

## Acknowledgments



This plan was prepared for the U District community and led by the U District Green Street **Steering Committee** with participation from a **Stakeholder Group** consisting of key neighborhood stakeholders.

## **Steering Committee** in alphabetical order

Pete Chautavipat, Little Thai Restaurant
Cory Crocker, U District Advocates
John Hix, Seattle Vineyard Church
Judith Hix, Seattle Vineyard Church
Dr. Jeff Hou, University Of Washington
Beth Mountsier, Bulldog News & Café
John Owen, Makers Architecture & Planning
Leah Preston, La Paz Apartments
Katy Ricchiuto, U District Partnership

### **Consultants** in alphabetical order

Mark Brands, FASLA, PLA, Site Workshop Bethany Steadman, PE, Mayfly Engineering Robin Thaler, PE, Mayfly Engineering Kevin Van Meter, Site Workshop

## **Stakeholder Group** *in alphabetical order*

Mohammed Azmath, Professional Copy & Print
Lyle Bicknell, Seattle Office of Planning & Community Development
Mark Childs, Childs Design Consulting
Jeremy Eknoian, University of Washington Real Estate
Joshua Gawne, Seattle Department of Transportation
Ray Jia, University of Washington Student
Ally Kerr, Resident
Maya Lu, BobaUp
Maureen, Stanford Apartments
Gordon Padelford, Seattle Neighborhood Greenways
Dave Rogers, MIG, Inc.
Hoai Anh Tran, Malmö University
Kate Wellens, University of Washington Student

### **Sponsors**



U District Green Street is a project of **U District Advocates** (the fiscal sponsor), a 501c3 nonprofit organization.



The project was made possible with funding provided by the Neighborhood Matching Fund from the **Seattle Department** of Neighborhoods.

This project is dedicated to the memory of our esteemed colleague, **John Owen**, whose exceptional expertise and commitment to improving the U District spanned several decades.





# Existing Conditions | Site Photos











# Existing Conditions | Site Photos











## **Design Process**

The Steering Committee and Design Team hosted a series of three Stakeholder meetings to engage the community at each step of the design process. The Stakeholder group represented a diverse group of interests and backgrounds related to 42nd street. The group included business owners, property managers, and residents of 42nd street as well as UW students and professors and representatives from the U District Partnership, U District Advocates, Seattle Neighborhood Greenways, and SDOT. Additionally, broad public outreach was conducted via online surveys and one open house.











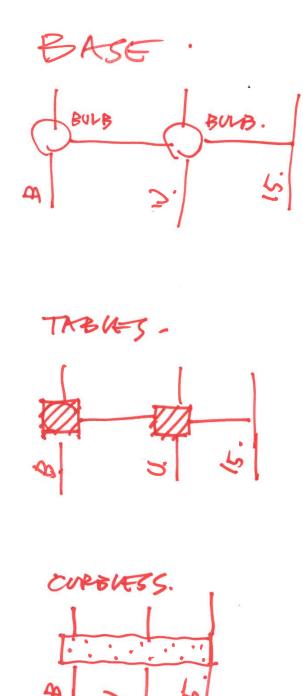


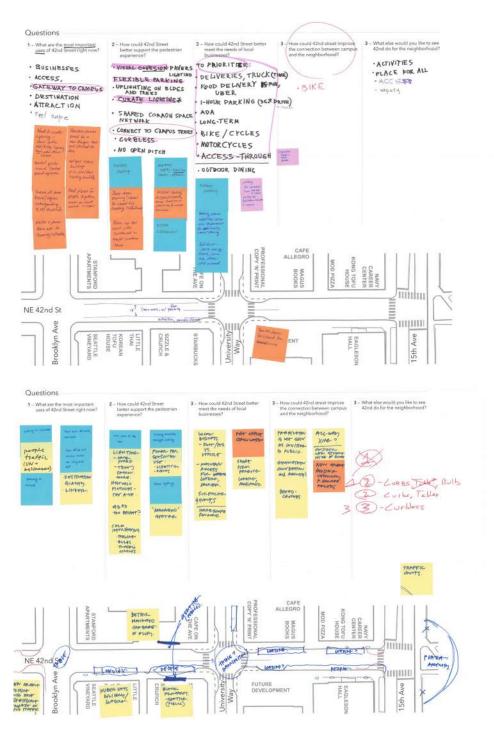


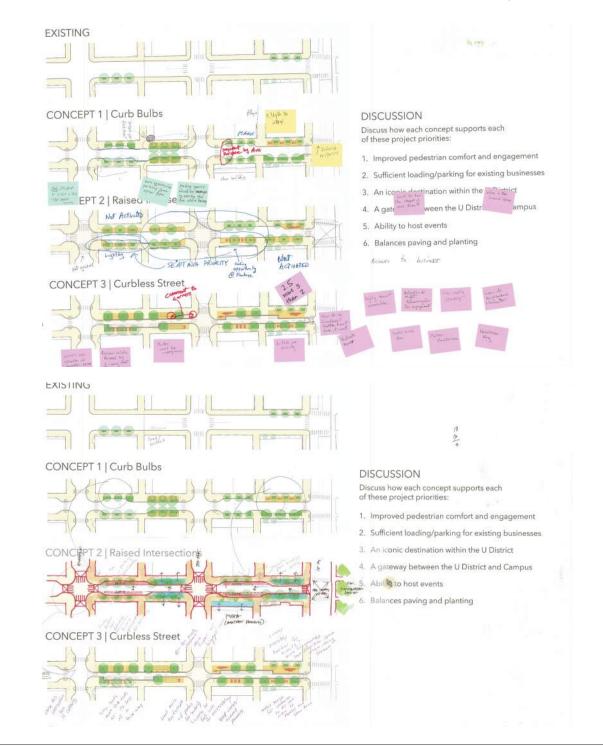
## **Design Process**

The three stakeholder meetings targeted the themes of Understanding, Exploring, and Deciding. In the first meeting the design team shared project background and the group discussed priorities for the street. At the second and third meetings design options were discussed at sequentially

greater detail leading to a final approach adopted by the steering committee. This lengthy process allowed the diverse group with differing interests to express their interests, understand other interests, and agree on a common approach. See Appendix 2 for scanned materials from the three stakeholder meetings.









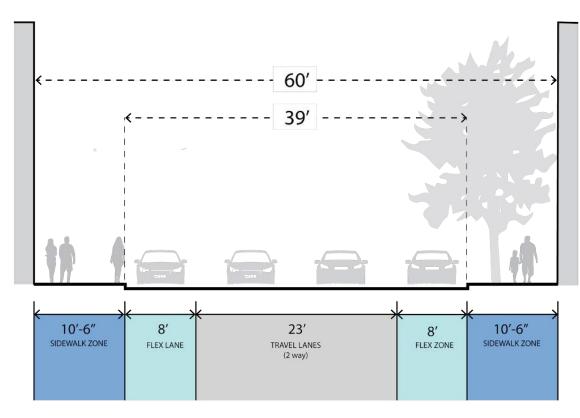
- Create places for people to experience and stay
- Embrace superior & sustainable urban design best practices
- Support local stakeholders & small businesses
- Enhance the connection between campus & community





# Site Sections | Existing Conditions

NE 42nd between Brooklyn Ave NE and 15th Ave NE is a 60' wide right-of-way with a 10'-6" pedestrian zone and a 39' curb-to-curb.



RIGHT OF WAY

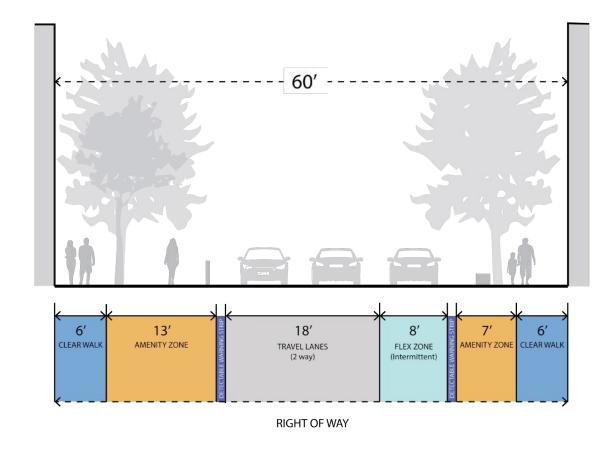


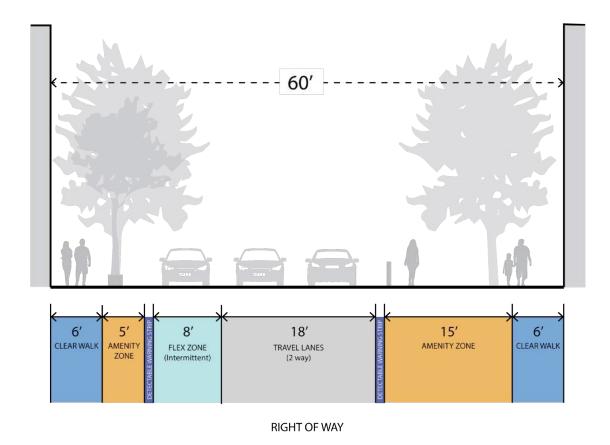


# Site Sections | Proposed

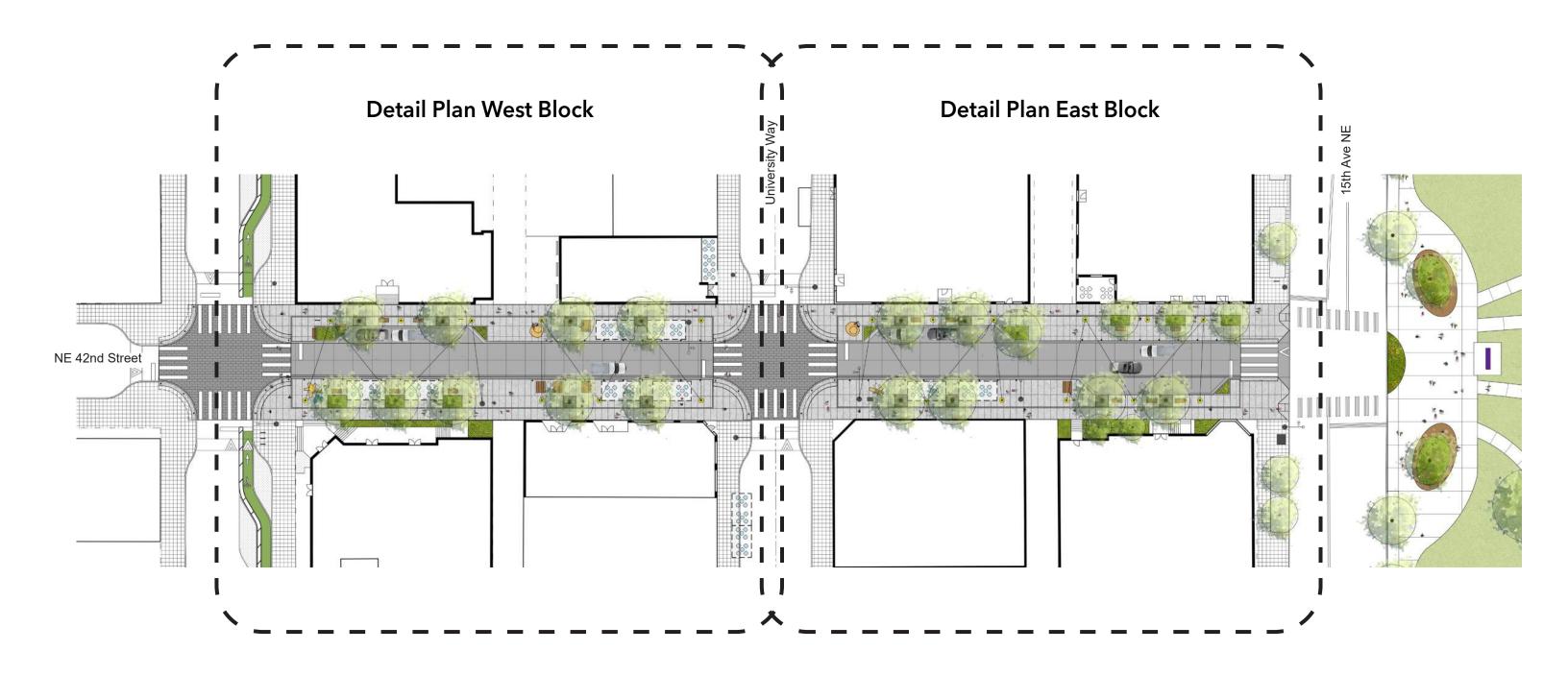
The proposed street increases the width of the pedestrian zone by reducing the travel lanes to minimum code-allowed width and by only intermittently including a flex/parking zone on alternating sides of the street.

The proposed street introduces a curbless design. The edge between pedestrian zones and vehicular zones is delineated by a detection strip in the paving. To ensure vehicles stay in the vehicular zone, trees and site furnishings such as bollards, bike racks, and benches are placed on either side of the travel lanes, forming a barrier to the pedestrian zone.



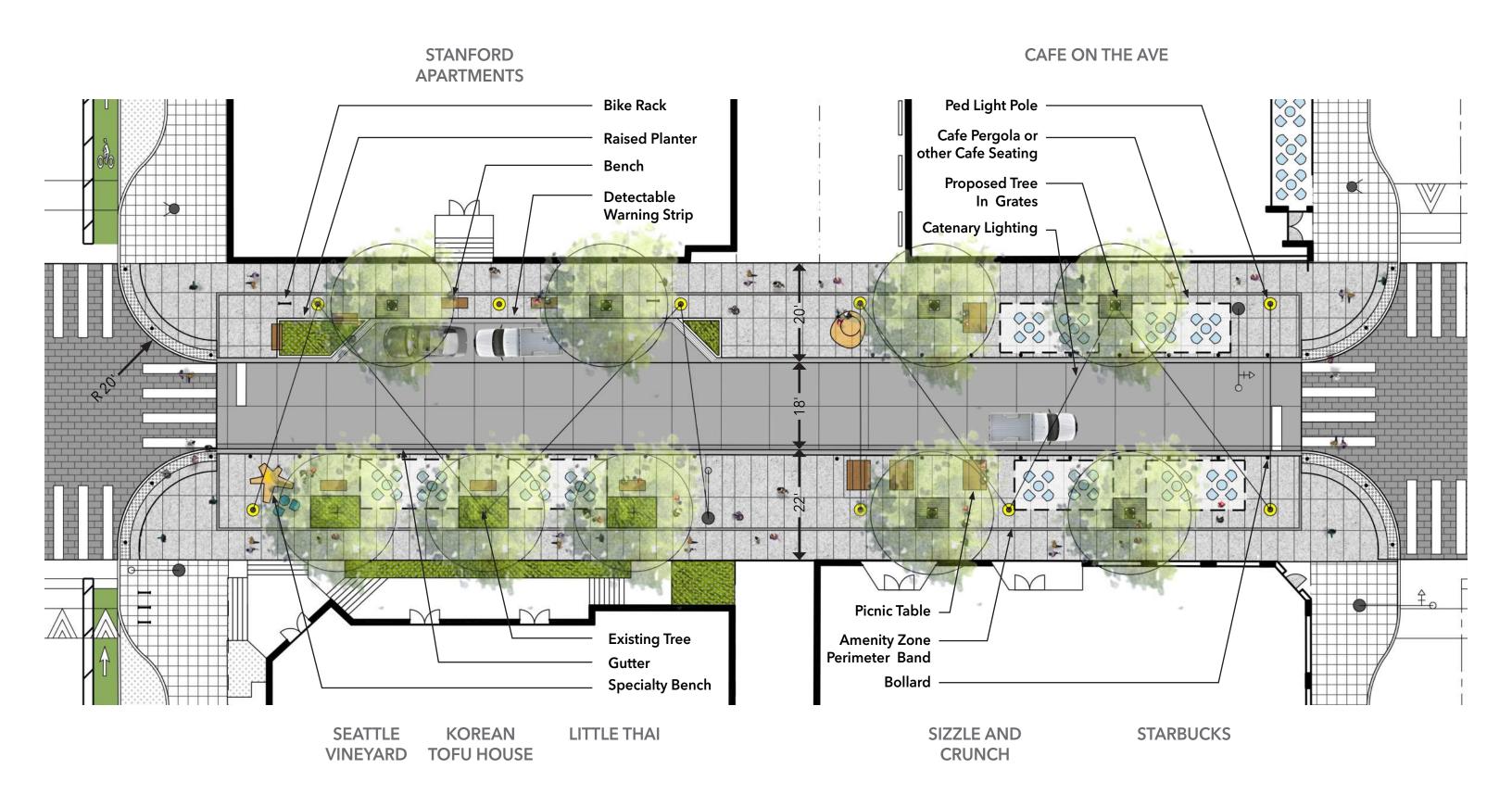












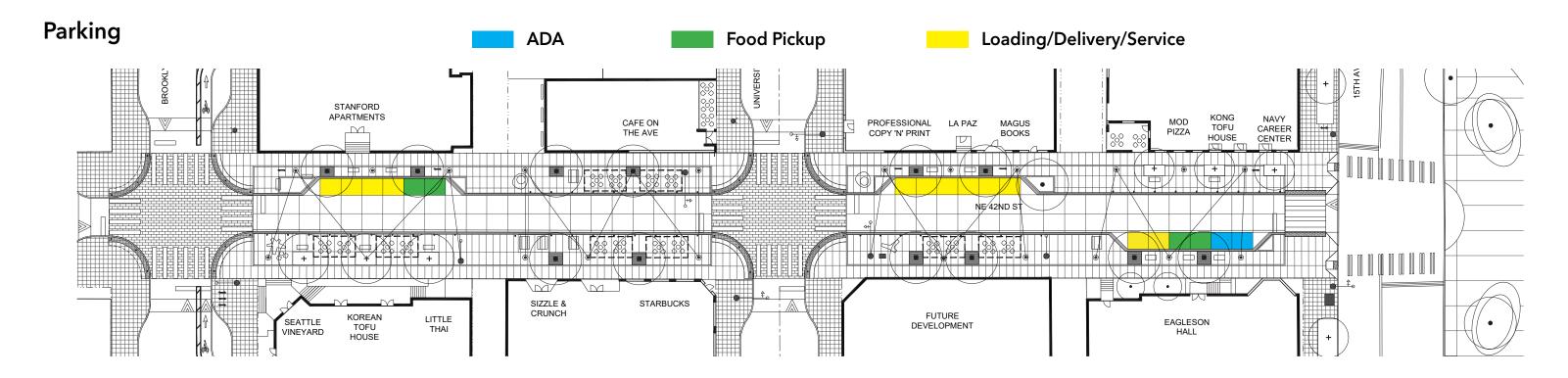


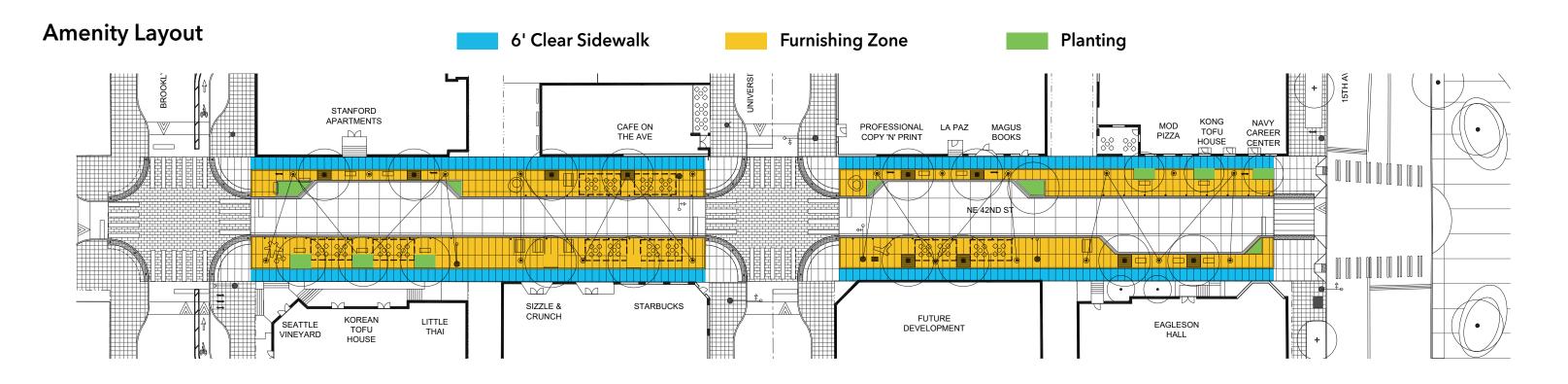






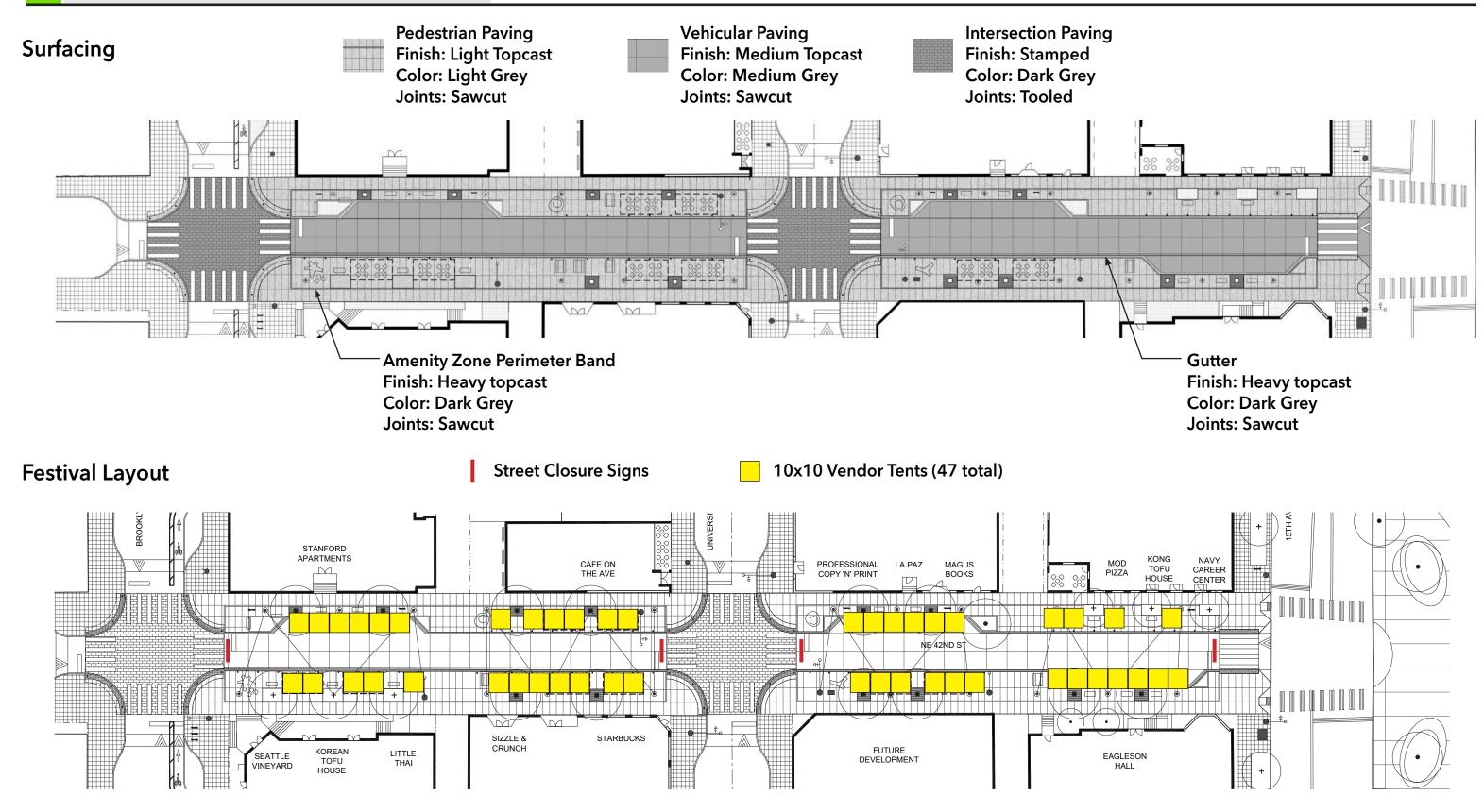














### **Street Furniture**





Street benches.



Informal group seating





Twig bench in various formations creating informal varied seating opportunities.

Benches provide opportunities for various group sizes to sit and linger on the street. They're typically located in the shade of trees. They can serve to narrow the apparent size of the vehicular lane and act as an obstacle to vehicles.

## Cafe / Dining Furniture





Picnic tables for dining.







Cafe table seating and pergola.

Cafe seating provides flexible furniture that can be moved around the street as needed to accommodate the different street modes from everyday to pop-up festival. Like more permanent seating, they serve to narrow the travel lanes and keep vehicles clear of the pedestrian zones.

### **Bike Racks**



U style bike rack.

Bike racks are located throughout the street, accommodating short term parking, narrowing the street and act as an obstacle to vehicles.

### **Tree Grates**





Tree grates along street.

New street trees are planted in tree grates to maximize the pedestrian space. Soil cells located beneath the adjacent paving provide soil volume for the trees.



## **Paving - Topcast Concrete**







Topcast concrete examples of various finishes.

Both vehicular and pedestrian zones will be cast-inplace concrete with sawcut scoring and sandblast finishes. The zones will be differentiated in color, density of scoring, and depth of sandblast finish.

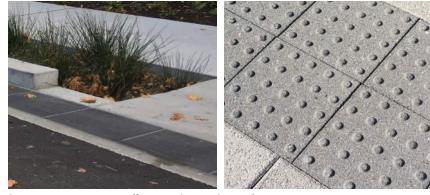
## **Paving - Stamped Concrete**



Stamped concrete patterns.

Stamped concrete will identify the raised intersections and differentiate them from other paving zones.

# **Detectable ADA warning Strip**



Precast concrete tactile warning strip options.

Concrete tactile warning pavers delineate crossing between pedestrian and vehicle zones.

## Lighting



Ped light pole on The Ave



Catenary lighting opportunity.

Lighting is an important element for promoting comfort, safety, and engagement in the evening. Both pedestrian light poles and catenary lighting help scale the street to pedestrian activities and comfort. To promote a sense of neighborhood identity the committee recommends a standard light pole design based on the poles on The Ave.





### **Bollards**







Precast concrete bollards.

Bollards are used where needed to create separation between the vehicular zone and pedestrian zones.

### **Raised Planters**



Raised planter with integrated seating.



Raised planters as part of the street furniture family



Raised precast concrete planters.

Where new planters are provided they are raised to ease maintenance, reduce litter, provide a seat perch, and fill the street at the pedestrian scale.

## **Street Trees**



Swamp white oak



Quercus suber Cork Oak



Quercus lobata Valley oak



Nyssa sylvatica Black tupelo

Street trees will visually link to UW campus across the street. Soil volume and water will be provided by soil cells beneath the paving with drip irrigation. Species to be coordinated with SDOT Urban Forestry.



#### **MEMORANDUM**

RE:

DATE: 6/27/2023

TO: Site Workshop

FROM: Robin Thaler, PE and Bethany Steadman, PE

PROJECT: U District Green Street

Civil Conceptual Design Narrative



The U District Green Street is proposed for NE 42<sup>nd</sup> Street between Brooklyn Avenue NE to the west and 15<sup>th</sup> Avenue NE to the East. The project proposes to replace hard surfacing, narrow the vehicular space, and create a more pedestrian friendly corridor. In addition, the project proposes utilizing SilvaCells adjacent to newly planted trees, which will provide growing space for larger mature trees by providing increased soil volume. SilvaCells are approved by Ecology to serve as underground bioretention cells, which can provide full stormwater mitigation as required and provide additional water quality treatment. Below is further narrative of the existing and proposed conditions and the civil conceptual design. See attached exhibit that shows the existing civil utilities and proposed stormwater mitigation overlaying the proposed conditions map.

#### **EXISTING CONDITIONS**

The existing conditions were evaluated by review of City of Seattle's (COS) DSO Water and Sewer Map, Seattle Department of Construction and Inspection (SDCI) GIS Maps, and via Google Earth/Street View as well as site walks. See attached exhibit for the existing civil utilities as well as the proposed civil improvements.

The DSO Map was consulted for reviewing existing civil utilities. It shows a separate public storm main routed south down University Way NE (AKA The Ave), then turns west along NE 42<sup>nd</sup> Street along the north side of NE 42<sup>nd</sup> Street, south of the existing curb line. The DSO Map notes the storm main as roughly 10 to 13 feet deep. No storm mains are located between 15<sup>th</sup> Street and University Way within the 42<sup>nd</sup> Street corridor. A storm main also runs north to south along Brooklyn Ave NE and 15<sup>th</sup> Ave NE. Both alleys include catch basins that discharge via a through curb outlet to the gutter pan on the north side of 42<sup>nd</sup> Street. Catch basins are located on the north side of intersections, catching stormwater before entering the intersection.

Water mains are located on the north side of NE 42<sup>nd</sup> Street for the full length of the proposed improvements, as well as within Brooklyn, University, and 15<sup>th</sup> Avenues. Water mains are typically around 4 feet deep. Water services to business are provided from the 42<sup>nd</sup> Street water main per the following:

• ¾-inch water service to 4201 University Way NE (Parcel # 1142001080),

- 2-inch and 4-inch water services to 4200 University Way NE (Parcel # 1142001210), and
- 4-inch and 6-inch water services to 1414 NE 42ND ST 98105 (Parcel # 1142001150)

Sewer mains are located along Brooklyn Ave, University Ave, and 15<sup>th</sup> Ave NE and flow north to south. Sewer services located within 42<sup>nd</sup> Street include a 6-inch side sewer service from 4200 University Way NE (Parcel # 1142001210) and a 6-inch side sewer service from 4101 15TH AVE NE (Parcel #1142001260). The side sewer service for 4200 runs along the north side of 42<sup>nd</sup> Street between the water main and the curb line where it connects to the sewer main within University Way. The side sewer service for 4101 appears to be along the property line under the pedestrian improvements before it connects to the sewer main within 15<sup>th</sup> Ave.

#### **PROPOSED CONDITIONS**

The project proposes to replace existing hard surfacing, including existing sidewalks and roadway pavements. New hard surfacing would reduce the pollution generating roadway pavement and increase non-pollution generating pedestrian spaces. Roughly 24,000 SF of replaced non-pollution generating hard surface and roughly 18,000 SF of replaced pollution generating hard surfacing for a total of 42,000 SF of hard surface being replaced is proposed.

#### STORMWATER MANAGEMENT

The project is classified as a Roadway Project and as such is required to provide the following stormwater mitigation:

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Requirement	Threshold Review	BMP Proposed
Onsite Stormwater	2,000 Sf or more of new	SilvaCells = 4,800 SF
Management (OSM)	plus replaced hard surface	mitigating roughly 60,000
	or 7,000 SF of land	SF of hard surface
	disturbing activity	
Flow Control	Not Applicable as	
	discharging to Portage Bay,	
	a Designated Receiving	
	Water Body	
Water Quality Treatment	Not Applicable as site is	SilvaCells also provide
	>35% hard surface and	water quality treatment of
	<5,000 SF of new PGHS.	pollution generating hard
	Replaced PGHS are	surface
	exempt.	

Proposed SilvaCells will be roughly 480 SF per new tree in order to provide enhanced soil volume for mature tree establishment. SilvaCells are approved by Ecology to be equivalent to bioretention cells given the same soil and ponding depth as bioretention cells. Based on the City's OSM List Approach Calculator, assuming infiltration rates between 0.30 and 0.60 inches per hour measured, this equates to roughly 6,000 SF of

hard surface treated per SilvaCell designed as an infiltrating bioretention cell with an underdrain.

The project proposes SilvaCells around 10 proposed trees, thus a potential to treat up to 60,000 SF of hard surface. Based on preliminary review of topography and catchment areas based on the DSO GIS maps, it appears that this area may be captured by directing the alley drainage and University Way drainage between 42<sup>nd</sup> and 43<sup>rd</sup> by redirecting existing catch basins to SilvaCells as shown on the attached exhibit.

The existing storm main within 42<sup>nd</sup> Street will be partially located under the SilvaCells on the north side of the street between University Way and Brooklyn Ave. The existing storm main is roughly 10 to 13 feet deep. It is noted that the project on 42<sup>nd</sup> and Brooklyn to the west was able to construct new trees over the existing storm main by installing a woven geotextile root barrier roughly 4-5 feet below the tree. The same option could be explored on this project.

#### **WATER AND SEWER**

Water mains are typically 3 to 4 feet of cover and run along the north side of 42<sup>nd</sup> Street in proximity to the proposed delineation between pedestrian and vehicular spaces (flush curb with tactile warning). They should have typical horizontal setbacks from proposed trees and SilvaCells. Existing water services could be preserved in place with SilvaCells stopping and starting on either side of the service.

An existing side sewer service serving 4200 University Way NE (Parcel # 1142001210), on the north side of 42<sup>nd</sup> and east of University Way, may be in conflict with the proposed SilvaCell and tree construction. It could either be preserved in its current location either within or under the SilvaCell or it should be relocated. Additional exploration, including utility locates and potholing, is recommended to understand the vertical and horizontal location of the side sewer and how it would relate to the proposed SilvaCell.

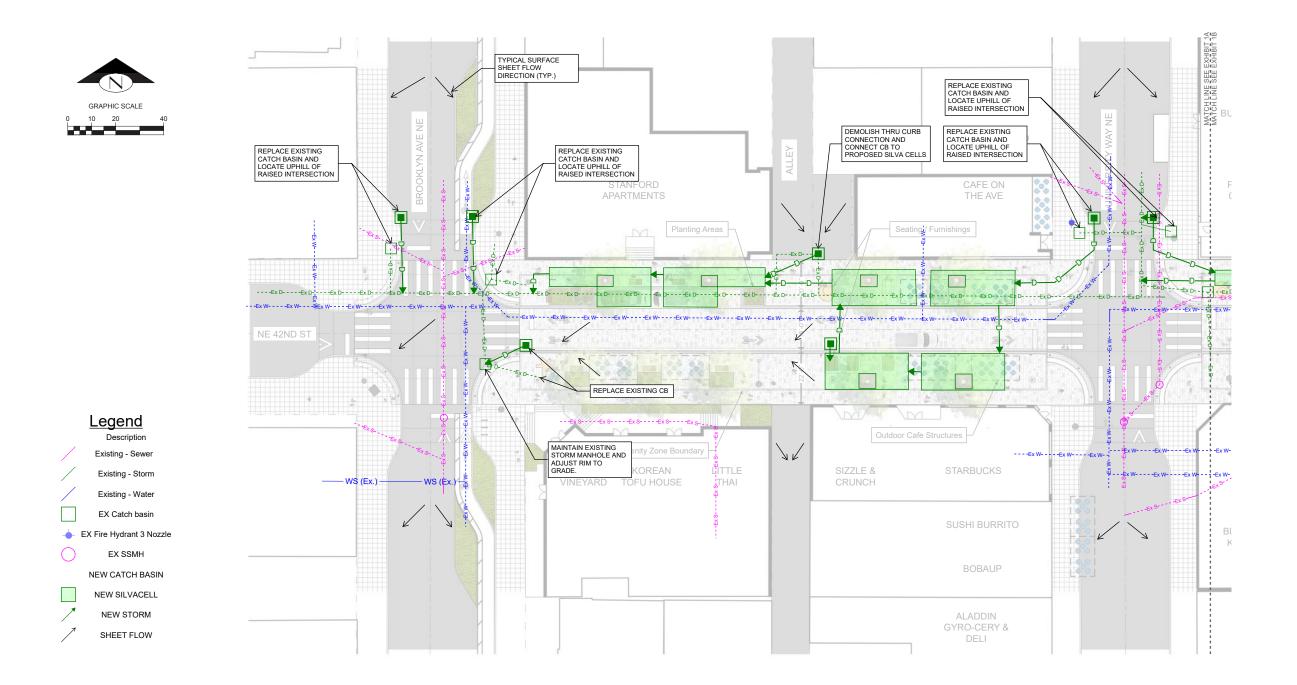
#### ADDITIONAL RIGHT-OF-WAY REQUIREMENTS

It is recommended to confirm traffic signalization and street/pedestrian lighting with SDOT, SCL and an electrical engineer. The City of Seattle Right-of-Way manual provides design guidance for street and pedestrian lighting. It notes that all lighting within the right-of-way should be analyzed with operational changes, such as reconfiguring the pedestrian and vehicular alignments as proposed. Additional guidance includes that street lighting for streets 50 feet wide or less may have street lighting in an alternating pattern spaced every 180 feet; Pedestrian lighting should be placed between street lighting luminaires at 60 foot spacing. For new or relocated street lighting on non-arterial streets, like 42<sup>nd</sup>, the manual states that street lighting should be designed using the most recent edition of the recommended IES guidelines, unless otherwise approved by SCL.

It is important to align all above-grade appurtenances with the proposed special event layout. Service equipment should be located below grade to the maximum extent feasible so that it doesn't conflict with the event space. This should be coordinated with SCL to ensure minimal conflicts.

#### **RECOMMENDED NEXT STEPS**

- Infiltration and Geotechnical Investigation
- Topographic Survey
- Pothole and confirm depth of utilities and possible conflicts
- Vehicular Turning Movement Study





### U DISTRICT GREEN STREET

Submittal	
CONCEPTIIAL	DESIGN

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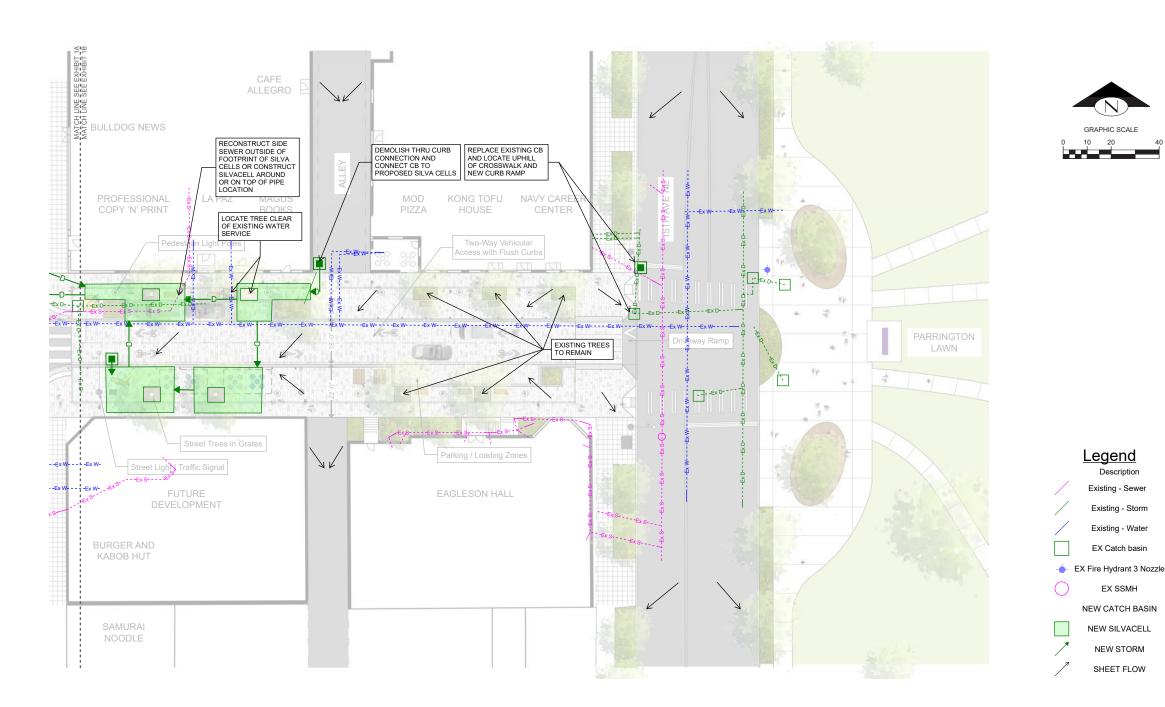
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**EXHIBIT 1A** 





### U DISTRICT GREEN STREET

Submittal	
CONCEPTUAL	DESIGN

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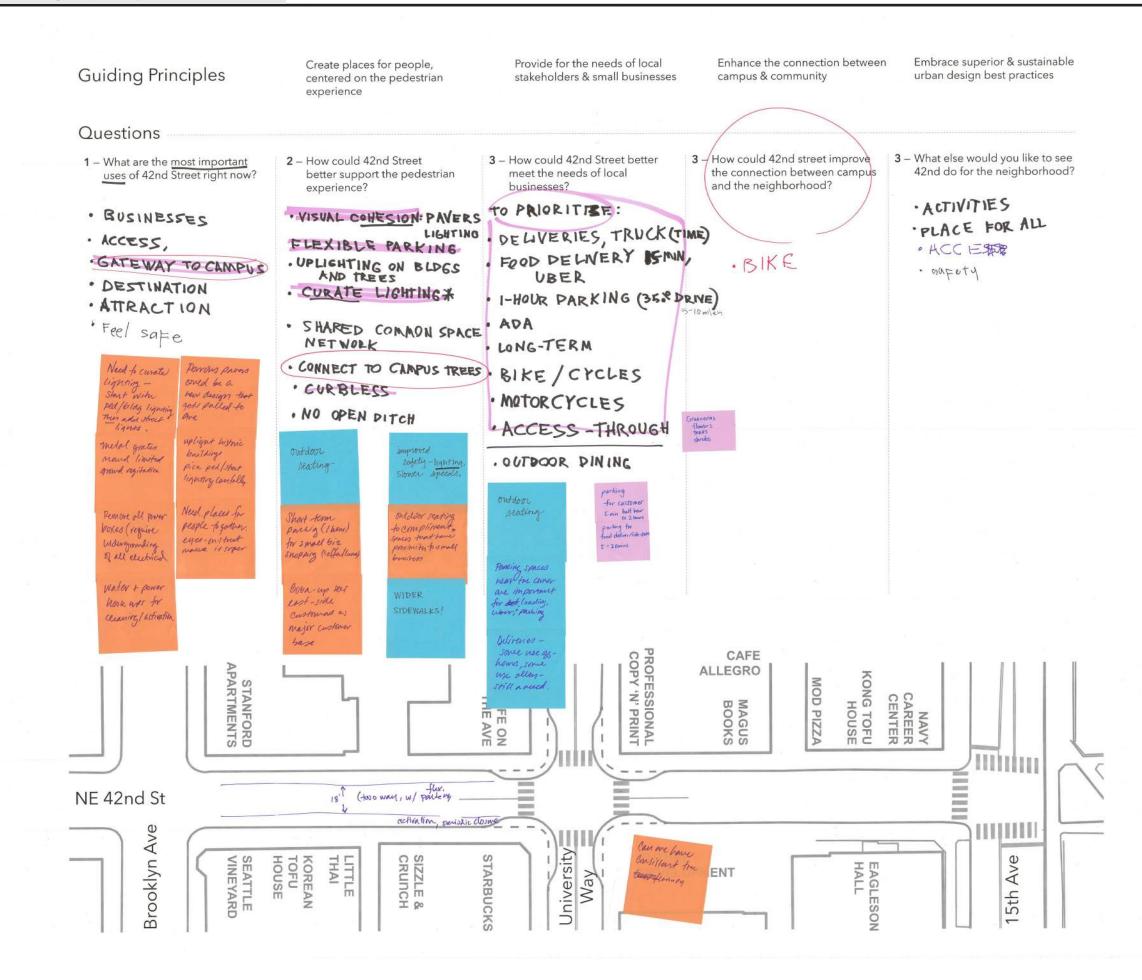
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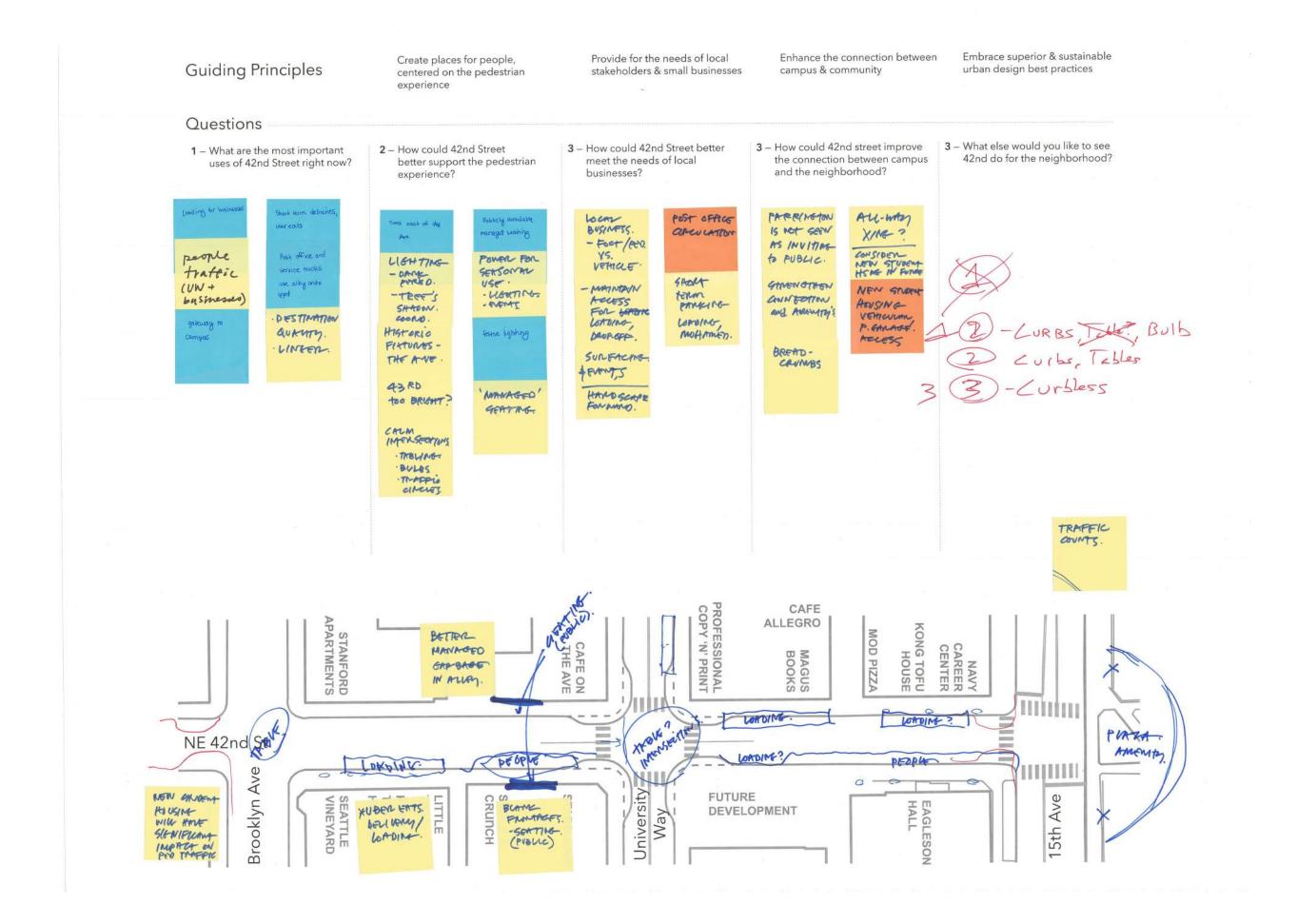
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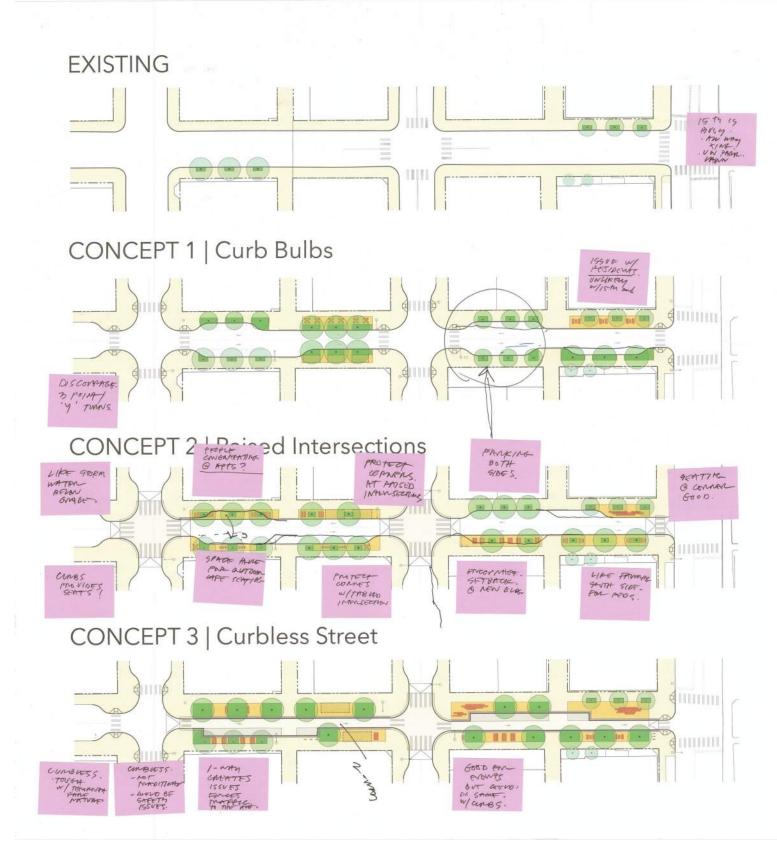
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**EXHIBIT 1B** 



#### Meeting #1 CONCERNS Embrace superior & sustainable Enhance the connection between rovide for the needs of local Create places for people, impacts to urban design best practices E student bound akeholders & small businesses campus & community centered on the pedestrian local bessions experience Questions 3 - How could 42nd street improve 3 - What else would you like to see 3 - How could 42nd Street better 2 - How could 42nd Street 1 - What are the most important 42nd do for the neighborhood? uses of 42nd Street right now? better support the pedestrian meet the needs of local the connection between campus and the neighborhood? businesses? experience? ANDHARK KEED Access to ( the the troll Space to h Activity@ at polis -flexible Ped=& hard Campus -> AVE WATER covered atta bussinesses Londmark maarsetions or Sidewill crossings timing -Feetivel street alternatie to THE AUE Space Identity-Delivery/ Loading Zones on 42nd @ Husky dos Shaber - w/ pow pruts Crowcla All ways - 4 mg stops Concept of the med Concept of the med the Richal C Piles pha CLEAN Parking 3 Prettier -plus -Bennes your right Afect pedertize 1-2 has also (not alleys) Like the Ave + pidup & reclas Entire neighborhom cleaner -graffit! -horselacs prosence Diverse business need cetail D' Conveya good cyclis to connext Pels not just through selety outdoor table Street is @ businesses -wider siden Start firm place the 232 car infrastructures. CAFE ALLEGRO KONG TOFU HOUSE MOD PIZZA CAFE ON THE AVE NAVY CAREER CENTER MAGUS BOOKS NE 42nd St ШПППП **Brooklyn Ave** 15th Ave University THAI SIZZLE & CRUNCH **FUTURE** KOREAN TOFU HOUSE STARBUCKS EAGLESON HALL Way DEVELOPMENT

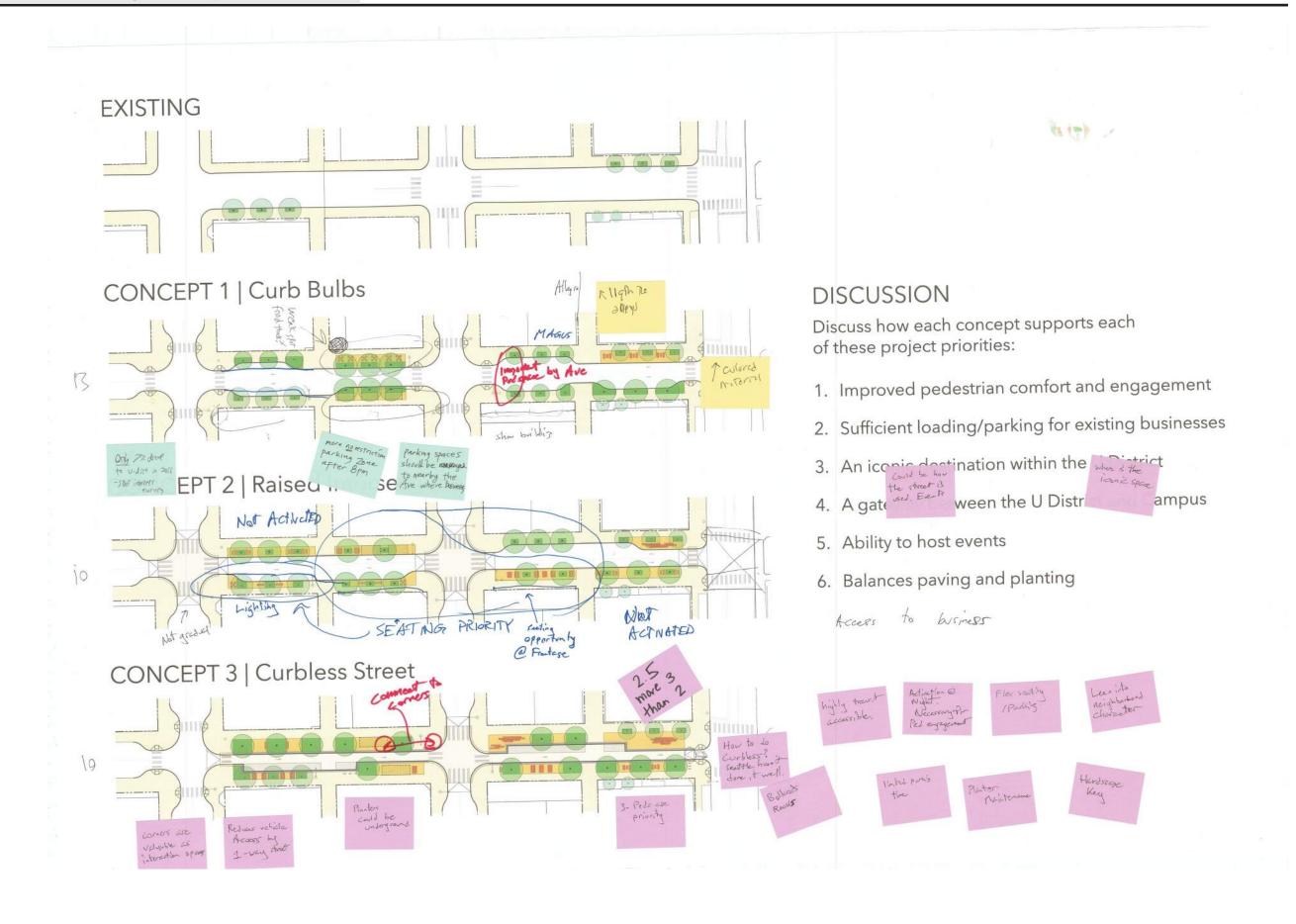




## DISCUSSION

Discuss how each concept supports each of these project priorities:

- 1. Improved pedestrian comfort and engagement
- 2. Sufficient loading/parking for existing businesses
- 3. An iconic destination within the U District
- 4. A gateway between the U District and Campus
- 5. Ability to host events
- 6. Balances paving and planting





Meeting #3

