

Designing Streets for People with Vision Disabilities: Toolkit and Pilot Design

Matt Johnson, AICP
Capital Projects Manager
Division of Transportation Engineering

Agenda

- Introduction / Background
- Key Elements in the Report
- Overview of Pilot Design
- Next Steps

Introduction / Background

Impetus for the Vision Impaired Study

- After we first started getting pushback in 2019 from the blind/low-vision community and our Commission on People with Disabilities, we started a continuing dialogue with them about floating bus stops.
- These conversations told us that there was a lot we could do to make Montgomery County more accessible to people with vision disabilities – not just floating bus stop changes.
- In 2020, we applied to the Metropolitan Washington Council of Governments for funding for a toolkit & pilot design.

Introduction / Background

- The project resulted in 2 deliverables.
 - A toolkit, *Planning and Designing Streets to be Safer and More Accessible for People with Vision Disabilities*.
 - A pilot design for the Fenton/Ellsworth intersection illustrating how the treatments called out in the toolkit can be used in practice.

Key Elements in the Report

Key Elements in the Report

› Introduction

- ❖ Understanding people with vision disabilities, best practices/lessons learned

› Process tools

- ❖ Engagement, pre- & post-construction activities, staff training, testing/training facility

› Design tools

- ❖ Tactile cues, visual cues, audible cues, signage, mobile technologies

› Designs

- ❖ Pedestrian access routes, crosswalks, bus stops

Introduction

- ❖ Key facts about people with vision disabilities
- ❖ Overview of approaches and lessons learned in other communities
- ❖ Principles of accessible design for people with vision disabilities

❖ Key facts about people with vision disabilities

- CDC reports that: 1 in 4 adults have a disability that impacts major life activities and
- 2 in 5 people over age 65 have some type of disability
- Disabilities may range from difficulties seeing, hearing, walking and thinking.
- Approximately 85% of people who are legally blind still have some residual vision.
- Most people with vision disabilities do not read braille.



A woman wearing a black backpack walks on a sidewalk using a support cane and a white cane.

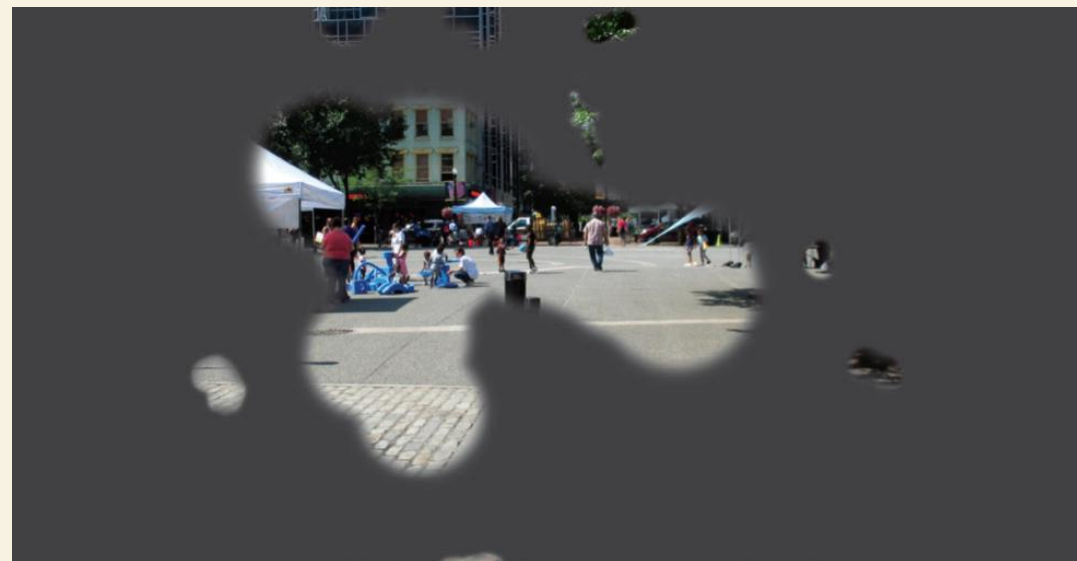
"Normal" vision



Central vision loss

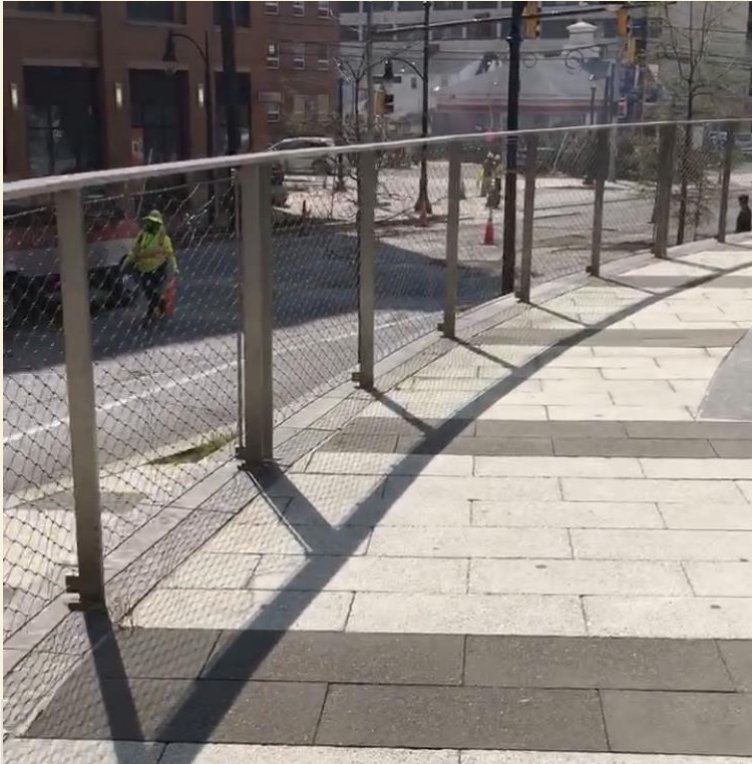


Overall acuity loss

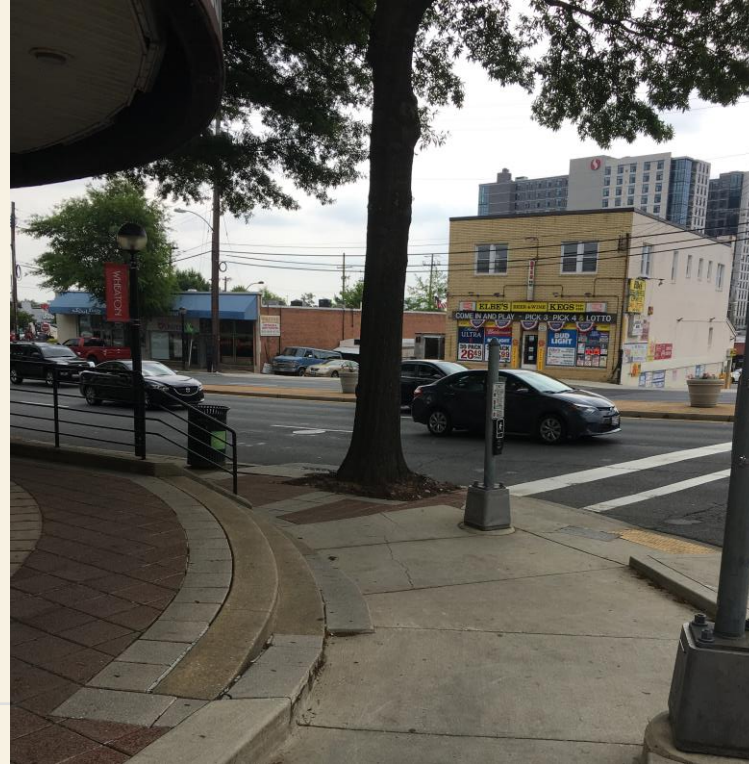


Peripheral vision loss

Some environments are visually confusing



Decorative sidewalks



Stairs that blend in



Connecting crosswalks

Even with good O&M skills, there are environmental challenges that create unsafe and uncomfortable conditions



Where to cross?



Ramps points into the intersection can be confusing

Rounded corners can make it difficult to locate the crosswalk or recognize the change in walking direction



Crossing

- Maintaining alignment
 - Lack of painted lines or faded marking
 - Busy crosswalks
 - Wide intersections
 - Skewed crosswalks
- Knowing when to cross
 - T-intersections
 - Roundabouts
 - Confusing traffic patterns
 - Ambient noise



Locating a bus stop

- This bus stop is located on a light pole with no landmarks such as a shelter or bench



❖ Principles of Accessible Design

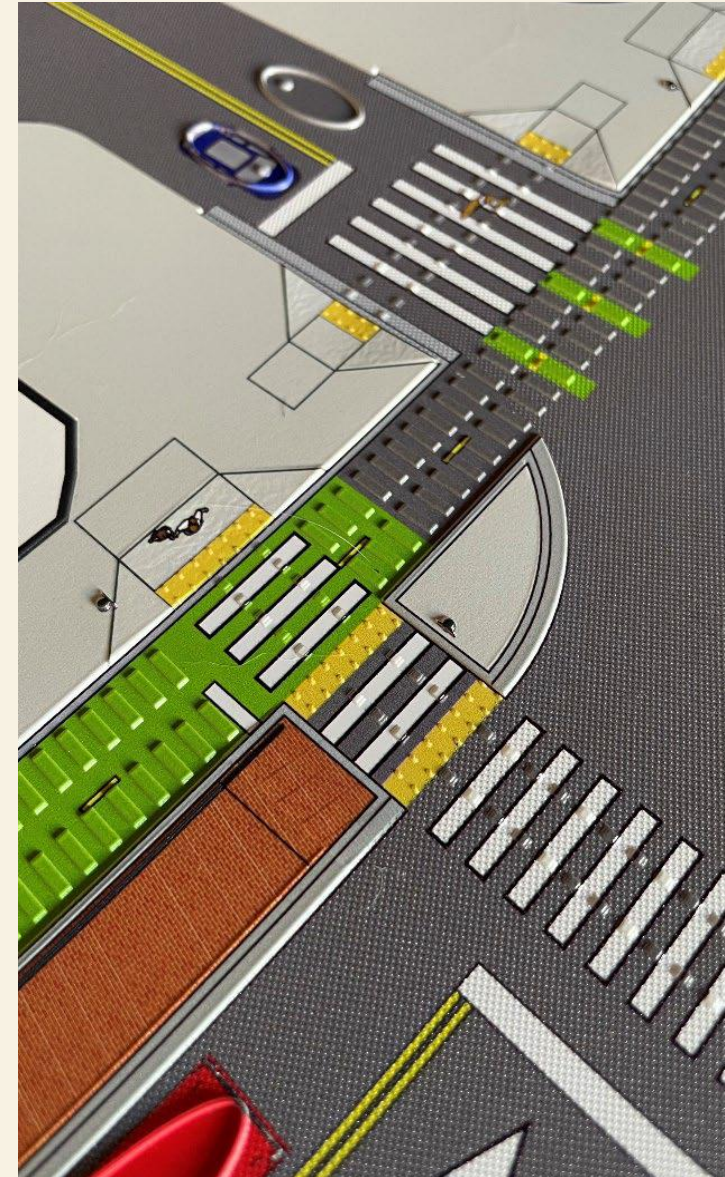
- Safety
 - People with vision disabilities are especially vulnerable
 - Montgomery County has adopted Vision Zero
- Compliance
 - Federal laws and standards include:
USDOT ADA Standards (2006), USDOJ ADA Standards (2010), US Access Board – PROWAG, MDMUTCD
- Inclusiveness
 - People with disabilities need to be included in the process.
Solutions need to be broad, not focused on one user.
- Consistency & Predictability
 - Designs need to be consistent, or they can become confusing and hazardous.
- Maintenance
 - Keeping accessible features in a state of good repair is essential.

Process Tools

- ❖ Engaging people with vision disabilities
- ❖ Pre-construction accessibility audit
- ❖ Performance evaluation
- ❖ Post-construction education & outreach
- ❖ Regular training on accessible planning & design
- ❖ Accessible design testing and training facilities

❖ Engaging people with vision disabilities

- Effective engagement requires a proactive approach. Many people with vision disabilities are unaware of projects that will impact their lives until after decisions have been made.
- This is most critical with new or unfamiliar designs or which don't have clear federal guidance.
- People should be asked ahead of meetings whether they have need for special accommodations.
- For projects likely to have a major impact on people with vision disabilities, consider tactile graphics.



❖ **Pre-construction accessibility audit**

- The study recommends an audit of a design by an independent reviewer experienced in accessibility prior to approval for construction.
 - Compliance with federal, state, and local regulations
 - Assessment of potential impacts (positive and negative) for people with disabilities
 - Report should include recommendations for addressing issues

❖ Performance evaluation

- Following construction of a new project, it should be evaluated to determine whether it's meeting its goals, including for accessibility
- This evaluation can improve future designs
- Lack of an evaluation can lead to negative opinions that might influence future implementation
- Note that with non-conventional designs, the need for minor post-construction alterations is expected and is not indicative of a failed design

❖ Post-construction education & outreach

- Following construction of a non-conventional project, it's important to educate all users, including users with disabilities about how to use the facility.
- Education should also educate users without disabilities of how the facility might impact their interactions with pedestrians with disabilities

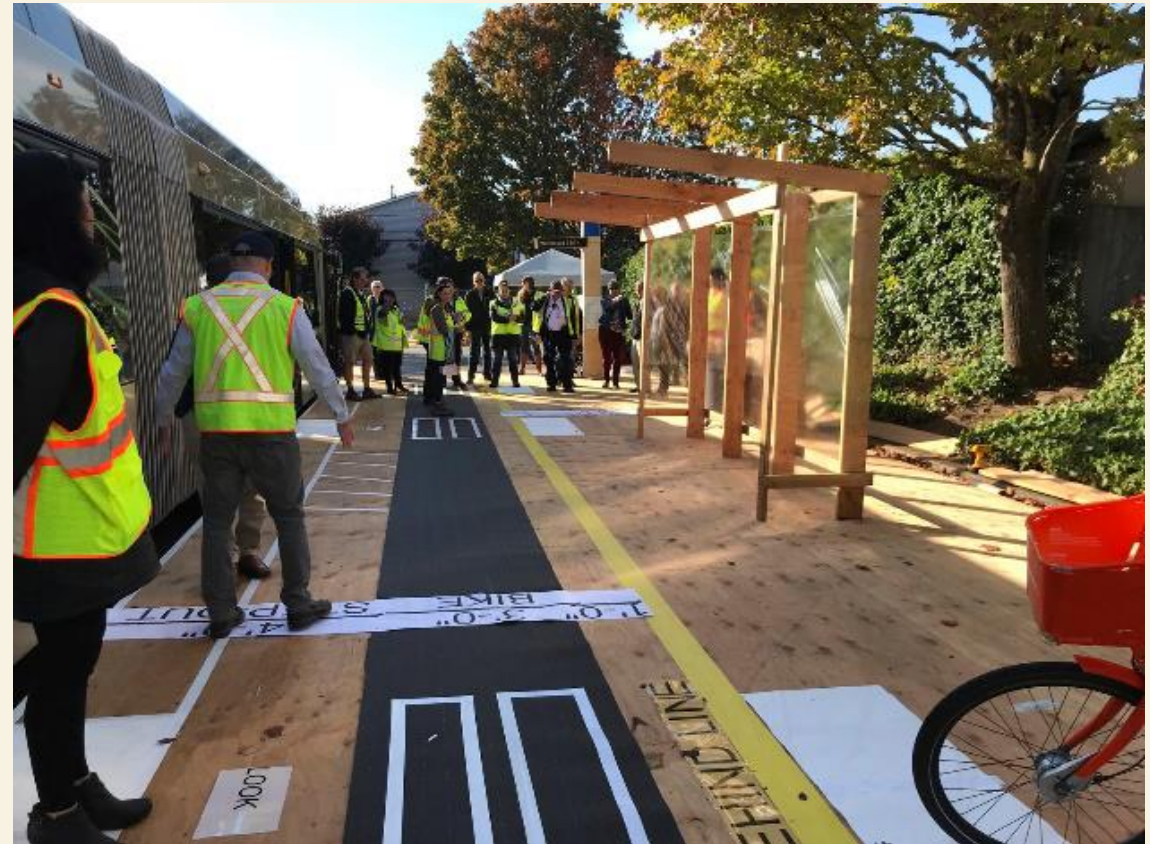


❖ **Regular training on Accessible Planning & Design**

- The County should implement a regular training program for staff and consultants to help them better understand the needs of people with disabilities, the relevant regulations, and best-practices (which are constantly changing).
- The training materials should be evaluated and updated at 5 year intervals OR when regulations change.
- Staff should be trained when starting employment and have training refreshed regularly.

❖ Testing & Training Facility

- A Testing & Training Facility (TTF) can be used to test out designs for accessibility issues prior to implementing them.
- It can also be used to help train people with vision disabilities and O&M specialists.



Design Tools

- ❖ Tactile cues
- ❖ Visual cues
- ❖ Audible cues
- ❖ Signage
- ❖ Mobile technologies

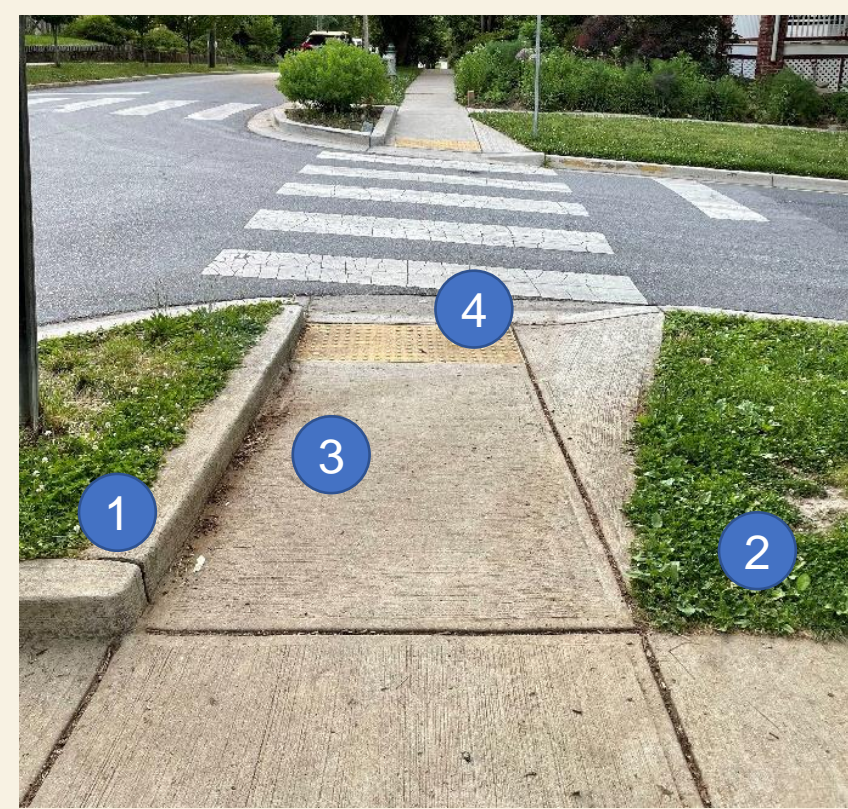
Navigation

- People who are legally blind tend to use their **hearing** to help them navigate. People with low-vision rely more on their **residual vision**. People who are deaf-blind can't rely on either and need **tactile** cues. Design needs to take everyone into account.



❖ Tactile Cues

- Tactile clues include:
 - Detectable edges ①
 - Detectable changes in surface texture ②
 - Detectable changes in slope ③
 - Tactile Walking Surface Indicators (TWSIs) ④
 - Tactile delineator surfaces ⑤



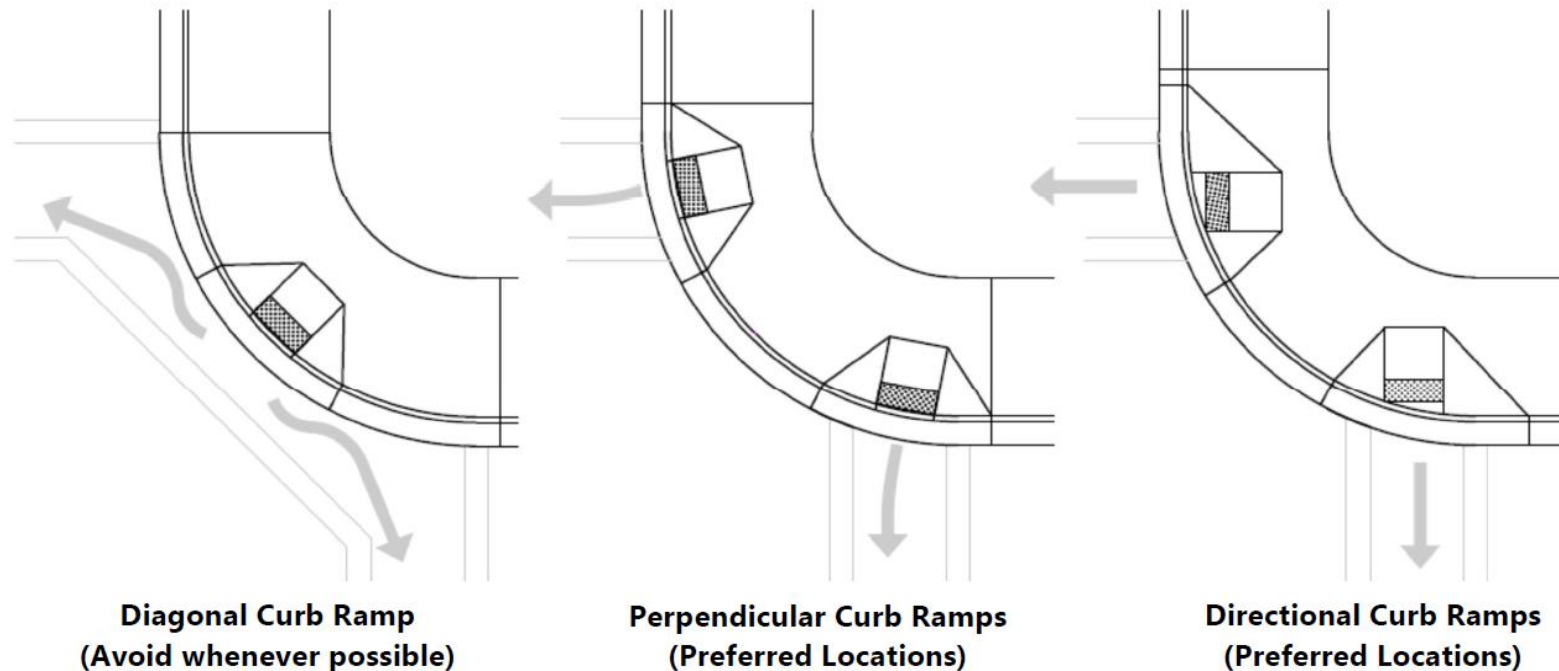
❖ Tactile Cues

- Recommended guidance
 - Tactile cues should comply with PROWAG and any federal, state, or local accessibility requirements where applicable.
 - Tactile cues should be applied **consistently**.
 - Detectable changes in surface texture should be verified by people with a range of vision disabilities using different navigational techniques prior to long-term installation.
 - Except at crosswalks, the boundary between pedestrian space and bicycle space should be delineated by a detectable edge.
 - Curb ramps should be directional.
 - Where feasible, vertical curbs should be incorporated in ramp designs to facilitate alignment.
 - Fences/railings should be cane-detectable.

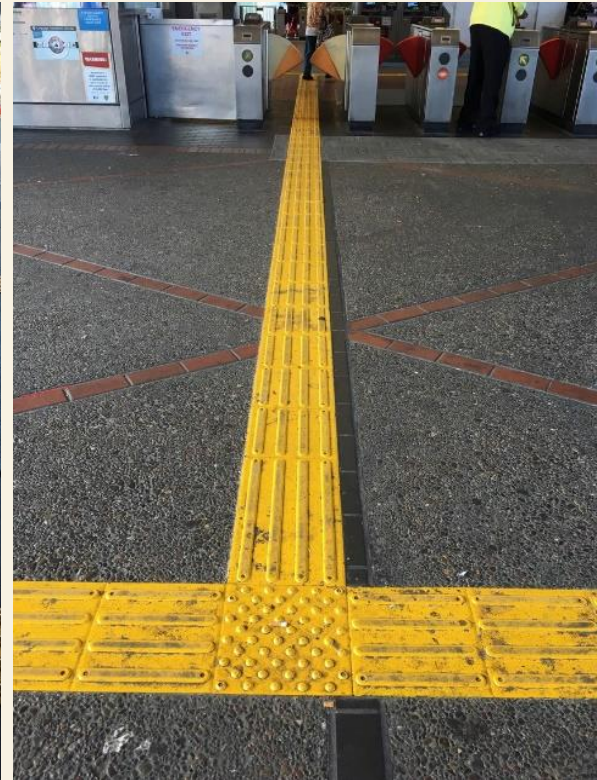
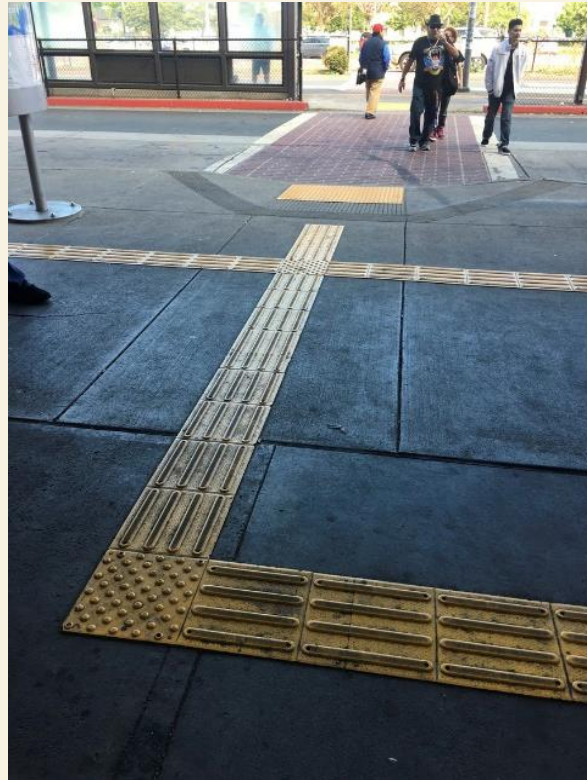


- **Tactile Cues – curb ramps**

- Curb ramps should be directional.
- Diagonal curb ramps should be avoided.
- Depressed curbs should be avoided. If used, DWS must cover entire opening.



- **Tactile Cues – Detectable Guidance Surface (DGS)**
- The DGS is used internationally to guide pedestrians with vision disabilities. There is little training on these in the US, but globally, people are trained to walk on top of the DGS.



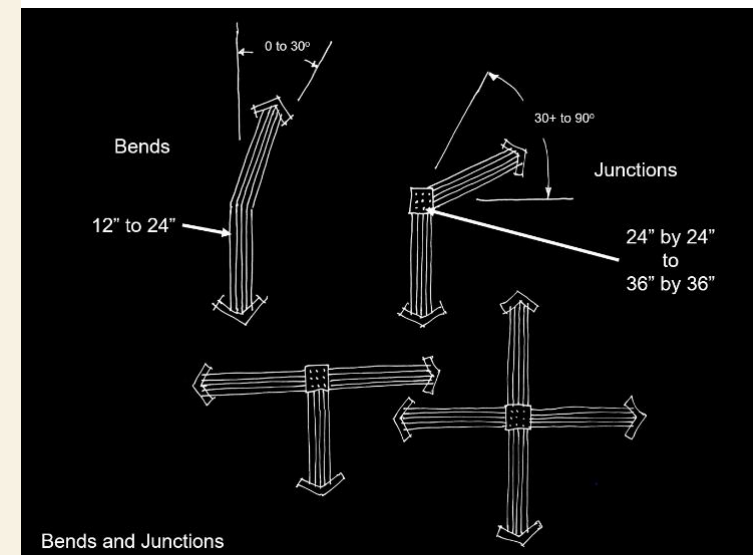
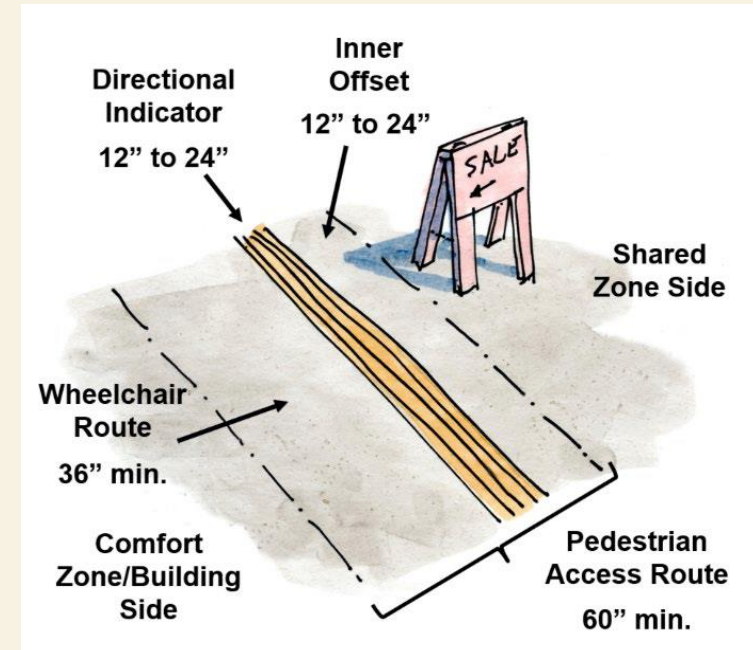
• Tactile Cues – Detectable Guidance Surface (DGS)

• Uses

- To guide in open areas where navigation may be difficult.
- To indicate a point of interest, such as a mid-block crossing or a bus stop.

• Considerations

- Width 24" when to be intercepted, 12" elsewhere.
- Should leave a 36" min wheelchair route to one side.
- Do **not** use as an edge treatment.
- When terminating, use a junction treatment.
- Must contrast with background surface.



- **Tactile Cues – Detectable Delineator Surface (DDS)**

- **Uses**

- To delineate the pedestrian space from a different space when the two must be at the same elevation and no other delineator is feasible.
- May also be used to help maintain alignment in a crosswalk.

- **Considerations**

- Must be detectable under foot. Should contrast with background surface.
- Must be traversable by wheelchair users.



❖ Visual Cues

- Many people who have vision disabilities retain some residual vision. Visual cues can be very important even to people with vision disabilities.
- Types of visual cues:
 - Contrasting colors and shades.
 - Familiar patterns.
 - Lighting.

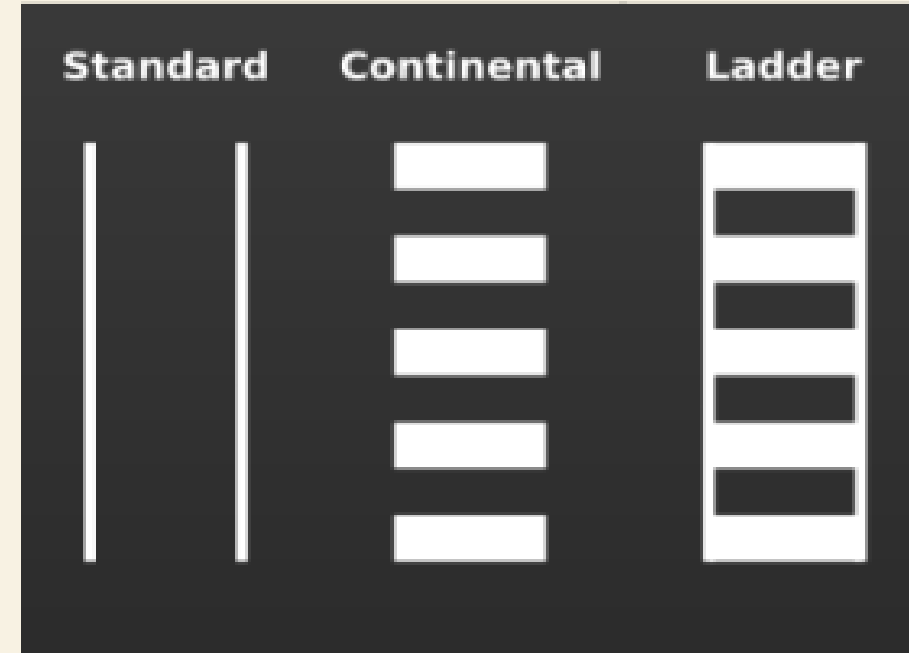
- **Visual Cues – contrasting colors and shades**

- Contrast is important for people with vision disabilities.
- They can use it to detect steps and can also distinguish the sidewalk from the roadway or bikeway in some cases.
- Aesthetics should never take precedence over accessibility. In this case, the contrast misleads people with low-vision and serves no purpose for navigation.



- **Visual Cues – familiar patterns**

- Use of familiar and standard patterns is important.
- High-visibility crosswalks are more easily distinguishable.
- People with low vision are better able to maintain alignment in crosswalks with lateral bounding lines.



- **Visual Cues – lighting**

- Lighting is important for everyone's safety, but it is especially critical for those with vision disabilities.
- Good lighting can help to create contrast for tripping hazards.
- Lighting levels should be uniform to prevent glare and transitions from dark to light.
- Signs and maps should be illuminated to help people with low-vision read them at night.

❖ Audible Cues

- Types of audible cues:
 - Traffic sounds.
 - Other pedestrians.
 - Different sounds surfaces make when tapped by cane.
 - Differences in echoes from objects in the environment.
 - Distinctive sounds (like a fountain).
 - Accessible Pedestrian Signals (APS).
 - Audible messaging.

- **Audible Cues – traffic sounds**
- Uses of traffic sounds:
 - The sound of parallel traffic can be used to maintain alignment in the crosswalk and to know when to start crossing.
 - The sound of perpendicular traffic can indicate you're approaching an intersection.
- Issues:
 - The electrification of the vehicle fleet is reducing sounds.
 - Bikes & scooters are nearly silent.
 - Difficulty at certain intersection types, such as all-ped crossings, T-intersections, roundabouts, and channelized turn lanes.
 - Crossing shared streets and shared spaces due to lack of traffic sounds.

- **Audible Cues – traffic sounds**
- Recommended guidance:
 - APS must be installed at all signalized pedestrian crossings with pedestrian signals and all PHB (HAWK) crossings.
 - Consideration should be given to making relatively quiet vehicles such as electric cars, bicycles, and scooters more audible at unsignalized pedestrian crossings through the use of technologies such as rumble strips or vehicle detection.

- **Audible Cues – accessible pedestrian signals**

- Concerns about existing approaches:
 - Difficulty hearing APS locator tones.
 - Difficulty hearing APS and traffic sounds due to ambient noise.
 - APS that are too loud.
 - Push buttons not in predictable locations, too far from the crosswalk, or difficult to reach.



- **Audible Cues – accessible pedestrian signals**
- Recommended guidance:
 - APS must be installed at intersections with an LPI, protected left turn, or exclusive pedestrian phase.
 - If an LPI is included, the WALK indication must remain on until parallel traffic is given a green signal.
 - APS pushbuttons should be installed even where a button is not required to activate the walk signal.
 - The APS locator tone should adjust automatically to the ambient noise level.
 - At complex intersections or crossings, consider including a tactile map of the intersection near the APS.
 - If two APS are located within 10' of each other, they must include a speech message to indicate which walk signal is on.

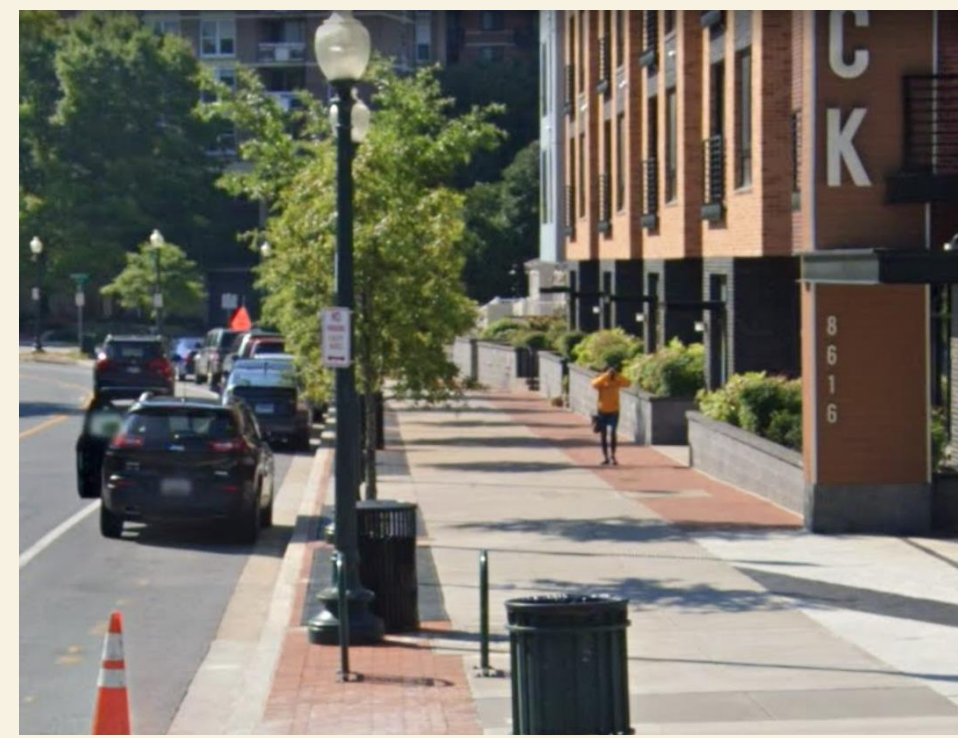
- **Audible Cues – accessible pedestrian signals**
- Additional features:
 - Extended-press should be used to activate additional features (such as a message indicating your location).
 - Audible beaconing should be considered in certain situations:
 - Crosswalks longer than 70’.
 - Skewed crosswalks.
 - Intersections with irregular geometry.
 - Where requested or where it is judged to be beneficial.

Designs

- ❖ Pedestrian Access Routes
- ❖ Crosswalks
- ❖ Bus stops

❖ Pedestrian Access Routes

- The Pedestrian Access Route (PAR) does not necessarily comprise the entire pedestrian space within the right-of-way. A sidewalk café or the furniture zone, for example, would not be included in the PAR.
- PARs that are not easily distinguishable or that curve and shift frequently can be difficult for people with vision disabilities to navigate.



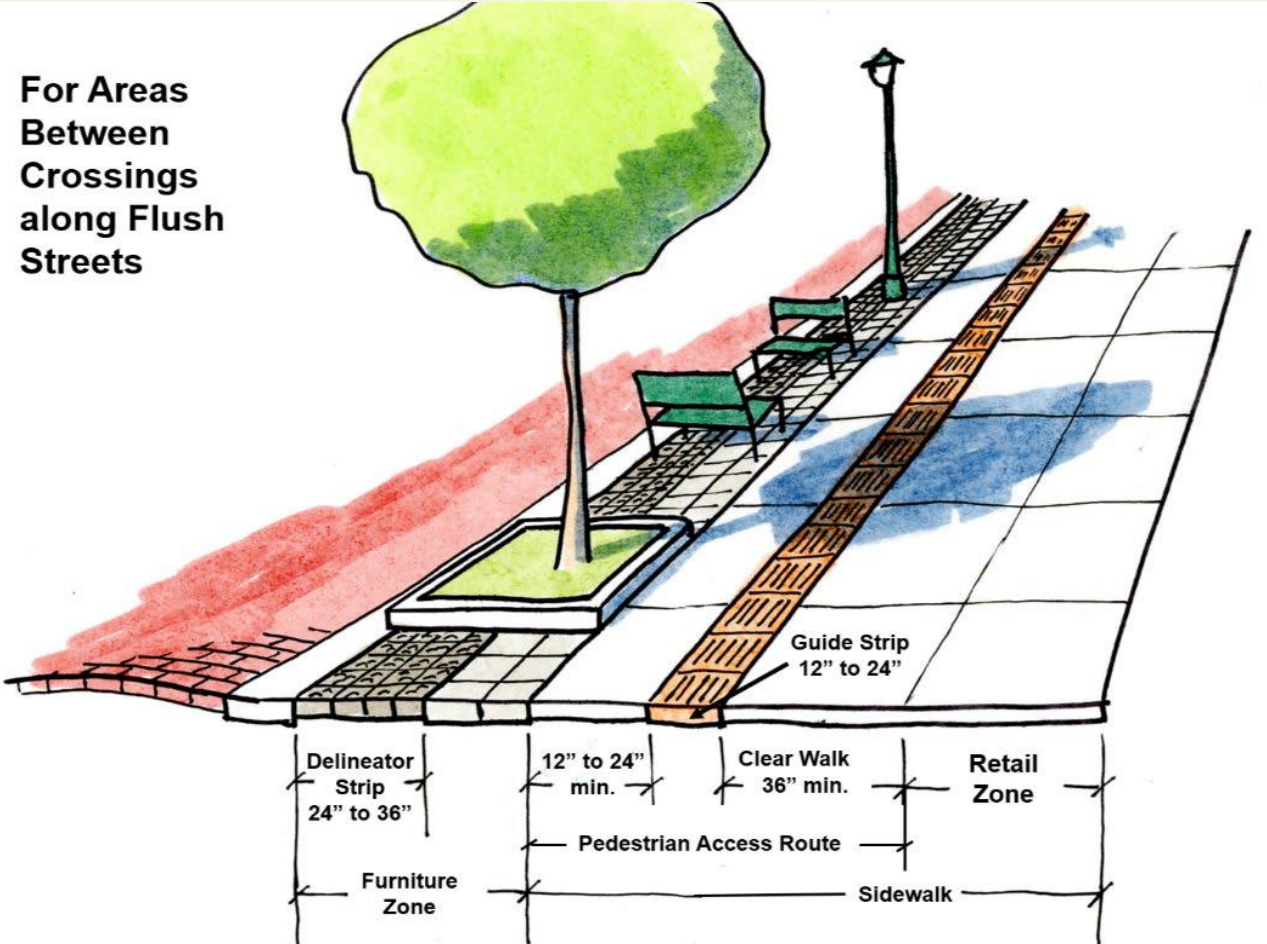
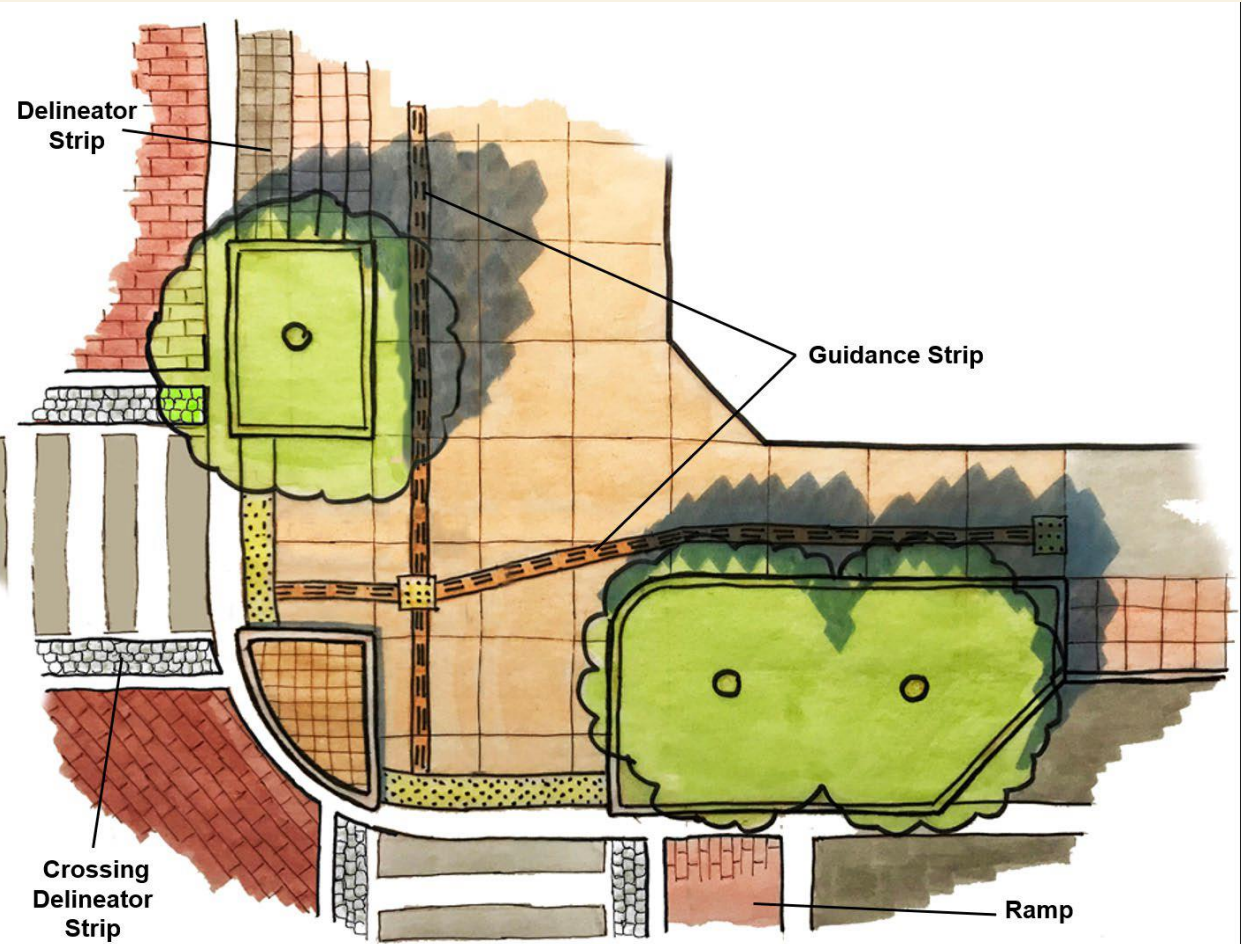
❖ Pedestrian Access Routes

- Recommended guidance:
 - Should meet PROWAG requirements for min clear width.
 - Should meet PROWAG requirements for cross-slope, running slope, and vertical changes in elevation.
 - Should be clear of permanent and temporary obstructions (signs, lampposts, utility poles, etc).
 - Should be as straight and direct as possible so it is intuitive.
 - Should connect to accessible routes.
 - Must be well lit with even lighting levels.
 - Where not intuitive, should be supplemented with DGS.
 - Should be made of concrete with a brushed finish and should contrast visually and texturally with adjacent surfaces. Use of brick pavers in PARs should be avoided.

❖ Pedestrian Access Routes

- Recommended guidance: (continued)
 - Where possible, a buffer/furniture zone should separate the PAR from the travel way.
 - Free-standing elements like bike racks should be placed outside the PAR.
 - In CBDs and town centers, designated parking areas for bikes and scooters should be provided (outside the PAR). Docking in these areas should be required to use designated spaces.
 - Standards should be established for protrusions into the PAR and trimming of adjacent vegetation.
 - Consider implementation of “no park” and “no ride” zones for dockless mobility in areas with high pedestrian activity.

❖ Pedestrian Access Routes



❖ Crosswalks

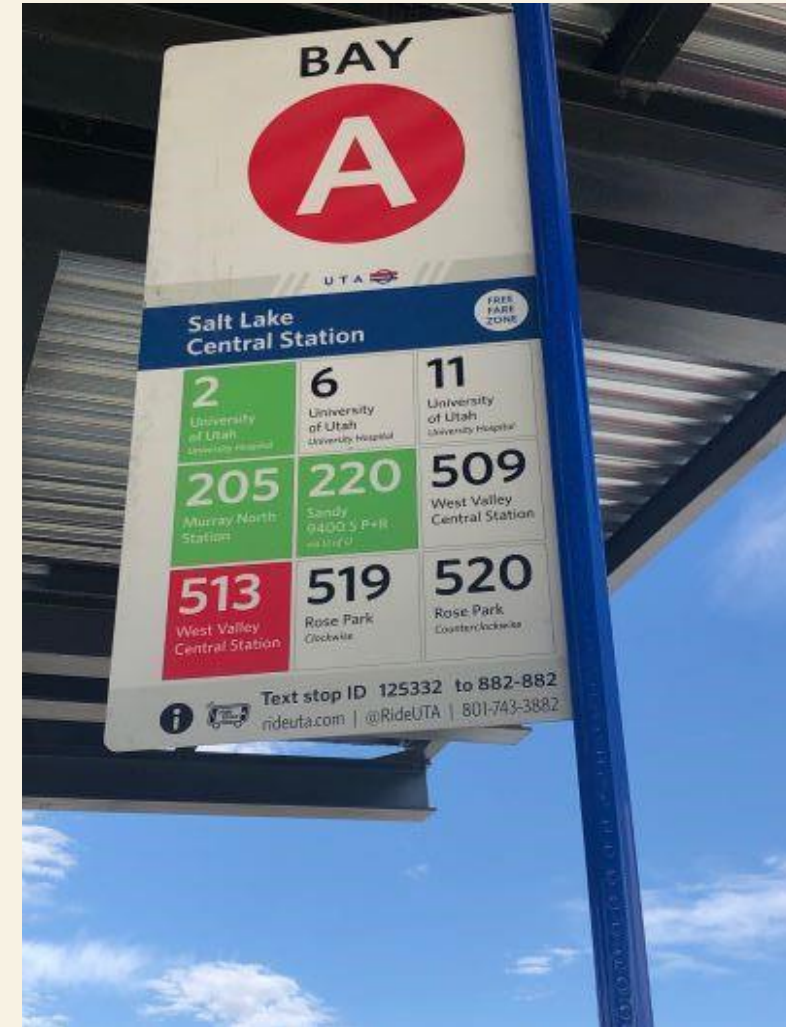
- Recommended guidance:
 - Crosswalks should use high-visibility **ladder**-style markings.
 - Crosswalks at signalized intersections should have APS.
 - Crosswalks should be straight and align with the PAR.
 - Crosswalks should be as short as possible. Consider curb-extensions to reduce exposure.
 - In cases where crosswalks are more than 40', skewed, in an area with high ambient noise levels, or do not have parallel traffic, consider use of a refuge island, delineator strips, and/or audible beaconing.
 - Directional ramps should be used.
 - Avoid use of channelized turn lanes and roundabouts.

❖ Bus Stops

- Concerns about existing approaches:
 - Finding bus stop locations, especially when located mid-block, in areas without a landscape buffer, or with no shelter.
 - Determining which bus lines serve the stop.
 - Determining the correct bus when the bus arrives.
 - Signs that are difficult to read/recognize from a distance.
 - Lack of audio and tactile signage.
 - Inadequate lighting.
 - Vegetation impeding access.
 - Lack of direct access to nearby destinations via an accessible route.
 - Changes in bus service due to disruptions such as construction.

❖ Bus Stops

- Recommended guidance:
 - Bus stops should be located in a predictable location near intersections and crosswalks.
 - Layouts should be consistent.
 - Guidance strips should be installed to assist users in finding the stop.
 - The DGS should be installed to minimize impact to wheelchair users.
 - A distinctive (shape and color) regional bus stop pole should be considered.
 - Consider Bluetooth beacons.



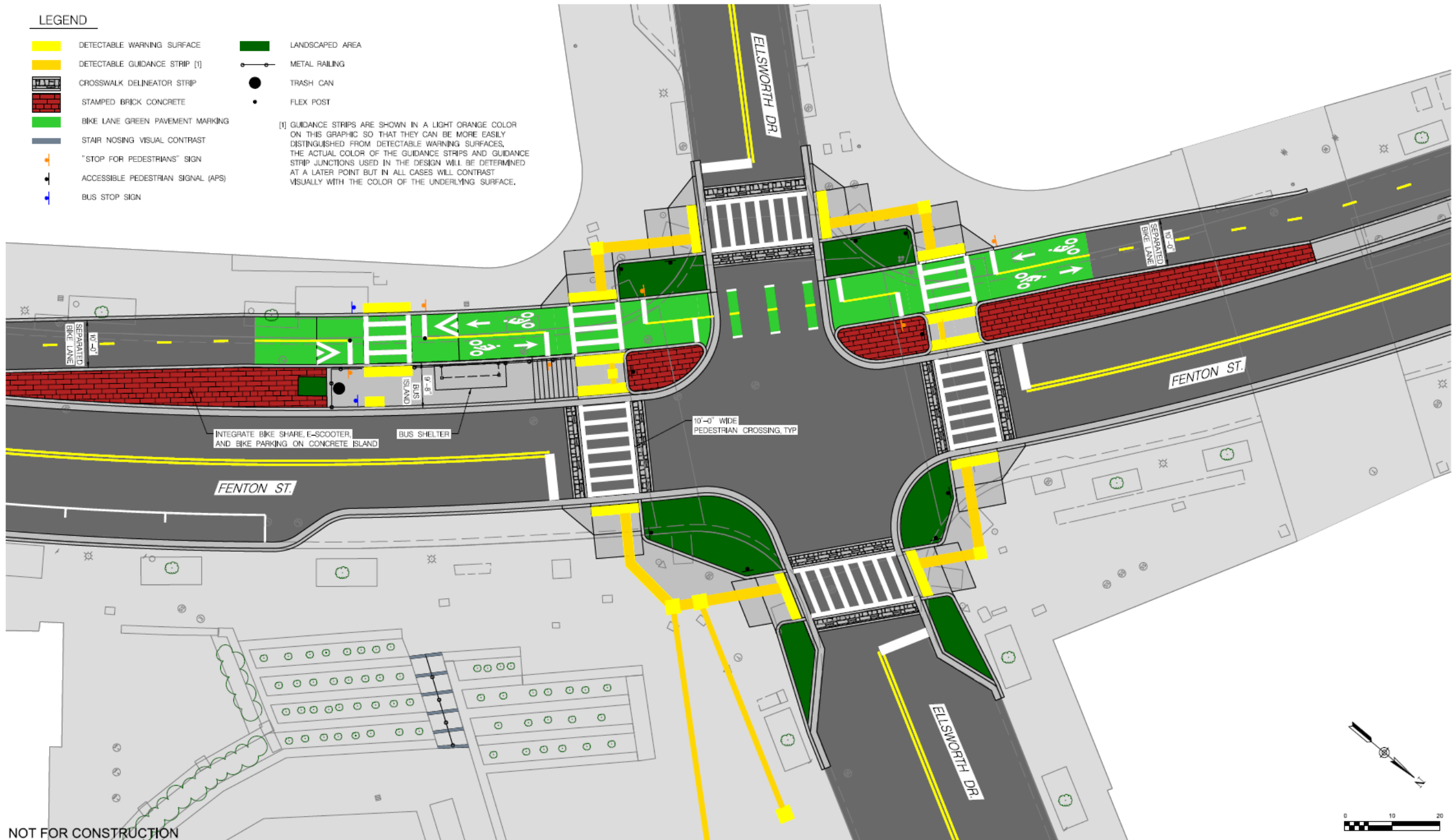
Overview of Pilot Design

LEGEND

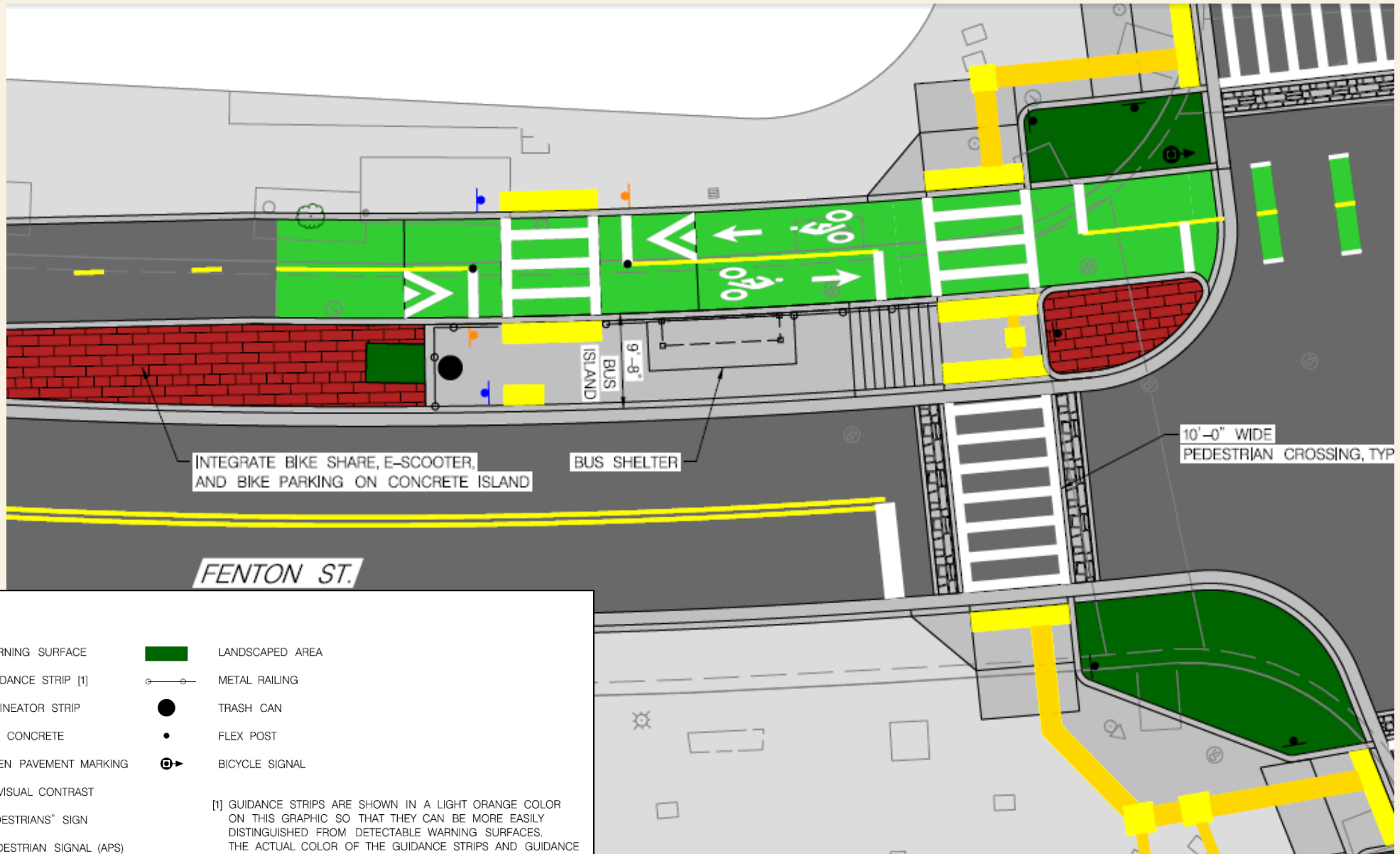
-  DETECTABLE WARNING SURFACE
-  DETECTABLE GUIDANCE STRIP [1]
-  CROSSWALK DELINEATOR STRIP
-  STAMPED BRICK CONCRETE
-  BIKE LANE GREEN PAVEMENT MARKING
-  STAIR NOSING VISUAL CONTRAST
-  "STOP FOR PEDESTRIANS" SIGN
-  ACCESSIBLE PEDESTRIAN SIGNAL (APS)
-  BUS STOP SIGN

-  LANDSCAPED AREA
-  METAL RAILING
-  TRASH CAN
-  FLEX POST

[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.



NOT FOR CONSTRUCTION



FENTON ST.

INTEGRATE BIKE SHARE, E-SCOOTER, AND BIKE PARKING ON CONCRETE ISLAND

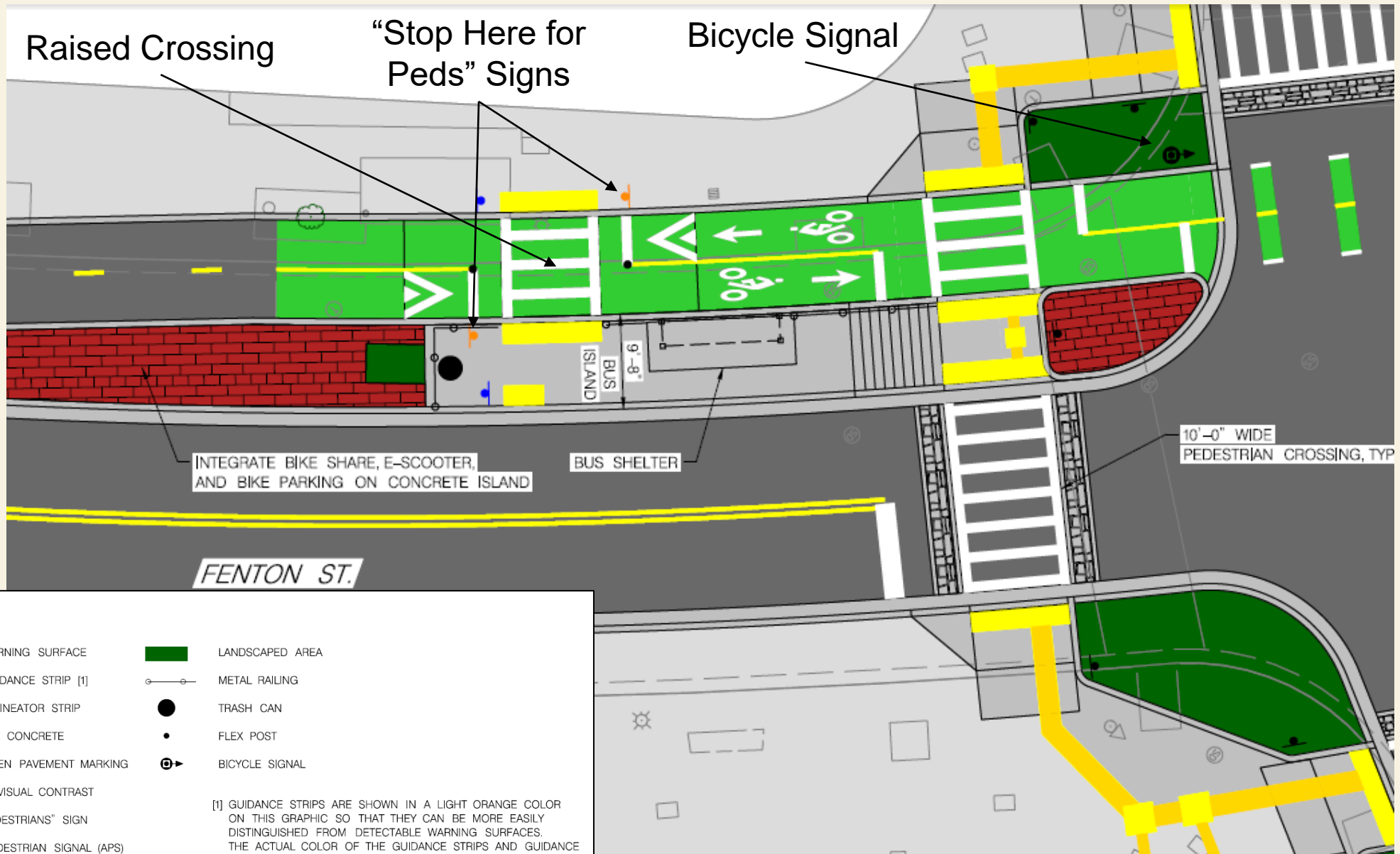
BUS SHELTER

10'-0" WIDE PEDESTRIAN CROSSING, TYP

LEGEND

- DETECTABLE WARNING SURFACE
- DETECTABLE GUIDANCE STRIP [1]
- CROSSWALK DELINEATOR STRIP
- STAMPED BRICK CONCRETE
- BIKE LANE GREEN PAVEMENT MARKING
- STAIR NOSING VISUAL CONTRAST
- "STOP FOR PEDESTRIANS" SIGN
- ACCESSIBLE PEDESTRIAN SIGNAL (APS)
- BUS STOP SIGN
- LANDSCAPED AREA
- METAL RAILING
- TRASH CAN
- FLEX POST
- BICYCLE SIGNAL

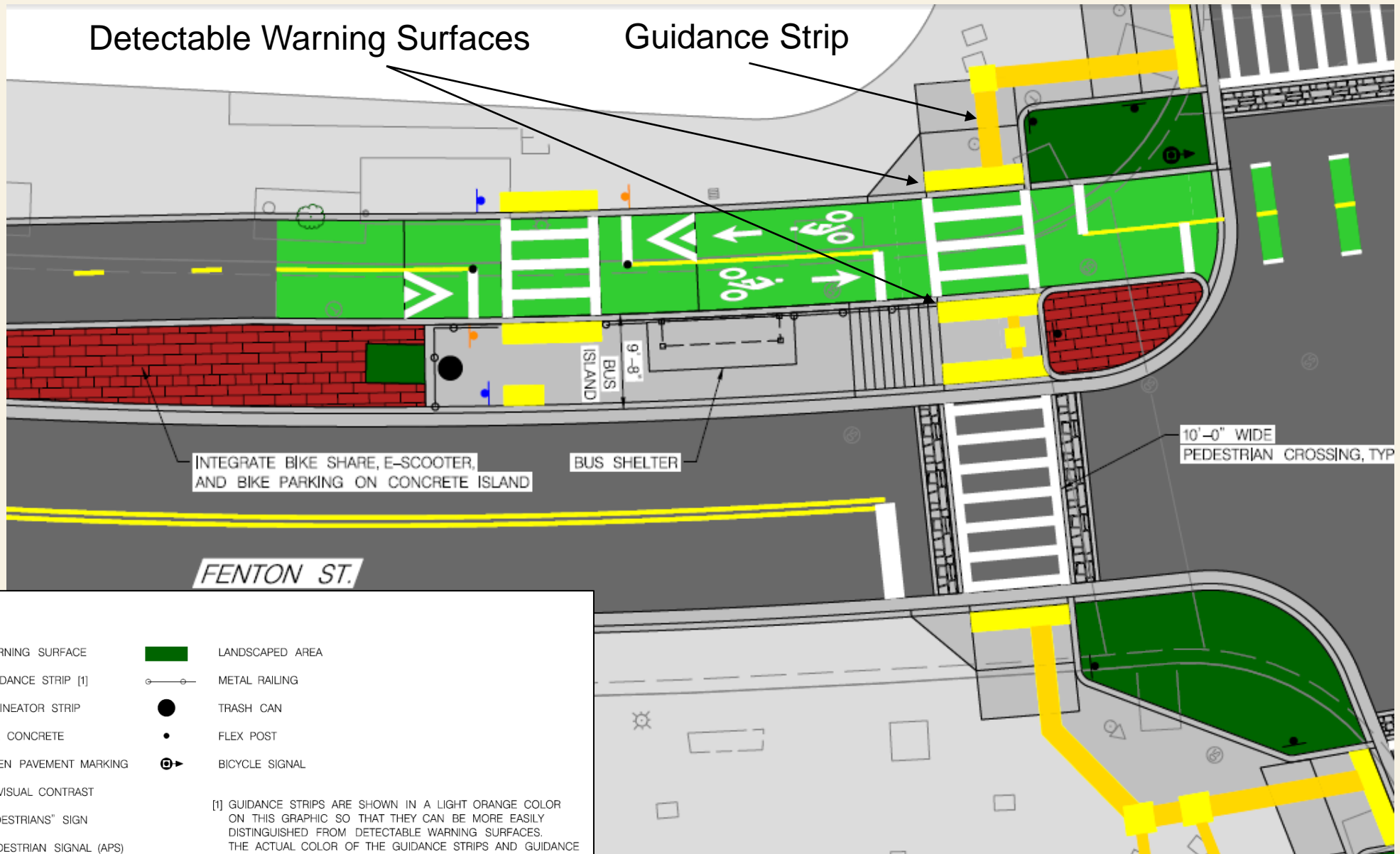
[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.



LEGEND

	DETECTABLE WARNING SURFACE		LANDSCAPED AREA
	DETECTABLE GUIDANCE STRIP [1]		METAL RAILING
	CROSSWALK DELINEATOR STRIP		TRASH CAN
	STAMPED BRICK CONCRETE		FLEX POST
	BIKE LANE GREEN PAVEMENT MARKING		BIicycle SIGNAL
	STAIR NOSING VISUAL CONTRAST		
	"STOP FOR PEDESTRIANS" SIGN		
	ACCESSIBLE PEDESTRIAN SIGNAL (APS)		
	BUS STOP SIGN		

[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.



Detectable Warning Surfaces

Guidance Strip















INTEGRATE BIKE SHARE, E-SCOOTER, AND BIKE PARKING ON CONCRETE ISLAND

BUS SHELTER

10'-0" WIDE PEDESTRIAN CROSSING, TYP

FENTON ST.

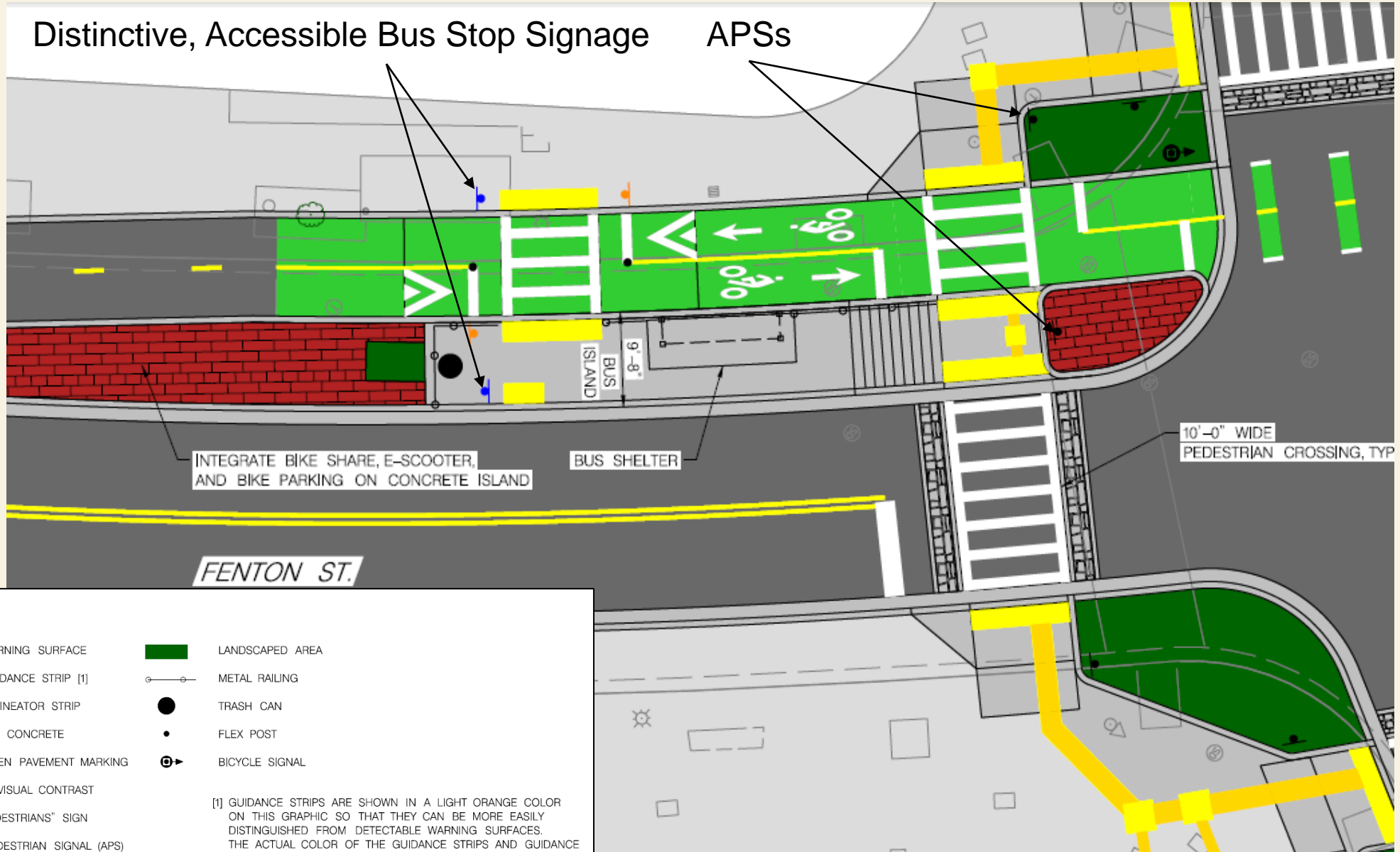
LEGEND

	DETECTABLE WARNING SURFACE		LANDSCAPED AREA
	DETECTABLE GUIDANCE STRIP [1]		METAL RAILING
	CROSSWALK DELINEATOR STRIP		TRASH CAN
	STAMPED BRICK CONCRETE		FLEX POST
	BIKE LANE GREEN PAVEMENT MARKING		BICYCLE SIGNAL
	STAIR NOSING VISUAL CONTRAST		
	"STOP FOR PEDESTRIANS" SIGN		
	ACCESSIBLE PEDESTRIAN SIGNAL (APS)		
	BUS STOP SIGN		

[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.

Distinctive, Accessible Bus Stop Signage

APSSs

















INTEGRATE BIKE SHARE, E-SCOOTER, AND BIKE PARKING ON CONCRETE ISLAND

BUS SHELTER

10'-0" WIDE PEDESTRIAN CROSSING, TYP

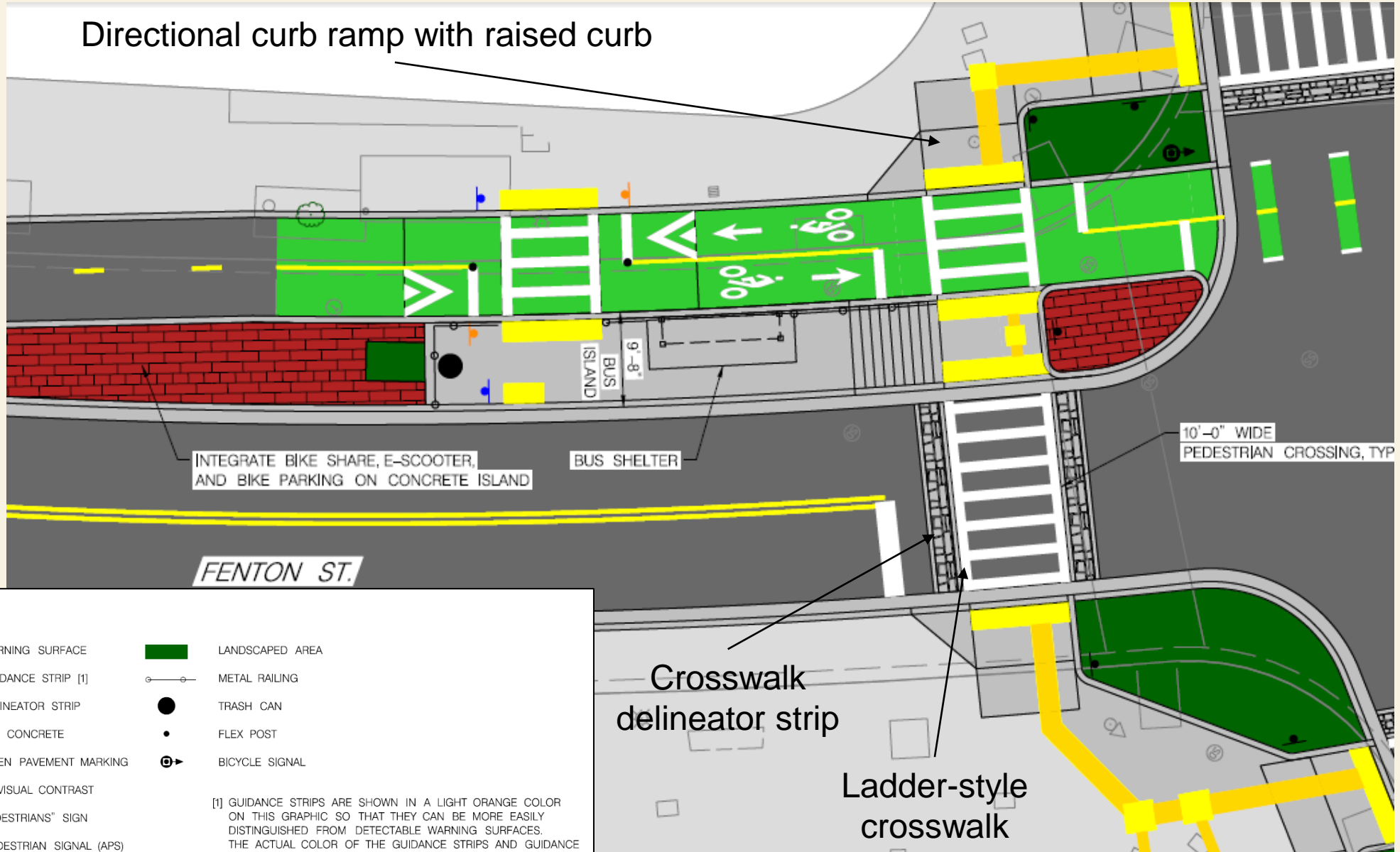
FENTON ST.

LEGEND

- | | | | |
|--|------------------------------------|---|-----------------|
|  | DETECTABLE WARNING SURFACE |  | LANDSCAPED AREA |
|  | DETECTABLE GUIDANCE STRIP [1] |  | METAL RAILING |
|  | CROSSWALK DELINEATOR STRIP |  | TRASH CAN |
|  | STAMPED BRICK CONCRETE |  | FLEX POST |
|  | BIKE LANE GREEN PAVEMENT MARKING |  | BICYCLE SIGNAL |
|  | STAIR NOSING VISUAL CONTRAST | | |
|  | "STOP FOR PEDESTRIANS" SIGN | | |
|  | ACCESSIBLE PEDESTRIAN SIGNAL (APS) | | |
|  | BUS STOP SIGN | | |

[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.

Directional curb ramp with raised curb



INTEGRATE BIKE SHARE, E-SCOOTER, AND BIKE PARKING ON CONCRETE ISLAND

BUS SHELTER

10'-0" WIDE PEDESTRIAN CROSSING, TYP

FENTON ST.

Crosswalk delineator strip

Ladder-style crosswalk

LEGEND

- DETECTABLE WARNING SURFACE
- DETECTABLE GUIDANCE STRIP [1]
- CROSSWALK DELINEATOR STRIP
- STAMPED BRICK CONCRETE
- BIKE LANE GREEN PAVEMENT MARKING
- STAIR NOSING VISUAL CONTRAST
- "STOP FOR PEDESTRIANS" SIGN
- ACCESSIBLE PEDESTRIAN SIGNAL (APS)
- BUS STOP SIGN
- LANDSCAPED AREA
- METAL RAILING
- TRASH CAN
- FLEX POST
- BICYCLE SIGNAL

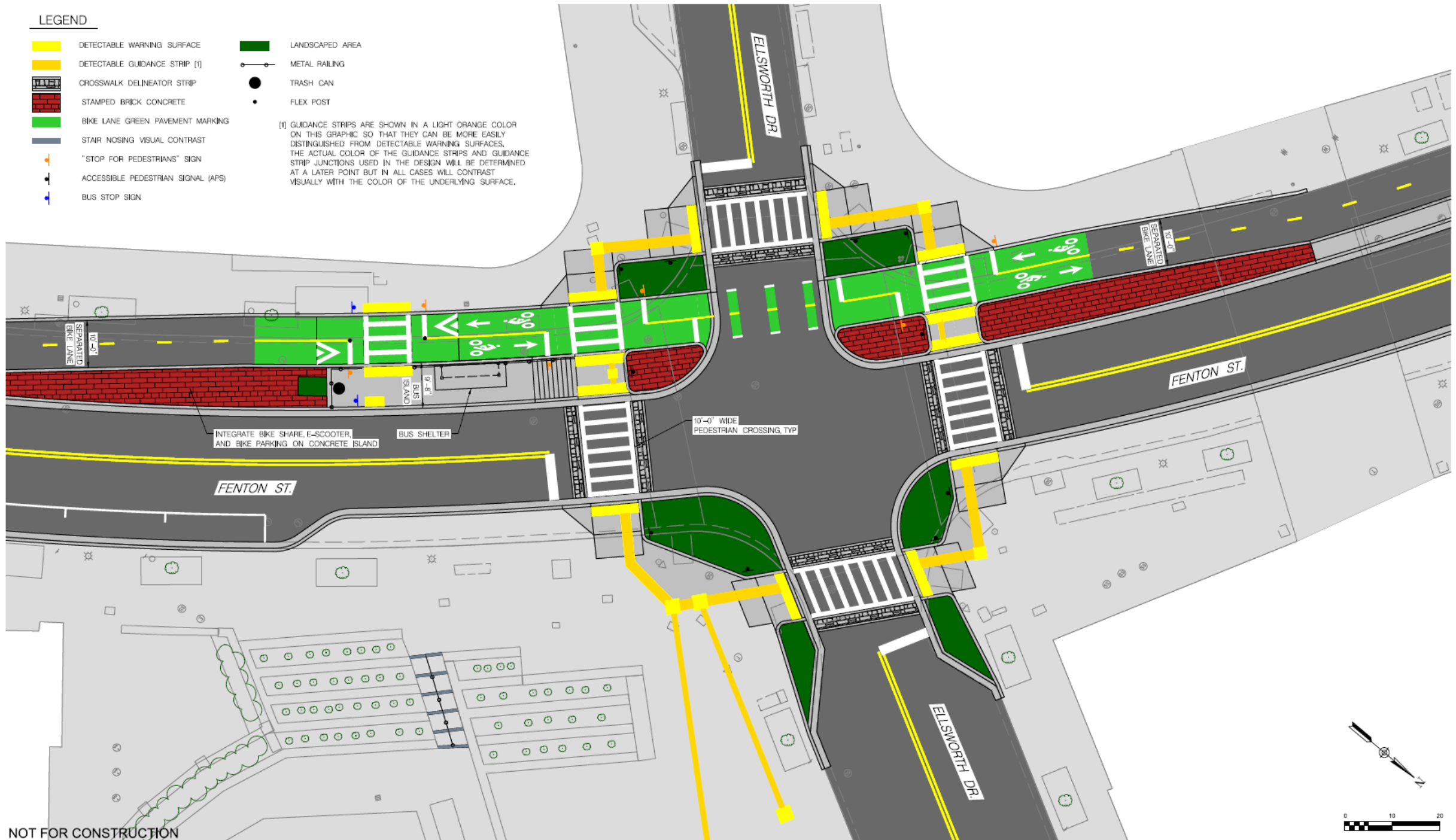
[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.

LEGEND

-  DETECTABLE WARNING SURFACE
-  DETECTABLE GUIDANCE STRIP [1]
-  CROSSWALK DELINEATOR STRIP
-  STAMPED BRICK CONCRETE
-  BIKE LANE GREEN PAVEMENT MARKING
-  STAIR NOSING VISUAL CONTRAST
-  "STOP FOR PEDESTRIANS" SIGN
-  ACCESSIBLE PEDESTRIAN SIGNAL (APS)
-  BUS STOP SIGN

-  LANDSCAPED AREA
-  METAL RAILING
-  TRASH CAN
-  FLEX POST

[1] GUIDANCE STRIPS ARE SHOWN IN A LIGHT ORANGE COLOR ON THIS GRAPHIC SO THAT THEY CAN BE MORE EASILY DISTINGUISHED FROM DETECTABLE WARNING SURFACES. THE ACTUAL COLOR OF THE GUIDANCE STRIPS AND GUIDANCE STRIP JUNCTIONS USED IN THE DESIGN WILL BE DETERMINED AT A LATER POINT BUT IN ALL CASES WILL CONTRAST VISUALLY WITH THE COLOR OF THE UNDERLYING SURFACE.



NOT FOR CONSTRUCTION

Next Steps

Moving Forward

- The study was completed on June 30. We're committed to making sure that it doesn't just gather dust on a shelf.
- In the next 10 months, we are taking the following steps:
 1. Design and construction of a **testing facility**.
 2. Upgrade of 4 floating bus stops to install **pilot treatments**.
 3. Begin **staff training**.
 4. **Integration of recommendations** into projects in design.
 5. Pilot use of **tactile graphics** in projects in design.
 6. A regional summit to start working toward **common design elements** across jurisdictional boundaries.
 7. Installation of **better wayfinding** at all existing floating stops.

Additional Discussion