

# DDOT Improves

# Utility coordination

# Utility Coordination



## Utility Work Coordination

Project ID:	UPRJ230128
Utility Company:	Washington Gas Light
Project Name:	BCA 302785 PLUG Feeder 15009
Budget Year:	2023
Project Phase:	None
Facility Type:	Gas
Project Identifier:	

## Utility Work Coordination

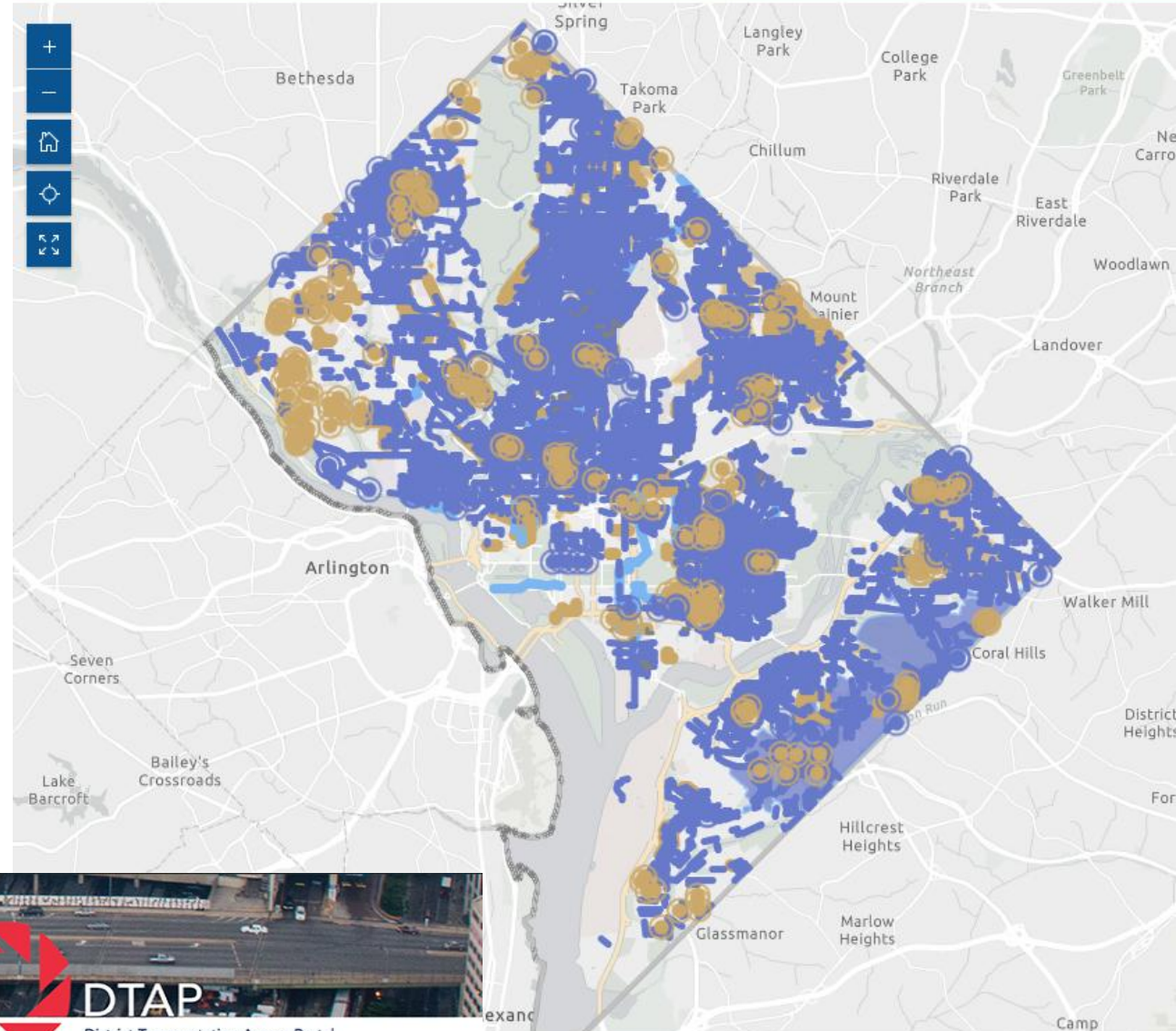
Project Phase:	None
Facility Type:	Water
Project Identifier:	
Work Type:	Construction
Status:	Under Design
Created Date:	1/7/2026, 1:52 PM
Est. Start Date:	11/30/2026
Est. Completion Date:	3/29/2032
Actual Start Date:	3/29/2032

# Utility Coordination

DDOT is working with utilities to make it way to coordinate on project planning and construction.

Tools like the DTAP tool allow utilities to layout their CIP and see what other plans are out there so they time or sequence the work

## Utility Work Coordination



# Utility Coordination

Hello John Thomas! [Log out](#)

## Add/Edit Utility Projects - Washington Gas Light



Hello John Thomas! [Log out](#)

### Edit Project Record

**Project Details** \* Required

Project ID	<input type="text" value="UPRJ260007"/>
Organization	<input type="text" value="Select"/>
Project Manager *	<input type="text" value="Select"/>
Description	<input type="text" value="Abandon approx 2000' of main and Install 205' of main."/>

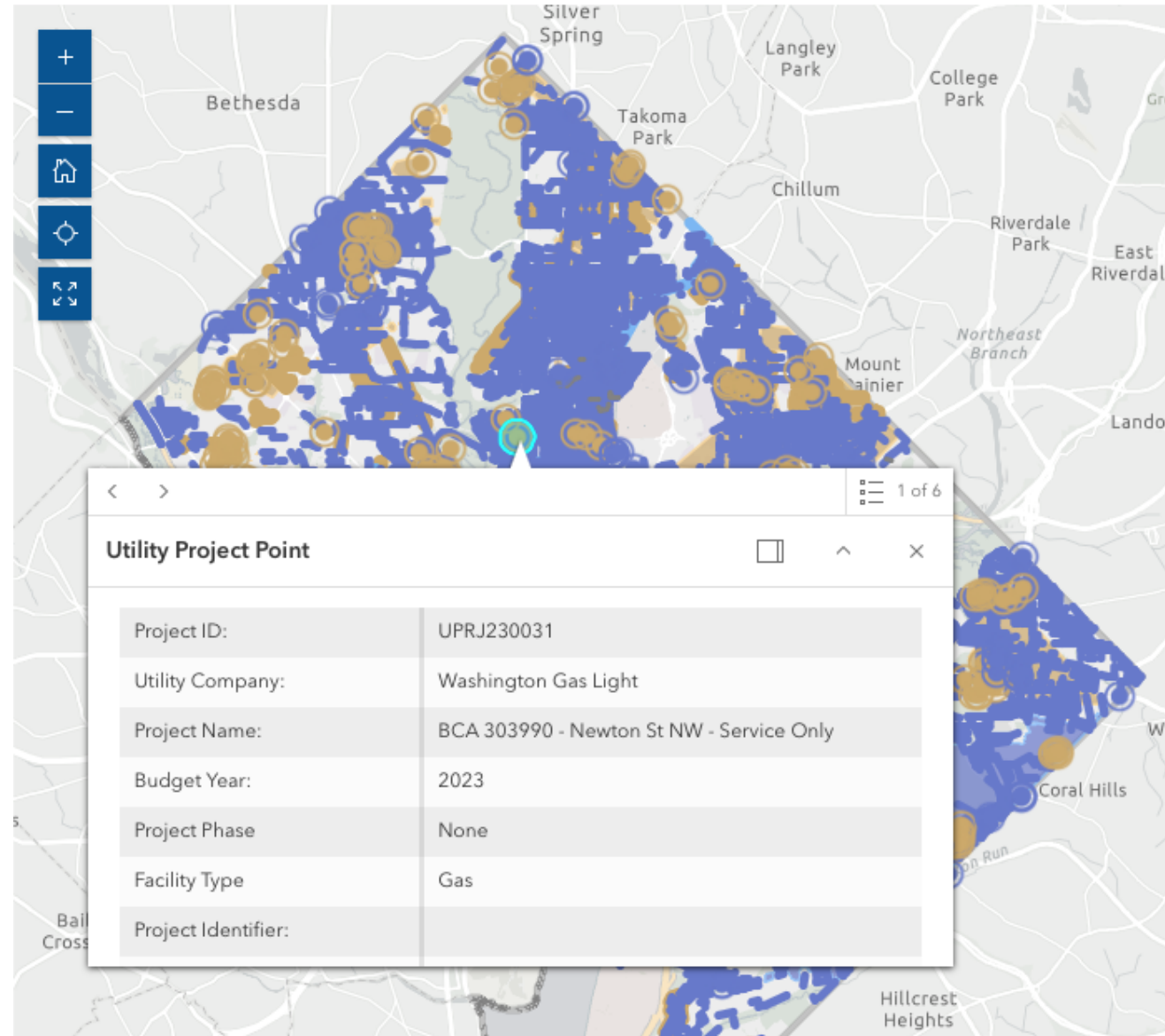
(Remaining Characters: 4946)

# Utility Coordination

DDOT is working with utilities on MOUs and other options that can help with processing permits related to larger scale work programs.

This is a work in progress but will provide clearer expectations for all sides but still will require coordination on timing and construction to avoid conflicts.

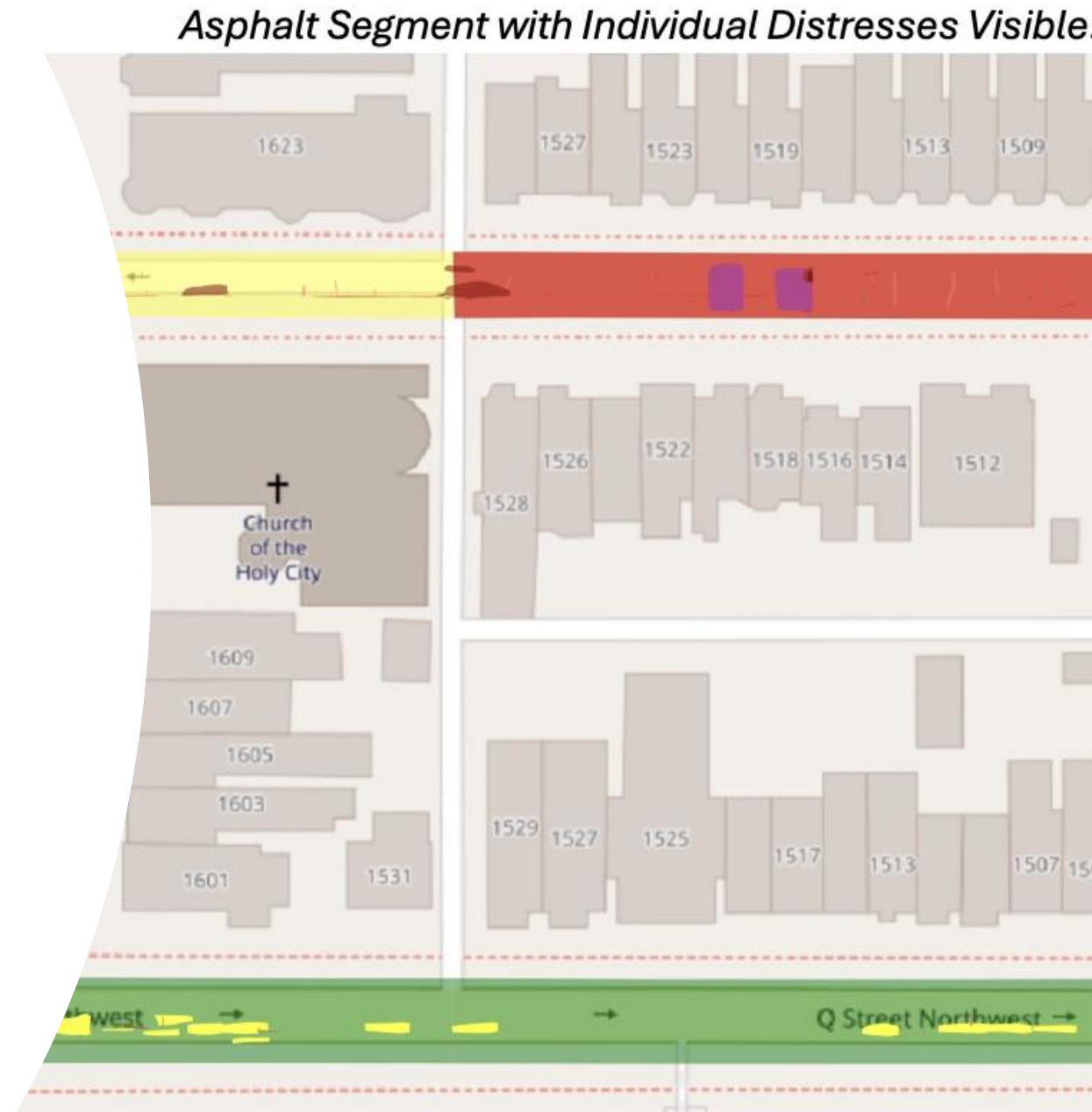
## Utility Work Coordination



asset management

# Cyclomedia (LiDAR) at DDOT

- DDOT has been using Cyclomedia LiDAR captures to update or create asset data for the agency that is focused on the roadway between the parked vehicles.
- As seen here with our Pavement Condition Index for local roadways.



# Cyclomedia (LiDAR) at DDOT

## Traffic Signs

**Traffic\_Sign\_QAQC: 40cbee13-159d-4112-acdd-ad8b7d1d9843**

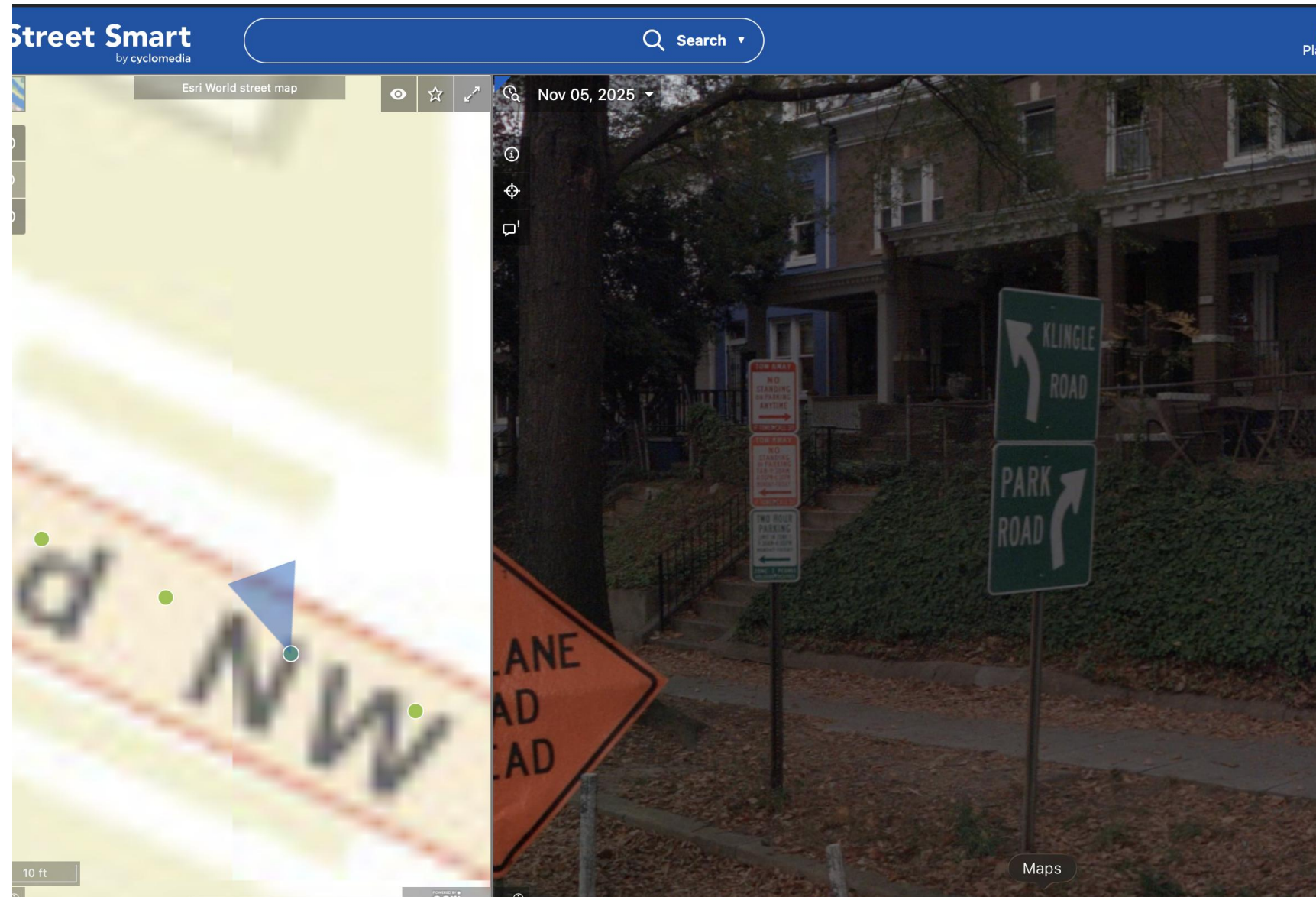
Table Edit Get directions Zoom to

ID	40cbee13-159d-4112-acdd-ad8b7d1d9843
Sign Height	36.00
Sign Width	36.00
MUTCD Code	NA
Structure ID	143158b2-930b-42fd-a25f-2152b78e8f40
Condition	FAIR
Easting	1,299,711.89
Northing	461,124.84
Elevation	167.89
Recorded At	11/29/24, 12:10 PM
Street Smart URL	<a href="#">View</a>
codedescription	NA Not Applicable ##
visualscore	3-Fair
reflectvalid	0
reflectscore	0.00

Last edited by SIGN on 12/19/2025, 1:58 PM.

# Cyclomedia (LiDAR) at DDOT

Traffic Signs



improved transportation safety through lidar

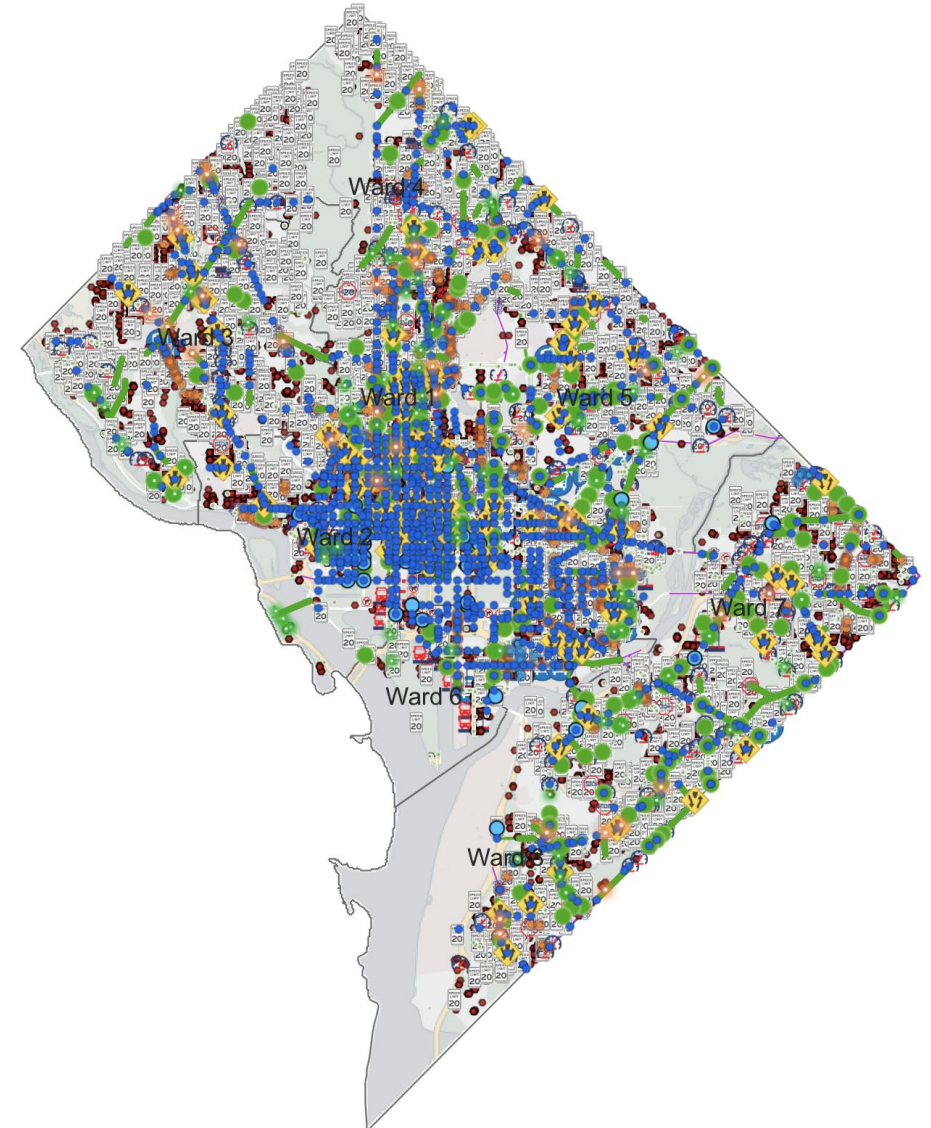
# Cyclomedia (LiDAR) at DDOT

Traffic Safety Assets – so many!

## DDOT Safety Intervention Dashboard

Find address

- > Signalization for Pedestrians
- > Intersection Movement
- > ASAP Program
- > Curb and Pylons
- > Safe Vehicle Movements
- > Signage
- > Bikeways
- > Bus Infrastructure
- > Reference Layers



DC GIS | Office of Planning | District Department of Transportation | DDOT

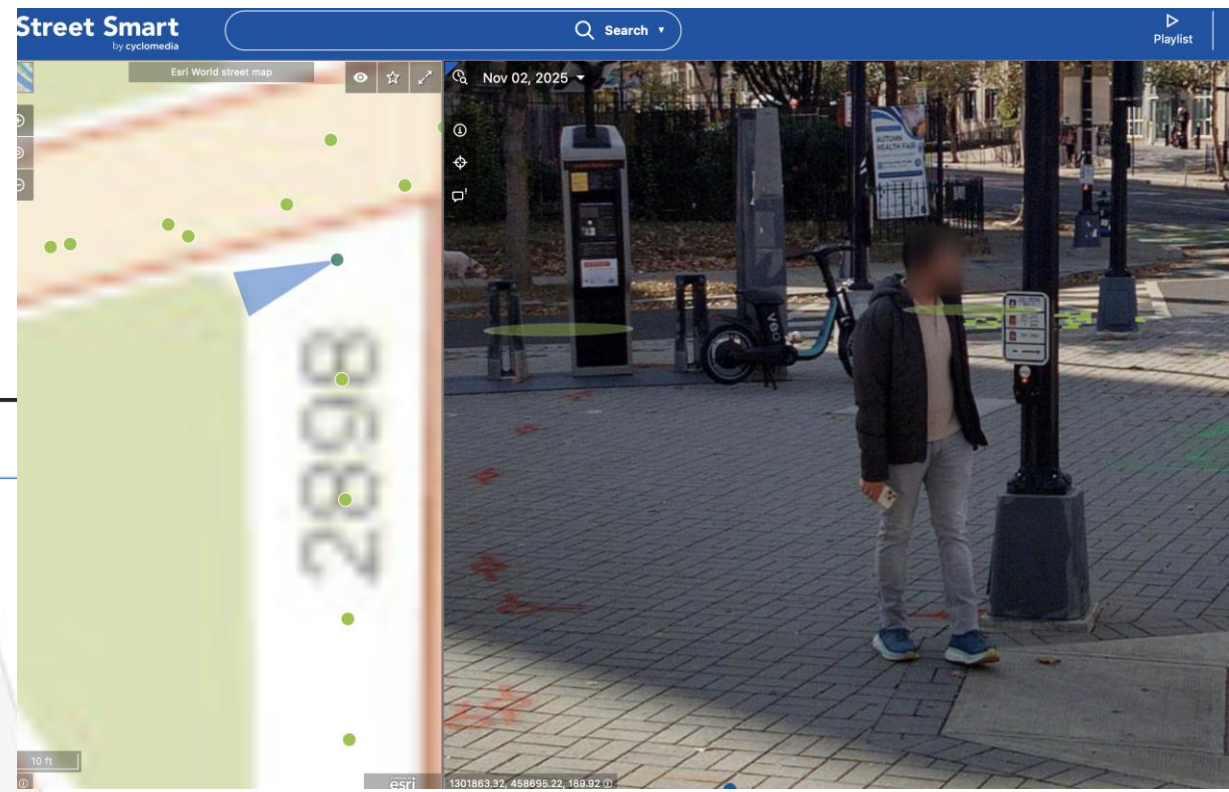
- Layers
- Search layers
- TrafficSafety Secure QAQC
  - Accessible Pedestrian Signals QAQC
  - LED Pedestrian Flashing Signs QAQC
  - Push Button QAQC**
  - Rectangular Rapid Flashing Beacons QAQC
  - School Zone Flashers QAQC
- Cw - WorkOrder
- Cw - WorkOrder
- Sign\_Secure\_QAQC - Traffic\_Sign\_QAQC
- Sign\_Secure\_QAQC - Sign\_Support\_QAQC

Traffic\_Sign\_QAQC: 8041a7b2-c85d-4441-9694-475ebc496a1b

Table Edit Get directions Zoom to

MUTCD Code	R10-3b
Structure ID	85531a3c-4b19-4ae2-bca0-2898d969bb23
Condition	POOR
Easting	1,301,856.61
Northing	459,062.66
Elevation	198.33
Recorded At	11/30/24, 10:59 AM
Street Smart URL	<a href="#">View</a>
codedescription	pedestrian push button to cross symbol white black
visualscore	1-Critical
reflectvalid	1
reflectscore	0.56

Last edited by SIGN on 12/19/2025, 1:58 PM.

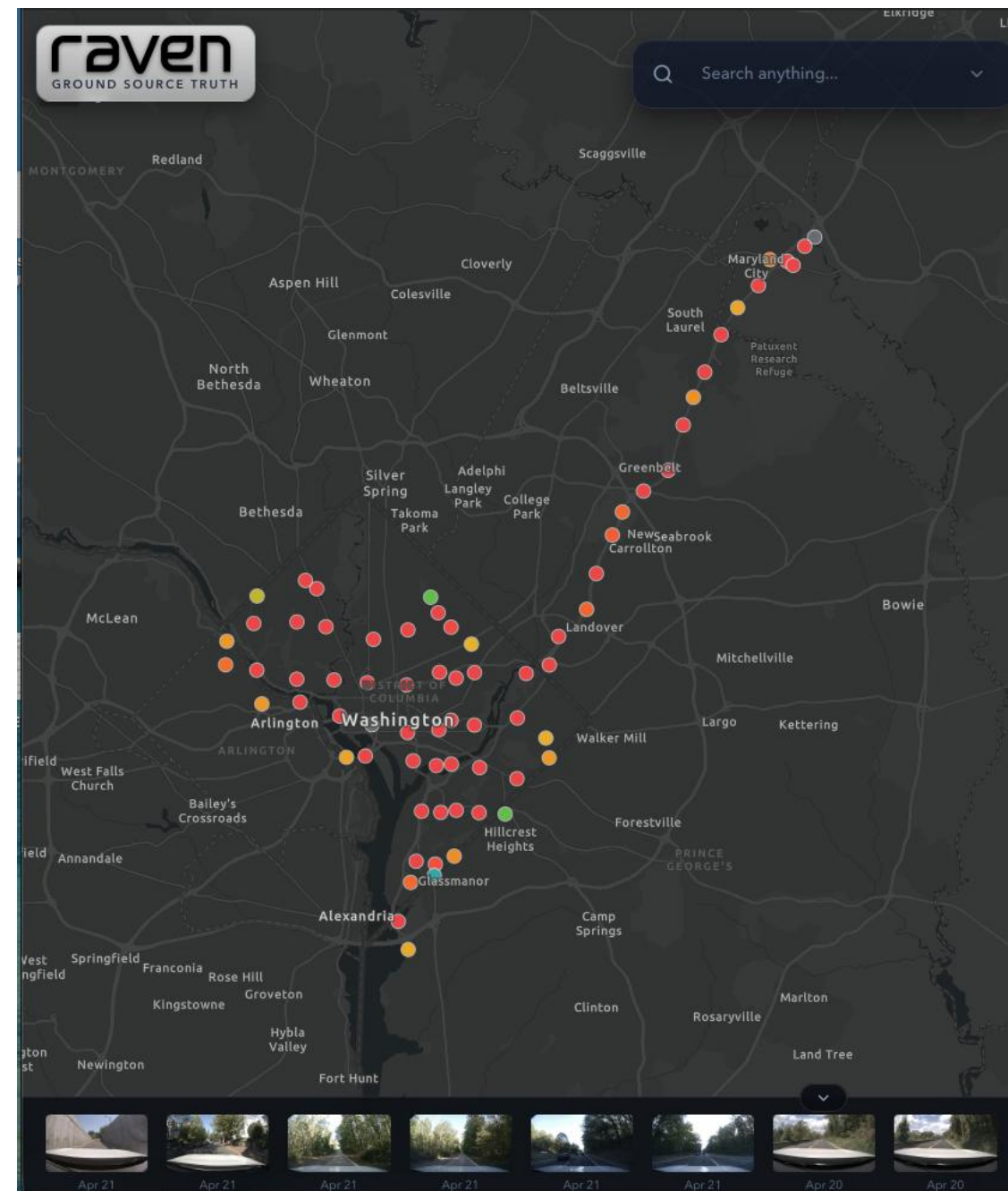


Ped Push Button

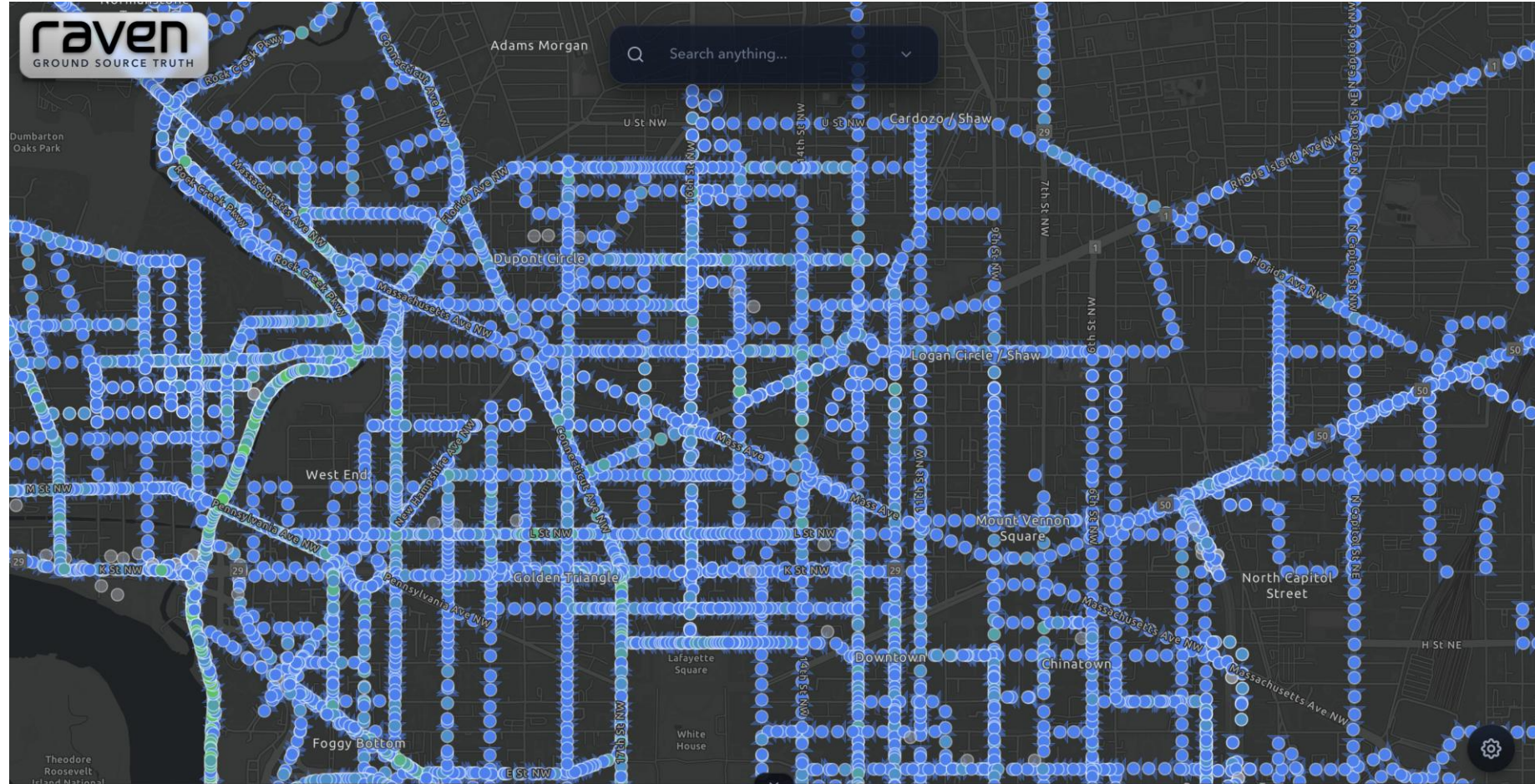
# cameras and dashboards

# Raven Camera

DDOT Has five Raven Cameras on board in our 75-day pilot test

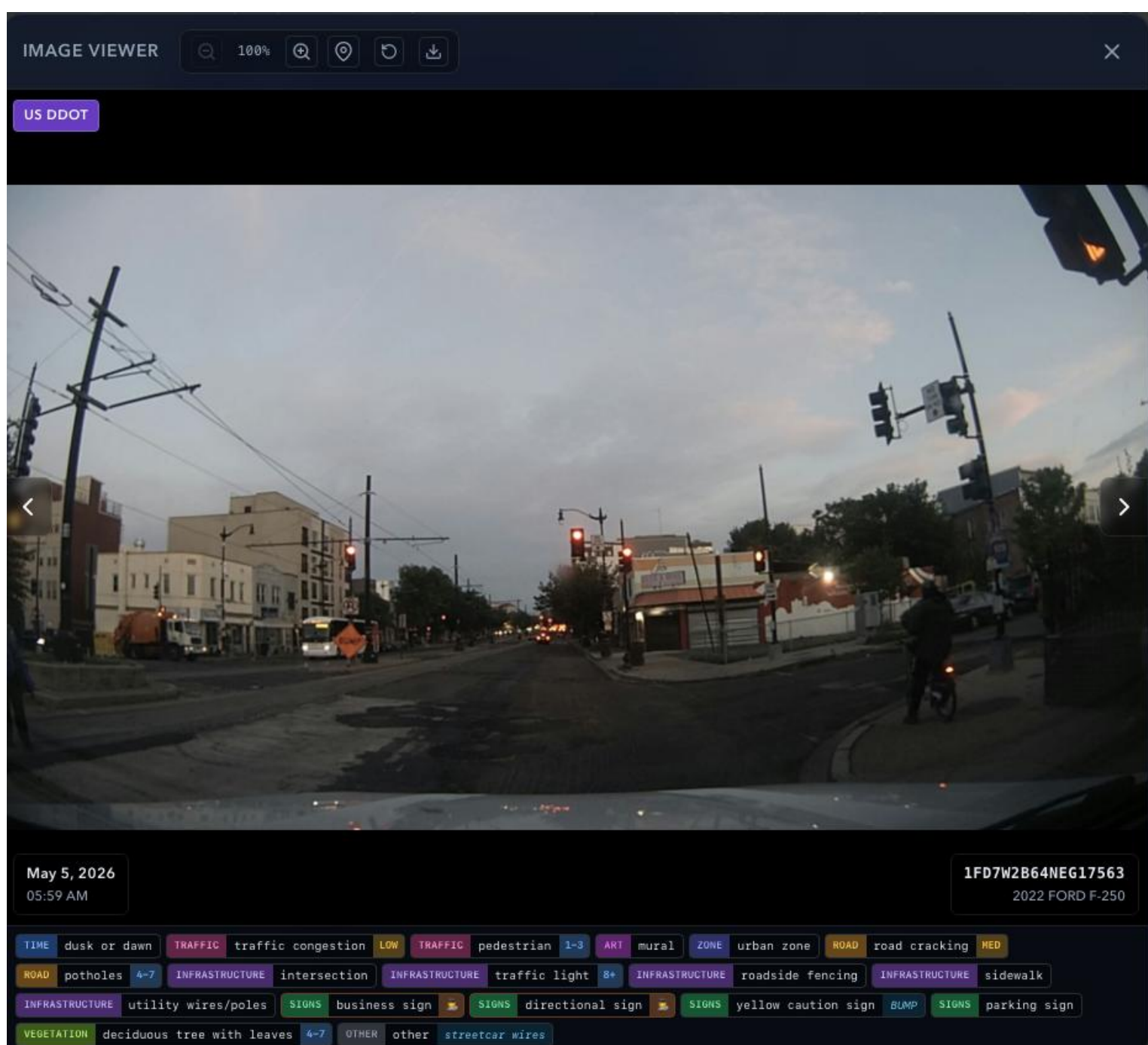


# Raven Camera



# Raven Camera

Pothole detection



# Raven Camera

## Road Cracking High detection

The screenshot displays the Raven Camera interface. At the top left is the Raven logo. A search bar at the top right contains the text "road cracking high" and a "CLEAR" button. Below the search bar is an "IMAGE VIEWER" window with a magnification of 240%. The main view is a street scene from a camera mounted on a vehicle, showing a silver car in the center lane and a red SUV in the right lane. A purple "US DDOT" label is in the top left of the image. At the bottom of the image, a timestamp reads "Apr 30, 2026 09:09 AM". Below the image is a list of detected objects and their confidence scores:

- TIME: day
- TRAFFIC: traffic congestion (MED)
- ZONE: urban zone
- ROAD: road cracking (HIGH)
- ROAD: manhole/catch basin
- ROAD: lanes
- ROAD: parked cars
- INFRASTRUCTURE: street light
- INFRASTRUCTURE: sidewalk
- INFRASTRUCTURE: bus stop
- INFRASTRUCTURE: infrastructure (4-7)
- INFRASTRUCTURE: bollard
- INFRASTRUCTURE: infrastructure
- INFRASTRUCTURE: bike rack
- SIGNS: parking sign
- SIGNS: sign
- SIGNS: no parking
- VEGETATION: deciduous tree with leaves (4-7)

# Raven Camera

## Stop Sign detection

The screenshot displays the Raven Camera interface, which includes a map on the left and right sides, a central image viewer, and a bottom panel with detection tags. The central image shows a street scene with a stop sign, a pedestrian, and a rainbow crosswalk. The bottom panel lists various detection categories and their counts.

**Map Labels:** Woodland, Adams Morgan, Dumbarton Oaks Park, M St NW, Logan, Cardozo, Mass Ave, 11th St NW, Downtown.

**Search Bar:** Stop Sign CLEAR

**Image Viewer:** IMAGE VIEWER 100% [Zoom In] [Location] [Refresh] [Download]

**US DDOT**

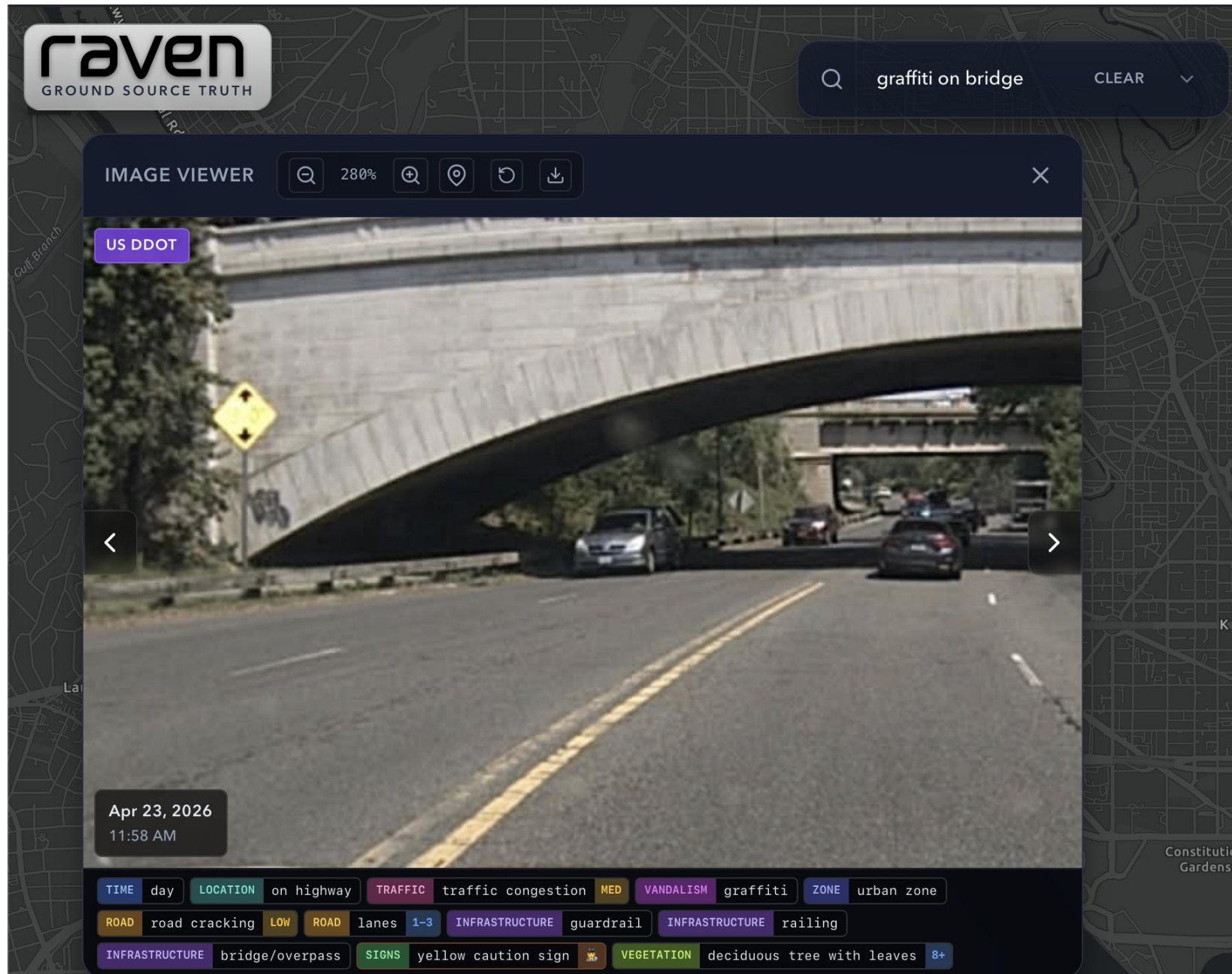
**Date and Time:** Apr 21, 2026 09:29 AM

**Detection Tags:**

- TIME: day
- TRAFFIC: pedestrian 1-3
- ZONE: residential zone
- ROAD: road cracking LOW
- ROAD: parked cars 4-7
- INFRASTRUCTURE: street light
- INFRASTRUCTURE: intersection
- INFRASTRUCTURE: sidewalk
- SIGNS: stop sign
- SIGNS: crosswalk sign
- VEGETATION: deciduous tree with leaves 8+
- VEGETATION: coniferous tree 1-3
- OTHER: other rainbow crosswalk

# Raven Camera

## Graffiti on Bridge detection



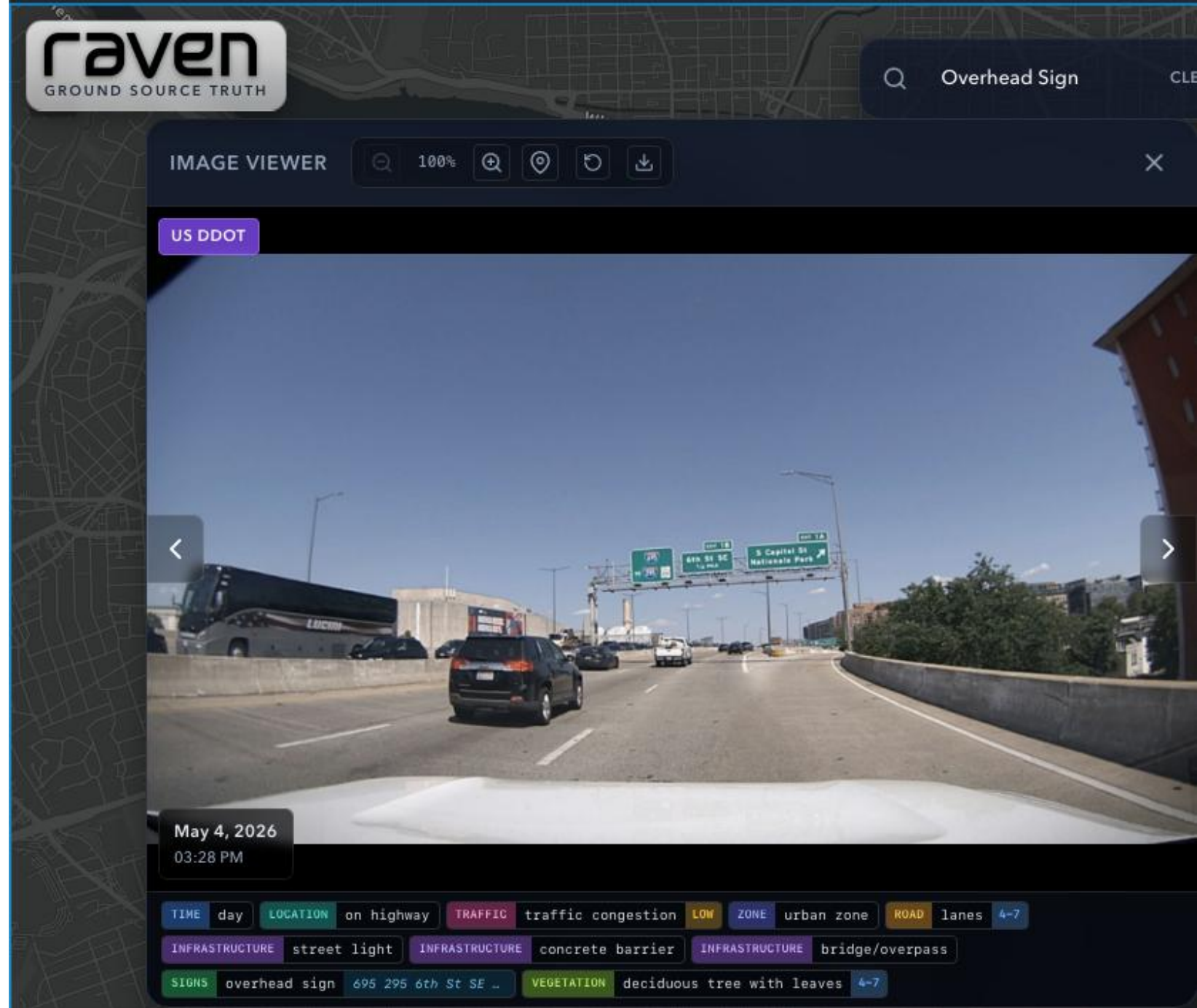
# Raven Camera

Work Zone with person detection

The screenshot displays the Raven Camera interface. At the top left is the logo for "raven GROUND SOURCE TRUTH". A search bar at the top right contains the text "work zone with pers" and a "CLEAR" button. Below the search bar is a "IMAGE VIEWER" section with a magnification level of "140%" and icons for search, zoom in, location, refresh, and download. The main video feed shows a street scene with a work zone in the distance, featuring orange traffic cones and construction equipment. A purple label "US DDOT" is overlaid on the top left of the video. Below the video, a timestamp indicates "Apr 20, 2026 01:54 PM". At the bottom, a series of colored tags identify detected elements: "TRAFFIC traffic congestion LOW", "TRAFFIC pedestrian", "ZONE urban zone", "ROAD parked cars 1-3", "INFRASTRUCTURE street light", "INFRASTRUCTURE intersection", "INFRASTRUCTURE roadside fencing", "INFRASTRUCTURE sidewalk", "INFRASTRUCTURE utility wires/poles", "SIGNS stop sign", "SIGNS directional sign", "STOP AHEAD", "SIGNS crosswalk sign", "SIGNS parking sign", "CONSTRUCTION construction site LOW", "CONSTRUCTION construction affects traffic", "CONSTRUCTION construction pylon/barrel 4-7", "CONSTRUCTION construction worker", and "CONSTRUCTION excavator". A map on the right side of the interface shows the camera's location with several colored markers.

# Raven Camera

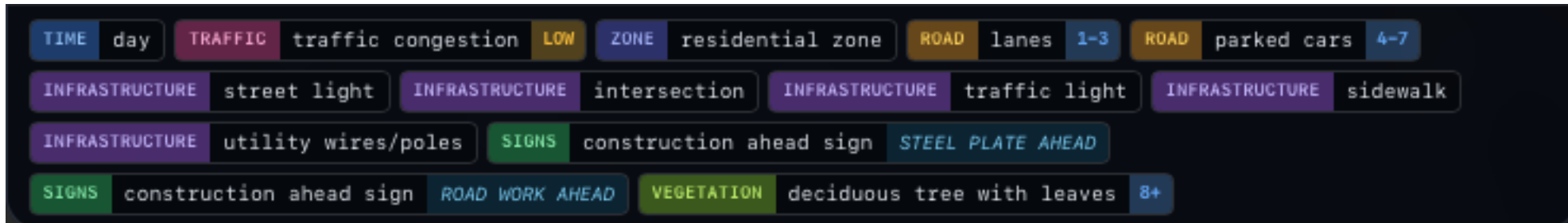
## Overhead Sign detection



# Raven Camera



Things we can detect



# Blyncoy Crowd Sourced Cameras

## Utility Patching

The screenshot displays the Blyncoy web application interface. On the left, a sidebar contains the Blyncoy logo, a search bar, and a 'DATA SETS (1)' section with a 'Remove All' button. Below this, a data set named 'April 2026 Raw Images DDOT' is listed with 'ZOOM TO', 'REMOVE', and a menu icon. An opacity slider is set to 80%. The main area shows a satellite map of a city street with a camera feed overlay. A 'Feature Information' panel is open, showing a 'Download this Table' button and a camera feed image. Below the image is a table of additional information:

- Additional Information -	
Id:	d_us_dc_util_0326_images_day_2026_04_04.fid-6c7519a3_19d5448bd92_-77b1
Heading:	134
Local Time:	2026-03-26T17:10:27Z
Source:	captain-picard
Frame Number:	0
Render_type:	datetime_image_additional_info
Full_proxy_host:	https://api.blyncoy.io/scry/payverlm

At the bottom right, the coordinates 'Lat / Lon 38.91181°N, 77.04654°W' are displayed.

# Blyncoy Crowd Sourced Cameras

## Crosswalk Condition Detection

The screenshot displays the Blyncoy web application interface. On the left, a sidebar contains the Blyncoy logo, a search bar, and a 'DATA SETS (1)' section with a 'Remove All' button. Below this, a data set 'April 2026 Raw Images DDOT' is selected, with options for 'ZOOM TO', 'REMOVE', and an opacity slider set to 80%. The main area features a map of Saint Elizabeths with a camera location marked. A 'Feature Information' panel on the right shows 'April 2026 Raw Images DDOT - Site Data' and a 'Download this Table' button. Below this is a camera feed showing a street view with a crosswalk. A 'Additional Information' panel provides metadata for the image, including ID, heading, local time, source, frame number, render type, and full proxy host. At the bottom right, the current latitude and longitude are displayed as 38.83107°N, 77.00465°W.

**Additional Information**

- Id: d\_us\_dc\_util\_0326\_Images\_day\_2026\_04\_04.fid-421ecb4f\_19d5448bd7e\_-6f07
- Heading: 103
- Local Time: 2026-04-01T17:33:03Z
- Source: captain-picard
- Frame Number: 0
- Render\_type: datetime\_image\_additional\_info
- Full\_proxy\_host: https://api.blyncoy.io/scry/payverlm

April 2026 Raw Images DDOT - Site Data

Lat / Lon 38.83107°N, 77.00465°W

Drones, Robots and AVs – oh my

# Drone Operations

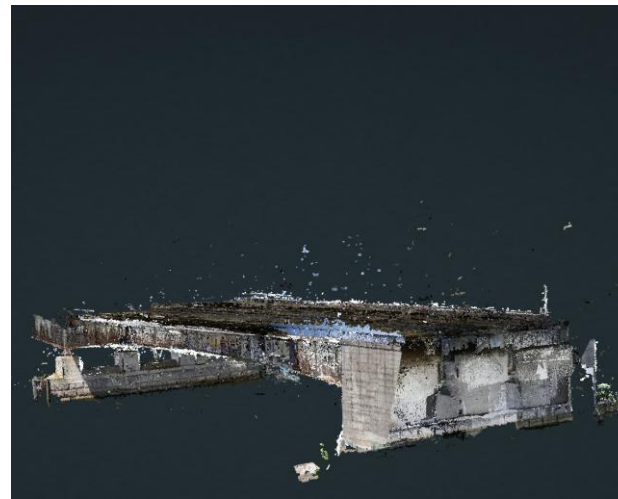
## Drone Models Deployed

Skydio 2 Plus, Skydio X2E and Autel Evo Max  
4T



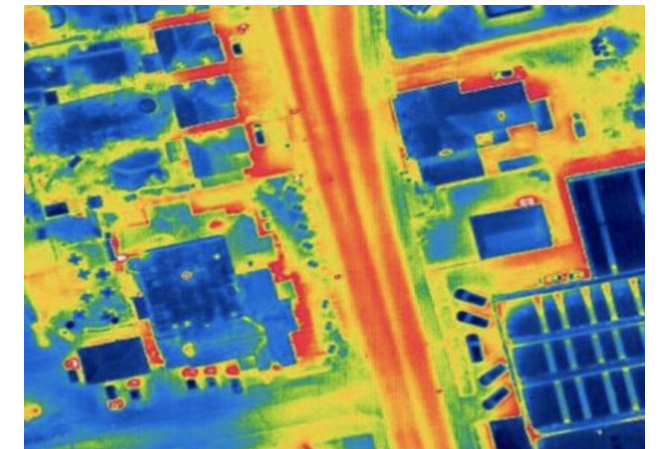
## Data Analytics

Esri 3D Site Scan to enable “phodar”  
imaging of assets.



## Sensor Technology

High-resolution cameras, obstacle detection  
and avoidance systems, thermal imaging



# Drone Operations

## Bridge Inspections

- Pennsylvania Ave Bridge
- Theodore Roosevelt Bridge

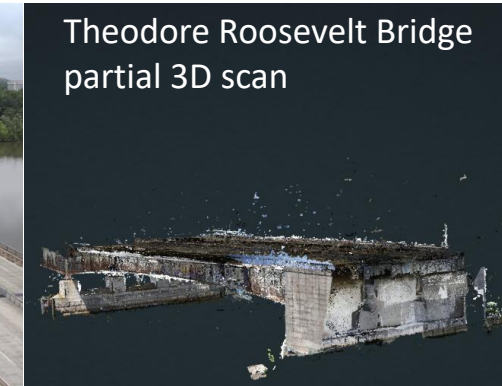
## DDOT Partnerships

- DOEE – Linnean Gully Stream Restoration
- DPW – DPW Annual Truck Touch

## District Public Events

- Open Streets DC

## Tree Audits



# Drone Operations



# KiwiBot Signwalk Condition

The screenshot displays the KiwiBot web application interface. On the left, there is a search bar and a list of filters for surface issues: Dips/Heaves, Gaps (half-inch wide or more), Grass, Minor cracking (less than half-inch wide), Missing brick pavers, None, Severe spalling, and Steep or multiple cross. The main map shows Columbia Heights with several red dots representing signwalk points. A detailed view of a point is shown, including a photo of a sidewalk with a dip, a score of 20.0, and a 'Poor' condition. The detailed view includes the following information:

- Point ID: -5201175670487452065
- Issue: Dips/Heaves
- Defects: 1
- Sidewalk Material: Concrete
- Timestamp: 9/19/2025, 5:05:40 PM
- Reasoning: The sidewalk has a significant dip/heave in the foreground, creating a tripping hazard.

On the right side of the map, there is a summary of the data: TOTAL POINTS 165, AVG SCORE 33.8, and a legend for condition scores: Excellent (blue), Great (green), Good (yellow), Fair (orange), and Poor (red). A 'View Table' button is also visible.

We classified each point and displayed its details, including a photo, the identified issue, a brief explanation of the reasoning, and the corresponding score.

# KiwiBot Signwalk Condition

We can filter by surface conditions such as dips and heaves, gaps wider than half an inch, grass, minor cracking, missing brick pavers, no issues, and severe spalling.



**20.0**

Poor

**Point ID:** -252280460040101474  
**Issue:** Dips/Heaves  
**Defects:** 1  
**Sidewalk Material:** Concrete  
**Timestamp:** 10/1/2025, 3:17:21 PM

**Reasoning:**  
 The sidewalk has several areas where bricks are displaced, creating dips and heaves.



**45.0**

Poor

**Point ID:** -8328011543784308876  
**Issue:** Severe spalling  
**Defects:** 2  
**Sidewalk Material:** Concrete  
**Timestamp:** 9/26/2025, 9:24:04 PM

**Reasoning:**  
 The sidewalk exhibits cracking and spalling, particularly around the curb and in the concrete slabs. There are also some red spray paint markings on the sidewalk.



**60.0**

Poor

**Point ID:** -7417881428805526452  
**Issue:** Gaps (half-inch wide or more)  
**Defects:** 1  
**Sidewalk Material:** Concrete  
**Timestamp:** 9/26/2025, 4:00:55 PM

**Reasoning:**  
 The sidewalk has a large circular gap filled with leaves, which is a significant defect.



**20.0**

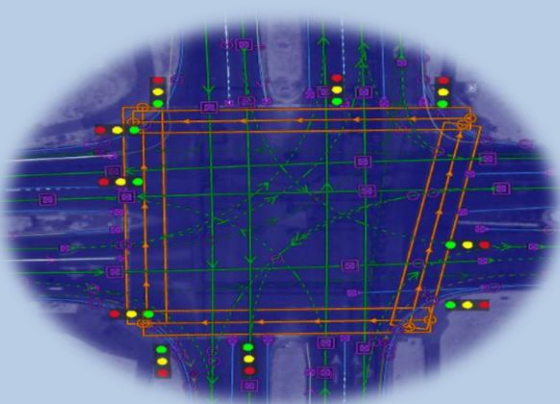
Poor

**Point ID:** -7188046740038378496  
**Issue:** Missing brick pavers  
**Defects:** 1  
**Sidewalk Material:** Concrete  
**Timestamp:** 7/15/2025, 9:01:04 PM

**Reasoning:**  
 The paver section of the sidewalk exhibits minor dips and heaves where some individual pavers are slightly uneven, creating small height differences. The concrete section appears to be in good condition. No other significant defects such as cracking, spalling, large gaps, non-uniform cross slopes, grass/weeds in joints, or missing bricks are visible.

# AVs may be an option in the future

## Mapping and Simulation



Drivers in sensor-equipped vehicles navigate streets to create highly detailed maps. Simulated scenarios using map data allow testing and improvement of the autonomous system before field testing

## Field Testing with a Safety Driver



Vehicles operate with a safety driver ready to take over in case of emergency, system failure, or if the vehicle exits its operational limits. **DC law allows testing with a safety driver on DC-owned streets** (separate permission required for NPS and other non-DC owners).

## Field Testing With No Driver



Vehicles operate without a safety driver. The system or a remote operator acts as the fallback driver in an emergency or system failure.



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# District Department of Transportation

**250 M St SE | Washington, DC 20003 | 202.673.6813**