



# Port Lands Flood Protection and Enabling Infrastructure: Roads

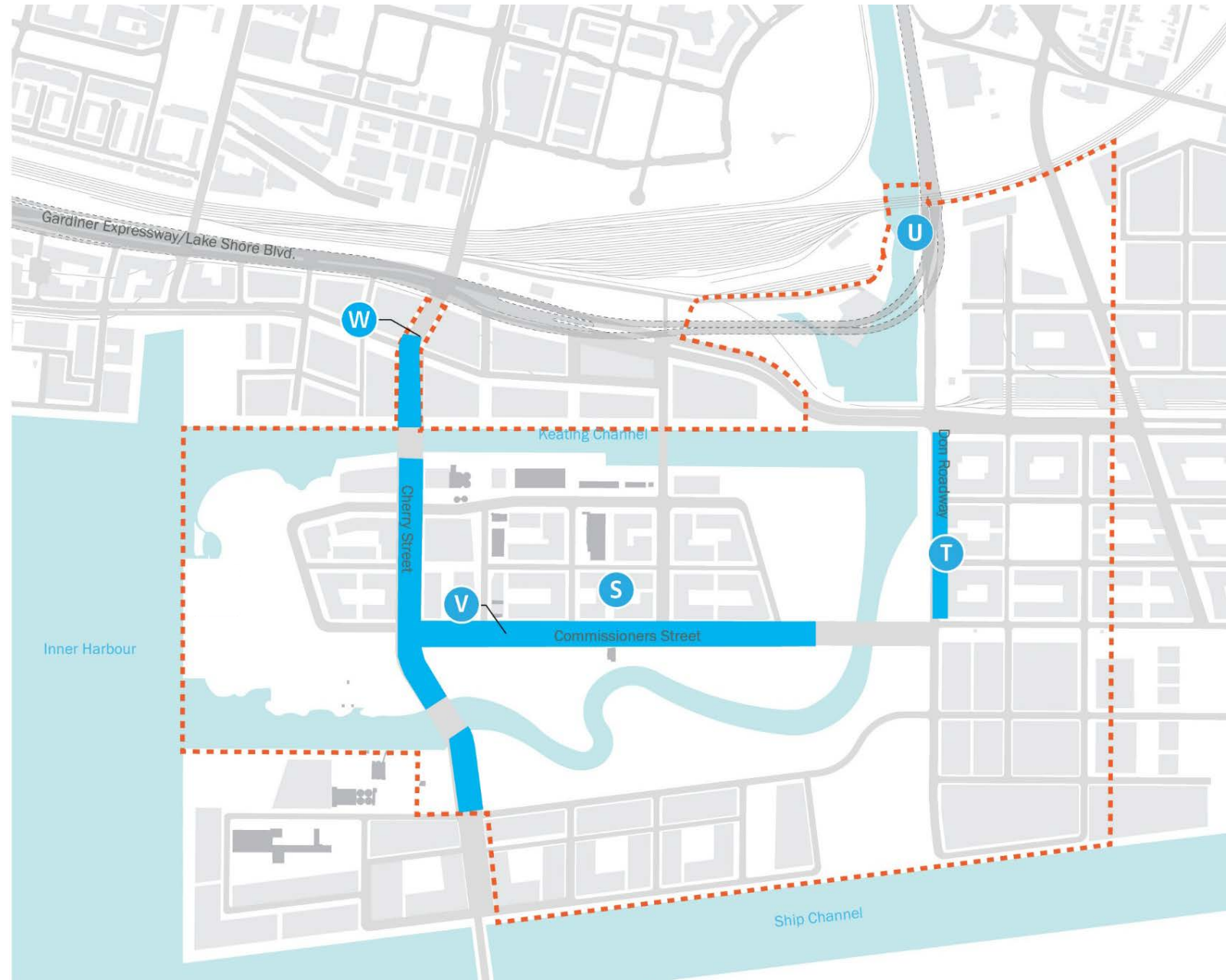
Detailed Design

June 26, 2019

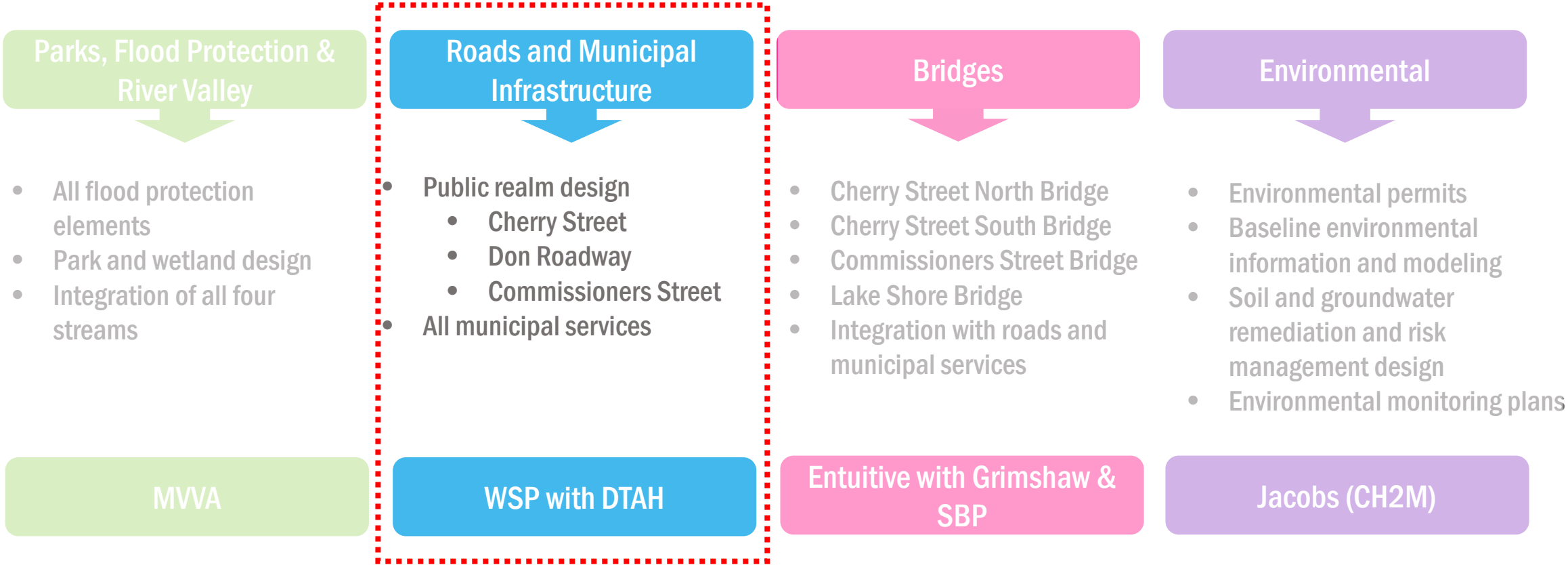
# Roads and Municipal Services

- A Cherry Street Stormwater and Lakefilling
- B Polson Slip Naturalization
- C Flood Protection - River Valley
- D Don Greenway (Spillway & Wetland)
- E Don Roadway Valley Wall Feature
- F East Harbour Flood Protection Land Form
- G Sediment and Debris Management Area
- H Flow Control Weirs
- I Eastern Avenue Flood Protection
- J Villiers Island Grading
- K Keating Channel Modifications
- L Promontory Park South
- M River Park
- N Lake Shore Road and Rail Bridge Modifications
- O Cherry Street Bridge North
- P Cherry Street Bridge South
- Q Commissioners Street Bridge
- R Old Cherry Street Bridge Demolition
- S Site Wide Municipal Infrastructure
- T Don Roadway
- U Hydro One Integration
- V Commissioners Street
- W Cherry Street Re-alignment

- Port Lands Flood Protection and Enabling Infrastructure Boundary
- Earthworks/Flood Protection
- Parks
- Bridges & Structures
- Roads and Municipal Infrastructure

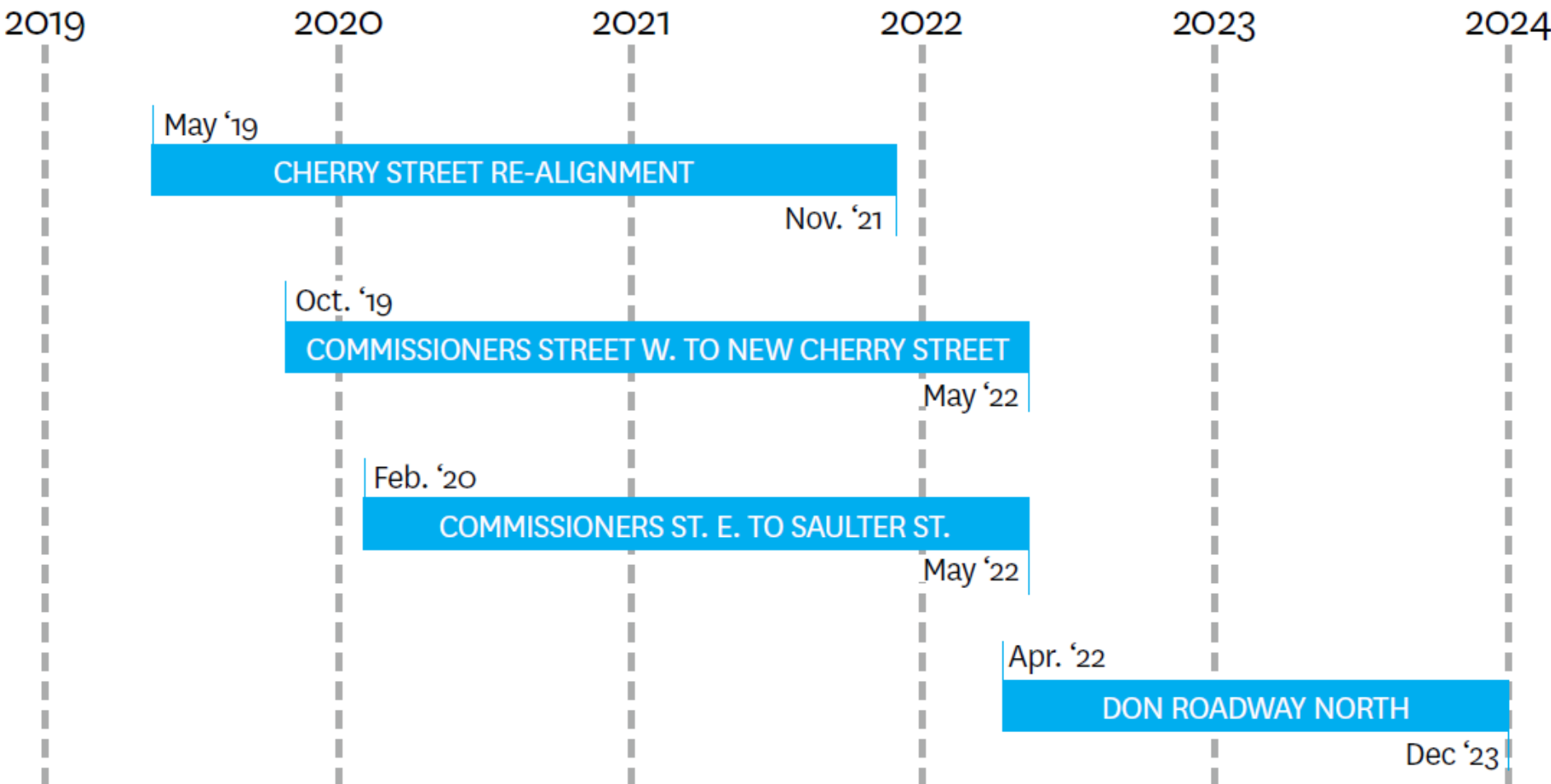


# Team Structure

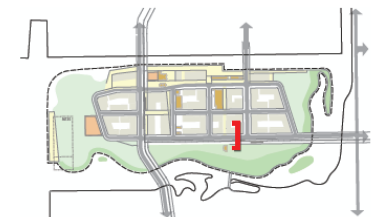
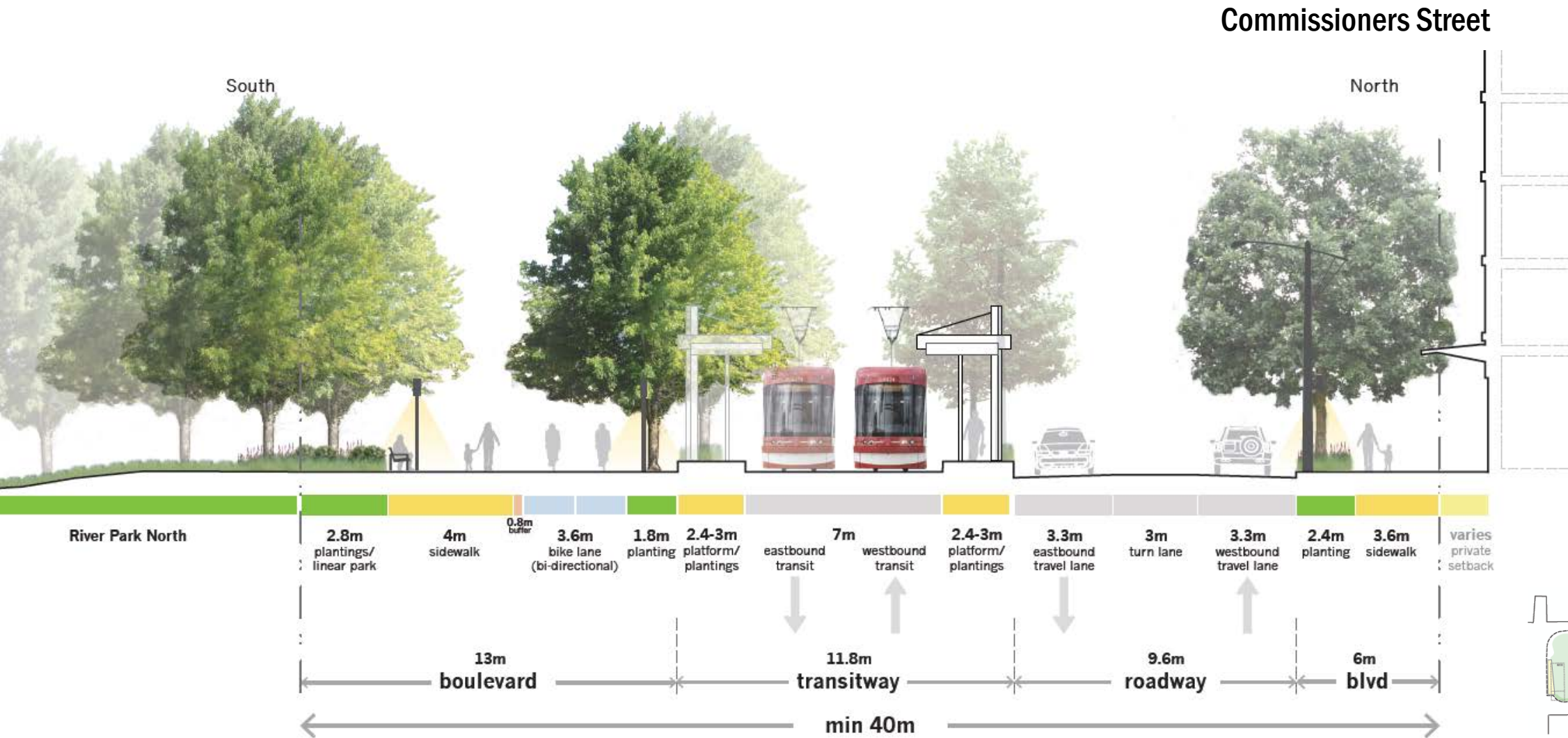


# Project Schedule – Anticipated Construction Schedule

## Project Schedule - Anticipated Construction Schedule



# Villiers Island Precinct Plan - Roads



# Roads DRP Comments

- The streets require a **stronger identity**, whether it be through planting or materials
- Recapture the **industrial heritage** of the site back into the revised road design
- Ensure that the pedestrian and bicycle lanes have **adequate separation**
- Consider making pedestrian **connections** into the river valley at the termination of each north-south street
- The left-hand turning lane on Commissioners requires further thinking. Ensure that the configuration is straightforward.

# Cherry Street DD

- Street character still lacks **roughness**
- Adequate **space** in the **pedestrian** waiting areas
- Show location of **utilities**
- Role of **public art** and how it can be integrated
- **Integration** with parks and bridges
- Reprieve from weather conditions and help with **heat island effect**
- Technical staff from City at the next meeting

# Areas for Panel Consideration

- Is the design successful in creating **identities** for each of the streets?
- Although we are working within wide ROWs, have we **humanized the streets** sufficiently to improve the perception of connectivity between the neighbourhood and the river park system?
- Are the streets capitalizing on opportunities for **sustainability** within the unique design challenges of each street?
- Does the design approach succeed in **making visible** the management of **water** within the streetscape

**Port Lands Flood Protection & Enabling Infrastructure**  
**Cherry Street Design Update**  
**Commissioners Street & Don Roadway Detailed Design 60%**  
Waterfront Toronto Design Review Panel:  
Fifth Submission

26 June 2019

WSP • DTAH



# Three Streets for the Port Lands

- Three streets for the Port Lands were presented September 2018
- Cherry Street 90% Detailed Design was presented November 2018
- An update to Cherry Street Design will be presented today
- Today's presentation will be focused on Commissioners Street and Don Roadway



# Past Design Review Panel Comments

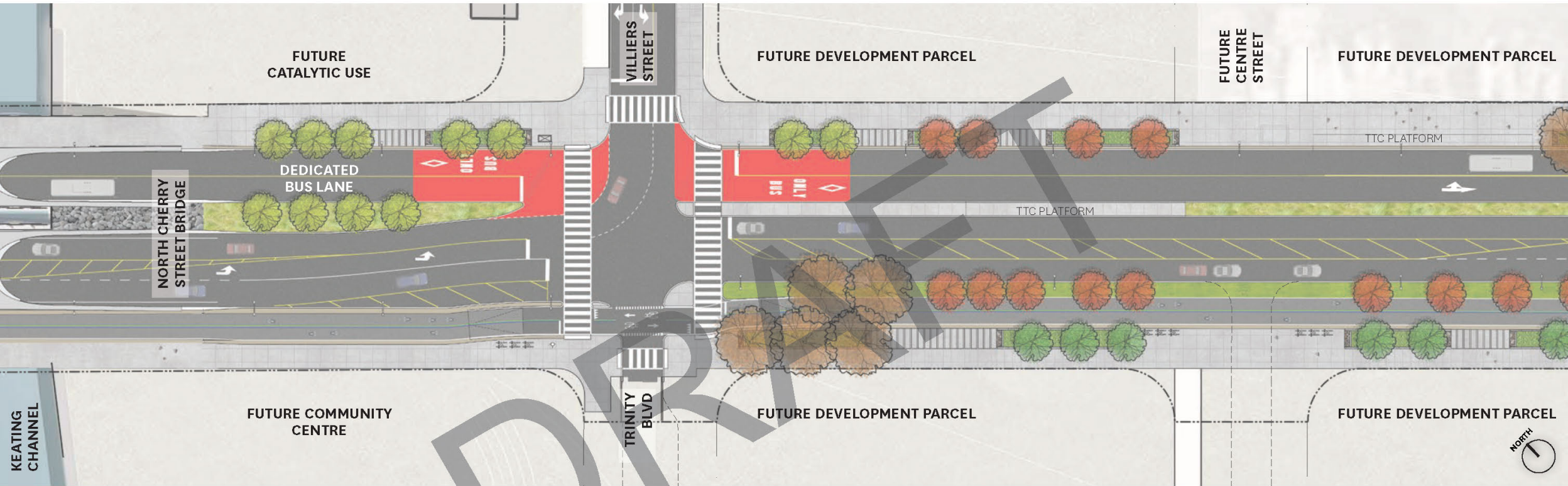
## Comments on Cherry Street, Commissioners Street and Don Roadway:

- Stronger **street identity** through planting or materials
- Recapture the **industrial heritage** of the site
- Unique **tree typology** on the streets
- Stormwater management and **green infrastructure**
- Consider ways to break up Commissioners Street: **mid-block crossings**
- **Narrowing of lanes**/road widths
- Left-hand turn lanes require further thinking - straightforward configuration
- Resilient texture and **quality of materials**
- Adequate **separation of pedestrian and bicycle lanes**
- **Pedestrian connections** into the River Valley Park

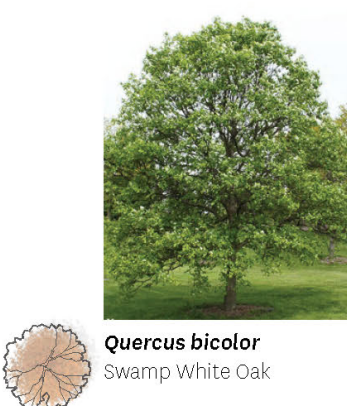
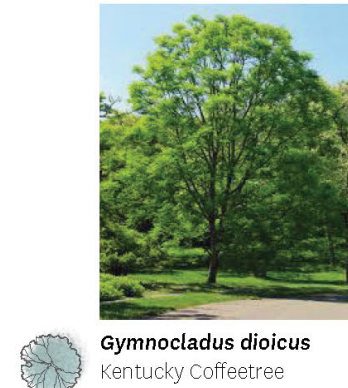
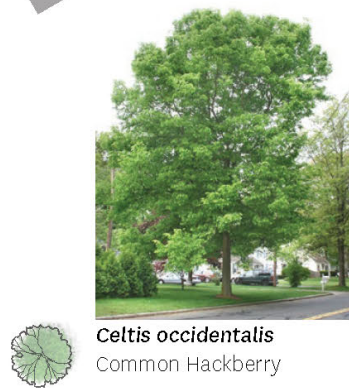
## Comments on Cherry Street 90% Detailed Design:

- Reprieve from weather conditions and help with heat island effect
- Street character still lacks “roughness”
- Adequate space in the pedestrian waiting areas
- Role of public art and how it can be integrated into the project
- Show location of utilities
- Coordination with the parks and bridge teams
- Technical staff from the City at the next meeting

# New Cherry Street Update: Urban Green Spine Tree Typology

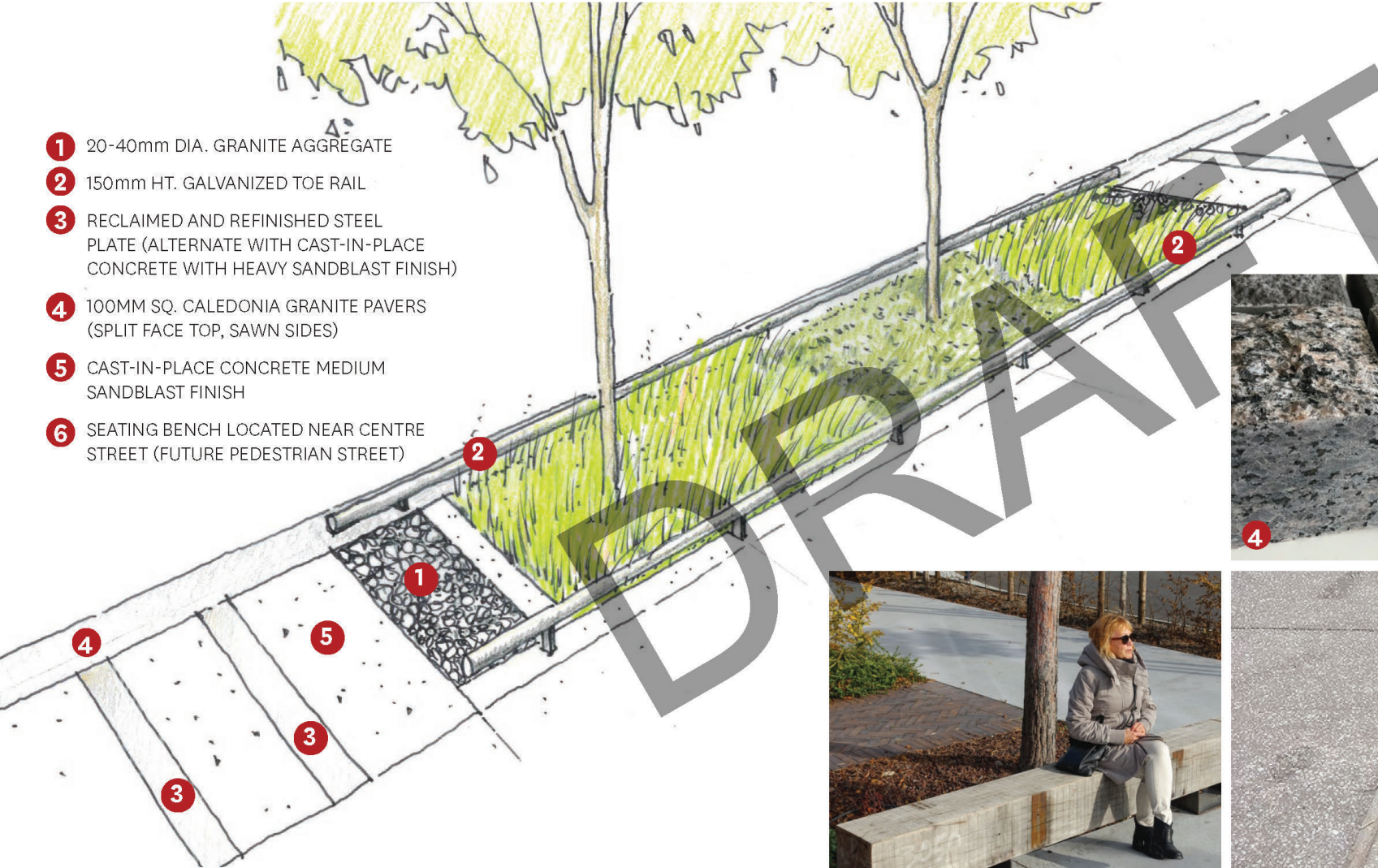


- “Urban rooms” and visual continuity along the street
- Resilient and tolerant of urban conditions
- Appropriate for bioretention planters/bioswales
- Peer-reviewed by North-South Environmental Inc.

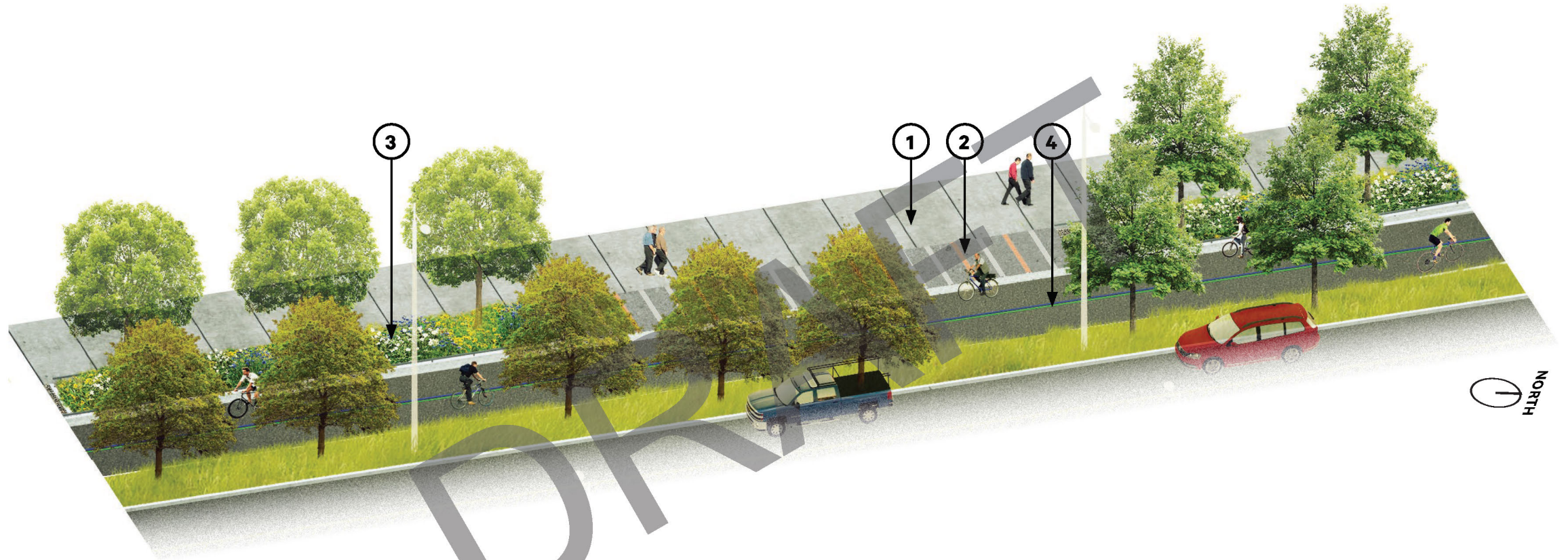


# New Cherry Street Update: Urban Post-Industrial Green Spine

- 1 20-40mm DIA. GRANITE AGGREGATE
- 2 150mm HT. GALVANIZED TOE RAIL
- 3 RECLAIMED AND REFINISHED STEEL PLATE (ALTERNATE WITH CAST-IN-PLACE CONCRETE WITH HEAVY SANDBLAST FINISH)
- 4 100MM SQ. CALEDONIA GRANITE PAVERS (SPLIT FACE TOP, SAWN SIDES)
- 5 CAST-IN-PLACE CONCRETE MEDIUM SANDBLAST FINISH
- 6 SEATING BENCH LOCATED NEAR CENTRE STREET (FUTURE PEDESTRIAN STREET)



# New Cherry Street Update: Urban Post-Industrial Green Spine



- ① Sidewalk (min. 3.0 m)
- ② Social spaces & site furnishings zone
- ③ Open pit planters with robust urban tolerant planting. The planter is one component of the green infrastructure
- ④ Martin Goodman Trail (4.0 m)

Cherry Street  
Planting Sample:



Honeylocust



Marmo Freeman  
Maple



Yarrow



Juniper

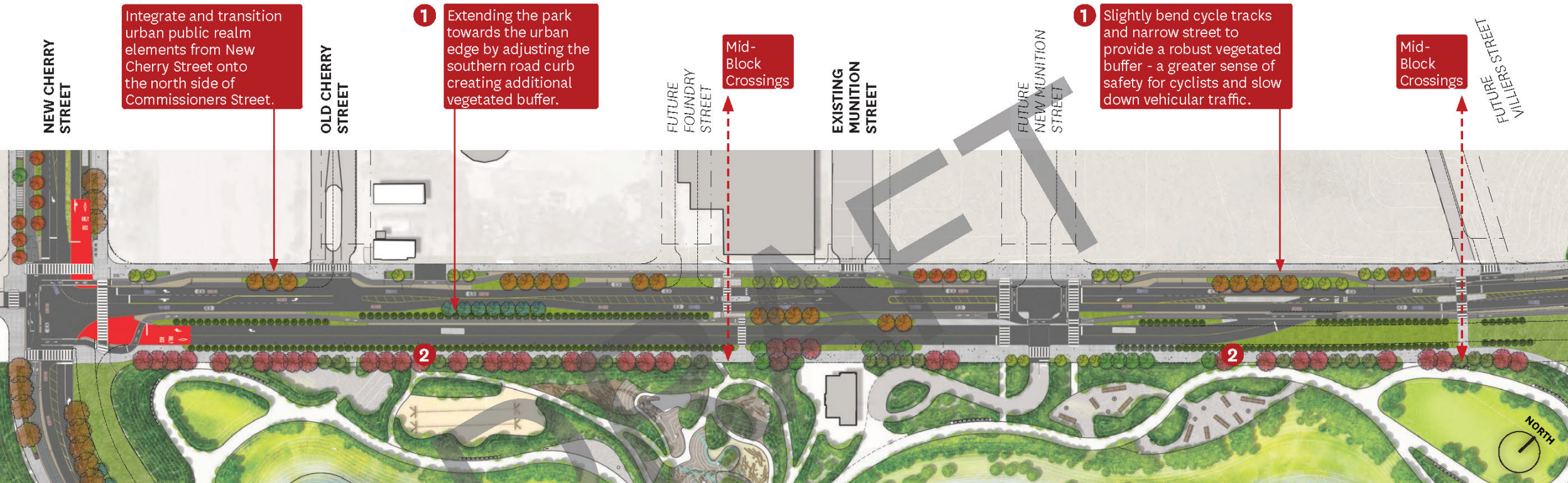


Perennial + Grasses Mix

# View Looking Southwest on East Side of New Cherry Street



# Commissioners Street: A “Park” Street Identity



Integrate and transition urban public realm elements from New Cherry Street onto the north side of Commissioners Street.

1 Extending the park towards the urban edge by adjusting the southern road curb creating additional vegetated buffer.

Mid-Block Crossings

1 Slightly bend cycle tracks and narrow street to provide a robust vegetated buffer - a greater sense of safety for cyclists and slow down vehicular traffic.

Mid-Block Crossings

1 Landscaped boulevard as buffer and bioswale



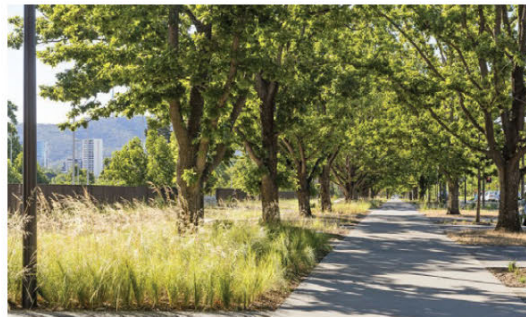
Precedent: Hunters Point South

2 Park boulevard



Precedent: Russellville, Arkansas

3 Former columnar tree allée at the Port Lands

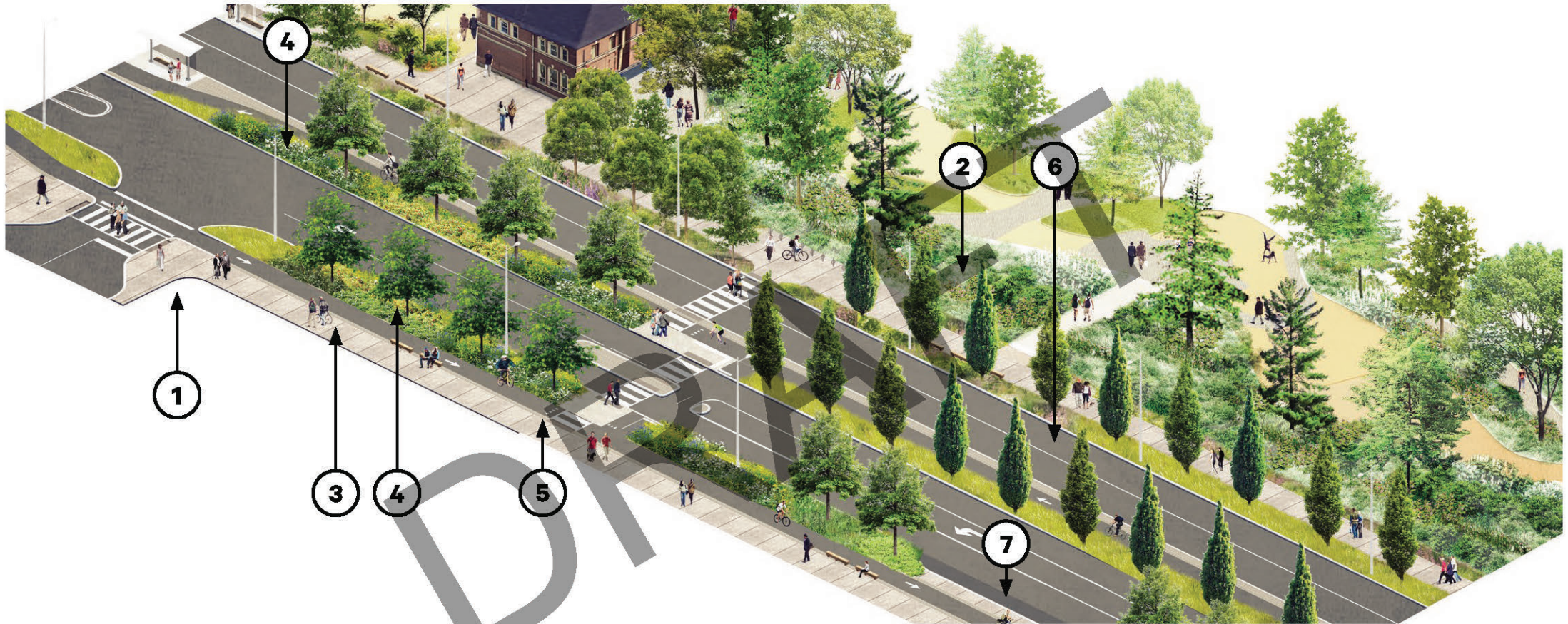


Precedent: Constitution Avenue, Australia



Archival photo of the Port Lands

# Commissioners Street: Extension of the Park



**1** Active and urban edge on the north side responds to future development

**2** A dense green edge and relaxed character for the south side responds to the park's character and programming

**3** Sidewalk (min. 3.0m)

**4** Bioswale

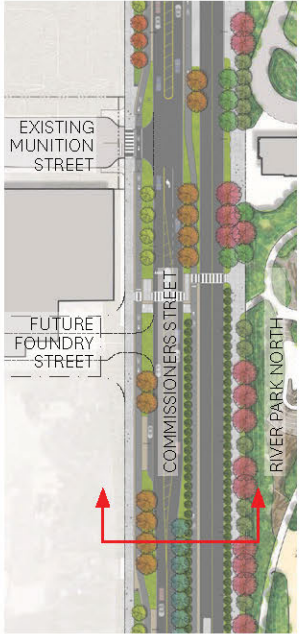
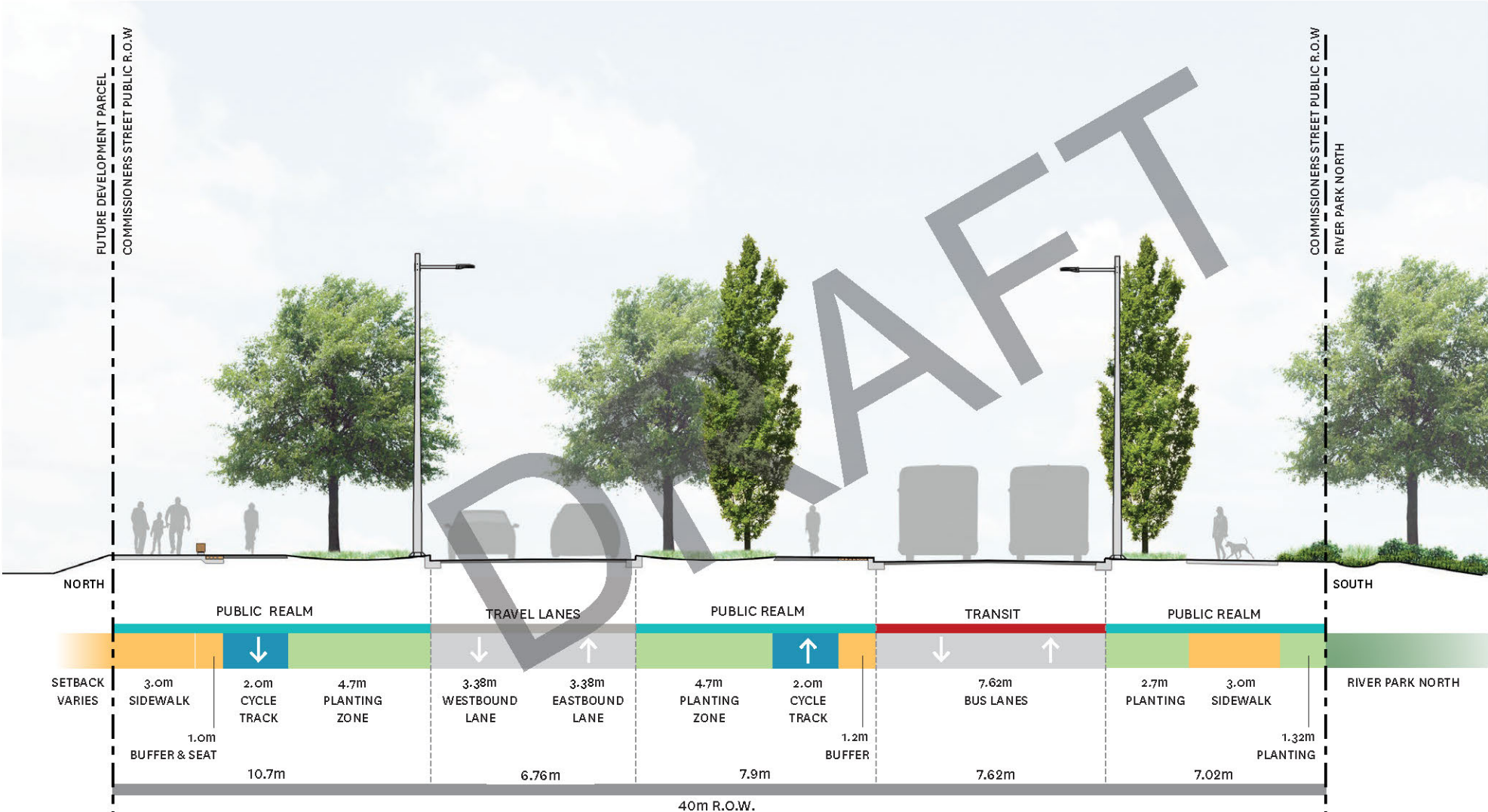
**5** Mid-block crossing

**6** Dedicated bus lane

**7** Vehicular lay-by (for pick-up and drop-off)



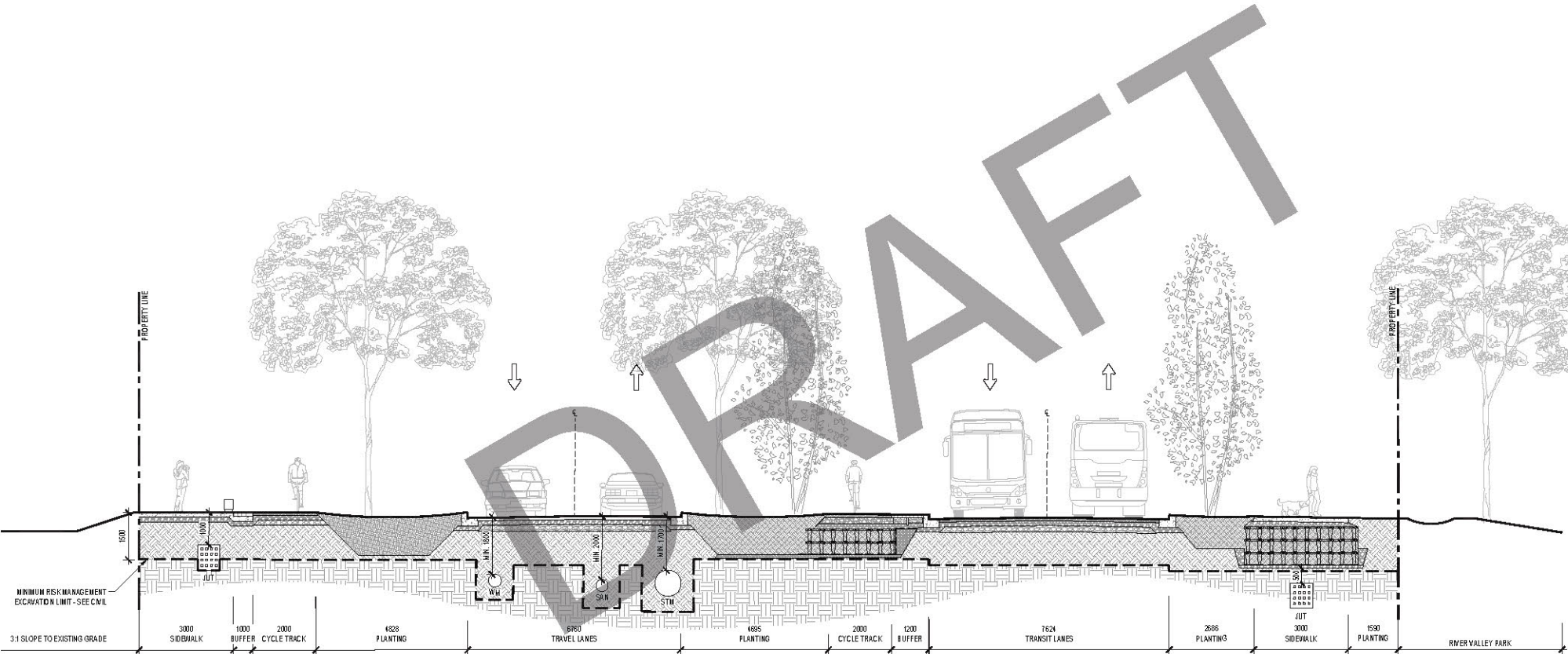
# Commissioners Street: At Mid-Block



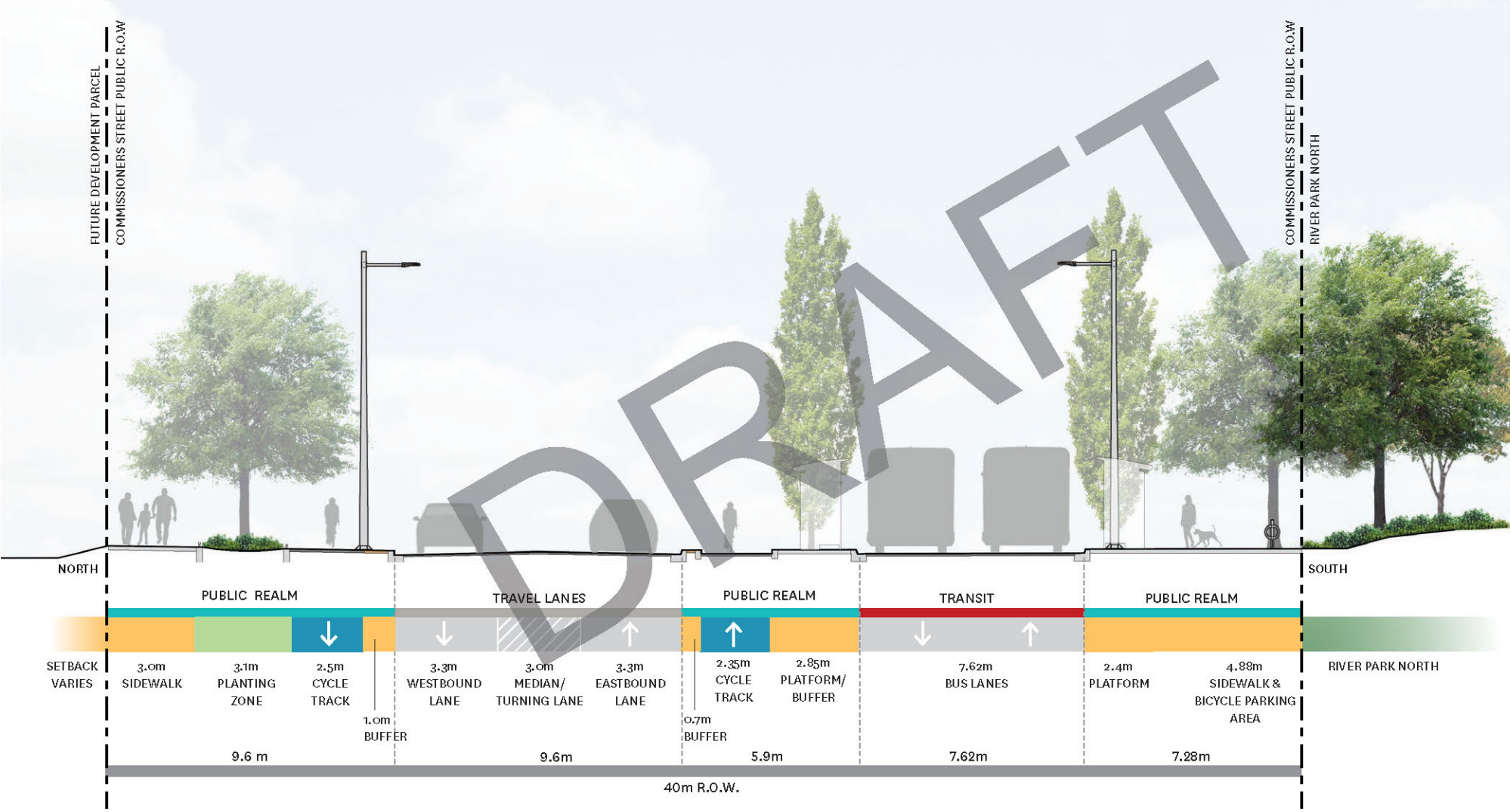
KEY PLAN



# Commissioners Street: At Mid-Block (underground utility coordination)



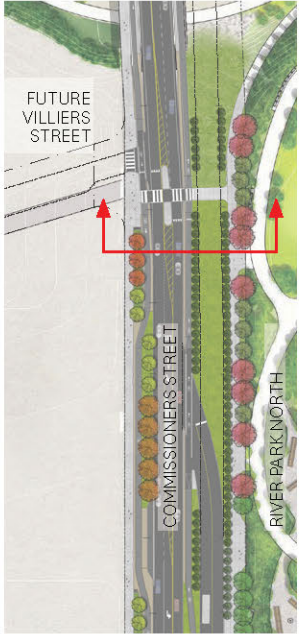
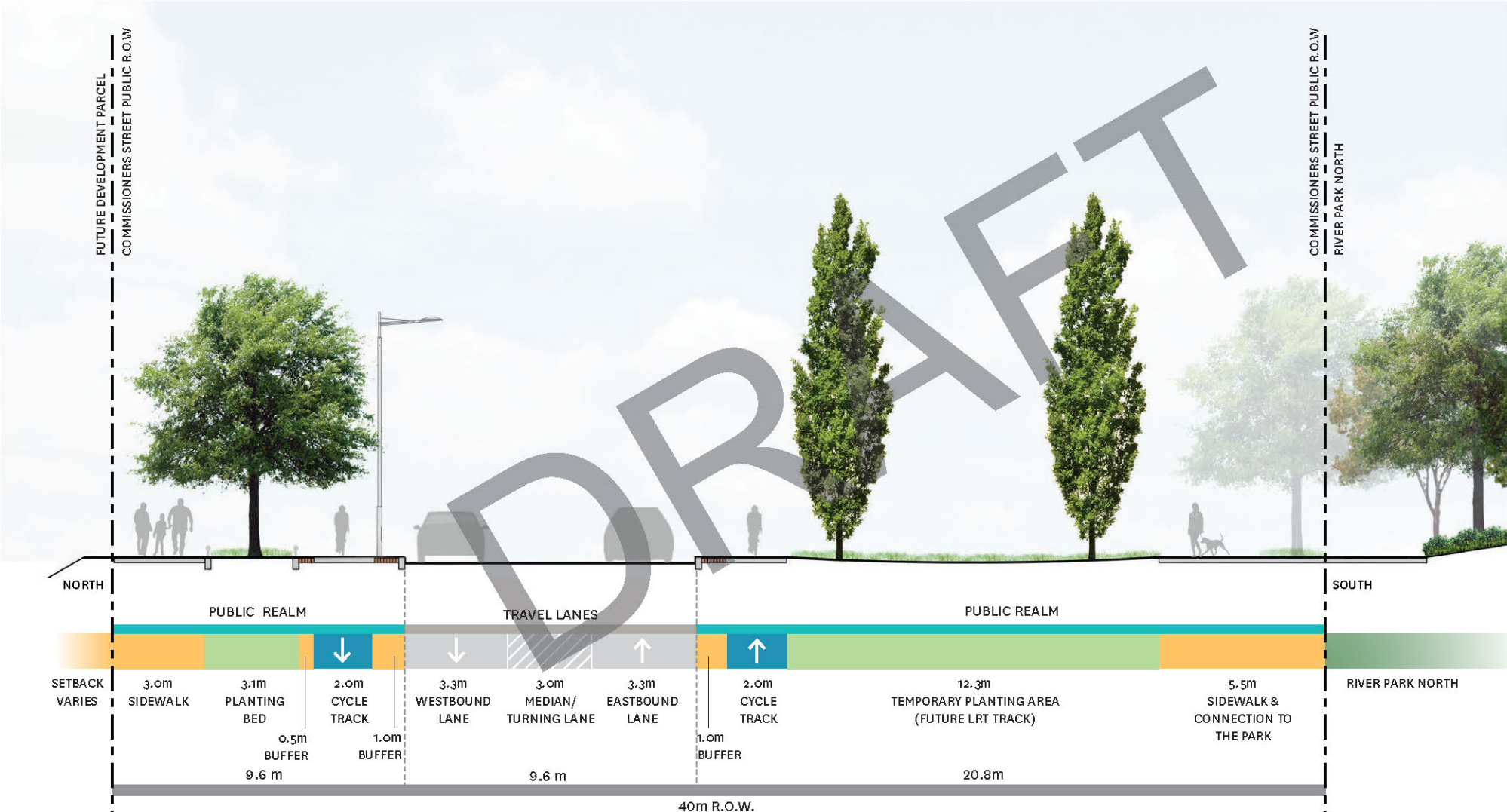
# Commissioners Street: At Platform



KEY PLAN



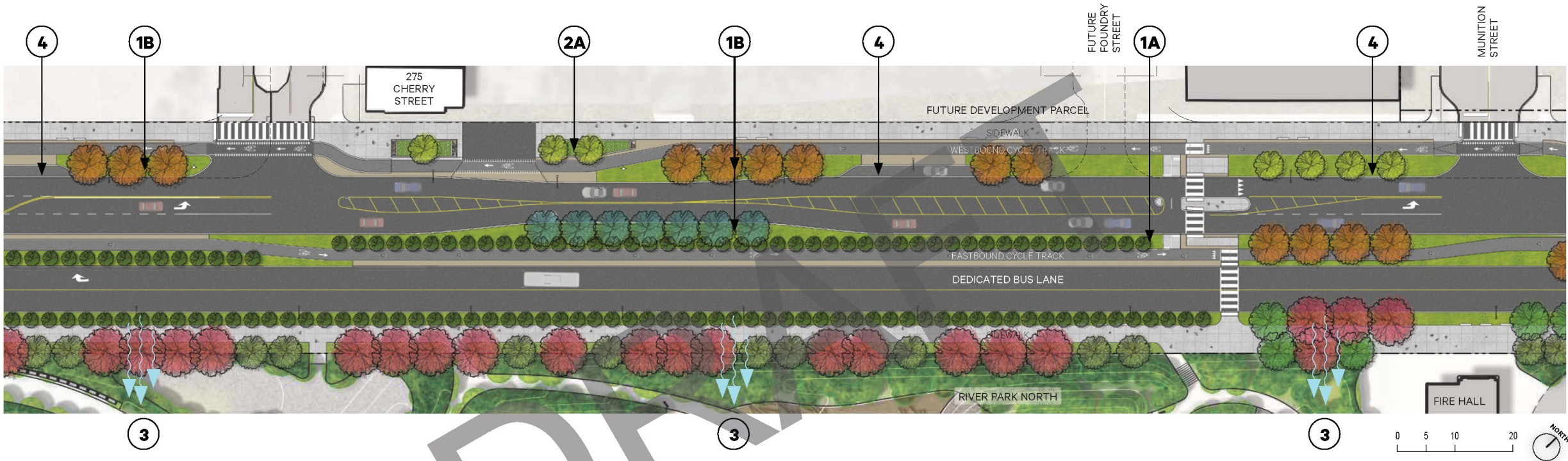
# Commissioners Street: Temporary Landscape Near Bridge Abutment



KEY PLAN



# Green Infrastructure - Commissioners Street



**1A** Enhanced grass swale



**1B** Bioswale



**2A** Open pit planter with soil cells



**3** Right-of-way edge drainage (rainwater drains from curb into park)



**4** Porous asphalt

# View Looking West on South Side of Commissioners Street



# View Looking West on North Side of Commissioners Street



# Commissioners Street: Tree Typology





# Commissioners Street: Seasonal Interest



English Pyramidal Oak



Thornless Honeylocust



Red Oak



Red Twig Dogwood



Winterberry



Dwarf Ninebark



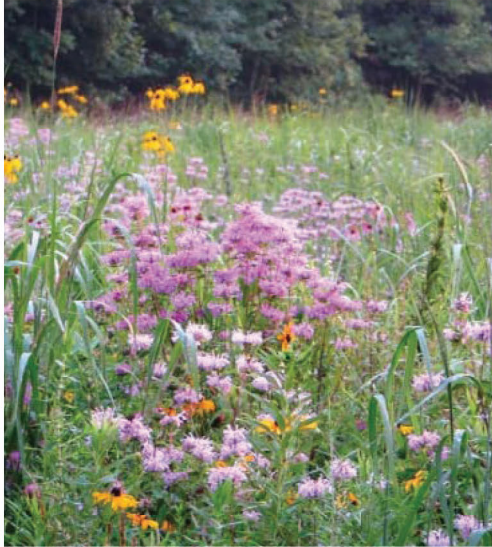
Carolina Rose



Fox Sedge

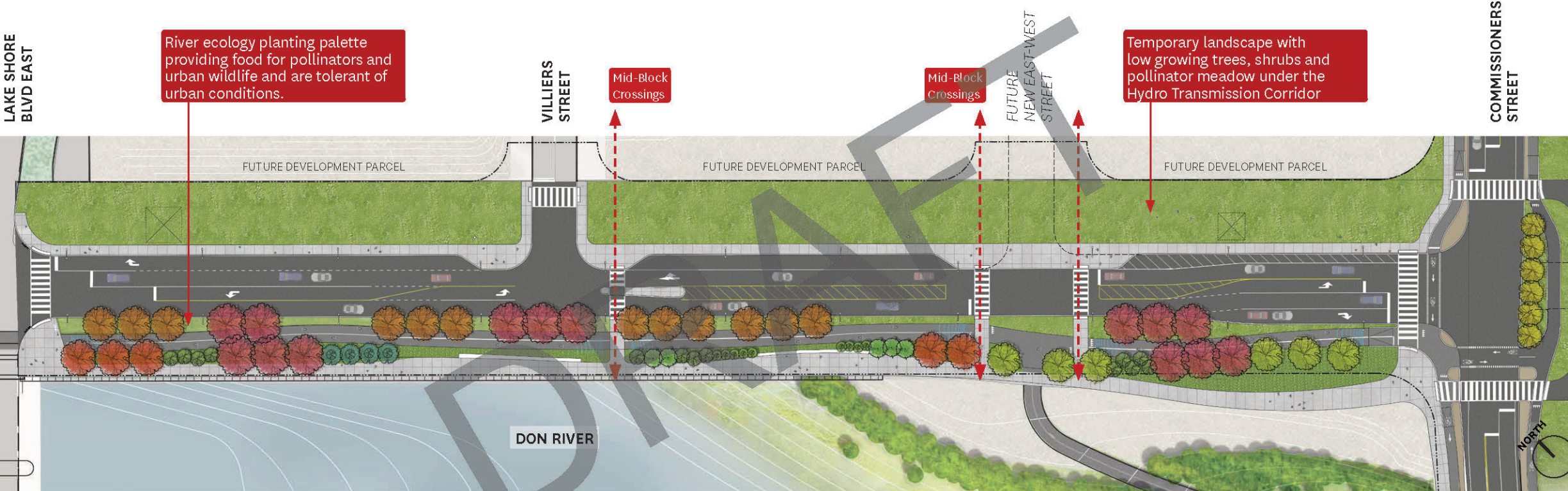


Tufted Hairgrass



Pollinator Meadow

# Don Roadway: A “River’s Edge” Street Identity



River ecology planting palette providing food for pollinators and urban wildlife and are tolerant of urban conditions.

Mid-Block Crossings

Mid-Block Crossings

Temporary landscape with low growing trees, shrubs and pollinator meadow under the Hydro Transmission Corridor

LAKE SHORE BLVD EAST

VILLIERS STREET

FUTURE NEW EAST-WEST STREET

COMMISSIONERS STREET

FUTURE DEVELOPMENT PARCEL

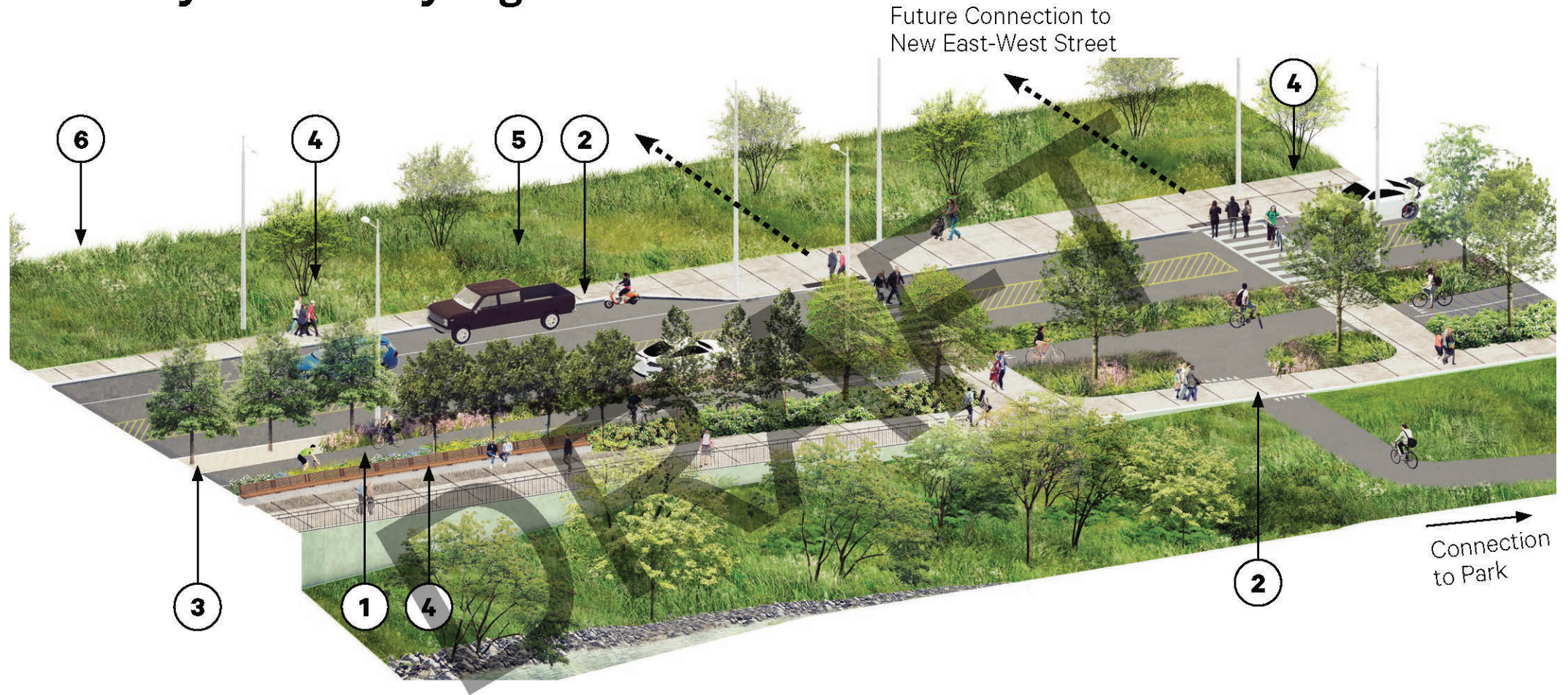
FUTURE DEVELOPMENT PARCEL

FUTURE DEVELOPMENT PARCEL

DON RIVER

NORTH

# Don Roadway: River Valley Edge



**1** Lower Don River Trail (3.6 m)

**2** Sidewalk (min. 2.3 m)

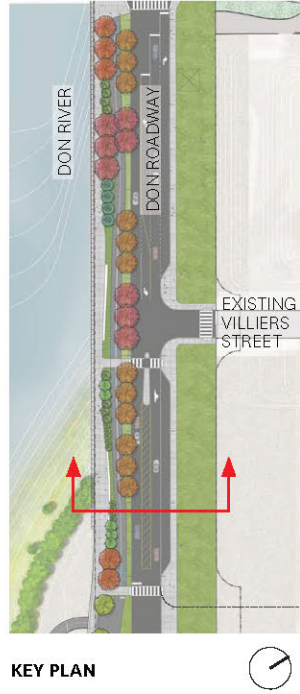
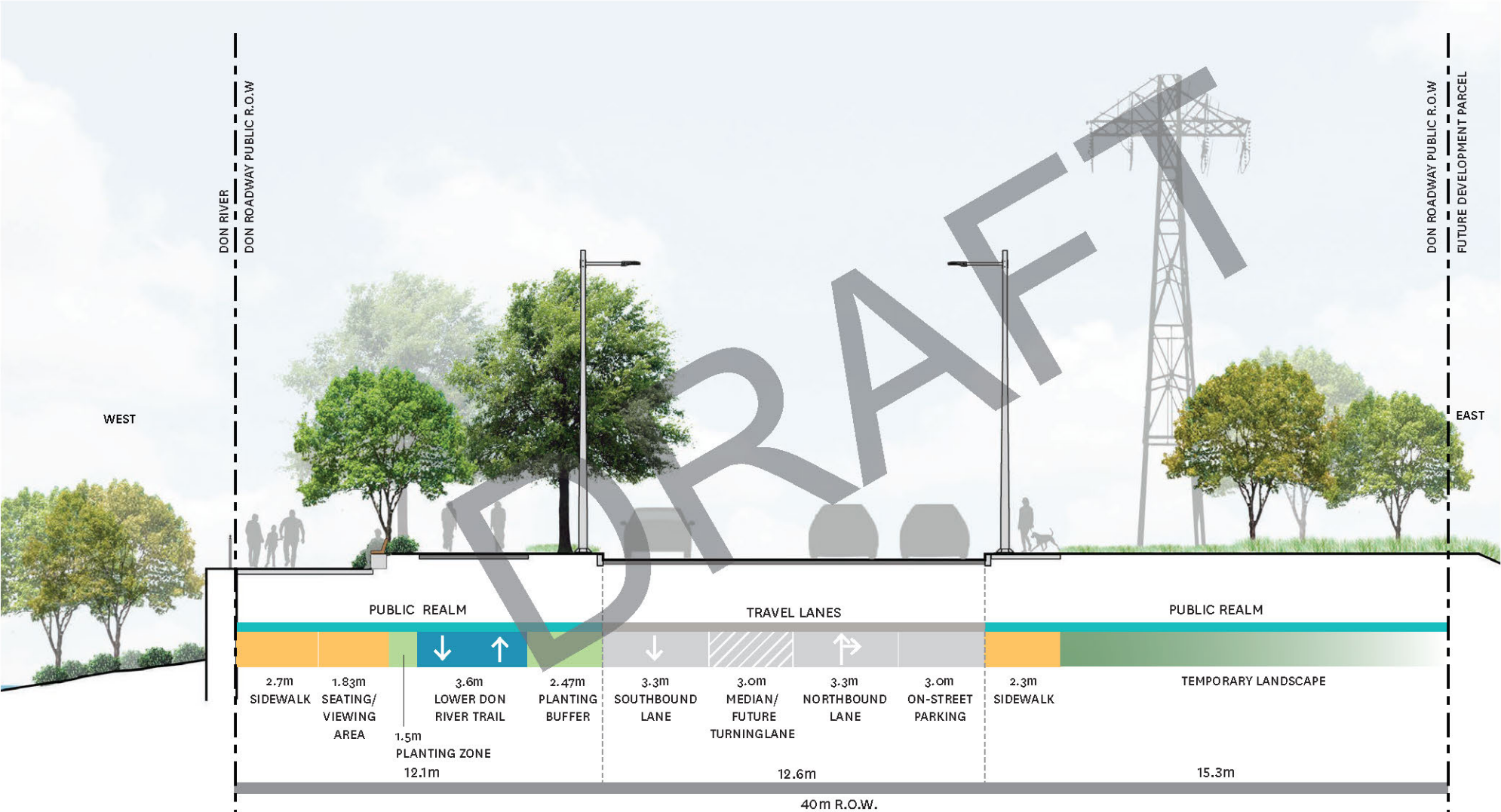
**3** Planted Boulevard. Planting inspired by the river ecology.

**4** Seating/Viewing Area

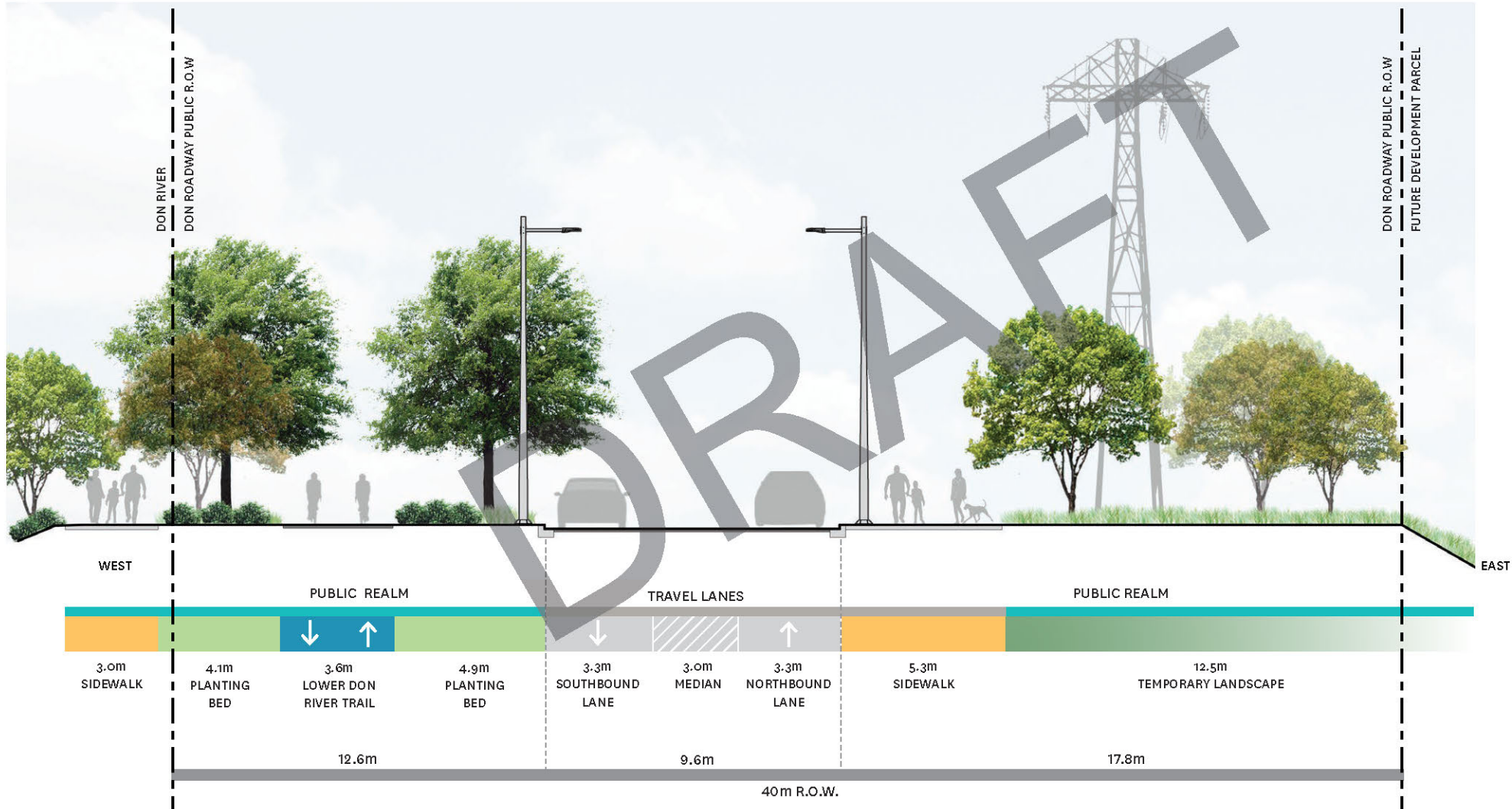
**5** Temporary Landscape

**6** Hydroelectric Transmission Corridor

# Don Roadway: At River Valley Wall



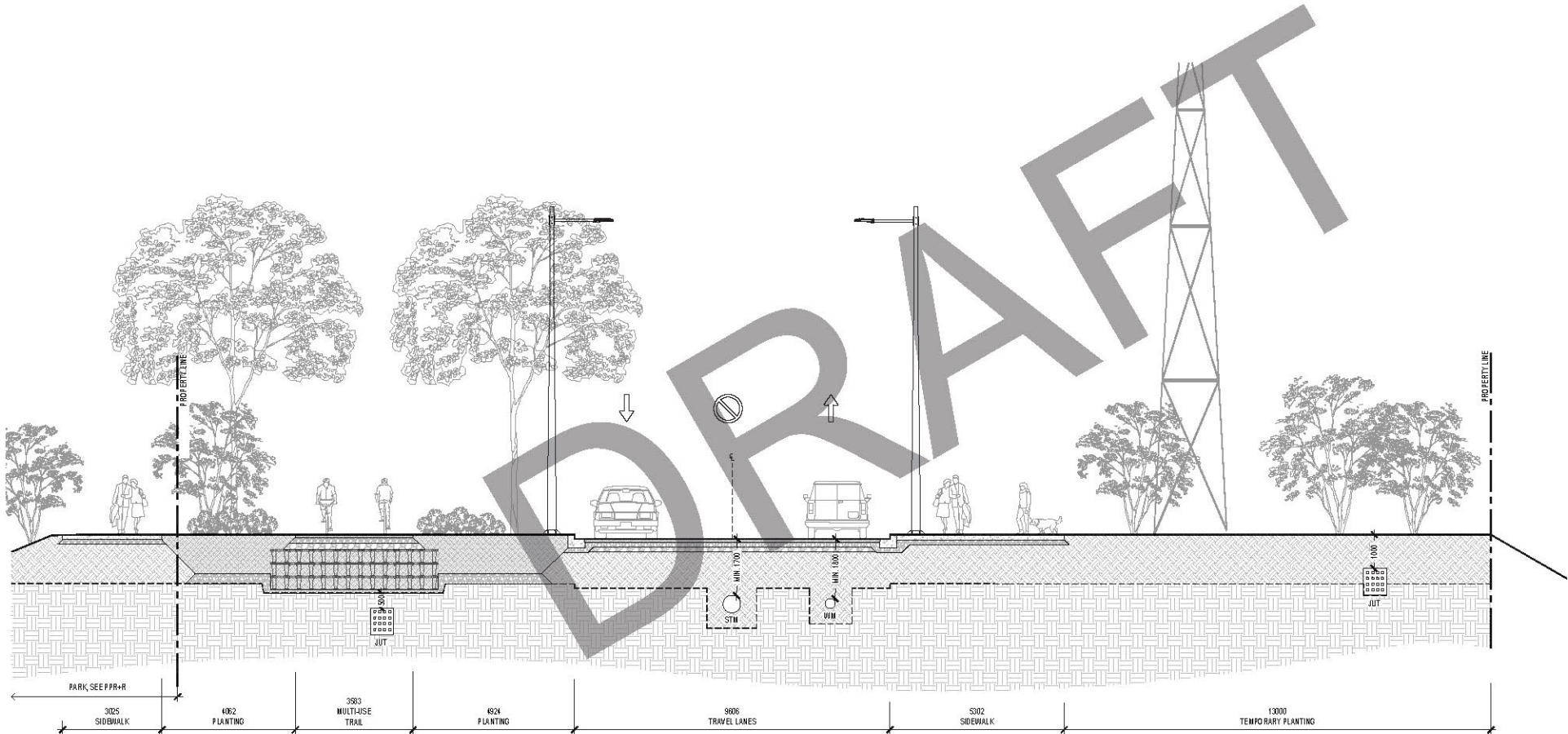
# Don Roadway: At River Valley Park



KEY PLAN



# Don Roadway: At River Valley Park (underground utility coordination)



# View Looking South on West Side of Don Roadway



# Don Roadway: Tree Typology





# River's Edge Plant Ecology: Seasonal Interest



Sugar Maple



White Pine



Highbush Cranberry



Winterberry



Canadian Yew



Trembling Aspen



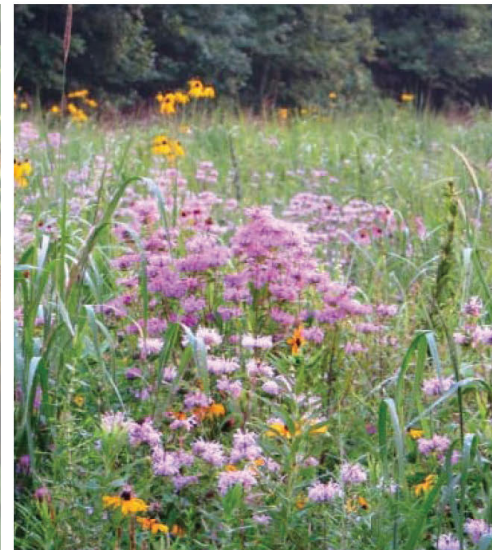
Red Oak



Red Mulberry



Purple-Flowering Raspberry



Pollinator Meadow

# Project Schedule - Anticipated Construction Schedule

