ODOT NEPA Manual

416   Mapping

This section addresses mapping design and project data conventions for different types of maps used in NEPA documents. Maps are an important part of NEPA documentation, allowing the reader to understand where a project is located in a geographical context and to illustrate important elements and environmental considerations of the project.

ODOT's requirements for including maps in project NEPA documentation are primarily dependent on the project's NEPA class of action (i.e., PCE/CE, EA or EIS). While the ODOT "Project Vicinity Map" (see 416.1, below) will usually provide sufficient mapping for most PCE projects, more complex CE, EA, and EIS projects will likely necessitate the use of additional maps, including API maps (see 416.2, below) and/or resource maps (see 416.3, below).

Project Vicinity Map

The intent of the standardized project vicinity map is to establish a consistent, informative template for project vicinity maps within ODOT NEPA documentation and to foster practical mapping practices. A project vicinity map is required for each project classified as a PCE or CE.

The project vicinity map is created using the NEPA layout in the ODOT GIS Project Vicinity Mapping Application or by using ODOT GIS software such as Microstation or ArcGIS. Detailed instructions for how to use the Project Vicinity Mapping Application can be found on the GIS YouTube channel. This section describes what must be included in a project vicinity map, as well as requirements for illustrating project data.

Project Vicinity Map Components

The following components are required on a project vicinity map (see **Figures 416-1 and 416-2**):

- Project Name;
- Federal-Aid Number;
- ODOT Key Number;
- City;
- County;
- North arrow;
- Scale bar;
- Inset map showing state context of project location; and
- ODOT logo (consultant or local agency logos are not permitted).

Project Vicinity Map Project Data

The following requirements apply to project data/illustrations on the project vicinity map:

Project Termini – The project vicinity map must clearly state and/or illustrate the termini (project limits) of the project. This includes starting and ending highway milepoints for linear projects and/or point locations for projects such as the installation of traffic control devices or sign installations.

Project-Related Features – Features, resources, and/or landmarks discussed in the project description should be labeled on the map. If the project description lists a highway, road, or intersection(s) where work will be performed, those should be labeled on the project vicinity map. If the project description discusses a park, waterway, or other resource, the resource should be labeled and the boundary identified (as applicable). Several base map options identify and label roadways and resources; where a base map labels and/or conveys the boundary of a project-related element, no additional labeling is required.

Additional Project Information – When a project has either optional or mandatory designated staging areas, material sources, borrow pits, and/or disposal sites, those locations should be labeled (indicating option or mandatory) and the boundaries shown on the project vicinity map.
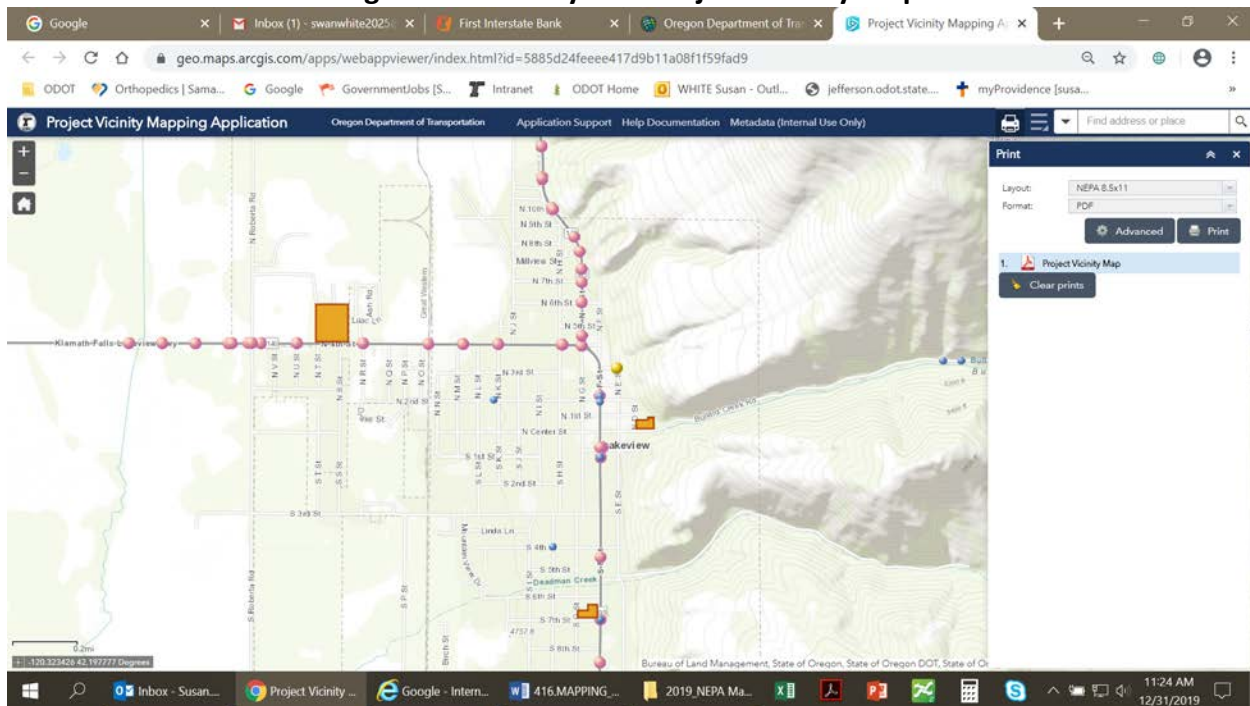
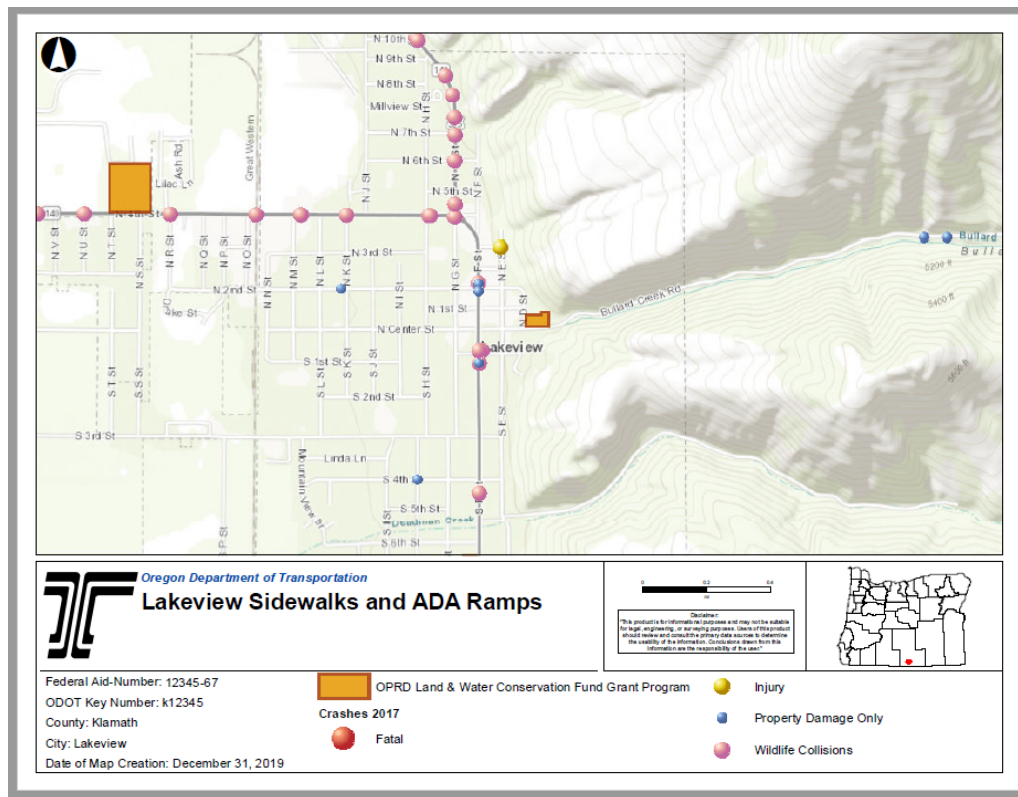**Figure: Screen Layout - Project Vicinity Map**

Figure: Print Layout (PDF) - Project Vicinity Map

Project Vicinity Map Best Practices

General mapping principles and conventions applicable to the project vicinity map include the following:

Base maps

The function of the base map is to provide a background setting, as well as the detail necessary to orient the viewer to the location of the project. There are a number of base map imagery options available within the Project Vicinity Mapping Web Application. Depending on the type of project data (e.g. point, line, polygon, etc.), as well as the geographic extent of the map, several different base map imagery options could be suitable (e.g. satellite, roadmap, topographic). Choose the base map that is appropriate for the data, ensuring that the project vicinity map project data as described above is clearly visible. For example, when using an aerial image, the project data should be drawn in bold, contrasting colors so as not to be lost in the background.

Level of Detail/Additional Maps

The focus of the project vicinity map should be helping the reader visualize the project location and relevant information; the map should not include unnecessary details that distract from this

purpose. For example, the map does not need to identify all geographic features, natural resources, and/or data layers in the project area and should instead seek to depict the project components and resources referenced in the project description text.

If a project component or a particular resource is difficult to describe, attach additional API maps, resource maps, or other drawings to supplement the project vicinity map. To the extent possible, any additional maps should include the project vicinity map components and adhere to the mapping best practices described herein.

Area of Potential Impact (API) Map

The intent of an API map is to convey the geographic boundaries of a project's potential environmental impacts. API maps can be comprehensive when a single map reflects the geographic extent of a project's potential environmental impacts. API maps can also be specific to a project's impacts to particular resources (e.g., wetlands, endangered species, and parks) or disciplines (e.g., right-of-way, land use, hazardous materials). At this time, there is no required format/content for an API map, although it is recommended that API maps include the same components required for Project Vicinity maps.

API maps are not required to be uploaded into the ProjectWise "sets" and are not required to be attached to CE or PCE documents. However, API maps are useful for conveying the extent of environmental impacts to the project team and can help inform project design to assist with avoidance, minimization, and mitigation of those environmental impacts.

There a few primary contexts for API maps, including, but not limited to:

- For PCE and CE projects, API maps are often created in coordination with various environmental specialists in order to help estimate project scope, schedule, and budget. Chronologically, these types of API maps are developed sometime between pre-STIP scoping and Project Initiation.
- For EA and EIS projects, API maps are created before or during the formal NEPA scoping process in order to help estimate potential impacts to inform the formulation of a range of alternatives for analysis in the NEPA document.
- For EA and EIS projects, API maps are created for inclusion in the NEPA document chapter that discusses potential environmental impacts from each alternative.

Resource Map

[PLACEHOLDER – SECTION UNDER DEVELOPMENT]