PSE

New Stadium

PDP Appendix

October 2019

CAAICON POPULOUS

ONE BUFFALO

DESIGN NARRATIVE & VISIONING | 01.16.19

PEGULA SPORTS AND ENTERTAINMENT

CAA ICON POPULOUS

AGENDA

GOALS & OBJECTIVES
DESIGN NARRATIVE
STADIUM SITE EVALUATION
STADIUM FACILITY ASSESSMENT KEY FINDINGS
REVIEW OF PROGRAM SUMMARY FORMAT

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GOALS & OBJECTIVES

PEGULA SPORTS AND ENTERTAINMENT

CAA ICON POPULOUS

OVERALL **VISION**

1. **Authenticity** is everything.
2. **One Buffalo.** Buffalonians believe in community and see teams as face of the community.
3. **365 day use**. Open and active year-round with event and hospitality offerings.
4. **Fan based engagement.** Focus on fan comfort amenities.
5. Provide more **communal areas** and more **social experiences.**
6. Create hospitality to **attract fans by specific demographics**. Create millennial specific offerings.
7. Create **connected spaces** for suite patrons to network.
8. **Generate more revenue.**
9. Act as a **regional destination** that also draws fans from out of state.
10. **Incorporate an iconic feature** that serves as a calling card while maintaining authenticity.
11. Maintain fan base: **extreme passion** for their sports teams.
12. **Durability.**
13. Institute **venue relevance** going forward.
14. **Maintain control** of sales and operations.

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STADIUM **ASPIRATIONAL**

1. **Long term solution.** Sustainable for many years to come, at least 20 years. [**4.86**]
2. **Create a loud/intimidating game environment.** Amplify crowd noise. [**4.71**]
3. **Multi-purpose.** New or renovated facility should support more uses than football. [**4.43**]
4. **Replicate intimacy of New Era Field.** Seating bowl should dominate. [**4.43**]
5. **Tailgating.** Must have ability to support significant tailgating experience - fan tradition. [**4.36**]
6. **Endear people to do more around the stadium.** Attract use year-round. [**4.21**]
7. **Families.** Better game-day experience for families, provide distinct experiences from beginning to end. [**4.14**]
8. **Revenue generating indoor program functions.** Every space has a revenue function. [**4.14**]
9. **Update and/or design to tomorrow's standards.** Current conditions are below current NFL standards. [**4.07**]
10. **Connection to the city.** Create a destination and ancillary development opportunities. [**3.86**]
11. **Connection of team store** to clubs/suites & other revenue generating stadium programs operating year-round [**3.86**]
12. **Sponsorship.** Develop a new approach to Founding Sponsors. [**3.86**]
13. **Sports Betting** should be considered in stadium planning as a future use & revenue opportunity. [**3.86**]
14. **Incorporate an authentic & unique fan engagement feature.** Balance of arts & sponsor integration. [**3.79**]
15. **60,000 - 65,000** is the targeted capacity. [**3.79**]
16. **No roof.** Outdoor football. [**3.71**]
17. **Create a new identity.** Develop design story that connects to stadium & feels like Buffalo. [**3.64**]
18. **More standing areas** with views of field. **Social gathering spaces.** [**3.50**]
19. **eSports** should be considered in stadium planning as a future use and revenue opportunity. [**3.00**]

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STADIUM **FUNCTIONAL**

1. **Wi-Fi and DAS,** sufficient to handle future bandwidth and user demand. [**4.64**]
2. Provide **suites of varying sizes** and types to increase diversity and hierarchy. [**4.50**]
3. **Wider concourses.** Provide more room for people and more storage areas. [**4.21**]
4. Incorporate additional **field tunnel(s).** [**4.14**]
5. **Exclusive entrance** for suite holders. [**4.14**]
6. **Concessions:** Higher quality, self-sufficient concessions w/ operational access between. [**3.93**]
7. **Tailgating: Provide amenities to enhance** and re-think the tailgating experience. [**3.79**]
8. **Incorporate a service level** for more efficient maintenance and operations. [**3.79**]
9. **Heated areas for GA fans.** [**3.71**]
10. **Centralized operations for MEP & lighting equipment;** consolidate cleaning operations adj. to maintenance. [**3.69**]
11. **Reduce number of suites** from current 121 to target 100. [**3.57**]
12. **Field dimensions enlarged** to accommodate soccer/other events. [**3.36**]
13. **Ticketing** should be closer to entry gates. [**3.36**]
14. Provide **premium merchandise sales areas** in club and suite areas for premium patrons. [**3.29**]
15. Desire for **in-seat F&B service.** [**3.07**]
16. **Re-build lower bowl** with deeper treads (renovation scenario). [**3.00**]
17. Potential for **tunnel club** (additional revenue). [**2.79**]
18. **Natural grass**, heated field. [**2.79**]
19. **Introduce in-bowl patio/lounge environment** as well as bottle service hospitality areas. [**2.54**]

ARENA **ASPIRATIONAL**

1. **Improved amenities** at every level. [**4.50**]
2. **Differentiated seating.** Create an atmosphere with different seating types - differing options to appeal to each segment of the population. [**4.27**]
3. **Enclose plaza t**o increase use. [**4.00**]
4. **Suites.** Increase options, reduce inventory. [**4.00**]
5. **Wow factor.** Make the arena great again. [**4.00**]
6. **Need retail on all levels,** especially suite and club levels. [**3.91**]
7. **Main store.** Provide access from 100 level (two levels) - potential tie into new plaza. [**3.90**]
8. **Opportunity for multiple, smaller premium clubs** (i.e. lower level glass look-in clubs). [**3.83**]
9. **Reduce capacity for fan experience improvements.** 19,070 down to 18,000-18,500. [**3.82**]
10. **Entry experience.** Make entrance foyer more of a place. [**3.82**]
11. **Branding.** Develop comprehensive brand strategy. [**3.55**]
12. **Consolidate sponsorship.** Possible new approach: founding partner / less is more. [**3.18**]
13. **Player access.** People will gravitate toward interaction with players. [**3.09**]
14. **Demo adjacent garage** and/or build a new one. [**2.91**]

ARENA **FUNCTIONAL**

1. **Rethink Lexus Club.** [**4.64**]
2. **Incorporate new video board**, new ribbon boards and a new sound system. [**4.45**]
3. **Quality of audio** is extremely important. [**4.45**]
4. Address **congestion** at 300 Level and suite corridors. [**4.36**]
5. **New seating options.** [**4.27**]
6. Incorporate **loge box or family room suite concept** with connected communal club/amenity spaces. [**4.18**]
7. **Improvements to ingress/egress.** [**4.18**]
8. **Replace seats.** [**4.09**]
9. **F&B:** improve POS ratio, implement more grab and go. [**4.00**]
10. **Suites:** reduce count. Improve entry experience, address tight suite corridor & limited vert. circulation opts [**3.91**]
11. **Improve the shoot-once end.** Introduce variety of new seating products in this area. [**3.91**]
12. **Add exterior building marquee.** [**3.82**]
13. **Provide more back of house space and rigging capacity** for concerts and events. [**3.82**]
14. **Provide new ice projectors.** [**3.64**]
15. **Create opportunities for views into the bowl** from the 300 level. [**3.64**]
16. **Concessions:** more open cooking concessions. Want to see the food being prepared. [**3.36**]
17. **Ground floor broadcast area** improvements, and a new studio. [**3.20**]
18. **Additional vertical circulation for GA.** [**3.18**]
19. Address **access to press box**. [**3.09**]
20. **Provide dedicated team dining area.** [**2.91**]
21. Consider **covering loading/marshalling** area. [**2.82**]
22. **Incorporate a wall of fame**. [**2.27**]

SITE EVALUATION

NEW STADIUM

March 5th, 2019

CREATING THE NEXT GREAT PLACE...
IS LIKE A "BRAID BETWEEN THE TEAM,
THE STADIUM, AND THE CITY."

GEORGE WILL

PEGULA SPORTS AND ENTERTAINMENT

CAA ICON POPULOUS

TABLE OF CONTENTS // SITE EVALUATION

EXECUTIVE SUMMARY
SITE EVALUATION MATRIX 3

SOUTH PARK SITE
EVALUATION SECTIONS 4-58

ORCHARD PARK SITE
EVALUATION SECTIONS 59-103

SUNY U.B. SITE
EVALUATION SECTIONS 104-142

APPENDIX
WSP ENGINEERING – PARKING AND TRAFFIC 144-191
WATTS ENGINEERING – CIVIL 192-224

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SITE EVALUATION MATRIX // COMPARING ALL 3 SITES

	1. PLACE MAKING ABILITY	1.1 DISTRICT IDENTITY	1.2 FUTURE LAND USE	1.3 SITE CHARACTERISTICS	1.4 MARKET TRENDS	2. TRANSPORTATION	2.1 EXISTING ROAD NETWORK	2.2 TRANSIT SYSTEM	2.3 WALKABILITY	2.4 RIDE SHARING	2.5 LONG-TERM TRANSPORTATION PLAN	3. PARKING	3.1 PARKING DEMAND/PATTERNS	3.2 ON-SITE PARKING	3.3 OFF-SITE PARKING	3.4 TAILGATING	4. PROGRAM ACCOMMODATION	4.1 STADIUM LOCATION OPTIONS	4.2 STADIUM CONFIGURATION	4.3 SUPPLEMENTARY LAND USES	4.4 URBAN DESIGN PTL.	5. COSTS	5.1 PROPERTY VALUES	5.2 SITE IMPROVEMENT COSTS	5.3 OFF-SITE / OTHER COSTS	6. SCHEDULE	6.1 PROPERTY CONTROL / ACQUISITION	6.2 SITE CONDITIONS / ENCUMBRANCES	6.3 LAND USE / ZONING PROCESS	7. INTANGIBLES	7.1 PROPERTY DEVELOPMENT CONCERNS	7.2 P.R. / COMMUNITY ENGAGEMENT	7.3 POLITICS	8. REVENUE GENERATION	8.1 STADIUM PROGRAMMING	8.2 ANCILLARY DEVELOPMENT STRATEGY	8.3 MXD PHASING & FLEXIBILITY	TOTAL
SOUTH PARK	12	3	3	3	3	14	2	3	3	3	3	9	2	2	2	3	11	2	3	3	3	6	2	2	2	6	2	2	2	6	2	2	2	9	3	3	3	73
ORCHARD PARK	7	2	2	2	1	8	3	1	1	2	1	11	3	3	3	2	10	3	2	2	3	9	3	3	3	9	3	3	3	9	3	3	3	3	1	1	1	66
SUNY BUFFALO	5	1	1	1	2	6	1	2	2	1	1	4	1	1	1	1	4	1	1	1	1	3	1	1	1	3	1	1	1	3	1	1	1	6	2	2	2	34

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SOUTH PARK SITE

1. PLACE MAKING ABILITY

1.1 DISTRICT IDENTITY
1.2 FUTURE LAND USE
1.3 SITE CHARACTERISTICS
1.4 MARKET TRENDS
TOTAL SCORE: 12

2. TRANSPORTATION

2.1 EXISTING ROAD NETWORK
2.2 TRANSIT SYSTEM
2.3 WALKABILITY
2.4 RIDE SHARING
2.5 LONG-TERM TRANSPORTATION PLAN
TOTAL SCORE: 14

3. PARKING

3.1 PARKING DEMAND/PATTERNS
3.2 ON-SITE PARKING
3.3 OFF-SITE PARKING
3.4 TAILGATING
TOTAL SCORE: 9

4. PROGRAM ACCOMMODATION

4.1 STADIUM LOCATION OPTIONS
4.2 STADIUM CONFIGURATION
4.3 SUPPLEMENTARY LAND USES
4.4 URBAN DESIGN POTENTIAL
TOTAL SCORE: 11

5. COSTS

5.1 PROPERTY VALUES
5.2 SITE IMPROVEMENT COSTS
5.3 OFF-SITE/OTHER COSTS
TOTAL SCORE: 6

6. SCHEDULE

6.1 PROPERTY CONTROL/ACQUISITION
6.2 SITE CONDITIONS/ENCUMBRANCES
6.3 LAND USE/ZONING PROCESS
TOTAL SCORE: 6

7. INTANGIBLES

7.1 PROPERTY DEVELOPMENT CONCERNS
7.2 P.R./COMMUNITY ENGAGEMENT
7.3 POLITICS
TOTAL SCORE: 6

8. REVENUE GENERATION

8.1 STADIUM PROGRAMMING
8.2 ANCILLARY DEVELOPMENT STRATEGY
8.3 MXD PHASING & FLEXIBILITY
TOTAL SCORE: 9

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1.1 DISTRICT IDENTITY

A new stadium in South Park would add a major architectural icon and entertainment anchor to downtown Buffalo, contributing to the Buffalo Billion and One Buffalo initiatives.

- Existing electrical, water, sewer, and fiber systems are in place in this location, but would require a degree of upgrading to accommodate the new stadium needs.

- The existing site is relatively flat with no existing structures, thereby minimizing any site preparation costs.

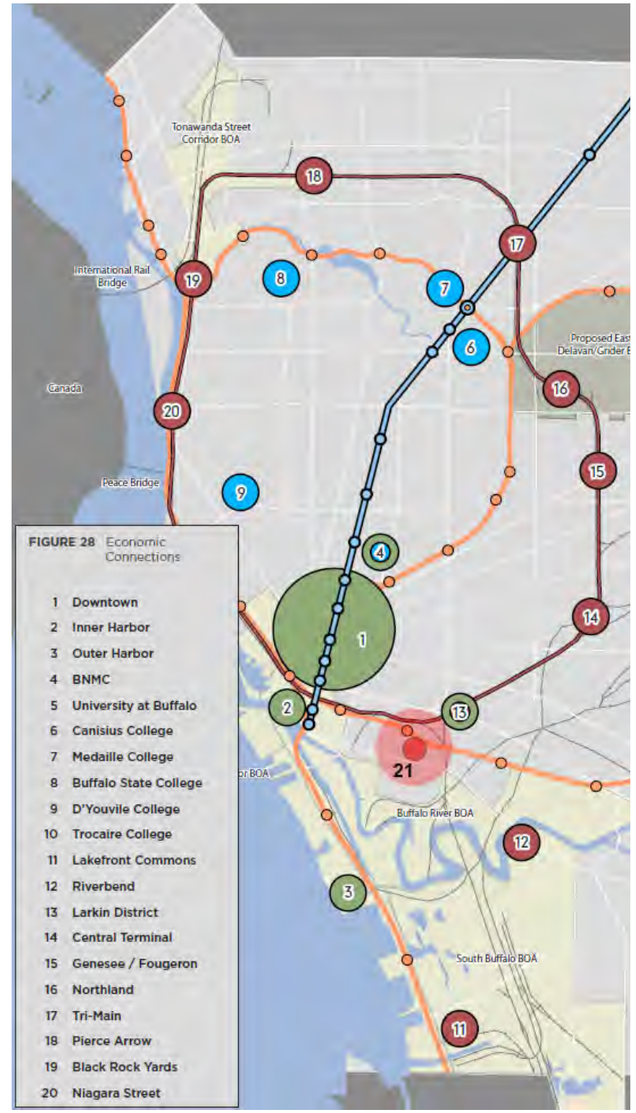
1.1 DISTRICT IDENTITY SCORE: 3

1.2 FUTURE LAND USE:

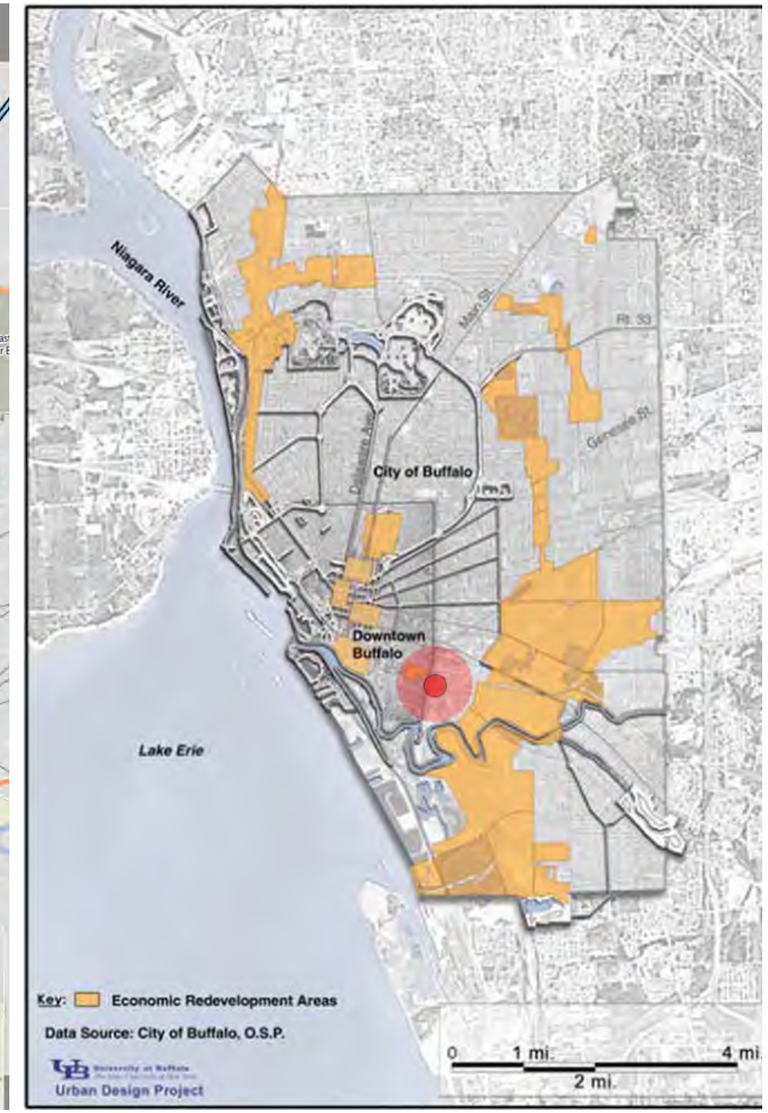
Currently, the existing site is a largely dormant and underutilized area of downtown, dominated by several vacant public housing buildings. While a new stadium could replace these buildings, it could also respect the scale and history of other neighborhood buildings as the district continues to evolve.

- With several vacant city-owned public housing buildings and properties in the area, the stadium and associated development could contribute to a positive urban redevelopment of South Park and the First Ward, much of which has been identified as targeted economic redevelopment areas.
- In addition to new buildings, enhanced landscapes and open spaces could contribute to the city's comprehensive plan strategies for improving the Olmsteadian park system that connects neighborhoods with downtown's lake and river greenways.
- A stadium-based development zone here would also help to bridge the economic energy of the Larkin District with the ongoing redevelopment activities of the Cobblestone and Canalside districts.

1.2 FUTURE LAND USE SCORE: 3



Source: Buffalo Green Code



Source: The Queen City Hub: A Regional Action Plan for Downtown Buffalo

1.3 SITE CHARACTERISTICS:

The property has a number of existing (mostly vacant) buildings on the site, is relatively flat, and offers attractive views of the downtown skyline towards the northwest, and of industrial grain elevators toward the south.

- The main eastbound lanes, as well as on- and off-ramps, of Interstate 190 border the northern edge of the site. A slight bend in the highway at this point also accentuates the powerful views that drivers will get of the building, as they enter and exit downtown.

- Directly across Louisiana Street, to the west, are six occupied 8-story residential towers, the largest of the Commodore Perry Homes and Extension (built between 1940 and 1956), which are owned and managed by the Buffalo Municipal Housing Authority.

- The other existing neighborhood structures to the south and east are a mix of 1- and 2-story residential and commercial buildings, most of them built in the early- to mid-twentieth century.

1.3 SITE CHARACTERISTICS SCORE: 3

1.3 SITE CHARACTERISTICS:

The property has a number of existing (mostly vacant) buildings on the site, is relatively flat, and offers attractive views of the downtown skyline towards the northwest, and of industrial grain elevators toward the south.

- Just south of the property on Louisiana Street is Father Conway Park, a neighborhood park of about 13 acres, used for a variety of recreation and events by local residents.

- Located just over 1/2 mile from Keystone Arena, the stadium would act as an eastern "bookend," with the Cobblestone blocks and Casino in between.

1.3 SITE CHARACTERISTICS SCORE: 3

1.4 MARKET TRENDS:

A new stadium at South Park would introduce a third professional sports venue that is located within a 3/4 mile from one another, creating strong anchors for a growing entertainment and mixed-use district that few cities can claim.

- With an active downtown real estate development market and ongoing mixed-use development at nearby Canalside, Larkinville, and Cobblestone districts, the stadium site would both benefit from and contribute to furthering Buffalo's focus on creating a vibrant, connected downtown.

- "Downtown Buffalo is a regional center for culture and entertainment. Substantial recent investments in Shea's Performing Arts Center, Studio Arena Theatre, the Buffalo Transportation Pierce Arrow Museum, Sphere Entertainment Complex, Mudpies, Dunn Tire Park, Andrews Theatre of the Irish Classical Theatre Company, and nearby Kleinhans Music Hall help confirm Downtown's role as a regional center." (The Queen City Hub, Vol. 2, p. 11)

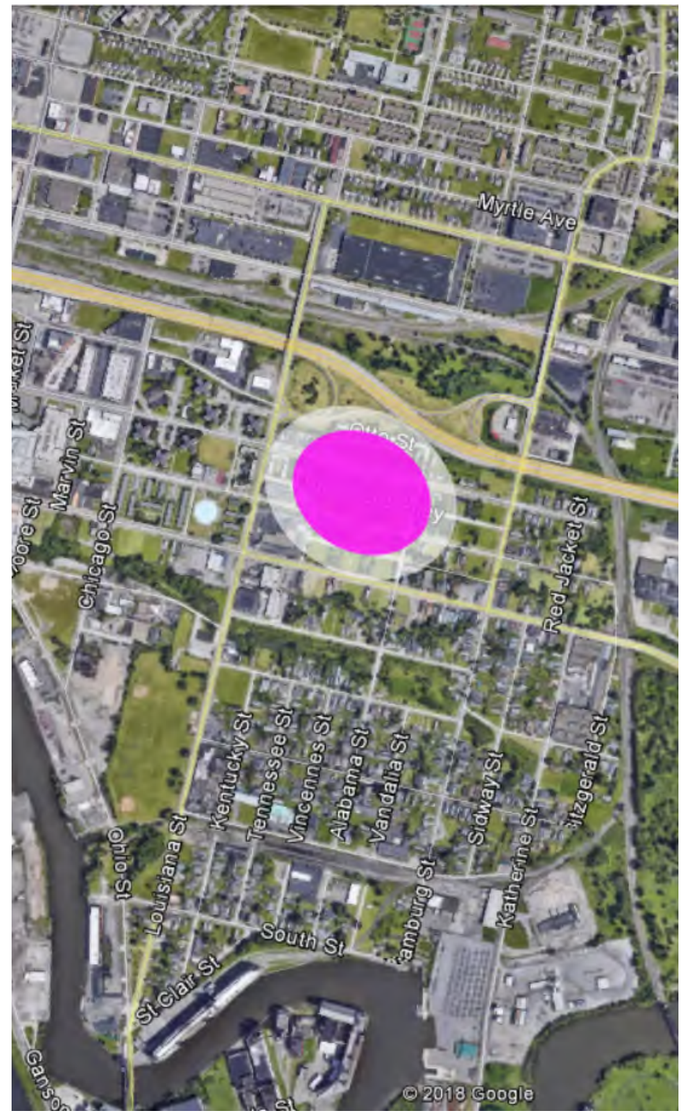
- As a result of both public and private investments over recent years, job creation, residential development, and retail/entertainment uses in the downtown area continue to grow.

1.4 MARKET TRENDS SCORE: 3

2.1 SOUTH PARK ROAD NETWORK:

The South Park site is comprised of two basic vehicular transportation systems: the interstate highway network, including I-190 to the north; and the local gridiron street system, to the west, south, and east.

- As noted in the accompanying transportation report, this site is well served by an interstate highway network but will likely be congested with backups on main lanes and on- and off-ramps during major events.
- Because of the elevated I-190 highway structure and the CSX railroad corridor, limited opportunities exist to access the roadway network to the north.
- While the gridded local street system provide redundancy and options for vehicular ingress/egress patterns, it also creates potential conflicts with pedestrian circulation in the district.
- Traffic management and potential road closures and/or one-way traffic patterns may be further considered to alleviate local transportation during event conditions.



2.1 SOUTH PARK ROAD NETWORK SCORE: 2

2.1 SP ROAD NETWORK: ARRIVALS ANALYSIS

- The downtown location is well served by an Interstate highway network (I-190, Route 33, Skyway/ Route 5). Figures 14 and 15 illustrate assumed arrival and departure routes to the Downtown location. Approximately 48% percent of game day trips would use I-190 (approx. 27% from/ to south and 21% from/to north). Approximately 21% is assumed to use Route 33.
- The existing city street grid provides some redundancy in operations and connections to and from site.
- Distribution of available downtown parking or supporting attractions (restaurants/bars/ Canalside, etc.) may better disperse traffic to a greater area and elongate (therefore reduce) the arrival and departure peak traffic volumes.
- The potential exists to expand on transit connections or ride share opportunities for "last mile" trips to stadium from downtown and other park-and-ride locations.
- The downtown location has the potential to build off existing arrival/departure routes and TMP established for Key Bank Center event traffic (TMP would only need to be modified to account for destination shift to south).

Traffic Arrival Patterns for Downtown Site

SOURCE: WSP

2.1 SP ROAD NETWORK: DEPARTURES ANALYSIS

- The downtown location is well served by an Interstate highway network (I-190, Route 33, Skyway/ Route 5). Figures 14 and 15 illustrate assumed arrival and departure routes to the Downtown location. Approximately 48% percent of game day trips would use I-190 (approx. 27% from/ to south and 21% from/to north). Approximately 21% is assumed to use Route 33.
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Traffic Departure Patterns for Downtown Site

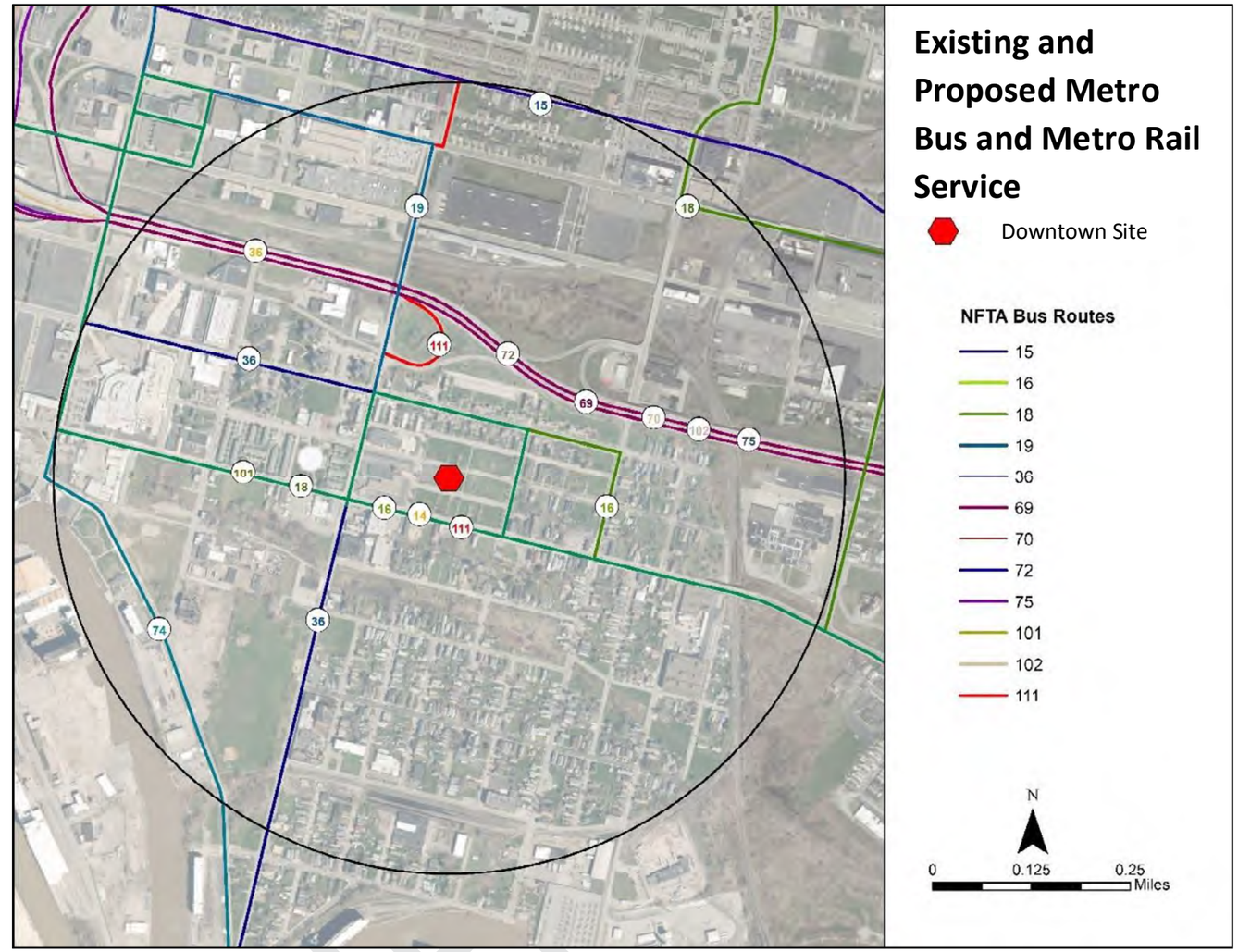
SOURCE: WSP

2.2 TRANSIT SYSTEM:

NFTA is currently pursuing plans to extend Metro Rail service to DL&W Terminal and provide a station to service the Cobblestone District. Combined with expansion to Northtowns, opportunity exists for substantial transit mode split.

- Based upon a modal split assumption of 15% Metro Rail riders and 30% bus/coach riders, and 55% passenger vehicle riders, a parking demand of 9,750 spaces is generated.
- NFTA owns the DL&W corridor right-of-way east of Michigan Avenue, which could be considered as a corridor to expand Metro Rail service and provide a station closer to the stadium site.
- Metro Bus routes near the Downtown site likely would need to be rerouted. If Perry Street is closed, then multiple Metro Bus routes would need to be rerouted from Perry Street.

Existing Metro Bus Routes and Existing and Proposed Metro Rail Routes at Downtown Site



SOURCE: WSP and NFTA

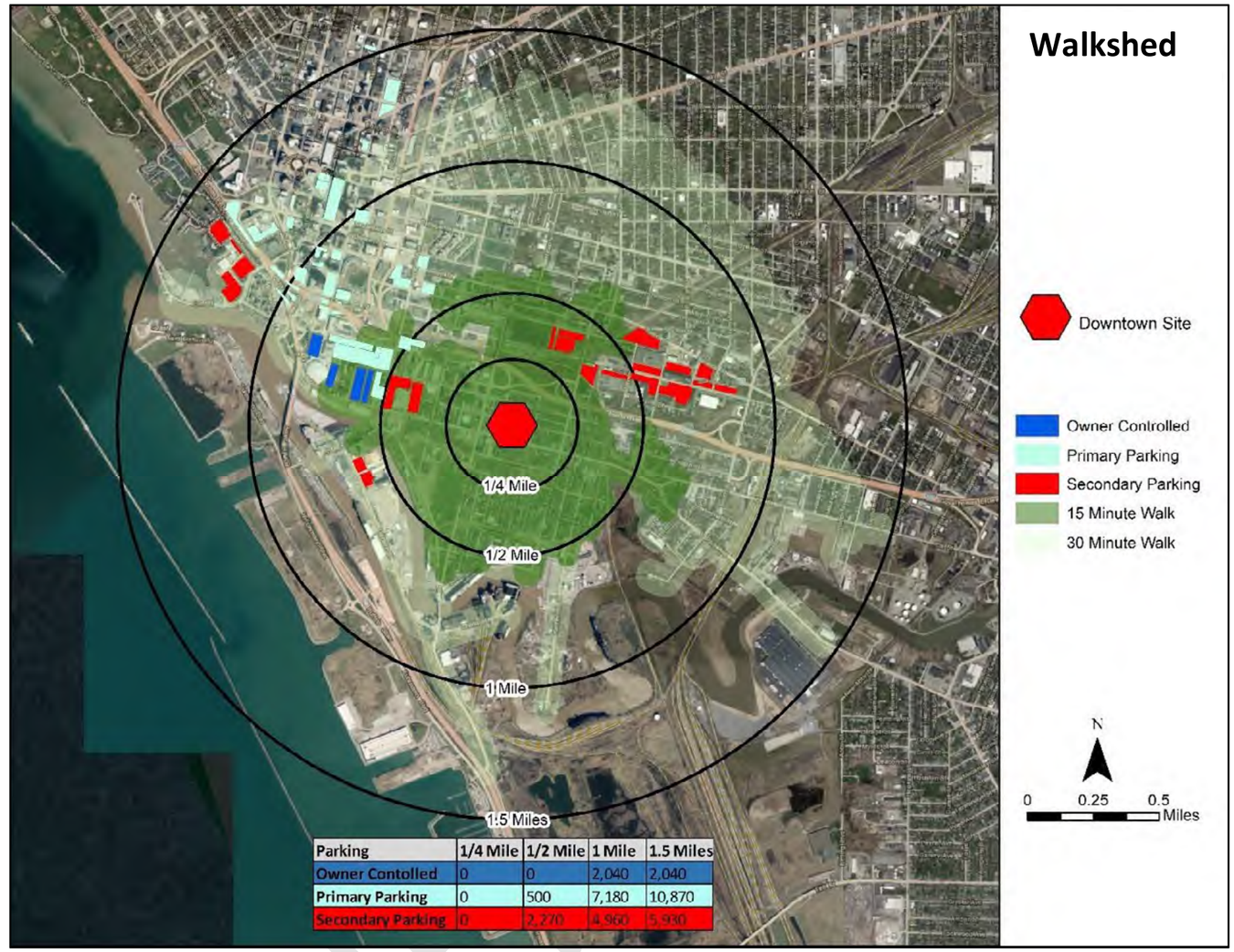
2.2 TRANSIT SYSTEM SCORE: 3

2.3 WALKABILITY: WALKSHED ASSESSMENT:

Most streets in South Park have sidewalks, but they vary in width, condition, and encumbrances. Larger event-day pedestrian levels and dispersed parking locations will necessitate a comprehensive report identifying patterns, conditions, and recommendations.

- There is a limited amount of Owner Controlled and Primary Parking available within the 15-minute walkshed of the Downtown site. This is limited to the surface lots in the Cobblestone District, the KeyBank Arena ramp, and a few parking areas under the I-190. Most of the parking for this site would come from throughout the 30-minute walkshed, which extends into downtown and Larkinville.
- The walkshed is constrained by the Buffalo River, railroad right-of-way, and I-190 (an elevated highway).
- Providing pedestrian access over the Buffalo River would require a moveable bridge as the Buffalo River is a navigable waterway and requires a 100-foot clearance. Enhanced walkways would be needed over the I-190 to access areas to the north (for example, Michigan, Louisiana, Hamburg, Van Rensselaer, Smith).

Walkshed Assessment of Downtown Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Contolled	0	0	2,040	2,040
Primary Parking	0	500	7,180	10,870
Secondary Parking	0	2,270	4,960	5,930

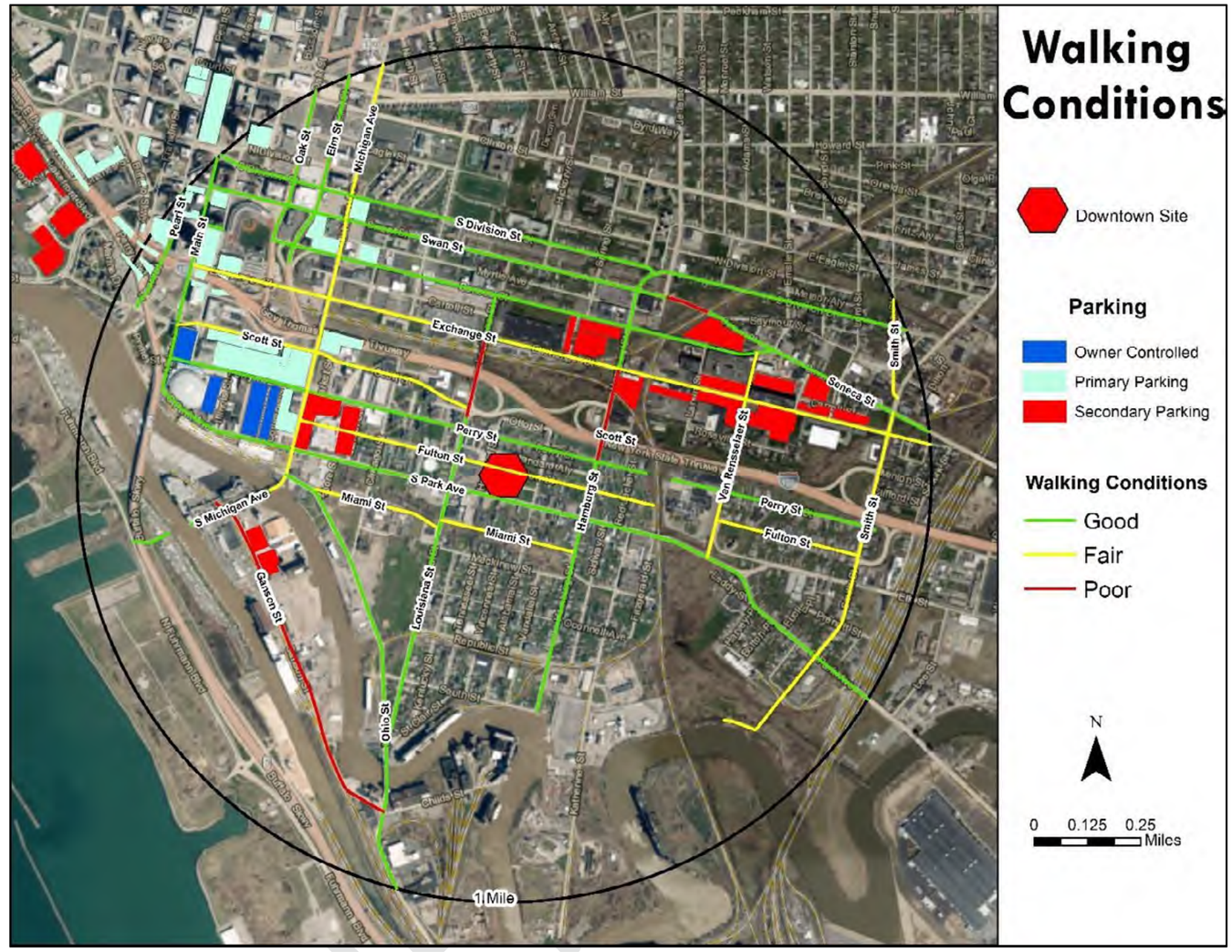
SOURCE: WSP

2.3 WALKABILITY SCORE: 3

2.3 WALKABILITY: WALKSHED CONDITION:

- Just about all streets in the vicinity of the Downtown site have sidewalks; with varying degrees of comfort and condition. Roadways that take patrons across or under I-190 are in poor condition.
- The DL&W corridor has potential to be used as a pedestrian corridor to/from the site.
- Exchange Street is only accessible from Louisiana Street and Hamburg Street via pedestrian stairways. Access is not ADA compliant.
- Many corridors, such as Exchange Street, Louisiana Street, Hamburg Street, Perry Street, have long stretches with fair or poor walkability conditions.

Walkshed Conditions of Downtown Site



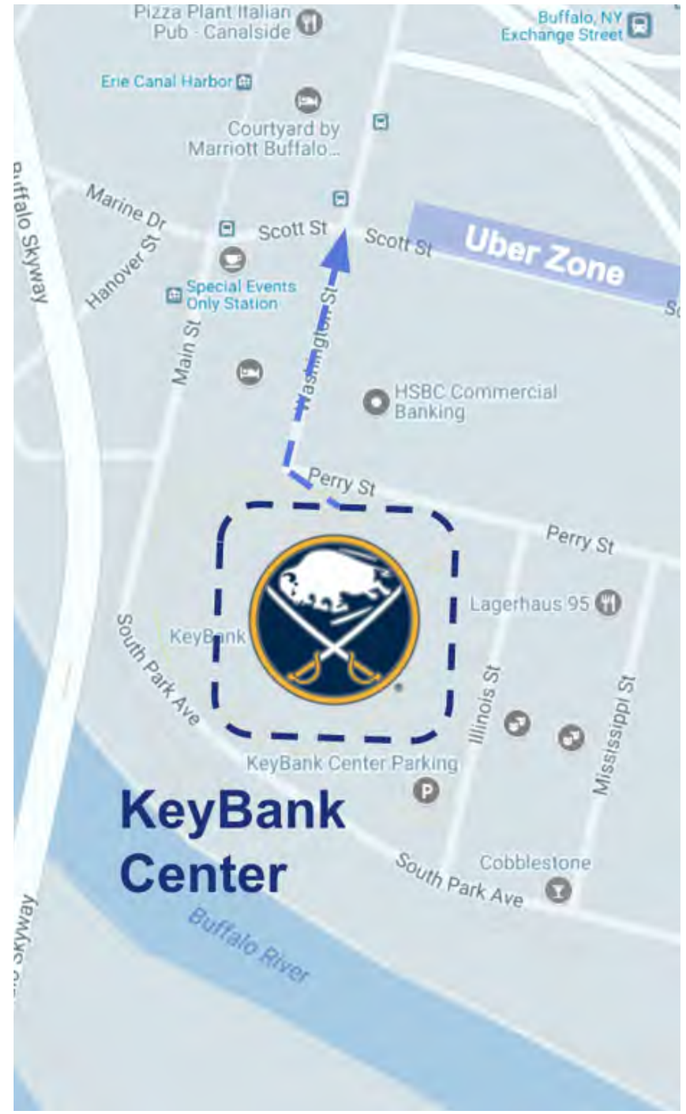
SOURCE: WSP

2.3 WALKABILITY SCORE: 3

2.4 RIDE SHARING:

Similar to other NFL stadiums, Uber, Lyft, and other ride-sharing programs have become more prevalent, with expectations to expand in future years. With arena patrons already accustomed to utilizing ride-share services at KeyBank Arena, similar patterns may be expected at the NFL stadium site at South Park.

- Expansion of social media platforms, such as the One Buffalo app, is expected to increase utilization and efficiency of shared-ride programs, transit use, parking systems, and other modes of circulation.
- The potential exists to expand on transit connections or ride share opportunities for "last mile" trips to stadium from downtown and other park-and-ride locations.
- Multiple ride-share locations may be located throughout the district to disperse ridership demand.



2.4 RIDE SHARING SCORE: 3

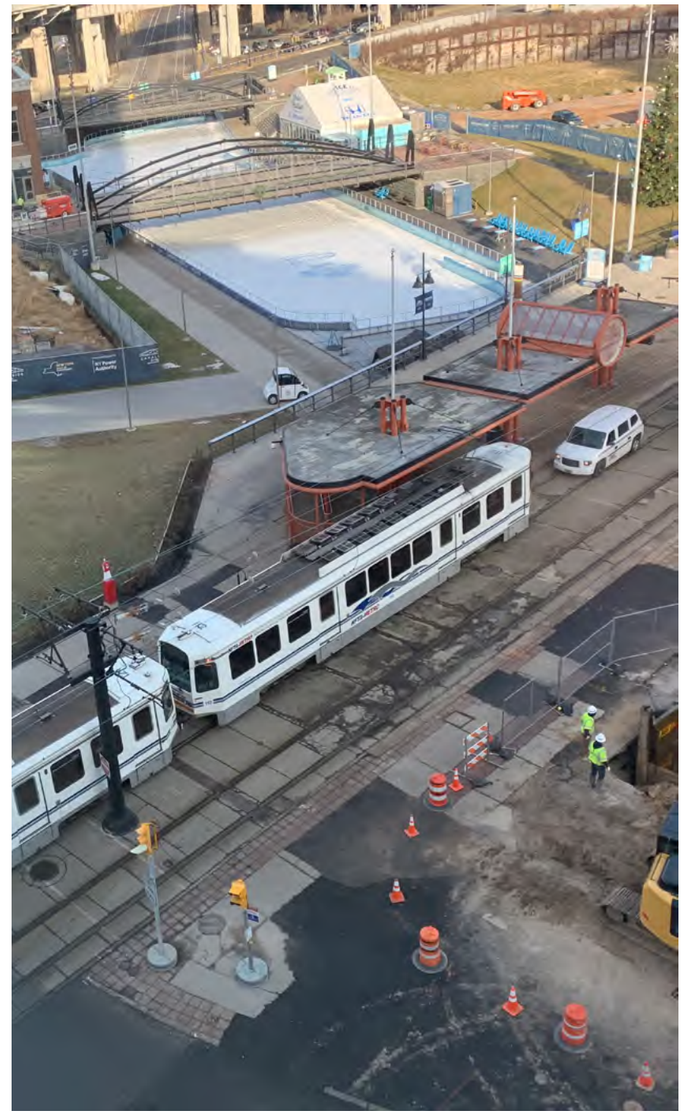
2.5 LONG-TERM TRANSPORTATION PLAN:

Existing Metro Rail, Metro Bus, highway, and local road systems create a valuable transportation network offering options to serve a future stadium in South Park, but need further detailed studies to prioritize recommended improvements in conjunction with pedestrian and parking patterns for major events.

- The extension of Metro Rail service to the DL&W terminal and further east of Michigan Avenue along the DL&W corridor would provide valuable access to stadium patrons as well as to the larger South Park neighborhood.

- I-190 is a critical transportation link for the future stadium site, but limitations with existing ramp capacities will be a priority for recommended access improvements.

- Existing local streets provide flexibility for multiple ingress/egress routes, but will also be impacted with additional traffic loads, raising the need for detailed studies for right-of-way improvements to several corridors connecting to stadium and parking areas.



2.5 LONG-TERM TRANSPORTATION PLAN SCORE: 3

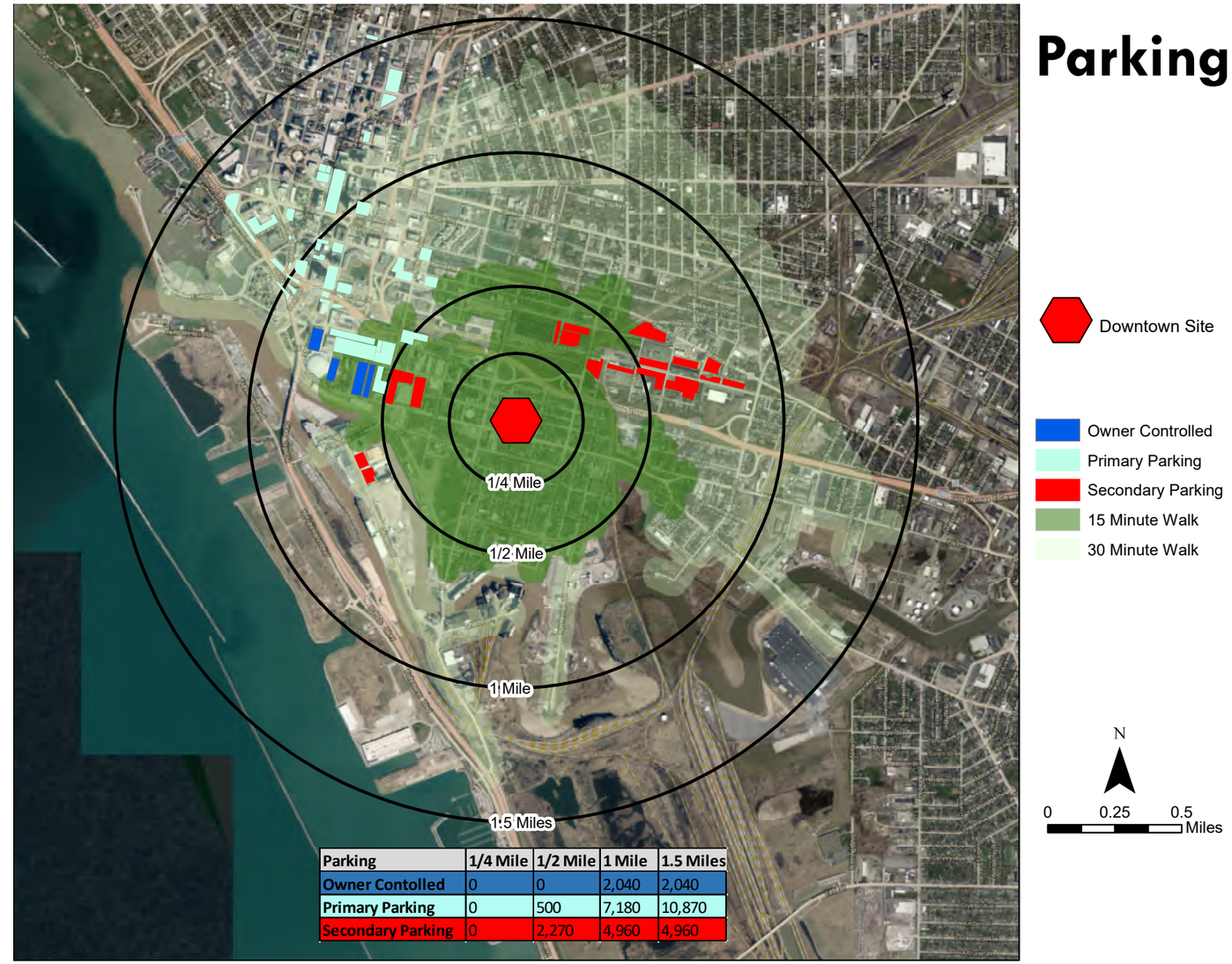
SOUTH PARK SITE // 2. TRANSPORTATION

Potential Bottleneck area with I-190 (and Route 5) trying to access local roadways versus 33 Traffic approaching from east via Oak
High speed turns onto Seneca from Oak conflicts with anticipated pedestrians
Reduce speed of Ramp to Seneca Street Replace ramp if can create direct connection to Michigan
Service Road type Ramp with option to connect to Michigan on Bridge Retain connection to 33 but could remove Seneca Ramp
Investigate potential for Direct Connection of Elm/Oak to Scott or to Perry. Challenge with grades but may be able to weave through existing ramp structures. This would lesson 33 traffic turning at Seneca & Swan Street connection to Michigan.
Interchange look at direct access ramp reconfiguration to stadium access/ring road. Would allow removal of ramps to Louisiana and Hamburg which have concerns on geometry and existing capacity
Service Road type Ramp through to Louisiana may provide opportunity to add ramp from Michigan to SB I-190
Improve Scott Street connection to stadium ring/access toad TBD
Potential relocation of ramp to provide more direct egress from South Park to I-190 SB. Could remove ramp from Smith supporting neighborhood cohesiveness
William St
N Division St
S Division St
E Eagle St
Clinton St
Exchange St
Gov Thomas E Dewey Thruway
Scott St
Perry St
New York State Thruway
Fulton St
Miami St
Mackinaw St
Republic St
South St
Seneca St
Carroll St
Howard St
Pink St
Bristol St
Fritz Aly
James St
Meteor Aly
Seymour St
Minton St
Clifford St
Elk St
Leddy St
Erie St
Coast Guard
Fuhrmann Blvd
N Fuhrmann Blvd
S Michigan Ave
Michigan Ave
Carson St
Hamburg St
Louisiana St
Hayward St
Standard Aly
Red Jacket St
Sidway St
Fitzgerald St
O'Connell Ave
Tennessee St
Vincennes St
Alabama St
Vandalia St
Kentucky St
St Clair St
Lee St
Walter St
Maurice St
Peabody St
Fillmore Ave
Clare St
Bond St
Adams St
Smith St
Dillon St
Emslie St
Lord St
Byrd Way
Devon Grn
Hickory St
Elm St
Oak St
Jefferson Ave
Madison St
Monroe St
Washington St
John Paul Ct
Olga Pl
Oneida St
Thomas E Dewey Thruway
Erie Canal
Buffalo Skyway
Moore St
Chippewa St
Louisiana St
Ohio St
Perry St
Fillmore Ave
W Market St
Seneca St
Dillon St
Hamburg St
Seymour St
Meteor Aly
Fritz Aly
Howard St
Pink St
Bristol St
Oneida St
Olga Pl
Clare St
Fillmore Ave
Clinton St
James St
Emslie St
Lord St
Smith St
Byrd Way
Jefferson Ave
Adams St
Washington St
John Paul Ct
William St
Devon Grn
Hickory St
Elm St
Oak St
Michigan Ave
N Division St
S Division St
E Eagle St
Clinton St
Exchange St
Gov Thomas E Dewey Thruway
Scott St
Perry St

3.1 PARKING DEMAND/PATTERNS:

Whereas most parking at the existing New Era Field is located adjacent to the stadium in large fields of parking, a parking scenario for a stadium in South Park would likely be more dispersed in a variety of lots and garages throughout the district.

- The presence of NFTA Metro Rail and Bus service represents an important transportation option to offset parking demand; local shuttle service may be another transit option to facilitate circulation throughout the district during major events.
- A number of existing parking facilities currently exist within a 1.5-mile radius from the stadium location, and have been evaluated at 1/4 mile intervals to identify potential parking supplies.
- Depending on the availability of property control, future parking structures may also serve additional parking needs for stadium events as well as other community- and mixed-use development program needs.



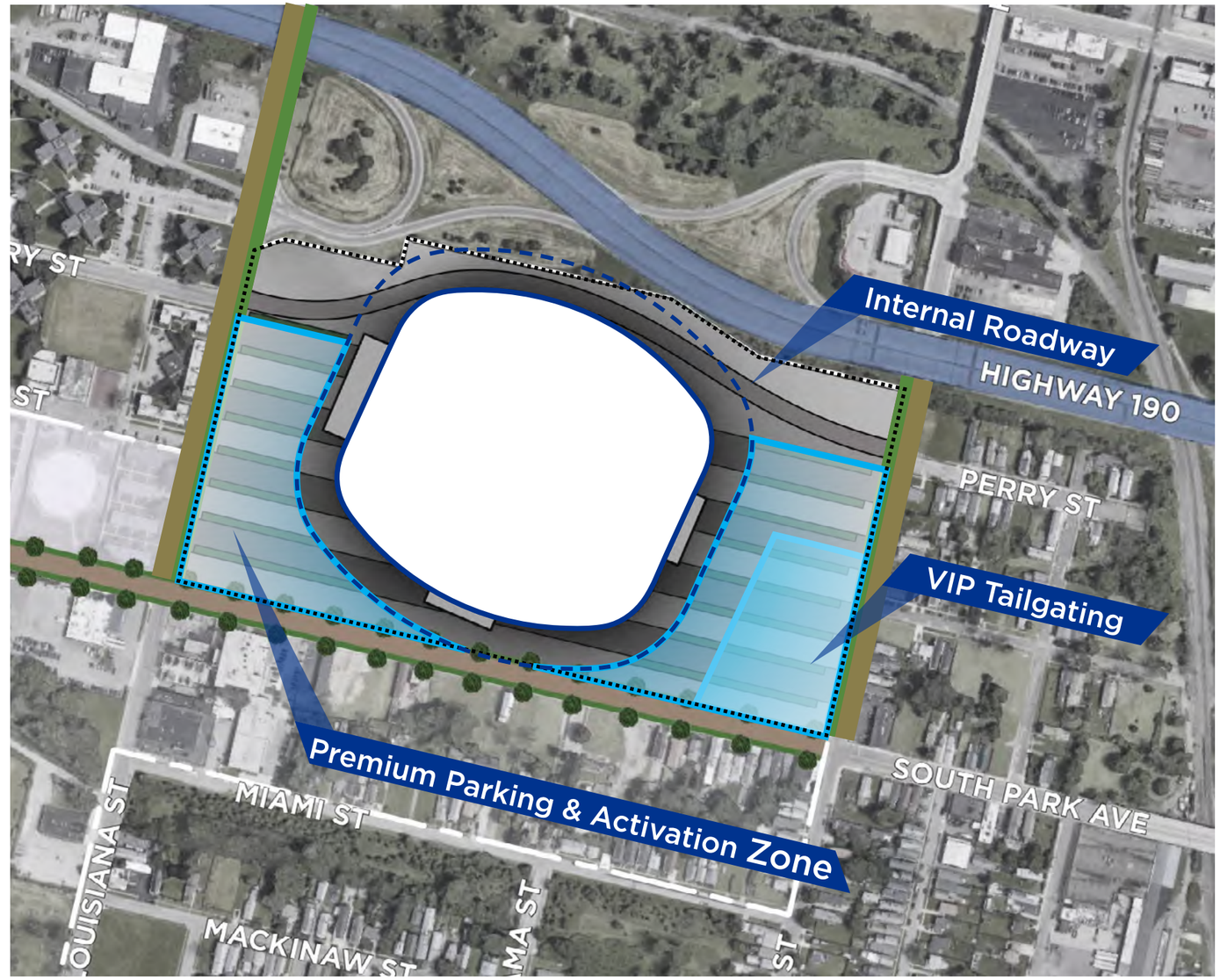
Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Contolled	0	0	2,040	2,040
Primary Parking	0	500	7,180	10,870
Secondary Parking	0	2,270	4,960	4,960

3.1 PARKING DEMAND/PATTERNS SCORE: 2

3.2 ON-SITE PARKING:

Within the immediate 36-acre site (between I-190, Louisiana Street, South Park Ave., and Hamburg Street) team-related parking needs will be accommodated; a combination of surface and structured parking solutions would provide VIP, service, and a limited amount of additional parking spaces.

- The segment of Perry Street between Louisiana Street and Hamburg Street is planned to be a limited access roadway for stadium-related parking and service needs.
- Given the anticipated building location on the site, a small amount parking may be located along the periphery of the stadium; additional parking areas would likely be positioned to the east of the stadium towards Hamburg Street.



3.2 ON-SITE PARKING SCORE: 2

3.3 OFF-SITE PARKING:

In addition to walking distances between the stadium site and potential parking locations, a preliminary analysis has also been undertaken for inventories that are Owner Controlled (by PSE), Primary Parking (available for public use), and Secondary Parking (possibly available during games).

- Based upon an assumption of 15% Metro Rail riders and 30% bus/coach riders, and 55% passenger vehicle riders, a parking demand of 9,750 spaces is generated.
- A preliminary analysis indicates that approximately 3,000 spaces are located within 1/2 mile from the stadium and 14,000 spaces are located within 1 mile of the stadium.

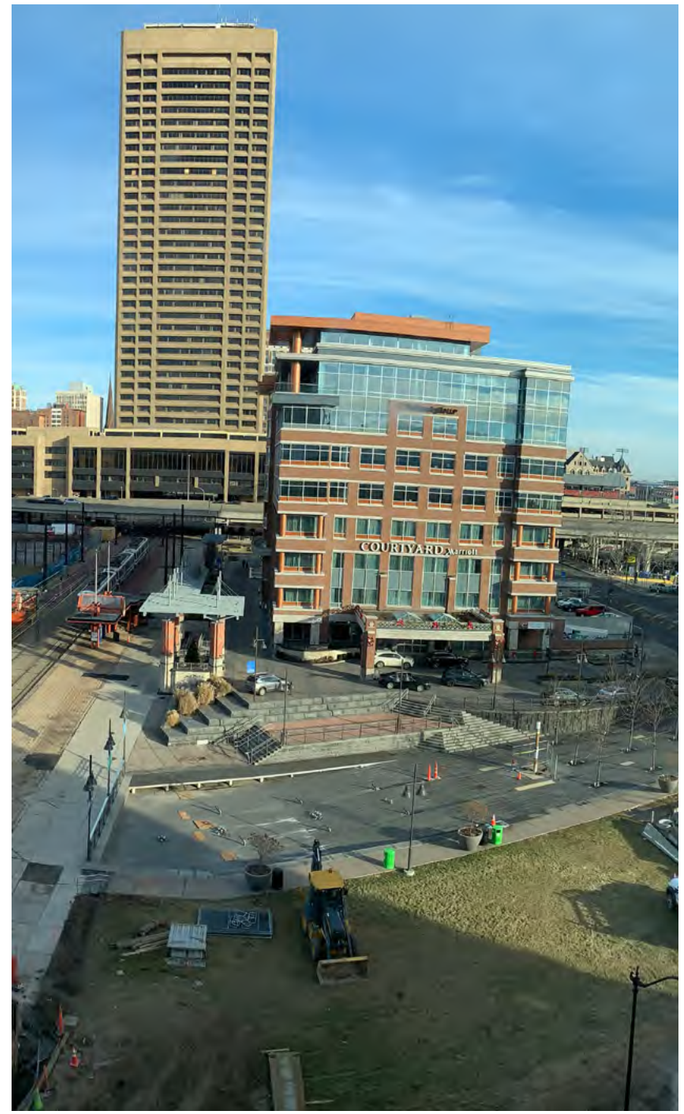
3.3 OFF-SITE PARKING SCORE: 2

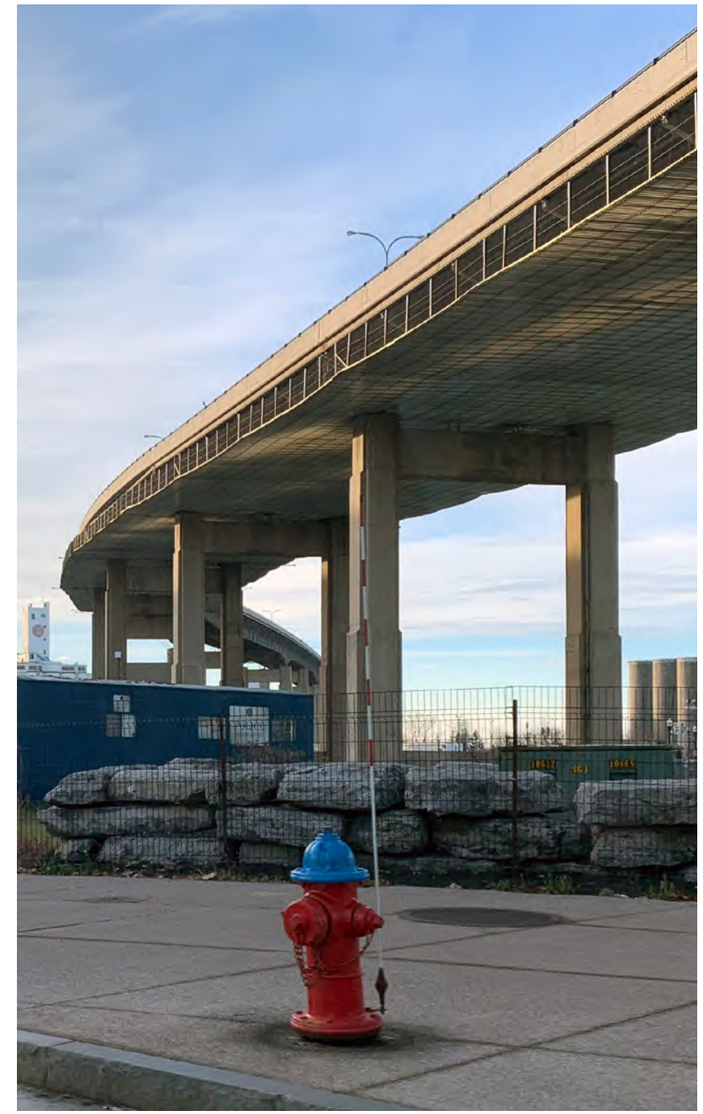
3.3 OFF-SITE PARKING:

In addition to walking distances between the stadium site and potential parking locations, a preliminary analysis has also been undertaken for inventories that are Owner Controlled (by PSE), Primary Parking (available for public use), and Secondary Parking (possibly available during games).

- Further study of parking locations indicate that a large supply exists just outside the ½/2 mile radius, at the KeyBank Arena/Harborside parking structures, which are a direct walk straight down Perry Street or South Park Avenue.

- Additional study is required for the zones along the I-190 frontage, but it appears that a significant amount of land may be improved to accommodate surface and/or parking structures. As an example, one parking deck has been explored on the north side of the highway, serving nearby parking but also envisioned as a terraced structure that would complement the stadium.



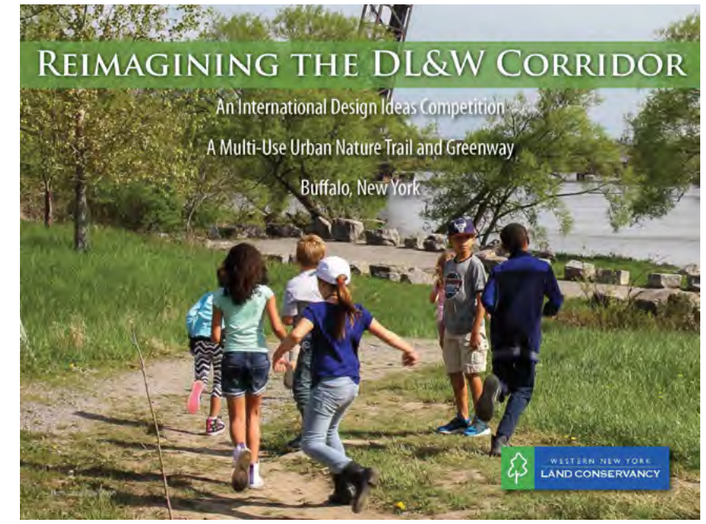


3.3 OFF-SITE PARKING SCORE: 2

3.4 TAILGATING:

Tailgating is a favorite pastime for Bills fans, and is expected to remain as an important tradition even with a new downtown stadium; new and creative approaches will need to be addressed to maximize the convenience and experience.

- Where surface parking lots exist, traditional tailgating may be staged. Where structured parking garages are utilized, tailgating would likely be limited to rooftops or open-air terraces.
- A terraced parking garage along the north side of I-190 would permit a series of tailgating levels overlooking highway traffic and the stadium, and a potentially exciting feature unique to Buffalo.
- Local parks and open spaces, such as the future DL&W linear park, may also host tailgating, picnics, and celebrations but should be controlled in order to ensure proper maintenance and operations before, during, and after events.
- Tailgating practices are also evolving into a variety formats which can be integrated throughout the stadium district: within stadium itself, "valet" style (with one-stop equipment already in place), and hybrid food truck zones.



3.4 TAILGATING SCORE: 3

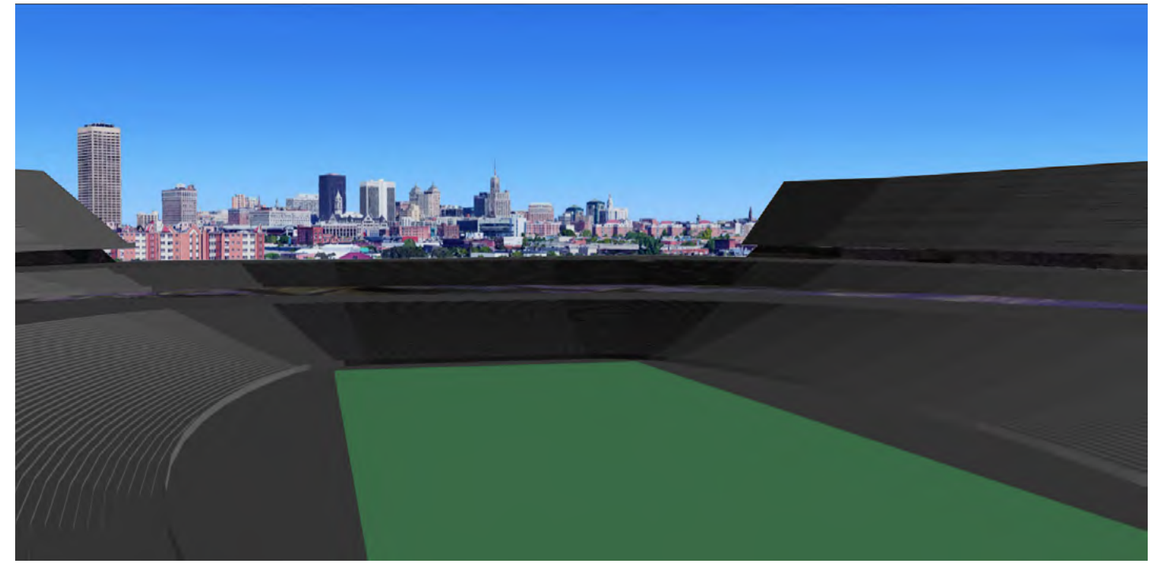
4.1 STADIUM LOCATION:

Only one stadium location was tested within the South Park district: the 36-acre zone between I-190, Louisiana Street, South Park Ave., and Hamburg Street. But for an urban site with four distinct edges, the building and surrounding landscapes will take on four distinct to respond to its surrounding context.

- The north side is conducive to maximizing the scale and appearance of the building along a highly visible highway corridor, which will be a main design opportunity for architectural as well as signage considerations.

- The west side affords desirable vistas to downtown's skyline, but needs to be balanced with prevailing wind conditions as well as the neighboring public housing buildings.

- The south side fronts on to South Park Avenue, the commercial spine that connects the First Ward to the arena and downtown, as well as to the future DL&W landscape/transit corridor.



4.1 STADIUM LOCATION SCORE: 2

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION

4.1 Stadium Location Options:

Only one stadium location was tested within the South Park district: the 36-acre zone between I-190, Louisiana Street, South Park Ave., and Hamburg Street. But for an urban site with four distinct edges, the building and surrounding landscapes will take on four distinct to respond to its surrounding context.

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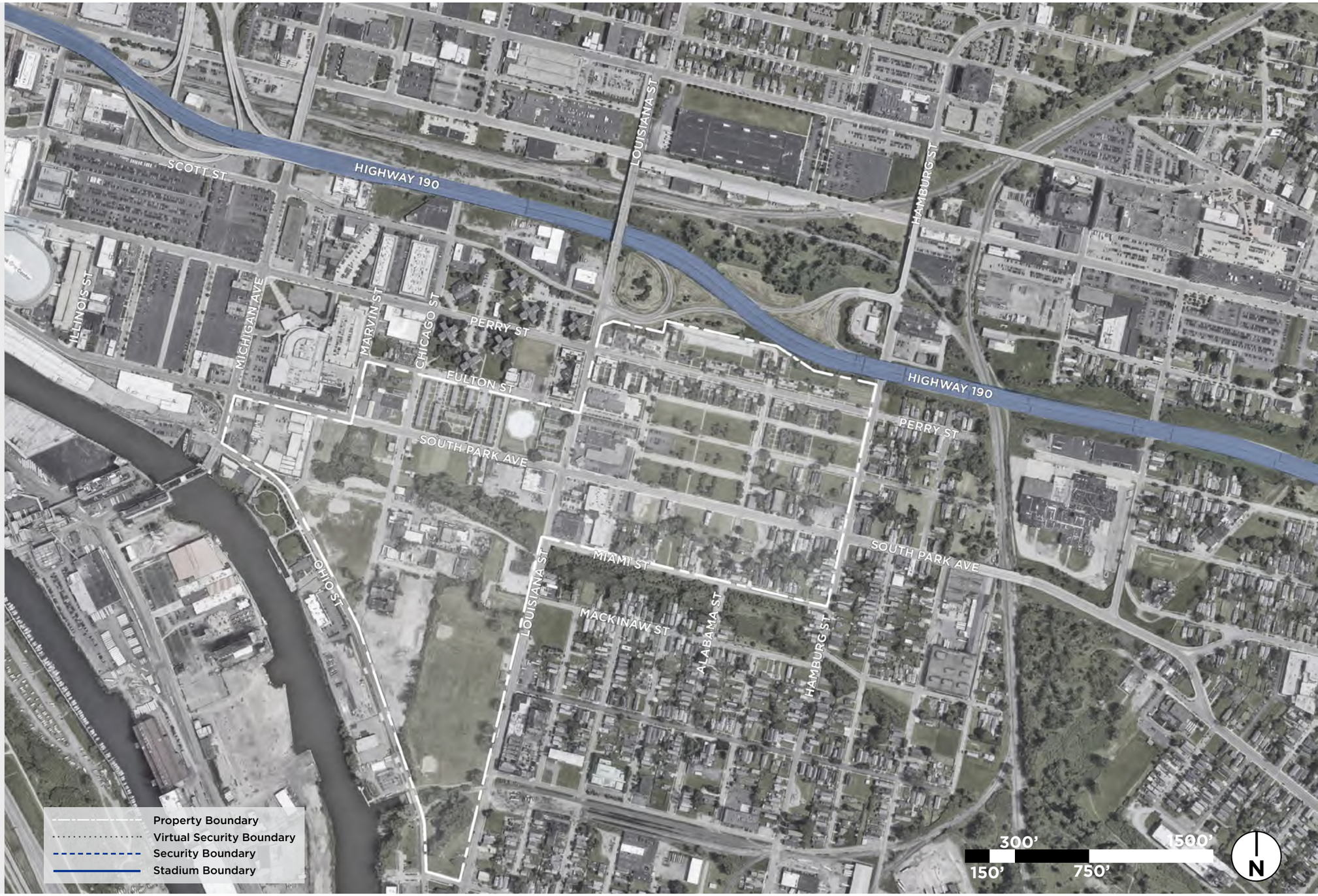
- The south side fronts on to South Park Avenue, the commercial spine that connects the First Ward to the arena and downtown, as well as to the future DL&W landscape/transit corridor.
- The east side is located adjacent to residential blocks with modest single-family houses, so must explore ways in which to transition the mass and function of the building as it meets this residential scale.

Stadium Location Score: 2



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION

4.1 Stadium Location Options:

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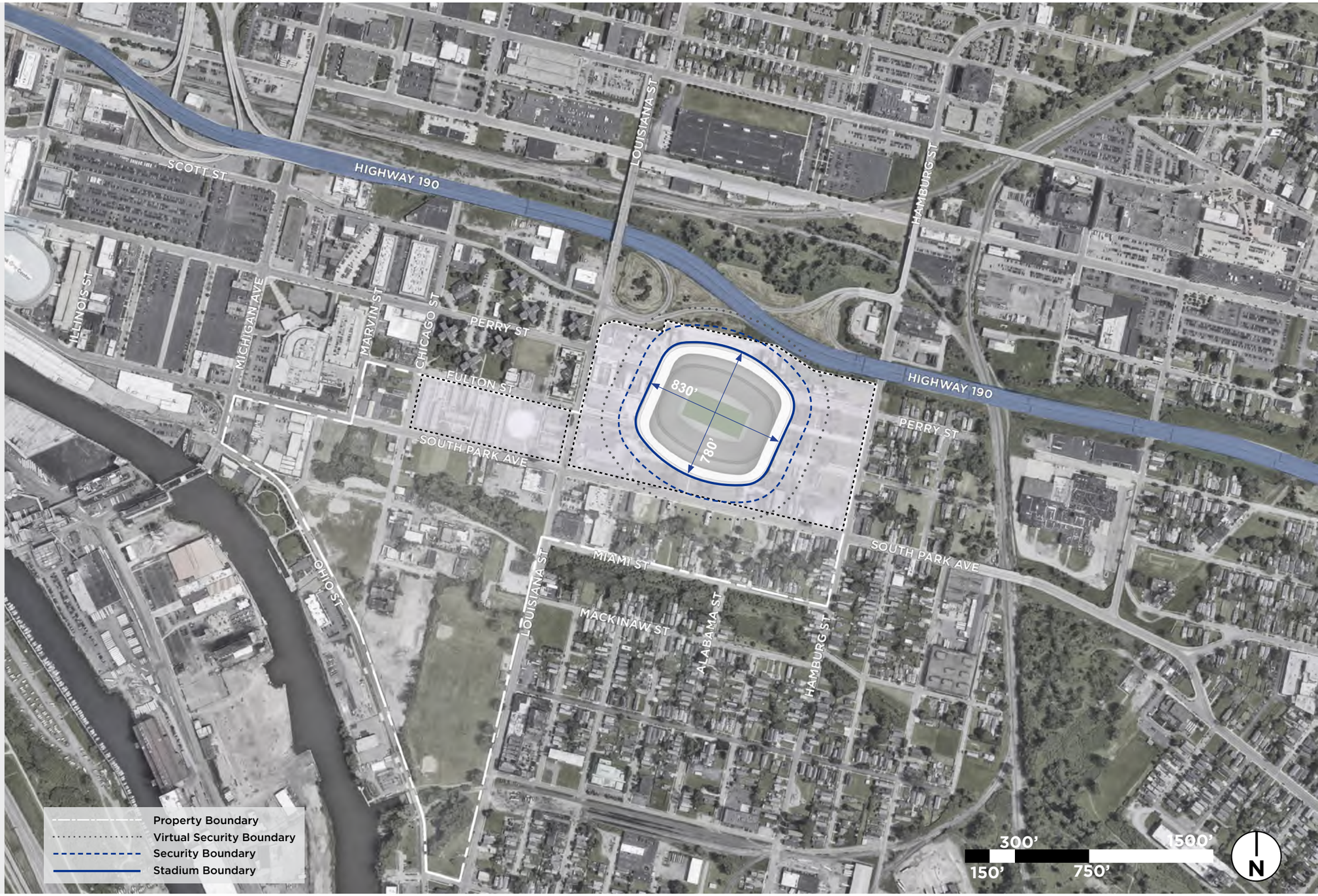
Stadium Location Score: 2

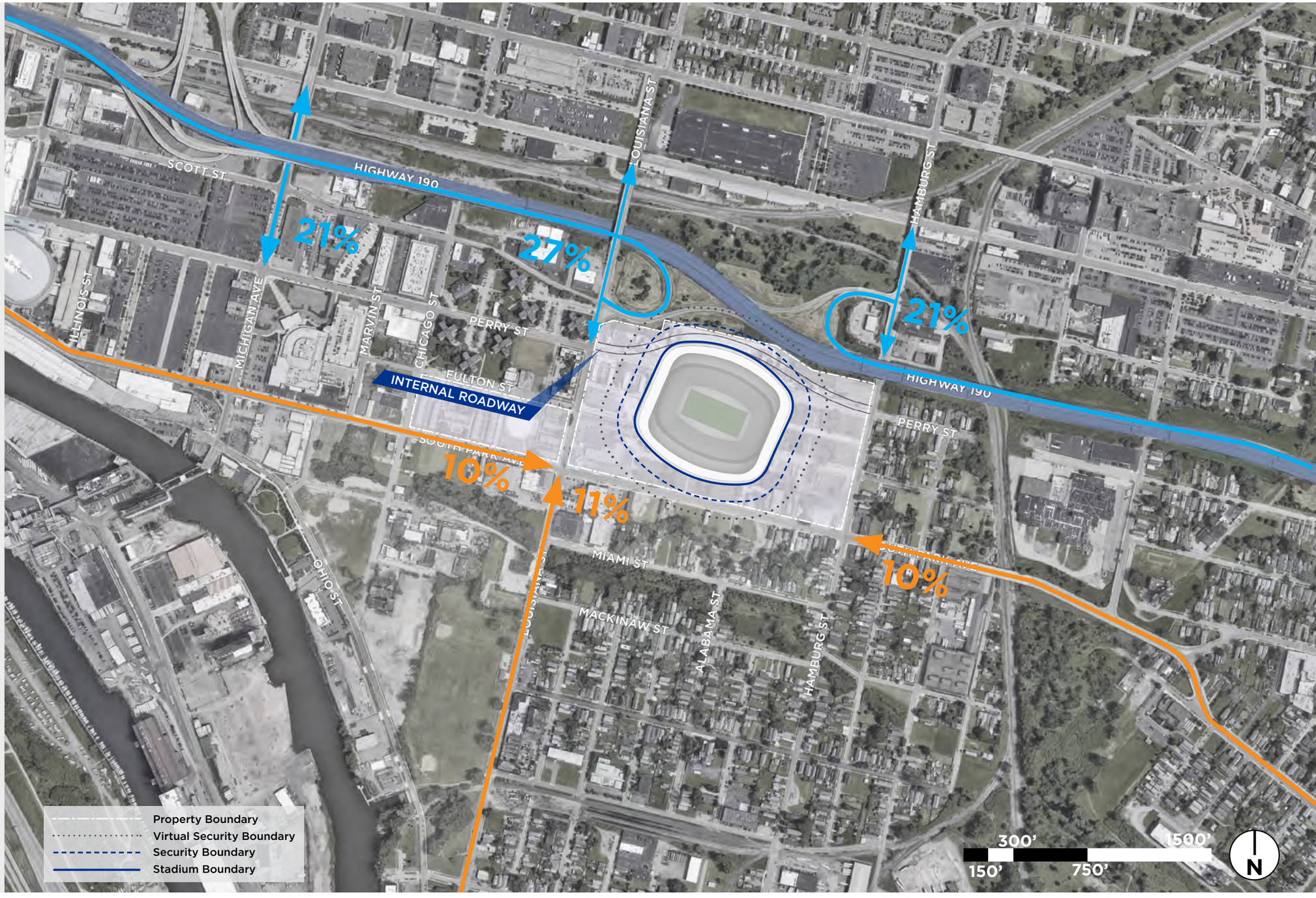


SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - TRAFFIC OVERLAY

4.2 Stadium Configuration:
The proposed stadium location has sufficient land area around the building to allow for flexibility with orientation and architectural articulation to respond to views, climate, and adjacent amenities.

- The scale of the new building will create an iconic presence along I-190, and is envisioned to include some type of articulation, such as an atrium, on the west side to take advantage of downtown views but also to offer fans an option to escape cold temperatures and winds.
- With the main pedestrian link between the stadium and areas near the arena, the main front door and entry plaza is expected to be on the west side of the building along Louisiana Street.
- Secondary entries are expected to be located on the south and east sides of the building, while the northern edges are expected to handle service functions, taking advantage of the internal Perry Street access road.

Stadium Configuration Score: 3



Key page

POPULOUS

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - WALKSHED & EXISTING PARKING

4.2 Stadium Configuration:

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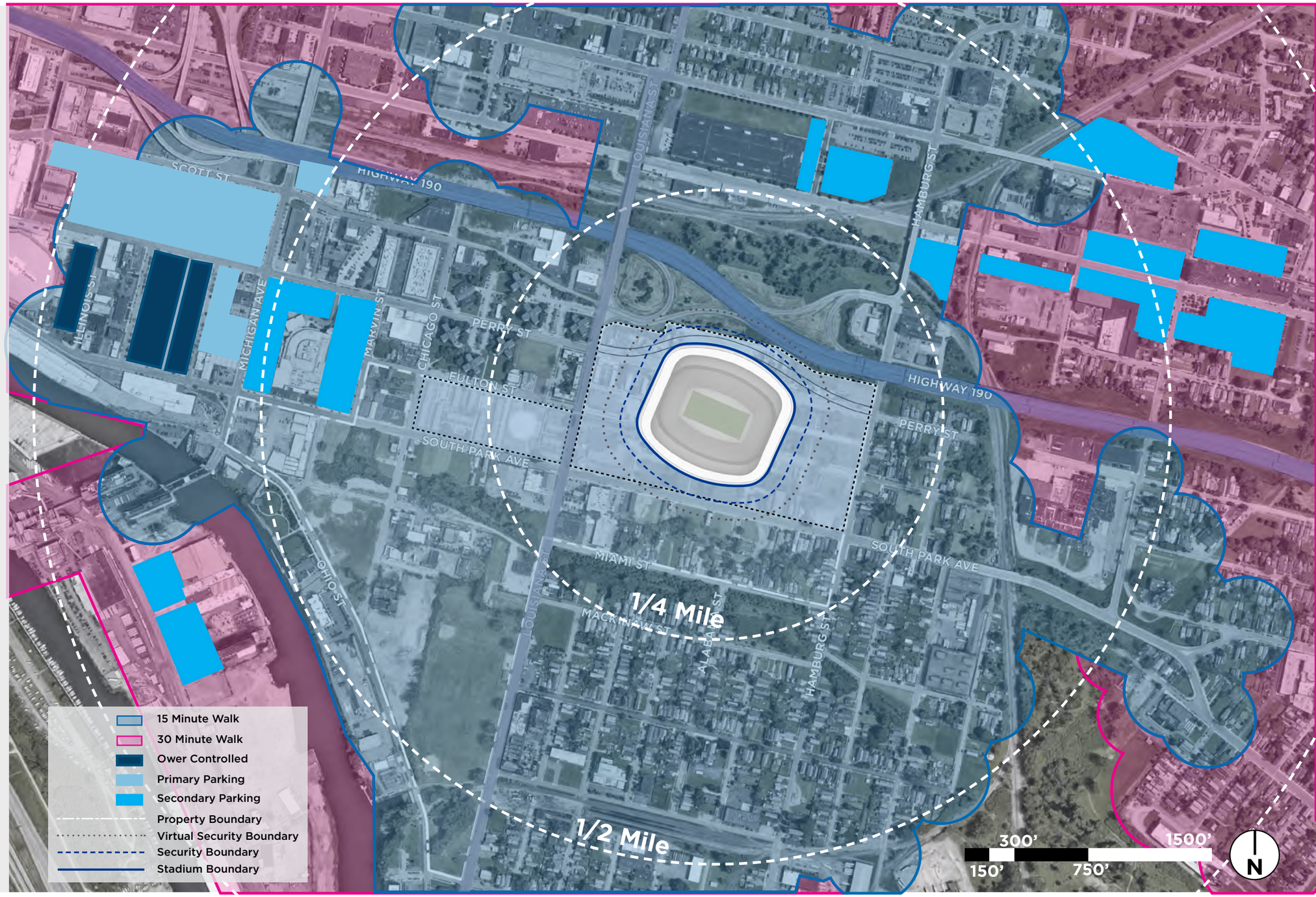
Stadium Configuration Score: 3



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - CONNECTIONS TO NORTH

4.2 Stadium Configuration:

The proposed stadium location has sufficient land area around the building to allow for flexibility with orientation and architectural articulation to respond to views, climate, and adjacent amenities.

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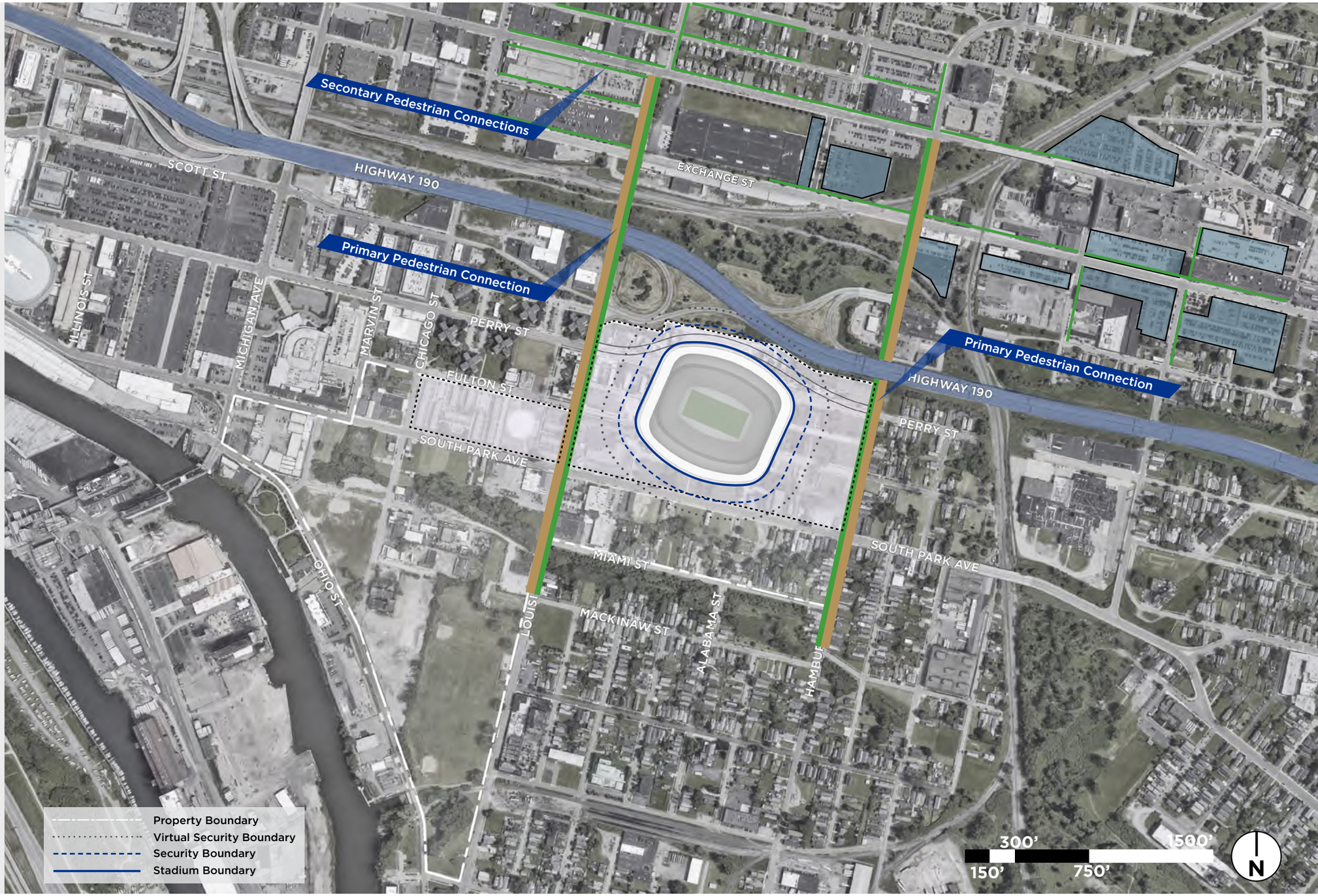

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - PARKING STRUCTURE

4.2 Stadium Configuration:

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Stadium Configuration Score: 3

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - CONNECTIONS TO SOUTH WEST

4.2 Stadium Configuration:

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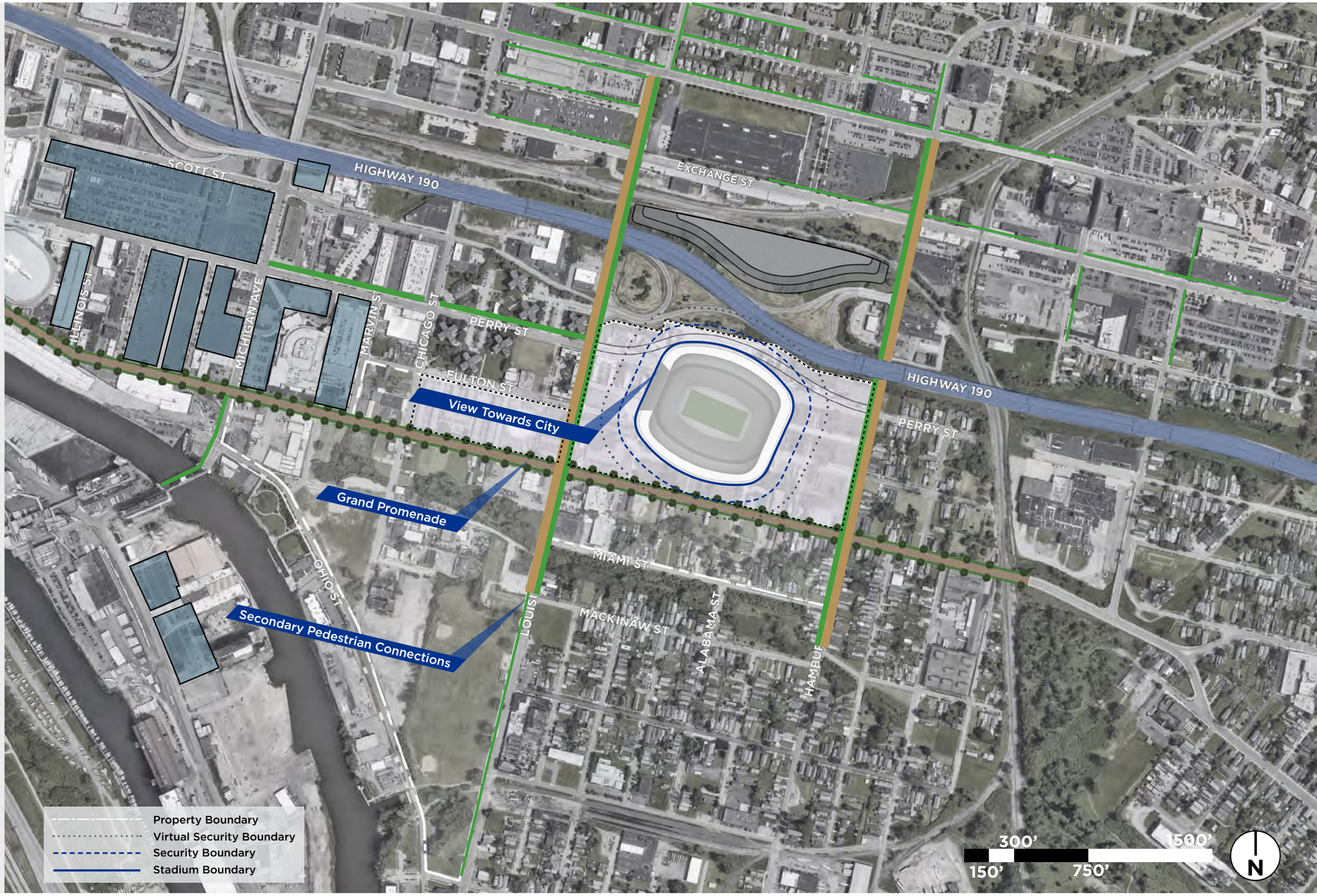
Stadium Configuration Score: 3



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - KEY ENTRANCES

4.2 Stadium Configuration:

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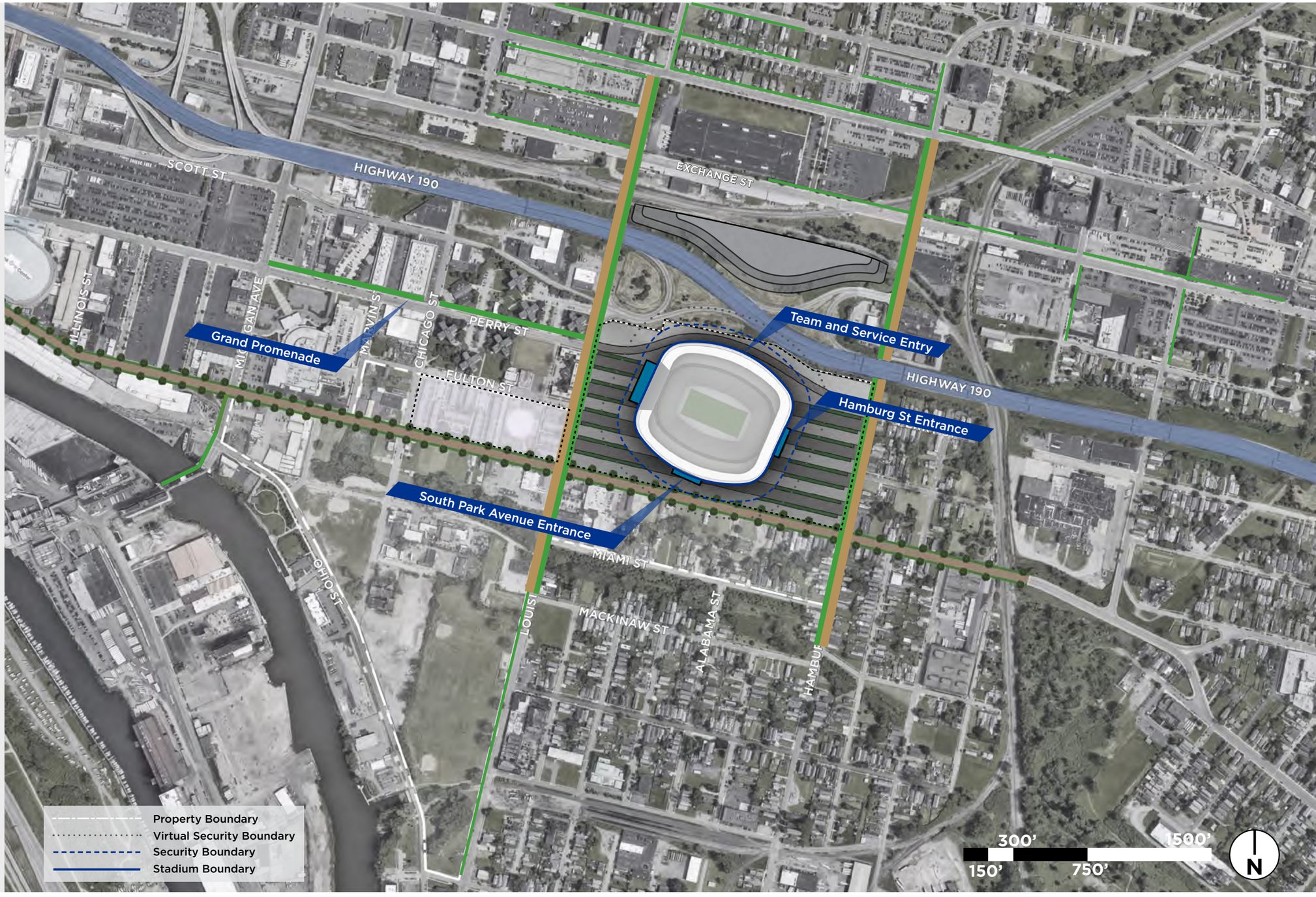
Stadium Configuration Score: 3



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - TAILGATING

4.2 Stadium Configuration:

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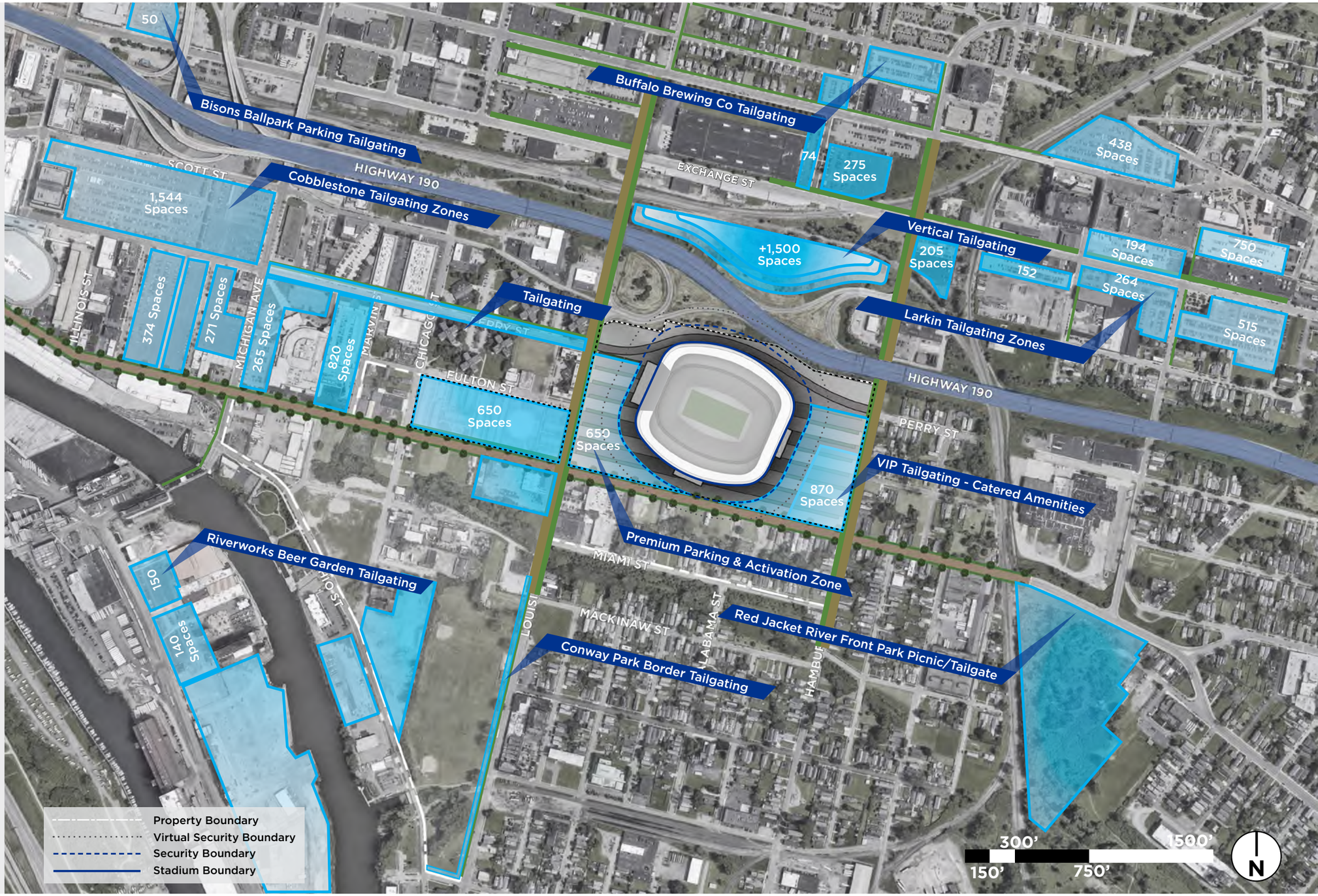

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - GREEN SPACES

4.2 Stadium Configuration:

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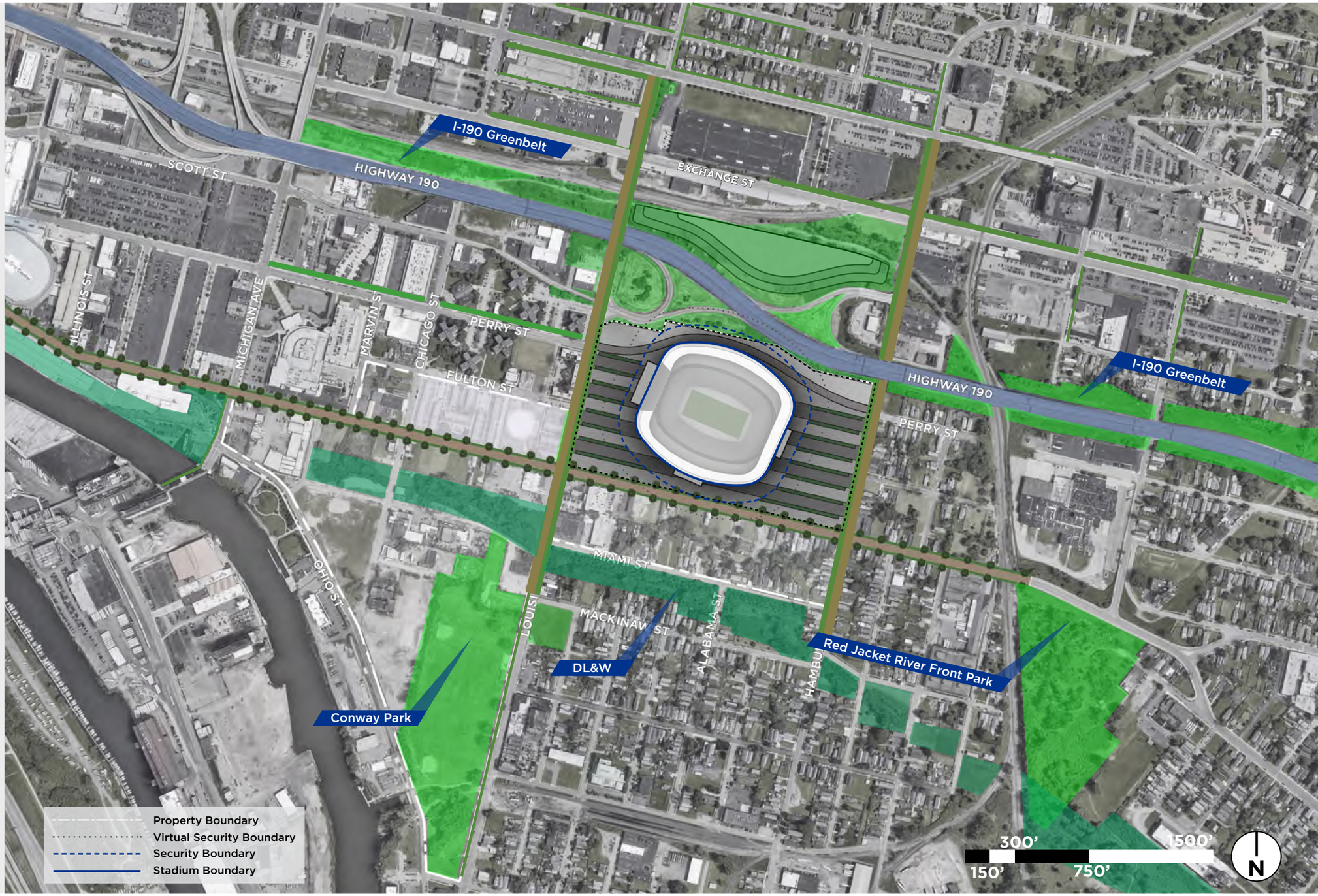

POPULOUS

SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - DL&W CONNECTION

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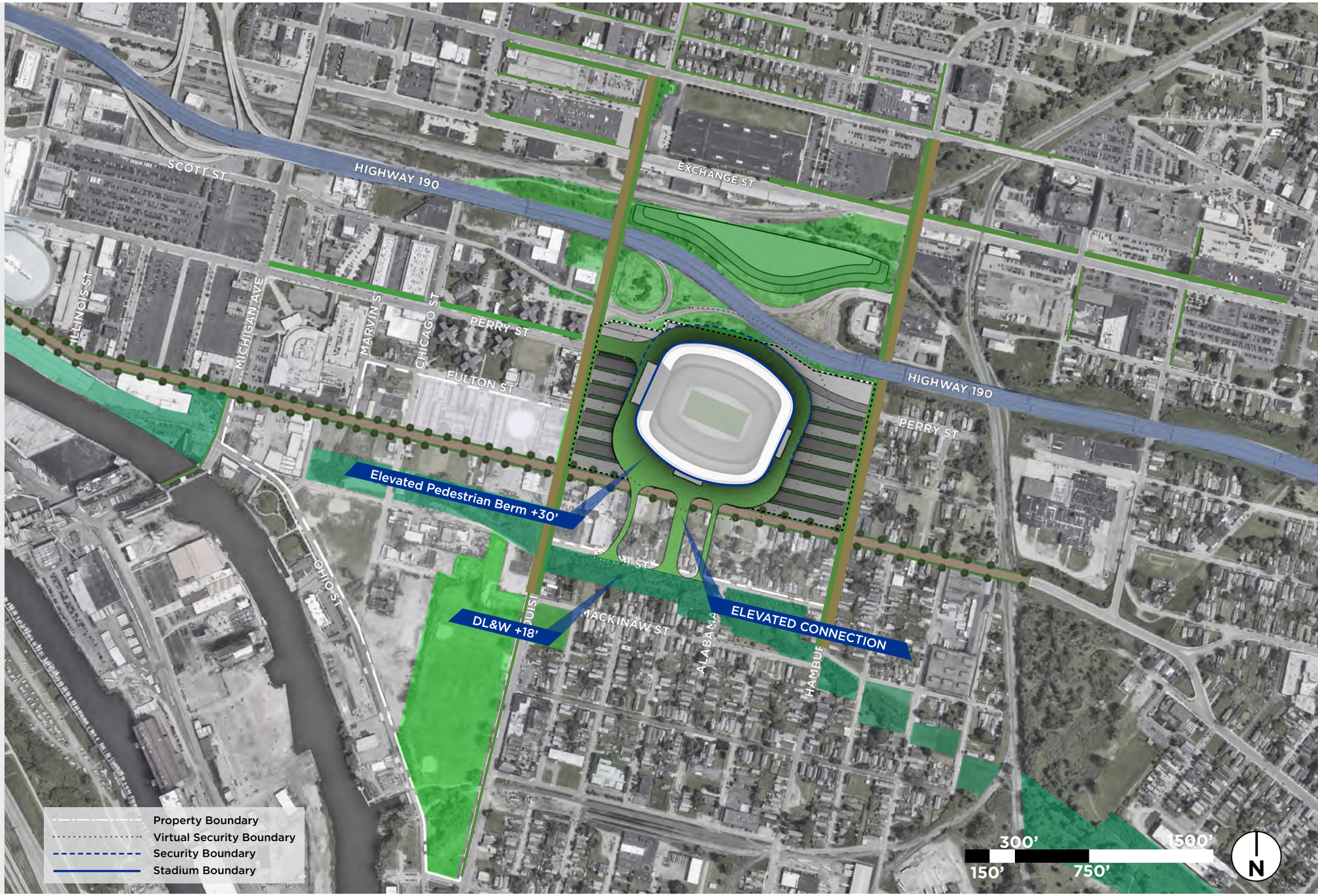
Stadium Configuration Score: 3



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - MIXED USE DISTRICT

4.3 Supplementary Land Uses:
There are several underutilized buildings and lots in the vicinity of the proposed stadium site; some are conducive to replacing with new uses while others should be maintained in order to preserve the unique character of South Park.

- Connection to Bisons Ballpark (linking three major downtown sports venues)
- Future renovation/expansion of Key Bank Arena.
- New Mixed-Use Urban Stadium.

- Future redevelopment (and/or parking) of Cobblestone blocks.

- Connection to harbor center and future redevelopment of HSBC site.
- New development opportunities along South Park Ave. corridor.
- Possible new entrance an/or development on south side of Seneca Buffalo Creek Casino.

- Parking & Tailgating.

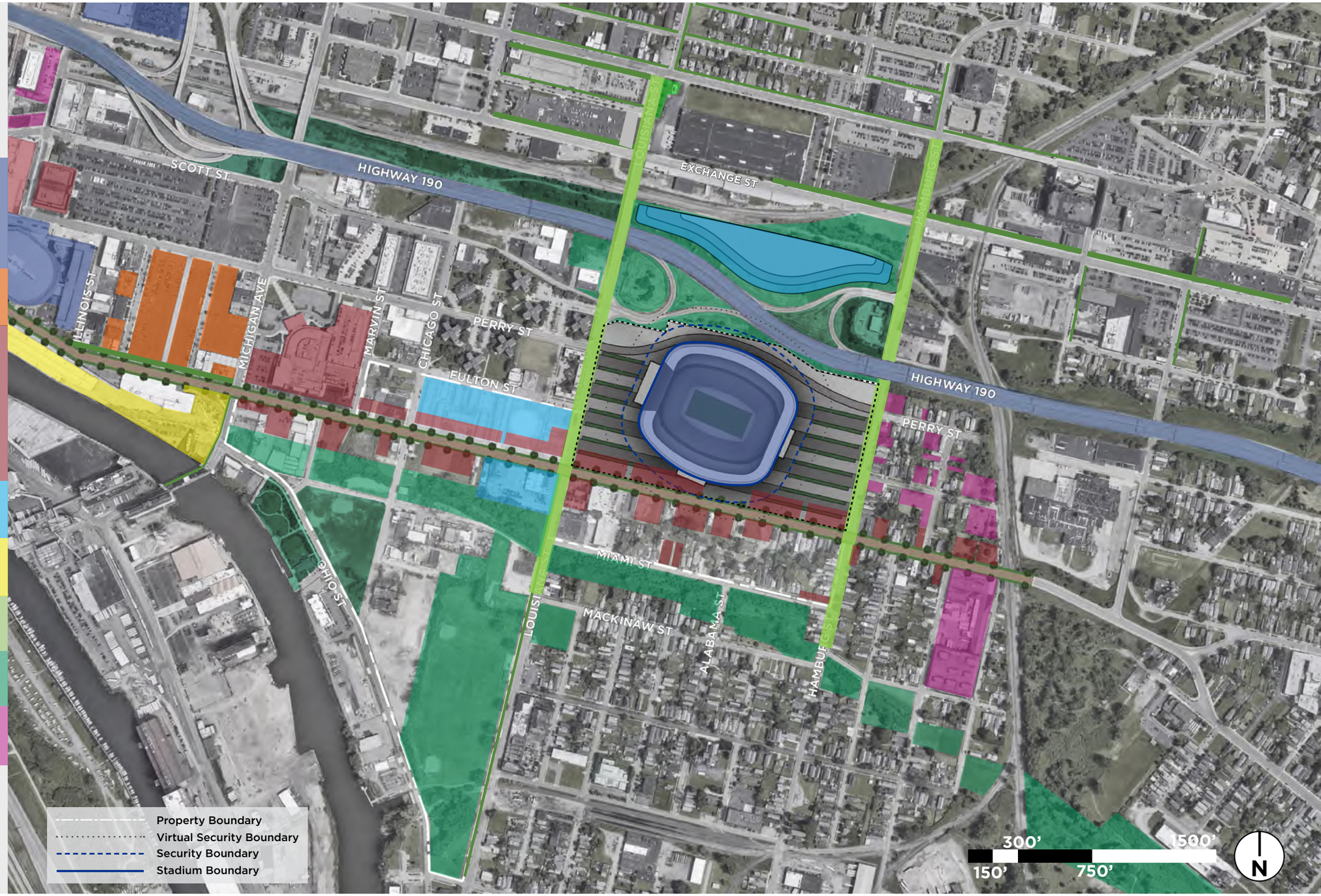
- Future redevelopment of NFTA Metro site.

- Enhancement of Louisiana and Hamburg streets corridors.

- Integration with parks, greenbelts and waterfront.

- Ongoing growth of canalside district
- Future district redevelopment(Phase 1)

Supp. Land Uses Score: 3



SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION - FUTURE DEVELOPMENT

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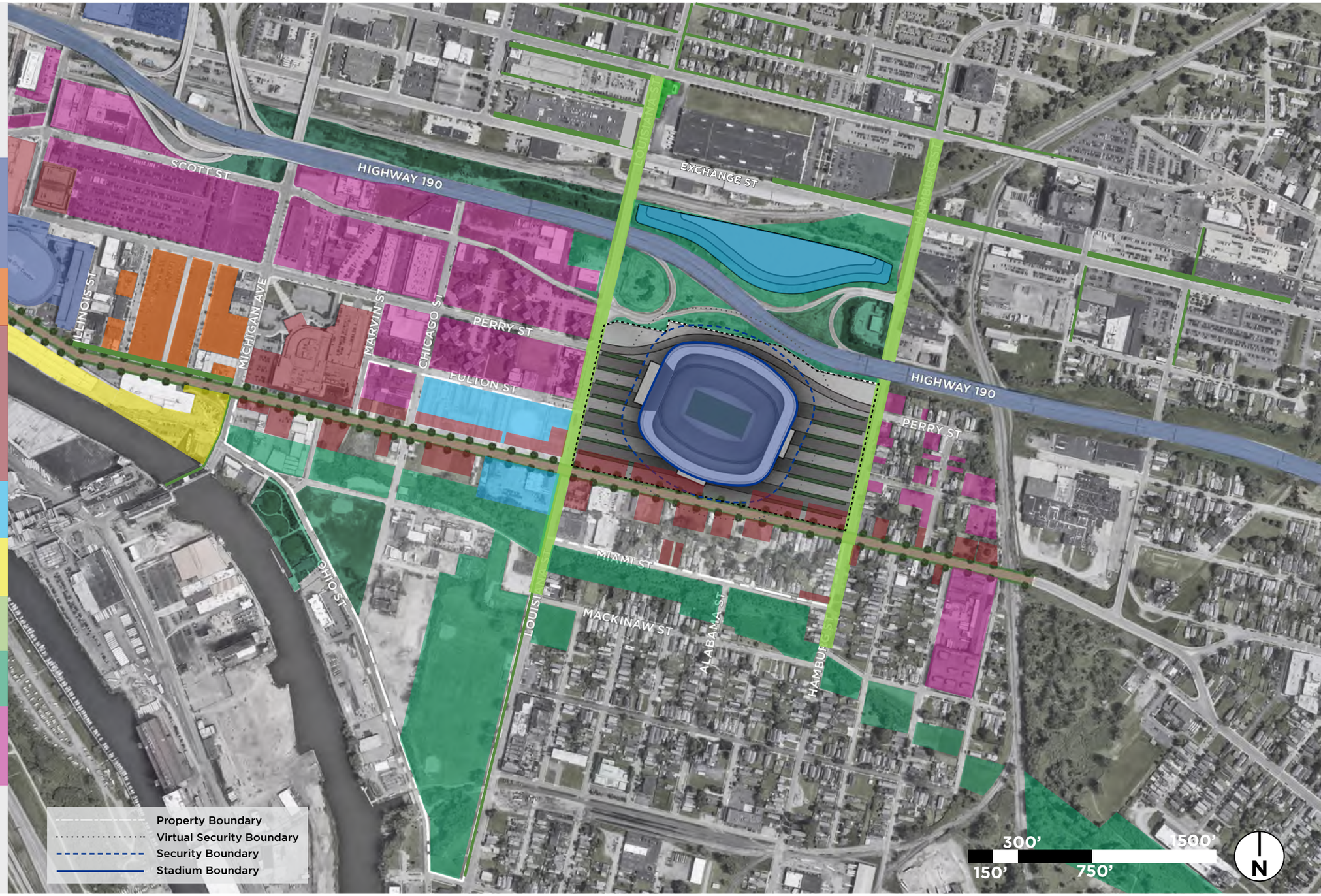
- Future redevelopment of NFTA Metro site.

- Enhancement of Louisiana and Hamburg streets corridors.

- Integration with parks, greenbelts and waterfront.

- Ongoing growth of canalside district
- Future district redevelopment(Phase1)
- Future district redevelopment(Phase2)

Supp. Land Uses Score: 3



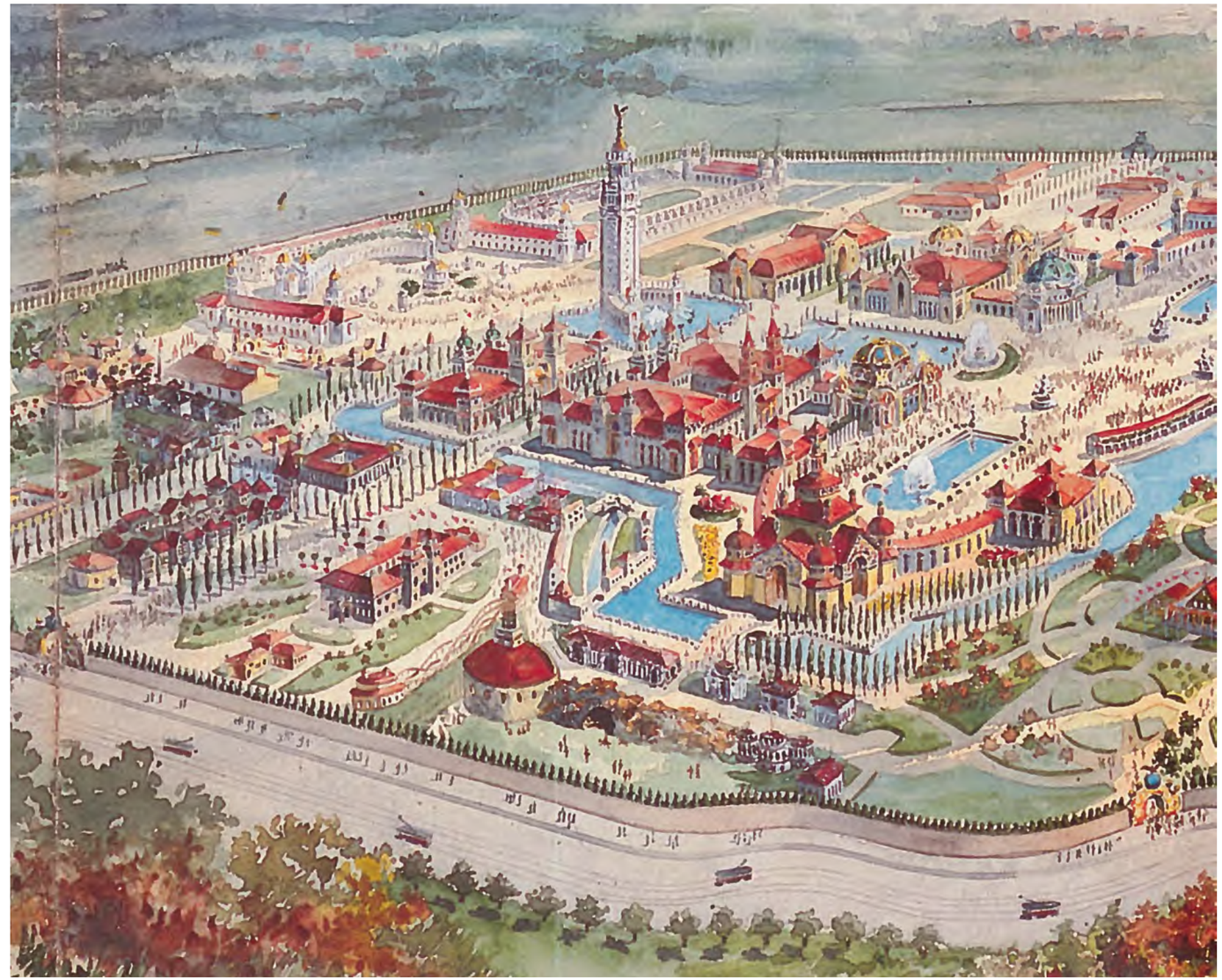
4.4 URBAN DESIGN POTENTIAL:

As noted in Section 1.1 (District Identity), developing a new stadium on the South Park site would mark a dramatic shift for the Bills' identify. It would also add a powerful entertainment and economic development anchor to downtown's emerging renaissance.

- Several initiatives and policies, including the city's comprehensive plan and Buffalo Billion recognize that the chassis of downtown remains intact, but additional elements are needed to continue filling in the gaps. The city's Queen City Hub document describes it this way: "The most basic elements of the vision are already in place – embedded in Joseph Ellicott's 1804 radial plan for the city and reinforced by Frederick Law Olmsted's park and parkway system."

- A new stadium at South Park is not just about a single building, but is envisioned as the city's next prominent civic building that has ripple effects which can connect parts of downtown through enhanced infrastructure and landscapes, in the spirit of the best urban design practices inherent to Buffalo, including the Pan American Expo of 1901.

4.4 URBAN DESIGN POTENTIAL SCORE: 3

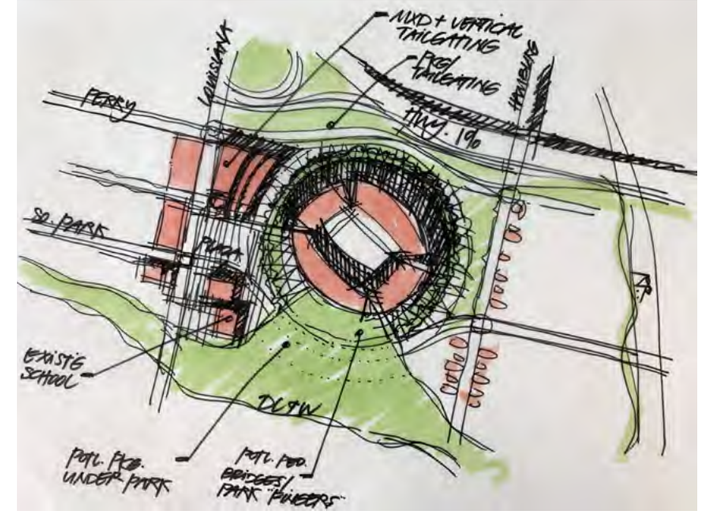


4.4 URBAN DESIGN POTENTIAL:

As noted in Section 1.1 (District Identity), developing a new stadium on the South Park site would mark a dramatic shift for the Bills' identify. It would also add a powerful entertainment and economic development anchor to downtown's emerging renaissance.

- Several other sports, civic, and entertainment venues in Buffalo's past and present also contain useful lessons for how to integrate large buildings with their surroundings, using various urban design principles to try and balance issues such as scale, circulation, programming, and public space.

- One of the signature park initiatives described by the city in The Olmstead City document is to restore Front Park, at the foot of the Peace Bridge, "ensuring that visitors arriving from Canada experience a great gateway as they enter Buffalo." Likewise, a new stadium and landscape at South Park could act as a great gateway as residents and visitors enter Buffalo from the east



4.4 URBAN DESIGN POTENTIAL SCORE: 3

5.1 PROPERTY VALUES:

As noted in Section 1.4 (Market Trends), the downtown has reversed course from previous decades and once again has momentum of attracting new business, residents, and visitors.

- In addition to programs like Buffalo Billion, downtown Buffalo also benefits from being included in the state's Opportunity Zone program, representing advantages for increased property values and real estate activity.

- This part of South Park is still in transition, with some new development, yet significant areas of blighted and underutilized properties, suggesting that property values have not yet increased to the same levels as other downtown zones.

Perry Choice Neighborhood: Proximity to Community Assets

Source: Center for Urban Studies Database, October 2012 - June 2013

5.1 PROPERTY VALUES SCORE: 2

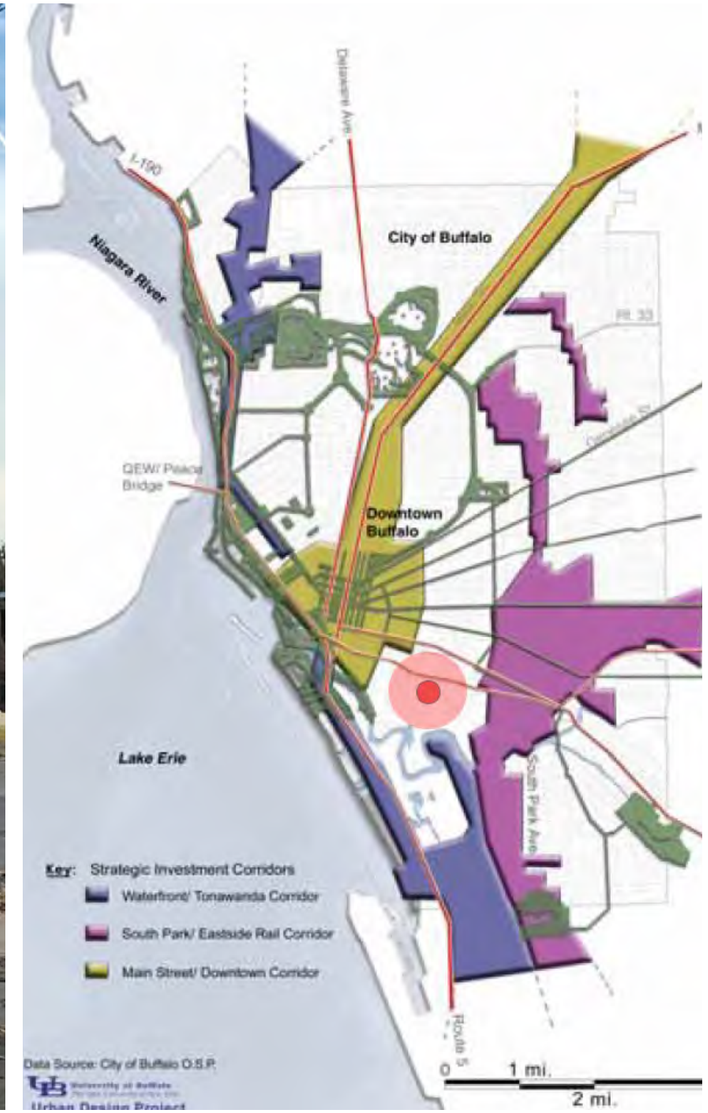
5.2 SITE IMPROVEMENT COSTS:

As a downtown neighborhood, South Park has an aging infrastructure system that would likely need upgrades to handle a large stadium and associated uses.

- As noted in the preliminary utility report, existing electrical, water, sewer, and fiber systems are in place in this location, but would require a relatively high degree of upgrading to accommodate the new stadium needs.

- The existing site is relatively flat, but does have some existing low-scale structures, which would entail moderate site preparation costs.

- As noted in the city's comprehensive plan, this site is near one of the city's five downtown key investment areas and in between two downtown strategic investment corridors, which may help support site improvement costs for the stadium and future neighborhood development.

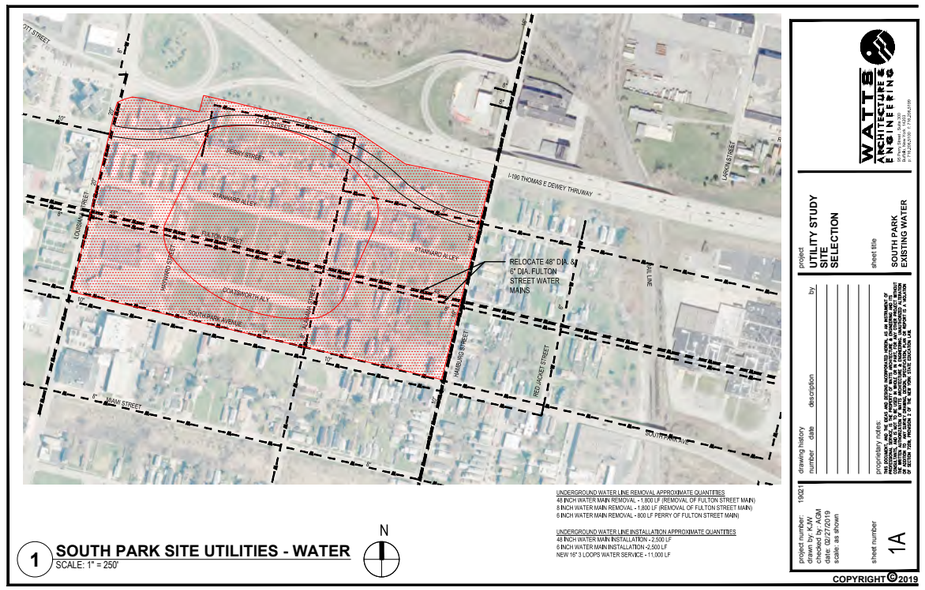


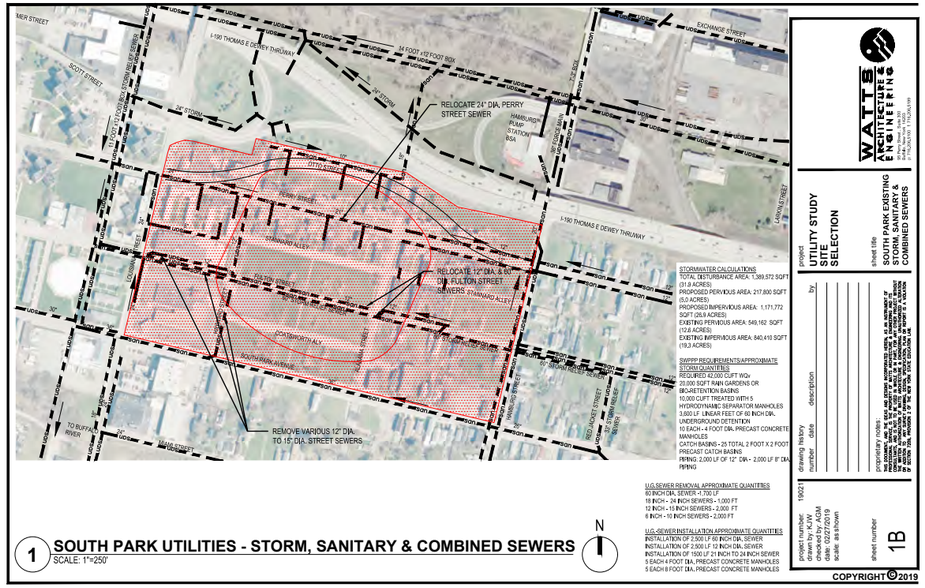
5.2 SITE IMPROVEMENT COSTS SCORE: 2

COSTS: UTILITY ASSESSMENT

No significant issues with available capacity were been identified at the South Park site. However, the South Park site also has numerous existing utility facilities that need relocation. All of these are public utilities that serve outlying areas of the community. These include the following:

- Primary power duct bank on Perry Street owned by National Grid.
- Possible relocation of existing power substation owned by the Buffalo Municipal Housing Authority.
- 48” diameter public water main on Fulton Street owned by the Buffalo Water Authority.
- 60” diameter storm relief sewer on Fulton Street owned by the Buffalo Sewer Authority.
- 12” diameter medium pressure gas main on Perry, Alabama and Fulton Streets owned by National Fuel Gas.
- Existing fiber optic communications lines on Perry Street owned by Fibertech, Verizon, Spectrum (formerly Time Warner) and others.
- These utilities are all active and this adds greatly to the complexity and cost resulting in poorer scores for magnitude, difficulty and cost.
- Detailed utility report is included in the Appendix.





Key page

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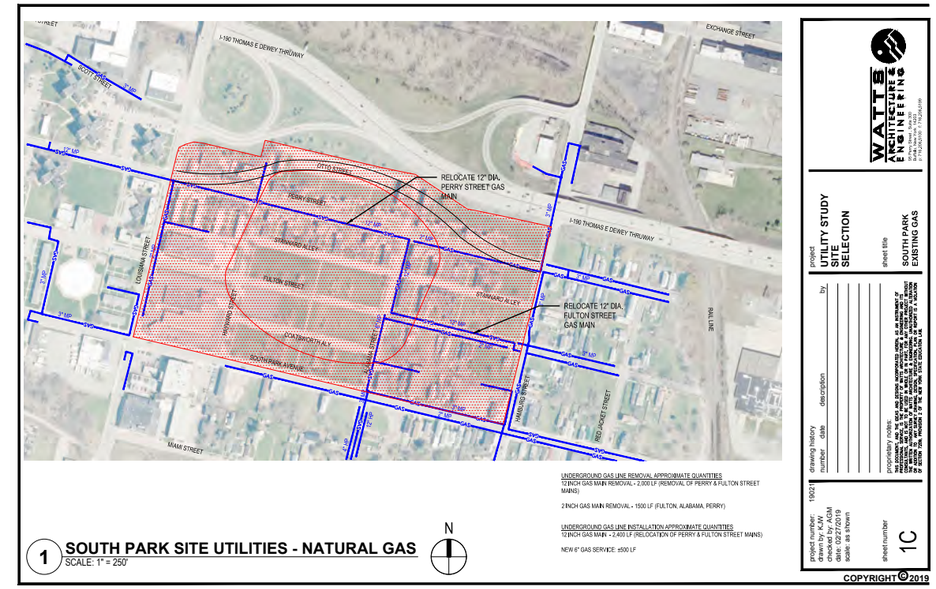

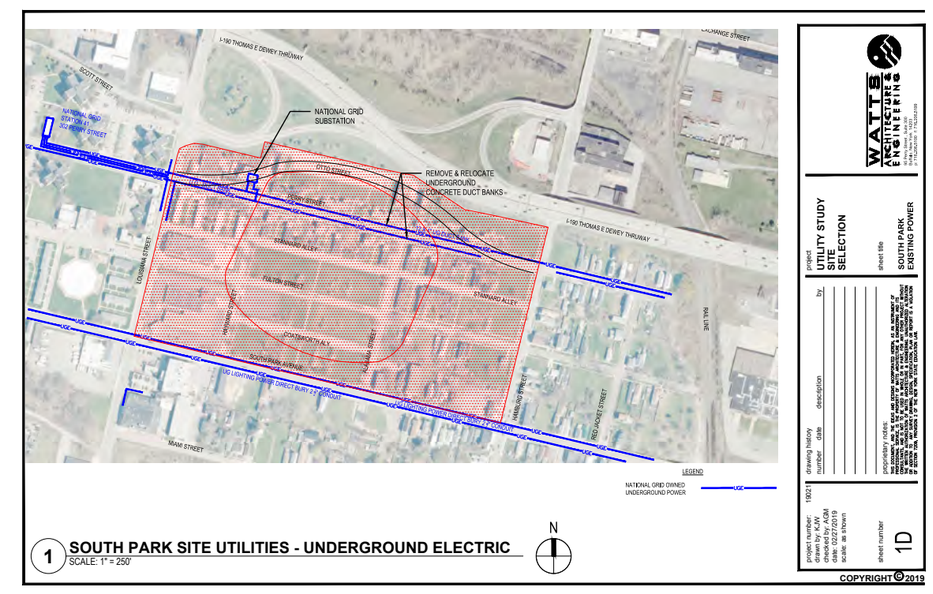

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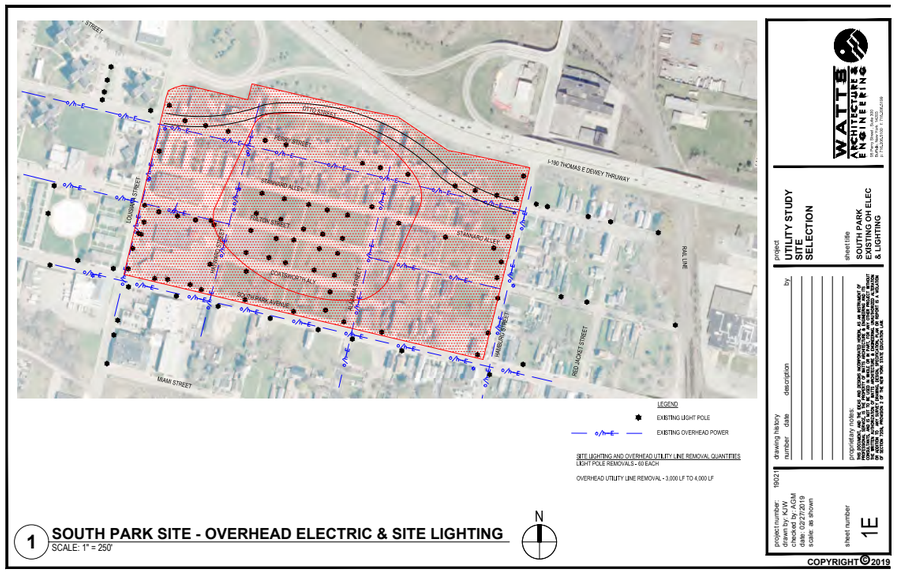

5.3 OFF-SITE / OTHER COSTS:

Because downtown has a professional arena and baseball stadium, as well as other entertainment attractions, transportation and parking patterns are somewhat geared to handle large influxes of people and vehicles, but additional infrastructure improvements would be needed to accommodate an NFL stadium.

- As noted in the preliminary transportation study, a number of roadway improvements have been identified for further study, which have the potential to mitigate transportation and parking impacts on downtown and surrounding neighborhoods.

- In addition to related off-site infrastructure improvements, the enhancement of selected streetscapes would help stadium-related access, while following the city's comprehensive plan strategies.

5.3 OFF-SITE / OTHER COSTS SCORE: 2

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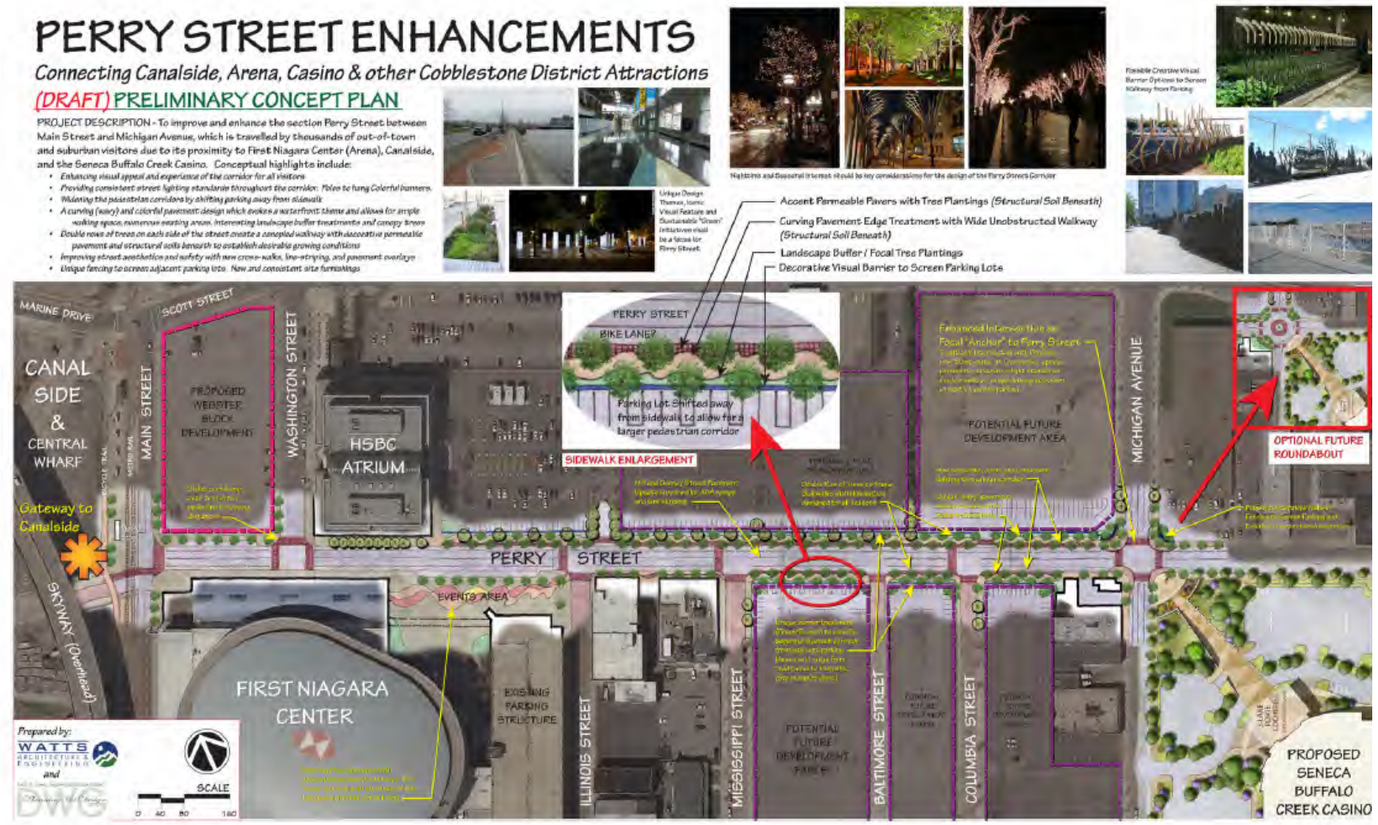
Because downtown has a professional arena and baseball stadium, as well as other entertainment attractions, transportation and parking patterns are somewhat geared to handle large influxes of people and vehicles, but additional infrastructure improvements would be needed to accommodate an NFL stadium.

- As described in their Queen City Hub document, downtown zones will see continued "progress that will combine basic infrastructure investment for public access, new commercial maritime facilities, and historic interpretation, with ancillary commercial, retail and entertainment developments."

- South Park Avenue, Perry Street, and Louisiana Street, for example, are already identified as key corridors that connect important downtown districts to each other and the river, and could follow similar public programs for comprehensive streetscape upgrades.



5.3 OFF-SITE / OTHER COSTS SCORE: 2

6.1 PROPERTY CONTROL / ACQUISITION:

Since most of the targeted property for the stadium is owned by public entities, negotiation regarding timing, price, and other conditions may be easier than for privately held properties.

- Most of the existing buildings on the 36-acre site are vacant public housing buildings, but a few occupied structures exist near the intersection of Hamburg Street and South Park Avenue.

- Outside the immediate 36-acre parcel, additional properties are possibly available to purchase or control, as indicated in a previous site selection study. Further detailed analysis of the boundary of this additional land needs to be conducted, with parcel-specific recommendations for future uses.

- The benefit of developing strategies for an expanded district areas such as this is that it could specify how future land use changes can support stadium functions, respect important neighborhood assets, and connect to city-wide systems with new buildings, landscapes, and infrastructure.

6.1 PROPERTY CONTROL / ACQUISITION SCORE: 2

6.2 SITE CONDITIONS / ENCUMBRANCES:

Assuming that the existing structures on the 36-acre site can be demolished, the immediate needs to accommodate the building and surrounding services may be achieved. Additional considerations around the perimeter of the property, however, need to be further studied to ensure compatibility with land use and circulation issues.

- Perry Street is a currently a continuous north/ south street, terminating at Red Jacket Street; a new stadium would require that it be realigned and controlled as a private access drive between Louisiana and Hamburg Streets.
- I-190 highway ramps are assumed to remain in place, but if future transportation improvements lead to their relocation elsewhere, the land that they occupy would be valuable to incorporate into stadium functions.

6.2 SITE CONDITIONS / ENCUMBRANCES SCORE: 2

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- While off-site parking destinations, such as Larkinville, may be identified as possible to include in game-day requirements, the quality of pedestrian connections to and from these destinations need further study to identify problems and/or solutions to ensure safety and convenience.

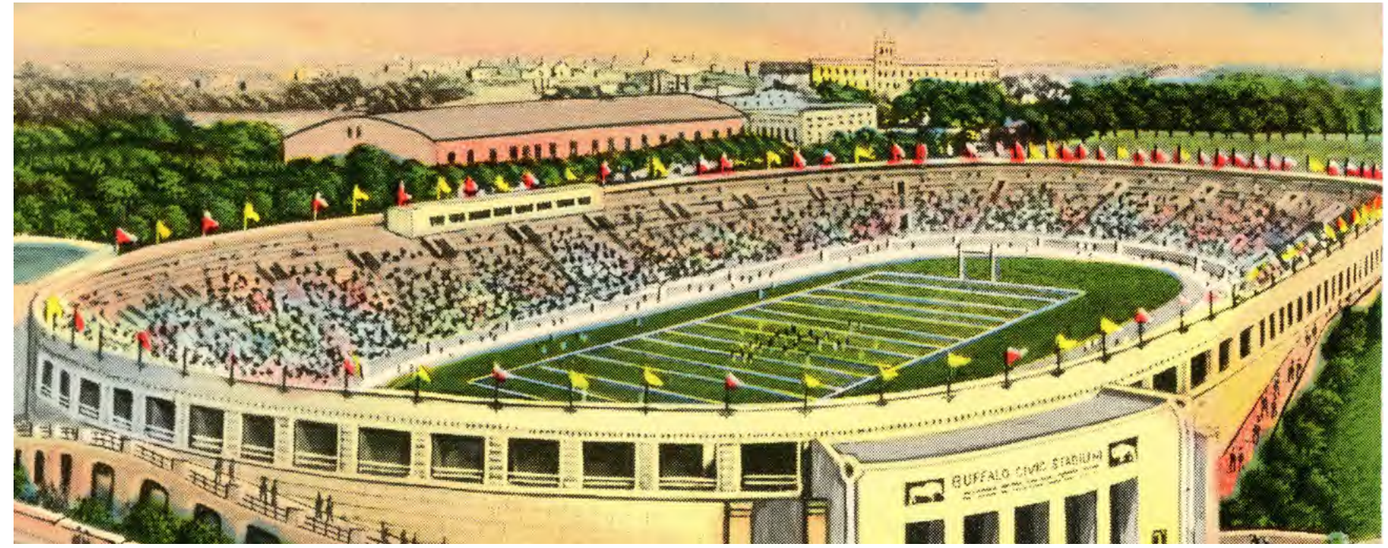
- As more detailed urban design analysis is investigated to create district-wide strategies, additional information will be needed to identify important community assets, buildings, and other elements to be preserved and incorporated into a wider district vision.

6.2 SITE CONDITIONS / ENCUMBRANCES SCORE: 2

6.3 LAND USE / ZONING PROCESS:

A new stadium on the South Park site would need to balance the city's goal of making the downtown an "Integrated Regional Center" layered with a variety of land uses, and sensitivities to an existing residential neighborhood that has been accustomed to less-intensive land uses.

- A new NFL stadium is not a small building, but the spaces around the edges allow for various urban design techniques to transition the mass down to a neighborhood scale on the east, west, and south sides.
- As noted in Section 4.4 (Urban Design) a diverse mix of uses, densities, and scales can help South Park evolve into a downtown neighborhood that is consistent with the city's comprehensive plan vision: "The 'live, work, and play' activity program will achieve its full potential when Downtown employees and residents of the inner ring of neighborhoods choose Downtown as their place for specialized neighborhood retail services, entertainment, and work."



6.3 LAND USE / ZONING PROCESS SCORE: 2

7.1 PROPERTY DEVELOPMENT CONCERNS:

The primary development challenges for a new stadium in South Park have been noted above, including transportation and infrastructure improvements, and creating a building that minimizes impacts to the existing residential neighborhood.

- Regarding below-grade issues, further investigations will be required to test environmental, water table, and soils conditions; but for the purposes of this study, it is assumed that none of these would be cause for rejecting this as a potential site.
- Assuming that basic transportation and infrastructure upgrades may be addressed, these improvements may be considered as part of a larger district improvement strategy to benefit the wider community.

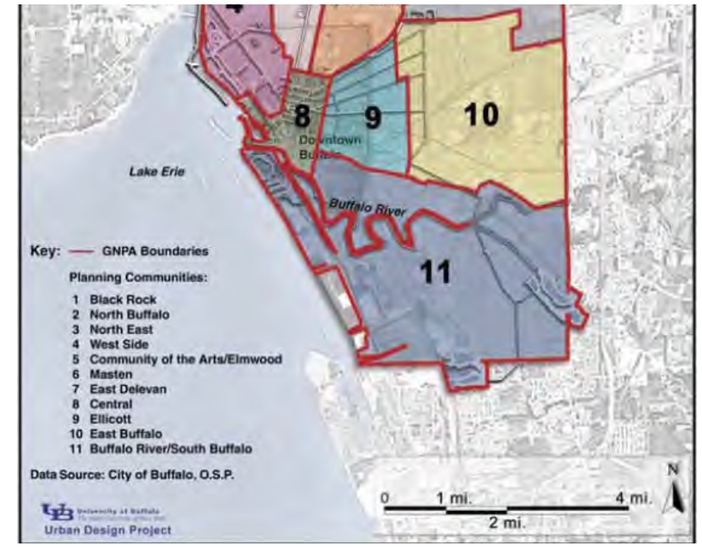
7.1 PROPERTY DEVELOPMENT CONCERNS SCORE: 2

7.2 P.R. COMMUNITY ENGAGEMENT:

Neighborhoods of the First Ward are among the oldest in the city, with a vested interest in their community. With a change as large as a new stadium, it is imperative to engage with neighborhood organizations, business leaders, churches, and other individuals and groups to establish an inclusive process from the outset.

- City-led organizations are a good starting point to begin conversations and identifying issues to address; the Good Neighbors Planning Alliance is one such group: "The Good Neighbors Planning Alliance forms a core of community-based involvement to make the plan, implement the plan, and sustain the local communities who live the plan." (The Queen City Hub, p. 60)

- The University at Buffalo Regional Institute is an organization that could play an instrumental role in facilitating a process of community engagement, as they have widespread experience with similar assignments in Buffalo and also know the South Park neighborhood well.



7.2 P.R. COMMUNITY ENGAGEMENT SCORE: 2

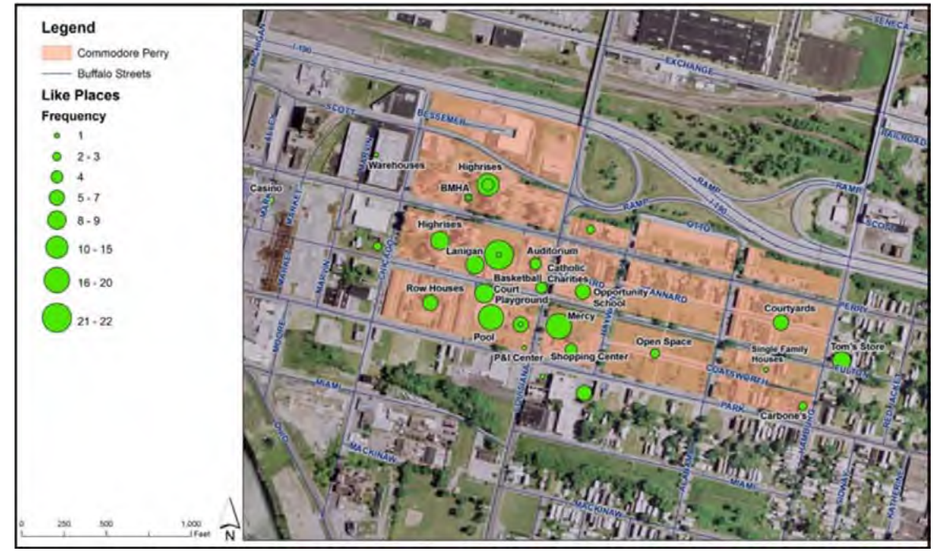
7.3 POLITICS:

In addition to engaging with community organizations and leaders, it will also be critical to solicit input early and often from local politicians. Likewise, state and federal officials will also be important to include in the process, particularly because of the opportunity to apply various public funding programs for the overall project and district.

- By locating the stadium in the South Park area, it can be positioned as one of several initiatives to continue bolstering downtown Buffalo, and take advantage of programs like Buffalo Billion, state Opportunity Zones, and possibly federal transportation improvement programs.

- In addition to public sector programs, foundations and nonprofit organizations may also be sources of support. The The Ralph C. Wilson, Jr. Foundation, for example, has been a force in the creation of signature park spaces in downtown Buffalo, helping to fulfill the city's Olmsteadian legacy.

- Given the nature of the Bills and the Pegula organization, sports and recreation can be a powerful element to extend from their core business as a city-wide program to benefit residents of all ages and abilities, in the interest of improving the community's health and well-being.



7.3 POLITICS SCORE: 2

8.1 STADIUM PROGRAMMING:

The programming of the interior elements of the stadium is anticipated to be directly related to elements on the exterior of the stadium, as well as elements adjacent to the building.

- Since the field level of the new stadium is expected to be at street level (not depressed below grade), an architectural opportunity exists to "plug in" retail or other commercial uses around the ground-level edges of the stadium, which will help to transition the building scale around its edges.

- Given the climatic conditions in Buffalo, an atrium element may be explored as an architectural element that relates to the stadium and potential ancillary development. This type of space may also be highly activated with a variety of programs relating both to team as well as community uses. The conservatory located in South Park is a local precedent that is worth exploring: not so much for its architectural expression as for its spatial and programmatic qualities that could possibly function as a shared space for the community and stadium events.

- While designed & programmed for "football first," opportunities for other programming to foster a variety of other uses of the venue.

8.1 STADIUM PROGRAMMING SCORE: 3

8.2 ANCILLARY DEVELOPMENT STRATEGY:

As noted in Section 1.4 (Market Trends), there is an ongoing development pattern in downtown and surrounding areas; South Park is still outside of much of the activity but poised to capitalize from a new stadium project.

- A stadium at this site would function well as a bookend-type anchor, paired with the arena just 1/2 mile away: this creates a compelling mixed-use development scenario for the Cobblestone blocks and surrounding areas.
- Nearby Larkinville is outside of the downtown core, but a neighbor to the South Park site, and could also generate complementary development and programming opportunities in conjunction with the new stadium district.
- This site also is very close to a number of natural amenities which are, to a certain extent, untapped resources that can be improved over time, as part of the overall district vision that the stadium can help fuel.
- The presence of Buffalo's massive grain elevators, steel bridges, and other industrial buildings near the South Park site create a one-of-a-kind urban environment that can help define a new identity for the Bills, and for the city of Buffalo, as it embraces

8.2 ANCILLARY DEVELOPMENT STRATEGY SCORE: 3

8.3 MXD PHASING & FLEXIBILITY:

The primary development focus in South Park will be the new stadium; any ancillary development may be longer-term strategies, carried out in conjunction with a district-wide redevelopment strategy.

- In addition to the new stadium property, several nearby parcels and blocks may be incorporated into a long-term district plan that follows major strategies articulated in the city's comprehensive plan and other documents.
- Once public realm improvements, such as new streetscape designs for South Park Avenue and Louisiana Street are developed, infill development projects can proceed with a flexible timeframe that responds to market demand.
- The South Park area is in a transitional phase, with many solid anchors that continue to support community goals for a stronger downtown Buffalo. A new stadium and integrated district plan could build on and accelerate that momentum with a flexible, incremental development growth pattern.

8.3 MXD PHASING & FLEXIBILITY SCORE: 3

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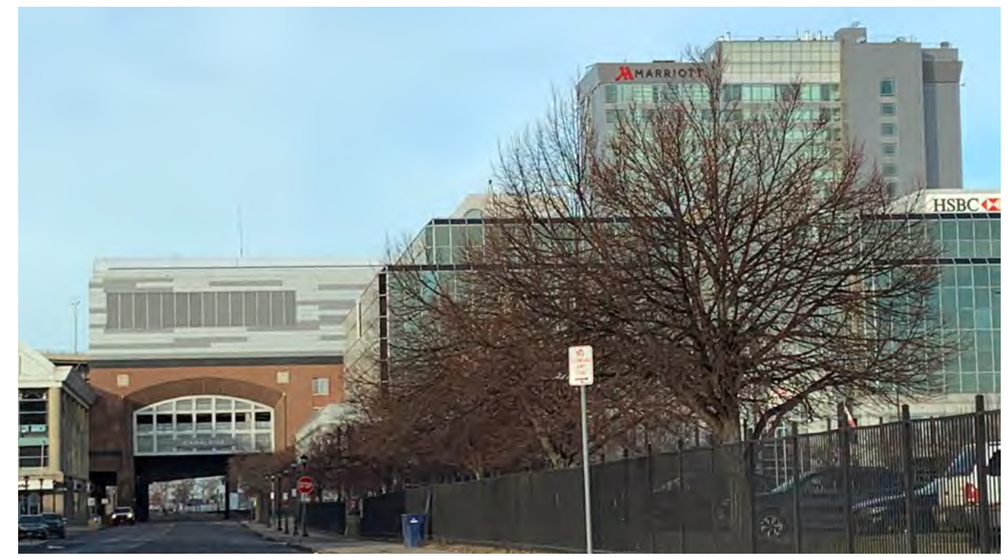
The primary development focus in South Park will be the new stadium; any ancillary development may be longer-term strategies, carried out in conjunction with a district-wide redevelopment strategy.

- The NFTA Metro site represents another valuable redevelopment site that could directly benefit the arena, South Park corridor, and riverfront promenade; however, creative programming and design of the space will be important to understand how it fits within longer term district profile.

- Other major development projects that will be important to consider within the overall district mix and phasing strategy will be the future uses for the Cobblestone blocks and the HSBC Bank parking lot.



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8.3 MXD PHASING & FLEXIBILITY SCORE: 3

ORCHARD PARK SITE

1. PLACE MAKING ABILITY

1.1 DISTRICT IDENTITY
1.2 FUTURE LAND USE
1.3 SITE CHARACTERISTICS
1.4 MARKET TRENDS
TOTAL SCORE: 7

2. TRANSPORTATION

2.1 EXISTING ROAD NETWORK
2.2 TRANSIT SYSTEM
2.3 WALKABILITY
2.4 RIDE SHARING
2.5 LONG-TERM TRANSPORTATION PLAN
TOTAL SCORE: 8

3. PARKING

3.1 PARKING DEMAND/PATTERNS
3.2 ON-SITE PARKING
3.3 OFF-SITE PARKING
3.4 TAILGATING
TOTAL SCORE: 11

4. PROGRAM ACCOMMODATION

4.1 STADIUM LOCATION OPTIONS
4.2 STADIUM CONFIGURATION
4.3 SUPPLEMENTARY LAND USES
4.4 URBAN DESIGN POTENTIAL
TOTAL SCORE: 10

5. COSTS

5.1 PROPERTY VALUES
5.2 SITE IMPROVEMENT COSTS
5.3 OFF-SITE/OTHER COSTS
TOTAL SCORE: 9

6. SCHEDULE

6.1 PROPERTY CONTROL/ACQUISITION
6.2 SITE CONDITIONS/ENCUMBRANCES
6.3 LAND USE/ZONING PROCESS
TOTAL SCORE: 9

7. INTANGIBLES

7.1 PROPERTY DEVELOPMENT CONCERNS
7.2 P.R./COMMUNITY ENGAGEMENT
7.3 POLITICS
TOTAL SCORE: 9

8. REVENUE GENERATION

8.1 STADIUM PROGRAMMING
8.2 ANCILLARY DEVELOPMENT STRATEGY
8.3 MXD PHASING & FLEXIBILITY
TOTAL SCORE: 3

POPULOUS®

1.1 DISTRICT IDENTITY:

A new stadium would confirm Orchard Park as the home of the Bills, building on the legacy and investment already established there.

- Other than the Bills' operations, Orchard Park is a residential suburb with limited economic development momentum.
- Highway 20 and Abbott Road don't have any exceptional character, but could be enhanced and redefined as new front-door identities with a new stadium complex.
- A handful of small commercial uses along Highway 20 negatively impact the principal image of the new stadium.
- The buildings and landscape character of Erie Community College's South Campus lack any distinctive quality, but the expansive property represents a desirable asset for parking-related uses.

1.1 DISTRICT IDENTITY SCORE: 2

1.2 FUTURE LAND USE:

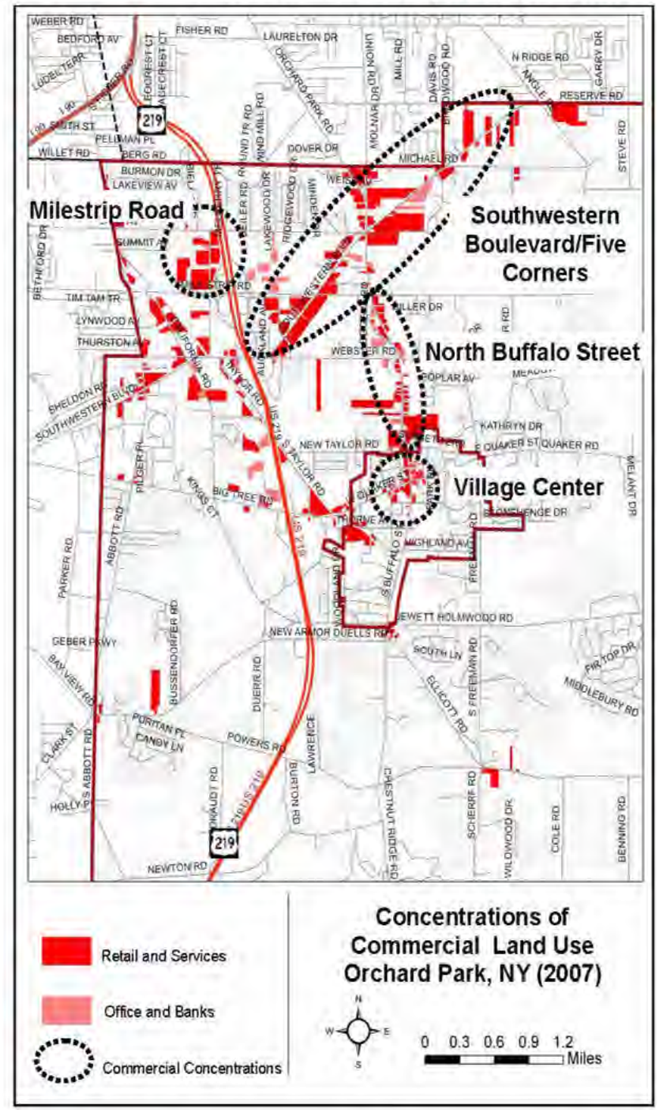
In addition to the existing Bills' facilities, the immediate area includes the ECC campus, single family residential, and small-scale commercial land uses. In general, the areas around New Era Field have no particular long-term land use strategy beyond what currently exists.

- Both New Era Field and the ECC campus are owned by Erie County. The stadium is located in Orchard Park; the college campus is located in the Village of Orchard Park and the Town of Hamburg. While Orchard Park

- The Village of Orchard Park's Comprehensive Plan (2007) prioritizes four major commercial centers in their comprehensive plan, but the areas around the existing stadium is not included. The plan suggests that existing land uses around the existing stadium generally follow the patterns that currently exist today.

- The ECC south campus is currently utilized during Bills games for parking-related uses, and represents a potential opportunity to consider for other future stadium-related uses, beyond its present institutional use.

Map 2-5. Commercial Activity in Orchard Park, NY (2007



1.2 FUTURE LAND USE SCORE: 2

1.3 SITE CHARACTERISTICS:

Currently, the overall character of the stadium's setting is dominated by surface roads and surface parking, with extensive security barriers and utility lines. Further inspection, however, indicates certain untapped assets to build upon.

- PSE has invested not only in New Era Field, but also in the Bills' training center and administration offices, which represent a fresh, new architectural aesthetic which could influence future building projects, including a new stadium.

- The Smoke Creek greenway is a natural riparian stream corridor with bordering uncared-for landscape zones on either side. This represents a potential landscape amenity to explore, possibly for tailgating, recreation, and other open space uses.

- The low-scale buildings on the ECC south campus lack architectural significance, but do represent an existing asset to creatively explore for stadium-related uses, in the event that the college ceases its existing educational function.

1.3 SITE CHARACTERISTICS SCORE: 2

1.4 MARKET TRENDS:

Other than the Bills' operations, Orchard Park and surrounding areas are residential suburban communities with limited economic development momentum.

- Highway 20, the main commercial corridor bordering the stadium's north boundary, has remained largely unchanged over several years, dotted with small commercial parcels and strip malls.

- Because of stagnant demographics, the ECC south campus has experienced declining enrollment, raising questions about its future.

- Like many other suburban shopping malls across the country, McKinley Mall has lost some important tenants over the past few years and is faces more challenges in an uncertain retail climate.

1.4 MARKET TRENDS SCORE: 1

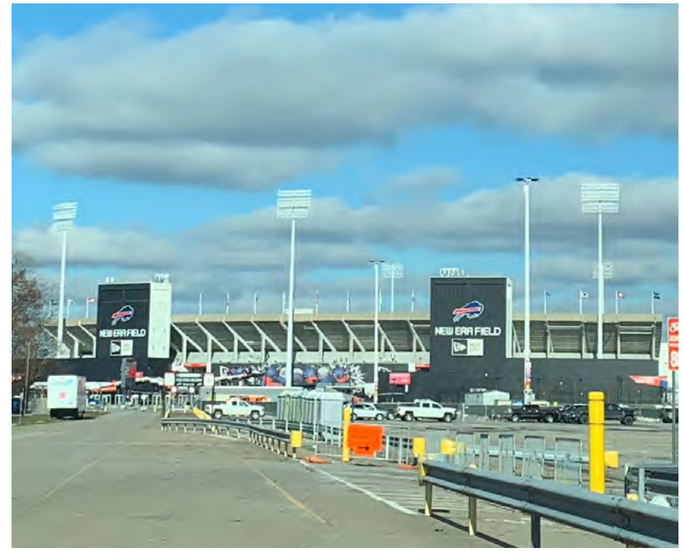
ORCHARD PARK SITE // 2. TRANSPORTATION

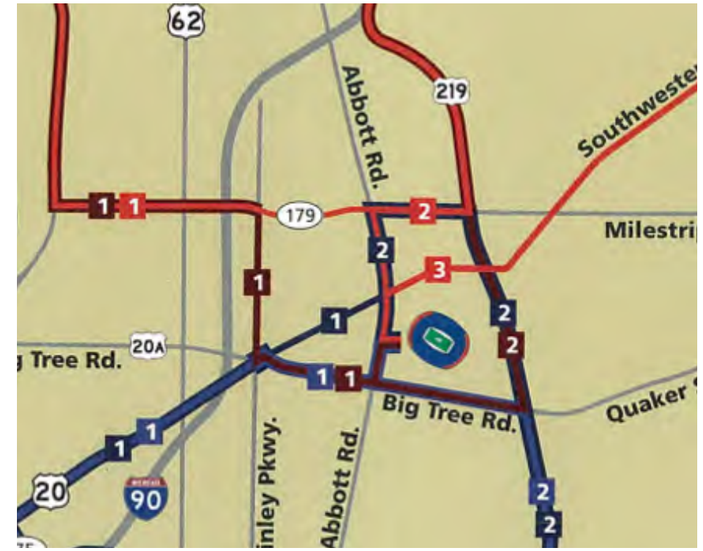
POPULOUS

2.1 ORCHARD PARK ROAD NETWORK:

Fans have been coming to Bills' games at Orchard Park since 1973, so visitors and local residents are accustomed to the existing road and traffic conditions on game days.

- Many fans are already familiar with coming to Orchard Park for events, so generally understand how to get to their destination.
- Likewise, traffic management and venue management/operations staff are accustomed to handling large events, in conjunction with local authorities.



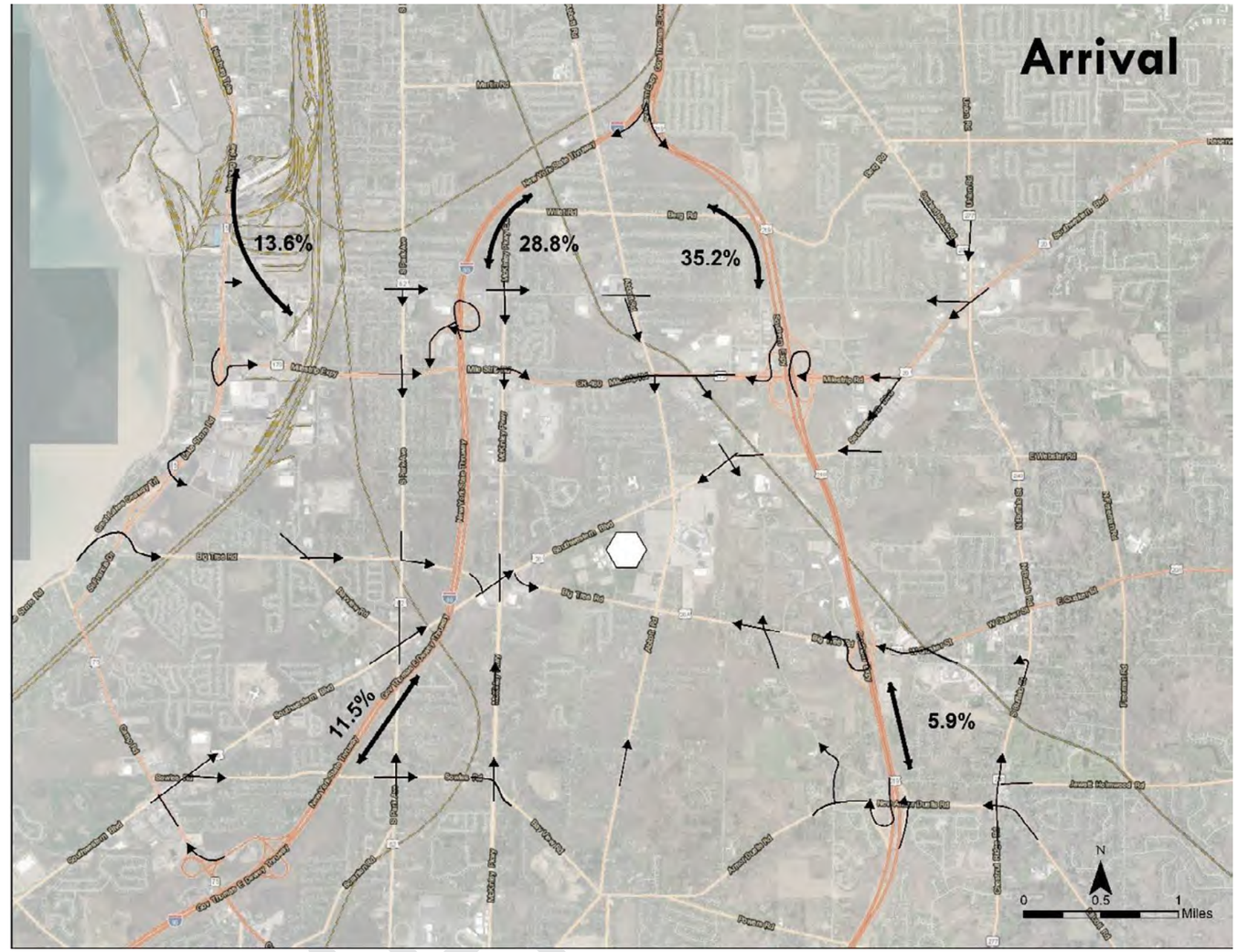


2.1 EXISTING ROAD NETWORK SCORE: 3

2.1 OP ROAD NETWORK: ARRIVALS ANALYSIS

- The owner has worked over the years to establish a traffic management plan that is effective and well understood by patrons. This includes the implementation of reversible lanes on sections of Abbott Road and Route 20A pre- and post-game as well as the temporary closure of a portion of Abbott Road. The existing TMP would only need minor modifications.
- Approximately 64% of game day trips would arrive from the north using I-90. The implementation of Electronic Toll Collection (ETC) by the New York State Thruway Authority on the I-90, which would result in the removal of the Lackawanna Toll Barrier, would be expected to shift trips to I-90 currently on US 219 providing more balance to arrival/departure traffic.
- This shift of traffic to arrive from/depart towards the west may balance out the traffic patterns versus current arrival/departure (more to north and east).

Traffic Arrival Patterns for Orchard Park Site



SOURCE: WSP

2.1 OP ROAD NETWORK: DEPARTURES ANALYSIS

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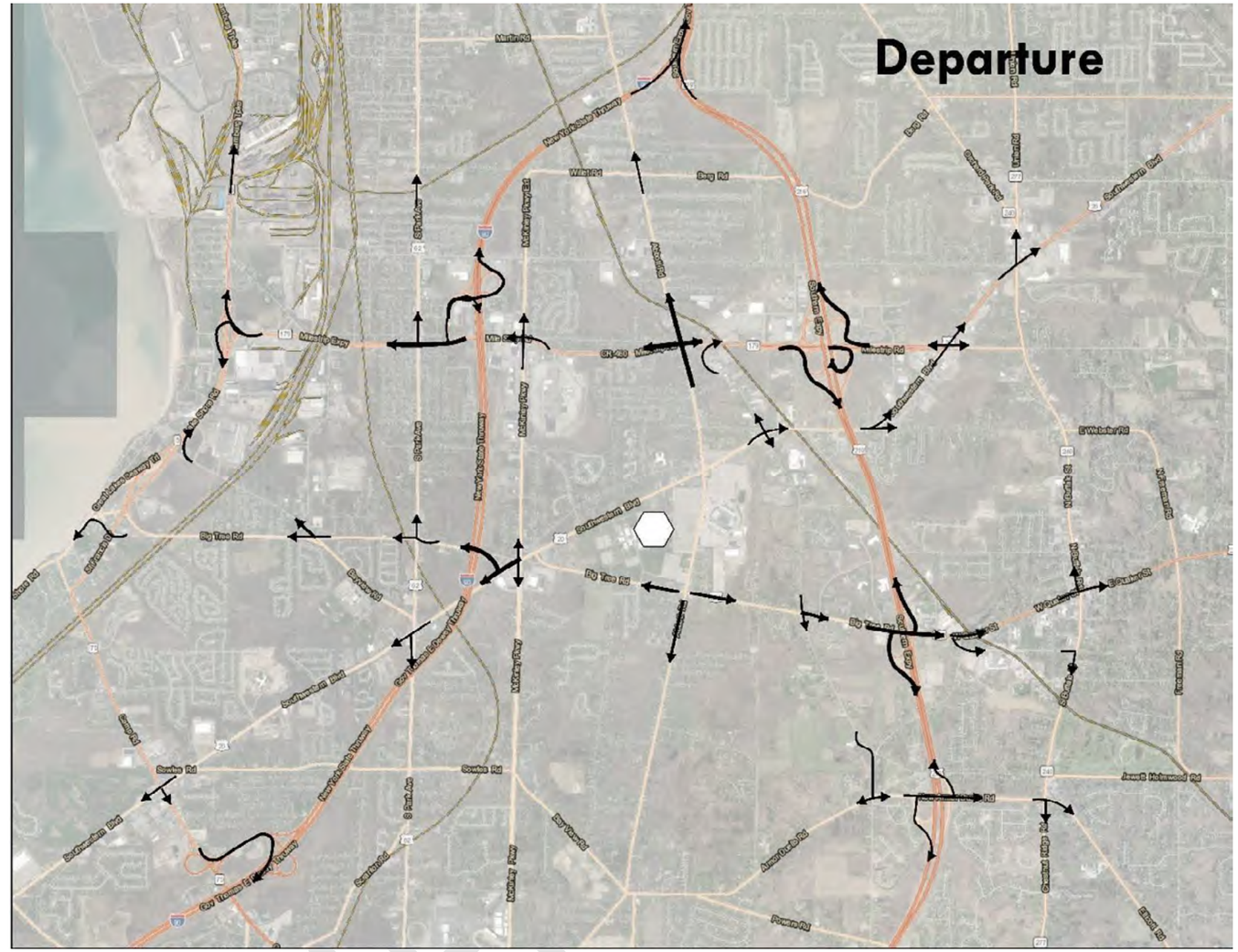
Traffic Departure Patterns for Orchard Park Site

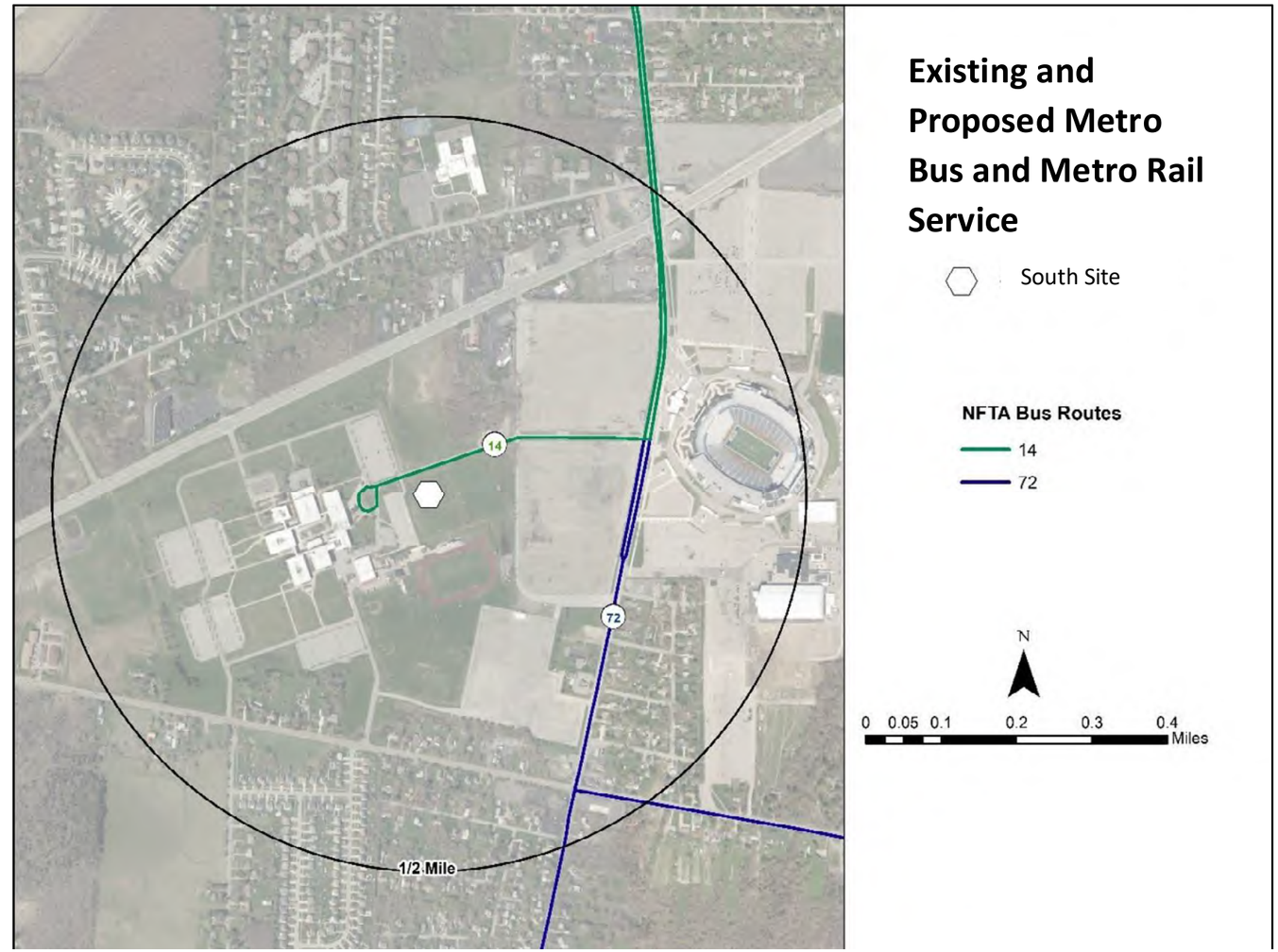


SOURCE: WSP

2.2 TRANSIT ACCESS:

- There is currently no Metro Rail service to the site and NFTA does not have plans to extend Metro Rail to the site.
- There is limited Metro Bus service to the area; mainly used to service ECC South Campus.
- Opportunities exist for shuttle park-and-ride service by bringing patrons in from satellite parking areas to the site.
- Rally is a private bus ride-share program endorsed by the Bills, which offers fan-friendly transportation to and from Bills' games, typically arriving three hours prior to kickoff to allow for tailgating and other pre-game festivities.

Existing Metro Bus Routes and Existing and Proposed Metro Rail Routes at Orchard Park Site



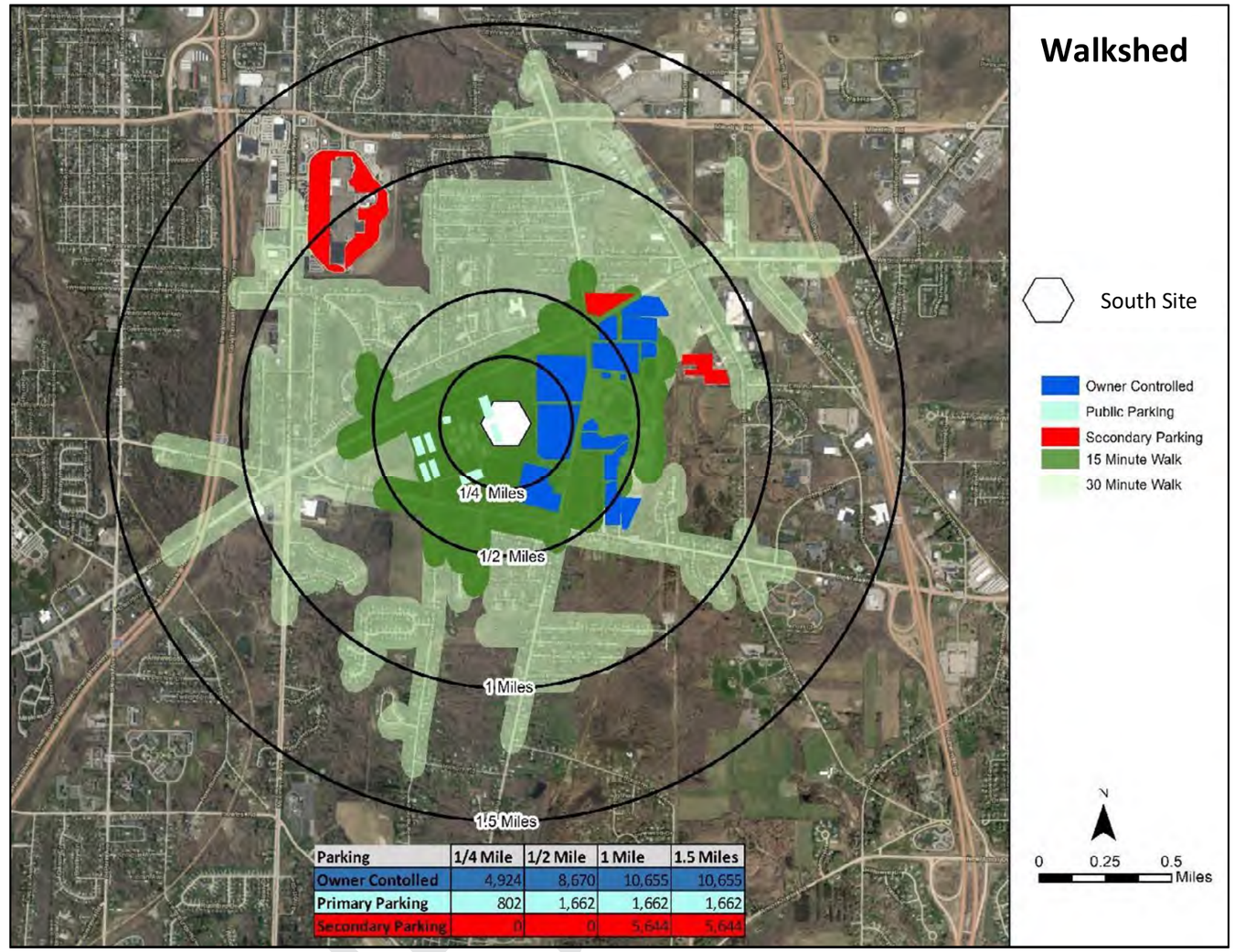
SOURCE: WSP and NFTA

2.2 TRANSIT ACCESS SCORE: 1

2.3 WALKABILITY: WALKSHED ASSESSMENT:

- The 15-minute walkshed for the South site doesn't extend much beyond the triangle created by Southwestern Boulevard, Big Tree Road, and Smokes Creek. This is where the majority of Owner Controlled and Primary Parking is available, so most of the parking areas fall within the 15-minute walkshed.
- Primary constraint of this walkshed is lack of roadway grid in area.
- Walking conditions to/from the stadium site are already familiar to patrons. Sidewalks exist along Southwestern Boulevard and Abbott Road, and roadways within the ECC Campus are generally accessible. There are no sidewalks on Big Tree Road. Patrons use the shoulder now on game days.
- Interior pedestrian corridors would be needed to traverse the site to access the stadium from parking areas.
- A large portion of parking would likely be located east of the stadium site which would require at least temporary closure of Abbott Road on game days to support pedestrian movements (current game day condition).
- Traffic control on game days at major intersections will continue to be needed to ease pedestrian circulation.

Walkshed Assessment of Orchard Park Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Contolled	4,924	8,670	10,655	10,655
Primary Parking	802	1,662	1,662	1,662
Secondary Parking	0	0	5,644	5,644

SOURCE: WSP

2.2 WALKABILITY SCORE: 1

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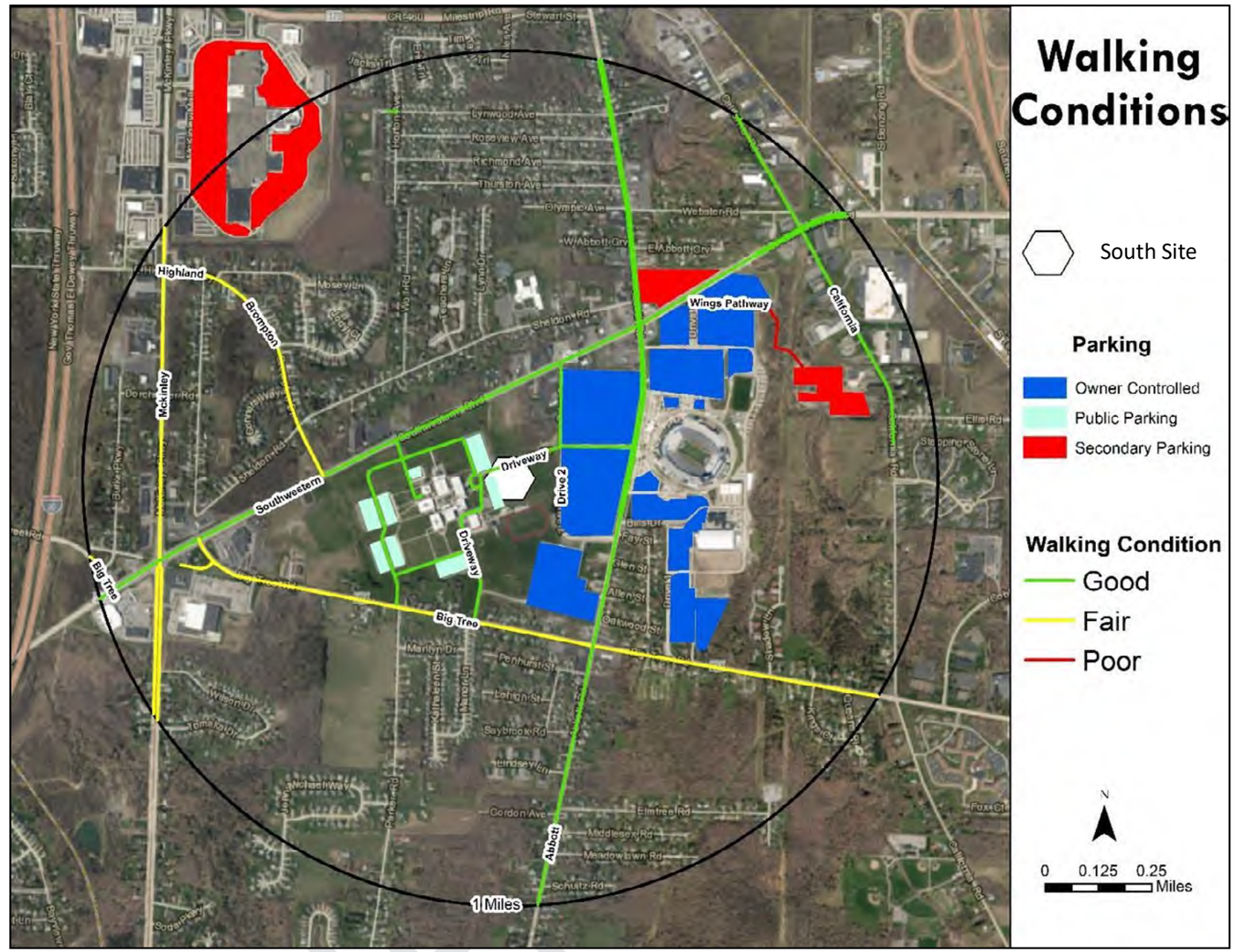


SOURCE: WSP

2.3 WALKABILITY SCORE: 1

2.4 RIDE SHARING:

Similar to other NFL stadiums, Uber, Lyft, and other ride-sharing programs have become more prevalent, with expectations to expand in future years. Generous surface parking and roads around the proposed stadium site are conducive to this growing trend.

- In 2018, the Bills moved the pickup location for Uber to the west side of the adjacent ECC campus, allowing for easy access to Southwestern Boulevard or Big Tree Road.
- While the walking distance from the Stadium to the Uber lot is approximately 20 minutes, the proximity to regional highways permits Uber drivers to complete two cycles of rider pick-up.
- Similar ride-share patterns can be expected with the proposed stadium site, with various options and flexibility for locating these services.

2.4 RIDE SHARING SCORE: 2

ORCHARD PARK SITE // 2. TRANSPORTATION

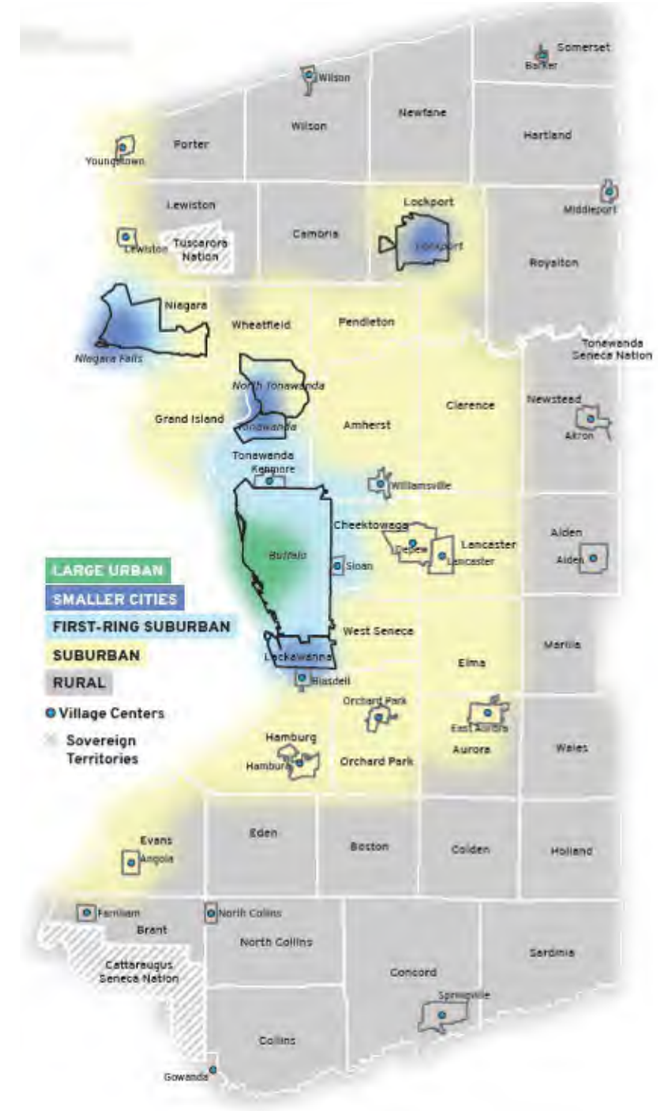
Existing Uber Dropoff

2.5 LONG-TERM TRANSPORTATION PLAN:

Given Orchard Park's suburban location, it has limited ability to take advantage of major public programs, such as "Buffalo Billion" or Buffalo's "Moving Forward 2050" Plan, and other transportation-related programs and funding.

- Reflecting the Village of Orchard Park's flat economic growth, no major transportation planning proposals are expected for the stadium and surrounding areas.

- In spite of familiar ingress/egress patterns for fans, game-day traffic congestion does still exist on surrounding roads; suggested improvements are noted in the following diagrams.



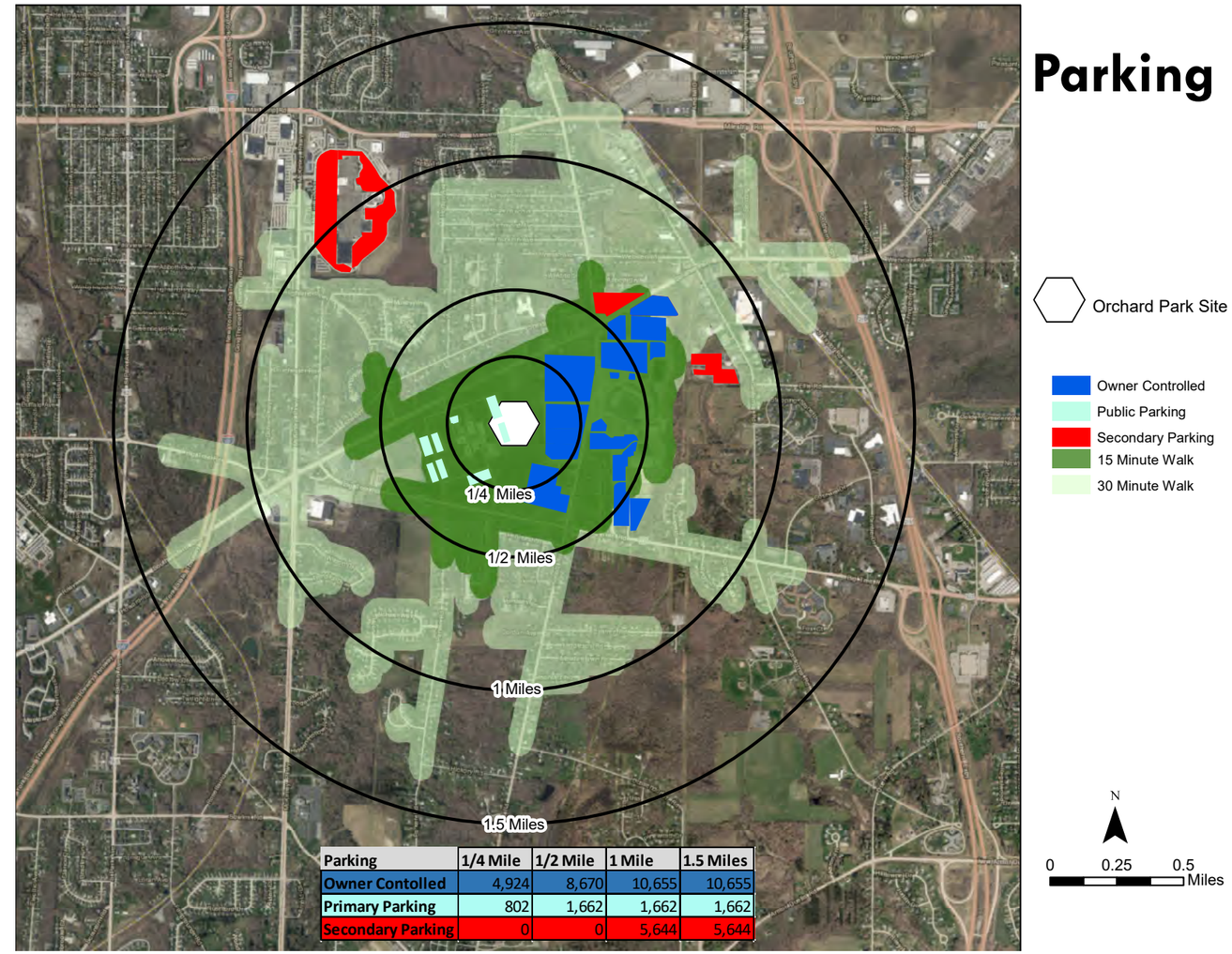
2.5 LONG-TERM TRANSPORTATION PLAN SCORE: 1

3.1 PARKING DEMAND/PATTERNS:

Basic parking demand and circulation patterns for the new stadium will be similar to those of the existing stadium, within convenient walking distances, but will require discussions with the ECC for future parking planning.

- By shifting the proposed stadium to the west of Abbott Road, a greater reliance of parking will naturally shift to the west, which necessitates discussions with the ECC regarding game-day parking agreements.

- Current assumptions are that existing ECC parking lots may be utilized for event parking; and undeveloped ECC land could also be improved with additional parking to replace any lost parking supply resulting from the new stadium.



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3.1 PARKING DEMAND/PATTERNS SCORE: 3

3.2 ON-SITE PARKING:

A new stadium will displace a substantial amount of existing surface parking located to the west of Abbott Road. However, additional potential parking supply exists on the adjacent ECC campus.

- Assuming that some or all of the New Era Field structure is redeveloped with some other use besides parking, and that a new stadium is built on property controlled by PSE, there will be a net loss of approximately 14 acres for land dedicated to parking.

- The proposed stadium location will impact the following existing lots: Lot 3, Lot 4, Bus Lot, and Camper Lot.

- Relocating these parking zones will trigger a larger parking management strategy, which reexamines the overall distribution to the east and west of Abbott Road.

3.2 ON-SITE PARKING SCORE: 3

3.3 OFF-SITE PARKING:

The main impact for off-site parking in Orchard Park will be the way in which the ECC property is incorporated into the future parking plan.

- As noted in 3.1, the proposed stadium location will trigger additional parking demand immediately around and near the building, which will directly impact existing lots and open grass areas of the ECC campus.

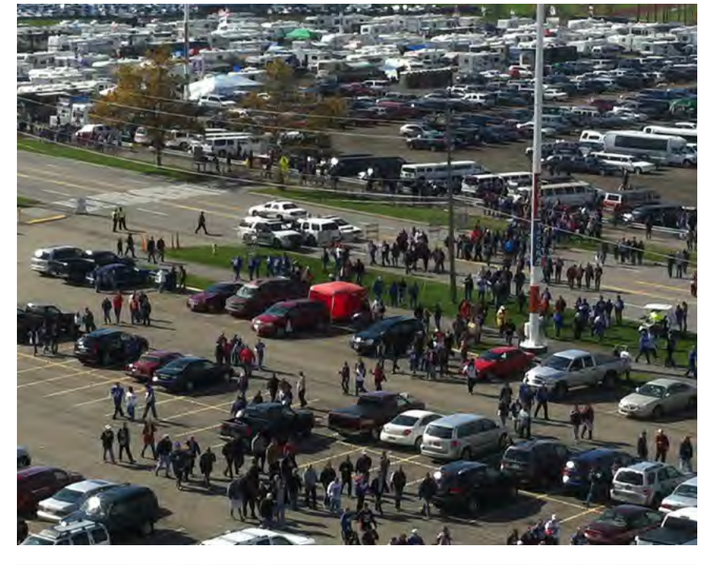
- Small-scale parking in residential driveways and streets, and in nearby commercial lots is expected to continue as it does today.

3.3 OFF-SITE PARKING SCORE: 3

3.4 TAILGATING:

One of the most revered tradition associated with a Buffalo Bills game day is tailgating at Orchard Park. This practice will continue here, but will be reconfigured as new parking zones are redeveloped to accommodate the new stadium.

- With plenty of potential land available on the ECC site, any lost surface parking is expected to be replaced with additional surface parking, thereby maintaining the same tailgating format that exists today albeit in a slightly new location.
- As noted in Section 1.3 (Site Characteristics), the Orchard Park site presents some untapped possibilities which could add a new, exciting dimension to tailgating and related attractions, by exploring how Smoke Creek and the existing ECC buildings might be uniquely redesigned as new fan amenities that are "uniquely Buffalo."



3.4 TAILGATING SCORE: 2

4.1 STADIUM LOCATION OPTIONS:

Given the combination of property controlled by PSE and the adjacent ECC campus, multiple sites are possible for locating a new stadium. The preferred stadium location, Option B, is directly west of the existing New Era Field, just west of Abbott Road.

- Option A, positioned to the north of New Era Field, captures greater visibility from Highway 20 and Abbott Road, but encroaches on 3rd party properties. The Smoke Creek greenway and existing stadium also limit the amount of usable space around a new building site in this location.

- **Option B**, positioned to the west of New Era Field, still maintains good visibility from Highway 20 and Abbott Road, despite adjacent small-scale commercial properties along the Highway frontage. This location would also be centered between existing Bills' facilities and future parking on ECC property.

- Option C, positioned to the east of the ECC campus buildings, would offer direct exposure onto Highway 20, but suffer from a one-sided parking distribution from the east, resulting in long walking distances and a disconnection to the existing Bills' facilities.

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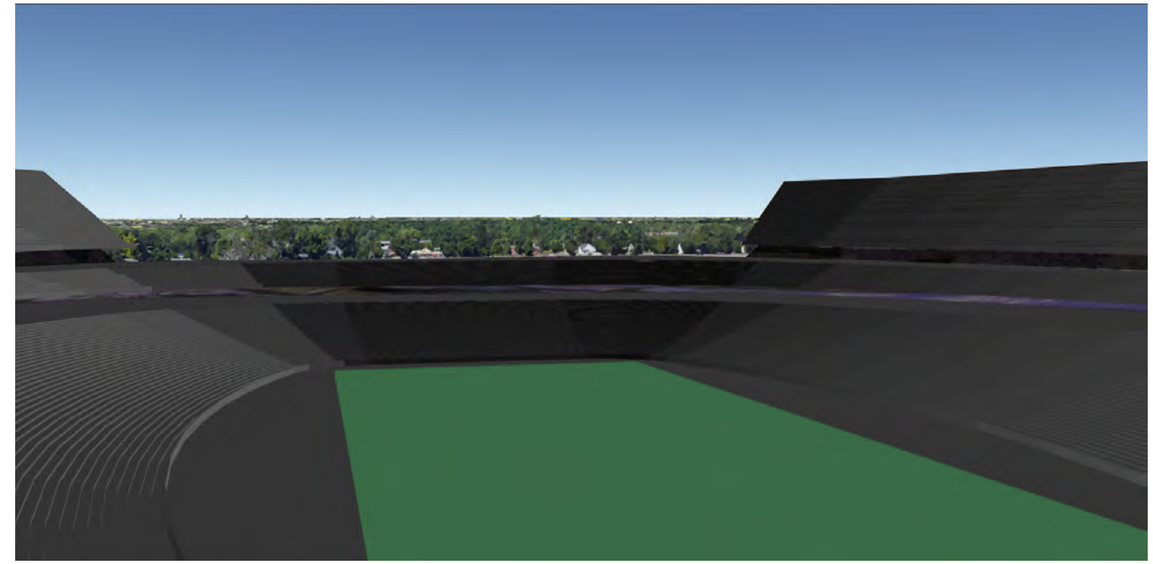


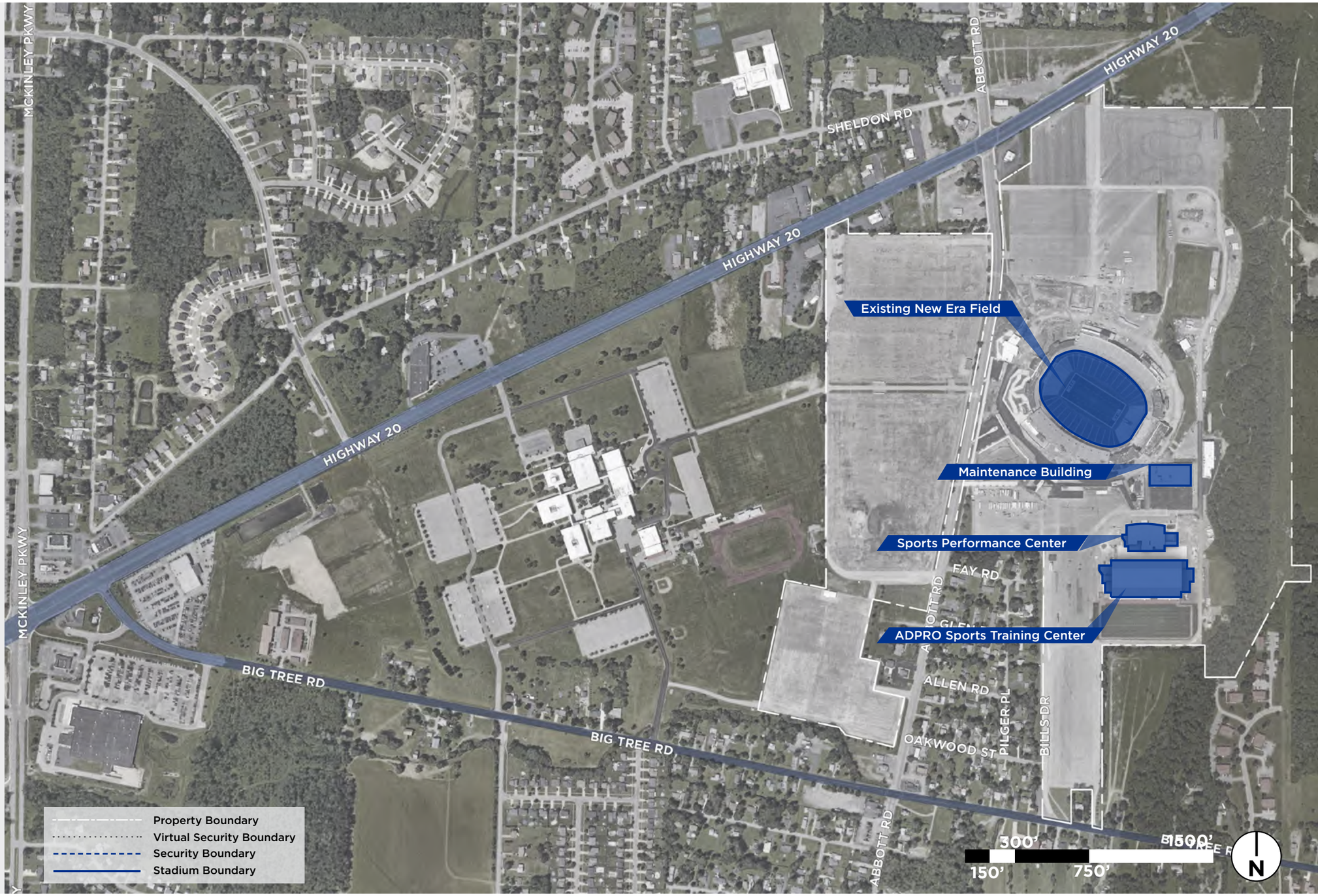
ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - STADIUM CONFIGURATION

4.2 Stadium Configuration:

The proposed stadium location has plenty of land area around the building, allowing flexibility for orientation and architectural articulation to respond to views, climate, and adjacent amenities.

- The scale of the new building will create an even greater iconic presence along Highway 20 and Abbott Road, as it will be physically larger and built with a fresh, new architectural expression.
- In addition to accommodating the building footprint, this proposed site will also accommodate the required 100-foot security offset and other support spaces.

Stadium Configuration Score: 2



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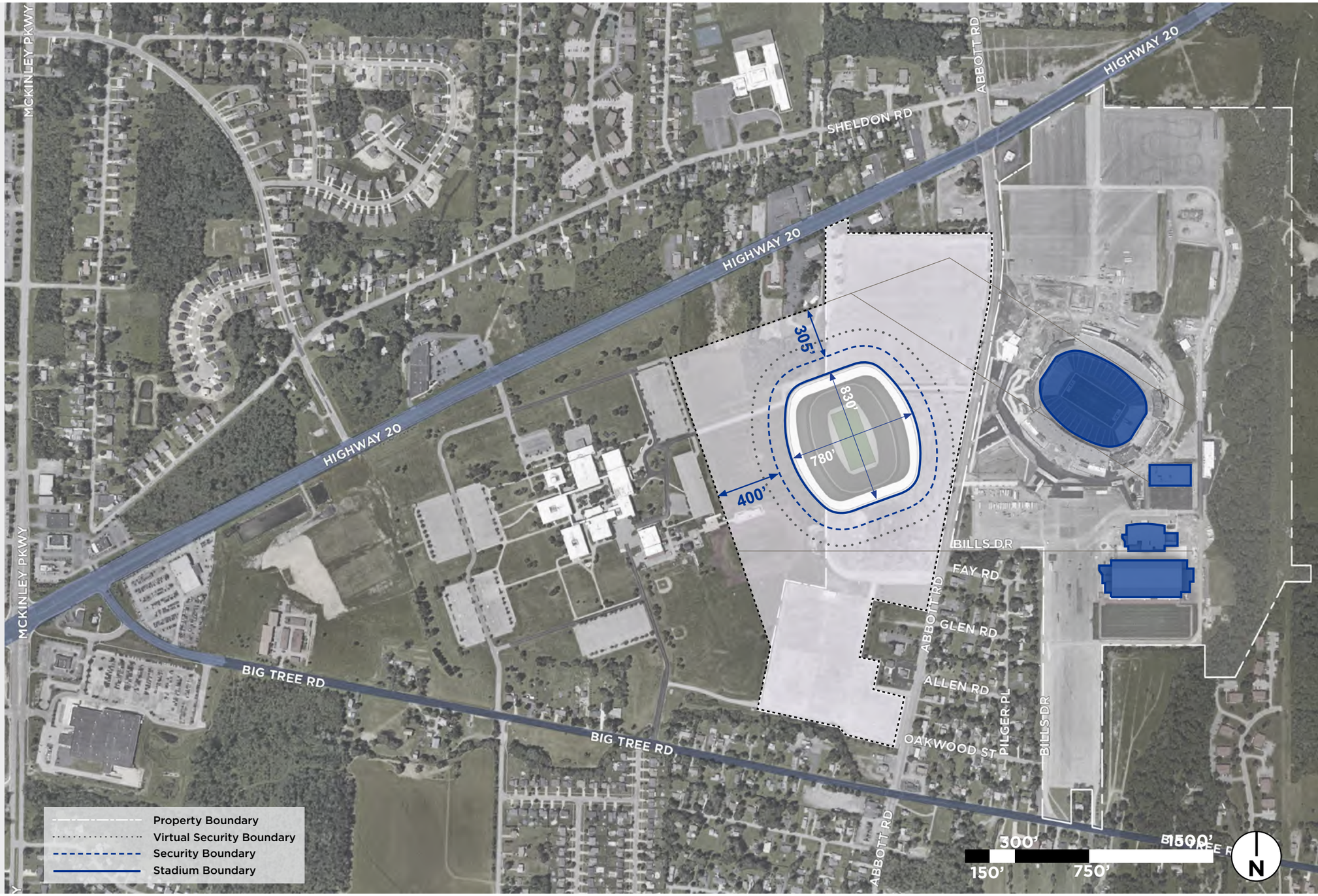

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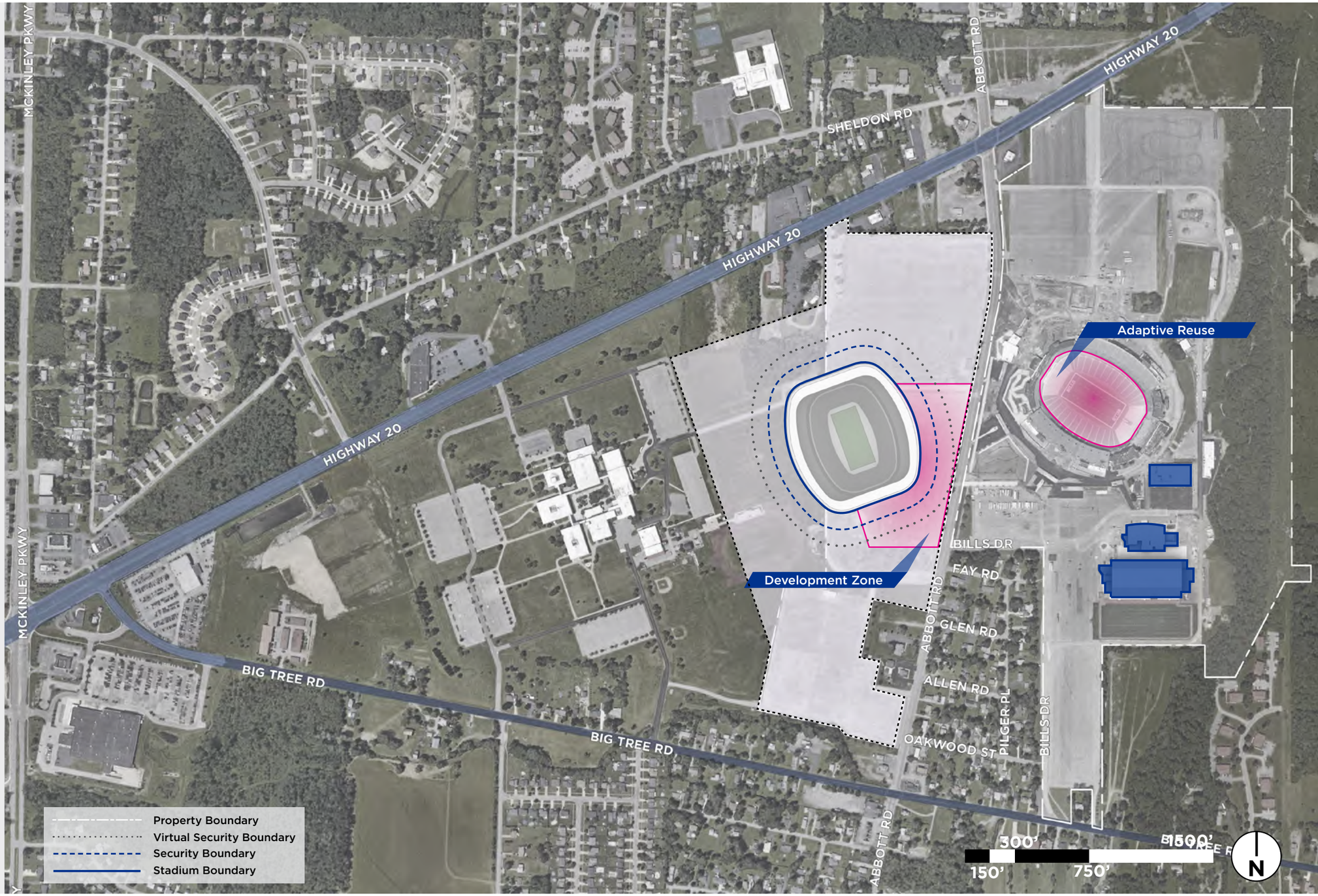
Stadium Configuration Score: 2

4.3 Supplementary Land Uses:

There is plenty of property around the proposed stadium site, which would be conducive to other land uses. The challenge here, however, is the lack of existing economic development demand for new uses beyond the stadium itself.

- Setting the stadium away from Abbott Road maintains flexibility for potential future development parcels that would benefit from adjacency to the venue and exposure to Abbott.
- Setting the stadium away from the ECC campus buildings maintains flexibility for potential future expansion by the college or any other future re-use of the complex.
- The new stadium site is also located in close proximity to New Era Field, setting up potential synergy with future redevelopment of the existing stadium and surrounding areas.

Supplementary Land Use Score: 2



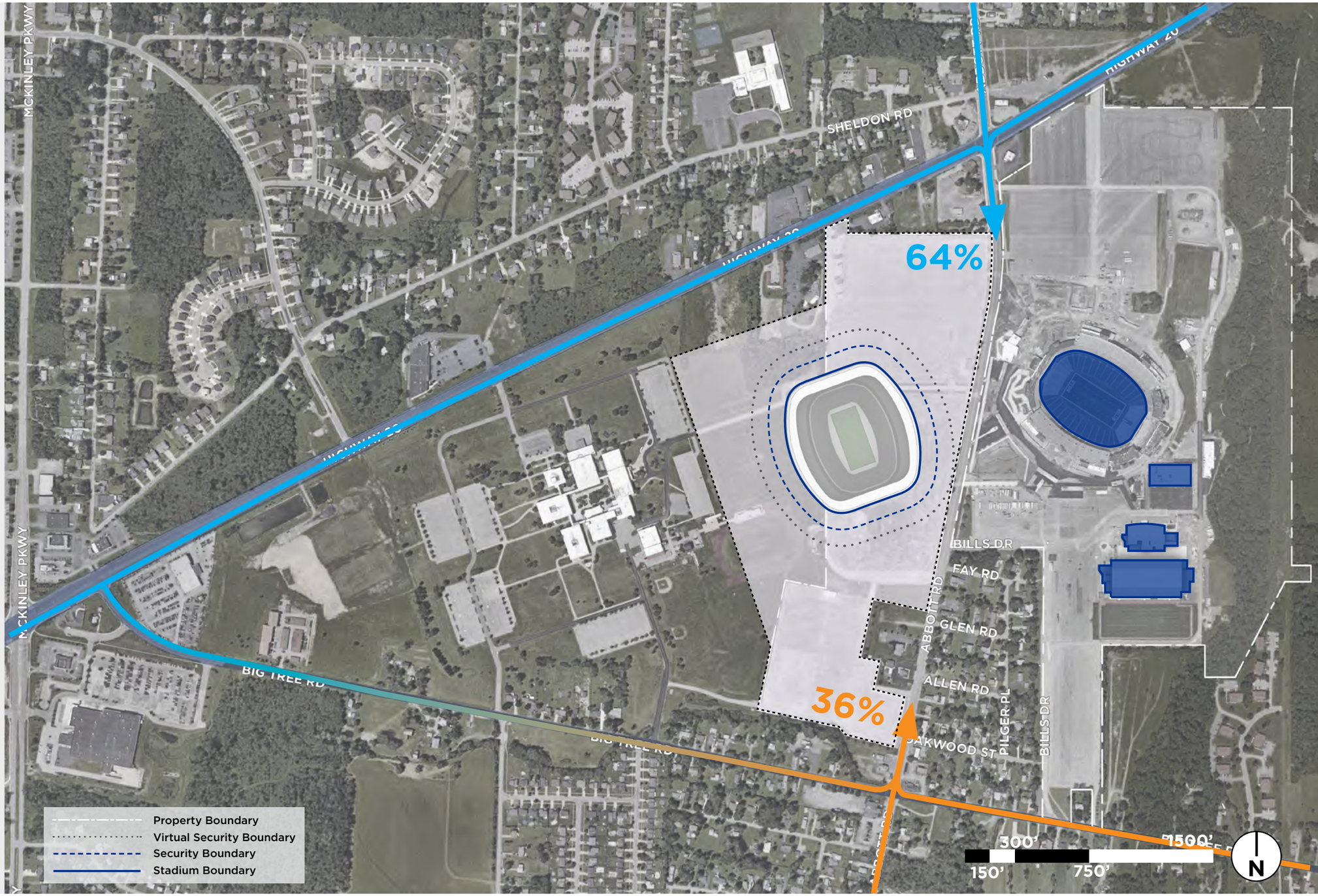
ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - TRAFFIC OVERLAY

4.4 Urban Design Potential:

As noted in Section 1.1 (District Identity), the Orchard Park site lacks exceptional character, but could be enhanced and redefined with a new stadium complex and redevelopment of the former stadium site.

Given the rolling suburban landscape of Orchard Park, a new stadium here could emphasize its relationship to nature – similar to museums, botanical gardens, expo buildings, and other similar precedents in Buffalo.

- While Abbott Road is closed on game days, it still lacks any pedestrian-friendly character or brand identity related to the Bills. A future opportunity would be to reclaim and redefine this corridor as a signature boulevard in the spirit of some of the great streets and promenades (both past and present) of Buffalo.
- The implementation of Electronic Toll Collection by the New York State thruway Authority on the I-90, which would result in the removal of the Lackawanna Toll Barrier, would be expected to shift trips to I-90 currently on US 219 proviging more balance to arrival/departure traffic.
- This shift of traffic to arrive from/ depart towards the west may balance out the traffic patterns vs current arrival/departure (more to the north and east)
- (See appendix for more detailed traffic circulation information)



ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - ABBOT ROAD EXPANSION

4.4 Urban Design Potential:

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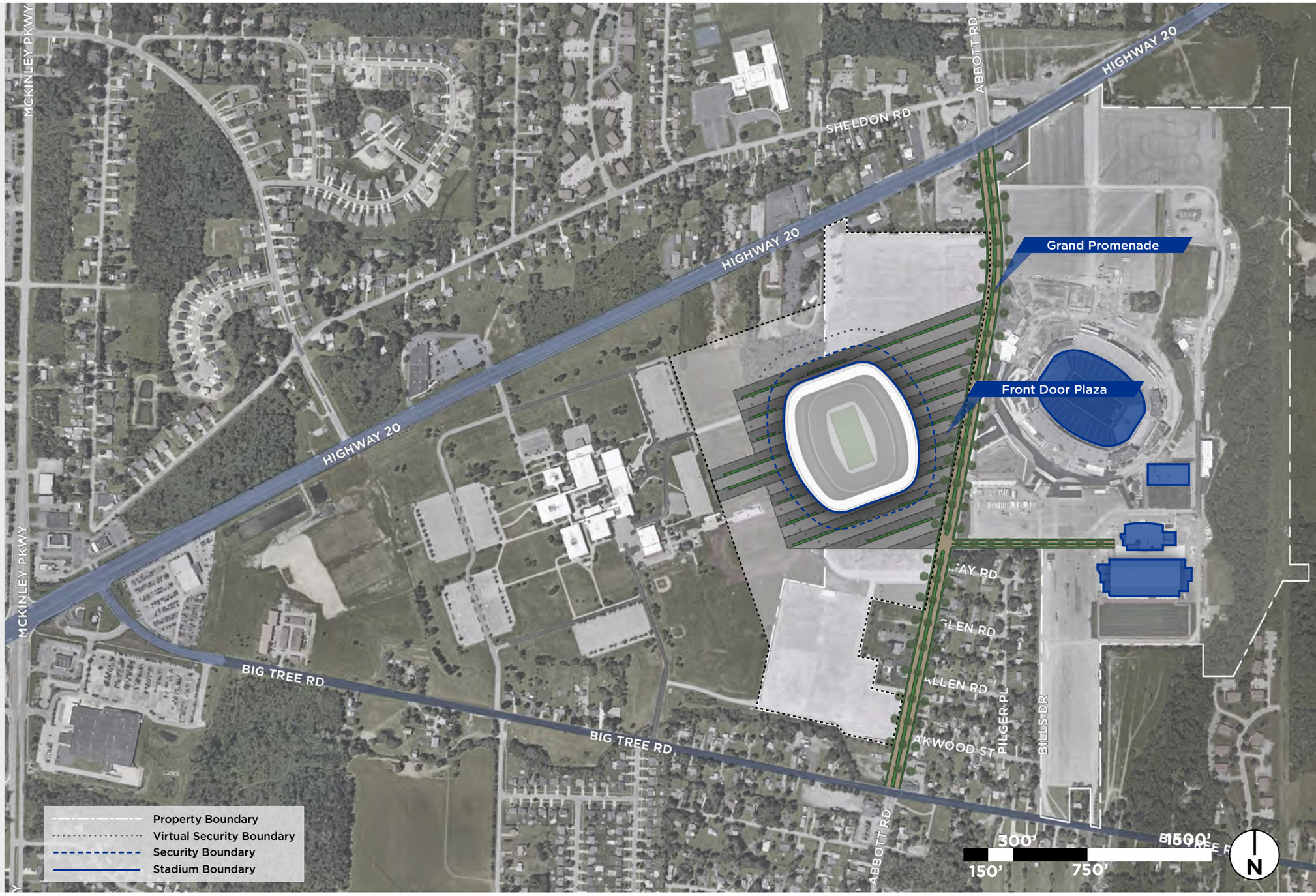

ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - KEY ENTRY POINTS

4.4 Urban Design Potential:

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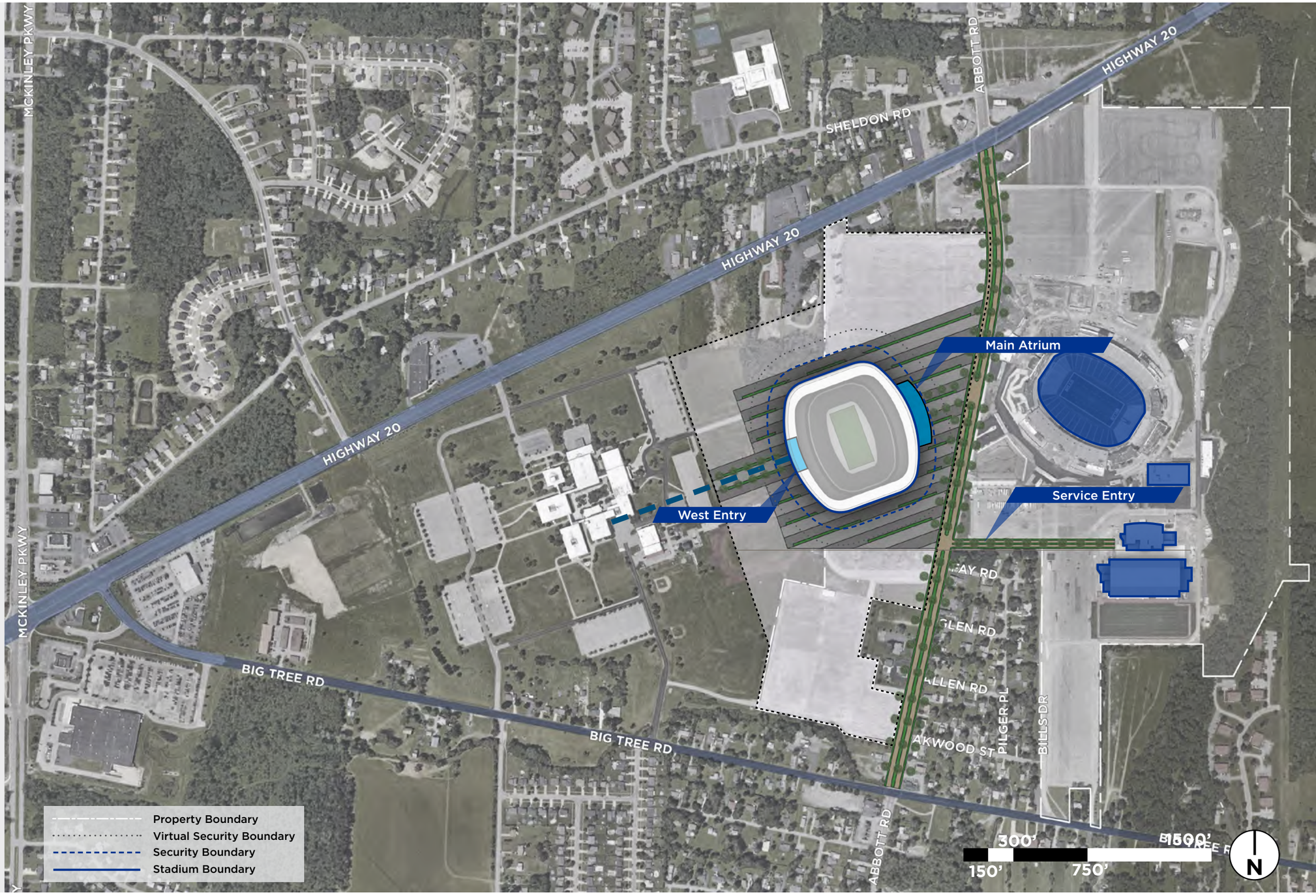

ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - NORTH LANDSCAPE

4.4 Urban Design Potential:

As noted in Section 1.1 (District Identity), the Orchard Park site lacks exceptional character, but could be enhanced and redefined with a new stadium complex and redevelopment of the former stadium site.

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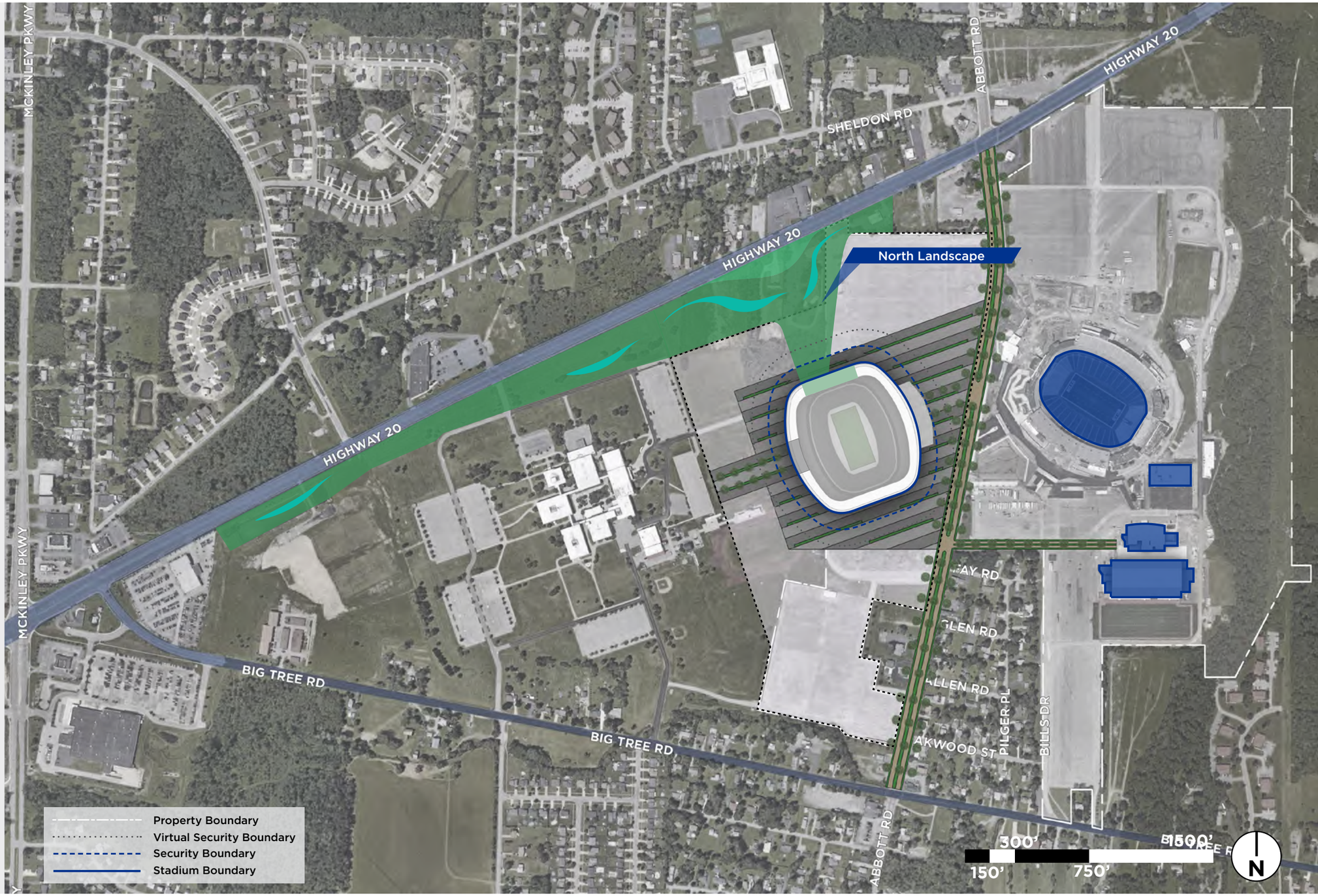
- The location of the new stadium sets up a potential cross-axis (perpendicular to Abbott Road) to reinforce a connection between the ECC campus, the new stadium, and a redeveloped New Era Stadium site. This also helps to connect the new stadium with the Bills' training complex.
- There is a significant landscape border along much of Highway 20, including some water retention elements. Another strong opportunity with the new stadium is to enhance and expand this landscape element as an amenity for fans, businesses, and residents in this district. And to expand this one step further, this open space system could also connect directly into the Smoke Creek corridor, which could potentially become an everyday park element as well as new tailgate amenity.



ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - TAILGATING

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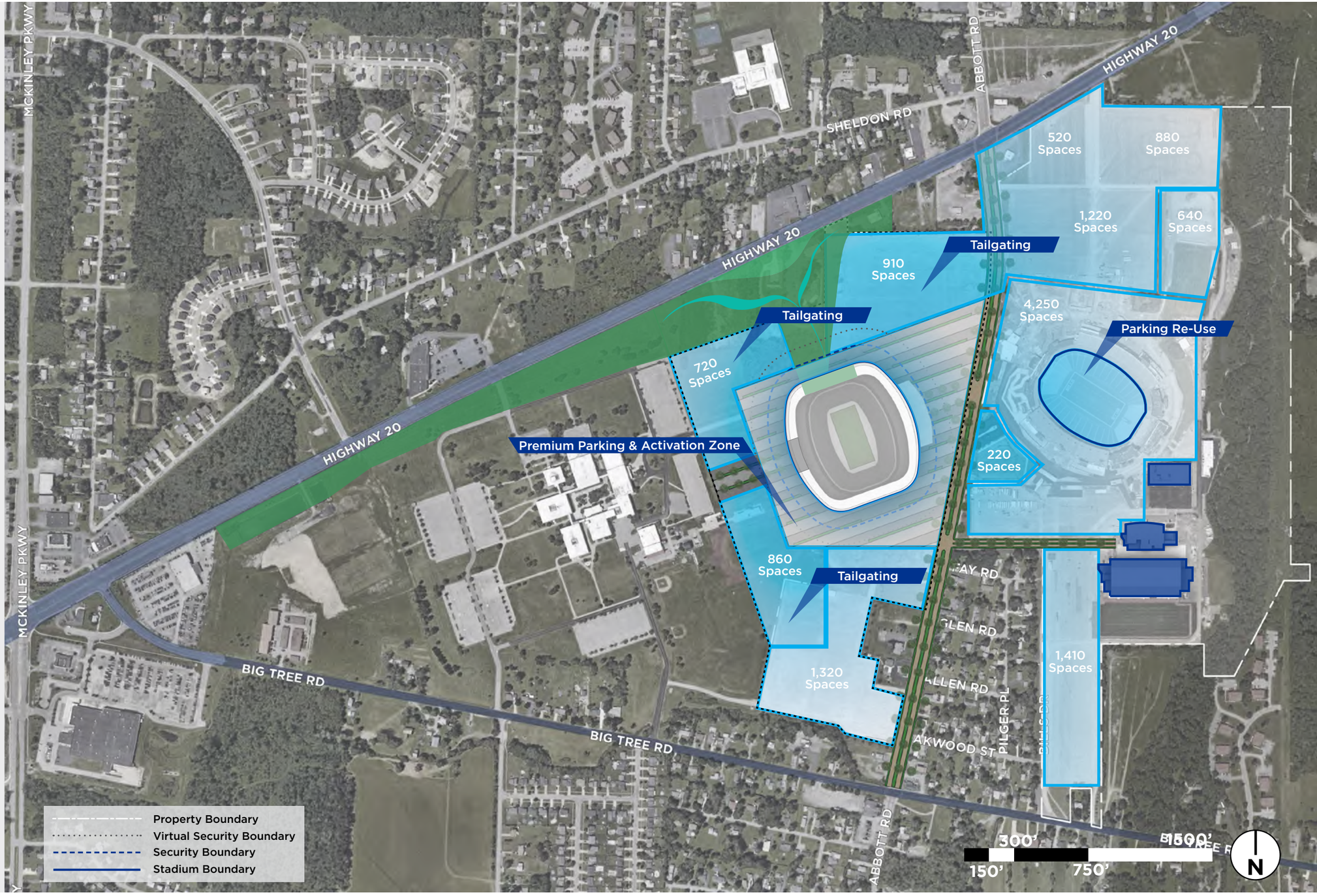
Given the rolling suburban landscape of Orchard Park, a new stadium here could emphasize its relationship to nature – similar to museums, botanical gardens, expo buildings, and other similar precedents in Buffalo.

- Tailgating functions now at Orchard Park, but the new stadium introduces the opportunity to reorganize and enhance the overall experience.

Urban Design Potential Score: 3



ORCHARD PARK SITE // 4. PROGRAM ACCOMODATION - POTENTIAL DEVELOPMENT

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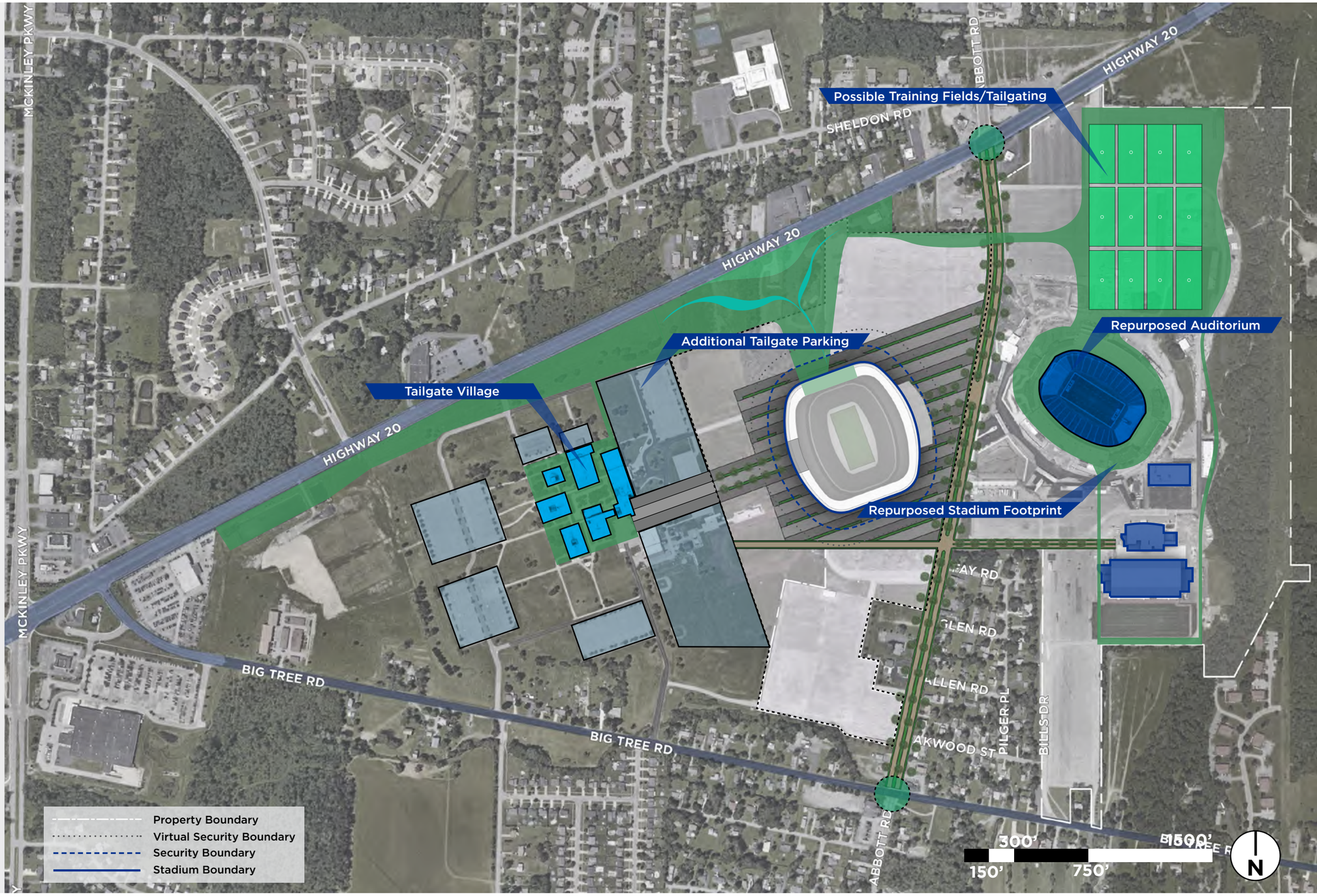
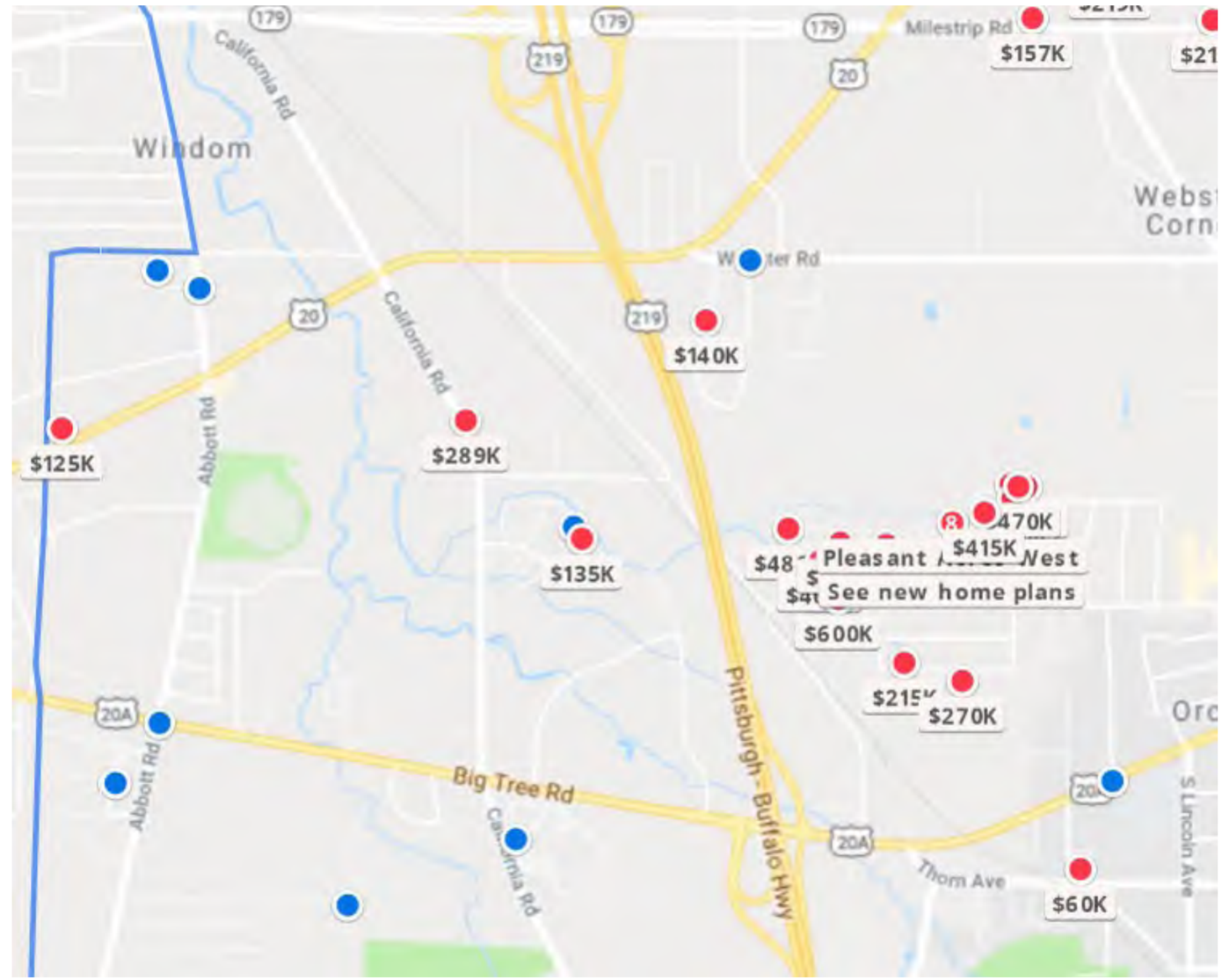


5.1 PROPERTY VALUES:

As noted in Section 1.4 (Market Trends), Orchard Park and surrounding areas have experienced limited economic development momentum, and property values have remained stable.

- The proposed stadium location would avoid the need to acquire additional property beyond what PSE or Erie County currently control.
- Since the county owns the ECC campus, additional property needs would be explored with respect to existing and future college plans.



5.1 PROPERTY VALUES SCORE: 3

5.2 SITE IMPROVEMENT COSTS:

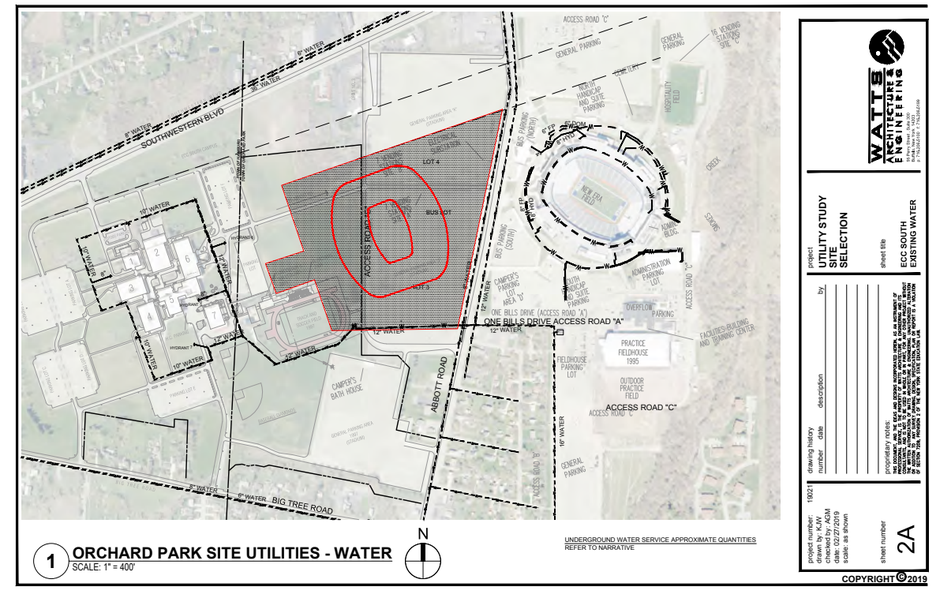
The area of the proposed stadium site is close to existing utilities, and does not appear to present any environmental issues of concern.

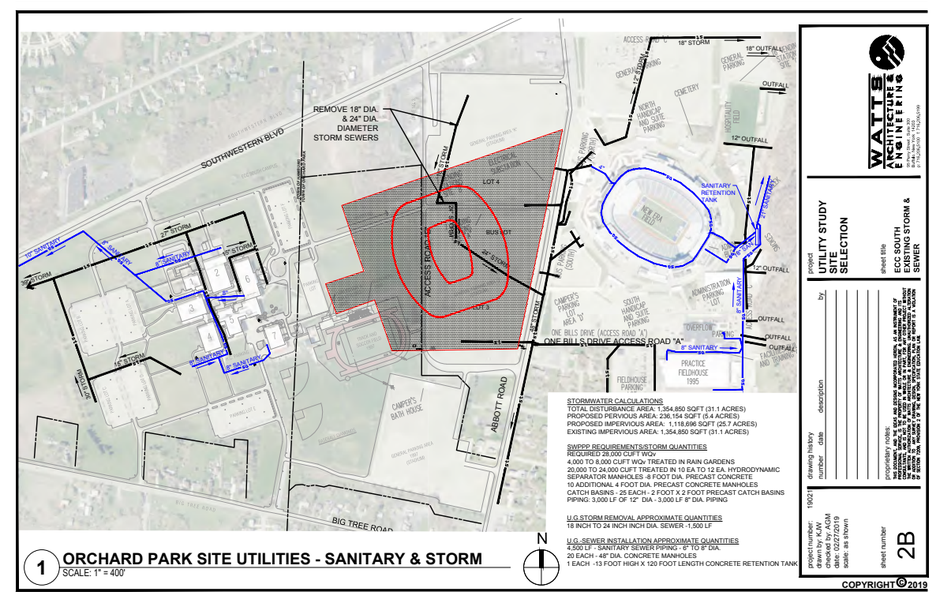
- Existing electrical, water, sewer, and fiber systems are in place in this location, but would require a degree of upgrading to accommodate the new stadium needs.
- The existing site is relatively flat with no existing structures, thereby minimizing any site preparation costs.

5.2 SITE IMPROVEMENT COSTS SCORE: 3

COSTS: UTILITY ASSESSMENT

Being close to the existing New Era Field the capacity of required utilities are adequate for a new stadium in all cases. The Orchard Park site rated highest primarily because the location of the proposed site is relatively clear of existing facilities that would need to be modified and/or relocated from under the stadium "footprint". This results in better scores for magnitude of improvements, degree of difficulty, and costs.





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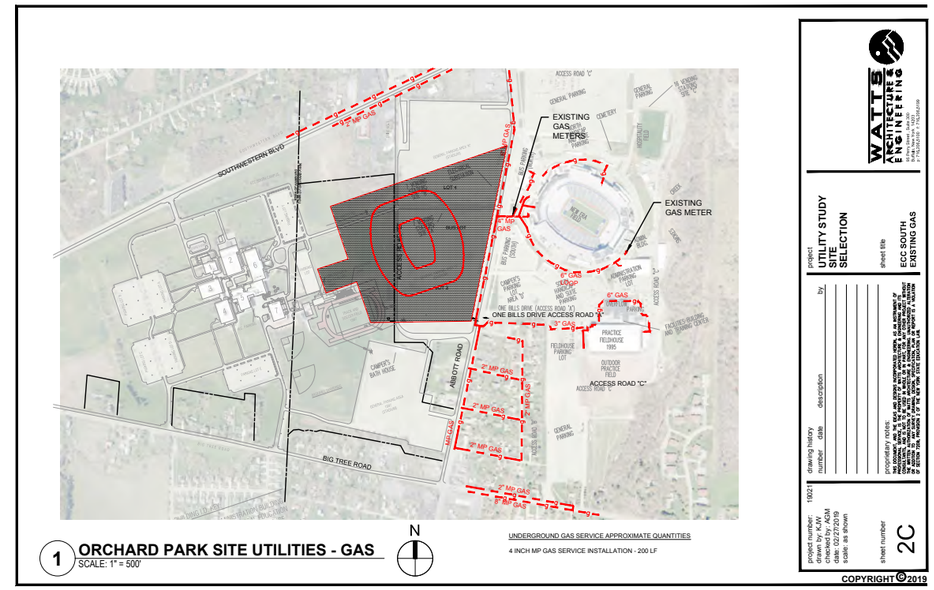
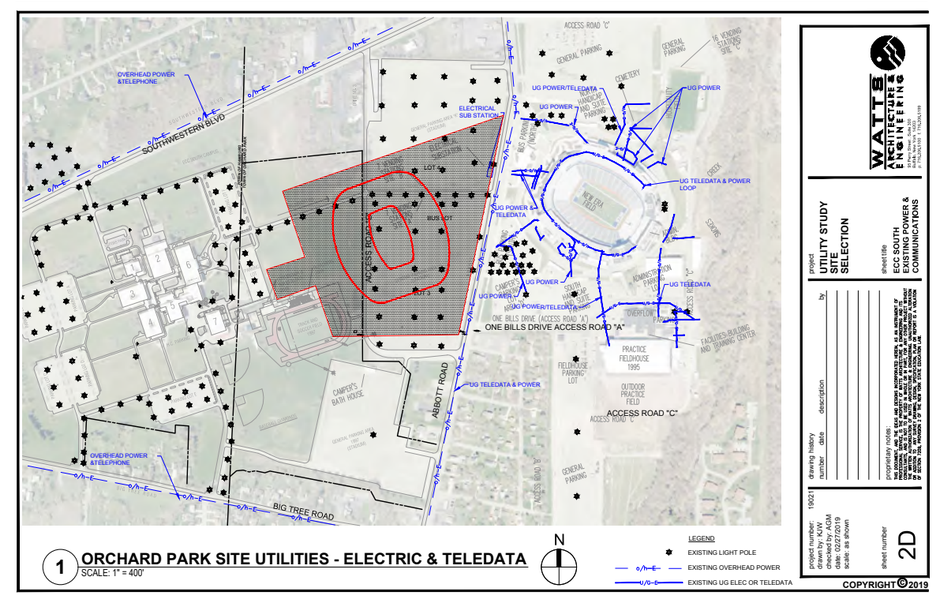




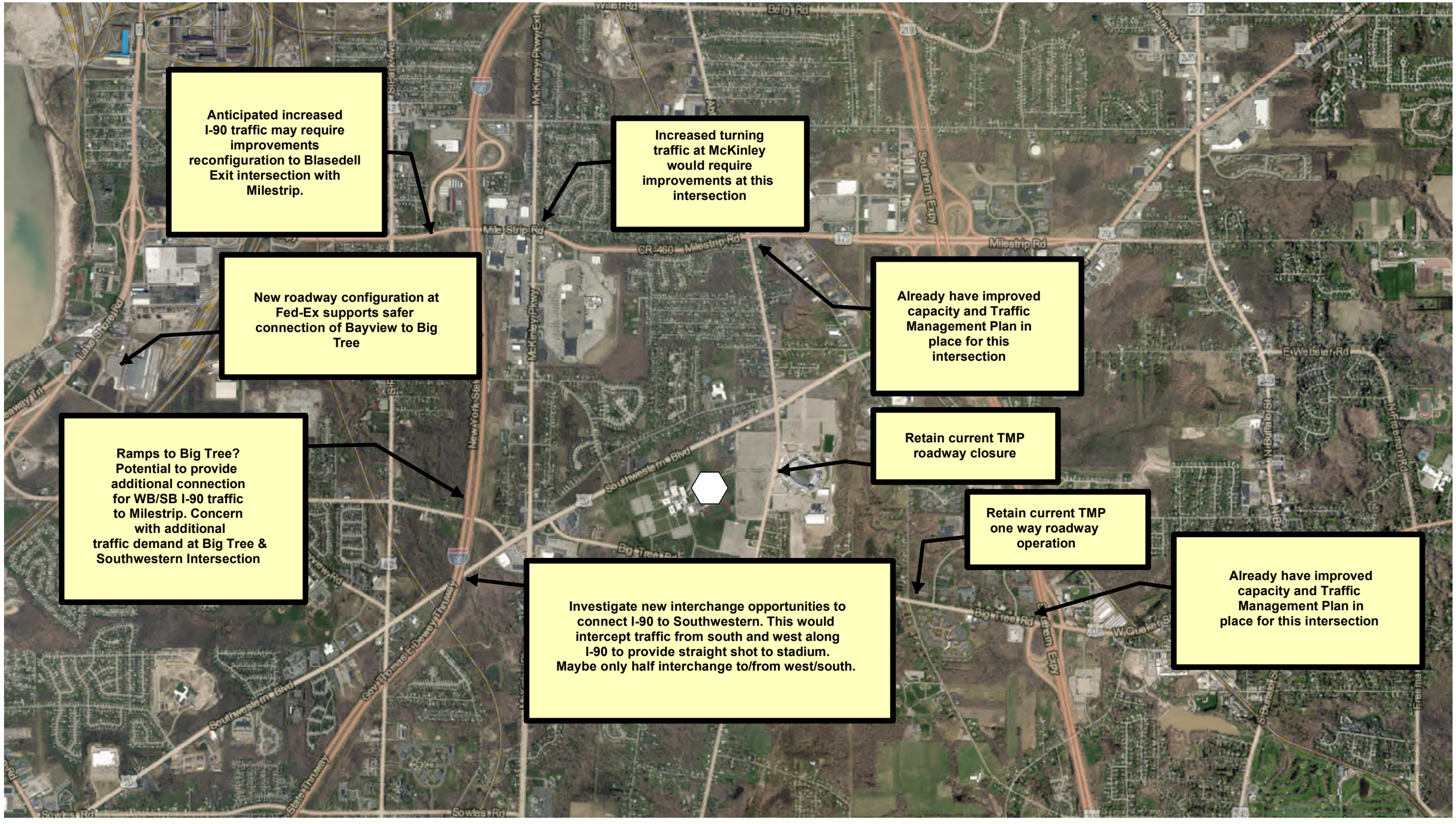
5.3 OFF-SITE / OTHER COSTS:

Because New Era Field has been operating as an NFL stadium since 1973, no significant off-site improvements are expected, but traffic-related improvements would enhance ingress/egress movements to the stadium and help reduce impact on surrounding neighborhoods.

- As noted in the adjacent diagram, ramp improvements to the I-90 could enhance access to and from Highway 20 and Big Tree Road.
- The new stadium site would have somewhat closer proximity, and potential synergy, with McKinley Mall; potential road improvements have also been noted in this vicinity.
- As noted in 4.4 (Urban Design Potential), the transformation of Abbott Road would greatly enhance the functionality and appearance of the new stadium district; this represents an important "off-site" improvement to explore further.

5.3 OFF-SITE / OTHER COSTS SCORE: 3

ORCHARD PARK SITE // 5. COSTS



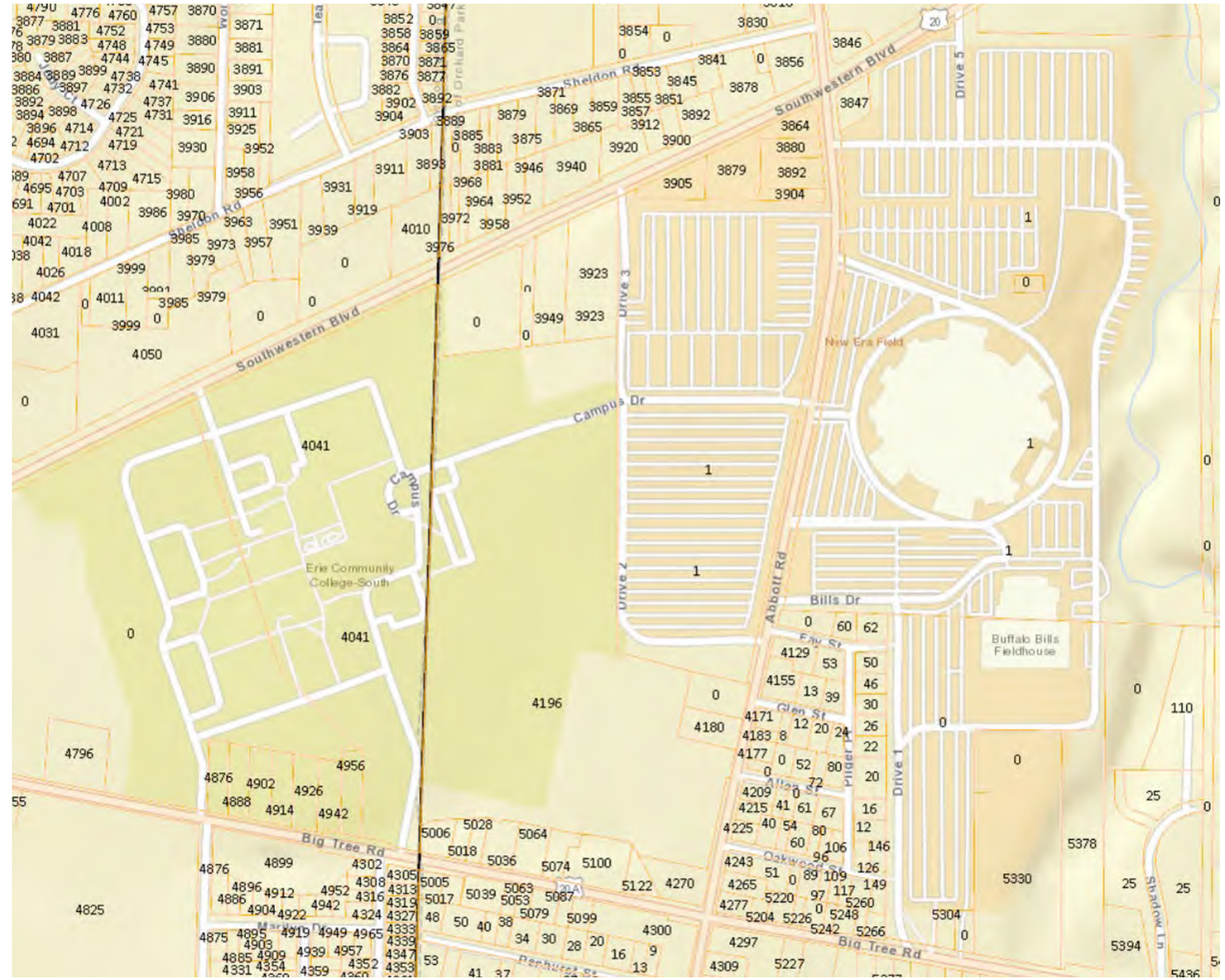
POPULOUS

6.1 PROPERTY CONTROL / ACQUISITION:

As noted previously, the new stadium location would rely on an agreement with the County-owned ECC property. Additional properties near the Highway 20 frontage would be desirable, but not critical.

- The proposed stadium location encroaches on campus parking and recreation uses, but assumes that the existing buildings will not be directly impacted.

- The outparcels located directly to the north of the proposed stadium site will negatively impact the appearance of the stadium and, to a lesser degree, the functionality of the stadium. If possible, it would be highly desirable to acquire these properties, to capture and control the "100% corner" at Highway 20 and Abbott Road.



6.1 PROPERTY CONTROL / ACQUISITION 3

6.2 SITE CONDITIONS / ENCUMBRANCES:

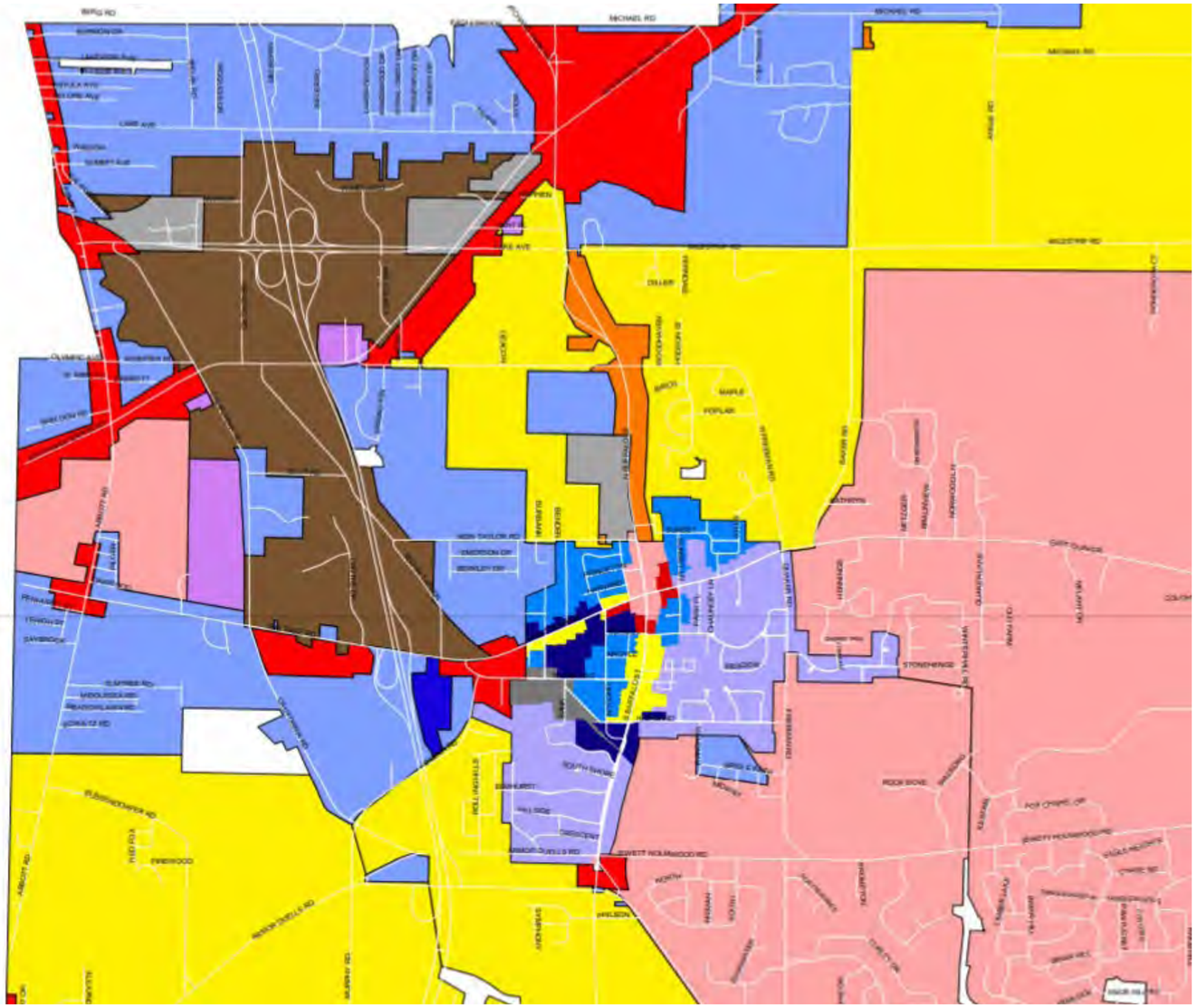
As noted previously, the new stadium location is not anticipated to have any major challenges with regard to site development.

- The new stadium would displace existing parking and recreation functions for the campus; these could be relocated/redeveloped elsewhere on campus, if necessary.

6.2 SITE CONDITIONS / ENCUMBRANCES SCORE: 3

6.3 LAND USE / ZONING PROCESS:

Since the new stadium location is virtually in the same location of Orchard Park, and would be located on county property, it is not anticipated to have any major challenges with regard to land use/zoning approval processes.



6.3 LAND USE / ZONING PROCESS SCORE: 3

7.1 PROPERTY DEVELOPMENT CONCERNS:

By locating a new stadium beyond the property controlled by PSE, issues related to the new building and property control should be highlighted.

- Whereas the field level of the existing stadium is depressed below grade, the new building is anticipated to have field level at grade: this would result in a taller building. On one hand, it would be more visible and iconic. On the other hand, the surrounding neighborhood is by and large one- to two-story structures, and a larger building may trigger some complaints from local neighbors.

- The ECC campus has been noted as a benefit for the new building site, offering necessary parking, additional undeveloped land, and possible re-use of existing buildings. On the other hand uncertainty about their future, and dependency on their property may represent a concern for future stadium and related development.

7.1 PROPERTY DEVELOPMENT CONCERNS SCORE: 3

7.2 P.R. COMMUNITY ENGAGEMENT:

As noted previously, since the proposed stadium is located very close to the existing stadium, no significant community opposition is anticipated. Depending on the future of the ECC, however, additional community-related engagement would likely be required.

- The prospect of a new stadium, and potentially new associated development uses, will undoubtedly attract significant attention, particularly in the Orchard Park community.
- The Orchard Park Neighborhood Association, for example, is already organized and in place, and may be one entity to engage with.
- The future use of the ECC campus will also trigger discussions with County and ECC leaders.
- Other business organizations with nearby commercial uses may also represent another local community with which to engage.

7.2 P.R. COMMUNITY ENGAGEMENT SCORE: 3

7.3 POLITICS:

As noted previously, since the proposed stadium is located very close to the existing stadium, no significant political opposition is anticipated.

- If not already explored, political reconnaissance should be addressed with representatives from the Village of Orchard Park, Erie County, etc.

7.3 POLITICS SCORE: 3

8.1 STADIUM PROGRAMMING:

The programming of the interior elements of the stadium is anticipated to be directly related to elements on the exterior of the stadium, as well as elements adjacent to the building.

- Since the field level of the new stadium is expected to be at street level (not depressed below grade), an architectural opportunity exists to "plug in" retail or other commercial uses around the ground-level edges of the stadium.

- No predominant outward vistas from the stadium exist in this location, which could influence a specific architectural response (eg. opening up views through an end zone or from a concourse club or element).

- Given the climatic conditions here in Orchard Park (and Buffalo, in general), an atrium element may be explored as an architectural element that relates to the stadium and potential ancillary development.

- While designed & programmed for "football first," opportunities for other programming to foster a variety of other uses of the venue.

8.1 STADIUM PROGRAMMING SCORE: 1

8.2 ANCILLARY DEVELOPMENT STRATEGY:

As noted in Section 1.4 (Market Trends), there is limited economic development momentum in Orchard Park which, in turn, limits the amount of ancillary development to be expected in this site. However, the future re-use of New Era Field presents a new opportunity for exploring how to leverage the venue and surrounding areas.

- In order to maintain possibilities for future development, space on both the west and east side of the future stadium is identified as possible ancillary development sites.
- The depressed field and lower bowl of New Era Field represent a unique attraction to consider for alternative recreation/entertainment uses once the new stadium is developed.
- Various scenarios for New Era Field's post-development may be explored, but a recreation-driven regional destination could leverage the facility's existing assets, and perhaps be expanded to include a series of related fields and/or indoor sports venues.

8.2 ANCILLARY DEVELOPMENT STRATEGY SCORE: 1

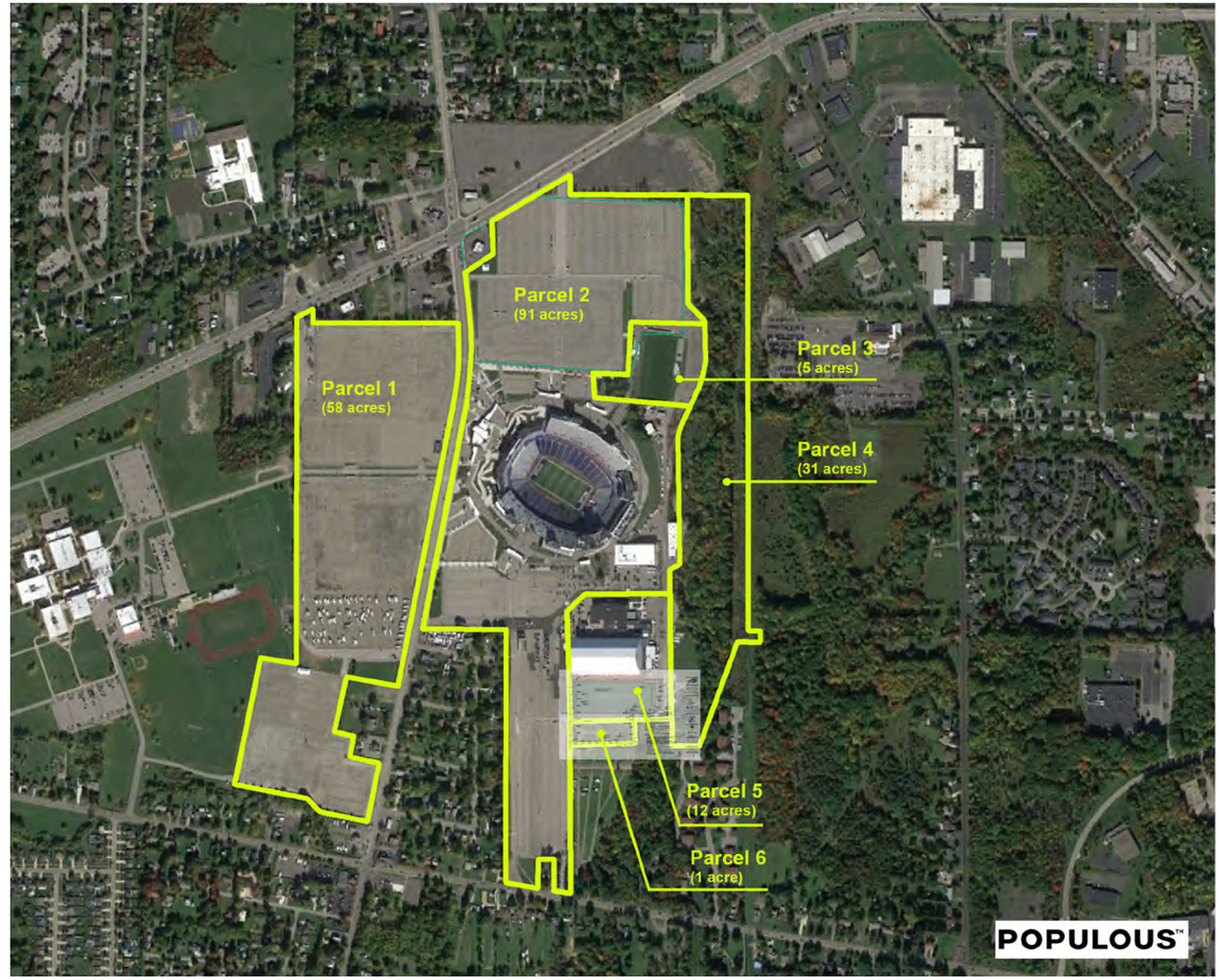
8.3 MXD PHASING & FLEXIBILITY:

The primary development focus in Orchard Park will be the new stadium; any ancillary development may be longer-term strategies, with the exception of repurposing New Era Field.

- As the new stadium begins construction, parking will have to be relocated and reorganized, which will require a phased strategy that coincides with both new construction and demolition activities.

- If and when mixed-use development buildings come on line, the interim uses for those parcels may be utilized for parking and other stadium-related activities.

- A transition plan will be required to make the switch from the existing to the new stadium but once complete, alternative uses for New Era Field should be simultaneously considered, to explore alternative programming and revenue generation.



8.3 MXD PHASING & FLEXIBILITY SCORE: 1

SUNY U.B. SITE

1. PLACE MAKING ABILITY

1.1 DISTRICT IDENTITY
1.2 FUTURE LAND USE
1.3 SITE CHARACTERISTICS
1.4 MARKET TRENDS
TOTAL SCORE: 5

2. TRANSPORTATION

2.1 EXISTING ROAD NETWORK
2.2 TRANSIT SYSTEM
2.3 WALKABILITY
2.4 RIDE SHARING
2.5 LONG-TERM TRANSPORTATION PLAN
TOTAL SCORE: 6

3. PARKING

3.1 PARKING DEMAND/PATTERNS
3.2 ON-SITE PARKING
3.3 OFF-SITE PARKING
3.4 TAILGATING
TOTAL SCORE: 4

4. PROGRAM ACCOMMODATION

4.1 STADIUM LOCATION OPTIONS
4.2 STADIUM CONFIGURATION
4.3 SUPPLEMENTARY LAND USES
4.4 URBAN DESIGN POTENTIAL
TOTAL SCORE: 4

5. COSTS

5.1 PROPERTY VALUES
5.2 SITE IMPROVEMENT COSTS
5.3 OFF-SITE/OTHER COSTS
TOTAL SCORE: 3

6. SCHEDULE

6.1 PROPERTY CONTROL/ACQUISITION
6.2 SITE CONDITIONS/ENCUMBRANCES
6.3 LAND USE/ZONING PROCESS
TOTAL SCORE: 3

7. INTANGIBLES

7.1 PROPERTY DEVELOPMENT CONCERNS
7.2 P.R./COMMUNITY ENGAGEMENT
7.3 POLITICS
TOTAL SCORE: 3

8. REVENUE GENERATION

8.1 STADIUM PROGRAMMING
8.2 ANCILLARY DEVELOPMENT STRATEGY
8.3 MXD PHASING & FLEXIBILITY
TOTAL SCORE: 6

POPULOUS®

1.1 DISTRICT IDENTITY

A new stadium at the SUNY UB campus would have a major impact on the identity of the Bills as well as the on the identity of the university.

- The SUNY UB campus is located in Amherst a middle-class suburb located about eight miles northwest of downtown, with a population of about 122,000.
- The campus itself is dominated by a cluster of academic buildings that make up its central core, arranged loosely along an east/west spine, and contained within a roadway loop (John James Audubon Parkway, Millersport Highway, and North Forest Road).
- Interstates 990 and 290 converge just west of campus and intersect with two major traffic arteries: Niagara Falls Boulevard and Sheridan Drive. Located between these roadways is one of Buffalo's regional shopping centers, Boulevard Mall.
- Bisecting the mall site is another east/west traffic artery, Maple Road, which skirts by the southern gateway to campus and continues through the Audubon Golf Course to the Transit Road commercial corridor.

1.1 DISTRICT IDENTITY SCORE: 1

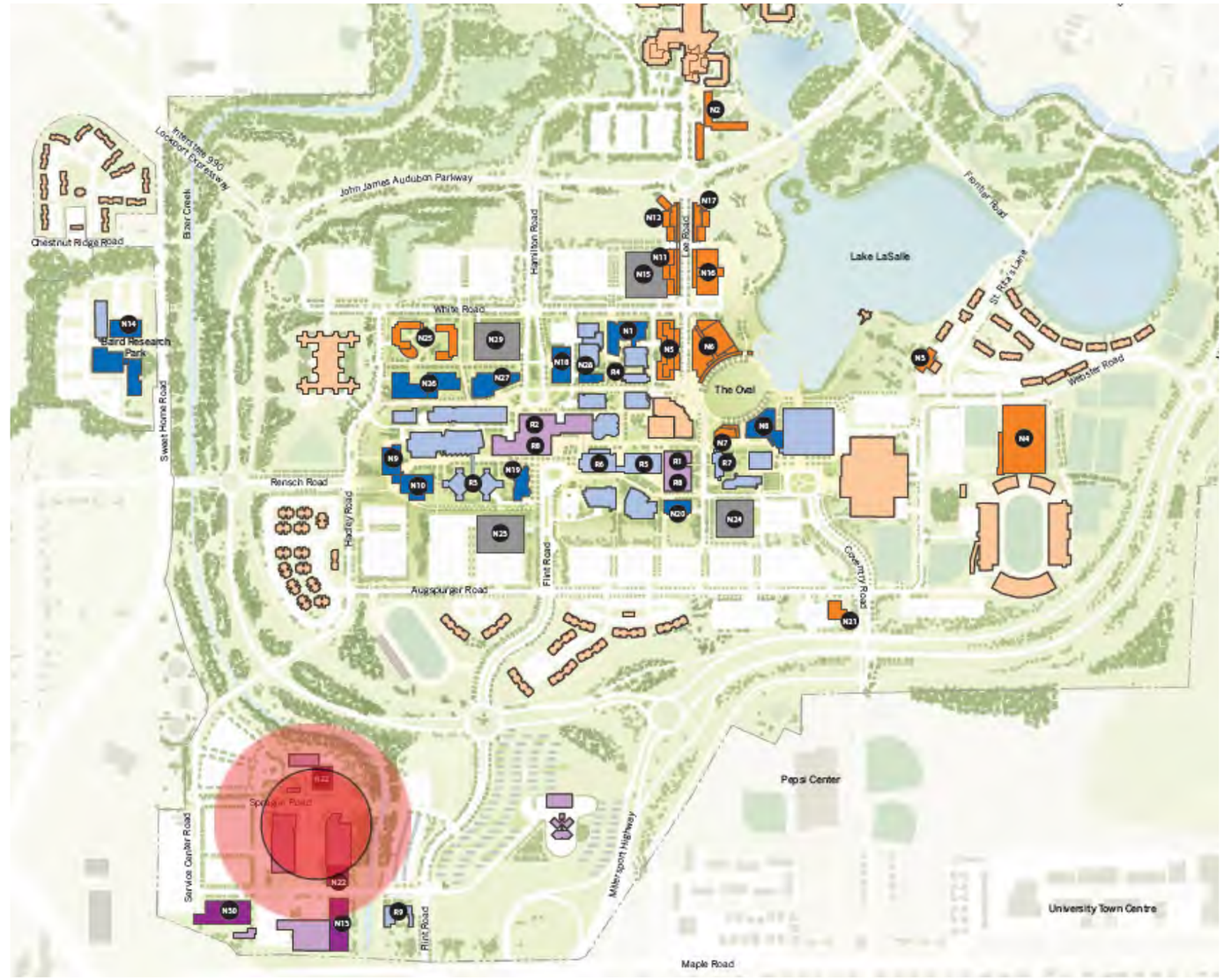
1.2 FUTURE LAND USE:

The site considered at the university is a parcel covering approximately 55 acres, located outside the loop road, in the southwest corner of the campus property, with frontage onto Maple Road and good visibility from I-290.

- By locating a stadium in the portion of the campus, it would have enough separation from the cluster of campus buildings so that it could establish a bold identity that would not compete with the campus architecture.

- Having an address at the confluence of Audubon Parkway, Millersport Highway, and Maple Road would afford possible synergies with existing and future commercial uses along these corridors.

- While technically on SUNY UB property, this site currently serves more of a service function for university uses; a stadium on this site would have limited synergy with the energy found in the main part of campus.



1.2 FUTURE LAND USE SCORE: 1

1.3 SITE CHARACTERISTICS:

The property has a several low-scale service-oriented buildings on the site, is relatively flat, and offers views of the campus buildings to the north – the attractiveness of their architecture, however, is less than desirable.

- While portions of the 1,200-acre campus are pleasant, including areas around Lake La Salle, this particular parcel lacks any distinctive character.
- Although the site does enjoy visibility from nearby highways and traffic arteries, it also suffers visual impediments of high power tension lines and support structures between I-290 and the property.
- Bizer Creek is a small stream that runs along the north and eastern border of the site, which could present an opportunity to enhance it as a pedestrian amenity and/or landscape foreground buffer for the stadium from Audubon Parkway.

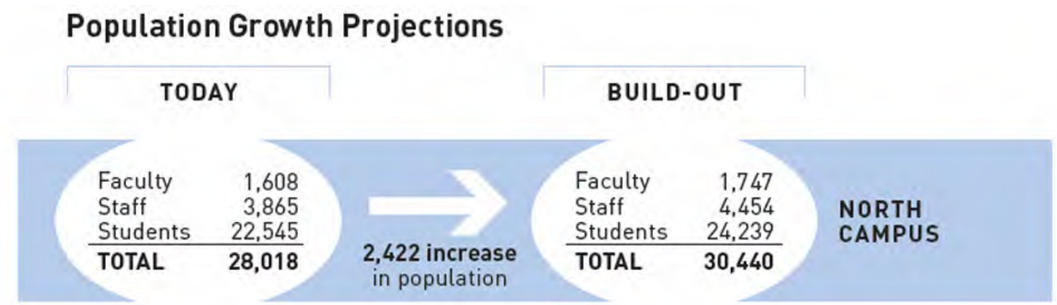
1.3 SITE CHARACTERISTICS SCORE: 1

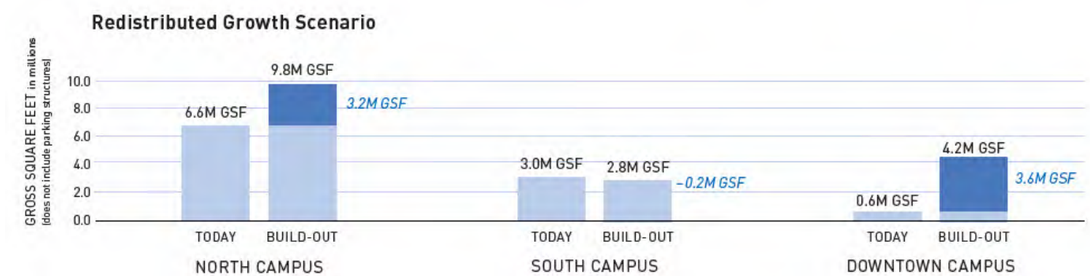
1.4 MARKET TRENDS:

A new stadium at South Park function in largely an isolated context, removed from university development plans and limited potential to integrate with any mixed-use development along Maple Road or any other nearby commercial corridors.

- Based upon the university's Facilities Master Plan, the UB campus is projected to experience modest student growth, supported by a conservative capital improvement plan which focuses on improvements in the central core of campus.

- Future commercial growth in the Amherst area is questionable, indicative of the recent announcement of the nearby Boulevard Mall expected to be put up for auction this spring, following the loss of major anchor tenants and in appraised value.





1.4 MARKET TRENDS SCORE: 2

2.1 EXISTING ROAD NETWORK:

The South Park site is comprised of two basic vehicular transportation systems: the interstate highway network, including I-290 and I-990 to the west; and the local suburban street system that surrounds the site.

- As noted in the accompanying transportation report, this site is served by interstates and local arteries, which fits the commuter pattern of the UB campus since its inception in 1964.

- The Building UB: The Comprehensive Physical Plan proposes improvements that would facilitate improved access and internal traffic flow around the campus, but nothing that would specifically improve this particular parcel.

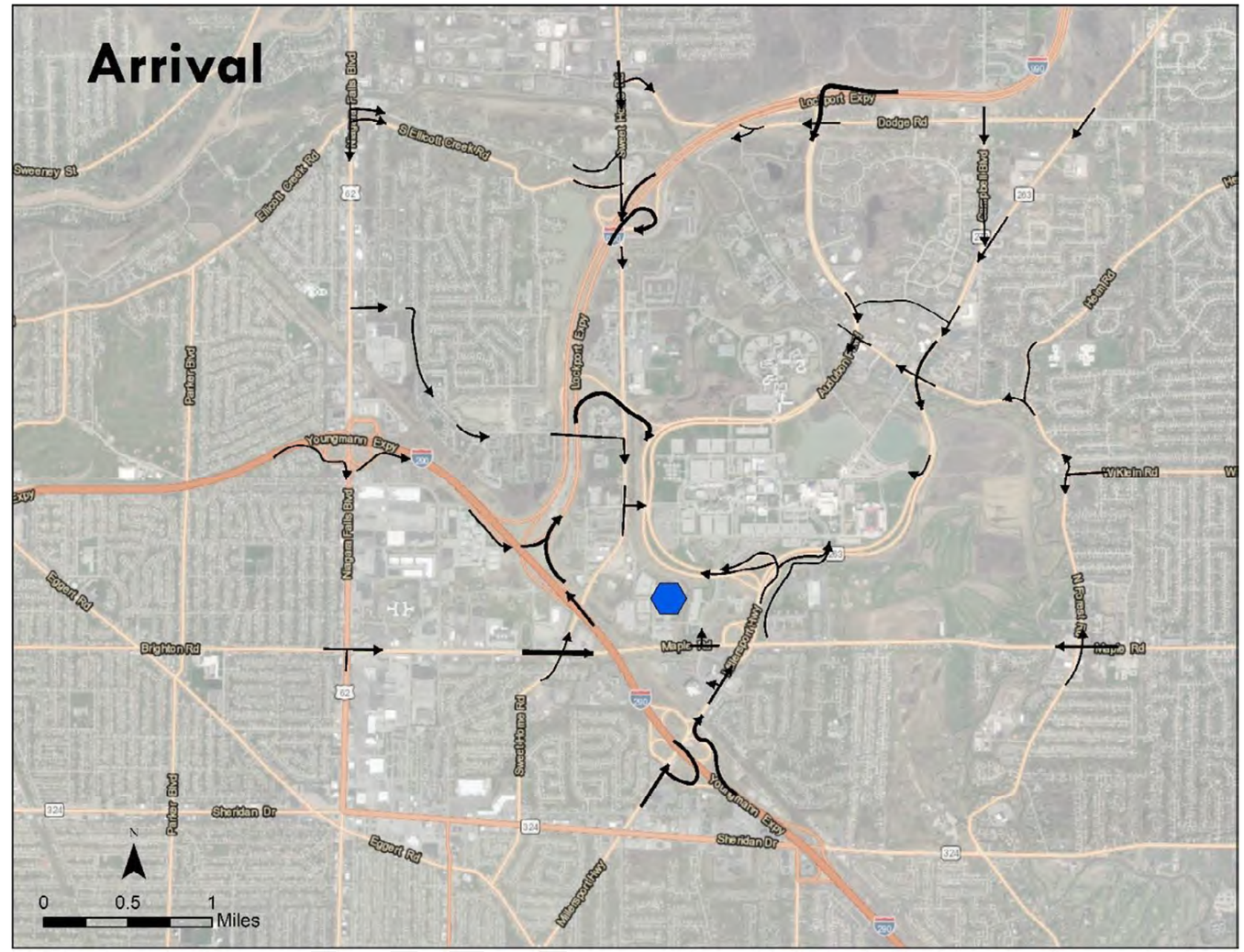
- The nature of Amherst's suburban road rights-of-way create significant setbacks, which would tend to further isolate a future stadium from any meaningful connection surrounding buildings or landscapes.

2.1 EXISTING ROAD NETWORK SCORE: 1

ROAD NETWORK: ARRIVALS ANALYSIS

- Approximately 70% of trips would arrive via I-290 northbound.
- The location has generally good traffic accessibility as the campus was built for commuter traffic.
- Free flow traffic exits from I-290 ramps onto Millersport Highway (SR263) and from I-990 ramp at North Campus exits.
- Traffic controls exists at Sweet Home Road and John James Audubon Parkway ramps from I-990.
- The Building UB: The Comprehensive Physical Plan proposes improvements that would facilitate improved access and internal traffic flow.
- Potential for greater use of local streets – may require police closure or control of local access.

Traffic Arrival Patterns for North Site



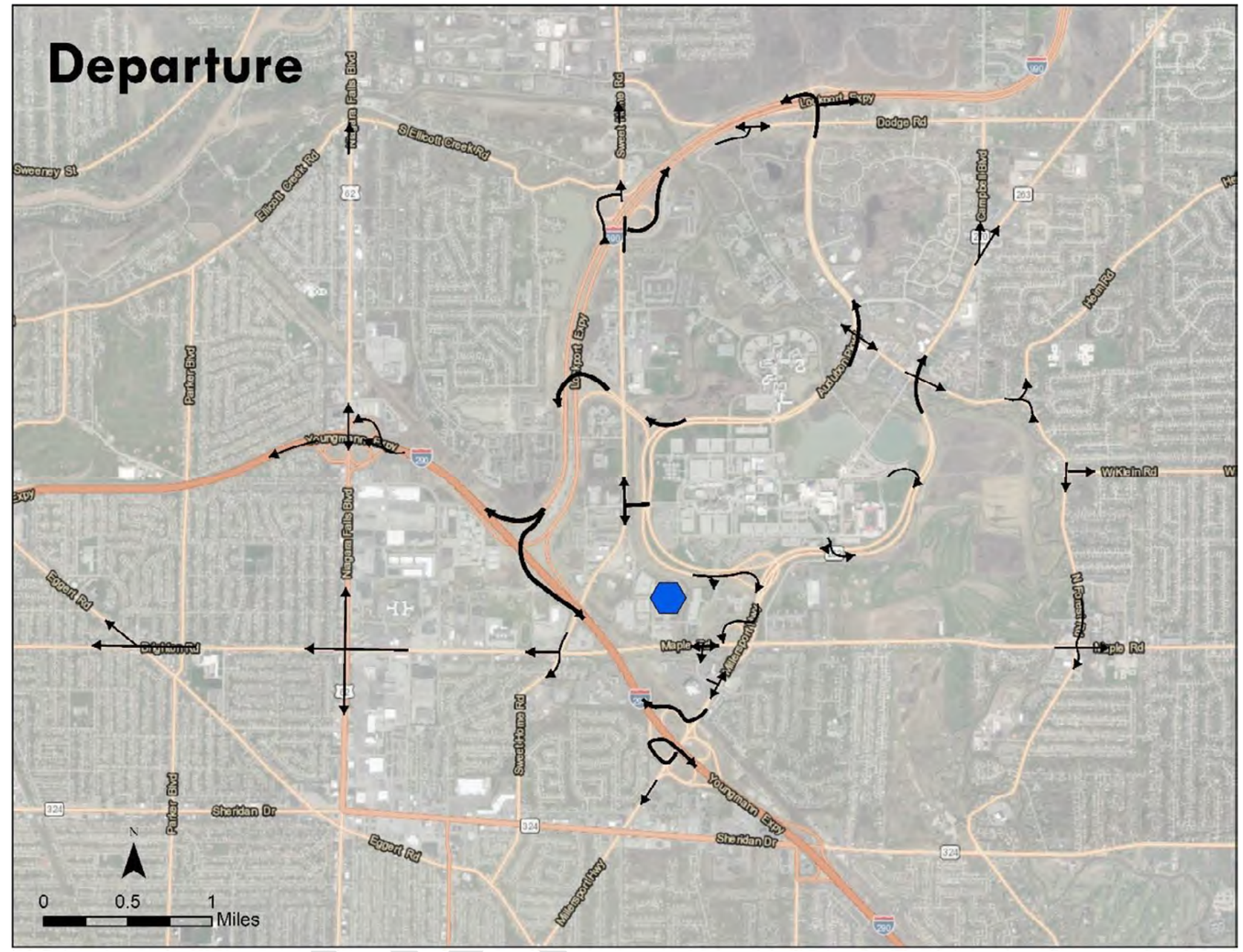
SOURCE: WSP

2.1 EXISTING ROAD NETWORK SCORE: 1

ROAD NETWORK: DEPARTURES ANALYSIS

- Approximately 70% of trips would arrive via I-290 northbound.
- The location has generally good traffic accessibility as the campus was built for commuter traffic.
- Free flow traffic exits from I-290 ramps onto Millersport Highway (SR263) and from I-990 ramp at North Campus exits.
- Traffic controls exists at Sweet Home Road and John James Audubon Parkway ramps from I-990.
- The Building UB: The Comprehensive Physical Plan proposes improvements that would facilitate improved access and internal traffic flow.
- Potential for greater use of local streets – may require police closure or control of local access.

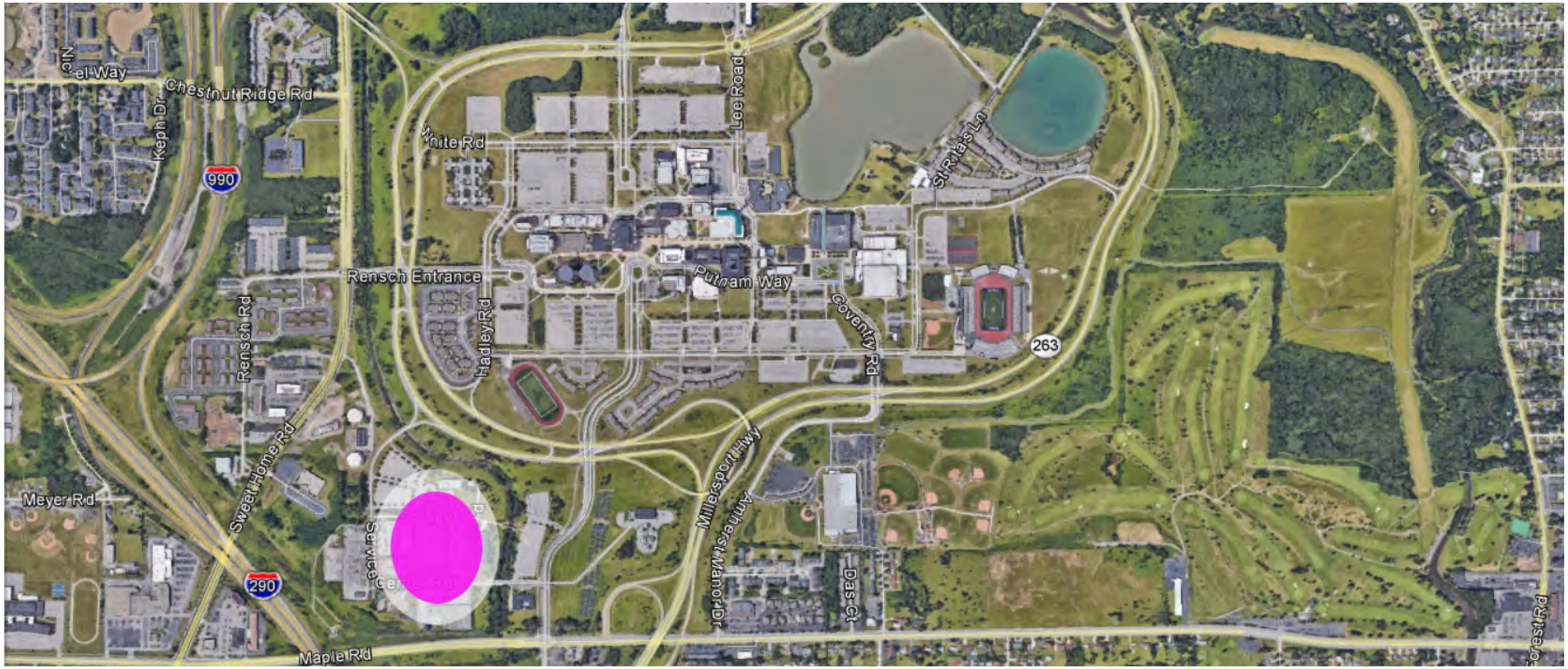
Traffic Departure Patterns for North Site



SOURCE: WSP

2.1 EXISTING ROAD NETWORK SCORE: 1

SUNY U.B. SITE // 2. TRANSPORTATION



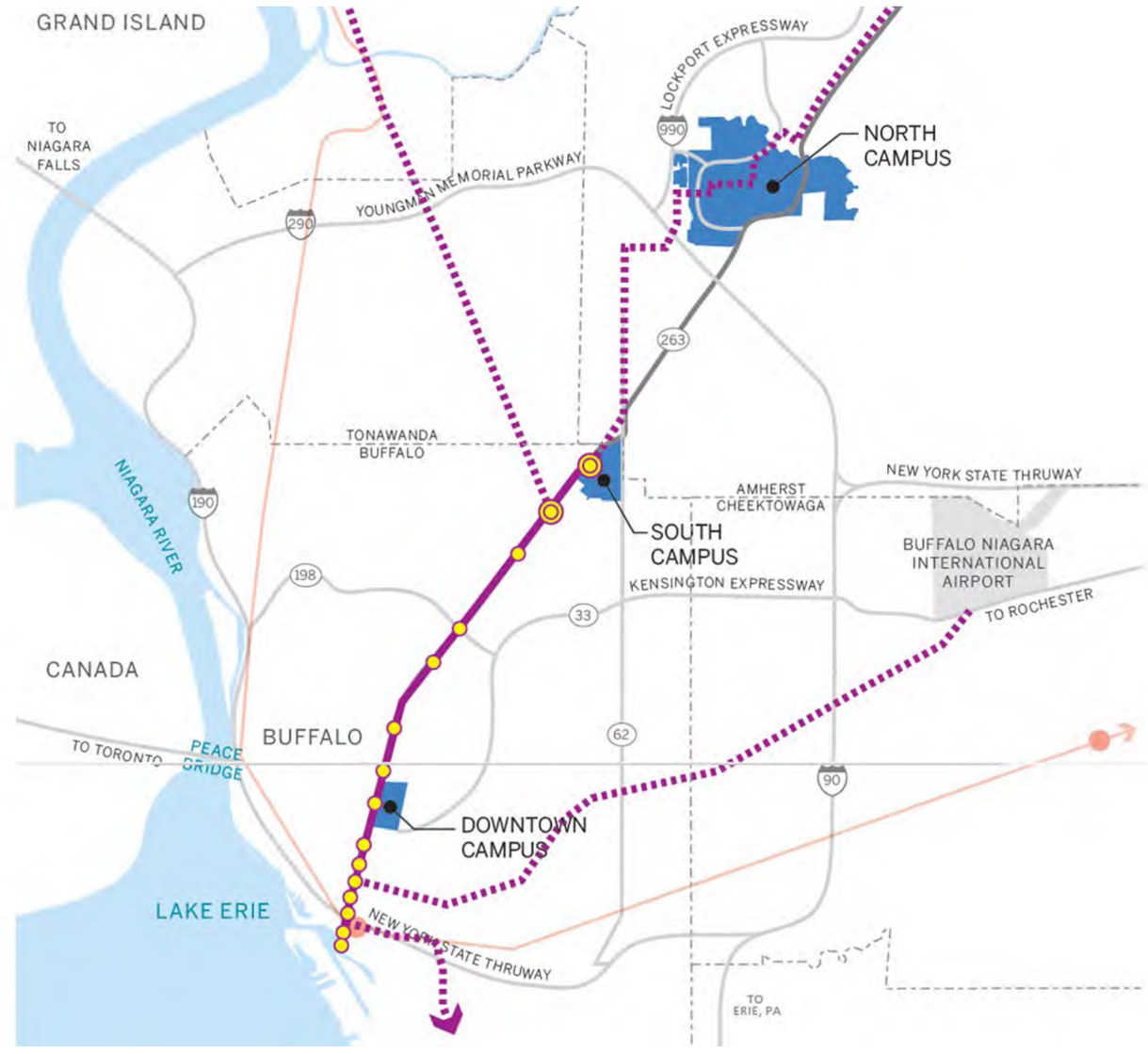
2.2 TRANSIT SYSTEM:

One of the primary reasons that this site was included as a potential candidate was because of the proposed extension of expansion of the Metro Rail to provide a one-seat ride from a new DL&W Station at Canalside/Key Bank Center through the UB North Campus.

- Current Metro Bus ridership is dominated by UB students, faculty, and staff, with the highest boarding/ alighting locations within or adjacent to the campus during both the weekday and on Sunday, which may represent a potential conflict with NFL game scheduling.

- NFTA is moving forward with plans to extend Metro Rail to UB North Campus and is currently undertaking the necessary environmental reviews and preliminary engineering. Further commentary on this issue is included in the attached transportation/parking report.

- Because the Metro Rail station is tentatively planned to be located along the campus spine, it will be separated from the stadium site by Audubon Parkway, possibly by ½mile walking distance.



2.2 TRANSIT SYSTEM SCORE: 2

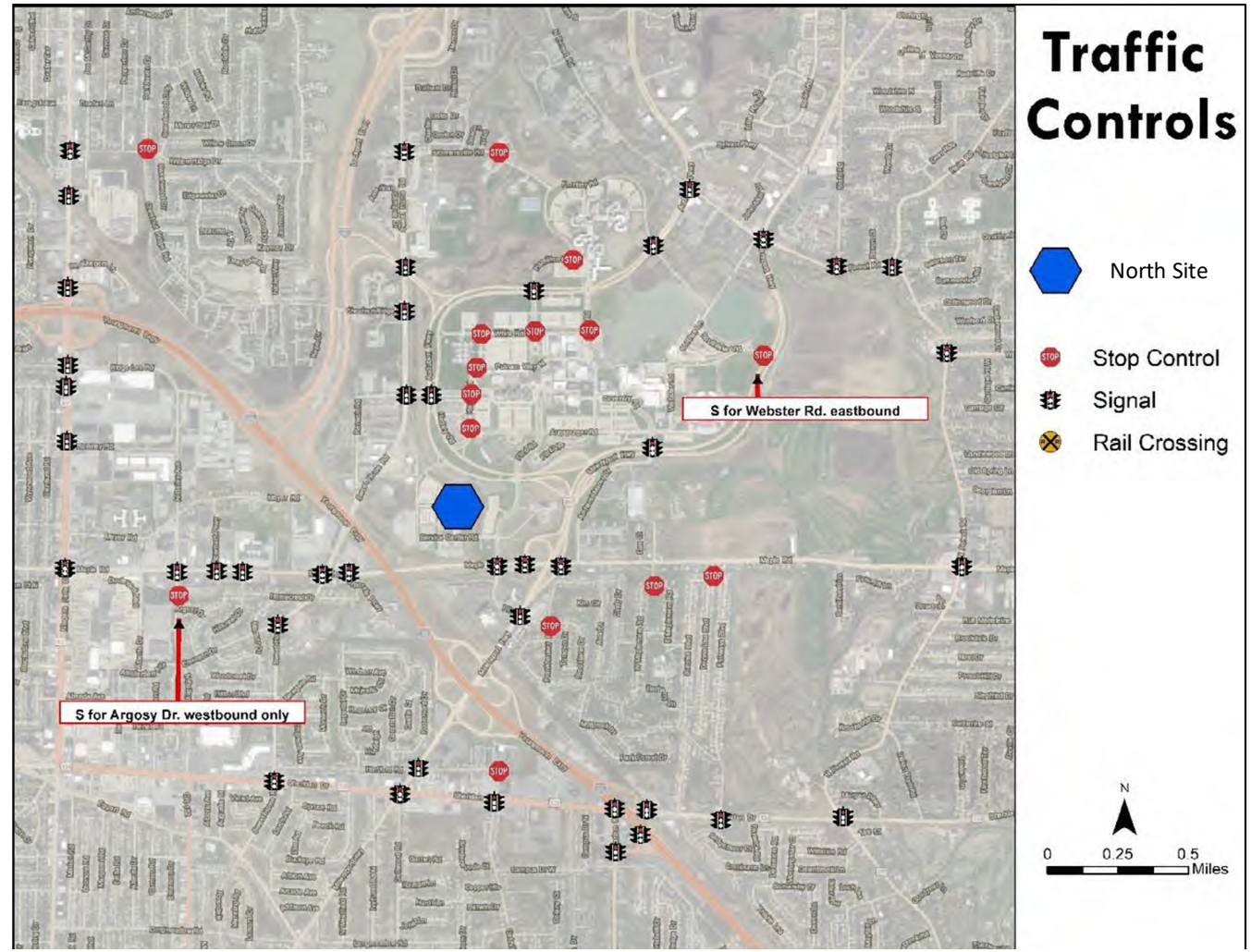
2.2 TRANSIT SYSTEM:

- NFTA is moving forward with plans to extend Metro Rail to UB North Campus and is currently undertaking the necessary environmental reviews and preliminary engineering.

- Expanded Metro Rail service would open up opportunities for park-and-ride to North site (University, LaSalle, downtown, and potential park-and-rides at Boulevard Mall and Dodge Road).

- The North site would be located along service track with no plans for tail track, meaning tail track would need to be constructed near the site to accommodate staging of Metro Rail trains on game days, otherwise patrons would have to wait at station platforms for regular service.

Traffic Controls in the Vicinity of the North Site



SOURCE: WSP and NFTA

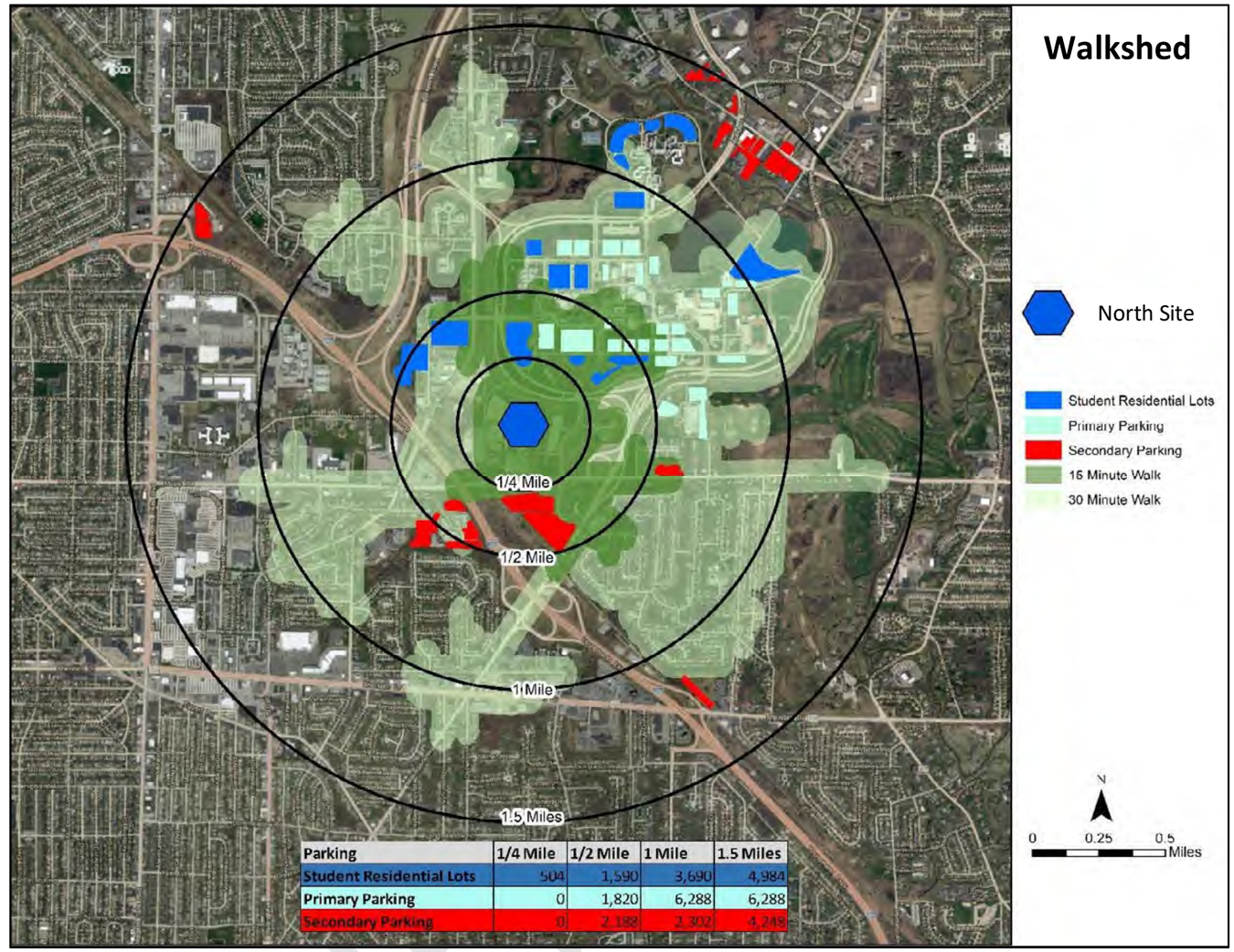
2.2 TRANSIT SYSTEM SCORE: 2

2.3 WALKABILITY: WALKSHED ASSESSMENT:

There is a limited amount of Owner Controlled and Primary Parking available within the 15-minute walkshed of the SUNY/UB site. This is limited to the surface lots on the west side of the campus, but further discussions are needed to determine possibility of use on game days. Most of the parking for this site would come from throughout the 30-minute walkshed, which extends throughout campus.

- The walkshed is constrained by the John James Audubon Parkway, Flint Entrance Road, Maple Road, and Sweet Home Road.
- Providing pedestrian access across John James Audubon Parkway during events will depend on street-level traffic management at the signalized intersection, unless a pedestrian bridge is constructed over this traffic artery.

Walkshed Assessment of North Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Student Residential Lots	504	1,590	3,690	4,984
Primary Parking	0	1,820	6,288	6,288
Secondary Parking	0	2,192	2,302	4,248

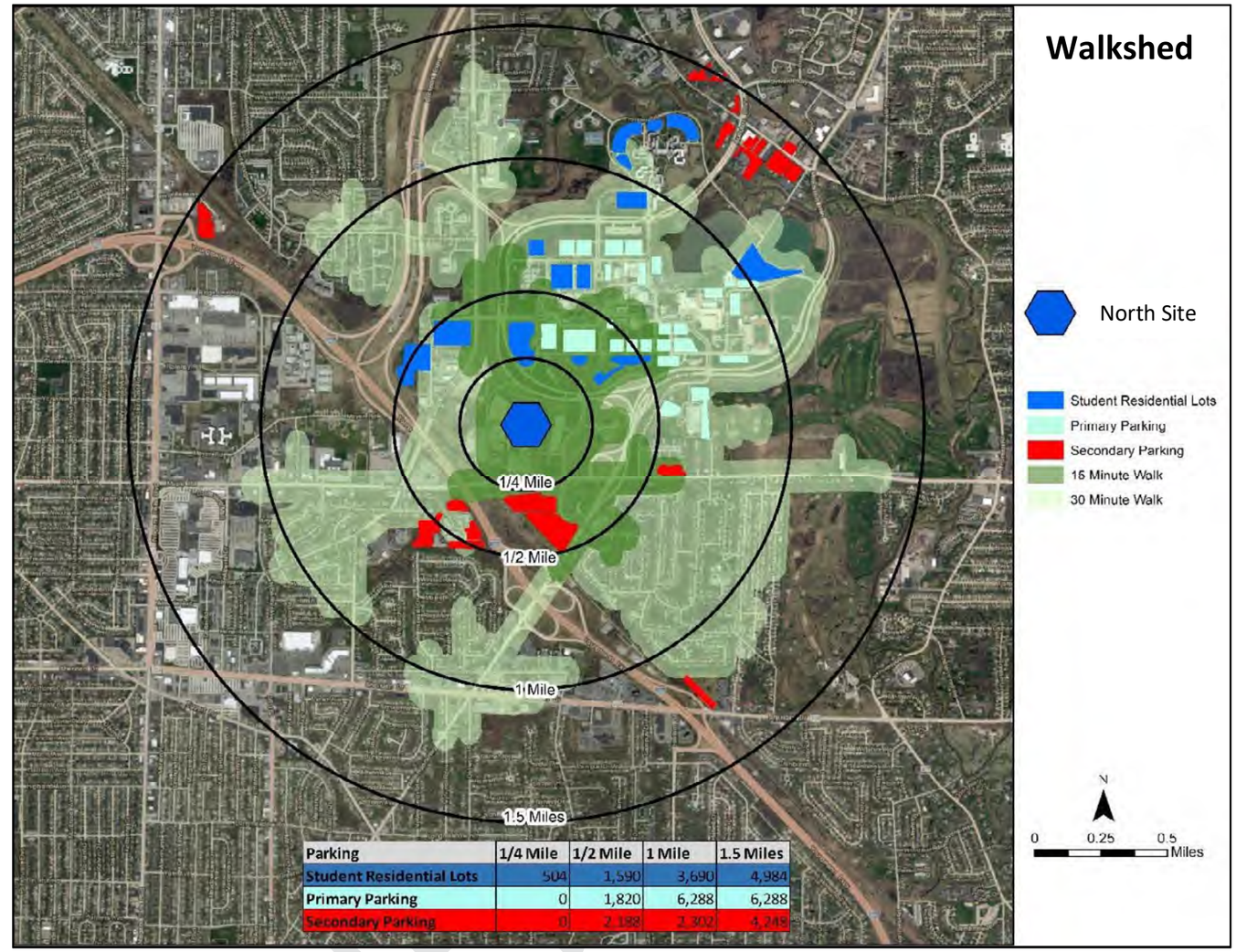
2.3 WALKABILITY SCORE: 2

2.3 WALKABILITY: WALKSHED CONDITION:

Because this has not historically been an active commercial or residential area of campus, sidewalk conditions are minimal and in poor condition. In some cases, along John James Audubon Parkway, for example, they are non-existent.

- Once pedestrians would reach the main part of campus, sidewalk conditions are very good. However, substantial changes would be expected to take place in conjunction with pedestrian circulation around the future Metro station location.

Walkshed Assessment of North Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Student Residential Lots	504	1,590	3,690	4,984
Primary Parking	0	1,820	6,288	6,288
Secondary Parking	0	2,188	2,302	4,248

2.3 WALKABILITY SCORE: 2

2.4 RIDE SHARING:

Similar to other NFL stadiums, Uber, Lyft, and other ride-sharing programs have become more prevalent, with expectations to expand in future years. The UB Facilities Master Plan includes plans within their Transportation Demand Matrix for "developing UB rideshare networking tools" as one of many multi-modal strategies.

- Because of UB's commuter campus history and suburban location, transit and ride sharing may have been slow to catch up, but improvements are on the way.
- One challenge to factor in with this potential stadium site is to incorporate safe, convenient walking paths between the stadium and ride-share lots. This site may present some problems in that regard, given the wide roads and setbacks.

TRANSPORTATION DEMAND MANAGEMENT (TDM) MATRIX

Note: The estimated percent reduction in traffic generation and parking demand assumes each TDM measure is implemented solely by itself and does not reflect the aggregate of multiple TDM measures.

Strategy	Reduction in Traffic Generation and Parking Demand	Capital Cost to UB	Operating Cost to UB	Implementation Timeframe	Implementation Issues	Implementation Responsibility
Moderate Measures						
Enhance on-campus bike facilities	3%	Medium	Low	Short-Term	—	P&T
Support a car sharing program on campus	2%	Low	Low	Medium-Term	—	UB
Guarantee a ride home in case of emergency or late hours for employees who use alternative modes	N/A (1)	Low/None	Low	Medium-Term	—	P&T
Expand NFTA Metro Bus service to UB campuses	5%-10%	None	None	Medium to Long-Term	NFTA budget	NFTA
Reserve preferential parking for carpools and vanpools	3%	Low	Low	Short-Term	Partner with third party to provide vans and organize vanpools and carpools	P&T
Restrict resident student parking on campus to residential lots	5% (2)	None	None	Short-Term	—	P&T
Develop UB rideshare networking tools	3%	Low/None	Low	Short-Term	—	P&T
Improve commuter bike routes	2%	Medium	Low	Short to Long-Term	Coordinate with City of Buffalo, Town of Amherst	P&T
Create UB park-and-ride lots for carpools and vanpools	5%	Medium/Low	Low	Medium-Term	Negotiate with property owners for use of property	P&T
Expand telecommuting and flexible work schedules	3% (3)	None	Low	Short-Term	—	DHR
Aggressive Measures						
Lend free bikes to students who do not apply for parking permits	3%-5% (2)	Medium/Low	Low/Medium	Short-Term	Partner with third party to donate or purchase and maintain bikes	P&T
Distribute limited free parking passes to employees who use alternative modes	N/A (1)	None	Low	Medium-Term	—	P&T
Provide monetary incentives to employees to use alternate modes	10%-15% (4)	Initial cost recouped over time with savings in parking facilities	Medium	Medium-Term	Negotiate contractual parking obligations with unions; obtain SUNY approval	DHR/SUNY
Unbundle student parking fees from general student transportation fees	10%-15% (2)	Lost revenues offset by increased parking fees	Medium	Short-Term	—	P&T
Price parking by proximity to the academic core	5% (2)	None	Low	Medium-Term	Dependent on monetary incentives for faculty and staff and unbundled student fees	P&T

2.4 RIDE SHARING SCORE: 1

2.5 LONG-TERM TRANSPORTATION PLAN:

The main long-term transportation issue relative to the U.B. site is the timing of the Metro Rail extension.

- The extension of Metro Rail service to the U.B. campus will represent an important feature for connecting the campus and surrounding communities to downtown, and may initiate spin-off Transit-Oriented-Development (TOD) investment around the campus and nearby stations.

- Additional campus roadway improvements will also contribute to improve traffic movements, but will likely need to be reviewed again, since these do not account for the levels of an NFL event co-located with campus activities.

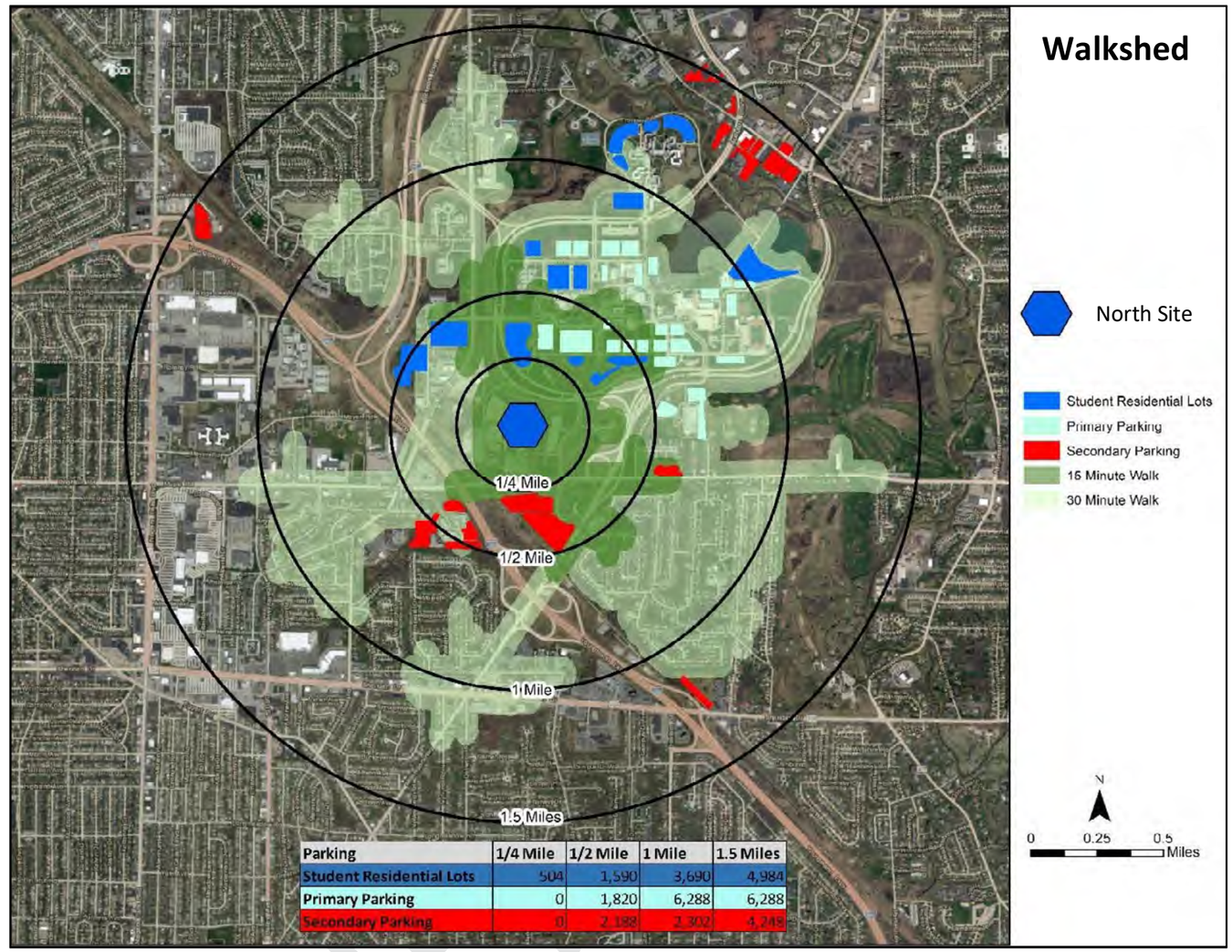
2.5 LONG-TERM TRANSPORTATION PLAN SCORE: 1

3.1 PARKING DEMAND/PATTERNS:

While the U.B. campus appears to have a lot of vacant space and available parking lots, the actual utilization and availability of potential parking is another issue.

- Because U.B. has been changing over the years from a commuter campus to one that includes more on-campus housing, many of the parking spaces are reserved for student residential permits, making them unavailable for stadium events.
- The university does control several spaces that could possibly be utilized for events, but this would require negotiations with U.B. to determine the exact number and conditions for temporary parking utilization.
- Beyond U.B.-controlled parking spaces, there are limited publically available parking and potential shared parking resources in the immediate vicinity.

Walkshed Assessment of North Site



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Primary Parking	0	1,820	6,288	6,288
Secondary Parking	0	2,188	2,302	4,249

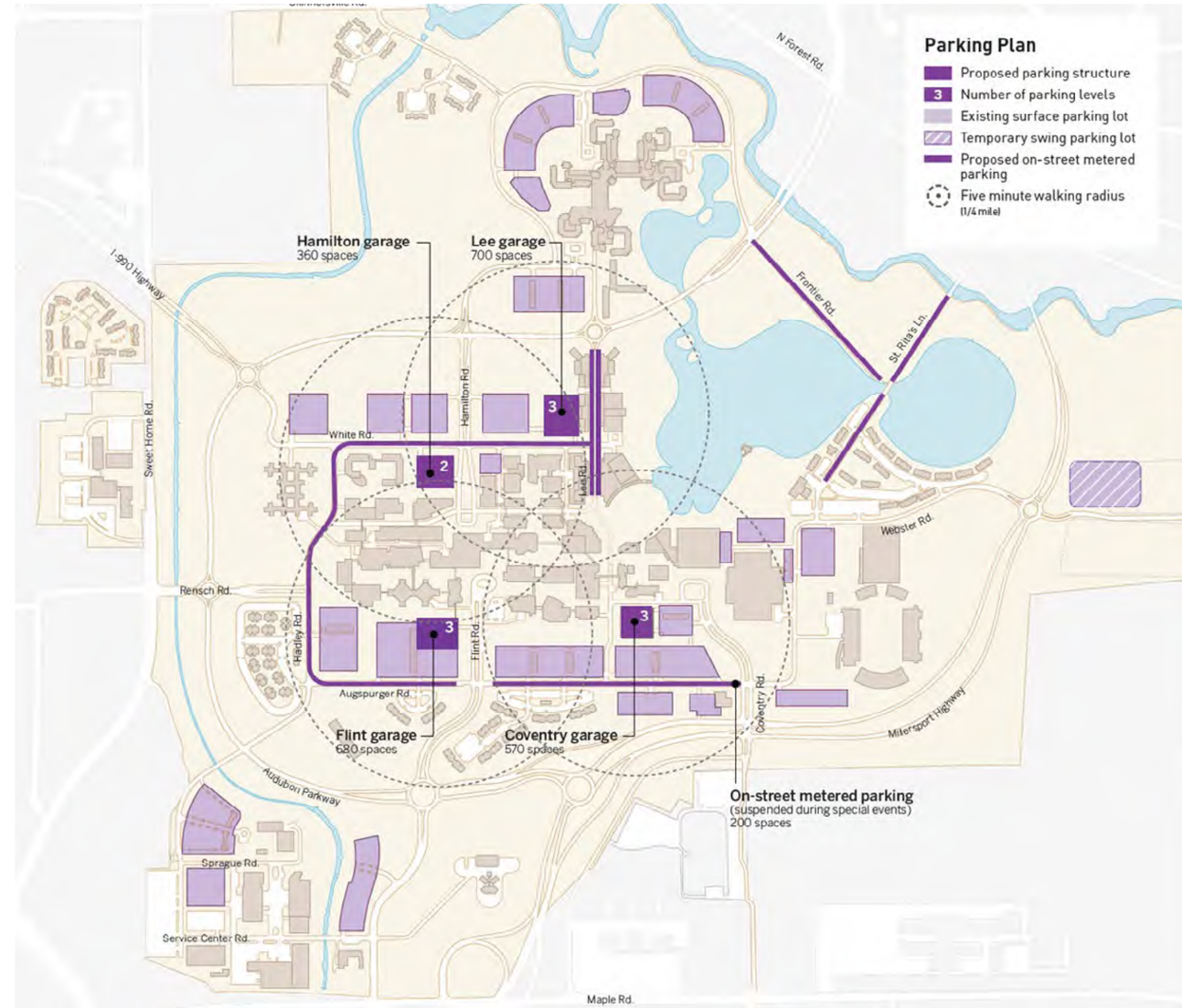
3.1 PARKING DEMAND/PATTERNS SCORE: 1

3.2 ON-SITE PARKING:

Within the immediate 55-acre site, team-related parking needs will be accommodated; a combination of surface and structured parking solutions would provide VIP, service, and a limited amount of additional parking spaces.

- The existing site currently has several parking lots, some of which would be displaced by a new stadium and related functions. However, the three-bay parking lot (Center for Tomorrow lot) located to the west of the Flint Entrance Road represents a valuable resource to service stadium needs.

- The university's master plan identifies potential future parking garages within the campus, including the site in question. Like other U.B.-controlled parking resources, any future parking lot or structure would also require negotiations of use agreements.



3.2 ON-SITE PARKING SCORE: 1

3.3 OFF-SITE PARKING:

As noted in 3.1, the campus has several parking lots and structures, but it the extent of shared utilization is uncertain. Likewise, shared and public parking resources in non-U.B. areas near the site are limited.

- Based upon an assumption of 15% Metro Rail riders and 15% bus/coach riders, and 70% passenger vehicle riders, a parking demand of 13,719 spaces is generated.

- A preliminary analysis indicates that approximately 4,000 spaces are located within ½mile from the stadium and 8,600 spaces are located within 1 mile of the stadium. As further discussed in the attached transportation/parking report, the ultimate parking shortage may depend on use arrangement agreements with the university.

- Another potential parking resource may also be explored with the utility right-of-ways located west and south of the site. This land includes natural landscapes and streams, as well as some topographical features, so may be limited for potential temporary parking uses.

3.3 OFF-SITE PARKING SCORE: 1

3.4 TAILGATING:

Like at Bills games, tailgating is a favorite pastime for U.B. Bulls fans. Depending ultimate parking arrangements, tailgating may be spread across campus, but a merging of NFL and university traditions could result in interesting entertainment programming, spaces, and experiences.

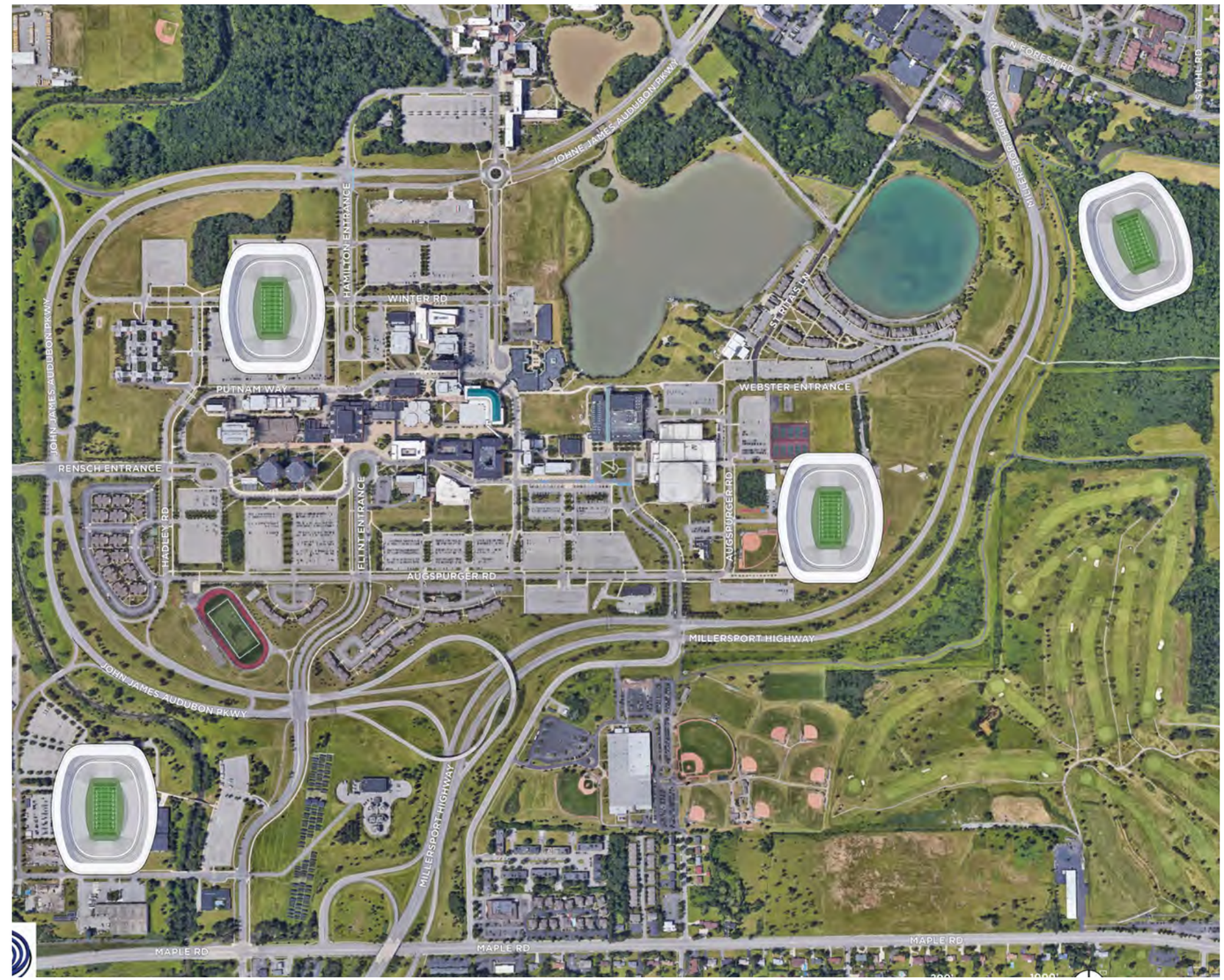
- U.B. football games have also supported a "Tailgate Concert Series" that includes temporary stages and pop-up food venues to produce a fun, active pre-game environment. This could be explored further for creative ways to expand and build upon this practice, to serve NFL patrons.
- Where surface parking lots exist, traditional tailgating may be staged. Where structured parking garages are utilized, tailgating would likely be limited to rooftops or open-air terraces.
- Local parks and open spaces, such as the recreation areas at Northtown Center may also host tailgating, but should be controlled in order to ensure proper maintenance and operations before, during, and after events.

3.3 TAILGATING SCORE: 1

4.1 STADIUM LOCATION OPTIONS:

Because of the expansive campus property, several stadium location options were explored, but only one was deemed potentially feasible.

- While there "appears" to be available land within the campus property, east of Millersport Highway, this also has sensitive environmental issues that would preclude this option.
- A second option was to replace the existing U.B. stadium with a new Bills stadium, but the new fieldhouse building, existing campus buildings and eastern property line severely constricts the site, which was then determined to be undesirable.
- A third option was to locate a stadium on surface parking lots in the northwest quadrant of campus, but its proximity to residential dorms and encroachment on permitted parking presented difficulties.
- With the second and third options, the location of a new stadium "within the loop" of Audubon/ Millersport was also problematic, creating a conflict between what is Bills and what is Bulls … the fourth site option, outside the loop, avoided this issue by allowing the new stadium to establish its own identity and presence, sufficiently outside the "shadow of U.B."



4.1 STADIUM LOCATION OPTIONS SCORE: 1

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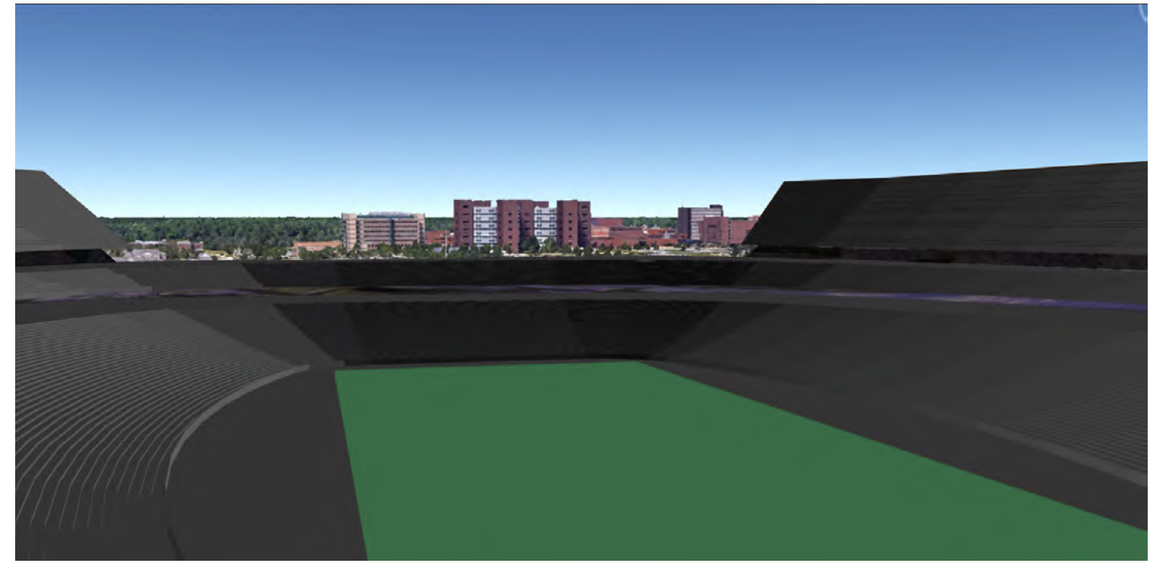


4.1 STADIUM LOCATION OPTIONS SCORE: 1

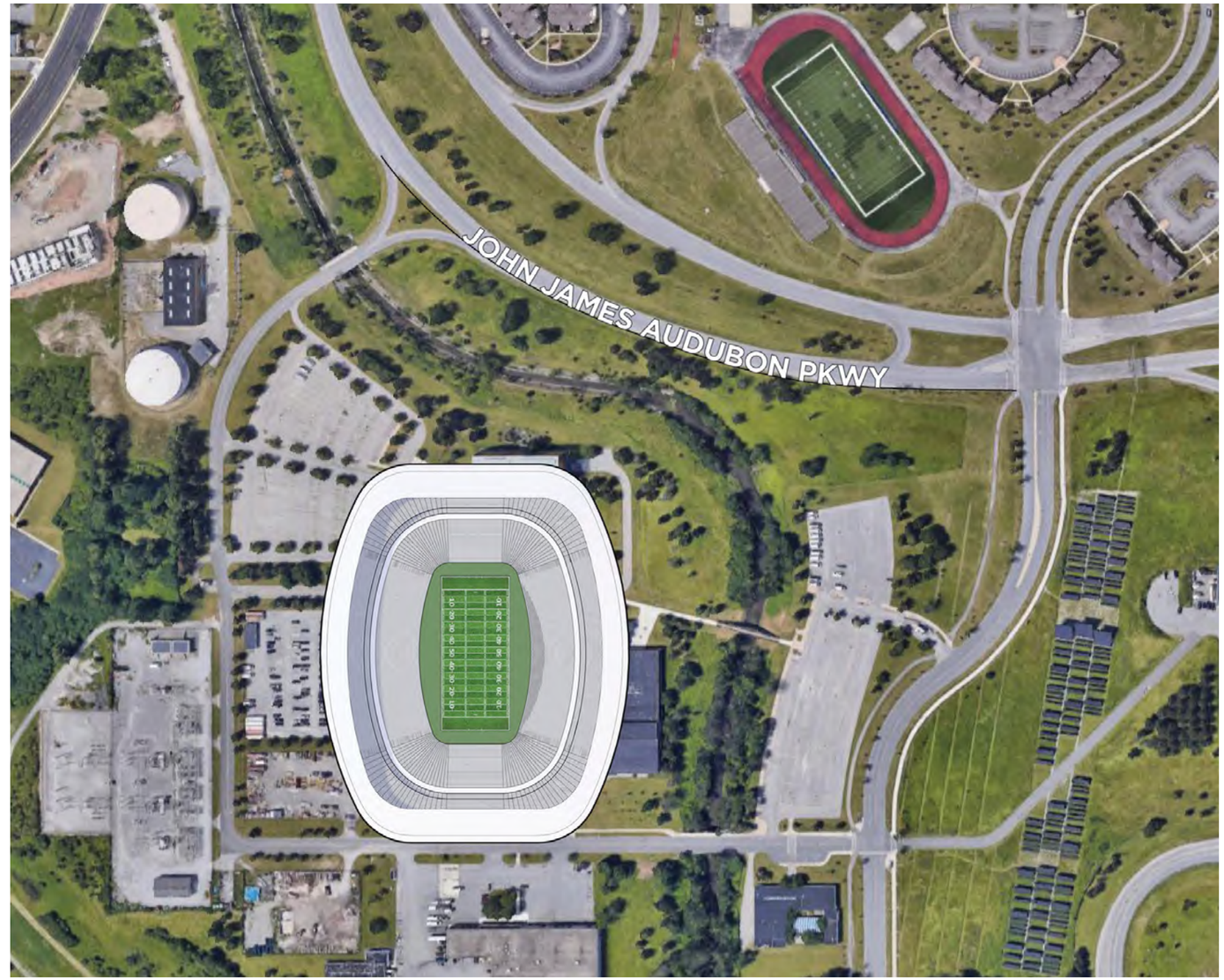
4.2 STADIUM CONFIGURATION:

The proposed stadium location has sufficient land area around the building to allow for flexibility with orientation and architectural articulation to respond to views, climate, and adjacent amenities.

- The scale of the new building will create an iconic presence along I-290/990, and is envisioned to include some type of articulation, such as an atrium, on the north side to orient toward campus and the future Metro station, but also to offer fans an option to escape cold temperatures and winds.

- With the main pedestrian link between the stadium and campus, the main front door and entry plaza is expected to be on the north side of the building with some type of pedestrian connection across Audubon Parkway.

- Secondary entries are expected to be located on the east and west sides of the building, possibly integrated with a water feature and landscape amenity; the south side is expected to handle service functions.



4.2 STADIUM CONFIGURATION SCORE: 1

4.3 SUPPLEMENTARY LAND USES:

The gross site acreage is approximately 55 acres, but with greenway and roadway setbacks, utility easements, and other restrictions, the potential for developing much else besides the stadium may be limited.

- Because parking will be a premium in this location, structured parking will most certainly be an element to try to integrate into this site strategy.
- The large suburban roads and setbacks are not conducive to creating urban spaces or building relationships between the stadium and ancillary development.

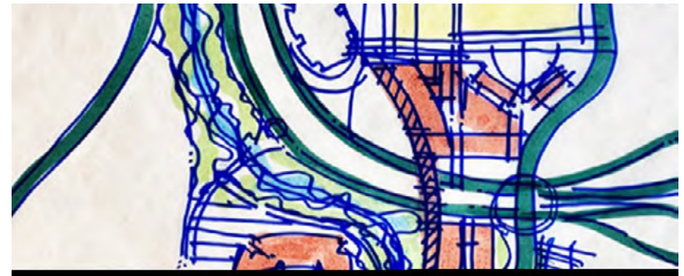
4.3 SUPPLEMENTARY LAND USES SCORE: 1

4.4 URBAN DESIGN POTENTIAL:

As noted in the comments of the previous section, there are not many inherent site influences that lead to options for creating compelling urban design relationships between the stadium and its surroundings on this site. But new spaces and structures designed in conjunction with a new stadium may "create" the interesting spaces and experiences, which may help to relate to the campus' evolving character.

- One possibility for creating an iconic architectural statement may lie in minimizing the built structures around the stadium, but the need for structured parking garages may conflict with that ambition.

- The positioning and relationship of multiple parking garages could also be explored as devices that work to "bridge" across the wide expanse of Audubon Parkway. This could be carried out simply in terms of how multiple buildings relate to one another to create space; it could also be explored as flanking buildings to the north and south of the road, connected by a physical pedestrian bridge above.

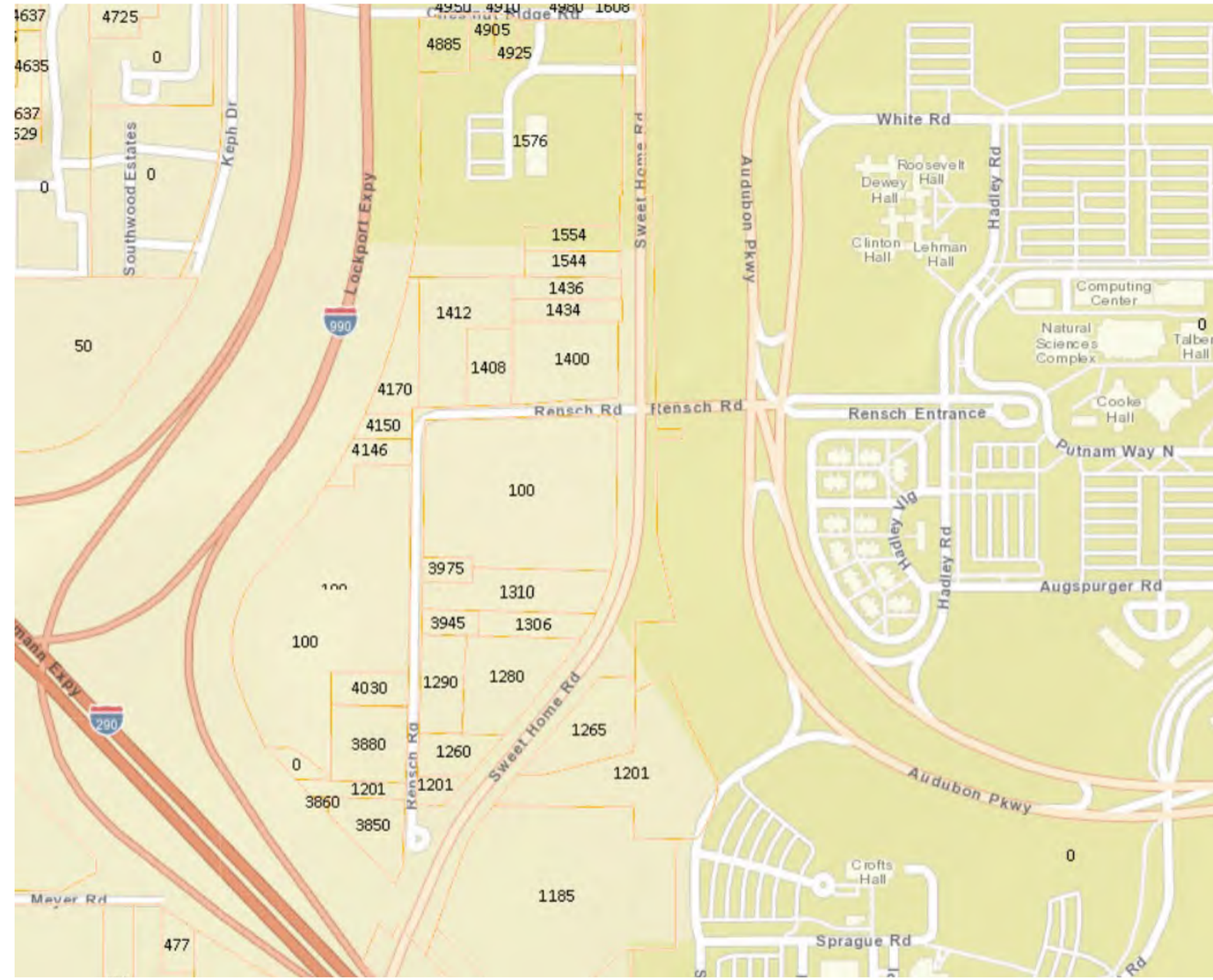


4.4 URBAN DESIGN POTENTIAL SCORE: 1

5.1 PROPERTY VALUES:

As noted in Section 1.4 (Market Trends), commercial development has flattened in this area, and the university itself projects only modest growth, suggesting that property values may be stagnant – this needs to be confirmed by local experts.

- Since the property is located on state-owned lands, property valuation may be more advantageous to PSE.
- On the other hand, the prospect of the Metro Rail extension will likely drive up prices once the project is confirmed, station locations are set, and timing is announced.



5.1 PROPERTY VALUES SCORE: 1

5.2 SITE IMPROVEMENT COSTS:

While this parcel of campus land is outside the core of academic and residential buildings, it still has existing buildings on site. More importantly, what lies below those buildings have an even greater impact on the viability of this site.

- As noted in the preliminary utility report, significant electrical, water, sewer, and fiber systems are present in this area, since the existing buildings – the Beane Center and the Statler Commissary – are important to campus services and operations, and would trigger steep costs and processes to modify.

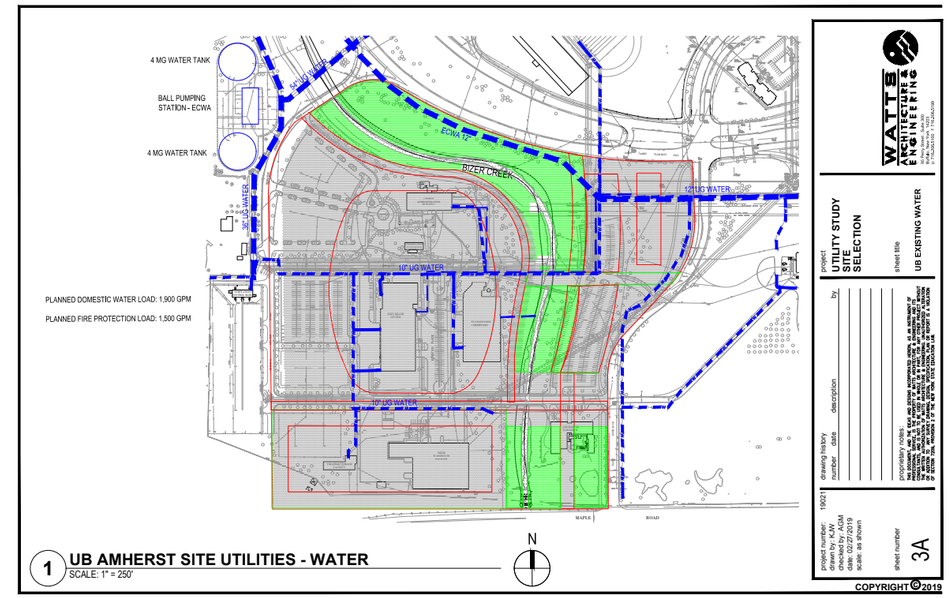
- As noted in Section 1.3 (Site Characteristics), Bizer Creek runs through the site on the north and eastern fringes. This could represent an attractive feature for fans and students, but also represents an item that could also trigger substantial costs and approval processes in order to transform it into a landscape feature.

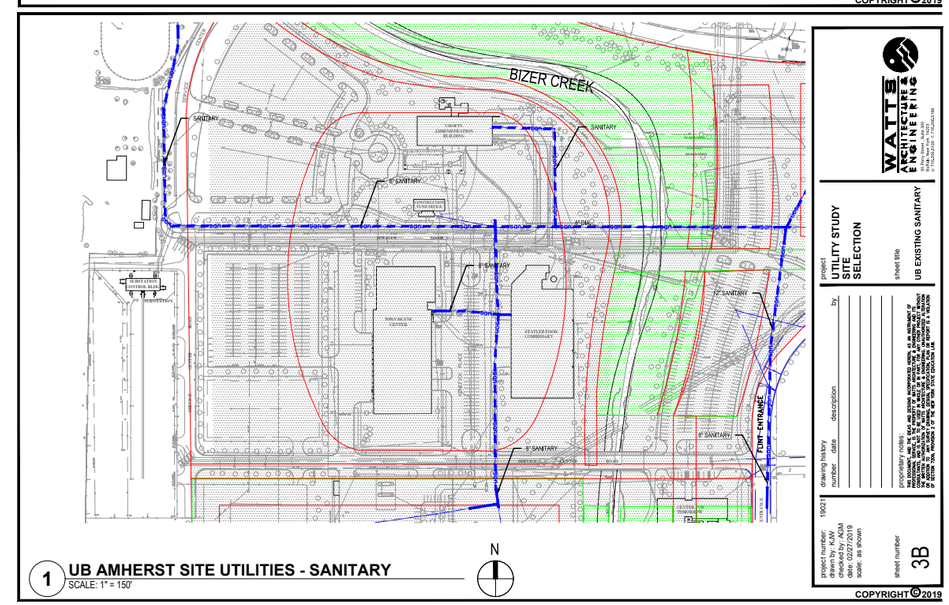
5.2 SITE IMPROVEMENT COSTS SCORE: 1

COSTS: UTILITY ASSESSMENT

No significant issues with available capacity were identified at the SUNY Buffalo site. However, there are also numerous existing utility facilities on the proposed site that need to be cleared, and in some cases, relocated to maintain service. The most notable example is the numerous electrical power feeds for the entire campus run from the existing campus substation across the site under stadium footprint. There are also other utilities serving the substation and the Erie County Water Authority Ball Pumping Station that would need to be relocated and restored. Although not insurmountable, these result in poorer scores for magnitude, difficulty and cost.

Another significant additional cost at the SUNY Buffalo site is the sanitary sewer flow offsets or mitigation fee required by the Town of Amherst according to Local Law Section 160-80 Article XVI. If the mitigation fee option is chosen, the fee is based on the projected peak wastewater discharge rate for the new stadium and would equate to a payment of $2.97 million to the Town.





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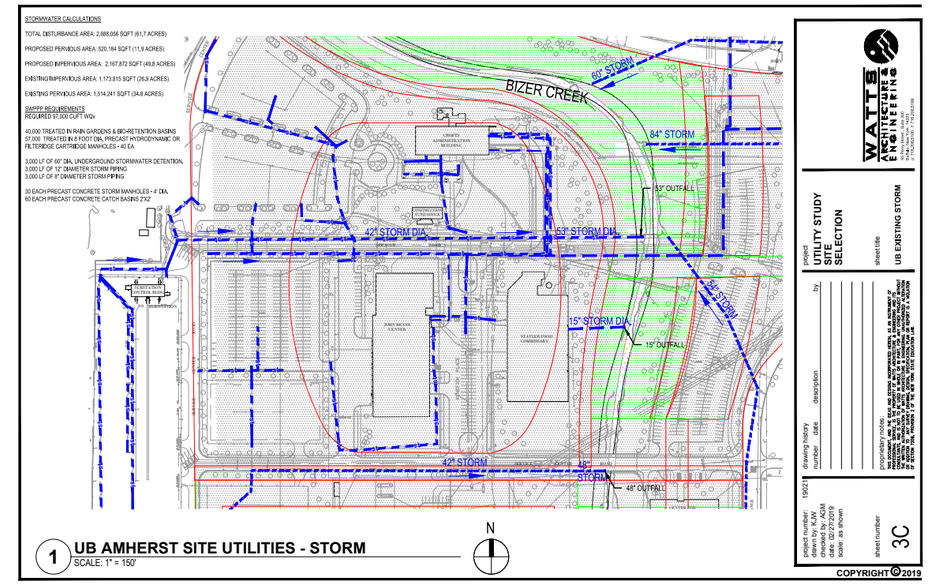

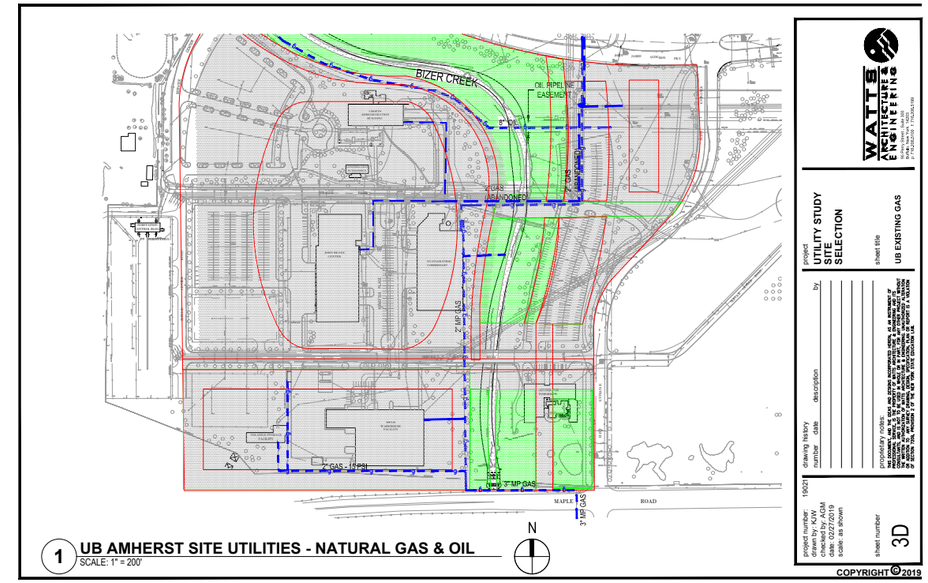

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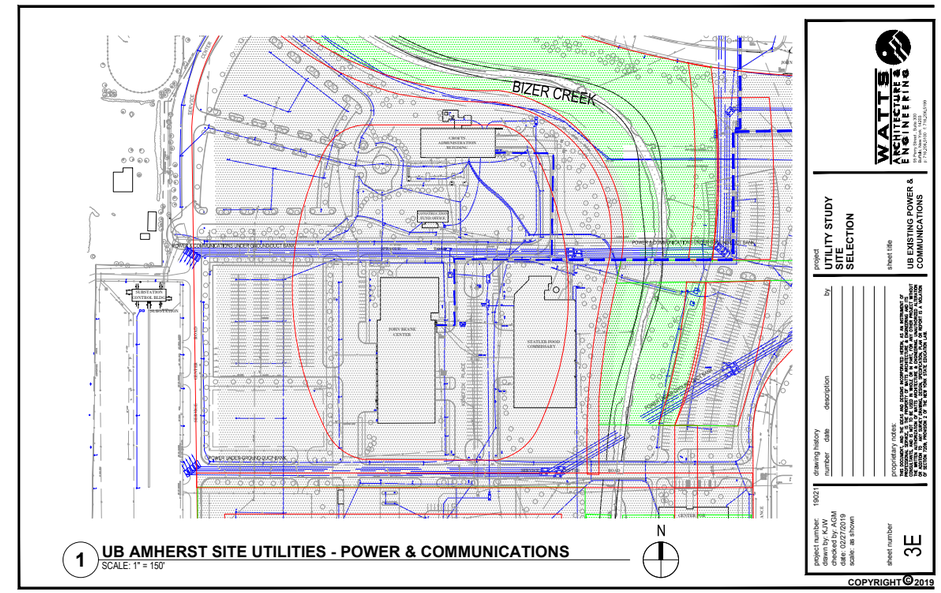
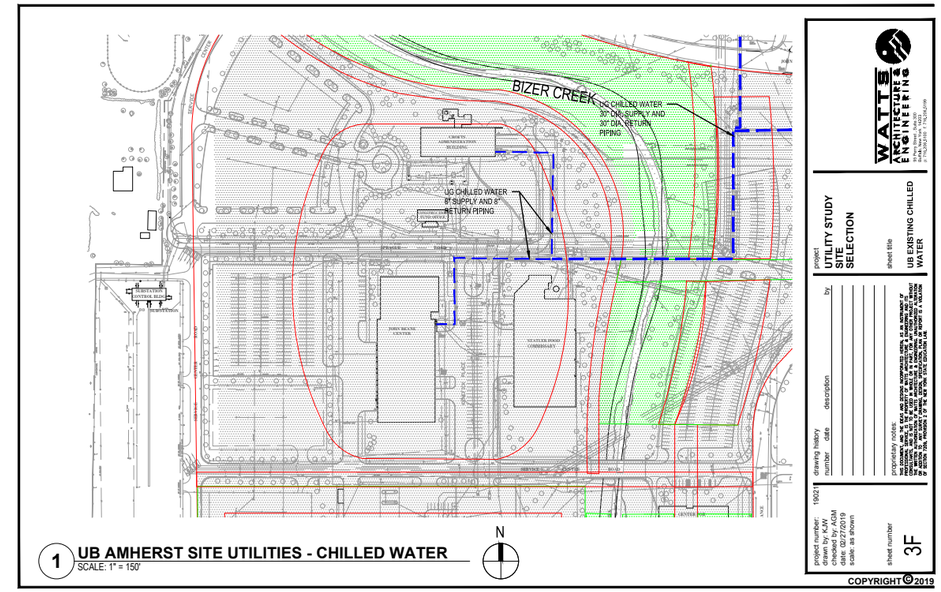




5.3 OFF-SITE / OTHER COSTS:

As with the site development issue noted in Section 5.2, off-site costs may come not so much from what is above ground as from what lies below it.

- As noted in the preliminary utility report, significant electrical, water, sewer, and fiber systems run in easements to the southwest of the property, parallel with the I-290 right-of-way.

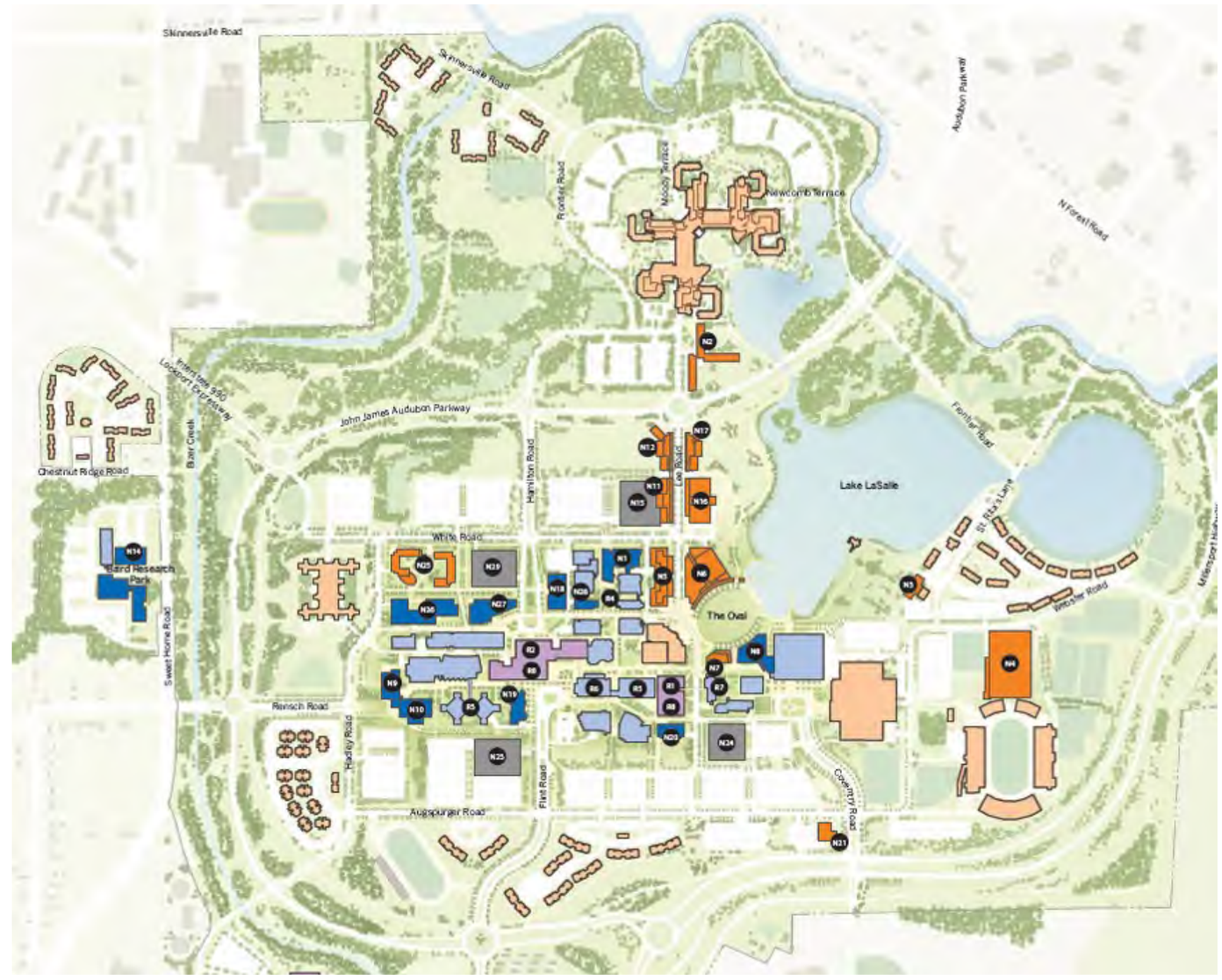
- Furthermore, the utility systems also noted above, in Section 5.2, come from off-site and connect into existing buildings on site, adding more strikes against this site.

5.3 OFF-SITE / OTHER COSTS SCORE: 1

6.1 PROPERTY CONTROL / ACQUISITION:

Since this site is state-owned, property acquisition would most likely take the form of a lease or other type of use agreement.

- While the property itself may technically be possible to utilize the utility-related issues that appear central to university operations may cause the deal to be too much to overcome.



6.1 PROPERTY CONTROL / ACQUISITION SCORE: 1

6.2 SITE CONDITIONS / ENCUMBRANCES:

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6.2 SITE CONDITIONS / ENCUMBRANCES SCORE: 1

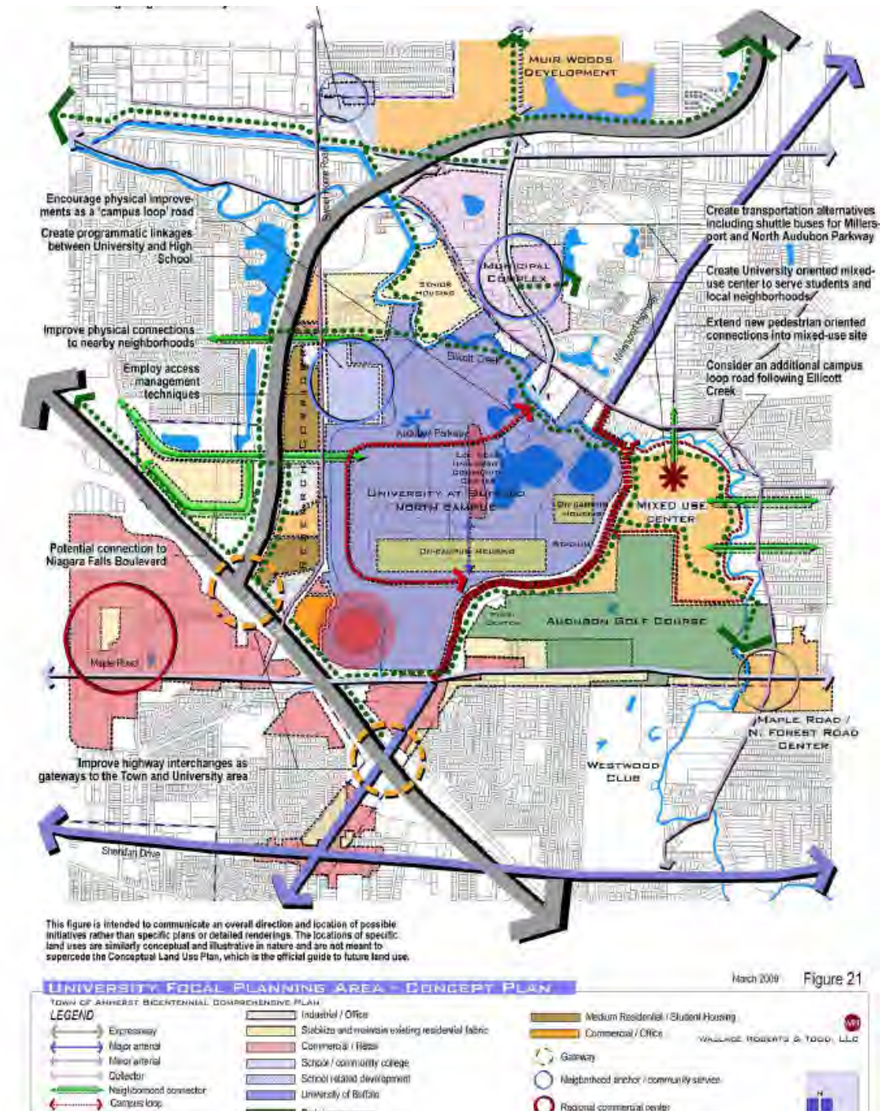
6.3 LAND USE / ZONING PROCESS:

The Town of Amherst is in the process of updating their Comprehensive Plan and Zoning Code, which are scheduled to be completed in the spring of 2019.

- Amherst is moving forward to position its policies to align with the state's Cleaner, Greener Communities (CGC) program.

- As noted in one of the Town's urban planning initiatives: "Imagine Amherst is a project to reimagine and improve commercial and mixed-use centers in the Town so that they work better with surrounding neighborhoods and encompass the vision that residents desire."

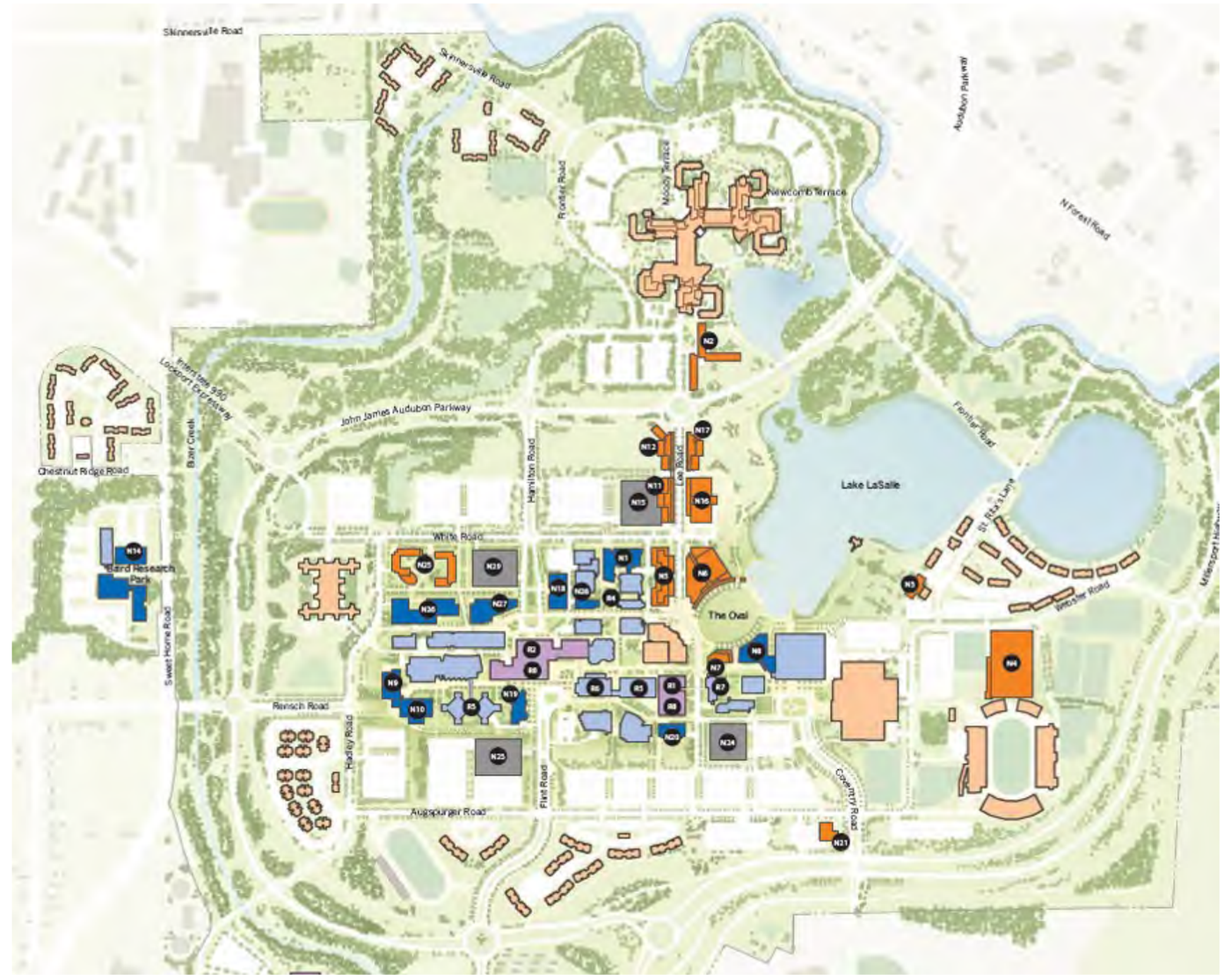
- With the current uncertainty of Boulevard Mall and the anticipated extension of the Metro Rail system, the town is also exploring more urban-oriented approaches for converting the commercial property into a mixed-use, TOD project to tie into one of the future Metro stations. While not directly relate to the potential stadium site at U.B., it does begin to move the town into more of an urban, mixed-use mindset that would be more compatible with a stadium district.



6.3 LAND USE / ZONING PROCESS SCORE: 1

7.1 PROPERTY DEVELOPMENT CONCERNS:

As noted in Sections 5.2 and 5.3, the primary property development concerns relate to serious utility and infrastructure systems that would be negatively impacted with this site.



7.1 PROPERTY DEVELOPMENT CONCERNS SCORE: 1

7.2 P.R. COMMUNITY ENGAGEMENT:

With new changes on the horizon in the Town of Amherst, as noted in Section 6.3 (Land Use/Zoning Process) the local community may be open to the possibility of a new stadium development on the U.B. campus. The university itself, on the other hand, may or may not be open to having a major entertainment venue located on its campus.

- The Amherst Chamber of Commerce appears to be an active organization involved with local potential projects, including the Boulevard Mall and extension to the Metro system. They would likely be a natural place to engage to explore the possibility of a new stadium project.

- The university system is a multi-tiered bureaucracy, so the prospect of floating a trial balloon with them is best left to the highest levels of leadership, to determine whether it has any chance of succeeding.

7.2 P.R. COMMUNITY ENGAGEMENT SCORE: 1

7.3 POLITICS:

As noted in the section above, the politics of moving ahead with this site as a realistic option has a two-pronged trajectory: one with the leaders of Amherst, the other with the leaders of U.B.

7.3 POLITICS SCORE: 1

8.1 STADIUM PROGRAMMING:

The programming of the interior elements of the stadium is anticipated to be directly related to elements on the exterior of the stadium, as well as elements adjacent to the building.

- No predominant outward vistas from the stadium exist in this location, which could influence a specific architectural response (eg. opening up views through an end zone or from a concourse club or element).

- Given the climatic conditions here in Amherst (and Buffalo, in general), an atrium element may be explored as an architectural element that relates to the stadium and potential ancillary development. The conservatory located in South Park is a local precedent that is worth exploring: not so much for its architectural expression as for its spatial and programmatic qualities that could possibly function as a shared space for the community and stadium events.

8.1 STADIUM PROGRAMMING SCORE: 2

8.2 ANCILLARY DEVELOPMENT STRATEGY:

As noted in Section 1.4 (Market Trends), there is limited expectation any ancillary development could be developed to complement the stadium location and program profile. And as noted in Section 4.3 (Supplementary Land Uses), the potential for fitting much else besides the stadium and parking onto the site is limited.

- If parking garages are developed in conjunction with the stadium on this site, it would be wise to anticipate future conversion strategies for the buildings, in the event that parking utilization declines to the point where spaces go underused. Such practices would include building flat floors and higher floor-to-floor dimensions that could accommodate alternative programmed space in the future.

- In addition to parking garage conversions, many other creative strategies may be employed with parking structures to make them more active spaces that contribute to an active environment. This may include ground-floor retail uses, "green walls", sponsorship and advertising graphic and video boards, etc.

8.2 ANCILLARY DEVELOPMENT STRATEGY SCORE: 2

8.3 MXD PHASING & FLEXIBILITY:

As noted in Section 1.4 (Market Trends), there is limited expectation any ancillary development could be developed to complement the stadium location and program profile. And as noted in Section 4.3 (Supplementary Land Uses), the potential for fitting much else besides the stadium and parking onto the site is limited.

- Other than the stadium itself, the development strategy at the U.B. site may be more directed towards the parking garage strategies noted in Section 8.2, above.

- The other phasing item to keep aware of with this site is the timing and location of the Metro station on campus, which would likely trigger a different urban design plan than presently exists in the current U.B. campus planning documents.

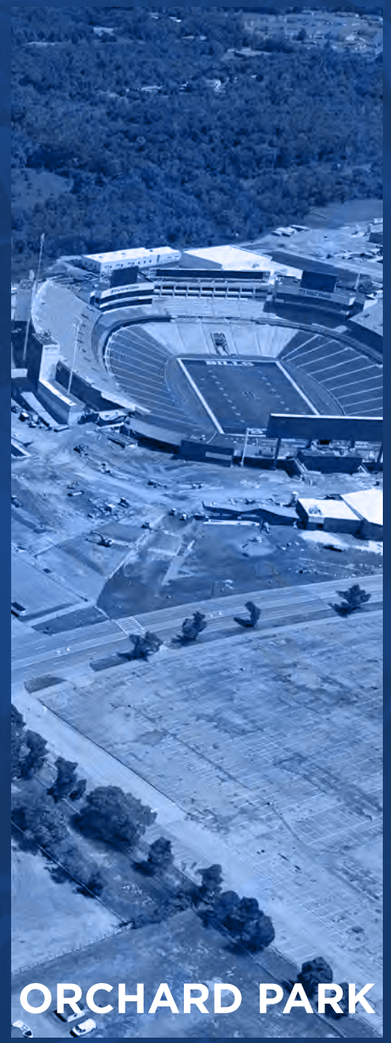
8.3 MXD PHASING & FLEXIBILITY SCORE: 2

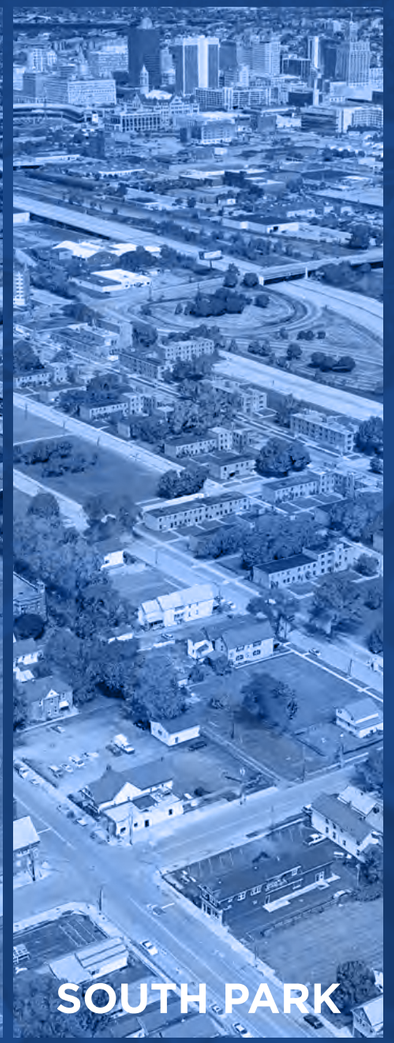
APPENDIX

SUPPORTING DOCUMENTS

WSP ENGINEERING – PARKING AND TRAFFIC **144-191**

WATTS ENGINEERING – CIVIL **192-224**





POPULOUS®

1. MODE SPLIT ASSUMPTIONS

How game day patrons travel to a stadium site is based on several parameters/factors:

- The location of the stadium facility (suburban vs urban site)
- The availability of stadium specific and available nearby parking
- The availability of nearby transit (rail and bus)
- Provision of other transit services such as remote bus park-n-ride, on call/demand services, tour buses, etc.

Each of these parameters will affect the split between patrons using available transit and choosing to drive and park nearby the stadium. However, the split between different modes of travel can be influenced by the team if they choose to provide in some manner transit service and by the number of stadium-related parking spaces they provide. Using information from other NFL stadiums, we see a consistent pattern of a greater number of team-owned parking spaces at suburban stadiums (from upwards to 20,000-27,000 spaces at AT&T and MetLife Stadiums) to as little as 3,000-4,000 spaces (at Mile High, US Bank, and Century Link Stadiums).

Several teams have also contracted directly with the local transit agencies to provide remote park-and-ride services to their stadiums. In Denver, RTD provides a robust bus park and ride service which is appealing to the stadium patrons as they are provided front door service to the stadium. Upwards of 20% of the game day patronage utilizes the bus service (Seattle realizes a similar game day bus share). Such a service in Buffalo could be provided from either existing park and ride facilities or larger campus like settings where parking is available.

Therefore, the resultant mode split can be influenced depending on the ability/appetite of the team to provide adjacent parking (location and quantity) and transit service through operating agreements.

A mode split analysis was undertaken to understand the demand for various transportation and parking services for patrons of the stadium, including Metro Rail riders, rideshare, bus/ motor coach, limo, RV, and passenger vehicle. Assumptions for the mode split are as follows:

- 70,000 seat stadium
- Owner to provide approximately 9,600 parking spaces at the South site
- Owner to provide 4,000 parking spaces at the North and Downtown site for patrons
- 2,000 parking spaces provided for employees/ staff

Parking demand was calculated using a mode split tabulation outlined in Figure 1.

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Figure 1: Mode Split Assumption Table

Current Parking Usage Assumptions (Owner Controlled)

	spaces
Passenger Vehicles	9,029
Bus/Motor Coach	160
Limo (mid-size)	47
RV	425
ADA	392
	9,681

LRT Assumptions:

NFTA max. train consist is 3 vehicles at 150 passengers per car (crush capacity) for a total of 450 passengers per train consist. NFTA owns a total of 27 rail cars. NFTA currently has 23 rail cars on site, 6 are part of the railway project and are off-site. NFTA typically runs 7 blocks of trains operating during peak service, which means a mix of 2 and 3-car consists. Typically, there are 1-2 cars out of service for maintenance. At full capacity, NFTA can operate 27 rail cars for a total of 4,050 passengers (crush). NFTA rail cars are high level requiring a 300-350' long platform (FTA requirements; platform per ADA accessible).

Parking Assumptions:

Owner to provide 9,681 parking spaces at South site

Owner to provide 4,000 parking spaces at Downtown and North sites

2.5 persons per vehicle

2,000 parking spaces on-site/nearby for employee parking

Stadium Seating	70,000	Walking Bus	Bus / Motor Coach / Other	Passenger Vehicles	Total Final Parking Needs
	Passenger Per Vehicle		40	2.5	
South Site	Mode Share	0%	20.0%	80%	100%
	Patrons	–	14,000	56,000	70,000
	Parking Provided			9,681	
	Parking Deficit		392	20,000	20,681
North Site	Mode Share	15%	15%	70%	100%
	Patrons	10,500	10,500	49,000	70,000
	Parking Provided			4,000	
	Parking Deficit		263	17,500	17,763
Downtown Site	Mode Share	15%	30%	55%	100%
	Patrons	10,500	21,000	38,500	70,000
	Parking Provided			4,000	
	Additional Parking Deficit		438	9,750	10,188

*Minor adjustments for Limo, RV, and Bicycle are not included.

**Total-event parking need is the sum of parking demand generated by all modes minus the anticipated number of parking spaces the owner will provide.

LRT Rider:

A portion of 70,500 people will require 70 rail cars

90 minutes to move 70,500 – [illegible] at 5 minute headway

60 minutes to move 70,500 – [illegible] at 3 minute headway

LRT queue would [illegible] 13 rail consists of [illegible] in length. This could be done in conjunction with staging at Dock Square and intermodal facility. Would require [illegible] 2,000 feet east of Dock Square (or about 1.1 mile).

2. PARKING

PURPOSE/INTENT

This parking analysis was undertaken to document the supply of and demand for parking within 1 ½ miles of the three locations under consideration for a new stadium. The locations are referred to as "South" (Orchard Park), "North" (UB North Campus), and "Downtown" (South Park).

METHODOLOGY

Parking supply was calculated based on observations of parking within ¼ mile, ½ mile, 1 mile, and 1 ½ mile rings around the stadium sites, as well as through available parking inventories and plans, including *Building UB: The Comprehensive Physical Plan* and *Buffalo Place 2018 Publicly Available Parking Inventory*.

Parking supply was further broken down as Owner Controlled (those parking lots owned by or controlled by the owners), Primary Parking (those parking lots that are available for public use), and Secondary Parking (those parking lots that are typically reserved for private tenants or permit holders that may become available to the public during games). To aid in understanding the general amount of time it would take to walk from parking areas to the stadium site, a 15-minute and 30-minute walkshed was included (walkshed is explained further in the Pedestrian Circulation section).

Park and Ride lots servicing NFTA Metro Rail (University and LaSalle park-and-ride) and parking within one block of the Metro Rail fare free zone were identified as potential parking supply, as were Park-and-Ride lots with proximity to each of the proposed locations.

A second assessment on parking supply included tabulating the utilization of parking areas during a Sunday between 11am and 1pm and Monday/ Thursday between 5pm and 7pm through field observation to better understand the likely supply of available parking during periods when peak parking demand would be expected for game days.

ANALYSIS/FINDINGS

Figures 2-4 illustrate the locations of available parking areas along with a breakdown of the supply. Figure 5 identifies the available park-and-ride lots and parking adjacent to Metro Rail that can be used as park-and-ride locations.

Mode Split

The following are derived from the mode split analysis:

- South Site
    - 0% Metro Rail riders (as Metro Rail currently does not extend and is not proposed to extend to south site)
    - 20% bus/ motor coach/ other riders = 14,000 patrons that would require 292 bus/ motor coach parking spaces (assumes all buses are parked or staged on-site for games)
    - 80% passenger vehicle = 56,000 patrons that would require 10,601 parking spaces

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- North Site
  - 15% Metro Rail riders (as Metro Rail is proposed to be extended to North Campus) = 10,500 riders
  - 15% bus/ motor coach/ other = 10,500 patrons that would require 219 parking spaces
  - 70% passenger vehicle = 49,000 patrons that would require 13,719 additional parking spaces
- Downtown Site
  - 15% Metro Rail riders (as Metro Rail is proposed to be extended to DL&W Terminal, providing a station) = 10,500 riders
  - 30% bus/ motor coach/ other = 21,000 patrons that would require 438 parking spaces
  - 55% passenger vehicle = 38,500 patrons that would require 9,750 additional parking spaces

Parking Supply Assessment

The following parking supplies are derived from the parking supply assessment:

- South Site

Parking	¼ Mile	½ Mile	1 Mile	1 ½ Mile
Owner Controlled	4,924	8,670	10,655	10,655
Primary Parking	802	1,662	1,662	1,662
Secondary Parking	0	0	5,644	5,644
TOTAL	5,726	10,332	17,961	17,961

- North Site

Parking	¼ Mile	½ Mile	1 Mile	1 ½ Mile
Owner Controlled	0	0	0	0
Primary Parking	0	1,820	6,288	6,288
Secondary Parking	0	2,188	2,302	4,248
TOTAL	0	4,008	8,590	10,536

- Downtown Site

Parking	¼ Mile	½ Mile	1 Mile	1 ½ Mile
Owner Controlled	0	0	2,040	2,040
Primary Parking	0	500	7,180	10,870
Secondary Parking	0	2,270	4,906	5,930
TOTAL	0	2,770	14,126	18,840

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- The ability to utilize Metro Rail park-and-ride lots at University, LaSalle, and at various parking lots within one block of the Metro Rail fare free zone downtown would provide an additional 4,120 parking spaces.

Parking Demand Assessment

The following assessment represents the need for additional parking spaces for passenger vehicles at each site based on the difference between parking demand generated for a typical game day and the number of parking spaces available at each site, which includes 4,000 parking spaces for patrons and 2,000 for employees/ staff and available owner controlled and primary parking supply based on availability of parking (which is determined by the difference in the number of parking spaces less the worst-case scenario utilization of parking). Sunday parking utilization in all cases was less that weekday evenings, thus a worst-case scenario of assessing parking demand and availability for a weekday was utilized.

Parking		South Site	North Site	Downtown Site
Parking Demand[1]		20,000	17,500	9,750
	Parking Supply[2]	12,317	6,288	12,910
	Parking Utilization[3]	8%	38%	17%
Available Parking[4]		11,331	3,898	10,715
Additional Parking Spaces Needed[5]		8,669	13,602	0

[1]Based on mode split table
[2]Based on parking supply of Owner Controlled and Primary Parking
[3]Based on observations of parking utilization during worst-case scenario, which is weekday evening
[4]Supply of available parking, which equals total parking supply minus parking utilization
[5]Number of parking spaces needed, either through constructing additional parking or securing Secondary Parking for game days, to fulfill demand

South Site

- The South site would require an additional 8,669 parking spaces to fully meet parking demand. There are approximately 5,644 parking spaces that are considered Secondary Parking that are currently used for game day at the site. If these spaces remained available for game day parking, an additional 3,025 parking spaces would be needed under the mode split scenario.
- The owner currently controls 9,691 parking spaces. Displaced parking spaces could be replaced on-site and some additional parking made available. Approximately 12,950 parking spaces could be provided within the stadium/ parking footprint of the south site.
- The south site offers the opportunity to distribute parking east and west of the stadium.
- Existing parking areas nearby can sufficiently handle additional parking.
- The McKinley Mall parking area could be considered for a shuttle service park-and-ride.

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Key page

North Site

- The North site has limited parking availability and would require an additional 13,602 parking spaces to fully meet parking demand. There are 4,984 parking spaces reserved for student residential permits and 4,248 parking spaces considered as Secondary Parking. If agreements can be reached to make these parking spaces available for game day parking, an additional 4,370 parking spaces would be needed under the mode split scenario.
- Existing Primary Parking areas are primarily northeast of the proposed stadium site and are mainly controlled by UB. Agreements would need to be arranged to allow for game day parking.
- Beyond UB, there is limited publicly available parking, and agreements would need to be reached with office parks, schools, businesses, and recreation centers to accommodate game day parking.
- Building UB: The Comprehensive Physical Plan calls for elimination of some surface parking areas that would be replaced with parking garages (timeline unknown).
- There is limited space to accommodate owner controlled parking on-site.

Downtown Site

- For the Downtown site under the proposed mode split with higher transit usage, the available parking supply within 1 ½ miles throughout downtown and Larkinville is enough to cover the demand of the site.
- Utilizing the 4,120 park-and-ride spaces under an enhanced transit scenario could help fill parking demands for the North site and Downtown site.
- The majority of the available Owner Controlled and Primary Parking is located west of the stadium site, which could create an unbalanced traffic flow pattern to/from parking areas as well as to/from the stadium itself. A more balanced approach towards parking supply would add available parking areas closer to the stadium site and include parking arrangements to use parking in the Larkinville neighborhood.
- Opportunities to provide parking to the north, east, and south are limited due to I-190, long bridge structures, and railroads (north and east) and residential neighborhood (south).
- There is an opportunity to utilize existing Metro Rail park-and-ride lots (University and LaSalle) and parking adjacent to the Metro Rail Fare Free zone (Fountain Plaza, Lafayette, Church, Seneca, Erie Canal Harbor stations) to park-and-ride patrons to site.

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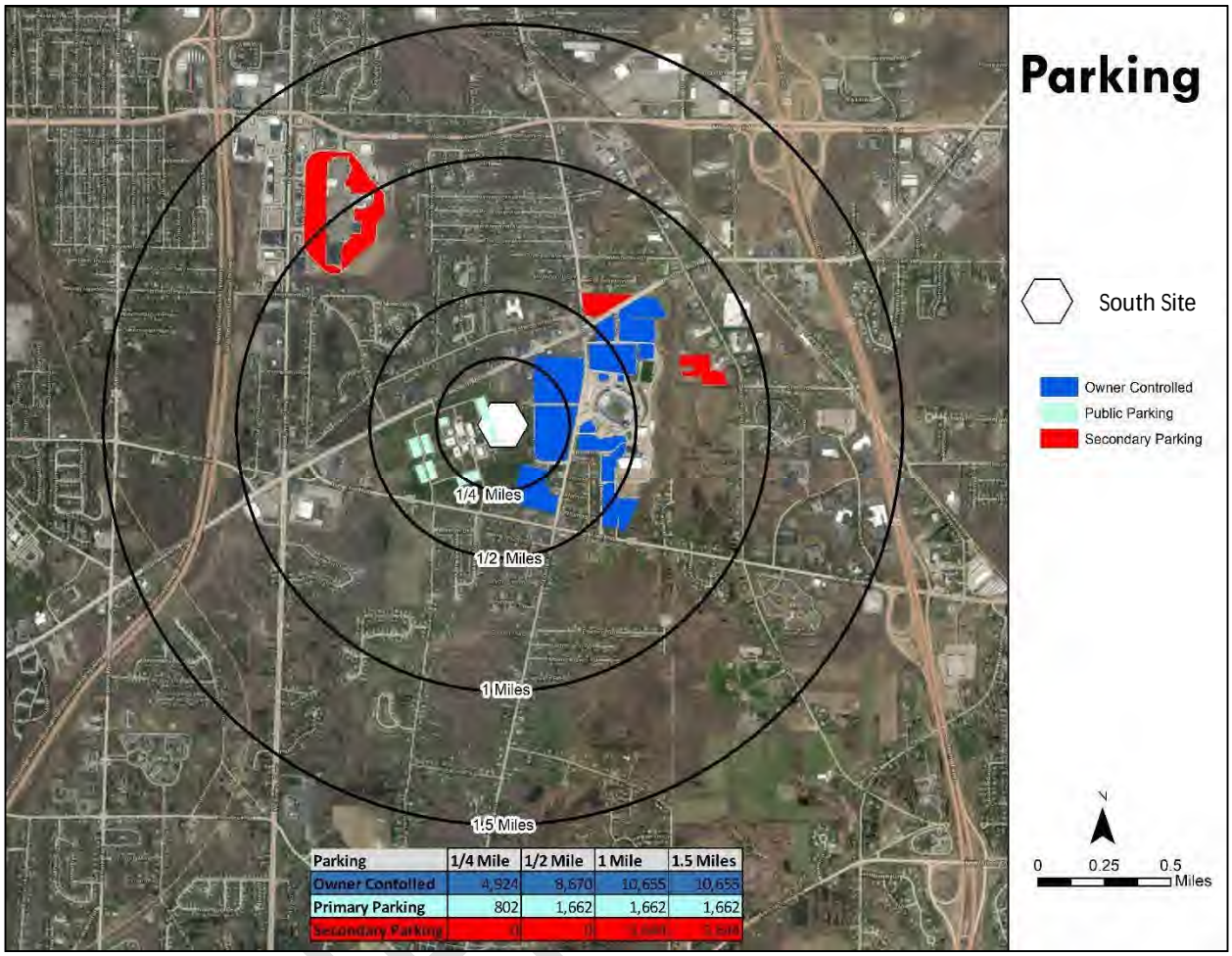
Figure 2: South Site Parking Supply



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Controlled	4,924	8,670	10,655	10,655
Primary Parking	802	1,662	1,662	1,662
Secondary Parking	0	0	[illegible]	[illegible]

Source: WSP

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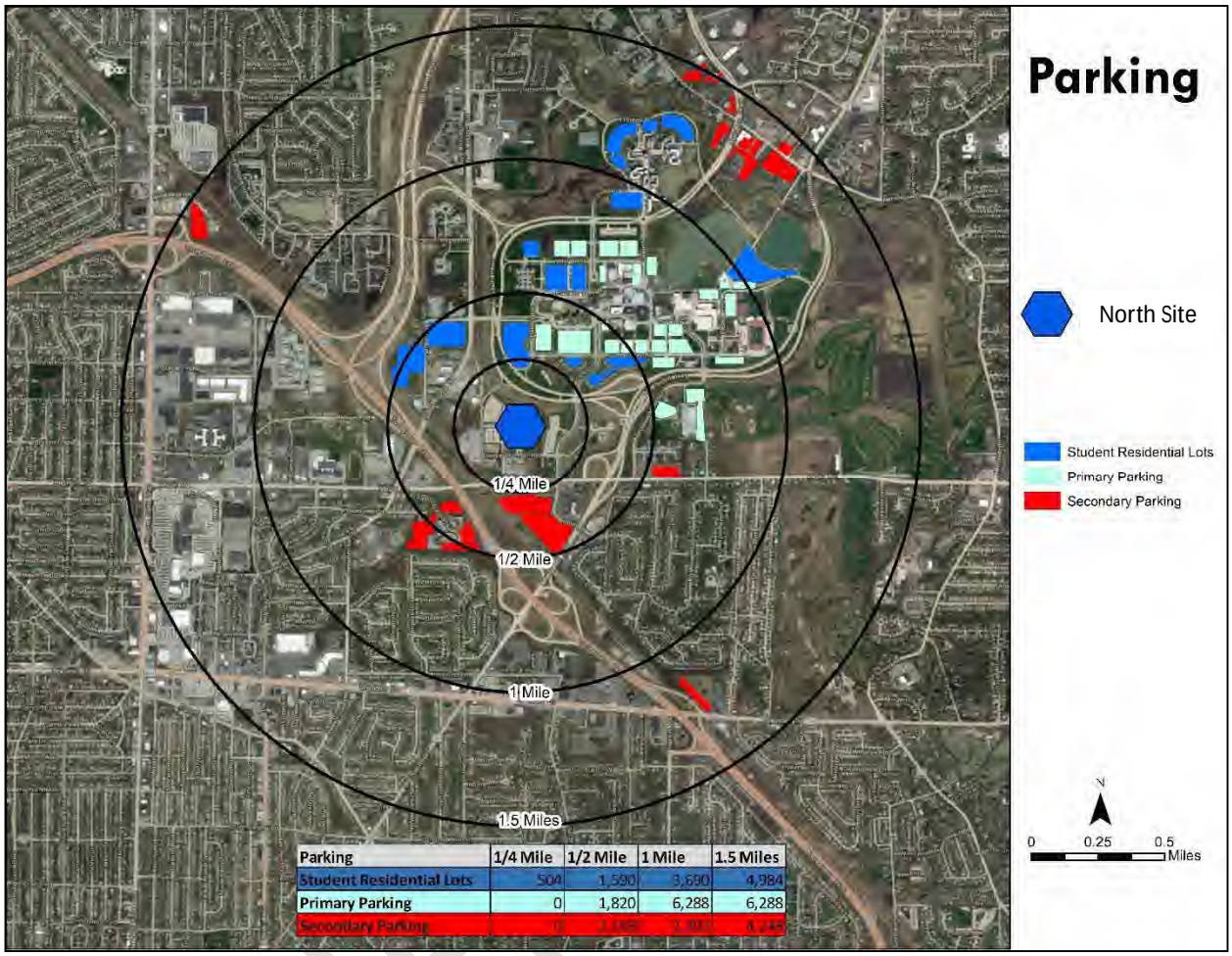
Figure 3: North Site Parking Supply



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Student Residential Lots	504	1,590	3,690	4,984
Primary Parking	0	1,820	6,288	6,288
Secondary Parking	[illegible]	[illegible]	[illegible]	[illegible]

Source: WSP

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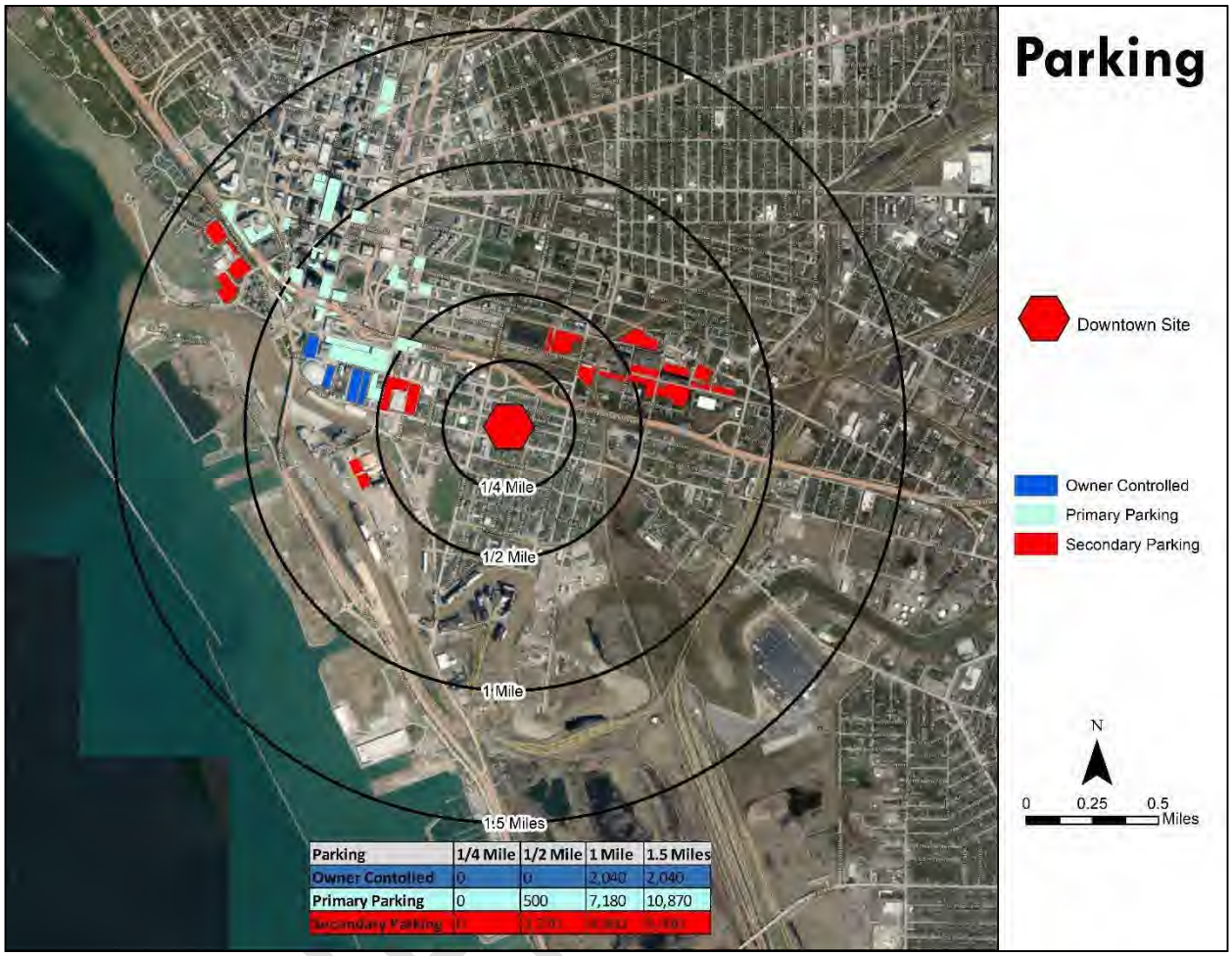
Figure 4: Downtown Site Parking Supply



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Contolled	0	0	2,040	2,040
Primary Parking	0	500	7,180	10,870
Secondary Parking	[illegible]	[illegible]	[illegible]	[illegible]

Source: WSP

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Figure 5: Metro Rail Park-and-Ride Parking Supply

Source: WSP and NFTA

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3. TRAFFIC CIRCULATION

PURPOSE/INTENT

This traffic circulation assessment was undertaken to develop an understanding of potential arrival and departure routes to each of the three locations under consideration for a new NFL stadium to identify potential traffic bottlenecks and/or areas of considerable congestion associated with each. The locations are referred to as "South" (Orchard Park), "North" (UB North Campus), and "Downtown" (South Park).

METHODOLOGY

The traffic assessment is based on season ticket holder zip/postal code information provided by the owner (i.e. number of tickets and ticket purchasers per zip code). This information was overlaid on the regional highway system within 80 miles of the proposed locations and using assumptions based on AADT and knowledge of routes used to access sites, an estimation of trips was assigned to major roadways (Figure 6). This was a desktop exercise and did not involve traffic modeling. Additionally, existing traffic controls in the vicinity of the proposed sites were identified in Figures 7-9.

ANALYSIS/FINDINGS

South Site

Opportunities

- The owner has worked over the years to establish a traffic management plan that is effective and well understood by patrons. This includes the implementation of reversible lanes on sections of Abbott Road and Route 20A pre- and post-game as well as the temporary closure of a portion of Abbott Road. The existing TMP would only need minor modifications.
- Figures 10 and 11 illustrate assumed arrival and departure routes to the South location. Approximately 64% of game day trips would arrive from the north using I-90. The implementation of Electronic Toll Collection (ETC) by the New York State Thruway Authority on the I-90, which would result in the removal of the Lackawanna Toll Barrier, would be expected to shift trips to I-90 currently on US 219 providing more balance to arrival/departure traffic.
- This shift of traffic to arrive from/depart towards the west may balance out the traffic patterns versus current arrival/departure (more to north and east).

> - Eleven approach/departure travel lanes within 1 mile circle
> - 1,000-1,500 max per lane vehicle capacity = 11,000 approach per hour

Challenges

- Anticipated increase in traffic via I-90 to Milestrip may create new capacity constraints at the I-90 Blasdell Exit Road intersection to Milestrip Road and at Milestrip Road and McKinley Parkway intersection.
- The shift of traffic from/to the west may increase traffic at McKinley Parkway/Big Tree Road, and Southwestern Boulevard (Route 20) intersection.

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- Milestrip Road and Abbott Road intersection (existing).
- US 219 Ramp & Big Tree Road intersection (existing).

Potential Improvement Opportunities

- I-90 Blasdell Exit Road intersection with Milestrip Road (signal timing, game day control).
- Milestrip Road & McKinley Parkway intersection (signal timing, game day control).
- New Interchange along I-90 with Southwestern Boulevard to accommodate movements from/to north.
- Narrowing and realignment of Abbott Road (between Routes 20 and 20A) east into the existing stadium parking area to create a larger parcel on the west of Abbott Road and an improved pedestrian environment.

North Site

Limited information is provided for this location as it was removed from further consideration.

- Figures 12 and 13 illustrate arrival and departure routes. Approximately 70% of trips would arrive via I-290 northbound.
- The location has generally good traffic accessibility as the campus was built for commuter traffic.
- Free flow traffic exits from I-290 ramps onto Millersport Highway (SR263) and from I-990 ramp at North Campus exits.
- Traffic controls exists at Sweet Home Road and John James Audubon Parkway ramps from I-990.
- The *Building UB: The Comprehensive Physical Plan* proposes improvements that would facilitate improved access and internal traffic flow.
- Potential for greater use of local streets – may require police closure or control of local access.

Downtown Site

Opportunities

- The downtown location is well served by an Interstate highway network (I-190, Route 33, Skyway/ Route 5). Figures 14 and 15 illustrate assumed arrival and departure routes to the Downtown location. Approximately 48% percent of game day trips would use I-190 (approx. 27% from/to south and 21% from/to north). Approximately 21% is assumed to use Route 33.
- The existing city street grid provides some redundancy in operations and connections to and from site.

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- Distribution of available downtown parking or supporting attractions (restaurants/bars/Canalside, etc.) may better disperse traffic to a greater area and elongate (therefore reduce) the arrival and departure peak traffic volumes.
- The potential exists to expand on transit connections or ride share opportunities for "last mile" trips to stadium from downtown and other park-and-ride locations.
- The downtown location has the potential to build off existing arrival/departure routes and TMP established for Key Bank Center event traffic (TMP would only need to be modified to account for destination shift to south).

- Ten approach/departure travel lanes within 0.5-mile circle
- 1,000 - max per lane vehicle capacity = 10,000 approach per hour

Note - 0.5 Mile utilized due to east/west site constraints (I-190 & River) and grid roadway pattern overlap at 1 mile circle

Challenges

- The lack of direct access from I-190 & Route 5 would force traffic onto local roadway network to access site.
- The city street grid network creates intersection capacity constraints with competing traffic demands depending on arrival orientation.
- The existing AM and PM interchange traffic bottlenecks would be replicated or intensified. This would be of great concern with confluence of WB Route 33 traffic approaching site versus I-190 traffic exiting to local roadway network via Elm/Oak. Traffic concentration would be anticipated at Elm/Oak intersections with Seneca Street and Swan along with adjacent roadway and intersections.
- Minimal capacity exists from Route 5 via Tifft/Ohio versus demand. Traffic may not able to approach via Tifft/Ohio and would be forced to integrate with I-190 traffic from northtowns adding pressure to the few exit/access points from the highway.
- The adjacent elevated I-190 and CSX railroad corridor prevents access to Exchange Street and limits opportunities to access the roadway network to the north.
- The Route 5 approach is limited to Ohio Street or connection to I-190/Seneca Street. Route 5 traffic utilizing I-190 would concentrate that traffic with I-190 traffic from the northtowns rather than dispersing the traffic.
- Dispersal of patrons within the adjacent downtown area would create additional pedestrian and motorist conflict points/crossings, which could constrain capacity at key intersections around site.
- Highways ramps from 1-190 do not provide free flow access to proposed location - all ramps are controlled by signals or stop signs.
- I-190 ramps are relatively short in length creating a potential for stopped/slow moving traffic on mainline (I-190).

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- The potential exists for traffic backups on I-190 South and Skyway/Route 5 north ramp to Elm Street exit due to short merge lane.
- No direct access existing from the I-190 northbound to Skyway (Route 5).
- Traffic could utilize local roads, which would be good for traffic distribution, but could be impactful to neighborhood quality of life.
- Given most existing parking areas are in the downtown and Cobblestone District – a higher percentage of traffic may be destined for the downtown and Cobblestone areas versus the stadium area.
- Metro Rail operations pre-empt east/west travel across Main Street, which would impact game day travel in the downtown area.
- Implementation of complete street concepts by the City has resulted in travel lane reductions (e.g., South Park Avenue, Ohio Street, Louisiana Street).
- Lift bridges over the Buffalo River are located on Ohio Street, Michigan Avenue and South Park Avenue; however, bridge operations are limited in late Fall and Winter.
- The Skyway/Route 5 can be closed during high winds and snow events.

Potential Improvement Opportunities

- Provide direct connection of Elm/Oak south over/under I-190 to Scott Street.
- Investigate opportunity to reconfigure Louisiana/Hamburg interchanges to provide direct ramp access to/from stadium circulator roadway.
- Utilize stadium circulator roadway to provide non-event connections of roadway network
- Investigate major improvements to the I-190 & Elm/Oak interchange to address mixing issues with Route 5 and concentration of traffic to Swan and Seneca Streets.
- Explore construction of new parallel ramp connection from I-190 NB to Michigan Avenue.
- Consider use of reversible lanes for portions of South Park Avenue and Louisiana Street on game days.
- Explore opportunity to relocate I-190 Smith Street interchange to provide direct egress from South Park to I-190.
- Investigate potential to construct proposed Tifft Street Connector (included in Southtowns Connector/Buffalo Outer Harbor FEIS), which would provide another means of access from Route 5, considering new Tesla facility on South Park Avenue.

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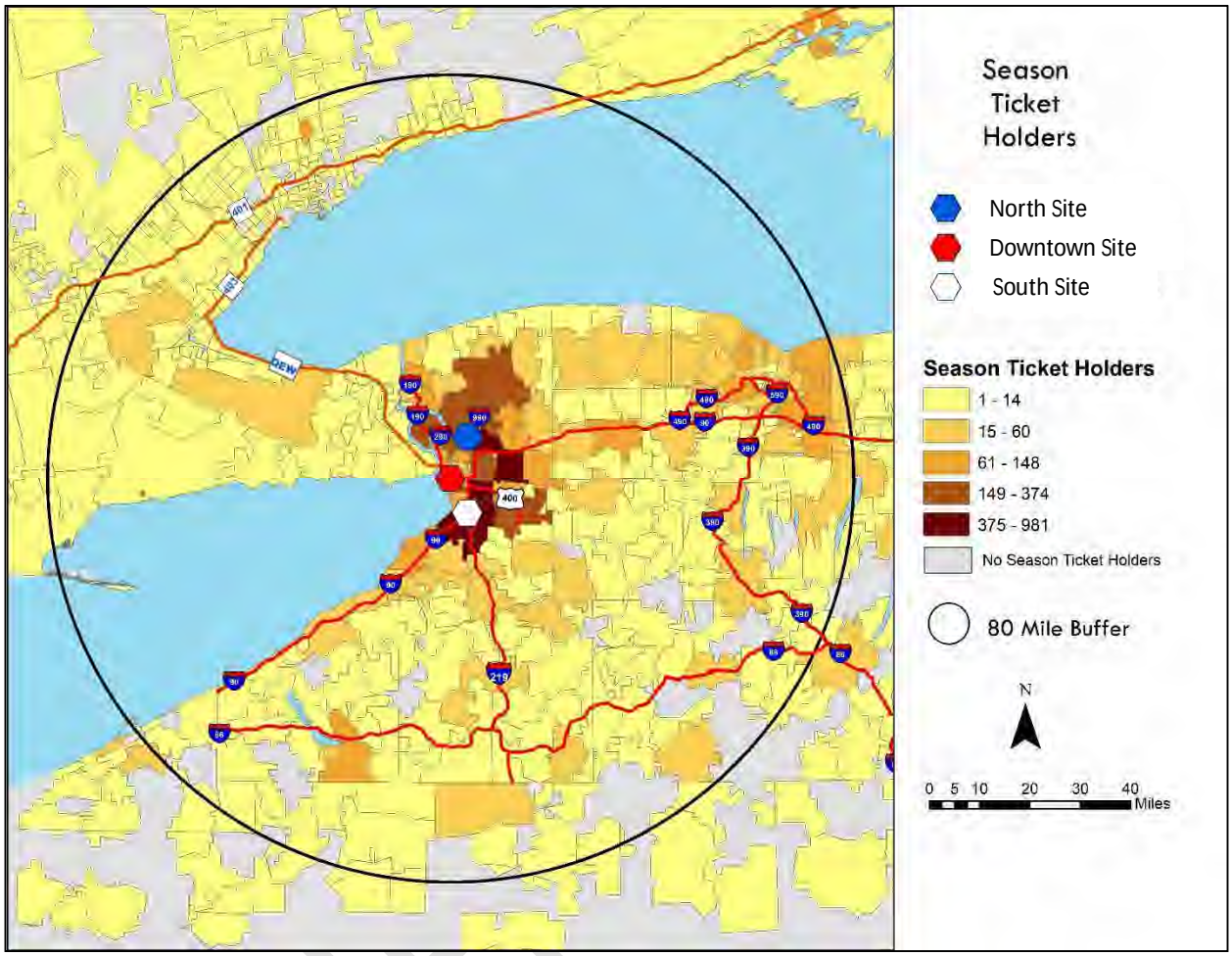
Figure 6: Season Ticket Holder Locations



Source: WSP and Buffalo Bills

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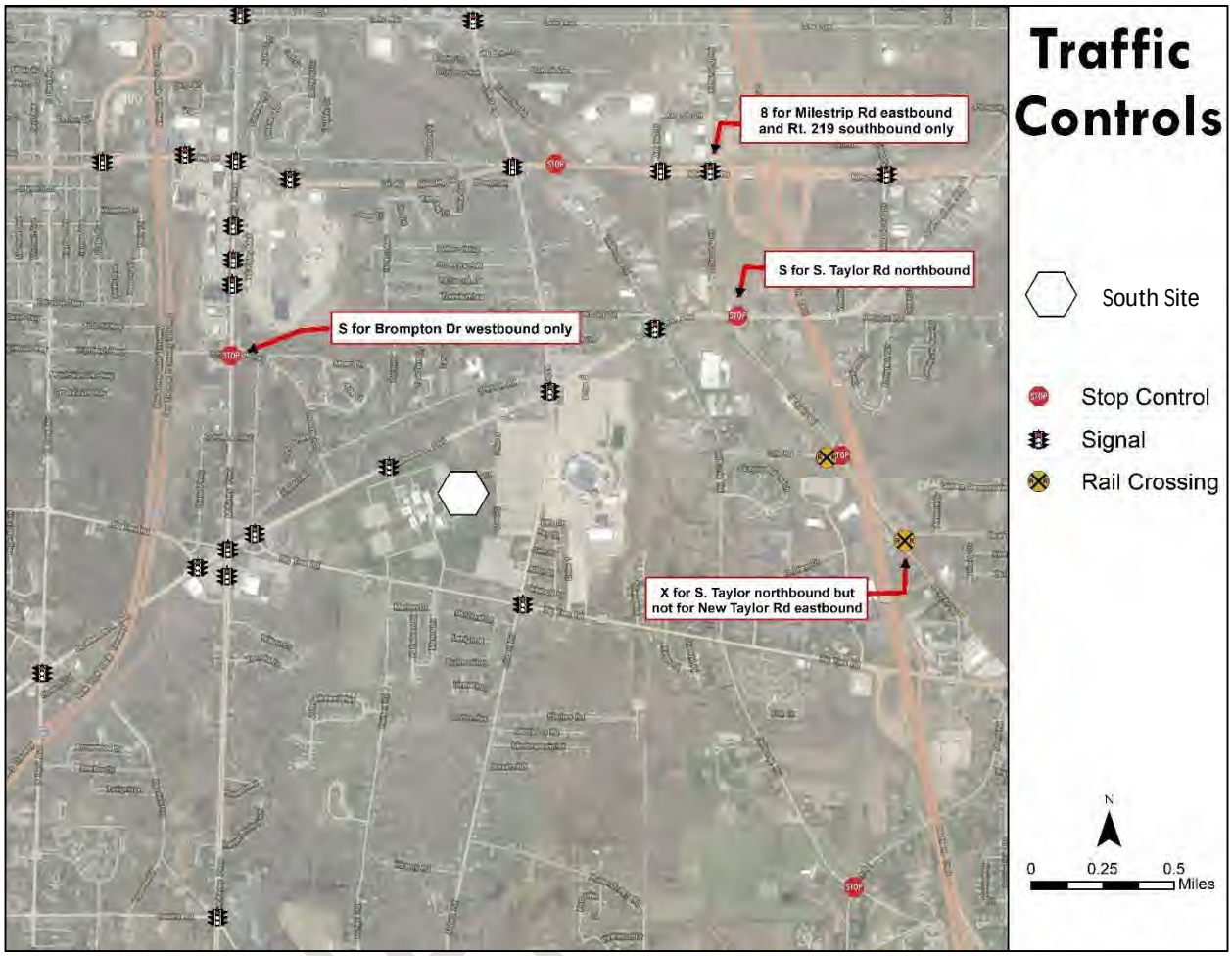
Figure 7: Traffic Controls in the Vicinity of the South Site



Source: WSP

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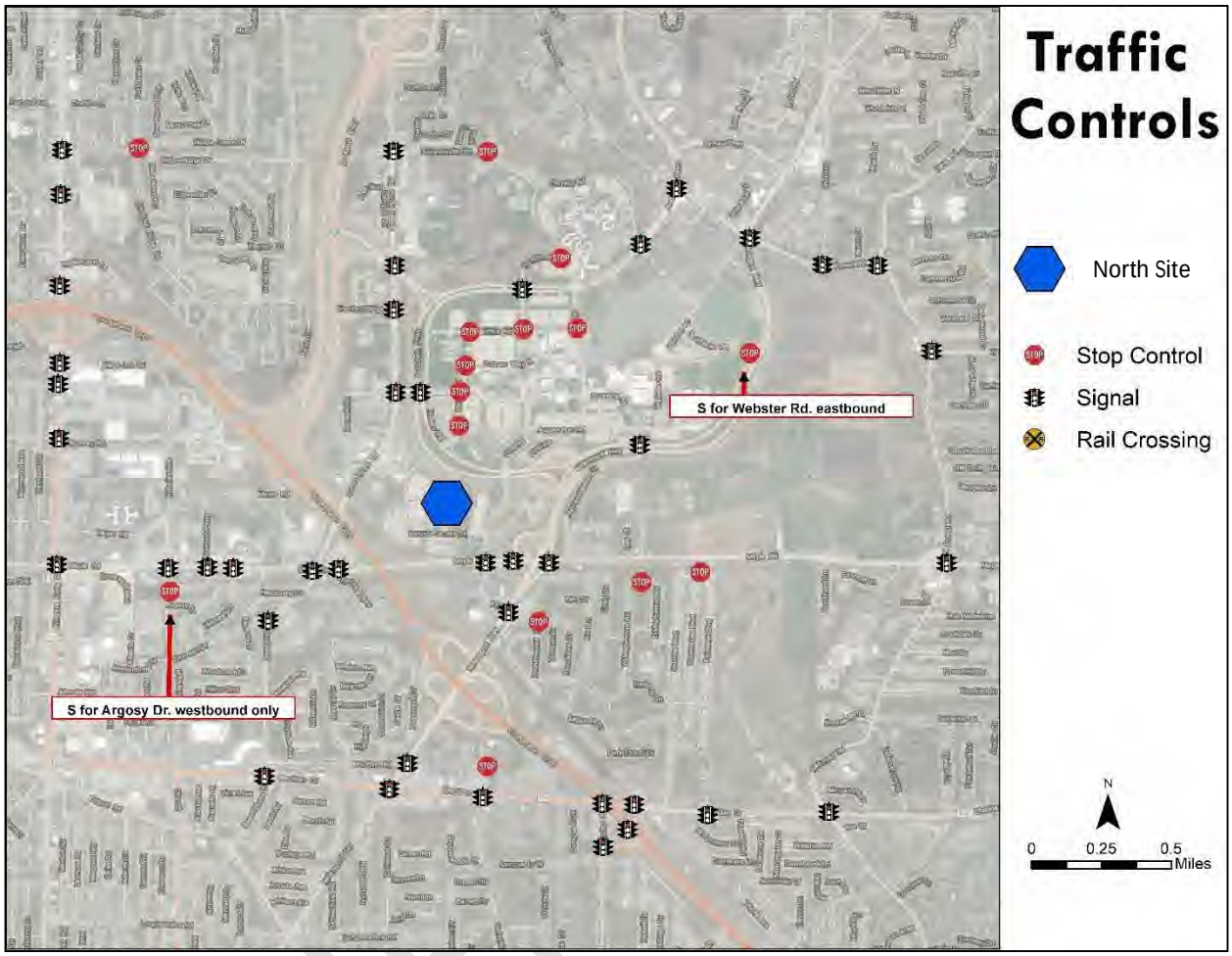
Figure 8: Traffic Controls in the Vicinity of the North Site



Source: WSP

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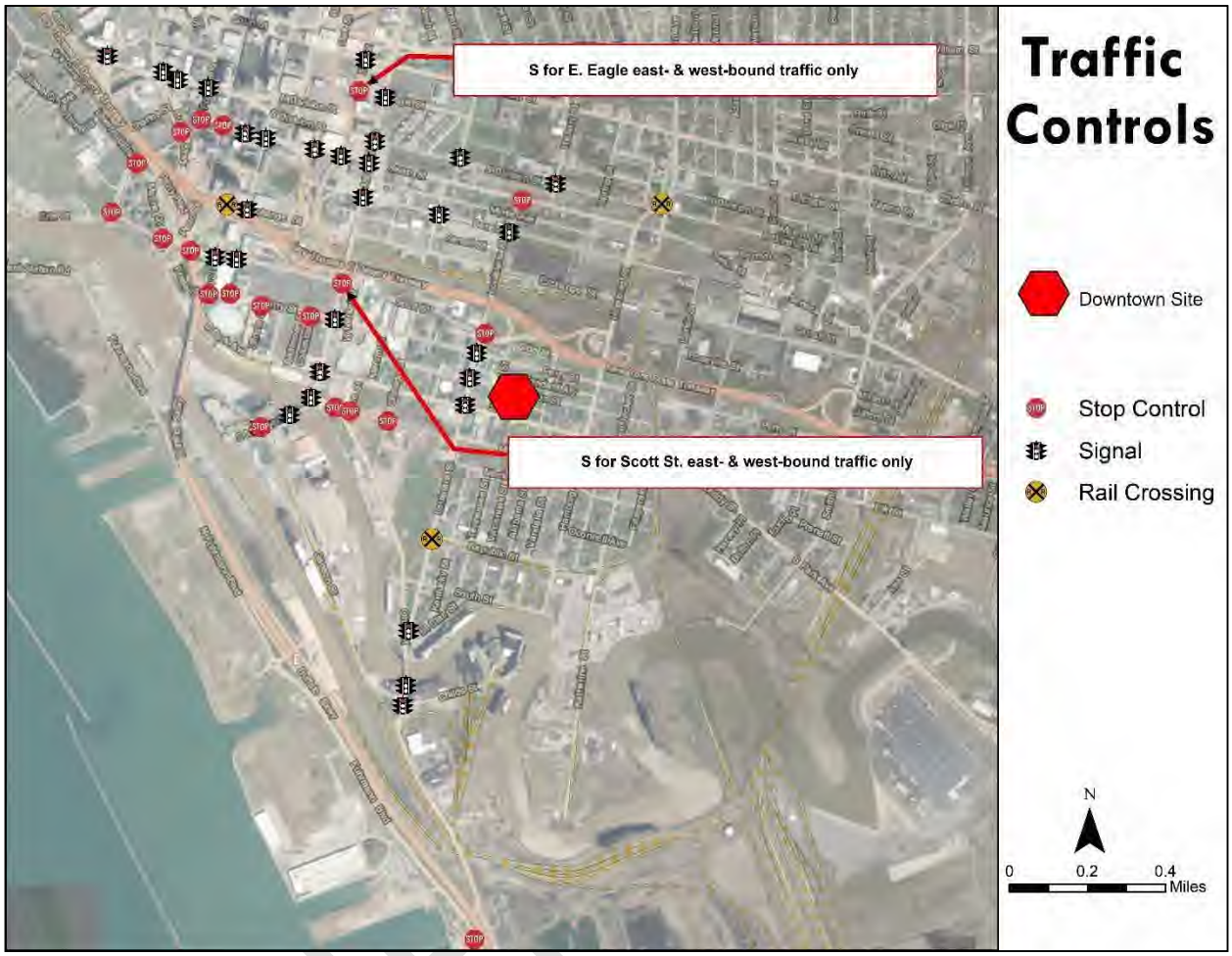
Figure 9: Traffic Controls in the Vicinity of the Downtown Site



Source: WSP

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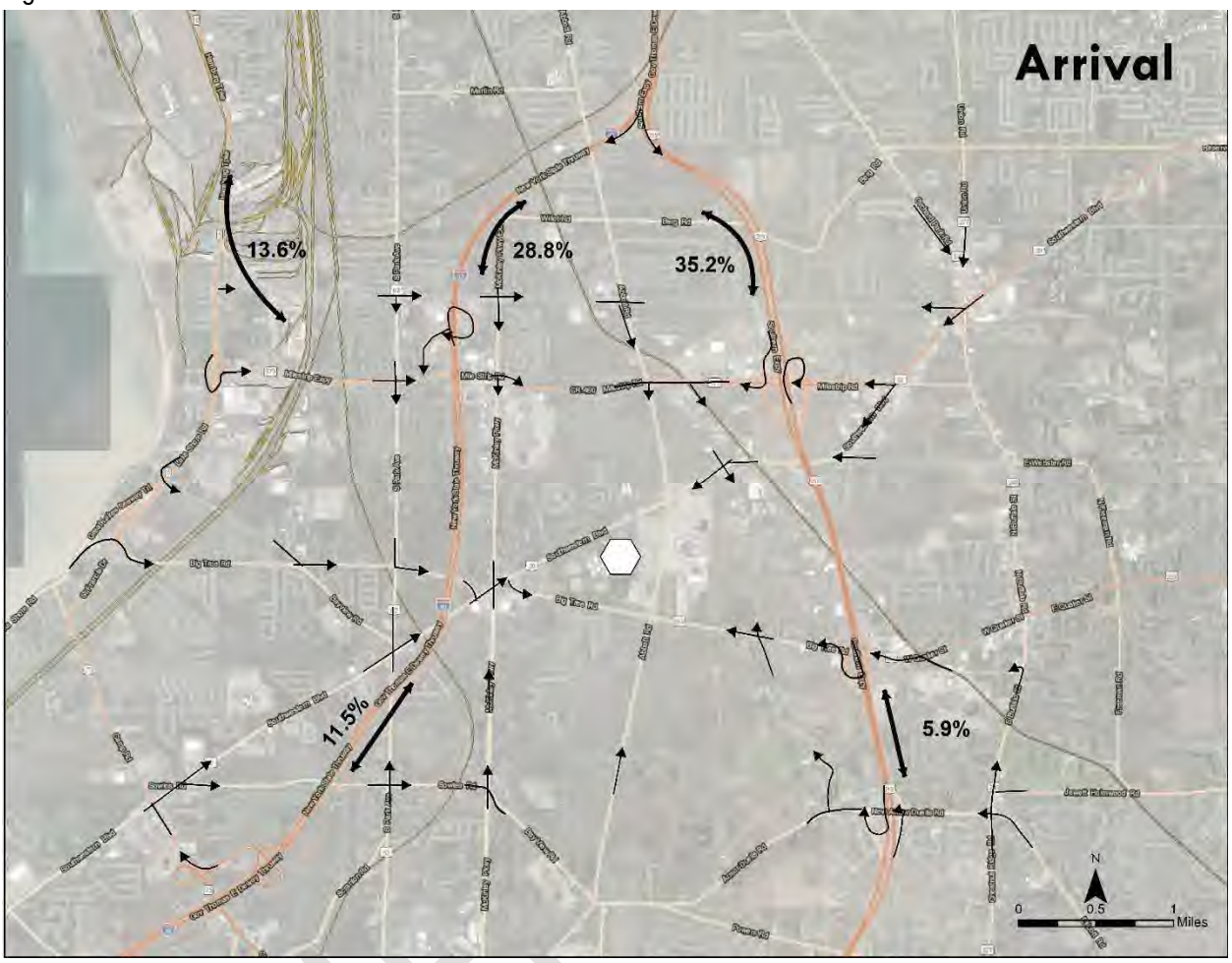
Figure 10: Traffic Arrival Patterns for South Site



Source: WSP

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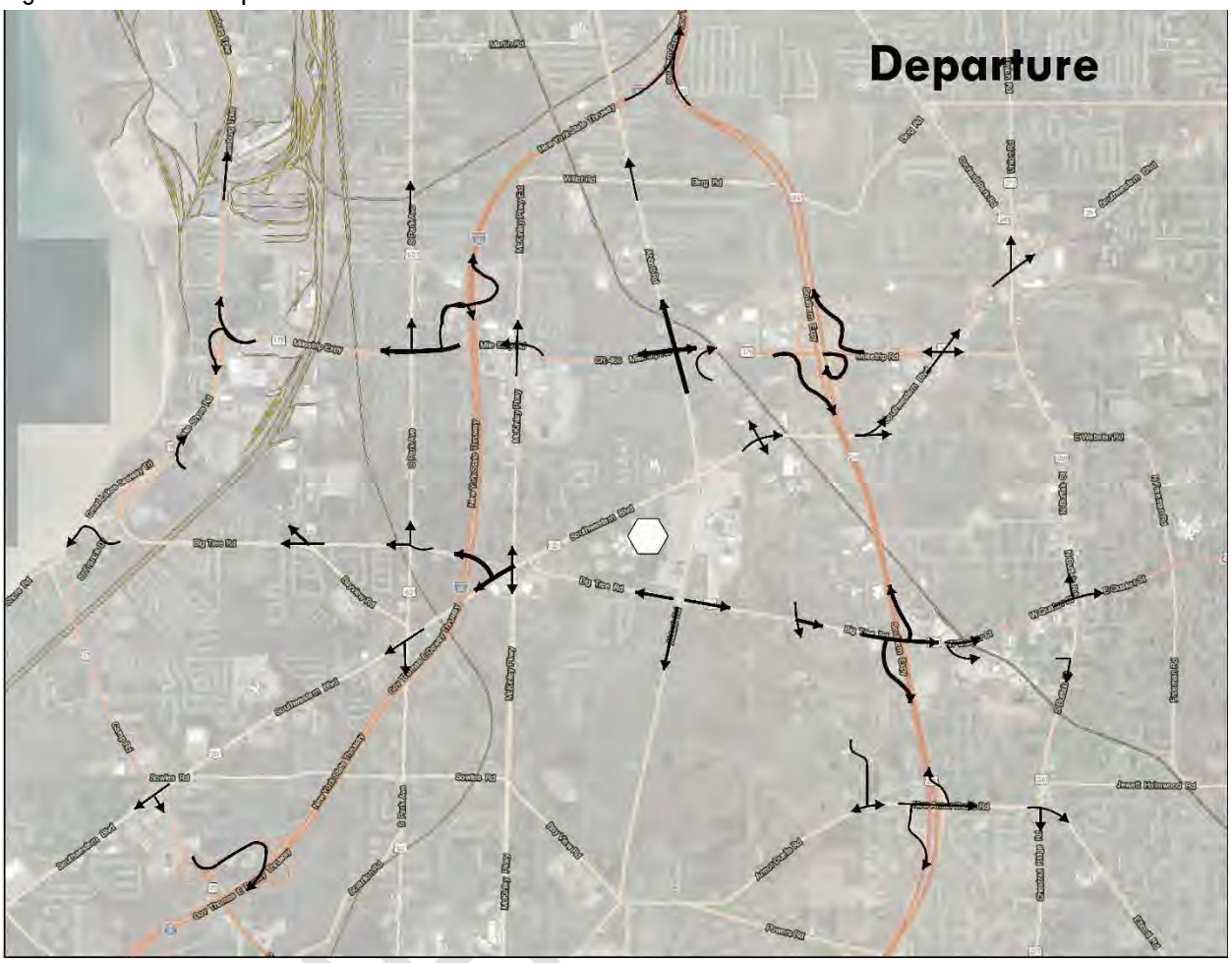
Figure 11: Traffic Departure Patterns for South Site



Source: WSP

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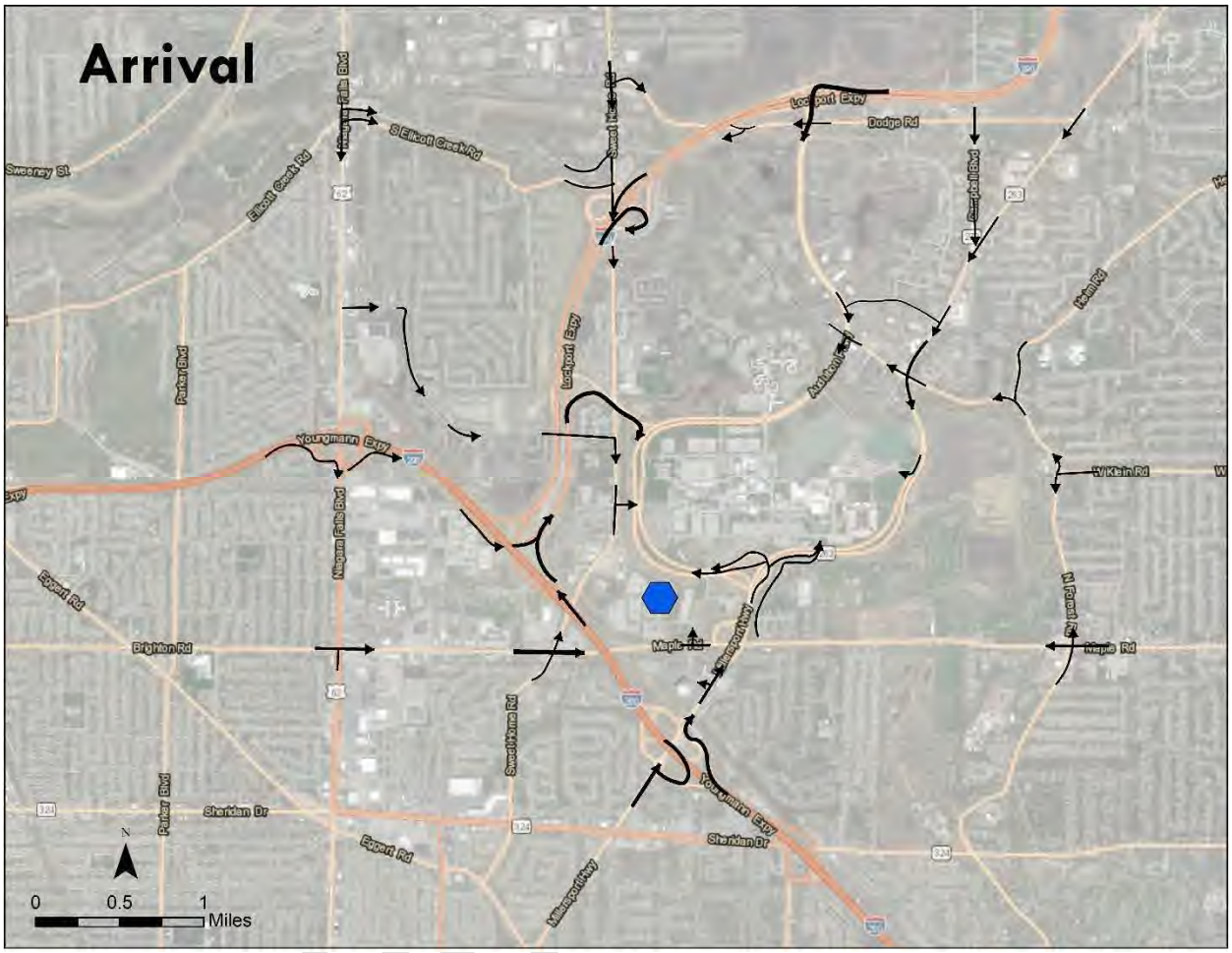
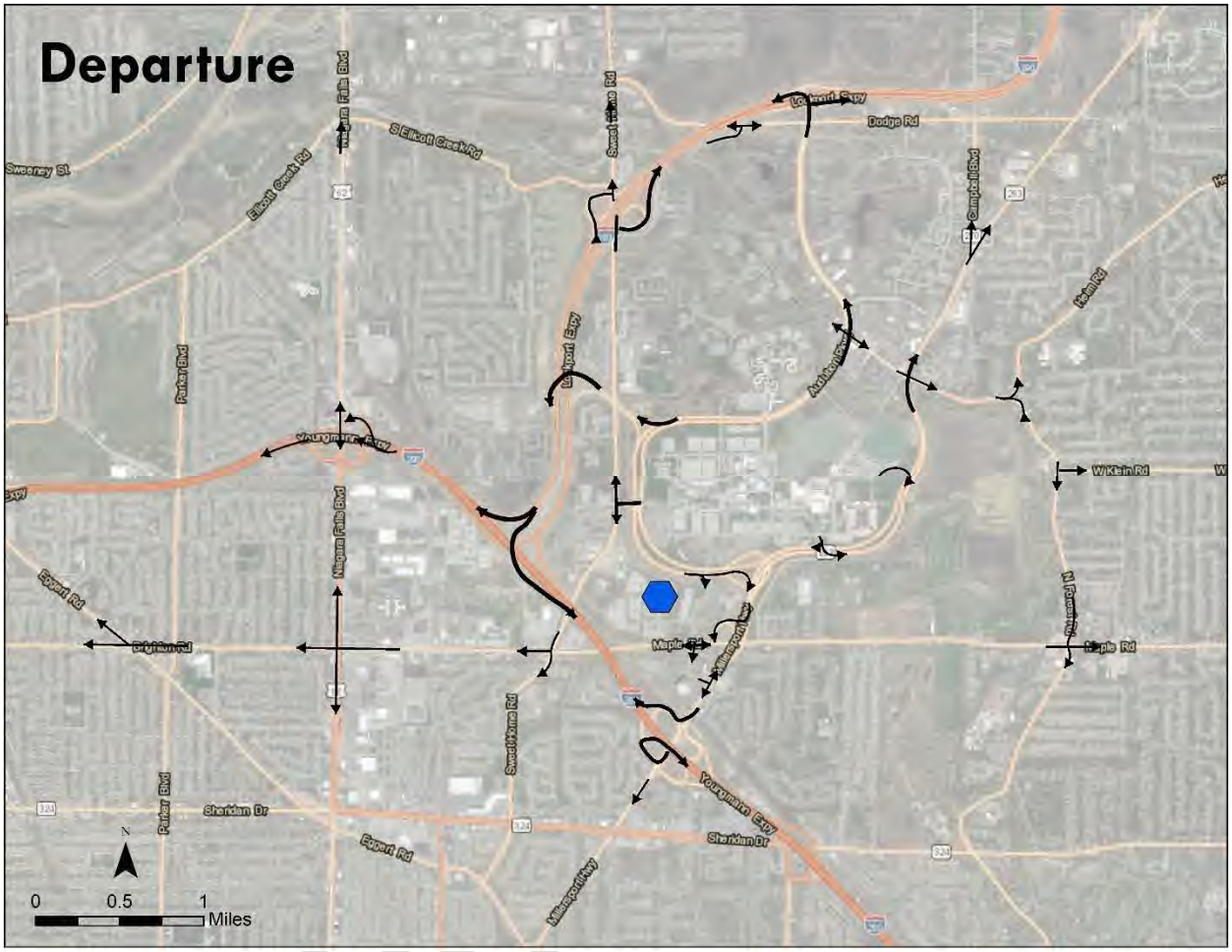
Figure 12: Traffic Arrival Patterns for North Site



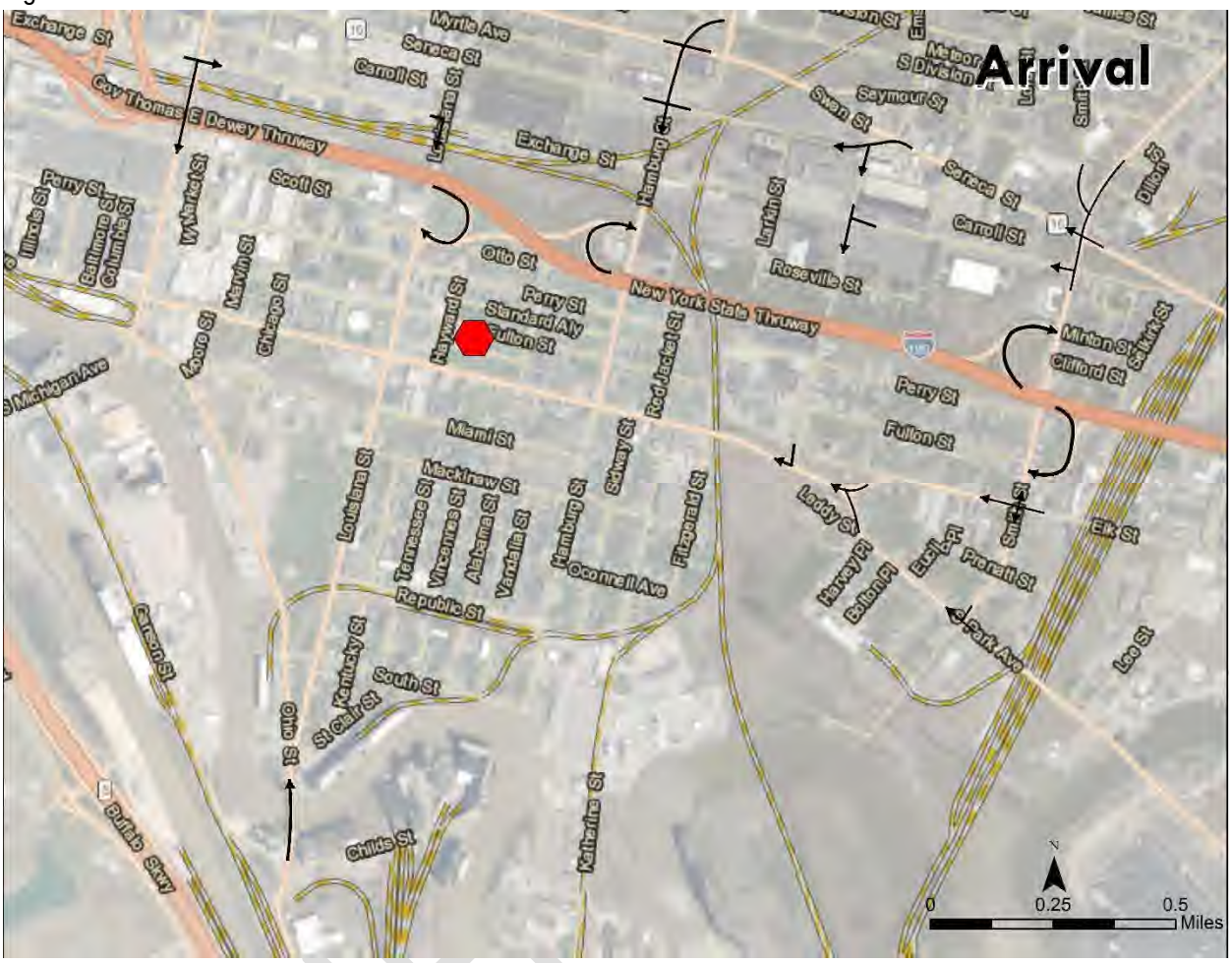
Source: WSP

Figure 13: Traffic Departure Patterns for North Site



Source: WSP

Figure 14: Traffic Arrival Patterns for Downtown Site



Source: WSP

Figure 15: Traffic Departure Patterns for Downtown Site

Source: WSP

4. TRANSIT ACCESS

PURPOSE/INTENT

This transit access assessment was undertaken to document the existing and future transit access for each of the three locations under consideration for a new stadium. The locations are referred to as "South" (Orchard Park), "North" (UB North Campus), and "Downtown" (South Park).

METHODOLOGY

Existing and future transit access is based on mapping of Metro Bus routes and Metro Rail service within ¼ mile, ½ mile, 1 mile, and 1 ½ mile rings around the stadium sites, assessing existing transit ridership at all of the sites, and through available plans and studies such as DL&W Terminal Station and Metro Rail Expansion Project and knowledge of transit in the region.

The mode split analysis influenced the transit access assessment for each site, estimating the number of riders that would access each stadium site using transit, based on similar stadium project transit utilization in other cities. For the Downtown site, transit mode split assumed a 15% transit mode split using Metro Rail, which would account for expanded Metro Rail service to DL&W Terminal and possibly beyond to service the Downtown site. For the North site, the transit mode split assumes the Metro Rail Expansion Project to the UB North Campus would be completed and would carry 15% transit mode split.

The combination of utilizing park-and-ride lots servicing NFTA Metro Rail and Metro Bus, along with parking within one block of the Metro Rail fare free zone were identified as possible solutions to bring patrons to the game through park-and-ride or shuttle service.

ANALYSIS/FINDINGS

Metro Rail & Metro Bus Routes

The Niagara Frontier Transportation Authority (NFTA) operates a light rail system known as Metro Rail as well as numerous Metro Bus routes across the region. Figures 16-18 illustrate the existing Metro Bus along with existing and proposed Metro Rail routes within ½ mile of each stadium site.

There is no existing or proposed Metro Rail service to the South site. There are two regular Metro Bus routes that provide access for the South site. One of these services ECC South Campus as an express bus Monday-Friday.

There is currently no existing Metro Rail service for the North site, however, NFTA is proposing to extend Metro Rail service to the Northtowns, which would provide Metro Rail service between DL&W Terminal and UB North Campus. There are also two Metro Bus routes that provide access to UB North Campus, which could accommodate the North site.

Metro Rail service downtown currently terminates at Erie Canal Harbor Station, and provides service to the University Station at UB South Campus. In addition to the northern expansion, Metro Rail service will soon be expanded to DL&W Terminal with the construction of a station within DL&W Terminal. The project will also ready Metro Rail for expansion beyond DL&W Terminal to the east or south in the

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future. There are twelve Metro Bus routes that provide access to the Downtown site that can be used on game days to transport patrons to the site.

Metro Rail System

Metro Rail operates daily between Erie Canal Harbor Station and University Station. Peak headway is around 10 minutes and off-peak headway ranges between 15-20 minutes. The portion above ground between Erie Canal Harbor Station and Fountain Plaza is a Fare Free Zone; proof of payment is required for the underground portion of the system. NFTA can operate a maximum train consist of four cars; each car has a crush capacity of 150 patrons. There are a total of 27 Metro Rail cars; currently NFTA has 21 cars on site with 6 currently being rebuilt off-site. Typically there are 1-2 cars out of service for maintenance at any given time. NFTA typically has 7 blocks of trains operating during peak service, which means a mix of 2 and 3-car consists. At full capacity, NFTA can operate 27 rail cars for a total of 4,050 passengers.

Metro Rail cars are all high-level boarding, requiring a 300-foot long high-level platform at stations to handle ADA accessibility for a 4-car consist train. The platform length becomes longer (approximately 380 feet) when considering space for ramps at either end of the platform.

Metro Rail & Metro Bus Ridership

Figures 19, 21, and 23 illustrate Metro Bus weekday boardings and alightings at stops located within a 30-minute walk of the stadium sites; Figures 20, 22, and 24 illustrate Metro Bus Sunday boardings and alightings at stops located within a 30-minute walk of stadium sites. Figures 25 and 26 illustrate Metro Rail boardings and alightings at Metro Rail stations for weekday and Sundays.

At the South site, weekday Metro Bus ridership is highest at the ECC South Campus, at stations located near Abbott Road and Southwestern Boulevard, and at McKinley Mall. Sunday ridership is generally low near the South site with the exception of McKinley Mall which experiences a relative high number of Metro Bus boardings and alightings.

At the North site, Metro Bus ridership is dominated by UB students, faculty, and staff, with the highest boarding/ alighting locations within or adjacent to the campus during both the weekday and on Sunday. On Sunday, Metro Bus ridership increases at nearby commercial areas on Maple Road and Sheridan Drive.

At the Downtown site, Metro Bus ridership on weekdays and Sunday is focused at the Downtown transfer hubs, however, there is a higher concentration of boardings and alightings near the intersection of South Park Avenue and Louisiana Street.

Metro Rail Utilization

There is no existing or propose Metro Rail service for the South site. Therefore, under the mode split assumptions, 0% of patrons would utilize Metro Rail for the South site. With proposed Metro Rail

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extension to the north, the mode split assumption for Metro Rail utilization at the North site is 15%, or 10,500 riders. With proposed Metro Rail extensions to DL&W Terminal as well as to the northtowns, the Downtown site assumes heavy use of transit as a component access, with 15% of patrons utilizing Metro Rail, equaling 10,500 riders.

The use of Metro Rail and Metro Bus park-and-ride lots and parking adjacent to Metro Rail can be used as park-and-ride locations for patrons to utilize transit to access stadium sites.

South Site

- There is currently no Metro Rail service to the site and NFTA does not have plans to extend Metro Rail to the site.
- There is limited Metro Bus service to the area; mainly used to service ECC South Campus.
- Opportunities exist for shuttle park-and-ride service by bringing patrons in from satellite parking areas to the site.

North Site

- NFTA is moving forward with plans to extend Metro Rail to UB North Campus and is currently undertaking the necessary environmental reviews and preliminary engineering.
- Expanded Metro Rail service would open up opportunities for park-and-ride to North site (University, LaSalle, downtown, and potential park-and-rides at Boulevard Mall and Dodge Road).
- The North site would be located along service track with no plans for tail track, meaning tail track would need to be constructed near the site to accommodate staging of Metro Rail trains on game days, otherwise patrons would have to wait at station platforms for regular service.

Downtown Site

- NFTA is currently pursuing plans to extend Metro Rail service to DL&W Terminal and provide a station to service the Cobblestone District. Combined with expansion to Northtowns, opportunity exists for substantial transit mode split.
- NFTA owns the DL&W corridor right-of-way east of Michigan Avenue, which could be considered as a corridor to expand Metro Rail service and provide a station closer to the stadium site. New stations would require a 300-foot long high-level platform. This could open up an opportunity for a transit plaza on the south side of the stadium that provides enhanced Metro Rail access. This right-of-way could also support tail tracks that could be used to stage Metro Rail trains for game day traffic.
- Metro Bus routes near the Downtown site likely would need to be rerouted. If Perry Street is closed, then multiple Metro Bus routes would need to be rerouted from Perry Street.

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Additionally, there would be a need to temporality reroute Metro Bus routes on South Park Avenue on game days.

- An estimated demand of 10,500 transit riders would require the equivalent of 70 rail cars. Under the existing Metro Rail system capacity, at 5-minute headways, it would take approximately 90 minutes to move 10,500 passengers.
- Staging of Metro Rail trains on game days would require trains to sit on tail track, which would need to be constructed east of DL&W Terminal. To accommodate staging of train consists, two tail tracks of approximately 2,600 feet each would be needed east of DL&W Terminal (or any other station that would be constructed).
- Currently, Metro Rail handles approximately 1,800 passengers post-event at KeyBank Arena. Post-event staging is conducted by staging two 4-car consists at the station and one 4-car consist in the maintenance yard. Staging of additional trains is limited by tail track availability.

Overall

- For all three of the proposed sites, opportunities for Metro Bus shuttle service could be arranged with NFTA to provide express shuttle service between Metro Bus park-and-ride lots and stadium sites, Metro Rail stations and stadium sites, and/or remote parking locations and stadium sites. This would likely be the situation, especially at the North and Downtown sites, where the ability to provide parking on-site or adjacent to the stadium sites is constrained. Utilizing remote parking areas and express shuttle service could help with access to sites.

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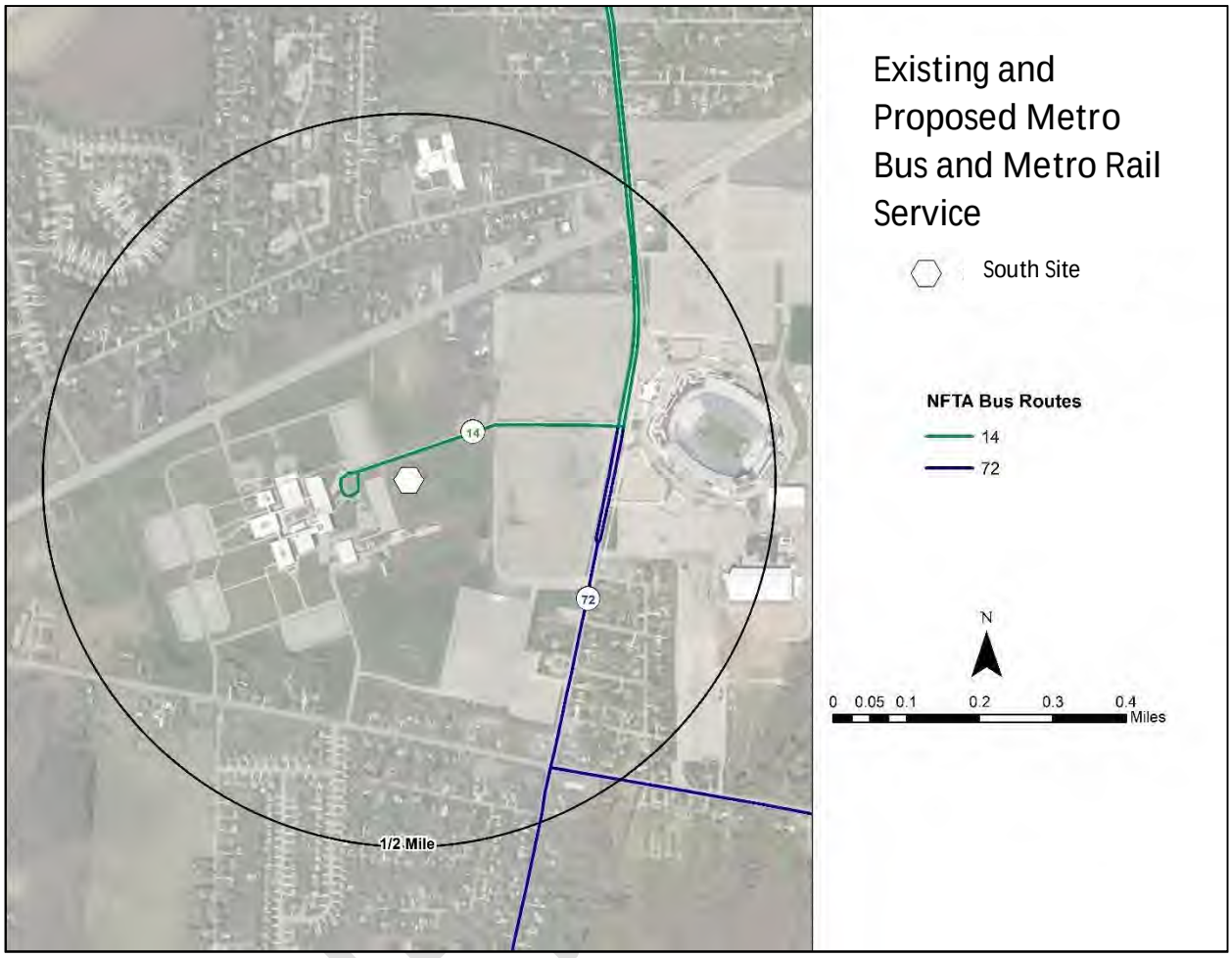
Figure 16: Existing Metro Bus Routes and Existing and Proposed Metro Rail Routes at South Site



Source: WSP and NFTA

Figure 17: Existing Metro Bus Routes and Existing and Proposed Metro Rail Routes at North Site

Source: WSP and NFTA

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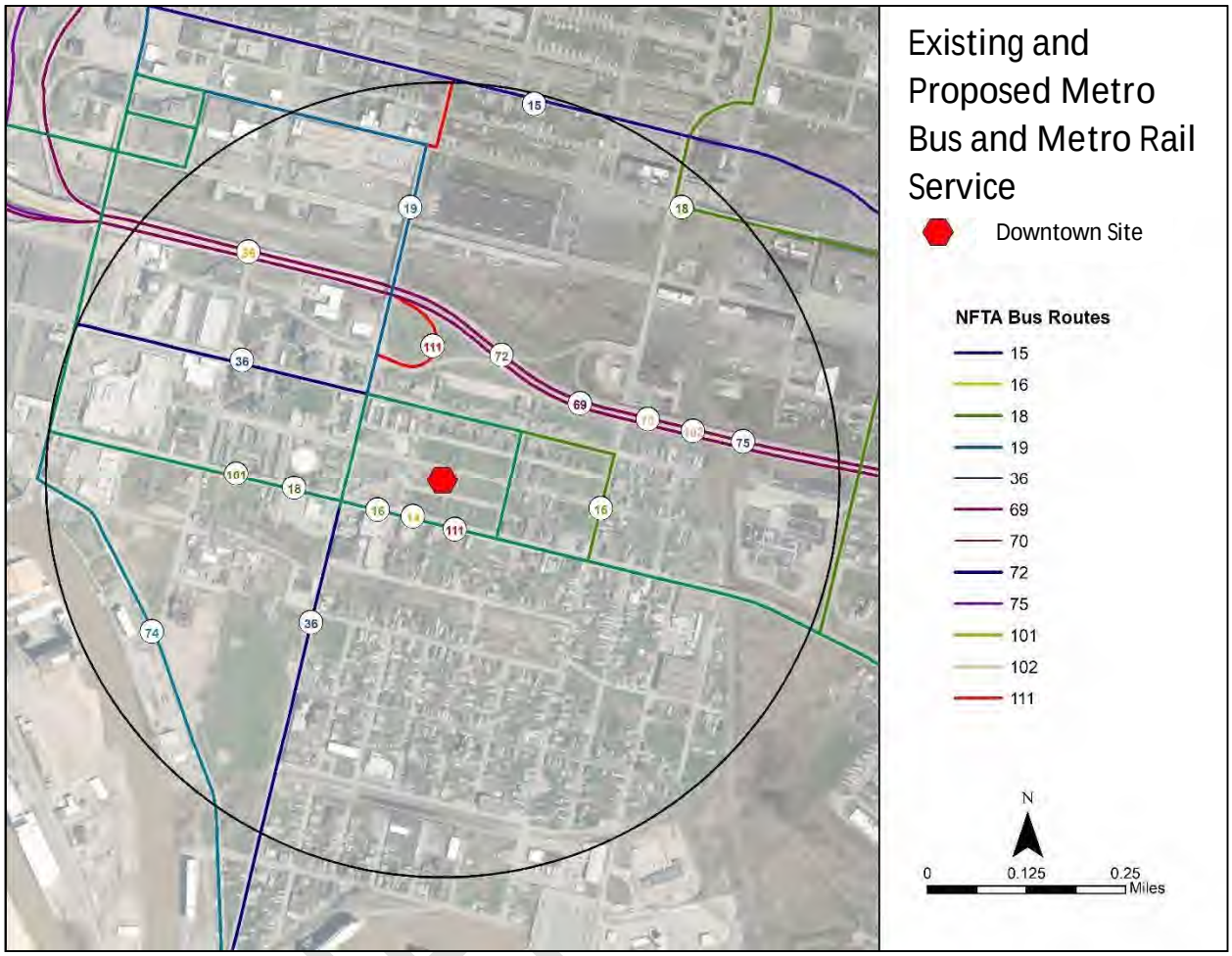
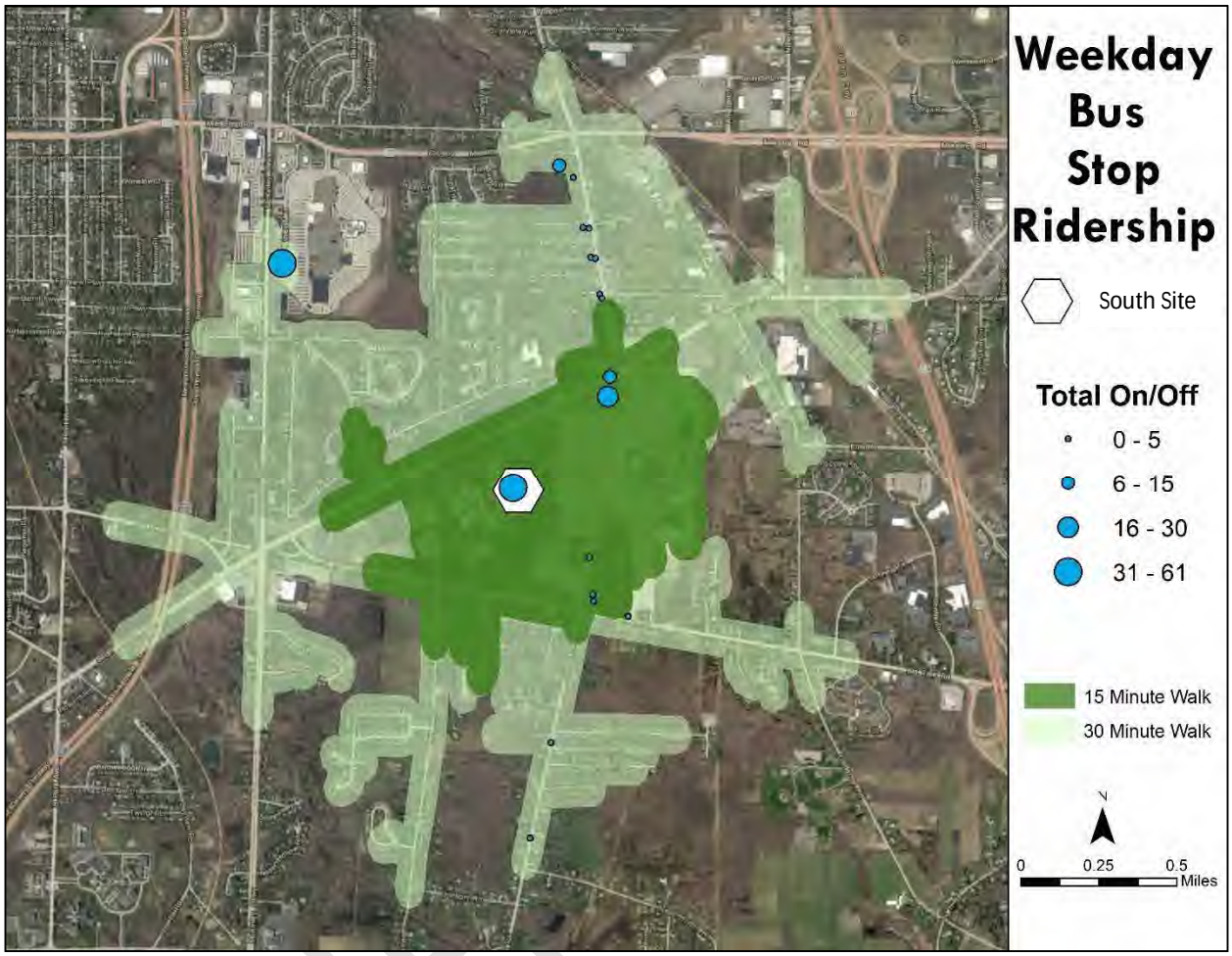
Figure 18: Existing Metro Bus Routes and Existing and Proposed Metro Rail Routes at Downtown Site



Source: WSP and NFTA

Figure 19: Existing Weekday Metro Bus Boardings and Alightings at South Site



Source: WSP and NFTA

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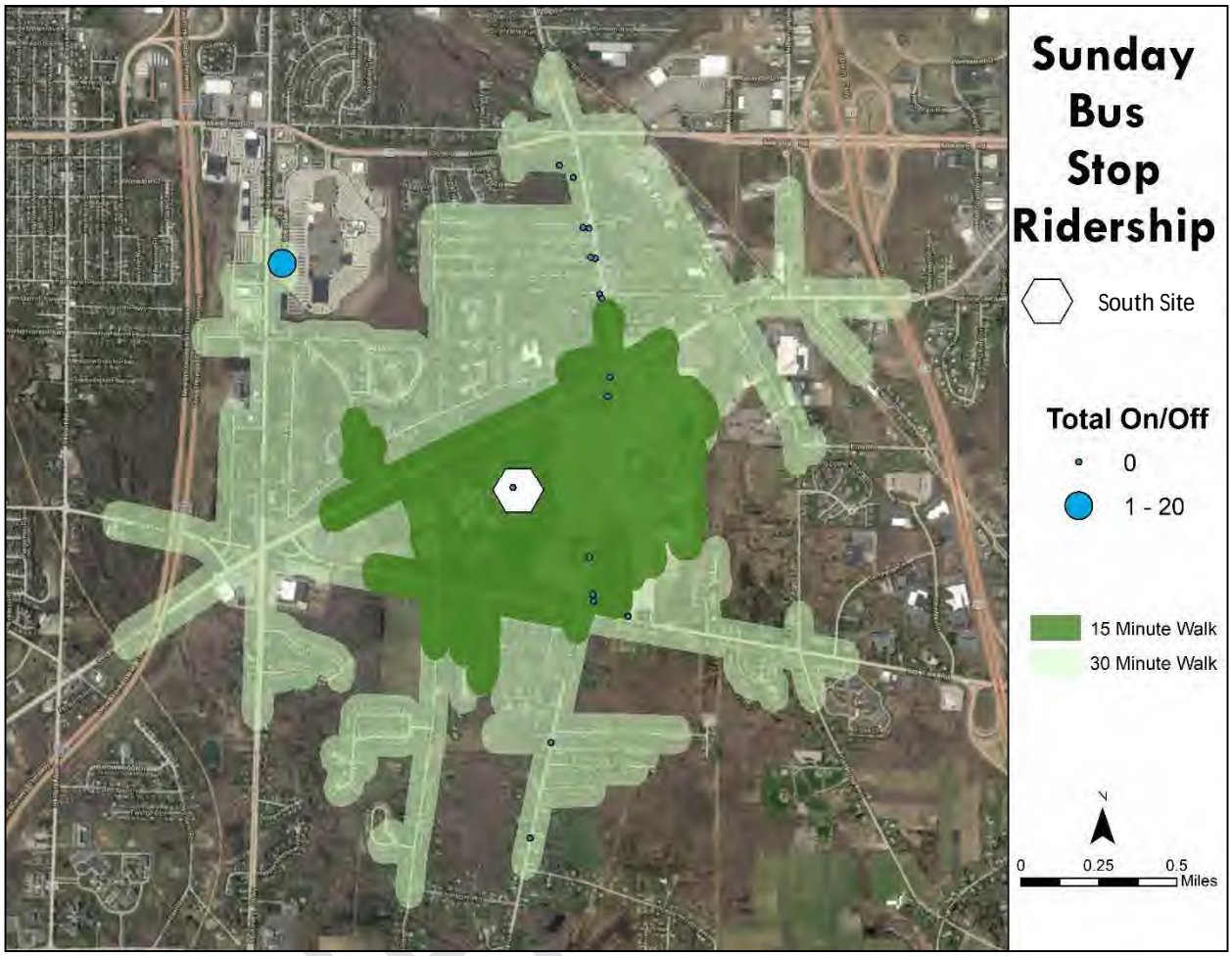
Figure 20: Existing Sunday Metro Bus Boardings and Alightings at South Site



Source: WSP and NFTA

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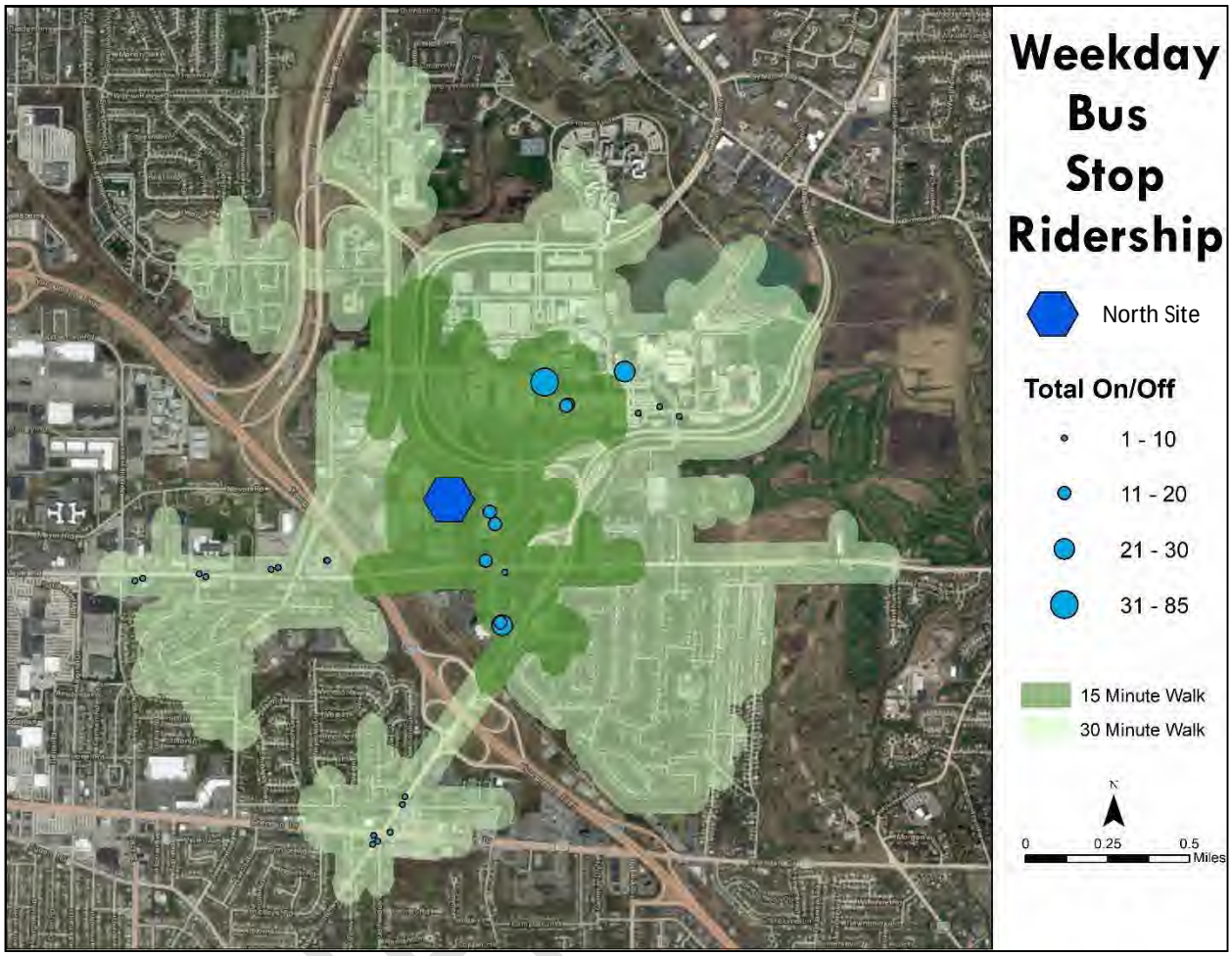
Figure 21: Existing Weekday Metro Bus Boardings and Alightings at North Site



Source: WSP and NFTA

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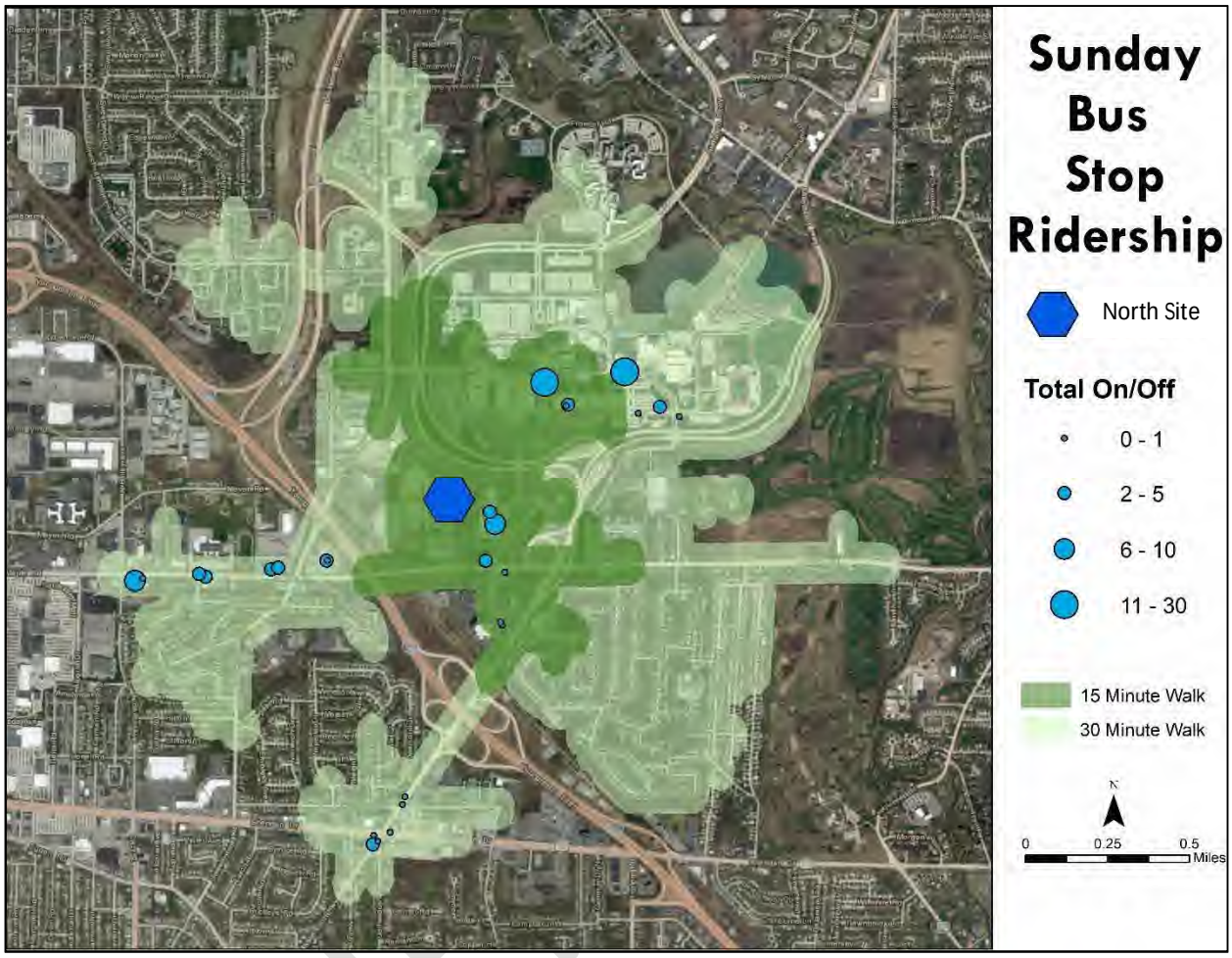
Figure 22: Existing Sunday Metro Bus Boardings and Alightings at North Site



Source: WSP and NFTA

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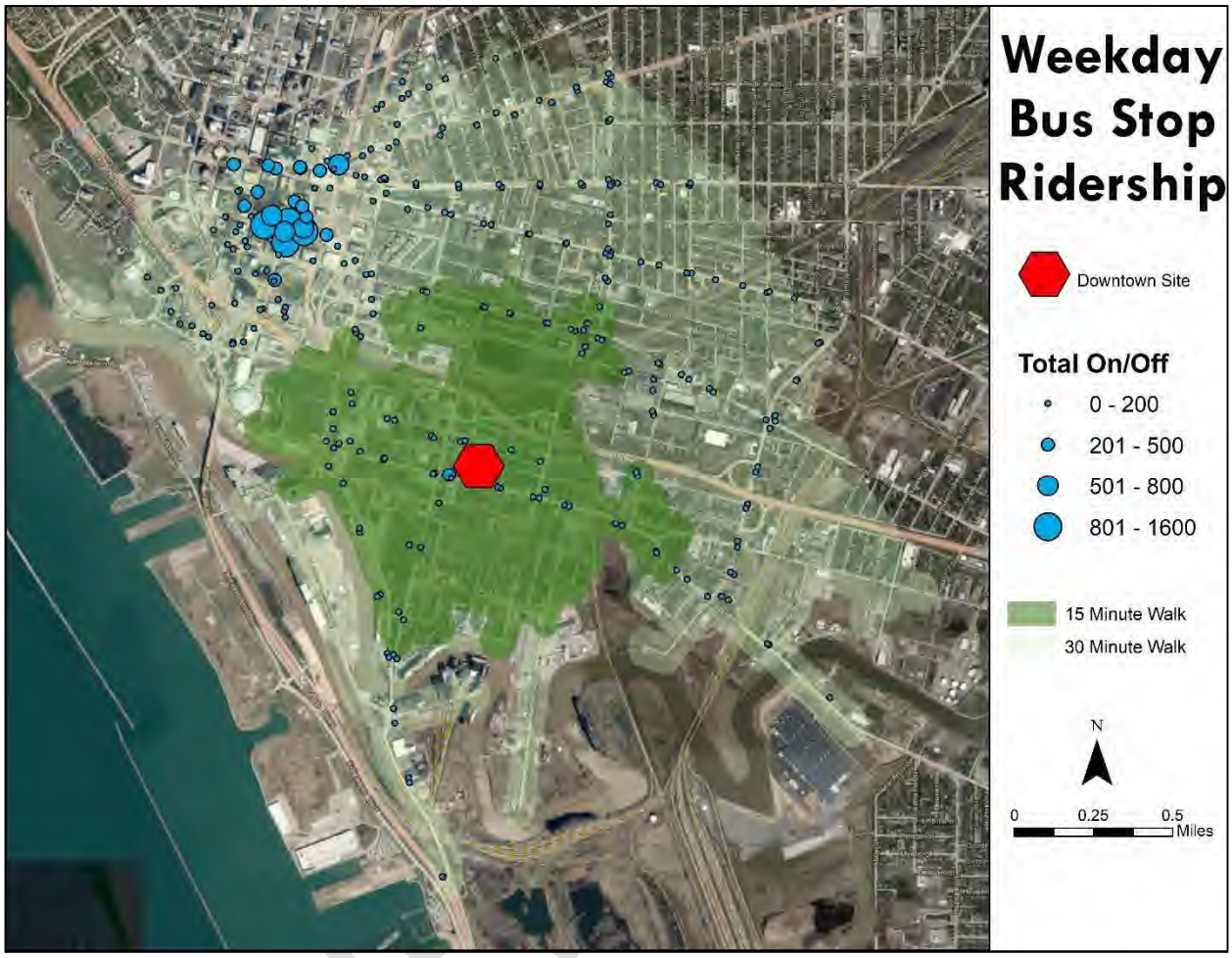
Figure 23: Existing Weekday Metro Bus Boardings and Alightings at Downtown Site



Source: WSP and NFTA

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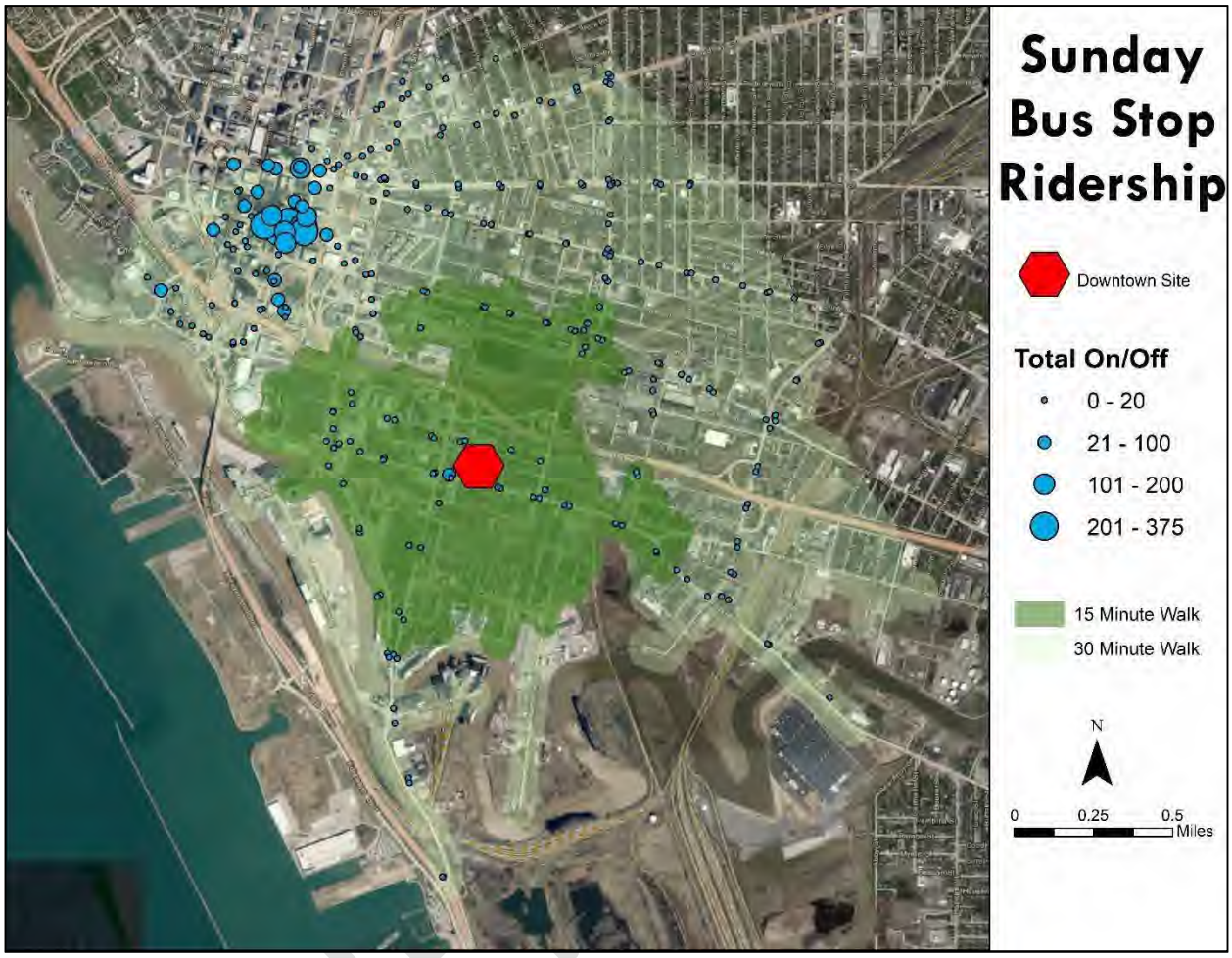
Figure 24: Existing Sunday Metro Bus Boardings and Alightings at Downtown Site



Source: WSP and NFTA

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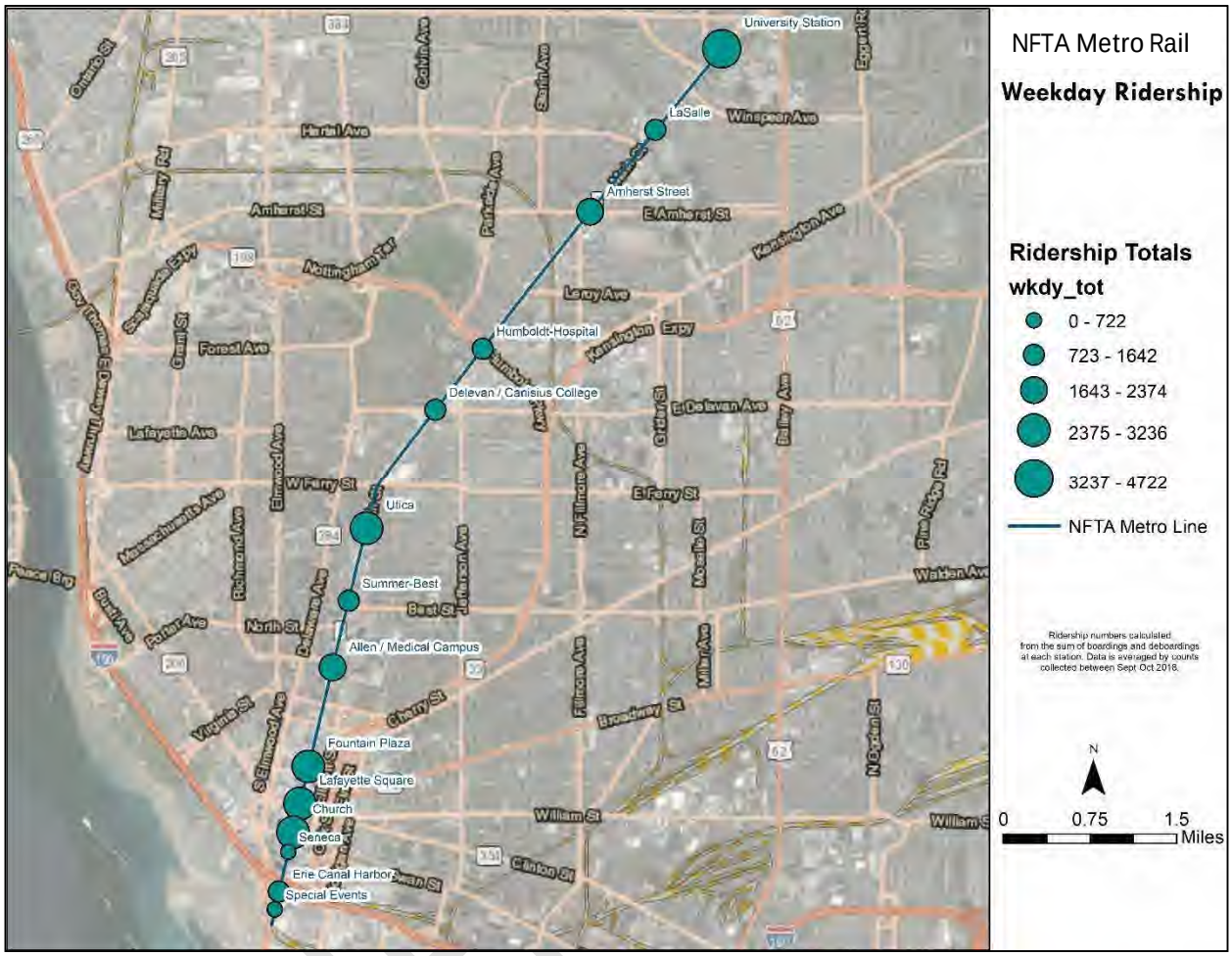
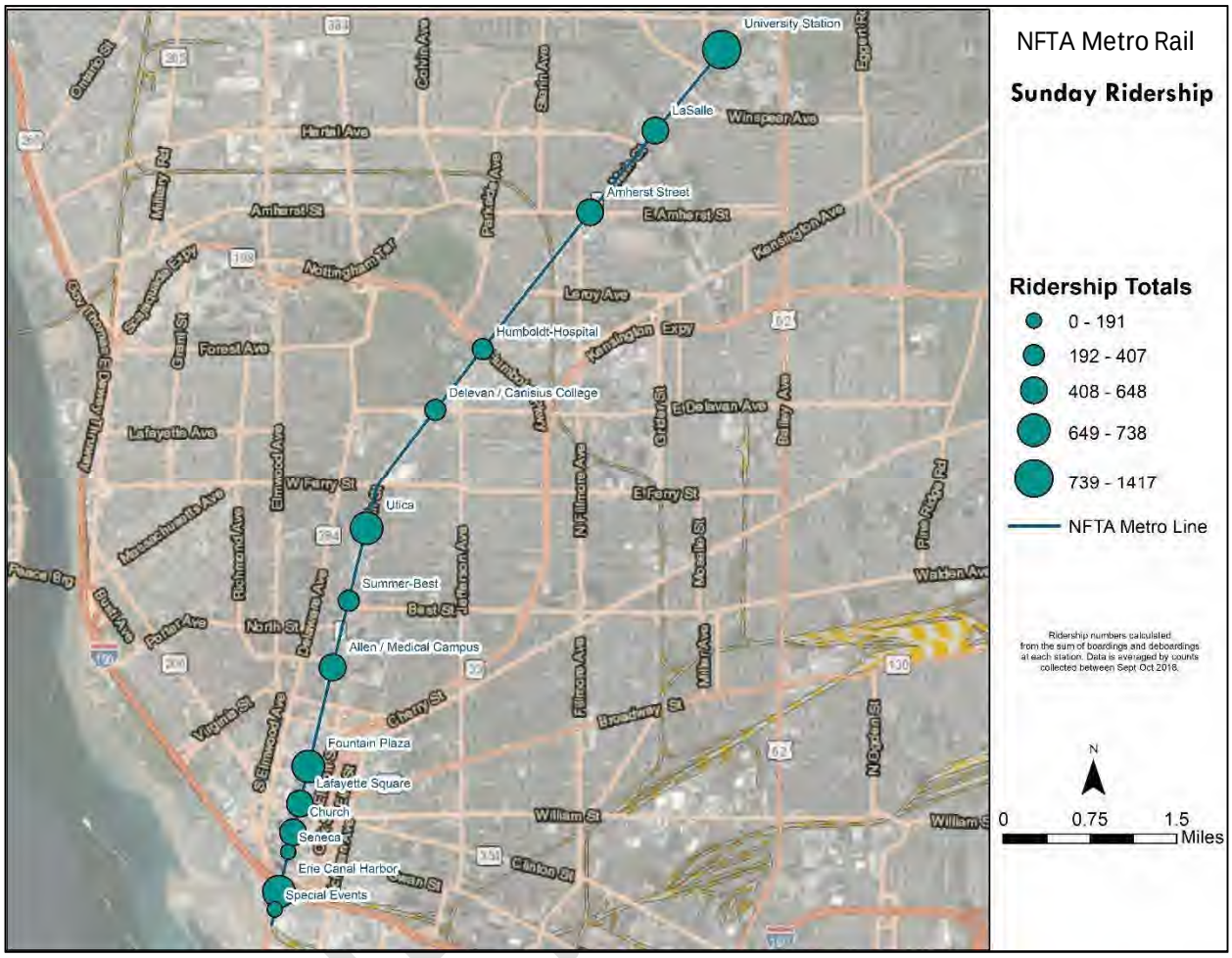
Figure 25: Existing Weekday Metro Rail Boardings and Alightings



Source: WSP and NFTA

Figure 26: Existing Sunday Metro Rail Boardings and Alightings



Source: WSP and NFTA

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5. PEDESTRIAN CIRCULATION

PURPOSE/INTENT

This pedestrian circulation assessment was undertaken to document the existing pedestrian circulation and access conditions and opportunities for each of the three locations under consideration for a new stadium. The locations are referred to as "South" (Orchard Park), "North" (UB North Campus), and "Downtown" (South Park).

METHODOLOGY

Walkshed assessments were developed for the areas around each of the three sites showing a 15-minute walkshed and a 30-minute walkshed around each site. This helps in determining how long it would take an average person to walk from a parking lot, transit stop, shuttle stop, or other location to the stadium site. The walkshed was generated using ArcGis "Create Drivetime Areas" tool which calculates the area that can be reached within a specific travel time or travel distance along a street based on mode of travel. The walkshed used the tool "follows paths and roads that allow pedestrian traffic and finds solution that optimize travel time" and calculates walking speed at 3.1 mph to identify the two walkshed areas. Using a walkshed assessment is more useful than a standard distance ring because the walkshed only considers paths accessible to pedestrians and places walking in terms of time rather than distance, to which more people can relate.

In addition to the walkshed assessment, an assessment of actual walking conditions was undertaken to expand upon the time it would take to walk to include the conditions experienced by pedestrians and weighs the comfortability of walking. The walkway conditions assessment was evaluated based upon the condition of the actual pathway, the route having sidewalk access, the presence of and width of the shoulder on the road, the lighting provided along the path, and general streetscape character (such as building frontages vs. vacant lots) that weigh on the comfortability of walking.

ANALYSIS/FINDINGS

Figures 27, 29, and 31 illustrate the 15-minute and 30-minute walksheds surrounding each of the three sites in relation to parking areas. In the transit discussion, the walkshed is presented in relation to transit stops. Figures 28, 30, and 32 illustrate the walking conditions patrons would experience at each of the sites. Only major corridors were included in the walking conditions assessment.

- The South site is the only site of the three that has a high percentage of available parking located within a 15-minute walkshed of the site. The North and Downtown sites have limited available parking with the 15-minute walkshed, meaning either additional parking would need to be incorporated near the sites, patrons would be expected to walk further to the stadium, or shuttle systems may need to be arranged to transport patrons from parking areas further away to the stadium.

South Site

- The 15-minute walkshed for the South site doesn't extend much beyond the triangle created by Southwestern Boulevard, Big Tree Road, and Smokes Creek. This is where the majority of Owner

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Controlled and Primary Parking is available, so most of the parking areas fall within the 15-minute walkshed.

- Primary constraint of this walkshed is lack of roadway grid in area.
- Walking conditions to/from the stadium site are already familiar to patrons. Sidewalks exist along Southwestern Boulevard and Abbott Road, and roadways within the ECC Campus are generally accessible. There are no sidewalks on Big Tree Road. Patrons use the shoulder now on game days.
- Interior pedestrian corridors would be needed to traverse the site to access the stadium from parking areas.
- A large portion of parking would likely be located east of the stadium site which would require at least temporary closure of Abbott Road on game days to support pedestrian movements (current game day condition).
- Traffic control on game days at major intersections will continue to be needed to ease pedestrian circulation.

North Site

- The 15-minute walkshed for the North site does not extend much beyond the UB North Campus and the triangle area created by Maple Road, I-290, and Millersport Highway. Some Primary Parking is located within this walkshed, but most is located beyond in the 30-minute walkshed. The 30-minute walkshed is mostly constrained to the Campus.
- The walkshed is constrained by Millersport Highway, I-990, I-290, Maple Road overpass of I-290, and overhead powerline corridors.
- Walking conditions at the North site are less favorable as the UB North Campus area was really built to accommodate commuter vehicular traffic. Sidewalks exists within the interior of the campus but few pedestrian accommodations exist between the campus and surrounding areas and along streets along the periphery of the campus.
- Accessing areas off-campus offer difficult walking conditions along Maple Road, which has no sidewalk along the elevated portion over I-290 and Millersport Highway and Audubon Parkway, which have no sidewalks. The I-290, Maple Road overpass, Millersport Highway, Audubon Parkway, and I-990 act as barriers to pedestrian connectivity.
- Stadium access would be predominately from 2 sides – the north and east.
- The *Building UB: The Comprehensive Physical Plan* proposes enhanced pedestrian accessibility across the campus and between the campus and neighboring areas.

Downtown Site

- There is a limited amount of Owner Controlled and Primary Parking available within the 15-minute walkshed of the Downtown site. This is limited to the surface lots in the Cobblestone

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District, the KeyBank Arena ramp, and a few parking areas under the I-190. Most of the parking for this site would come from throughout the 30-minute walkshed, which extends into downtown and Larkinville.

- The walkshed is constrained by the Buffalo River, railroad right-of-way, and I-190 (an elevated highway).
- Providing pedestrian access over the Buffalo River would require a moveable bridge as the Buffalo River is a navigable waterway and requires a 100-foot clearance. Enhanced walkways would be needed over the I-190 to access areas to the north (for example, Michigan, Louisiana, Hamburg, Van Rensselaer, Smith).
- Just about all streets in the vicinity of the Downtown site have sidewalks; with varying degrees of comfort and condition. Roadways that take patrons across or under I-190 are in poor condition.
- The DL&W corridor has potential to be used as a pedestrian corridor to/from the site.
- Exchange Street is only accessible from Louisiana Street and Hamburg Street via pedestrian stairways. Access is not ADA compliant.
- Many corridors, such as Exchange Street, Louisiana Street, Hamburg Street, Perry Street, have long stretches with fair or poor walkability conditions.

Overall

- For all three sites, improved pedestrian connectivity is needed between existing and proposed parking areas/ transit stations and the stadium site.

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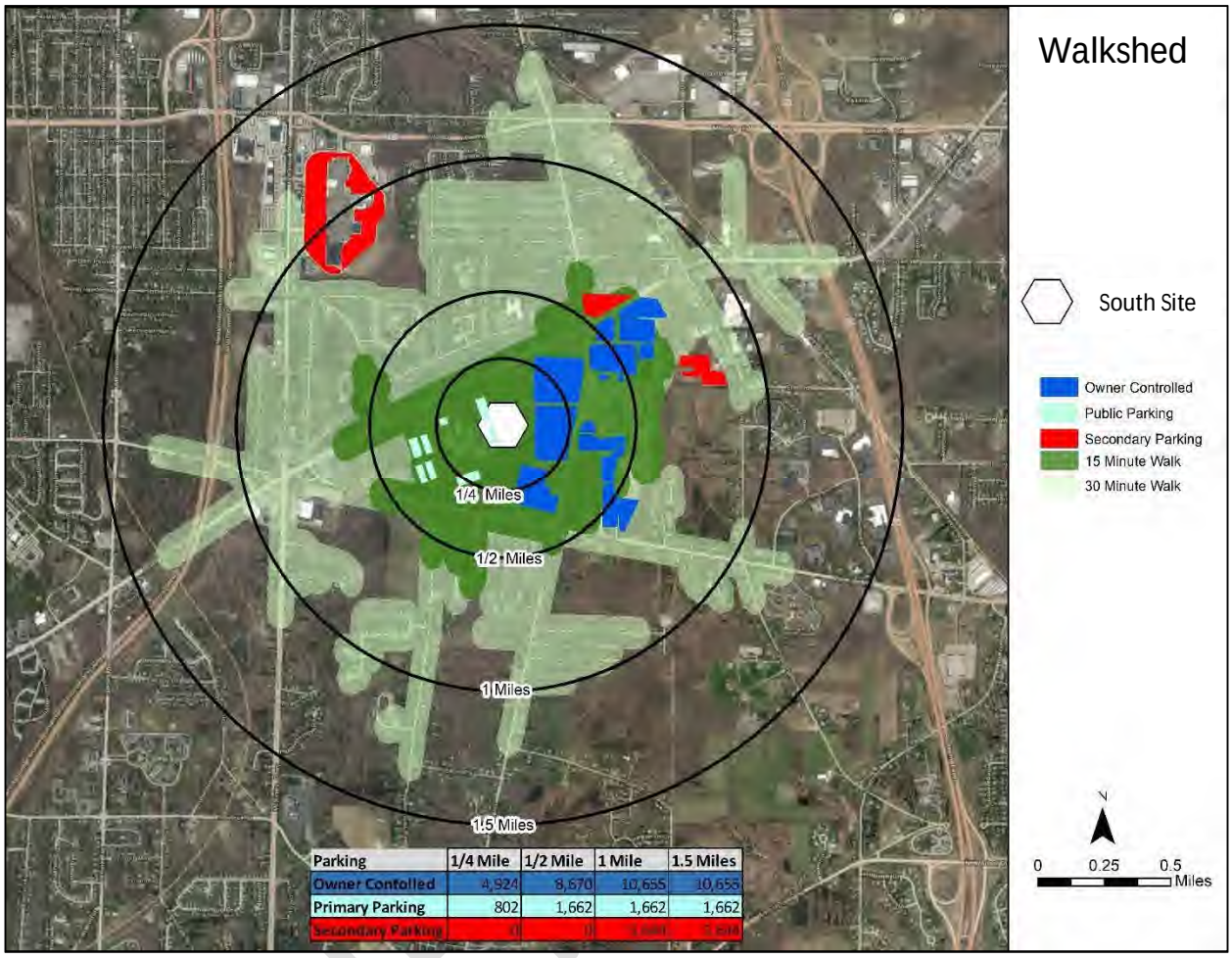
Figure 27: Walkshed Assessment of South Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Controlled	4,924	8,670	10,655	10,655
Primary Parking	802	1,662	1,662	1,662
Secondary Parking	0	0	[illegible]	[illegible]

Source: WSP

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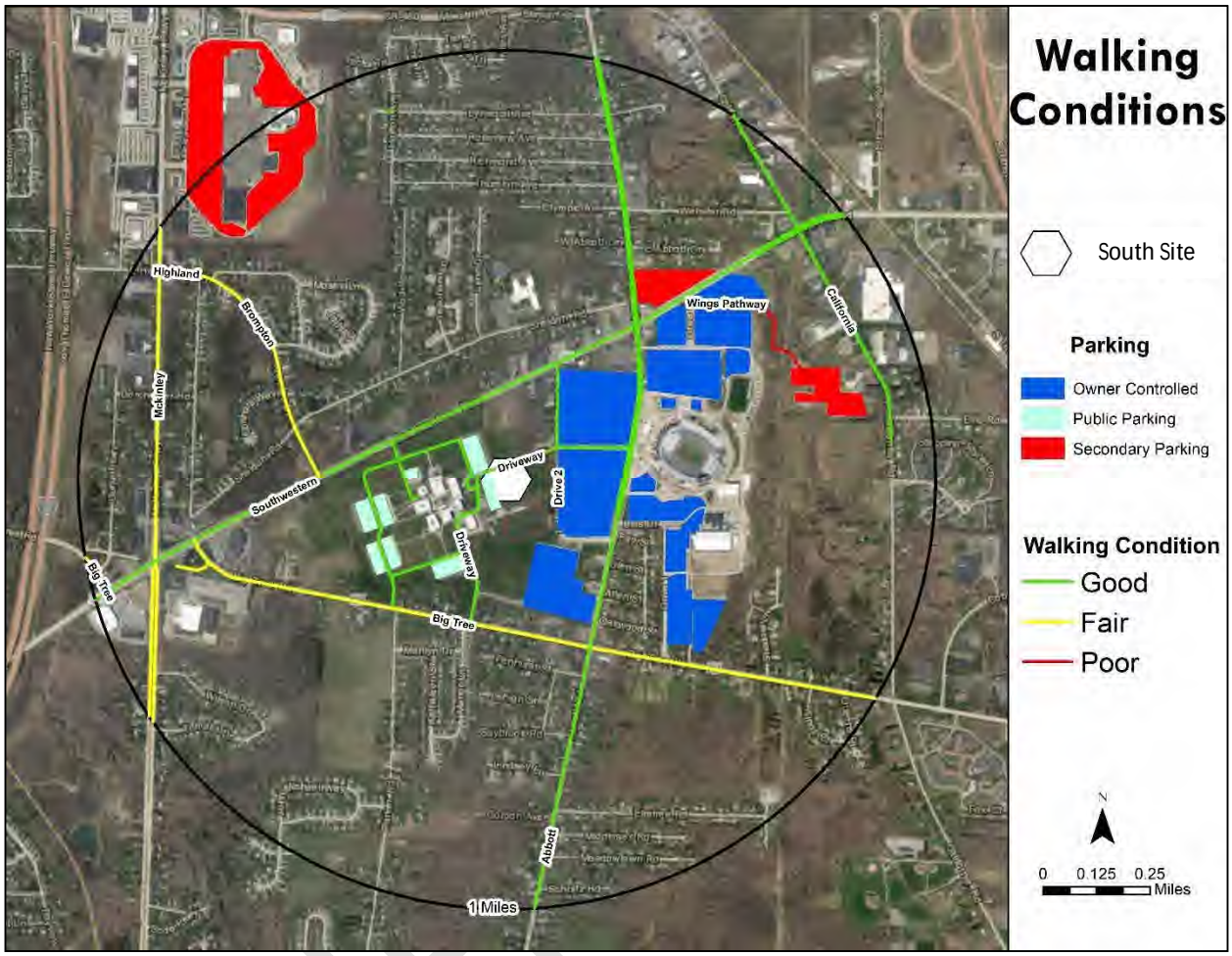
Figure 28: Walkshed Conditions of South Site



Source: WSP

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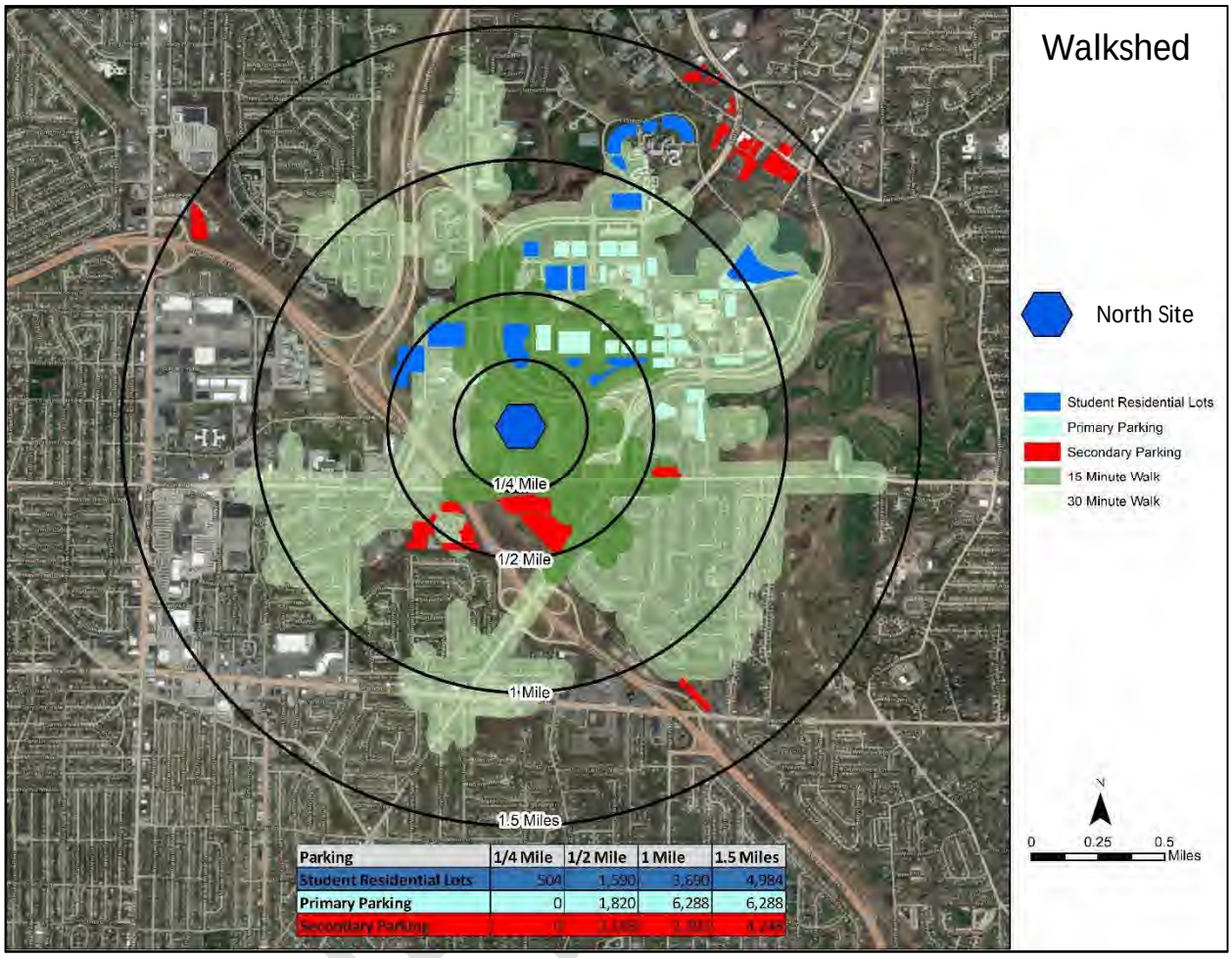
Figure 29: Walkshed Assessment of North Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Student Residential Lots	504	1,590	3,690	4,984
Primary Parking	0	1,820	6,288	6,288
Secondary Parking	[illegible]	[illegible]	[illegible]	[illegible]

Source: WSP

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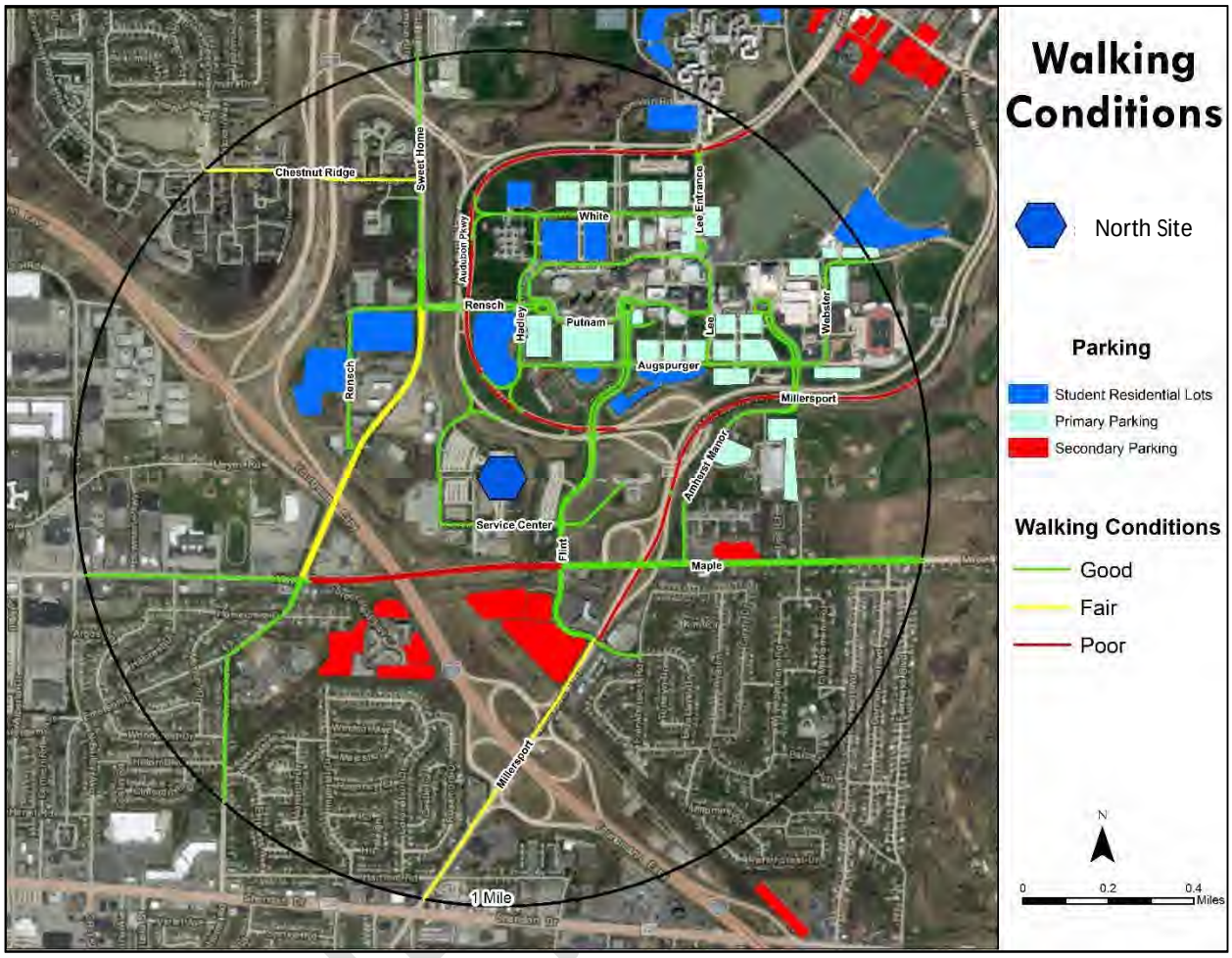
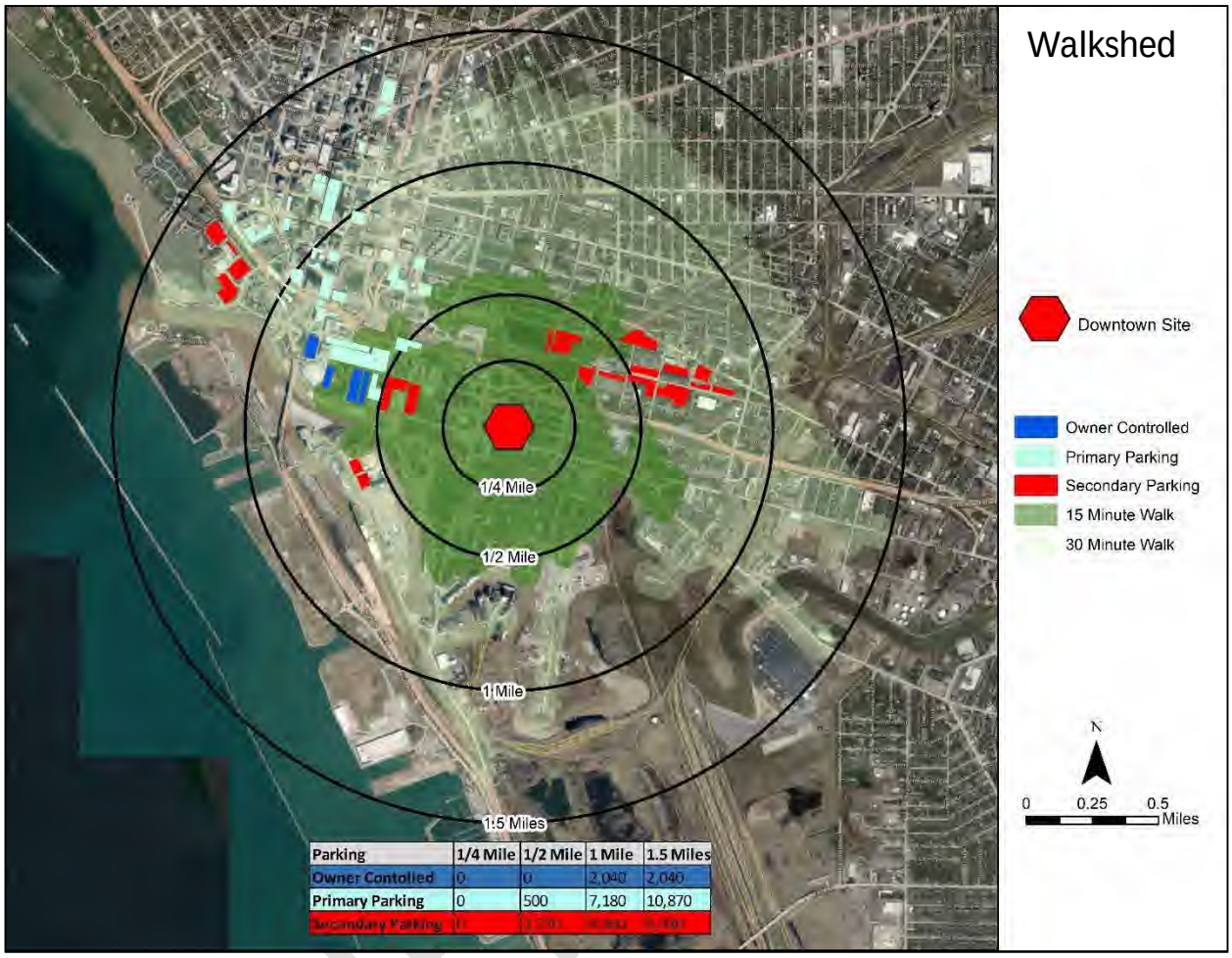
Figure 30: Walkshed Conditions of North Site



Source: WSP

Figure 31: Walkshed Assessment of Downtown Site



Parking	1/4 Mile	1/2 Mile	1 Mile	1.5 Miles
Owner Controlled	0	0	2,040	2,040
Primary Parking	0	500	7,180	10,870
Secondary Parking	0	[illegible]	[illegible]	[illegible]

Source: WSP

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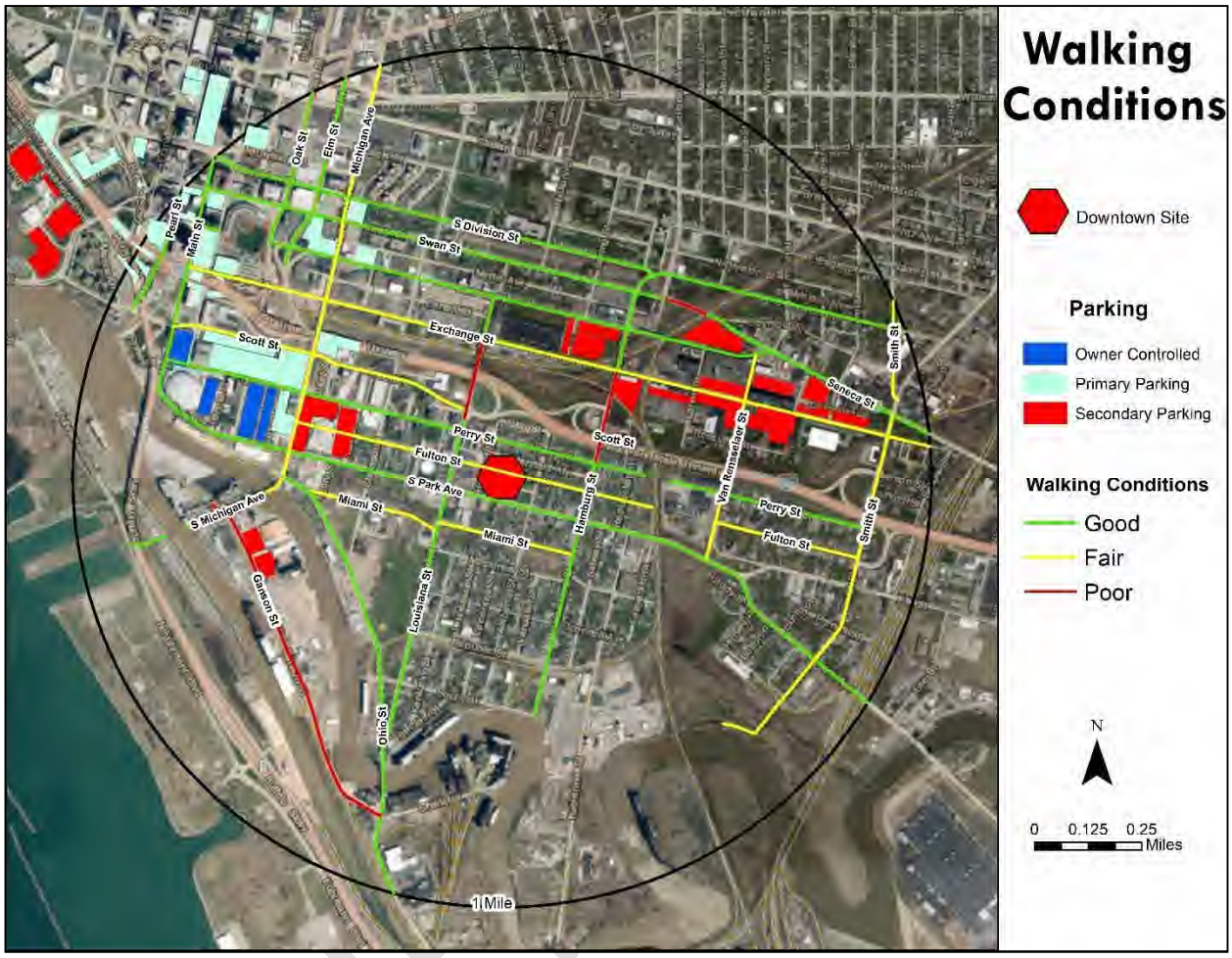
Figure 32: Walkshed Conditions of Downtown Site



Source: WSP

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SITE EVALUATION NEW STADIUM
UTILITY ASSESSMENT

February 26, 2019

EXECUTIVE SUMMARY

This part of the evaluation provides a "high level" summary of the main utilities at each of the three sites including water supply, sanitary sewer, storm drainage, natural gas, power, and data services. The utility evaluation results in a relative comparison and scoring of each site based on the criteria of; available capacity, magnitude of required improvements, degree of difficulty, and cost.

Based on our research and analysis the overall relative ranking of the sites from high to low is Orchard Park, SUNY Buffalo and South Park. This ranking considered utility aspects only and did not consider environmental, ownership, land acquisition, legal, political, regulatory or other factors.

South Park **Overall Score: 53**

No significant issues with available capacity were identified at the South Park site. However, the South Park site has numerous existing utility facilities that need relocation. All of these are public utilities that serve outlying areas of the community beyond the site. These utilities include the following:

- Primary power duct bank on Perry Street owned by National Grid.
- Possible relocation of existing power substation owned by the Buffalo Municipal Housing Authority.
- 48" diameter public water main on Fulton Street owned by the Buffalo Water Authority.
- 60" diameter storm relief sewer on Fulton Street owned by the Buffalo Sewer Authority.
- 12" diameter medium pressure gas main on Perry, Alabama and Fulton Streets owned by National Fuel Gas.
- Existing fiber optic communications lines on Perry Street owned by Fibertech, Verizon, Spectrum (formerly Time Warner) and others.

These utilities are all active and this adds greatly to the complexity and cost resulting in poorer scores for magnitude, difficulty and cost.

Orchard Park **Overall Score: 74**

Being close to the existing New Era Field the capacity of required utilities are adequate for a new stadium in all cases. The Orchard Park site rated highest primarily because the location of the

proposed site is relatively clear of existing facilities that would need to be modified and/or relocated from under the stadium "footprint". This results in better scores for magnitude of improvements, degree of difficulty, and costs.

SUNY Buffalo Overall Score: 62

No significant issues with available capacity were identified at the SUNY Buffalo site. However, there are also numerous existing utility facilities on the proposed site that need to be cleared, and in some cases, relocated to maintain service. The most notable example is the numerous electrical power feeds for the entire campus run from the existing campus substation across the site under stadium footprint. There are also other utilities serving the substation and the Erie County Water Authority Ball Pumping Station that would need to be relocated and restored. Although not insurmountable, these result in poorer scores for magnitude, difficulty and cost.

Another significant additional cost at the SUNY Buffalo site is the sanitary sewer flow offsets or mitigation fee required by the Town of Amherst according to Local Law Section 160-80 Article XVI. If the mitigation fee option is chosen, the fee is based on the projected peak wastewater discharge rate for the new stadium and would equate to a payment of $2.97 million to the Town.

Schedule Notes:

Both the South Park and SUNY Buffalo sites involve significant utility modifications and relocations that present many unknowns for scheduling which are largely unpredictable. These elements would likely require alternative studies, planning, design, and permitting involving reviews and approvals from numerous public agencies. The high magnitude of the utility construction would require at least a full season of heavy construction before the sites would be ready for stadium construction. These factors create a challenge for fast tracking stadium design and construction and would likely add 18-24 months to the schedule.

Conversely, the Orchard Park site is relatively clear and "shovel ready" which would accommodate fast track scheduling. Assuming the County and the Bills continue their current partnership the County could retain ownership of the facility. The County, as a "self-permitting" agency, could control and/or lead the majority of the environmental reviews and permitting.

SOUTH PARK SITE

A. WATER SUPPLY
   1. EXISTING:
      a. The site is located in a City of Buffalo and served by the Buffalo Water Authority municipal water system (BWA) managed under Veolia.
      b. Existing BWA water facilities include:
         i. Louisiana Street: 20" waterline installed in 1908.
         ii. Fulton Street: 48" main transmission line installed in 1909 and 6" distribution line installed in 1885.
         iii. South Park: 10" distribution line installed in 2001.
         iv. Hayward Street: 8" distribution line.
         v. Alabama Street: 8" distribution line installed in 1885.
      c. BWA Hydrant Flow Test: 10" distribution line, 9/21/2006 (South Park @ Marvin)
         i. Static Pressure 73 psi Residual Pressure 71 psi
         ii. Measured Flow 1300 gpm Fire Flow @ 20 psi residual 7629 gpm
      d. BWA Hydrant Flow Test: 10" distribution line, (Perry @ Marvin) date unknown
         i. Static Pressure 74 psi Residual Pressure 72 psi
         ii. Measured Flow 1361 gpm Fire Flow @ 20 psi residual 8068 gpm

   2. REQUIRED IMPROVEMENTS:
      a. Existing BWA delivery pressure and volume is very good in this area and is adequate to supply the anticipated demands.
      b. The existing 48" transmission line on Fulton is located right under the proposed stadium footprint and would need to be relocated. Likely alignment would be from Louisiana and Fulton south to South Park, then east to Hamburg, then north back up to tie in at Fulton (total ±2500 feet). It may be possible to locate a similar alignment on an easement on stadium property to avoid disturbance and restoration on City streets.
      c. It is assumed three separate new private domestic, hydrant and fire suppression loops would be built around entire stadium (total ± 11,000 feet).
      d. The need for a fire pump would be evaluated during design. If necessary fire pump system would be equipped with standby emergency power supply, or diesel or gas powered.
      e. Permits will be required for the public water supply system improvements and backflow prevention devices.
      f. See exhibit sheet for conceptual estimate of water supply system improvement quantities.

B. SANITARY SEWER
1. EXISTING:
a. The proposed stadium site is located in the Hamburg-Smith sewer district area in the City of Buffalo. Sanitary and storm drainage is provided by way of the combined sewer system operated by the Buffalo Sewer Authority (BSA). Combined sewer flows are conveyed in sewer interceptors to the BSA Bird Island Treatment Plant in the Niagara River. Based on information from previous studies the Plant has an allowable flow limit of 180 MGD and sees an average daily flow of approximately 129 MGD. Many of the collection sewers experience wet weather flows which exceed sewer capacity and are overflowed into a system of relief sewers which are discharged into surface waters in permitted combined sewer overflow outfalls (CSO's). Therefore, additional wastewater flow to the plant is managed and regulated by a wastewater permits from the City, Erie County Health Department and the NYSDEC.
b. Existing BSA sewer facilities include:
i. Louisiana Street: 24" combined sewer.
ii. Perry Street: 24" and 21" combined sewer.
iii. Fulton Street: 60" storm relief sewer and 12" combined sewer.
iv. South Park: 36" combined sewer.
v. Hayward Street: 12" combined sewer.
vi. Alabama Street: 10" combined sewer.
c. The Fulton Street 60" storm relief sewer flows westerly across Louisiana Street to a 11'x12' relief sewer that runs southerly on along the west side Louisiana Street through Conway Park (formerly Ohio Basin) across Ohio Street to discharge into the Buffalo River. The discharge point is an existing permitted combined sewer overflows (CSO #023 and 064).

2. REQUIRED IMPROVEMENTS:
a. A Sanitary Sewer Extension permit will be required from the NYS Department of Environmental Conservation (NYSDEC) as administered by the Erie County Health Department (ECHD). A permit will also be required from the Buffalo Sewer Authority. These permits will require the applicant to furnish a Downstream Capacity Analysis (DSCA) including flow monitoring. The DSCA will help determine the routing for the new sanitary flows and scope of the required improvements.
i. BSA Sewer Permits do require nominal administration permit fees and flow monitoring. However, flow offsets and fixed fee payments (mitigation fees)

for additional peak flow have not been traditionally been required by the BSA.

b. The existing 60" storm relief sewer on Fulton Street is located right under the proposed stadium footprint and would need to be relocated. Likely alignment would be from Louisiana and Fulton south to South Park, then east to Hamburg, then north back up to tie in at Fulton (total ±2500 feet). It may be possible to locate a similar alignment on an easement on stadium property to avoid disturbance and restoration on City streets.
c. New stadium sewers will be separate sanitary and storm sewers.
d. The existing BSA 24" sewer on Perry Street and/or the 36" sewer on South Park are anticipated to be tied into for the new stadium sanitary sewer. If these sewers do not have adequate capacity to handle the game day peak flow from the new stadium facility a detention tank may be required.
    i. Similar to the existing New Era Field, a detention tank could be built with sufficient volume to provide temporary storage to for peak game day flows and allow for a regulated discharge rate that would prevent overflows and surcharging into the downstream sewers. Based on the volume of the existing detention tank at the 80,000 capacity New Era Field, the equivalent tank size for a 65,000 capacity stadium would be approximately 210,000 gallons. The tank would likely be built of poured concrete to assure water tightness.
e. The majority of the smaller diameter onsite sewers served the now vacant public housing complex and would be abandoned and removed as necessary during stadium construction.
f. See exhibit sheet for conceptual estimate of sewer system improvement quantities.

C. STORM DRAINAGE
1. EXISTING:
    a. As described above the existing BSA sewer system including street and property drainage is a combined storm and sanitary sewer system.
    b. There are no separate storm sewers in the proposed stadium area. Existing street receivers are connected to the BSA combined sewer system.
    c. There are no existing stormwater management facilities on the existing drainage system for water quality treatment or regulated discharge.

2. REQUIRED IMPROVEMENTS:

a. Stormwater Permit Required: Under the City of Buffalo Unified Development Ordinance (UDO) Article 7.3 the stadium project will require a permit from the Buffalo Sewer Authority (BSA) and a Stormwater Pollution Prevention Plan prepared in accordance with BSA requirements including permanent stormwater management practices for runoff reduction, water quality, and peak discharge regulation. A brief summary of the performance standards and design criteria are as follows:
   i. As per UDO section 7.3.3, since there are no available storm sewers the preferred point of discharge for stormwater is a storm relief sewer.
   ii. Where stormwater is discharged to a storm relief sewer the post-development peak discharge for a 25-year rainfall event must be regulated on site to be less than the pre-development 2-year peak discharge rate.
   iii. As per UDO section 7.4.4, "green infrastructure" best management practices to reduce runoff volume, such as infiltration, green roofs, and rainwater harvesting, should be utilized where practicable.
   iv. On site stormwater detention with underground storage facilities may be employed where green infrastructure practices cannot be fully implemented due to site constraints.
b. It is assumed that the stadium site would be designed to discharge into the available storm relief sewer. Green infrastructure practices would be employed where feasible and underground detention storage would also be required.
c. See exhibit sheet for conceptual sizing and anticipated stormwater management improvements.

D. NATURAL GAS
1. EXISTING:
   a. Gas utility service is provided by National Fuel Gas Corp. (NFG). The following existing NFG facilities have been identified in in the proposed stadium site:
      i. Louisiana Street: 2" plastic, medium pressure 60 psi MAOP (maximum allowable operating pressure).
      ii. Perry Street: 12" steel and 2" plastic, medium pressure 60 psi MAOP.
      iii. Alabama Street: 12" steel and 6" plastic, medium pressure, 60 psi MAOP.
      iv. Fulton Street: 12" steel and 2" plastic, medium pressure, 60 psi MAOP.
      v. South Park: 2" plastic, medium pressure, 60 psi MAOP.

2. REQUIRED IMPROVEMENTS:

a. The existing NFG distribution system is anticipated to have capacity for new stadium load (± 97 MCFH, open air). This would be confirmed with NFG during design.
b. The existing NFG 12″ distribution main on Perry, Alabama and Fulton Streets would be under the proposed stadium footprint and need to be relocated. A probable alignment would be from Perry and Louisiana along the south side of the I-190 right of way to Hamburg Street, then south on Hamburg to tie back into the existing lines at the intersection of Fulton and Hamburg. Total length ± 2500 feet.
c. The majority of the smaller diameter onsite gas lines serving the vacant public housing complex and vacated businesses would be abandoned and removed as necessary during stadium construction.
d. Assume ±500 feet new 4″ or 6″ service and dual meter set for the new stadium.

E. POWER
1. EXISTING:
a. Electrical power service is provided by National Grid. The existing distribution system has capacity for the loads identified including multiple circuits for redundancy.
b. There is an existing National Grid substation in the BMHA service center located at the northwest corner of Perry Street and Hayward Streets. This substation is in service for the BMHA housing complex.
c. In addition to the substation described above, existing National Grid facilities in the proposed stadium site include the following:
i. Louisiana Street: Overhead primary power and street lighting plus underground conduit.
ii. Perry Street: Overhead primary power and street lighting. 12x4″ underground duct bank and manholes.
iii. Hayward Street: Overhead lighting.
iv. Alabama Street: Overhead lighting.
v. Fulton Street: Partial overhead lighting.
vi. South Park: Two, 1 x 2-1/2″ underground conduits for street lighting.
d. There is a site lighting network in the vacant BMHA housing complex which is assumed to be owned by BHMA.

2. REQUIRED IMPROVEMENTS:

a. It is assumed that the existing substation would need to be relocated. The existing substation is located close to the stadium footprint and may conflict with the proposed realignment of Perry Street.
b. The existing primary power facilities and on Perry Street would need to be relocated to accommodate the proposed stadium and Perry Street realignment along with new street lighting.
c. All the existing power and street lighting on the BMHA and other properties to be vacated would be abandoned and removed.
d. The new stadium would require medium voltage distribution equipment.

F. COMMUNICATIONS TECHNOLOGY
1. EXISTING:
a. Fiber optic data and communication service is available to the South Park site.
b. Based on returns from a Dig-Safe-New-York "design tickets" for Perry, Fulton and South Park Avenue the following communications companies have facilities in the area:
i. Time Warner Cable: CATV
ii. Fibertech Networks: fiber optic

ORCHARD PARK SITE Current Erie Community College South Campus

A. WATER SUPPLY
   1. EXISTING:
      a. Campus property straddles the municipal boundary of the Towns of Hamburg and Orchard Park. The site is located in the Hamburg-Orchard Park Joint Water District.
      b. The Town of Hamburg municipal water system owned and operated by the Erie County Water Authority (ECWA).
      c. The Town of Orchard Park municipal water system owned by the Town and operated by the Erie County Water Authority (ECWA) under a lease-management agreement. Water supplied by the ECWA.
      d. Existing Campus water supply is a single 12" service extended across Abbott Road from New Era Field at One Bills Drive. Existing delivery volume is marginal. Delivery pressure is chronically low.
      e. ECWA Hydrant Flow Test 6/2/2015:
         i. Static Pressure 40 psi Residual Pressure 34 psi
         ii. Measured Flow 1500 gpm Fire Flow @ 20 psi residual 2874 gpm
      f. Existing New Era Field fed by single 16" diameter service tapped off 42" main on Big Tree Road. Primary public water supply source is existing ECWA 42" diameter waterline at Big Tree and Abbott Roads.
      g. Southwestern Blvd.:
         i. ECWA 36" PCCP (pre-stressed concrete cylinder pipe) transmission main north side of Southwestern Blvd.
         ii. ECWA 8" distribution main connects to 6" Orchard Park main at Town line.
      h. Abbott Road: Town of Orchard Park 8" distribution main on west side of road.
      i. Big Tree Road: ECWA 8" distribution main on south side of road connects to 6" Orchard Park main at Town line.

   2. REQUIRED IMPROVEMENTS:
      a. Existing delivery volume is marginal. Delivery pressure is chronically low in this area.
      b. Booster pumps will be required for domestic and fire suppression systems. These systems will be similar in magnitude to the existing booster and fire pump systems at the existing New Era Field and Field House. Pumping systems would be equipped with standby emergency power supplies.

c. Existing 8" distribution lines on Big Tree and Southwestern are inadequate to deliver required water volume. Delivery would be improved by extending a large diameter main (say 24") approximately 1600 feet westerly from the existing 42" main at the intersection of Big Tree Road and Abbott Road.
d. A combination domestic and fire suppression service could then be extended onto the site to the new booster pumping facilities (approximately 1200 feet).
e. It is assumed three separate new private domestic, hydrant and fire suppression loops would be built around entire stadium (total ± 11,000 feet).
f. Secondary water services may be considered from Southwestern Blvd.
g. Permits will be required for the public water supply system improvements and backflow prevention devices.

B. SANITARY SEWER
1. EXISTING:
a. Campus property straddles the municipal boundary of the Towns of Hamburg and Orchard Park. Site is located in and served by the Erie County Sewer District No. 3 (ECSD No. 3).
b. The existing campus sanitary sewer service consists of an 8" diameter "vitrified tile pipe" sewer (VTP) built in 1972 when the original campus was developed. This service lateral discharges into an existing 10" diameter ECSD No. 3 sewer on the south side of Southwestern Blvd.
c. Upstream from the service lateral there is a collection system of building sewers that serve the individual campus buildings.
d. The existing New Era Field, team headquarters, and training complex is served by an existing 18" diameter asbestos cement pipe (ACP) sanitary sewer which discharges into a ±254,000 gallon concrete retention tank located near Smokes Creek on the east side of the stadium. The retention tank handles the high peak flows during stadium events to prevent overflows and surcharging into the downstream sewers.
e. The retention tank primary outlet is an 8" diameter sewer that discharges into the existing 21" reinforced concrete pipe (RCP) Smokes Creek trunk line sewer owned by ECSD No. 3. The retention tank is equipped with a secondary 18" diameter high level overflow outlet.

2. REQUIRED IMPROVEMENTS:
a. A Sanitary Sewer Extension permit will be required from the NYS Department of Environmental Conservation (NYSDEC) as administered by the Erie County Health Department (ECHD). The permit will require the applicant to furnish a

Downstream Capacity Analysis (DSCA). The DSCA will help determine the routing for the new sanitary flows and scope of the required improvements.

b. The existing 8" campus service line and 10" ECSD sewer do not have adequate capacity to serve a new stadium facility. Improvements will be required.
c. Based on our preliminary assessment a new gravity sewer and/or pump station and force main would be required to connect into the existing ECSD No. 3 Smokes Creek west trunk sewer. The gravity sewer would be the preferred option depending on the status of the existing New Era Field.
    i. If the existing stadium is decommissioned and demolished the existing sanitary sewer and detention tank could be reused. This would require a sewer from the south side of the new stadium across Abbott Road to the existing New Era Field sewer ±1850 feet with 16" pipe.
    ii. Alternative gravity sewer or force main could run from the north side of the new stadium across Abbott Road to corner of Southwestern Blvd., then northeasterly to the Smokes Creek west trunk sewer approximately 3400 feet.
d. The Smokes Creek trunk line sewer is anticipated to have adequate capacity for handling the flows from a new stadium complex based on the assumption that sanitary flows from the existing New Era Field stadium would be eliminated, and available trunk sewer flow capacity would be allocated to the for the new stadium facility.
e. Existing sewers for the ECC campus buildings could remain in service and/or modified as necessary for the repurposed facilities.

C. STORM DRAINAGE
1. EXISTING:
    a. New Era Field Parking Lots (west side of Abbott Rd.): Served by existing 18" and 24" diameter storm sewers. Discharge into 48" storm sewer on Abbott Road (Erie County DPW).
    b. ECC Campus: Existing 39" campus storm sewer discharges to existing ±1.3 acre detention pond on south side of Rt. 20 Southwestern Blvd.

2. REQUIRED IMPROVEMENTS:
    a. Stormwater Permit Required: NYSDEC SPDES Stormwater Permit will require permanent stormwater management practices for runoff reduction, water quality, and peak discharge regulation.
    b. Where new stadium construction occurs on existing impervious areas project may qualify for "redevelopment criteria" which allows reduced runoff reduction and use of approved manufactured stormwater treatment products.

c. See exhibit sheet for conceptual sizing and anticipated stormwater management improvements.

D. NATURAL GAS
1. EXISTING:
a. Gas utility service is provided by National Fuel Gas Corp. (NFG). Existing NFG distribution main on west side of Abbott Road is 6″ diameter medium pressure (± 5 psi).
b. Existing New Era Field is fed by way of 4″ diameter medium pressure service lateral. Existing meter capacity is up to ±46 MCFH.
c. Training Facility is fed by separate 3″ diameter service.

2. REQUIRED IMPROVEMENTS:
a. Existing 6″ distribution main on Abbott Road is anticipated to have capacity for new stadium load (± 97 MCFH, open air). Confirm with NFG.
b. Assume ±200 feet new 4″ or 6″ service and dual meter set.

E. POWER
1. EXISTING:
a. Electrical power service is provided by New York State Electric and Gas Corp. (NYSEG). The NYSEG distribution system has adequate capacity for the loads identified including multiple circuits for redundancy.
b. Medium Voltage Distribution (13.2kV): The existing New Era Field electrical power service substation is located on the west side of Abbott Road in NEF Lot 4. The existing power service consists of two underground 12.47kV circuit feeders from (NYSEG). Each feeder serves a 600 amp, 12.47kV main service. The main service is configured to allow each substation to optionally connect to either of the feeders.

2. REQUIRED IMPROVEMENTS:
a. The existing New Era Field electrical substation would be re-used with some modifications to conform with the new stadium design and maintain the existing stadium and training facilities in operation.

F. COMMUNICATIONS TECHNOLOGY
1. EXISTING: Fiber optic data and communications service is available to the Orchard Park site.

SUNY BUFFALO SITE Current SUNY at Buffalo Campus Service Center

A. WATER SUPPLY
   1. EXISTING:
      a. The site is located in a Town of Amherst Water District.
      b. The Town of Amherst municipal water system owned by the Town and operated by the Erie County Water Authority (ECWA) under a lease-management agreement. Water supplied by the ECWA.
      c. Existing ECWA facilities include the nearby Ball Pumping Station and two water storage tanks located ±500 feet northwest from proposed stadium site. Each water tank has 4 million gallon storage volume.
      d. From the Ball Pumping Station ECWA transmission lines include a 54" diameter line crossing Bizer Creek to the northwest and a 36" diameter line along the west boundary of the campus property. Normally ECWA would not allow new taps off transmission lines.
      e. Existing ECWA 12" distribution line is available on the north side of Bizer creek across from the proposed stadium site. Source of supply is 54" ECWA transmission line.
      f. ECWA Hydrant Flow Test: 12" distribution line, 6/19/2018 (Amherst Manor Drive)
         i. Static Pressure 94 psi Residual Pressure 89 psi
         ii. Measured Flow 1574 gpm Fire Flow @ 20 psi residual 6744 gpm
      g. Existing Campus water system to the Service Center complex is a 10" waterline which is fed off the Campus distribution system.

   2. REQUIRED IMPROVEMENTS:
      a. Existing ECWA delivery pressure and volume is very good in this area and is adequate to supply the anticipated demands.
      b. Existing Campus water system would be disconnected and entirely abandoned. Portions would be removed as necessary during site demolition.
      c. Would need to confirm with ECWA location for connection of new stadium combination domestic and fire suppression service. New 12" service line would then be extended under Bizer Creek onto the site (± 500 feet).
      d. It is assumed three separate new private domestic, hydrant and fire suppression loops would be built around entire stadium (total ± 11,000 feet).
      e. Would need to extend and restore water service to existing power substation (± 500 feet).

f. The need for a fire pump would be evaluated during design. If necessary fire pump system would be equipped with standby emergency power supply, or diesel or gas powered.
g. Permits will be required for the public water supply system improvements and backflow prevention devices.

B. SANITARY SEWER
1. EXISTING:
a. The proposed stadium site is located in the Town of Amherst Consolidated Sewer District and is tributary to the Town of Amherst Water Pollution Control Facility Plant 16 on Tonawanda Creek Road. Based on information from previous studies by the Town the Plant has a design capacity of 48 MGD and sees an average daily peak flow of approximately 27 MGD. Wet weather flows can be as high as 100 MGD. Therefore, additional wastewater flow to the plant is managed and regulated by a wastewater permits from the Town and the NYSDEC.
b. The existing campus sanitary sewer system for the Service Center complex consists of an 8" diameter sewer located in the main utility corridor on Sprague Road. This sewer extends upstream westerly to the ECWA Ball Pumping Station flowing from west to east across Bizer Creek where it discharges to a 12" diameter campus collector sewer.
c. The majority of the Campus sanitary sewer system discharges into a 36" diameter Town sewer near the intersection of Sweet Home Road and Chestnut Ridge Road by way of a 30" diameter sewer across Bizer Creek, approximately 3500 feet north of the proposed stadium site.

2. REQUIRED IMPROVEMENTS:
a. A Sanitary Sewer Extension permit will be required from the NYS Department of Environmental Conservation (NYSDEC) as administered by the Erie County Health Department (ECHD). A permit will also be required from the Town of Amherst as identified above. These permits will require the applicant to furnish a Downstream Capacity Analysis (DSCA). The DSCA will help determine the routing for the new sanitary flows and scope of the required improvements.
i. Permits will likely require flow offsets that will require the applicant to implement infiltration and inflow (I&I) reduction measures that will result in removal of four times the peak wastewater flow generated from the project.
ii. Alternatively, as per ToA Local Law Section 160-80 Article XVI the applicant may make a one-time fixed fee payment into the Town's Sewer Remediation Trust Fund to the amount of $1000 per GPM of additional peak flow. The

estimated peak wastewater discharge rate for the new stadium is 2970 GPM (6.6 CFS). This would equate to a payment of $2.97 million.

b. The existing 8" Campus Service Center line and 12" collector sewer do not have adequate capacity to serve a new stadium facility. Improvements will be required. Three options have been identified:
   i. Similar to the existing New Era Field, a detention tank could be built with sufficient volume to provide temporary storage to for peak game day flows and allow for a regulated discharge rate that would prevent overflows and surcharging into the downstream sewers. This option would allow the campus sewers currently serving the site to continue to be used. Based on the volume of the existing detention tank at the 80,000 capacity New Era Field, the equivalent tank size for a 65,000 capacity stadium would be approximately 210,000 gallons. The tank would likely be built of poured concrete to assure water tightness.
   ii. A second option would be to build a new 24" diameter gravity sewer for the stadium that would connect to the existing Town 54" diameter West Side Interceptor located off the southwest corner of the site in the power transmission line easement at the intersection of Maple Road and the I-290. This new sewer would approximately 800 feet long with an average depth of 8 to 10 feet.
   iii. A third option would be to build a new 24" diameter gravity sewer that would connect to the existing Town 36" diameter sewer at Sweet Home and Chestnut Ridge Roads. This new sewer would approximately 3500 feet long with an average depth of 8 to 10 feet. This sewer is feasible in concept but there would be several utility crossings to resolve including the Arco petroleum pipeline easement, as well as some restoration costs. Feasibility would be confirmed during conceptual design.
   iv. The second and third options described above may be combined with the ±210,000 gallon detention tank for peak flow regulation if required.

c. The existing campus sewers would be disconnected and entirely abandoned and/or removed as necessary during site demolition.

d. The existing sewer laterals for the ECWA Ball Pumping Station and Substation Control Building would need to be picked up with the new stadium sewer system.

C. STORM DRAINAGE

1. EXISTING:

   a. Bizer Creek is a NYSDEC Class C stream which effectually forms the easterly and northerly boundary of the proposed stadium site. This stream course alignment

was dramatically modified during original campus construction in the early 1970's and has been channelized both downstream and upstream from the site. It and its tributaries serve as the principal drainage way for an approximately 7 square mile upstream urban and suburban watershed including the southwest sector of the Town of Amherst and parts of the Town of Tonawanda, Village of Kenmore and City of Buffalo. Bizer creek discharges into Ellicott Creek though a manmade outfall weir structure off Skinnersville Road in the northwest quadrant of the Campus approximately 1.4 miles downstream from the site. Since channelization there have been no significant flooding events.

b. The existing Campus Service Center complex is served by an existing storm sewer system that includes at least four separate discharge outfalls into Bizer Creek. Apparent equivalent diameters are; 54", two-48", and 15".
c. There are no known or apparent stormwater management practices on the existing drainage system that would provide water quality treatment or regulated discharge.

2. REQUIRED IMPROVEMENTS:
   a. Stormwater Permit Required: NYSDEC SPDES Stormwater Permit will require permanent stormwater management practices for runoff reduction, water quality, and peak discharge regulation.
   b. Where the new stadium construction occurs on existing impervious areas project may qualify for "redevelopment criteria" which allows reduced runoff reduction and use of approved manufactured stormwater treatment products.
   c. It is assumed that the existing discharge outfall locations to Bizer Creek would continue to be used with upstream onsite modifications as required
   d. See exhibit sheet for conceptual sizing and anticipated stormwater management improvements.

D. NATURAL GAS
1. EXISTING:
   a. Gas utility service is provided by National Fuel Gas Corp. (NFG). The existing NFG distribution main is on the south side of Maple Road.
   b. The existing gas service onto the Service Center Complex is 3" diameter medium pressure (15 psig).

2. REQUIRED IMPROVEMENTS:
   a. The existing NFG distribution main on Maple Road is anticipated to have capacity for new stadium load (± 97 MCFH, open air). Confirm with NFG.

b. Assume ±1500 feet new 4" or 6" service and dual meter set.

E. POWER
1. EXISTING:
a. Electrical power service is provided by National Grid. The existing distribution system has ample capacity for the loads identified including multiple circuits for redundancy.
b. There is an existing campus owned substation on the west side of the Service Center site that serves and feeds the entire SUNY UB campus.
c. There are also a series of at least three overhead extreme high voltage power transmission lines located in a right-of-way to the west of the power substation. These are believed to be owned by the New York Power Authority (NYPA) and National Grid and each set of lines could be 230 kV or more. The substation is fed from the existing high voltage lines.
d. There are two major utility corridors crossing the proposed stadium site from the substation to the main campus. Each utility corridor includes ±6 concrete encased underground power duct banks with numerous power vaults which are owned by the campus and typically contain 15kV medium voltage cables for campus power distribution.

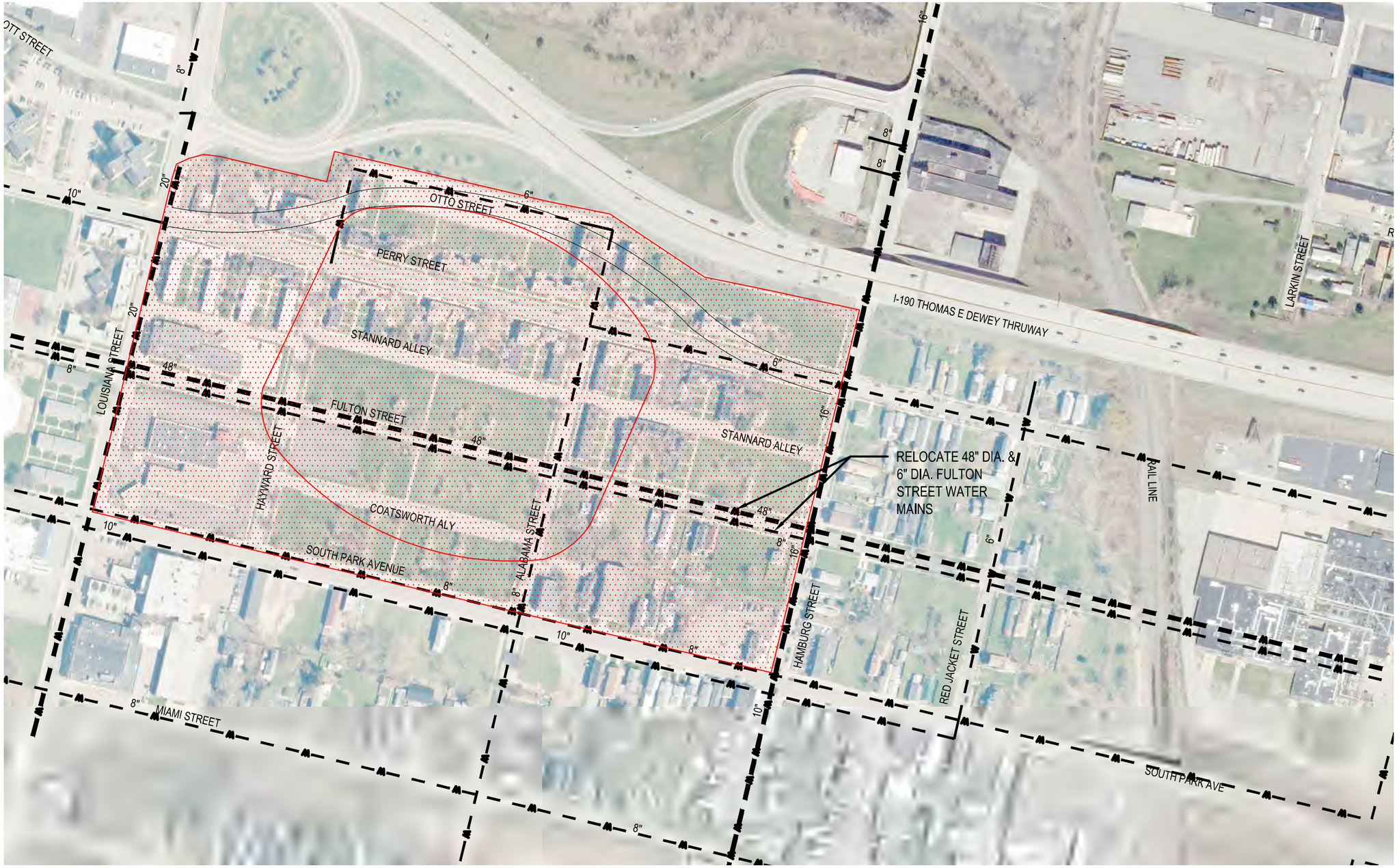
2. REQUIRED IMPROVEMENTS:
a. All of the existing underground power distribution system for the campus which crosses the proposed stadium site. The northerly corridor on Sprague Road would need to be relocated. This could include approximately 12,000 feet of duct banks and 18 vaults. This may be impractical and cost prohibitive. The southerly corridor may be left in place depending on stadium layout. If these needed to be relocated it could require approximately 5000 feet of duct banks and 10 power vaults.
b. The existing substation has adequate capacity to serve the power needs for the new stadium.

F. COMMUNICATIONS TECHNOLOGY
1. EXISTING:
a. Fiber optic data and communication service is available to the UB site.

G. OTHER UTILITIES
1. PETROLIUM PIPELINE:

a. There is an existing underground 8" petroleum pipeline that crosses the northerly perimeter of the proposed stadium site along the top of south bank of Bizer Creek. This is located on a 40 foot easement across the campus. It is anticipated that the new stadium layout could be designed so this pipeline is not affected or required to be relocated.

2. CHILLED WATER:
   a. There are existing 8" diameter chilled water supply and return lines which serve the existing buildings in the Service Center Complex from the campus Baker Chilled Water Plant. It is unlikely that the Plant has capacity to supply adequate chilled water for a domed stadium. It is anticipated that the chilled water service would be discontinued and the existing lines would be abandoned and removed during stadium construction.



UNDERGROUND WATER LINE REMOVAL APPROXIMATE QUANTITIES
48 INCH WATER MAIN REMOVAL - 1,800 LF (REMOVAL OF FULTON STREET MAIN)
8 INCH WATER MAIN REMOVAL - 1,800 LF (REMOVAL OF FULTON STREET MAIN)
6 INCH WATER MAIN REMOVAL - 800 LF PERRY OF FULTON STREET MAIN)

UNDERGROUND WATER LINE INSTALLATION APPROXIMATE QUANTITIES
48 INCH WATER MAIN INSTALLATION - 2,500 LF
6 INCH WATER MAIN INSTALLATION -2,500 LF
NEW 16" 3 LOOPS WATER SERVICE - 11,000 LF

N

1 **SOUTH PARK SITE UTILITIES - WATER**
SCALE: 1" = 250'

WATTS ARCHITECTURE & ENGINEERING
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project
UTILITY STUDY SITE SELECTION

sheet title
SOUTH PARK EXISTING WATER

drawing history

number	date	description	by

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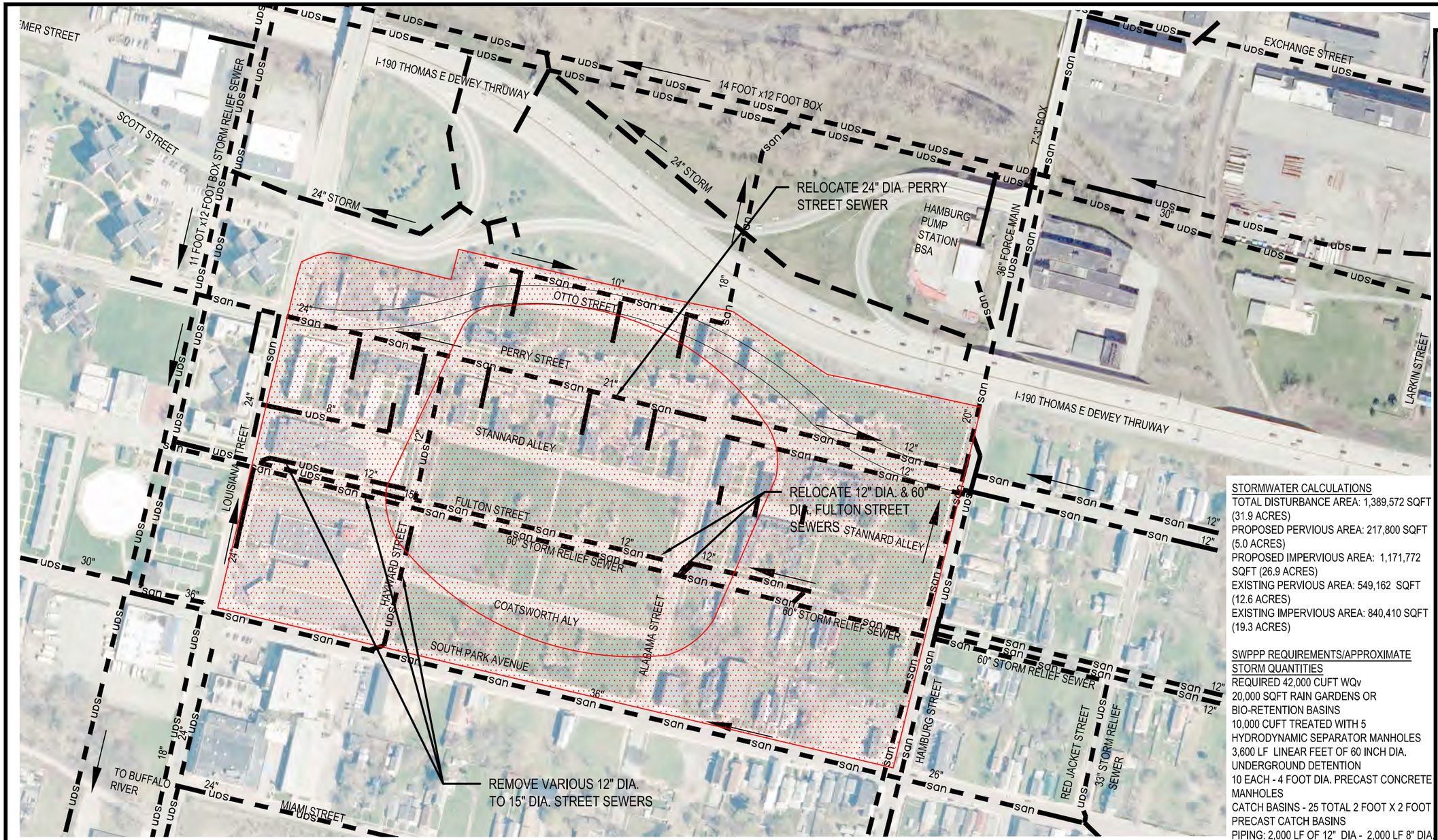

STORMWATER CALCULATIONS
TOTAL DISTURBANCE AREA: 1,389,572 SQFT (31.9 ACRES)
PROPOSED PERVIOUS AREA: 217,800 SQFT (5.0 ACRES)
PROPOSED IMPERVIOUS AREA: 1,171,772 SQFT (26.9 ACRES)
EXISTING PERVIOUS AREA: 549,162 SQFT (12.6 ACRES)
EXISTING IMPERVIOUS AREA: 840,410 SQFT (19.3 ACRES)

SWPPP REQUIREMENTS/APPROXIMATE STORM QUANTITIES
REQUIRED 42,000 CUFT WQv
20,000 SQFT RAIN GARDENS OR BIO-RETENTION BASINS
10,000 CUFT TREATED WITH 5 HYDRODYNAMIC SEPARATOR MANHOLES
3,600 LF LINEAR FEET OF 60 INCH DIA. UNDERGROUND DETENTION
10 EACH - 4 FOOT DIA. PRECAST CONCRETE MANHOLES
CATCH BASINS - 25 TOTAL 2 FOOT X 2 FOOT PRECAST CATCH BASINS
PIPING: 2,000 LF OF 12" DIA - 2,000 LF 8" DIA PIPING

U.G.SEWER REMOVAL APPROXIMATE QUANTITIES
60 INCH DIA. SEWER -1,700 LF
18 INCH - 24 INCH SEWERS - 1,000 FT
12 INCH - 15 INCH SEWERS - 2,000 FT
6 INCH - 10 INCH SEWERS - 2,000 FT

U.G.-SEWER INSTALLATION APPROXIMATE QUANTITIES
INSTALLATION OF 2,500 LF 60 INCH DIA. SEWER
INSTALLATION OF 2,500 LF 12 INCH DIA. SEWER
INSTALLATION OF 1500 LF 21 INCH TO 24 INCH SEWER
5 EACH 4 FOOT DIA. PRECAST CONCRETE MANHOLES
5 EACH 8 FOOT DIA. PRECAST CONCRETE MANHOLES

N

1 **SOUTH PARK UTILITIES - STORM, SANITARY & COMBINED SEWERS**
SCALE: 1"=250'

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SOUTH PARK EXISTING STORM, SANITARY & COMBINED SEWERS

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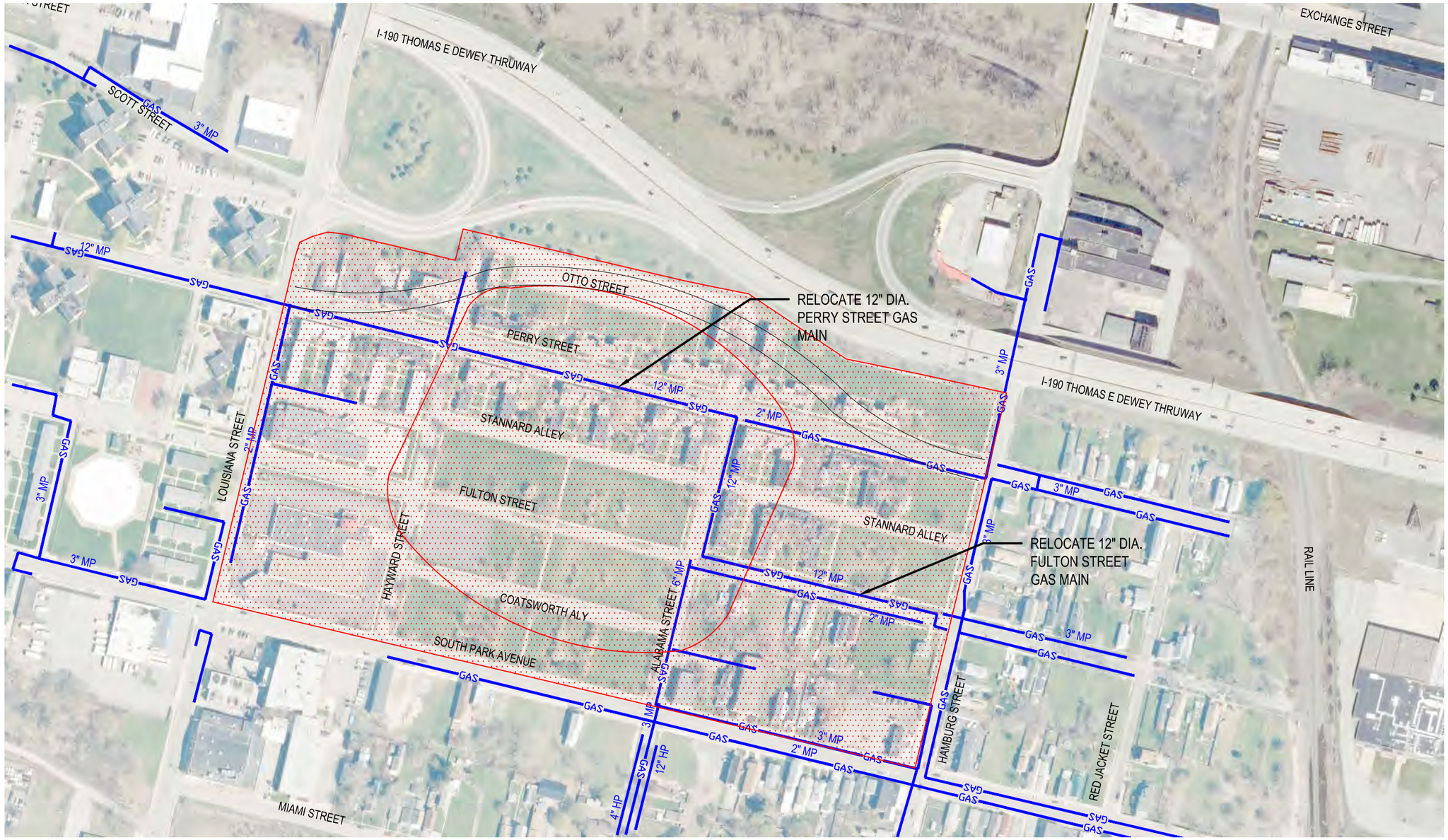

UNDERGROUND GAS LINE REMOVAL APPROXIMATE QUANTITIES
12 INCH GAS MAIN REMOVAL - 2,000 LF (REMOVAL OF PERRY & FULTON STREET MAINS)

2 INCH GAS MAIN REMOVAL - 1500 LF (FULTON, ALABAMA, PERRY)

UNDERGROUND GAS LINE INSTALLATION APPROXIMATE QUANTITIES
12 INCH GAS MAIN - 2,400 LF (RELOCATION OF PERRY & FULTON STREET MAINS)

NEW 6" GAS SERVICE: ±500 LF

N

1 SOUTH PARK SITE UTILITIES - NATURAL GAS

SCALE: 1" = 250'

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UTILITY STUDY SITE SELECTION

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SOUTH PARK EXISTING GAS

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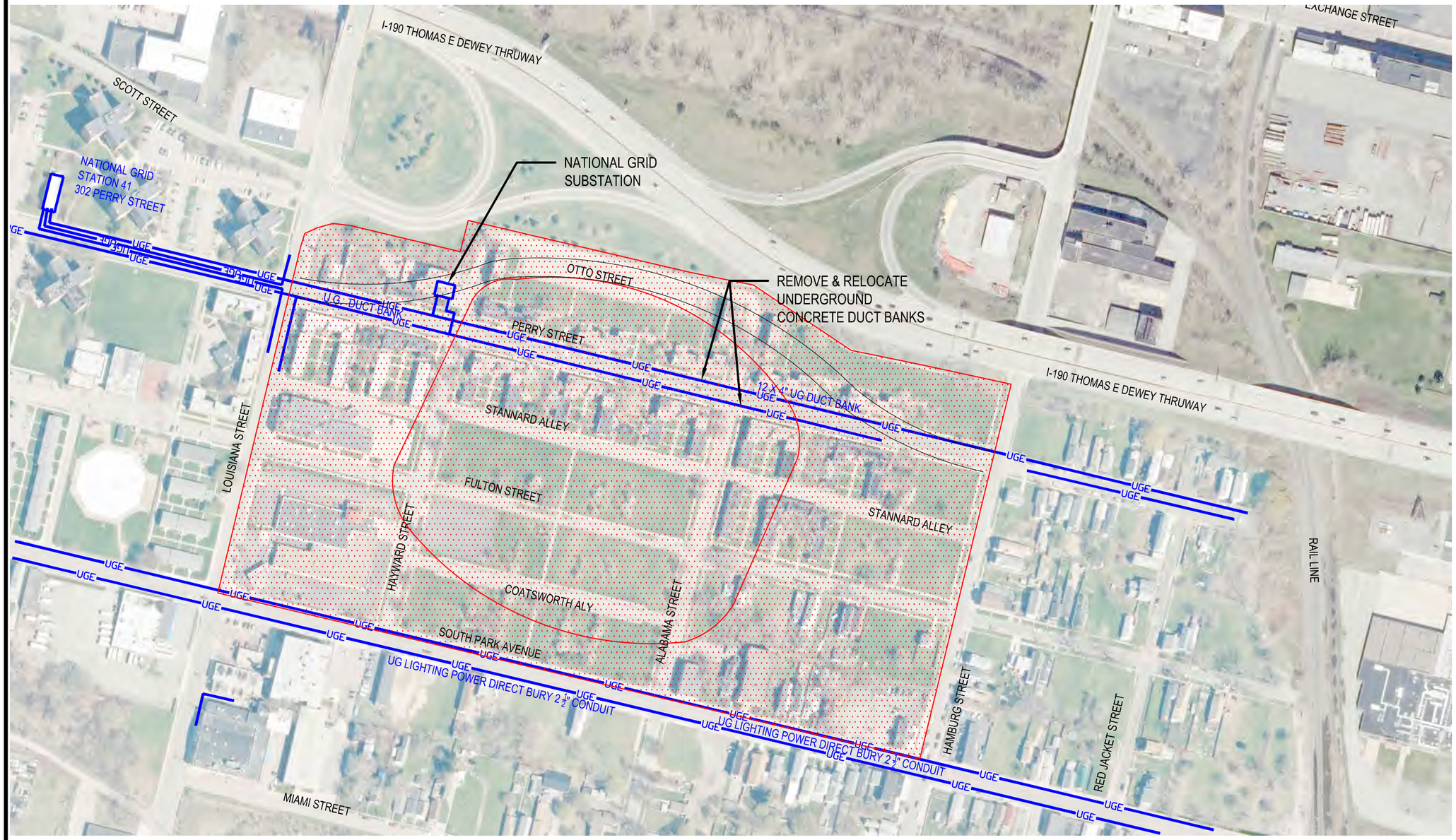

LEGEND

NATIONAL GRID OWNED UNDERGROUND POWER — UGE

N

1 SOUTH PARK SITE UTILITIES - UNDERGROUND ELECTRIC

SCALE: 1" = 250'

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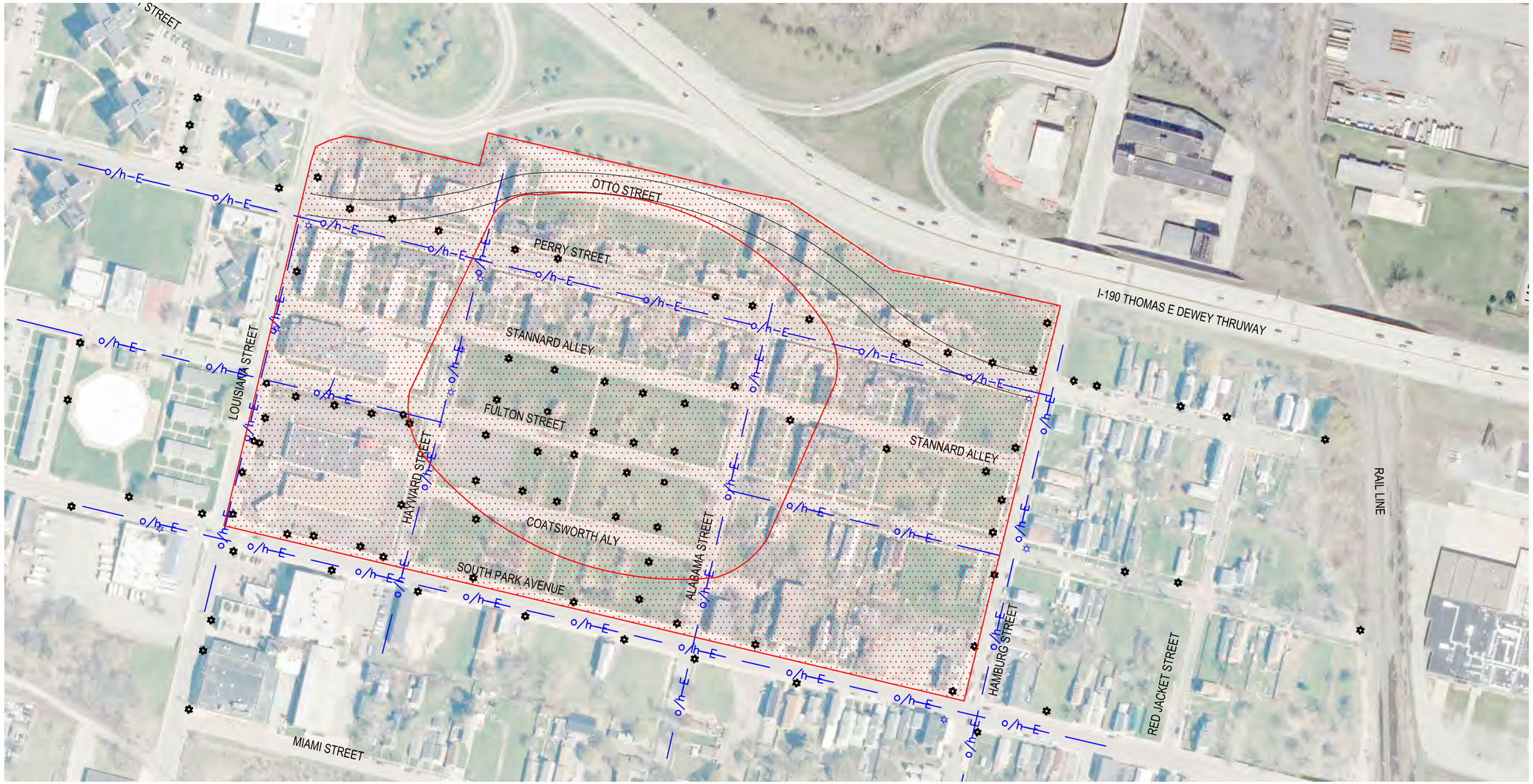

LEGEND

EXISTING LIGHT POLE

EXISTING OVERHEAD POWER

SITE LIGHTING AND OVERHEAD UTILITY LINE REMOVAL QUANTITIES
LIGHT POLE REMOVALS - 60 EACH

OVERHEAD UTILITY LINE REMOVAL - 3,000 LF TO 4,000 LF

N

1 SOUTH PARK SITE - OVERHEAD ELECTRIC & SITE LIGHTING

SCALE: 1" = 250'

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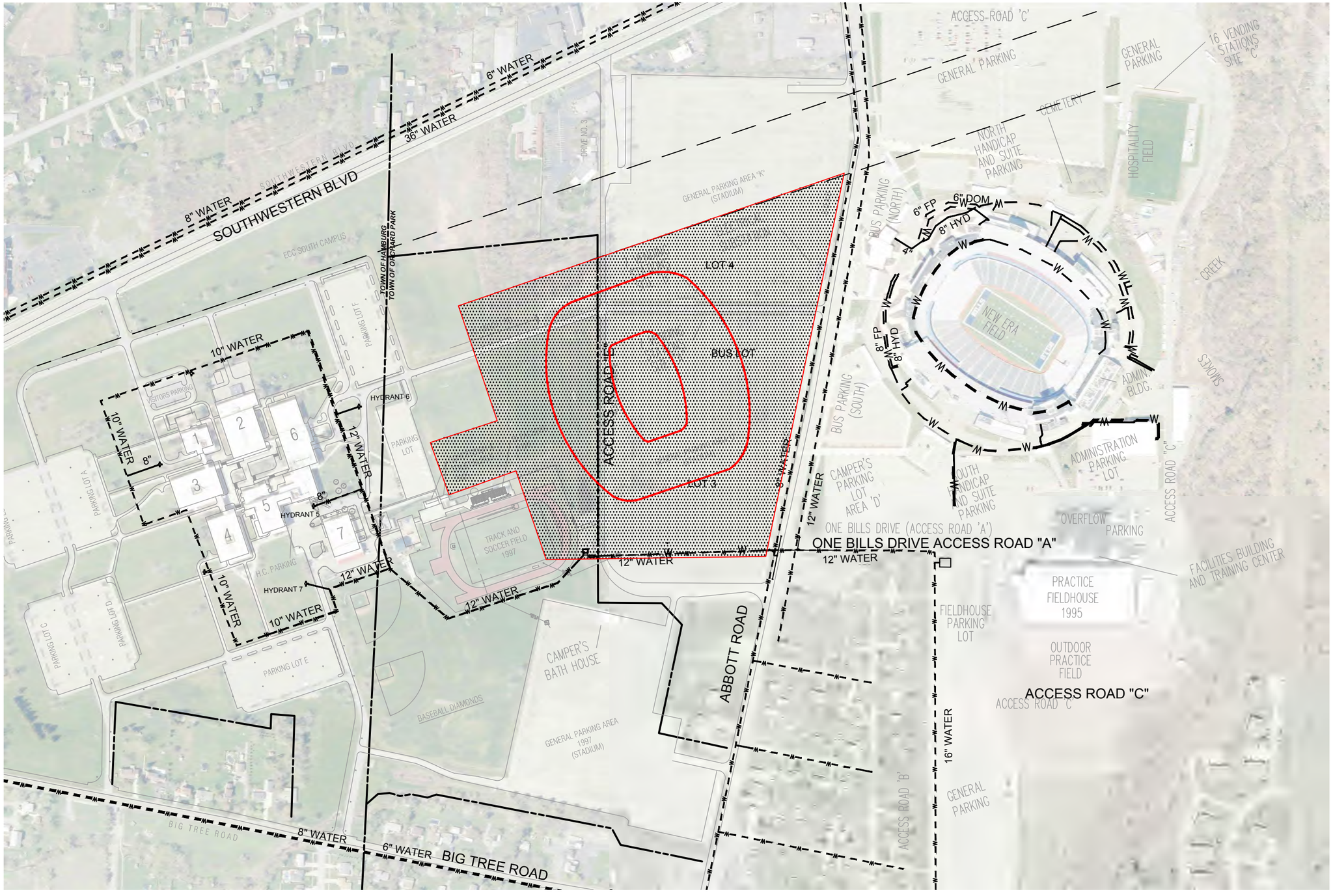

1 ORCHARD PARK SITE UTILITIES - WATER

SCALE: 1" = 400'

N

UNDERGROUND WATER SERVICE APPROXIMATE QUANTITIES
REFER TO NARRATIVE

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SITE SELECTION

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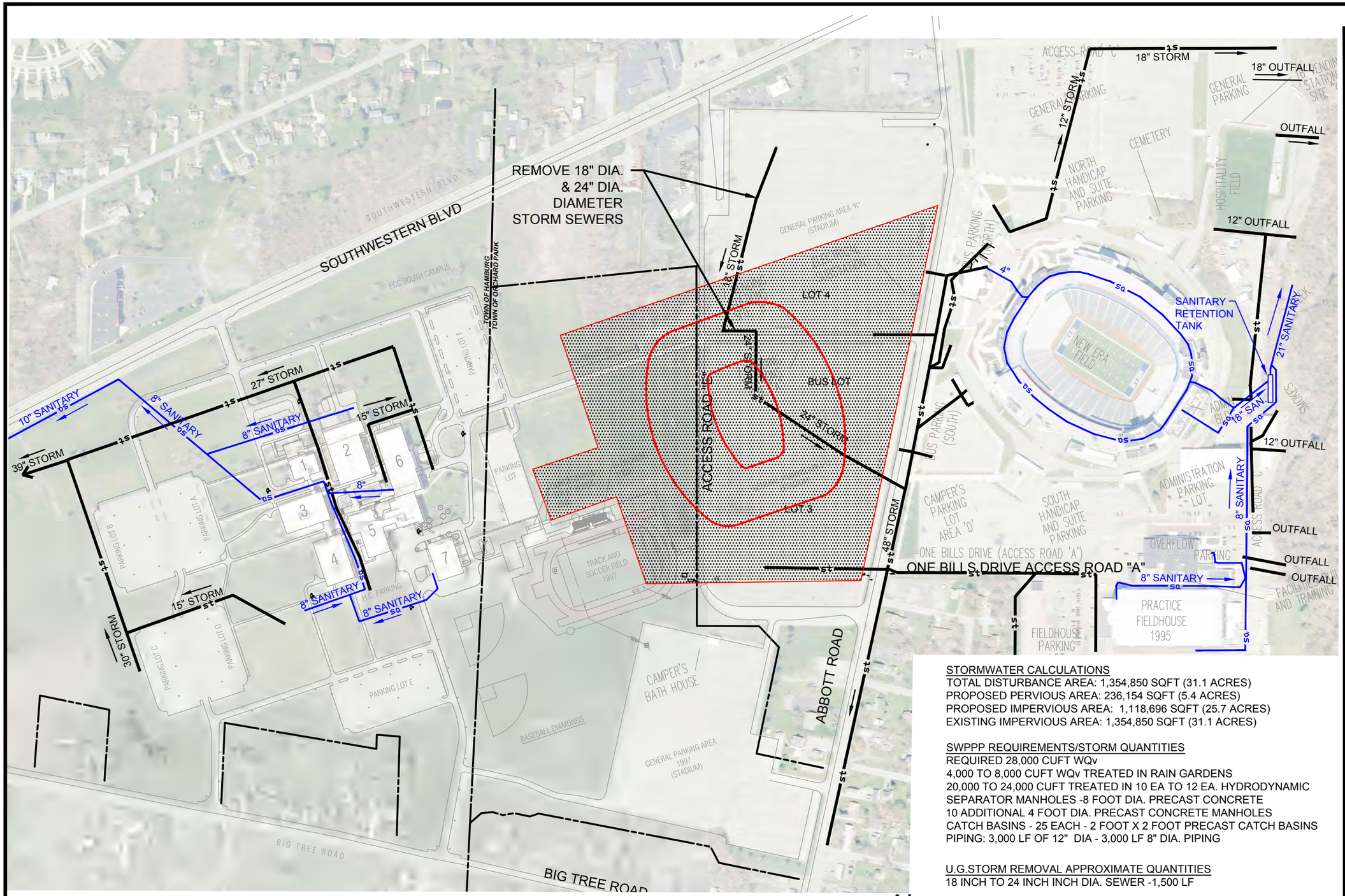

1 ORCHARD PARK SITE UTILITIES - SANITARY & STORM

SCALE: 1" = 400'

STORMWATER CALCULATIONS
TOTAL DISTURBANCE AREA: 1,354,850 SQFT (31.1 ACRES)
PROPOSED PERVIOUS AREA: 236,154 SQFT (5.4 ACRES)
PROPOSED IMPERVIOUS AREA: 1,118,696 SQFT (25.7 ACRES)
EXISTING IMPERVIOUS AREA: 1,354,850 SQFT (31.1 ACRES)

SWPPP REQUIREMENTS/STORM QUANTITIES
REQUIRED 28,000 CUFT WQv
4,000 TO 8,000 CUFT WQv TREATED IN RAIN GARDENS
20,000 TO 24,000 CUFT TREATED IN 10 EA TO 12 EA. HYDRODYNAMIC SEPARATOR MANHOLES -8 FOOT DIA. PRECAST CONCRETE
10 ADDITIONAL 4 FOOT DIA. PRECAST CONCRETE MANHOLES
CATCH BASINS - 25 EACH - 2 FOOT X 2 FOOT PRECAST CATCH BASINS
PIPING: 3,000 LF OF 12" DIA - 3,000 LF 8" DIA. PIPING

U.G.STORM REMOVAL APPROXIMATE QUANTITIES
18 INCH TO 24 INCH INCH DIA. SEWER -1,500 LF

U.G.-SEWER INSTALLATION APPROXIMATE QUANTITIES
4,500 LF - SANITARY SEWER PIPING - 6" TO 8" DIA.
20 EACH - 48" DIA. CONCRETE MANHOLES
1 EACH -13 FOOT HIGH X 120 FOOT LENGTH CONCRETE RETENTION TANK

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p: 716.206.5100 f: 716.206.5199

project
UTILITY STUDY
SITE
SELECTION

sheet title
ECC SOUTH
EXISTING STORM &
SEWER

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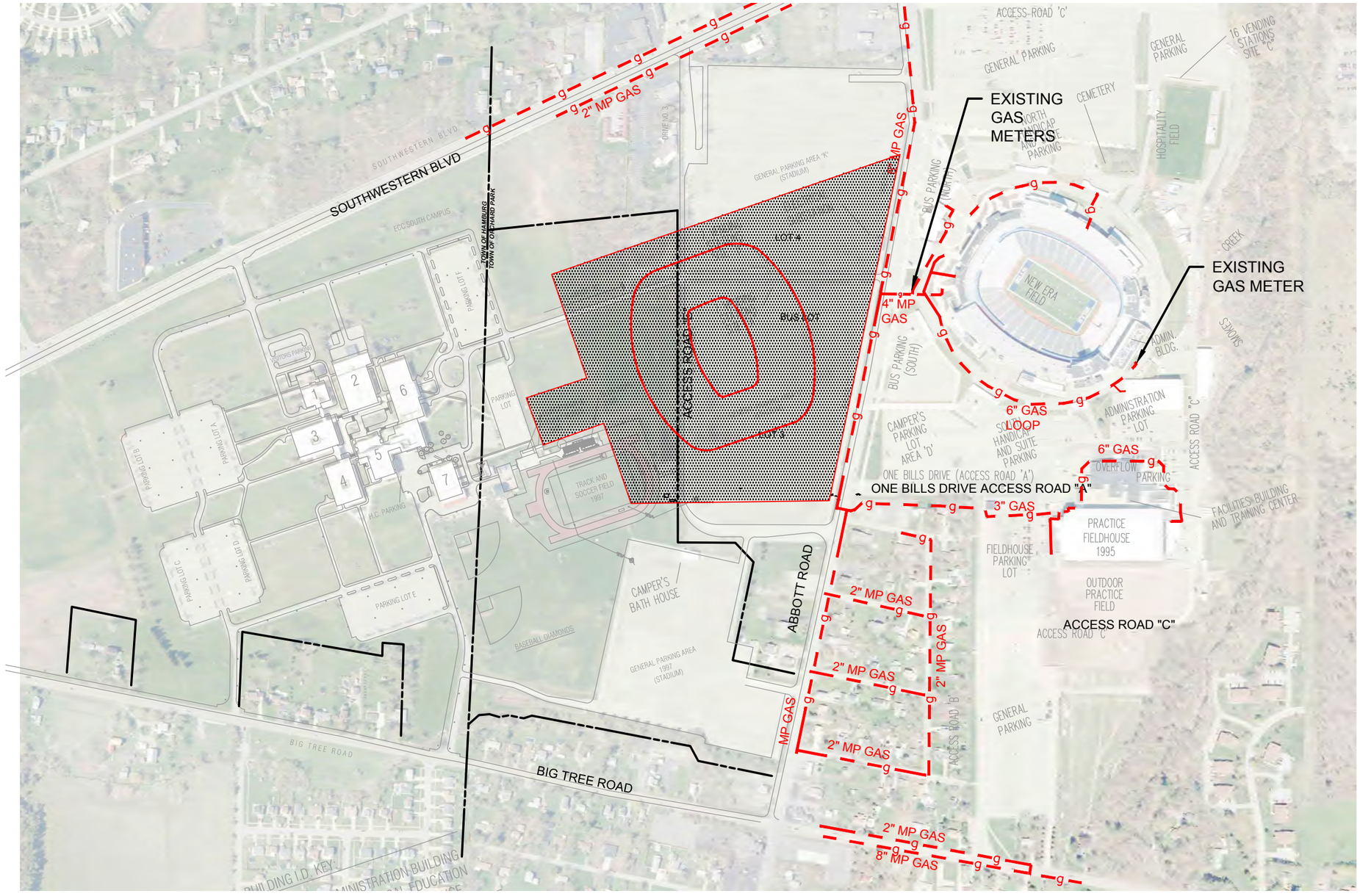

1 ORCHARD PARK SITE UTILITIES - GAS

SCALE: 1" = 500'

N

UNDERGROUND GAS SERVICE APPROXIMATE QUANTITIES

4 INCH MP GAS SERVICE INSTALLATION - 200 LF

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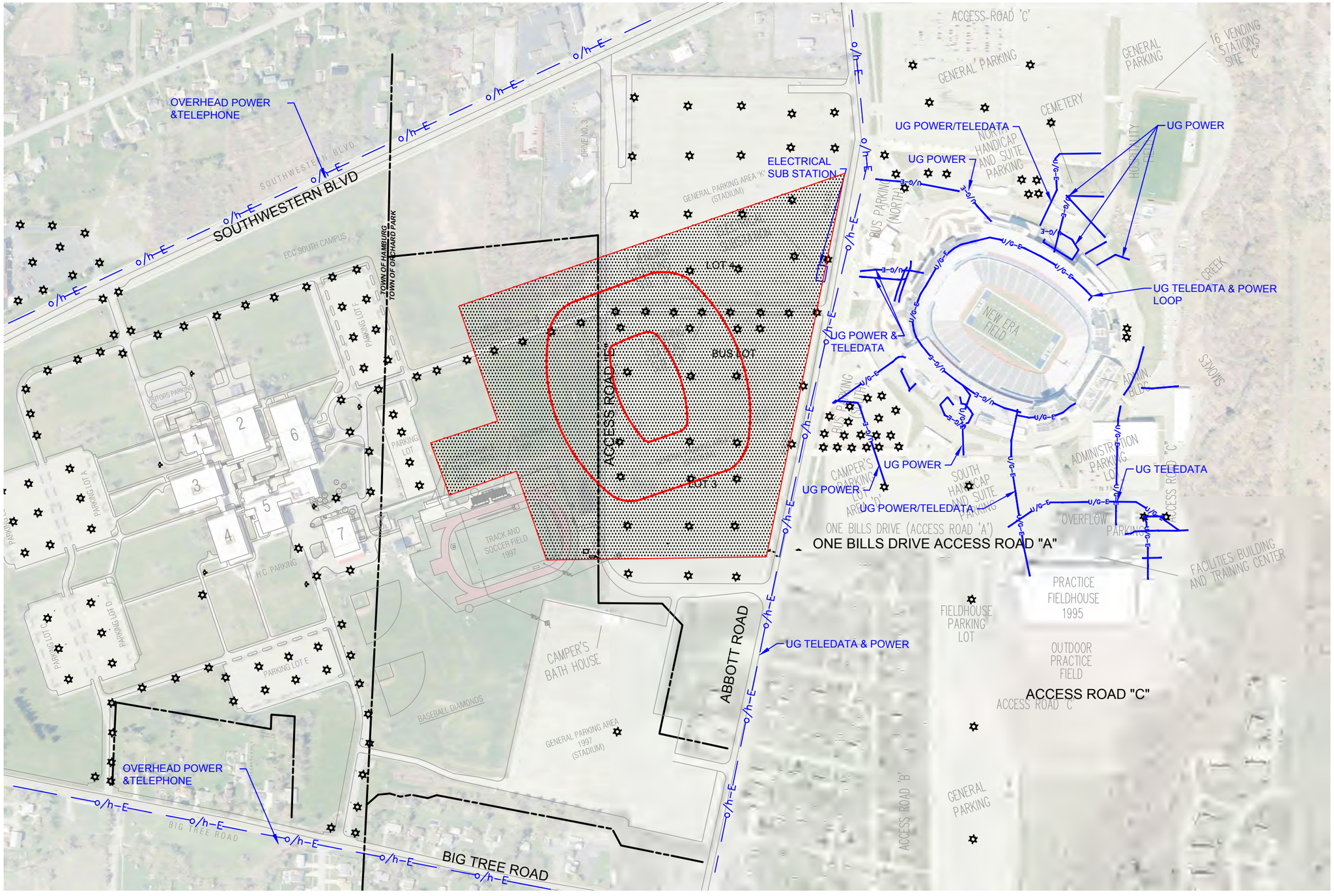

1 ORCHARD PARK SITE UTILITIES - ELECTRIC & TELEDATA

SCALE: 1" = 400'

N

LEGEND

- EXISTING LIGHT POLE
- o/h–E — EXISTING OVERHEAD POWER
- U/G–E — EXISTING UG ELEC OR TELEDATA

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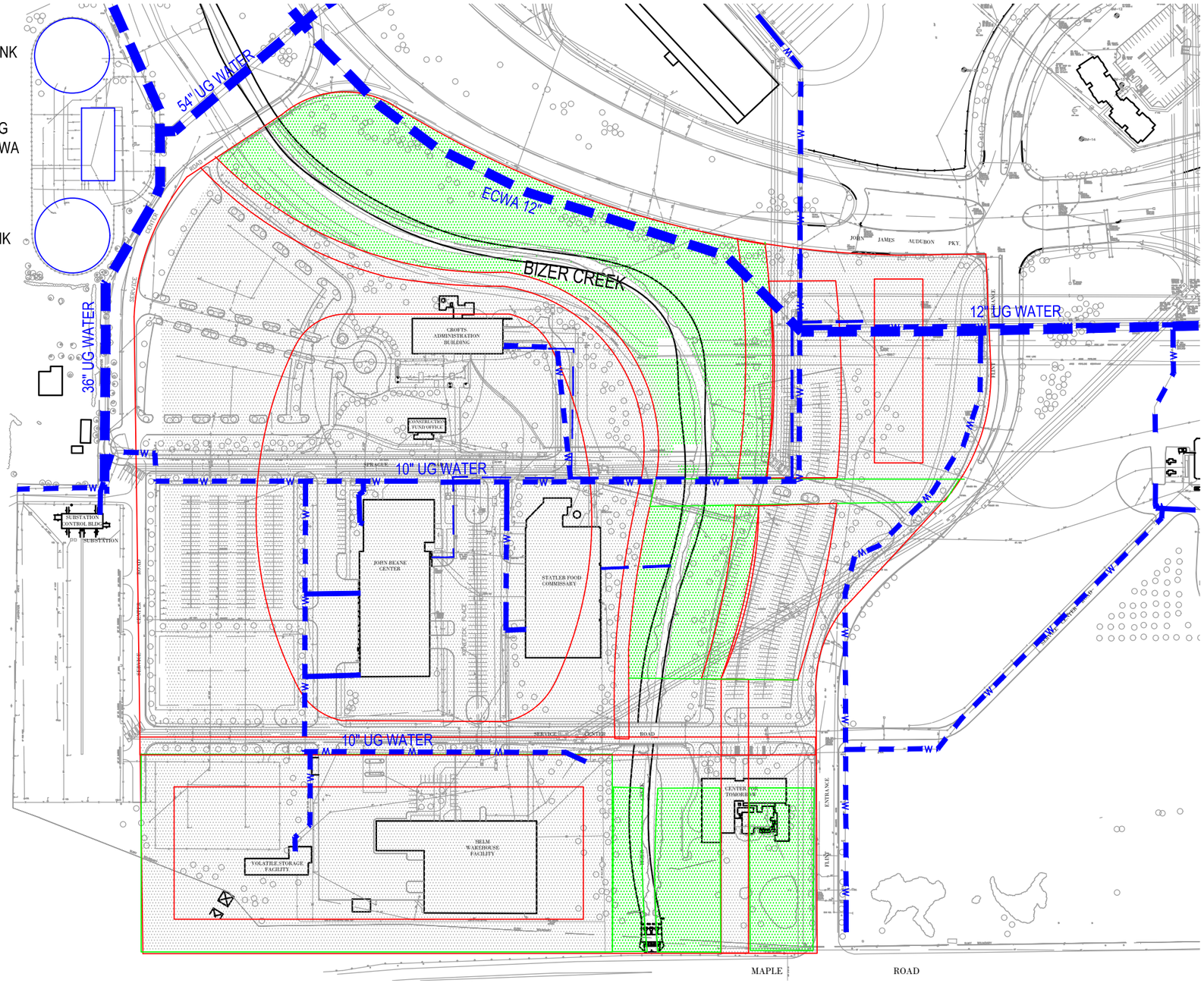
4 MG WATER TANK

BALL PUMPING STATION - ECWA

4 MG WATER TANK



PLANNED DOMESTIC WATER LOAD: 1,900 GPM

PLANNED FIRE PROTECTION LOAD: 1,500 GPM

N

1 UB AMHERST SITE UTILITIES - WATER

SCALE: 1" = 250'

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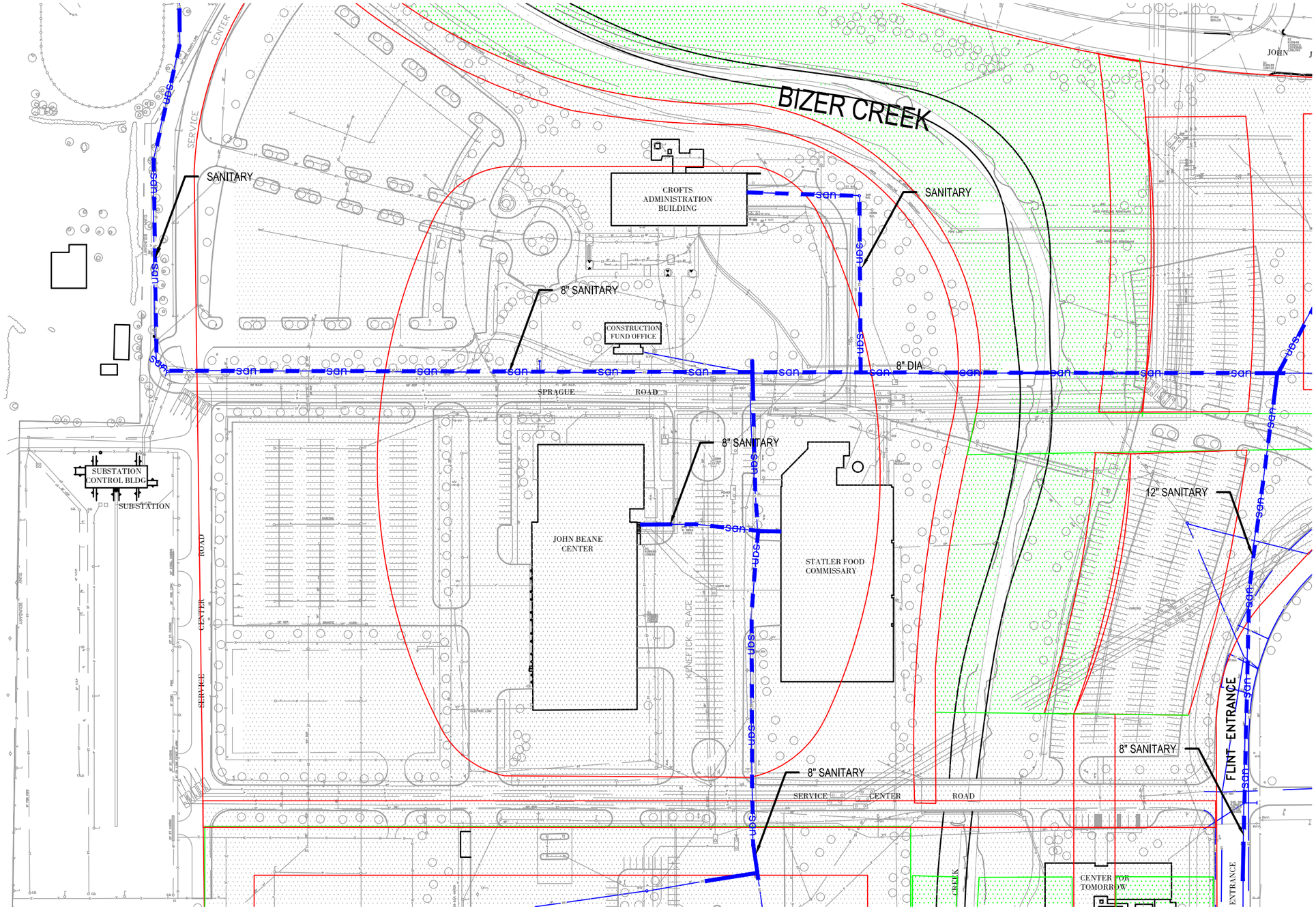

1 UB AMHERST SITE UTILITIES - SANITARY

SCALE: 1" = 150'

N

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STORMWATER CALCULATIONS

TOTAL DISTURBANCE AREA: 2,688,056 SQFT (61.7 ACRES)

PROPOSED PERVIOUS AREA: 520,184 SQFT (11.9 ACRES)

PROPOSED IMPERVIOUS AREA: 2,167,872 SQFT (49.8 ACRES)

EXISTING IMPERVIOUS AREA: 1,173,815 SQFT (26.9 ACRES)

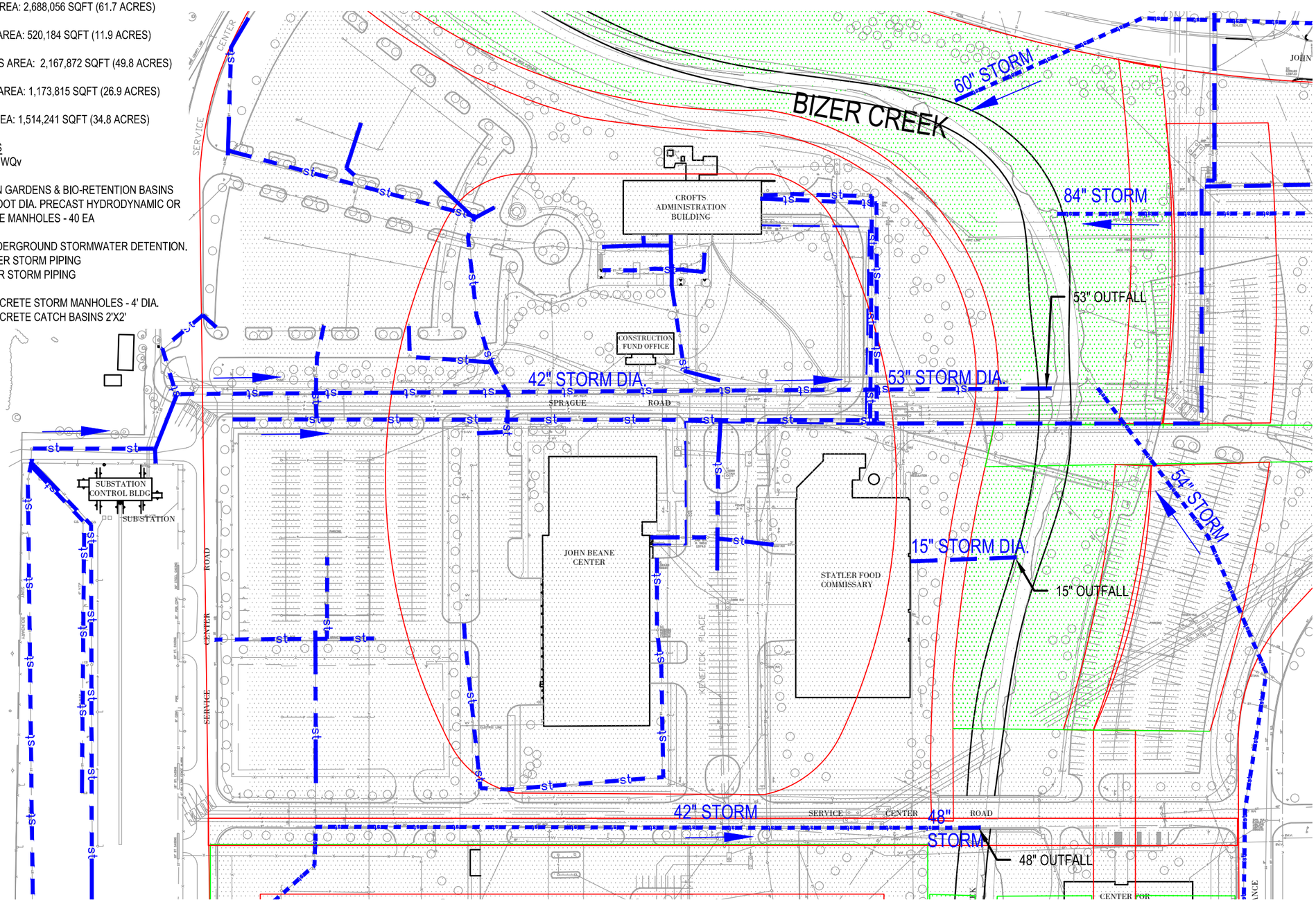
EXISTING PERVIOUS AREA: 1,514,241 SQFT (34.8 ACRES)

SWPPP REQUIREMENTS
REQUIRED 97,000 CUFT WQv

40,000 TREATED IN RAIN GARDENS & BIO-RETENTION BASINS
57,000 TREATED IN 8 FOOT DIA. PRECAST HYDRODYNAMIC OR FILTERIDGE CARTRIIDGE MANHOLES - 40 EA

3,000 LF OF 60" DIA. UNDERGROUND STORMWATER DETENTION.
3,000 LF OF 12" DIAMETER STORM PIPING
3,000 LF OF 8" DIAMETER STORM PIPING

30 EACH PRECAST CONCRETE STORM MANHOLES - 4' DIA.
60 EACH PRECAST CONCRETE CATCH BASINS 2'X2'



1 UB AMHERST SITE UTILITIES - STORM

SCALE: 1" = 150'

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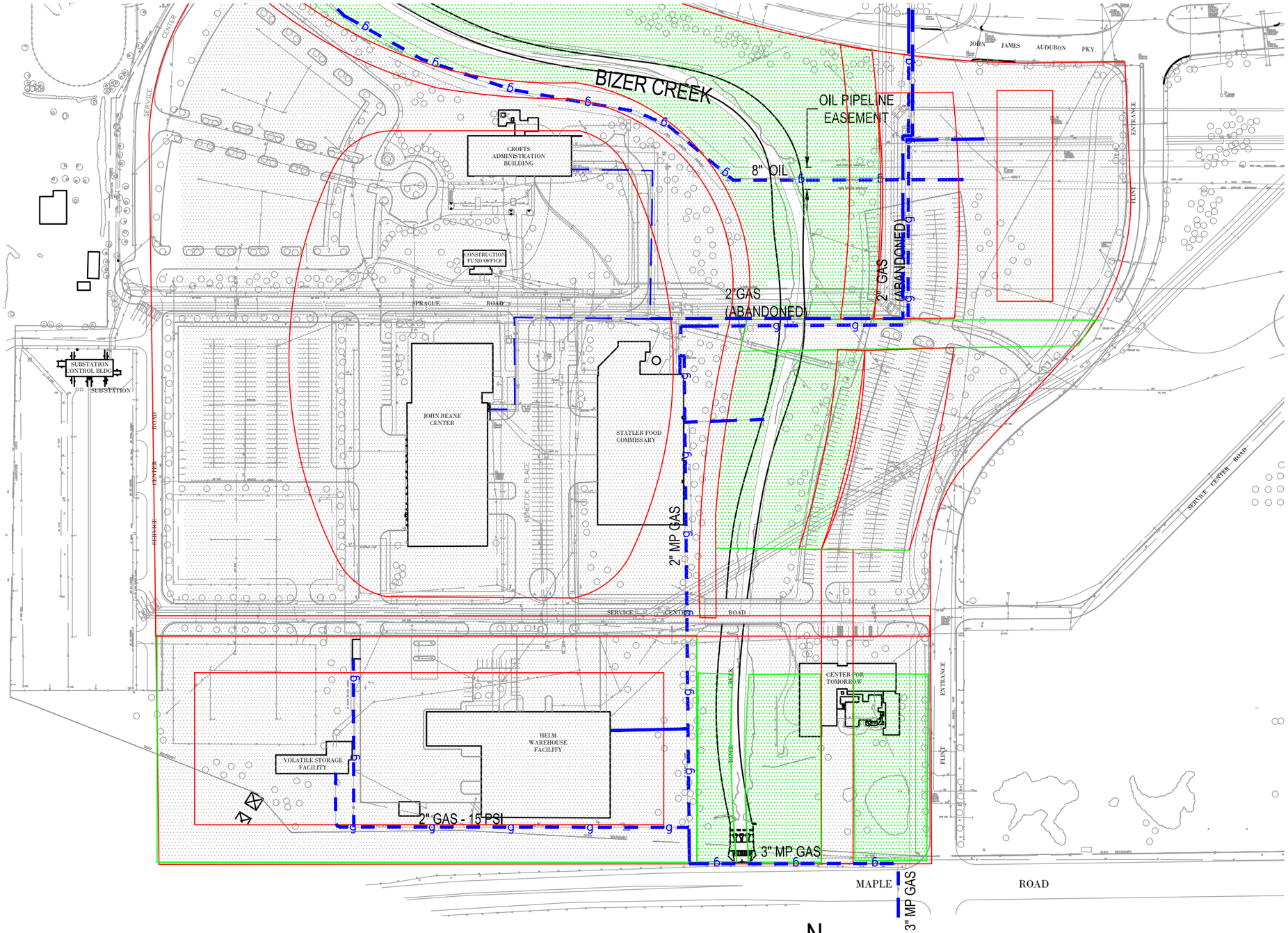

1 UB AMHERST SITE UTILITIES - NATURAL GAS & OIL

SCALE: 1" = 200'

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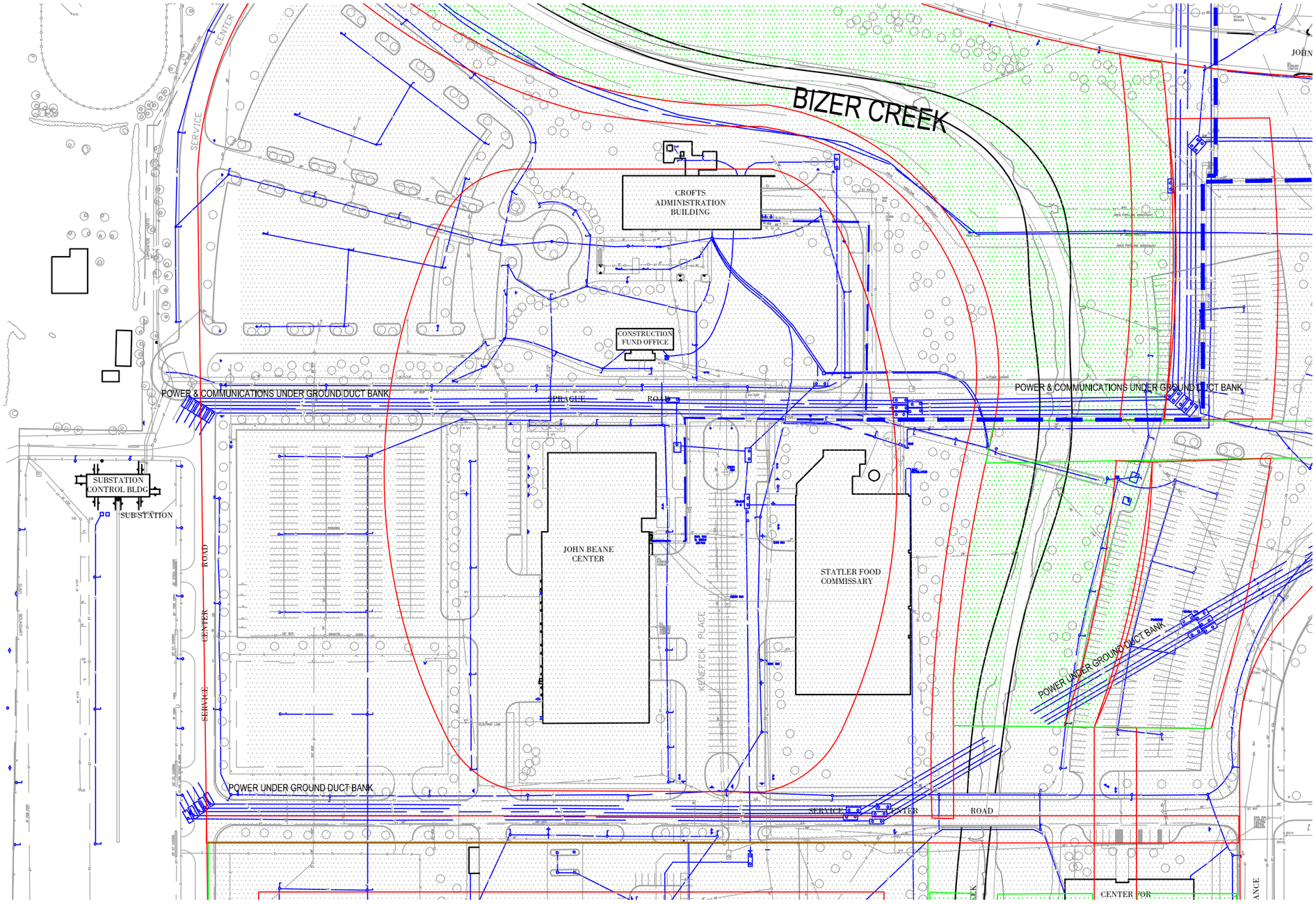

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1 UB AMHERST SITE UTILITIES - POWER & COMMUNICATIONS

SCALE: 1" = 150'

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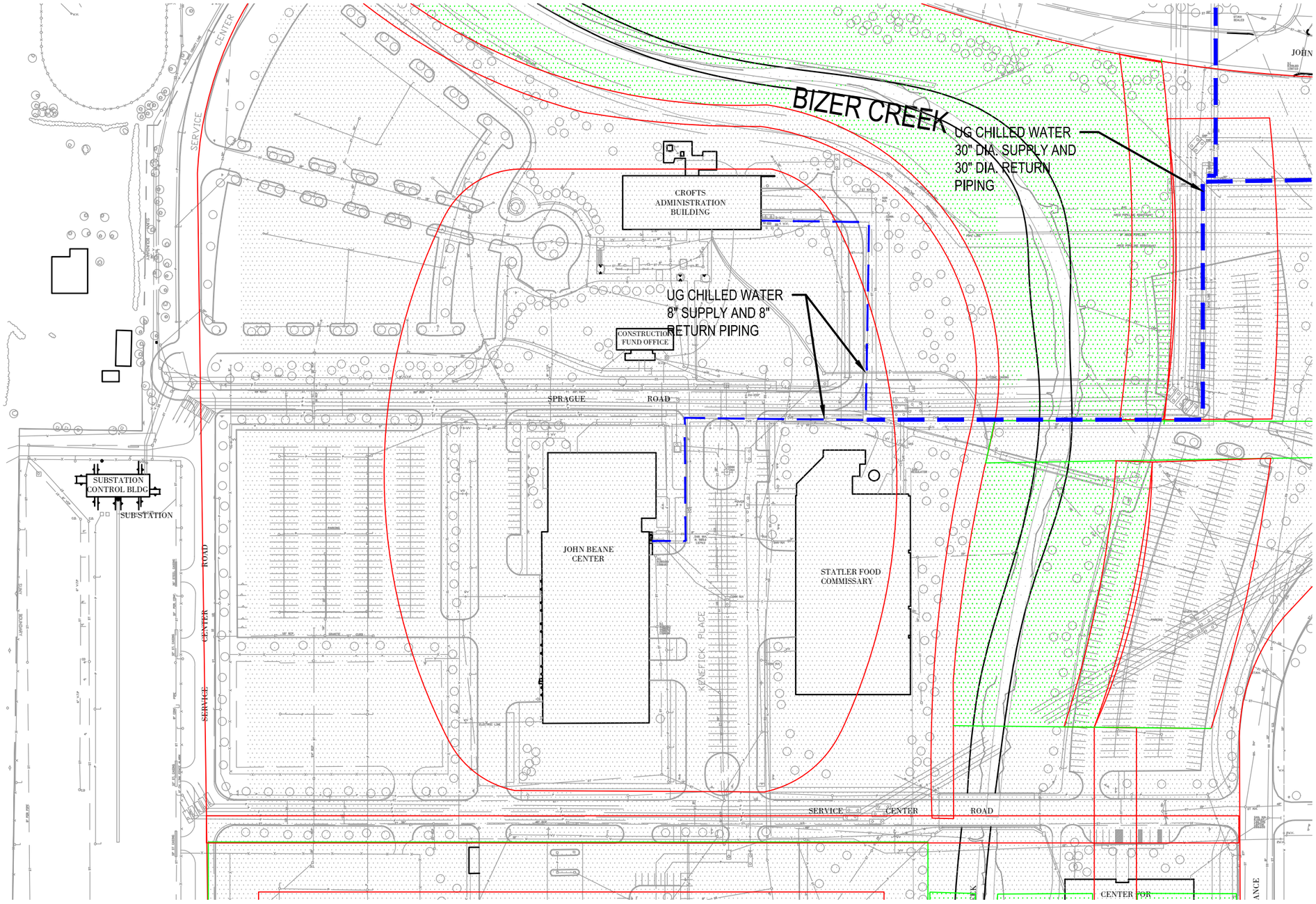

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1 UB AMHERST SITE UTILITIES - CHILLED WATER

SCALE: 1" = 150'

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SOUTH PARK SITE // 4. PROGRAM ACCOMMODATION

4.1 Stadium Location Options:
Only one stadium location was tested within the South Park district: the 36-acre zone between I-190, Louisiana Street, South Park Ave., and Hamburg Street. But for an urban site with four distinct edges, the building and surrounding landscapes will take on four distinct to respond to its surrounding context.

- The north side is conducive to maximizing the scale and appearance of the building along a highly visible highway corridor, which will be a main design opportunity for architectural as well as signage considerations.
- The west side affords desirable vistas to downtown's skyline, but needs to be balanced with prevailing wind conditions as well as the neighboring public housing buildings.
- The south side fronts on to South Park Avenue, the commercial spine that connects the First Ward to the arena and downtown, as well as to the future DL&W landscape/transit corridor.
- The east side is located adjacent to residential blocks with modest single-family houses, so must explore ways in which to transition the mass and function of the building as it meets this residential scale.

Stadium Location Score: 2

LAND USE ISSUES: BMHA/PERRY HOMES

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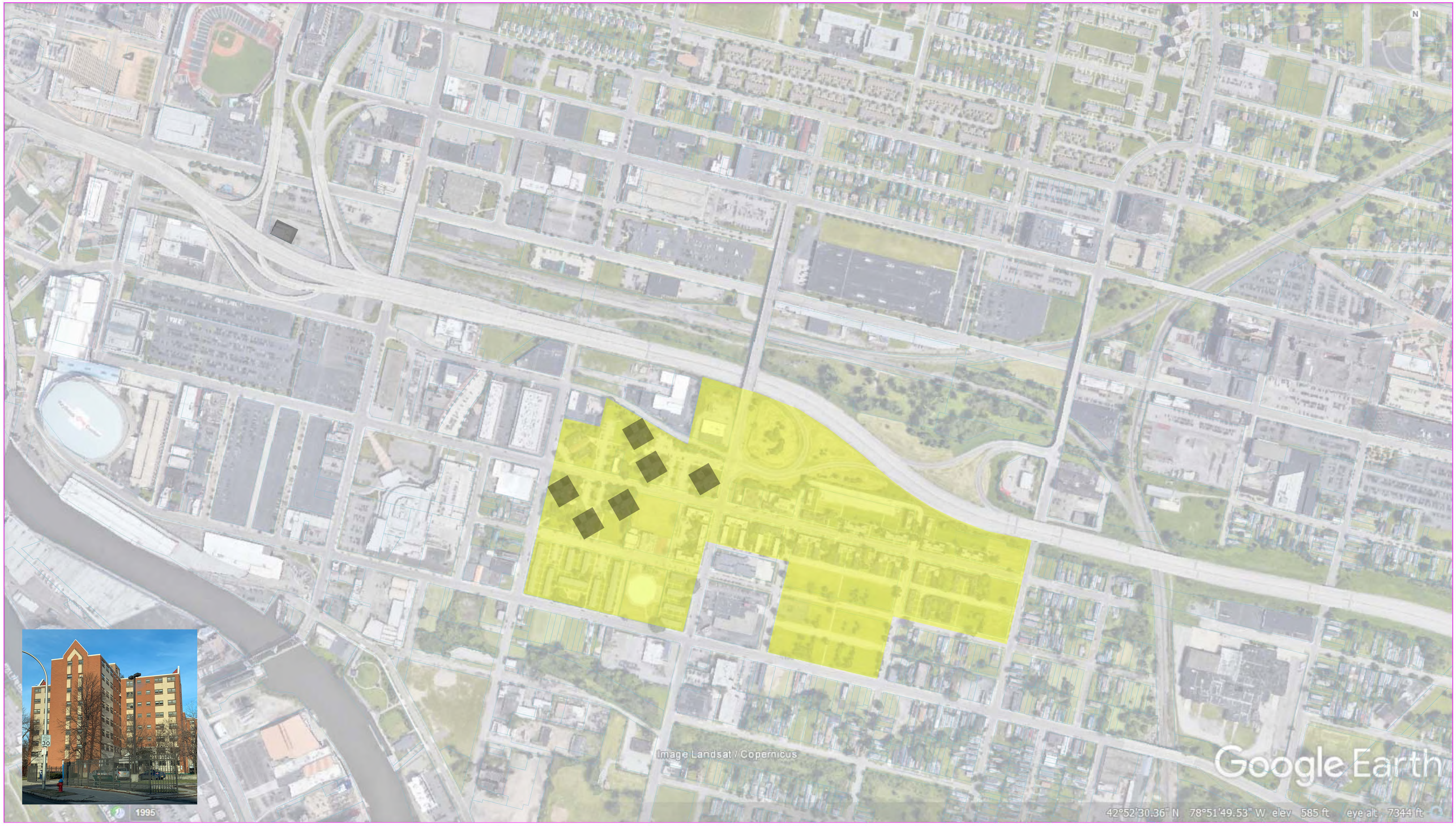

LAND USE ISSUES: BMHA/PERRY HOMES

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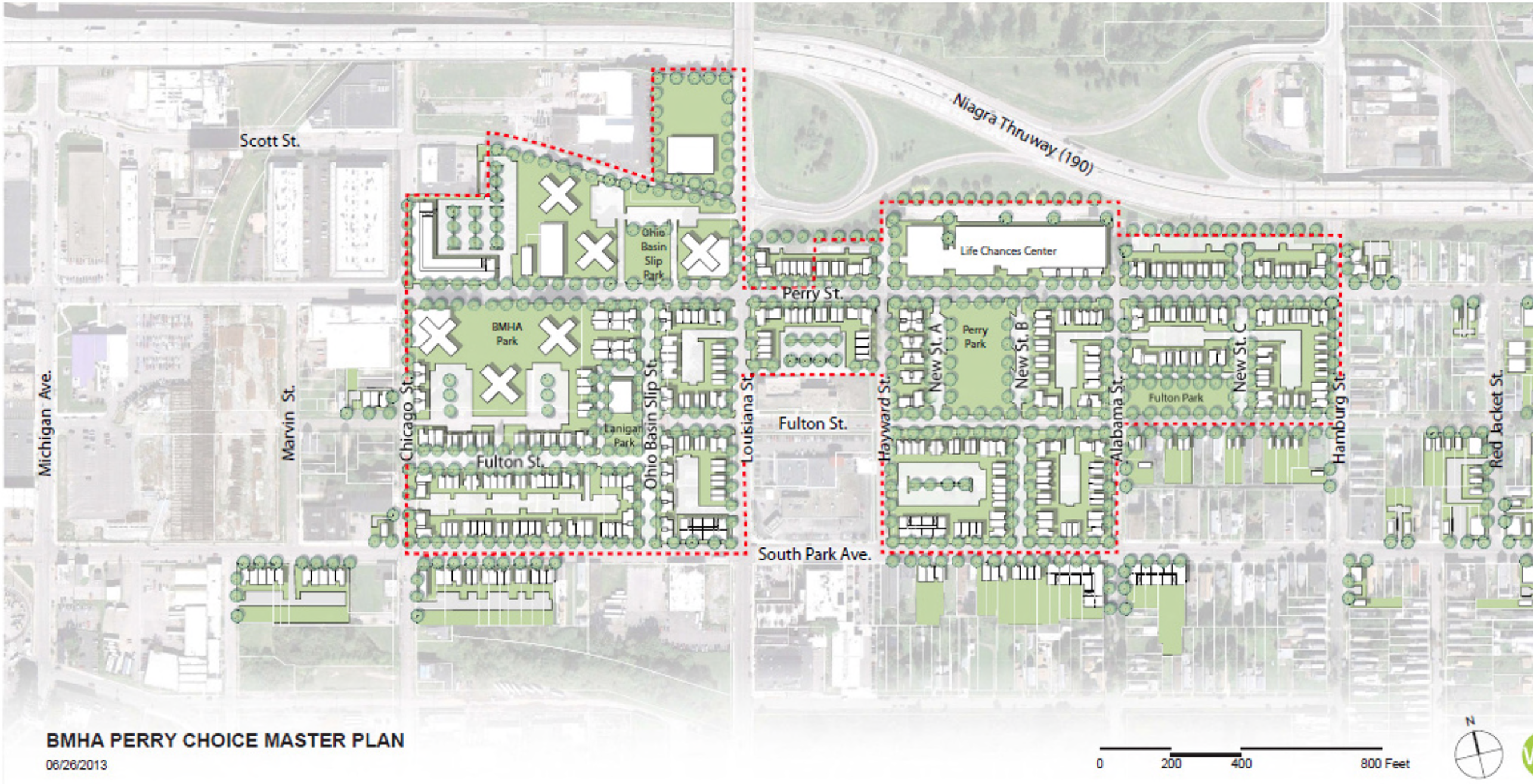
Figure 8: Master Plan of Perry Homes and Extension and surrounding neighborhood



Source: Wallace, Roberts & Todd

SITE OPTION: WEST OF LOUISIANA STREET

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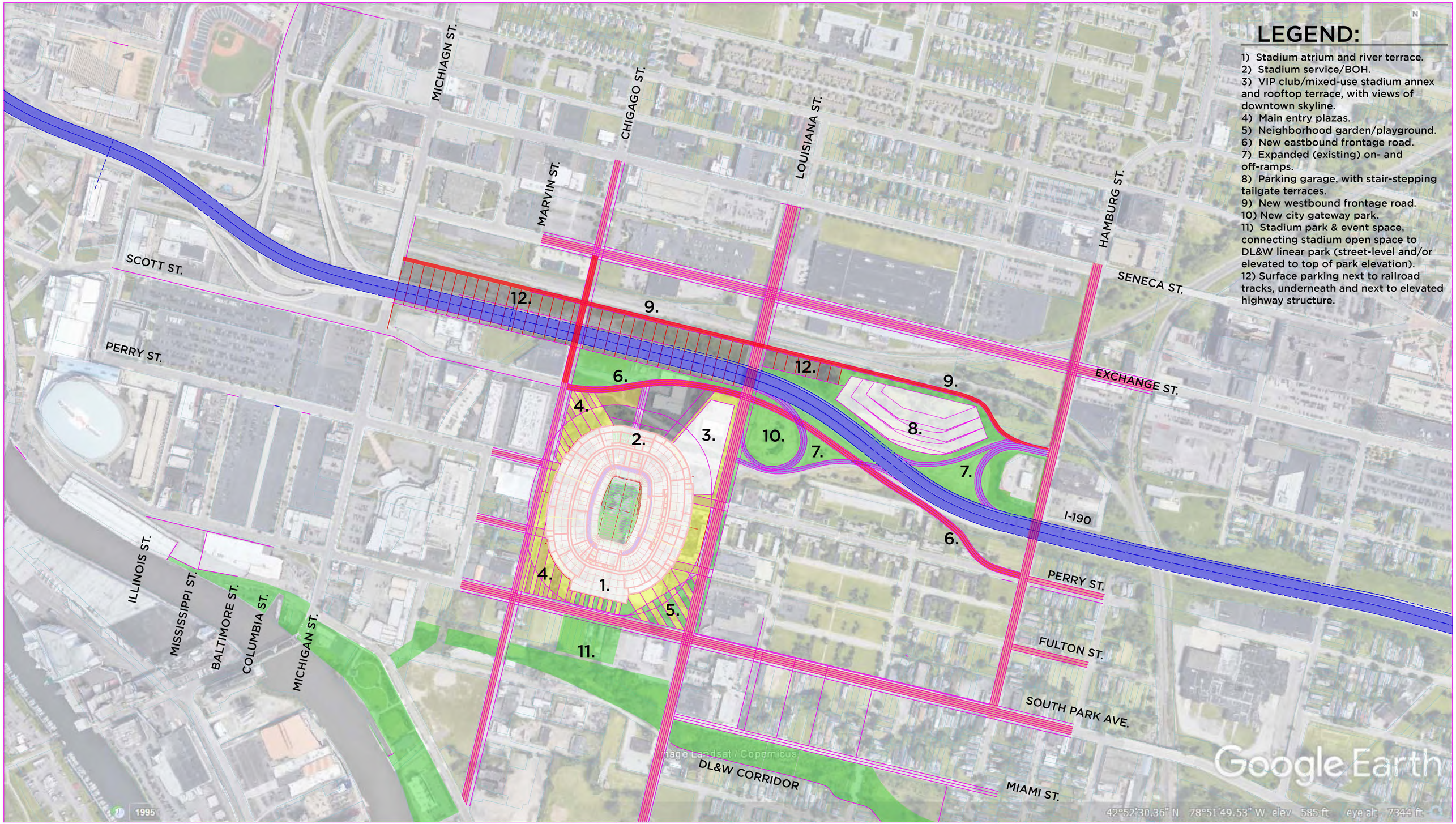

LEGEND:

1) Stadium atrium and river terrace.
2) Stadium service/BOH.
3) VIP club/mixed-use stadium annex and rooftop terrace, with views of downtown skyline.
4) Main entry plazas.
5) Neighborhood garden/playground.
6) New eastbound frontage road.
7) Expanded (existing) on- and off-ramps.
8) Parking garage, with stair-stepping tailgate terraces.
9) New westbound frontage road.
10) New city gateway park.
11) Stadium park & event space, connecting stadium open space to DL&W linear park (street-level and/or elevated to top of park elevation).
12) Surface parking next to railroad tracks, underneath and next to elevated highway structure.

SITE OPTION: EAST OF LOUISIANA STREET (PHASE 1 PLAN)

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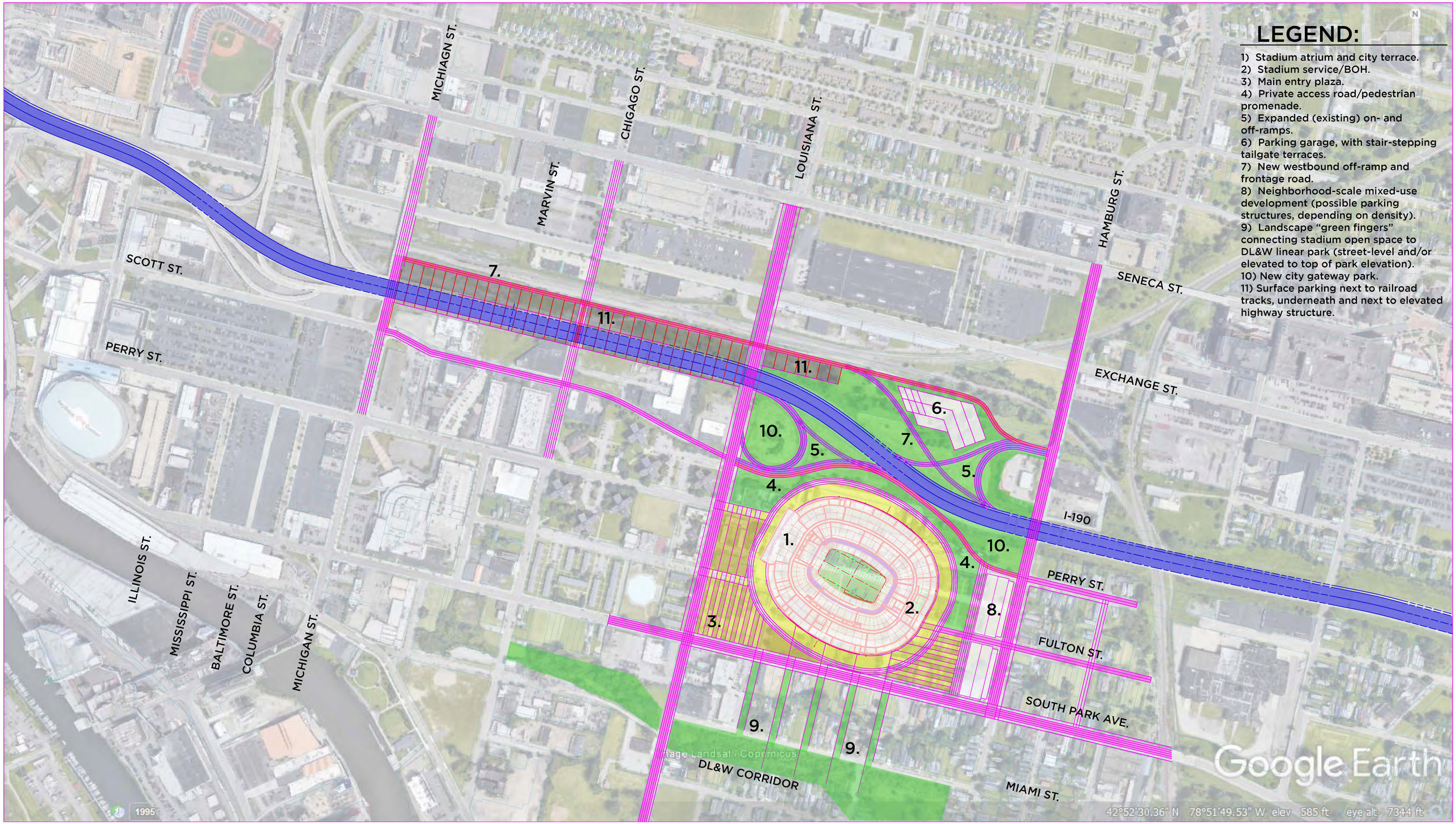

LEGEND:

1) Stadium atrium and city terrace.
2) Stadium service/BOH.
3) Main entry plaza.
4) Private access road/pedestrian promenade.
5) Expanded (existing) on- and off-ramps.
6) Parking garage, with stair-stepping tailgate terraces.
7) New westbound off-ramp and frontage road.
8) Neighborhood-scale mixed-use development (possible parking structures, depending on density).
9) Landscape "green fingers" connecting stadium open space to DL&W linear park (street-level and/or elevated to top of park elevation).
10) New city gateway park.
11) Surface parking next to railroad tracks, underneath and next to elevated highway structure.

EXISTING CONDITIONS

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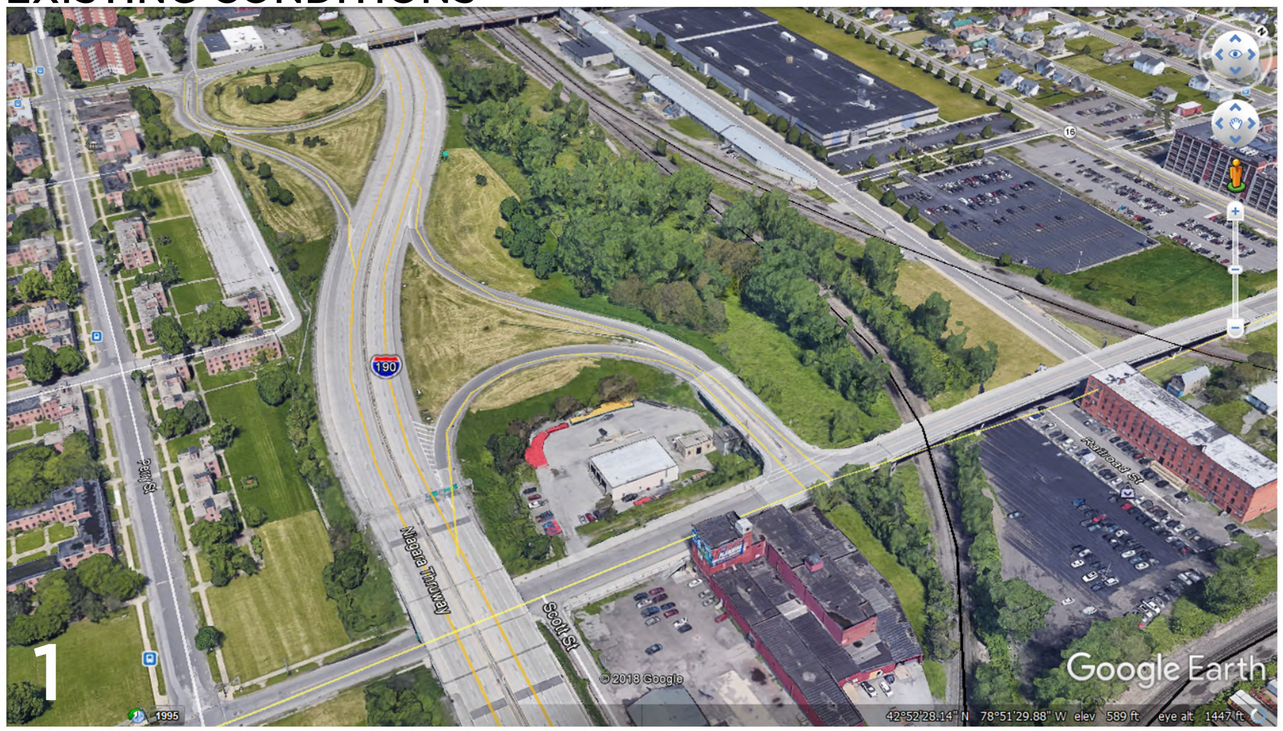

EXISTING CONDITIONS

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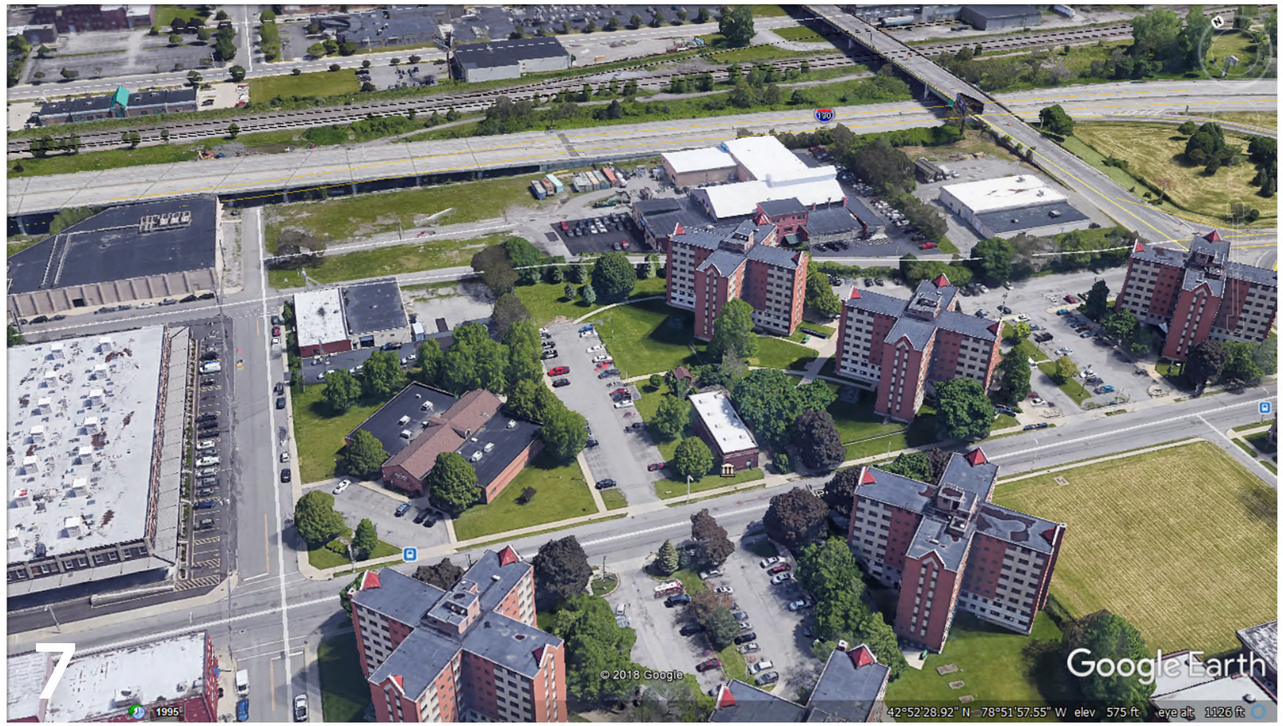

SITE OPTION: EAST OF LOUISIANA STREET (PHASE 1 PLAN)

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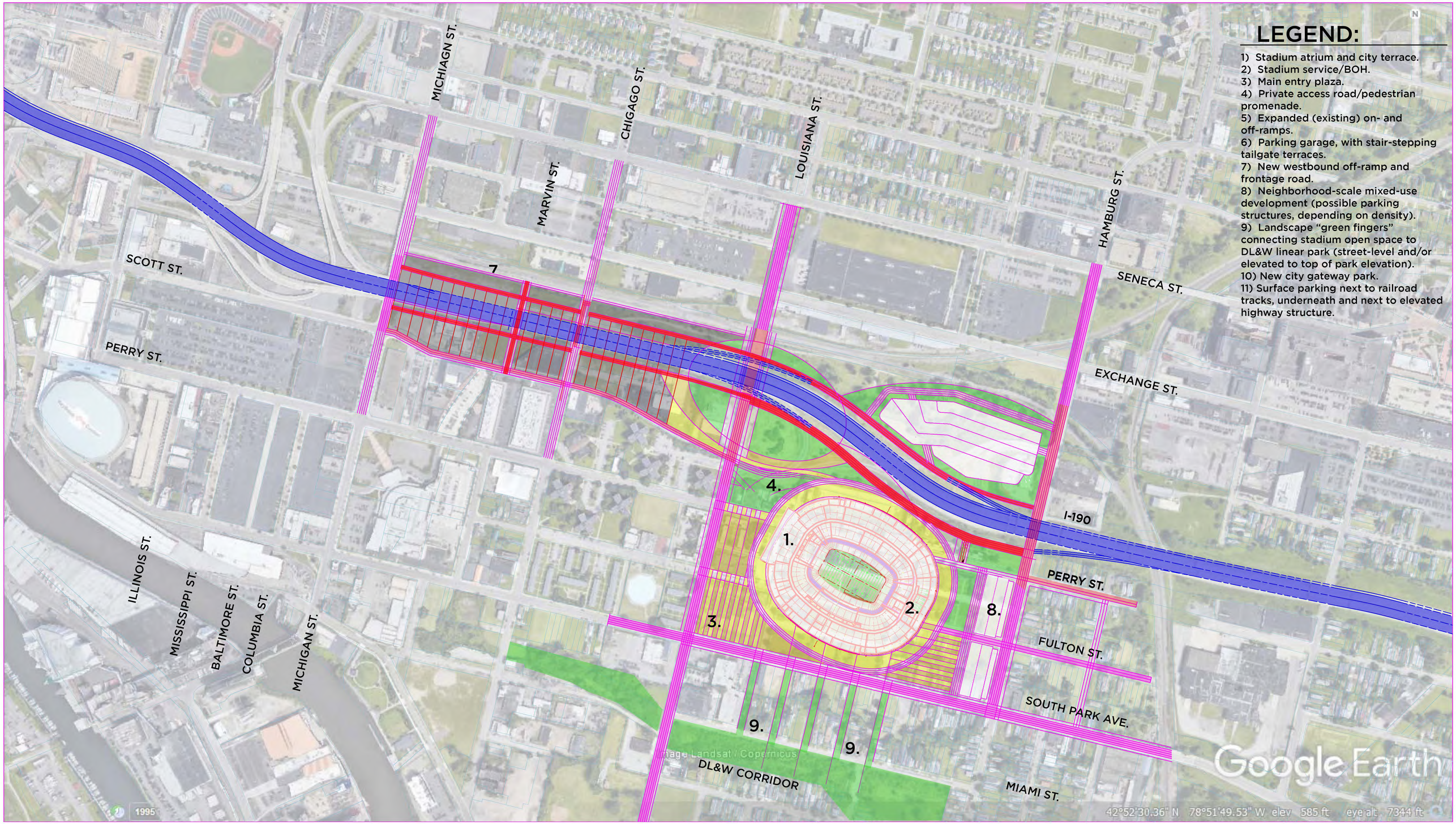

LEGEND:

1) Stadium atrium and city terrace.
2) Stadium service/BOH.
3) Main entry plaza.
4) Private access road/pedestrian promenade.
5) Expanded (existing) on- and off-ramps.
6) Parking garage, with stair-stepping tailgate terraces.
7) New westbound off-ramp and frontage road.
8) Neighborhood-scale mixed-use development (possible parking structures, depending on density).
9) Landscape "green fingers" connecting stadium open space to DL&W linear park (street-level and/or elevated to top of park elevation).
10) New city gateway park.
11) Surface parking next to railroad tracks, underneath and next to elevated highway structure.

LAND USE ISSUES: 190 & RAILROAD & INDUSTRIAL PARCELS

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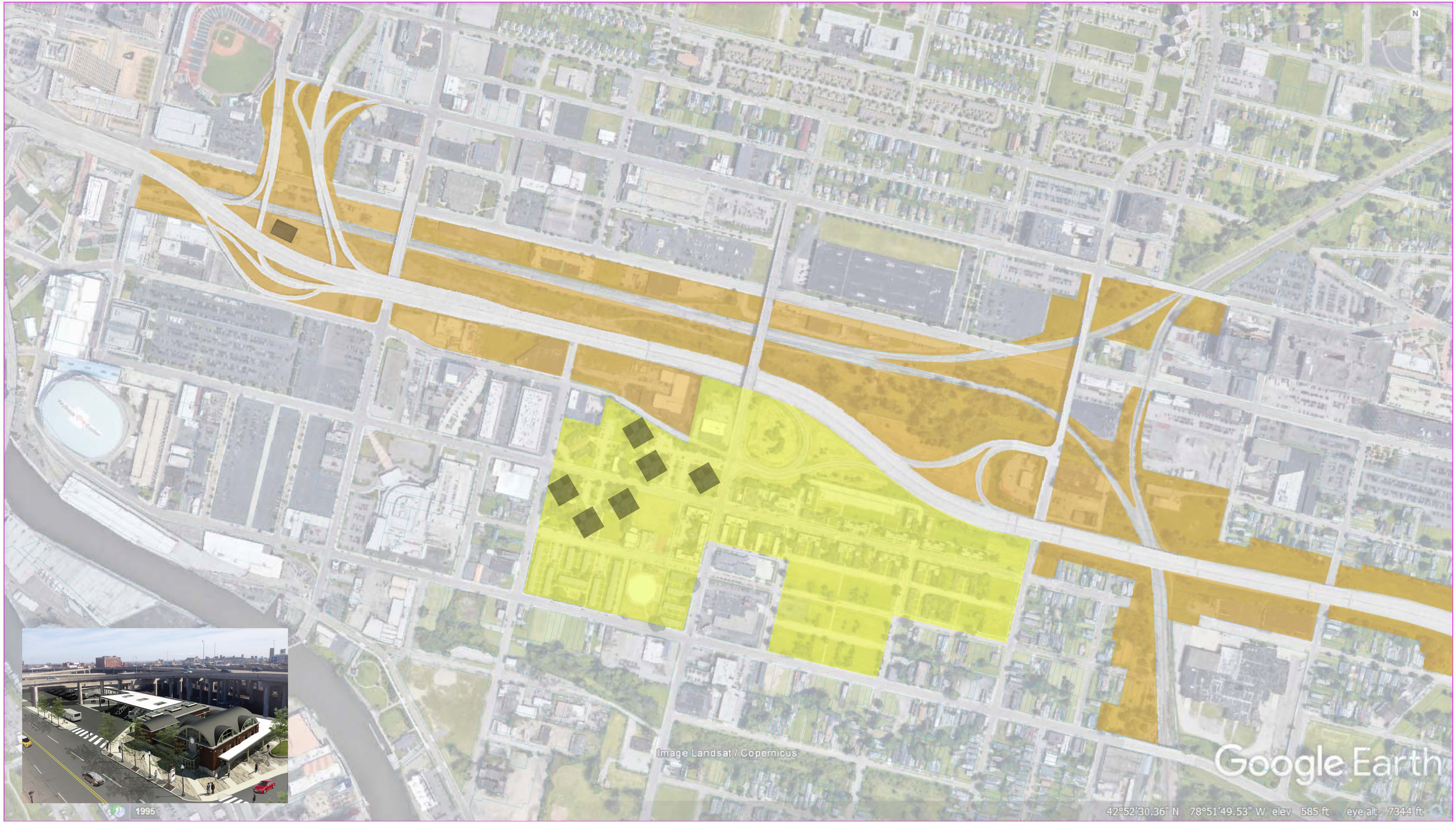
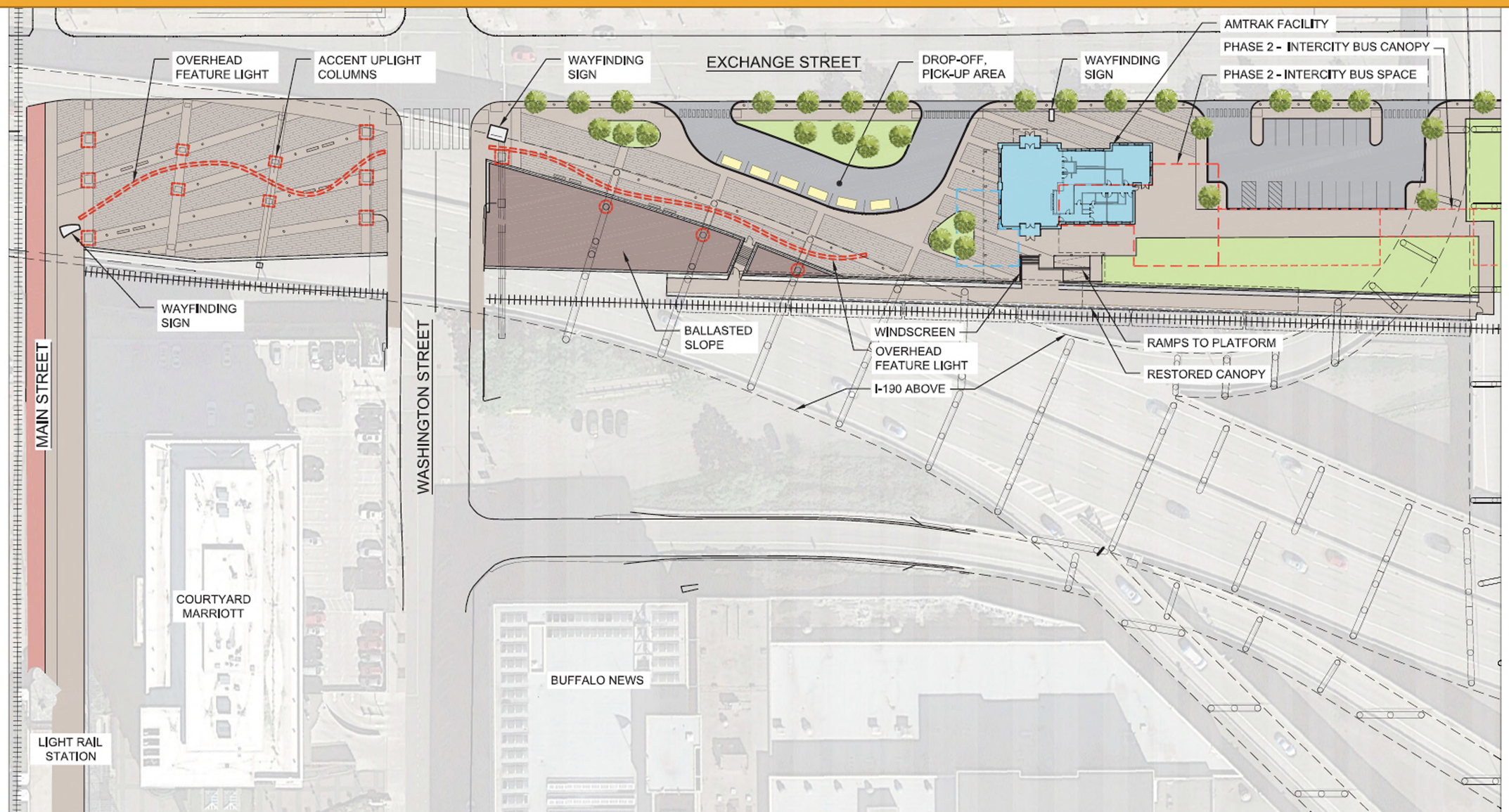


LAND USE ISSUES: FUTURE EXCHANGE ST. STATION SITE PLAN

POPULOUS™



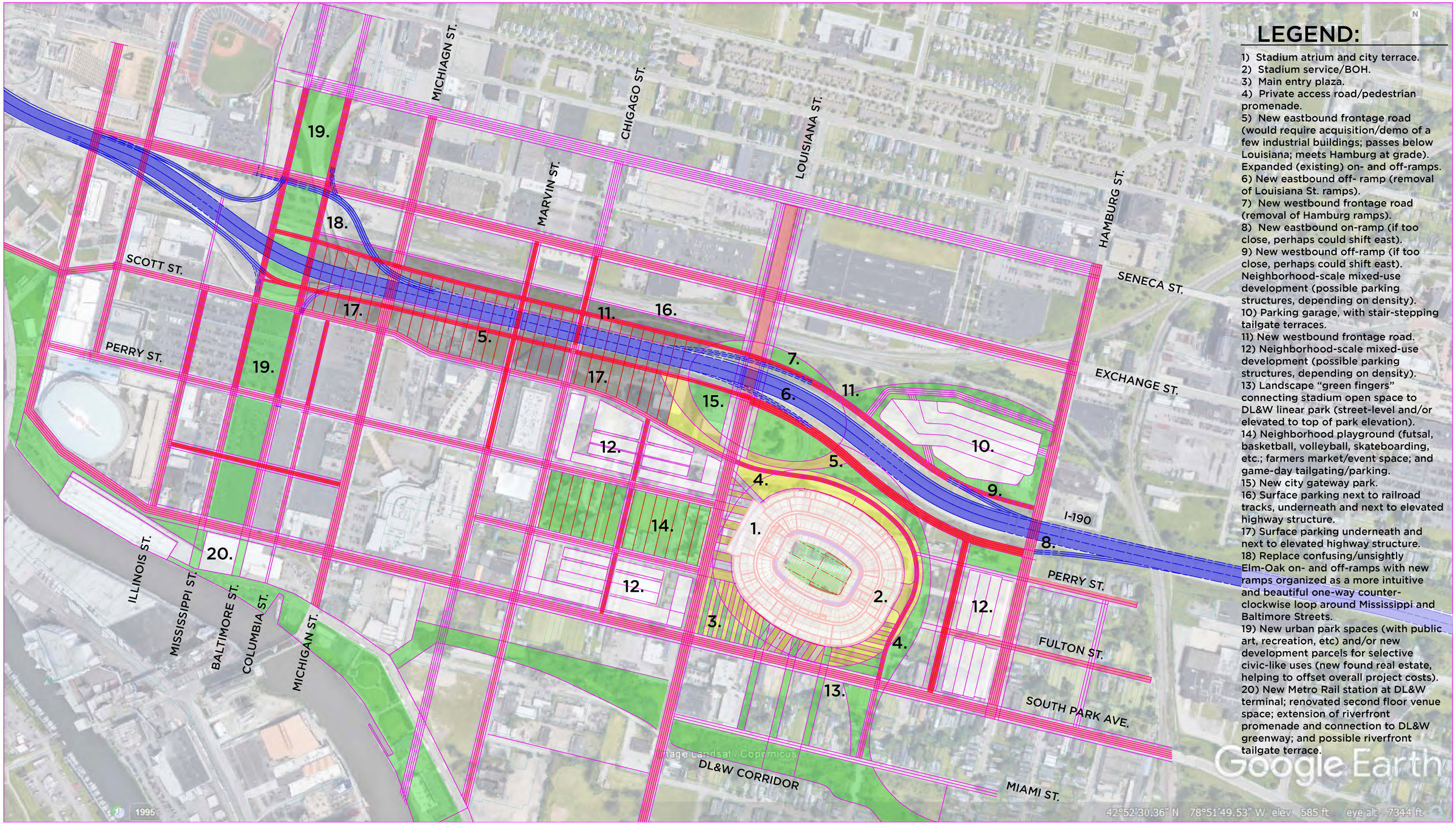
NEW YORK STATE OF OPPORTUNITY. Department of Transportation

AMTRAK

PHASES ONE & TWO

SITE OPTION: EAST OF LOUISIANA STREET (DISTRICT PLAN)

POPULOUS™



LEGEND:

1) Stadium atrium and city terrace.
2) Stadium service/BOH.
3) Main entry plaza.
4) Private access road/pedestrian promenade.
5) New eastbound frontage road (would require acquisition/demo of a few industrial buildings; passes below Louisiana; meets Hamburg at grade). Expanded (existing) on- and off-ramps.
6) New eastbound off- ramp (removal of Louisiana St. ramps).
7) New westbound frontage road (removal of Hamburg ramps).
8) New eastbound on-ramp (if too close, perhaps could shift east).
9) New westbound off-ramp (if too close, perhaps could shift east).
Neighborhood-scale mixed-use development (possible parking structures, depending on density).
10) Parking garage, with stair-stepping tailgate terraces.
11) New westbound frontage road.
12) Neighborhood-scale mixed-use development (possible parking structures, depending on density).
13) Landscape "green fingers" connecting stadium open space to DL&W linear park (street-level and/or elevated to top of park elevation).
14) Neighborhood playground (futsal, basketball, volleyball, skateboarding, etc.; farmers market/event space; and game-day tailgating/parking.
15) New city gateway park.
16) Surface parking next to railroad tracks, underneath and next to elevated highway structure.
17) Surface parking underneath and next to elevated highway structure.
18) Replace confusing/unsightly Elm-Oak on- and off-ramps with new ramps organized as a more intuitive and beautiful one-way counter-clockwise loop around Mississippi and Baltimore Streets.
19) New urban park spaces (with public art, recreation, etc) and/or new development parcels for selective civic-like uses (new found real estate, helping to offset overall project costs).
20) New Metro Rail station at DL&W terminal; renovated second floor venue space; extension of riverfront promenade and connection to DL&W greenway; and possible riverfront tailgate terrace.

EXISTING CONDITIONS

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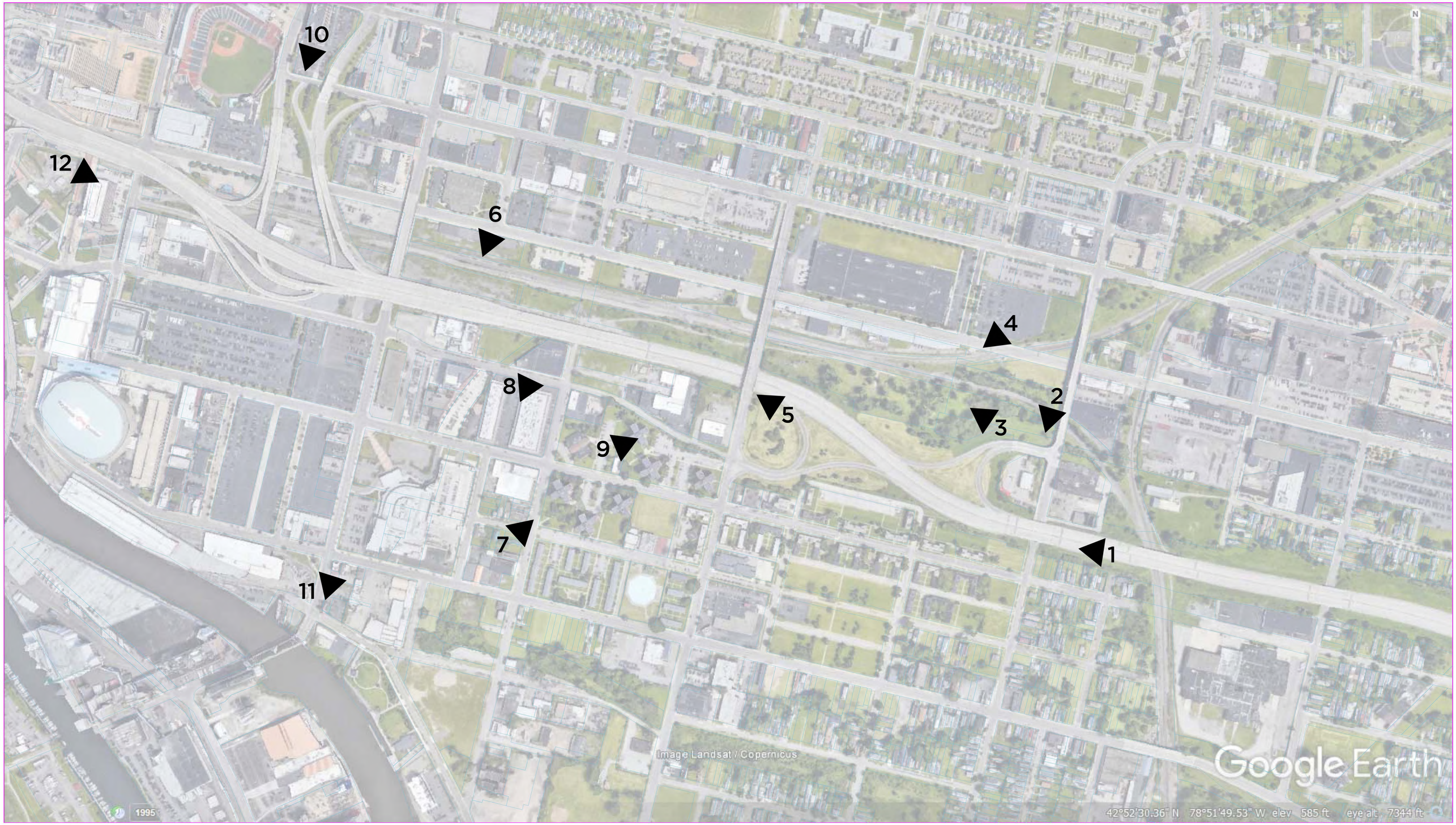
EXISTING CONDITIONS / PHOTO KEY

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