

Figure G-7: Alternative B-V.1– Northern Low-Level Island Platform, MMTS at E. 5<sup>th</sup> Avenue

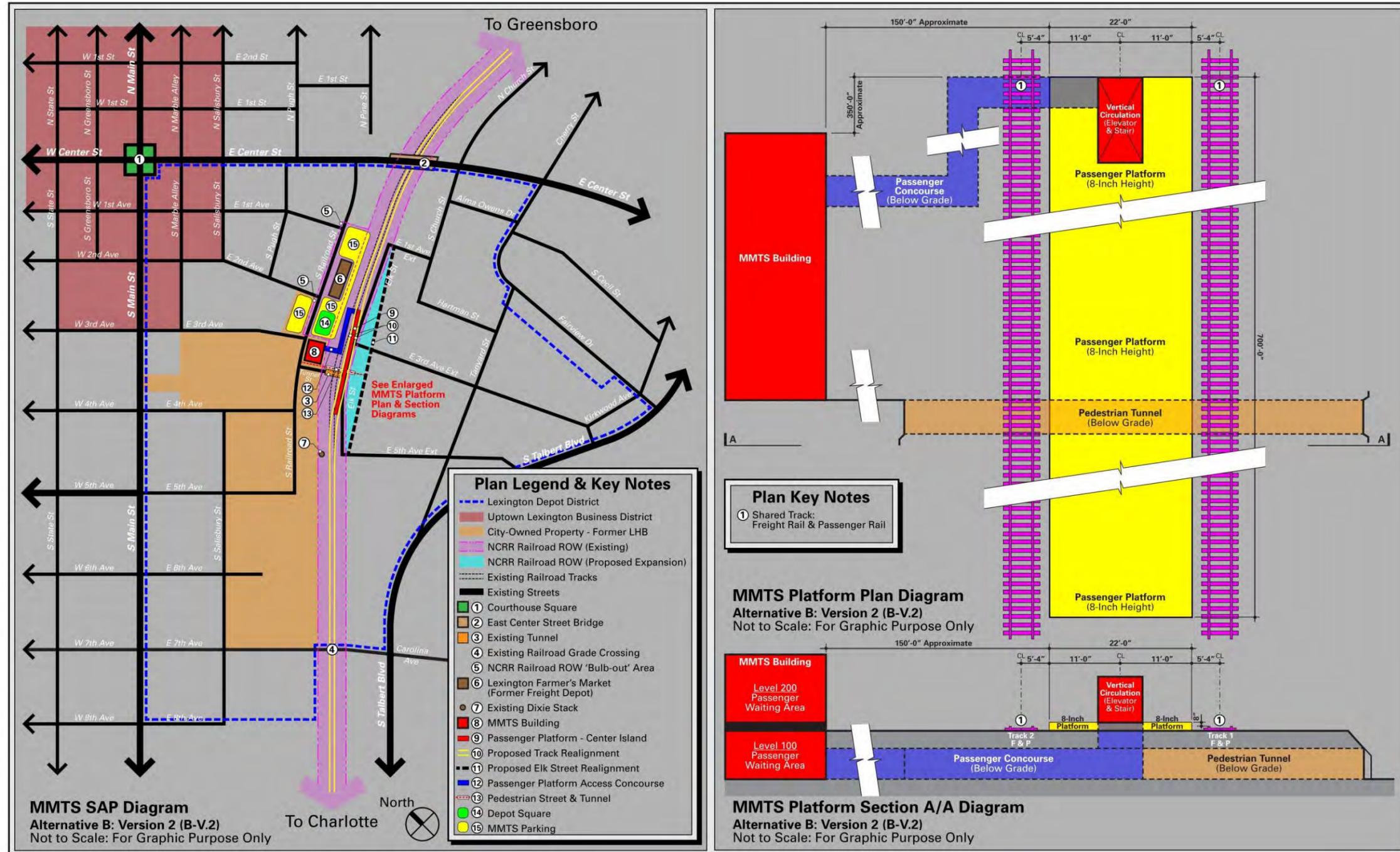


Figure G-8: Alternative B-V.2 - Northern Low-Level Island Platform, MMTS at E. 3<sup>rd</sup> Avenue

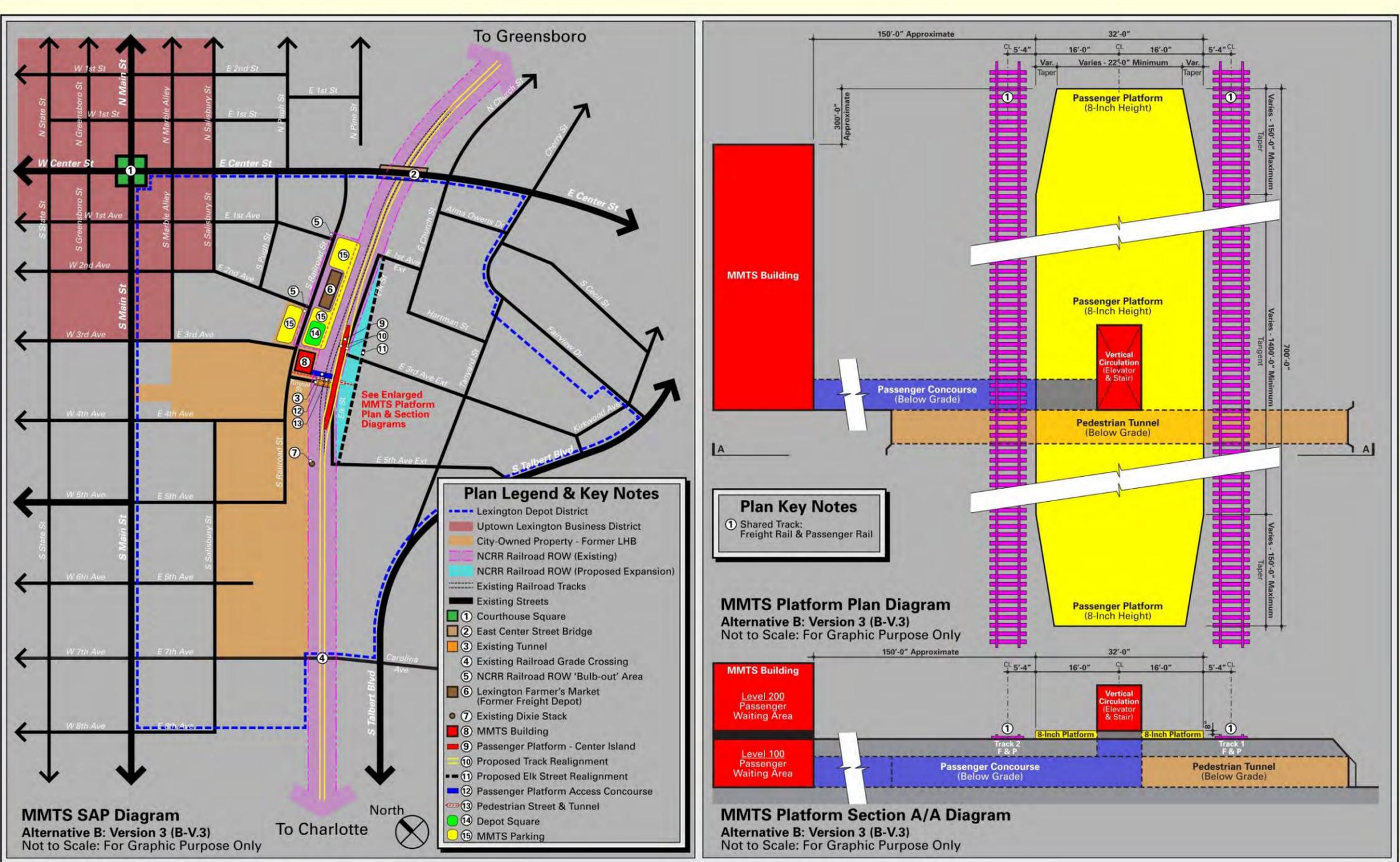


Figure G-9: Alternative B-V.3 - Northern Low-Level Island Platform, Reduced MMTS at E. 3rd Avenue

### Platform and Track Alignment Alternative A and Alternative B Comparative Analysis

The preliminary Alternative A and Alternative B, along with corresponding alternates, were evaluated together through a Comparative Analysis of advantages and disadvantages for specific geometric and operational considerations (See **Table G-1**).

**Table G-1: Passenger Platform & Track: Geometric and Operational Comparative Analysis**

Platform Location & Track Alignment Geometric & Operational Considerations	Platform Location & Track Alignment Alternatives				
	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3
<b>ADVANTAGES</b>					
1. Maximum 4-track cross-section under the existing Center Street Bridge.	X	X		X	X
2. Platform position is directly across from the desired Multi-Modal Station facility location at the intersection of E. 3rd Avenue and S. Railroad Street.			X	X	X
3. Direct line of sight between station and platform.			X	X	X
4. Shorter horizontal travel distance by passengers between station and platform.			X	X	X
5. Platform width will permit vertical circulation components to be located anywhere along passenger platform.	X		X		X
6. Platform location and track alignment are positioned in the center of the existing ROW.	X	X			
7. Only limited grading is expected in the vicinity of the platform.	X	X			
8. Platform location and track alignment are expected to have less impact on potential reuse of existing buildings.			X	X	X
9. Fewer impacts to existing freight and passenger train operations during platform and track construction are expected.			X	X	X
10. Simplifies construction (coordination and expense) for proposed future NCDOT corridor underpass project at West 5th Avenue.			X	X	X

**Table G-1 (Continued)**

Platform Location & Track Alignment Geometric & Operational Considerations	Platform Location & Track Alignment Alternatives				
	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3
1. Maximum 3-track cross-section under the existing Center Street Bridge.			X		
2. Platform position is remote from the desired Multi-Modal Station facility location at the intersection of E. 3 <sup>rd</sup> Avenue and S. Railroad Street.	X	X			
3. Limited line of sight between station and platform.	X	X			
4. Longer horizontal travel distance by passengers between station and platform.	X	X			
5. Platform width will permit vertical circulation components to be located on <b>ONLY</b> one or both ends of passenger platform.		X		X	
6. Greater impacts to existing freight and passenger train operations during platform and track construction are expected.	X	X			
7. Platform location and track alignment are expected to have greater impact on potential reuse of existing buildings.	X	X			
8. Demolition (in part or whole) of multiple structures on the north/west side of the corridor are expected.	X	X			
9. Demolition (in part or whole) of multiple structures on the south/east side of the corridor are expected.			X	X	X
10. Removal/abandonment or realignment of Elk Street along the south/east frontage of corridor is expected.			X	X	X
11. Re-grading is expected east of the Center Street Bridge for the realignment of the two existing tracks.	X	X	X	X	X
12. Excavation and construction of retaining walls under the Center Street Bridge will be necessary for the addition of Tracks 3 & 4 in the future.	X	X	X*	X	X
13. Significant additional ROW is required.			X	X	X
14. New track alignment is located on extreme topography; a combination of structural fill and/or retaining walls is expected to construct the platform and adjacent track alignment.			X		
15. Complicates construction (coordination and expense) for proposed future Lexington TSS underpass project at East 5 <sup>th</sup> Avenue.	X	X			

\*(Track 4 will require bridge re-construction)

The results of the Comparative Analysis supported Alternative B-V.3 with the most advantages and the fewest disadvantages while still consistent with the overall desired SAP Location Alternative B.

#### **Alternative B-V.4 (48-inch Height Platform – Level Boarding Option) – Figure G-10**

Following the development of Alternative B-V.3 as the favored platform alternative, additional platform design requirements and guidelines were established by various stakeholders:

- In September 2012 the NCDOT Rail Division informed the COL and the Consultant Team that a high-level platform (also called level boarding) would be required for the Lexington Station Project. The high-level platform was required in consideration of 49 CFR section 37.42(c) and per guidance from the FRA, Amtrak, and the Department of Justice. The high-level platform would be at a 48-inch height with 5-foot 7-inch dimension between the centerline of track and the “hard” edge of the platform. This would result in a 4-inch gap; and, if a lesser gap would be ultimately required, a filler could be attached to the platform edge (e.g. a 2-inch filler would result in a 2-inch gap).
- In addition, a high-level (48-inch) platform would require the adjacent tracks to serve only passenger trains, given that the high-level platforms would not meet the minimum side clearance requirements for freight rail operations. Therefore, any high-level platform options would require a future six-track section for the Project (given the NS and NCR requirements to plan for four freight tracks). While the construction of the future 5th and 6th tracks are not anticipated until a much later, to be determined date, it is important to note that construction is expected to require additional ROW acquisition and associated earthwork and reconstruction of the Center Street bridge.
- The changes in required platform height and subsequent change in the required track cross sections (from four tracks to six tracks), necessitated the Consultant Team and the NCDOT Rail Division to consider dual side platforms options as well as a modified island platform.

#### **Potential Gap Solution Evaluated**

Given the ROW impacts with a six-track cross section with high-level platforms, the SAP Team considered additional options that might allow freight trains to use the tracks adjacent to the high-level platforms and thus require only a four-track cross-section. Per Amtrak’s New Level Boarding Policy, a “gap” solution with a movable setback may be considered. Under this scenario, the track serving a high-level passenger platform could be constructed with a gap to allow for required freight clearances. The gap is then negotiated by use of bridge plates or a movable setback designed with a combination of narrow boarding bridges and/or wider movable sections.

The SAP Team also discussed the potential cost benefits relative to the shared track approach permitted by a gap solution (such as a movable setback or bridge plate) and the resulting ability to construct fewer tracks. The SAP Team determined that there could be the potential human error or mechanical issues relative to functioning of the movable setback/bridge plate resulting in delays in both passenger and freight rail operations. Additionally, the SAP Team and the Consultant Team believe that there is a very low probability of receiving an expedient review and endorsement from NCR and NS with respect to the TIGER planning grant obligations and required closeout date. On November 16, 2012, NCDOT

advised the COL and the Consultant Team to proceed with engineering design and environmental analysis for a no gap alternative due to the uncertainty surrounding the technology, reliability and operational aspects of a gap solution alternative.

#### **Potential Impacts with High-Level Island Platform (Alternative B-V.4)**

The Consultant Team advanced Alternative B-V.4 (High-Level Island Platform with a four-track cross-section, with provision to allow for a final six-track cross-section) into preliminary engineering and EA preparation to confirm limits of construction for the Project. The results indicated potential required impacts including cut/fill inside and outside of the NCRB railroad ROW, greater ROW width required near the Lexington MMTS Building, and reconstruction of both the Center Street bridge and the Raleigh Road bridge.

#### **Revisit of Low-Level Island Platform Option (Alternative B-V.3)**

During the LRC Regular Meeting on May 8, 2013, the COL and Consultant Team received an e-mail from NCDOT Rail Division outlining a recent clarification by FRA to permit an 8-inch height, low platform design. The email noted that according to the FRA, *...“if Norfolk Southern and the NCRB were opposed to a high level platform at this location, which they are, ... NCDOT and the City would not be required to build a high level platform. The USDOT Secretary’s Office working with the ADA Access Committee has decided that platforms adjoining “privately owned and controlled freight tracks” do not have to provide level boarding but must provide 8” ATR [at top of rail]. If the track is publicly owned and controlled then level boarding is required. Since the NCRB is a private corporation and it has a long term trackage rights agreement with the private Norfolk Southern Corporation the tracks running through Lexington therefore fall into the category that requires 8” ATR, not 48” ATR.”*

*“While NCDOT would prefer a high level platform at Lexington for passenger boarding efficiency and doing the right thing for the ADA community we acknowledge that the added costs of doing so would make the Lexington station project cost prohibitive. Therefore it is NCDOT’s recommendation to the City of Lexington and its design team that a low level 8” ATR center island platform be adopted for this station project...”*

Upon a short recess and discussion with the Consultant Team, the LRC subsequently voted unanimously to approve endorsement of the 8-inch height, low platform design approach. The low-level platform option would significantly reduce the scope of required track work and potential environmental impacts when compared to a high-level platform track option.

Accordingly, the Consultant Team recommenced preliminary engineering on passenger platform and track alignment per the Alternative B-V.3 Configuration with low-Level boarding design (8-inch height).

#### **Preferred Alternative C [Dual Side Platform] – Figure G-11**

On September 11 2014, the COL and the Consultant Team met with representatives from NS to share the vision for passenger rail service in Lexington and current project design. During the meeting NS indicated their preliminary support for the project pending future corridor modeling and required amendment to the current Definitive Service Outcome Agreement (DSOA) for the operation of passenger service with NCRB and the NCDOT Rail Division. However, they would not support design for an island platform configuration; rather, only a dual side-loaded platform configuration would be considered by NS.

Accordingly, the Consultant Team, in coordination with the NCDOT Rail Division and FRA developed general specifications to prepare conceptual engineering for a new Alternative C with for a dual side-loaded platform as a modification to Alternative B-V.3.

**Preferred Alternative C - Concept Summary:**

The purpose of the conceptual engineering design for Alternative C is to develop a scenario with dual side-loaded platforms within the existing 2-track ROW while providing clearance for the future addition of a 3rd and 4th track by others under a separate project. The four-track planning is required to determine the permanent position of the platforms with vertical circulation at the station location and approaching track alignment, in particular.

**Preferred Alternative C - General Metrics, Design Assumptions & Criteria:**

1. Dual Side Platforms:

- (a) Configuration: Two Side Platforms;
- (b) Length: Approximately 680-700 feet (8 coaches), Width: 16 feet minimum with 26 feet at ends or as required to provide minimum 20-foot radius baggage cart turn around, Height: 8 inches;
- (c) Position platform faces 5-feet 4-inches from centerline of adjacent track;
- (d) Align as far north/west as possible to allow for permanent relocation of two existing mainline tracks (Track 1 & Track 2);
- (e) Construct East Side and West Side platforms in near-term (temporary) location;
- (f) Plan for future relocation of East Side and West Side platforms in permanent position when additional Track 3 and Track 4 are installed; and,
- (g) Design the new side loaded platforms with the vertical circulation (elevator and stairs) placed at the permanent locations on the outside of a four-track corridor, with a near-term configuration showing temporary platforms in the positions of the future Tracks #3 and #4.

2. Track Realignment:

- (a) Design for near-term configuration with a two-track mainline (Track 1 & Track 2) on a permanent alignment on north/west side of the NCRR ROW;
- (b) Mainline Track 1 and Track 2 shall have an 18-foot separation and include an inter-track fence (Note: the 18-foot separation is based on other projects located on adjacent corridors and may be adjusted per NS during future preliminary design coordination);
- (c) Track redesign shall improve curves to the best design speed possible while providing approximately 700 feet of tangent for the platforms (*Carolinian*) – platforms can have slight curvature along the length or at tapered ends if necessary. As with previous design for island platform, allow for 85 to 90 mph on realigned Tracks #1 and #2 with 4-inch cant deficiency;

- (d) Plan and design the railroad profile to support a future expansion to a permanent four-track mainline alignment. Include graded slope with retaining walls as appropriate to best contain the roadbed of a four-track alignment with drainage within the right-of-way, with the understanding that a profile through the station or on the approaches to the station might be nearly the same for a two-track or a four-track railroad relative to graded slopes or retaining walls due to the major curve realignment;
- (e) Tracks #3 and #4 shall be depicted as dashed lines and labeled as “Future”, and show an overlay of temporary platforms in the positions of the future Tracks #3 and #4. Include turnouts for connection of Tracks #3 and #4 only if feasible without additional impacts to right-of-way or adjacent structures (East Center Street) – otherwise just terminate Tracks #3 and #4 as dashed lines; and,
- (f) The Future (four-track) configuration will require the relocation of the existing rail siding near East 7th Avenue currently used by rail maintenance operations. NCDOT Rail Division confirmed that relocating this siding to another location in the corridor is feasible. Accordingly, although this is considered a construction impact, the operational impact cannot be determined until it is relocated per the separate Future (four-track) project.

#### **Comparative Analysis of All Passenger Platform and Track Alternatives**

After the development of Alternative B-V.4 and Alternative C, the Consultant Team re-evaluated the all of the alternatives.

**Table G-2** shows the advantages and disadvantages of the alternatives.

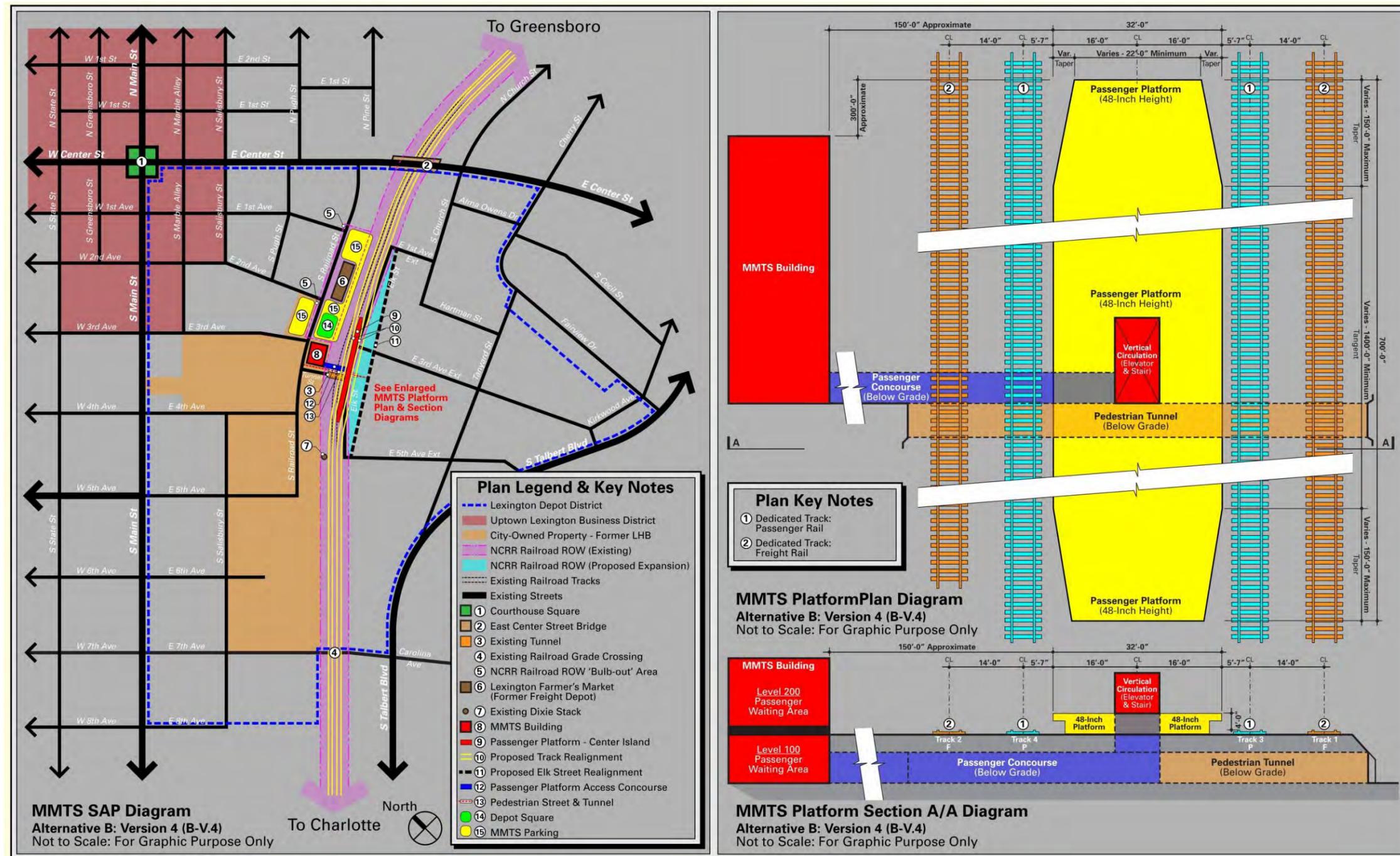


Figure G-10: Alternative B-V.4 - Northern High-Level Island Platform, Reduced MMTS at E. 3<sup>rd</sup> Avenue

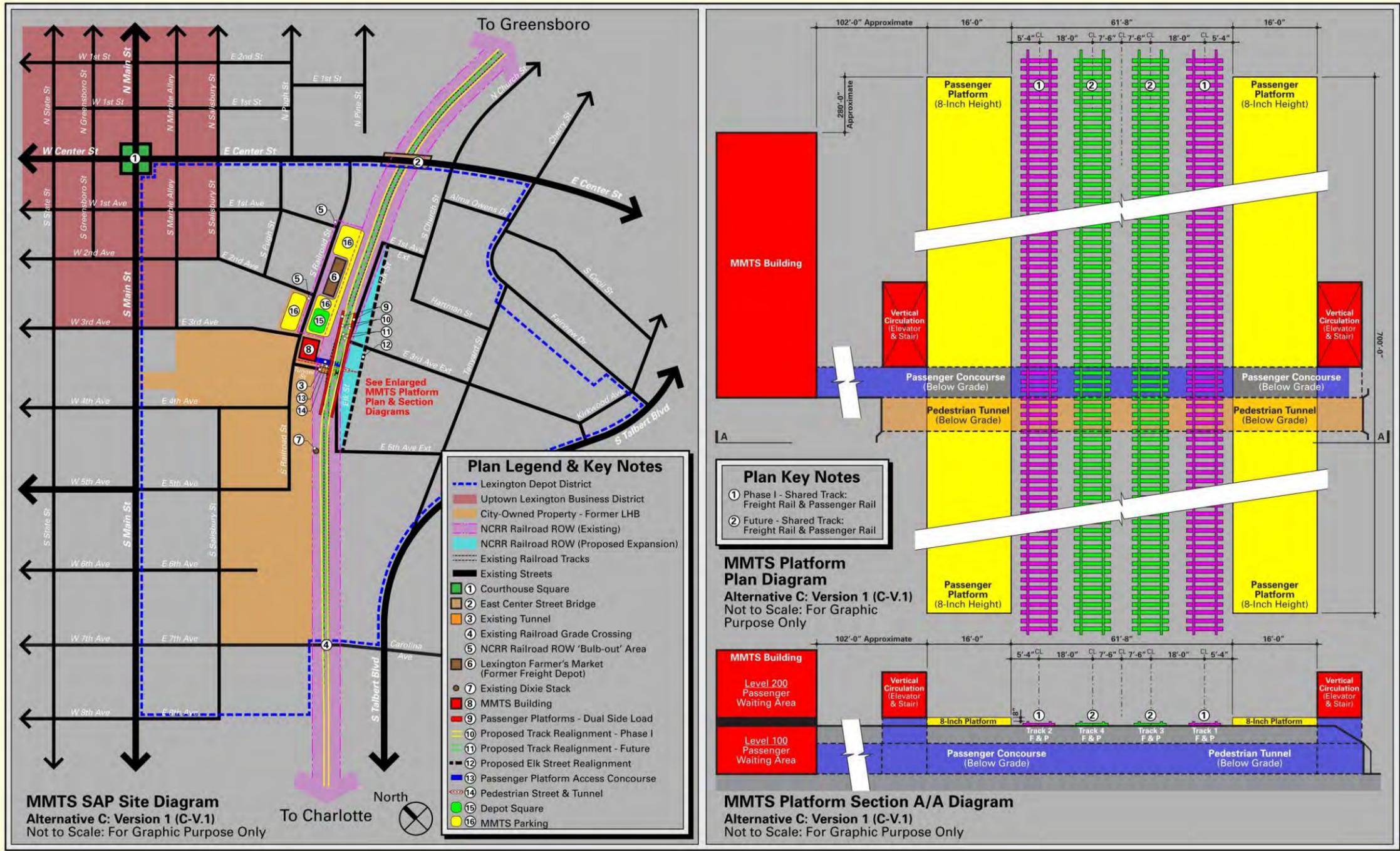


Figure G-11: Alternative C - Northern Low-Level Side Platforms, Reduced MMTS at E. 3<sup>rd</sup> Avenue

**Table G-2: Passenger Platform & Track: Geometric and Operational Comparative Analysis**

Platform Location & Track Alignment  Geometric & Operational Considerations	Platform Location & Track Alignment Alternatives							
	ADVANTAGES	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3	B-V.4	C
1. Maximum 4-track cross-section under the existing Center Street Bridge.	X	X			X	X	X	X
2. Platform position is directly across from the desired Multi-Modal Station facility location at the intersection of E. 3rd Avenue and S. Railroad Street.			X	X	X	X	X	X
3. Direct line of sight between station and platform.			X	X	X	X	X	X
4. Shorter horizontal travel distance by passengers between station and platform.			X	X	X	X	X	X
5. Platform width will permit vertical circulation components to be located anywhere along passenger platform.	X		X			X	X	X
6. Platform location and track alignment are positioned in the center of the existing ROW.	X	X						
7. Only limited grading is expected in the vicinity of the platform.	X	X						
8. Platform location and track alignment are expected to have less impact on potential reuse of existing buildings.			X	X	X	X	X	X
9. Fewer impacts to existing freight and passenger train operations during platform and track construction are expected.			X	X	X	X	X	X

Platform Location & Track Alignment Geometric & Operational Considerations	Platform Location & Track Alignment Alternatives						
	ADVANTAGES	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3	B-V.4
10. Simplifies construction (coordination and expense) for proposed future NCDOT corridor underpass Project at West 5th Avenue.			X	X	X	X	X
11. Meets updated NS design requirements							X
12. Minimizes impacts to Section 4(f) resources			X	X	X	X	X

Table G-2 (Continued)

Platform Location & Track Alignment Geometric & Operational Considerations	Platform Location & Track Alignment Alternatives						
	DISADVANTAGES	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3	B-V.4
1. Maximum 3-track cross-section under the existing Center Street Bridge.			X				
2. Platform position is remote from the desired Multi-Modal Station facility location at the intersection of E. 3 <sup>rd</sup> Avenue and S. Railroad Street.	X	X					
3. Limited line of sight between station and platform.	X	X					
4. Longer horizontal travel distance by passengers between station and platform.	X	X					
5. Platform width will permit vertical circulation components to be located on <b>ONLY</b> one or both		X		X			

Lexington Multi-Modal Transportation Station – Environmental Assessment

Platform Location & Track Alignment		Platform Location & Track Alignment Alternatives					
Geometric & Operational Considerations							
DISADVANTAGES	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3	B-V.4	C
ends of passenger platform.							
6. Greater impacts to existing freight and passenger train operations during platform and track construction are expected.	X	X					
7. Platform location and track alignment are expected to have greater impact on potential reuse of existing buildings.	X	X					
8. Demolition (in part or whole) of multiple structures on the north/west side of the corridor is expected.	X	X					
9. Demolition (in part or whole) of multiple structures on the south/east side of the corridor is expected.			X	X	X	X	X
10. Removal/abandonment or realignment of Elk Street along the south/east frontage of corridor is expected.			X	X	X	X	X
11. Re-grading is expected east of the Center Street Bridge for the realignment of the two existing tracks.	X	X	X	X	X	X	X
12. Excavation and construction of retaining walls under the Center Street Bridge will be necessary for the addition of Tracks 3 & 4 in the future.	X	X	X*	X	X	X	X
13. Significant additional ROW is required.			X	X	X	X	X

Platform Location & Track Alignment		Platform Location & Track Alignment Alternatives					
Geometric & Operational Considerations							
DISADVANTAGES	A-V.1	A-V.2	B-V.1	B-V.2	B-V.3	B-V.4	C
14. New track alignment is located on extreme topography; a combination of structural fill and/or retaining walls is expected to construct the platform and adjacent track alignment.			X				
15. Complicates construction (coordination and expense) for proposed future Lexington TSS underpass Project at East 5 <sup>th</sup> Avenue.	X	X					
16. Has greater impacts Section 4(f) Resources	X	X					

\*Track 4 will require bridge reconstruction

As seen in **Table G-2**, three Alternatives – B-V.3, B-V.4, and C – had the most advantages and fewest disadvantages. The SAP Team then determined that a high-level platform option (Alternative B-V.4) would not be feasible, given the clearance requirements for freight operations. Finally, in a meeting with the COL and the Consultant Team on September 11 2014, NS stated they would not support design for an island platform configuration (all Alternatives in A and B), but instead would support a dual low-level side platform configuration (Alternative C).

Accordingly, the Consultant Team in coordination with the NCDOT Rail Division and FRA developed general specifications to prepare conceptual engineering for **Alternative C** with dual low-level side platforms as a modification to Alternative B-V.3. The Consultant Team and COL selected Alternative C as the preferred alternative because it best met the project purpose and need, while also best meeting the railroad geometric and operational considerations. Alternative C was then progressed to the Build Alternative.

### C. Railroad Track and Passenger Platform Phasing

#### Near Term Two-Track: Temporary Configuration

Once the SAP Team selected platform Alternative C, the Consultant Team developed concept plans for the trackage. NCDOT Rail Division expects NS will prefer the near term two-track plan to be implemented with the realignment of the mainline Track 1 and Track 2 on the "inside" configured together with adjacent temporary platforms and with vertical circulation positioned according to the future permanent platform and Track 3 & Track 4 locations.

#### Future Four-Track: Permanent Configuration

The Future four-track permanent plan is a separate project by others that would require demolition of the temporary platforms to install Track 3 & Track 4 configured together with the construction of two new adjacent permanent platforms. Although this strategy may be more expensive with the construction and demolition of two platforms; NCDOT Rail Division explained that NS' expected preference stems from the ability to maintain mainline freight operations without interruption or track crossings.

#### **D. Passenger Platform Access**

After evaluating the SAP alternatives, and platforms alternatives the SAP Team evaluated passenger platform access options. The implementation and configuration of controlled passenger platform access will allow the Lexington MMTS building to meet increasing security requirements for rail travel and will provide safe and separated access for both passengers and baggage handlers. Although baggage service will not be provided with initial Lexington MMTS operations, the baggage concourse will be designed and constructed to meet the requirements according to expected future service and demand; in the interim, the baggage tunnel will be used for routing utilities, general maintenance access to the platform, and potential equipment storage.

Passenger access between the station and the platform was considered in two ways: above-grade bridge and a below-grade concourse. Both options would require vertical circulation components including elevator and steps or escalator located at the platform and in the station to accommodate expected passenger loads.

##### **Above-Grade Bridge**

An above-grade bridge would require a minimum of two freight elevators, one in the station and one at the platform, both designed to accommodate baggage transport vehicle and trailer(s). Additionally, the above-grade bridge option would require a minimum 24-foot clear from the top of rail to the bottom of the bridge to accommodate freight rail operations.

##### **Below-Grade Concourse**

As an existing site element, the street tunnel crossing the corridor below the tracks is included as part of the Project. This tunnel structure lies beneath the location of the proposed passenger platforms and is expected to be closed and filled partially in place due to unknown structural integrity and public safety concerns. To replace the access currently provided by this existing tunnel, the below-grade concourse platform access option includes both an underground passenger concourse intended to serve passenger and baggage access between the Lexington MMTS building and the platforms, and an adjacent general public pedestrian access across the corridor below the tracks. This access could also be designed to accommodate future baggage handling vehicles required when baggage service is implemented at the site.

Considering clearance requirements of an above-grade option and the opportunity for reduced construction and maintenance costs provided by creating a below-grade option, NCDOT Rail Division has expressed a preference for below-grade passenger platform access. Per internal review and comments October 24, 2012, NCDOT Rail Division advised that a Below-Grade Concourse is the most practical method for providing passenger platform access. Accordingly, a Below-Grade Concourse was carried

forward in the Project design.

### **E. Lexington MMTS Building Location, Size, and JCD Program Strategy**

The Amtrak Station Manual provides general guidance on the services and amenities to be provided within the Lexington MMTS Building Basic Station Program and the surrounding SAP Site area. Considering initial Lexington Station annual ridership is expected to achieve 10,000 annual passengers, the NCDOT Rail Division indicated the station building should be planned and designed as a Medium Category facility. In addition to the Basic Station Functions, the COL considered strategies to include complimentary Joint Commercial Development (JCD) program within the Lexington MMTS building. Accordingly, the Consultant Team developed two alternative JCD Program Strategies for the Lexington MMTS Building as either a Single-Use or Mixed-Use Facility together with consideration of feasibility, economic planning, and community input:

#### **Lexington MMTS Single-Use Facility:**

Basic Station Functions with “Incidental” Joint Commercial Development.

The Lexington MMTS Single-Use Facility Building Program will accommodate primarily the Basic Station Functions supported by Incidental Joint Commercial Development including a potential Visitor Center, Snack Shop/News Stand, and Free Standing Retail Kiosks. This Incidental JCD Program Strategy assumes the availability of limited funding for the Lexington MMTS facility.

#### **Lexington MMTS Mixed-Use Facility:**

Basic Station Functions with “Expanded” Joint Commercial Development.

The Lexington MMTS Mixed-Use Facility Building Program will accommodate the Basic Station Functions together with an Expanded Joint Commercial Development including a significant program addition defined by potential civic and/or commercial uses such as a performance arts center, convention center, office space, retail shops and restaurants, or boutique hotel. This Expanded JCD Program Strategy assumes the availability of full funding for the entire Lexington MMTS facility.

Based upon the Lexington MMTS Building Basic Station Program and two potential JCD Program Strategies, five initial Lexington MMTS site and building location and configuration (including building footprint size and shape, and total area) alternatives were developed during the SAP site planning process. The two initial alternatives considered included locating a portion of the Lexington MMTS building within the NCRR ROW “bulb-out” area (NCRR ROW area outside of the 200-foot wide charter ROW). This potential location was considered desirable because it would allow the Lexington MMTS building to be closer to the existing Lexington Farmer’s Market and Uptown Lexington business district and still have a direct relationship with the rail corridor. This potential location was also desirable because it would preserve more of the LHB property for future redevelopment and economic activities, which would add to the expected increase of the city tax base generated in the Depot District. However, assuming negotiations with NCRR progress immediately and in a positive manner, it is still expected that the contractual requirements for the options within the ROW “bulb-out” cannot be resolved in a reasonable amount of time with respect to obligations under the TIGER planning grant. Therefore, these two options were removed from consideration. This decision was confirmed during a COL internal review meeting October 17, 2012.

Three remaining alternatives considered the location of the Lexington MMTS building outside of the NCRROW; however, they include improvements such as surface parking, streets/access drives, and open space located within the NCRROW. The COL will continue ROW "bulb-out" discussions and negotiations with NCRROW relative to short term use for those improvements and potential acquisition in the long term for future city/private development opportunities. ROW negotiations will also continue regarding potential additional land area needed on the southeast side of the alignment in order to construct all required freight rail tracks in the future.

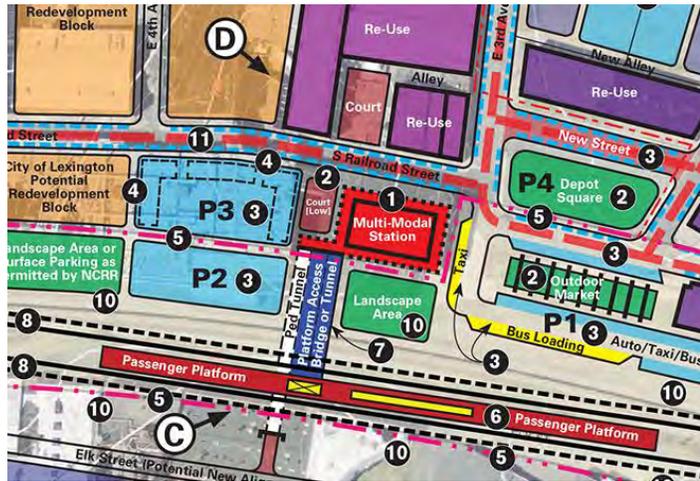
The Lexington MMTS building and site location and configuration options evaluated were labelled as Alternative B.1, Alternative B.2 and Alternative B.3. These are shown in **Figures G-12, G-13 and G-14**, respectively.

**MMTS Site Alternative B.1**

**Building Location:** The Lexington MMTS Building is located outside of the NCRROW with zero setback on the corner of East 3rd Avenue and South Railroad Street and covers the entire parcel up to the north side of the existing tunnel street.

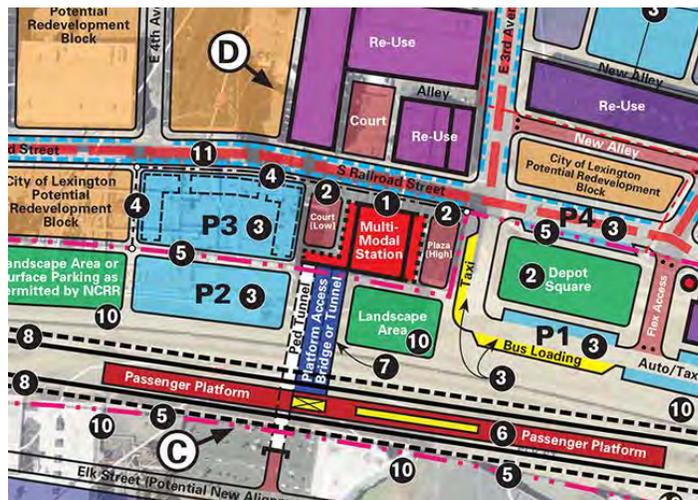
**Building Size:** Multi-story building with main level building footprint (enclosed floor area) of approximately 14,000 GSF.

**JCD Program Strategy:** Basic Station Program with Expanded JCD mixed-use program for a total gross building area greater than 8,000 GSF and up to 30,000 GSF.



**Figure G-12: MMTS Site Alternative B.1**

**MMTS Site Alternative B.2**



**Building Location:** The Lexington MMTS Building is located outside of the NCRROW with a setback from the corner of East 3rd Avenue and South Railroad Street and covers a portion of the parcel up to the north side of the existing tunnel street.

**Building Size:** Multi-story building with main level building footprint (enclosed floor area) of approximately 8,000 GSF.

**JCD Program Strategy:** Basic Station Program with Incidental JCD program for a total gross building area of approximately 8,000-14,000 GSF.

**Figure G-13: MMTS Site Alternative B.2**

### MMTS Site Alternative B.3

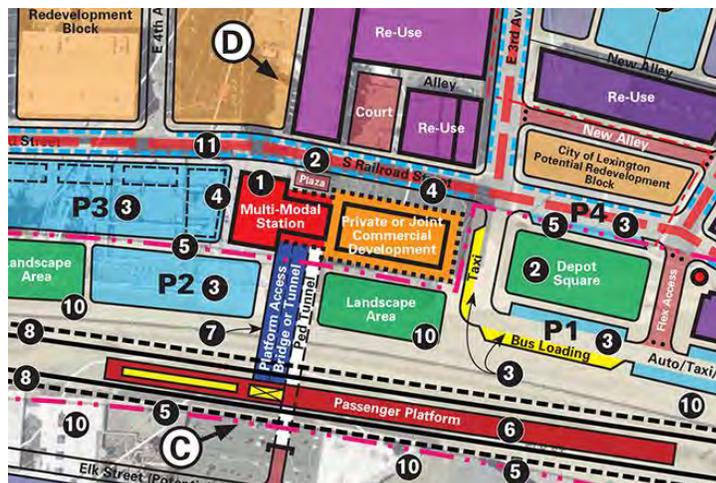


Figure G-14: MMTS Site Alternative B.3

**Building Location:** The Lexington MMTS Building is located outside of the NCRROW and on the south side of the existing tunnel street to facilitate the connection of a separate parcel for a “Civic/Commercial” redevelopment project on the corner of East 3rd Avenue and South Railroad Street.

**Building Size:** Multi-story building with main level building footprint (enclosed floor area) of approximately 8,000 GSF.

**JCD Program Strategy:** Basic Station Program with Incidental JCD program for a total gross building area of approximately 8,000-14,000 GSF.

### Comparative Analysis of Lexington MMTS Site Alternatives B.1, B.2, and B.3

The Consultant Team completed a Comparative Analysis of these three alternative locations using seven categories and ranked them based on their expected ability to achieve optimal results for specific criteria in each category. This comparative analysis was formally presented to NCDOT Rail Division, SAP Team, and LRC. The results are shown in **Table G-3**.

- Category 1: Site Integration - the potential for an appropriate Site Integration of the Station and SAP Components.
- Category 2: Proximity & Visibility - the potential for favorable Proximity and Visibility of the Station and SAP Component locations relative to the context of the Depot District and greater Uptown Lexington area.
- Category 3: General Access – the potential for favorable General Access to the Station and SAP Component locations relative to the context of the Depot District and greater Uptown Lexington area.
- Category 4: ROW and Platform Interface - the potential for favorable ROW and Platform Interface for Station and SAP Components inside and adjacent the NCRROW.
- Category 5: SAP Components - the potential for favorable design of the SAP Components.
- Category 6: General Construction - the potential for favorable implementation and completion of General Construction of the initial Station and SAP Components relative to potential future expansion and adjacent development opportunities.

- Category 7: Agency Support - feedback as collected from internal COL, LRC, SAP Team, and NCDOT workshops and meetings indicating the current favorable Agency Support to the Station and SAP Component locations relative to the context of the Depot District and greater Uptown Lexington area.

**Table G-3: Facility Location Comparative Analysis**

Category	MMTS Site	MMTS Site	MMTS Site
	Alternative B.1	Alternative B.2	Alternative B.3
Site Integration	2	1	3
Proximity & Visibility	1	2	3
General Access	1	1	2
ROW & Platform Interface	1	2	3
SAP Components	1	2	3
General Construction	1	3	2
Agency Support	1	2	3
<i>Aggregate Ranking</i>	<i>8</i>	<i>10</i>	<i>18</i>
<i>Average Ranking</i>	<i>1.1</i>	<i>1.4</i>	<i>2.6</i>
<i>Comprehensive Ranking</i>	<i>1</i>	<i>2</i>	<i>3</i>

The ranking is supported either by quantitative data or reflects qualitative assessments per current comments and feedback as collected from external Community and internal COL, LRC, SAP Team, and NCDOT workshops and meetings. For the purpose of this analysis, the Categories and associated Criteria are unweighted.

Upon workshop review and discussion, the COL, SAP Team and NCDOT Rail Division concluded MMTS Site Alternative B.1 represented the most desirable Lexington MMTS Building Location, Size, and JCD Program Strategy. Accordingly, the Consultant Team presented a synopsis to the LRC, which outlined the specific features and issues along with advantages and disadvantages of each option for the Lexington MMTS Building Location, Size, and JCD Program Strategy relative to the SAP Conceptual Site Plan. In addition, select criteria were highlighted from the Lexington MMTS Building Location Comparative Analysis to explain current support for the options favored by the SAP Team and NCDOT Rail Division.

The LRC engaged in a thorough discussion, considering the Lexington MMTS Building Location, Size, and JCD Program Strategy illustrated in each option within the context of the SAP and the future redevelopment of the encompassing Depot District. After careful consideration of the three Alternatives, the LRC subsequently confirmed a final decision endorsing their preference for the **Alternative B.2**.

The Lexington MMTS Building Location, Size, and JCD Program Strategy **Alternative B.2** was approved by LRC on December 5, 2012 and approved by City Council on January 14, 2013. **Figure G-15** illustrates the conceptual MMTS Site Plan included in the Build Alternative.

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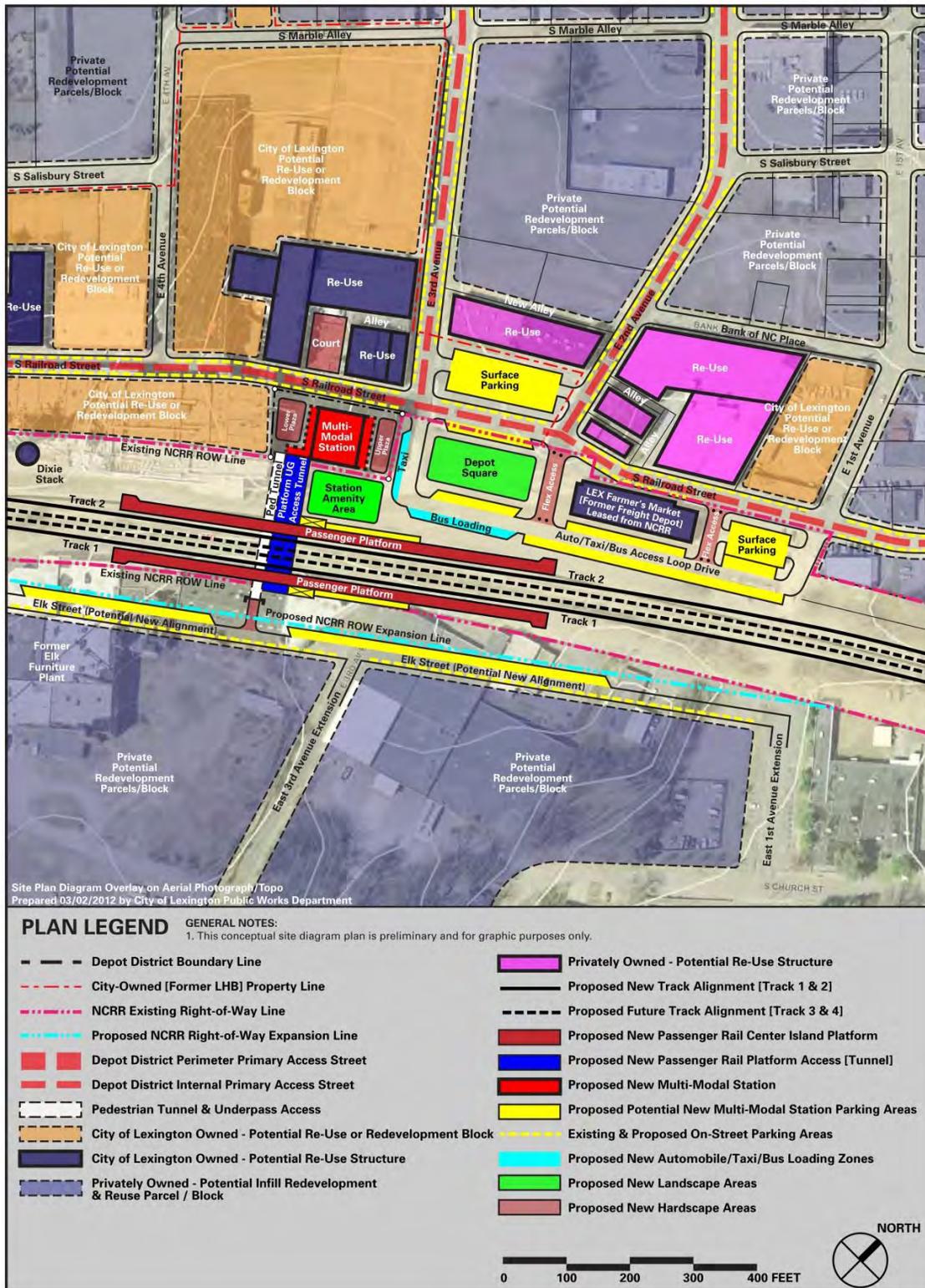


Figure G-15. MMTS Site Plan

**Recommendation of the Lexington MMTS Location:** The LRC articulated the following primary objectives and considerations supporting their final decision endorsing their preference for the Lexington MMTS Building Location Alternative B.2:

**A. Lexington MMTS Building Location and Size**

The Lexington MMTS Building Location and Size shall endeavor to provide direct frontage, with appropriate scale and accessibility, on the corner of East 3rd Avenue and South Railroad Street; and, provide an active and safe experience for a new Pedestrian Underpass across the NCRR railroad ROW and gateway connecting the Lexington MMTS/Depot District and the existing neighborhoods and potential future TOD on the south/east side of the railroad corridor.

1. While the LRC acknowledged the Lexington MMTS Building location and footprint depicted in Alternative B.2 is setback from the corner, further discussion considered the following opportunities:
  - a. shift the building as far north toward the corner as permitted by use of practical retaining walls while maintaining adequate vertical and horizontal grade relationship for integration of below grade concourse access to passenger platform coupled with reconstruction of existing “Tunnel Street” into new Pedestrian Underpass across the NCRR railroad ROW;
  - b. design the building with a configuration and/or features including a portico, porte cochere, arcades, etc. as possible to decrease physical and perceived setback distance from the corner; and,
  - c. position the building as required to improve pedestrian accessibility relative to extreme slopes of the site and adjacent streets.
2. Lexington MMTS Building footprint Alternative B.2 is appropriate and similar to the scale of other civic and commercial buildings in Uptown Lexington. For example, the Old Courthouse building footprint is approximately 50 feet by 90 feet or 4,500 SF, and the former freight depot/current Farmer’s Market is 45 feet by 200 feet or 9,000 SF.
3. Lexington MMTS Building position Alternative B.2 is expected to support an appropriate design and function for the lower plaza as required to provide an active and safe experience for a new Pedestrian Underpass across the NCRR railroad ROW and gateway connecting the Lexington MMTS/Depot District to the existing neighborhoods and potential future TOD on the south/east side of the railroad corridor.

**B. Lexington MMTS Building JCD Program Strategy**

The Lexington MMTS Building Design and JCD Program Strategy shall endeavor to facilitate the opportunity for complete and unconditional Federal funding/reimbursement as defined by the FRA<sup>22</sup>; and, encourage new mixed-use development outside of and adjacent to the Lexington

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<sup>22</sup> FRA definition of JCD: Construction at station sites intended to support non-transportation commercial activities (shopping, restaurants, residential, office space), not including incidental use of station space intended for use by passengers (newsstands, snack bar, etc.). JCD Costs may not be allowable for Federal reimbursement.

MMTS Building through either:

- a. the adaptive re-use of nearby existing buildings surrounding the proposed “Depot Square”; or,
- b. the redevelopment of nearby available open parcels.

Accordingly, the LRC requested integration of the following considerations:

1. As it is possible to secure Federal funding/reimbursement for the entire station facility if designed with only a minimal/incidental JCD program, the LRC recommends the JCD Program Strategy outlined within Alternative B-V.1, whereby expenditure of available COL funds may be focused on adaptive re-use of nearby existing buildings surrounding the proposed Depot Square, or through the redevelopment of nearby available open parcels, rather than for non-reimbursable JCD within the Lexington MMTS Building.
2. Redesign for a larger building with a more substantial JCD program is feasible if the opportunity for partnership with a developer of a specific non-transportation commercial activity arises in the interim prior to construction.
3. Given the unique existing topography of the site and proposed building integration to accommodate required below grade concourse access to the passenger platform, reasonable increases in the total station building gross square feet may be appropriate with the initial building design to accommodate Basic Station Functions.
4. Design of the initial station building envelope and/or structure to accommodate potential future building additions, above or abutting the building, for JCD uses or Basic Station Functions is not expected to be practical; however, future transportation or non-transportation related buildings may be connected to the initial station with bridges, arcades, or similar structures.

## **F. Lexington MMTS Building Programming & Space Planning**

Lexington MMTS Building Programming and Space Planning included advancing Conceptual Design for three Options by integrating parameters defined by the recommended Alternative B-V.2 Building Location, Size, and JCD Program Strategy together with the collective comments generated by the COL, SAP Team, and NCDOT Rail Division.

### **Lexington MMTS Option 1 (Figure G-16)**

Lexington MMTS Option 1 proposes a square, compact building footprint positioned with a significant setback to create a large plaza space on the corner of East 3rd Avenue and South Railroad Street, and stretches from the edge of NCRROW to the edge of South Railroad Street. The building is wrapped with a perimeter outdoor arcade to permit pedestrian access at multiple locations around the site. The building interior is organized with a “nine-square” layout providing an open central space around which the Basic Station Program is strategically arranged to provide passengers with good visibility and direct access to ticketing, waiting areas, restroom and vending areas, potential JCD, and concourse to the platform.



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and interior arcade around which the Basic Station Program is strategically arranged to provide passengers with good visibility and direct access to ticketing, waiting areas, restroom and vending areas, potential JCD, and concourse to the platform.

**Level 100:** The ticket and station manager’s office is centrally located and articulated to facilitate optimum visibility and security within the building. The primary passenger waiting area (lower) stretches the width of the building and aligns with the entrance to the passenger concourse access to the platform. Furthermore, the grand hall provides flexible space for additional passenger and/or special event seating. To facilitate convenient access by passengers, the restrooms and vending areas are clustered at the bottom of the monumental stair and off the grand hall directly across from the ticket office.

**Level 200:** The primary station entrance and lobby is centrally located between the passenger waiting area (upper) facing the NCCR railroad ROW and platform and the potential JCD and visitor center space facing South Railroad Street. An open atrium space centered with a monumental stair provides passengers with a visual and direct connection to the lower level and creates a dramatic two-story interior space.

Figure G-17 shows Lexington MMTS Concept Option 2.

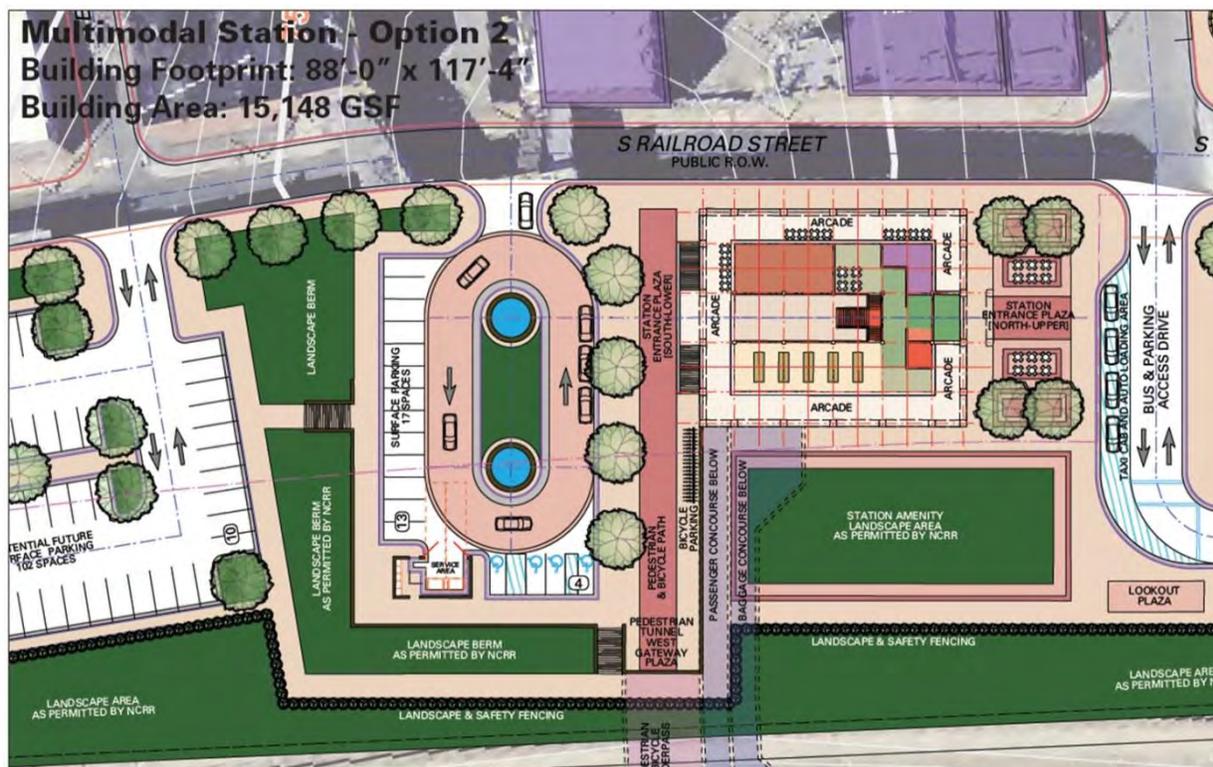


Figure G-17: Lexington MMTS Concept Option 2

**Option 3** (Figure G-18)

Lexington MMTS Concept Option 3 proposes a narrow rectangular, elongated building footprint positioned with a minimal setback to permit a sidewalk and anchor the building on the corner of East 3rd Avenue and South Railroad Street. The building is setback from the NCRROW to create a linear multipurpose plaza outside of the ROW and is setback along South Railroad Street providing pedestrian access following the existing street slope. A portion of Level 100 (lower) extends below the multipurpose plaza. The building is wrapped with a perimeter outdoor arcade to permit pedestrian access at multiple locations into the building and around the site. The building interior is organized with a “shot-gun” interior layout providing a linear sequence of open spaces around which the Basic Station Program is strategically arranged to provide passengers with good visibility and direct access to ticketing, waiting areas, restroom and vending areas, potential JCD, and concourse to the platform.

**Level 100:** The ticket and station manager’s office is centrally located and articulated to facilitate optimum visibility and security within the building. The primary passenger waiting area (lower) stretches the width of the building and aligns with the entrance to the passenger concourse access to the platform. Furthermore, the grand hall provides flexible space for additional passenger and/or special event seating. To facilitate convenient access by passengers, the restrooms and vending areas are clustered around the elevator and monumental stair.

**Level 200:** The primary station entrance and lobby is centrally located between the visitor center space facing the NCRROW and platform and the potential JCD facing South Railroad Street. The lobby opens directly into the passenger waiting area stretching the entire width of the building. The passenger waiting area opens to an atrium space centered with a monumental stair and elevator provides passengers with a visual and direct connection to the lower level and creates a dramatic two-story interior space.

**Figure G-18** shows Lexington MMTS Concept Option 3.



**Surface Parking Options**

During the development of the site plan and building layout alternatives, the COL considered adding surface parking to the lower level of the MMTS complex. Creating this surface parking would require demolition of portions of the LHB Plant that have been identified as contributing resources by the State Historic Preservation Office (SHPO) to a proposed Lexington Industrial Historic District. To avoid impacts to the historic buildings, the COL eliminated the surface parking option from the lower level of the MMTS site. The Project instead will include surface parking and on-street parking east of the proposed MMTS. This parking plan was then incorporated into the modified Build Alternative.

**Figure G-19** shows the Concept Plan for the Lexington MMTS Station.

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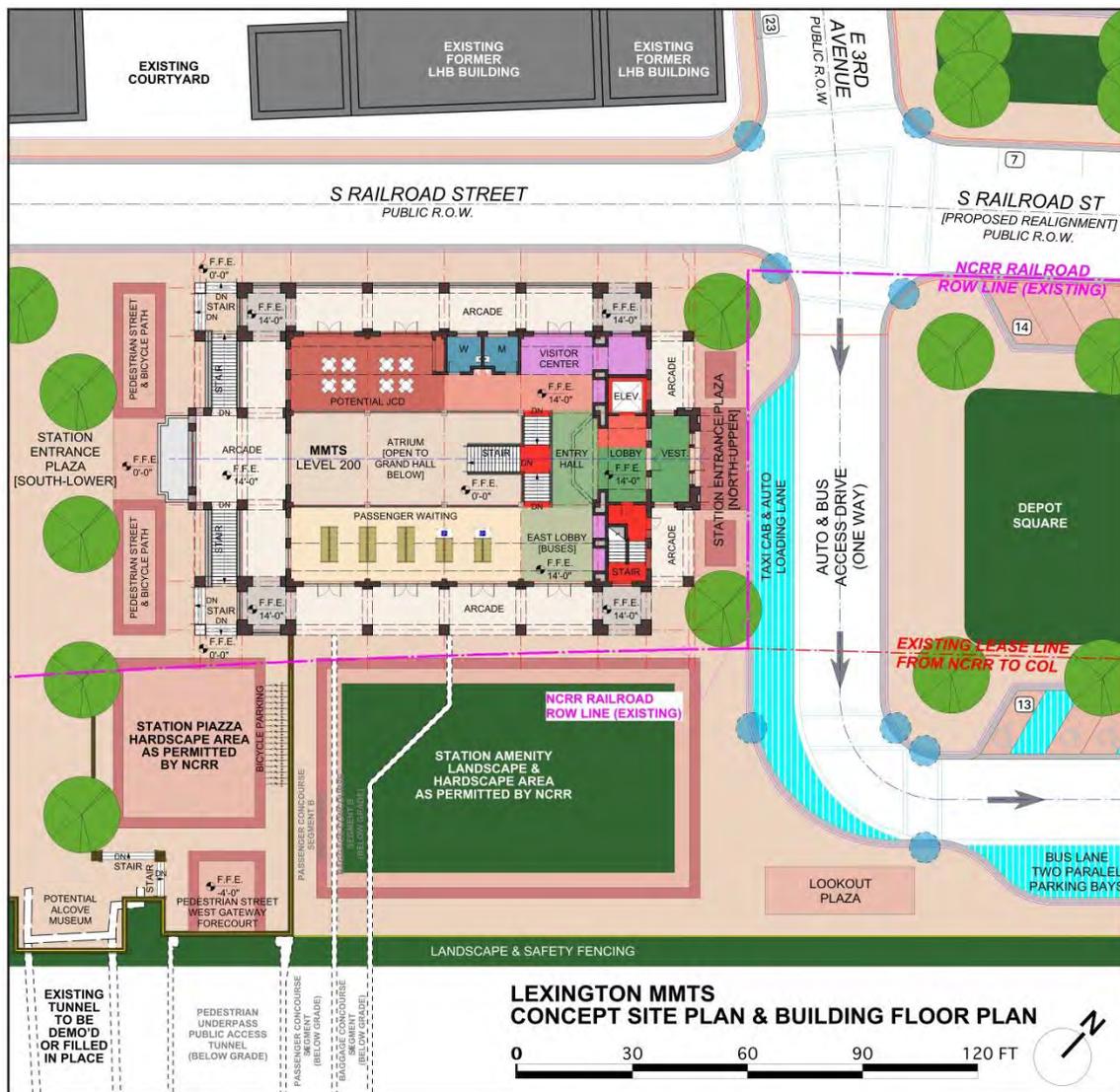


Figure G-19: Proposed Lexington MMTS Concept

Alternatives Carried Forward for Detailed Evaluation

No-Build Alternative

The No-Build Alternative would consist of the currently planned and programmed activities within the LHB property and transportation infrastructure projects currently included in the North Carolina State Transportation Improvement Program (STIP). The Comprehensive Transportation plan for Davidson

County, July 2011, details the current and recommended transportation infrastructure within the project area and surrounding city.

### **Build Alternative**

As previously stated, on September 11, 2014, the COL and the Consultant Team met with representatives from NS to discuss the current project design, which led to the redesign of the Project and which is now reflected as Alternative C (Two-Track and Dual Side Platform Configuration).

The purpose of the conceptual engineering design for Alternative C is to develop a scenario with dual side-loaded platforms within the existing 2-track ROW while providing clearance for the future addition of a 3rd and 4th track by others under a potential separate project by others. The four-track planning is required to determine the permanent position of the platforms with vertical circulation at the station location and approaching track alignment.

The Project is defined in the SAP for the Build Alternative, which was established through the following steps:

- the assessment of Previous conceptual engineering prepared by NCDOT Rail Division for Passenger Platform and Track Alignment - Preliminary Alternative A and Alternative B, and subsequent conceptual engineering prepared by the Consultant Team supporting the design of alternative options;
- the identification and development of specific SAP Key Components defining the Functional Criteria and Programming associated with the SAP Site, Lexington MMTS Building, Passenger Platform and Concourse, Track Alignment, and Primary Access Streets;
- the evaluation and endorsement of the recommended SAP Location Alternative B as determined through Comparative Analysis and Public Input;
- the conceptual engineering for the Preferred Alternative C: Two-Track and Dual Side Platform Configuration; and,
- the established and ongoing collaboration, consideration, and coordination with all project parties including the COL, LRC, SAP Team, Consultant Team, and railroad agencies (FRA, NCDOT Rail Division, NCRR, and NS).

All SAP Key Components for Build Alternative are organized within three core Project Sections that together comprise the Project, and shown in **Figure G-20**.

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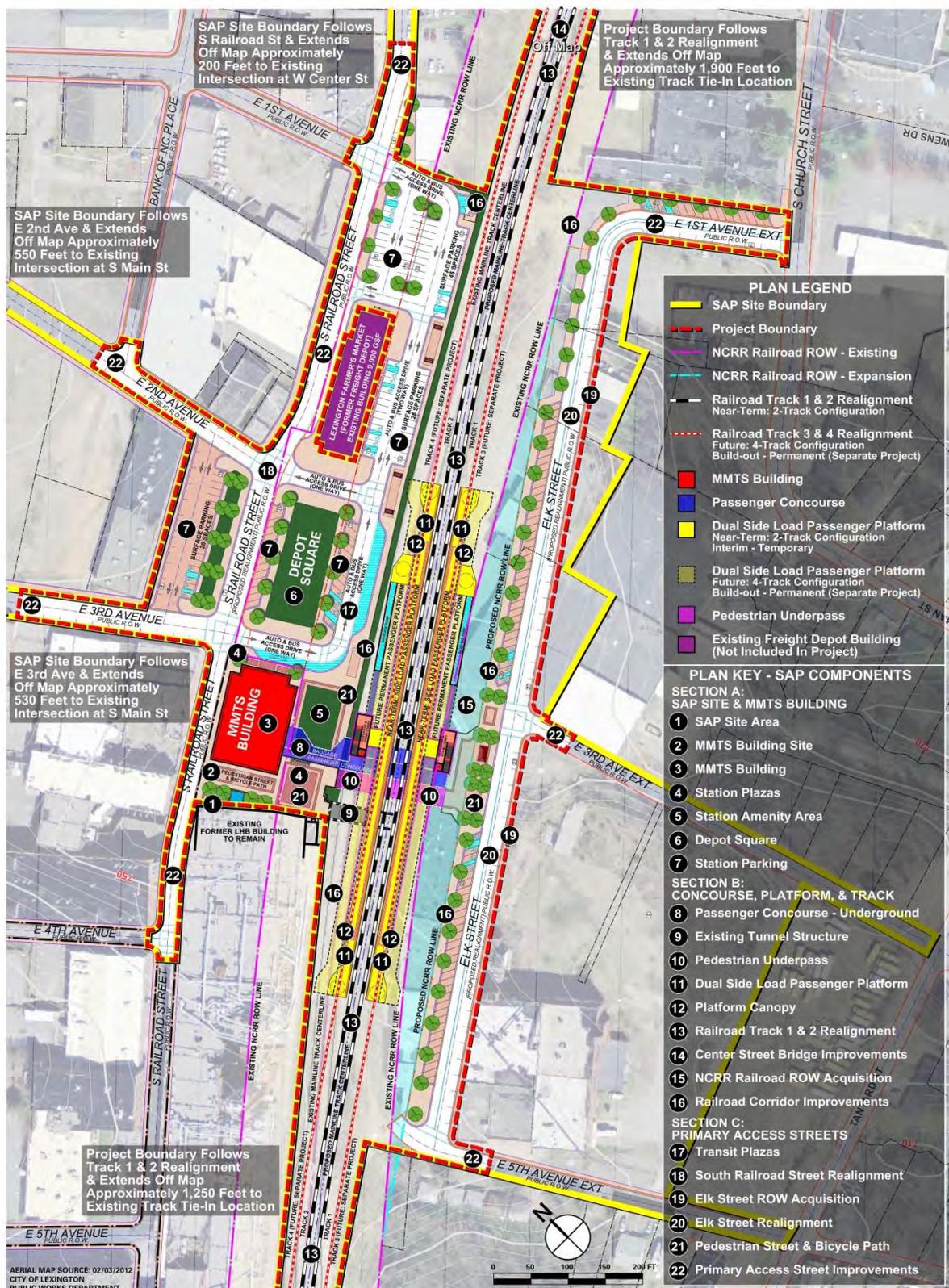


Figure G-20: Lexington MMTS Build Alternative

## **SECTION A: SAP SITE AND LEXINGTON MMTS BUILDING**

### **1. SAP Site Area**

The SAP Site Area is approximately 18.6 acre defined by the combined total land area required to implement the proposed key components comprising each SAP Project Section. All existing site conditions and features encompassing and influencing the SAP Project Site are identified and evaluated relative to the proposed key components comprising each SAP Project Section including:

- Zoning;
- Land Use;
- Public Transportation Services (Fixed-Route Bus: Local City, Cross County & Regional);
- NCRR ROW;
- City-Owned Property (former LHB)
- Lexington Depot District;
- Proposed Lexington Industrial Historic District & Identified Contributing Resources;
- Public Primary Access Streets;
- Utilities; and,
- SAP Site Areas.

### **2. Lexington MMTS Building Site**

Site preparation for the Lexington MMTS Building will include the selective demolition and shoring of existing buildings currently occupying the required limits of construction. The Lexington MMTS Site will be designed to take advantage of the unique existing topography characterized by a 12 to 14-foot grade change along South Railroad Street between East 3rd Avenue and the existing “Tunnel” Street; whereby:

- an Upper Site Area will be created level with East 3rd Avenue as the primary entrance into the Lexington MMTS (Level 200) and defined by a station plaza, multimodal transit plaza, adjacent surface parking, dedicated service area and Depot Square;
- a Lower Site Area will be created level with the existing “Tunnel” Street and new underground passenger concourse platform access and pedestrian street and defined by a station plaza; and,
- accessible access and connections between the Upper and Lower Site Areas will be achieved through a combination of site features including sidewalks and site steps, and the Lexington MMTS building including stairs and an elevator.

This proposed site configuration is expected to facilitate the ordered site integration, construction, and functional operation of the multilevel Lexington MMTS building.

### **3. Lexington MMTS Building**

The new Lexington MMTS Building will be the primary facility for train passengers, enabling connections to other transit modes including pedestrian, bicycle, automobile, taxicab, and bus with local and regional service. The Lexington MMTS Building is a multi-level facility with an interior gross floor area of 15,292 SF and outdoor covered gross floor area of 5,135 SF for a total gross floor area of 20,972 SF.

The Lexington MMTS Building footprint is an elongated rectangle (approximately 92 feet wide by 134 feet long) positioned with a minor setback to create a small plaza space on the corner of East 3rd Avenue and South Railroad Street, and stretches from the edge of NCRROW to a setback along South Railroad Street providing pedestrian access following the existing street slope. The primary entrance facing Depot Square is defined by a prominent clock tower that anchors the building within the Depot District. The form and expression of the tower will be advanced in future design phases through community workshops. The Lexington MMTS Building roof form is sloped and articulated to facilitate direct sunlight into South Railroad Street and the lower transit plaza located on the north and west side of the building respectively.

The secondary entrance facing the lower transit plaza and pedestrian street is articulated to provide multimodal access and encourage pedestrian circulation along the pedestrian street connecting the Depot District to the neighborhoods on the east side of the NCRROW through the proposed pedestrian underpass. In addition, the south end of the building is designed to accommodate the potential connection to adjacent and future infill buildings upon redevelopment buildings via pedestrian bridge structure(s).

The Lexington MMTS Building is wrapped with a perimeter outdoor arcade to permit pedestrian access at multiple locations into the building and circulation around the site. The arcades are accentuated with small tower forms located on each corner and conceived as monuments to facilitate general orientation and represent the individual neighborhoods comprising and surrounding the original and expanded four squares of the COL. The articulation of these corner forms will be advanced in future design phases through community workshops.

The exterior material of the Lexington MMTS Building will be predominately masonry including brick with stone and precast concrete accents. Primary roof forms will be tile with metal gutters and downspouts as required, and the parapet screen wall (for roof top mechanical units) will be clad with metal panels. An expressive storefront system will be composed to accommodate a flexible building entrance strategy and articulated with a select pallet of profiles. Arcade soffits and ceilings will be articulated with an exterior stucco or drywall system. All arcade and stair rails and guardrails are intended to be decorative metal and custom designed by local craftsmen. An exterior building lighting strategy will be developed to enhance safety and security around the building as well as highlight specific building forms and features. Light fixtures will be selected with design expressions that complement the building.

The building interior is organized with a “grand hall” interior layout providing an open central, galleria space and interior arcade around which the Basic Station Program is strategically arranged to provide passengers with good visibility and direct access to ticketing, waiting areas, restroom and vending areas, potential JCD, and concourse to the platform. A clear span truss structure is proposed to facilitate a flexible, open space plan. The truss design is envisioned to express the legacy of quality and craftsmanship established by the former and remaining local furniture making industry, and will be developed in greater detail during future design phases with collaboration and input from local craftsmen. Natural daylight and visibility is maximized throughout the station with wide and tall ground level “storefront” windows and clerestory windows above.

**Level 100:** Provides a secondary, lower level entrance to the building with direct access to station office space (interim station manager’s office and future ticketing and baggage operations), primary passenger waiting area and restroom facilities, and connection to the passenger concourse leading to the platform. An open, two-story grand hall – galleria space will provide both accessible and visual connections between Levels 100 and 200, and throughout the building for passengers and station personnel. An interior arcade is provided around which the Basic Station Program is strategically arranged to provide passengers with good visibility and direct access to ticketing and station offices, waiting areas, restroom and vending areas, potential JCD, and concourse to the platform. The ticket and station manager’s office is centrally located and articulated to facilitate optimum visibility and security within the building.

Station Office Area A and B are organized with a flexible and efficient space plan to accommodate a station program that can grow in two phases to evolve with the correlating functional requirements of station operations. The program and layout of Station Office Area A and B will be advanced and coordinated with NCDOT Rail Division and Amtrak during future phases of design.

The primary passenger waiting area (lower) stretches the width of the building and aligns with the entrance to the passenger concourse access to the platform. Furthermore, the grand hall provides flexible space for additional passenger and/or special event seating. To facilitate convenient access by passengers, the restrooms and vending areas are clustered at the bottom of the monumental stair and off the grand hall directly across from the ticket office.

Initially, the Lexington MMTS will be staffed by NCDOT Rail Division personnel who will provide general management of the facility and assist passengers with access to the concourse and boarding/alighting of trains. As NCDOT Rail Division is not authorized to sell tickets, passengers must reserve and obtain tickets directly from Amtrak (booking channels include: online, mobile application and devices, over the phone, ticket agent at another Amtrak staffed station, or qualified travel agent) or from a Quik-Trak Kiosk located in the Lexington MMTS. In addition, NCDOT Rail Division will not provide baggage-handling service with initial passenger rail service. Both ticketing and baggage-handling functions shall be provided by Amtrak personnel only and shall commence at a future time to be determined as justified by the attainment of appropriate thresholds for passenger ridership and revenue generated at the Lexington MMTS.

**Level 200:** Provides the building primary entrance with an at-grade connection from the Station Plaza and future Depot Square to the grand hall – galleria consisting of the upper lobby, passenger waiting area (rail and bus), and potential incidental and station-related commercial space. An open atrium space centered with a monumental stair provides passengers with a visual and direct connection to the lower level and creates a dramatic two-story interior space. An outdoor arcade will wrap the perimeter of Level 200 providing pedestrian access at multiple locations around and to the inside of the Lexington MMTS. An interior light shelf is extended long the east and west side of the space below the clerestory windows to minimize heat gain and glare from direct sunlight while extending daylight deeper into the galleria space and passenger waiting areas located on Level 100 below. In addition, these light shelves may provide concealed circulation of mechanical ducts and opportunities for accent lighting and wayfinding signage.

**Level 300:** Provides a small observation gallery on the north end of the building, along with flanking outdoor balconies, with views down into the grand hall and out to Depot Square, and will be open to the public and available for special events. A mechanical mezzanine with access to the building roof and

clock tower is provided above. In addition, the south end of the building provides a project light shelf and potential public art display platform. As noted above, this area is design to accommodate the potential connection to future redevelopment buildings via pedestrian bridge structure(s).

#### **4. Station Plazas**

The Station Plazas (Upper and Lower) will be the public spaces serving as the transition or gateway thresholds between the Inside Lexington MMTS Building and Outside City and is well positioned to maximize visibility from the Lexington MMTS, surrounding Depot District, and adjacent neighborhoods. Given the proposed Lexington MMTS building integration with the existing, sloped topography of the site, an Upper (Level 200) and Lower (Level 100) Station Plaza will provide unique gateway experiences for passengers and visitors arriving on either level. In addition to providing safe access to the Lexington MMTS building for pedestrians and cyclists, the Station Plazas will contain hardscape and landscape surfaces and accommodate provisions for future unique features including: fountains, monuments, public art and vending opportunities.

#### **5. Station Amenity Area**

As permitted by NCRR, the Station Amenity Area will be located adjacent to the Lexington MMTS Building along the east side fronting the railroad corridor and constructed as a simple lawn defined by a perimeter hardscape pathway. The Station Amenity Area will function as the front lawn for the Lexington MMTS providing an outdoor waiting area for passengers and visitors as well as opportunities for staging special public and private outdoor events including weddings, outdoor art exhibitions, and a variety of seasonal occasions.

#### **6. Depot Square**

Depot Square will be a monumental public open space, for use by citizens and visitors alike, functioning as both a gateway to the COL and a central gathering space within the Depot District. Framed by the Lexington MMTS Building, the existing Farmer's Market (former Freight Depot) and several adaptive reuse and infill redevelopment opportunities, Depot Square will be designed and programmed to accommodate a range of activities and events associated with both the basic functions of the Lexington MMTS Building and the expected mixed-use functions of the greater Depot District. Depot Square will incorporate hardscape and landscape surfaces and accommodate provisions for future unique features including: fountains, monuments, public art and vending opportunities.

#### **7. Station Parking**

A phased, dispersed, and shared approach to parking will be provided to facilitate strategies for near and long-term parking requirements while preserving flexibility to permit the adaptation of a variety of parking locations, types, users, and densities for both the Lexington MMTS Building and the redevelopment of the encompassing Depot District. Initially, only surface and on-street parking types are planned to provide adequate capacity within the SAP Site area; however, structured parking types are envisioned in subsequent future phases to meet the capacity increases determined by the correlating demand of passenger ridership and access along with associated with redevelopment of the Depot District.

Generally, all surface parking lots will be shared parking facilities, providing spaces designated for use by:

- the Lexington MMTS passengers, visitors, and personnel; and,
- the general public for access to existing and future development and attractions within the Depot District.

Adequate lighting and emergency call boxes will be installed to maximize security within and around all surface parking lots. Pedestrian access from the lots to the Lexington MMTS Building will be provided with sidewalks, ramps, and stairs as required. Initially, surface parking will be accommodated primarily within six SAP locations:

**7A. Depot Square:** On-street diagonal parking will be provided on two sides of Depot Square for passenger and visitor convenience along South Railroad Street and along the access drive fronting the NCRF railroad ROW.

**7B. Freight Depot:** The existing surface parking on the north side of the former Freight Depot (current Lexington Farmer’s Market) building will be reconfigured to maximize efficiency with increased number of spaces and circulation along with a dedicated service area (waste/recycle enclosure). In addition, new surface parking will be configured and extend around the former Freight Depot building and connect to the Upper Transit Plaza facilitating efficient multimodal access and circulation for automobiles, taxi cabs, buses, bicycles, and pedestrians. Shared use of this surface parking area by the Lexington MMTS Building and Farmer’s Market patrons is expected to be complimentary given the seasonal activity and incidental operating hours of the Farmer’s Market. Parking spaces within this lot will be programmed to accommodate the Lexington MMTS personnel as well as short-term (daily) and long-term (weekly) passenger parking as needed.

**7C. City-Owned Gravel Lot:** The existing city-owned gravel parking lot, defined by Railroad Street, East 2nd Avenue, and East 3rd Avenue, is situated adjacent to the Upper Transit Plaza and will be reconfigured with the proposed realignment of South Railroad Street to provide temporary surface parking including (a) safe, efficient parking space layout and vehicle circulation, and (b) adequate short and long-term parking capacity and convenient, accessible access to the transit plaza and station area for passengers and visitors. The duration of this parking area will be subject to potential future TOD redevelopment project(s) on the site; at which time, the surface parking will be relocated/reintegrated accordingly.

**7D. Elk Street Realignment:** The proposed realignment and design of Elk Street will include on-street diagonal parking spaces for convenient, short-term passenger and visitor parking on the east side of the NCRF ROW with direct access along the pedestrian street through the new underpass to the Lexington MMTS building.

**7E. SAP Construction Staging/Future TOD Area:** Subject to agreement with the existing property owner, the proposed SAP Construction Staging Area will include temporary surface parking area (up to 65 spaces) for construction contractors and workers and will be restored to original condition (minimum) after SAP construction is complete. Subsequently, pending agreement with the existing property owner and future demand, a portion of this site may be reserved to provide remote, long-term and/or park and ride surface parking (plan for 65 spaces – final quantity to be determined per demand) for passengers. If

provided, the duration will be subject to potential future TOD redevelopment project(s) on the site; at which time, the surface parking will be relocated/reintegrated accordingly.

## **SECTION B: CONCOURSE, PLATFORM, and TRACK**

### **8. Passenger Concourse**

The Passenger Concourse will be designed and constructed in two sections (Section A and Section B) to facilitate a continuous 225-foot underground, climate-controlled passenger and baggage access and connection between the Lexington MMTS building (passenger waiting area and station office/baggage room) and the boarding platform. The passenger and baggage concourse will be separated with a continuous floor-to-ceiling wall. The passenger concourse will be 20 feet wide in Section A and taper to 10 feet wide in Section B to reflect expected passenger dispersion patterns from the lobby. The finishes and lighting, along with wayfinding signage and complimentary graphics, within the passenger concourse will be designed provide a seamless experience from the Lexington MMTS building. The baggage concourse will be 8 feet wide minimum and will expand as required to maintain maneuvering clearances for a continuous 5-foot wide clear baggage cart path. The finishes and lighting within the baggage concourse will be utilitarian in character. The configuration of the controlled access concourse will allow the Lexington MMTS building to meet increasing security requirements for rail travel and will provide safe and separated access for both passengers and baggage handlers. Although baggage service will not be provided with initial Lexington MMTS operations, the baggage concourse will be designed and constructed to meet the functional requirements according to expected future service and demand; and, in the interim, will be used for routing utilities, general maintenance access to the platform, and potential equipment storage.

**8A. Section A:** Section A will provide a direct connection, approximately 135 feet in length, between Section B and the vertical circulation (elevator and stair) to both of the dual side boarding platforms. The vertical circulation is strategically positioned to facilitate the future 4-track configuration and permanent platform location. The passenger concourse will terminate with passenger lobbies providing access to each platform above with an enclosed elevator and stairs, both sized to provide adequate clearance for comfortable and safe circulation of passengers and carry-on baggage. The baggage concourse will terminate with baggage cart and platform equipment storage areas and continue with dedicated ramps (8 feet wide and maximum 10 percent slope) for baggage handling equipment access to each platform above. In addition, the eastern end of Section A will provide emergency exit access from the passenger and baggage concourse directly to the adjacent pedestrian street and public street ROW established by the new pedestrian underpass and Elk Street realignment.

**8B. Section B:** Section B will provide a direct connection, approximately 90 feet in length, between Section A and the Lexington MMTS building (passenger waiting area and station office–baggage room). Portions of Section B are ramped (maximum 5 percent slope in the passenger concourse and maximum 10 percent slope in the baggage concourse) as required to provide adequate depth below the tracks and passenger platform above. Taking advantage of the steep grade of the site, the exterior wall on one side of the concourse will be articulated to match the architecture of the Lexington MMTS building and integrate fixed window openings to permit ample daylight within and provide passengers with a visual connection to the surrounding Depot District. Controlled access to the baggage concourse will be provided directly into the baggage cart maneuvering area from the secured baggage room and the

baggage claim area as required. In addition, controlled access from the baggage cart maneuvering area will be provided across the baggage concourse directly outside to the transit plaza.

### **9. Existing Tunnel Structure**

The existing vehicular “Tunnel” Street and Structure will be abandoned for use as a vehicular access below the NCRR railroad ROW. Upon review and subsequent letter by SHPO on November 4, 2013, the existing tunnel structure is identified as a “contributing resource” to a SHPO-proposed Lexington Industrial Historic District located within the property that is determined eligible for inclusion in the NRHP.

Accordingly, the current plan for the existing tunnel structure is to avoid and/or minimize impacts by incorporating the structure within the SAP site and building design. The impacts would include abandonment of the current use of the existing tunnel structure as a vehicular only access below the NCRR railroad ROW along with the removal (total or partial) and/or filling in place in order to build the Project components including new track alignment, dual side platforms, passenger concourse, and pedestrian underpass tunnel for public access below the NCRR corridor.

Preliminary impact minimization strategies include modifications of the existing tunnel structure as required to facilitate repurpose/reuse as either:

- an underground corridor for new and improved site utilities crossing below the NCRR railroad ROW;
- a public interpretive installation (feasibility and usable tunnel depth to be determined and enclosed with a decorative security gate); and/or,
- a secondary service access to the Passenger Platform (not depicted in current design).

### **10. Pedestrian Underpass**

A new, open (non-gated) pedestrian tunnel structure (underpass) connection crossing below the NCRR railroad ROW, providing safe public access for pedestrians and cyclists only, will be designed and constructed to replace current use of the existing vehicular “Tunnel” Street and Structure. The pedestrian underpass length will be minimized (per required head wall locations determined by clearances for realignment of Track 1 and 2 and future track expansion above) and width will be maximized to increase daylight and provide an inviting pedestrian experience. In addition, within and around the pedestrian underpass entrances, adequate lighting and emergency call boxes will be installed to maximize security.

### **11. Dual Side Passenger Platforms**

Two 8-inch height passenger platforms will be constructed in a dual side load configuration 700 feet long to provide adequate frontage for expected passenger train lengths and 16 feet wide to provide safe circulation area for passenger queuing, boarding, and alighting while also accommodating baggage handling equipment. The dual side platform configuration will enhance operational efficiency and safety within this location on the corridor by facilitating the ability to dispatch trains to either track as needed. The platforms are well positioned to:

- provide direct access to the Lexington MMTS with a below grade passenger (and future baggage) concourse by taking advantage of the existing extreme topography;
- integrate a new pedestrian underpass connection below the tracks;
- provide resolution of the existing tunnel structure; and,
- take the future Lexington TSS Underpass location options into consideration.

The platforms will be penetrated in three locations (passenger elevator, passenger stair, and baggage ramp) to accommodate access from the concourse below. Accessible performance standards will be met through station-based lifts in accordance with recent decisions by the FRA and the USDOT Secretary's Office working with the ADA Access Committee relative to platforms adjoining privately owned and controlled freight tracks (The platform is located within the railroad ROW privately owned by NCRR and has a long term trackage rights agreement with the private NS Corporation).

### **12. Platform Canopy**

Canopies approximately 545-feet long will be constructed over both platforms to provide adequate weather protection and circulation clearance for passengers, passenger accessibility equipment, and future baggage equipment. The height and overhang will be established per NS design parameters to respect clearances required by arriving and departing passenger trains along with passing freight train traffic. Portions of both canopies will be enclosed above the passenger access stair and adjacent elevators to create small lobbies as required to provide extended climate control and weather protection to the passenger platform and the concourse below. The platform canopies will have a prominent visual presence from both platforms and the surrounding Depot District on both sides of the corridor and will be designed as an expressive architectural element in harmony with the Lexington MMTS building.

### **13. Track Configuration – Railroad Track 1 and 2 Realignment**

Track Configuration will include the repositioning and installation of new tracks as required within the NCRR railroad ROW with respect to the passenger platforms locations along with existing and future freight and high-speed passenger rail traffic. One pair of tracks (Track 1 and Track 2) will be constructed to flank and allow passenger trains to dwell along either passenger platform, while allowing freight trains to pass on the opposite side. Track 1 and Track 2 will extend beyond the platform and tie into existing tracks approximately one-half mile to the north and one-quarter mile to the south. Site preparation for the new track configuration will include construction of new structural fill together with

retaining/stabilization walls along with the selective demolition and shoring of existing buildings currently occupying the required limits of construction.

#### **14. Center Street Bridge Improvements**

Improvements adjacent to the existing Center Street Bridge crossing the NCRR railroad ROW will be implemented as required to facilitate construction of the realigned Track 1 and Track 2, and will include site re-grading and/or construction of retaining and/or crash walls as determined in future design phases.

#### **15. NCRR ROW**

In recognition of growing freight traffic on the NCRR corridor the project will allow for the future four-track configuration with construction of Track 3 and Track 4 expansion.

#### **16. Railroad Corridor Improvements**

As permitted by NCRR, improvements within and along the railroad corridor within the SAP near the Lexington MMTS will be implemented to enhance beauty and safety while accommodating regular routines for maintenance and operations. Fencing and low landscaping will be provided near the outer edge of both sides of the ROW fronting the dual side platforms and additional inter-track fencing will be provided between Track 1 and Track 2 fronting the platform to help prevent unauthorized and unsafe pedestrian access and crossing of the NCRR railroad corridor.

### **SECTION C: PRIMARY ACCESS STREETS**

#### **17. Transit Plazas**

Two Transit Plazas (Upper and Lower) are proposed to provide passengers with direct, safe, and accessible access between the loading areas and the Lexington MMTS building entrances on Level 200 and 100 respectively. In addition to providing multimodal access to the Lexington MMTS building, both Transit Plazas will facilitate efficient access by emergency and service vehicles.

**17A. Upper Transit Plaza:** The Upper Transit Plaza will be accessed directly from South Railroad Street at the intersection of East 3rd Avenue, and configured with an auto and bus access drive providing frontage and direct access to the Lexington MMTS building primary entrance on Level 200 and orderly one-way traffic circulation around Depot Square. The Upper Transit Plaza will provide

- a dedicated lane with zones delineated for taxicab, automobile and bus loading, and
- diagonal parking spaces will also be provided along each side of Depot Square for added passenger and visitor convenience.

**17B. Lower Transit Plaza:** With emergency vehicle access from South Railroad Street, the Lower Transit Plaza will provide:

- ADA-compliant pedestrian access directly to Level 100 of the building, and
- increased visibility and safer pedestrian access by the community on the east side of tracks.

### **18. South Railroad Street Realignment**

South Railroad Street will be realigned with a new street plan and safer, accessible intersections between East 2nd Avenue and East 3rd Avenue. The realignment will be designed in accordance with Complete Streets policies to enhance community cohesion with connectivity and multimodal access within the Depot District encompassing the Lexington MMTS building. Additional improvements along this portion of South Railroad Street will include the relocation, upgrade, and extension of existing utilities.

### **19. Elk Street ROW Acquisition**

Elk Street will be realigned between East 1st Avenue Extension and East 5th Avenue Extension to accommodate the new passenger platform and associated track alignment and the associated NCRR railroad ROW expansion as required for additional tracks in the future to expand freight rail service within this location on the corridor. Accordingly, the proposed Elk Street ROW (61'-0" ) acquisition will include:

- abandonment of existing Elk Street ROW;
- demolition of existing roadway along with relocation of some utility infrastructure; and,
- rough grading (cut/fill slopes) as required to tie into existing grades along the frontage between East 1st Avenue Extension and East 5th Avenue Extension.

### **20. Elk Street Realignment**

The proposed realignment of Elk Street will be constructed within the new 61'-0" ROW to complete a continuous street connection between East 1st Avenue Extension and East 5th Avenue Extension. The new alignment of Elk Street will be designed in accordance with Complete Streets policies to enhance community cohesion with connectivity and multimodal access within and between the neighborhood on the southeast side of the NCRR railroad ROW and the Lexington MMTS Building, Depot District, and Uptown District on the northwest side. The roadway widths will be designed to accommodate public on-street parking defined by:

- diagonal spaces along the west side of the street (nearest the NCRR railroad ROW) that are intended to serve the adjacent community with convenient parking for access to the Lexington MMTS via the pedestrian street and underpass; and,
- parallel spaces along the east side of the street that are intended to serve the future TOD neighborhood.

Additional improvements along Elk Street will include permanent sidewalks, a pedestrian plaza area near the new underpass entrance, accommodations for a bus stop, and the relocation, upgrade, and extension of existing utilities.

## 21. Pedestrian Street & Bicycle Path

A new pedestrian street and bicycle path will be constructed to replace the vehicular (only) access currently provided by the existing Tunnel Street. The pedestrian street will continue and enhance public, community access between South Railroad Street and the proposed Elk Street realignment and provide direct access to the Lexington MMTS building. Proposed improvements including gateway plazas articulated with hardscape surfaces, landscape features, signage, and adequate lighting will be positioned on either end of the pedestrian street to encourage access and walkability while providing a safe environment for pedestrians and cyclists. This important link will enhance community cohesion by:

- providing active and safe experience for pedestrians and cyclists through the proposed pedestrian underpass crossing the NCRR railroad ROW; and,
- establishing new gateways connecting the Lexington MMTS building and Depot District with the existing neighborhoods and potential future TOD on the southeast side of the railroad corridor.

## 22. Primary Access Street Improvements

Portions of designated Primary Access Streets (including street and sidewalk areas) will be enhanced with improvements in accordance with Complete Streets policies to enhance community cohesion with connectivity and multimodal access within the Depot District encompassing the Lexington MMTS building. Accordingly, proposed improvements to Primary Access Streets will focus on increasing pedestrian safety, walkability and accessibility along sidewalks adjacent to the station area with the installation of ramps, crosswalks, traffic and wayfinding signage, streetlights, and curb and gutter repairs along streets and intersections. Additional improvements will include the relocation, upgrade, and extension of existing utilities as required for service to the building, curb and gutter repair and construction, and roadway resurfacing. Initially, Primary Access Street Improvements will focus on streets within the proposed SAP site boundary with future improvements extending on either side of the NCRR railroad corridor, to South Main Street and East Center Street (on the west) and to South Talbert Boulevard and East Center Street (on the east). Improvements are proposed on the following Primary Access Streets:

**South Railroad Street - A:** Improvements (street + sidewalk) will overlay the existing street alignment between East 2nd Avenue and approximately 160 feet beyond East 1st Avenue.

**South Railroad Street – B:** Improvements (street + sidewalk) will overlay the existing street alignment between East 4th Avenue and East 3rd Avenue.

**East 2nd Avenue:** Improvements (street + sidewalk) will overlay the existing street alignment extending approximately 265 feet from South Railroad Street to the intersection with Bank of North Carolina Place.

**East 3rd Avenue:** Improvements (street + sidewalk) will overlay existing street alignment extending approximately 275 feet from South Railroad Street.

**East 1st Avenue Extension:** Improvements (street + sidewalk) will overlay existing street alignment between the tie-in to Elk Street Realignment and Church Street.

**East 3rd Avenue Extension:** Improvements (street only: proposed improvements beyond the new intersection with Elk Street will be limited to street resurfacing/repair as required per SAP construction;

and, additional streetscape improvements will be implemented in the future concurrent with potential TOD redevelopment) will overlay existing street alignment between the tie-in to Elk Street Realignment and Tanyard Street.

**East 5th Avenue Extension:** Improvements (street only: proposed improvements beyond the new intersection with Elk Street will be limited to street resurfacing/repair as required per SAP construction; and, additional streetscape improvements will be implemented in the future concurrent with potential TOD redevelopment) will overlay existing street alignment between the tie-in to Elk Street Realignment and Tanyard Street.

**Access Drive - Private** [not a Primary Access Street]: Subject to agreement by existing property owner, this existing access drive is proposed for temporary use for access to the proposed SAP construction staging area located on the same parcel. Accordingly, temporary improvements to the driveway intersections, surface, and drainage between East 3rd Avenue Extension and East 5th Avenue Extension are proposed as required to facilitate construction traffic and will be restored to original condition (minimum) after SAP construction is complete.