

ATLANTA BELTLINE SOUTHWEST CORRIDOR DESIGN

25 April, 2013

Ryan Gravel, Perkins+Will
for Atlanta BeltLine Inc.





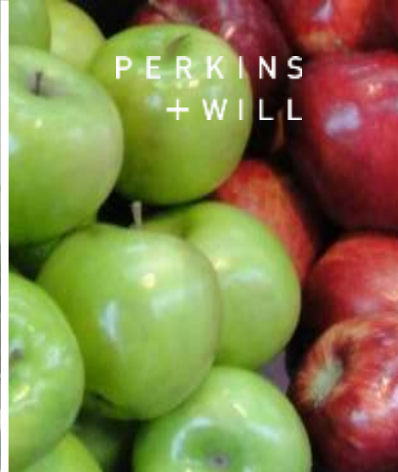
2-4

45

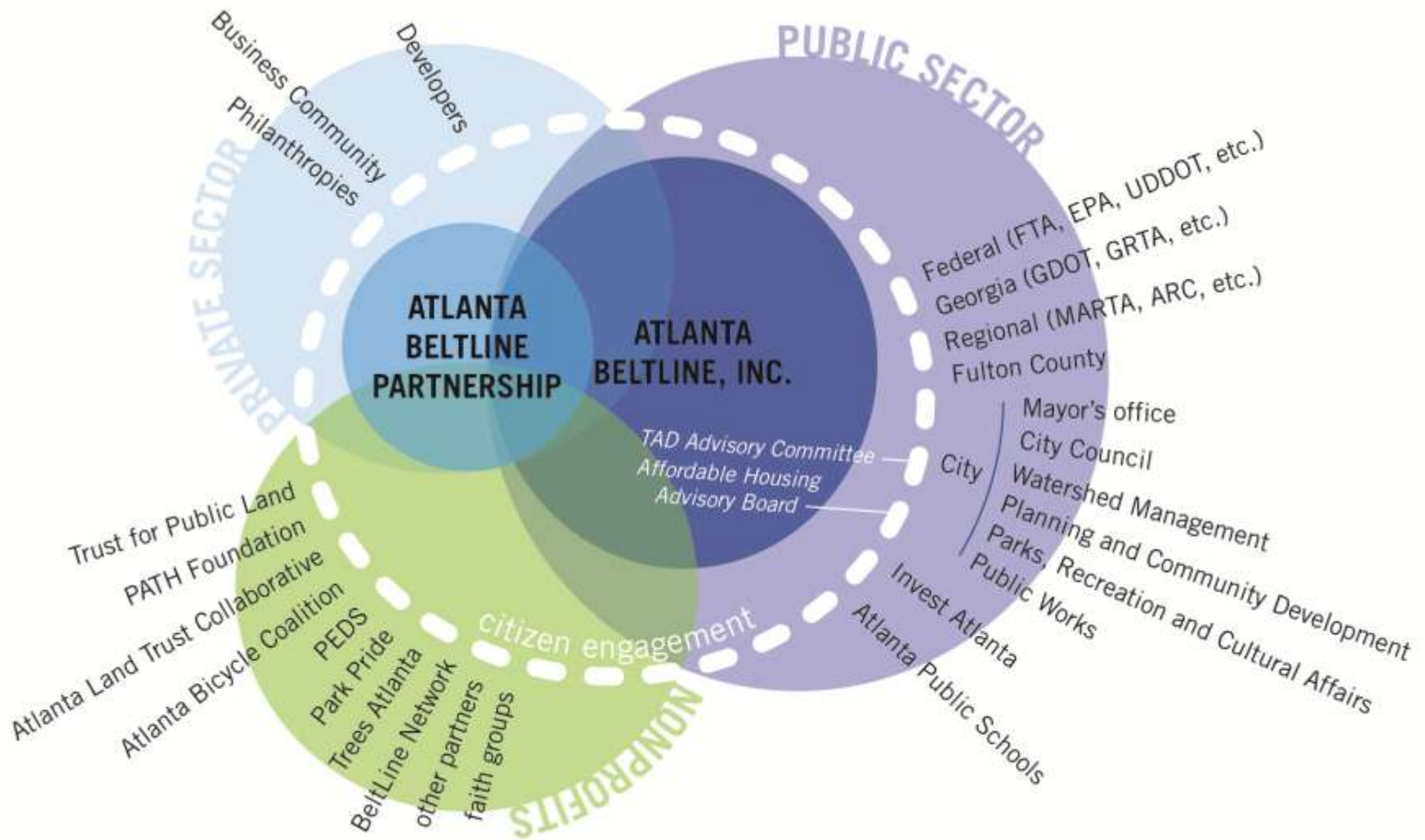
100,000

4-6,000

acres for redevelopment (2k ha)



It takes a Partnership



Atlanta BeltLine Corridor Design Team



Atlanta BeltLine, Inc.
Project Administrator

Perkins+Will
Design/Project Lead

Amec, Inc.

Lead Engineer and Surveyor

James Corner Field Operations

Conceptual Design Partner

HDR – *Transit Engineer*

Stantec Consulting – *Roadway Engineer + Surveyor*

B&E Jackson Associates – *Engineer + Surveyor*

Agility Surveying Company – *Surveyor*

Kimley-Horn Associates – *Civil Engineer + PDP*

Pond / Ecos – *Landscape Architect + PDP*

Leni Schwendinger Light Projects – *Lighting Designer*

Buro Happold – *Sustainability Engineer*

Biohabitats – *Ecologist*

Danielle Roney LLC – *Public Art Consultant*

Morrison Design LLC – *Cultural Historian*

BCN Consulting – *Public Realm O+M Consultant*

HR&A – *Economics + Operations Strategist*

Lord Aeck Sargent Architecture – *Preservation Architect*

Costing Services Group – *Cost Estimator*

Panache Communications – *Community Engagement Consultant*

ABCD – Analysis



ABCD – Design Drivers



CHARACTER



MULTI-RE-USE



THRESHOLD



PERFORMANCE



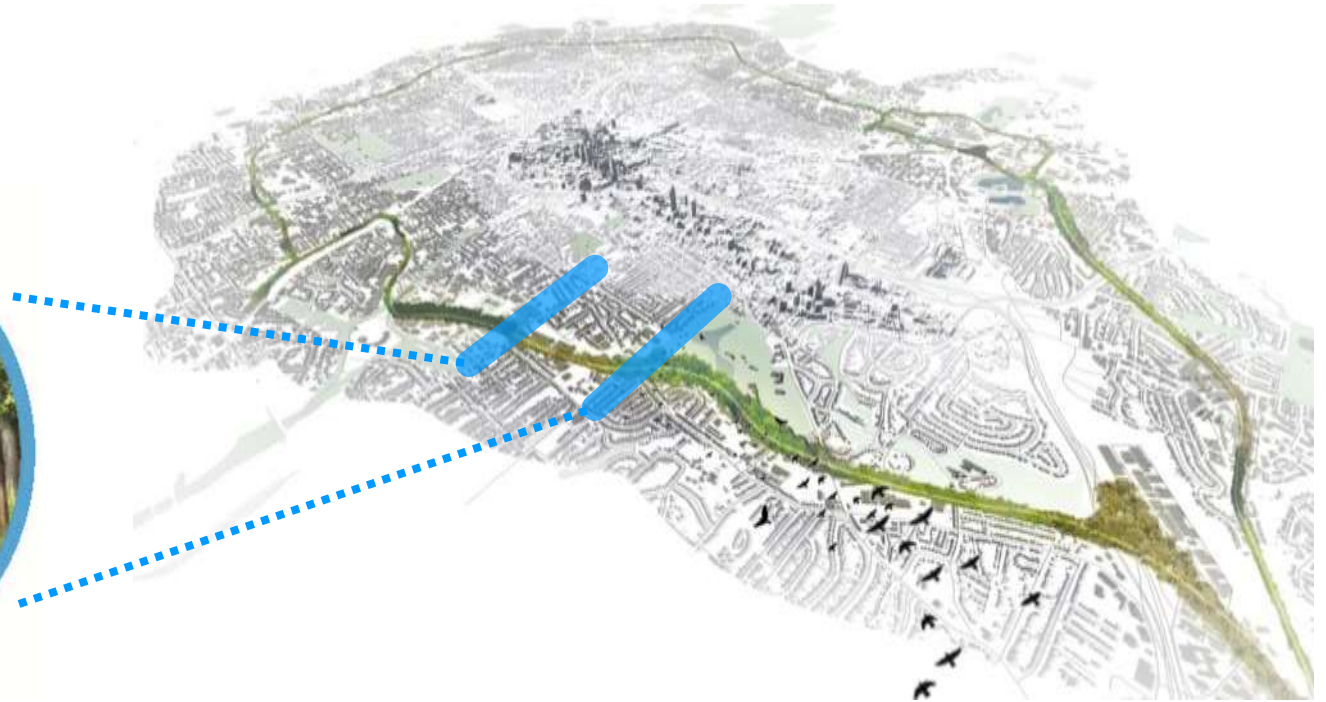
PHASED BUILDOUT



ABCD – Design Framework



ABCD – Preliminary Design



ABCD – Future Design Work



1

2

3

4

5

Atlanta BeltLine Corridor Design



Atlanta BeltLine Corridor Design **Analysis**



Mapping



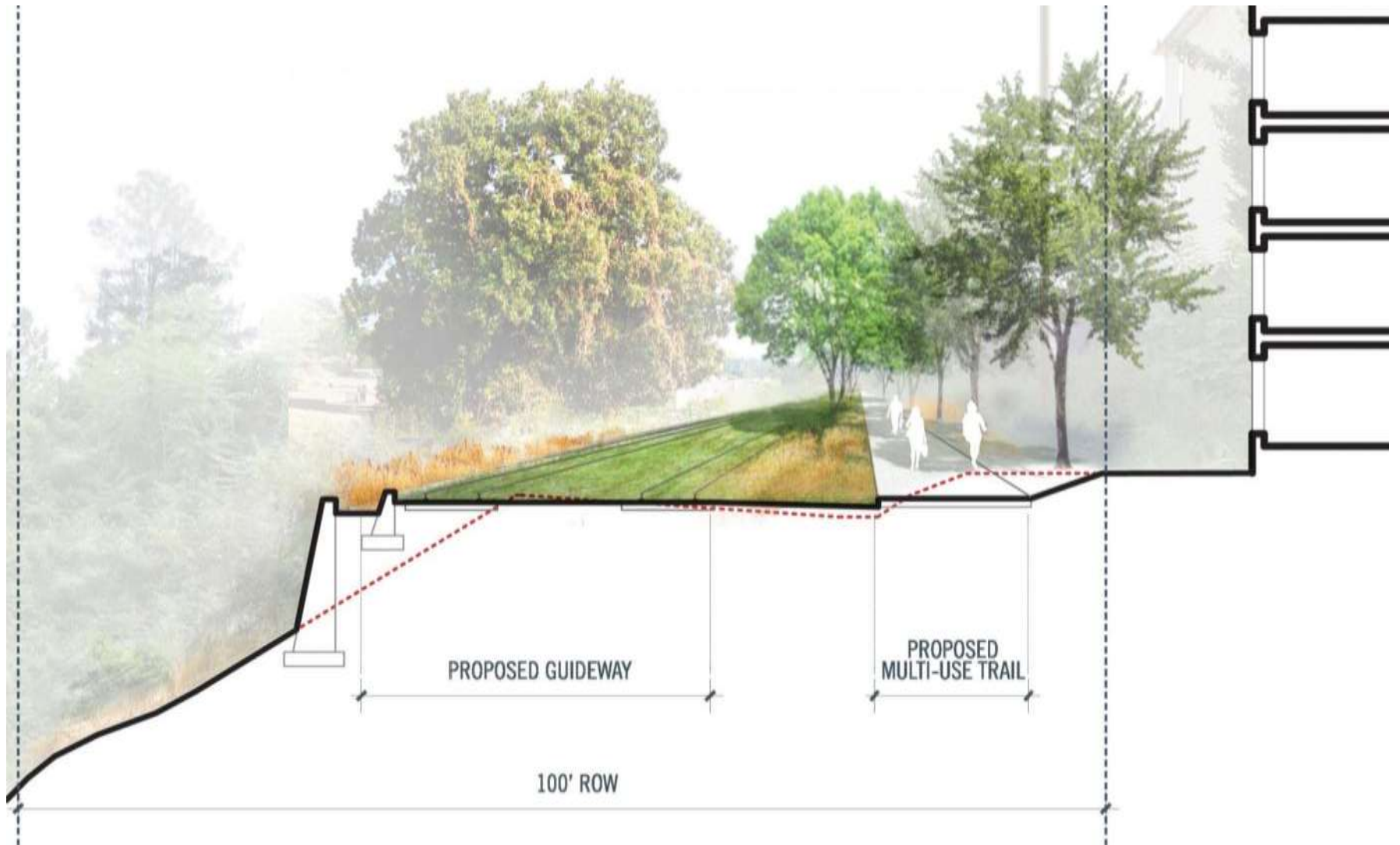
Research



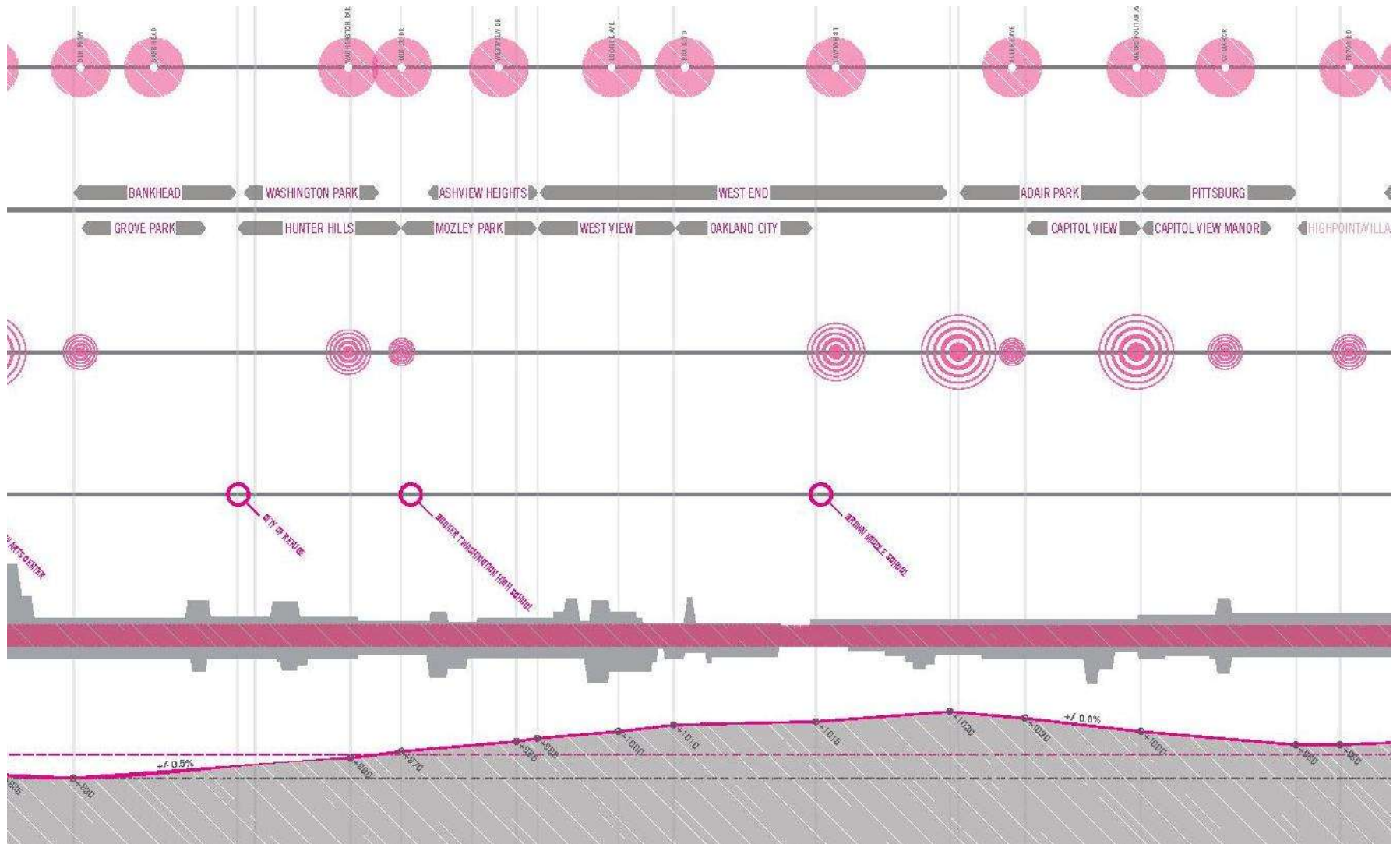
Field Work



Drawing



Analysis



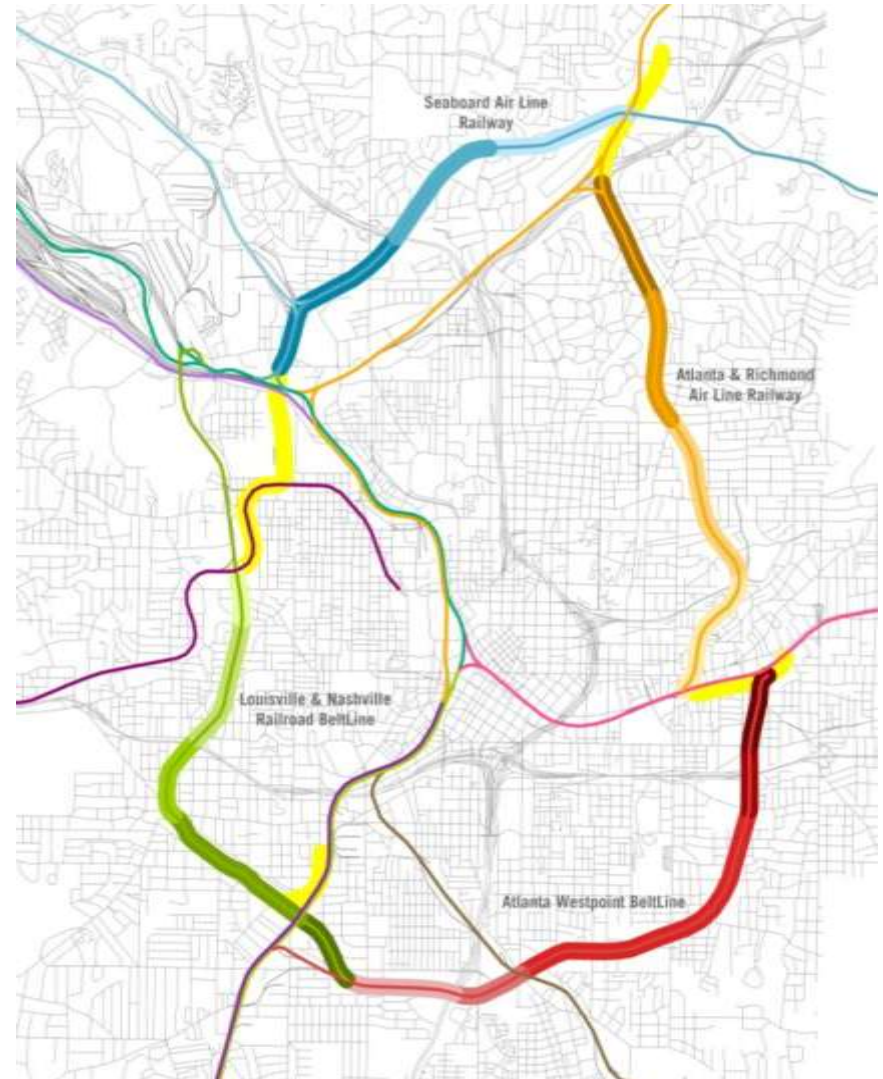
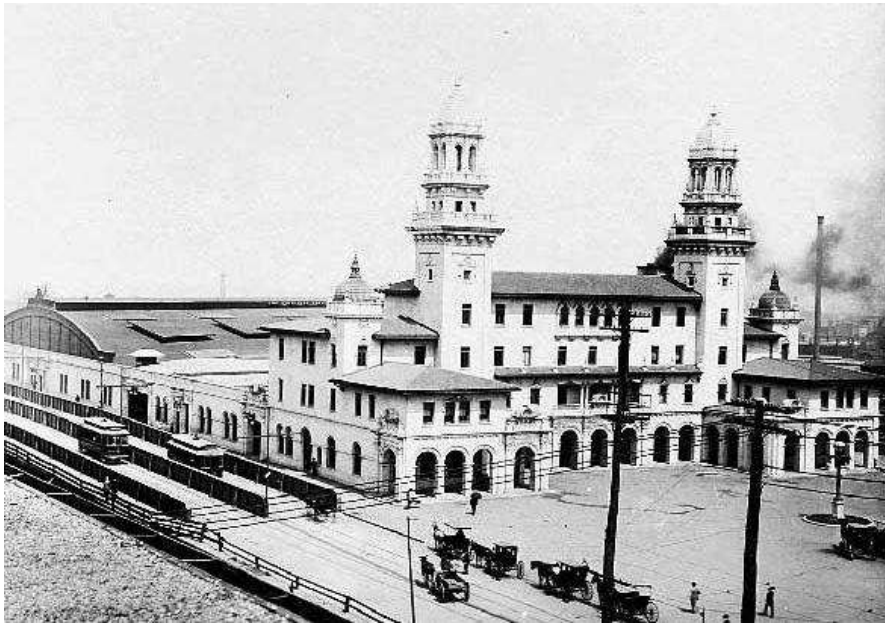
Analysis

Context Conditions

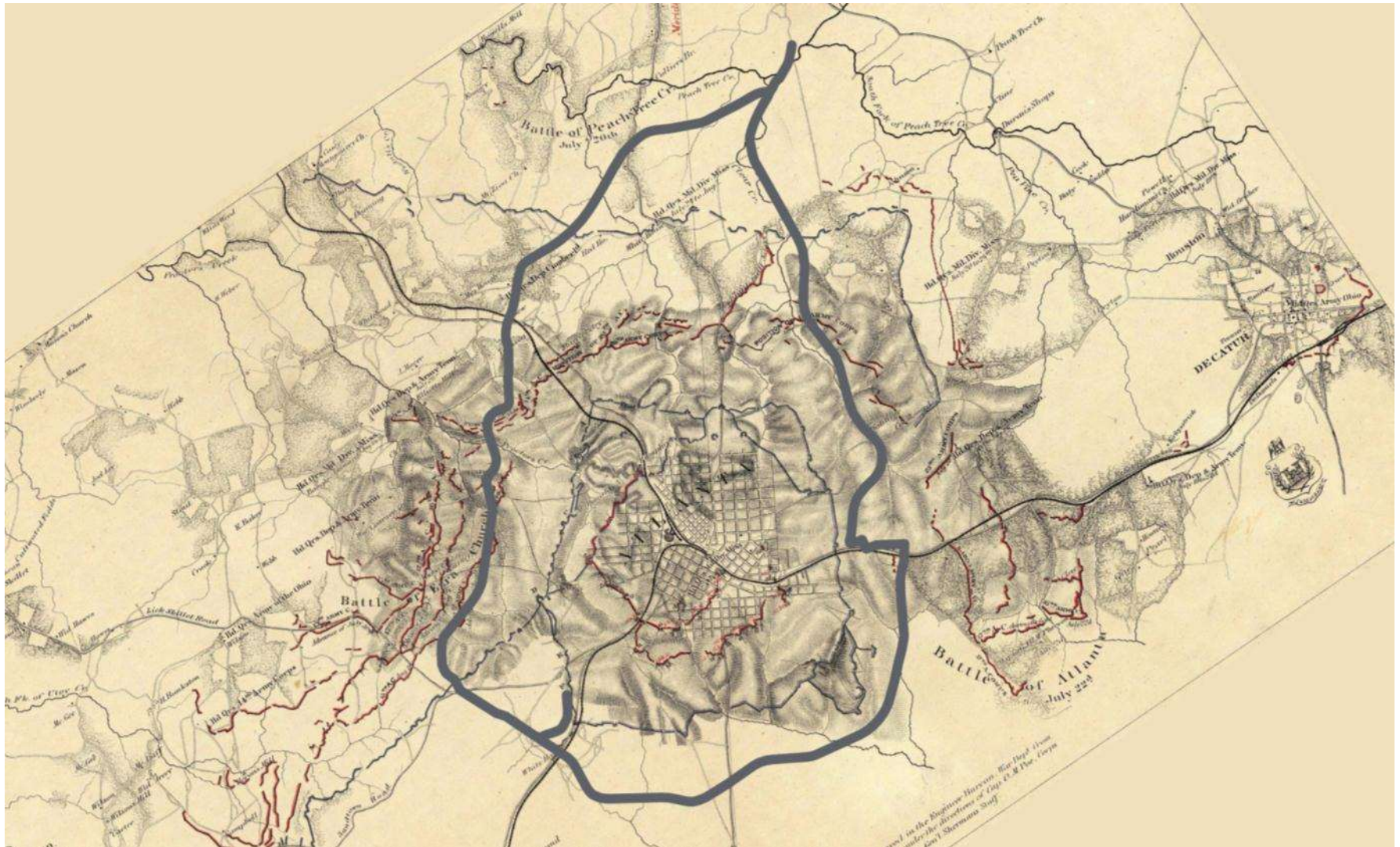
Native Context



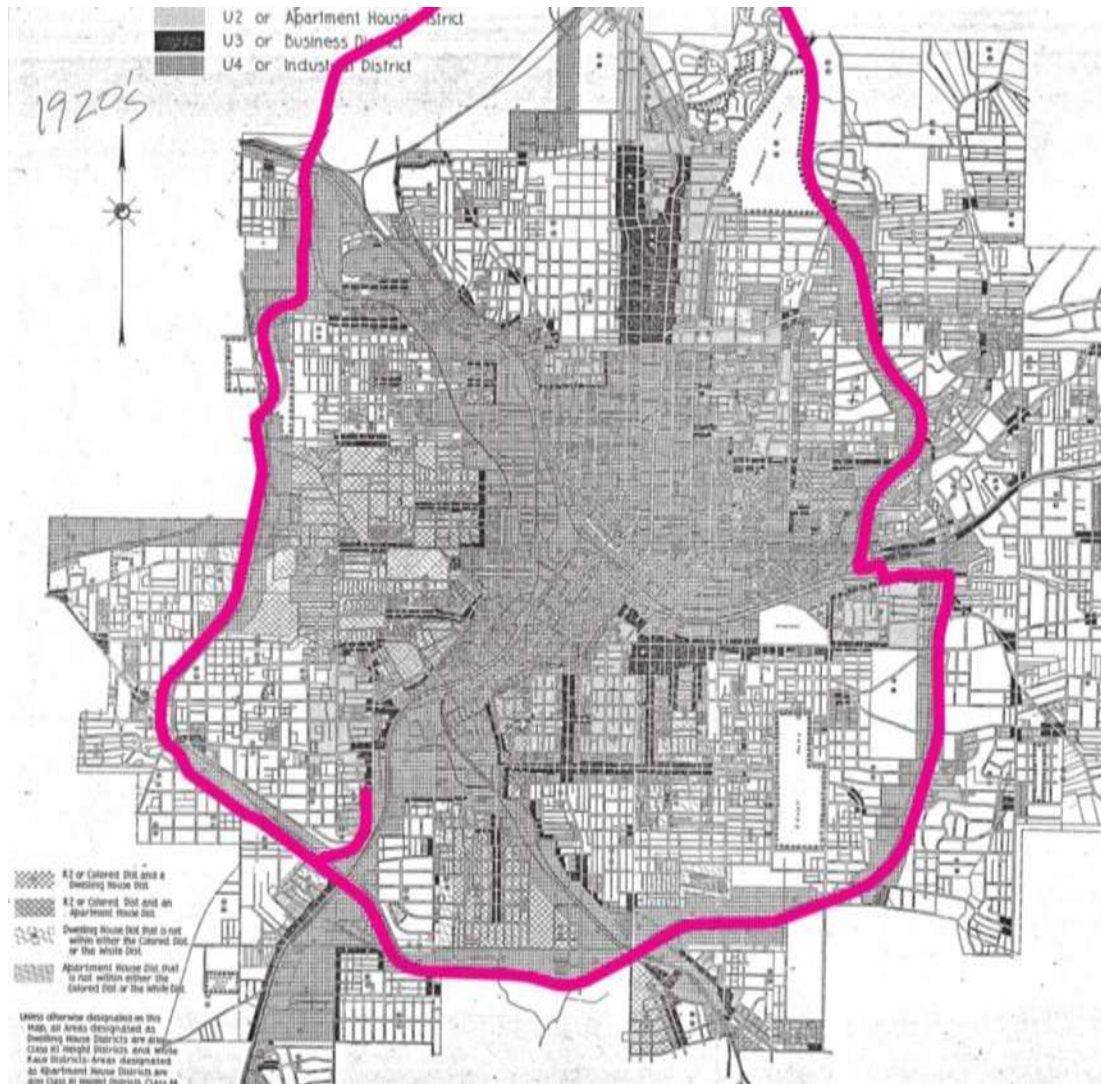
Railroad Context



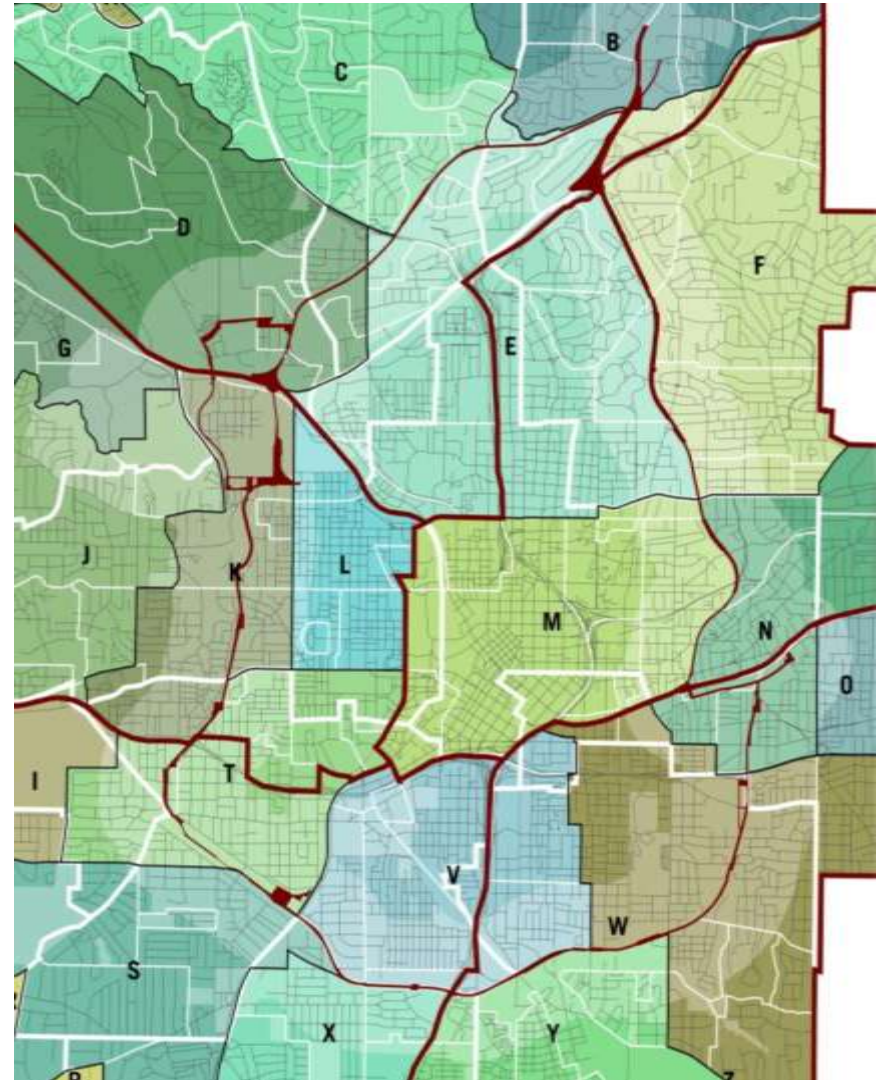
Historical Context



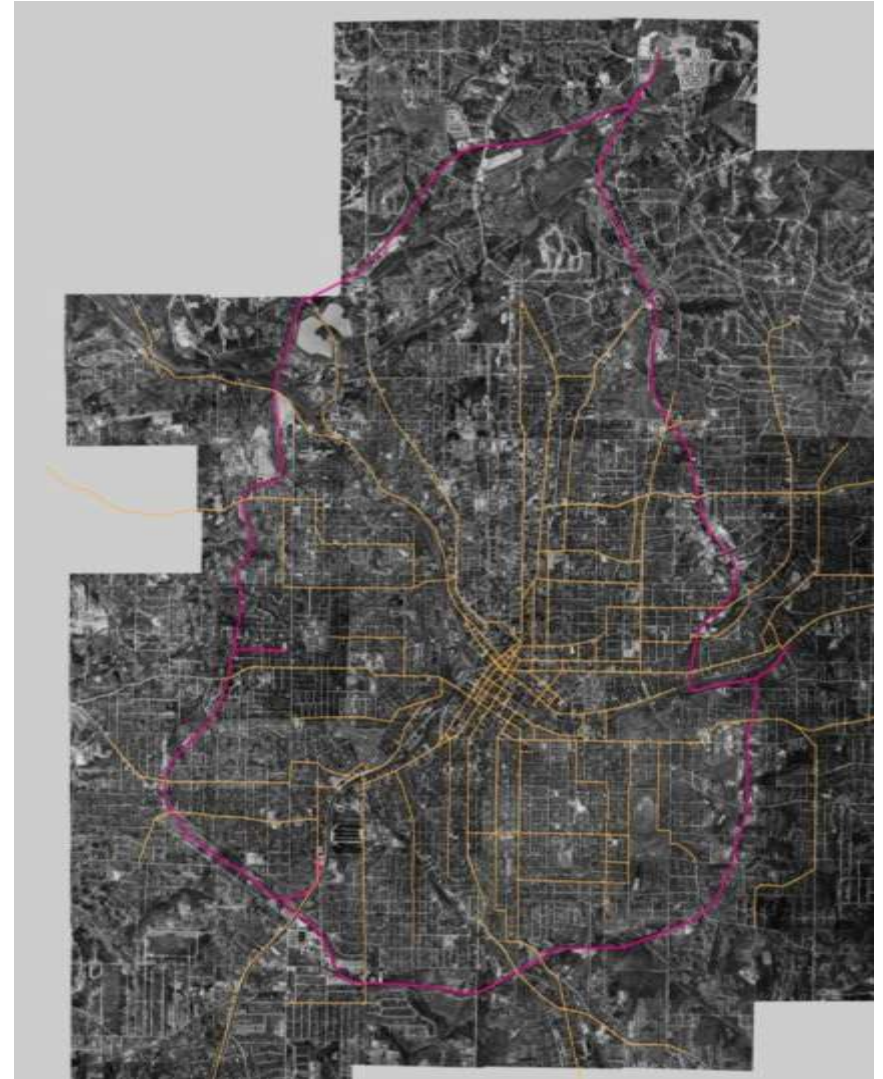
Social Context



Political Context



Development Context



(Un)Natural Context



Ownership/Use Context



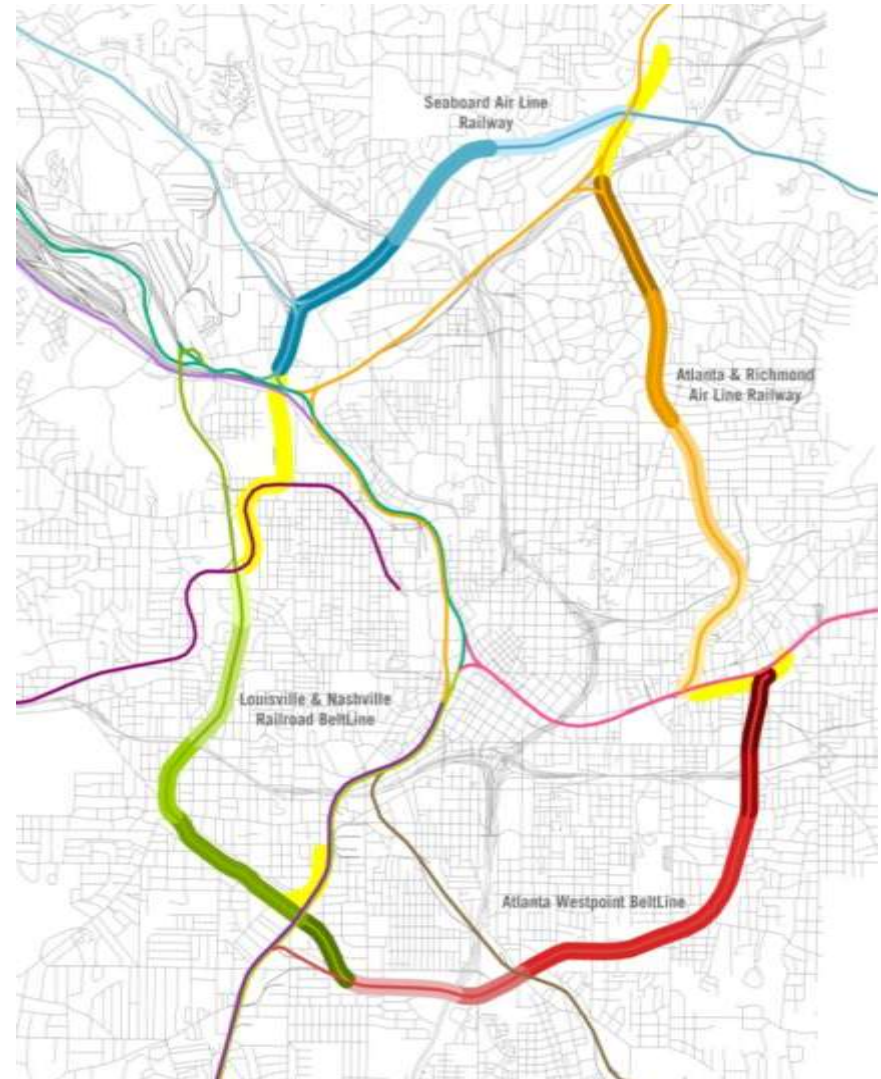
Physical Context



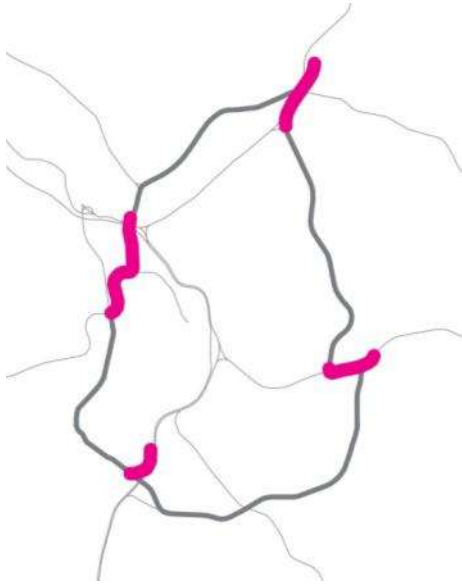
Analysis

Railroad Conditions

Four Belt Lines + Four Connectors



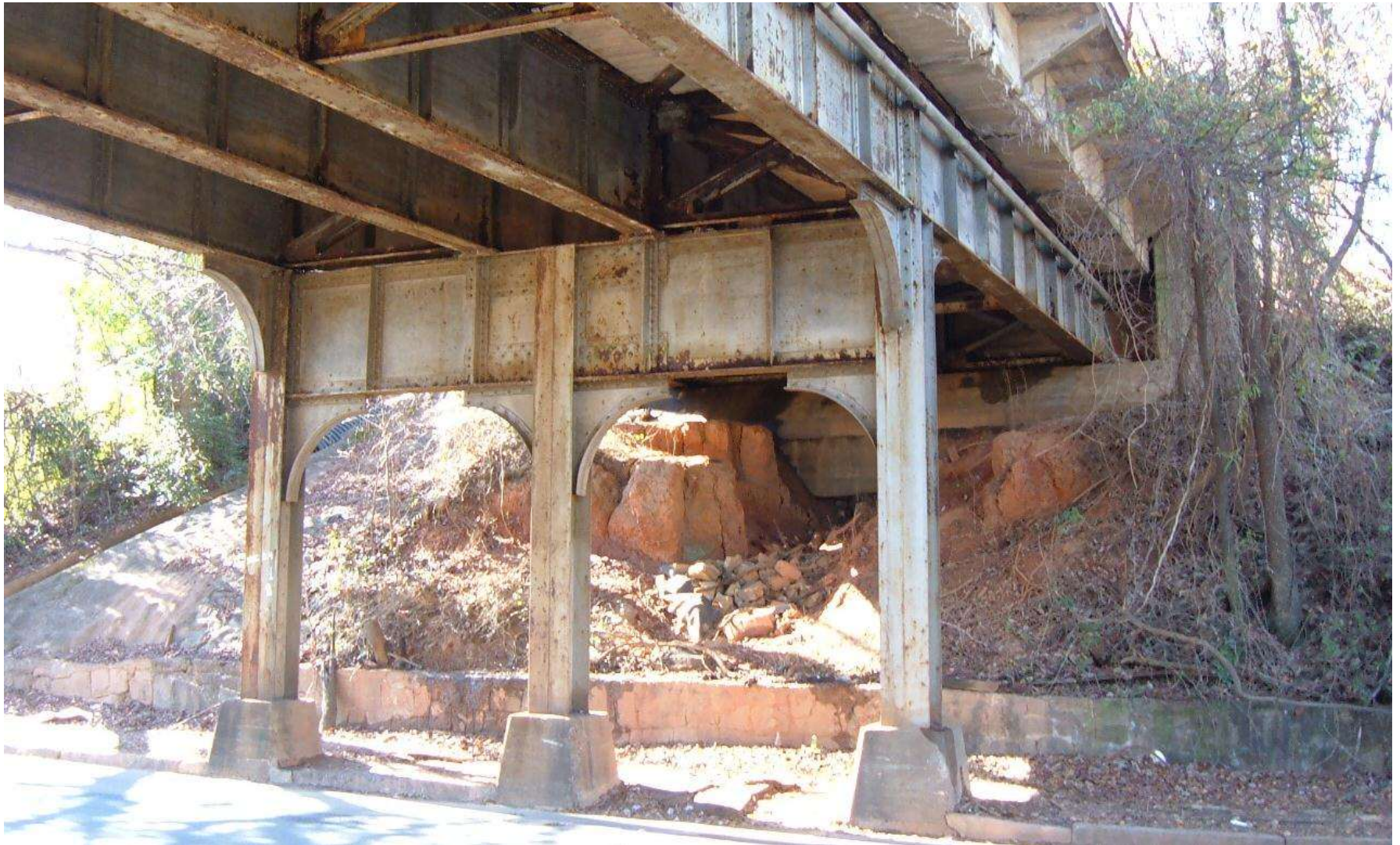
Four Connectors



Analysis

Typical Conditions

Track Position



Edges + Adjacencies



Street Connections



Natural Systems + Character



Alignment, Structures + Landform



Track Tectonics

PERKINS
+ WILL



Analysis
Program

Transit

PERKINS
+ WILL



Trail



Public Space



ANALYSIS

Conditions

Program



DESIGN

Design Drivers

Design Framework

Analysis
Design Drivers
Design Framework
Preliminary Design
Future Design

Design

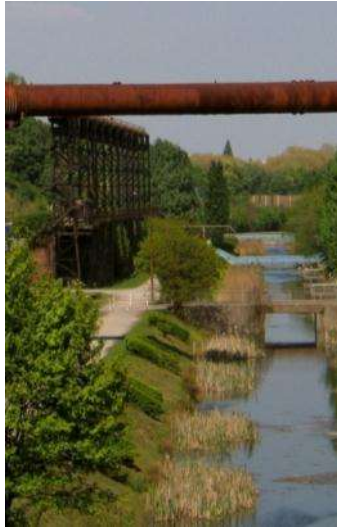
Design Drivers



Design Drivers



CHARACTER



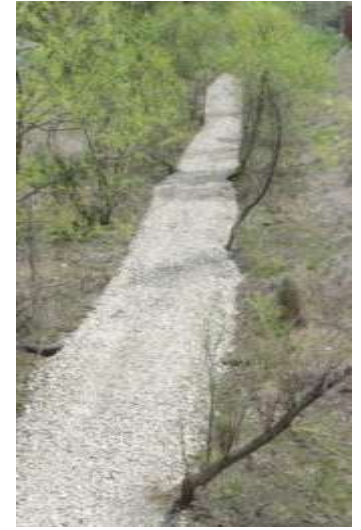
MULTI-RE-USE



THRESHOLD

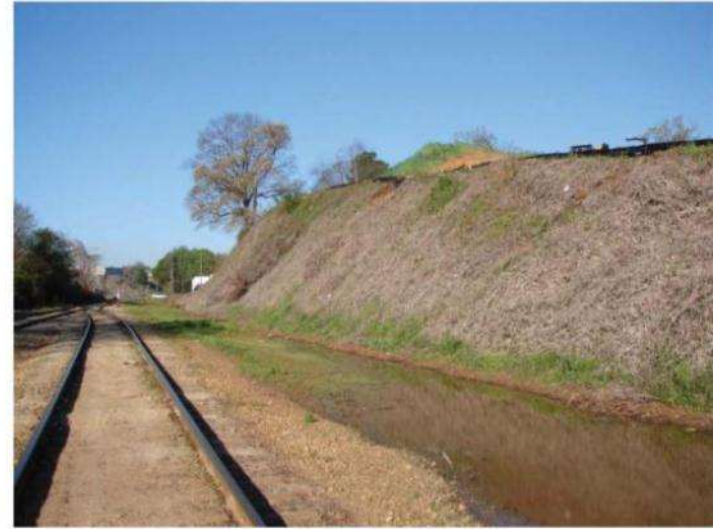


PERFORMANCE



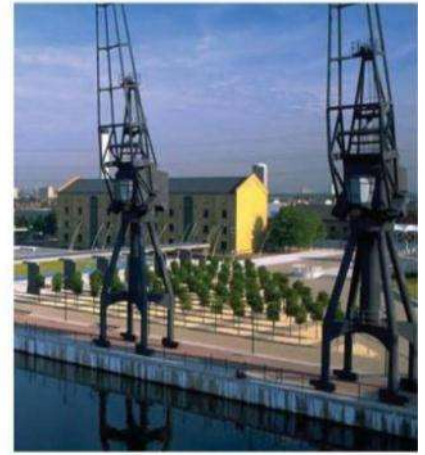
PHASED BUILDOUT

Design Drivers

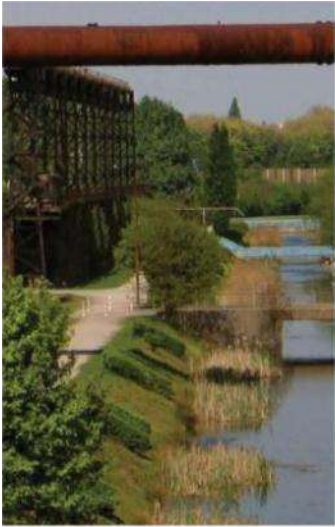


CHARACTER

- Interpret and evoke its origin as a series of railroad corridors;
- Cultivate its sense of adventure, discovery and informality;
- Respect its unique landscape and historical features.



Design Drivers



MULTI-RE-USE

- Transform it for a new set of infrastructure and a signature public meeting ground;
- Promote both mobility and destination;
- Design for changing interpretation of spaces and elements over time.



Design Drivers



THRESHOLD

- Design a coherent public space, unchallenged by private adjacencies;
- Convert its back-door condition to be more fully accessible;
- Reconcile its goal of clarity with confusing adjacencies and existing conditions.



Design Drivers



PERFORMANCE

- Support existing habitat and the generation of biodiversity;
- Optimize its performance through a sustainable approach to energy, water, light and materials;
- Where possible, contribute to broader sustainability goals and opportunities beyond its right-of-way.



Design Drivers



PHASED BUILDOUT

- Design for incremental buildout of segments and features;
- Define ecologically strategic investments;
- Ensure that its amenities are equitably distributed and that it will meet future demands.



Design

Design Framework



A gravel path winds through a wooded area with trees and a building in the background.

22 MILES OF VARIETY
22 MILES OF CONTINUITY

Design Framework

22 Miles of Variety

Variety – Existing



Variety – Existing



Neighborhood framework



Waterways + stormwater



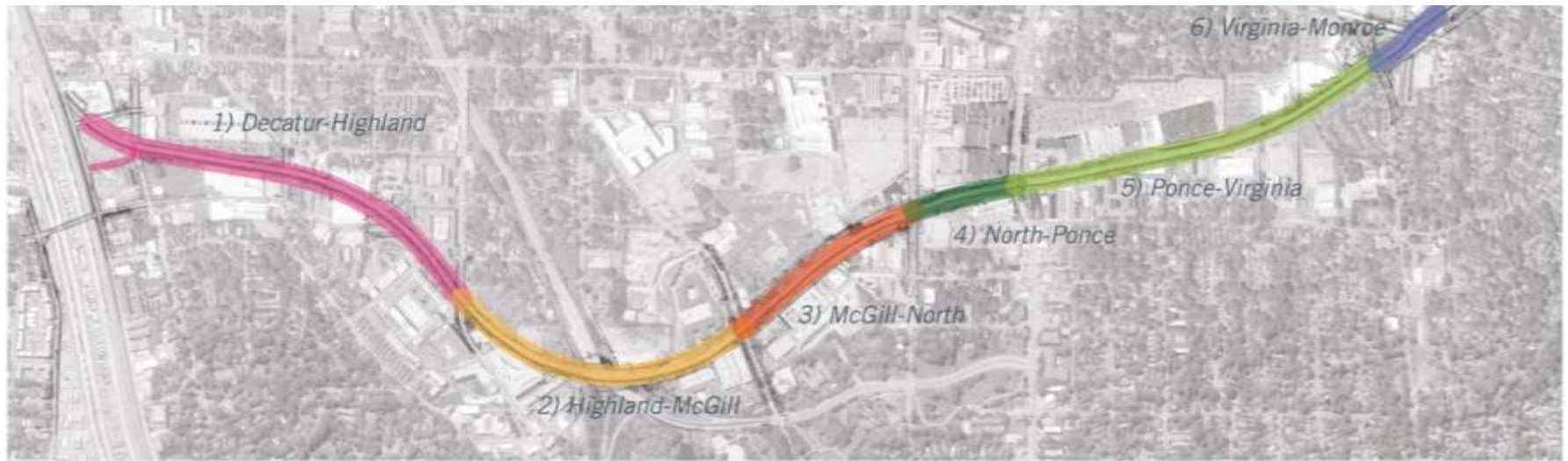
Tree canopy



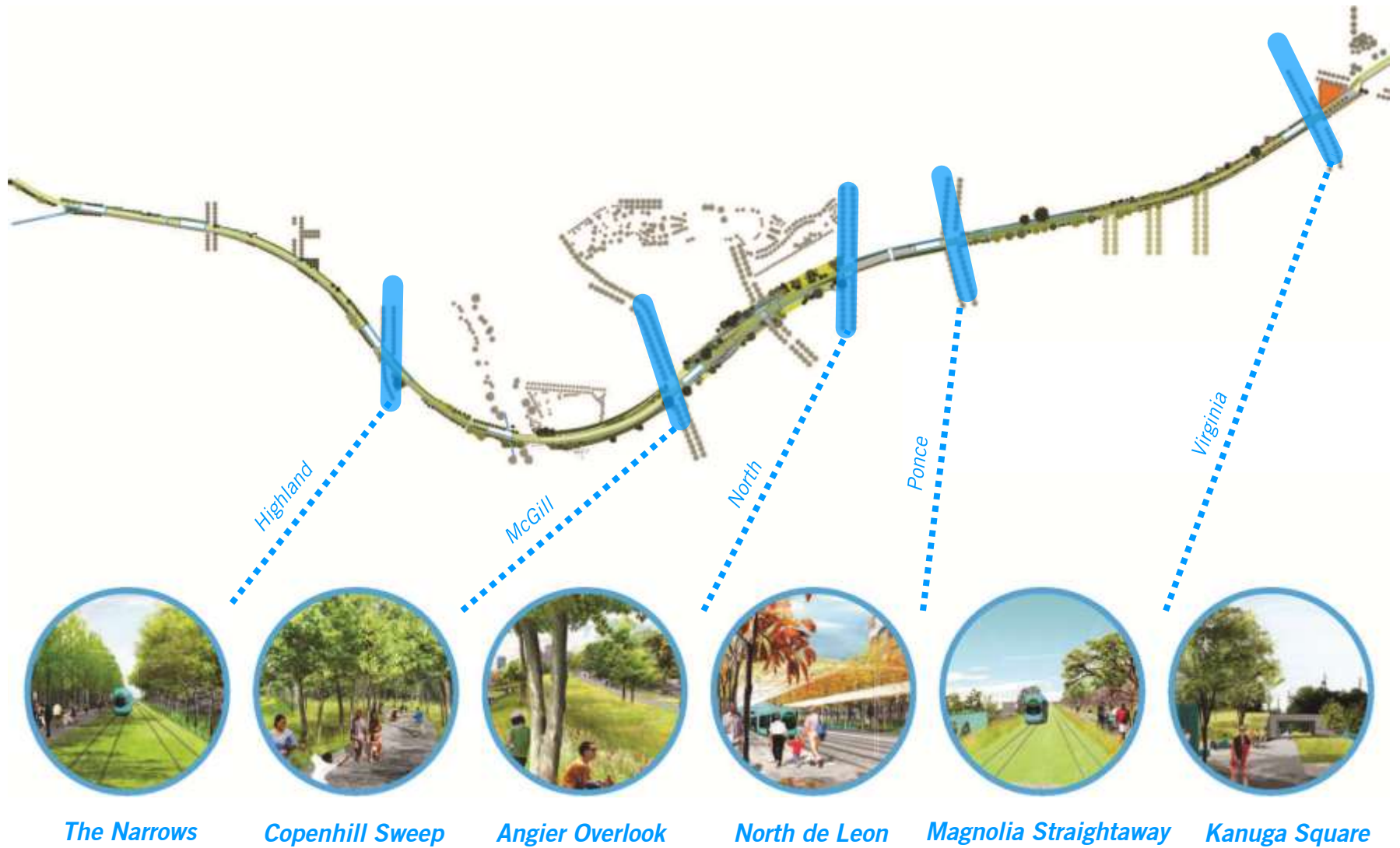
Railroad landforms

- **NATURAL SYSTEMS** - waterways, stormwater challenges, tree canopy, etc.
- **PHYSICAL FORMS** - bridges, embankments, other landforms
- **HISTORICAL + CULTURAL CONDITIONS** - artifacts, historic context
- **CITY FRAMEWORK** - skyline views, connecting streets, communities, parks, schools, etc.

Variety – Proposed



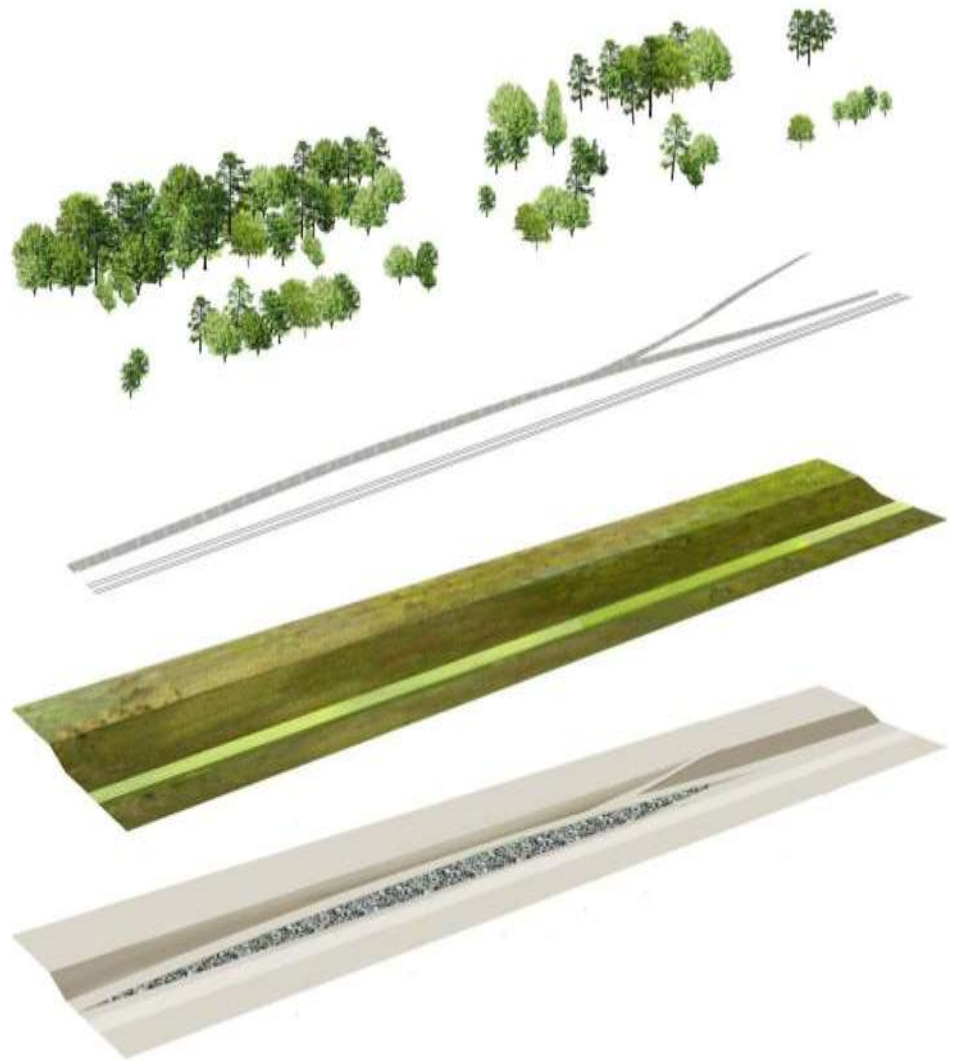
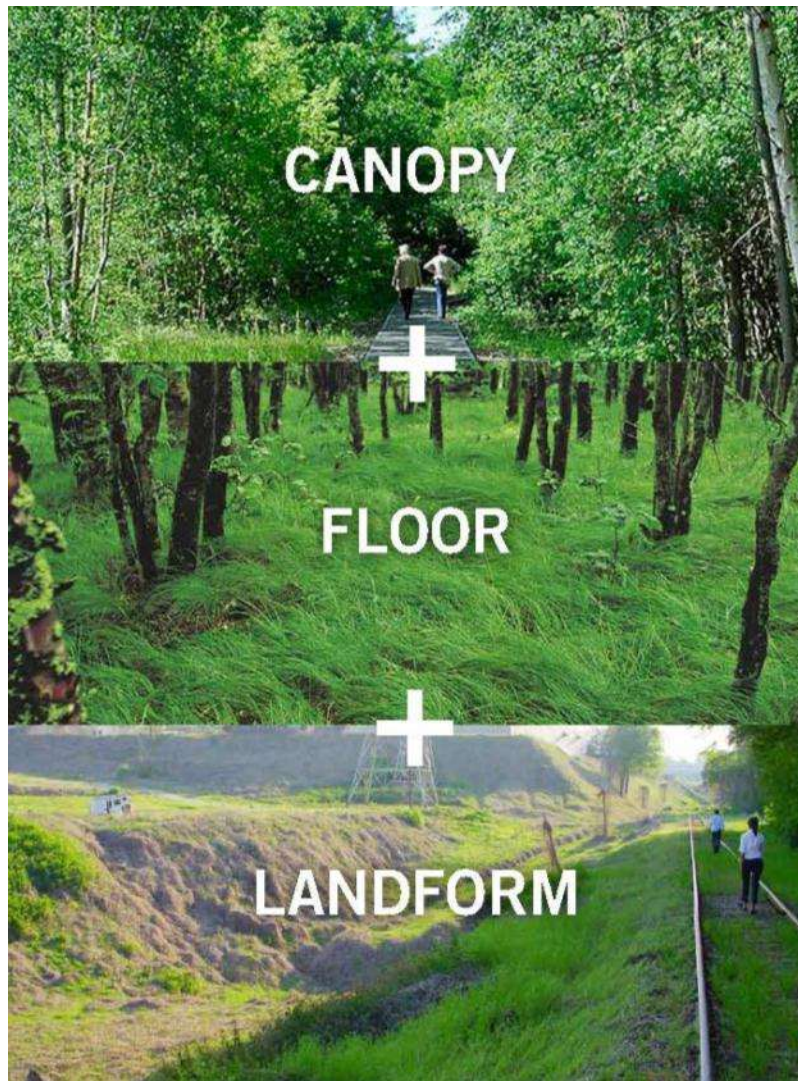
Variety – Character Rooms



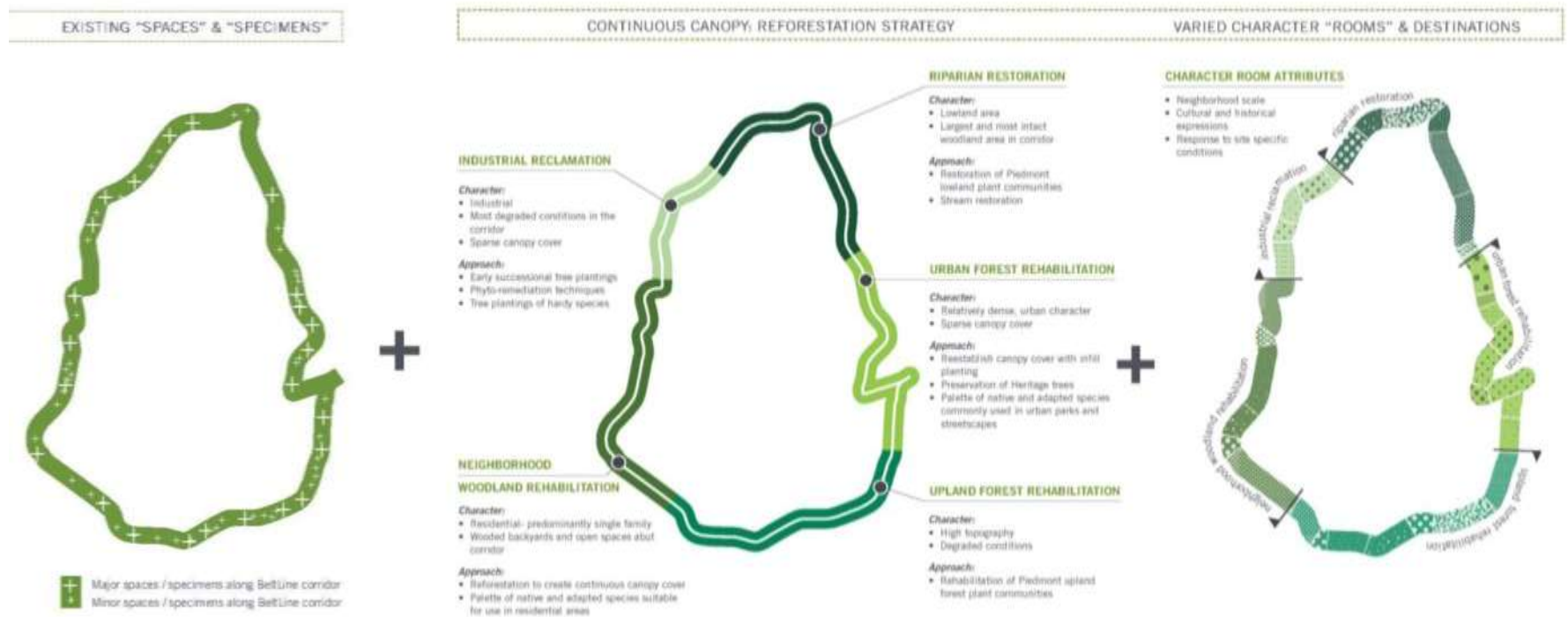
Variety – “BeltLine Spaces”



Variety - Landscape



Canopy



Canopy - Features



Canopy – Reforestation Strategies

Quercus alba
white oak



Quercus coccinea
scarlet oak



Quercus velutina
black oak



Quercus stellata
post oak



Quercus prinus
chestnut oak



Carya alba
mockernut hickory



Carya glabra
pignut hickory



Carya ovalis
red hickory



Pinus echinata
shortleaf pine



Cornus florida
flowering dogwood



Ulmus alata
winged elm



Ilex opaca
american holly



Oxydendrum arboreum
sourwood



Cercis canadensis
redbud



Amelanchier arborea
downy serviceberry



Viburnum acerifolium
maple leaf viburnum



Hamamelis virginiana
witch-hazel



Viburnum rafinesquianum
downy arrowwood



Euonymus americanus
strawberry bush



Vaccinium stamineum
deerberry

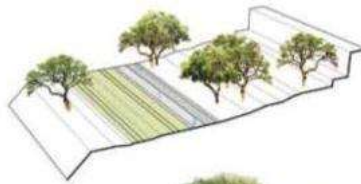


Vaccinium pallidum
lowbush blueberry

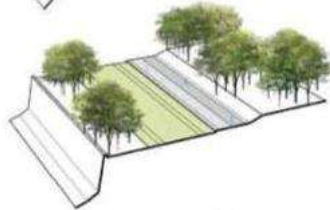


Canopy – Character Rooms

L1
SPECIMENS + CLEARINGS



L2
FOREST CLUMPS



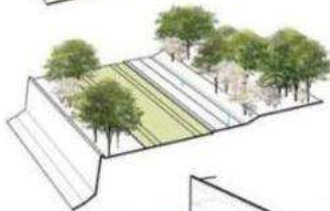
L3
ALLÉE



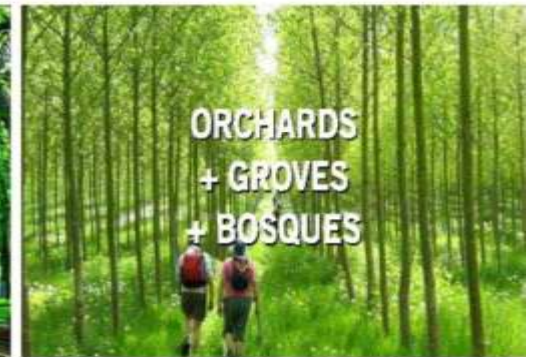
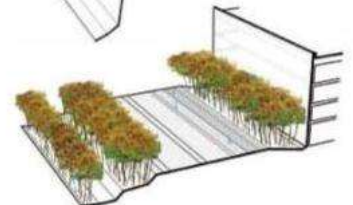
L4
ORCHARDS + GROVES + BOSQUES



L5
FLOWERING UNDERSTORY



L6
THICKETS



Floor



L7 GREEN GUIDEWAY

Low-growing, low-input, low-maintenance and drought tolerant grasses are recommended: Bermuda grass, Buffalo grass (native), and Zoysia grass.



L2.2 TRANSIT + "DRY" FLOOR

With the introduction of transit, low-growing, sun tolerant grass species will replace the taller growing, warm season grasses within the guideway.



L2.4 TRANSIT + "MOIST" FLOOR

With the introduction of transit, low-growing, shade tolerant grass species will replace the taller grasses and wetland emergents.

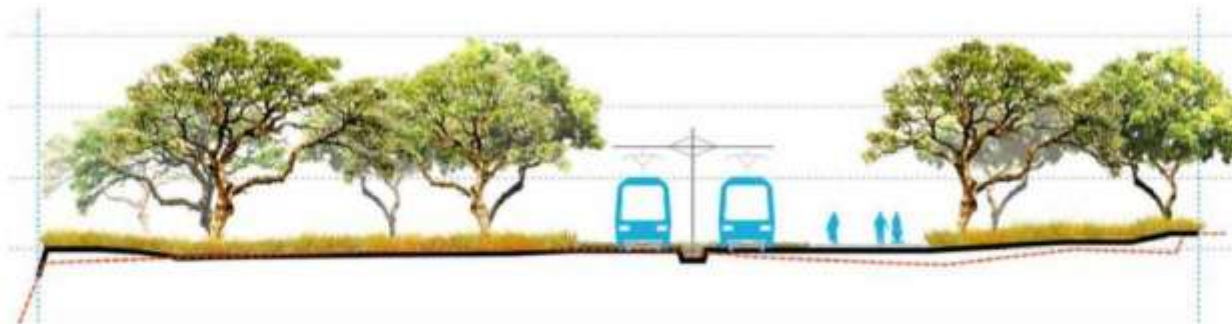
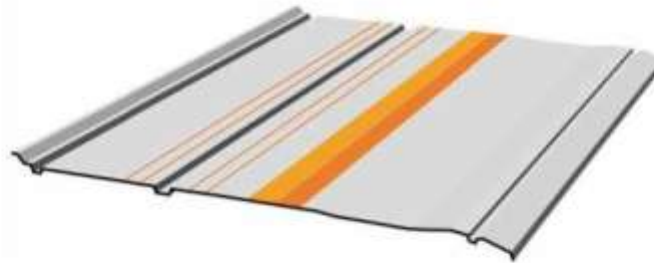
Landform

landscape
design

LANDFORMS & STORMWATER CAPACITY

Flat Right-of-Way L5.1

Due to the Atlanta BeltLine's history as a rail corridor - much of the existing cross-section conditions are relatively flat, having been engineered to support the 1 - 2% track grades. To upgrade these sections to support the new trail and transit guideway, the strategic and efficient design of swales and drainage features will be necessary to effectively manage stormwater.

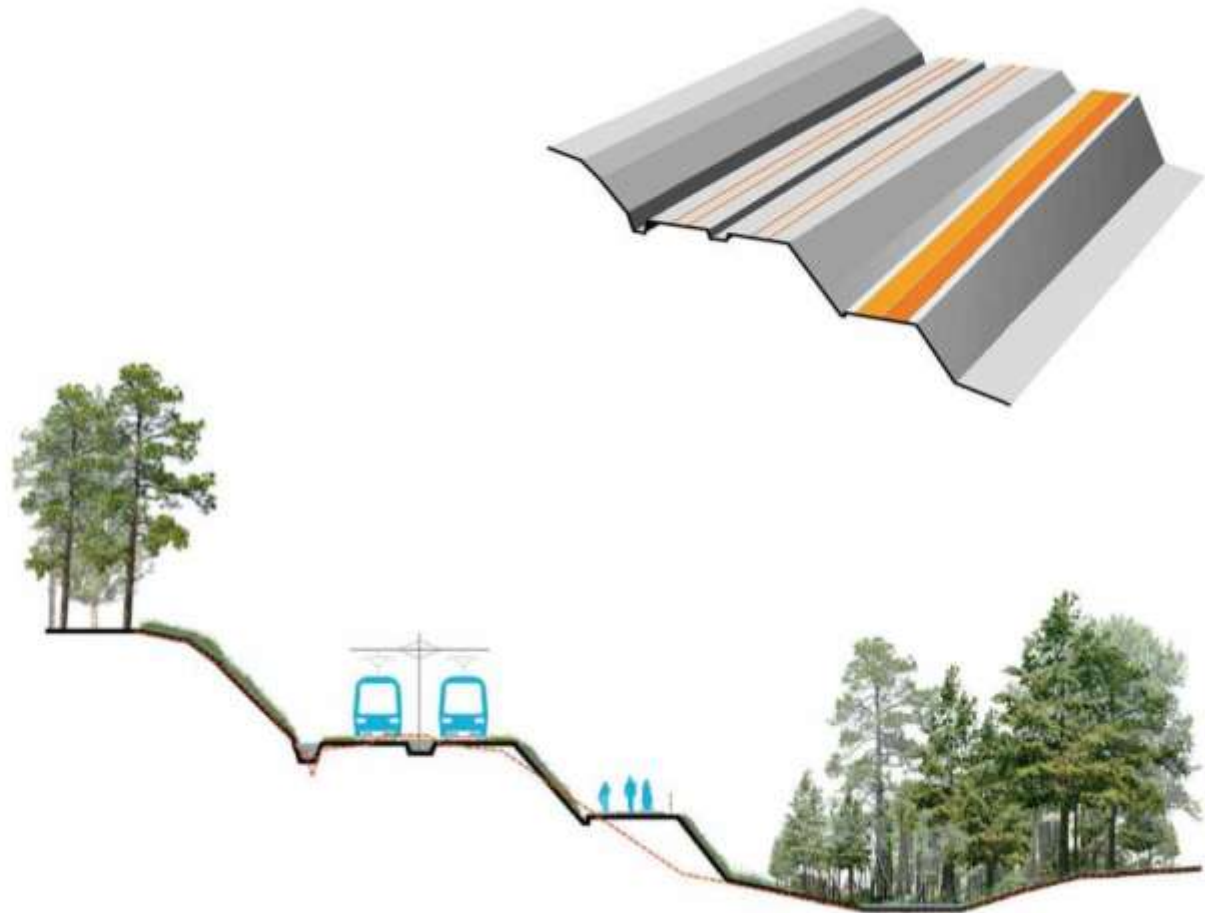


landscape
design

LANDFORMS & STORMWATER CAPACITY

L5.2 Embankments

In portions of the corridor that have steep grades or side slopes, extensive grading will be necessary to assemble the transit guideway and trail surfaces. Stormwater collection will be essential on both the up-slope and down-slope sides of the guideway and trail. The resulting earthwork should be efficient but graceful and provide a smooth experience for users entering, leaving or traveling the Atlanta BeltLine.



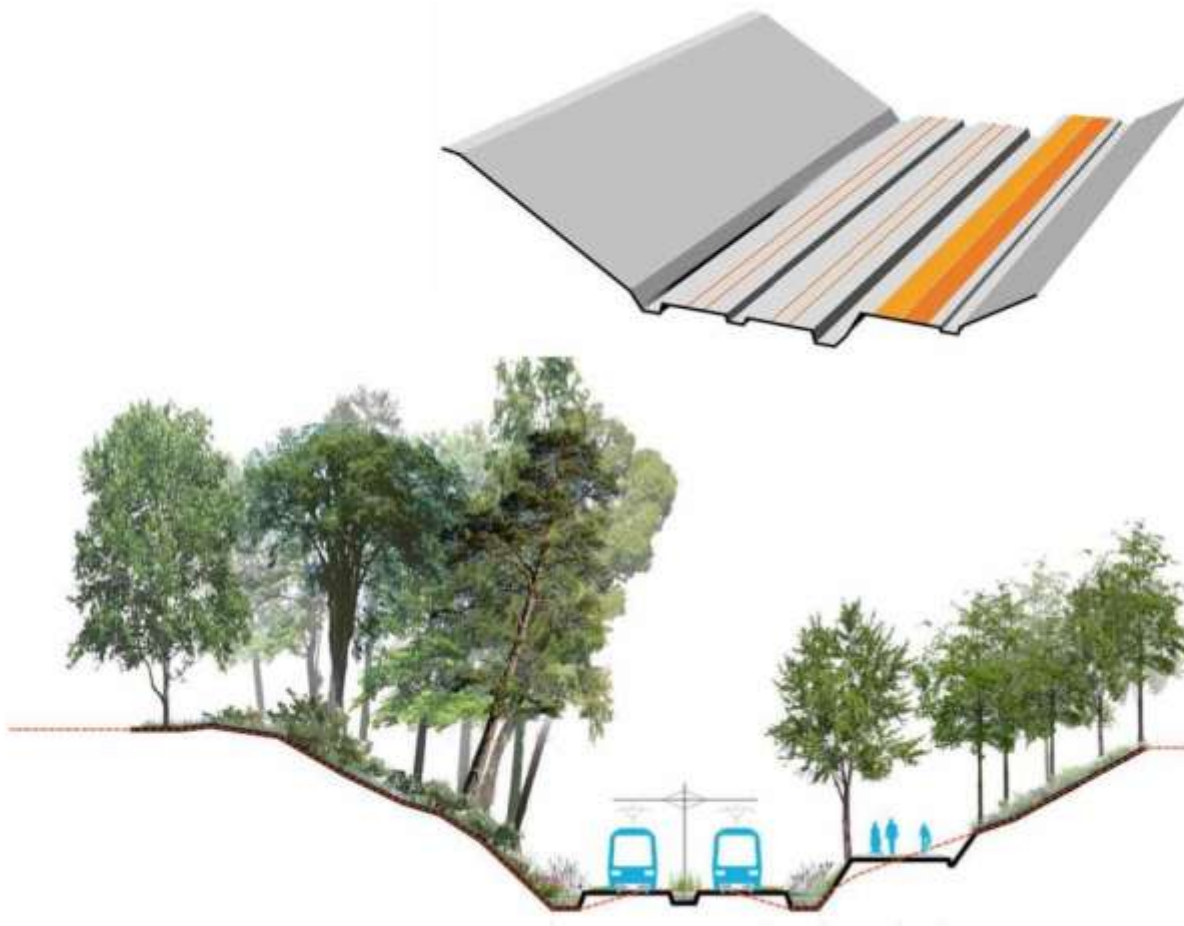
Landform

landscape
design

LANDFORMS & STORMWATER CAPACITY

Sunken Corridors L5.3

For portions of the corridor in which the future guideway will be recessed below adjacent street level, the new topography should strategically drain the trails and guideway while supporting moist floor species in large bioswale conditions or 'wet-woods'. Placement of the trail should maximize potential for an experience of an 'interior' landscape, a place removed from the City.



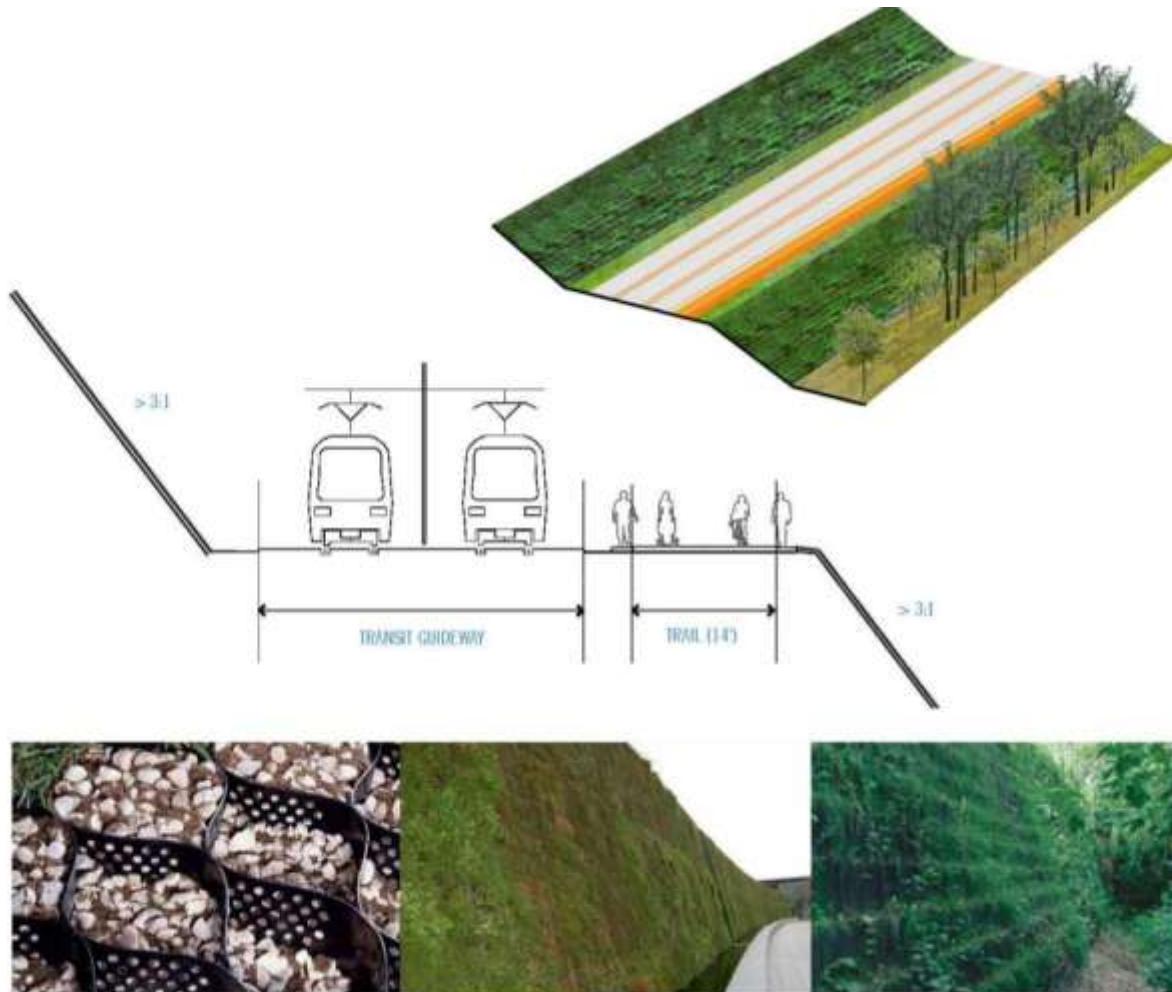
landscape
design

LANDFORMS & STORMWATER CAPACITY

Green Embankments / Soft Walls L5.5

Where space and width permits, the engineered side slopes, or embankments should be green: utilizing material technologies that support steep slopes and vegetation, thereby creating a soft quality to the engineered form.

For slopes ranging from 1.5:1 to 2.5:1, geo-fiber soils and porous, geo-web materials shall be used in place of masonry retaining features – and shall be designed with suitable ground covers, grasses and shrub species that are consistent with the adjacent floor palette.

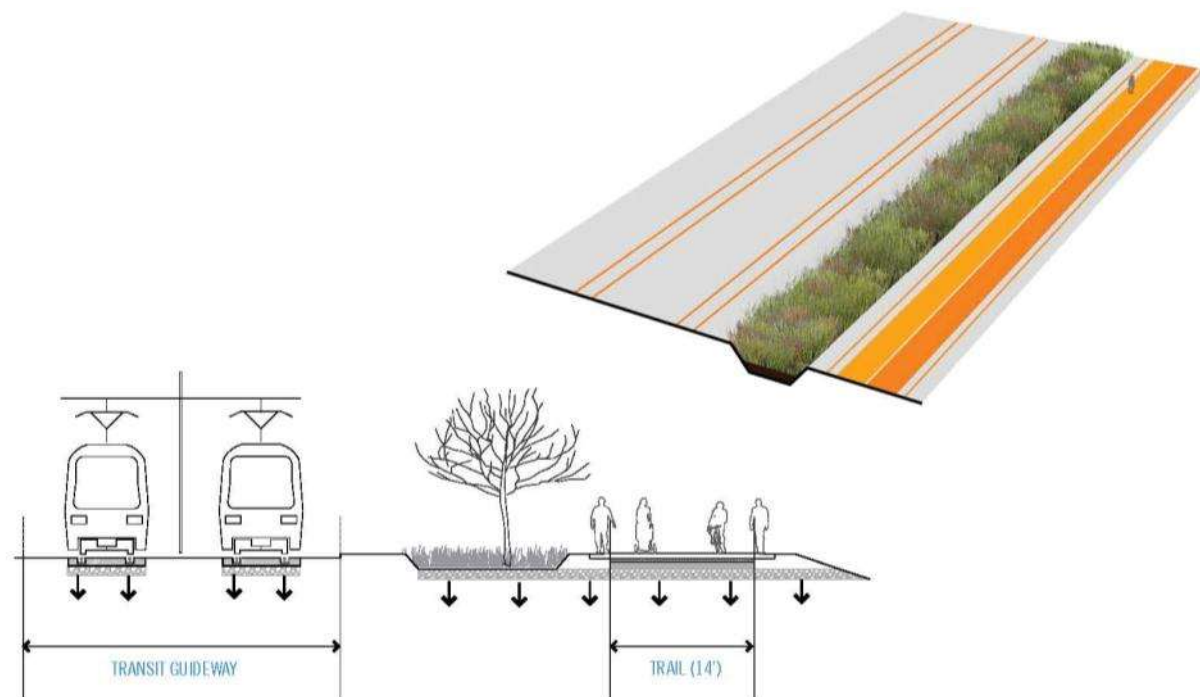


landscape
design

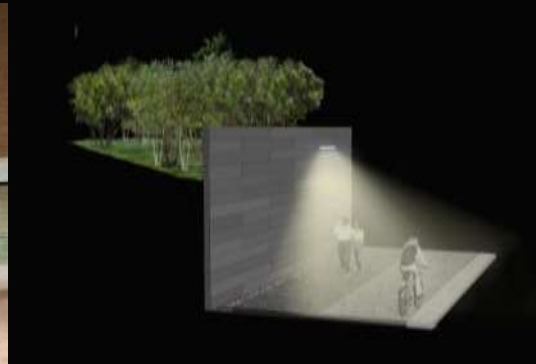
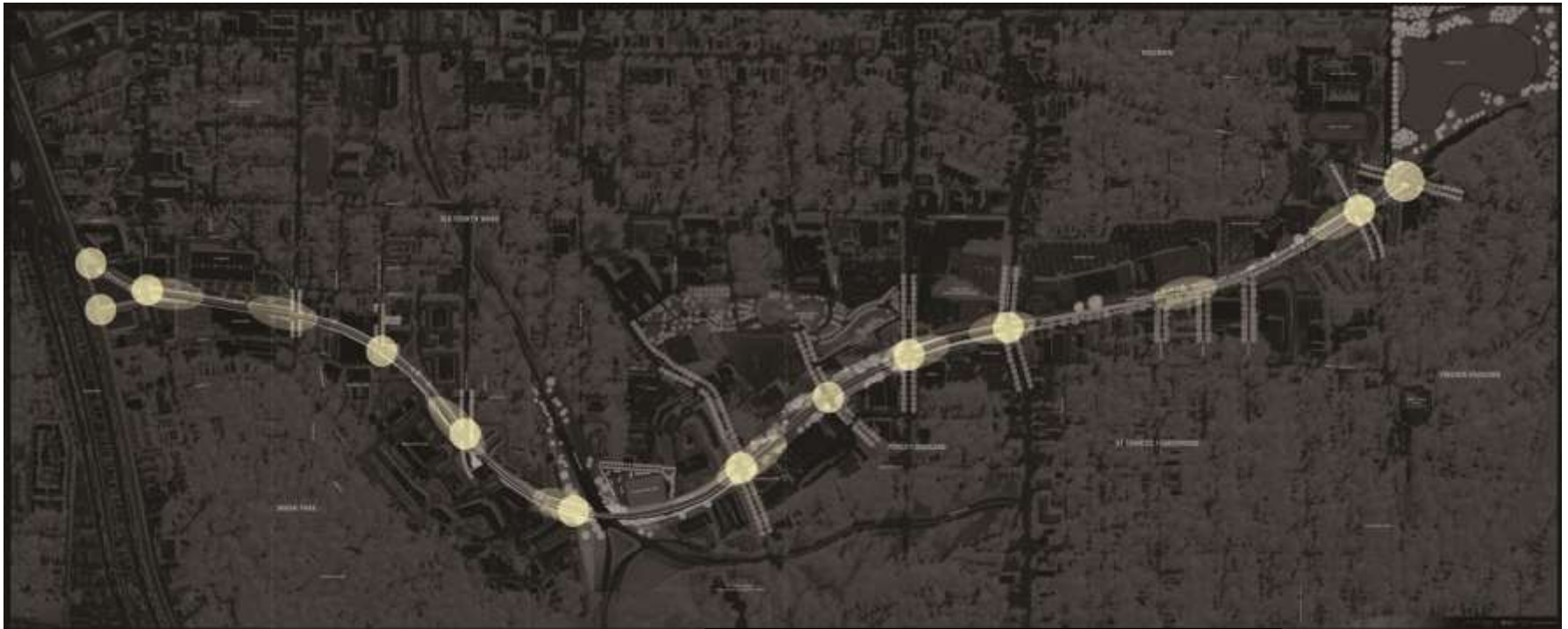
LANDFORMS & STORMWATER CAPACITY

L5.6 Vegetated Swales

Priority is maintaining flow and improving water quality. Runoff from trail may be conveyed/infiltrated in adjacent filter strips or swales. Swales or rocky conveyances will lead to a down-gradient discharge point. To the extent possible, planting should be texturally consistent with adjacent floor and used as a buffer to control runoff and increase infiltration.



Variety – Lighting



Variety – Public Art



Variety – Character Rooms



Variety – Character Rooms



Variety – Character Rooms



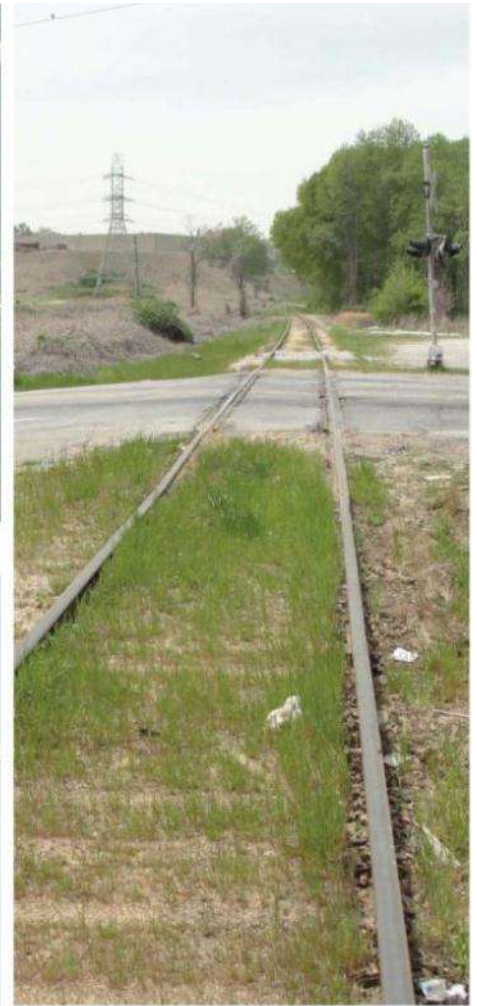
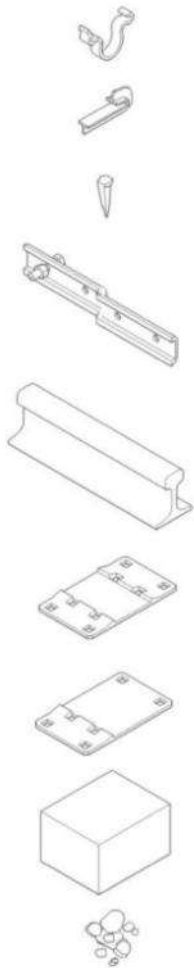
Variety – Character Rooms



Design Framework

22 Miles of Continuity

Continuity – Existing



Continuity – Proposed



Hardscape



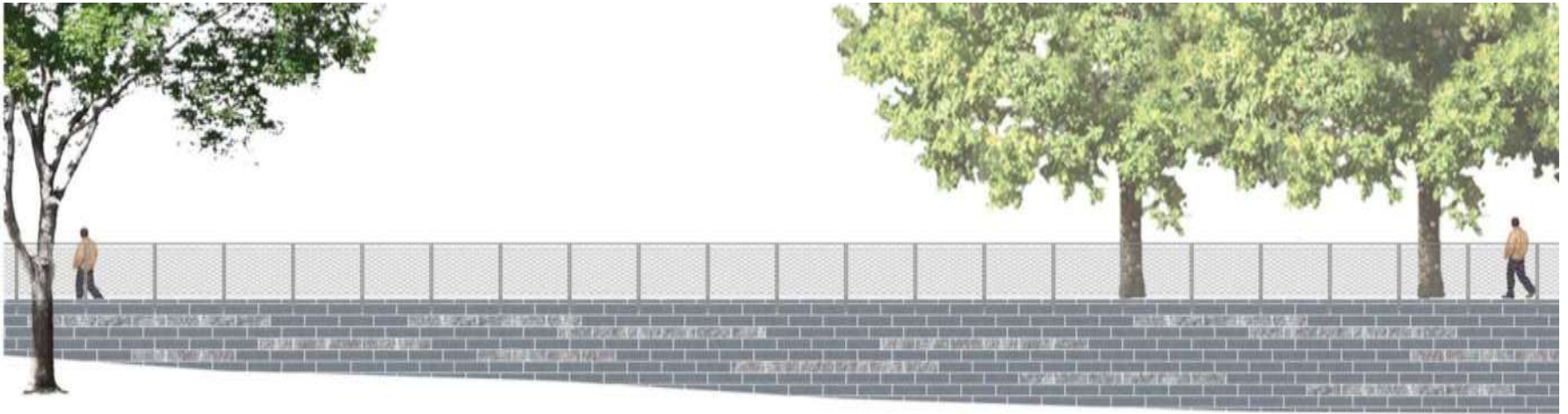
Hardscape



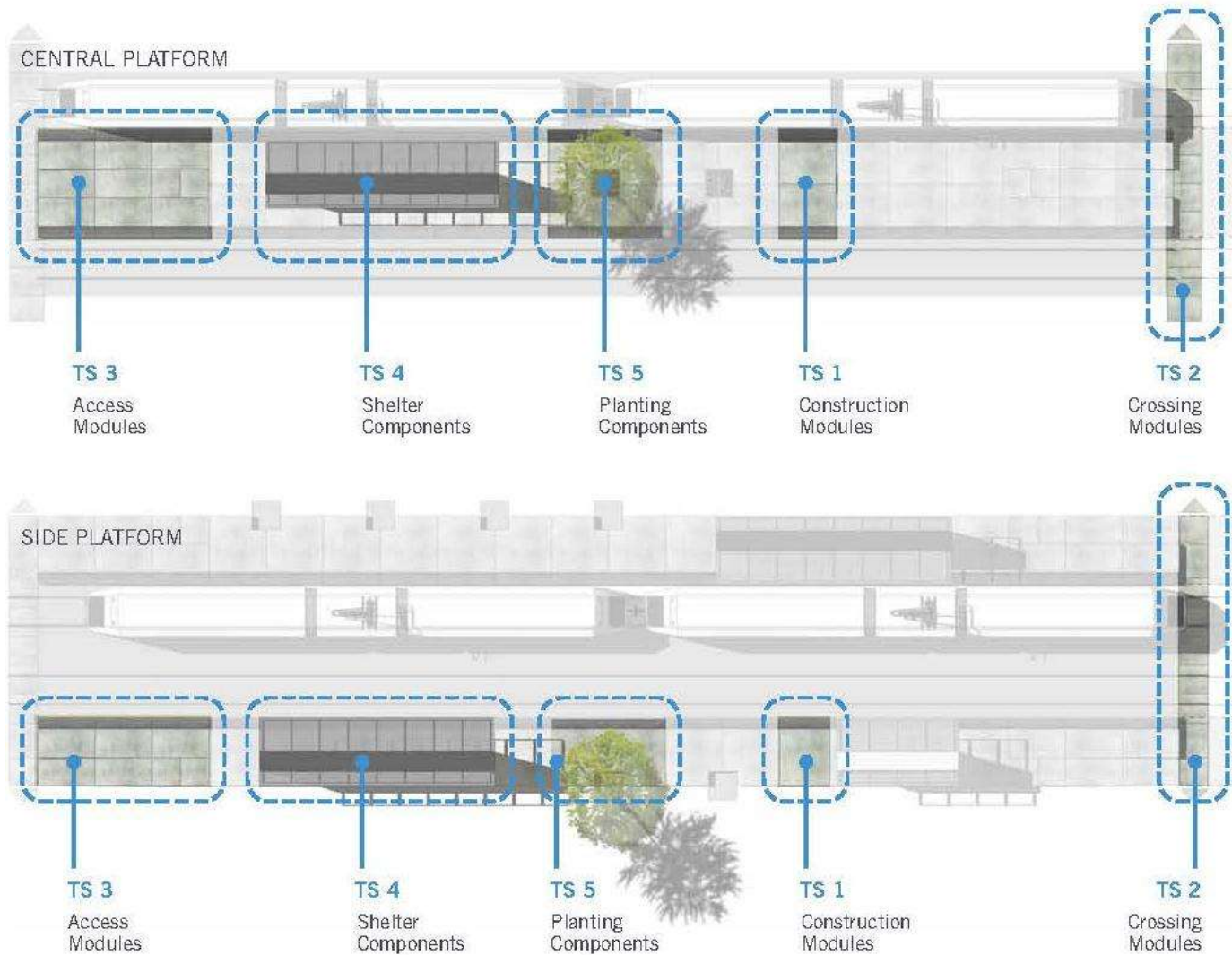
Bridges



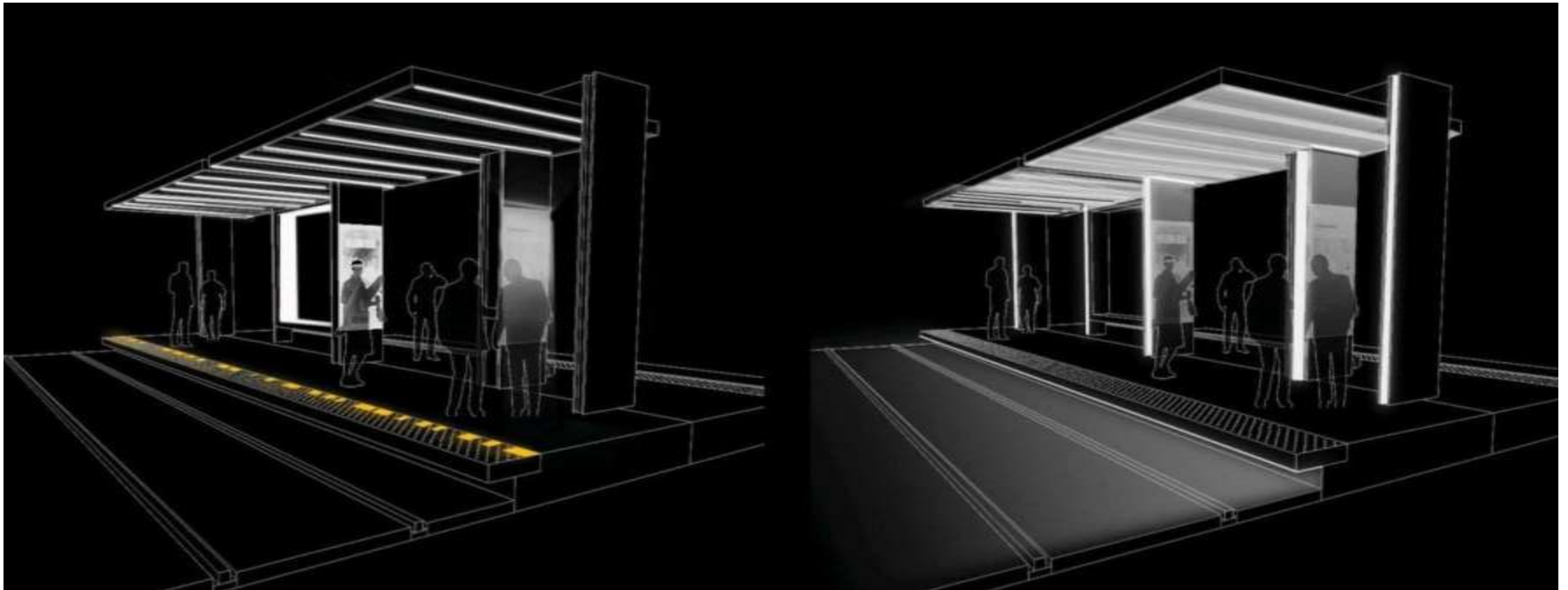
Walls



Transit Stations



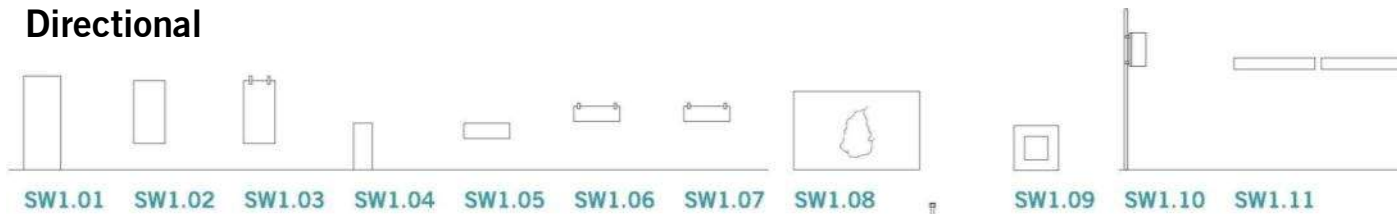
Transit Stations



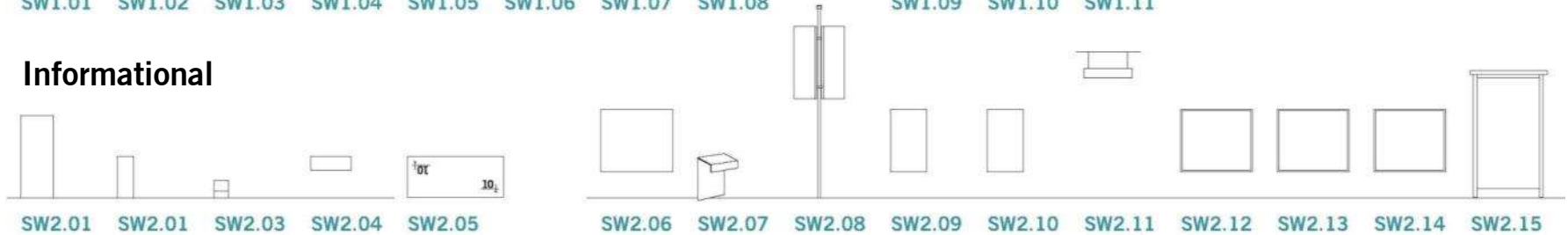
Concept Studies

Signage + Wayfinding

Directional



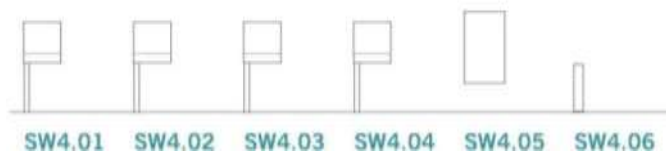
Informational



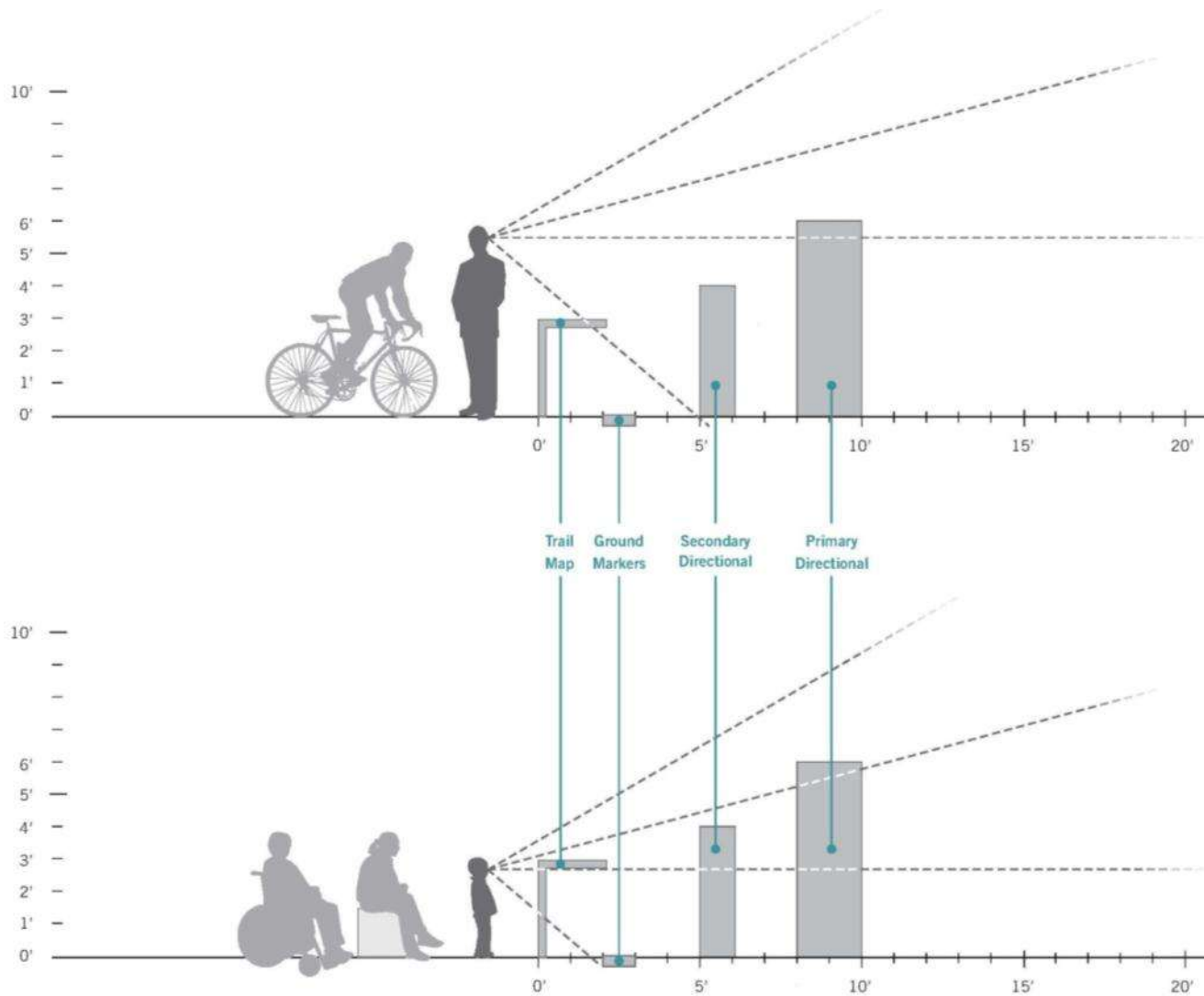
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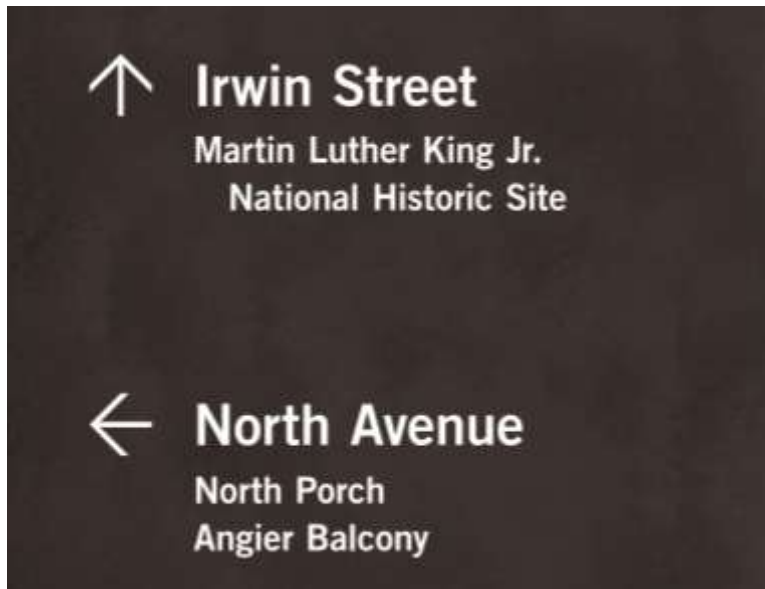
Regulatory



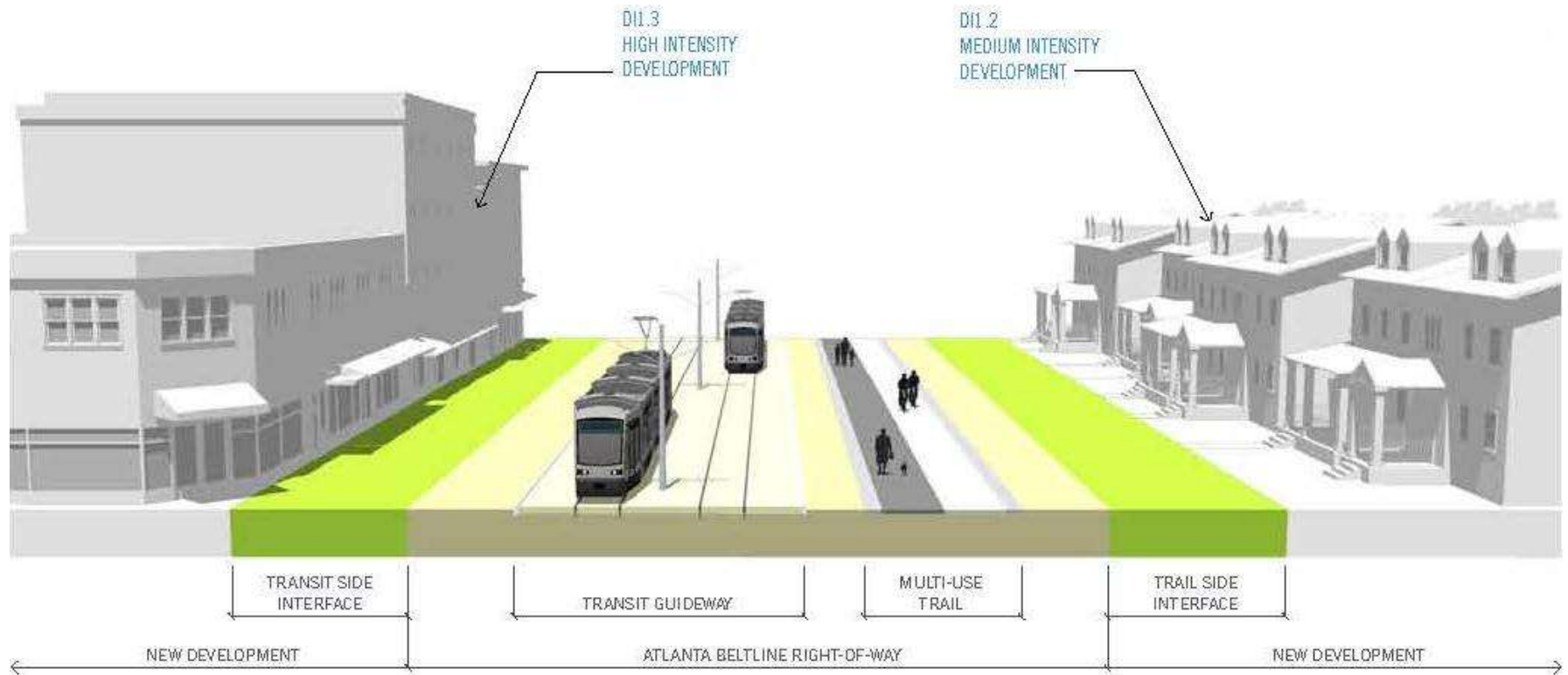
Signage + Wayfinding



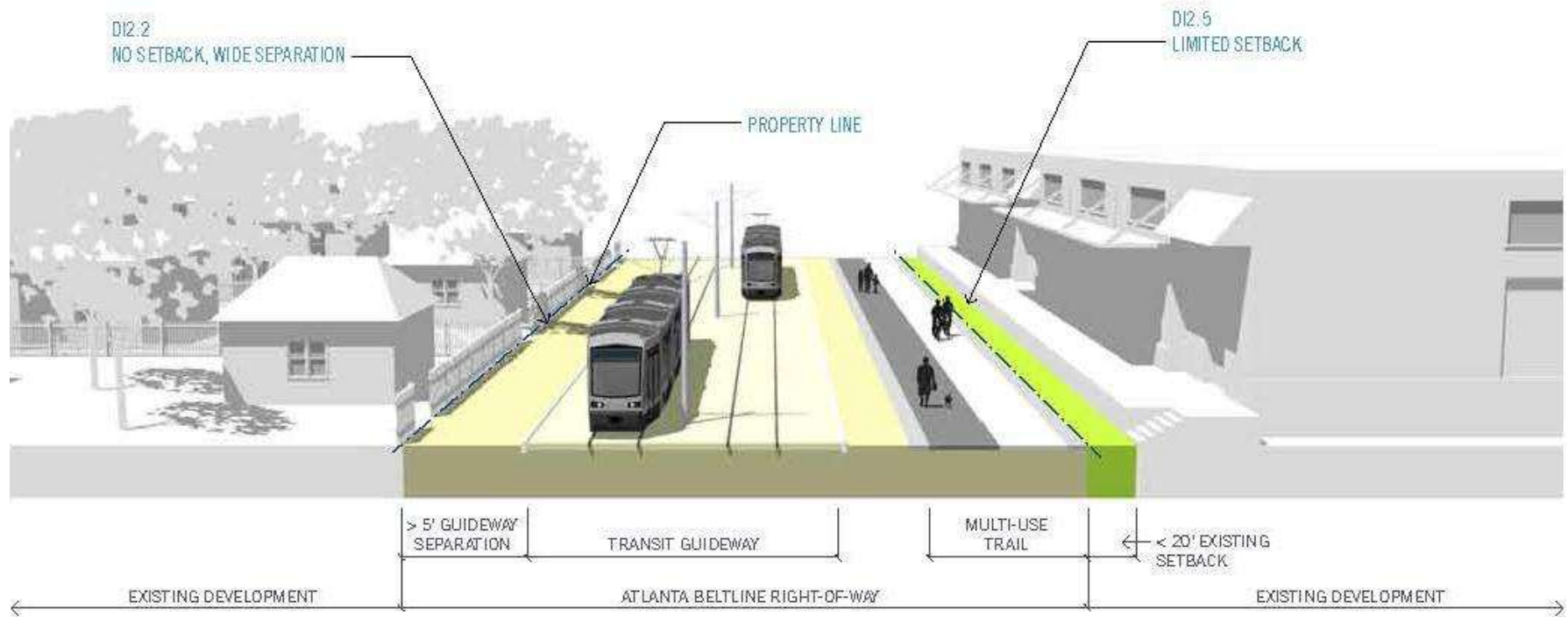
Signage + Wayfinding



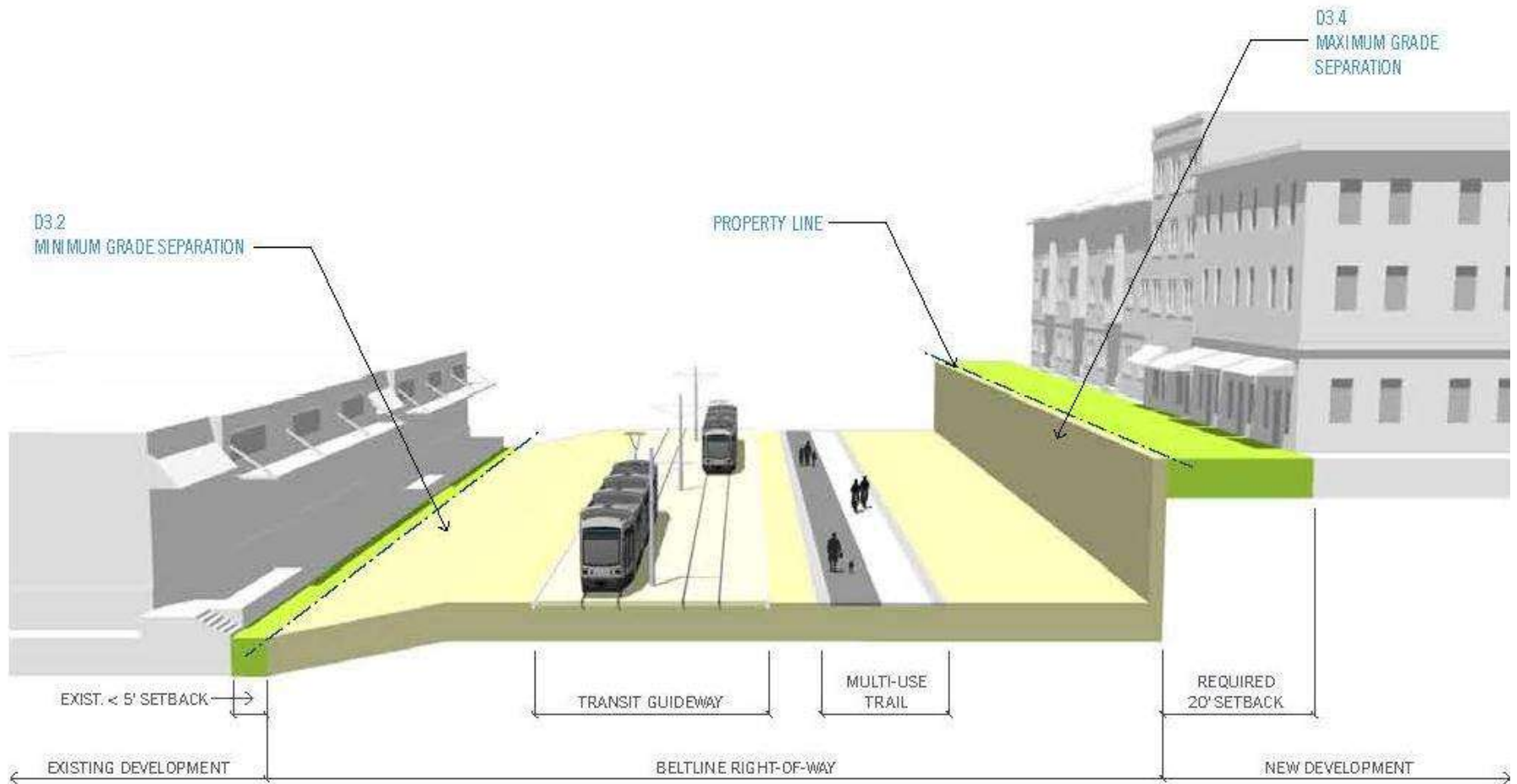
Development Interface



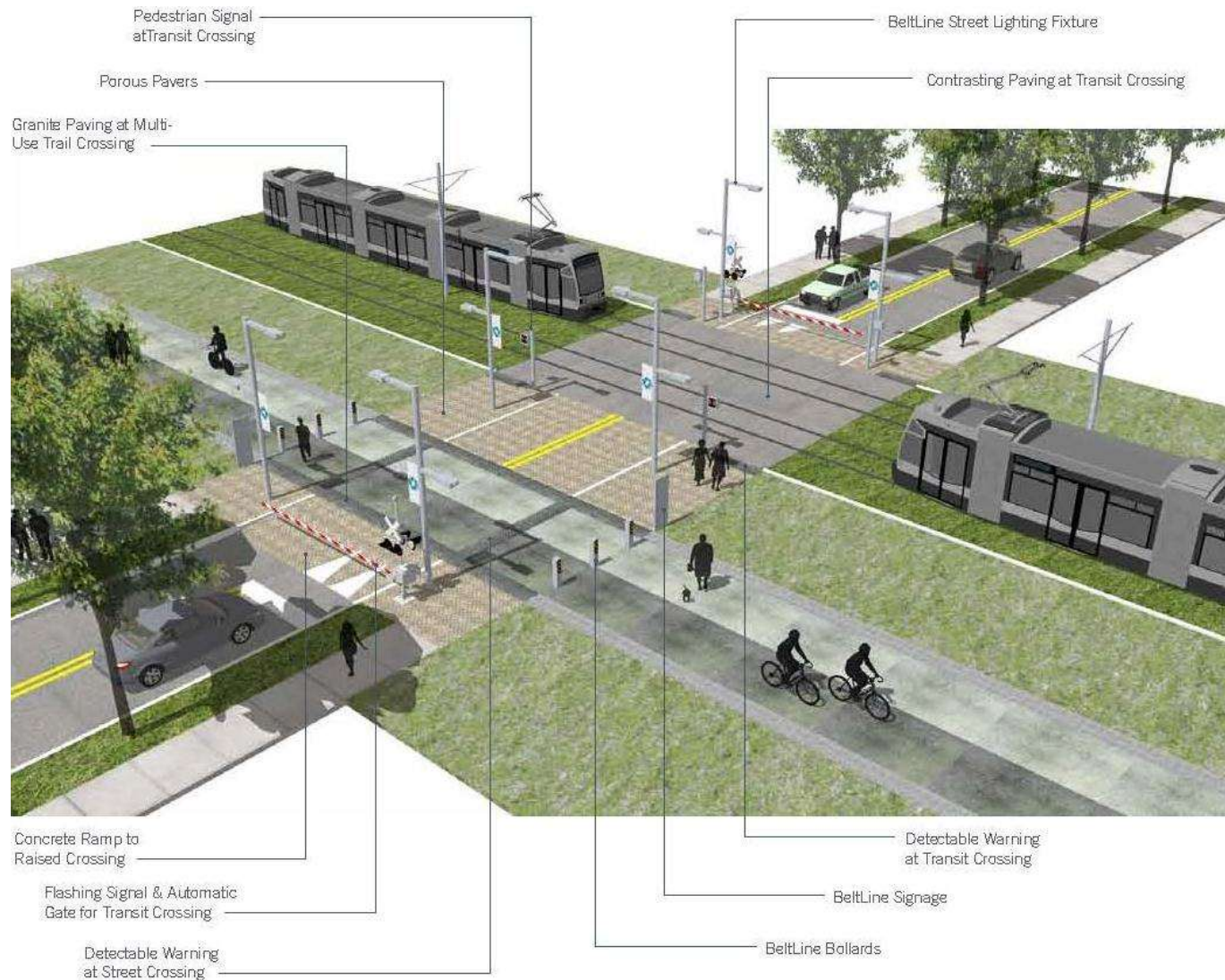
Development Interface



Development Interface



Streetscapes

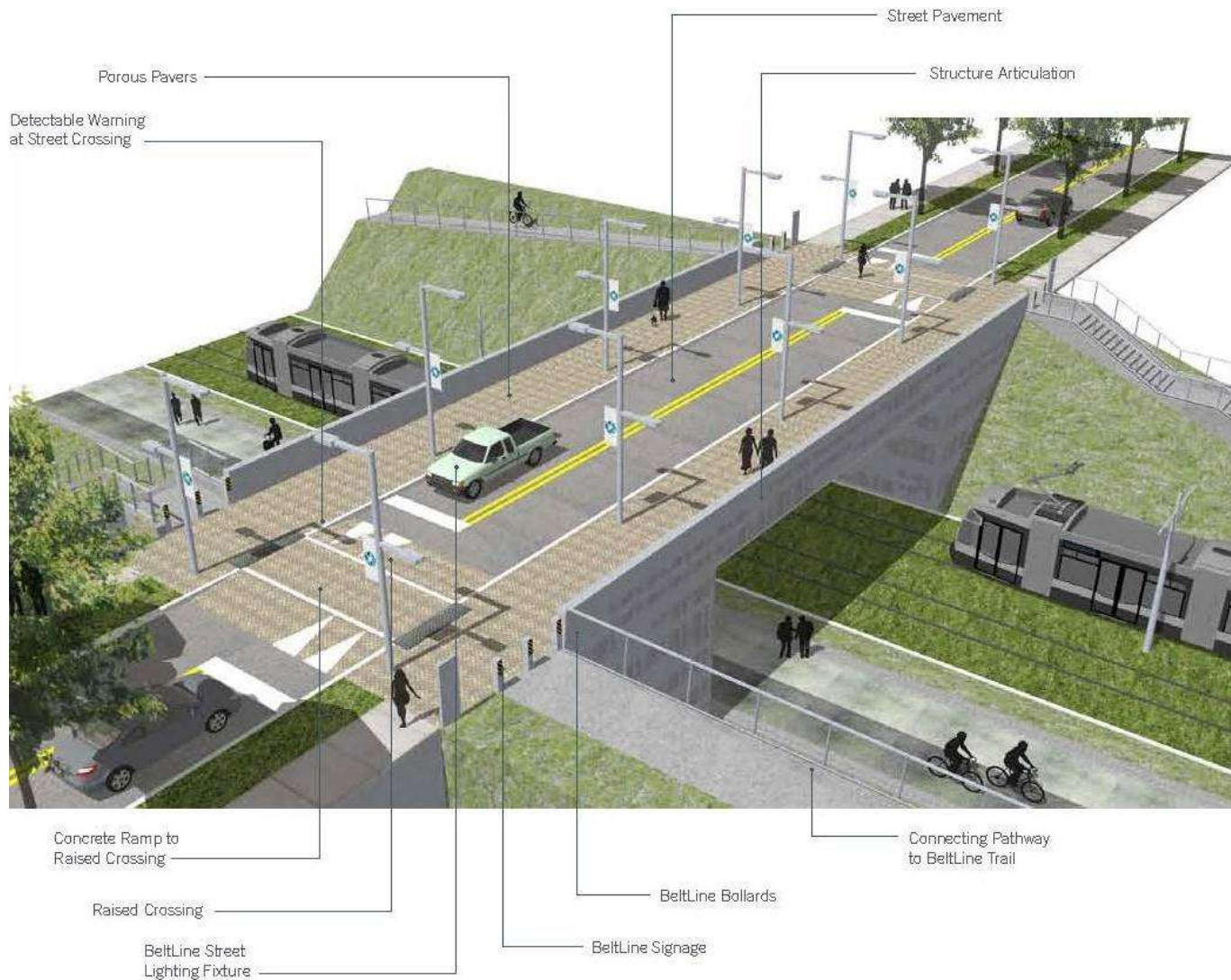


Streetscapes



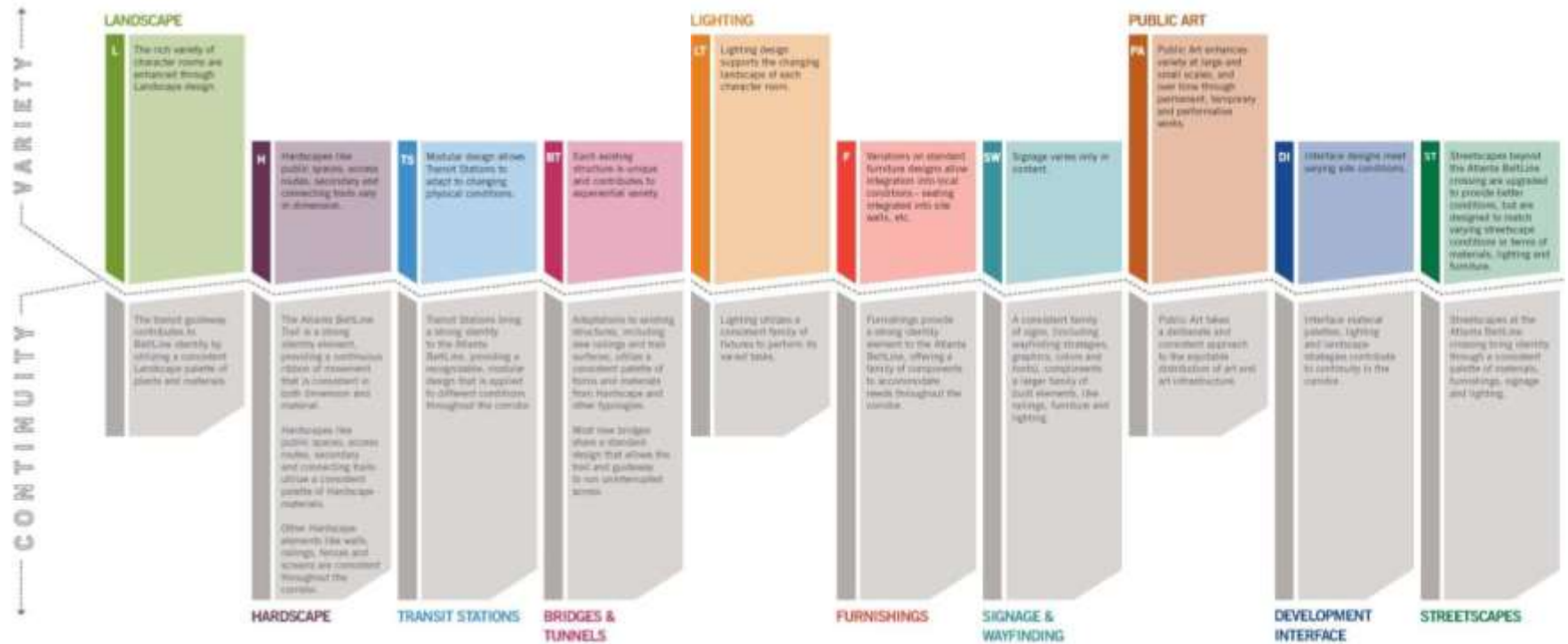
Above-Grade Crossings

Streetscapes



Below-Grade Crossings

Design Framework



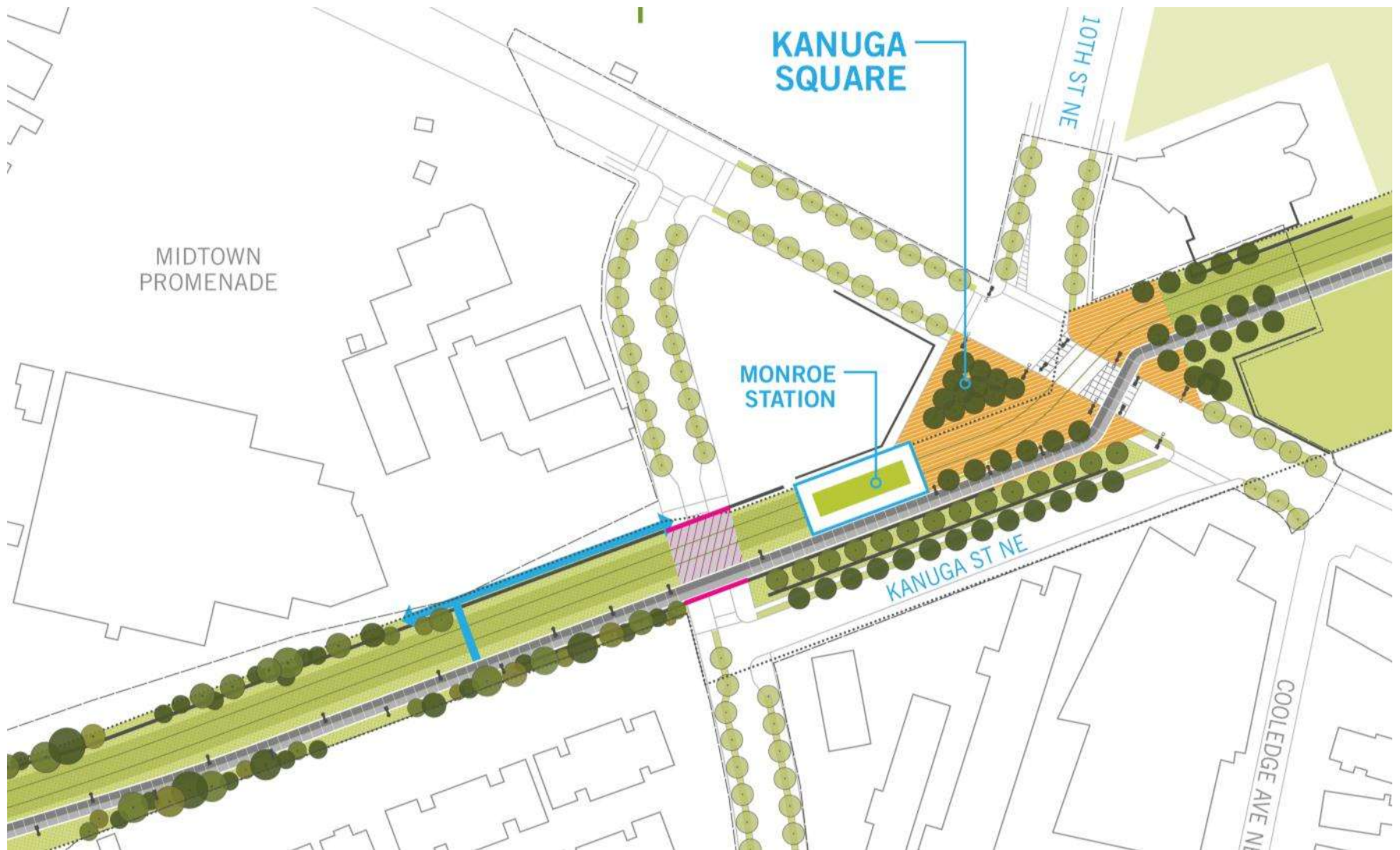
Design

Preliminary Design

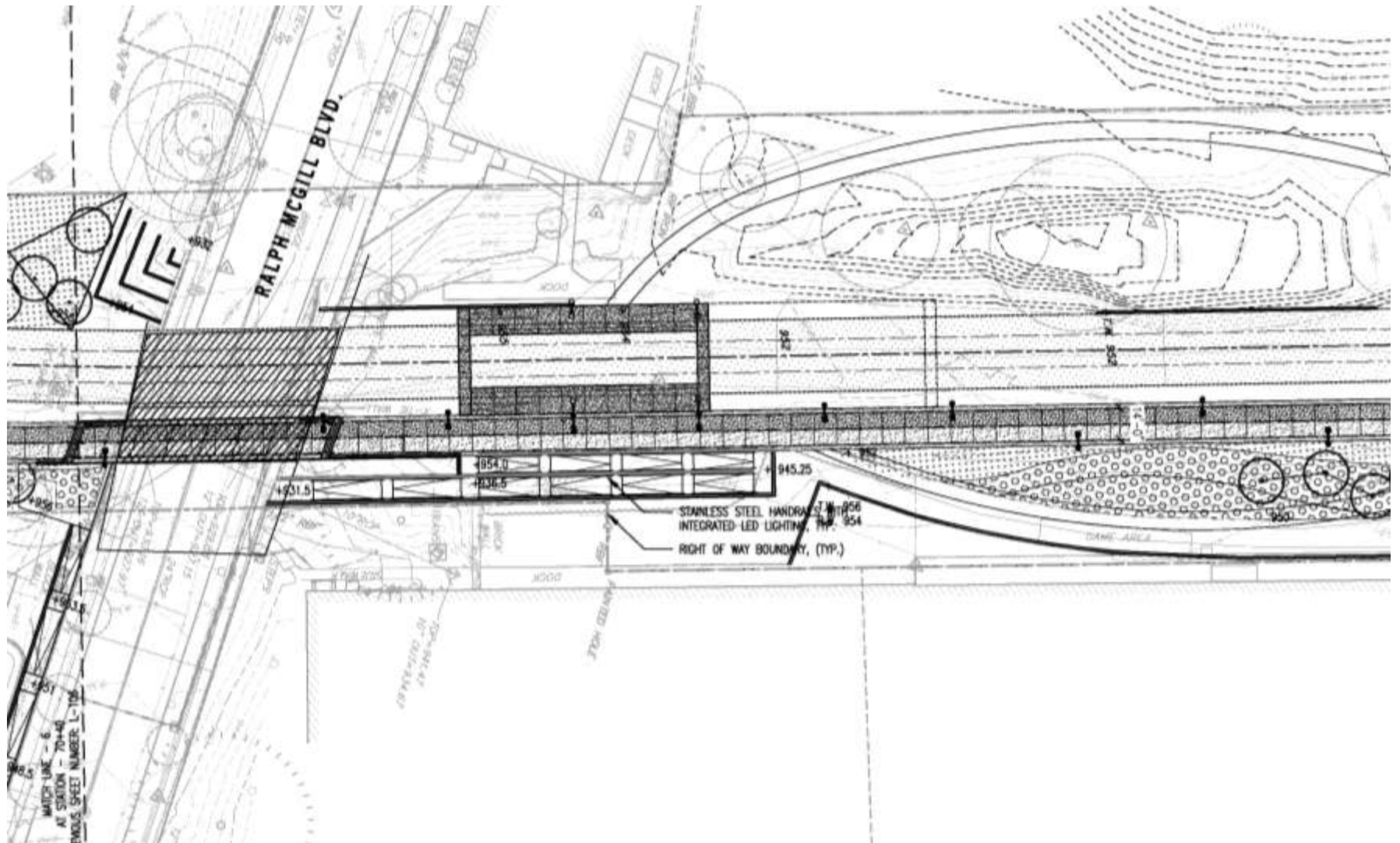


Preliminary Design

PERKINS
+ WILL



Construction Documents



Eastside Trail



September 9, 2012 – not officially open yet (RG)



Thanks!

PERKINS
+ WILL



Ryan Gravel, AICP, LEED AP
Perkins+Will
ryan.gravel@perkinswill.com

