Walkable Crown Hill

Streetscape Improvements and Traffic Calming Toolkit

November 14, 2008

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Walkable Crown Hill

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Community Members

A special thanks to all of the community members who have given their time and energy to this project.

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architecture · planning · urban design

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Figure 1. Site map of the Crown Hill study area.

CHAPTER 1:

Background

Walkable Crown Hill (WCH) was formed by a group of concerned citizens who want to reclaim the streets of Crown Hill for pedestrian use. It emerged in the summer of 2007 as a joint initiative of the Crown Hill Neighborhood Association and Sustainable Crown Hill to develop the tools and strategies that would empower community members to create change on their streets. WCH builds on the ideas and principles laid out in the 1998 Crown Hill/Ballard Neighborhood Plan and the 2007 Greening Crown Hill document from the Crown Hill Business Association. In addition, WCH has coordinated its efforts closely with the Seattle Department of Transportation (SDOT) to ensure that its work and recommendations are feasible and fundable.

The planning process initiated by WCH is intended to bring together members of the Crown Hill community to identify concerns and document ideas for specific, achievable steps toward the creation of a walkable culture in Crown Hill. In the spring of 2008, WCH did a traffic study of residential streets and began surveying the community about their pedestrian habits and needs. Then, with the support of a NMF grant from the Seattle Department of Neighborhoods, MAKERS architecture was hired to assist WCH in the planning process. MAKERS led two community-wide charettes in which community members worked together to discuss concerns and ideas.

Out of this community work came two major products. The first is a priority list of 'major' projects in the community that would likely need significant funding from the City. Chapter 2 summarizes the project priorities. In addition to this priority list, community members came up with a number of streetscape design strategies to improve non-arterial residential streets using large and small interventions, with funding from both city and private sources. Chapter 3 summarizes these ideas into a Toolkit for Citizen-Intitiated Streetscape Improvements. This entire document and the work that produced it is intended to provide the means for all of these projects to be citizen-initiated, with neighbors working together to make their block a better, safer place for pedestrians.

Figure 2. Existing conditions in Crown Hill.

Goals and Objectives

Goal: Create a walkable culture on Crown Hill and promote community building.

Objectives:

- Actively engage the community in the development of this Plan
- Improve the safety of pedestrians, bicyclists, and drivers.
- Reduce traffic speed and volumes on residential streets.
- Enhance the neighborhood's natural and artistic character.
- Generate opportunities for neighbors to build a community together.

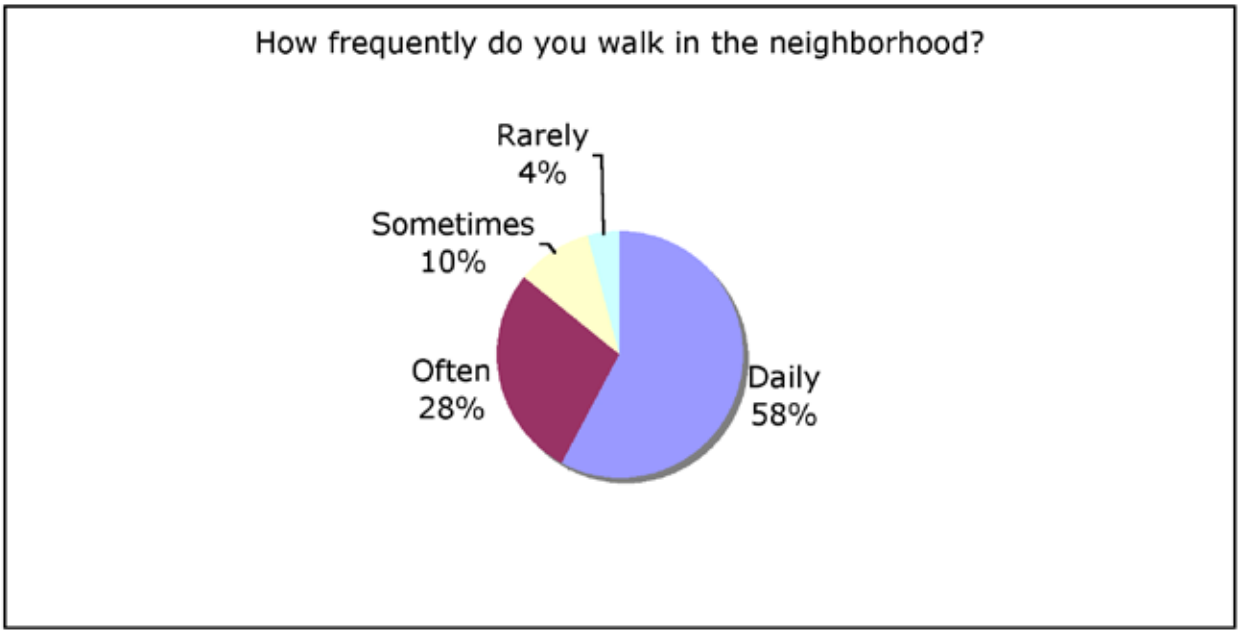
Neighborhood Traffic Study

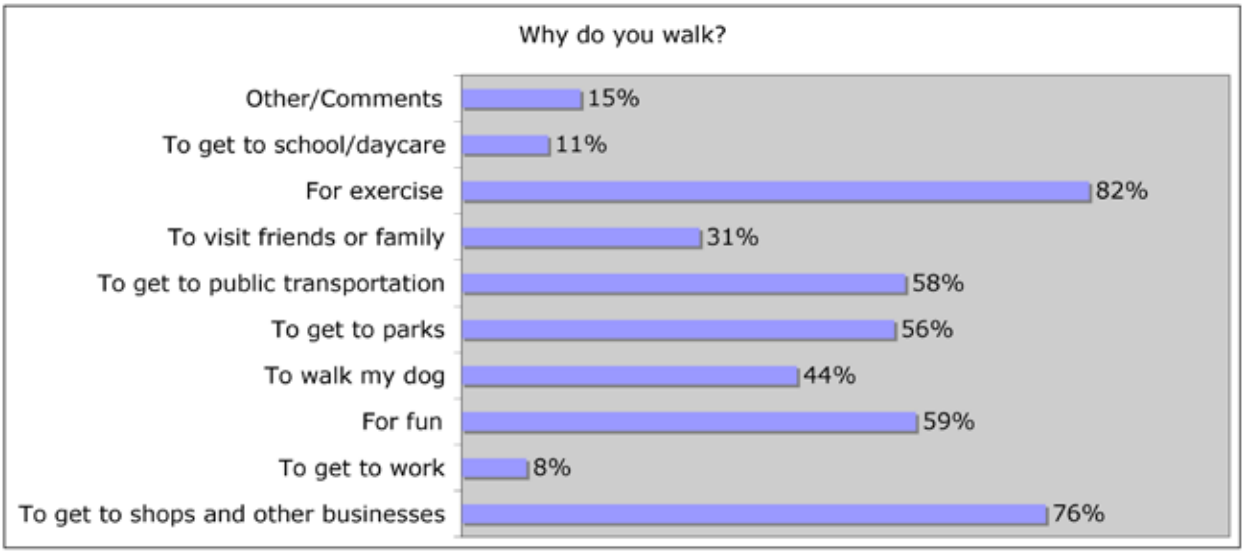
Walkable Crown Hill members worked with SDOT to conduct a speed and traffic volume assessment of multiple residential streets throughout the Crown Hill neighborhood. Residents have complained of a high volume of cut-through traffic, particularly on the “long blocks” running both north and south of Holman. Based on the data taken by WCH volunteers in seven different locations, the volume of traffic on all streets was determined to be well within acceptable standards as determined by SDOT. The speed of the vehicles surveyed varied throughout the neighborhood, but at the 85th percentile (above average) all speeds were less than 35MPH, or 10 MPH over the speed limit of 25 MPH. This is the threshold of concern for SDOT and the speed at which police officers would tend to pull over a speeding motorist. SDOT did express interest in resurveying the two streets that showed speeds higher than 30 MPH to ensure that they do not worsen, as well as to reassess those streets that are slated for traffic circle and speed bump projects to determine the impact of those interventions.

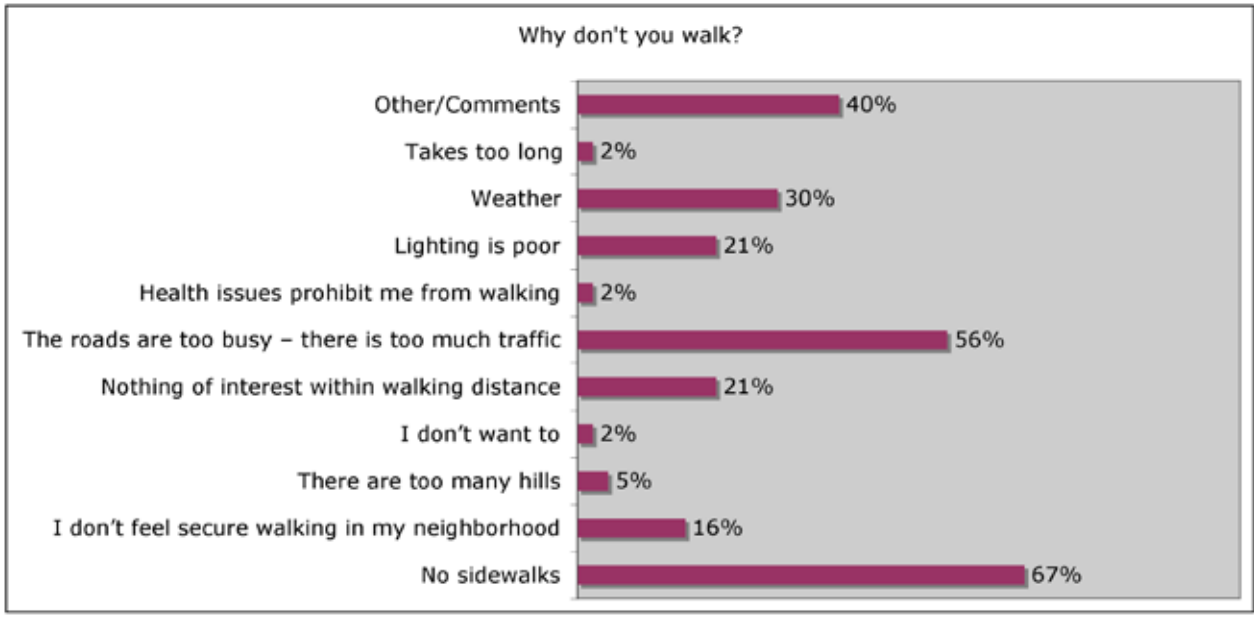
Street Monitored	Speed (85th %)
NW 97th btw 9th and 12th Ave. NW	23 MPH
NW 92nd btw 8th and 9th Ave. NW	24 MPH
13th Ave. NW btw NW 85th and NW 90th	32 MPH
13th Ave. NW btw NW 95th and 100th	28 MPH
NW 100th btw 14th Ave. NW and Mary	31 MPH
12th Ave. NW btw NW 95th and 97th	29 MPH
Mary Ave. btw NW 92nd and 95th	28 MPH

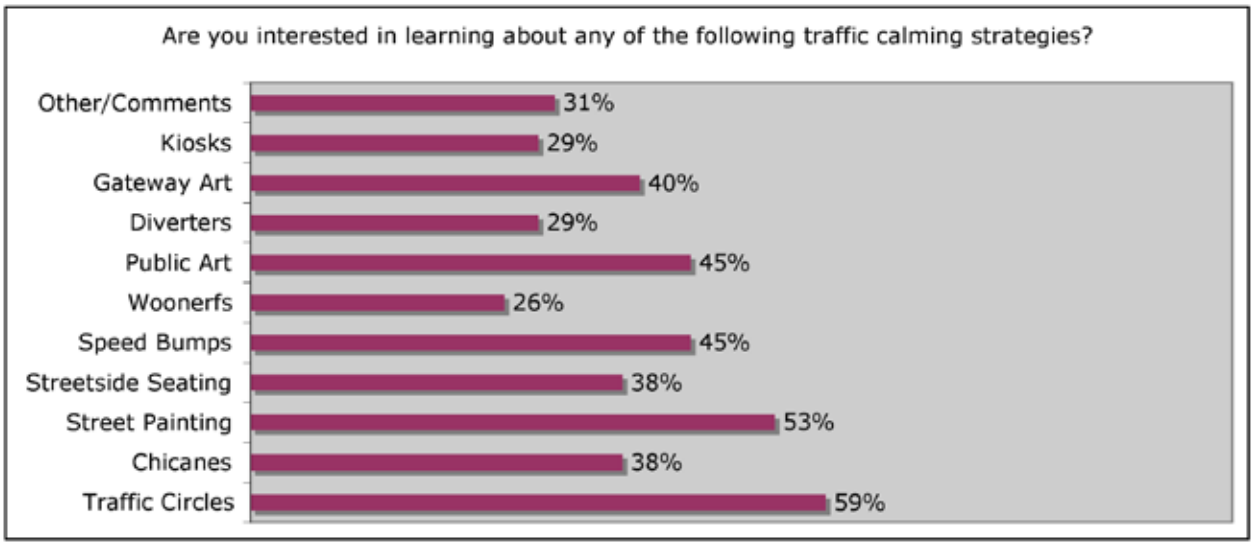
Pedestrian Survey

Walkable Crown Hill developed a pedestrian survey to assess community members' current and desired pedestrian experience. The survey mirrored a similar survey that was done for the city's pedestrian master planning process so that our results could inform that process, as well. The survey was administered in-person at various neighborhood events as well as through an on-line form accessible through the Walkable Crown Hill website (walkablecrownhill.org). In all, 71 community members completed the survey. The responses to several questions are presented here and the complete results, including comments and the responses to the open-ended questions, can be found by following the link on the Walkable Crown Hill website: www.walkablecrownhill.org.









Other Survey Questions:

Are there places you avoid walking?

Are there routes or locations that you avoid? Why?

In your opinion, what makes a great place to walk?

CHAPTER 2:

INTRODUCTION

Throughout this planning process it became clear that a number of major projects would really help improve the pedestrian environment. These major projects generally involve more traditional approaches to traffic calming and pedestrian infrastructure. However, such traditional projects are expensive and Crown Hill residents realized that they were unlikely to achieve everything on their wish list due to a scarcity of funding. To resolve this issue, during the second charette, community members created a priority list of projects that they thought would have the greatest impact on improving their neighborhood. This way, these projects will be targeted first for applications and recommendations for available funding through the Neighborhood Street Fund or the Neighborhood Matching Fund.

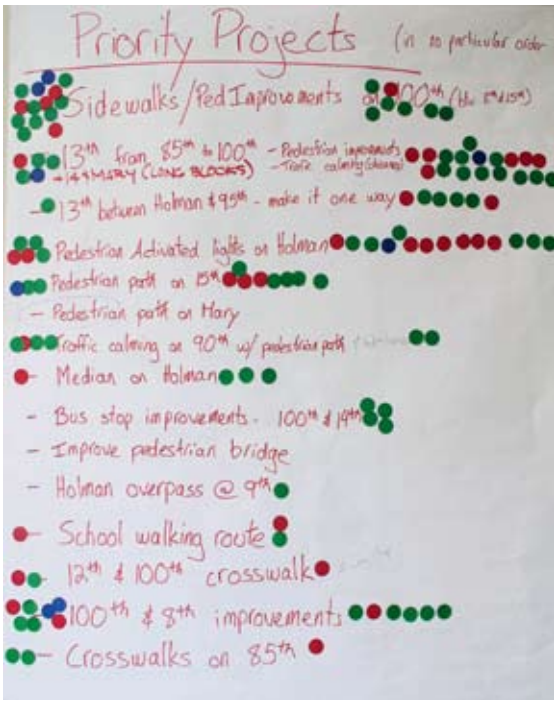


Figure 3. Results of the project priority dot exercise at the second community charette.

One priority identified by the community, making 13th Ave. NW between Holman Rd. and NW 95th St. from a two-way to a one-way southbound street (#6 on the original map on the next page), was temporarily removed from the list because it cannot be evaluated until the permanent status of the adjacent Crown Hill School property is established. When the potential changes to that site are determined it should be put back on the priority list.

These priorities were submitted to the Seattle Department of Transportation (SDOT) for review and SDOT gave detailed feedback to the community in the form of solutions, comments, more detailed funding opportunities, and estimated project costs. This feedback is included in this chapter under each priority.

Figure 4. Community members brainstorming at the second charette.

Detailed Priority List

1. Pedestrian improvements and traffic calming on long blocks from NW 85th St. NW 100th St: 12th Ave NW, 13th Ave NW, 14th Ave NW, and Mary Ave NW.
2. Sidewalks and pedestrian improvements on NW 100th St. between 8th Ave NW and 15th Ave. NW
3. Pedestrian-activated signals on Holman Rd NW
4. Intersection improvements at the intersection of NW 100th St and 8th Ave NW.
5. Pedestrian path along 15th Ave NW
6. Traffic calming with pedestrian path and bike lane on NW 90th St.
7. A vegetated median along Holman Rd. NW.
8. Bus stop improvements on NW 100th St. and 14th Ave NW.
9. School walking route on NW 95th St
10. Intersection improvements at NW 100th St and 12th Ave NW with cross-walks
11. Crosswalks on NW 85th St.
12. Intersection improvements at Holman Road NW and 9th Ave NW

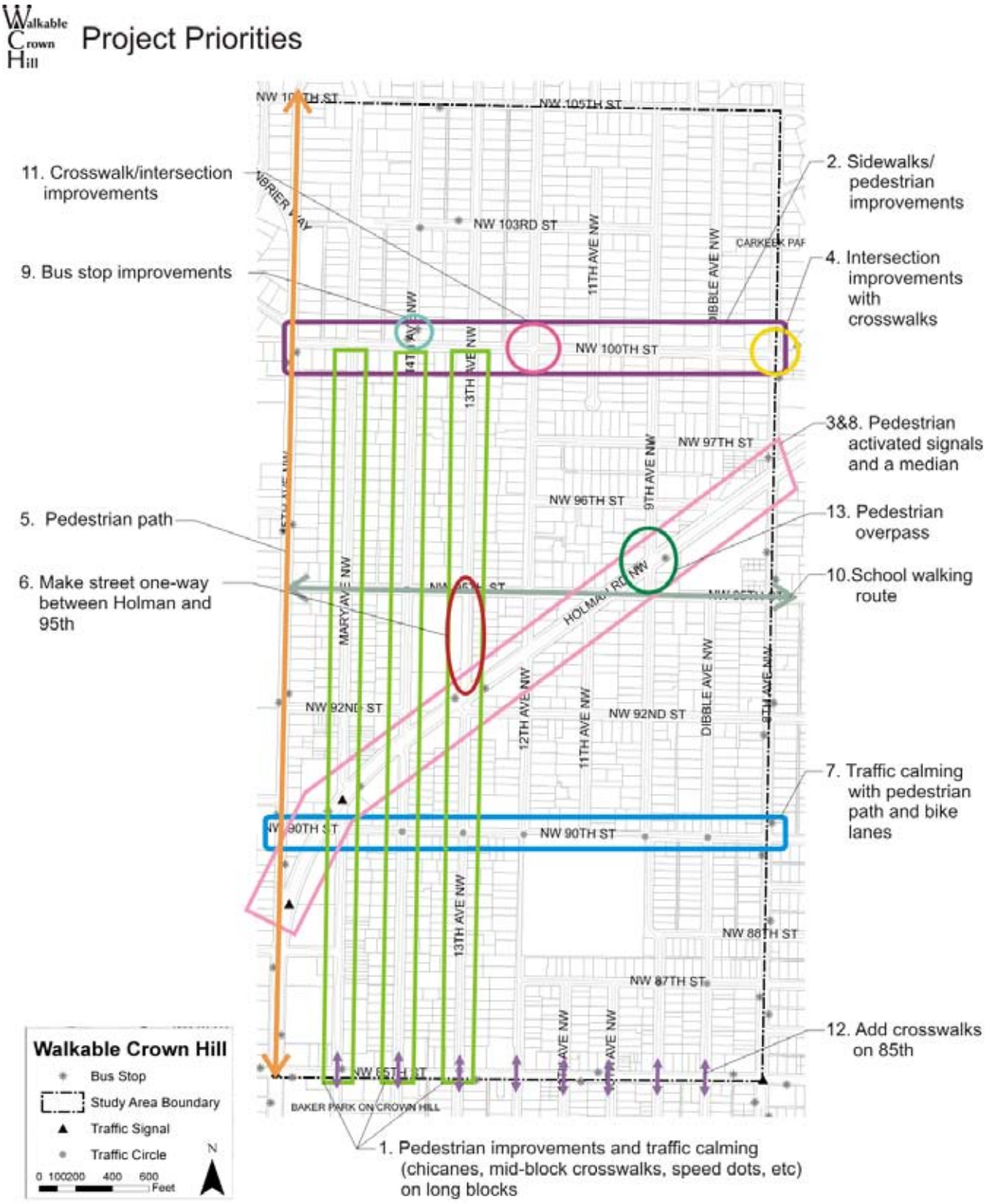


Figure 5. Based on the results of the community-wide charette, this graphic shows the priorities for the key project in Crown Hill

Project Description

Pedestrian improvements and traffic calming on long blocks from NW 85th St. to NW 100th St: 12th Ave NW, 13th Ave NW, 14th Ave NW, and Mary Ave NW.

Because there is nothing to break up 12th Ave NW, 13th Ave NW, 14th Ave NW, and Mary Ave NW, drivers tend to speed. The residents would like to implement some traffic calming techniques that would help break up the long blocks and reduce vehicular speeds. Some suggestions were: Chicanes, vegetated speed dots mid-way through the block, Mid-block pedestrian crossings. These mid-block pedestrian crossings might also be excellent locations for artwork, special landscaping, kiosks etc.

Physical Description

These streets range from 20'-23' wide with gravel shoulders and are anywhere from 600'-1300' in length. There are some exceptions; 13th Ave NW between Holman Rd and NW 95th St is 16' wide and only 500' long and 14th Ave NW between NW 90th St is 32' wide and 400' long with sidewalk on the West side, 14th Ave NW between Holman Rd and NW 95th St is 22' wide and 750' long with sidewalk on the East side. 13th Ave NW and 14th Ave NW have existing power poles and fire hydrants on the East side of the street, this should not effect the project. Mary Ave NW has power poles 9' from the roadway on the west side of the street and fire hydrants 6' off on the east.

Figure 6. Priority area

Figure 7. Typical condition on long blocks

Figure 8. Typical intersection condition on long blocks

Solutions and Funding

Figure 9. Chicanes

Figure 10. Asphalt walkway

SDOT Comments

Four viable options are available for traffic calming/pedestrian improvements on the above mentioned streets.

1. Extruded curbing and planting strip with new asphalt walkway:
   Section is per SDOT standard 25' road with 12' drive, 7' parking, 6" curb, 6' planting strip, and 6' asphalt walkway on both sides. Materials chosen would be lower cost.
2. Lowest cost extruded curbing and re-adaptive use of road:
   Curb would be on one side of the road with an asphalt walkway behind. A typical section would be a 13' drive lane with 7' parking lane, 6"curb, and 6' walkway from existing road bed with some possible asphalt augmentation.
3. Chicanes:
   Three sets of two or three chicanes each at specific intervals would create a traffic calming effect. This could possibly provide mid-block crossings.
4. Planter Boxes:
   A low cost option that would create a hard edge for vehicles to park against. Due to long blocks the project would need to be completed in phases, such as one side at a time or half blocks.

Funding Opportunities

Community could apply to both small and large Neighborhood Street Fund for hardscape improvements depending upon how many blocks they propose. There may also be an opportunity to leverage money for the chicanes from SDOT's traffic calming budget. For a planting box option and softscape material the community could look toward Neighborhood Matching Fund for the physical box and plant material/trees. Once boxes are in place the community could also apply for Department of Neighborhood Tree Fund or there may also be a possibility of coordinating with SDOT Urban Forestry to obtain trees free of charge.

Cost Range

1. Extruded curb w/planting strip and asphalt walkway: est. $45,000 per block/per side
2. Extruded curb re-adaptive use of road: est. $30,000 per block/per side
3. Chicanes: est. $20,000 per pair// Planting boxes: est. $20,000 per block/per side

2. IMPROVEMENTS ON NW 100TH STREET

Project Description

Figure 11. Priority area

Sidewalks and pedestrian improvements on NW 100th St. between 8th Ave NW and 15th Ave. NW

In general, residents saw the need for a pedestrian walkway on at least one side of NW 100th St between 8th Ave NW and 15th Ave NW. The pedestrian walkway should be separated from car traffic, but does not necessarily need to be a traditional concrete sidewalk. Asphalt, or other universally accessible pavement, would be acceptable. The most important thing to residents is that it be level and ADA accessible. Many people also wanted bike lanes on NW 100th St. Numerous ideas were discussed to help slow traffic on 100th and to improve pedestrian crossings at intersections. Some ideas include: crosswalk, curb bulbs at intersections and crosswalks, and painted intersections.

Figure 12. NW 100th St could benefit from pedestrian improvements

Physical Description

A collector arterial, NW 100th St from 15th Ave NW to Dibble Ave has unimproved shoulders; however there is a 3' +/- path (in various states of repair) running the full length on the north side of the road. The street features no curb, has relatively steep grades from 14th Ave. NW to 11th Ave NW. There are painted edges running the length of the road and wrapping the corners of the connecting side streets. Drainage ditches are scattered along the southern street edge. Traffic speeds range from 32 to 34 miles per hour.

Figure 13. Existing conditions on NW 100th St.

Solutions and Funding

SDOT Comments

Because there is already a walkway on the north side of the street and the right-of-way south of the street is constrained by several drainage ditches, the north side is most advantageous for pedestrian improvements. Given the space constraints, curb bulbs are not a viable option. Nor would painted intersections be feasible on an arterial. This project could have a couple of potential options or a mixture of solutions.

1. Traditional curb and gutter with concrete sidewalk:
   Although the more expensive option, this would include a planting strip, 6' sidewalk, and concrete driveway aprons.
2. Curb and gutter with asphalt walkway:
   This option would include a monolithic pour curb with repair or replacement of the existing asphalt walkway. To create positive drainage away from private property, the planting strips would need to accommodate runoff though natural drainage swales. This option would also include asphalt driveway aprons.

Figure 14. Example of a traditional curb and gutter with a planting strip

Funding Opportunities

Due to the low speeds the community would be better served focusing on funding for pedestrian improvements rather than traffic calming. Community could apply to both small and/or large Neighborhood Street Fund.

Cost Range

1. Traditional curb and gutter with concrete sidewalk:
   est. $80,000 per block/per side with 7 blocks estimated at $700,000 to $800,000.
2. Curb and gutter with asphalt walkway:
   est. $25,000-40,000 per block depending upon conditions such as condition of existing path, amount of driveways, drainage needs etc.

Figure 15. Example of an asphalt walkway with a planting strip

Project Description

Figure 16. Priority area

Pedestrian-activated signals on Holman Rd NW

Pedestrian activated signals at 9th and 12th Ave NW and Holman Road. Possible coordination with a median or intersections improvements.

Physical Description

Four lane arterial with c-curb on west.

Solutions and Funding

SDOT Comments

There are two quantitative means to warrant a signal under the guidelines of the Manual on Uniform Traffic Control Devices: pedestrian volume and/or pedestrian generators. At this point in time, neither 9th Ave NW nor 12th Ave. NW at Holman Rd have high enough average pedestrian counts or a pedestrian generator such as a park, school, or family services; as a result, this option would not be a feasible at this time.

Leverage Opportunities

There are no other opportunities for joint funding with other programs.

Cost Range

Pedestrian activated traffic signal: est. $100,00 per signal

Figure 17. Existing conditions at the intersection of Holman Rd NW and 12th Ave NW.

4. NW 100TH & 8TH AVE INTERSECTION

Project Description

Intersection improvements at the intersection of NW 100th St and 8th Ave NW.

This intersection should be redesigned to distinguish pedestrian space and vehicular space. Crosswalks and curb bulbs (where appropriate) would help improve pedestrian safety. Other intersection improvements to help calm traffic and to improve access to QFC would be beneficial.
This could be done as part of comprehensive improvements to NW 100th St. (See priority #2).

Figure 18. Priority area

Physical Description

This is an all-way stop intersection with a small concrete and brick island. There is a continuous turning lane heading north from 8th Ave. NW onto NW 100th Pl. The western facing blocks have concrete sidewalks and curbs. The Northeast and south east corners have some asphalt but are mostly unimproved. The triangle does not extend the full extent of the paint lines, and is in poor repair. There are pedestrian generators surrounding this intersection with QFC grocery and other shopping immediately east. Also in the vicinity is an assisted living facility for handicap. This intersection serves as one of the few routes by which to access the shopping center.


Figure 19. Existing conditions at the intersection of NW 100th St and 8th Ave NW

Figure 20. Existing conditions at the intersection of NW 100th St, 8th Ave NW, and NW 100th Pl.

Solutions and Funding

Figure 21. Examples of curb bulbs

SDOT Comments

There is a range of viable options to improve pedestrian safety at this intersection.

1. General changes not including triangle:
   a. Traditional sidewalk with curb and gutter on the northeast side 8th Ave NW & NW 100th St. With this improvement, there is the opportunity to also change the bend in the road.
   b. Traditional sidewalk with curb and gutter on the southeast side of NW 100th Pl between 8th and 7th Ave.
   c. Curb bulbs on the south corners at the intersection of 8th and NW 100th Pl.
2. Triangle- Most significant change:
   This option would close the continuous turning lane from 8th Ave NW onto NW 100th Pl. The existing all way stop would function as the intersection (which would allow the right turn movement), thus provide a full pedestrian area without cars. The resulting triangle could have 6' planting strips at face of curb, 6' concrete sidewalk running both north and west, and an additional diagonal sidewalk from 8th Ave. NW to NW 100th. The center of the triangle could be utilized as additional planting area. This option could include curb bulbs on the southeast corner.
3. Triangle- Less significant change:
   Enlarge existing triangle to the paint lines. This would provide a shorter distance for pedestrians to cross. This could have further enhancement with a curb bulb or "extended curb bulb" with no loss to current parking.

Funding Opportunities

Community could apply to both small and/or large Neighborhood Street Fund.

Cost Range

1. General changes not including triangle:
   a. est. $40, 000
   b. est. $45,000
   c. est. $25,000 per each curb bulb.
2. Triangle- Most significant change: est. $80,000
3. Triangle- Less significant change: est. $50,000

5. 15TH AVE NW PEDESTRIAN PATH

Project Description

Pedestrian path along 15th Ave NW.

This project involves improving the existing path by leveling it, ensuring that no one parks on it, and building new paths to create a continuous pedestrian connection along 15th Ave NW. The path will connect pedestrians to bus stops along 15th (particularly the potential new Bus Rapid Transit stop at NW 85th St and 15th Ave NW) and will provide pedestrian connections to the Soundview Playfield.

Physical Description

Collector arterial with a marked crosswalk at NW 92nd St. & 15th Ave NW. Drainage ditches are scattered on the east side of the road and the edges are mostly unimproved with various configurations of gravel parking. #15 Metro bus runs the length of the street- most stops have a shelter on the west side. There are three main pedestrian generators Whitman Middle School, SoundView Playfields and Swanson's Nursery.

Figure 22. Priority area

Figure 23. 15th Ave NW

Figure 24. The existing pathway along 15th Ave NW is not consistent and needs improvements

Solutions and Funding

Figure 25. Example of traditional curb and gutter with concrete sidewalk

Figure 26. Example of planter bulb

SDOT Comments

Due to locations of pedestrian generators and drainage, the west side of 15th is the most appropriate side for pedestrian improvements; and there are a number of potential measures of combination of measures to improve pedestrian facilities.

1. Traditional curb and gutter with concrete sidewalk:
   Traditional concrete sidewalk with curb and gutter could be constructed the whole length, although costs would be very prohibitive. A better approach might be to look at key areas such as in front of the school and play field. SDOT could apply traditional construction to these areas.
2. Combination of alternatives approach:
   The path could be improved on a block by block basis, incorporating different walkway and streetscape designs. To keep costs low there is the possibility of maintaining the existing sidewalk/walkways; however, this would impact other design features such as drainage and grading. Here are some examples:
   a. From the Holman Rd intersection on NW 90th St. installation of a monolithic curb with openings for drainage would help to separate pedestrian from vehicle. It is doubtful a planting strip could be accommodated without eliminating current on-street parking. The resulting section would be 7' parallel parking, 6" curb with curb cuts, and existing walkway. This proposal could include a curb bulb extending south on 15th Ave. NW by 30' at the corner 15th Ave NW and NW 90th St. ramping down to the existing concrete sidewalk. This would minimally impact parking and provide some area for landscaping. This type of implementation with the addition of asphalt walkways could also repeat from NW 95th St. up to NW 100th St.
   b. In front of the playfield, matching the existing condition at the adjacent bus stop is recommended.
   c. In front of the school, there could be a thick curb with drainage cuts. In front of the stairs and on the north side, planting bulbs (similar to Swanson nursery) could be constructed to create stronger separation of pedestrians and vehicles and improve the pedestrian environment.

Funding Opportunities

The SDOT sidewalk development program will likely fund improvements for this corridor in the next 5-15 years. The community could apply to both small and large Neighborhood Street Fund for hardscape improvements depending upon how many blocks they propose.

Estimated Cost Range

Combination of alternatives approach:

a. From the Holman Road intersection to 90th - $25,000;
b. Curb bulb from NW 95th St. to NW 100th St.- $30,000
c. In front of playfield - $45,000
d. In front of school - $30,000-$70,000 (depending on if vegetated bulbs are added)

6. NW 90TH ST PEDESTRIAN PATH

Project Description

Traffic calming with pedestrian path and bike lane on NW 90th St.

A continuous pedestrian path that is separated from vehicular traffic would greatly improve the pedestrian environment along NW 90th St. Continuing the traffic calming measures, such as traffic circles already in place, is also encouraged.

Figure 27. Priority area

Physical Description

The block between Holman Rd. and 14th Ave NW has an existing sidewalk on the north. From Holman Rd to 12th Ave NW public right-of-way is 50', yet between 12th Ave NW and 9th Ave NW the right-of-way is 30', then from 9th Ave NW east the right-of-way is 60'. From Holman Rd to 12th Ave NW the utility poles are on the south side of NW 90th St moving east from 12th Ave NW they are on the north side of NW 90th St. East from 9th there are end block and mid block inlets/ catch basins. The cemetery property extends to the edge of pavement. There are also a number of built encroachments on the north side of NW 90th St from 12th Ave NW to 9th Ave NW. Between 12th Ave NW and 9th Ave NW the right-of-way is narrow, so parking would need restriction on both sides of the street to accommodate a narrowed road and walking area. Due to the V-channel drainage and grade these blocks could potentially be more costly due to necessary drainage structures in the overall improvements. These narrow segments would not be an appropriate location for planter boxes.

Figure 28. Existing conditions on NW 90th St.

Figure 29. Existing conditions on NW 90th St.

Solutions and Funding

SDOT Comments

Figure 30. Examples of an asphalt walkway with a planting strip.

Four viable options are available for pedestrian improvements that promote parking in the street and an accessible walking surface on the above mentioned streets. Overall, the north side of NW 90th St from 14th Ave NW to 9th Ave NW is the most feasible location for a walkway. However, from 9th Ave NW to 8th Ave NW the south side is more appropriate.

1. Extruded curbing and planting strip with new asphalt walkway:
   Section is per SDOT standard 25' road with 12' drive, 7' parking, 6" curb, 6' planting strip, and 6' asphalt walkway on both sides. These materials would be low cost.
2. Lowest cost extruded curbing and re-adaptive use of road:
   Curb would be on one side of the road with an asphalt walkway behind. Asphalt would be installed as needed to create a 25' roadway. A typical section would be a 12' drive lane with 7' parking lane, 6"curb, and 6' walkway from the existing road bed with some possible asphalt augmentation.
3. Planter Boxes:
   Planter boxes offer another low cost option that would create a hard edge against which vehicles could park. Due to long blocks the project may need to be completed in phases, such as one side at a time or half blocks. These boxes would need to be larger than the typical 5'x5' and would need SDOT Urban Forestry review. This would not be an option between 11th Ave NW & 9th Ave NW due to ROW constraints.
4. Traditional curb and gutter with concrete sidewalk:
   This location could be a strong candidate for traditional concrete curb and gutter with sidewalk. We recommend beginning at 14th Ave NW and NW 90th St across from the existing sidewalk.

Figure 31. Example of planter boxes in conjunction with an extruded curb that could be used at the edge of the street to create a hard edge. These are separate strategies that may be employed individually or in combination.

Funding Opportunities

The community could apply to both the small and large Neighborhood Street Fund for hardscape improvements depending upon how many blocks they propose.

For a planting box option and softscape material, the NSF would not be an appropriate funding source. The community could look toward Neighborhood Matching Fund for the physical box and plant material/ trees. Once the boxes are in place the community could also apply for Department of Neighborhood Tree Fund. The community will need to anticipate some permit fees for construction/planting review.

Estimated Cost Range

1. Extruded curb w/planting strip and asphalt walkway: est. $45,000 per block/per side
2. Extruded curb re-adaptive use of road: est. $30,000 per block/per side
3. Planting boxes: est. $20,000 per block/per side for boxes and soil prep
4. Traditional approach: $80,000 +/- depending upon length and drainage conditions.

7. HOLMAN RD MEDIAN

Project Description

A vegetated median along Holman Rd. NW.

A vegetated median along Holman Road NW would provide numerous benefits to the community as well as enhance safety and traffic circulation. The trees and vegetation along the median would beautify the area, visually narrow the roadway, calm traffic, define the neighborhood identity, reduce driveway conflicts (better access management), and provide a refuge for pedestrians crossing the street, improving pedestrian safety and connectivity. This project should be coordinated with the suggestion for pedestrian activated signal (Priority #3) and the intersection improvements at 9th Ave NW and Holman Rd NW (Priority #12).

Figure 32. Priority area

Physical Description

Holman Road between 15th Ave NW and 11th Ave NW has a middle turn lane. There are several curb cuts/driveways on both the south and north side of the road. At the intersection of 15th Ave NW and Holman Rd and again at Mary Ave NW and Homan Rd, there is a signal and pedestrian crossing. No other intersection has a pedestrian light. There is a pedestrian bridge at 13th Ave NW and Holman Road.

Figure 33. Images of existing conditions on Holman Rd NW.

Figure 34. Existing conditions at the intersection of 15th Ave NW and Holman Rd NW.

Solutions and Funding

Figure 35. Example of a raised pedestrian landing

SDOT Comments

Planning and constructing medians along this corridor would need more agency study and considerable public outreach. Adjacent businesses could have significant concerns with a median For example, due to the amount of business driveways and side streets off of Holman, a median will impact current accessibility for cars which currently use the middle lane to turn. As a result, “turnaround” vehicle volume may impact side streets, to an extent that is currently unclear. Turning lanes would also need to be maintained for cars turning onto residential streets and vise versa. At this time, SDOT does not have resources committed for planning this improvement.

1. Intersection of 15th Ave NW & Holman Rd :
   There is the possibility to improve the pedestrian area at 15th Ave NW and Holman Rd. Currently, the pedestrian crossing has c-curb and striping. This area could have a permanent monolithic curb with an elevated pedestrian landing adjacent to a new median. This median could stretch north until the first driveway on the west side of the street. Maintenance and irrigation concerns may suggest a decorative hardscape is more appropriate.

Funding Opportunities

The community could apply for a small Neighborhood Street Fund for median improvements at the intersection of 15th Ave NW and Holman Rd.

Cost Range

- Pedestrian landing with median: $45,000-$55,000 (depending upon traffic control costs.)

Figure 36. A vegetated median on Holman Rd, like this median on Lake City Way, could improve the arterial

8. BUS STOP IMPROVEMENTS

Project Description

Bus stop improvements on NW 100th St. and 14th Ave NW.

Currently, public space and private space are not well-defined at this bus stop. There are no trash cans so trash often ends up on private lawns. The residents of this area would like to see the public bus stop to be distinguished from private property. A trash can, curb bulb, bench, and possibly a kiosk would also improve this bus stop.

Physical Description

14th Ave NW north of NW 100th St has 60' of public right-of-way with about 16'-18' of space on the western side from the edge of asphalt to private property. There is an estimated 76' from 100th heading north to the first driveway on the west side.

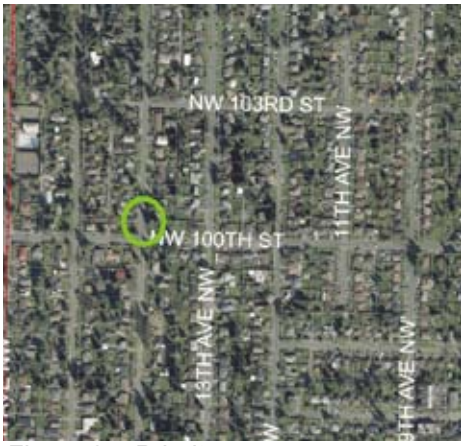


Figure 37. Priority area

Figure 38. Existing conditions.

Figure 39. NW 100th St and 14th Ave NW.

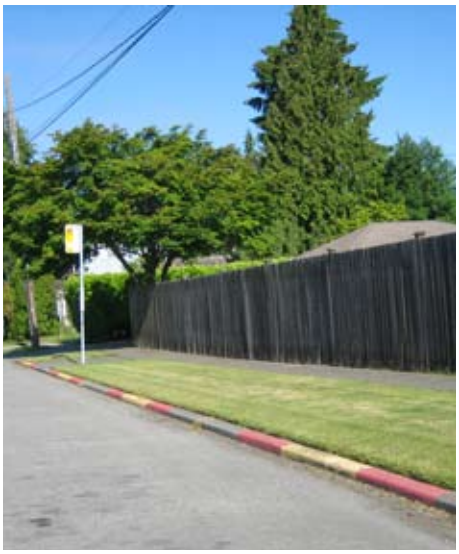


Figure 40. An example of a bus stop with a full traditional curb and sidewalk.

Solutions and Funding

SDOT Comments

In addition to working with SDOT, the community will need to contact and work with King County Metro for a trash can and/or bench.

1. Corner curb and sidewalk:
   This area could have a full traditional curb and partial sidewalk at the corner and bus area. This location would not be appropriate for extruded curb due to the impact of bus tires on the curb.
2. Landing area:
   Another option would be to build an elevated landing area at the bus stop only, with partial curb/curb ramps. This would bring costs down yet build to the correct elevation height for a future corner.

Funding Opportunities

The community could apply to a small Neighborhood Street Fund for hardscape improvements. The community should also contact Metro for possible funding of improvements.

Cost Range

1. Corner curb and sidewalk: $30,000-$40,000 (depending upon materials)
2. Landing area: $22,000

9. NW 95TH SCHOOL WALKING ROUTE

Project Description

School walking route on NW 95th St

Elementary school students need a safe walking route to North Beach Elementary School. Currently, the Seattle School District directs students to walk on Holman Rd NW because there is a sidewalk, even though it is a very busy street. NW 95th St. could provide a safe walking route, but it needs a defined walkway separating from vehicular traffic and from parked cars on at least one side of the street.

Physical Description

NW 95th Street has various conditions including drainage swales and on street parking. Average road widths are 20'. Right-of-way is 60' with a wider swath on the south side of the street (i.e. the ROW is not centered on the street.). Small Faces Child Development Center is on the block between 14th Ave and 13th Ave NW.

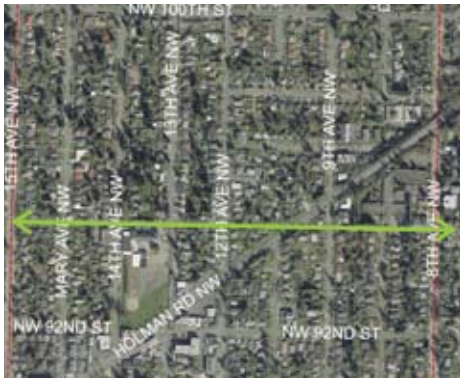


Figure 41. Priority area

Figure 42. Existing conditions on NW 95th St.

Figure 43. Existing conditions on NW 95th St.

Solutions and Funding

SDOT Comments

Due to encroachments, drainage patterns, and right-of-way, the south side of 95th would be the more appropriate side for street improvements. There are three viable options available for pedestrian improvements that promote parking in the street and an accessible walking surface.

Figure 44. An example of an asphalt walkway with planting strip.

1. Extruded curbing and planting strip with new asphalt walkway:
   The section is per SDOT standard 25' road with 12' drive, 7' parking, 6" curb, 6' planting strip, and 6' asphalt walkway on both sides. The materials chosen would be low cost.
2. Lowest cost extruded curbing and re-adaptive use of road:
   The curb would be on one side of the road with an asphalt walkway behind. A typical section would be a 13' drive lane with 7' parking lane, 6"curb, and 6' walkway from existing road bed with some possible asphalt augmentation.
3. Traditional curb and gutter with concrete sidewalk:
   This location could be a strong candidate for traditional concrete curb and gutter with sidewalk due to the possibility of combined funding opportunities.

Funding Opportunities

The community could apply to a small Neighborhood Street Fund for hardscape improvements. There is also a possible opportunity for funding through SDOT's Safe Routes to School assuming that the project ranks as #1 in the consensus of the larger community including the school administrators and the PTA.

Cost Range

1. Extruded curb w/planting strip and asphalt walkway: est. $45,000 per block/per side
2. Extruded curb re-adaptive use of road: est. $30,000 per block/per side
3. Standard Improvement cost estimate: $80,000 per block/per side.

10. NW 100TH & 12TH AVE INTERSECTION

Project Description

Intersection improvements at NW 100th St and 12th Ave NW with crosswalks

This intersection provides much used connections to Carkeek Park so it is important for pedestrians to be able to safely cross at this location. Residents would like a 4-way stop sign for vehicular traffic to ensure that cars will stop for pedestrians. A raised intersection might be an option.

Physical Description

This is a collector arterial without other stop signs or crossings. Neighborhood streets have stop signs coming onto the arterial. The measured speeds range from 32-35 miles per hour.

Figure 45. Priority area

Solutions and Funding

SDOT Comments

A four-way stop would not be warranted under federal standards. The documented collision rate is low (two in five years). The community will need to work with SDOT's pedestrian program to initiate a pedestrian count at this intersection of NW 100th St and 12th Ave NW to see if the intersection warrants a marked crossing. In addition, the community could place, outside of SDOT review, pedestrian flags to aid in visibility while crossing the street. This can be effective in bringing pedestrians to the attention of drivers while also ensuring the pedestrian stays mindful of personal safety.


Figure 46. Existing conditions at NW 100th St and 12th Ave NW

Funding Opportunities

There are two possible funding options available to the community. As this location is within a school walking route boundary, the community could apply to the SDOT Mini Grant program through Safe Routes to School. This could be useful for funding the flag material. See the following website: www.seattle.gov/transportation/saferoutes.htm

The Department of Neighborhoods Small Sparks awards could also provide funding for flags. See the following website www.seattle.gov/neighborhoods/nmf/

Cost Range

If a crosswalk is warranted, SDOT would incorporate this in our normal operational budget. Pedestrian flags range from a dollar to eight dollars. The community should anticipate some budget for continual replenishment. The community will also need to consider some kind of container to hold the flags when not in use.

Figure 47. Priority area

Figure 48. View of NW 85th St.

Figure 49. An example of a curb bulb.

Project Description

Crosswalks on NW 85th St.

Pedestrians must be able to safely cross NW 85th St in order to access the bus stop, the QFC, and Miller Park. Crosswalks with curb bulbs should be placed along NW 85th St, particularly at Mary Ave NW, 14th Ave NW, and 13th Ave NW.

Physical Descriptions

85th is an arterial road and from these intersections continuing eastward there are sections of c-curb dividing the street (although at Mary the c-curb appears to have been cut to allow for pedestrian access.) There are typical curbs with sidewalks and resulting drainage inlets.

Solutions and Funding

SDOT Comments

The community should contact SDOT's pedestrian program to initiate pedestrian counts to see if any of the intersections at Mary Ave NW, 14th Ave NW, and 13th Ave NW warrant a marked crosswalk.

1. Curb bulbs at intersections:
   It is also feasible to place curb bulbs on 85th Street NW at the intersections of Mary Ave NW, 14th Ave NW, and 13th Ave NW. This would minimally impact parking if at all since cars should not be parking within 30' of an intersection. There would be inlet relocations for some of the intersections.

Funding Opportunities

If any of the intersections warrant a crosswalk, implementation would be absorbed in SDOT's operational budget.

The community can apply for both small and large Neighborhood Street Funds to plan and construct the curb bulbs.

Cost Range

Curb bulbs at intersections:

- Curb bulb pair on either side of 85th Street NW: estimate $50,000.
- All three intersections estimate $150,000

12. HOLMAN RD & 9TH AVE INTERSECTION

Project Description

Intersection improvements at Holman Road NW and 9th Ave NW

In order to improve connections between areas north and south of Holman Rd NW, it is important to ensure pedestrians can easily cross Holman Road NW. This option should be coordinated with the pedestrian activated signals on Holman Rd NW (Priority #3) and with the vegetated median on Holman Rd NW (Priority #7). One suggestion is to construct another pedestrian overpass at Homan Rd NW and 9th Ave NW. However, this is a very expensive option and would require long ramps for universal access.

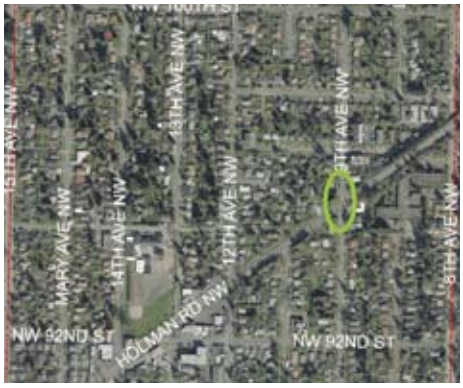


Figure 50. Priority area

Physical Descriptions

Holman Road is a heavily trafficked arterial road. There are two north bound and two south bound lanes with a center turn lane. Cross streets are not necessarily perpendicular to the road. There are two signal intersections and one pedestrian bridge; however, several cross streets do not have facilities for pedestrians.


Figure 51. View of Holman Rd NW and 9th Ave NWt.

Solutions and Funding

SDOT Comments

At this point in time, SDOT recommends the community contact our Pedestrian program to initiate pedestrian counts at the various intersections. This may trigger developing future plans to improve connectivity such as warranting marked crosswalks. The community can also continue their work with our Arterial Traffic Calming program if speeds appear to be a problem.

Funding Opportunities

If any of the intersections warrant a crosswalk, implementation would be absorbed in SDOT's operational budget.

Cost Range

None


Figure 52. View of Holman Rd NW and 9th Ave NWt.

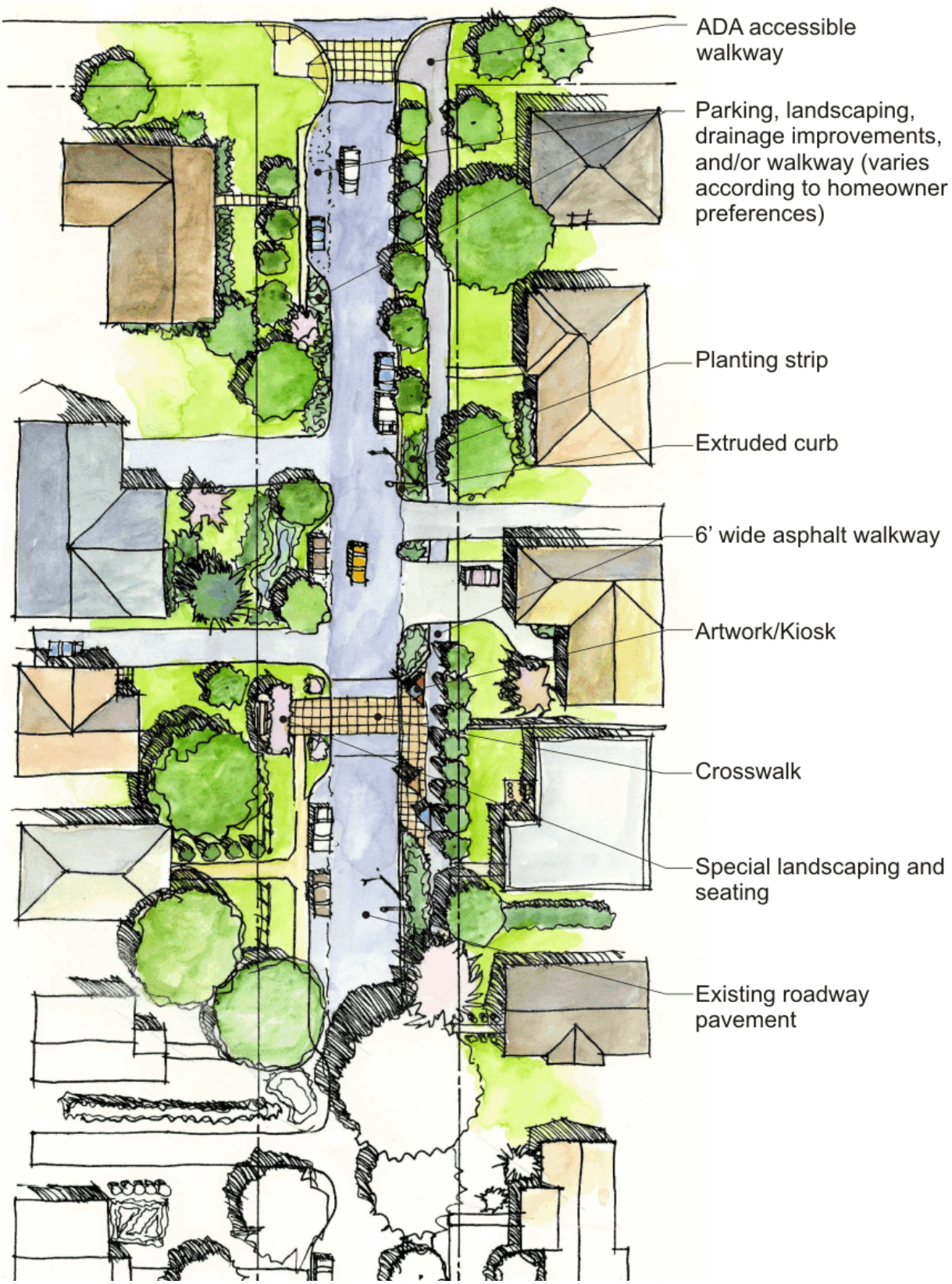


Figure 53. A rendering of multiple traffic calming treatments referenced in the following toolkit. Strategies may be used individually or in combination to create safe, beautiful, walkable streets.

CHAPTER 3:

Introduction

Crown Hill currently has very little infrastructure for pedestrians. Many streets do not have the traditional "curb, gutter, sidewalk" configuration similar to other areas in Seattle. The current streetscape configuration consists of a paved asphalt roadway approximately 19' – 20' wide with ambiguous edges that turn into gravel areas for parking. Because people do not park on the paved area of the road, this leaves a wide, unimpeded area for vehicular traffic to travel at speeds inappropriate for residential streets. There is no delineation between the public right-of-way and where private property begins. Parking areas are not clearly defined which leads to a variety of parking configurations, including: perpendicular parking, angle parking, and parallel parking. Pedestrian space is not defined, leaving pedestrians to walk in the street or in the gravelly areas next to the street if there aren't cars parked there. In some cases, roadway drainage is directed to a ditch along the roadway edge. In short, the lack of suitable roadway infrastructure results in inefficient, unsightly, and potentially dangerous conditions not suitable for an urban neighborhood.

Figure 54. Existing conditions.

Since it does not seem realistic to anticipate that the City will install traditional sidewalks on many of the streets in the neighborhood (nor is this universally desired by the community), this plan documents the methods and processes that neighbors, either individually or collectively, can use to initiate improvements in the unimproved portions of the street right-of-way (ROW). To that end, this section includes a "toolkit" providing citizens with a variety of design ideas that can be initiated and implemented by citizens either as improvements to individual residential

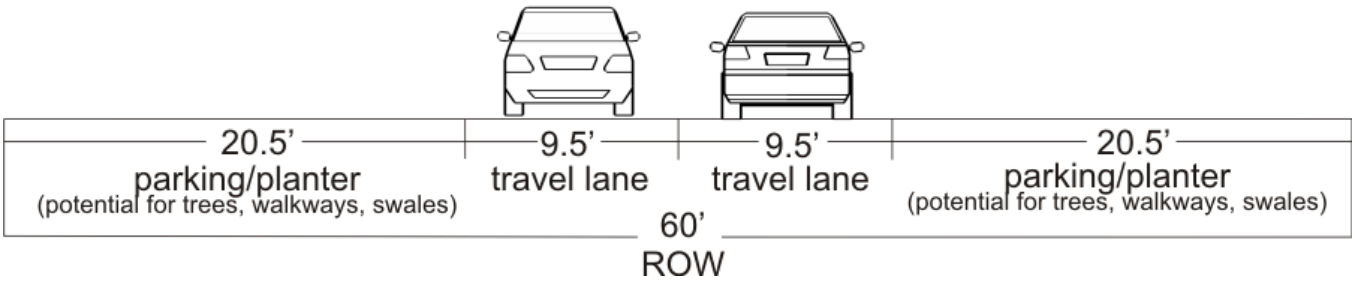


Figure 55. Street section showing typical existing conditions for residential streets in Crown Hill.

Figure 56. Existing conditions.

street frontages or as a coordinated block-long effort. The proposed citizen-initiated framework is especially suited to the Crown Hill Neighborhood because community leaders are working to increase neighborhood unity and identity and view local street improvements as a means of accomplishing this.

The toolkit provides community members with a number of different lower-cost techniques that could be used on these streets to accomplish community goals. Some of these techniques are well-established strategies and others are tools that have been piloted in recent years. The Seattle Department of Transportation (SDOT) was an invaluable partner in reviewing this plan and has confirmed that each of these tools is a feasible strategy. Any specific implementation of these strategies will still require City approval through the permitting process to determine its appropriateness for an individual site. Each site and block will have unique circumstances, so the toolkit is designed to guide participants with ideas and strategies, but the City will ultimately have to make the final approval decision. More specific guidelines can be found in the Seattle Right of Way Improvement Manual, which can be found on the SDOT website (http://seattle.gov/transportation/rowmanual/), as well within the section below that describes each tool.

The techniques outlined in the toolkit should be viewed as complementary to the major projects prioritized in Chapter 2, especially Priority 1 (improving the “long blocks”) and others that address the needs of residential streets. Also, while any home or business owner may initiate many of these improvements for their own property, community members are encouraged to gather their neighbors and develop a common plan for the entire block. Some of the improvements will, in fact, require block coordination. While individual aspects of the plan may be implemented at different times and through different processes and using different funding sources, coordination with neighbors will ensure that each project along the way is integrated and supported by the rest. The drawing that precedes this introduction gives an example of how a number of these techniques might be used in combination to create a safe, pedestrian-friendly, and beautiful streetscape along a typical Crown Hill block.

Lastly, while this guide will hopefully inspire and encourage Crown Hill neighbors to begin to take action with their neighbors, community members should know that they are not alone in doing so. Those who have served on the Coordinating Committee of WCH are themselves members of the Crown Hill community, and we have gained knowledge and experience in the process of developing this plan and are both willing and excited to support our neighbors. We can help in the process of organizing neighbors, supplying information and ideas, and navigating interactions with city government. As we begin to implement these strategies throughout the

neighborhood, we will also serve as a vehicle to share success stories and to connect those neighbors wanting to do projects with those who have done similar ones.

Design Objectives

As noted earlier, most of the street edges on residential streets lack any improvements to order activities. This lack of definition results often results in chaotic, unattractive, and inefficient conditions. The tools provided in this toolkit are designed to better define pedestrian space, vehicular travel lanes, parking space, and landscaped areas. Because each block will have unique opportunities and constraints due to right-of-way width, drainage, and the needs of the residents, these tools are intended to be used only as a guide to initiate community involvement in improving the public right-of-way.

Figure 57. Existing conditions.

Proposed Tools

The following tools are proposed for consideration in this toolbox:

- Separated Asphalt Walkway
- Planter
- Rain Garden or Bioswale
- Gathering Place
- Chicane

Figure 58. Existing conditions showing spectacular views of the Olympic Mountains.

SEPARATED ASPHALT WALKWAY

Description

This is a lower cost alternative to a traditional curb/gutter/sidewalk design. The design usually includes on-street parallel parking, a curb, a planting strip, and a 6-foot asphalt walkway.

Detailed Evaluation

- Can be applied on one-way or two-way streets
- Generally has on-street parallel parking
- Sidewalk is usually 6 feet separated from the street by a planting strip
- This design can also include traffic calming devices such as chicanes, traffic circles, speed humps, etc, but if the lane widths are narrow, traffic calming devices should not be needed.

Benefits

- The defined planting strip allows for street trees and vegetation
- Provides a safe walkway for pedestrians

Figure 59. An example of an asphalt walkway.

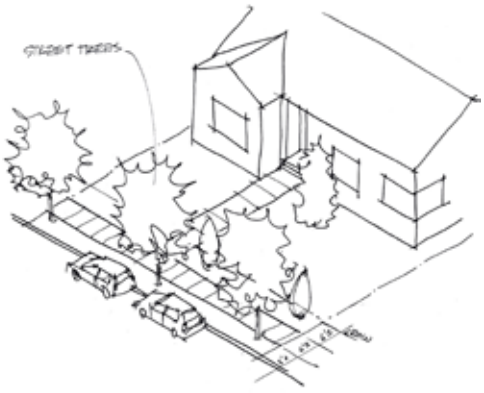


Figure 60. Rendering of a separated asphalt walkway.

Figure 61. Results from the community-wide charette showing a street design scenario with a separated walkway.

Description

Planters can be placed in the right-of-way in the space between the travel lane and private property. The planters will visually and physically narrow the travel lane will help define space in the right-of-way. Specifically, landscaping can help define the space for cars and the space for people. Trees, shrubs, and groundcover can be placed in the designated planting area. Depending on the situation, the planting area will require raised wood planter boxes to protect the vegetation from vehicles. Scarification and soil amendments will be required to prepare areas impacted by . Overall planter size should be a minimum of 5'x15' to ensure tree health. Residents should refer to the Seattle Department of Transportation Client Assistance Memo # 2304 "Planting Strip Landscaping and Paving Rules" for general guidance.

Figure 62. These are the type of planters that could be used at the street edge. Pictured here is a pilot project on a street with an existing sidewalk and separate curbing project. Conditions in Crown Hill will require larger boxes than those shown here.

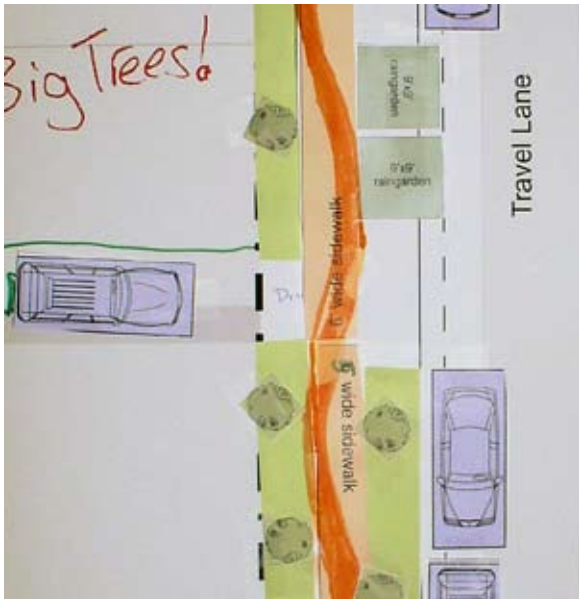


Figure 63. Results from the community-wide charette showing planters along the street edge.

Detailed Evaluation

- Can occur on both sides of the street
- Planters should not interfere with walkways and sidewalks, but can help distinguish pedestrian space from vehicular space.
- Drainage flow must to be considered in design. Planter should not interfere with ditches and other drainage systems.

Benefits

- Defines space in the right-of-way.
- Adds canopy cover, shade, and aesthetic beauty to the public realm.
- Can be done by individual or multiple property owners, as needed

Drawbacks

- May reduce amount of on-street parking

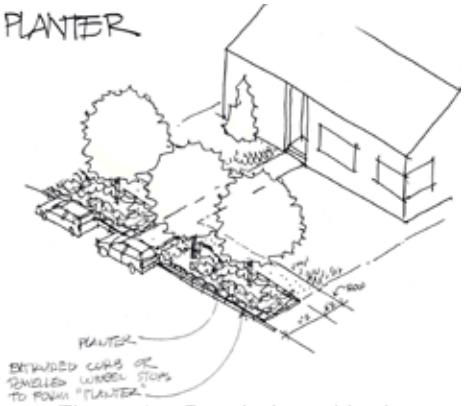


Figure 64. Rendering with planters

RAIN GARDEN OR BIOSWALE

Description

Rain gardens or bioswales can be incorporated into the street design in Crown Hill. Like the planters, rain gardens and bioswales can help define the space in the right-of-way. A rain garden is a single bioretention cell that works to absorb and clean rainwater. Bioswales are a system of cells that allow water to flow from one to another to absorb and clean rainwater. Rain gardens or bioswales could be incorporated on one side of the street or on both sides of the street, depending on right-of-way width and drainage needs.

Detailed Evaluation

- Planting areas can be located in a variety of locations but should be designed to accommodate wheel stops, parking, pedestrian walkways, and travel lanes.
- Rain gardens are depressed vegetated areas that are specifically designed to absorb and filter stormwater runoff.

Benefits

- Landscaping and trees will help define space for cars, parking, and pedestrians
- Landscaping and trees will calm traffic by reducing the visual width of the roadway
- Incorporating rain gardens into these planting areas will greatly benefit the drainage system.

Drawbacks

- Can become expensive if it involves engineering work and significant drainage analysis
- Seattle Public Utilities may have to be involved in the project

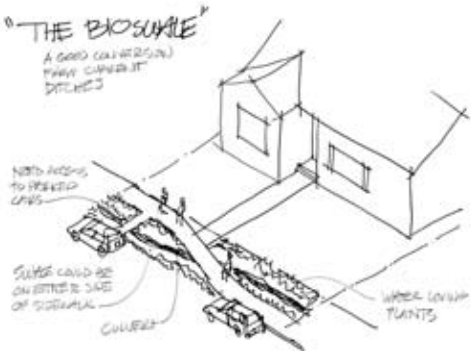


Figure 67. Rendering of a bioswale

Figure 65. A raingarden is an individual bioretention cell that can be incorporated into a landscaped area.

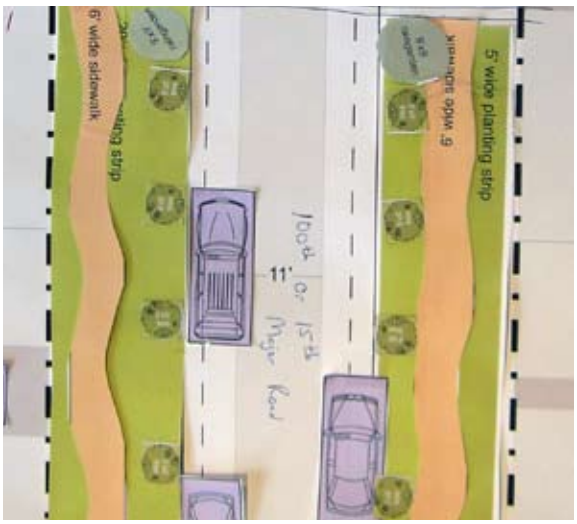


Figure 66. Results from the community-wide charette showing a street design scenario with a raingarden and planting strips.

Description

Gathering places can be incorporated into the design of the right-of-way. Benches, kiosks, or other community-oriented structures can be placed in the area between the travel lane and private property, preferably connected to a pedestrian pathway. Residents should refer to the Seattle Municipal Code 23.55.015, which has specific guidelines for kiosks, and to Chapter 4.25 of the Seattle ROW Manual for guidelines on other structures.

Figure 68. This kiosk with a bench is an example of a gathering place that can be incorporated into the right-of-way.

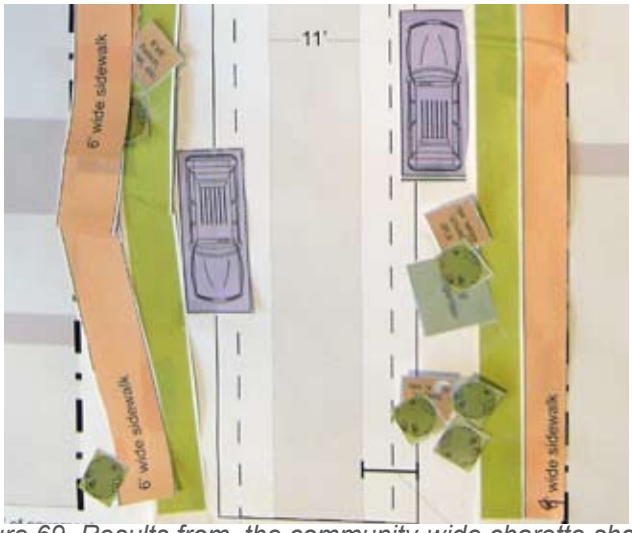


Figure 69. Results from the community-wide charette showing a street design scenario with a kiosk or bench.

Detailed Evaluation

- Gathering places can be placed in the planting strip between the on-street parking and a walkway or between a walkway and private property.
- Can be incorporated into the design of a variety of types of streets
- Could be designed into bus stops.
- Kiosks require a one-time construction permit and other structures require an annual street-use permit.

Benefits

- Provides a place for community members to gather and connect.
- Benches and other seating provide a resting place on the long residential blocks.

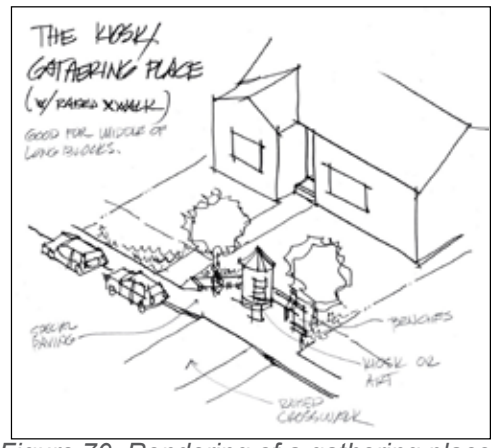


Figure 70. Rendering of a gathering place

CHICANES

Description

Chicanes are a series of landscaped curb bulbs that extend out into the street. They are placed on alternating sides of the roadway, narrowing the roadway to one lane and forcing motorists to decrease vehicle speed. Chicanes can be placed in such a way as to create an informal pathway between private property and the beginning of the chicane.

Detailed Evaluation

- Chicanes are best used on two-way, residential streets
- Parking is not allowed between chicanes
- Walkways can be located between the chicane and the private property line
- Adequate reflective devices and warning signs are needed to warn drivers
- Chicanes should not be used on major bicycle routes
- Mountable curbs should be used to facilitate emergency vehicles
- Drainage needs to be considered in design

Figure 71. Vegetated chicanes in Crown Hill.

Benefits

- Slows traffic
- Adds landscaping
- Can allow for pedestrian and wheel chair passage

Drawbacks

- Without designated walkways, parked vehicles in adjacent ROW may push pedestrian passage further into the street.

Figure 72. Results from a community-wide charette show chicanes incorporated into the roadway design.