



# TEAC - Western Committee ComEd Supplemental Projects

October 31, 2023

# Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

**Need Number:** ComEd-2023-013

**Process Stage:** Need Meeting 10/31/2023

**Project Driver:**

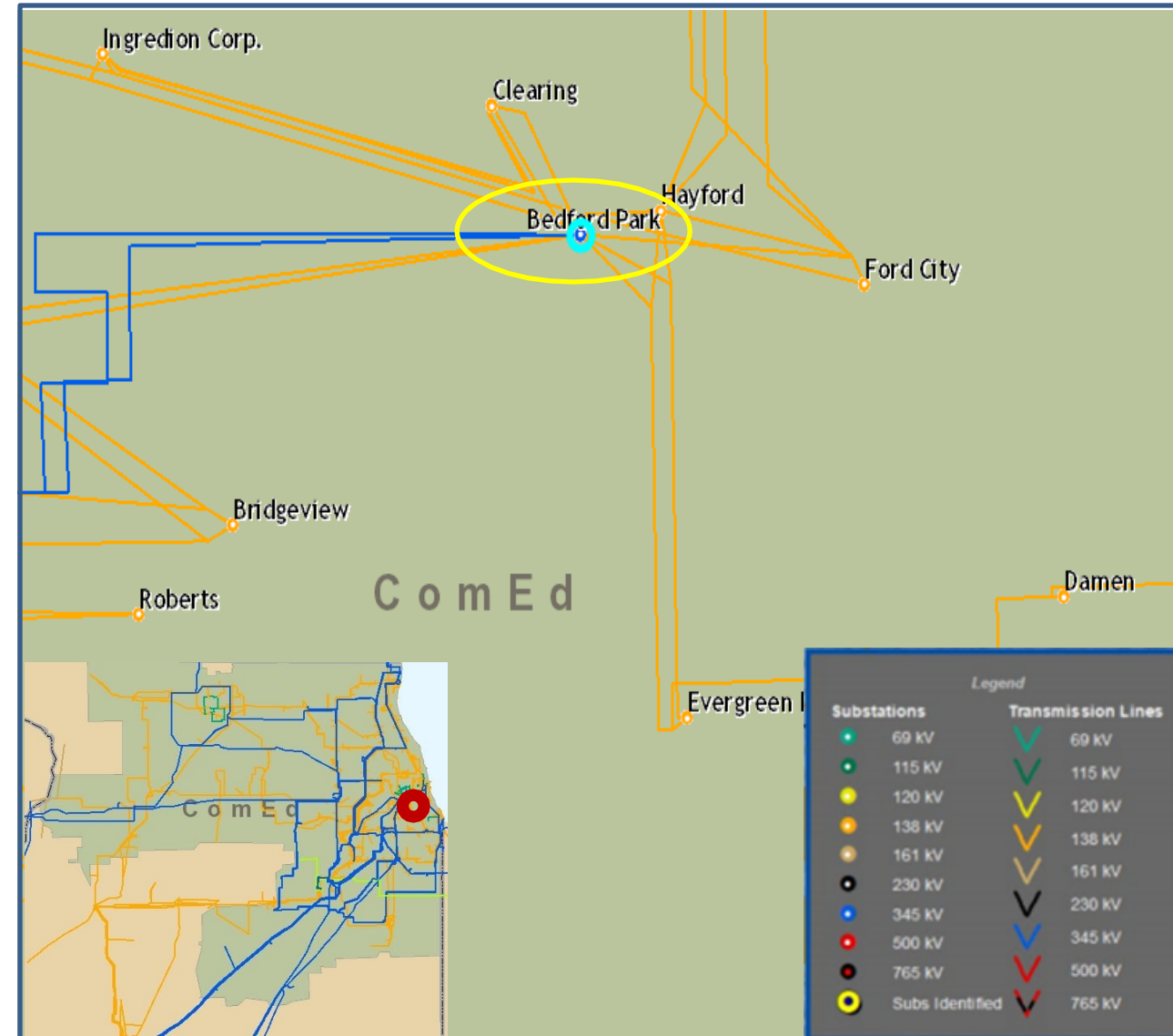
Equipment Material Condition, Performance and Risk

**Specific Assumption Reference:**

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

**Problem Statement:**

- 345 -138 kV autotransformer 83 was installed in 1993. It is one of five similar transformers purchased by ComEd. Two have failed in service and one other is being replaced on supplemental project S2266. Another is proposed to be replaced on ComEd-2023-011.
- Undersized core allows for overexcitation during loading causing overheating of metal, partial discharge, and circulating currents.
- Due to the hydrogen levels, the transformer must be taken out of service periodically and degasified.



# Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

**Need Number:** ComEd-2023-010

**Process Stage:** Solution Meeting 10/31/2023

**Previously Presented:** Need Meeting 10/3/2023

**Project Driver:**

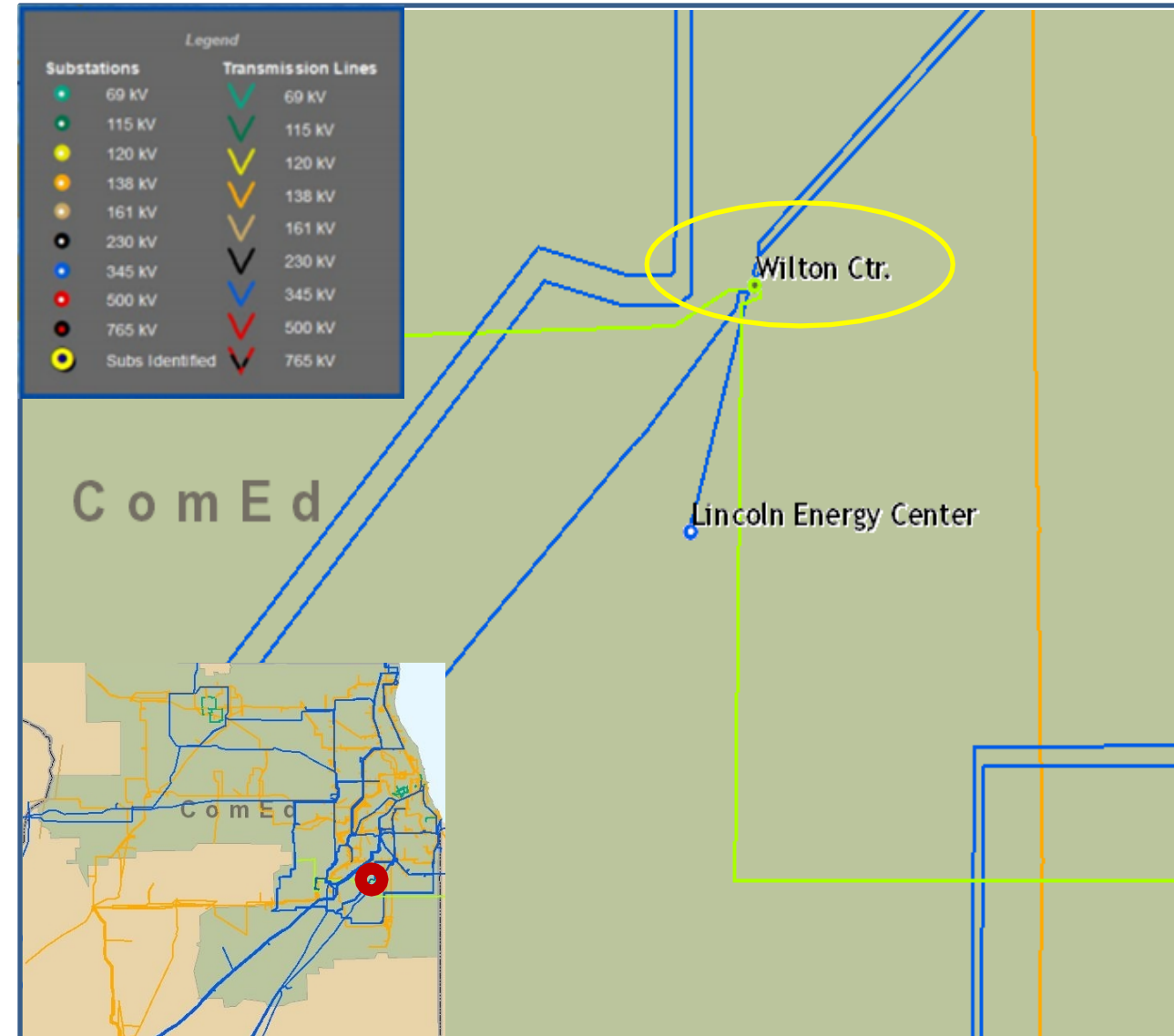
Equipment Material Condition, Performance and Risk

**Specific Assumption Reference:**

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

**Problem Statement:**

- 345 kV oil circuit breakers BT2-3, BT3-4, BT4-5, BT5-6, BT6-7 at Wilton Center substation were installed in 1970. They are in deteriorating condition, lack replacement parts, and have elevated maintenance cost.



**Need Number:** ComEd-2023-010

**Process Stage:** Solution Meeting 10/31/2023

**Proposed Solution:**

Replace existing 345 kV oil BT2-3, BT3-4, BT4-5, BT5-6, BT6-7 CBs with new 345 kV SF6 CBs.

Existing Breaker Ratings: 2000 A, 50 kA

New Breaker Ratings: 3000 A, 63 kA

<b>345 kV Wilton – Loretto Line</b>	<b>SN/SE (MVA)</b>	<b>WN/WE (MVA)</b>
Old Rating	1364/1528	1590/1781
New Rating	1679/2058	2091/2340

Estimated transmission cost: \$12.7M

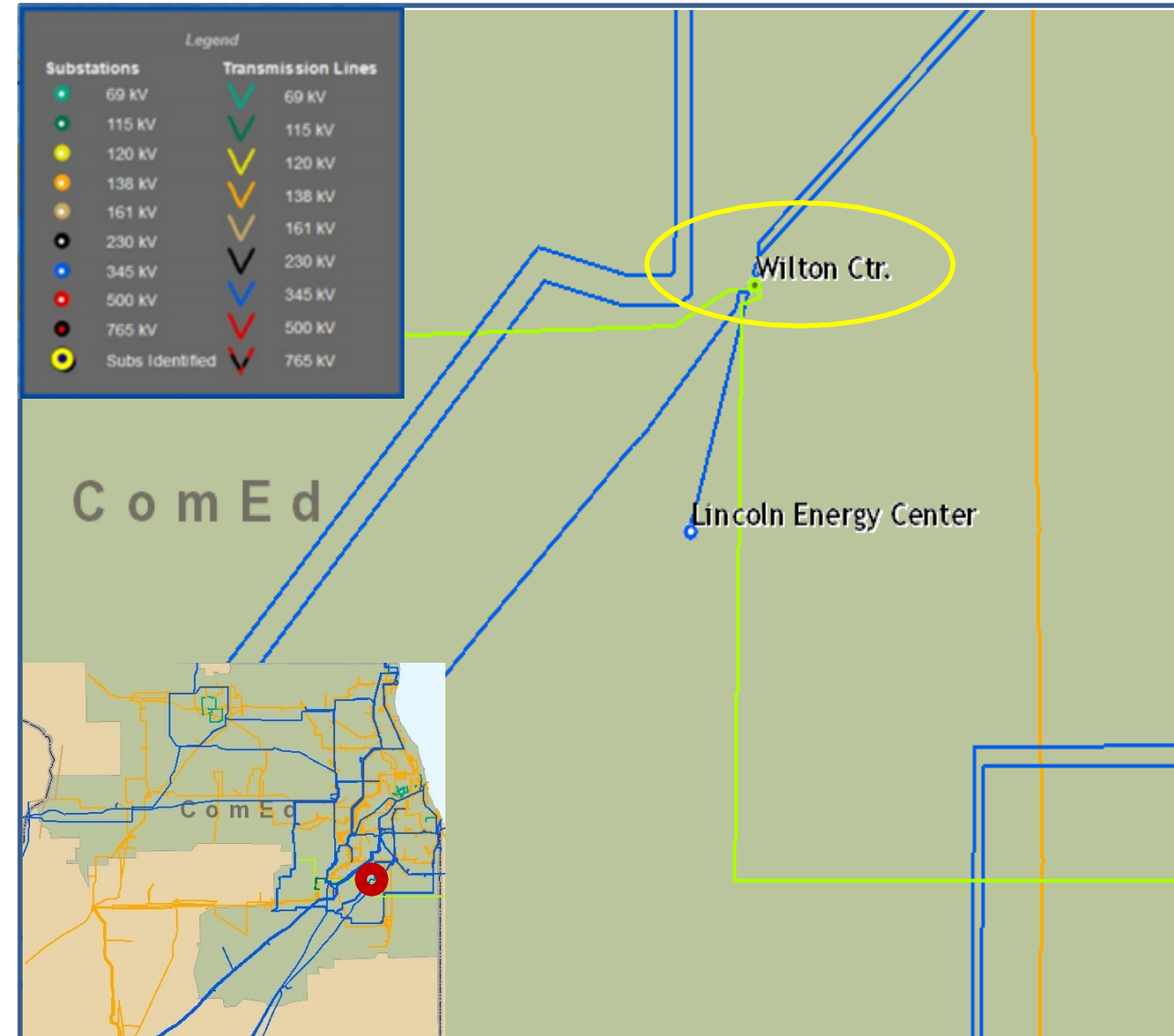
**Alternatives Considered:**

No feasible alternatives.

**Projected In-Service:** 12/31/24

**Project Status:** Engineering

**Model:** 2028 RTEP



**Need Number:** ComEd-2023-011

**Process Stage:** Solution Meeting 10/31/2023

**Previously Presented:** Need Meeting 10/3/2023

**Project Driver:**

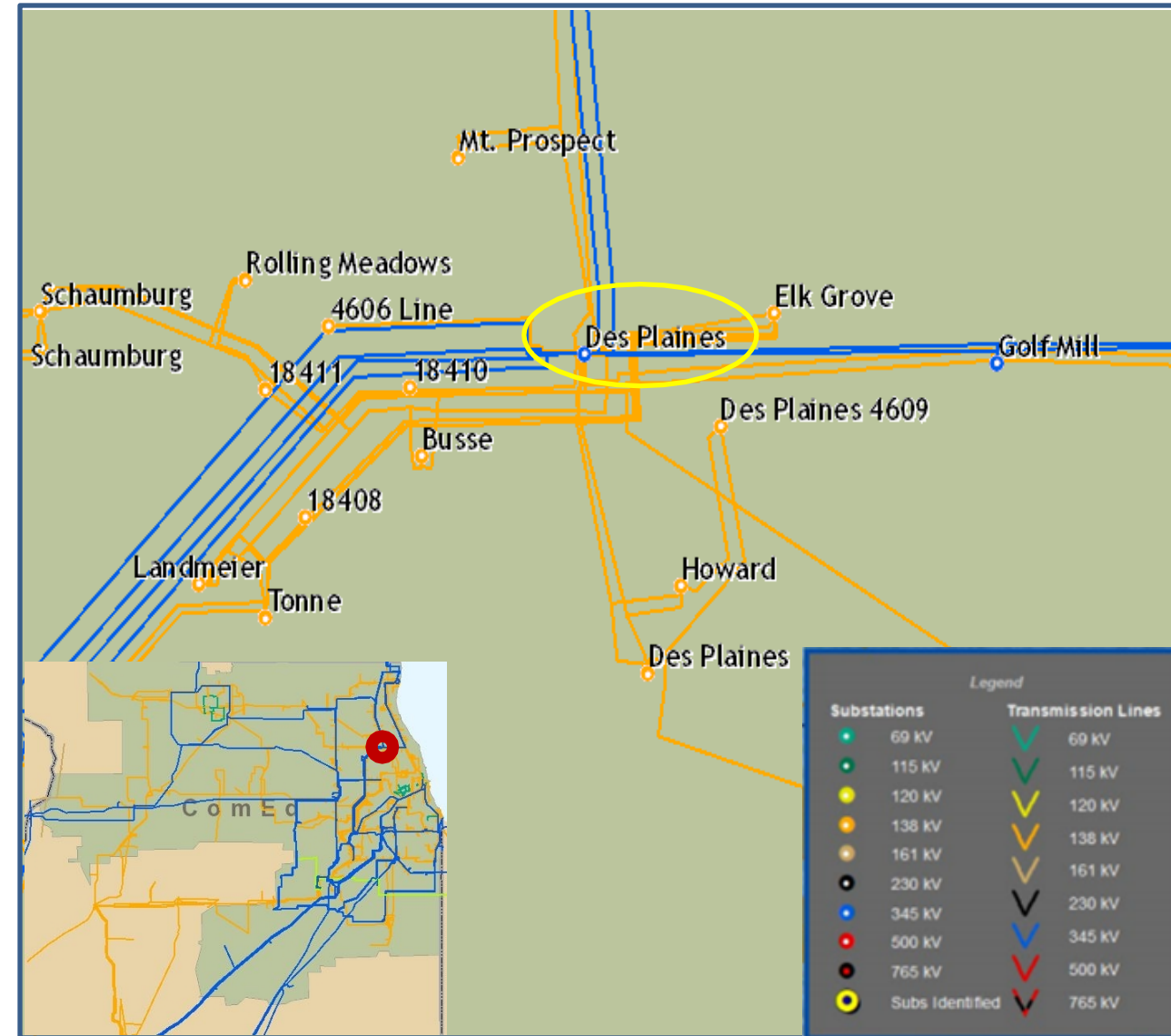
Equipment Material Condition, Performance and Risk

**Specific Assumption Reference:**

- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

**Problem Statement:**

- 345 -138 kV autotransformer 83 was installed in 1993. It is one of five similar transformers purchased by ComEd. Two have failed in service and one other is being replaced on supplemental project S2266.
- Undersized core allows for overexcitation during loading causing overheating of metal, partial discharge, and circulating currents.
- Due to the hydrogen levels, the transformer must be taken out of service periodically and degasified.
- 138 kV TR 83 CB was installed in 1974. It is deteriorating condition, has a lack of replacement parts, and has elevated maintenance costs.



**Need Number:** ComEd-2023-011

**Process Stage:** Solution Meeting 10/31/2023

**Proposed Solution:**

Replace 345/138 kV autotransformer with a new standard autotransformer. Replace tertiary capacitor bank with a new 138 kV capacitor bank on new 138 kV bus. Replace 138 kV TR 83 oil CB with a new 138 kV SF6 CB.

TR 83	SN/SE (MVA)	WN/WE (MVA)
Old Rating	400/465	400/465
New Rating	420/480	420/480

Estimated transmission cost: \$24.1M

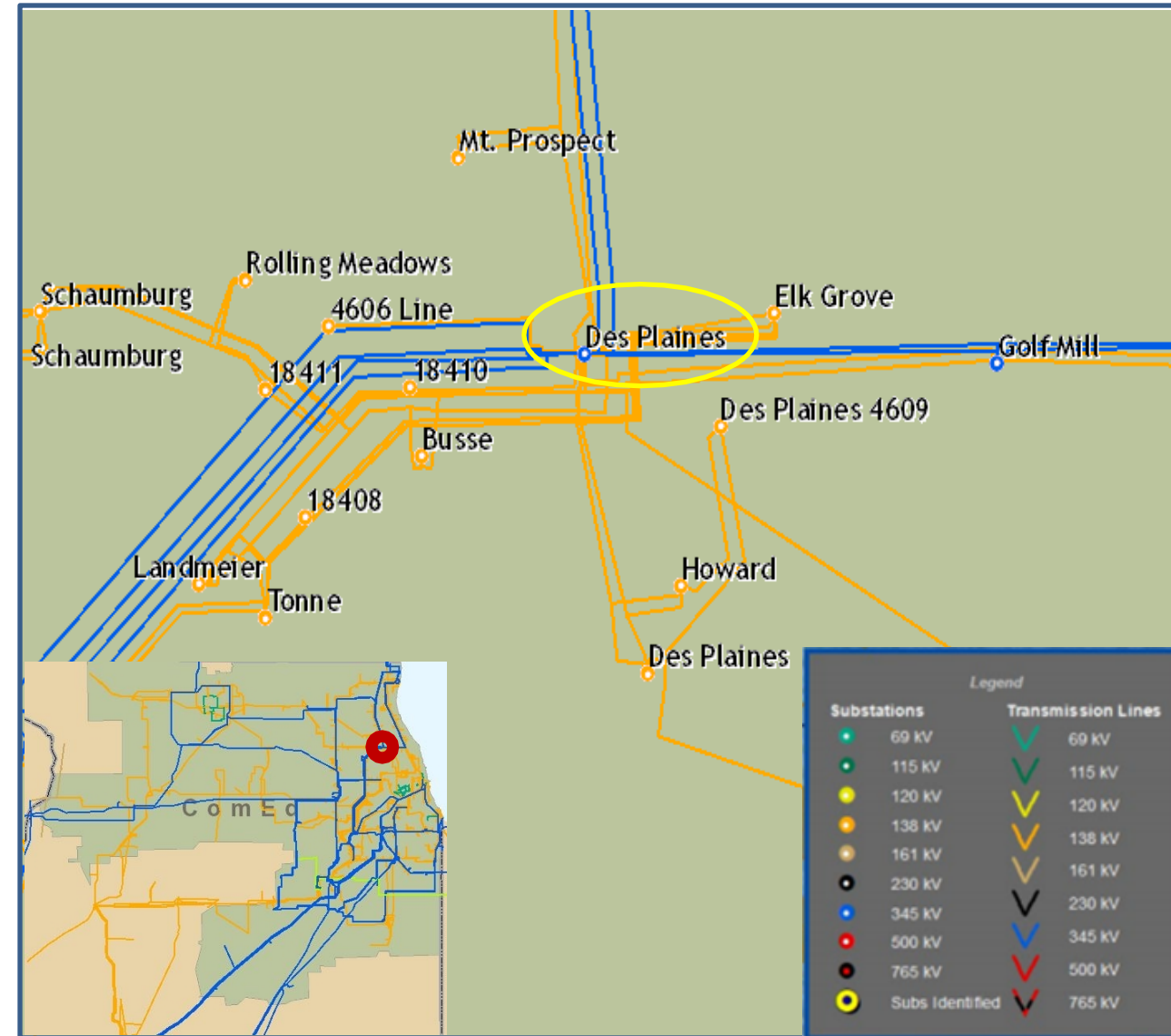
**Alternatives Considered:**

No feasible alternatives.

**Projected In-Service:** 12/31/25

**Project Status:** Conceptual

**Model:** 2028 RTEP





# Appendix

# High Level M-3 Meeting Schedule

Assumptions	Activity	Timing	
		Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting	
Needs	Activity	Timing	
		TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting	
Solutions	Activity	Timing	
		TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting	
Submission of Supplemental Projects & Local Plan	Activity	Timing	
		Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
		Post selected solution(s)	Following completion of DNH analysis
		Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions	

# Revision History

10/20/2023 – V1 – Original version posted to pjm.com