



# Virtual Public Involvement Initiative

Learn About

# Project Visualizations



## What are Project Visualizations?

Project visualization techniques include photo simulations, 3-D images, videos, aerial footage, augmented reality or virtual reality. They can be powerful public involvement tools for transportation agencies because they provide the public with a “mock up” of what a proposed project would look like on the ground.

Visualizations can help communicate complex site conditions or engineering designs, enhance public understanding of a project’s goals, and provide spatial or geographic context for a project. What’s more, visualizations can be created *before* an agency spends time and resources developing detailed engineering plans and designs. Such visualizations can be a first step in conveying the macro or broad project objectives.

Transportation agency visualizations of plans and projects can be posted to streaming sites, shared on social media, and made accessible on project websites. Agency staff can integrate visualizations into do-it-yourself videos to share details of a proposed project, reaching potentially new audiences through a popular medium.



## VPI in Practice

The Visual Engineering Resource Group at Washington State DOT develops visualizations to support the department’s project development and NEPA processes.

In this example, the team created a photo simulation showing local terrain, existing buildings, and a proposed roundabout on SR150.



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## Can Project Visualizations Help My Agency?

Engaging with stakeholders during the transportation planning and project development process is not only required, it's the right thing to do for the public good. Community members want to understand how tax dollars are being invested, and residents have unique perspectives and insights about the places they live, work, and visit.

A common challenge for stakeholders and the public is understanding how a project will actually impact the physical geography of their communities. Narrative descriptions of projects are valuable, but for many stakeholders, "a picture is worth a thousand words." Agency staff can dramatically improve the public's understanding of a project and its components by creating easy-to-access visualizations. Washington State DOT, which staffs an in-house Visual Engineering Resource Group dedicated to creating visualizations, reports that their open houses are becoming more popular, and participants display an enthusiastic appreciation for project visualizations.



## How Can My Agency Create and Use Project Visualizations?

Creating visualizations requires specialized training and expertise in the use of key software packages and tools. Agencies may choose to assemble an entire team or provide adequate training and resources to one or two staff people or contractors. It's important to continually monitor and invest in staff development as tools, programs, and equipment will evolve and change over time. Agencies can test the value of visualizations to the public by hiring a firm to develop photo-simulations, animations, or videos before developing in-house staff capacity.

Washington State DOT had success by initially developing 3D modeling skills, then advancing to animations. Video software and the use of "storytelling" techniques can make for more compelling animations. An agency that has some basic equipment – video software, cameras, microphones, and lighting – is well positioned to begin using project visualizations in public involvement efforts.

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## VPI in Practice

North Carolina DOT created 3-D visualizations for its "Complete 540" Triangle Expressway Southeast Extension project. Point your smartphone's camera at the QR code below to see the visualizations!



*Image courtesy North Carolina Department of Transportation (NCDOT)*

## TAKE NOTE...

- Visualizations provide information that narrative or text doesn't convey
- Virtual reality – in the form of gaming – is already familiar among some demographics, like younger stakeholders
- Agencies can hire professional visual engineers or contractors prior to developing in-house staff capacity
- "A picture is worth a thousand words"

