Transportation Access Plan

Union Square Revitalization Parcel D2.1
Office and Lab

February 13, 2019

Prepared for:

Union Square RELP Master Developer LLC

Prepared by:

Stantec Consulting Services

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Executive Summary

The currently proposed D2 Block portion of the Union Square Revitalization will be constructed within an approximately 154,000 square foot parcel (3.54 acres) parcel of land within the approved Union Square Redevelopment area in Somerville, Massachusetts. This development site is bordered to the north by Somerville Avenue, to the east by residential and commercial properties and Allen Street, to the south by MBTA railroad tracks, and to the west by Prospect street. The development site includes three parcels which will be referred to as D2.1, D2.2 and D2.3. Two structures are proposed, with an internal lot line dividing the D2.3 and D2.3 parcels. The D2.1 project will consist of a commercial/life-science building while the D2.2 and D2.3 will be mixed used residential. D2.2 and D2.3, although distinct buildings for DSPR purposes, will operate as one residential project. Combined, the three building projects total approximately 195,550 SF of commercial space, with 21,430 SF being retail, 16,220 SF dedicated to Arts and Creative Economy uses, and the balance Office or Lab space. The residential portion of the project includes 450 dwelling units.

D2.1 is a 7-story, approximately 178,890 square foot commercial life-science building. It is comprised of approximately 12,090 square feet of ground floor retail, above which 166,800 square feet of commercial space is distributed across 6 additional levels. Approximately 8,900 square feet of this commercial area will be dedicated to Arts and Creative Enterprise uses. Parking needs of D2.1 will be accommodated by the shared parking garage that sits below the D2.2 and D2.3 building footprints. D2.1 loading and servicing occurs through a three-bay loading docking accessible via the new D2 Alley. Two WB-40 trucks will provide service to commercial tenants on upper levels while a smaller bay for single unit trucks will provide for retail servicing. 58 bicycle parking spaces will be provided for D2.1 44 of these spaces will be sheltered and secured within a dedicated bicycle parking area at the ground floor. 14 additional spaces will be provided at the building's exterior for short-term use.

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TRANSPORTATION ACCESS PLAN

1.0 ILLUSTRATIVE SITE PLAN

The proposed D2.1 development (Office/Lab | Union Square Revitalization) will be located on the corner of Somerville Avenue and Prospect Street, abutting the proposed thoroughfare on the East and Bennett Court on the west. The D2.1 development will be a stand-alone structure that shares parking and civic amenities located on the D2.2 and D2.3 parcels.

The attached illustrative site plan depicts the site landscaping and ground level floor plans.

2.0 TRANSPORTATION ELEMENTS PLAN

The D2 parcel is currently an undeveloped lot, all transportation related elements will be proposed.

Pedestrian access is available on all faces of the building, by way of either sidewalks or the civic space connecting to Bennett Court. Bennett Court, located on the southern side of the D2.1 parcel, will be a flush plaza designed to promote pedestrian access between the Green Line and the project site. Vehicular access will also occur through Bennett Court and deliveries will be coordinated with the property manager and encouraged to occur during off peak hours. Consistent with the CDSP, the proposed civic spaces are concentrated around the new Green Line Union Square MBTA station and along the Prospect Street frontage (a designated pedestrian street in the Union Square Zoning) in order to create a strong pedestrian connection between Union Square Station and the Union Square Plaza. The primary access for vehicles will be the alley allowing the proposed building structures to separate primary onsite pedestrian activity and onsite vehicular activity zones.

Transportation elements for the development have been carefully chosen to encourage multi-modal transportation and are illustratively shown on the attached transportation elements plan with the keynotes listed in table 1.

Table 1 – Transportation Elements Plan Legend

Keynote	Description	Keynote	Description
1	Seating Area	5	Proposed Street Trees
2	Proposed Curb Cut	6	Bike Rack
3	Existing Curb Cut to be Closed	7	Existing Bike Lanes to Remain
4	Drop off Area		

2.0.1 STREET SIGNAGE

Street signage will be provided along the Alley, Charlestown Place and Bennett Court to enforce parking regulations and increase pedestrian safety. All intersections will be stop controlled and pedestrian crossing signs will be installed on both sides of the Bennett Court and Charlestown Place crosswalks. Parking enforcement signs for short term drop off / pick will be installed at the end of the Charlestown Place near the entrance to the MBTA station and Bennett Court. Four building mounted no parking signs will be posted on the Alley side of D2.1 and an additional four no

parking signs on sign posts will be installed along Bennett Court. The Prospect Street and Somerville Avenue sides of the building will not require signage.

2.0.2 PAVEMENT MARKINGS

Pavement markings will be limited to stop bars at each stop-controlled intersection, crosswalk markings at the intersection of the alley and Somerville Avenue, Bennett Court and Charlestown Place and Short-Term parking along Charlestown Place.

2.0.3 STREET FURNITURE

The D2.1 parcel will abut the public sidewalks along Prospect Street and Somerville Avenue (both are designated as pedestrian streets in the Union Square zoning), as a result an effort has been made to reduce street furniture within primary pedestrian routes in the public right of way. Amenities such as benches and seating areas are concentrated in the civic space where more room is available and bicycle parking has been consolidated to provide only short-term parking on the exterior of the building.

3.0 PEDESTRIAN ACCESS PLAN

The D2.1 parcel abuts the public sidewalk along Prospect Street and Somerville Avenue, as part of the project the public sidewalks along Prospect Street side will be rehabilitated and widened including the addition of streetscape and connections to the civil space located on the D2 parcel. The City of Somerville will reconstruct the sidewalk along Somerville Avenue as part of its Somerville Avenue Utility Improvement Project, resulting in a wider pedestrian path and improved streetscape prior to occupancy of D2.1. Two curb cuts will be created, one for Bennett Court and one for the alley. Three curb cuts along Prospect Street and two along Somerville Avenue will be closed resulting in a net reduction of three curb cuts.

Pedestrians will be encouraged to use entry points along Prospect Street and Somerville Avenue. On site pedestrian walkways and seating areas will be located parallel to Prospect Street. The intersection of Bennett Court and Prospect Street will be at grade connecting the pedestrian plaza to the public right of way and providing ADA access to the Project and MBTA Station. Sidewalks will be provided on all sides of the D2.1 structure with a 4’ minimum clear width and a more generous 12’ minimum on designated pedestrian streets. Sidewalks will connect to the residential neighborhood along Charlestown Street providing pedestrian access to and from the MBTA station as well as the civic spaces surrounding the D2.2 and D2.3 projects.

4.0 BICYCLE PARKING PLAN

Existing bicycle paths located or planned along Prospect Street and Somerville Avenue will remain in the proposed condition. Primary access for the bicycles will be provided through the alley from Somerville Avenue. Along this section of Somerville Avenue the bicycle lane runs next to the sidewalk and on-street parking is not permitted allowing bicycle access to the D2.1 site without creating a turning movement conflict with motor vehicles.

Bicycle parking for D2.1 parcel will be provided on the D2.1 site with 58 spaces. 44 of these spaces will be interior and 14 additional spaces will be located on the exterior of the building for short term use. Bicycle requirements have been determined using the City of Somerville’s short term and long-term rates based on proposed program. The

results are summarized in Table 2 below. A bicycle parking plan is also included depicting the locations of interior long-term parking and exterior short-term bicycle parking allocated for D2.1.

Table 2 – Short Term and Long Term Bicycle Parking Calculations

Use Category	Short Term (Minimum)	Long Term (Minimum)	Program Area (SF / RM / DU)	Short Term Req.	Long Term Req.
Arts & Creative Enterprise	1.0 PER 10,000 SF	1.0 PER 3,000 SF	8,900	1	3
Office	1.0 PER 20,000 SF	1.0 PER 3,000 SF	62,300	3	21
Lab	1.0 PER 20,000 SF	1.0 PER 5,000 SF	95,600	5	19
Retail	1.0 PER 2,500 SF	1.0 PER 10,000 SF	12,090	5	1
			Total	*14*	*44*

5.0 MOTOR VEHICLE PARKING PLAN

Vehicular On Street

On street parking is currently not permitted along the project frontage and no modifications will be made as part of the proposed development. A short-term drop-off / pick up area accommodating up to four vehicles will be included as part Charlestown Place adjacent to the MBTA station. Two Drop-off spaces, for shared use between Parcel D2.2 and D2.1 will be located on the South side of Bennett Court.

Vehicular Off Street

Parking needs of the D2.1 parcel will be accommodated by the shared parking garage located on the D2.2 / D2.3 parcels. The parking garage will be a three-story garage with approximately 269 total parking spaces. 44 of which will be compact cars and 10 EV spaces with dual charging stations, and 7 ADA accessible spaces. Parking will be evenly distributed across all three levels, with 82 spaces on the level 1, 108 on level 2 and 79 on level 3. Entrance and exit for the garage and the D2.1 interior loading dock are provided from the alley. Four drop-off parking spaces are located along Charlestown Place that will be shared for the D2 development and serve MBTA's The Ride paratransit program. Two additional drop-off spaces, for shared use between Parcel D2.2 and D2.1 will be located on the South side of Bennett Court.

Parking Demand

Off-street parking requirements for the Union Square Overlay district (USQ) mandate a maximum number of parking spaces to promote alternate methods of transportation and will work in concert with the Project's transportation demand management strategies. Parking demand has been estimated using a demand model provided by the City of Somerville, the results are summarized in Table 3 below. Ultimately, as a shared and "unbundled" resource, parking by building use for each of D2.1, D2.2, and D2.3 will vary from demand calculations.

Table 3 – D2.1 Vehicular Parking Demand Calculations

Building Use	GSF	Adjusted Rate	Required Parking
Office / Lab / Creative	166,800 SF	0.80 / 1,000 SF	133
Retail	12,090 SF	1.52 / 1,000 SF	18
Total	178,890	**Total**	**151**

A vehicular parking plan of is included with this narrative depicting parking locations listed in Table 4 below.

Table 4 – Motor Vehicle Parking Plan Legend

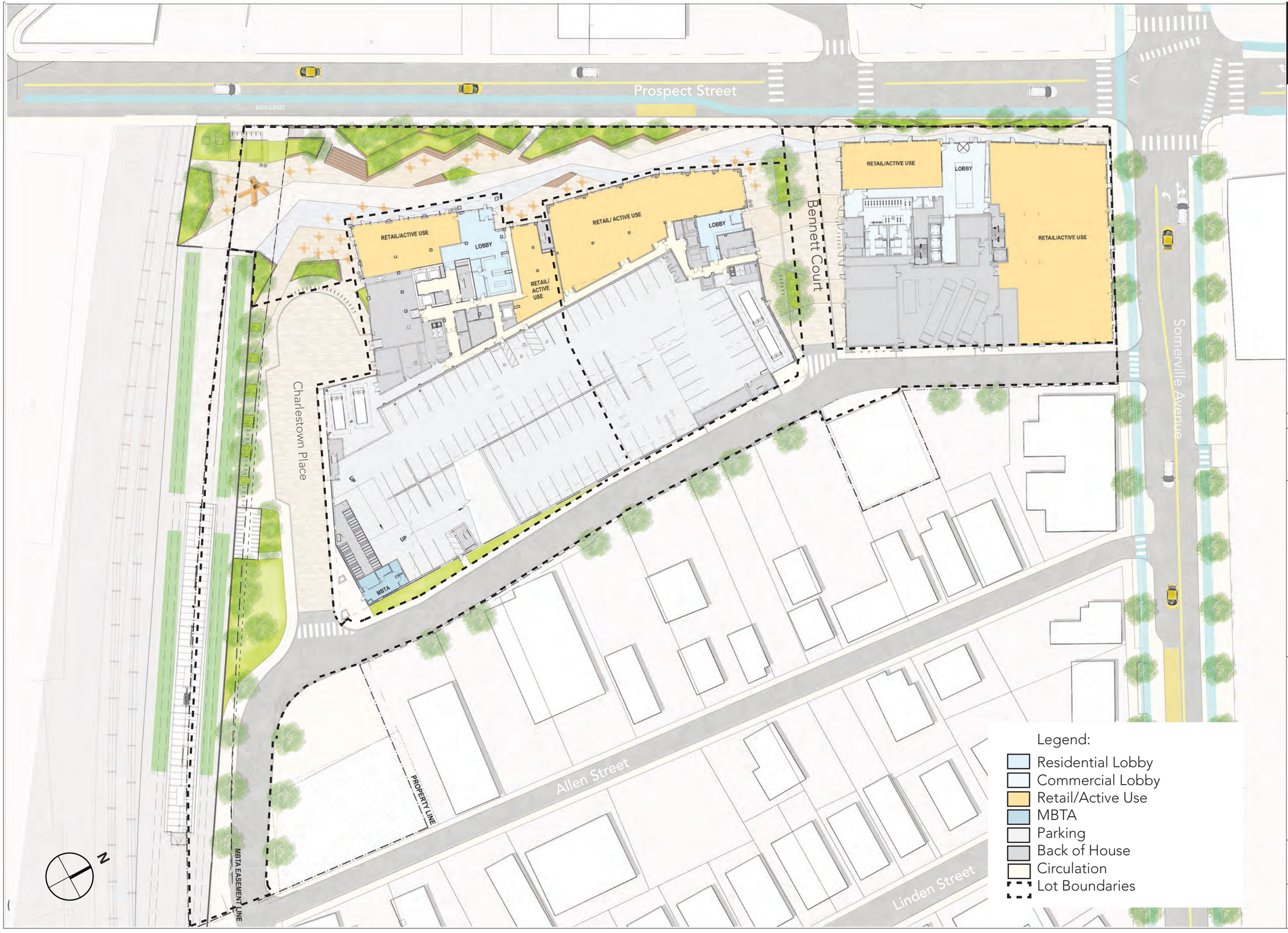
Keynote	Description	Keynote	Description
1	Shared Parking Garage	3	Bennett Court Short Term Parking
2	Charlestown Place Short Term Parking	4	D 2.1 Loading Dock

6.0 VEHICULAR MOVEMENT PLAN

With the objective of providing safe access for multi-modal transportation, the alley will connect Somerville Avenue and Charlestown Street with controlled vehicle access through Bennett Court. D2.1 loading and servicing occurs through a three-bay loading docking accessible via the new D2 Alley. Two WB-40 trucks will provide service to commercial tenants on upper floor levels while a smaller bay for box-truck will provide for retail servicing. Vehicular movements for the anticipated design vehicles have been graphically shown using AutoTurn software in the attached figures.

FIGURES

Illustrative Site Plan



Civic Space A

UNION SQUARE
SOMERVILLE, MA

OWNER

UNION SQUARE RELP
MASTER DEVELOPER LLC (US2)
31 Union Square
Somerville, MA. 02143

ARCHITECT

bKL ARCHITECTURE LLC
225 North Columbus Drive
Suite 100
Chicago, IL. 60601
T 312.881.5999

REV #	ISSUE DATE	DESCRIPTION
01	AUGUST 20, 2018	DRC

SEAL

ground

LANDSCAPE

Ground Inc.
285 Washington Street, #G
Somerville, MA. 02143
T 617.718.0889

SHEET TITLE

ILLUSTRATIVE SITE PLAN

DRAWING NUMBER

CSA-L400

FIGURES

Transportation Elements Plan

D2.1 TRANSPORTATION ELEMENTS PLAN

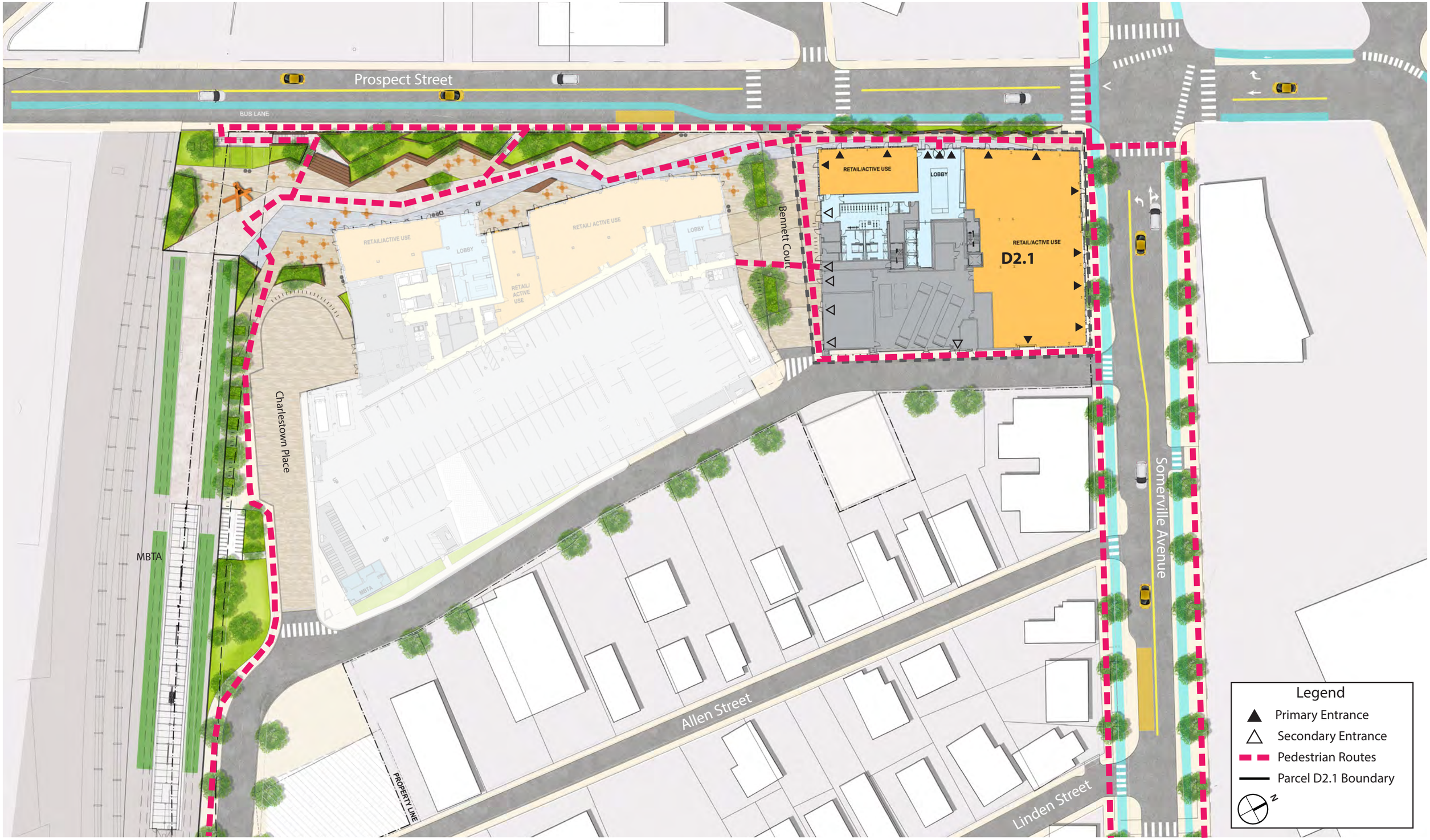
Stantec USQ ground

Union Square, Somerville, MA

Feburary 13, 2019

FIGURES

Pedestrian Access Plan



D2.1 PEDESTRIAN ACCESS PLAN

Stantec USQ ground

Union Square, Somerville, MA

Feburary 13, 2019

FIGURES

Bicycle Parking Plan

D2.1 BICYCLE PARKING PLAN

Stantec USQ ground

Union Square, Somerville, MA

Feburary 13, 2019

FIGURES

Motor Vehicle Parking Plan

Prospect Street

BUS LANE

RETAIL/ACTIVE USE

LOBBY

RETAIL/ ACTIVE USE

RETAIL/ ACTIVE USE

LOBBY

RETAIL/ACTIVE USE

D2.1

Bennett Court

Charlestown Place

MBTA

Somerville Avenue

Allen Street

PROPERTY LINE

Linden Street

Legend

1 Shared Parking Garage

2 Charlestown Place
Short Term Parking (4 Spaces)

3 Bennett Court
Short Term Parking (2 Spaces)

4 D2.1 Loading Dock

Parcel D2.1 Boundary

N

D2.1 MOTOR VEHICLE PARKING PLAN

Stantec USQ ground

Union Square, Somerville, MA

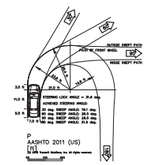
Feburary 13, 2019

FIGURES

Vehicular Movement Plans

PASSENGER CAR AUTOTURN

1" = 40'-0"



TURNING RADIUS TEMPLATE

ORIGINAL SHEET - ARCH D

Project:

Union Square Redevelopment
Union Square, Somerville, MA

PREPARED BY:

STANTEC
226 CAUSEWAY STREET
BOSTON, MA 02114
617.523.8103

PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

SOMERVILLE USE ONLY

Permit-Seal

	By	Appd	
AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12

Issued/Revision

Title

PASSENGER CAR - SITE ENTRANCE ANALYSIS

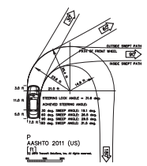
Project No. 210801585

Scale AS SHOWN

Drawing No.

P-01

PASSENGER CAR AUTOTURN
1" = 40'-0"



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PREPARED FOR:
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PROJECT NORTH

0 40' 80'
SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title
PASSENGER CAR - SITE EGRESS ANALYSIS

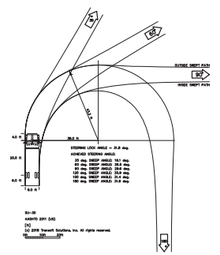
Project No.
210801585

Scale
AS SHOWN

Drawing No.
P-02

SINGLE UNIT (30 FT) AUTOTURN

1" = 40'-0"



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ORIGINAL SHEET - ARCH D

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Union Square Redevelopment
Union Square, Somerville, MA

PREPARED BY:

Stantec

STANTEC
226 CAUSEWAY STREET
BOSTON, MA 02114
617.523.8103

PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title

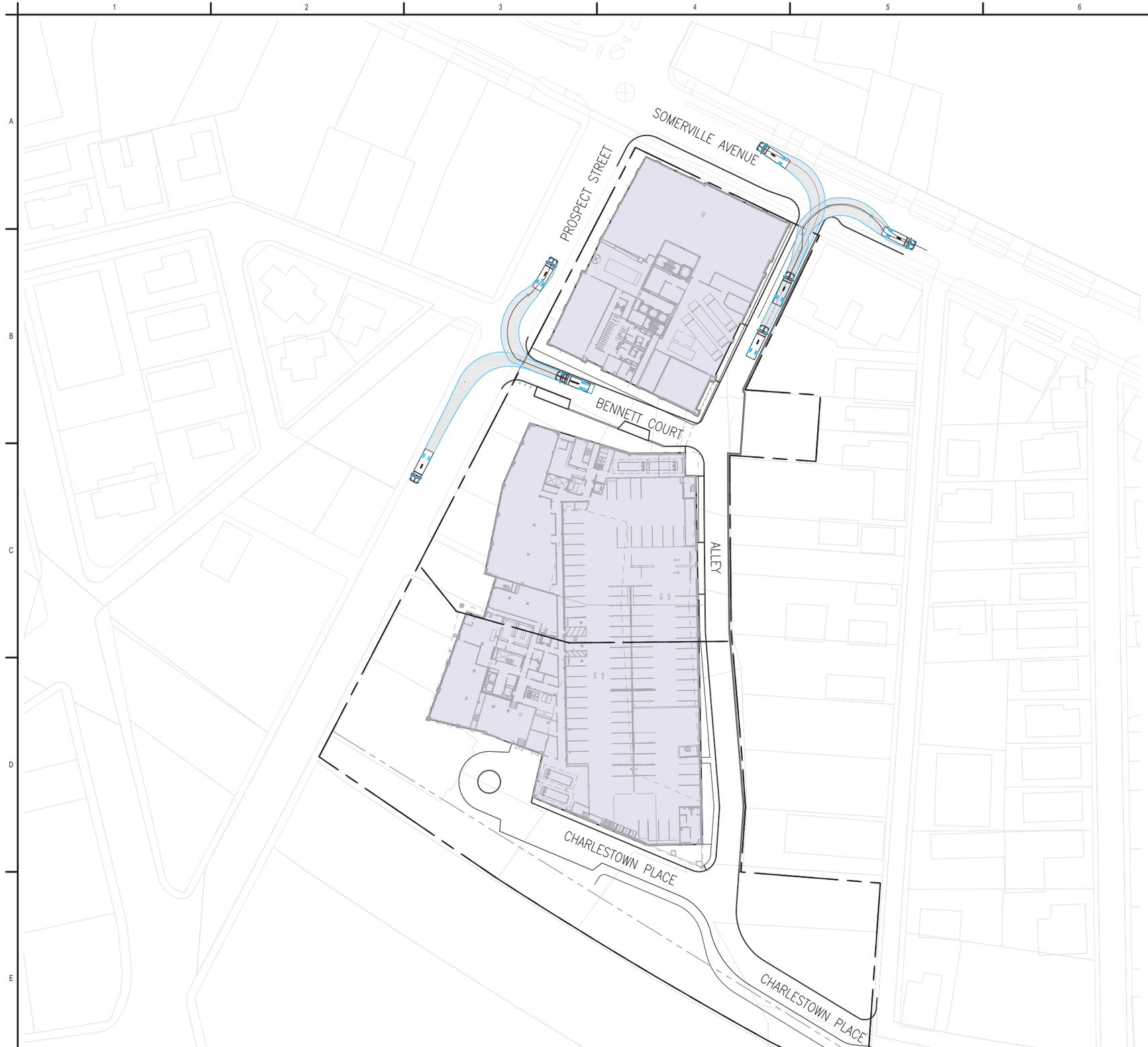
SINGLE UNIT - SITE ENTRANCE ANALYSIS

Project No. 210801585

Scale AS SHOWN

Drawing No.

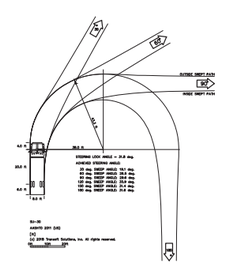
SU-01



SINGLE UNIT (30 FT) AUTOTURN

1" = 40'-0"

ORIGINAL SHEET - ARCH D



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Union Square, Somerville, MA

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0 40' 80'

SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
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Title

SINGLE UNIT - SITE EGRESS ANALYSIS

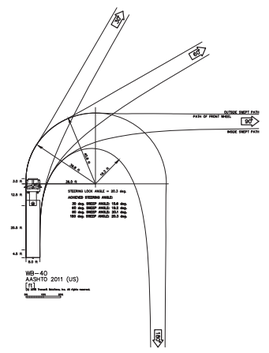
Project No.
210801585

Scale
AS SHOWN

Drawing No.

SU-02

WB-40 TRUCK AUTOTURN
1" = 40'-0"



TURNING RADIUS TEMPLATE

ORIGINAL SHEET - ARCH D

Project:
Union Square Redevelopment
Union Square, Somerville, MA

PREPARED BY:
Stantec
STANTEC
226 CAUSEWAY STREET
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617.523.8103

PREPARED FOR:
UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'
SCALE

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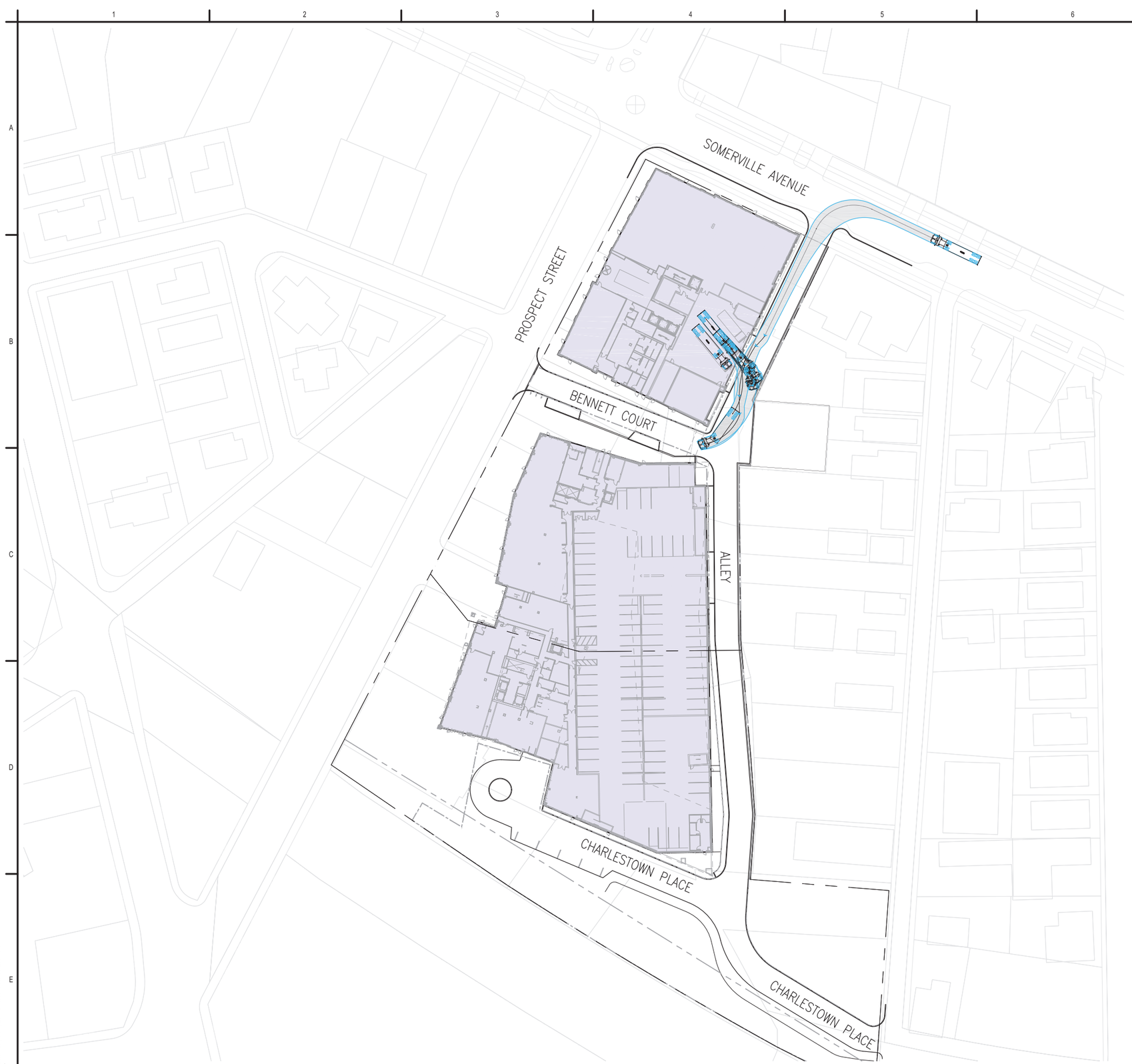
AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title
WB-40 - SOMERVILLE AVE SITE ENTRANCE ANALYSIS

Project No.
210801585

Scale
AS SHOWN

Drawing No.
WB40-01



WB-40 TRUCK AUTOTURN

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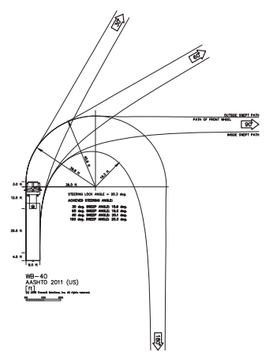

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PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title

WB-40 - SOMERVILLE AVE SITE ENTRANCE ANALYSIS

Project No. 210801585

Scale AS SHOWN

Drawing No.

WB40-01A

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August 9, 2017

ORIGINAL SHEET - ARCH D

WB-40 TRUCK AUTOTURN

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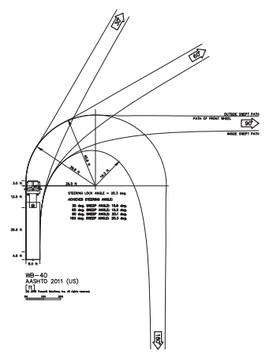

TURNING RADIUS TEMPLATE

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226 CAUSEWAY STREET
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617.523.8103

PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title

WB-40 - PROSPECT ST.
SITE ENTRANCE ANALYSIS

Project No. 210801585

Scale AS SHOWN

Drawing No.

WB40-02

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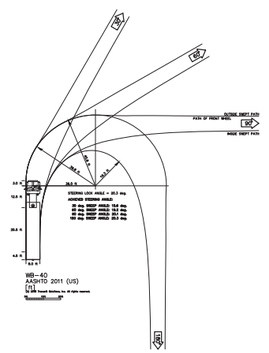
August 6, 2021

ORIGINAL SHEET - ARCH D

WB-40 TRUCK AUTOTURN

1" = 40'-0"



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Union Square, Somerville, MA

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SCALE

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Title

WB-40 - SITE EGRESS ANALYSIS

Project No. 210801585

Scale AS SHOWN

Drawing No.

WB40-03

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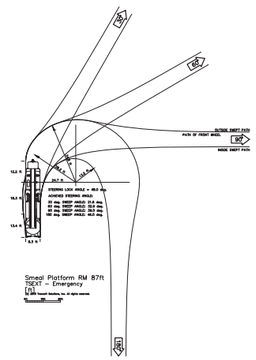
August 6, 2021

ORIGINAL SHEET - ARCH D

EMERGENCY VEHICLE AUTOTURN

1" = 40'-0"



EMERGENCY VEHICLE TO BE CONFIRMED WITH SOMERVILLE FIRE DEPARTMENT

TURNING RADIUS TEMPLATE

Project:

Union Square Redevelopment
Union Square, Somerville, MA

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Stantec

STANTEC
226 CAUSEWAY STREET
BOSTON, MA 02114
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PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

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AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
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Title

EMERG. VEHICLE - SITE ENTRANCE ANALYSIS

Project No.
210801585

Scale
AS SHOWN

Drawing No.

EMER-01

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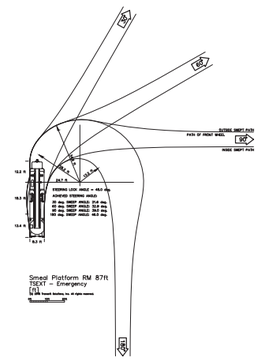
August 8, 2022

ORIGINAL SHEET - ARCH D

EMERGENCY VEHICLE AUTOTURN

1" = 40'-0"



EMERGENCY VEHICLE TO BE CONFIRMED WITH SOMERVILLE FIRE DEPARTMENT

TURNING RADIUS TEMPLATE

ORIGINAL SHEET - ARCH D

Project:

Union Square Redevelopment
Union Square, Somerville, MA

PREPARED BY:

STANTEC
226 CAUSEWAY STREET
BOSTON, MA 02114
617.523.8103

PREPARED FOR:

UNION SQUARE STATION ASSOCIATES

PROJECT NORTH

0 40' 80'

SCALE

SOMERVILLE USE ONLY

Permit-Seal

AUTOTURN - SITE ANALYSIS	JEL	FH	2019.02.12
Issued/Revision	By	Appd	YYYY.MM.DD

Title

EMERG. VEHICLE - SITE EGRESS ANALYSIS

Project No.
210801585

Scale
AS SHOWN

Drawing No.

EMER-02