MOBILITY + COMMUNITIES + ENVIRONMENT + ECONOMY

SCAG

Transportation Data Analysis Technical Assistance Program

JULY 2026

Public Accessways

Culver City

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List of Exhibits

Transportation Data Analysis Technical Assistance Program Overview

The SCAG Transportation Data Analysis Technical Assistance (TA) Program was established to advance the use of emerging transportation data platforms in local and regional planning practice. The program operates under SCAG's Regional Pilots Initiative program, which carries out demonstrations of next generation technologies to guide the Southern California region toward a more sustainable region. The TA Program demonstrates how public agencies can utilize big data analytics to address complex transportation planning questions that support regional sustainability goals aimed at reducing transportation-related carbon reduction emissions.

To support this effort, SCAG procured a regional subscription to StreetLight Insight®, providing data access at no cost to local agencies through June 2026. This subscription enables access to multimodal origin-destination data, safety analytics, truck telematics data, near real-time speed data, transportation network company activity data, and integrated transportation network tools. This subscription enables public agency staff and regional stakeholders to analyze local and regional travel behavior patterns using big data analytics to inform decisions that reduce emissions, improve multimodal access and connectivity, mitigate safety risk, and ensure equitable access to the broader transportation system.

The key objectives of the Transportation Data Analysis TA Program include:

- Encourage a culture of data-driven decision-making across the region.
- Bridge traditional and emerging planning approaches, integrating big data with established planning tools and policy frameworks.
- Refine complex transportation research questions so they are appropriately scoped and right sized for big data analysis.
- Empower local partners through technical guidance, hands-on analytical support, and expanded access to advanced mobility datasets.
- Promote cross-platform validation, encouraging comparison between big data sources and traditional datasets to enhance data literacy and analytical reliability.
- Document best practices for leveraging big data in transportation planning and public sector decision-making.
- Equitably deliver data access and technical guidance, prioritizing capacity building among smaller and underserved jurisdictions.

Through a request for questions process, SCAG solicited research questions from public agencies. Selected case studies demonstrate practical applications of mobility analytics to address transportation safety, congestion, transit performance, demand management, and land use impacts on transportation.

Case Study Overview

The Culver City Public Accessway Network analysis was conducted as part of the SCAG TA Program to evaluates the effectiveness of big data for network-based pedestrian accessibility and vehicle speed analyses. Additionally, this effort tests the efficacy of big data for strengthening nexus and proportionality findings within a specific plan framework. Nexus and proportionality require demonstrating that new development generates impacts, such as increased population and travel demand, that create a clear need for additional pedestrian infrastructure, and that the required improvements, such as constructing public accessways, are reasonable and proportional responses to those impacts.

This case study was guided by the following research question, refined through the TA Program:

- **Case Study Research Question**: Can big data and innovative analytics be used to quantify the public health, safety, and connectivity benefits of the proposed Public Accessway Network?

PLANNING CONTEXT AND NEED

The Public Accessways and Public Accessway Network (formerly the Reciprocal Paseo Network) is a system of publicly accessible pedestrian and bicycle pathways planned within the Fox Hills Specific Plan area to improve mobility, reduce transportation impacts associated with new high-density development, and advance public health and safety objectives. As described in the Fox Hills Specific Plan, the network is intended to break up large suburban "mega blocks," some approaching 2,000 feet in length, and establish a more connected, walkable, and transit-supportive urban form.

Fox Hills was originally developed as a car-oriented office and commercial district, with curvilinear streets and limited pedestrian connectivity. As redevelopment occurs under the Mixed-Use Medium and Mixed-Use High designations, residential density and overall trip generation are expected to increase. While this growth supports the City's vision for a mixed-use, transit-accessible neighborhood, it also increases pedestrian, bicycle, and vehicle activity within a roadway network that was not designed for high levels of multimodal travel. The Public Accessway Network improves circulation, shortens walking distances, and provides safer alternatives to high-speed arterial roadways.

POLICY ALIGNMENT

Implementation of the Public Accessway Network supports and advances the following goals and subgoals outlined in Culver City's Mobility Element:

- **Goal M-1 (Safety):** Reduce fatal and severe injury crashes and prioritize safety corridors
- **Goal M-2 (Complete Streets):** Establish a cohesive active transportation network
- **Goal M-4 (Equitable Access):** Improve pedestrian connections to key land uses and transit

In addition, the City's Local Road Safety Plan (LRSP) identifies high-risk roadways, reinforcing the need for safer, lower-stress pedestrian connections and infrastructure. Additionally, federal safety guidance, including Vision Zero and Safe System principles, further supports reducing exposure on high-speed roadways.

ANALYSIS FRAMEWORK

This analysis evaluates the public health and safety benefits of the proposed Public Accessway Network from two primary perspectives:

- **Pedestrian Travel Time** – By introducing mid-block connections, the accessways reduce pedestrian travel distances and circuity between housing, transit, employment centers, retail destinations, and community amenities. Shorter and more direct routes increase the practicality of walking and biking for daily trips and support mode shift away from short vehicle trips, contributing to reduced vehicle miles traveled (VMT) and carbon reduction.
- **Pedestrian Exposure** – Existing roadway conditions within and surrounding Fox Hills include operating speeds that frequently exceed 30 mph, a nationally recognized threshold at which pedestrian fatality risk increases substantially. Currently, many common walking routes require travel along or across high-speed corridors identified in the City's Local Road Safety Plan as high-risk roadways. The Public Accessway Network aims to provide separated, lower-stress pathways that reduce pedestrian exposure to high-speed traffic, decrease the number of required arterial crossings for internal neighborhood trips, and improve overall safety outcomes consistent with Vision Zero and Safe Systems principles.

ROLE OF BIG DATA

USES AND BENEFITS

This case study evaluates how big data can support planning and policy decisions in this context. Connected vehicle data (CVD) from StreetLight Data was used to provide recent, segment-level vehicle operating speed information for all roadways in Fox Hills. StreetLight Data provides a significant benefit over traditional data collection methods by offering a historical, annualized view of vehicle travel behavior rather than a single point-in-time snapshot. This allows the city to look back in time and compare travel patterns across different periods, supporting before-and-after analyses and ongoing monitoring. Culver City can use StreetLight Data to track changes in vehicular travel behavior in Fox Hills over time, as well as support broader area-specific and citywide assessments.

LIMITATIONS AND APPLICATIONS IN THIS STUDY

Big data was not used to estimate pedestrian travel times. The pedestrian travel time analysis was conducted using a GIS-based network approach with assumed walking speeds to isolate the impact of the proposed Public Accessway Network on route directness and distance.

This approach was selected due to limitations associated with applying big data at a neighborhood scale for pedestrian routing and origin-destination analysis. Big data sources such as StreetLight estimate pedestrian activity based on modeled and aggregated data, which can introduce uncertainty at smaller geographic scales. In addition, sample size limitations from StreetLight's location-based service (LBS) data stream may affect the reliability of pedestrian trip patterns within a focused study area like Fox Hills.

As a result, big data was applied where it provides the greatest value, understanding vehicle operating speeds and exposure to higher-speed traffic, while traditional methods were used for pedestrian travel time analysis to ensure a more controlled and reliable assessment of connectivity impacts.

PURPOSE OF THIS MEMORANDUM

This memorandum documents the methodology and findings of the public health and safety analysis supporting the Public Accessway Network, including evaluation of operating speeds, pedestrian travel time reductions, and exposure risk along high-speed corridors. It is also intended to demonstrate how big data can be applied and evaluated, and when alternative methods are more applicable. The findings are intended to support Culver City in understanding, safety, access, and VMT-related benefits of the proposed network, and provide data-driven foundation for future planning efforts. However, they are not intended to provide final or conclusive recommendations.

Methodology

PEDESTRIAN TRAVEL TIME ANALYSIS

To evaluate the effect of the proposed Public Accessway Network on pedestrian connectivity, a network-based travel time analysis was conducted comparing existing conditions to a scenario including the proposed accessways.

First, GIS centerlines representing the existing roadway network were mapped. A second network layer was created by adding the proposed public accessway alignments to the existing network. These two network scenarios (existing network and existing + accessways network) were analyzed separately.

Representative pedestrian trip origins were selected at dispersed residential and mixed-use buildings throughout the Fox Hills Specific Plan area. These included:

- 5800 Bristol Parkway
- 5740 Canterbury Drive
- 5950 Canterbury Drive
- 6174 Buckingham Parkway
- 5855 Green Valley Circle
- 6083 Bristol Parkway
- 5990 Green Valley Circle

Trip destinations were defined as the four proposed mobility hubs identified in the specific plan:

- Culver City Transit Center
- Bristol & Green Valley
- Buckingham & Green Valley (proxy for Fox Hills Park)
- Hannum & Buckingham
- Fox Hills Park

For each unique origin–destination pair, the shortest walking route was calculated under both network scenarios. Walking time was derived using an assumed average walking speed of four feet per second (used in California MUTCD to determine pedestrian clearance time). Differences in route length and travel time between the two scenarios were used to quantify improvements attributable to the Public Accessway Network.

PEDESTRIAN EXPOSURE ANALYSIS

To evaluate pedestrian exposure to high-speed traffic conditions within the Fox Hills Specific Plan area, segment-level operating speed data were obtained from **StreetLight Connected Vehicle Data**. The

dataset reflects a **one-year analysis period from October 2024 through October 2025**. Speeds represent bi-directional **85th percentile vehicle speeds.**

This analysis establishes baseline operating speed conditions on corridors where pedestrians currently travel and provides context for evaluating how the proposed Public Accessway Network would reduce pedestrian exposure to higher-speed roadway environments by providing separated, lower-stress walking routes.

Results and Recommendations

PEDESTRIAN TRAVEL TIME ANALYSIS

A total of 28 origin-destination (O-D) pairs were evaluated between representative residential locations and the four designated mobility hubs within the Fox Hills Specific Plan area. The analysis compared shortest walking routes under:

- Existing roadway network conditions, and
- Existing network plus the proposed Public Accessway Network.

KEY FINDINGS

Twenty-two of the 28 O–D pairs (79 percent) experience a change in optimal walking route when the Public Accessway Network is introduced.

For these affected trips, the average travel time reduction is two **minutes**.

Travel time savings vary by trip, with several O-D pairs experiencing more substantial reductions due to the elimination of circuitous routing around large blocks within Fox Hills.

The specific origin–destination pairs that experience travel time savings are summarized in **Table 1 – Travel Time Savings by O-D Pair**. Corresponding route comparisons (existing vs. with accessways) for O-D pairs with a travel time savings of one minute or greater are illustrated in **Figure 1-8** in the appendices**.**

Table 1. Travel Time Savings by Origin-Destination Pair

Origin	Destination	Existing Walk Time (min)	Future Walk Time (min)	Travel Time Savings (min)
5800 Bristol Pkwy	Culver City Transit Center	11.8	11.8	-
5800 Bristol Pkwy	Bristol/Green Valley Mobility Hub	9.1	9.1	-
5800 Bristol Pkwy	**Buckingham/Green Valley Mobility Hub**	**15.4**	**11.7**	**3.7**
5800 Bristol Pkwy	Hannum/Buckingham Mobility Hub	4.7	4.3	0.4
5740 Canterbury Dr	Culver City Transit Center	19.0	18.9	0.1
5740 Canterbury Dr	Bristol/Green Valley Mobility Hub	15.9	15.7	0.2
5740 Canterbury Dr	Buckingham/Green Valley Mobility Hub	11.7	11.7	-
5740 Canterbury Dr	Hannum/Buckingham Mobility Hub	2.3	2.3	-
5950 Canterbury Dr	**Culver City Transit Center**	**22.1**	**20.3**	**1.8**

Origin	Destination	Existing Walk Time (min)	Future Walk Time (min)	Travel Time Savings (min)
5950 Canterbury Dr	Bristol/Green Valley Mobility Hub	14.2	14.2	-
5950 Canterbury Dr	Buckingham/Green Valley Mobility Hub	8.4	7.9	0.5
5950 Canterbury Dr	Hannum/Buckingham Mobility Hub	5.5	5.3	0.2
6174 Buckingham Pkwy	**Culver City Transit Center**	**24.5**	**17.5**	**7.1**
6174 Buckingham Pkwy	Bristol/Green Valley Mobility Hub	9.5	9.4	0.1
6174 Buckingham Pkwy	Buckingham/Green Valley Mobility Hub	3.1	2.8	0.3
6174 Buckingham Pkwy	Hannum/Buckingham Mobility Hub	7.5	7.1	0.4
5855 Green Valley Cir	**Culver City Transit Center**	**24.3**	**12.6**	**11.7**
5855 Green Valley Cir	Bristol/Green Valley Mobility Hub	3.5	3.1	0.4
5855 Green Valley Cir	Buckingham/Green Valley Mobility Hub	3.3	3.3	0.1
5855 Green Valley Cir	**Hannum/Buckingham Mobility Hub**	**13.9**	**12.0**	**2.0**
6083 Bristol Pkwy	**Culver City Transit Center**	**20.4**	**17.3**	**3.1**
6083 Bristol Pkwy	Bristol/Green Valley Mobility Hub	3.6	3.4	0.2
6083 Bristol Pkwy	Buckingham/Green Valley Mobility Hub	10.1	9.7	0.4
6083 Bristol Pkwy	**Hannum/Buckingham Mobility Hub**	**20.1**	**17.2**	**2.9**
5990 Green Valley Cir	Culver City Transit Center	10.4	10.3	0.1
5990 Green Valley Cir	Bristol/Green Valley Mobility Hub	3.6	3.6	-
5990 Green Valley Cir	Buckingham/Green Valley Mobility Hub	11.2	11.2	-
5990 Green Valley Cir	**Hannum/Buckingham Mobility Hub**	**24.5**	**17.5**	**6.9**

INTERPRETATION

The results of the pedestrian travel time analysis demonstrate that the Public Accessway Network:

- Improves route directness for key residential-to-transit and residential-to-mobility hub trips.
- Reduces pedestrian circuity created by large block sizes.
- Enhances internal neighborhood connectivity.
- Increases the practicality of walking for short, local trips.

These connectivity improvements support increased active transportation use and reduce reliance on indirect routes along higher-speed roadways.

The following section evaluates how the proposed Public Accessway Network could also reduce pedestrian exposure to elevated operating speeds within the Fox Hills roadway network.

PEDESTRIAN EXPOSURE ANALYSIS

OPERATING SPEED CONDITIONS

As shown in **Figure 9**, most primary roadways within the Fox Hills Specific Plan area, including Bristol Parkway, Green Valley Circle, Fox Hills Drive, Hannum Avenue, and Buckingham Parkway, as well as adjacent arterials (Slauson Avenue, Sepulveda Boulevard, and Centinela Avenue), have historical 85th percentile operating speeds exceeding 30 mph.

Operating speeds above 30 mph represent a critical safety threshold. Federal Highway Administration research and vision zero guidance demonstrate that pedestrian fatality risk increases exponentially at speeds above approximately 30 mph.

Additionally, research shows that the number one indicator of crash severity is speed. The average risk of death for a pedestrian struck by a vehicle is[1]:

- 10% fatality risk at an impact speed of 23 mph.
- 25% fatality risk at an impact speed of 32 mph.
- 50% fatality risk at an impact speed of 42 mph.
- 75% fatality risk at an impact speed of 50mph.
- 90% fatality risk at an impact speed of 58 mph.

Additionally, the average risk of severe injury for a pedestrian struck by a vehicle reaches 50% at an impact speed of 31 mph.

[1] Fatality Analysis Reporting System; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2020, DOT HS 813 118, June 2021; AAA Foundation for Traffic Safety, Impact Speed and a Pedestrian's Risk of Severe Injury or Death; National Traffic Speeds Survey III: 2015, DOT HS 812 485, March 2018

The presence of these speeds within Fox Hills indicates elevated pedestrian exposure risk and reduced comfort conditions along the existing roadway network.

HIGH-RISK CORRIDORS

Culver City's Local Road Safety Plan identifies **Centinela Avenue and Sepulveda Boulevard** as High-Risk Roadways. These corridors serve as primary access routes between Fox Hills residential areas, commercial destinations, and the Culver City Transit Center.

Under existing conditions, pedestrian access to transit and nearby destinations requires travel along or across these higher-speed corridors, increasing both crash exposure and potential injury severity.

ROLE OF THE PUBLIC ACCESSWAY NETWORK

The proposed Public Accessway Network, including the paseo connection and 12-foot sidewalk dedication between Hannum Avenue and Sepulveda Boulevard, provides:

- Off-street, lower-stress pedestrian and bicycle routes.
- Reduced exposure to operating speeds above 30-35 mph.
- Improved access to transit and neighborhood destinations.

Key Takeaways and Potential Next Steps

This case study highlights several key lessons regarding the application of big data in neighborhood-scale transportation planning efforts. Big data is most effective when applied to questions seeking to understand vehicular travel patterns and behavior, and pedestrian and bicyclist exposure at both a segment- and area-level scale. Traditional analysis methods might be better suited for analyses that require precise mobility routing or are sensitive to sample size, such as pedestrian travel time and routing at a localized scale. Second, the analysis demonstrates the importance of pairing multiple analytical approaches.

Looking ahead, Culver City can build on this effort by continuing to integrate big data into ongoing monitoring of travel patterns in Fox Hills. Potential next steps could include:

- Using StreetLight Data or similar big data vendor to track changes in vehicle operating speeds within or adjacent to Fox Hills.
- Conducting before- and after evaluation to assess how new accessways influence travel behavior and usage. This is contingent on active transportation data becoming more widely available and stable in big data.
- Incorporating additional data such as crash data, pedestrian counts, speed surveys to further validate and expand upon findings.
- Applying these analyses to other areas of the city.

Overall, this effort demonstrates a scalable approach for applying, evaluating, and integrating big data into local planning processes, while maintaining flexibility to use traditional analysis methods where they are most appropriate.

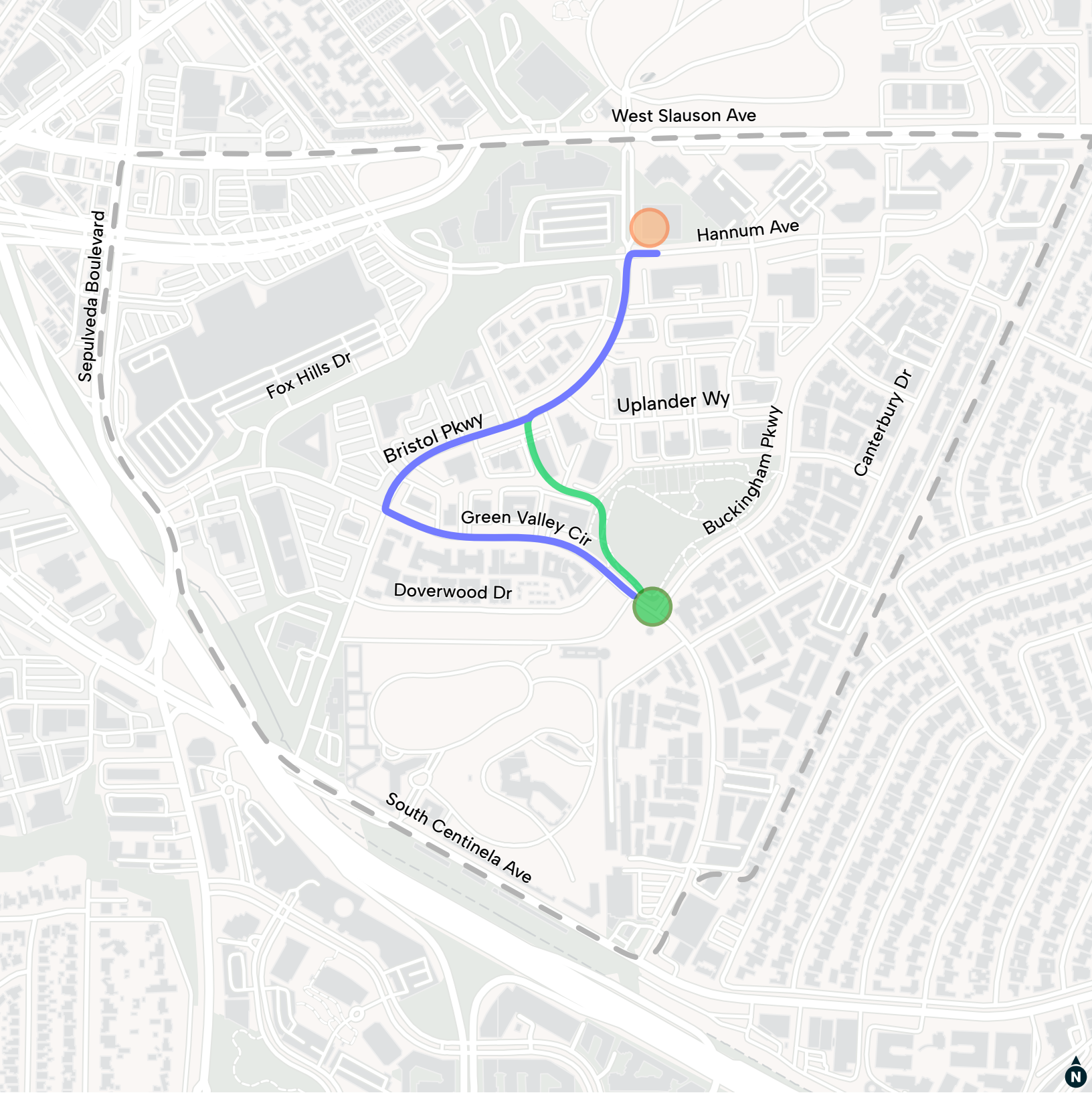

Figure 1: 5800 Bristol Pkwy to Buckingham/ Green Valley Mobility Hub

Source: Open Street Map; Culver City

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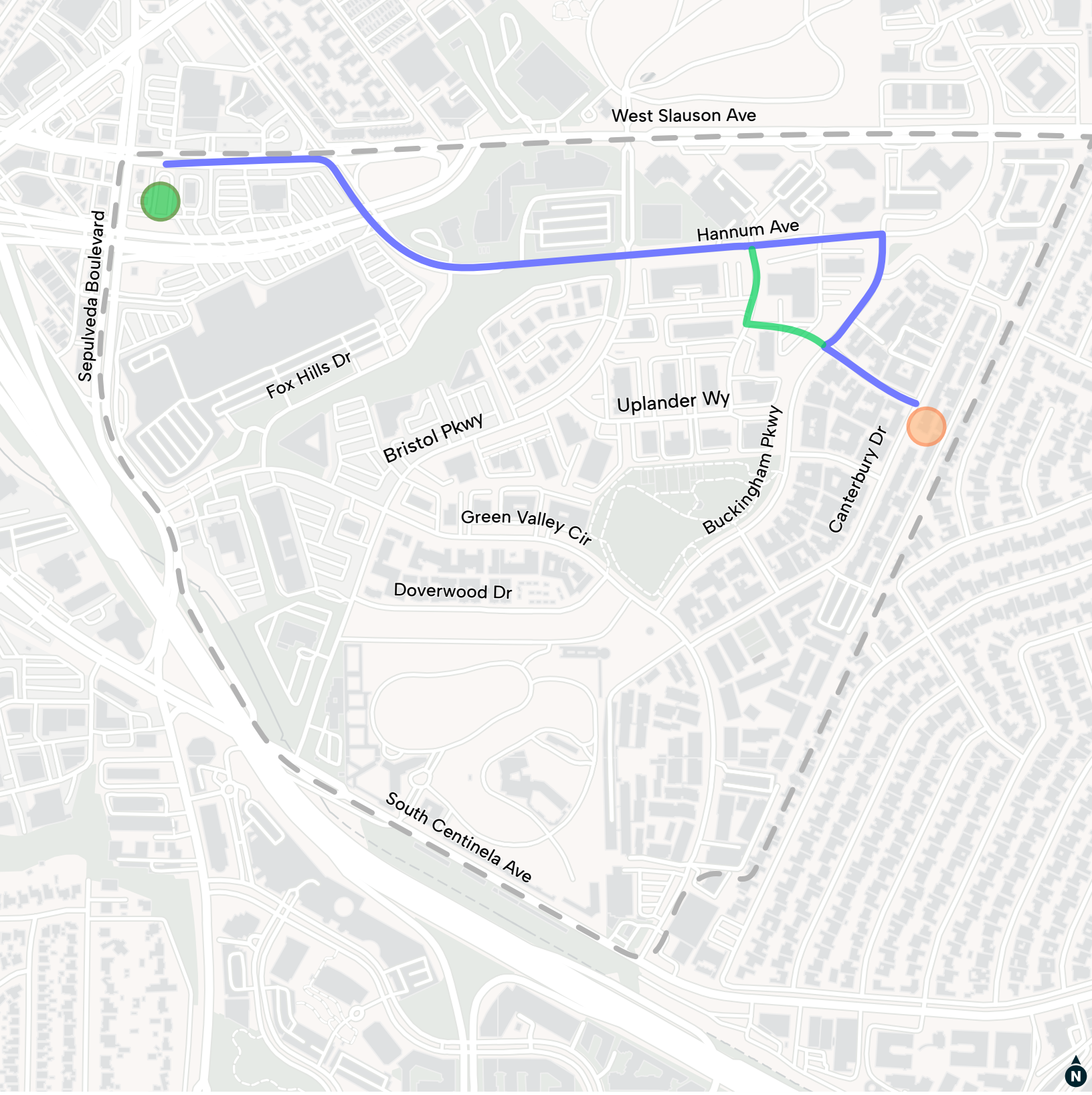

Figure 2: 5950 Canterbury Dr to Culver City Transit Center

Source: Open Street Map; Culver City

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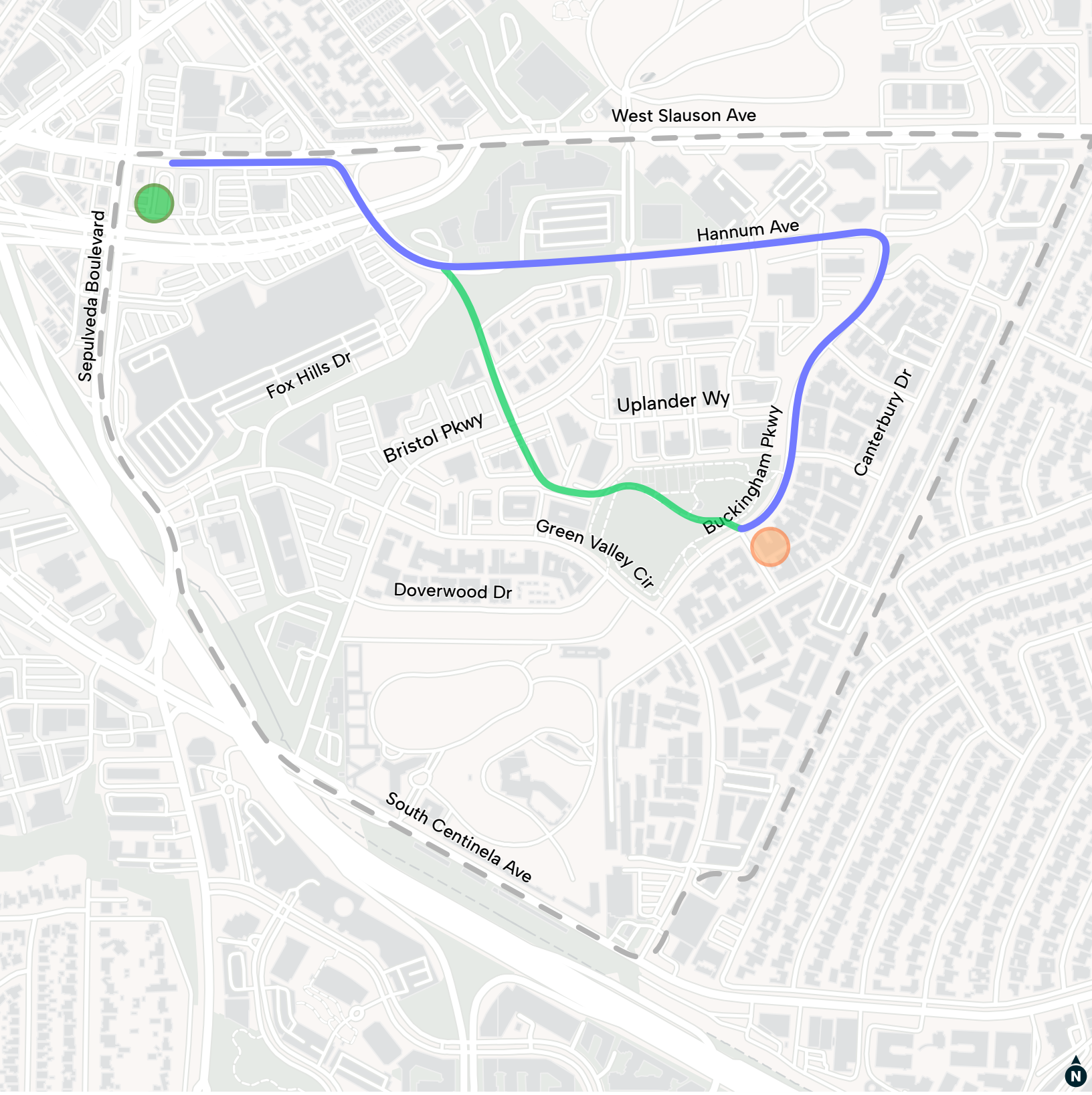

Figure 3: 6174 Buckingham Pkwy to Culver City Transit Center

Source: Open Street Map; Culver City

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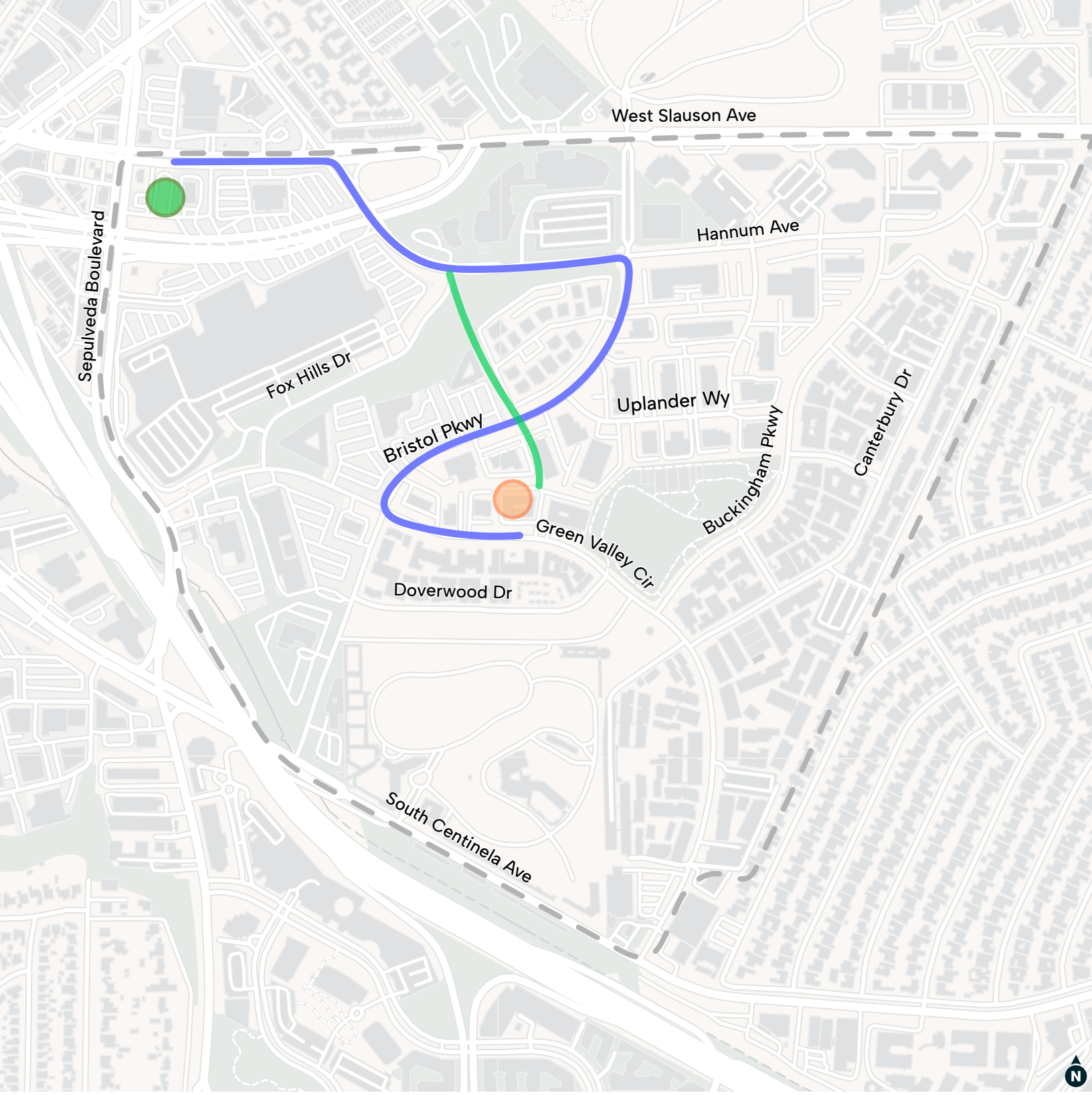

Figure 4: 5855 Green Valley Cir to Culver City Transit Center

Source: Open Street Map; Culver City

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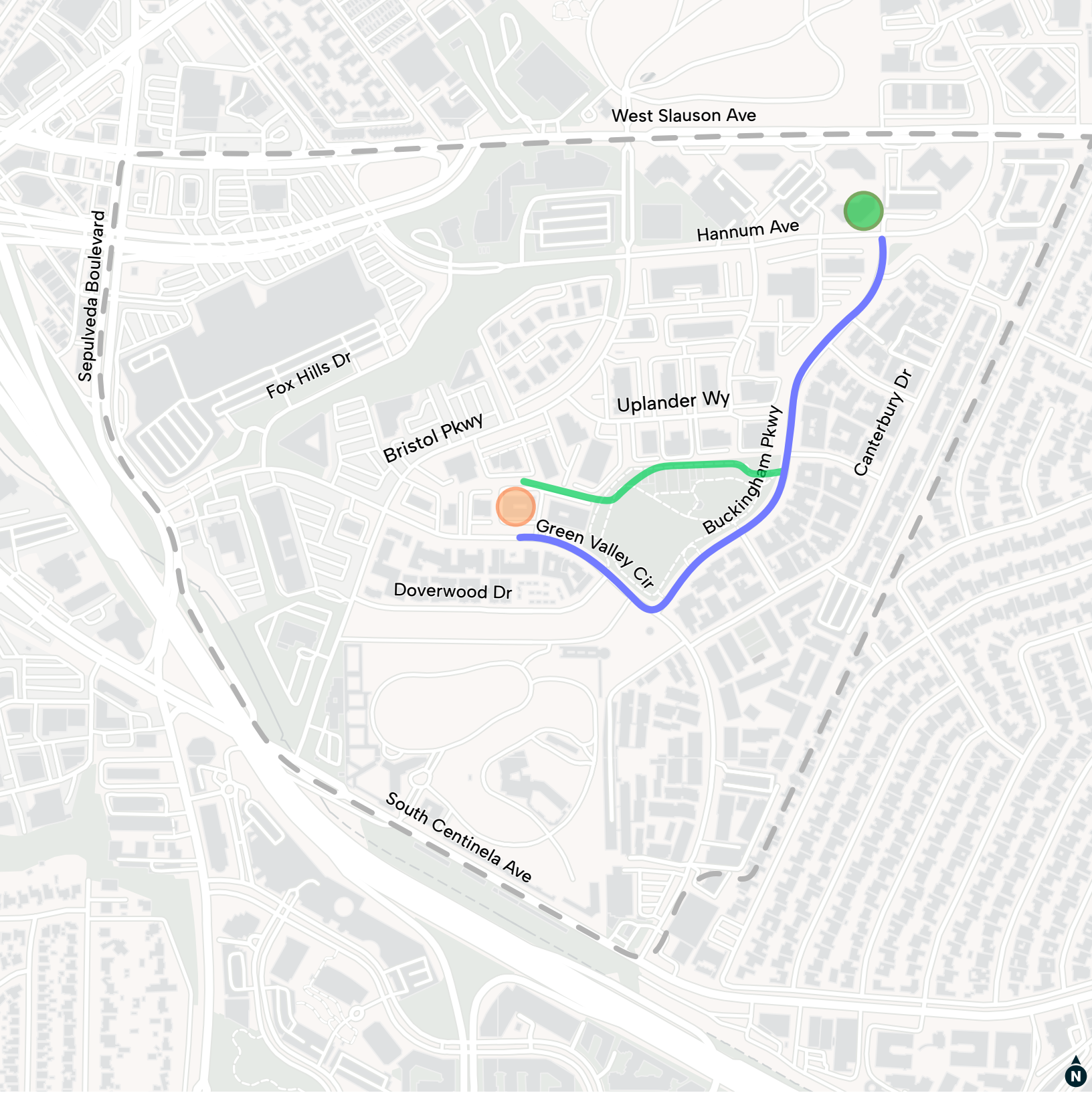

Origin Destination Existing Route Proposed Route

Figure 5: 5855 Green Valley Cir to Hannum/ Buckingham Mobility Hub

Source: Open Street Map; Culver City

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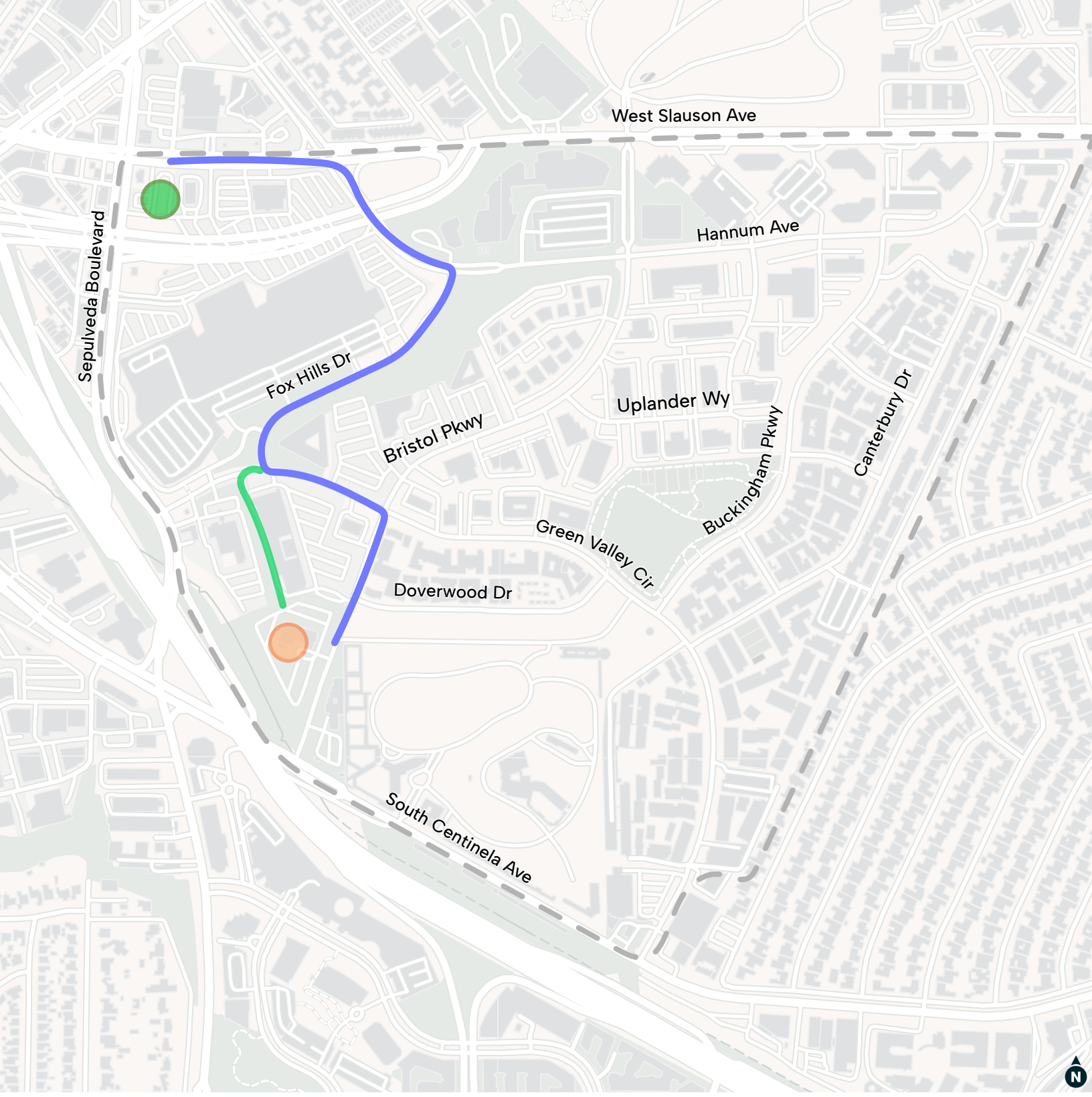

Figure 6: 6083 Bristol Pkwy to Culver City Transit Center

Source: Open Street Map; Culver City

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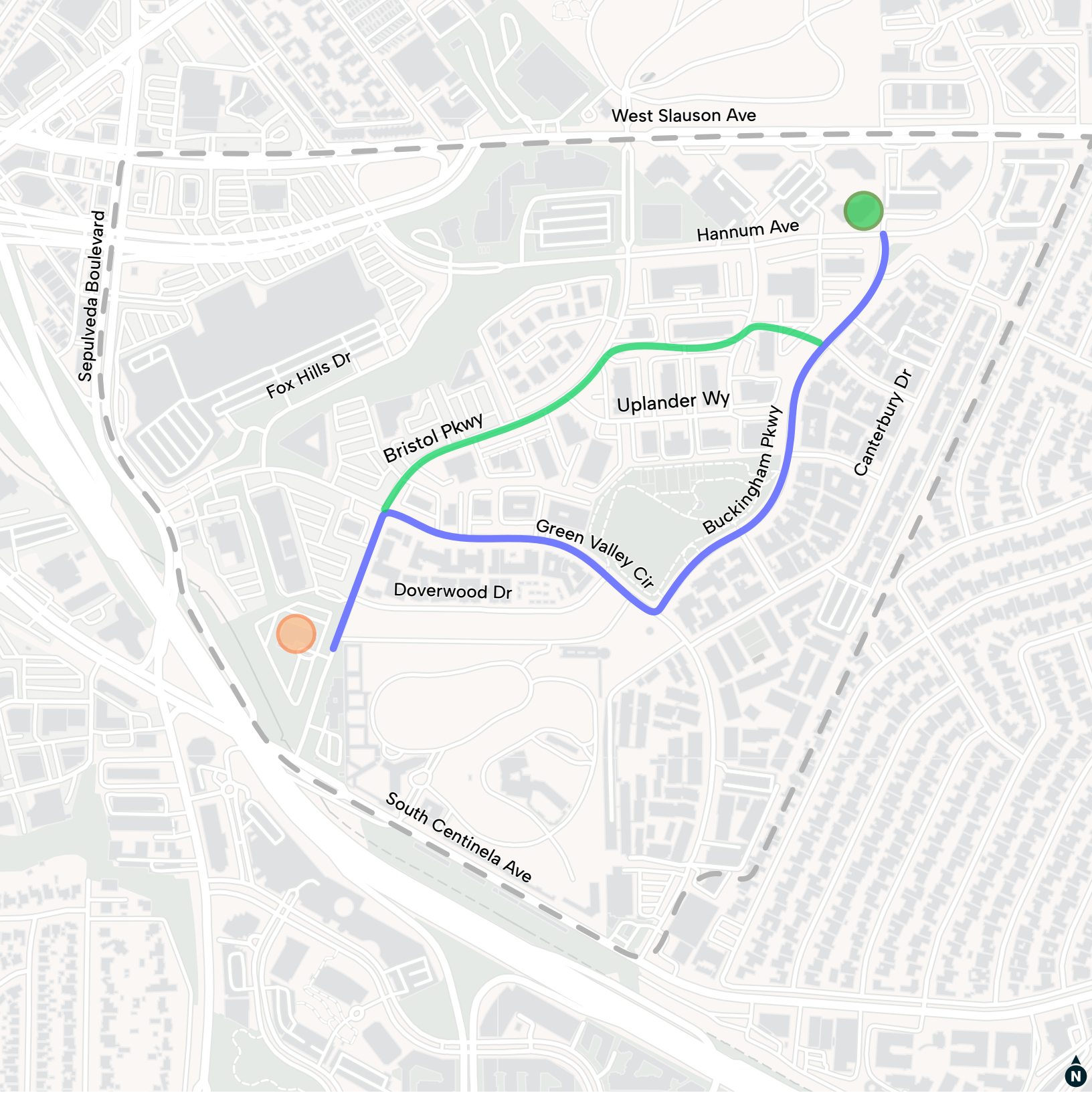

Figure 7: 6083 Bristol Pkwy to Hannum/ Buckingham Mobility Hub

Source: Open Street Map; Culver City

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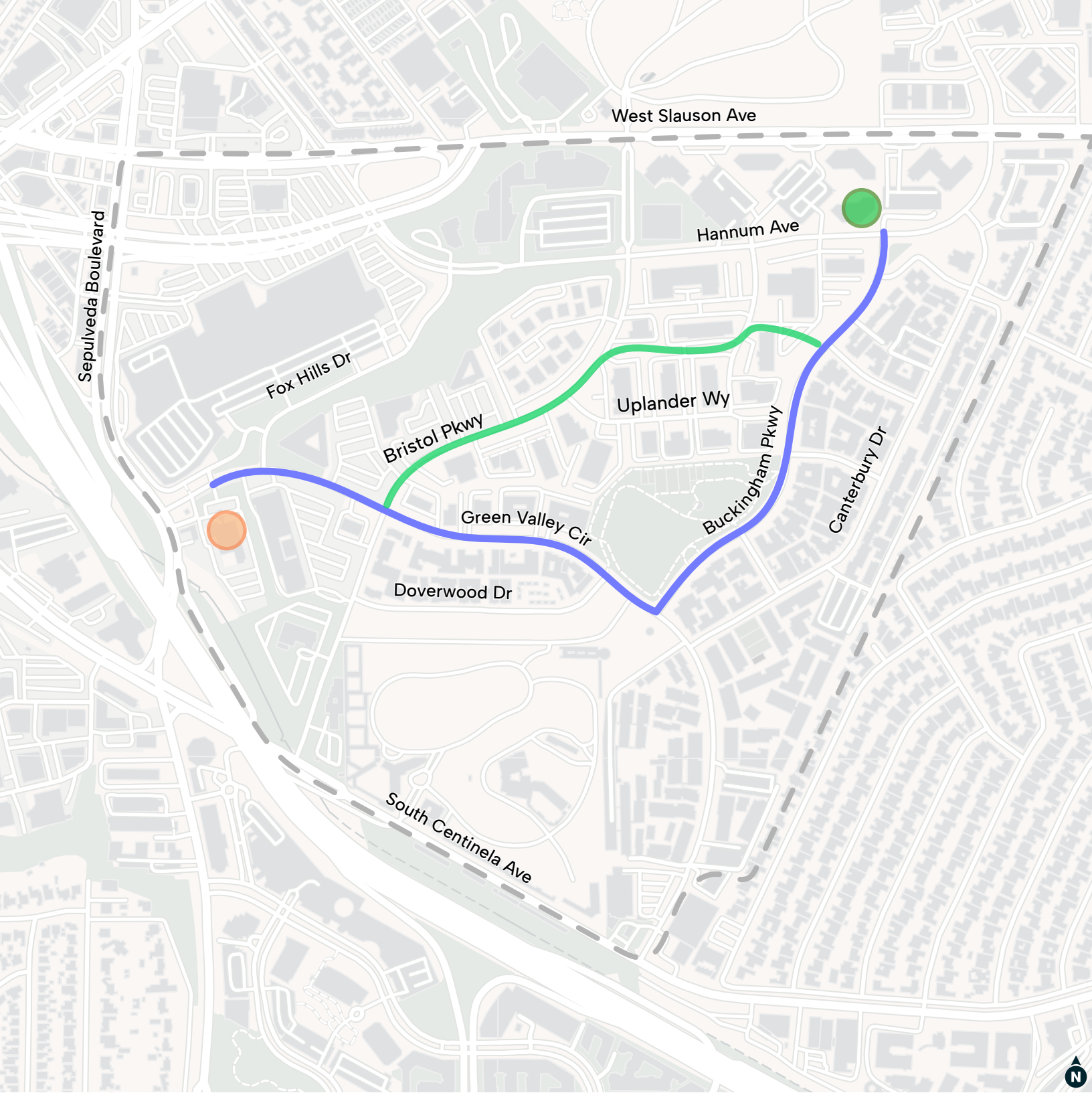

Figure 8: 5990 Green Valley Cir to Hannum/ Buckingam Mobility Hub

Source: Open Street Map; Culver City

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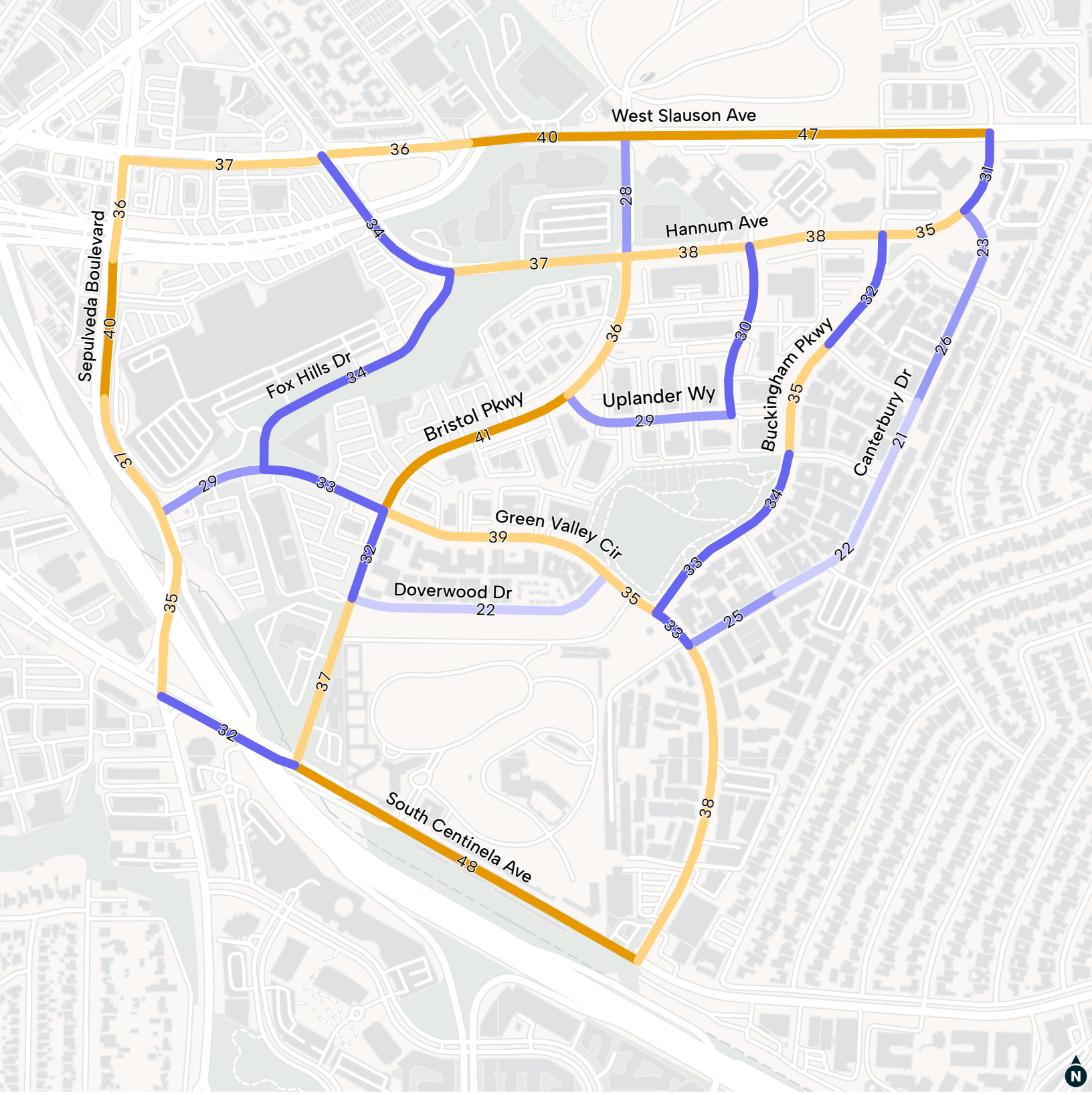

Speed Bins

- Low
- Low-Medium
- Medium
- Medium-High
- High

Note: 85th percentile speeds are representative of an average day. Speed bin categories are relative to all roadways within Fox Hills

Figure 9: 85th Percentile Vehicle Speeds

Source: StreetLight Data October 2024 to October 2025

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