	5-22-2026	ISSUED FOR REVIEW	0	ADG	5-22-2026
1	ADG	7-14-2026	ISSUED FOR REVIEW	1	ADG	7-14-2026
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NOTES:

1. TRANSMISSION LINE DIMENSIONS ARE PRELIMINARY. I-90 DIMENSIONS ASSUMED FOR TYPICAL CROSS SECTION.
2. TYPICAL SPAN LENGTH: 1200' - 1400'
3. DIMENSION FOR EXISTING ROADWAY SHOWN. 14' FOR NEW ROAD CONSTRUCTION.
4. DIMENSION FOR EXISTING ROADWAY SHOWN. 13' FOR NEW ROAD CONSTRUCTION.
5. 8'-0" MIN. FOR NEW ROAD CONSTRUCTION.

MPUC Docket No. E002, ET2, ET6675/CN-25-117

Why didn't the I-90 route between Lakefield Junction and Pleasant Valley advance?

1

Development along I-90 made following the interstate more impactful and/or impractical in many areas

- The cities, airports, highway interchanges and development along I-90 would require lengthy deviations from the interstate corridor. These deviations would impact more businesses, homes, farms and other areas than most other route options we reviewed.

2

The route could only follow I-90 approximately 38% of the time

- Because of the numerous constraints, the route could only follow I-90 between Lakefield Junction and Pleasant Valley for approximately 38% of its length, failing to achieve the primary objective of using the interstate corridor.

3

Environmental and natural resource constraints

- Following the I-90 corridor would result in impacts to wildlife management areas, conservation lands, lakes, and wetlands or require lengthy deviations to avoid impacts. Crossing these features would result in unique environmental impacts and permitting and engineering challenges.

4

Longer route length increased cost and land impacts

- The I-90 route was 11–22 miles longer than the southern and northern routes, resulting in more impacts to landowners and property, as well as higher costs and greater construction and operational impacts.

5

More engineering complexity

- The I-90 route had substantially more angles than the northern and southern routes, requiring additional deadend and running angle structures (more robust), increasing construction complexity and cost.

