



---

# **PBOT FOCUS GROUP AND PEER CITY REVIEW**

## **OVERVIEW AND RECOMMENDATIONS**

---

Prepared by Sara Schooley, Toole Design

June 4, 2020



## **CONTENTS**

<b>Section 1. Introduction</b>	<b>3</b>
<b>Section 2. Focus Group Summaries</b>	<b>5</b>
Permitting/Encroachment Focus Group	5
Development Review	6
Planning	7
Engineering and Design	8
Discussion Themes	9
<b>Section 3. Peer City ReviewS</b>	<b>12</b>
Seattle, WA	12
Washington, DC	15
Denver, CO	15
Boston, MA	18
Austin, TX	20
Discussion Themes	22
<b>Section 4. Recommendations</b>	<b>25</b>



# SECTION 1. INTRODUCTION



# SECTION 1. INTRODUCTION

The City of Portland is currently updating the sidewalk corridor chapter of the Pedestrian Design Guide (PDG), which serves as the City's primary guidance on how sidewalks should be built throughout Portland to ensure they are context-appropriate and accessible to people of all ages and abilities. The Guide was last updated in 1998, at which time it was considered one of the most forward-thinking pedestrian guidance documents in the country. Since then, Portland has added over 100,000 residents, which has spurred development of both housing and commercial areas throughout the city. This development has highlighted some of the difficulties of using the current PDG, both because it did not predict some of the current development patterns and situations, and because additional plans, policies, and procedures that have been adopted since the Guide's development make implementing the PDG confusing for staff.

Before the PDG project team begins updating the sidewalk corridor chapter, we want to better understand how the document is currently being used by City staff and how peer cities around the country are working to create safe, comfortable, and consistent sidewalk corridors. This document summarizes our findings from internal PBOT focus groups and peer city interviews where we researched these topics.

After the focus groups and the peer city interviews, the report identifies common themes and important findings, in hope that these can be used as we update the PDG. These themes and findings can be found at the ends of the Focus Groups and Peer City Interviews sections of this memo, Sections 2 and 3, respectively. Specific recommendations informed by these themes and findings can be found in Section 4. Recommendations section of this memo.



**SECTION 2.**  
**FOCUS GROUP SUMMARIES**



# SECTION 2. FOCUS GROUP SUMMARIES

The 1998 Pedestrian Design Guide (PDG) is used daily by staff throughout the Portland Bureau of Transportation (PBOT). In March and April of 2020, the PDG update project team conducted focus groups with some of PBOT’s work groups that use the Guide the most to understand how they use it, where it is challenging to use, and what parts of the guide they would like to see improved in the update. Summaries of the four groups’ discussions – Permitting/Encroachment, Development Review, Planning, and Engineering/Design – are below.

## PERMITTING/ENCROACHMENT FOCUS GROUP

The Permitting and Encroachment focus group included staff from PBOT that manage right-of-way (ROW) encroachments and permitting in existing ROW, such as sidewalk cafés, utilities, and events. As such, they use the 1998 PDG as their go-to reference to properly permit and place items in the sidewalk corridor. This group works with mostly external stakeholders – private business owners, other agencies, and event operators – so is often in the role of communicating the requirements of the PDG to others.

The group overwhelmingly stated that Table A-1: Recommended Widths for Sidewalk Corridor Zones is the piece of the current PDG that they use the most. This table offers guidance on Pedestrian Through Zone (PTZ) clearance requirements as new items (utility poles, café seating, etc.) are placed in the sidewalk corridor. Table 2: Elements of the Right-of-Way was the next most-cited piece of the PDG during the group’s conversation, as it dictates where elements (benches, bicycle racks, etc.) can be placed, specific siting criteria related to the current sidewalk corridor layout, and responsible party for the element (e.g., drinking fountains are the responsibility of the Water Bureau).

While the group, in general, believed that the PDG offered valuable and clear guidance, there was discussion about the difficulties of implementing what is in the Guide because of the realities of the sidewalk corridor layout. The following were identified as challenges:

- External partners seem to, mostly, accept the guidelines as rules and ask to place their infrastructure in the appropriate locations. Much of the challenge lies in working with other


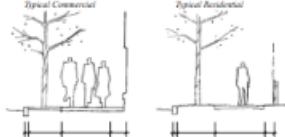
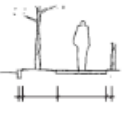

Sidewalk Corridor	Application	Recommended Configuration								
4.6 m (15' - 0")	Recommended in Pedestrian Districts, especially for arterial streets or where ROW width is 24.5 m (80'-0").	 <table border="1"> <tr> <td>Carh Zone</td> <td>Furnishings Zone</td> <td>Through Pedestrian Zone</td> <td>Frontage Zone</td> </tr> <tr> <td>150 mm (0' - 6")</td> <td>1.2 m (4' - 0")</td> <td>2.5 m (8' - 0")</td> <td>750 mm (2' - 6")</td> </tr> </table>	Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone	150 mm (0' - 6")	1.2 m (4' - 0")	2.5 m (8' - 0")	750 mm (2' - 6")
Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone							
150 mm (0' - 6")	1.2 m (4' - 0")	2.5 m (8' - 0")	750 mm (2' - 6")							
3.7 m 12' - 0"	Recommended for City Walkways, for local streets in Pedestrian Districts, and for streets where ROW width is 18.2 m (60'-0").	 <table border="1"> <tr> <td>Carh Zone</td> <td>Furnishings Zone</td> <td>Through Pedestrian Zone</td> <td>Frontage Zone</td> </tr> <tr> <td>150 mm (0' - 6")</td> <td>1.2 m (4' - 0")</td> <td>1.9 m (6' - 0")</td> <td>450 mm (1' - 6")</td> </tr> </table>	Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone	150 mm (0' - 6")	1.2 m (4' - 0")	1.9 m (6' - 0")	450 mm (1' - 6")
Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone							
150 mm (0' - 6")	1.2 m (4' - 0")	1.9 m (6' - 0")	450 mm (1' - 6")							
3.4 m 11' - 0"	Recommended for Local Service Walkways where ROW width is 15.2 m (50'-0"). Accepted for City Walkways where ROW width is 15.2 m (50'-0") provided Through Pedestrian Zone is 1.9 m (6'-0").	 <table border="1"> <tr> <td>Carh Zone</td> <td>Furnishings Zone</td> <td>Through Pedestrian Zone</td> <td>Frontage Zone</td> </tr> <tr> <td>150 mm (0' - 6")</td> <td>1.2 m (4' - 0")</td> <td>1.9 m (6' - 0")</td> <td>150 mm (0' - 6")</td> </tr> </table>	Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone	150 mm (0' - 6")	1.2 m (4' - 0")	1.9 m (6' - 0")	150 mm (0' - 6")
Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone							
150 mm (0' - 6")	1.2 m (4' - 0")	1.9 m (6' - 0")	150 mm (0' - 6")							
3.0 m (10' - 0")	Recommended for Local Service Walkways in residential zones of R-7 or less dense where ROW width is less than 15.25 m (50'-0").	 <table border="1"> <tr> <td>Carh Zone</td> <td>Furnishings Zone</td> <td>Through Pedestrian Zone</td> <td>Frontage Zone</td> </tr> <tr> <td>150 mm (0' - 6")</td> <td>1.2 m (4' - 0")</td> <td>1.5 m (5' - 0")</td> <td>150 mm (0' - 6")</td> </tr> </table>	Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone	150 mm (0' - 6")	1.2 m (4' - 0")	1.5 m (5' - 0")	150 mm (0' - 6")
Carh Zone	Furnishings Zone	Through Pedestrian Zone	Frontage Zone							
150 mm (0' - 6")	1.2 m (4' - 0")	1.5 m (5' - 0")	150 mm (0' - 6")							

Figure 1. Selection of Table A-1: Recommended widths for sidewalk corridor zones from the 1998 Pedestrian Design Guide

- City agencies and internal partners (e.g., Water Bureau, Urban Forestry) and placing their infrastructure (e.g., water pipes, trees). Ideally, much of this infrastructure would go in or under the furnishing zone. The largest furnishing zone shown in the PDG is four feet – which, according to the group, is barely enough to fit a street tree, much less other infrastructure, such as vaults and seating.

As a result, much of the infrastructure creeps into the PTZ and, while the group makes every effort to maintain the required PTZ width, the PTZ often ends up becoming a zigzagging “slalom” along a corridor, which is not ideal for continuity.

- Frontage zones are often very narrow – between six inches to a foot and a half – and often cannot hold what is or needs to be placed in those zones. These zones are where cafés are placed or building projections, such as conduit poles or small utility vaults, are located and many of these items end up spilling into the PTZ.
- The group discussed Seattle’s approach to trying to get more space for the frontage zone by asking developers for a voluntary 6-foot dedication/easement; if this space is not given, property owners are precluded from having a sidewalk café in the future. The group was uneasy with this approach for a variety of reasons including (1) This approach only solves issues where development is happening, which does not account for many areas where sidewalk cafés are currently desired, (2) This seems like a decision that should be done at the planning level, not the developer level, in order to create places that meet the City’s visions of activated sidewalks, and (3) Portland’s ROWs are narrower than Seattle’s, so Portland is dealing with more space limitations to begin with.
- Currently, many businesses use sidewalks as an extension of their business – for clothing racks, carts, etc. – or as a singular place to do business – such as flower stands. Because of the extent of uses like these, PBOT does not current enforce regulations in these situations. This practice leaves many sidewalks throughout the city without a continuous PTZ of consistent width but does offer an “enlivened” sidewalk corridor that is valued by the city and its residents.
- There are some pieces of guidance from groups within and outside of PBOT that create this same situation of inconsistent PTZs, such as the TriMet shelter intergovernmental agreement and the newly released Bike Parking Guide.

Beyond these specific issues, the group emphasized that while the PDG offers clear guidance, is does not offer direction about potential opportunities for flexibility or how the design guidelines could be adapted to be more context specific. The group asked for additional process guidance for when and/or how variances or alternative standards would be acceptable in the new guidelines to assist them in their work and ensuring that they are consistently communicating the PDG’s standards to their partners.

## DEVELOPMENT REVIEW

The Development Review group includes staff that work with private developers every day, permitting ROW improvements associated with their development, and ensuring that any ROW work meets a swath of City standards, rules, and guidelines, including the PDG. Because of their role, this group could be seen as the primary “customers” to an updated PDG and, as such, are a key group in contributing to and reviewing the updated guide.

This group immediately emphasized the need to increase the status of the PDG from “guidelines” to “standards,” as many other policies and rules are standards and, as a result, can outweigh the PDG. That said, they were also aware that in order for this switch from guidelines to standards to work, an updated PDG needed to be consistent with other City standards and make a side effort to “sunset” any outdated rules or policies to ensure that there

would not be any conflicts that could be cited by developers. Some of the rules, standards, and guidelines mentioned in this group included historic districts, building front lines, alternative walkway standards, shared-use paths, streetscape plans, the Stormwater Management Manual, and ADA guidance.

As in the Permitting/Encroachment focus group, the Development Review group cited Table A-1 as the most used part of the PDG. They believed this table was clear and, for the most part, gave them the information in a format that was easy to understand and communicate. They did mention that Table A-1 should be expanded to include graphics and dimensions for how sidewalk corridors should be developed on streets which do not currently have a curb, essentially developing graphics for alternative street standards that could be housed in the PDG. In addition, given the important piece that stormwater management has in sidewalk corridor design and the recent update to the Stormwater Improvement Manual (SWMM), stormwater infrastructure should be incorporated into Table A-1, or at least referenced.

There was also concern that the current PDG reads as though it's solely for capital projects because it does not allow for any flexibility or offer a process for decision-making when trade-offs need to be made. This topic is currently being worked on as part of the Streets 2035 project, but staff requested that the PDG offer a consistent or complementary decision-making tree that focuses on trade-offs within the sidewalk corridor as a quick reference. Staff also requested that the decision-making guidance in an updated PDG include information on how furnishing zone treatments, vault/transformer locations, and stormwater treatments should be prioritized within the sidewalk corridor, not just the widths of the zones.

The group also discussed pedestrian connections and implementing the pedestrian network recommendations from PedPDX. A major challenge has happened in areas where a fully built street is not needed or desired, and a pedestrian connection is appropriate, but the grade is too steep to meet ADA requirements. The group asked for clear guidance for where/how they could build a non-ADA compliant facility and stated the importance of getting the full buy-in of the city attorneys in such guidance.

This group was especially interested and enthused about the PDG update – they use this document every day. These staff will continue to be deeply engaged in the update going forward and will be a primary source of technical feedback and advice over the coming months.

## PLANNING

The staff that attended the Planning focus group included PBOT's modal coordinators and staff that help plan for multimodal corridors. These staff do not reference the PDG as much as those from the other focus groups but are often charged with implementing a "vision" of some sort, which, ideally, would be consistent with the PDG.

Many of the other focus groups expressed support for the PDG becoming standards and "having more teeth." This group had mixed feelings about this approach. They were concerned about how the consistency between the PDG and other modal design standards and wanted to ensure that they were all equal in terms of how and whether they were mandated. There were conflicting thoughts as to the difference between a guideline and standard as far as process, approval, etc., and the group agreed to table the issue and follow up with other City staff.

The group noted Table A-1 as the most used section of the PDG. Staff also cited the PDG's direction for how to get more space for the sidewalk requirements if you need it to meet the PDG – "acquire additional Right-of-Way or Public Walkway Easement, or narrow existing roadway in accord with established minimum roadway standards" - and said that these methods are virtually impossible because of politics, cost, or other reasons. They asked for an updated Guide to give more flexibility and context-sensitive advice for how to approach more challenging and/or ROW-constricted situations.



One approach the group suggested was to have one PDG section that showed sidewalk corridor width requirements and another section that showed guidelines, or other preferred options that could be implemented as possible. Other staff responded that this approach would require a bit of care to ensure that developers or PBOT project managers would not default to the cheapest sidewalk corridor design allowed and, instead, would be pushed to create a corridor that met the needs and visions of the area.

Many members of this group are heavily involved in Streets 2035 and have concerns beyond the sidewalk corridor, more focused on how all the pieces of the ROW function as a whole. Consistency and coordination between the PDG update and Streets 2035 will need to be continued to ensure that the two projects align seamlessly.

## ENGINEERING AND DESIGN

The Engineering and Design focus group included staff that design capital projects and supervise the building of them, often doing redesigns as issues come up during construction. This group can be seen as the “final set of eyes” before a sidewalk is poured or a project punch list is approved and, therefore, are key staff to ensuring the PDG is met as the City gets projects on the ground.

As with the other groups, they felt that Table A-1 was the most-applicable reference for their work and that A-2 was used in specific situations to help them with siting. This group also echoed many of the concerns from the Development Review group about wanting already approved options within the PDG so they could be context-sensitive in places where there are competing needs between modes or bureaus, or where there is not enough ROW. Specifically, this group mentioned that having more sidewalk corridor layout options could help reduce the need for going through the design exemption process, saving both time and money on projects.

This team also brought up concerns about moving curbs and how, while moving curbs could be a way to get more sidewalk width without acquiring ROW from property owners (which often is not an option with their projects because there may not be new development occurring in the same places as capital projects), it is often cost prohibitive and can interfere with SWMM requirements and other utility placement.

These staff often need to make changes in the field to make the project work and the elements fit. While they seemed confident in their professional judgement, they also asked for additional items to be clarified in the PDG update, including:

- Linear tactile markings
- Consistency with and reflection of bike design guidelines
- Placement of transit shelter locations, especially where the bus stops in lane
- Incorporating micromobility into the sidewalk corridor
- Stormwater management infrastructure, especially items that address potential hazards of surface stormwater treatment like railings
- Incorporating the parking zone as an extended furnishing zone

Lastly, the group discussed the transportation hierarchy as one of their guiding principles, yet one they felt they had little direction on how to implement. The emphasized the need for the PDG (and the Streets 2035 project) to help in objectifying the transportation hierarchy policies and other modal policies to ensure that projects are aligned with broader City visions and goals.

# DISCUSSION THEMES

The PBOT focus groups offered a unique perspective into how the current PDG is used and where PBOT staff find it useful and challenging. While the groups varied in their assessment of the guide and what sort of improvements they would like to see in an update, there were a few notable themes, including:

- **Keep Table A-1 and make it better.** All of the focus groups cited Table A-1 as the most-used part of the PDG. Staff like and appreciate the clarity of the visuals, the succinct information, and the one-stop reference that it provides. That said, some staff felt that Table A-1 needed to be expanded in the PDG update to make it more relevant to today's developments. Specifically, Table A-1 should provide guidance on curb-free/alternative street design and how stormwater features should be incorporated into the sidewalk corridor. Additional information/content within the updated PDG should be presented in this highly visual, graphic format for clarity and ease of use.
- **Provide for context-sensitive solutions.** While Table A-1 is a good start in many situations, every situation is unique per the pattern area, land use, existing curb line, available ROW, etc. The current PDG does not offer context-sensitive solutions for staff or for private developers given these factors. The updated PDG should include a variety of sidewalk corridor design solutions that are context sensitive so staff have more "pre-approved" designs to choose from and can rely less on design exceptions or professional judgement. The context and criteria for applying these various design options may or may not be applied must be clearly stated.
- **Protect the Pedestrian Through Zone.** The PTZ is, arguably, the most important piece of the sidewalk corridor. Permitted and unpermitted uses are starting to encroach on and shrink PTZs as the ROW takes on additional demands (utilities, sidewalk cafés, etc.). The updated PDG should clearly state the importance of maintaining a clear and continuous width PTZ and offer design solutions that encourage this as an outcome. To do this, the updated PDG may need to update widths, design options, and space allocation for other zones of the sidewalk/right-of-way in order to adequately accommodate uses such as utilities, street trees, café seating, and other encroachments/activities.
- **Develop standards but allow appropriate context-sensitive flexibility.** Some staff were adamant about the PDG becoming standards while other preferred they remained guidelines. The PDG should become standards but should be written in a way that allows for context sensitivity where appropriate and will provide an exceptions process. For private development, the PDG should include or reference the criteria and process for the Public Works Appeals process.
- **Address new topics.** Portland's development patterns and transportation systems have both grown dramatically since 1998 – the updated PDG should reflect these changes. Specifically, the updated PDG should include sections and guidance on linear tactile markings, integration of the sidewalk corridor with the update bicycle design guidelines, micromobility, alternative pedestrian walkways (including paths and stairs), stormwater, space needs for tree viability, hardscape and softscape treatments and materials, utilizing the parking/flex zone as an extension of the sidewalk corridor, and integration of new and expanded transit shelters and stations.
- **Reconcile the PDG with other (sometimes conflicting) guidance.** Staff often are charged with using their professional judgement to "mediate" between various policies and plans. The updated PDG needs to either reflect existing guidance or, if any of the updated PDG is inconsistent with past guidance, an effort needs to happen to sunset the outdated guidance. Administrative rules, relationships between the PDG

and streetscape design plans, bike parking, and transit siting guidelines all were highlighted as areas where there are current inconsistencies between guiding documents.



# SECTION 3. PEER CITY REVIEWS



# SECTION 3. PEER CITY REVIEWS

To learn more about best practices around the country, the project team conducted reviews of five cities – Seattle, WA; Washington, DC; Denver, CO; Boston, MA; and Austin, TX – to get a sense of how other cities are working to create their ideal sidewalk corridors, where they are being innovative, and what challenges they have encountered. These reviews consisted of both a review of their design guide(s) and/or policy documents, and a staff interview. The following sections summarize what the project team learned over the review.

## SEATTLE, WA

Seattle is often looked to as a model for Portland – both cities pride themselves in having a strong multimodal culture while also having a wide variety of neighborhood characteristics that both residents and planners try to uphold. Prior to 2017, Seattle was struggling with how to consistently make decisions in their ROWs that would be transparent, could be clearly communicated to the development community, and would create a multimodal network that is efficient, safe, and attractive.

With this purpose in mind, the City created and adopted Streets Illustrated, an update to Seattle's Right-of-Way Improvement Manual, in 2017. It is an online manual which includes design guidance and standards, as well as processes for how to design, build, and manage infrastructure within the right-of-way. Chapter 3.2 of Streets Illustrated includes the design standards for sidewalks (<https://streetsillustrated.seattle.gov/design-standards/sidewalks/>).

Seattle divides their sidewalk corridor into the same zones as Portland – the frontage zone, pedestrian clear zone, and the landscape/furniture zone. Figure 2 from Streets Illustrated lays out the sidewalk dimensions per street types. As shown, Seattle aims to have a 2-foot frontage zone, 6-8-foot pedestrian clear zone and, generally, a 6-foot landscape/furniture zone. According to staff, there was no technical analysis completed to decide on these widths – just a general understanding of how wide areas would need to be for two people to walk side by side (at least 5 feet), feel buffered from traffic, and/or have enough space for large street trees and their root systems.

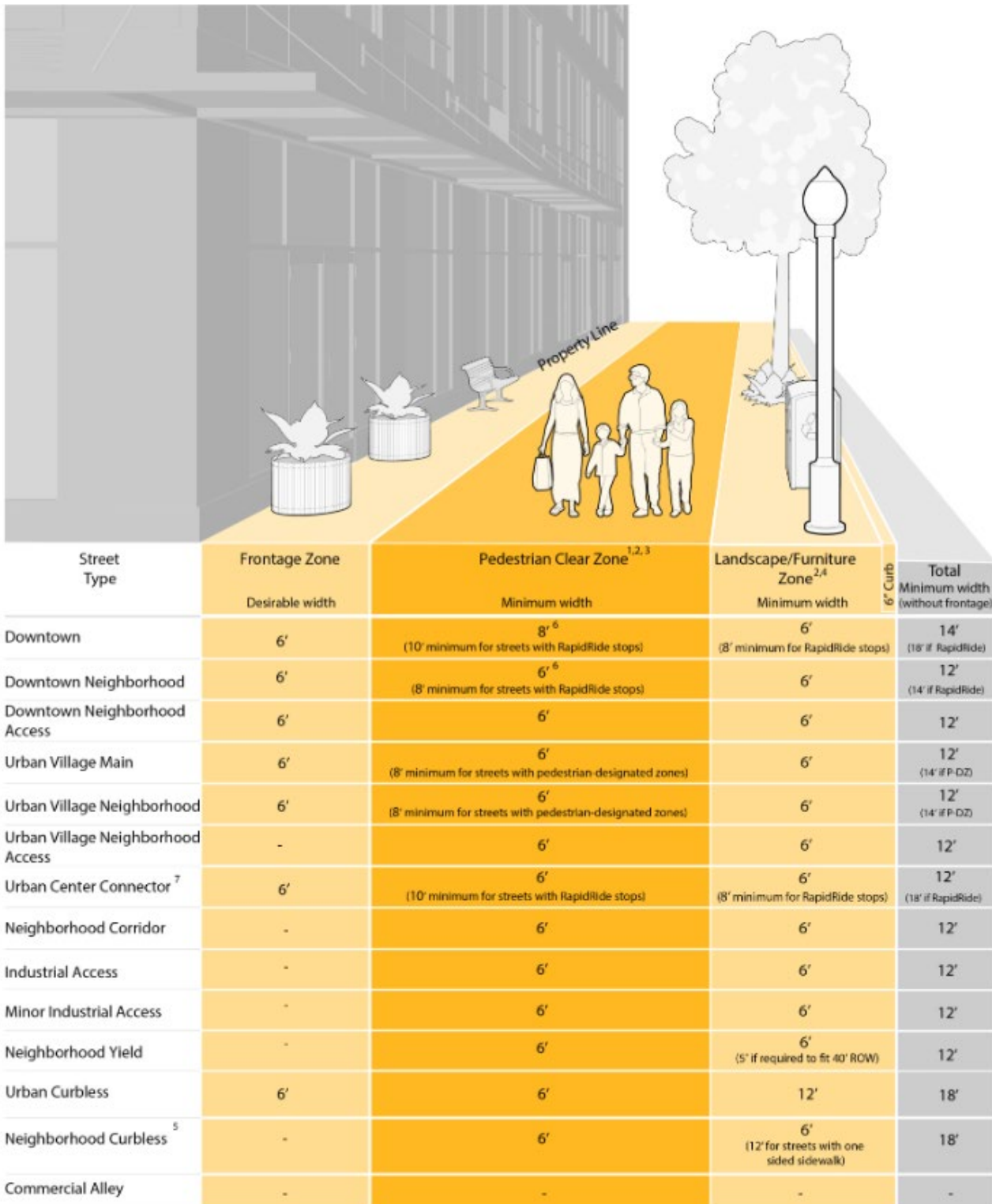


Figure 2. Sidewalk dimensions (Source: Streets Illustrated, 2017. <https://streetsillustrated.seattle.gov/design-standards/sidewalks/>)

These standards can be manipulated, though, in order to account to other factors. The most common manipulations of these widths include:

- **Pedestrian Clear Zone.** Six feet is generally accepted as the narrowest a pedestrian clear zone should be. That said, in areas that have limited ROW or other unusual circumstances, the city will accept clear zones of 5 or (in rare cases) 4 feet, in order to comply with the ADA. If the clear zone is 4 feet, there must be 5-foot zone every 200 feet.
- **Straight Pedestrian Clear Zone.** The city aims to make the pedestrian clear zone a straight shot, allowing users to walk directly forward without venturing into other sidewalk zones. There are some cases, either because of an extended frontage zone use (e.g., sidewalk café, merchandise displays) or other “point obstructions” that need to stay in a specific location (e.g., large tree, fire hydrant), where they will allow the clear zone to sway. The clear zone must maintain four feet of width if this happens.
- **Urban Center Connector and RapidRide Corridors.** Both Urban Center Connector and RapidRide Corridors were designated for frequent transit use, which would produce more sidewalk usage for getting to/from transit and waiting for transit. These street types are required to have wider sidewalks (14’ and 18,’ respectively) and, concurrently, wider clear zone requirements (10’), to accommodate these uses.
- **Utility Access Points.** Utility access points shall be located out of the pedestrian clear zone and outside of the landscape/furniture zone. If this is not possible and they must be located in the clear zone, it should have a level non-slip surface that meets ADA standards.
- **Furnishing Zone Widths.** Most of the furnishing zones are designated to be 6 feet (greater than Portland’s 4 feet). This zone is widened if the location is at a RapidRide stop to allow more space for onboarding and debarking riders.

Seattle, like Portland, has topography challenges in certain parts of the city. Areas have steep topography and/or narrow ROW widths, which make it difficult and prohibitively expensive to build sidewalks, especially if there is not an existing curb. The City allows an “alternative” walkway treatment to be built on one or both sides of these streets if they can meet design requirements.

On the surface, Streets Illustrated seems like a comprehensive and well-developed approach that would help in making consistent decisions in the ROW and, specifically, in the sidewalk corridor. In addition, the City’s code offers clear direction in situations where there is not adequate right-of way per Chapter 23.53 – Requirements for Streets, Alleys, and Easements. It states, “If necessary to accommodate the right-of-way and roadway widths specified in the Right-of-Way Improvements Manual, dedication of right-of-way is required. If an existing arterial street has less than the minimum right-of-way width established in subsection 23.53.015.A.6, dedication of additional right-of-way equal to half the difference between the current right-of-way width and the minimum right-of-way width established in subsection 23.53.015.A.6 is required.”

Yet, the clarity of the code does not always translate to practice. Staff said that there is still a lot of negotiation that happens, both internally at SDOT and with developers. This is especially the case where the city does not have enough ROW to make the standards happen and there is a set curb. In these cases, the City will try to convince the developer to give them a voluntary pedestrian easement where the property owner still owns the land, but it is set aside for pedestrian access. Exacting the needed ROW is a generally unpopular route to go, both in terms of maintaining relationships with property owners and staff time and resources needed to go through the process, and the City does not have adequate proportionality proof established to consistently make this ask, nor quantitatively link how an “ask” would mitigate the transportation impact of a development. The City is currently working on creating the back-up for this ask in order to lessen their reliance on developers to negotiate or willingly accept voluntary pedestrian easements.

# WASHINGTON, DC

Washington, DC (DC) is considered one of the most walkable cities in the country, where sidewalks are often packed with commuters, tourists, and residents. was designed very intentionally in the early 1900s to make a city with “centers” and cohesive neighborhoods that were walkable and easily navigable through public space requirements. In fact, in 1870, Congress passed the “Parking Act” in DC which designated the part of the District’s unusually wide right-of-way adjacent to private property as park areas to be maintained by the adjacent property owner.

Although the District’s public space regulations remained in place throughout the 20<sup>th</sup> century, as new development shifted to the suburbs and staff turnover at District agencies resulted in a work force less familiar the regulations, the idea that part of the right-of-way was legally part of the city’s park system was mostly forgotten. Around 2000, DC began seeing a surge in new development as residents and businesses started moving back into the city. Without the institutional knowledge of the regulations, city staff did not have adequate guidance to support them during this renaissance and, as such, changes to sidewalks and public space were being approved and built inconsistently throughout the city by private developers.

This inconsistency led to the development of the City’s Public Realm Design Manual (<https://ddot.dc.gov/PublicRealmDesignManual>) that supplemented the already-existing Design and Engineering Manual (<https://ddot.dc.gov/page/design-and-engineering-manual>).

	<b>Curb Walk*</b>	<b>Tree/Furnishing Zone***</b>	<b>Sidewalk Unobstructed Clear Width (min)</b>	<b>Public Parking/ Café Zone</b>	<b>Total Minimum Sidewalk Width</b>
<b>Low- to Moderate-Density Residential**</b>	None	4-6 feet	6 feet	Varies	10 feet
<b>High-Density Residential</b>	1 foot	4–8 feet	8 feet	Varies	13 feet
<b>Central DC and Commercial Areas****</b>	1–2 feet	4–10 feet	10 feet	Varies	16 feet

*NOTE: All widths depend on sidewalk space within the ROW Designated Street Distribution Cards; for all projects, refer to streetscape standards for historic zones and the DDOT Green Infrastructure Standards.*

\*Curb walks must be provided where permitted by DDOT and if accessible parking spaces are provided in accordance with the proportions set forth in the Federal PROWAG.

\*\*Single-family detached houses and row houses.

\*\*\*Reference soil volume minimums and identify utility locations when establishing this zone.

\*\*\*\*Curb walk and tree furnishing zones must total at least 6 feet.

Figure 3. [https://ddot.dc.gov/sites/default/files/dc/sites/ddot/page\\_content/attachments/DEM-2019-01-01\\_DDOT\\_DEM\\_Updates\\_FINAL.PDF](https://ddot.dc.gov/sites/default/files/dc/sites/ddot/page_content/attachments/DEM-2019-01-01_DDOT_DEM_Updates_FINAL.PDF)

Each street in DC has a “Street Distribution Card,” a paper record of the ROW requirements for each street in the city that includes the width between curbs, a width for street tree and sidewalks, and a width for a landscaped area between the back of the sidewalk and property line. While the Street Distribution Cards are a reliable record of how the public space has historically been distributed, the cards have not been consistently maintained or updated to reflect current standards. There are instances when staff deviate from what is recorded on the cards to ensure new sidewalk meet the minimum clear sidewalk widths that are required today. This includes tree



boxes that are between four and six feet in width and sidewalks that vary in width depending on adjacent land use: 6 feet for low- to medium-density residential areas, 8 feet for high-density residential or light commercial areas, and 10 feet for the Central Business District. The city has not documented a quantitative nexus or proportionality back-up for the widths; it is just generally accepted knowledge about what is comfortable.

Many of the other pedestrian corridor requirements are similar to or exceed those of Seattle – mandating at least 4 feet for a minimum pedestrian through zone for ADA compliance, requiring utility vaults to be placed outside of the pedestrian through zone in most cases, mandating an 8-foot minimum for sidewalk at transit stop locations, and clearly stating that sidewalk obstructions/furnishings should not encroach on the sidewalk’s clear travel path. The furnishing zone is usually set between 4-6 feet but may sometimes be as narrow as 3 feet. In these cases, there will be “bump out” areas that extend a foot into the sidewalk to allow for 4-foot by 4-foot tree boxes.

DDOT’s strategy for ROW acquisition is clearly laid out in the Design and Engineering Manual. In summary, the process is as follows:

- Once the project is identified, the Right-of-Way group within DDOT is notified;
- The project budget must include as estimate to acquire the needed ROW. These costs are estimated using tax assessment and recent property sales. A funding source for purchasing the ROW must be determined;
- Once the funding is approved, surveys are completed to determine the exact ROW needs. The needs and the estimated price for purchasing the ROW are presented to the property owner; and
- If the property owner does not accept the offer, the city begins a condemnation process.

The Design and Engineering Manual’s direction is straightforward and singular, seemingly giving the City full control in cases where ROW is needed to create an adequate sidewalk corridor. Yet, this process is rarely used because, in general, Washington, DC has extremely wide ROWs (typically 90 feet) and can usually fit what it needs where it needs it.



**Figure 4. Varying practices where pedestrian standards change mid-block in Washington, DC.**

ROW not needed for vehicular traffic or pedestrians is also utilized when transitioning from one sidewalk standard to another along a continuous corridor. Most public space distribution is consistent for an entire block or it changes at an alley (which is typically consistent with where zoning changes on private property), but there are

situations where building type use changes to another at the parcel level (e.g., the ground floor use of a building is commercial and the adjacent ground floor use is residential). Their practice is to maintain a continuous 4-6-foot tree box/furniture zone and 6-10-foot clear pedestrian path behind the furnishing zone along the length of the block. This practice provides a continuous street experience and maintains a consistent pedestrian network. The space behind the clear pedestrian path is either paved as sidewalk when adjacent to ground-floor commercial uses (which can be used for sidewalk cafés) or landscaped when adjacent to ground-floor residential uses.

The street widths in Washington, DC are within are typically 90' in width but range between 80 to 160' on its widest avenues. The dimensions between curb and property line can vary significantly in width – from 10' at the narrowest (4' tree box and 6' sidewalk) or up to 55' along an avenue (6' tree box, 6 to 10' clear sidewalk, and up to 40+ feet for sidewalk in commercial areas or landscape in residential areas). There are two examples shown in Figure 4. The image on the left is in an outlying area on DC's Connecticut Avenue NW (across from the entrance to the National Zoo); the other is downtown in the 400 block of Massachusetts Avenue NW. Both show a continuous tree box/furniture zone and clear sidewalk at the curb and where a sidewalk adjacent to a commercial use abuts a landscaped area in front of a residential use.

Washington, DC, does provide an interesting case study for energizing the sidewalk corridor of commercial areas through sidewalk cafés and show window projections. The City considers cafés an extension of a business and permits them through the property owner, who may or may not be the restaurant owner. The city charges a permit fee and an annual rent bill for the sidewalk space that they use and has strict guidelines for how a café should be designed, including the preservation of the appropriate clear zone on the sidewalk, height of fences and landscaping around the café, and that the sides of a café must be open. The sidewalk café design guidance allows pedestrians to have visibility into and out of the café space, which helps with activating the sidewalk. More on the sidewalk café requirements can be found at [https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/sidewalk\\_café.pdf](https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/sidewalk_café.pdf).

Show windows are also encouraged by allowing businesses to extend their display of goods into public space in windows that are predominantly glass and create transparency between the sidewalk and interior of commercial spaces. A permit is needed to construct a show window into public space, but there is not annual rental fee. Guidelines like maximum amount that a window can extend into public space, maximum widths, and minimum distances from the curb ensure that show windows create a pedestrian scale and maintain adequate space for street trees and clear sidewalk widths. More information on projection regulations can be found at <https://planning.dc.gov/page/building-projections-washington-dc>.

## DENVER, CO

Denver updated its Transportation Standards in 2017 and is currently updating its Complete Streets Guidelines. The current standards are based on street classifications, having minimum 5-foot clear zones and 8-foot furnishing zones, to a maximum of 8-foot sidewalks and 12-foot furnishing zones for busy arterial roads. These general standards can be overridden by City-adopted area plans, such as in downtown. The upcoming Complete Streets Guidelines will help the City make more context sensitive decisions and marry the transportation function of the roadway with the transportation goals of the City.

Most likely, the Complete Streets Guidelines will designate cross sections based on the street types developed in Blueprint Denver, the city's 20-year land use and transportation plan. These street types link the design and operation to their character and land use, creating a more holistic picture of the roadway.

In areas where they do not have adequate ROW for the required sidewalk, City staff take one of two approaches – (1) They can move the curb into the roadway (many of the curb-to-curb widths in the city are wider than needed) or (2) They can ask for half of the right-of-way difference than they need. This ask, and its relationship to

proportionality, is a consistent point of contention between the City Attorney, permitting staff, and developers even though Article 5 within their development code clearly states that the property owner must provide the needed ROW to meet the transportation standards, independent of whether a street is currently there or a curb is placed. The code continues to explain that the City “is authorized to withhold issuance of a building permit... until arrangements have been made to the manager’s satisfaction that the required street rights-of-way... will be provided by the owner of the land to be developed or redeveloped.”

While the City does have the permission to ask for and the process for obtaining the ROW is within its code, the City will often still ask for voluntary pedestrian easements before it exacts the property. This still meets the goals of the sidewalk standards – to have adequate space for pedestrian use and flow – while not damaging relationships with the development community and saving staff and legal resources. The City also has a variance process that allows projects to diverge from City standards that it can use, although it does not advertise the program extensively. The variance process is used more with capital projects than with development projects.

For areas where there are transitions between sidewalk standards, whether it is between street types or historic building frontages, City staff use their professional judgement and do their best, often going through the sidewalk non-conformance process.

## BOSTON, MA

The Boston Complete Streets Guidelines ([www.boston.gov/sites/default/files/file/2019/12/BCS\\_Guidelines.pdf](http://www.boston.gov/sites/default/files/file/2019/12/BCS_Guidelines.pdf)) are nationally recognized as a forward-thinking blueprint for multimodal streets. The Guidelines were adopted in 2013, and while often thought of as the guiding document for determining street and sidewalk layouts, they are only a piece of the City’s decision-making process. Along with the Complete Streets Guidelines, City staff also use the following documents:

- **Accessibility Checklist** (<http://www.bostonplans.org/getattachment/2b173503-a553-4880-974f-a25270e8ff34>). This checklist was created by the Mayor’s Commission for Persons with Disabilities to ensure that accessibility is incorporated into each project and the areas around the project at its inception. This checklist asks about the compliance of the sidewalk space with the Complete Streets Standards, whether there are any impedances within the pedestrian through zone (such as sidewalk cafés) and how they will be designed to maintain accessibility, and whether the materials meet ADA standards.
- **Roadway Design Standards** ([https://www.boston.gov/sites/default/files/imce-uploads/2019-05/roadway\\_design\\_standards.pdf](https://www.boston.gov/sites/default/files/imce-uploads/2019-05/roadway_design_standards.pdf)). The Roadway Design Standards offer engineering drawings and guidance for elements within the sidewalk corridor, including the tree pits. These standards also outline the variety of materials approved for Boston’s sidewalks.

The Complete Streets Guide dictates the desired widths of the frontage zone, pedestrian zone, and the greenscape/furnishing zone based on street types. The absolute minimum for the pedestrian through zone is 4 feet (to comply with the ADA), but the usual minimum ranges from 5 to 8 feet. The street types were created for the Complete Street Guide and supplement the traditional functional classification system of streets.

City staff work diligently to ensure that the pedestrian through zone is maintained and protected, and sometimes, as a result, need to be flexible with the frontage and furnishing zones because of space limitations. City staff try to start with accessibility as the true “standard” and then negotiate the other parts of the sidewalk to create the space that is needed to create an active streetscape. This is shown in Figure 5 from the Complete Streets Guide, which does allow for a nonexistent frontage zone and a greenscape/furnishing zone ranging from 1 foot 6 inches to 5 feet.

In general, Boston has extremely narrow ROWs with narrow sidewalks that cannot be widened even if travel or parking lanes were removed. These types of streets are unique to Boston and other colonial cities along the East Coast. Because of these limitations, if the desired sidewalk design width changes along the stretch of the sidewalk because of street type changes, it usually cannot actually be changed because of space constraints. In these cases, the city simply continues with the existing sidewalk width pattern.

If there is room for flexibility, staff would either push the curb out or require a building setback. In some cases, like the City's Cummins Highway reconstruction, they were able to widen sidewalks and even provide separated bike lanes because the overall project was a road diet, which took significant space from vehicle travel and transferred it to pedestrian and bicycle travel. For private development, the sidewalk often ends up as a patchwork, although if a lot of development is predicted, the City will set up urban design standards for a whole corridor, including sidewalk widths, that become a requirement for development.

As with other cities, Boston rarely asks for ROW outright to get additional sidewalk space and will, instead, ask for pedestrian easements. This approach is generally accepted by the developer given the City's hot development market and the developer's desired to please the community where they are developing.

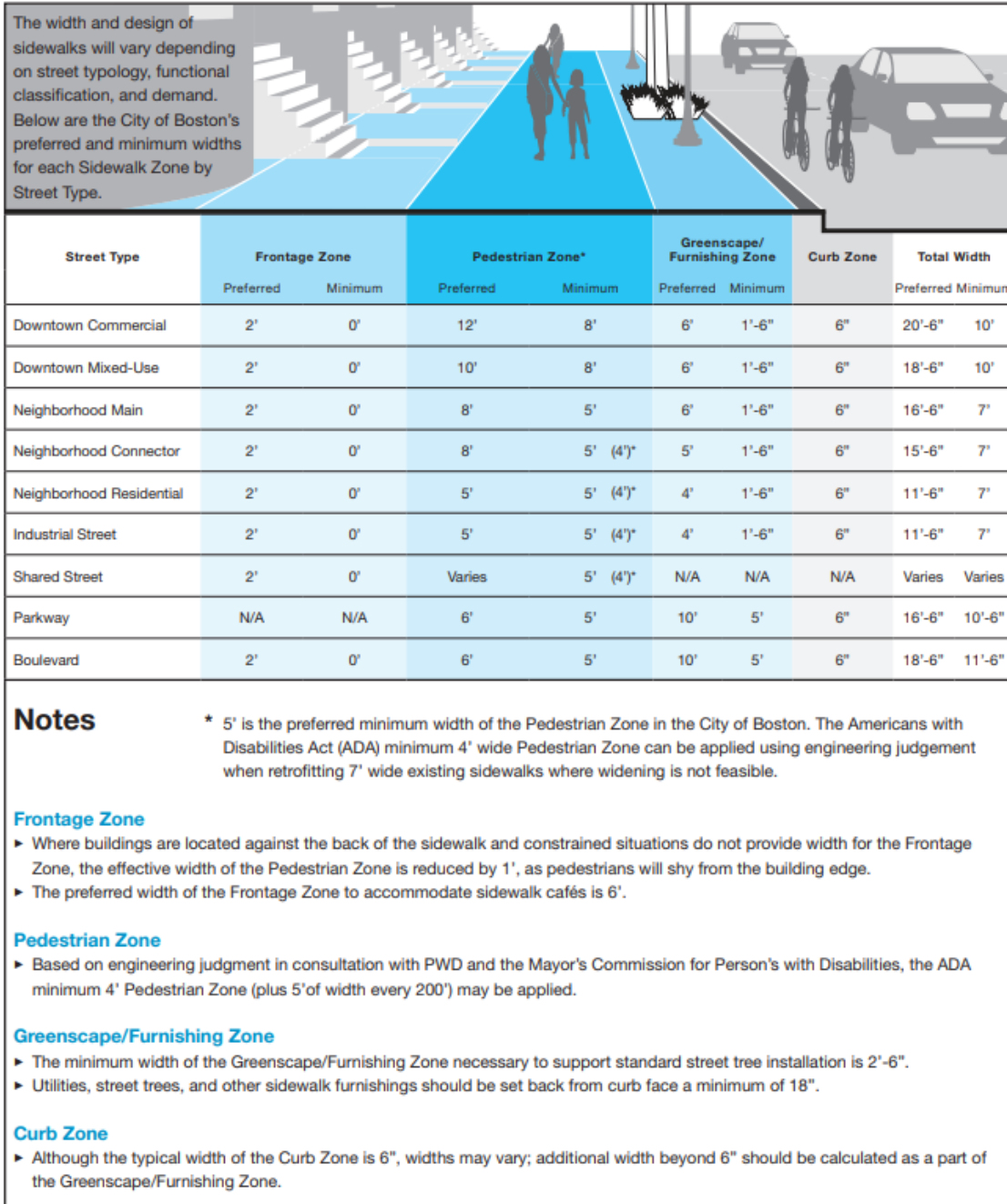


Figure 5. Boston's preferred and minimum widths for sidewalk zones ([https://www.boston.gov/sites/default/files/file/2019/12/BCS\\_Guidelines.pdf](https://www.boston.gov/sites/default/files/file/2019/12/BCS_Guidelines.pdf))

## AUSTIN, TX

Austin adopted new transportation network planning and design guidance in 2019 – the Austin Strategic Mobility Plan (<https://www.austintexas.gov/department/austin-strategic-mobility-plan>). This is an umbrella document for other transportation documents, including those related to sidewalk planning and design. Prior to the Strategic Mobility Plan, the City adopted a Street Design Guide. This guide created “street levels,” which are based on

functional classifications and primary characteristics, such as the trip types they serve, average vehicle speeds, and circulation functions.

The City determines the sidewalk needs and widths based on the street levels and the land use context. Each combination of land use context and street level has recommended and constrained (in essence, their minimum) widths for the sidewalk, tree/furniture zone, and a building setback/frontage zone. The narrowest constrained sidewalk width is 5 feet, although it may be up to 12 feet in areas with more intense uses.

	Level 2	Level 3	Level 4			
<b>ROW</b>	Desired Range	Desired Range	Desired Range			
	<b>74'-92'</b>	<b>92'-132'</b>	<b>120'-146'</b>			
<b>Additional ROW/ Easement Dedication for Parking (by Owner Request)</b>	<b>Parking Desired (Included in pavement)</b>	<b>0'-16'</b>	<b>n/a</b>			
<b>Pedestrian Zone</b>						
<b>Subsection Width</b>	<b>8'-15'</b>	<b>10'-16'</b>	<b>13'-18'</b>			
<b>Toolbox:</b>	<b>RECOMMENDED</b>	<b>CONSTRAINED</b>	<b>RECOMMENDED</b>	<b>CONSTRAINED</b>	<b>RECOMMENDED</b>	<b>CONSTRAINED</b>
<i>Sidewalk</i>	6'	5'	7'	6'	7'	6'
<i>Tree &amp; Furniture Zone</i>	8'	3'	8'	4'	10'	7'
<i>Shared Use Path (instead of sidewalks)<sup>1</sup></i>	n/a	n/a	n/a	n/a	n/a	n/a
<i>1' Setback<sup>2</sup></i>	1'	0'	1'	0'	1'	0'

**Figure 6. Austin’s Urban Context sidewalk widths**  
[https://austintexas.gov/sites/default/files/files/Transportation/Austin\\_Street\\_Design\\_Guide\\_June\\_2017\\_Public\\_Launch\\_reduced\\_size\\_06202017.pdf](https://austintexas.gov/sites/default/files/files/Transportation/Austin_Street_Design_Guide_June_2017_Public_Launch_reduced_size_06202017.pdf)

In situations where there is a transition between sidewalk widths on a corridor/adjacent property, they typically have the development do a straight-line flared transition from the narrow section to the wider section (or the other way around). If the new/old sidewalks are not in line with each other (e.g., the new sidewalk is set back further from the curb than the older, existing sidewalk), they purposefully avoid the use of a perpendicular connector (i.e., the two sidewalks are parallel to each other and a short segment with two 90-degree connections are constructed perpendicular to the sidewalks). In these situations, they use a S-curve transition between the two sidewalk segments so that it is easier for people with strollers or those using mobility devices.

Where the City of Austin varies the most from the other reviewed cities is in its documented proof of proportionality between what it asks for from the developer for ROW improvements (street and sidewalk-based) and the actual transportation impact that the development will have of the transportation system. The City of Austin implements a formalized “Rough Proportionality” (RP) as a state-mandated way to verify that transportation improvements required of developers during the application process are appropriate and fair. At the submittal of a traffic impact analysis (required if the site will generate more than 2,000 daily unadjusted vehicle trips), City staff use a “Rough Proportionality Worksheet” (found at <http://www.austintexas.gov/page/rough-proportionality>) as a check to see if the required improvements or mitigations are consistent with the calculated RP.

The City of Austin uses the RP calculation as a check and not as a hard ceiling. If a specific improvement is deemed critical, city staff can exceed the calculated RP value by up to 10%. In addition, city staff does not perceive the RP calculation as a way to extract the maximum amount of improvements/contributions from developments. Instead, staff focus on building and enhancing the multi-modal transportation infrastructure by working as partners with developers, and not as a simple fees collection agency.

Within the transportation impact analysis or other transportation analyses required of a development; the traffic engineering consultant must provide a list of improvements to mitigate their transportation impacts. They can also state a preference as to which improvements the developer will construct or make a fee-in-lieu payment. City

staff consider the identified improvements during the review process and then agrees to the preferred items or negotiates changes, as necessary. The RP value is calculated at this point to check if the improvements are truly proportional to their estimated impacts.

In some locations, especially in downtown Austin, the area directly in front of or around the development may be up to standards. In these cases, the city may ask the developer to build and/or fund city-led construction projects within a certain distance of the property to fill gaps in the pedestrian network.

This Rough Proportionality process is an adopted and accepted way to get developers to improve the sidewalks throughout Austin, piece by piece, even where development is not happening or will not be for the near future. Where there are issues or the developer pushes back, the City sometimes will ask for pedestrian easements, which will still get the pedestrian space that they need but without the developer needing to observe as large of a setback from the pedestrian space. This situation mostly occurs in downtown or in historic areas.

## DISCUSSION THEMES

The peer city interviews were exceptionally interesting for the project team and confirmed that no city has found the silver bullet to create perfect and consistently built sidewalks throughout their city. That said, each city did have pieces of their design guidance and process that were exceptional, interesting, or otherwise applicable to Portland's PDG update. The following themes from the peer city reviews should be considered as we move forward with the PDG update:

- **Every city is different.** Whether it is because of historical development patterns, available ROW width, accepted relationships between the City and developers, or community expectations, each city's design guidelines and standards look different and are implemented differently. Portland's guidelines should be designed specifically for Portland and, as such, should promote context-sensitive guidelines and/or processes throughout the document.
- **Start with voluntary pedestrian easements.** Most cities had a structural basis for asking for an exaction or ROW if there was not enough to meet their pedestrian guidelines, whether in their land use code or legal documents. That said, most cities did not regularly ask for exactions, instead asking for pedestrian easements which leaves the physical space in the property owners' hands, while getting the space's functional use set aside for the sidewalk corridor. This practice also conserves staff and legal resources during permit approval processes.
- **Create smooth transitions, as you can.** In general, cities handled mid-block transitions based on the amount of ROW they had. If they have "extra" ROW, they use building setbacks to create a sidewalk that aligns along the back of the furnishing zone while offering more pedestrian space towards the building. In other cases, they created gradual transitions or, when that was not possible, retained the existing sidewalk design.
- **Six feet should be the minimum pedestrian through zone.** All the cities cited a 6-foot pedestrian clear zone as their desired minimum, with the widths expanding as the land uses intensified and the project amount of pedestrian usage increased. Where flexibility is needed in constrained areas, the furnishing zone and building frontage zone are reduced, not the pedestrian clear zone. In addition, all the cities allowed 4-foot pinch points if there were identified constraints, in order to comply with the ADA.
- **Four feet should not be the maximum furnishing zone width.** Furnishing zones serve a variety of purposes from landscaping, supporting a citywide urban canopy, and maintaining a place for utility

infrastructure or street furniture, among others. It also serves as a buffer between pedestrians and vehicle traffic, which increases both real and perceived safety. In the current PDG, the widest recommended furnishing zone is 4 feet. This amount of space is less than many of our peer cities recommend and is less space than the internal focus group participants desire. The PDG update should evaluate where there are opportunities for wider furnishing zones and what potential options there might be to meet the needs of the furnishing zones in other places or ways (e.g., using the curb/flex zone for stormwater treatments).

- **Widths are generally accepted, usually.** The project team talked about proportionality with each city, specifically inquiring about how they show, when challenged, that their ask for a sidewalk width is proportional to the development's impact on pedestrian demand. All the cities, besides Austin, did not have any formal back-up of why specific widths were required for specific street types, land uses, etc. These cities used generally accepted assumptions that two people walking by each other need 6 feet to be comfortable, and that you need more space as more people are using the sidewalk. Austin, on the other hand, has an extensive Rough Proportionality process that quantifies how transportation improvements are proportional to the development's impacts. Austin's work is admirable and intensive and shows that proportionality documentation needs to be thoroughly researched, accepted, and, in their case, legally defensible.





# **SECTION 4. RECOMMENDATIONS**



# SECTION 4. RECOMMENDATIONS

The focus groups and peer city reviews offered the PDG project team a chance to reflect on the current PDG and identify opportunities to improve it based on internal knowledge and external experience. The following are recommendations that the project team should keep in mind as we continue moving forward on the PDG update:

- **Start with a decision tree.** Staff across all groups said that Table A-1 was the most-used part of the existing PDG but that it lacked the context-sensitivity that they needed to make decisions for specific locations. Looking at some of the peer cities' methods for integrating context into their guides, it is recommended that the decision tree starts with a street typology that marries the transportation needs and land uses along a street, potentially the Street Design Classification within the Portland's recently adopted Transportation System Plan. From this stage, the available ROW, existing curb line, and other roadway characteristics and contexts of the location should be considered when defining constraints and acceptable design accommodations within those constraints.
- **Provide design alternatives and flexibility for constrained or special conditions.** The updated PDG should have as much guidance as possible to ensure that sidewalk corridor design meets the pedestrian-centric goals of the City and so developers or capital project managers have accurate expectations of what they need to build. Some peer cities' design guides offered a few ROW design options depending on available space and the street type. This "design option" technique would be useful for the updated PDG, although would need to be clear about which and what constraints are valid when deciding on design alternatives so that design alternatives did not become a default decision in challenging situations.
- **Honor the Pedestrian Through Zone.** Having an adequate and comfortable PTZ is the fundamental goal of the sidewalk corridor. The updated PDG needs to give guidance on how and where other items that are on the sidewalk corridor (e.g., sidewalk café furniture, poles, etc.) can be placed to maintain the desired PTZ. This PTZ should also be honored when there is a shift in the sidewalk corridor standards to make a clear and predictable path for pedestrians. If possible, building setback should be used first for additional space, followed by a gradual diagonal build out or in to the connecting PTZ.

In addition, peer cities consistently noted a 6-foot PTZ in their standards, with the widths expanding as the land uses intensified and the projected amount of pedestrian usage increased. The PTZ widths within the current PDG are comparable to other cities.

- **Expand the guide to make it timely.** Our discussion with staff highlighted how much Portland has changed since 1998 in terms of development and the uses of the city's transportation system. The updated PDG should include sections and guidance that address these changes and, at minimum, cover linear tactile markings, integration of the sidewalk corridor with the update bicycle design guidelines, micromobility, stormwater, street trees, transit islands and transit stations, alternative pedestrian walkways (including paths and stairs), materials (hardscape and landscape requirements), and utilizing the parking/flex zone as an extension of the sidewalk corridor, where appropriate.
- **Explore furnishing zone widths and options.** More research will be conducted to better understand if 4 feet is adequate for creating a tree canopy within the sidewalk corridor and, if so, what technologies the PDG may recommend. Additional thought should be put into whether the parking zone/flex zone can serve as the sidewalk corridor's furnishing zone in specific situations.

- **Pedestrian easement might be the first approach if the proportionality backup is not adopted.** Whether or not cities require exactions relies on the culture of their development community and, sometimes, on the expectations the city's residents placed on developers. Only Austin had a quantitative method for determining proportionality, which was for the entire ROW, not only the sidewalk corridor. The cities other than Austin used pedestrian easements as a method for getting the space and use they wanted for a wider pedestrian corridor without have to go through a legal or unpopular exaction process. Portland staff have discussed with the City Attorney how and what sort of proportionality documentation would be needed to help get the needed space from developers. While the City Attorney expressed that additional documentation would be helpful, there was no formal commitment that it would be enforceable. This enforcing of an ask for and required giving of additional space would need to be supported by City and PBOT leadership, which will be a longer process than the PDG Sidewalk Corridor section update entails. It is recommended that this conversation continues amongst PBOT, Streets 2035, and legal staff as they look to consistently ask for and/or obtain the space they need for a ROW that meets the Portland's visionary goals.