GETTING SMART

A STORY OF NASHVILLE RECEIVING TENNESSEE'S FIRST SMART GRANT

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NDOT

Agenda

- What are the SMART Grants?
- ***What was our ask?***
- What was the process?
- Who was involved?
- ***How did we win?***
- What did we learn?
- What is next?

What are the SMART Grants?

SMART

- Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program
- Established by the Bipartisan Infrastructure Law
  - Discretionary grant program
  - $100 million appropriated annually for FY 2022 – 2026
  - Two stages
    - Stage 1: Planning and Prototype Grants – minimum grant amount of $250,000 / maximum $2,000,000
    - Stage 2: Implementation Grants – only eligible for stage 1 grant winners

Who can apply?

- a State
- a political subdivision of a State
- a Tribal government
- a public transit agency or authority
- a public toll authority
- a metropolitan planning organization; and
- a group of 2 or more eligible entities detailed above, applying through a single lead applicant

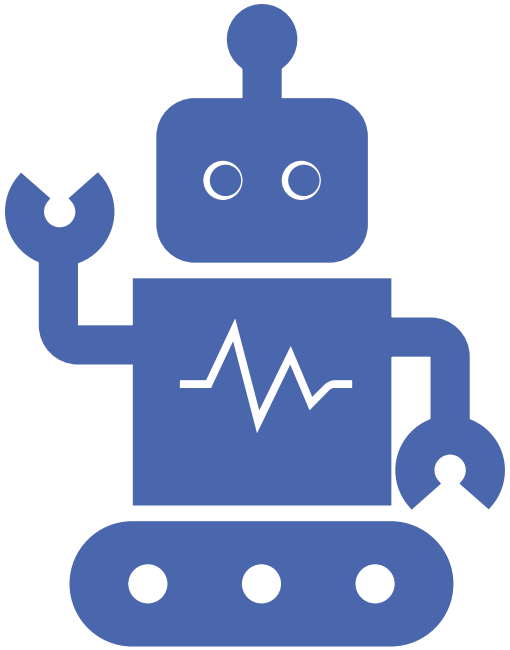
Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program | US Department of Transportation

What projects are Eligible?

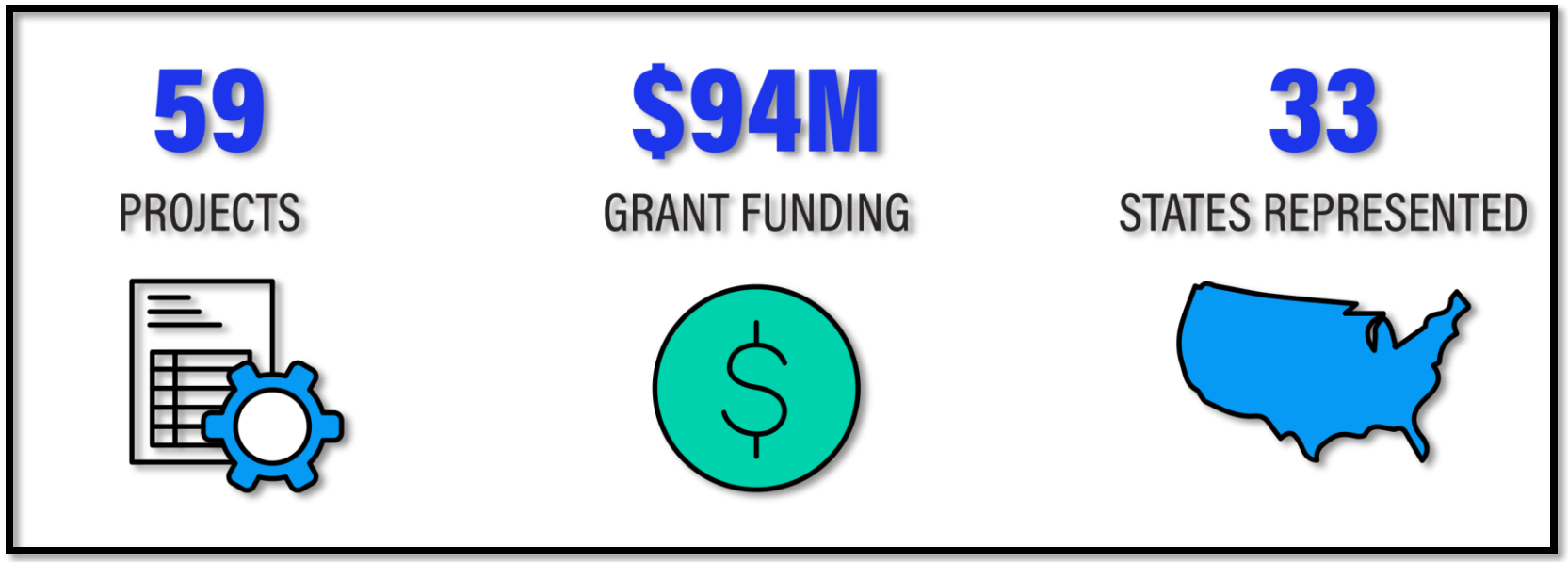
(BIL Section 25005 e.1)

- Coordinated Automation
- Connected Vehicles
- Intelligent, Sensor-Based Infrastructure
- Systems Integration
- Delivery/Logistics
- Innovative Aviation
- Smart grid
- Traffic Signals

https://www.transportation.gov/sites/dot.gov/files/2022-09/FY22%20SMART%20Grants%20NOFO_Final.pdf



What are the SMART Grants? SMART



FY 2022

NDOT Nashville SMART Grant

Name: Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS)

Project Type: Intelligent, Sensor-Based Infrastructure

Award Amount: $2,000,000

What was our Ask?

- **Goal**: To improve the mechanism for identifying incidents outside of traditional crash reports, implementing targeted safety measures, and evaluating these measures in Nashville's urban communities.
- **Strategy**: Through the installation of LiDAR and video camera technologies at key intersection and mid-block segments, we plan to collect and evaluate "near-miss" data, enabling us to further protect our transportation network's most vulnerable users.

What made it strong?

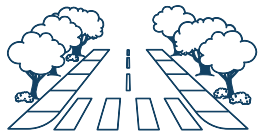
- Our ask:
  - was specific,
  - focused on a densely populated area with a history of disadvantaged community members (including high presence of pedestrians, cyclists, mobility-impaired users, unhoused individuals, and minority-owned businesses),
  - featured university collaboration and buy-in,
  - had room for expansion,
  - put into action the goals set forth by the city's Vision Zero Plan

Vision Implementation Plan

- In August of 2022, Nashville's Vision Zero 5-year Implementation Plan was adopted by the Metro Nashville Council
- The Implementation Plan establishes clear yearly milestones and metrics that cover the Five E's Framework of traffic safety
- NDOT is looking to leverage federal grant opportunities to help accelerate Vision Zero efforts in Metro Davidson County.

https://www.nashville.gov/departments/transportation/plans-and-programs/vision-zero

5 “E” Strategies of Vision Zero



Engineering

Creating safe, connected, and comfortable physical infrastructure for all modes of transportation.

Evaluation

Determining feasibility of quick build and countermeasure implementation of the High Injury Network as well as monitoring overall program progress and effectiveness of strategies and actions.

Encouragement

Fostering a culture that supports and encourages all modes of transportation through opportunities, programs, and incentives.

Education

Equipping people of all ages and abilities with the knowledge, skills, and confidence to safely move around.

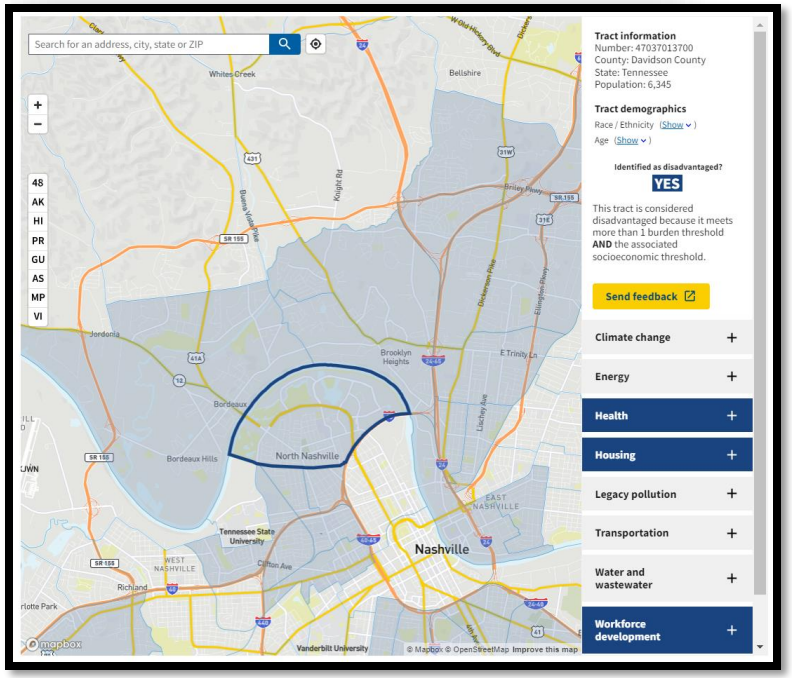
Enforcement

Building safe and responsible behaviors on the road and building respect among road users through partnerships with community groups and law enforcement.

What also made it strong?

https://screeningtool.geoplatform.gov/

- Other noteworthy considerations:
  - We created a project website
  - We had 3 letters of support
  - One of our stakeholders, TDOT, is also pursuing similar work
  - Perhaps most importantly: We clearly illustrated the WHERE (the neighborhood was identified as a Promise Zone by HUD during the Barry Administration in 2016 and its census tracts were recognized as overburdened and underserved, according to USDOT's Climate and Economic Justice Screening Tool



What was the process?

- Identifying the team – setting up the players early!
- Early coordination – unified vision for safety, technology, job support
- Pulling it together – closely follow the grant guidelines
- Sweating the small stuff – Additional touches
- Grant submission – early!

What was the process?

Setting up the players

ASSISTANCE FROM CONSULTANT STAFF FOR DOCUMENT DEVELOPMENT

UTILIZED NDOT AND UNIVERSITY STAFF FOR “BIG PICTURE” THINKING

NDOT RESPONSIBLE FOR STAKEHOLDERS AND MANAGEMENT

VANDERBILT UNIVERSITY

TENNESSEE STATE UNIVERSITY

THE UNIVERSITY OF TENNESSEE CHATTANOOGA

NDOT

TN TDOT Department of Transportation

Identifying the Team

Chattanooga Urban Testbed Program

- 1.2 mile real-world sandbox designed to facilitate early-stage research and development.
- All data generated within testbed is ingested into a scalable, event-driven, publish/subscribe data integration platform.
- Physical infrastructure supported by Chattanooga's gigabit fiber network.
- Object Tracking

Getting Organized

- Establishing schedule and deadlines early
- Holding Bi-weekly working group meetings
- Consistent engagement with university representatives about action items
- Master Tracker for hitting every need and milestone
- Constant reference to Technical Merit Criteria

Components of the Grant Submittal

- Overview / Project Description (1-2 pages)
- Project Location (1 paragraph)
- Community Impact (1 paragraph)
- Technical Merit Overview (2 pages)
- Project Readiness Overview (2 pages)
- Appendices
  - Appendix 1: Resumes
  - Appendix 2: Summary Budget Narrative

Overview / Project Description

Crux of the submittal

Discuss the specific issues this grant will address

- City's under-reported collisions
- Gaps in traditional safety & data accountability
- Technology installation to create a safer environment for vulnerable transportation users

University partners support

- University of Tennessee-Chattanooga had already implemented a similar innovation
- Vanderbilt had led innovative I-24 safety initiatives
- HBCU Tennessee State University sits within the project location

Overview / Project Description (continued)

Desired outcome for Stage 2

- As Vision Zero priorities and goals are implemented, Stage 2 would identify additional focus areas
- Further collaboration with WeGo and other stakeholders

Improvement of Status Quo

- Learn new ways to obtain near-miss data
- Provide installation of technology along Nashville roadways that can aid other innovations (i.e., fiber optics)
- Enhance NDOT's relationship with universities and promote job creation

Project Readiness

- Where partnerships are stressed
- Discussion of community engagement
- Qualifications of main team players (NDOT, TDOT, and Universities)

Summary Budget Narrative

Should describe all planned project costs for Stage 1

Describe how funds will be spent on the project

Consultant and university assistance with drafting costs

Community Impact

- Need to identify Historically Disadvantaged Communities
- Address benefits to these communities
- Stressed NDOT's Vision Zero Plan and safety priorities

Community Size

Program statute requires funding is based on the types of communities that projects benefit: large communities, midsize communities, rural communities, regional partnerships

- NDOT classified the city as midsize
- DOT asked if NDOT would reclassify as a **large community**
- Definition of community size was not clear – we used the geographic location of the project's population and not the metropolitan area

Equity Tool Analysis

Grant requires using one of 3 tools for equity analysis

- DOT's Historically Disadvantaged Community Status Tool
- Federally designated community development zones
- Climate and Economic Justice Screening Tool

Consultant developed memo to identify best analysis tool

Recommended Climate and Economic Justice Screening Tool and Nashville Promise Zone designation

Sweating the Small Stuff:
Other Enhancements that made a Difference!

WE MADE
A CATCHY ACRONYM

WE MADE
A PROJECT WEBSITE

WE HAD
LETTERS OF SUPPORT

SUBMITTED EARLY!

What is the NDOT SMART Grant Project?

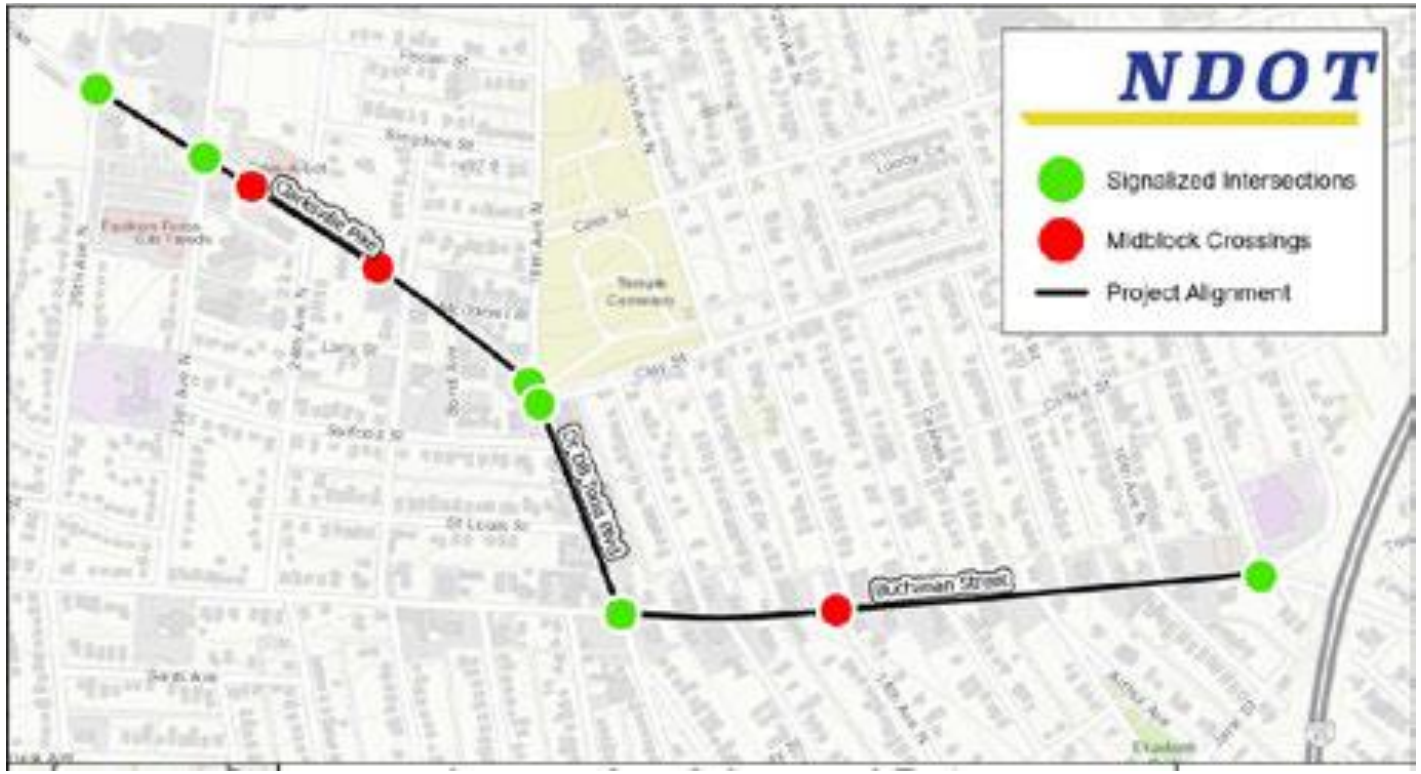
VISION ZERO
SAFE STREETS IN NASHVILLE

The Leveraging Advanced Data to Deliver Multimodal Safety (LADDMS) project advances the Nashville Department of Transportation (NDOT) and Multimodal Infrastructure's Vision Zero Initiative and strategy to partner with local Tennessee universities to provide visionary analysis for safety improvements in North Nashville.

The LADDMS project is a research collaboration effort with NDOT, University of Tennessee (Chattanooga), Vanderbilt University, Tennessee State University, Tennessee Department of Transportation (TDOT), and other local stakeholders. This project will identify safety incidents outside traditional crash reports, implementing targeted safety measures, and evaluating these measures in Downtown Nashville's complex multimodal environment under the city's Vision Zero Implementation Plan. This project will benefit the North Nashville area by improving safety for all transportation network users with an emphasis on pedestrians and bicyclists who have been traditionally underrepresented in safety studies.

LADDMS Project Description

- Identify safety issues outside traditional crash reports, implement targeted safety measures, and quickly evaluate safety measures for effectiveness through LiDAR, video, and other sensor data.
- 2-mile project corridor along Buchanan St., Dr DB Todd Jr Blvd., and Clarksville Pk in North Nashville. Locally controlled roadways with:
  - Transit
  - Bike lanes
  - Elementary Schools
  - Grocery Store
  - MDHA Housing
  - Nearby Parks
  - 2 and 4-lane roadway sections



Next Steps!

PUBLIC SURVEY

UNIVERSITY GRANT PARTNERSHIP COLLABORATION

PRE-POSITIONING FOR PHASE II (IMPLEMENTATION)

EXPANSION TO MORE VISION ZERO AND HIGH INJURY NETWORK (HIN) COMMUNITIES

THANK YOU!

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NDOT