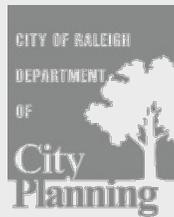


City of Raleigh Union Station Update **Passenger Rail Task Force Workshop**

Presented by City of Raleigh Staff
November 14, 2011



- **The Multi-Modal Center concept has been developing for approximately 20 years**
- **The current proposal (e.g. the retrofit of the Viaduct Building) does not diverge from the continuum of Multi-Modal center concepts**
- **This presentation demonstrates the evolution of the multi-modal concept and how new indicators can be incorporated into a facility**
- **Past Studies**
 - **1993 | DOT Study of Rail Service**
 - **1996 | Downtown Intermodal Transportation Center Feasibility Study**
 - **2002 | Downtown Raleigh Intermodal Facility Phase II Conceptual Study**
 - **2010 | Union Station: Raleigh's Multi-Modal Transit Center**



1993 DOT Study

- Recommendations:
 - “...NC Department of Transportation should continue to promote and press for intermodal stations wherever they are feasible”
 - An examination of new high-speed ground transportation technologies that could meet intercity passenger demand at these intermodal locations



1996 Downtown Raleigh Intermodal Transportation Center Feasibility Study

- Study Goal/Outcome:
 - Determine if ridership was high enough to warrant the need for an intermodal facility
 - Ridership estimations supported concept. Ridership estimated to be approximately 9,640 weekday arrivals and departures by 2020 (primarily CAT and TTA DMU riders)



1996: Study Sites

Study Process and Outcomes:

1. Determined Users

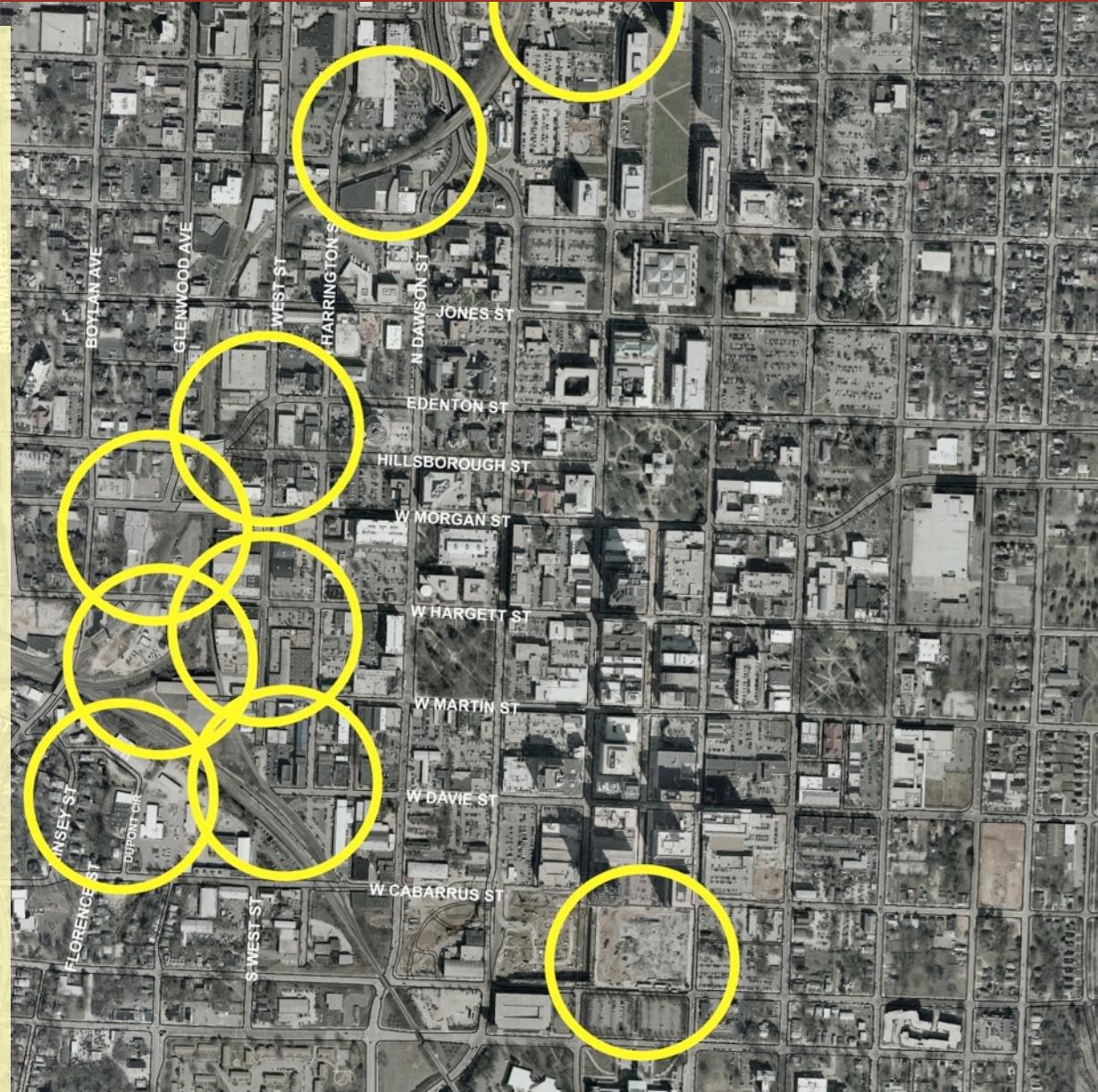
Amtrak,
TTA Regional Rail (DMU),
Greyhound/Carolina Trailways,
CAT/ TTA Bus,
Private Taxi/Limo/Airport Shuttle,
Potential High Speed Rail,
Bicycles & Pedestrians

2. Recommended Design Features

Pedestrian Spaces,
Auto Drop-off/Pick-up,
Surface Parking,
Local and Regional Bus Bays,
Intercity and Regional Platforms
Passenger waiting areas

3. Created Prototypical Designs

4. Conducted a Site Option Analysis



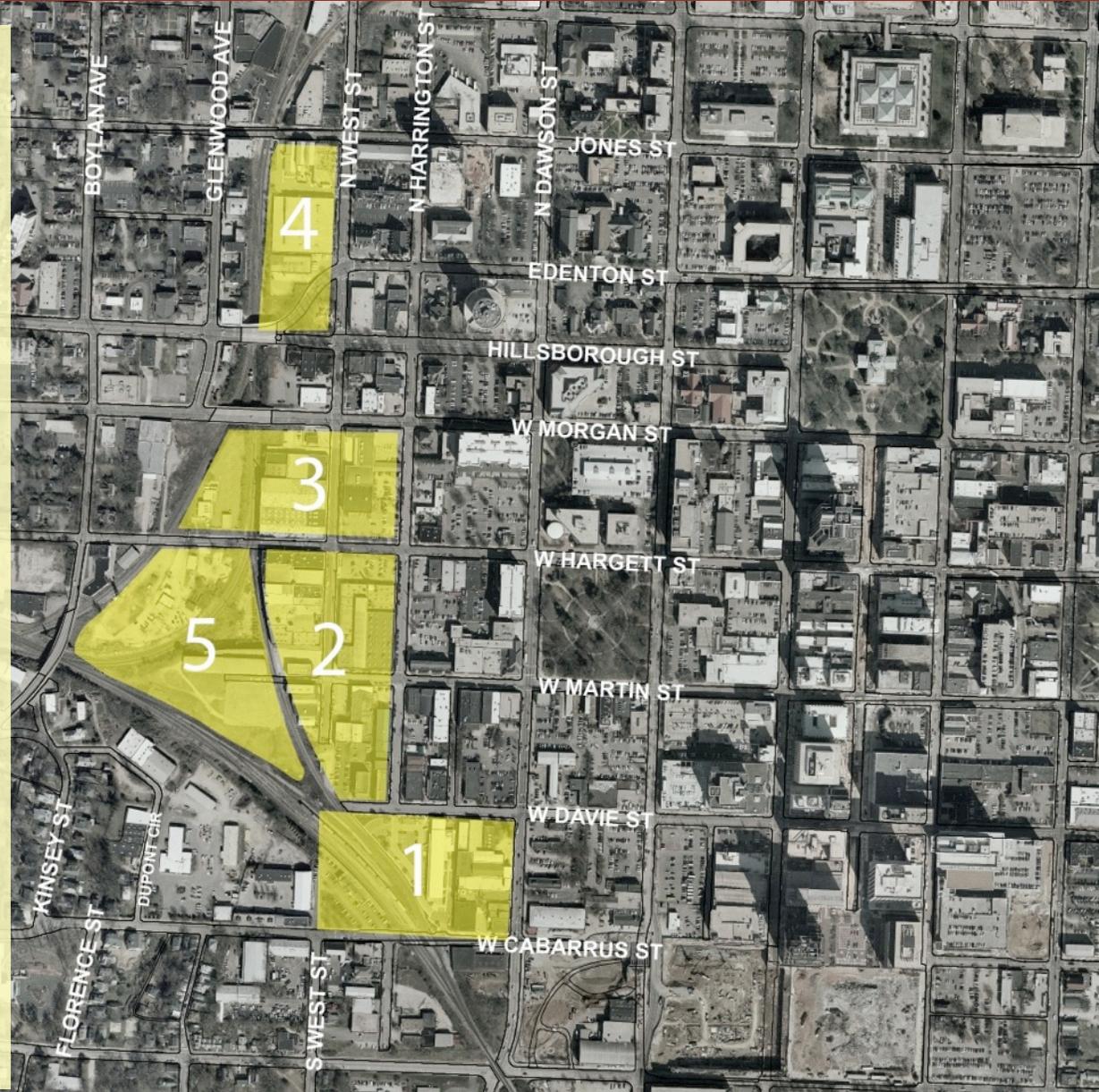
1996: Preferred Sites

5. Selected Five Sites for Detailed Analysis

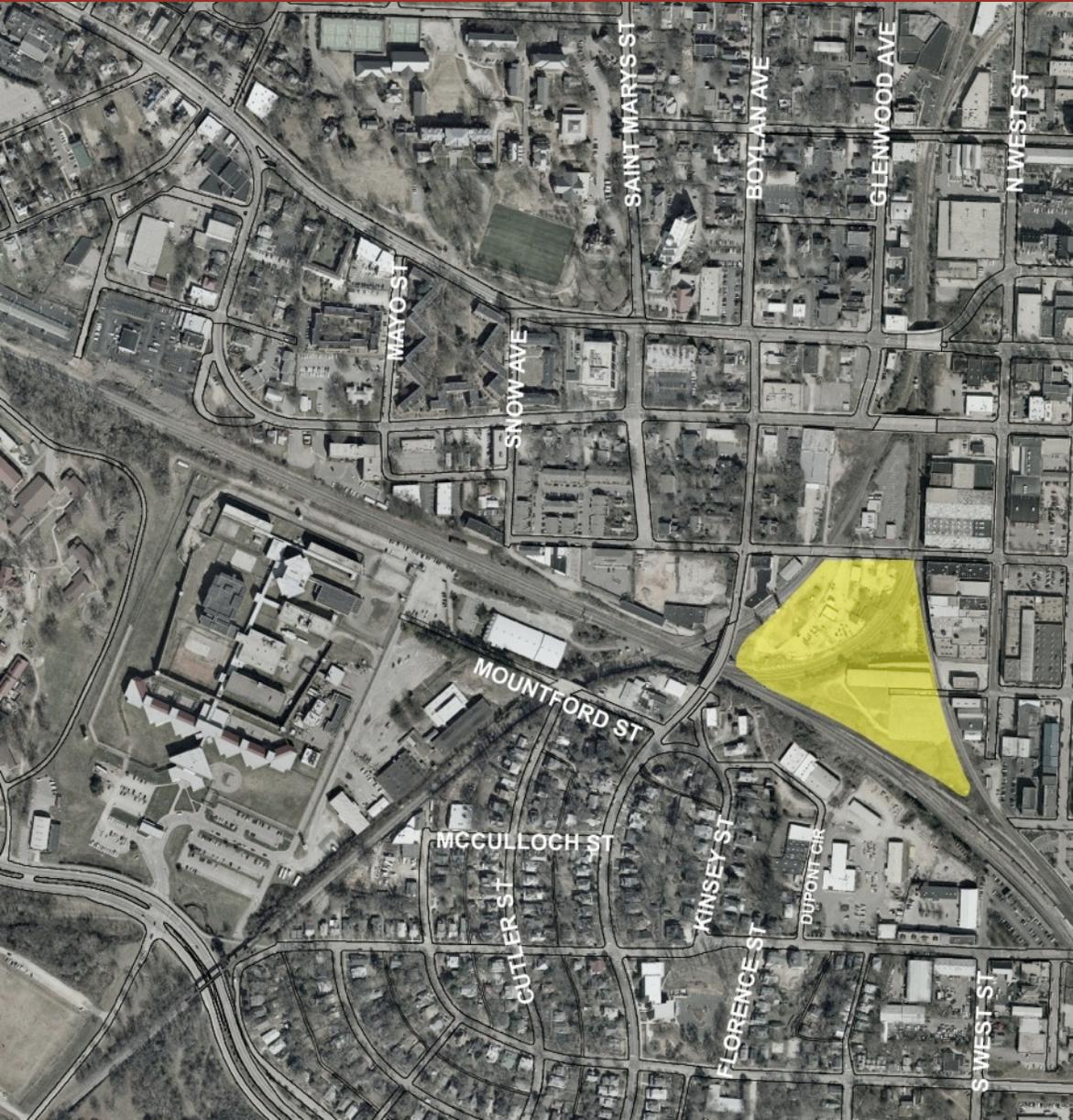
Evaluation Criteria:

- Modal Connections,
- Transit Usage,
- Travel Time,
- Cost-Effectiveness,
- Impact on Traffic and Transit Operations,
- Development Opportunities

6. Selected a Preferred Site



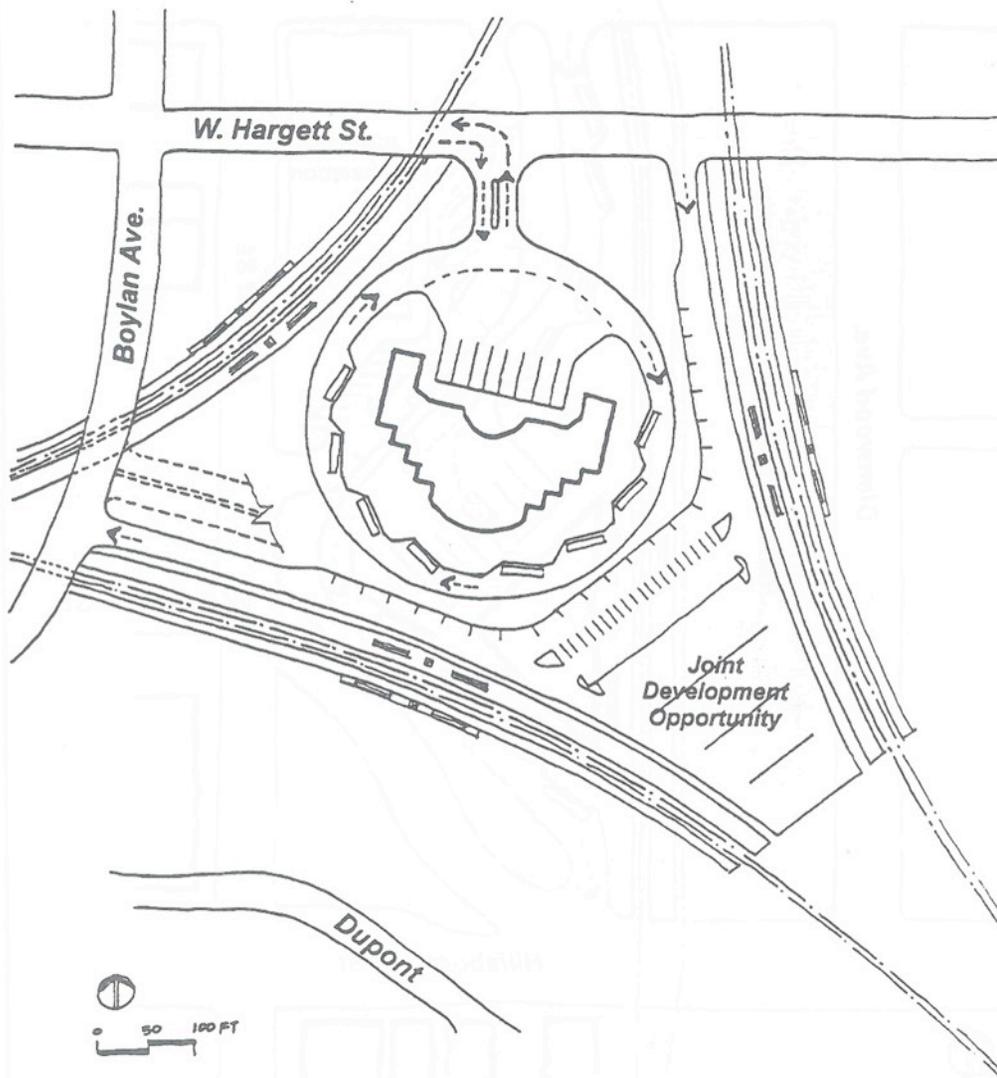
1996: Recommended Site



Site 5 recommended:

- Maximized connections among all downtown modes
- Only site that directly accommodated all potential rail passenger transfers at one location without any back-and-forth maneuvering of trains
- Size and location of site easily accommodated a staged development plan to incrementally develop the facility
- Given that the facility must be located along the railroad corridor, this site was as close as possible to the CBD and maximized its development and joint development potential

1996: Recommended Site Layout



7. Phased Implementation Plan Recommended:

- I. Signify Intent to Obtain Site Control
- II. Relocate Amtrak and Intercity Bus to an Interim Facility on the Site
\$3.4 – \$5.4 Million
- III. Add Rail Platforms and Divert Local Bus Service to Site
\$8 Million
- IV. Solicit and Implement Joint Development
Costs Absorbed by Private Sector

2002 Downtown Raleigh Intermodal Facility, Phase II Conceptual Study

- Study Goals/Outcomes:
 - Recommend a preferred concept design for an intermodal facility, including the physical space needs of modes
 - Developed two conceptual facility designs. Consensus on one preferred design not reached by sponsoring agencies.
 - Assumed relocation of freight rail tracks required for both scenarios



2002: Study Area

Study Process and Outcomes:

1. Reviewed User Requirements

Freight Concerns added

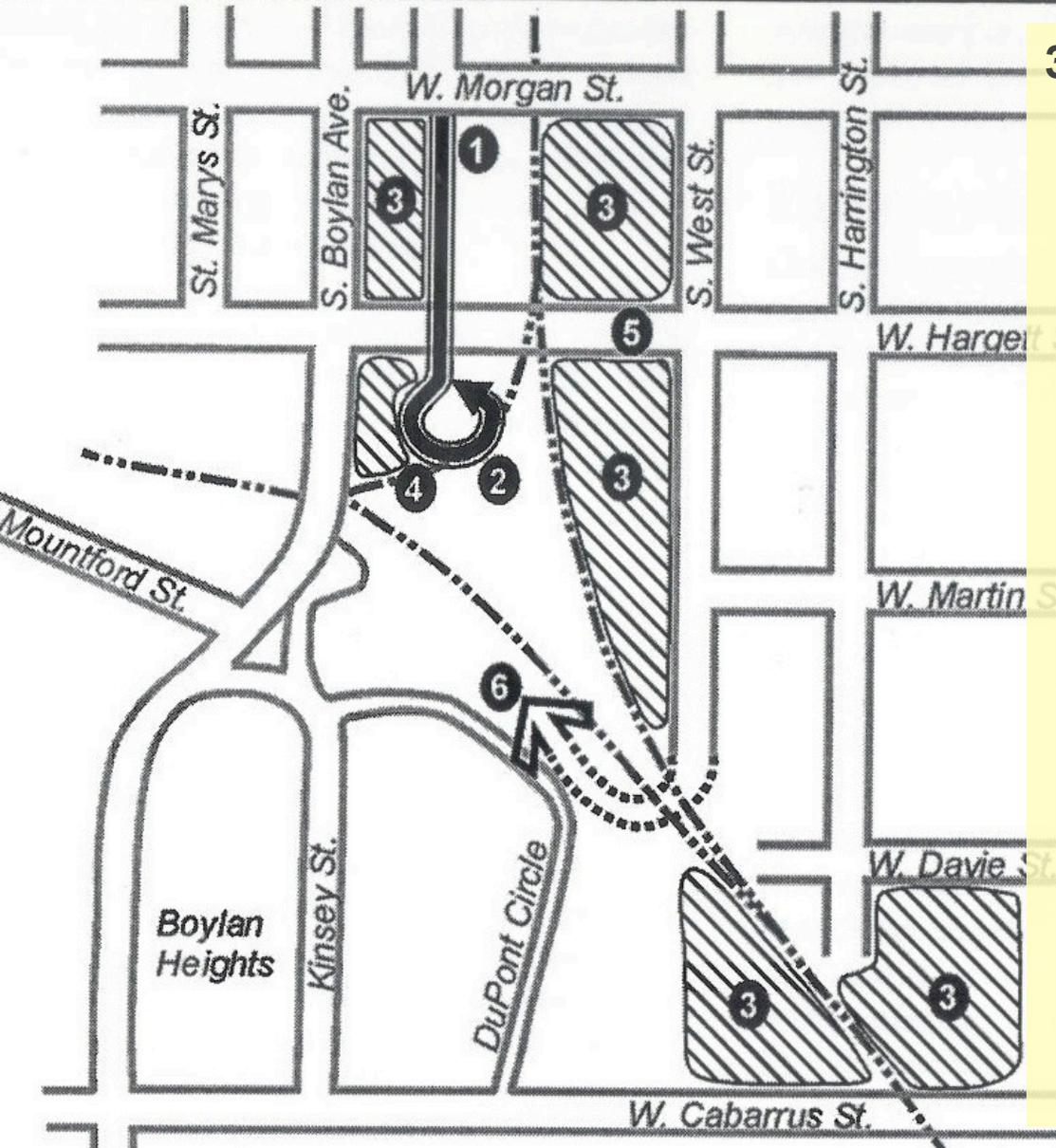
HSR not addressed

2. Determined Goals of Three Sponsoring Agencies

- Assist the state, the Triangle Region and local jurisdictions in achieving a functional multimodal transportation system that reduces private vehicle trips...
- Support the City of Raleigh in achieving its downtown and neighborhood planning objectives
- Support TTA in providing effective regional public transportation including fixed guideway transit, regional bus and ridesharing
- Assist NCDOT in developing effective intercity rail and bus service for the residents of the state and the Triangle Region
- The location and function of the Intermodal Facility should offer opportunities for joint public/private partnerships and contribute to the investment of private funds in the surrounding areas



2002: Design Guidelines



3. Identified Design Guidelines:

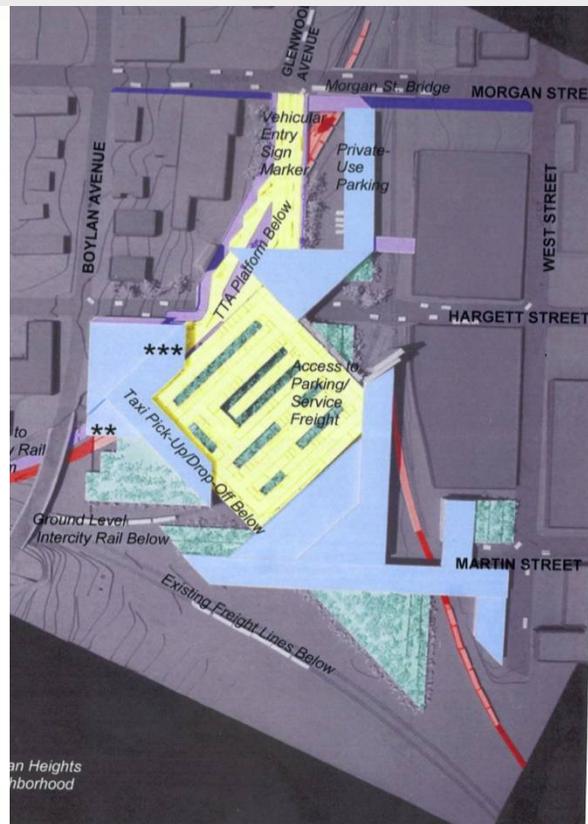
- ① Provide access to facility from Morgan Street at a point opposite the intersection Glenwood Avenue
- ② Access to the site from Morgan Street will be on a bridge terminating at the Intermodal facility. The bridge may be used for access to adjoining property as well to facilitate its redevelopment to a higher density use ...
- ③ Facility will use primarily railroad and industrial type land including the Wye property. The location should preserve redevelopment options for private property on streets bordering the site: Morgan, Boylan, West, Martin and Cabarrus
- ④ The intercity passenger station portion of the facility will be located in proximity to the proposed intercity passenger platforms located west of the Boylan Bridge
- ⑤ Hargett will remain open as a through public street between West St and Boylan Ave
- ⑥ For the “Wye” Facility option a grade separated crossing of the single track on the east side of the wye will be sought.

2002: Design Alternative



LEGEND

- TTA Rail/Bus
- **** Intercity Rail
- ***** Intercity Bus Below
- Vehicular Access
Bus/Autos
Kiss & Ride
Parking
Taxi/Rental Car
- Pedestrian/
Bicycle
- Joint
Development
(Private)
- Terraced
Landscape



4. Recommended Space Requirements
66,000 sqft - \$50-75 Million

5. Developed Two Design Alternatives (Wye, Morgan/Hargett)

- Evaluation Criteria:**
- Accessibility of the Site;
 - Accommodation of the Space/Function for Users;
 - Support Development/Redevelopment/Joint Development;
 - Impact on Adjoining Neighborhoods;
 - Contribute to Urban Form
 - Contribute to Passenger flow between Modes

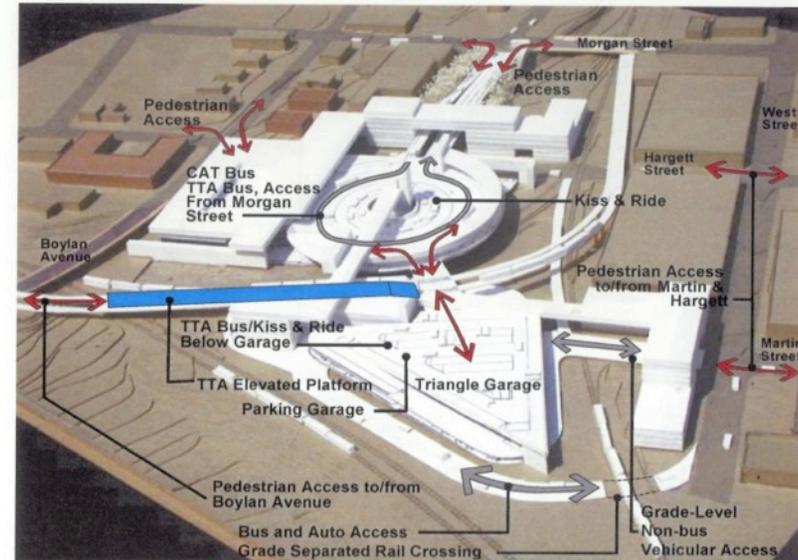


2002: Wye Alternative

6. Study data indicated a preferred location – “Wye Location” – but stakeholders could not reach consensus

7. Recommended Implementation Plan

- I. Determine Key Development Parameters for Facility
 - Determine feasibility potential of relocating N-S tracks
 - Determine TTA platform location
- II. Develop Management & Implementation Plan, including roles of Stakeholders
- III. Develop Funding Strategy



TTA Operations and Pedestrian Access



Intercity Bus Operations

2002: Wye Alternative

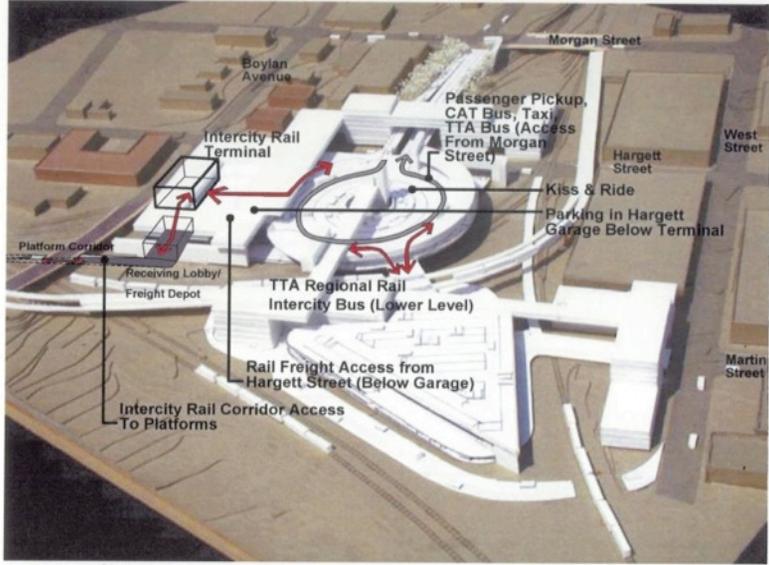


Figure 8.
Intercity Rail O

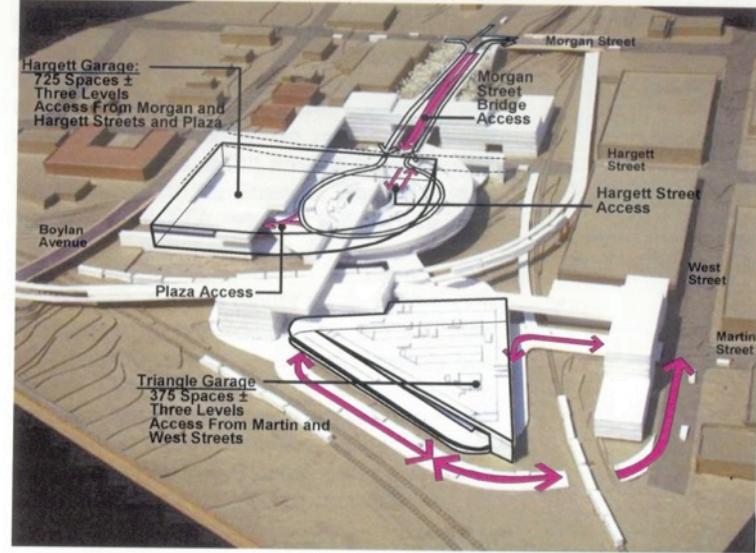


Figure 10.
Garage Operations



Figure 9.
Support Transit Services

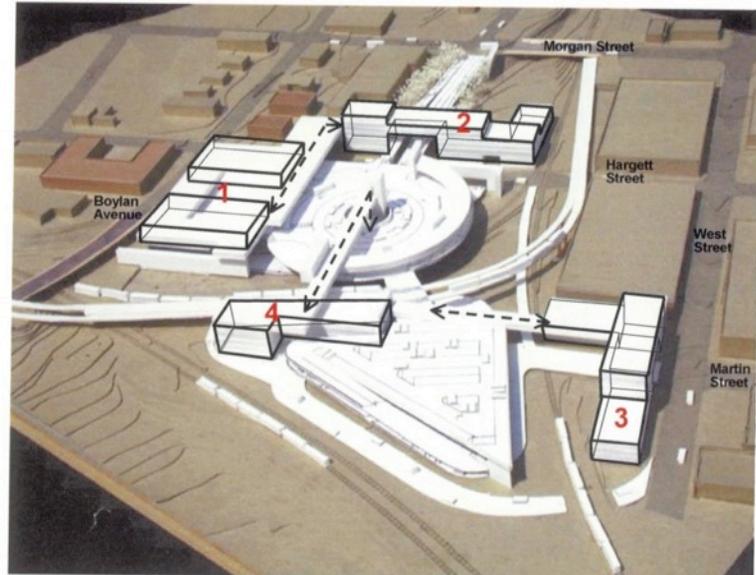
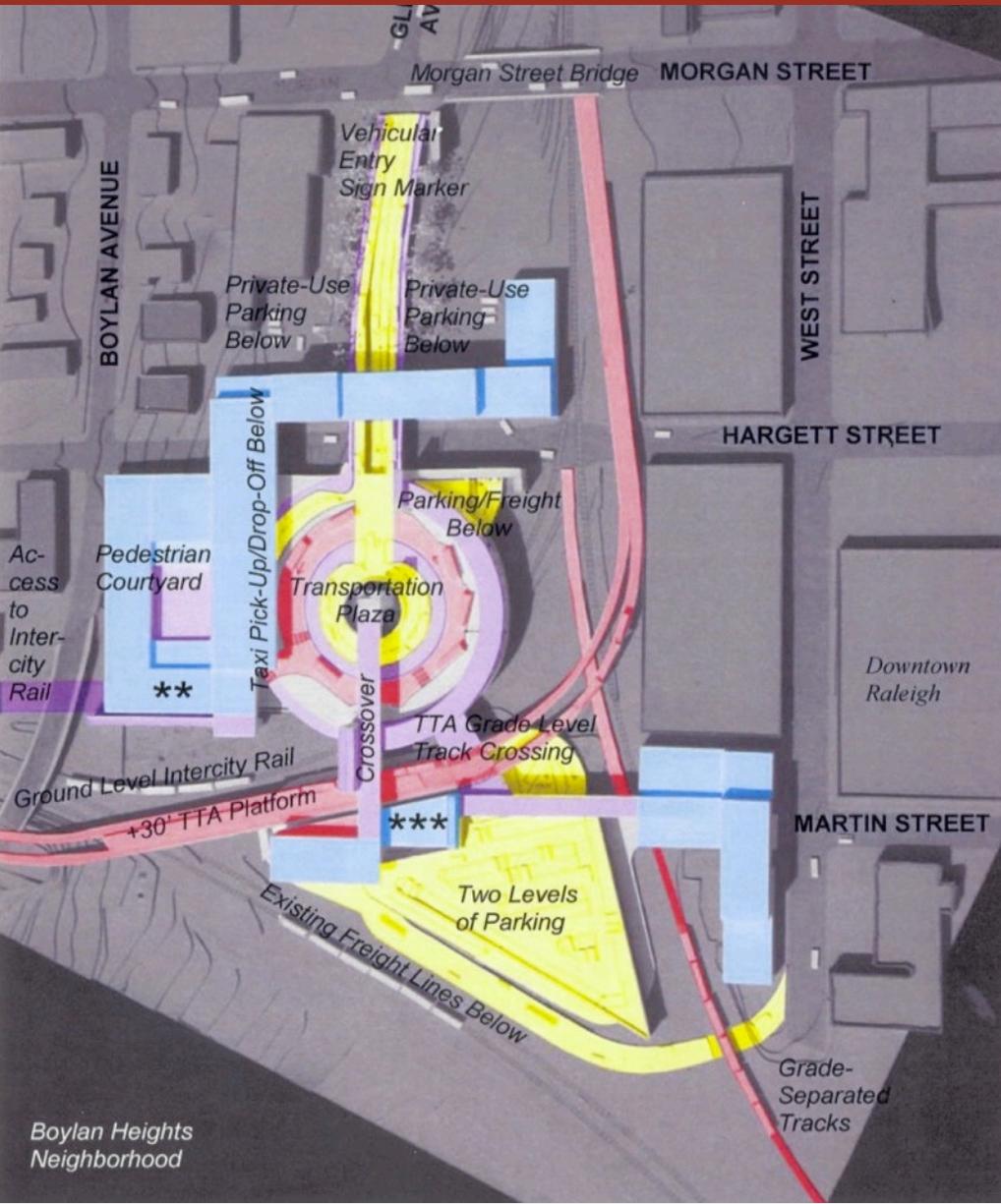


Figure 11.
Private Development

2002: Wye Alternative



Wye Alternative rated higher for the following reasons:

- Provides access to/from Morgan, Hargett, and Martin (E-W); and West, Glenwood, and Boylan-pedestrians (N-S)
- Greater capacity for bus, taxi, and shuttle vehicles
- The access bridge from Morgan to the Hargett Garage would be a key access way and could serve as an upper level connector to properties adjoining the bridge
- Provides improved pedestrian path over the existing freight railroad tracks that presently separate the Boylan Avenue residential areas from downtown

2010 Union Station: Raleigh's Multi-Modal Transit Center

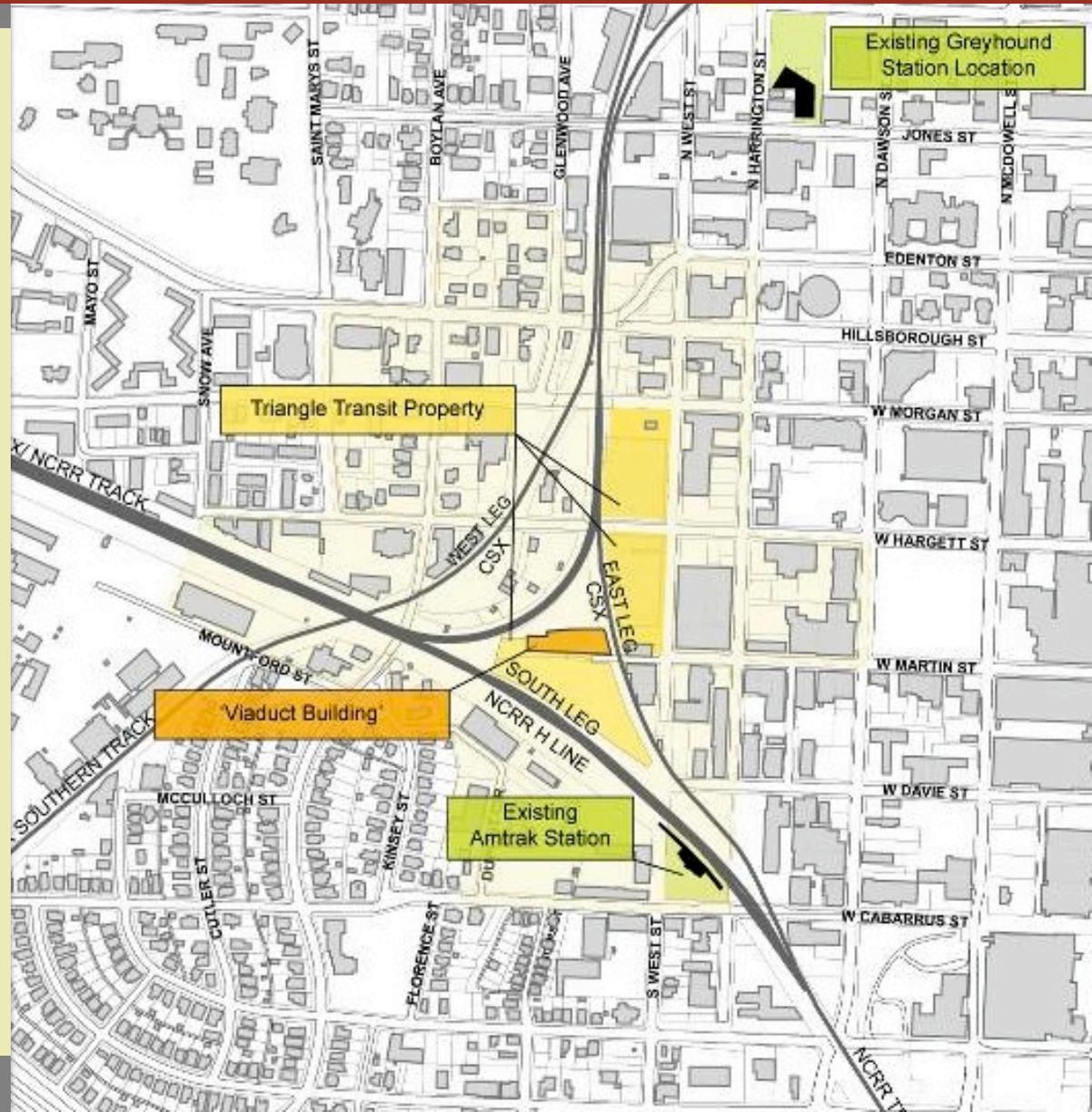
- Study Goals/Outcomes:
 - Feasibility study to reevaluate the potential to create a multimodal facility combining all Downtown modes of transportation
 - Identify location of existing and future transit service areas
 - Define the facility elements that contribute to and establish a sense of place
 - Identify a development strategy for the surrounding area
 - Provide convenient connections to the community, between station platforms, waiting rooms, and service areas



2010: Study Area

Study Process and Outcomes:

1. Reviewed User Requirements
 - SEHSR as important component
 - New TTA Commuter Rail Service
 - New Light Rail Component
2. Recommended Design
 - Goals & Guidelines
 - Increase Transit Use
 - Establish a transit Identity
 - Allow for and Plan for Future Modes
 - Tie together Western edge of Downtown
 - Anchor the Downtown Circulator
 - Create a Gateway Destination
 - Maximize Developable Space/Parcels

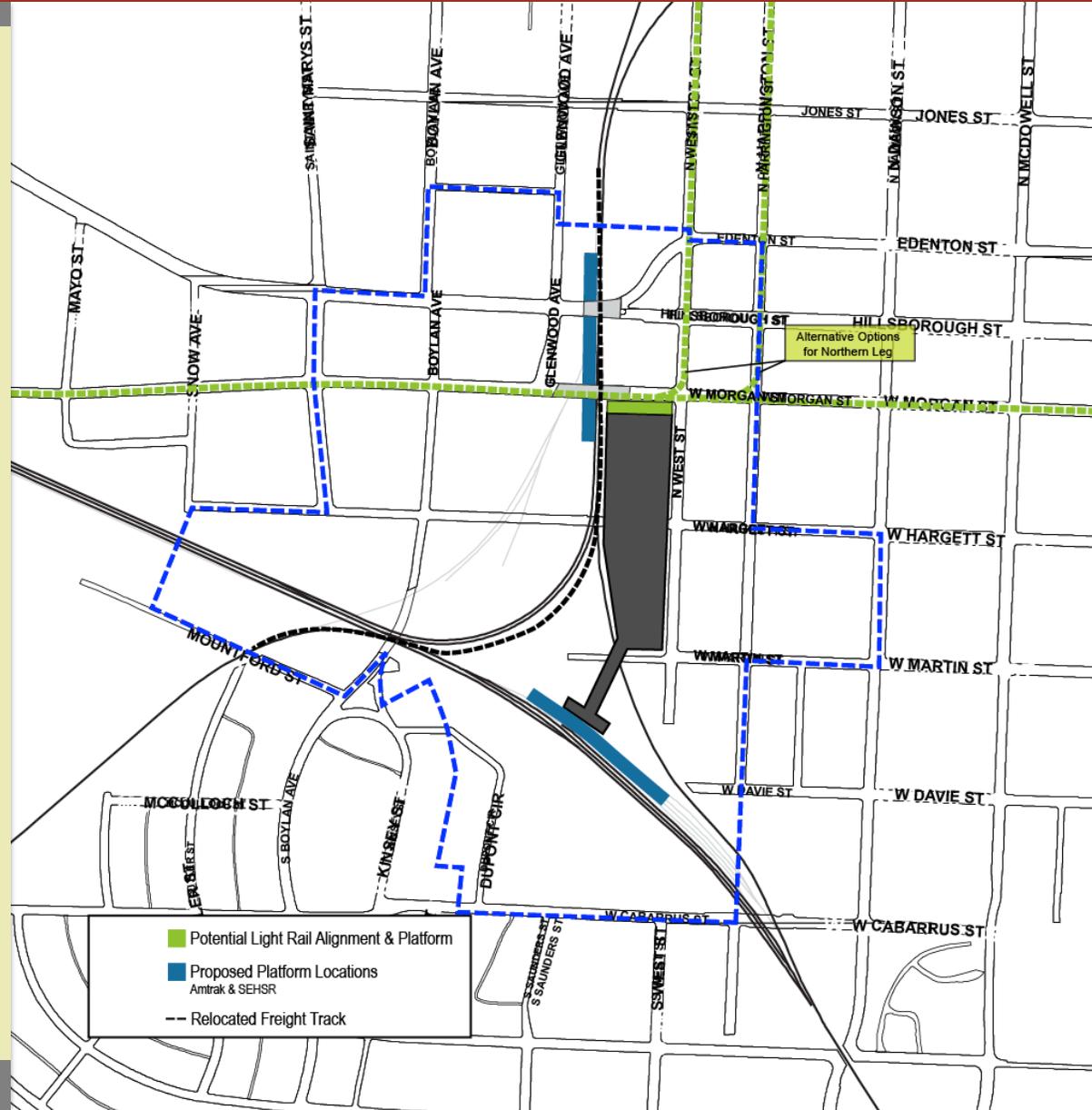


2010: Platform and Facility Location

3. Established Platform Locations
New Amtrak Intercity Platform
located within wye

SEHSR platform located under
Morgan And Hillsborough bridges

Proposed West Morgan Street LRT
alignment



2010: Land Use and Density for Study Area

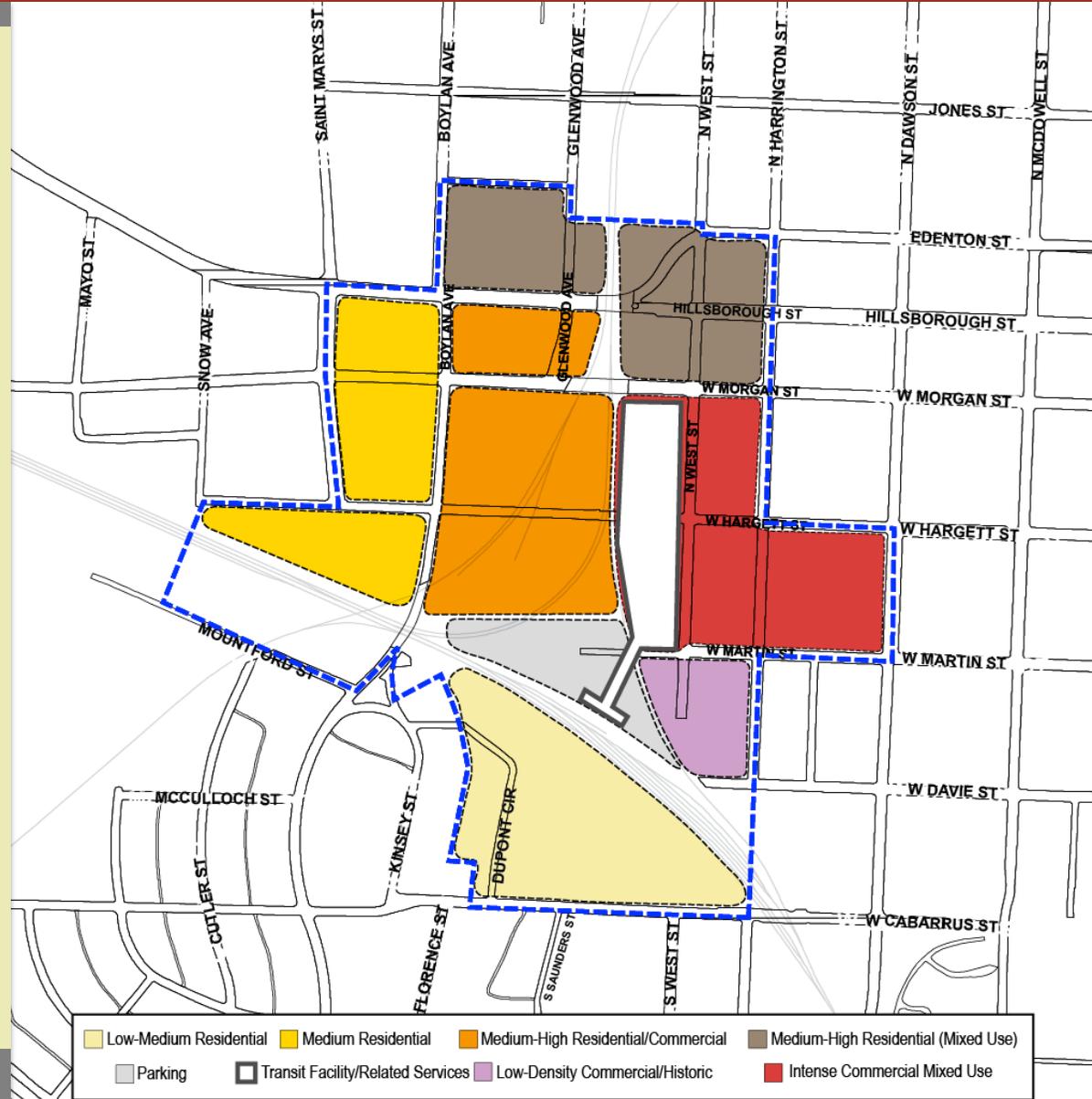
4. Recommended Development Scheme for area

Intense Commercial Mixed Use adjacent/to the east of station

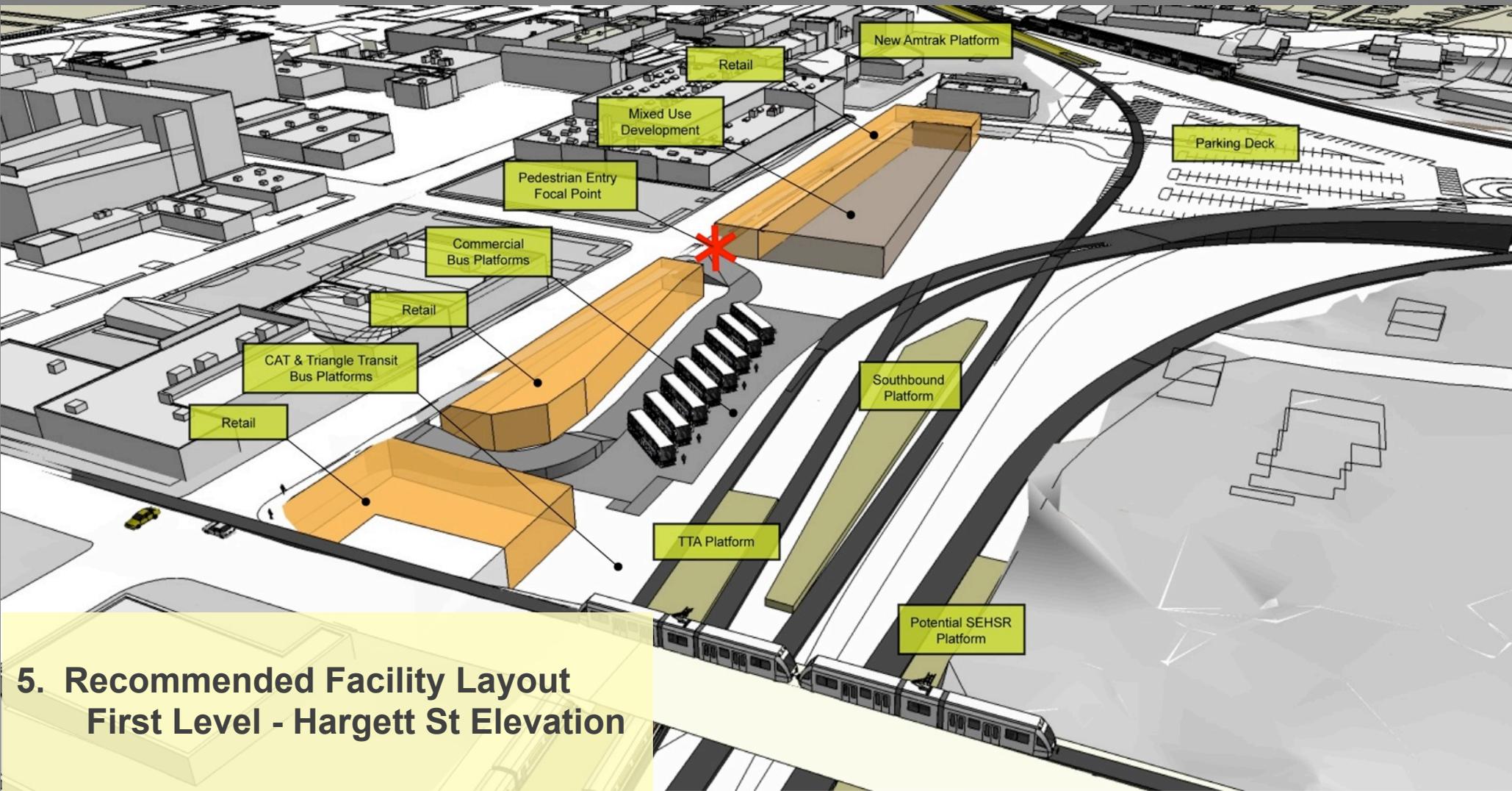
Medium High Residential/Mixed Use and Medium High Residential/Commercial for areas north and west of facility, respectively

Proposed development above transit facility in a series of towers

Proposed Parking within wye



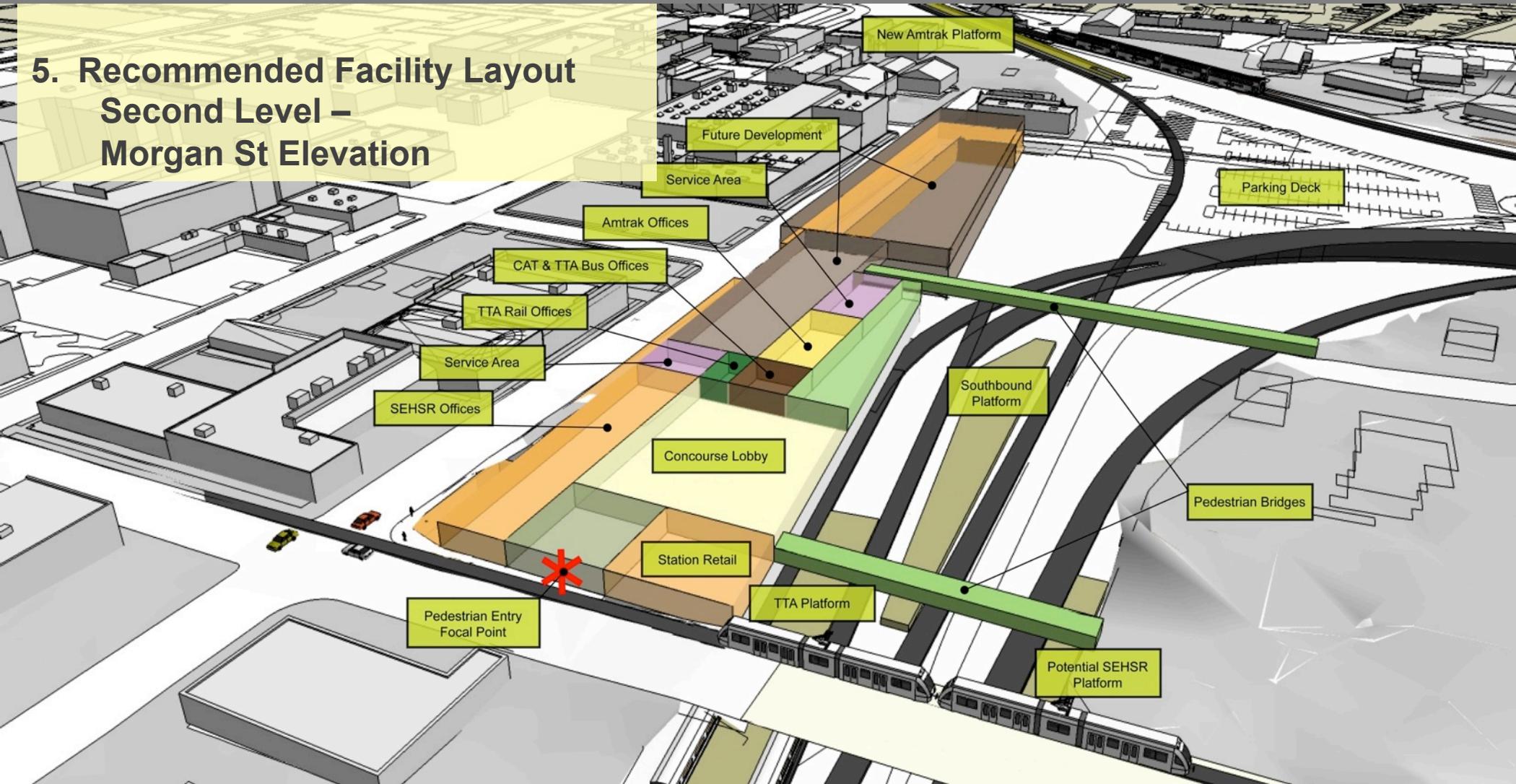
2010: Facility Layout



5. Recommended Facility Layout First Level - Hargett St Elevation

2010: Facility Layout

5. Recommended Facility Layout Second Level – Morgan St Elevation



2010: Massing Model

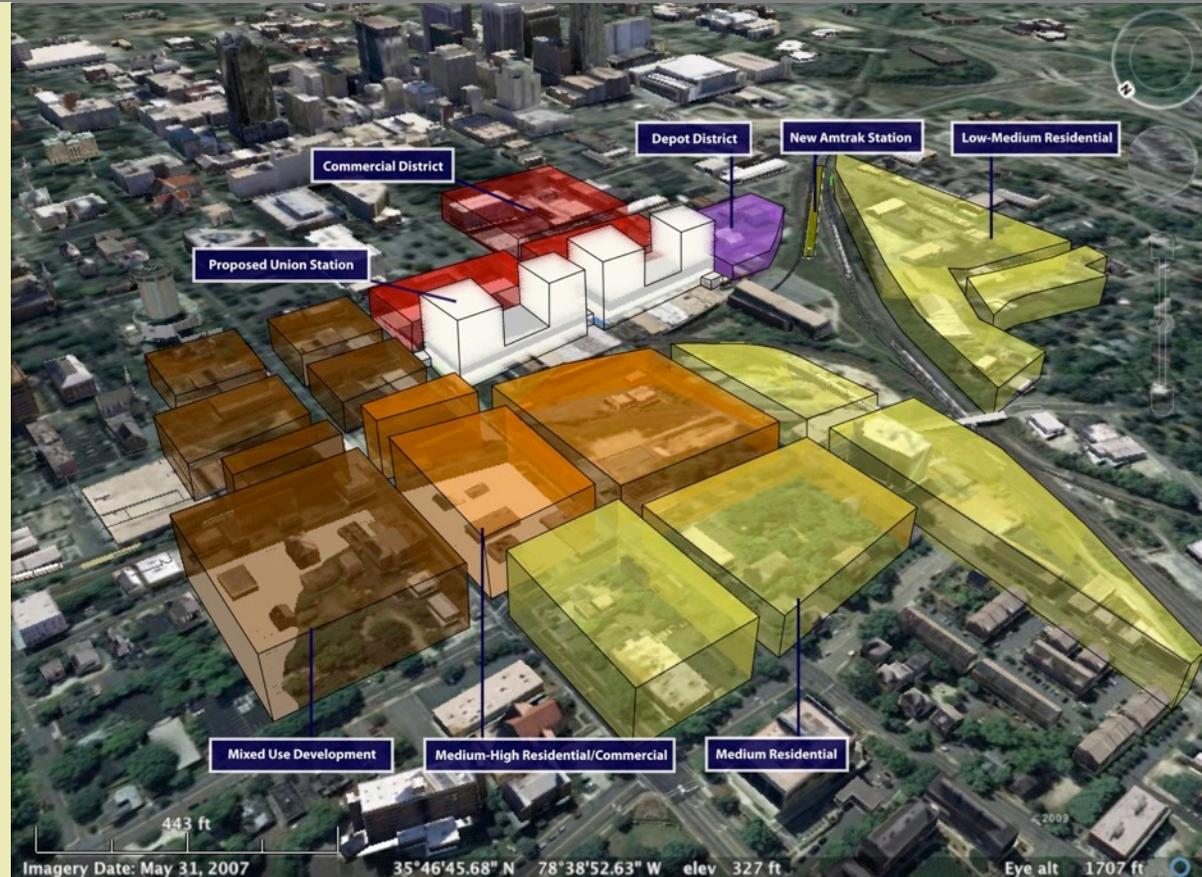
5. Recommended Phasing Plan
0. Environmental Clearance and Preliminary Engineering
\$10 – \$11.3 Million

I. Amtrak Relocation
\$31.6 - \$41.7 Million

II. Greyhound Relocation
\$16.6 – \$29.1 Million

III. Full-Union Station Buildout
\$74.2 - \$139.6 Million

Total - \$150.9 – \$212.4 Million



2011 Raleigh Train Station

- Study Goals/Outcomes:
 - Feasibility study to evaluate the adaptive reuse of the Viaduct Building into a passenger train facility
 - This building can serve as the passenger processing/waiting for the overall Union Station facility
 - Initial study shows building retrofit feasible



Union Station Study (“MTC”) Location Based Upon:

- **Best available information on proposed platform locations at the time**
- **Convenient transfer between majority of modes**
- **Proximity to and view from downtown on Hargett Street**
- **Distance between Amtrak and other rail platforms remained an issue**

Amtrak Alternate Location Based Upon:

- **Closer location to other proposed rail platforms**
- **Serves immediate and future Amtrak need for additional passenger space**
- **Adaptive reuse of existing buildings provides substantial cost savings**
- **Exceptional view from downtown on Martin Street**
- **Supports redevelopment of TTA property and emerging arts district**



Projects compared based on the following elements:

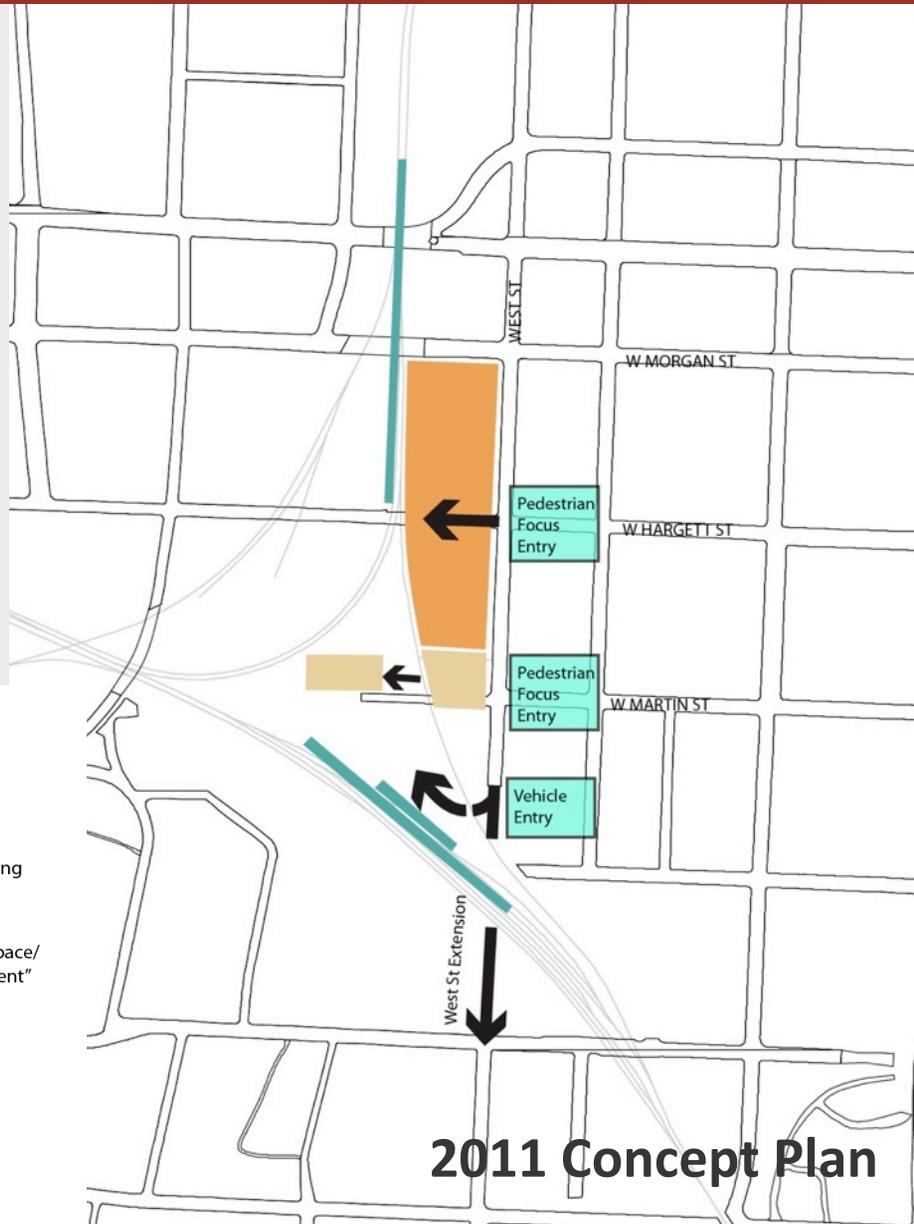
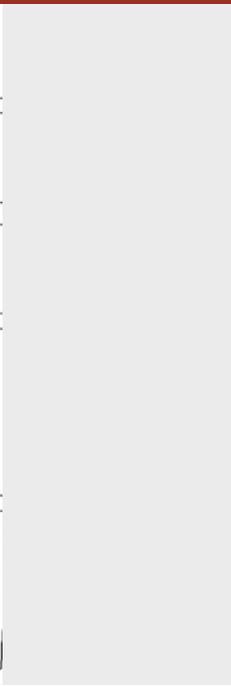
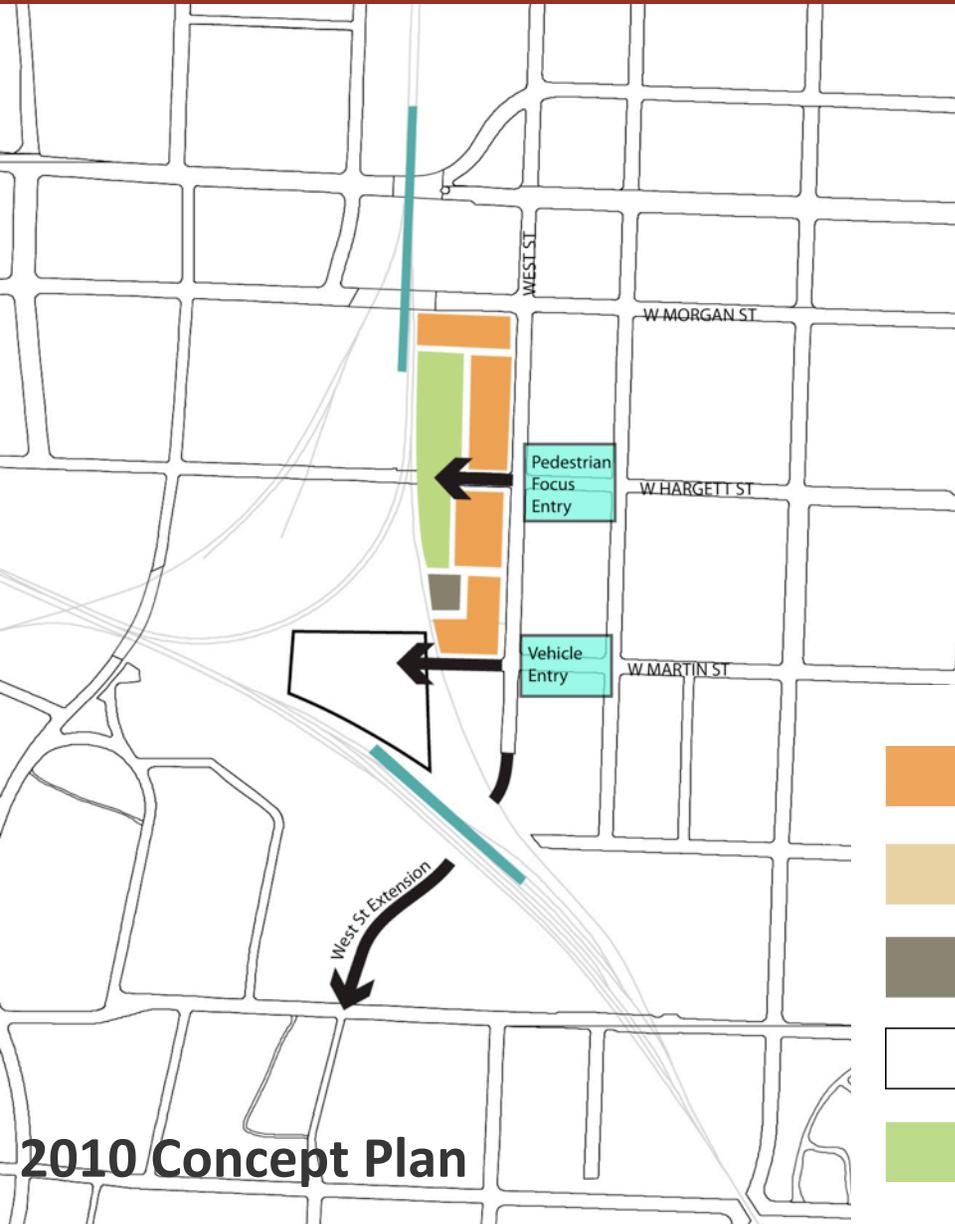
- **Facility Layout**
- **Platform locations**
- **Building Massing**
- **Development Strategy**

NCDOT Proposal does not address:

- **Long-term Parking Needs**
- **Bus Transfer Space**
- **Connecting into a full weather protected facility**



Comparison 2010 to 2011: Facility Layout – First Level

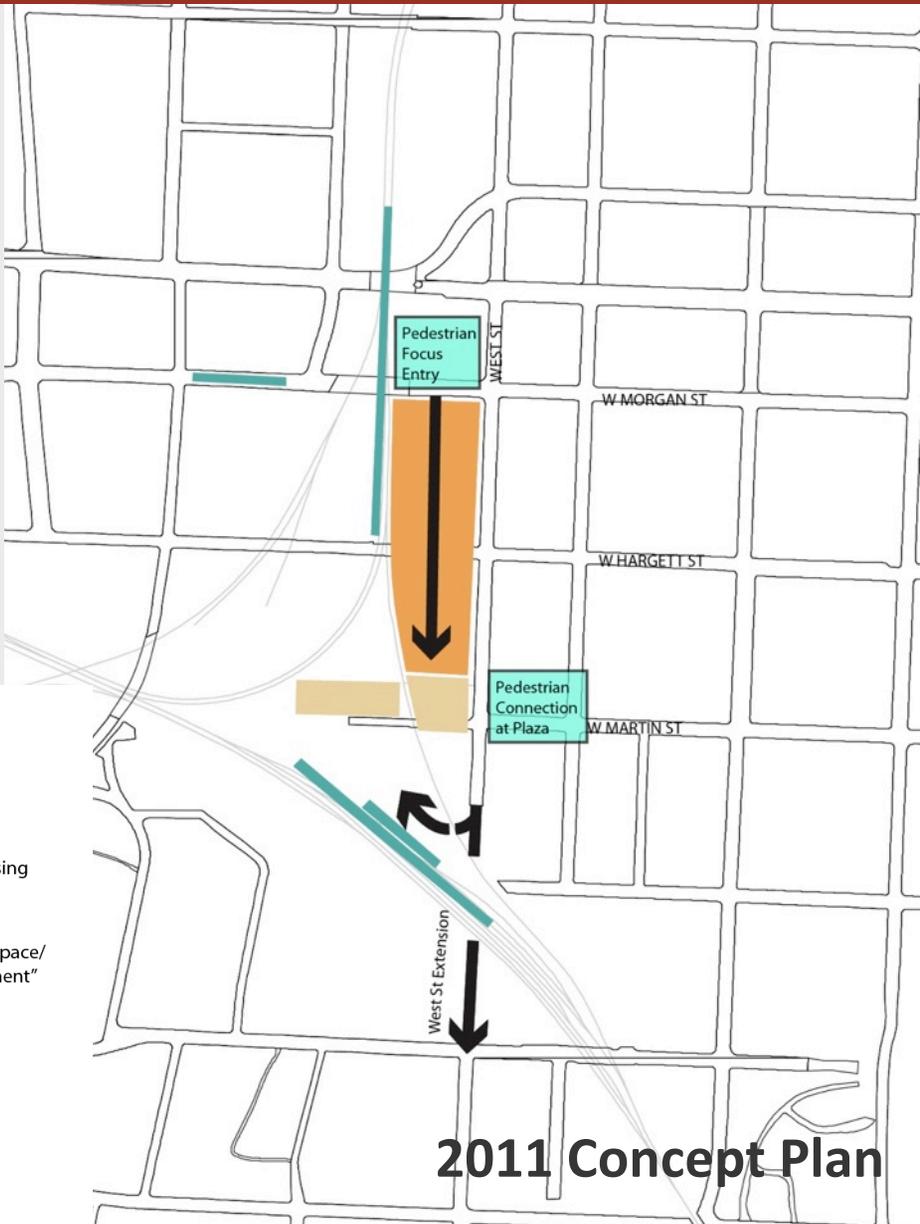
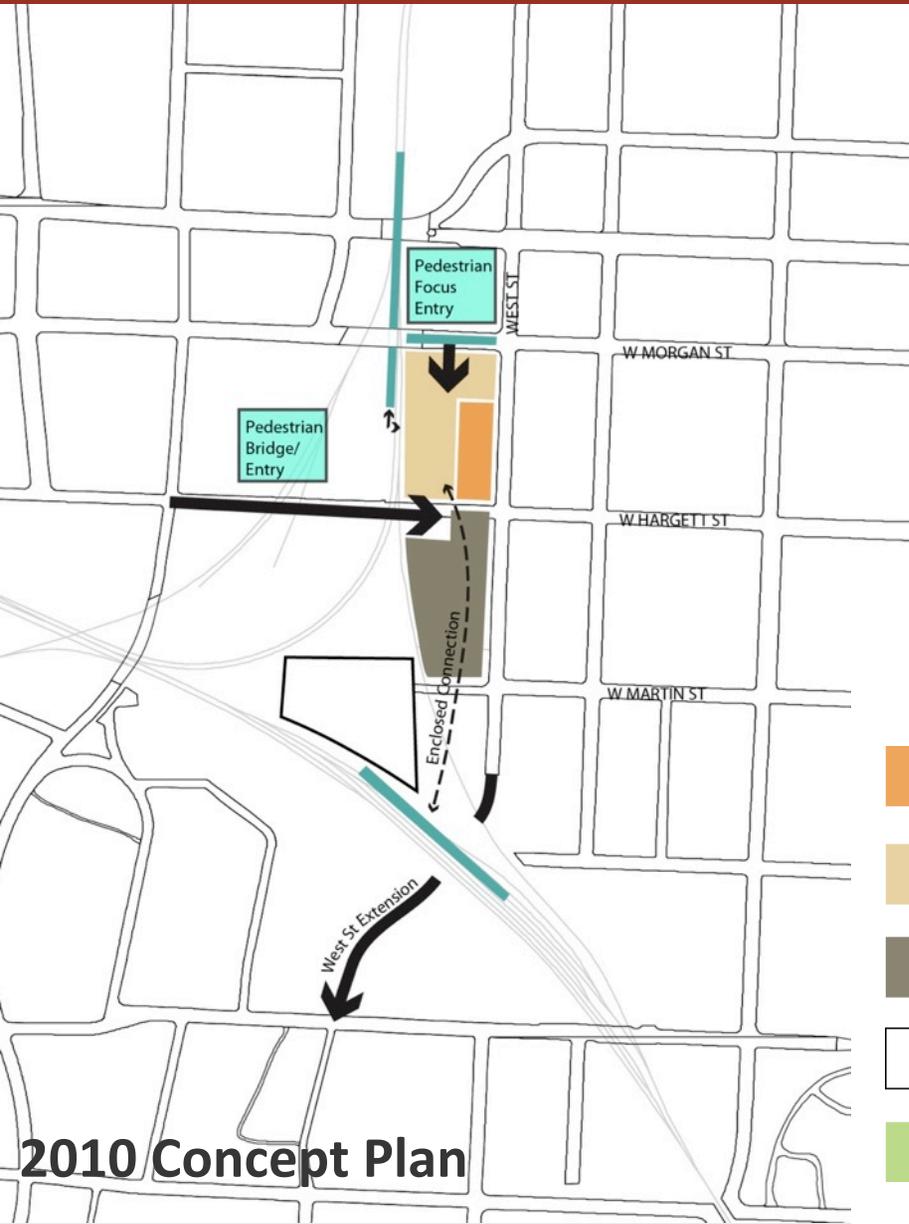


-  Retail
-  Passenger Processing
-  Unprogrammed Space/
"Future Development"
-  Parking
-  Intercity Bus

2010 Concept Plan

2011 Concept Plan

Comparison: Facility Layout – Second Level



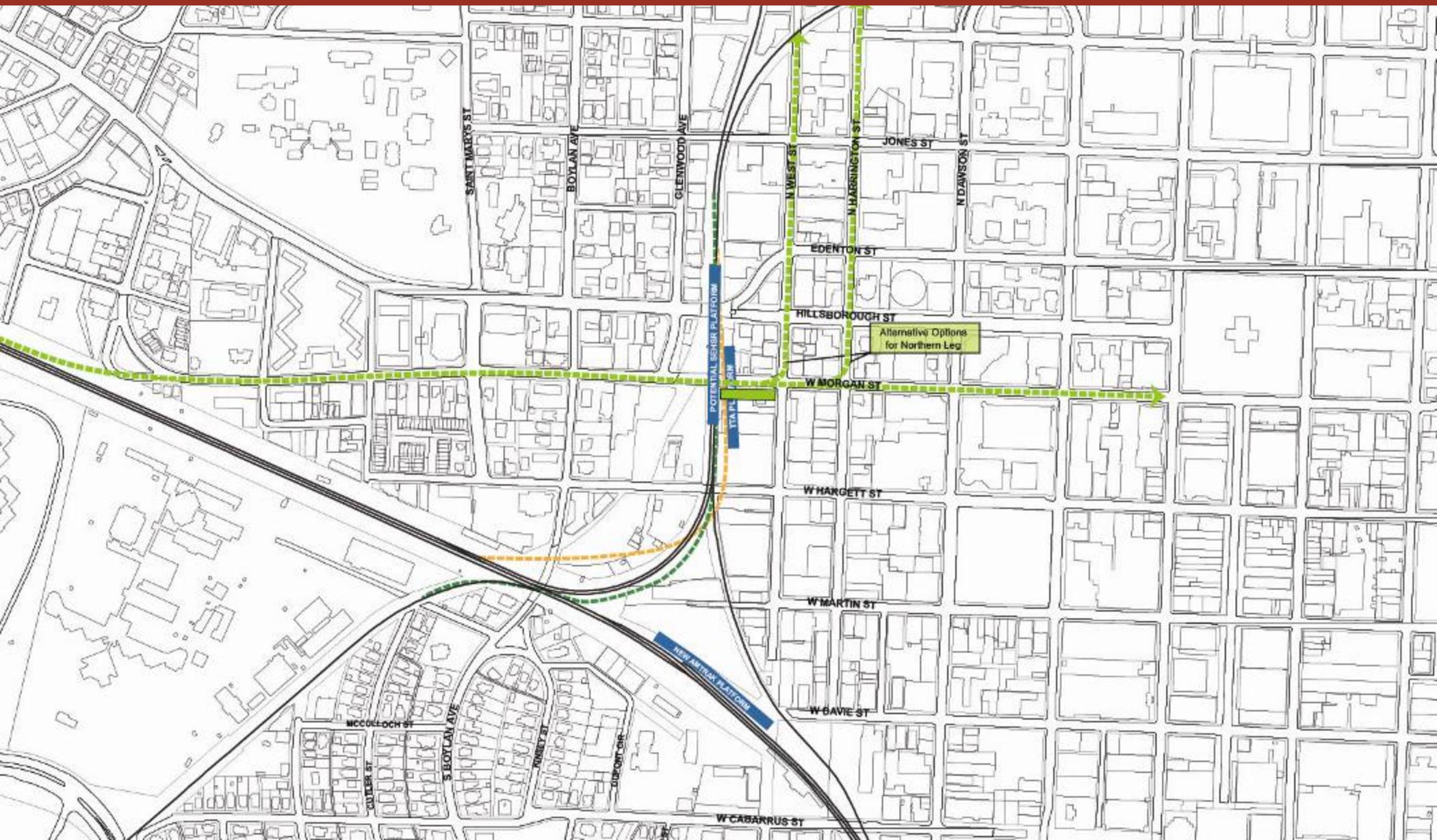
-  Retail
-  Passenger Processing
-  Unprogrammed Space/
"Future Development"
-  Parking
-  Intercity Bus

2010 Concept Plan

2011 Concept Plan

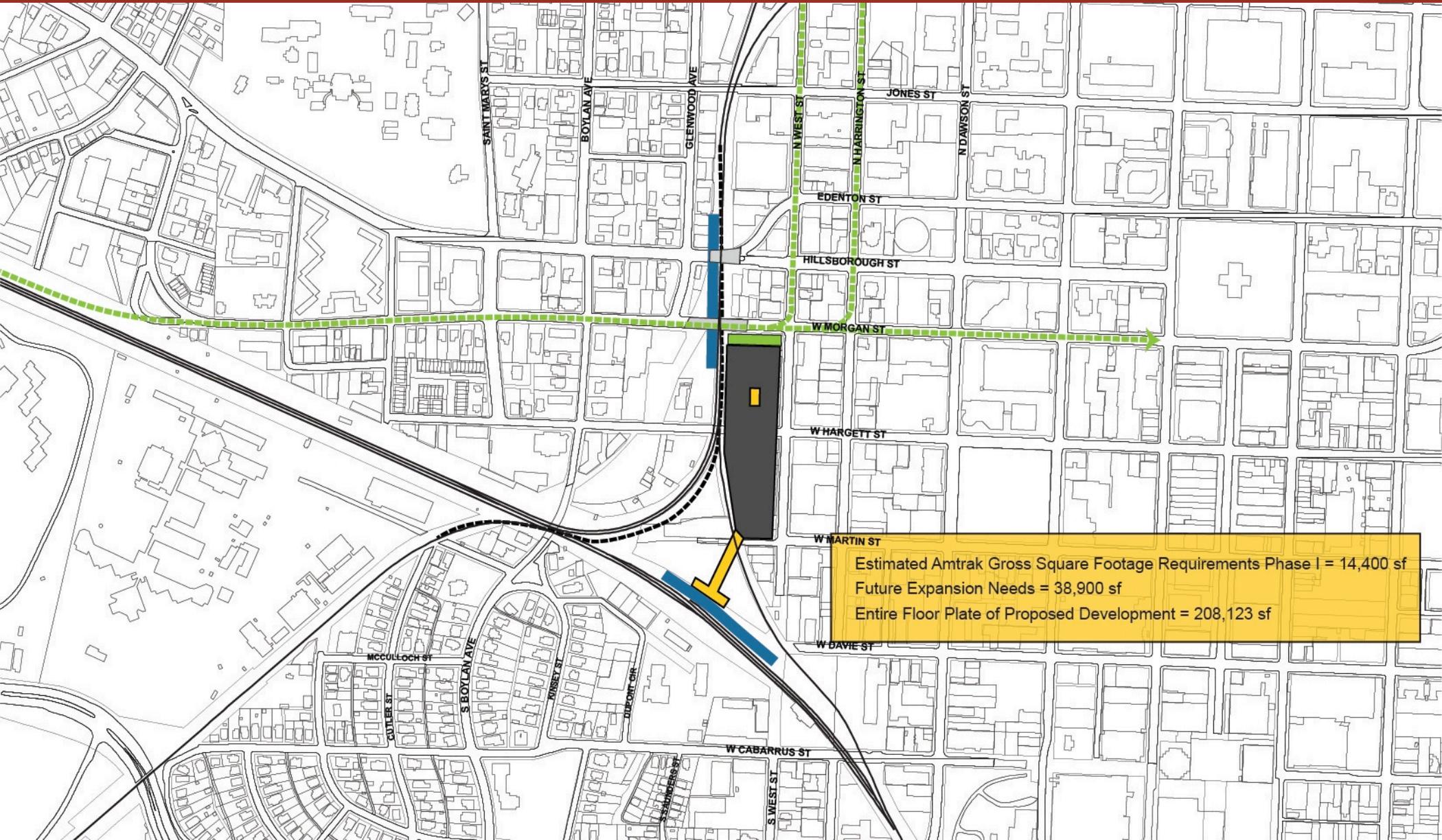
- **Platform Locations**
 - **Original MTC report assumed an LRT platform on West Morgan Street at the 'front door' of Union Station**
 - **LPA (D6) locates a platform at the base of Glenwood Avenue, approximately one block from the front door of Union Station**
 - **Original MTC report assumed SEHSR platform north of Hargett Street at mid block between Hargett and W Morgan**
 - **Current understanding places platform closer to Hargett Street**

PLATFORM LOCATIONS : MTC Report 2010

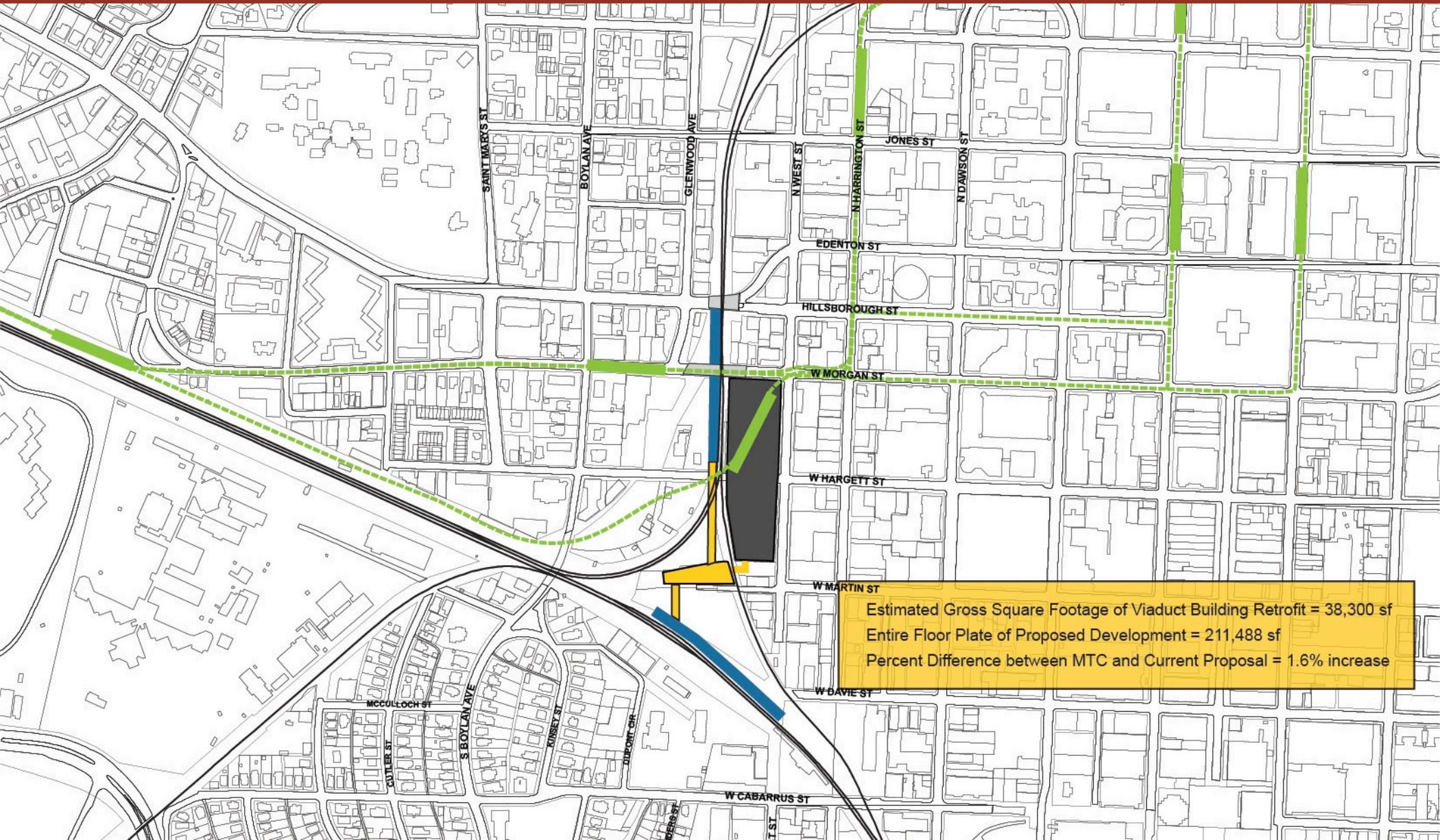


- **Building Massing/ Floor Plate Size**
 - Original MTC report assumed Amtrak gross square footage requirements for Phase I would be 14,400 sq ft, with future expansion needs of 38,900 sq ft
 - The assumed gross square footage of Viaduct Building retrofit and associated components to connect to platforms is estimated to be approximately 38,300 sq ft and will require the creation of an exterior plaza on the northwest corner of W Martin and West Streets
 - Original MTC report assumed a gross square footage for the floor plate of the entire development to be 208,123 sq ft
(Indicated in gray and yellow in following diagrams)
 - Estimated gross square footage for floor plate of the *entire* development- incorporating the current proposal- is estimated to be 211,488 sq ft
 - There is a 1.6% difference (increase) between the two proposals

BUILDING MASSING/ FLOOR PLATE : MTC Report 2010

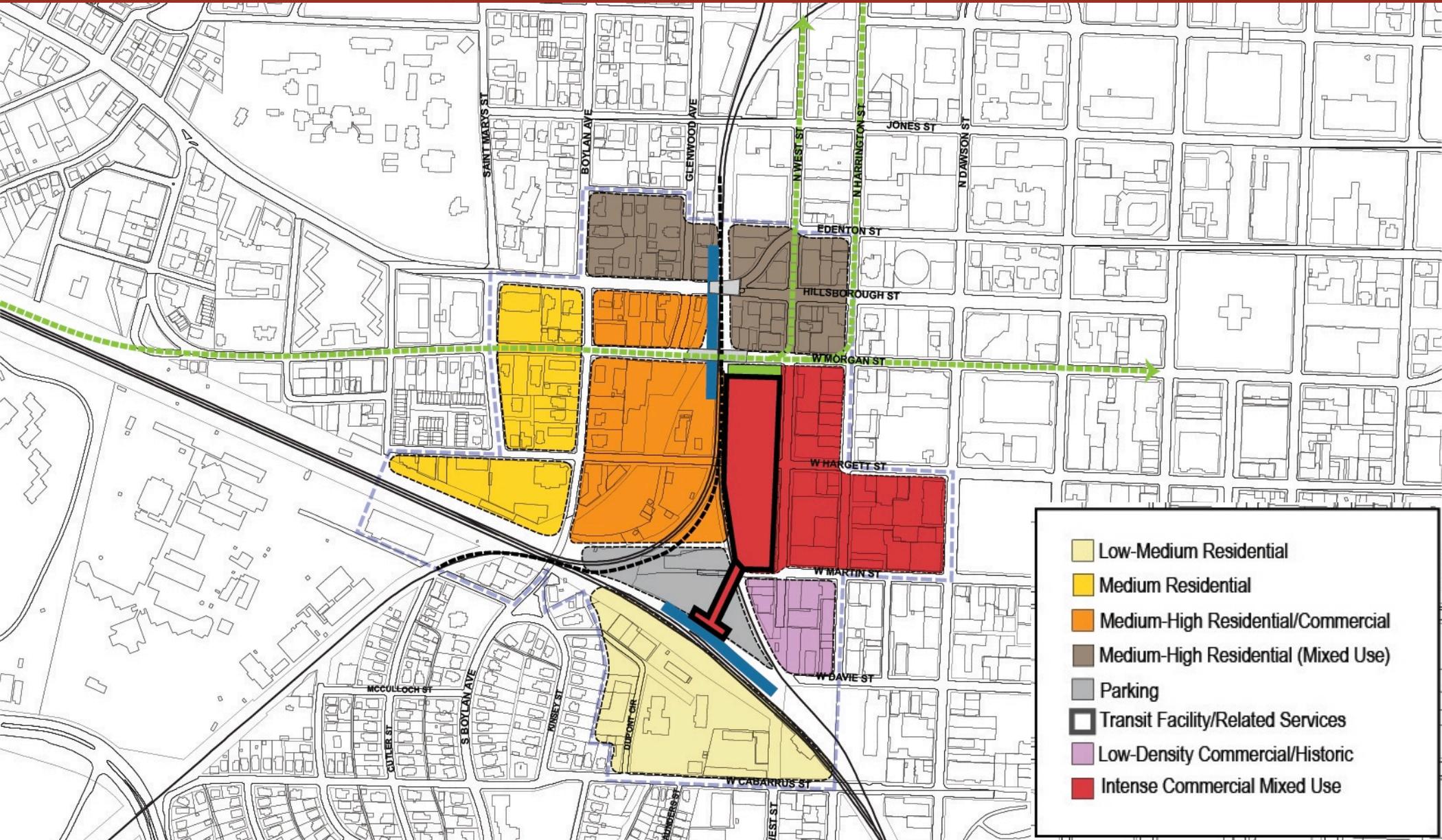


BUILDING MASSING/ FLOOR PLATE : July 2011

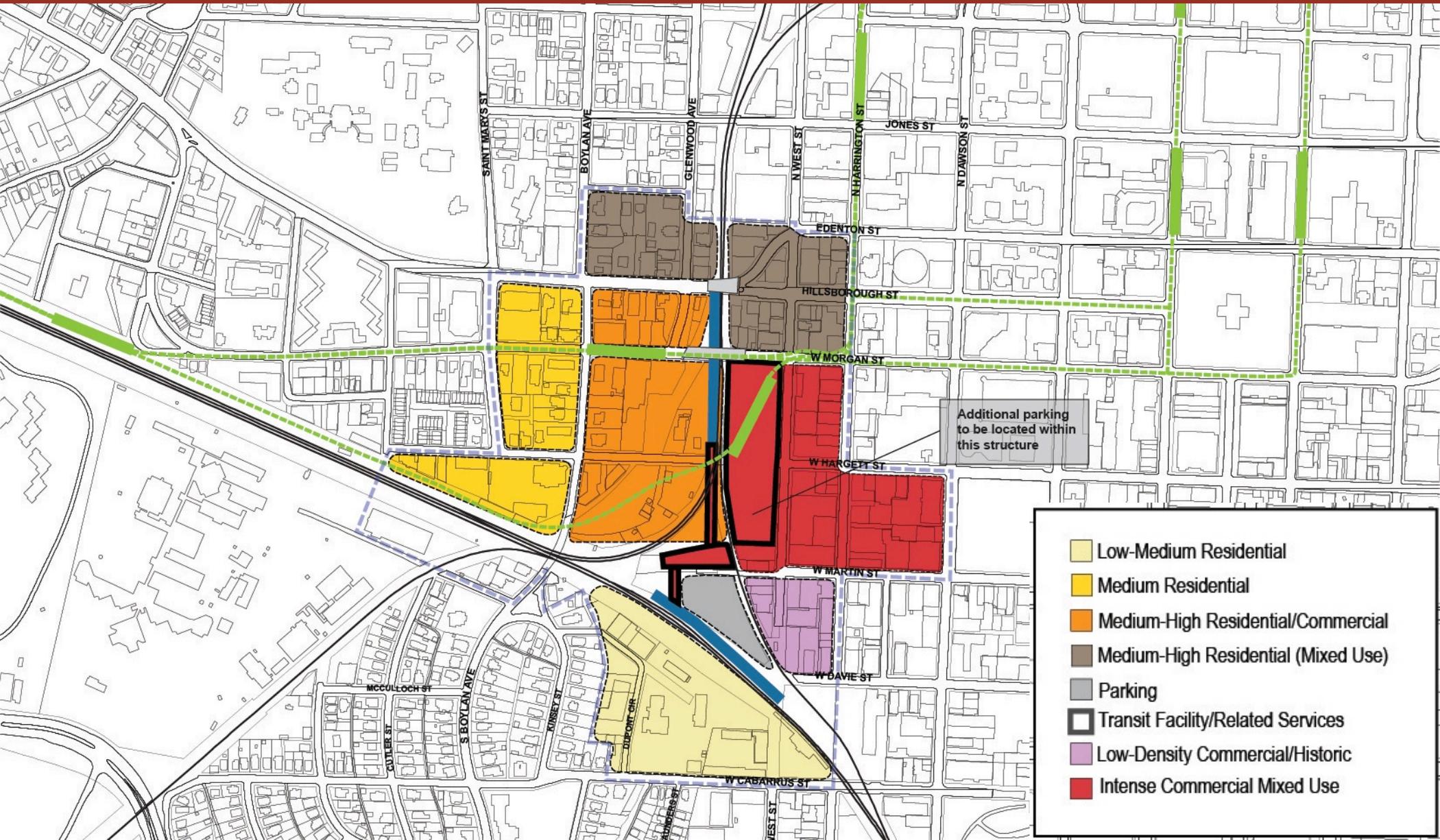


- **DEVELOPMENT STRATEGY, USE & DENSITY**
 - **Original MTC report assumed a high concentration of Commercial Mixed Use and Medium-High Residential/Commercial adjacent to the Union Station Development**
 - **Current proposal is consistent with this approach**
 - **Original MTC report assumed the majority of the parking needs could be met by placing structured parking in the interior of the Wye**
 - **Current proposal and better understanding of the constraints associated with traversing the tracks will allow temporary surface parking within the Wye. Permanent structured parking will be required within the larger portion of the Union Station facility or on adjacent blocks.**

DEVELOPMENT STRATEGY, USE & DENSITY : MTC Report 2010



DEVELOPMENT STRATEGY, USE & DENSITY : July 2011



Thank you.

