

Screening Tool for Equity Analysis of Projects (STEAP)

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U.S. Department of Transportation
Federal Highway Administration

Background



U.S. Department of Transportation
Federal Highway Administration

Tool Goal

- Develop equity tools that Divisions, states and MPOs can rapidly use

Requirements for Project Tool

- Equity analysis tool for project development
- Ability to Identify project impact on marginalized populations
 - Title VI – Race, Color and National Origin
 - Environmental Justice (EJ) – Minority and low-income populations
 - Limited English Proficiency (LEP)
 - Disadvantaged population identified in the Executive Order 13985
- Simple and easy to use
- Tool accessibility

Development & Implementation



U.S. Department of Transportation
Federal Highway Administration

- **STEAP – Screening Tool for Equity Analysis of Projects**
 - Purposes – Permits rapid screening of project locations anywhere in the US
 - Easy to use – Graphic user interface
 - Users can specify project locations on the map
 - No longer require GIS specialists to perform project buffer analysis
 - Project Equity Analysis Report – Generate easy-to-read reports
 - Including Title VI and EJ population summaries surrounding the project locations
 - Containing up to two buffer analysis reports
 - Tool Accessibility – Web application, extension of HEPGIS public website

Extension of HEPGIS Public Website

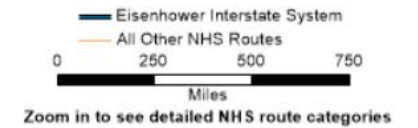
National Highway System



Map Scale: 1 : 21,908,782 Width: 4,939 Miles

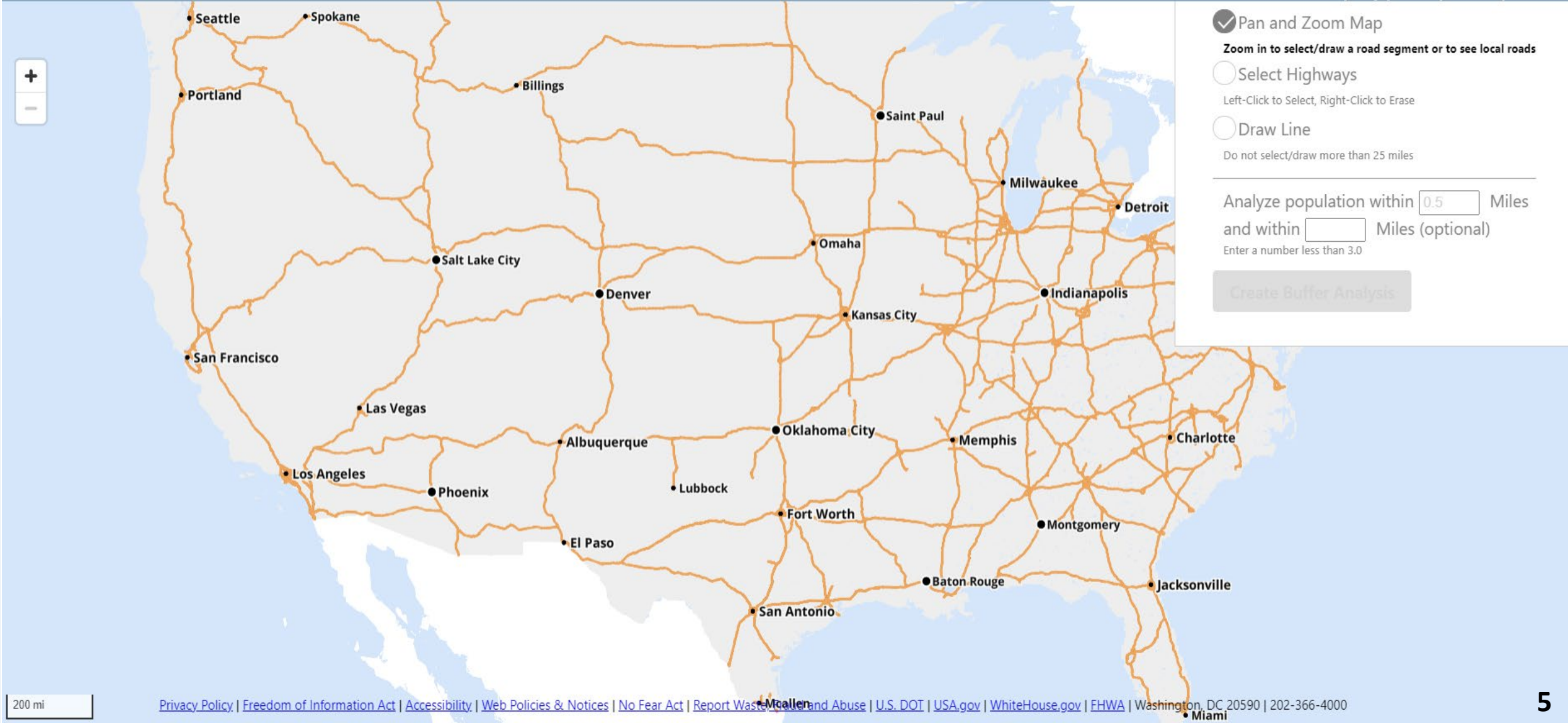
Powered by TransCAD for the Web

Sources | Legend | Data | Layers



For information and comments about this web site, contact Supin Yoder

STEAP User Interface



Map Interaction:

- Pan and Zoom Map
 - Zoom in to select/draw a road segment or to see local roads
- Select Highways
 - Left-Click to Select, Right-Click to Erase
- Draw Line
 - Do not select/draw more than 25 miles

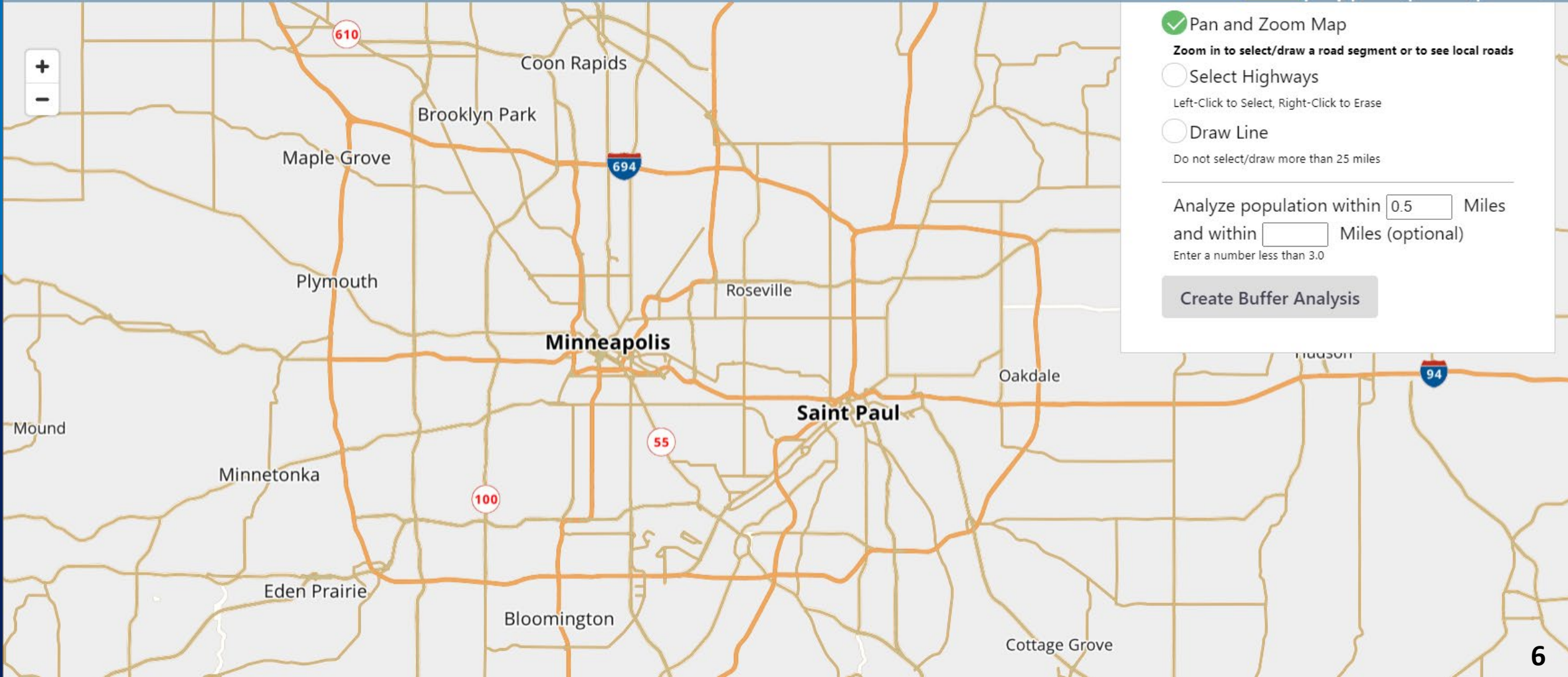
Analysis Settings:

Analyze population within Miles
and within Miles (optional)
Enter a number less than 3.0

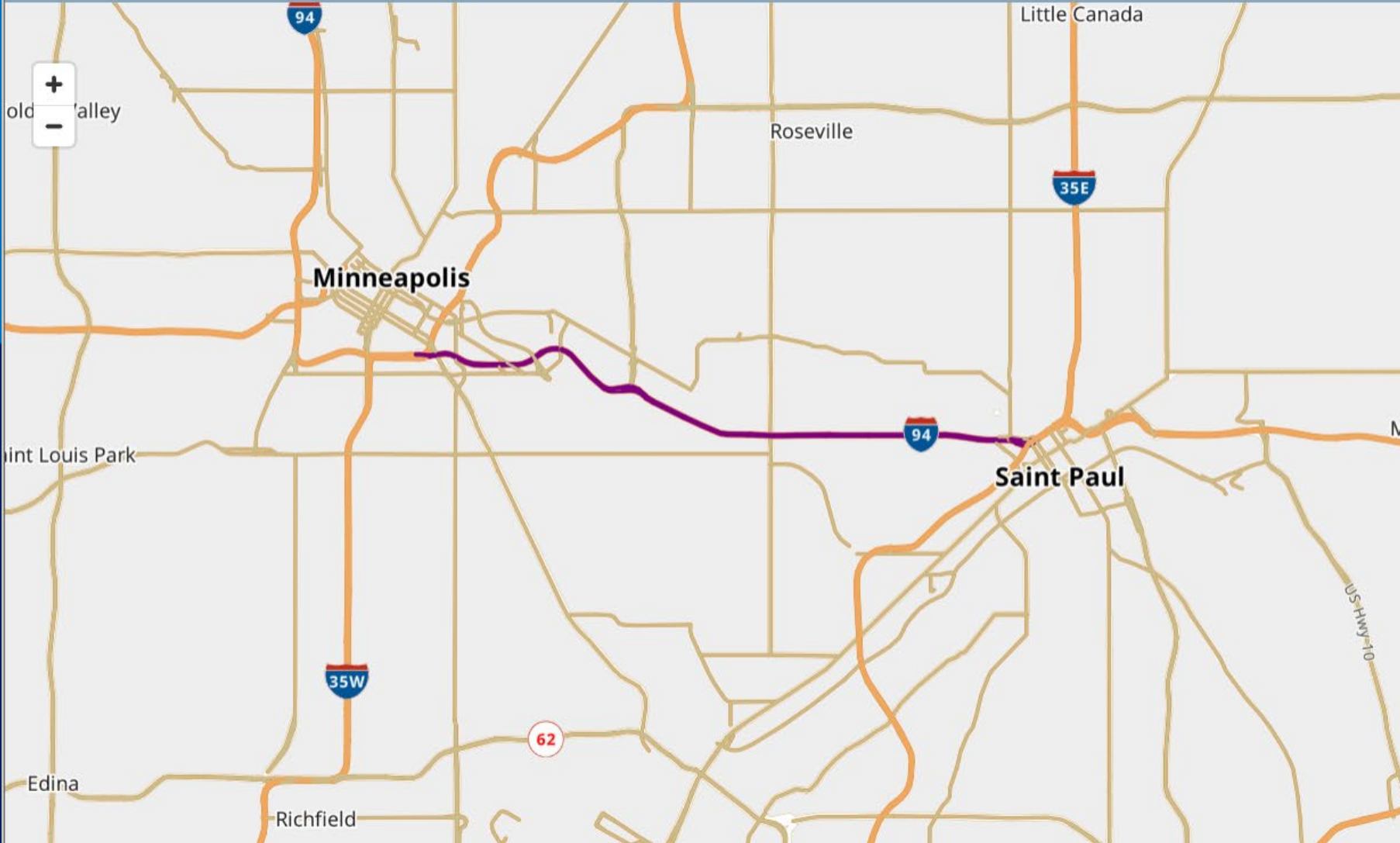
Map Labels: Seattle, Spokane, Portland, Billings, Saint Paul, Milwaukee, Detroit, Salt Lake City, Omaha, Indianapolis, Denver, Kansas City, San Francisco, Las Vegas, Albuquerque, Oklahoma City, Memphis, Charlotte, Los Angeles, Phoenix, Lubbock, Fort Worth, Montgomery, El Paso, San Antonio, Baton Rouge, Jacksonville, McAllen, Miami

Scale: 200 mi

Zoom to Project Locations



Selecting Roadways



Pan and Zoom Map
Zoom in to select/draw a road segment or to see local roads

Select Highways
Left-Click to Select, Right-Click to Erase

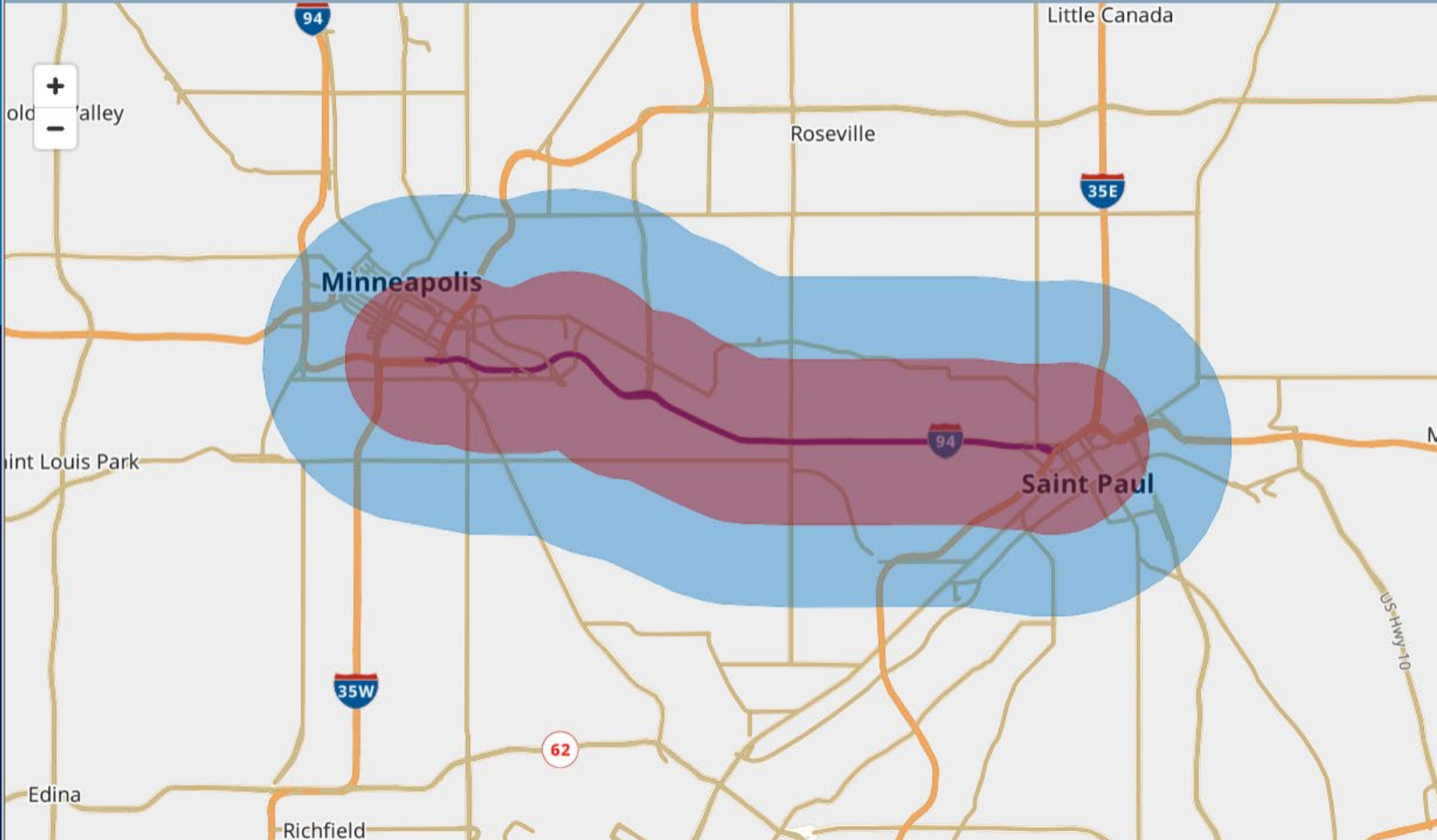
Clear selection (14.6 Miles)

Draw Line
Do not select/draw more than 25 miles

Analyze population within Miles
and within Miles (optional)
Enter a number less than 3.0

Create Buffer Analysis

Specify Project Buffers



Pan and Zoom Map

Zoom in to select/draw a road segment or to see local roads

Select Highways

Left-Click to Select, Right-Click to Erase

Clear selection (14.6 Miles)

Draw Line

Do not select/draw more than 25 miles

Analyze population within Miles

and within Miles (optional)

Enter a number less than 3.0

Create Buffer Analysis

Clear Buffers

Open Report

Generate Project Equity Analysis Report



- Pan and Zoom Map
Zoom in to select/draw a road segment or to see local roads
- Select Highways
Left-Click to Select, Right-Click to Erase
- Draw Line
Do not select/draw more than 25 miles

Clear selection (14.6 Miles)

Analyze population within Miles
and within Miles (optional)
Enter a number less than 3.0

Create Buffer Analysis

Clear Buffers

Open Report

Report Size: Larger ↑ Smaller ↓ Close X

12c87dee.pdf

2 / 13 | 75%

1.0 Miles Buffer Analysis Summary Report

	ACS Estimates	Percent
General Buffer Area Statistics		
Land Area (in square miles)	19	
Population	157,236	
Households	63,569	
Families	25,246	
Housing Units	69,245	
Population by Race		
Total	157,236	100%
Population Reporting One Race		
White	89,986	57%
Black	36,826	23%
American Indian	2,629	2%
Asian	15,954	10%
Pacific Islander	68	0%
Some Other Race	4,332	3%
Population Reporting Two or More Races	7,441	5%
Total American Indian Population *		



Project Buffer Analysis Report Contents

- **Title VI**
 - Race, Ethnicity & Foreign-born population
- **Environmental Justice (EJ)**
 - Minority population
 - Low -income persons
 - Poverty by race and age
- **Limited English Proficiency (LEP)**
- **Other Population Characteristics**
 - Age & gender
 - Education attainment
 - Unemployment status
 - Veterans & disability status
- **Household Characteristics**
 - Household structure
 - Housing affordability
 - Vehicle ownership
 - No computers & no internet connection

STEAP Live Demo

<https://hepgis.fhwa.dot.gov/>



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STEAP Benefits

Implements Executive Order 14008

- Sec. 222 (a) calls for the creation of a geospatial Climate and Economic Justice Screening Tool and interactive maps highlighting disadvantaged communities

Supports project pre-screening

- Identifies the size of disadvantaged populations and their characteristics
- Evaluates impact of right-of-way acquisition on marginalized populations
 - When using buffer size of 0.1 mile (500 feet) to generate the project equity analysis report
- Assesses if project disproportionately affects vulnerable populations
- Develops meaningful public engagement plans
- Influences project scoping and alternatives development

Effective use of federal resources

- Division staff can perform project Title VI & EJ Analysis without the need for GIS specialists



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Thank You

Questions or feedback, please contact

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