



BEST PRACTICES: CONSTRUCTION MANAGEMENT & ACCESS IMPROVEMENTS

Growing cities with strong economies are often home to booming construction industries. While growth and new construction bring housing and businesses, improved infrastructure, and amenities, construction projects can have a negative impact on the right-of-way, including forcing detours, compromising safety, and creating access barriers for people traveling by all modes of transportation. Construction affects people and organizations differently, and areas with significant numbers of projects that are uncoordinated and in close proximity can have:

- More conflicts between people using the right-of-way and construction activities
- More construction vehicles
- More traffic in certain areas due to closures and detours
- More accessibility issues and liability exposure
- Less flexibility in scheduling for contractors
- Less margin of error
- Less patience for residents, business owners, and travelers

City of Toronto Assessment of Construction Impacts by Stakeholder

Agency Partners	Utility Partners	Industry Partners	Businesses	Travelling Public	Community
<p><i>"How can we better coordinate to stay on schedule & keep the public safe?"</i></p>	<p><i>"How will this impact our costs & timelines?"</i></p>	<p><i>"How will people access my business? Will this impact my bottom line?"</i></p>	<p><i>"How will I get to my destination safely & on time?"</i></p>	<p><i>"How will this impact my property & my area?"</i></p>	
<ul style="list-style-type: none"> • City Divisions • TTC • Metrolinx • MTO • MOL • TCHC • Waterfront Toronto • TRCA • ... 	<ul style="list-style-type: none"> • Toronto Hydro • Enbridge • Enwave • Telecoms • ... 	<ul style="list-style-type: none"> • RESCON • BILD • Trucking industry • Sewer & Watermain Constructors • RMCAO • Crane Rental Association 	<ul style="list-style-type: none"> • BIAs • Building Managers & Owners • Delivery Providers • ... 	<ul style="list-style-type: none"> • Vulnerable Users • Pedestrians • Cyclist • Transit User • Driver • Walk Toronto/ Cycle Toronto • ... 	<ul style="list-style-type: none"> • Resident Groups • Ratepayers/ Tenant Associations • Condo Boards • School Boards • Hospitals • Seniors Facilities • ...

Source: https://www.toronto.ca/wp-content/uploads/2019/12/94b0-TS_Constr-Hub-Town-Hall.pdf



Early planning and regular coordination between developers, contractors, municipal departments, and transit agencies can help mitigate the mobility issues that arise from construction projects. In the context of transportation, construction management and access improvements refer to the processes by which cities maintain safe multimodal travel during street, sidewalk, and alley closures due to construction activities.

Construction Management Tools

Permitting

In general, municipalities require permits for all construction projects; projects that require right-of-way closures or impact accessible walking, rolling, and biking paths typically require a special “traffic management” permitting process. Examples of right-of-way impacts that may be permitted include full street closures, lane closures, construction use of a parking lane, and sidewalk and bikeway detours. A municipality’s transit agency may engage in the permitting process if temporary relocations of bus stops are needed or if bus routes must be detoured.



Detours and Temporary Infrastructure

Construction projects often require staging areas in the right-of-way for equipment and deliveries, which can impact sidewalks or curb lanes. These access impacts require detours to accommodate alternative pedestrian routes and other facilities. Beyond re-routing, providing safe pedestrian access through construction zones can be accomplished with temporary structures such as a covered boardwalk that guides people from the sidewalk into a detour and then back onto the sidewalk beyond the construction site.



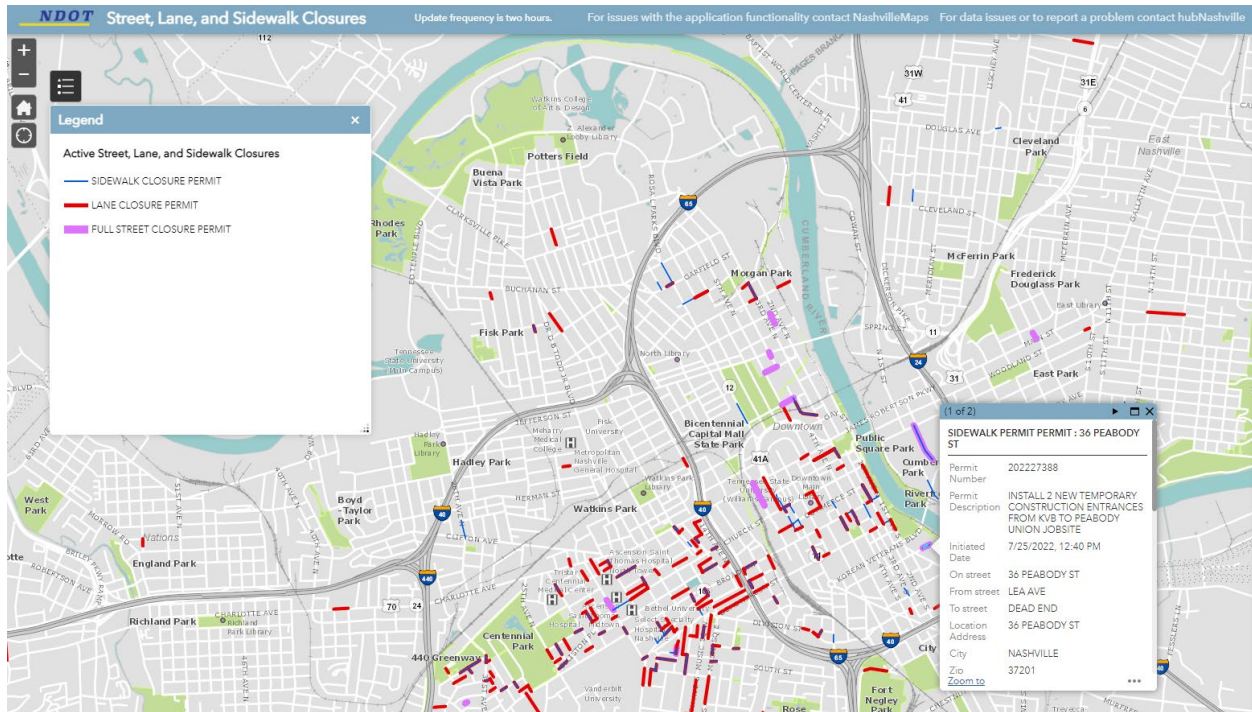
Channelizing Devices

Channelizing devices like cones, tubular markers, vertical panels, traffic drums, and safety barricades alert travelers to construction activity and facilitate gradual shifts in traffic flow. The design and placement of channelizing devices is directed through a traffic management or maintenance of traffic permit and should be as predictable and clear as possible.



Public Information

Providing clear and current information to the public about sidewalk and road closures, detours, and other impacts to the right-of-way can help people plan their travel in advance and reduce frustration. NDOT's Street, Lane, and Sidewalk Closures map is updated every two hours and provides details about the types of closures that are permitted, including the beginning and ending dates of the work. Ensuring that data like this is broadly available is an important component of an effective public information campaign.



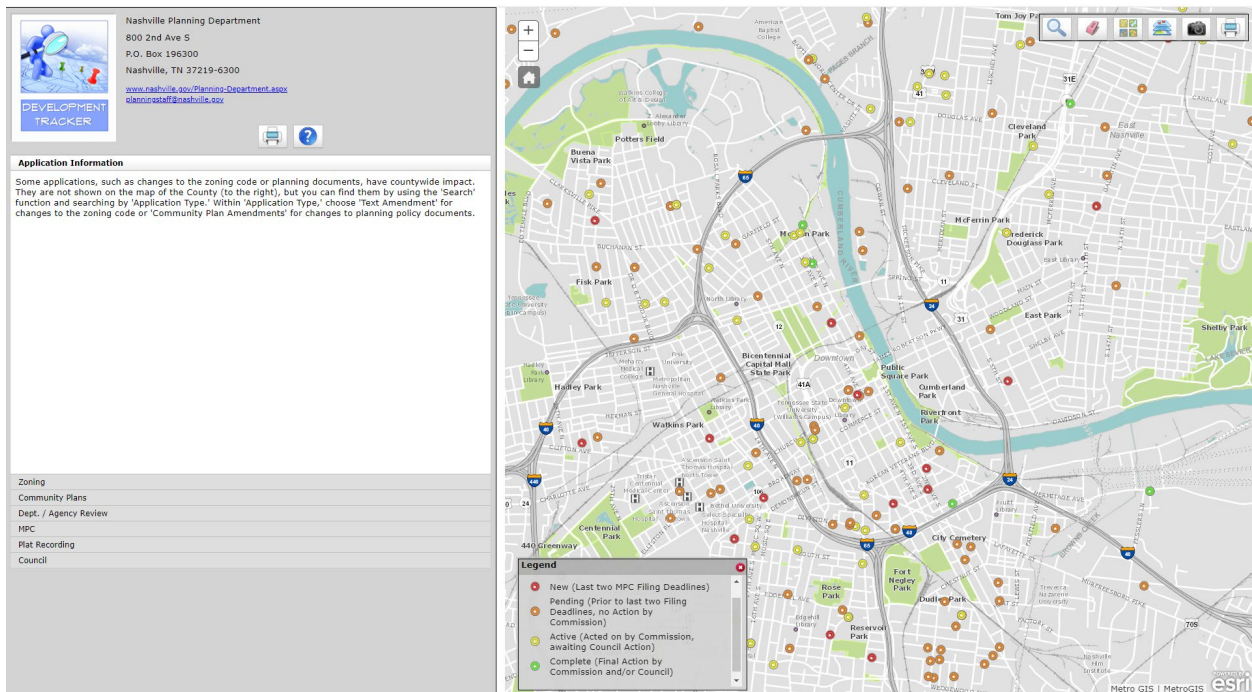
Source:

<https://nashville.maps.arcgis.com/apps/webappviewer/index.html?id=74cb903244e1497a8c3d9db4ee6404a5>

Nashville's Construction Management Needs

Nashville is one of the fastest growing big cities in America, with 15% population growth between 2010 and 2020 alone.¹ From 2011 to 2021, there was 1.5 million square feet of office space under construction,² and there are 25 construction projects currently underway.³ These projects include residential development to provide new housing, commercial development to support the city's economy, and improvements to existing infrastructure to respond to the demands of a growing city.

Nashville's Development Tracker



The Development Tracker allows the public to follow applications filed with the Metro Planning Department as they move through the approval process.

Source: <https://maps.nashville.gov/DevelopmentTracker/>

All of that construction translates to increases in sidewalk and bike lane closures—in fact, nearly 90% of sidewalk and bike lane closures are due to construction projects.⁴ To address this issue, Metro recently issued a revised permit policy for construction-related closures. Under the new policy, closures can be permitted for no more than seven days. After that time, the

¹ <https://storymaps.arcgis.com/stories/b9da3bf4bc1346e6b1491536bc5e7dd3>

² Connect Downtown one pager

³ <https://nashvilledowntown.com/economic-development/development-map/under-construction>

⁴ <https://www.newschannel5.com/news/a-new-permit-policy-will-keep-nashville-sidewalks-and-bike-lanes-clear-from-construction>

applicant must provide a solution to reopen the facility, such as using scaffolding over a sidewalk, or apply for a variance. NDOT also recently increased the number of right-of-way inspectors to better manage closures and enforce permit conditions.

These changes are significant steps towards improving safety for pedestrians and cyclists around construction sites. However, with so much construction underway, Downtown Nashville could benefit from a comprehensive construction management strategy, with requirements for enhanced coordination, high-quality multimodal access, and increased fees for use of the right-of-way. Coordinated management of construction impacts—including detours and temporary facilities to support people driving, taking the bus, and walking and rolling—can help to create a safer and more accessible downtown. Transportation management and access improvements for construction sites are critical for Nashville’s continued growth and for more resilient, sustainable, and equitable transportation networks.

Case Studies

Access Seattle Construction Hubs (Seattle, WA)



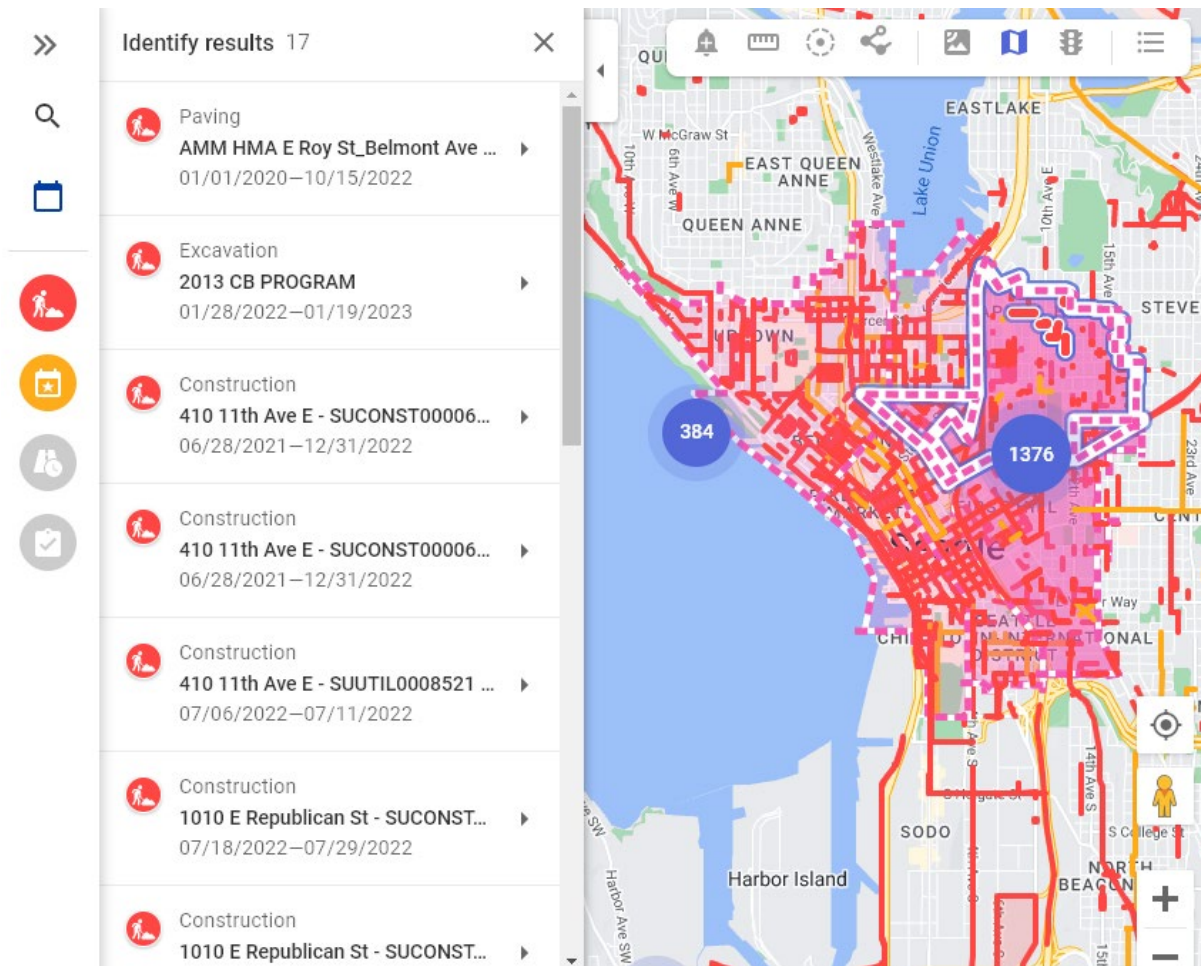
Source: Seattle Department of Transportation, “How to plan, document, and implement pedestrian mobility in and around work zones”

In response to booming growth, the Seattle Department of Transportation (SDOT) developed the Access Seattle program to address pedestrian mobility in and around construction work zones. Through the program, SDOT designated areas of dense construction activity as

“Construction Hubs,” and established special requirements and resources to ensure mobility and access through these zones.

Contractors planning to work in Construction Hubs must discuss their desired use of the right-of-way with SDOT construction coordinators at least 10 days before a construction permit application can be considered. To maximize pedestrian accessibility, SDOT suggests that right-of-way discussions begin long before construction starts. This early coordination allows contractors to plan and design structures on private property (instead of in the right-of-way) to maintain mobility and ensure continuous, well-drained, well-lit sidewalks that are protected from the roadway, ADA accessible, adequately signed, and at least 4 feet wide.

Construction Hub Coordinators work across construction projects and contractors to ensure that at least one sidewalk per block in a Construction Hub remains open. Hubs and detour information are publicly available on SDOT’s website, and residents can review the [Project and Construction Coordination Map](#) to learn more about active construction projects in their area.



Source: <https://www.seattle.gov/transportation/projects-and-programs/programs/pedestrian-program/project-and-construction-coordination-office/project-and-construction-coordination-map>

Lessons Learned

- **Planning and coordination benefit everyone.** Construction Hubs make the best use of public assets by optimizing project scheduling. Coordinating information about current and planned work helps facilitate project sequencing and avoid rework, and it allows the City to identify opportunities for improvements called for in modal master plans when restoration is scheduled.
- **Coordination saves money.** SDOT calculated savings based on points of coordination resolved, finding that the Construction Hub Program resulted in:
 - 200 days of construction saved
 - \$15.5 million saved by all partners, including City departments, utilities, agencies, and private developers
 - \$1.6 million saved by SDOT alone
 - 1,600 tons of CO2 reduced
- **Training makes a difference.** Early coordination requirements are also an opportunity for education. SDOT staff can work directly with local contractors to ensure they understand the requirements and are trained to address them appropriately.
- **Pedestrians are prioritized.** Construction Hub Coordinators work to avoid major street or sidewalk closures when other nearby streets are closed due to construction. The emphasis on sidewalk impacts at the onset of construction helps focus planning around people walking, rolling, and biking.

Applicability to Nashville

While Downtown Nashville has areas of concentrated construction activity, there is currently no unified (or public-facing) approach to organize and coordinate the projects or uses of the right-of-way. Nashville could develop a Construction Hub program to better manage construction impacts and organize projects in ways that support maintenance of traffic and improved access for people walking, rolling, biking, and taking the bus.

Toronto, ON Construction Hubs

Following Seattle's example, Toronto initiated a construction hub pilot program in 2019, as part of the city's larger Vision Zero Road Safety Plan to reduce traffic-related fatalities and serious injuries on Toronto's streets⁵. Toronto's construction hubs address road safety and public right-of-way use in areas with significant construction activity, focusing on reducing the costs and

⁵ <https://www.toronto.ca/services-payments/streets-parking-transportation/road-safety/vision-zero/vision-zero-plan-overview/>

impacts of construction on residents, businesses, partners, and the traveling public. Each area is assigned a coordinator, whose role includes managing right-of-way logistics, revising construction management plans, and acting as a single point of contact for stakeholders.



Source: <https://www.toronto.ca/services-payments/streets-parking-transportation/road-safety/construction-hubs/yonge-eglinton-construction-hub-2/>

Toronto’s first hub was the Yonge & Eglinton Construction Hub, which introduced several initiatives and interventions to improve pedestrian safety. These included creating temporary one-way streets, restricting parking, and raising awareness about heavy truck blind spots. Since 2019, the City has designated five additional construction hubs.

Lessons Learned

- **Designating a single point of contact is critical.** A city employee is the construction hub project manager, and that person’s function is to act as a liaison between contractors, residents, and local business owners, as well as coordinate with other city departments. Having a dedicated project manager means everyone knows who to contact for the answers they need.
- **Connecting construction hub approaches to Vision Zero strategies helps to set priorities.** Implementing the construction hubs program as a complement to Vision Zero allowed the City to apply creative solutions to address safety and accessibility concerns. Temporary road rule changes, re-purposing parking spaces, and improved signage are tools that improved pedestrian access and safety around Toronto’s hubs.

Applicability to Nashville

Nashville’s recently adopted Vision Zero Action Plan can provide additional support for addressing pedestrian safety during construction activities. Following Toronto’s approach, NDOT could undertake additional analysis with a focus on construction activity to link a

Nashville Construction Hubs Program to Vision Zero implementation, addressing impacts and advancing City priorities simultaneously.



Source: https://www.toronto.ca/wp-content/uploads/2019/12/94b0-TS_Constr-Hub-Town-Hall.pdf

Portland, OR Work Zone Policy

In 2016, following a grassroots social media campaign by Street Trust, Portland adopted an official policy for the safe accommodation of pedestrians and cyclists in and around work zones. This policy prioritizes access for people walking, rolling, and biking around construction sites, giving blockages of pedestrian and biking facilities the same importance as a vehicle travel lane closure. It identifies closing a sidewalk or bicycle lane as a last resort and includes standards for alternative paths when a closure is required. Pathways must be ADA compliant, provide sufficient capacity, and be convenient to ensure that people will use them.

Lessons Learned

- **Establishing a hierarchy helps allocate space.** Construction in the right-of-way often impacts sidewalks and bikeways more significantly and for longer periods of time than vehicle travel lanes are impacted. Portland's policy establishes the priority of pedestrians and cyclists—and the requirement that contractors provide safe and accessible facilities—even when that comes at the expense of general-purpose traffic.
- **Specifying time limits can incentivize creative solutions.** Portland's policy strongly encourages contractors to limit sidewalk closures to no more than one week, attaching

escalating fees to longer closures. This approach incentivizes contractors to plan their work efficiently, avoid increased fees, and prioritize reopening as soon as possible.



Source: <https://twitter.com/nickfalbo/status/733316703988252672/photo/1>

Applicability to Nashville

Nashville could expand on its recent sidewalk and bikeway closure policy changes to further prioritize construction zone safety and access for multimodal travelers. While Nashville now limits the duration of sidewalk and bikeway closures, it could also attach escalating fees to closures that impact pedestrian and cyclist mobility, incentivizing contractors to consolidate and expedite their activities.

Montreal, QC Construction Charter

Montreal’s reputation for frequent and disruptive construction—and the many resulting detours—has earned the city the unofficial nickname “Cone-y Island.”⁶ There are nearly 500

⁶ <https://montrealgazette.com/opinion/columnists/brownstein-cone-y-island-making-comeback-on-montreal-streets>

construction projects within the city limits each year,^{7 8} which have a negative impact on the daily lives of Montrealers trying to move about the city.

To address these disruptions, the city introduced an official charter for municipal infrastructure construction sites to promote best practices among its teams, external partners, and private developers. The charter standardized procedures regarding accessibility, safety, mobility, impact management, mitigation measures, communications, and environmental considerations. These tangible commitments help hold construction companies accountable and document the City's mobility goals. Although the charter does not include punitive measures, it is a step toward better site coordination for most urban construction work.⁹



Source: George Rose 2015 from Getty Images

Lessons Learned

- **Standardized guidelines create a level playing field.** Montreal's charter makes construction site regulations clear to both construction companies and the public. Codifying the rules means that no company can claim ignorance and that residents understand the standards should they need to report infractions.

⁷ <https://montreal.ca/en/articles/why-does-montreal-carry-out-so-many-construction-projects-each-year-15663>

⁸ <https://montrealgazette.com/opinion/columnists/josh-freed-montreal-should-take-pride-in-being-cone-capital-of-the-world>

⁹ <https://www.cbc.ca/news/canada/montreal/construction-charter-end-roadwork-chaos-1.6037694>

- **Provide advance notice of street closures.** The construction charter requires project managers to create signs that give advanced notice of road closures when work begins and requires prompt removal of signs and bollards as construction is finished.

Applicability to Nashville

Nashville could develop a construction charter to establish clear guidelines for City contractors and private developers. While Montreal's charter is difficult to enforce without consequences for failing to comply, Nashville could designate penalties for infractions that create congestion, impact safety, and reduce overall mobility downtown.

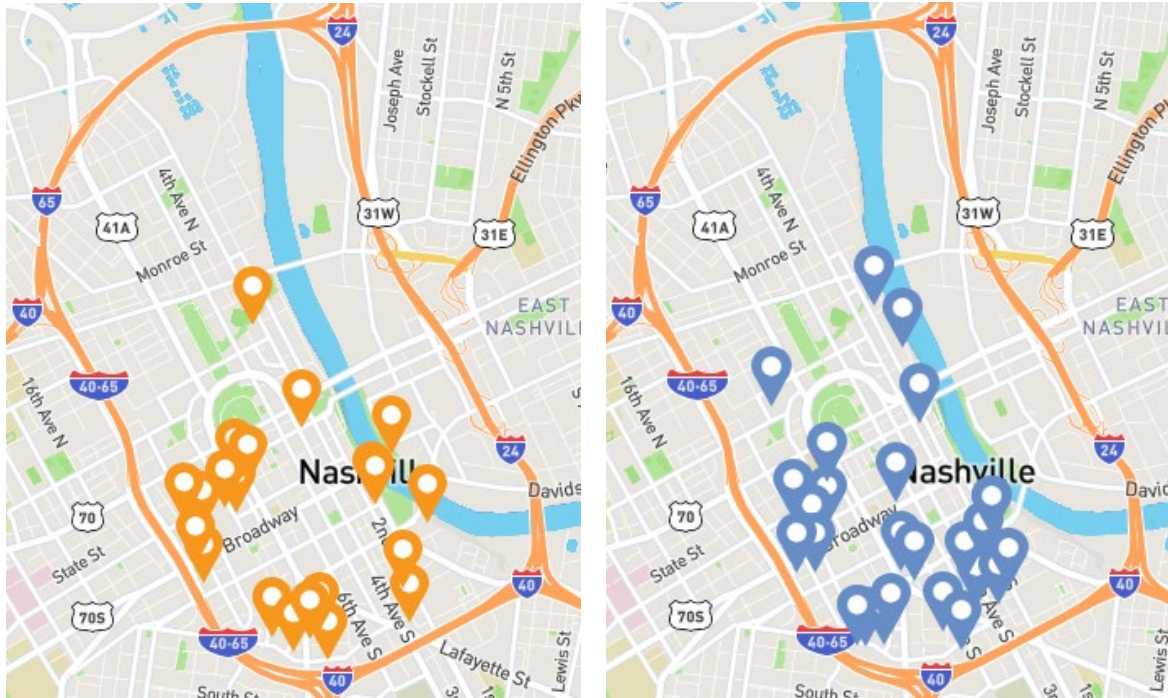
Implementation in Nashville

Nashville's booming economy and rapid growth are generating significant construction activity, with major residential and commercial developments underway throughout Downtown. These projects impact the transportation network through road and sidewalk closures that create congestion, require detours, and create challenging conditions for people walking and biking.

Nashville's recent policy changes demonstrate the city's commitment to addressing safety and accessibility issues caused by sidewalk and bike lane construction closures. However, the policy is only as good as its implementation, which must be consistent across projects. Nashville's construction management response could benefit from a less subjective and more systematic approach.

Much of Downtown's recent construction activity has been concentrated in the Gulch and SoBro, and it is now expanding to Pie Town. These areas are strong candidates for construction hubs, and Nashville should consider developing a program similar to those in Seattle and Toronto. Establishing hubs would help contractors coordinate efforts and reduce duplicative work, inform the public about active projects and detours, and help the City ensure that priority infrastructure is implemented as part of ongoing development. Nashville could implement construction hubs as a partnership between NDOT and Metro Planning, connecting recommendations to the Vision Zero Action Plan to advance safety projects simultaneously.

Developments under construction (left) and proposed (right) in Downtown Nashville



Source: Nashville Downtown Partnership

While developing the construction hubs program, NDOT could establish a version of Montreal's construction charter or New York City's guide to temporary active transportation facilities during construction to provide a framework for future projects and codify a mechanism to further enforce regulations and access standards for pedestrians, cyclists, and transit riders. By including penalties for infractions, Nashville could further incentivize desired safety and mobility outcomes and better manage the right-of-way around construction sites.