



Request for Information (RFI) on USDOT Equitable Transportation Community Explorer (ETCE) Tool and Index Methodology

United States
Department of Transportation

February 2023



Background on Justice40

WHAT is Justice40?

President Biden’s Jan 2021 **EO14008: Tackling Climate Change at Home and Abroad** created the government-wide Justice40 Initiative, establishing the goal that at least **40% of the benefits of certain federal investments flow to disadvantaged communities.**

WHY Justice40?

Justice40 aims to **address decades of systemic inequitable historical policies and underinvestment in disadvantaged communities.** The initiative aims to bring resources to communities most impacted by climate change, pollution, and environmental hazards.

What Justice40 means for the US Department of Transportation (USDOT)

The Bipartisan Infrastructure Law and the Inflation Reduction Act represent once-in-a-generation investment in infrastructure, climate resilience, and innovation. Justice40 allows USDOT to identify opportunities and prioritize projects that benefit rural, suburban, tribal, and urban communities facing barriers to affordable, equitable, reliable, and safe transportation. DOT will also assess the negative impacts of transportation projects and systems on disadvantaged communities and will consider if local community leaders have been consulted in a meaningful way during the project’s development.



**Prioritize
Investments**






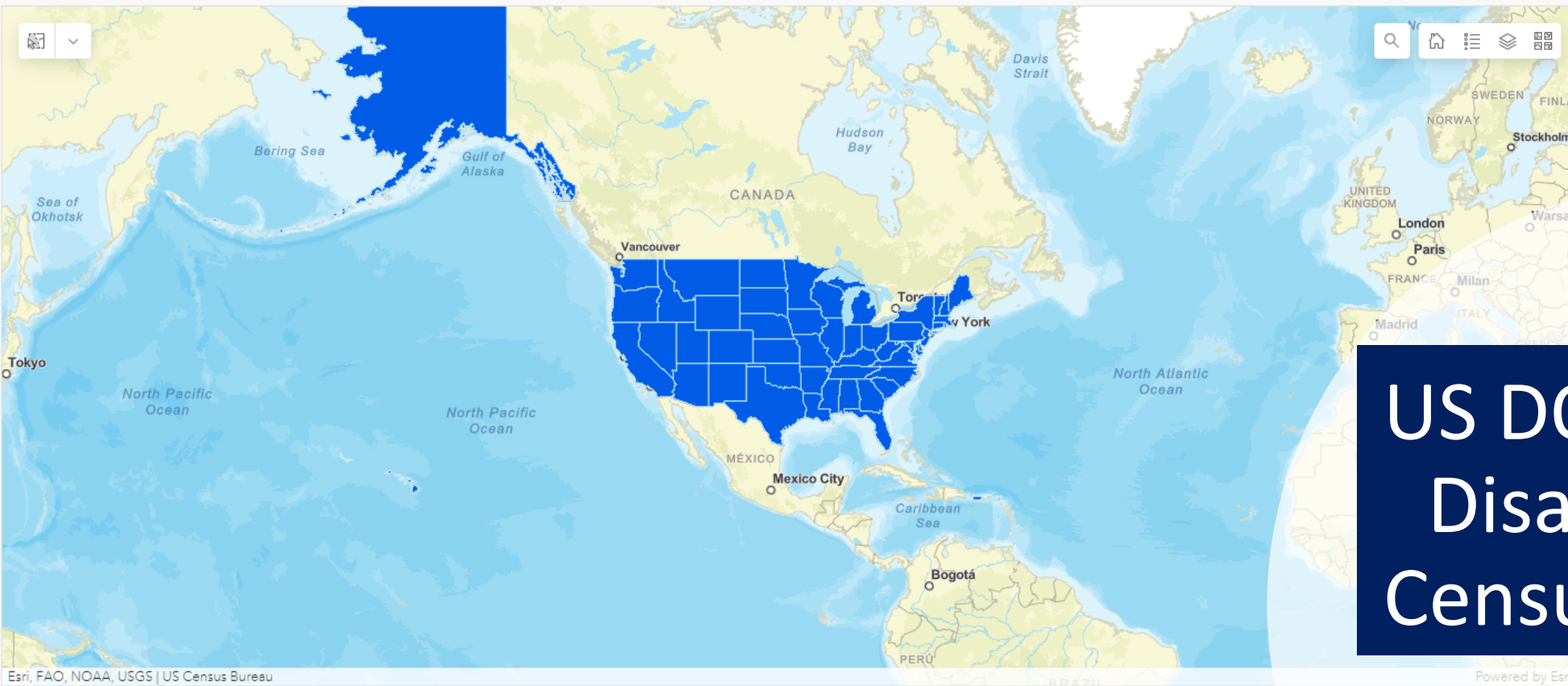
**Measure Impact and
Improve Effectiveness**



**Strengthen
Communities**



User Instructions: On the list to the right, select your state of interest. Use the +/- icons or mouse wheel to zoom into the map. Click and drag the map area to pan. Use the select tool on the left  to select US Census tracts within your area of interest. Census tracts with four or more Transportation Disadvantage indicators will be visible in **orange**. Single-click on a Census tract to view the tract number and Transportation Disadvantage categories. The  icon is the legend for the visible map layers. Use the home button  to return to the continental US extent.



To view the **transportation disadvantaged definition**, select the expand icon in this box's upper right corner. Please note the Reconnecting Communities Notice of Funding Opportunity uses the "Transportation Disadvantaged Census Tracts" tool as one option for determining whether a community is

Transportation Disadvantaged Tracts by State

Select a state from the list

- Alabama: 601
- Alaska: 33
- American Samoa: 1

US DOT's Current Disadvantaged Census Tract Tool

- Georgia: 861
- Guam: 1
- Hawaii: 33
- Idaho: 65
- Illinois: 867
- Indiana: 321
- Iowa: 47
- Kansas: 146

Esri, FAO, NOAA, USGS | US Census Bureau

Powered by Esri

◀ 1 of 50 ▶

ALABAMA

72.8k

Total Selected Census Tracts

◀ 1 of 50 ▶

CALIFORNIA

22k

Total Selected Transportation Disadvantaged Census Tracts

30%

Percent of Transportation Disadvantaged Census Tracts In Selected Area

USDOT Equitable Transportation Community Explorer & Index Methodology RFI

On February 17, USDOT released a Request for Information (RFI) to receive input from stakeholders on its updated **USDOT Equitable Transportation Community Explorer (ETCE) and Index Methodology** that supports the Justice40 initiative.

Impact of the ETCE

Users of ETCE can-

- Explore how different geographic areas experience disadvantage
- Use the data to assist in identifying/developing projects that will begin to reverse elements of disadvantage

What should I review?

- [RFI Link](#) with following components:
- **USDOT Equitable Transportation Community Explorer Map (ETCE)**
 - **Tool Methodology**
 - **Data Sets**

What feedback should I provide?

- Please provide recommendations for areas including but not limited to:**
- Improvements to the methodology used to identify burdened communities to support Justice40.
 - Additional datasets to enhance current indicators and requests for geographic resolution of data (i.e., census block, census tract, zip code, county)
 - Modifications that can improve usability, accessibility, or design of mapping functions
 - Ways to address any gaps in any data from the 50 states and territories



USDOT’s Pending Updated Disadvantaged Community Definition

For the Justice40 Initiative, USDOT developed a working definition of disadvantaged to identify communities and opportunities for program investments.

USDOT’s Disadvantaged Community Index

A *Disadvantaged Community* is a group of individuals living in **geographic proximity** to one another or **sharing common conditions or group experiences** (i.e., migrant workers, Native Americans) that experience cumulative burden across economic, social, and environmental factors.



-  **Transportation Insecurity:** communities that spend more, and take longer, to get where they need to go
-  **Environmental Burden:** communities experiencing disproportionately high levels of pollutants & toxins
-  **Social Vulnerability:** communities with high levels of poverty, low access to jobs and education, and communities with a shared history of discrimination
-  **Health Vulnerability:** communities with adverse health outcomes, disabilities, and low access to health care services
-  **Climate and Disaster Risk:** communities vulnerable to natural hazards and that are experiencing increased risk caused by climate change

Each of the five components is composed of indicators (and variables that fall under each indicator).

Transportation Insecurity

Below are the indicators within the Transportation Insecurity component.

Transportation Access

Percent of households with no car, average commute time to work, Walkability Index value from EPA, frequency of transit services per square mile, jobs within a 45-min drive

Transportation Cost Burden

Cost of gas, cost of transit, time value of money, time to work, median income, vehicle miles traveled, vehicle finance charges, cost of maintenance, insurance costs

Transportation Safety

Traffic fatalities per tract

Poll Question 1- Access

Other than access to jobs, for which other services and amenities should DOT consider calculating access metrics?

- Grocery stores
- Schools
- Medical Facilities
- Parks
- Other (Please respond in chat)

Environmental Burden

Below are the indicators within the Environmental Burden component.

Air Pollution

Levels of ozone and fine particulate matter (PM_{2.5}) in the air

Hazardous Sites

Air toxics cancer risk, diesel particulate matter level, proximity to hazard sites, toxic release sites, treatment and waste disposal facilities, risk management plan sites, non-abandoned lead mines

Built Environment

Percent of houses built before 1980 (this is an indicator of likelihood of lead exposure)

Transportation Infrastructure Burden

Proximity to high-volume roads, railways, airports, ports

Water Pollution

Percent of the census tract that intersects with a watershed containing impaired water(s)

Social Vulnerability

Below are the indicators within the Social Vulnerability component.

Socioeconomic Status

Percent of population with income below 200% of poverty level, percent of people age 25+ with less than a high school diploma, percent of people age 16+ unemployed, percent of total housing units that are renter-occupied, percent of occupied houses that spend 30% or more of their income on housing with less than 75k income, percent of population uninsured, percent of households with no internet subscription, GINI Index score

Household Characteristics

Percent of population 65 years or older, percent of population 17 years or younger, percent of population with disability, percent of population (age 5+) with limited English proficiency, percent of total housing units that are mobile homes

Housing Type

Percent of total housing units that are mobile homes

Health Vulnerability

Below are the indicators within the Health Vulnerability component.

Health Vulnerability

Prevalence of health conditions (asthma, cancer, high blood pressure, diabetes, and poor mental health) that may be associated with or exacerbated by pollution from transportation infrastructure; hospital proximity

Climate and Disaster Risk

Below are the indicators within the Social Vulnerability component.

Annualized Disaster Losses

Estimated annualized loss due to disasters.

Future Extreme Weather Risks

Increase in number of days over 90 degrees by mid-century, number of days exceeding 99th percentile of precipitation by mid-century, percent change in number of days with less than 0.01 inches of precipitation, percent of tract inundated by 0.5 sea level increase by 2100

Impervious Surfaces (from Land Cover)

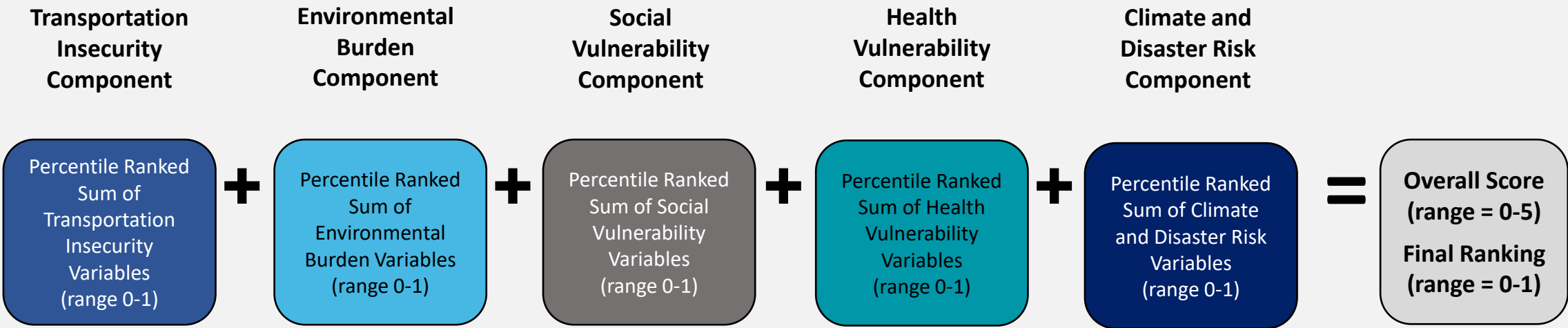
Average percent land classified as impervious surface per tract

How does the Disadvantaged Community Index work?

The Disadvantaged Community Index is the basis for identification of disadvantaged communities within the ETCE. The methodology is based on Centers for Disease Control and Prevention’s Environmental Justice Index (EJI) with the addition of transportation and climate and disaster risk components.

How does the Disadvantaged Community Index Work?

Each of the five components contains indicators as shown in the prior slides. Each indicator has a set of variables that are calculated to eventually provide an overall score and a final ranking.

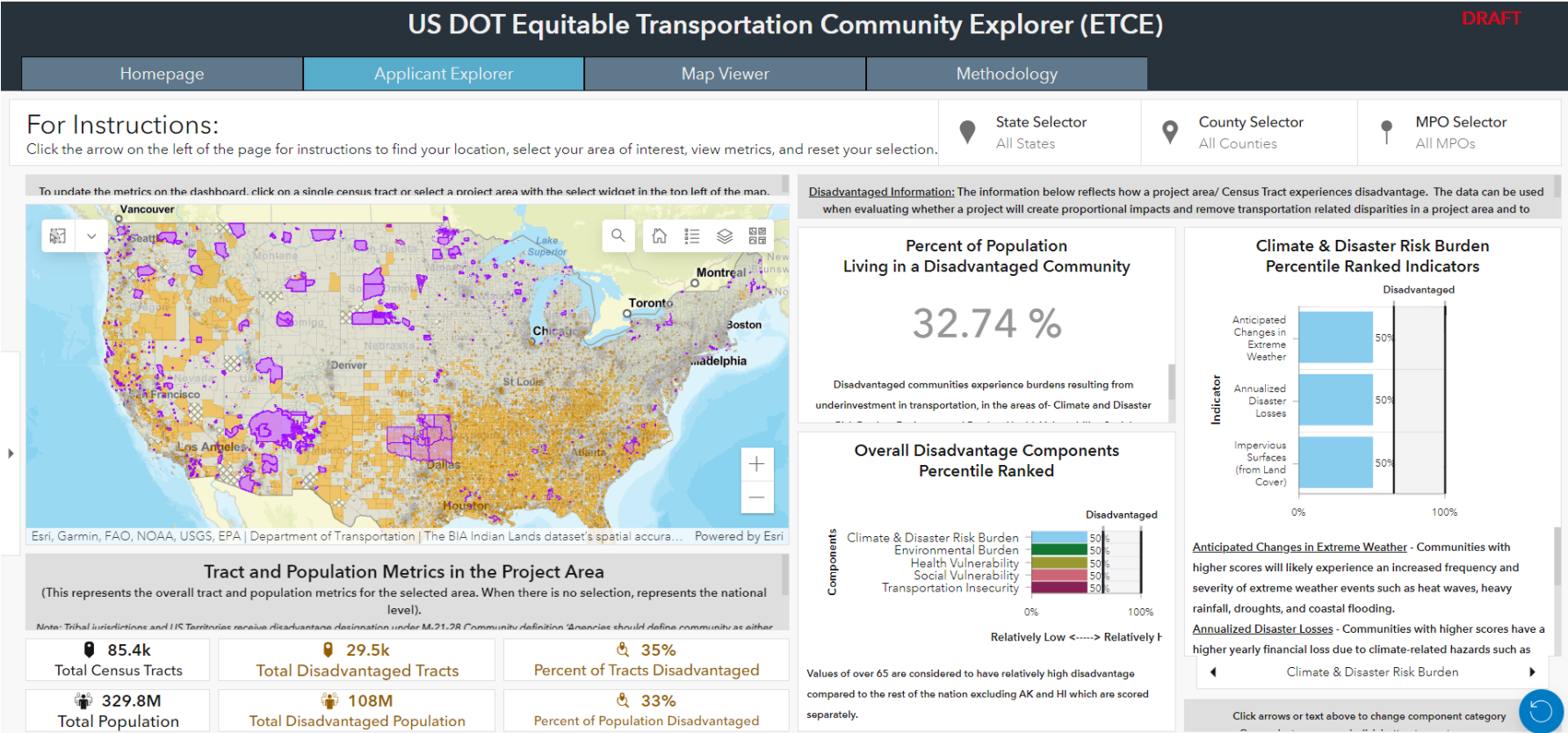


A census tract will be considered disadvantaged if the overall index score places it in the 65th percentile (or higher) of all US census tracts. The 65th percentile cutoff was chosen to be consistent with other tools that measure disadvantage including CEJST.

The ETCE Example User Experience Journey

USDOT will be releasing its proposed Equitable Transportation Community Explorer (ETCE) and Disadvantaged Community Index for public comment to improve the tool’s functionality and usability. Here is a sample user journey to better understand the tool’s impact on US DOT grant applicants.

A sample grant applicant user journey (Step 1)



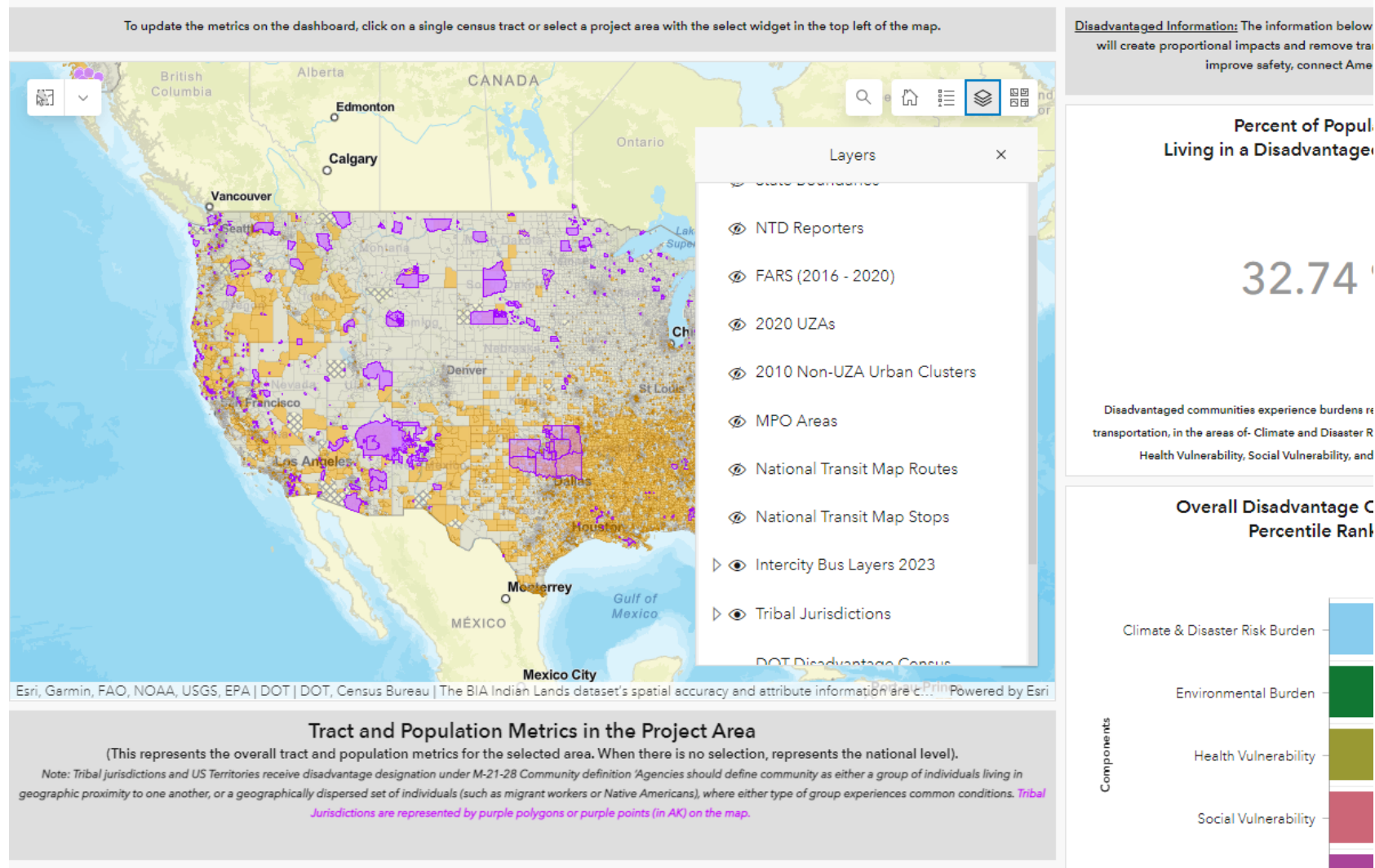
Step 1: Open ETCE

- Open the homepage of the ETCE and select the “Applicant Explorer” tab to learn more.
- ETCE is an interactive dashboard for users to determine if a project area is disadvantaged. This view allows users to explore key areas of interest through the search and selection features. The map also contains various layers to provide additional context, including geographic boundaries and transit information.

A sample grant applicant user journey (Step 2)

For Instructions:

Click the arrow on the left of the page for instructions to find your location, select your area of interest, view metrics, and reset your selection.



Step 2: Select Data Layers

The applicant can select data layers that provide additional information related to their project or the funding program they are applying to.

- State Boundaries
- NTD Reporters
- FARS (2016-2020)
- 2020 UZAs
- 2010 Non-UZA Urban Clusters
- MPO Areas
- National Transit Map Routes
- National Transit Map Stops
- Intercity Bus Layers 2023
- Tribal Jurisdictions
- Disadvantaged Components
- Non-Attainment Areas

Poll Question 2- Features

Are there specific features or functions that will enhance the usability of the interactive map?

- Airports
- Class 1 & 2 Railroads
- Ports & Intermodal Centers
- Freight Bottle Necks
- Land Use Maps
- Other (Please respond in the chat)

A sample grant applicant user journey (Step 3)

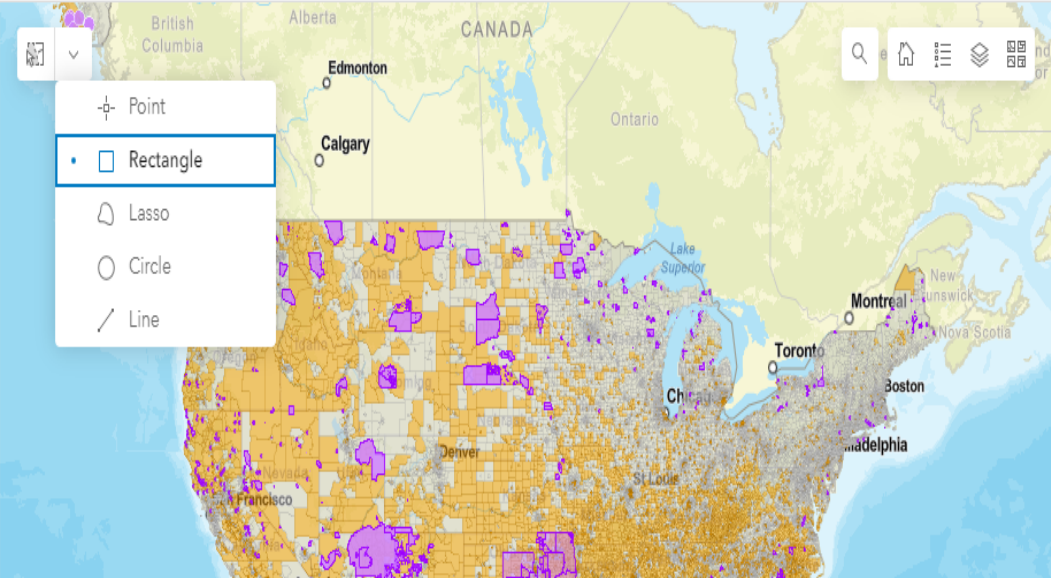
For Instructions:
Click the arrow on the left of the page for instructions to find your location, select your area of interest, view metrics, and reset your selection.

State Selector
All States

County Selector
All Counties

MPO Selector
All MPOs

To update the metrics on the dashboard, click on a single census tract or select a project area with the select widget in the top left of the map.



Disadvantaged Information: The information below reflects how a project area/ Census Tract experiences disadvantage. The data can be used when evaluating whether a project will create proportional impacts and remove transportation related disparities in a project area and to demonstrate the need to increase affordable transportation options, improve safety, connect Americans to good-paying jobs, fight climate change, and/or improve access to resources and quality of life.

Percent of Population Living in a Disadvantaged Community

32.95 %

Disadvantaged communities experience burdens resulting from underinvestment in transportation, in the areas of: Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, Social Vulnerability, and Transportation Insecurity.

Climate & Disaster Risk Burden Percentile Ranked Indicators

Indicator	Disadvantaged
Anticipated Changes in Extreme Weather	50%
Annualized Disaster Losses	50%

Step 3: Find Project Area

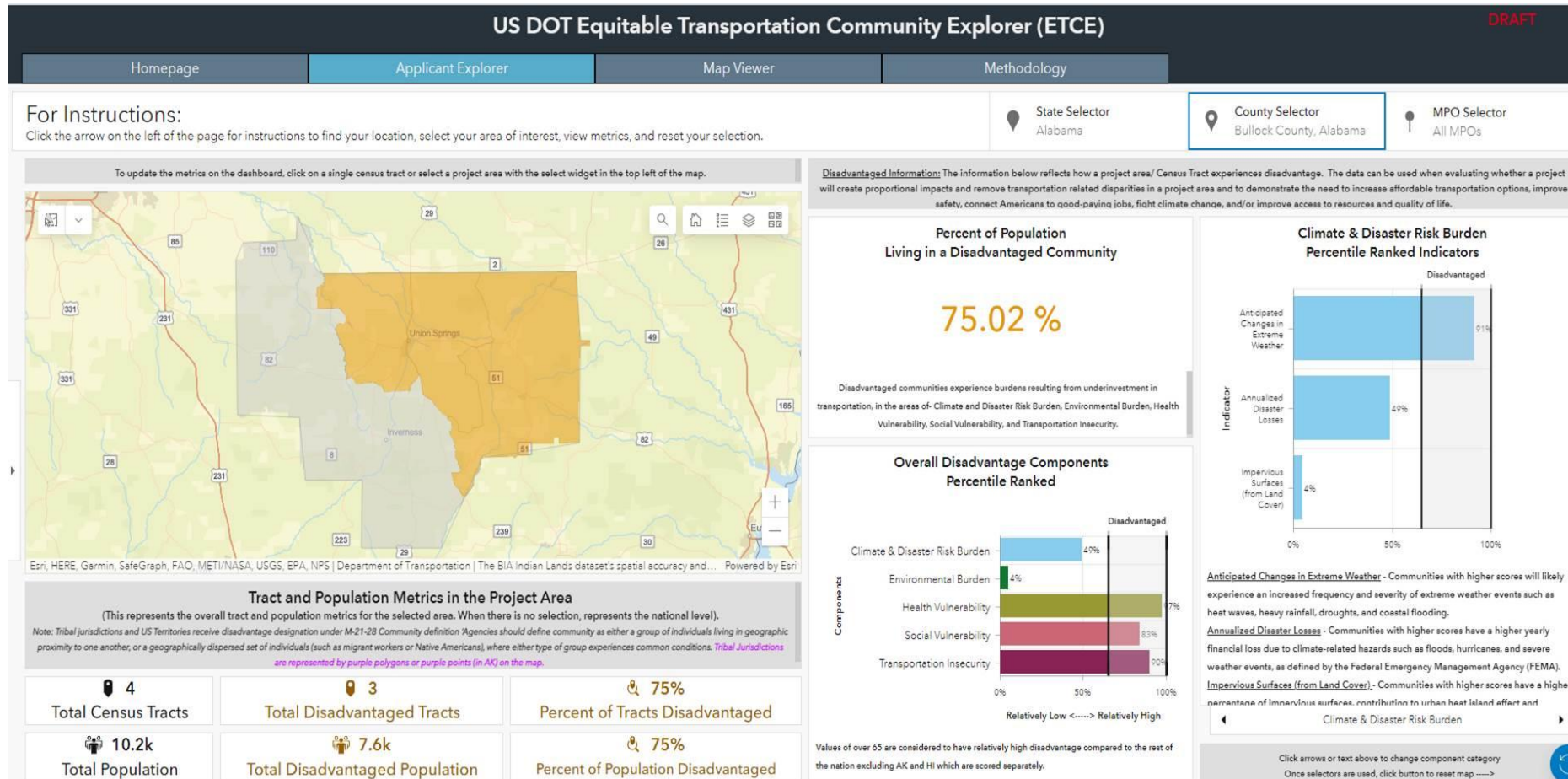
- The applicant finds the project area by using one of the selector options (State Selector, County Selector or MPO Selector) or the search tool (magnifying glass- upper right corner of map) to search by specific address, jurisdiction, or zip code.
- The project area is selected by using one of the tools in the upper left corner (point, rectangle, lasso, circle or line) to either select a single Census Tract (point) or draw the appropriately shaped project area.

Poll Question 3- Search Categories

What is the most common way a stakeholder would search for a project impact area? Select all that apply.

- Zip code
- Address
- Community name
- Census tract number
- Other (Please respond in the chat)

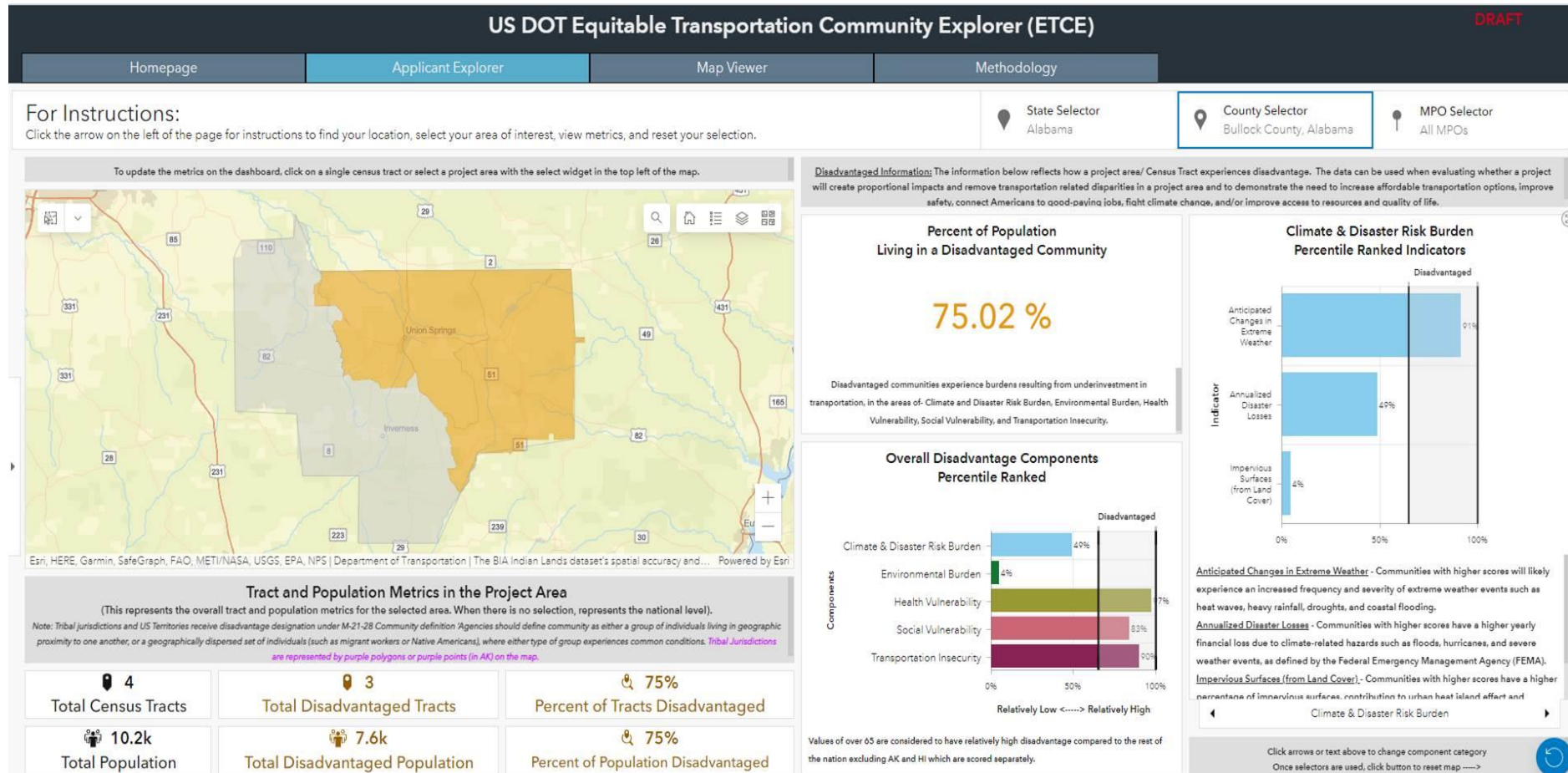
A sample grant applicant user journey (Step 4)



Step 4: Determine project area and population that is experiencing disadvantage

- The percentage of tracts considered disadvantaged is 75% and the total population considered disadvantaged is 7,600.
- Percent of population living in a disadvantaged community is 75.02%.

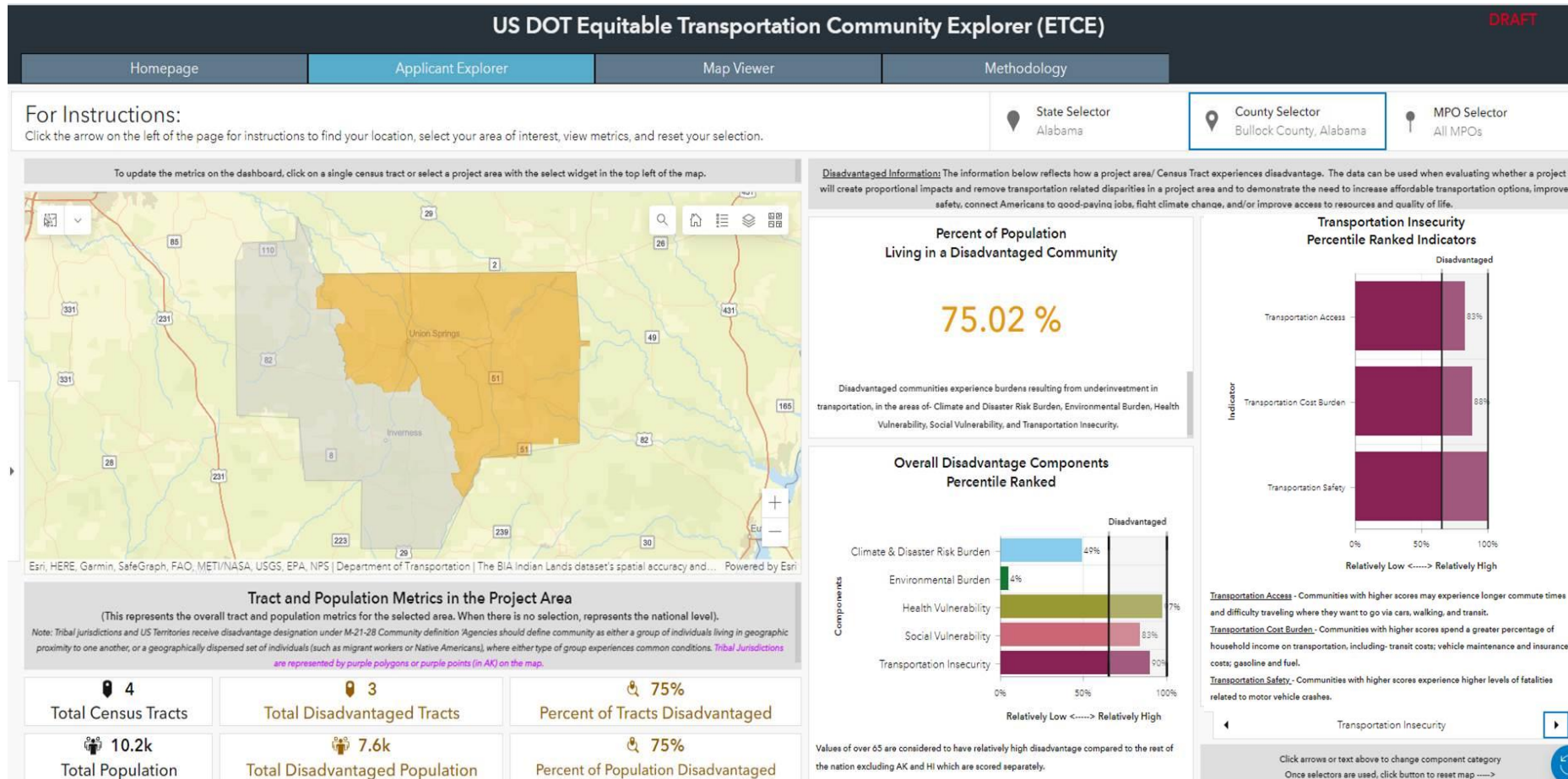
A sample grant applicant user journey (Step 5)



Step 5: Determine overall components for which the project area is experiencing disadvantage

- To understand core drivers of disadvantage in the project area the user looks to the “Overall Disadvantage Component” panel.
- In this example the 65th percentile is exceeded in Health Vulnerability, Social Vulnerability, and Transportation Insecurity.
- This means that compared to other census tracts nationally, the project area has a relative high burden in health vulnerability, social vulnerability, and transportation insecurity.

A sample grant applicant user journey (Step 6)



Step 6: Determine specific drivers within the disadvantage components

- To understand the core drivers of disadvantage, the applicant selects the component name under “Transportation Insecurity Percentile Ranked Indicators.”
- In this example the project area is burdened by lack of transportation access, transportation cost burden, and experiences transportation safety challenges.

From this interactive journey with the ETCE, the user understands how the community/project area is experiencing disadvantage. Data from the Transportation Insecurity Percentile Ranked Indicators can be used to when explaining how the benefits of a project will reverse how the project area experiences disadvantage.

Poll Question 4- Tool Name

Does the tool's name reflect its purpose?

- Yes
- No
- Suggestions (Please respond in the chat)

How to submit RFI comments

USDOT released a Request for Information (RFI) on February 17, 2023 to receive input from stakeholders on its updated USDOT Equitable Transportation Community Explorer (ETCE) and Index Methodology.

YOUR INPUT IS REQUESTED! HERE is the latest RFI. Please submit comments by March 18, 2023

How do I submit feedback?

Comments should refer to the docket number [DOT-OST-2023-0020] and submitted by one of the following methods:

- [Federal Rulemaking Portal](#)
- **Mail:** Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- **Hand Delivery:** 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, DC, between 9 a.m. and 5 p.m. ET, Mon.- Fri, except Federal Holidays.



For access to the docket, to read background documents or comments received please visit:

<https://www.regulations.gov/document/DOT-OST-2023-0020-0001>

For Questions:

- Please email Justice40@dot.gov

How to Find the RFI?

The screenshot displays the Regulations.gov website interface. At the top, a navigation bar includes the site logo, a search bar, and a 'SUPPORT' button. Below this, a banner indicates a new phone number for the Help Desk. The main content area features a 'Docket (DOT-OST-2023-0020) / Document' header. A prominent 'NOTICE' section titled 'Request for Information: Equitable Transportation Community Explorer Tool and Index Methodology' is posted by the Department of Transportation on February 21, 2023. It includes a 'Comment' button, a 'View Related Comments' link with a count of 2, and a 'Share' button. To the right, a 'Comment Period Ends: 23 Days' badge is visible. Below the notice, a tabbed interface shows 'Document Details' and 'Browse Posted Comments' (2). The 'Document Details' tab is active, displaying a sidebar with document metadata: Document ID (DOT-OST-2023-0020-0001), Comments Received (2), Comment Due Date (Mar 18, 2023), Federal Register Number (2023-03396), Document Subtype (Request for Comments), and Received Date (Feb 21, 2023). The main content area under 'Document Details' includes sections for 'Action' (Request for information), 'Summary' (The Department of Transportation is issuing this request for information (RFI) to solicit feedback on DOT's updated Transportation Disadvantaged Census Tracts Tool (now named US DOT Equitable Transportation Community Explorer) and Index methodology that supports the Administration's Justice40 initiative), 'Dates' (Issued February 17, 2023; responses to this RFI should be received by March 18, 2023), and 'Addresses' (Comments should refer to the docket number above and submitted by one of the following methods: Federal Rulemaking Portal, Mail, and Hand Delivery). A footer note directs users to the Public Participation heading of the SI IDI ELEMENTARY for detailed instructions on submitting comments.

<https://www.regulations.gov/document/DOT-OST-2023-0020-0001>

How to Submit A Comment?

Effective January 23, 2023, the new phone number for the Help Desk is 1-866-498-2945

Regulations.gov
Your Voice in Federal Decision Making

SUPPORT

You are commenting on a Notice by the **Department of Transportation**

Request for Information: [Equitable Transportation Community Explorer Tool and Index Methodology](#)

Comment Period Ends: **23 Days**

Write a Comment

[Commenter's Checklist](#)

Comment*

Start typing comment here...

5000

What is your comment about?

Select a Comment Category

Attach Files

You can attach up to 20 files, but each file cannot exceed 10MB. Valid file types include: bmp, docx, gif, jpg, jpeg, pdf, png, pptx, rtf, sgml, tif, tiff, txt, wpd, xlsx, xml.

Drop files here or

[Browse...](#)

Email Address

Email Address

Technical Documentation, Link to the Tool and Data Downloads



U.S. Department of Transportation

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Justice40 Initiative

RFI- Draft Equitable
Transportation Community
Explorer

Covered Programs

Public Webinars and Outreach for
the Justice40 Initiative

Transportation Disadvantaged
Census Tracts (Historically
Disadvantaged Communities)
Interim Definition Methodology

Technical Assistance

Resources

View

Edit

Revisions

Entityqueue

RFI- Draft Equitable Transportation Community Explorer

Please note: This version of the Equitable Transportation Community Explorer map has been developed for illustrative purposes to demonstrate the proposed index methodology. It is subject to change the following public comment period.

The U.S. Department of Transportation (USDOT) announced a [Request for Information \(RFI\)](#) to receive public input on the updates to the agency's Equitable Transportation Community Explorer and Index Methodology that support the Biden-Harris Administration's Justice40 Initiative. [The RFI](#) is open for a 30-day public comment period beginning February 17, 2023. Comments must be received by March 18, 2023 to be considered. For more information about USDOT's Request for Information on Equitable Transportation Community Explorer and Methodology please visit the [RFI](#).

[The Equitable Transportation Community Explorer](#) ^α is an interactive web application that explores the cumulative burden disadvantage communities experience resulting from underinvestment in transportation in the areas of Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability. ETCE uses newly available 2020 Census Tracts and data, adds additional indicators reflective of disadvantage related to lack of transportation investment and updates the methodology used to calculate disadvantage. In ETCE individual variables and datasets are combined to create a score for each component (Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability). The scores from each component are percentile ranked and combined to create an overall index score. Under this methodology, a census tract will be considered disadvantaged if the overall index score places it in the 65th percentile (or higher) of all US census tracts (the 65th percentile cutoff was chosen to be consistent with other tools that measure disadvantage including CEJST).

Applicants to DOT's discretionary programs have the option of using the tool CEJST and/or ETCE when developing funding applications. State DOT's and Metropolitan Planning Organizations can use the tool in developing their

Downloads

The dataset used in the Draft Equitable Transportation Community Explorer, along with a shapefile, geodatabase, and index technical documentation are available for download:

- [Index file \(.csv\)](#)
- [Index file \(.xlsx\)](#)
- [Index Score Only \(.csv\)](#)
- [Shapefile \(.shp\)](#)
- [Geodatabase \(.gdb\)](#)
- [Index Score Only \(.zip\)](#)
- [Index Data Dictionary \(.xlsx\)](#)
- [Index Descriptive Stats \(.xlsx\)](#)
- [Alias Lookup Table \(.csv\)](#)
- [Index Technical Documentation \(.pdf 1.2 MB\)](#)
- [Features services link](#)

<https://www.transportation.gov/priorities/equity/justice40/rfi-draft-equitable-transportation-community-explorer>



Thank You

Justice40@dot.gov