

Project Plan: Electrical Infrastructure

Project Title: Electrical Infrastructure Comprehensive Plan Amendment

PURPOSE

The purpose of this item is to provide a Project Plan for the proposed Electrical Infrastructure Comprehensive Plan Amendment (CPAM) to the *Loudoun County 2019 General Plan* (2019 GP). The map and policy amendments proposed with the CPAM will provide additional guidance for electrical providers, County staff, elected officials, and other governmental decision-makers when planning where and how high voltage transmission corridors are constructed within the County.

BACKGROUND

At the [October 17, 2024](#), meeting, the Transportation and Land Use Committee (TLUC) was presented the findings and recommendations of the Power Transmission Evaluation of Loudoun County, Virginia-Due Diligence Report prepared by Kimley-Horn. TLUC members were also provided an overview of the current electrical policies in the 2019 GP and Department of Planning and Zoning (DPZ) staff's recommendations for map and text amendments to the County's policies for high voltage transmission corridors. TLUC recommended (4-0-1: Randall absent) the Board of Supervisors (Board) initiate a CPAM for Electrical Infrastructure to adopt mapping, text, and policy amendments to the 2019 GP for high voltage transmission corridors and directed staff to develop a Project Plan.

DPZ staff proposes the following Project Plan to adopt an Electric Infrastructure Map and amend the County's electrical infrastructure policies to implement this policy direction.

PROJECT STRATEGY AND SCOPE

Project Strategy

The Electrical Infrastructure CPAM will consider updates and amendments to the electrical policies in the 2019 GP. The project has been divided into two phases to expedite the process and achieve specific objectives. Phase 1 is limited in scope and will consider the adoption of an Electric Infrastructure Map identifying all existing and approved high voltage transmission corridors. Phase 2 is anticipated to begin following the completion of Phase 1. Phase 2 will be focused on proactive long-term planning for the expansion of the County's electrical infrastructure and the identification of potential routes for the establishment of new high voltage transmission corridors to address future regional and local electric load growth.

Project Scope Phase 1

Phase 1 is comprised of a mapping and policy review and development component. The mapping component will identify all existing and approved high voltage transmission corridors (230 kilovolts (kV) and 500 kV) as a feature shown in the 2019 GP. The adoption of an Electric Infrastructure Map and identification of existing and approved high voltage transmission corridors as a preferred location for the development of future transmission lines is in keeping with the County's existing policies and clearly directs electrical providers and reviewers at the state and federal government to locations where the County would anticipate and support the development and redevelopment of high voltage transmission corridors.

The policy review and development component will have an initial study period to research and consider regional and national best practices, evolving electrical technology, as well as regulatory and state enabling legislation related to electrical infrastructure. The information will be used to inform policy recommendations to amend the County's existing electrical policies and develop new policies that address the location, design, and aesthetics of high voltage transmission corridors. Potential amendments to the 2019 GP could consider but are not limited to the following:

- Collocation of high voltage transmission corridors with existing electric and utility infrastructure easements and rights-of-way (ROWs);
- Promote reconductoring and voltage conversion to increase capacity within existing transmission corridors before considering new construction;
- Encourage undergrounding of high voltage electric transmission lines where practical to minimize visual impacts on scenic landscapes, heritage resources, major travel corridors, and residential communities;
- Incorporate design techniques and natural vegetative screens to minimize the visual impact of overhead high voltage transmission corridors and electrical infrastructure; and
- Support the establishment of passive trails and/or the incorporation of native plant species and wildlife habitat within transmission corridors.

Project Scope Phase 2

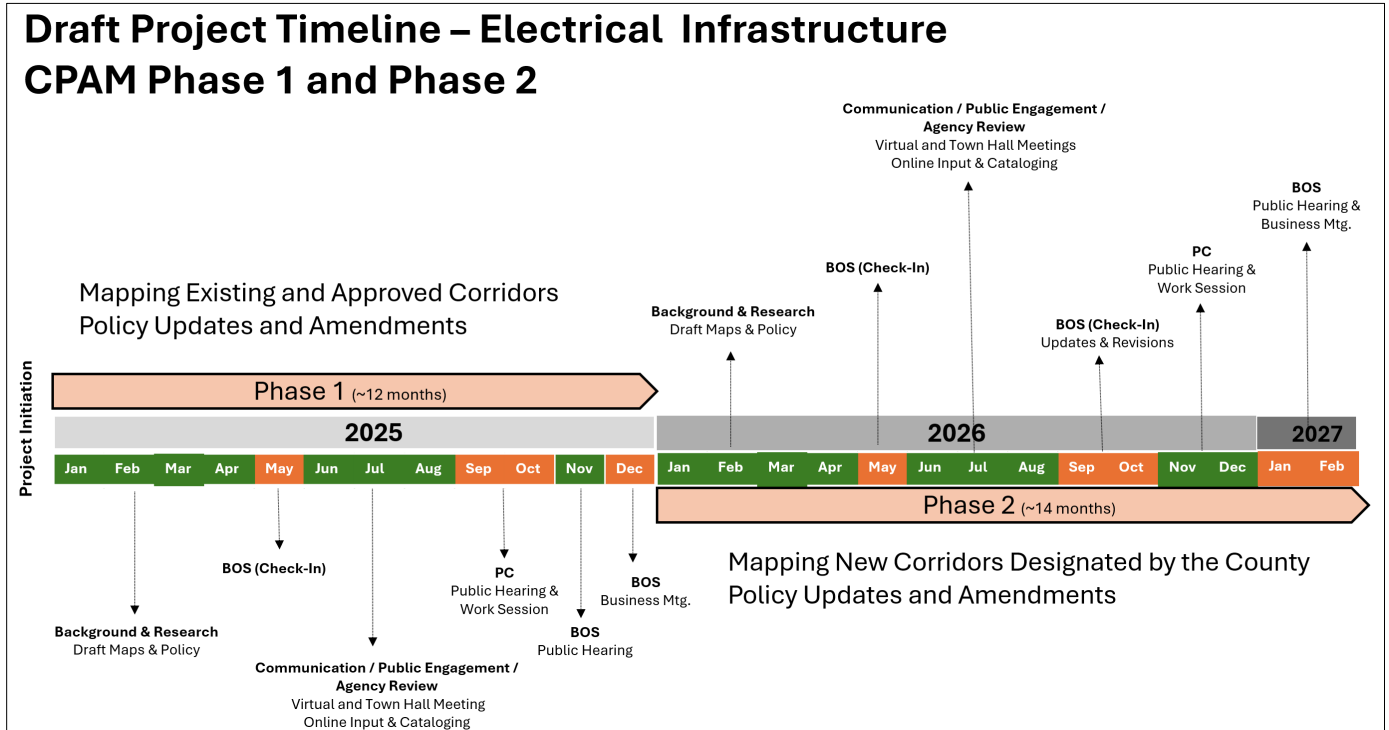
Phase 2 will build on the mapping work completed in Phase 1 and will begin after completion of Phase 1. Phase 2 will focus on the future planning for potential routes that could accommodate new high voltage transmission corridors. These new high voltage transmission corridors, referred to as "greenfield routes" by electric providers, traverse areas where no existing high voltage transmission corridors are present to collocate additional transmission lines. As part of the analysis for Phase 2, staff and the consultant will review County Geographic Information System (GIS) data to identify and consider potential linear routes with sufficient area to accommodate new high voltage transmission corridors that minimize impacts on environmental and heritage resources, and the surrounding community.

The analysis will focus on the utilization of other existing infrastructure ROWs beyond transmission corridors such as highways, major roadways, streets, natural gas pipelines, water and sewer easements, etc. to limit potential impacts when identifying and evaluating potential future routes to be designated by the County for new high voltage transmission corridors. Staff and the consultant will work closely with electric providers to identify areas within the County that may be considered for regional high voltage transmission lines as well as routes within the County to serve areas requiring additional electrical capacity. As part of Phase 2, staff and the consultant will develop maps and recommendations for potential routes for new high voltage transmission corridors designated by County that could be adopted as a feature shown on the County's Electrical Infrastructure map developed in Phase 1. Additional supporting text amendments and policy recommendations will also be developed in Phase 2 to support the planning effort.

Project Duration

Total project duration for the completion of Phase 1 is estimated to require 10 to 12 months. The process is scheduled to begin in January 2025, following Board initiation of the CPAM and approval of this Project Plan. Phase 1 is anticipated to conclude at the end of 2025 with Board adoption of the CPAM that incorporates a map identifying all existing and approved high voltage transmission corridors within the County and policy updates and amendments pertaining to the location, design and aesthetics of high voltage transmission corridors in the winter of 2025.

Total project duration for the completion of Phase 2 is estimated to require 12-14 months. Phase 2 is expected to commence following the conclusion of Phase 1. Phase 2 is expected to conclude in the winter of 2027 with Board adoption of mapping amendments to the County's Electrical Infrastructure Map developed in Phase 1 identifying potential routes for new high voltage transmission corridors designated by County and additional text amendments and policy updates to support the planning effort.



Key phases of Phase 1 include:

1. Initiation: Board adoption of the Project Plan;
2. Study Period, Data Collection, and Research;
3. High Voltage Transmission Corridor Mapping and Drafting Policy Recommendations;
4. Board Consideration and Direction on Draft Recommendations (Check-In);
5. Public Engagement;
6. Agency Comment Period;
7. Public Hearings and Work Sessions (Planning Commission and Board of Supervisors); and
8. Board Adoption.

Key phases of Phase 2 include:

1. Study Period, Data Collection, and Research;
2. High Voltage Transmission Corridor Mapping and Drafting Policy Recommendations;
3. Board Consideration and Direction on Draft Recommendations (Check-in);
4. Public Engagement;
5. Agency Comment Period;
6. Board Consideration and Direction on Draft Recommendations (Check-in);
7. Public Hearings and Work Sessions (Planning Commission and Board of Supervisors); and
8. Board Adoption.

DELIVERABLES

Work products for **Phase 1** will include:

1. A new Electric Infrastructure Map depicting existing and approved high voltage transmission corridor within the 2019 GP;
2. Revised text and policy updates and amendments within the 2019 GP as needed;
3. Updates to GIS layers; and
4. Staff reports to include analysis and recommendations for updates and amendments within the 2019 GP.

Work products for **Phase 2** will include:

1. An amended Electric Infrastructure Map depicting potential routes designated by the County for new high voltage transmission corridors within the 2019 GP;
2. Revised text and policy updates and amendments within the 2019 GP as needed;
3. Updates to Geographic Information System (GIS) layers; and
4. Staff reports to include analysis and recommendations for updates and amendments within the 2019 GP.

PROJECT ASSUMPTIONS FOR PHASE 1 AND 2

1. **Resources.** County staff with assistance from a third-party consultant that has the required baseline information and data, analysis skills, and technological tools (e.g., GIS software) to carry out the mapping, text, and policy amendment recommendations to the 2019 GP in accordance with the Board's direction.
2. **Board Policy Direction.** The Project Plan assumes the Board will provide policy direction on proposed mapping and text amendments when the Project Plan is adopted. The Board will also provide additional input following the study period on draft mapping and policy amendments at a Business Meeting to affirm staff's recommendations and provide additional guidance for the continuance of the project.
3. **Staff Resources.** The Community Planning Division's staffing levels will be maintained throughout the project and staffing resources will not be diverted to other initiatives.

PROJECT CONSTRAINTS FOR PHASE 1 AND 2

As a staff-driven effort with assistance from a third-party consultant, competing County planning initiatives and priorities pose the greatest constraints to the projected schedule. DPZ staff with the assistance of a third-party consultant will undertake the project mapping, evaluation, draft mapping and policy development, public outreach, noticing efforts, and other services as necessary to implement the proposed CPAM.

PROJECT ORGANIZATION AND TEAM FOR PHASE 1 AND 2

The project will be managed by a Senior Planner from the Community Planning Division of DPZ. The Project Manager will coordinate efforts between the County Attorney, Public Affairs and Communications (PAC) and any requisite consultant work. The Project Manager and consultant will also facilitate public outreach and all legal notice requirements.

Project Supervisor:	Theresa Stein, Program Manager, Community Planning
Project Manager:	Pat Giglio, Senior Planner, Community Planning
County Staff:	Various agency/department liaisons to be determined
Consultant:	Kimley-Horn

STAKEHOLDERS FOR PHASE 1 AND 2

1. Board of Supervisors
2. County and Regional Agencies:
 - a. County Administration
 - b. County Attorney
 - c. PAC
 - d. Office of Management and Budget
 - e. Office of Mapping and Geographic Information
3. County Advisory Boards
 - a. Planning Commission (Commission)
 - b. Economic Development Advisory Commission
 - c. Environmental Commission

- d. Heritage Commission
 - e. Route 28 Landowners Advisory Board
 - f. Rural Economic Development Council
4. Residents, local organizations, business/property owners, developers, industry/citizen groups, and electric providers.

COMMUNITY OUTREACH PLAN FOR PHASE 1 AND 2

The public engagement and noticing objectives for Phase 1 and Phase 2 will focus on informing the community and/or special interest groups regarding proposed changes and soliciting feedback. There will be opportunities for public comment in the context of one virtual community outreach and one in-person community meeting during Phase 1 and one virtual meeting and up to three in-person community meetings for Phase 2 occurring in advance of the public hearing phases. There will also be opportunities for discussion and comment at applicable advisory bodies and public hearings as required by state code and the Zoning Ordinance.

Staff with the assistance of PAC will maintain a dedicated webpage for the project allowing the public to submit comments to DPZ and/or to the Commission and Board concerning this project. Comments provided during the engagement process and online input will be compiled to identify trends and themes to inform future discussions with the Commission and the Board for both Phase 1 and Phase 2. Staff intends to inform the community and/or special interest groups of project milestones through regular updates on the County's webpage and through a variety of print and electronic media.

PROJECT RESOURCES FOR PHASE 1 AND 2

As a staff-driven project with assistance from a third-party consultant, the required resources are most intensive in terms of staff time that is utilized for this project rather than significant increases in any budget line item. With that in mind, this project would become a piece of the planned workload for the Community Planning Division of DPZ, and any additional projects or priorities that materialize in 2025 and 2026 would potentially impact the schedule. Staff anticipates a cost of up to \$211,840 over the course of this project for consultant services to conduct background research, develop mapping and GIS layers, provide support for the development of text and policy amendments with staff direction, and provide support for meetings with the public, Commission and Board for Phase 1 and Phase 2.

Task	Baseline Estimated Cost
Consultant Services Phase 1 and Phase 2	\$176,840
Contingency Phase 1 and Phase 2	35,000
Total	\$211,840