

APPENDIX E: Transportation Access Plan (TAP)

This page is left intentionally blank



To: Mayor's Office of Strategic Planning
and Community Development
City of Somerville
93 Highland Avenue
Somerville, MA 02143

Date: March 23, 2020

Memorandum

Project #: 14000.00

From: Patrick Dunford, P.E.
Senior Project Manager

Re: Transportation Access Plan
XMBLY – 5 Middlesex Avenue
Somerville, Massachusetts

The following information is being provided to document the draft Transportation Access Plan (TAP) for the currently proposed XMBLY development (the "Project") to be located at 5 Middlesex Avenue in Somerville, Massachusetts (the "Site"). The TAP will be issued as a final document upon review and approval by the City of Somerville (the "City"), following any required edits or additional from that review. The following TAP is an updated version of a TAP previously submitted as approved as part of this Project's original 2018 approval prior to this current amended development proposal. This document and accompanying information depict the proposed Project access for automobile, bicycle, and pedestrian traffic. Information regarding truck deliveries and service vehicles (trash, recycling, etc.) also is provided for review.

The currently proposed Project will include approximately 1,219,100 sf of research & development/lab space with and approximately 24,500 sf of supporting retail/restaurant space. The overall Project also will include the "Alta XMBLY" 329-unit residential building discussed above. A new fire station also will be constructed within the Block 21 structured parking garage at the southeast corner of the Middlesex Avenue/Foley Street intersection. By comparison, the 2018 approved XMBLY development included 489 residential units, approximately 612,500 sf of office space, 333,500 sf of research & development/lab space, and 27,140 sf of supporting retail/restaurant space. The final mix of uses will vary depending on market conditions at the time the Project is constructed but will not exceed the approximate maximum dimensions presented above.

Site Access

The Project Site is bound by existing roadways around its perimeter, which will allow for multiple options for entering and existing the overall Project Site. The Project also will include the construction of a new "Road K" traveling in a north/south direction through the center of the Project Site. This roadway will be intersected at its midpoint by Road L, which will continue to the east to its terminus with Grand Union Boulevard. This road also will continue to and from the west where it will connect to Middlesex Avenue. Road K will intersect Foley Street opposite the K-Mart Driveway on the opposite side of the roadway, and this location will continue to function as a full-access unsignalized intersection. Road K will continue to the south through the Project Site where it will intersect Revolution Drive opposite the existing Home Depot driveway. To enhance access at this location, a new eastbound left-turn lane already has been constructed within the existing roadway median to accommodate entering left-turns into the Project Site. This intersection will continue to operate at as a full-access four-way, unsignalized intersection.

To avoid traffic conflicts on Grand Union Boulevard, turning movements to and from Road L will be limited to right-turns only. Road L will provide access and egress for the residential 188-space parking garage under construction within Block 23, and Project Site residents also may use Road K to travel to and from the garage. Road K also will



provide access and egress to the Block 21 commercial parking garage. The Block 21 will no longer have an access driveway on Road K. Instead, the garage will be accessed via a connecting circulation aisle on Foley Street, and the Road L connector roadway to the south.

A new driveway also will be provided on Middlesex Avenue, but it will be limited to entering and exiting right-turns only due to the existing landscaped island opposite the site which limits Middlesex Avenue to one-way, northbound travel only in this area. However, the Proponent is actively pursuing an alternate design to allow for at least exiting traffic directly onto Middlesex Avenue heading to Mystic Avenue northbound, with entering left-turns into the Site also possibly being allowed. To help provide adequate sight lines looking from this driveway towards northbound Middlesex Avenue traffic, the easterly curblines of this roadway will be modified slightly. Specifically, the existing edge of road will be shifted by up to 26 feet to the west. Traffic heading northbound on Mystic Avenue still will be able to freely turn right onto Middlesex Avenue, but exiting Project Site traffic will be able to see these oncoming vehicles for a greater distance. With this change, there also will be additional green space provided along the Project Site's Middlesex Avenue frontage which should provide for improved conditions for pedestrians in this area.

Finally, the potential 14,000 sf City of Somerville fire station will have its own driveway on Middlesex Avenue at the northwest corner of Block 21. The Proponent is committed to working with the City to help provide appropriate measures to help ensure timely, safe, and efficient access and egress to this new amenity.

On-Street Parking

The regulation of on-street parking within and adjacent to the Project will be coordinated through consultation with the City. The Proponent plans to provide on-street parallel parking along most of the length of the newly created Road K. The existing on-street parallel parking spaces along the Site's Foley Street frontage will remain, but with slightly modifications to accommodate the new curb cuts along this roadway proposed as part of this project. The existing Foley Street spaces currently have two-hour time limits.

Site Plans and Supporting Graphics

The conceptual ground floor Site plan for the Project and an illustrative Site plan have been attached for reference as Figures 1 and 2.

Pedestrian Access Plan

Refer to Figure 3 for a plan depicting the Project sidewalk network and general building entrance locations is provided attached to this document. The building entrances shown are general locations; more detail and information will be provided as the Site design is refined.

Bicycle Parking Plan

Refer to Figure 4 for a conceptual bicycle parking plan. The exact locations and configurations of the internal building bicycle parking have not yet been finalized. The City of Somerville Zoning Bylaws require that a total of 182 bicycle parking spaces be provided. However, considering the mixture of proposed uses and configuration of the Site, a total of 224 bicycle parking spaces will be provided.



Motor Vehicle Parking Plan

Refer to Figure 5 for a plan showing the vehicle access to the Project Site. As shown on the plan, there will be a total of four access/egress driveways to the proposed structured parking within the Project Site. This will include a curb cut off of the proposed north/south internal circulation aisle connecting Foley Street to the westerly extension of Road L. With that driveway, the previously approved driveway on Road K no longer will be provided to the Block 21 parking garage. A second driveway to the Block 21 structured parking will be provided on the westerly extension of Road L. Structured parking also will be located within Blocks 24 and 25. One driveway to that parking will be located on the westerly extension of Road L approximately 60 feet to the west of the north/south circulation aisle noted above. A second access/egress driveway to that garage will be located on Revolution Drive at the southerly end of the Site. However, due to the existing raised median on that roadway, entering and exiting left turns will be restricted at that driveway. In total, up to 1,899 structured parking spaces will be provided within the overall Project Site.

Vehicle Movement Plans

Refer to Figures TT-1 through Tt-16 for vehicle tracking diagrams which demonstrate the ability of vehicles ranging in size from standard passenger vehicles to delivery trucks to navigate in and out of the Project Site from the various loading facilities and/or driveways.



Memorandum

ATTACHMENTS

- Ground Floor Plan
- Illustrative Plan
- Pedestrian Access Plan
- Bicycle Parking Plan
- Vehicle Parking Plan
- Vehicle Tracking Diagrams

Ref: 14000.00
March 23, 2020

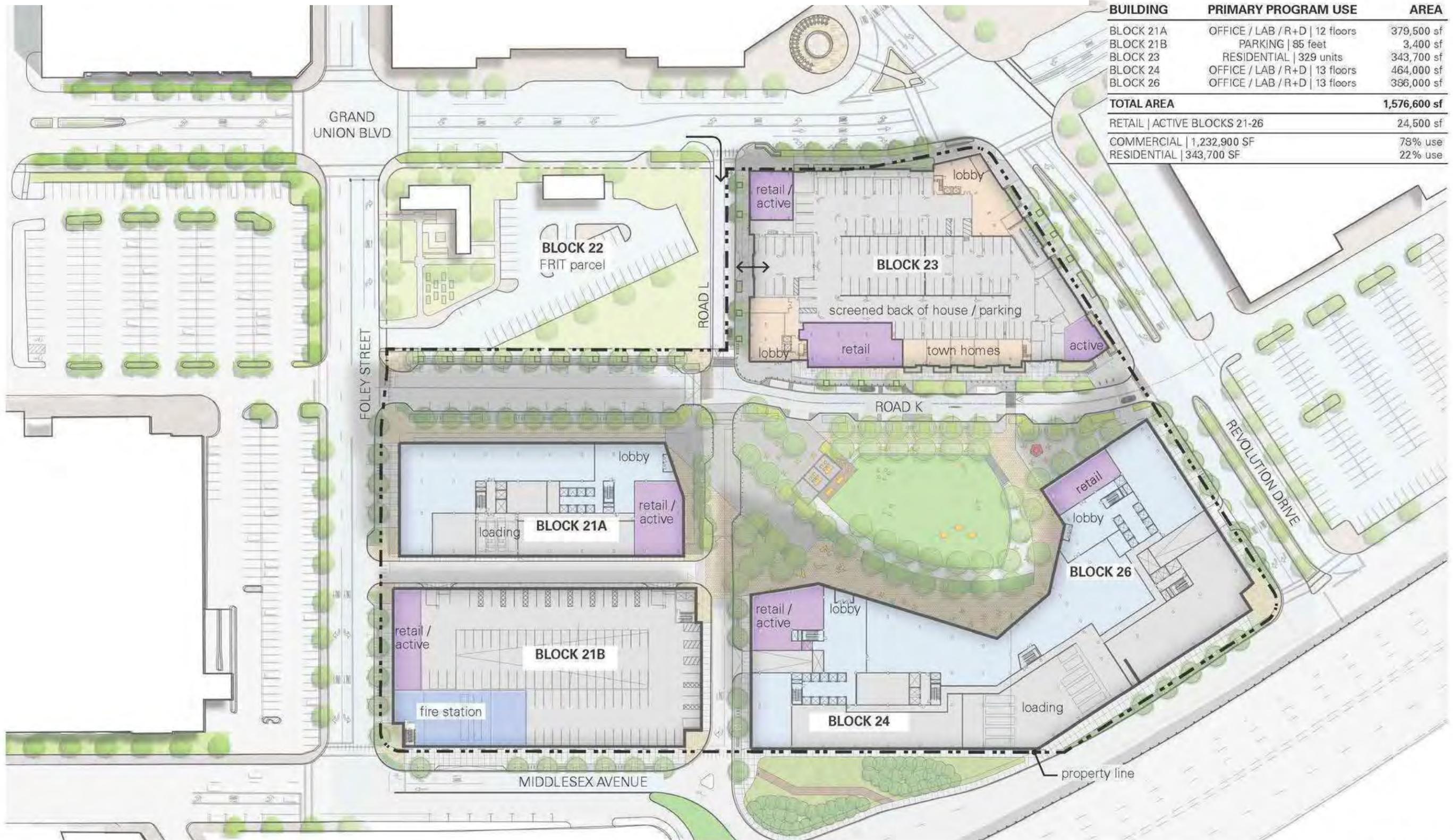


Memorandum

➤ **Ground Floor Plan**

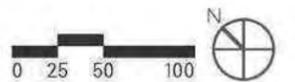
Ground Floor Plan

Source: XMBLY Master Plan Design Guidelines March 19, 2020.



BUILDING	PRIMARY PROGRAM USE	AREA
BLOCK 21A	OFFICE / LAB / R+D 12 floors	379,500 sf
BLOCK 21B	PARKING 85 feet	3,400 sf
BLOCK 23	RESIDENTIAL 329 units	343,700 sf
BLOCK 24	OFFICE / LAB / R+D 13 floors	464,000 sf
BLOCK 26	OFFICE / LAB / R+D 13 floors	386,000 sf
TOTAL AREA		1,576,600 sf
RETAIL ACTIVE BLOCKS 21-26		24,500 sf
COMMERCIAL 1,232,900 SF		78% use
RESIDENTIAL 343,700 SF		22% use

Figure 1



Ref: 14000.00
March 23, 2020



Memorandum

➤ **Illustrative Plan**

Illustrative Site Plan

Source: XMBLY Master Plan Design Guidelines March 19, 2020.

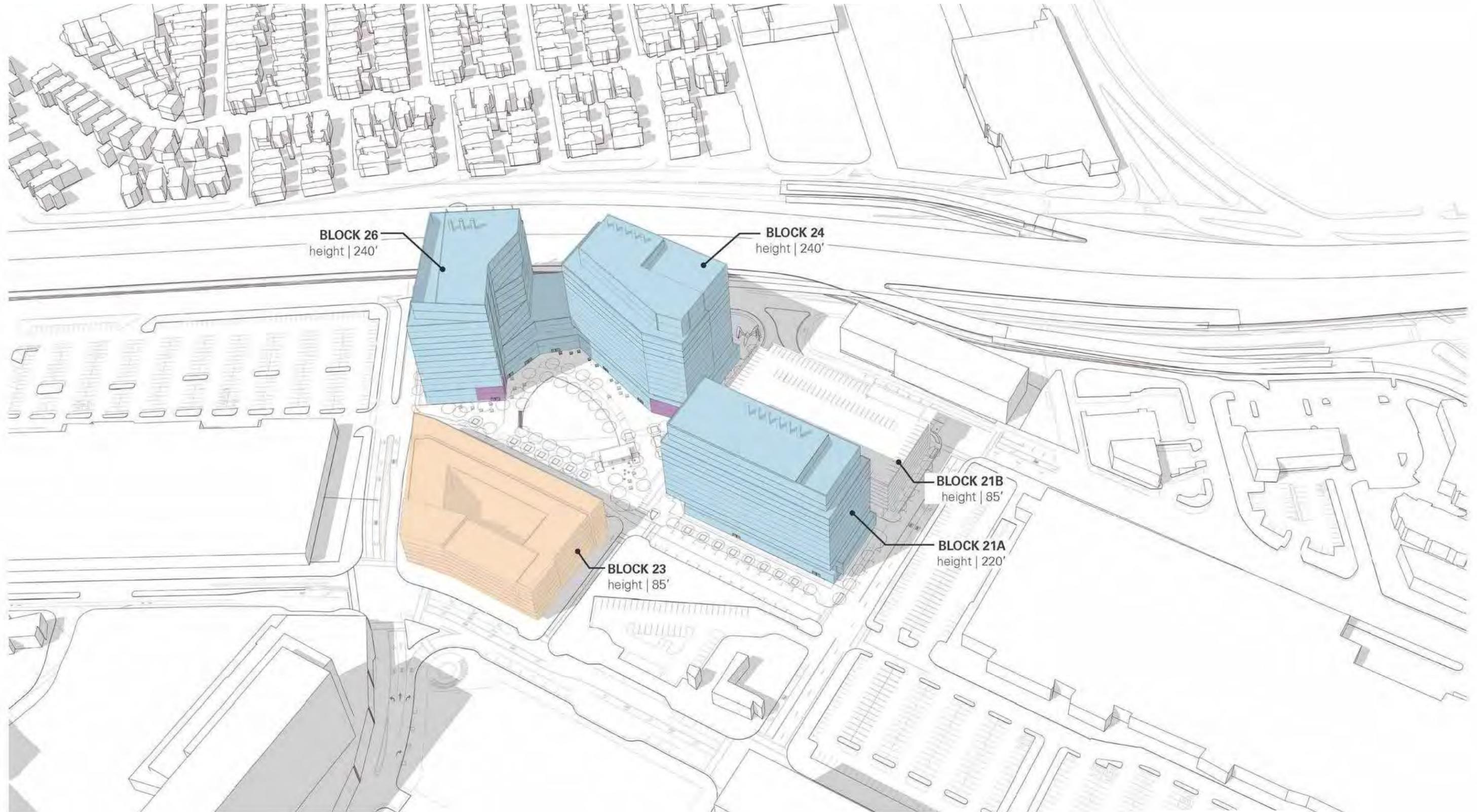


Figure 2

Ref: 14000.00
March 23, 2020

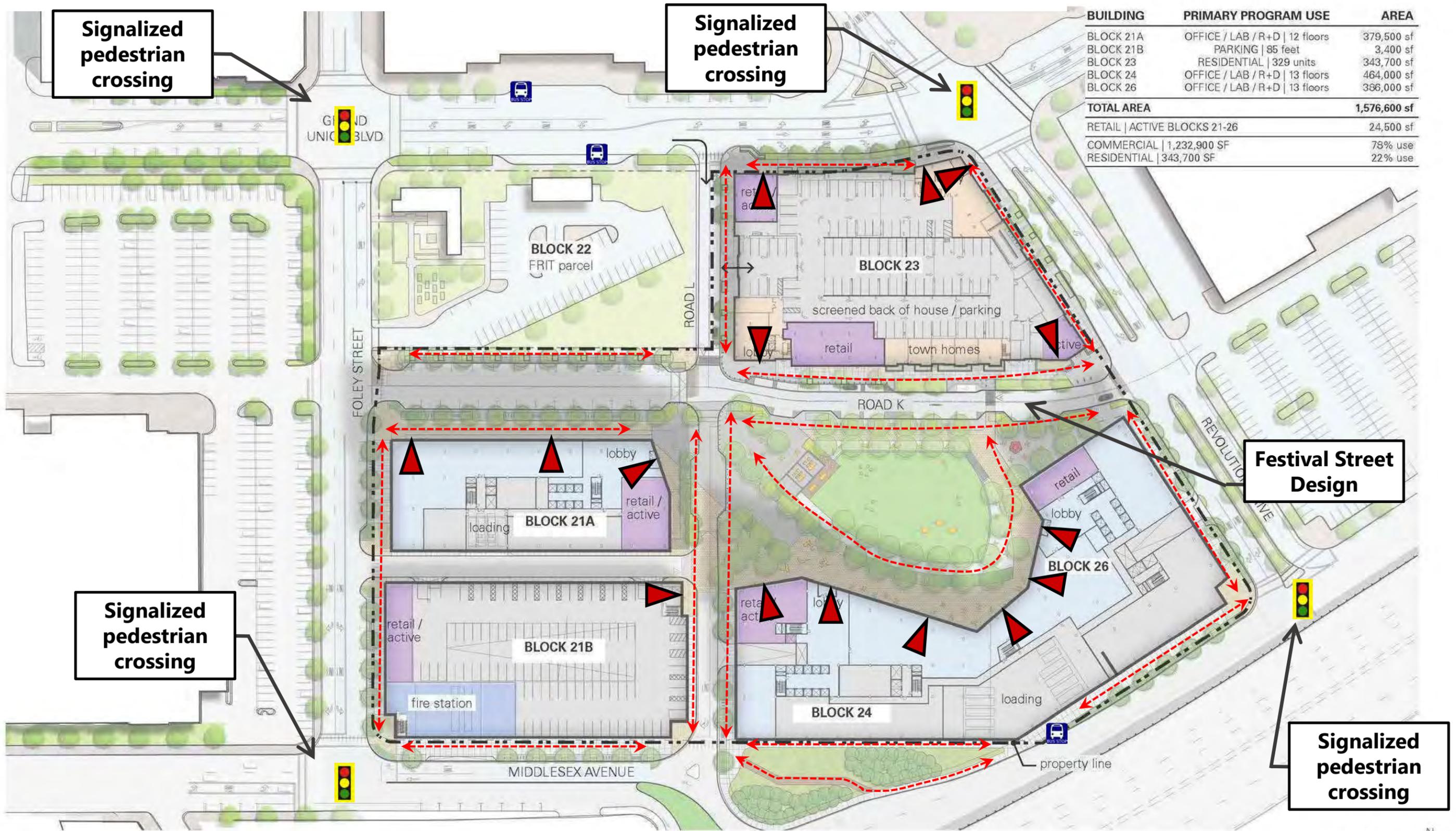


Memorandum

➤ **Pedestrian Access Plan**

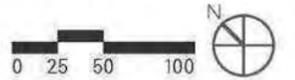
Pedestrian Access Plan

Source: XMBLY Master Plan Design Guidelines March 19, 2020.



BUILDING	PRIMARY PROGRAM USE	AREA
BLOCK 21A	OFFICE / LAB / R+D 12 floors	379,500 sf
BLOCK 21B	PARKING 85 feet	3,400 sf
BLOCK 23	RESIDENTIAL 329 units	343,700 sf
BLOCK 24	OFFICE / LAB / R+D 13 floors	464,000 sf
BLOCK 26	OFFICE / LAB / R+D 13 floors	386,000 sf
TOTAL AREA		1,576,600 sf
RETAIL ACTIVE BLOCKS 21-26		24,500 sf
COMMERCIAL 1,232,900 SF		78% use
RESIDENTIAL 343,700 SF		22% use

Figure 3



Ref: 14000.00
March 23, 2020



Memorandum

➤ **Bicycle Parking Plan**

Bicycle Parking Plan

Source: XMBLY Master Plan Design Guidelines March 19, 2020.

Bicycle Parking Spaces:

182 spaces required per zoning

224 spaces provided*

- Exact allocation of bicycle parking spaces for Block 21, 24, & 26 to be determined through ongoing refinement of site plan.
- Short-term bicycle racks to be provided within 50 feet of each building entrance.

BUILDING	PRIMARY PROGRAM USE	AREA
BLOCK 21A	OFFICE / LAB / R+D 12 floors	379,500 sf
BLOCK 21B	PARKING 85 feet	3,400 sf
BLOCK 23	RESIDENTIAL 329 units	343,700 sf
BLOCK 24	OFFICE / LAB / R+D 13 floors	464,000 sf
BLOCK 26	OFFICE / LAB / R+D 13 floors	386,000 sf
TOTAL AREA		1,576,600 sf
RETAIL ACTIVE BLOCKS 21-26		24,500 sf
COMMERCIAL 1,232,900 SF		78% use
RESIDENTIAL 343,700 SF		22% use

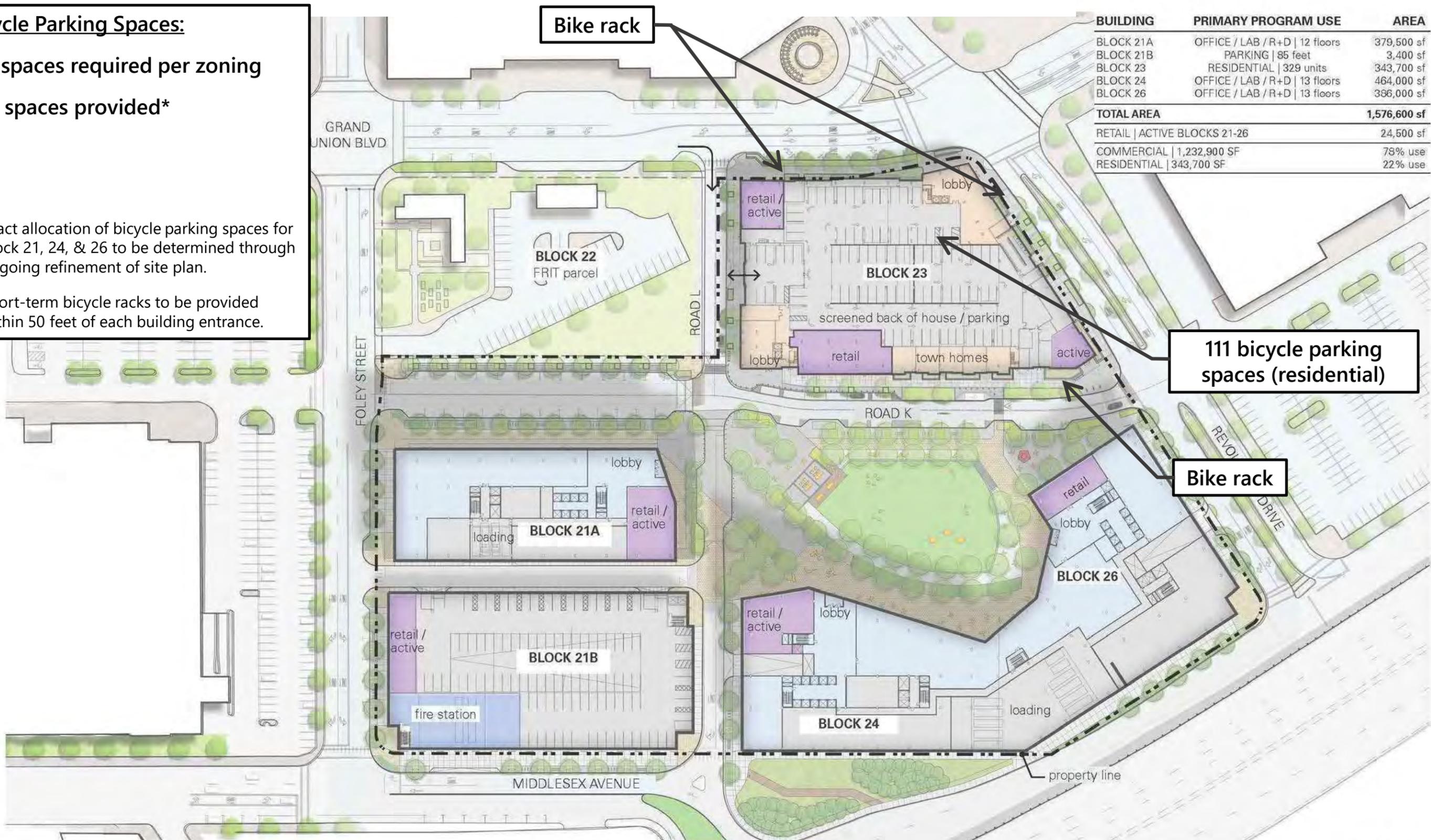


Figure 4



Ref: 14000.00
March 23, 2020



Memorandum

➤ **Vehicle Parking Plan**

Motor Vehicle Parking Plan – XMBLY and On-Street parking

Source: XMBLY Master Plan Design Guidelines March 19, 2020.

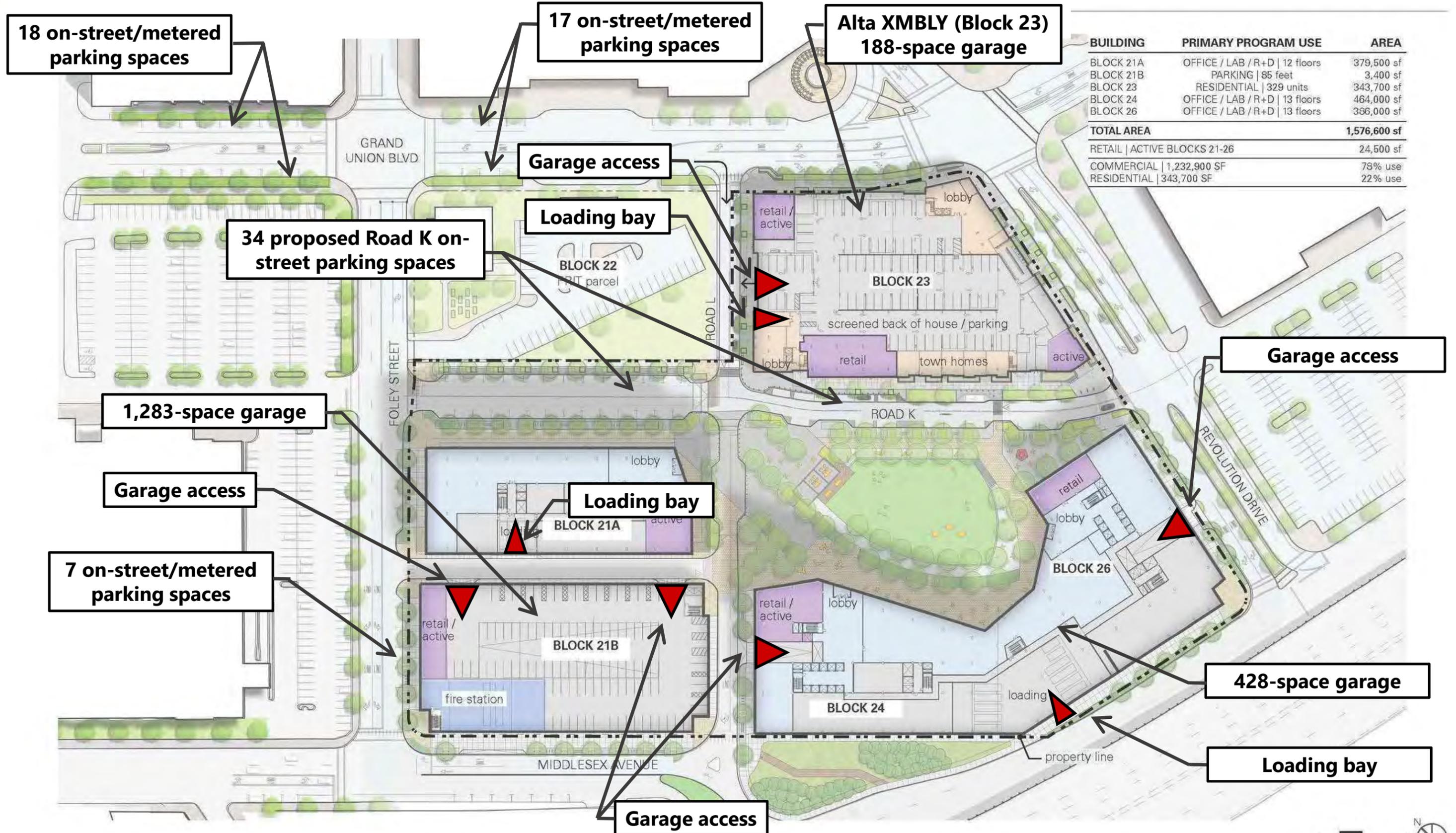


Figure 5

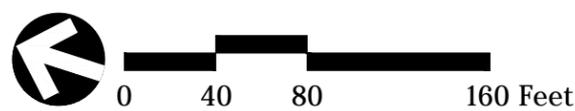
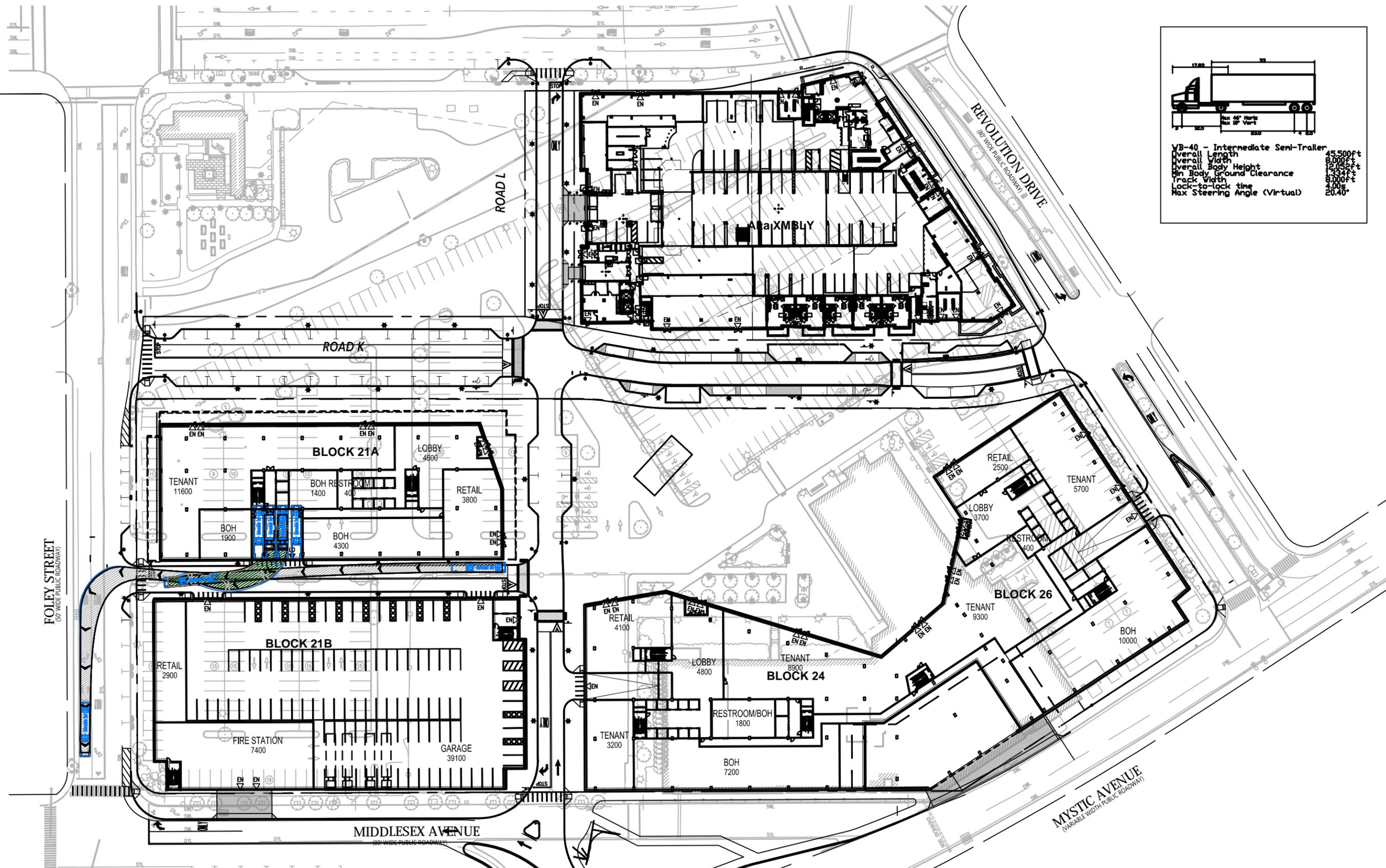


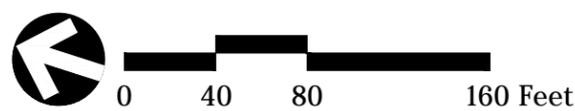
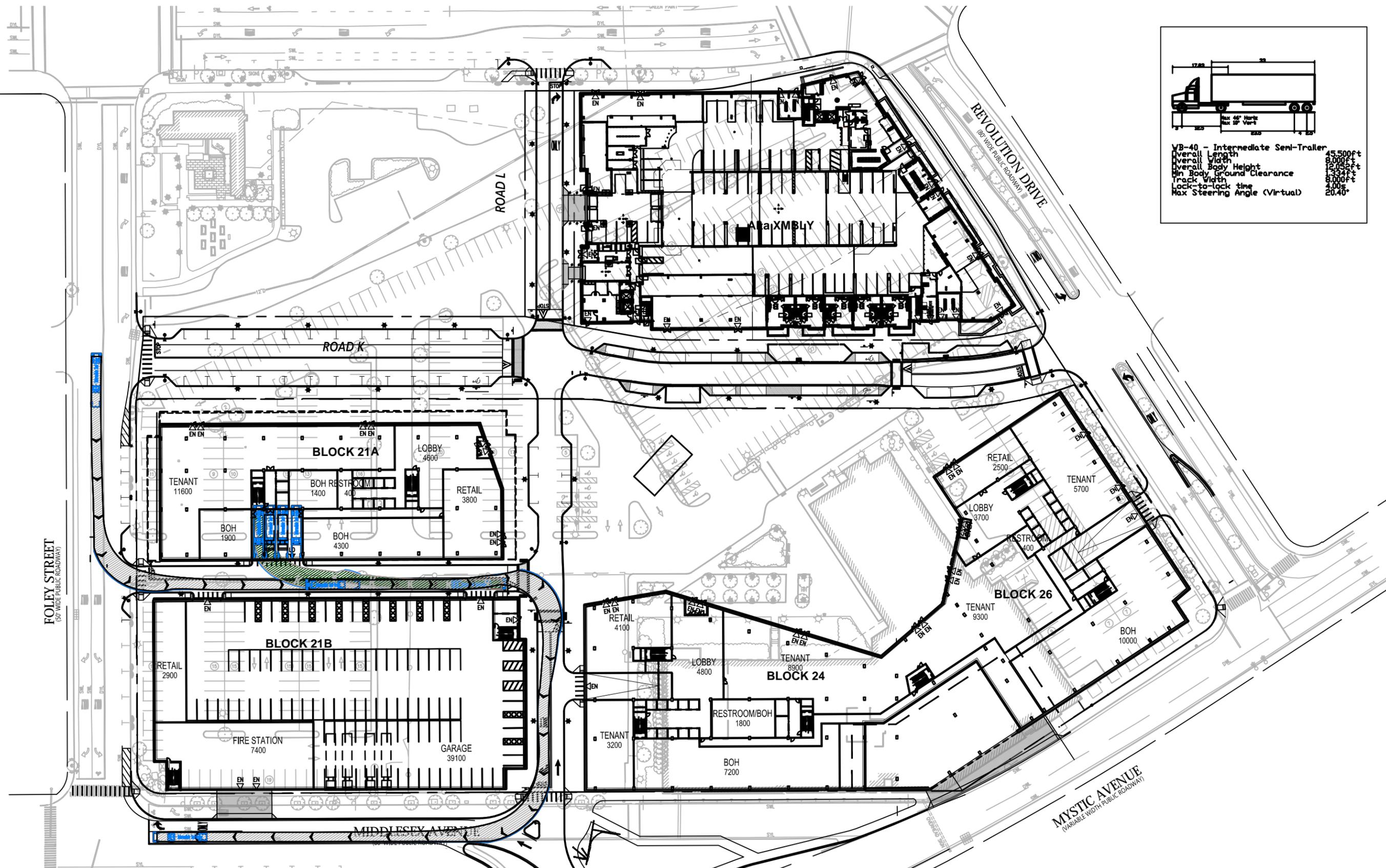
Ref: 14000.00
March 23, 2020

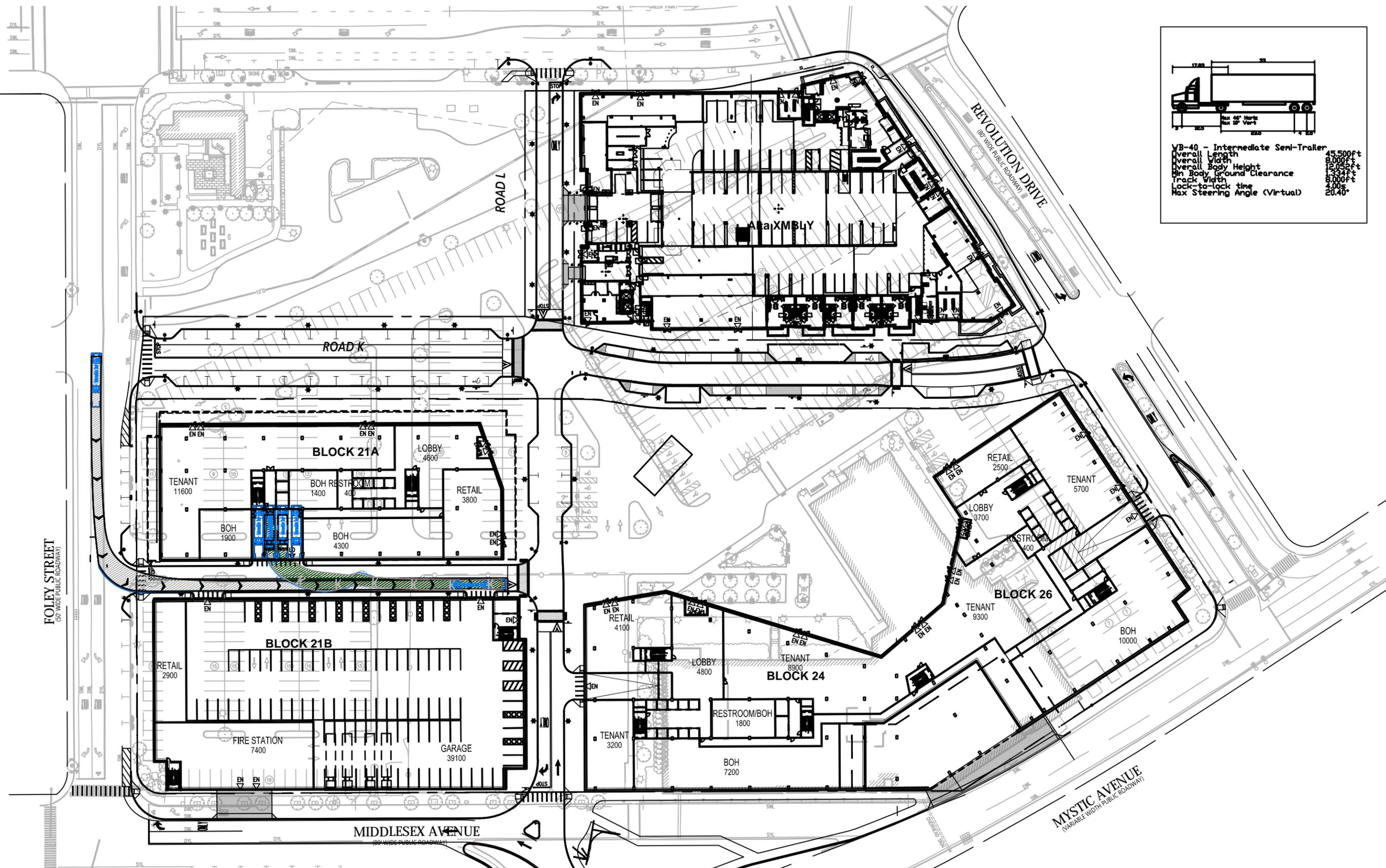


Memorandum

➤ **Vehicle Tracking Diagrams**

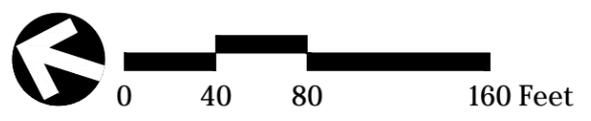


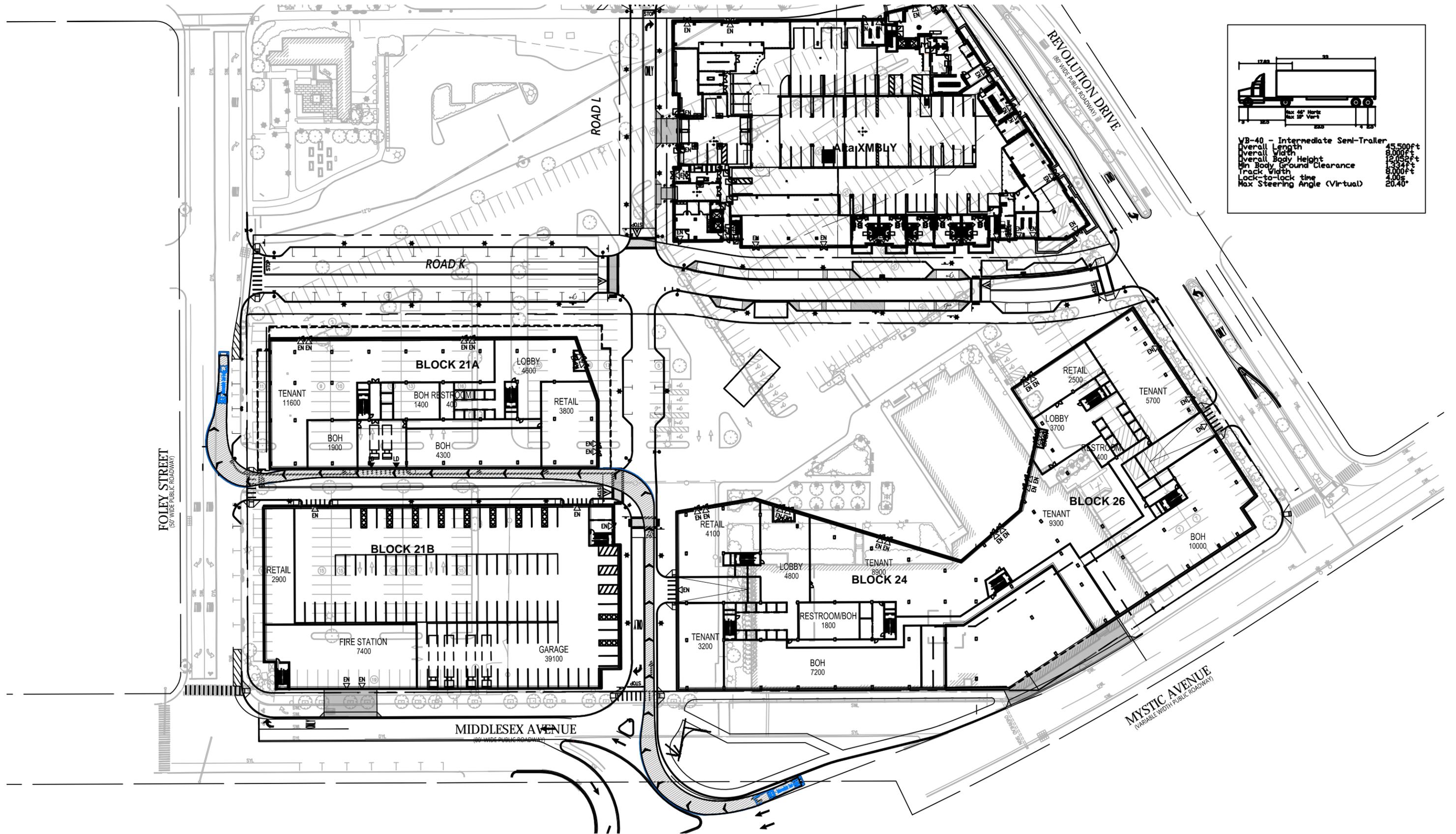




VB-40 - Intermediate Semi-Trailer

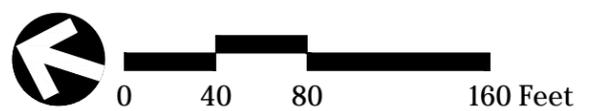
Overall Length	45.500ft
Overall Width	8.000ft
Overall Body Height	12.052ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.40°





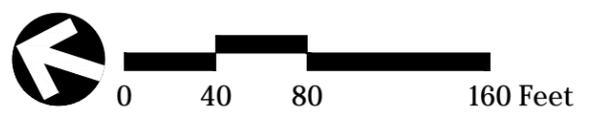
VB-40 - Intermediate Semi-Trailer

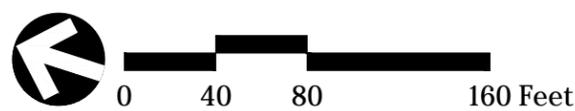
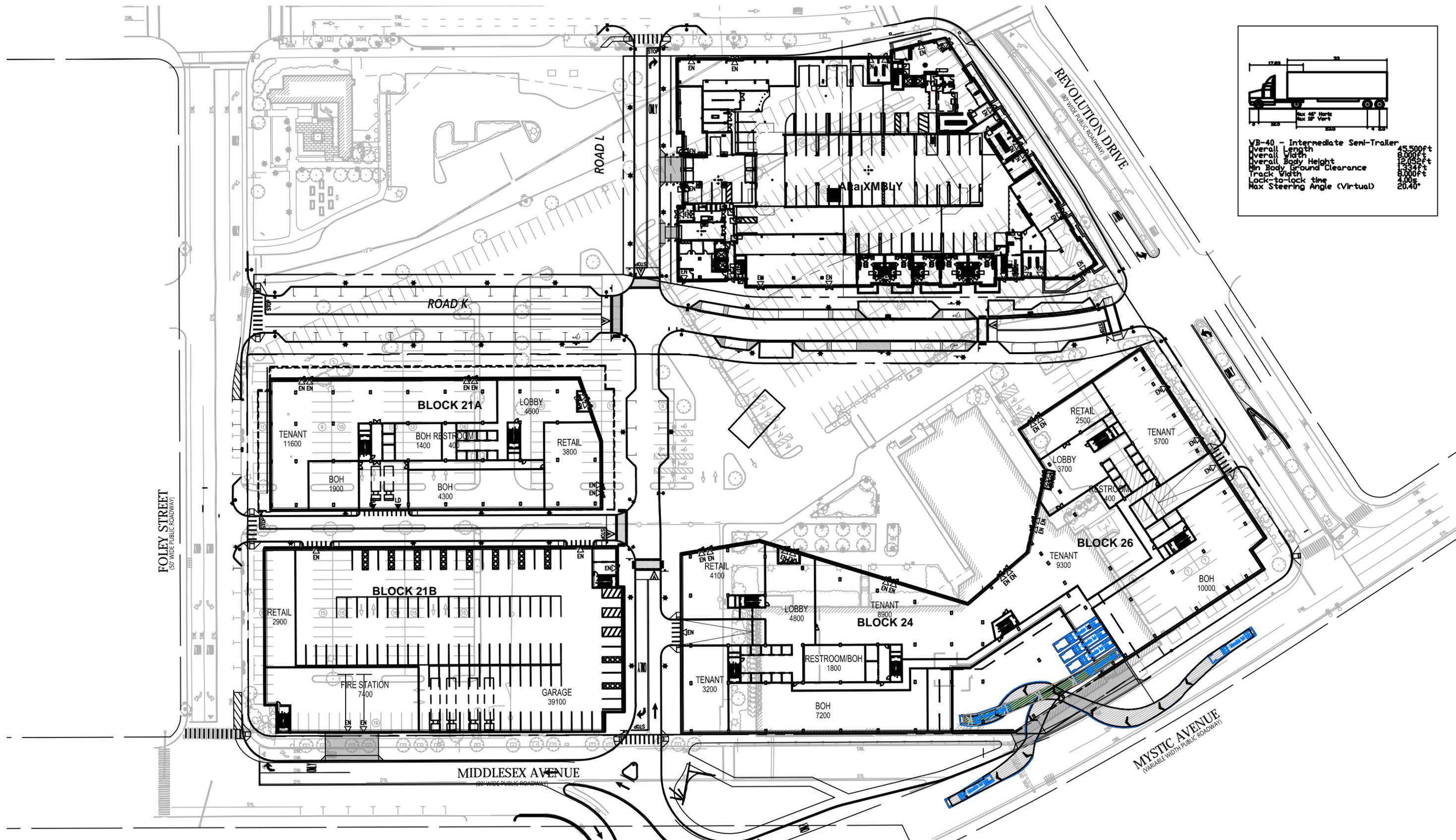
Overall Length	45.500ft
Overall Width	8.000ft
Overall Body Height	12.052ft
Min Body Ground Clearance	1.334ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	20.40°

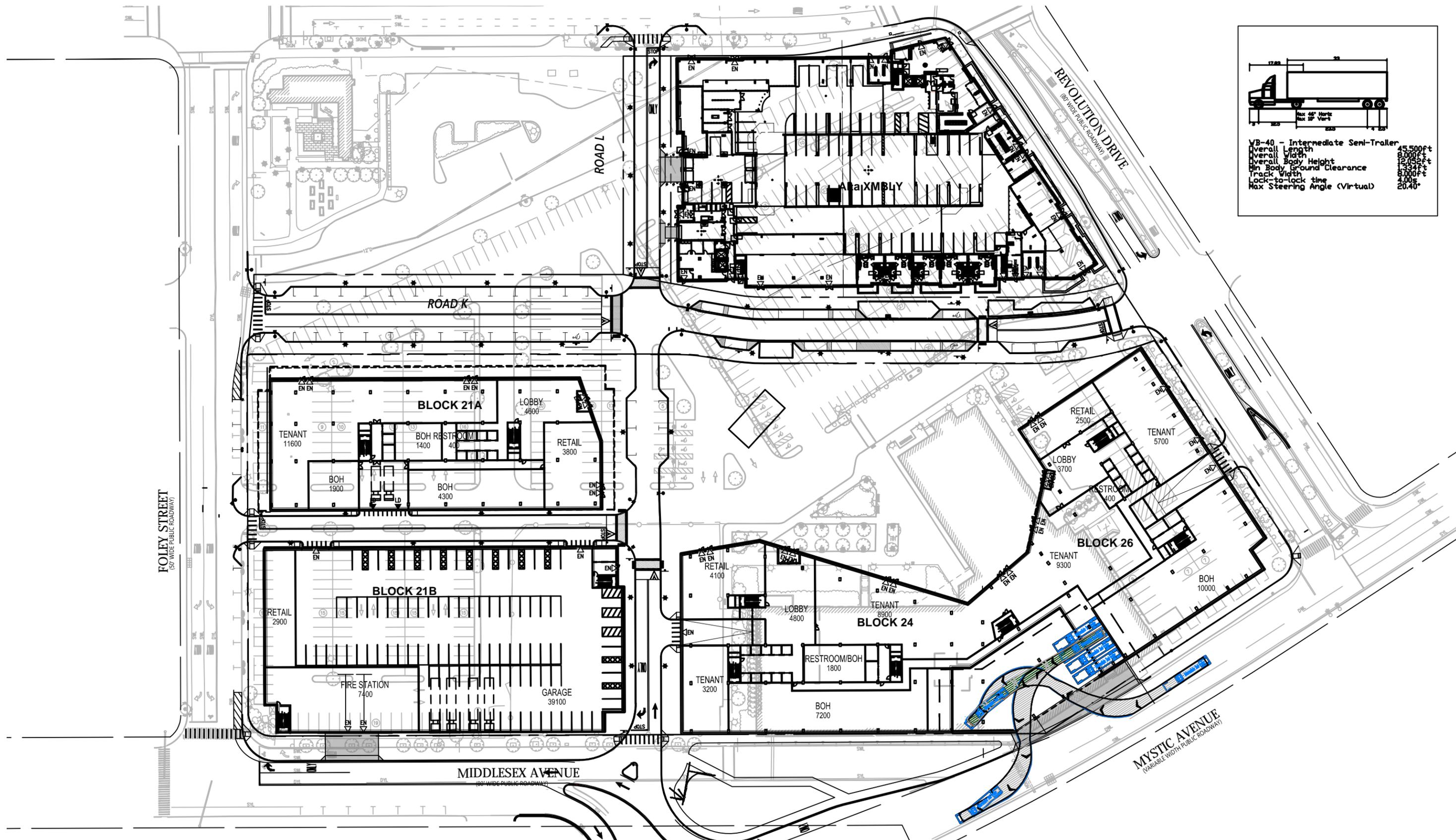




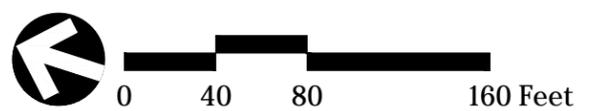
VB-40 - Intermediate Semi-Trailer
 Overall Length 45.500ft
 Overall Width 8.000ft
 Overall Body Height 12.052ft
 Min Body Ground Clearance 1.334ft
 Track Width 8.000ft
 Lock-to-lock time 4.00s
 Max Steering Angle (Virtual) 20.40°

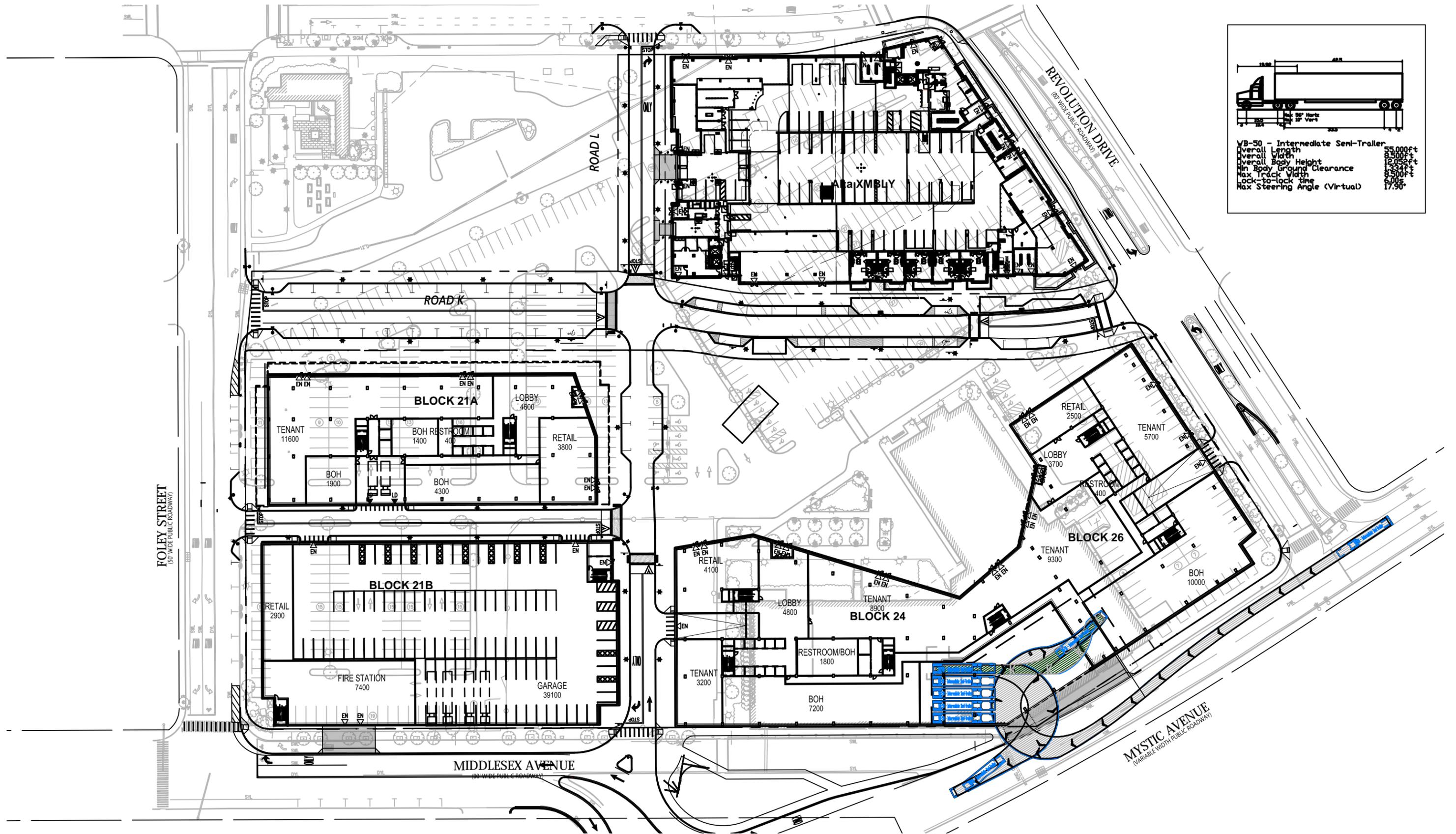




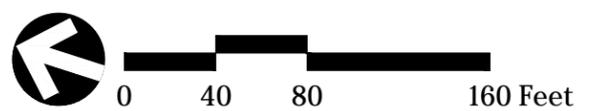


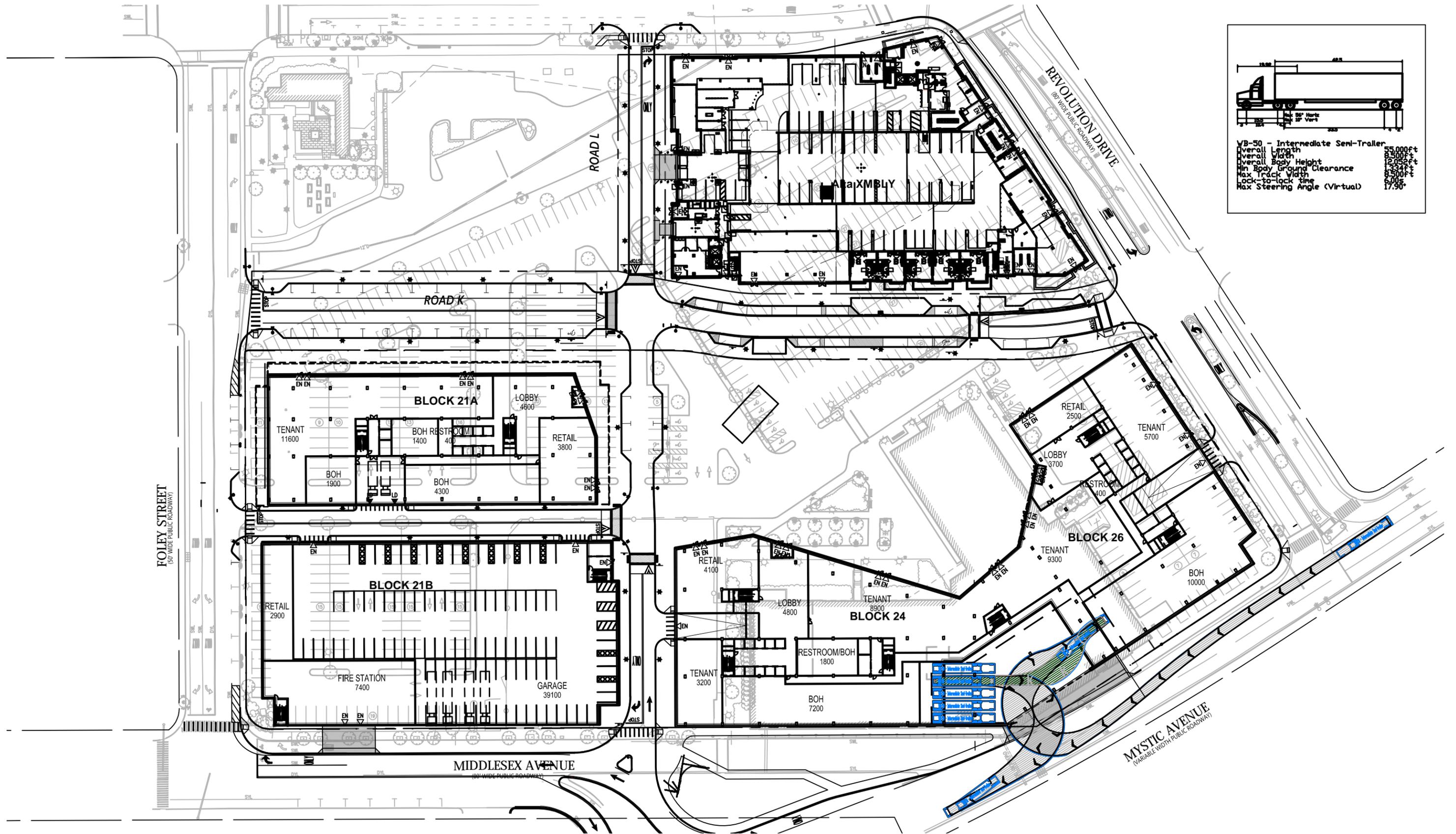
VB-40 - Intermediate Semi-Trailer	45.500ft
Overall Length	8.000ft
Overall Width	12.052ft
Overall Body Height	13.342ft
Min Body Ground Clearance	8.000ft
Track Width	4.00s
Lock-to-lock time	20.40°
Max Steering Angle (Virtual)	



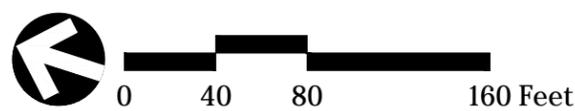


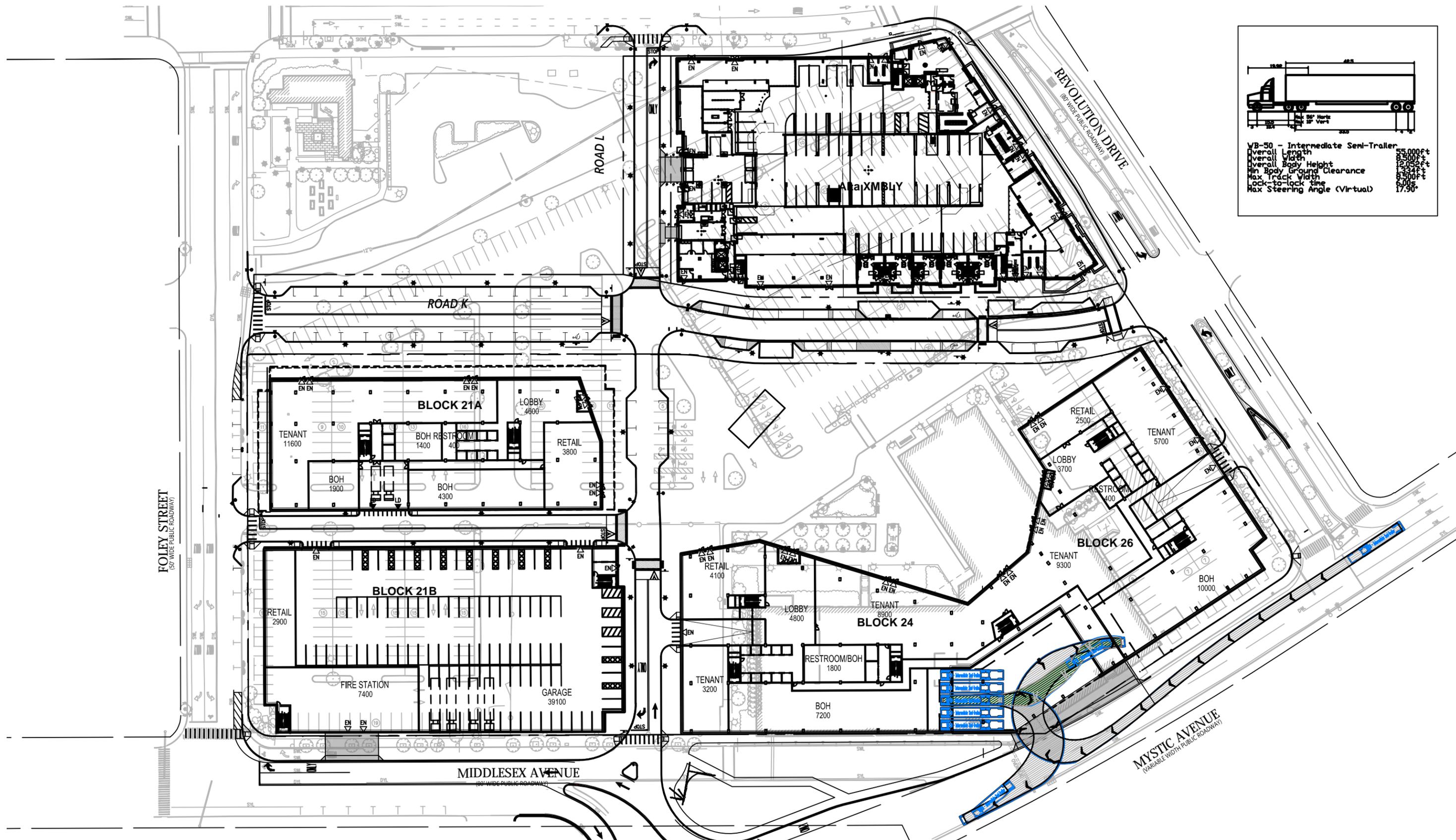
VB-50 - Intermediate Semi-Trailer
 Overall Length 55,000ft
 Overall Width 8,500ft
 Overall Body Height 12,052ft
 Min Body Ground Clearance 1,334ft
 Max Track Width 8,500ft
 Lock-to-lock Time 6.01s
 Max Steering Angle (Virtual) 17.50°



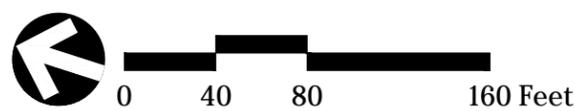


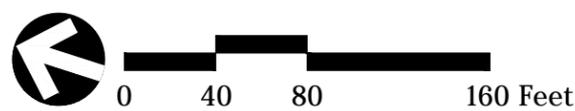
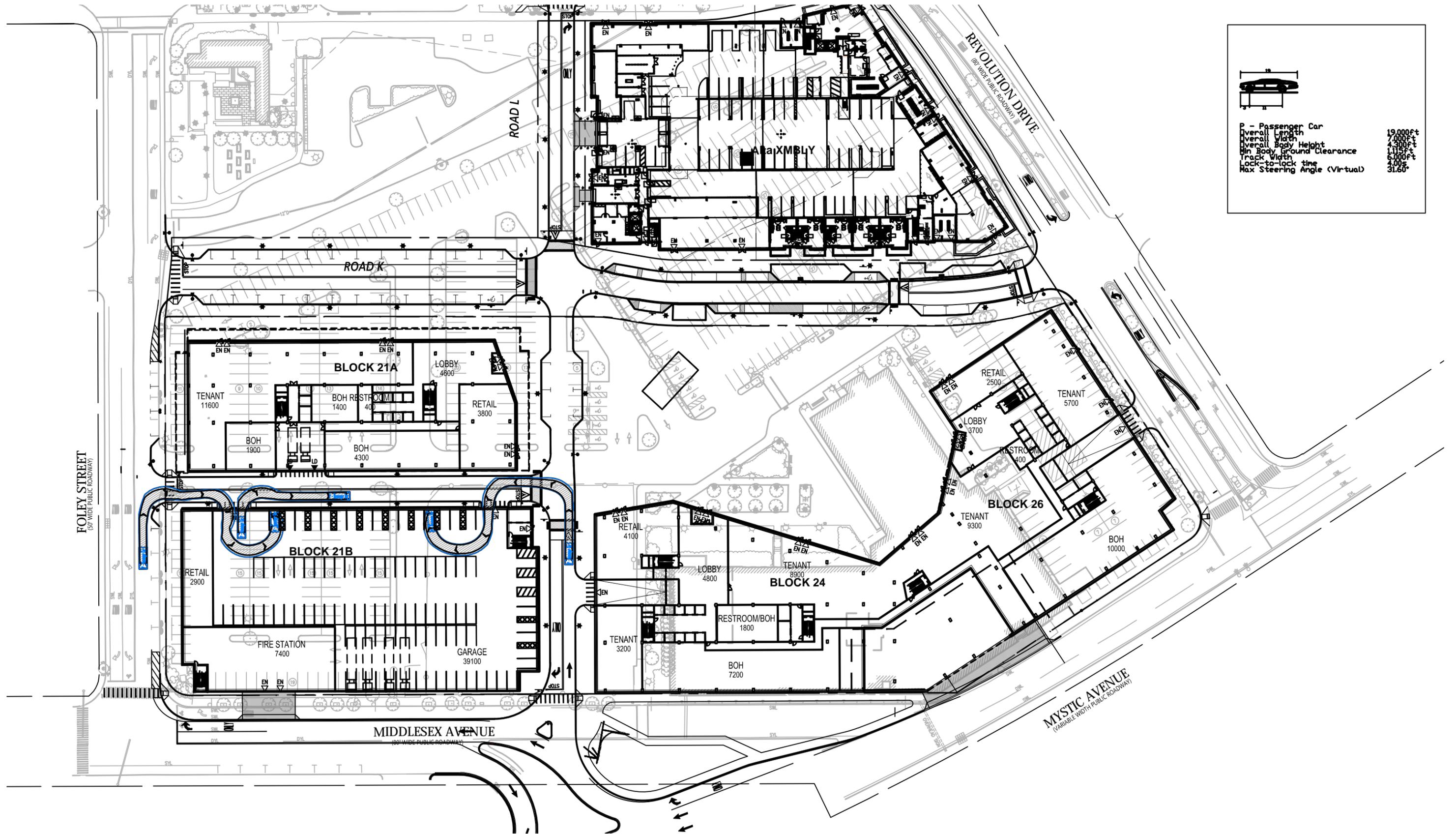
VB-50 - Intermediate Semi-Trailer
 Overall Length 55,000ft
 Overall Width 8,500ft
 Overall Body Height 12,052ft
 Min Body Ground Clearance 1,334ft
 Max Track Width 8,500ft
 Lock-to-lock time 6.01s
 Max Steering Angle (Virtual) 17.50

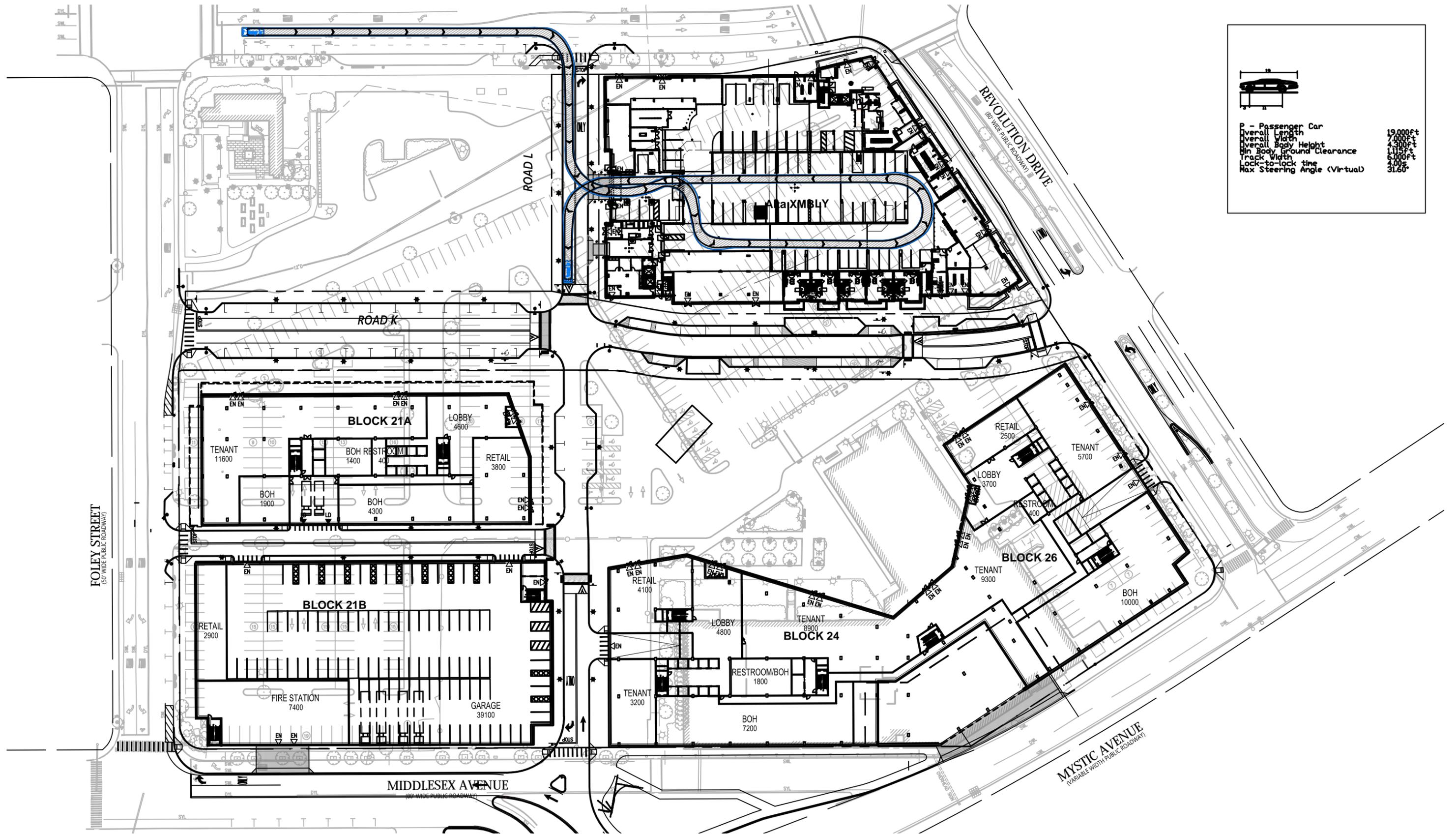




WB-50 - Intermediate Semi-Trailer
 Overall Length 55,000ft
 Overall Width 8,500ft
 Overall Body Height 12,052ft
 Min Body Ground Clearance 1,334ft
 Max Track Width 8,500ft
 Lock-to-lock Time 6.0s
 Max Steering Angle (Virtual) 17.5°







	P - Passenger Car	19,000ft
	Overall Length	7,000ft
	Overall Width	4,300ft
	Overall Body Height	1,115ft
	Min Body Ground Clearance	6,000ft
	Track Width	4,000ft
	Lock-to-lock time	4.00s
	Max Steering Angle (Virtual)	31.60°

