
March 15, 2023

Mr. Tom Rich
FD Rich Company
222 Sumer Street
Stamford, CT 06901

**Re: Delivery Circulation
128-136 Broad Street Proposed Development
Stamford, Connecticut
SLR #141.13311.00012**

Dear Mr. Rich,

At your request, SLR International Corporation (SLR) has reviewed the delivery circulation for the adjacent property at 118 Broad Street in Stamford, Connecticut, as it relates to the proposed development. **Figures 1a to 5b**, illustrate the existing and proposed conceptual vehicular paths for 26-, 30-, and 40-foot single-unit trucks. The figures were created using *Vehicle Tracking* (Autodesk) software package and minimum turning paths from the American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design*. It is important to note that the vehicular paths shown can be considered conservative. Drivers, particularly delivery truck drivers, are typically more skilled than the *Vehicle Tracking* software. This is evident in the truck maneuvers observed today within the existing parking lot behind the proposed development.

Today, the deliveries for 118 Broad Street largely take place within the existing surface parking lot east of the 118 Broad Street property or on Gay Street. This parking lot experiences a significant amount of activity throughout the day. The existing delivery activity within the parking lot is very random and unorganized. A lot of the trucks park parallel to the Bedford Street Garage and then hand truck the items to the businesses. Very few trucks currently pull into the alley behind 118 Broad Street. Additionally, a lot of trucks currently use Gay Street to maneuver around the parking lot.

With the proposed development, all delivery routes for 118 Broad Street are now proposed to enter and exit through the private parking garage. Overall, the proposed delivery circulation will be self-contained, require less movements within the public streets, and conflict with less traffic and pedestrian activity.

Twenty-Six-Foot Garbage Truck

Figure 1a illustrates the existing delivery circulation to the back of 118 Broad Street for a 26-foot single-unit (SU-26) truck. Today, trucks can head into the back of the property using the existing parking lot drive aisle located within the proposed development's property. Depending on if cars are parked behind the

building, smaller trucks either pull all the way into the property (as shown in Figure 1a) or they stop short and park within the drive aisle. After loading/unloading, trucks typically back north within the parking lot and then drive forward to Gay Street.

Figure 1b illustrates the proposed delivery circulation to the back of 118 Broad Street once the proposed development is constructed for a SU-26 truck. As shown, trucks will still be able to head into the back of the property through the proposed development's parking garage. After loading/unloading, SU-26 trucks can back north within the proposed development's proposed right-of-way and then drive forward through the parking garage and onto Gay Street. Note that AASHTO does not have a template for a SU-26 truck. To illustrate the conceptual vehicular paths of a SU-26 truck, the 30-foot single-unit (SU-30) truck dimensions from AASHTO were modified.

When comparing the two, the movements are considerably similar. With the proposed condition, the truck circulation will now happen within a private parking garage, which will have a lot less traffic and pedestrian activity. Additionally, it is proposed to install a series of three convex safety mirrors on the columns of the garage to help truck drivers maneuver.

Thirty-Foot Single Unit Truck – Head-in Access

Figure 2a illustrates the existing delivery circulation for a SU-30 truck heading into the back of 118 Broad Street. Today, trucks can head into the back of the property using the existing parking lot drive aisle located within the proposed development's property. After loading/unloading, trucks typically back east along the drive aisle until the driver has enough space to back north within the parking lot and then drive forward to Gay Street.

Figure 2b illustrates the proposed delivery circulation heading into the back of 118 Broad Street once the proposed development is constructed for a SU-30 truck. As shown, SU-30 trucks will still be able to head into the back of the property through the proposed development's parking garage. After loading/unloading, trucks can back east and then south within the parking garage to drive forward onto Gay Street.

When comparing the two, the movements are similar. Today, trucks back up to the north in the parking lot and under the proposed condition, trucks will have to back up to the south in the proposed parking garage. Under the proposed condition, trucks will likely not have to back up as far to have enough space to turn around; and as stated previously, the private parking garage will have a lot less conflicting traffic and pedestrian activity. Additionally, it is proposed to install a series of three convex safety mirrors on the columns of the garage to help truck drivers maneuver.

Thirty-Foot Single Unit Truck – Back-in Access

Figure 3a illustrates the existing delivery circulation for a SU-30 truck backing into the rear of 118 Broad Street. Today, trucks must pull forward within the parking lot and then back into the rear of the property

using the existing parking lot drive aisle located on the proposed development's property. After loading/unloading, trucks then drive forward along the drive aisle and onto Gay Street.

Figure 3b illustrates the proposed delivery circulation backing into the rear of 118 Broad Street once the proposed development is constructed for a SU-30 truck. As shown, SU-30 trucks will be able to head into the proposed development's parking garage, then turn south in the parking garage to back into the rear of the property. After loading/unloading, trucks can drive forward through the parking garage and onto Gay Street. The Connecticut Department of Transportation (CTDOT) guidelines suggest using SU-30 trucks as the standard design vehicle for commercial driveways.

When comparing the two, the existing truck movements are similar. However, under the proposed condition, trucks will not be required to use Gay Street to turn around, instead they will have enough space in the parking garage to maneuver. Additionally, it is proposed to install a series of three convex safety mirrors on the columns of the garage to help truck drivers maneuver.

Forty-Foot Single Unit Truck – Head-in Access

Figure 4a illustrates the existing delivery circulation for a 40-foot single-unit (SU-40) truck heading into the back of 118 Broad Street. Today, trucks can head into the back of the property using the existing parking lot drive aisle located within the proposed development's property. After loading/unloading, larger trucks back east along the drive aisle until the driver has enough space to back north within the parking lot, and then drive forward to Gay Street.

Figure 4b illustrates the proposed delivery circulation heading into the back of 118 Broad Street once the proposed development is constructed for a SU-40 truck. As shown, SU-40 trucks will still be able to head into the back of the property through the proposed development's parking garage. After loading/unloading, trucks can back east and then south within the parking garage to then drive forward onto Gay Street. Note that SU-40 trucks are not very common.

When comparing the two, the movements are similar. Today, trucks back up to the north in the parking lot and under the proposed condition, trucks will back up to the south in the parking garage. Under the proposed condition, trucks will likely not have to back up as far to have enough space to turn around; and as stated previously, the private parking garage will have a lot less conflicting traffic and pedestrian activity. Additionally, it is proposed to install a series of three convex safety mirrors on the columns of the garage to help truck drivers maneuver.

Forty-Foot Single Unit Truck – Back-in Access

Figure 5a illustrates the existing delivery circulation for a SU-40 truck backing into the rear of 118 Broad Street. Today, trucks must pull forward within the parking lot and then back into the rear of the property using the existing parking lot drive aisle located on the proposed development's property. After loading/unloading, trucks then drive forward along the drive aisle and onto Gay Street.

Figure 5b illustrates the proposed delivery circulation backing into the rear of 118 Broad Street once the proposed development is constructed for a SU-40 truck. As shown, SU-40 trucks will be able to head into the proposed development's parking garage, then turn south in the parking garage to back into the rear of the property. After loading/unloading, trucks can drive forward through the parking garage and onto Gay Street.

When comparing the two, the existing truck movements are similar. However, under the proposed condition, trucks will not be required to use Gay Street to turn around, instead they will have enough space in the parking garage to maneuver. Additionally, it is proposed to install a series of three convex safety mirrors on the columns of the garage to help truck drivers maneuver.

We hope this report is useful to you and the adjacent property owner. If you have any questions or need anything further, please do not hesitate to contact either of the undersigned.

Sincerely,

SLR International Corporation



David G. Sullivan, PE
U.S. Manager of Traffic & Transportation Planning



Emily A. Foster, PE
Associate Transportation Engineer

13311.00012.m1523.ltr.docx

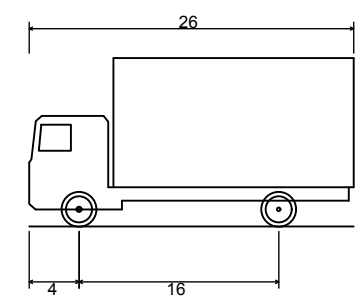
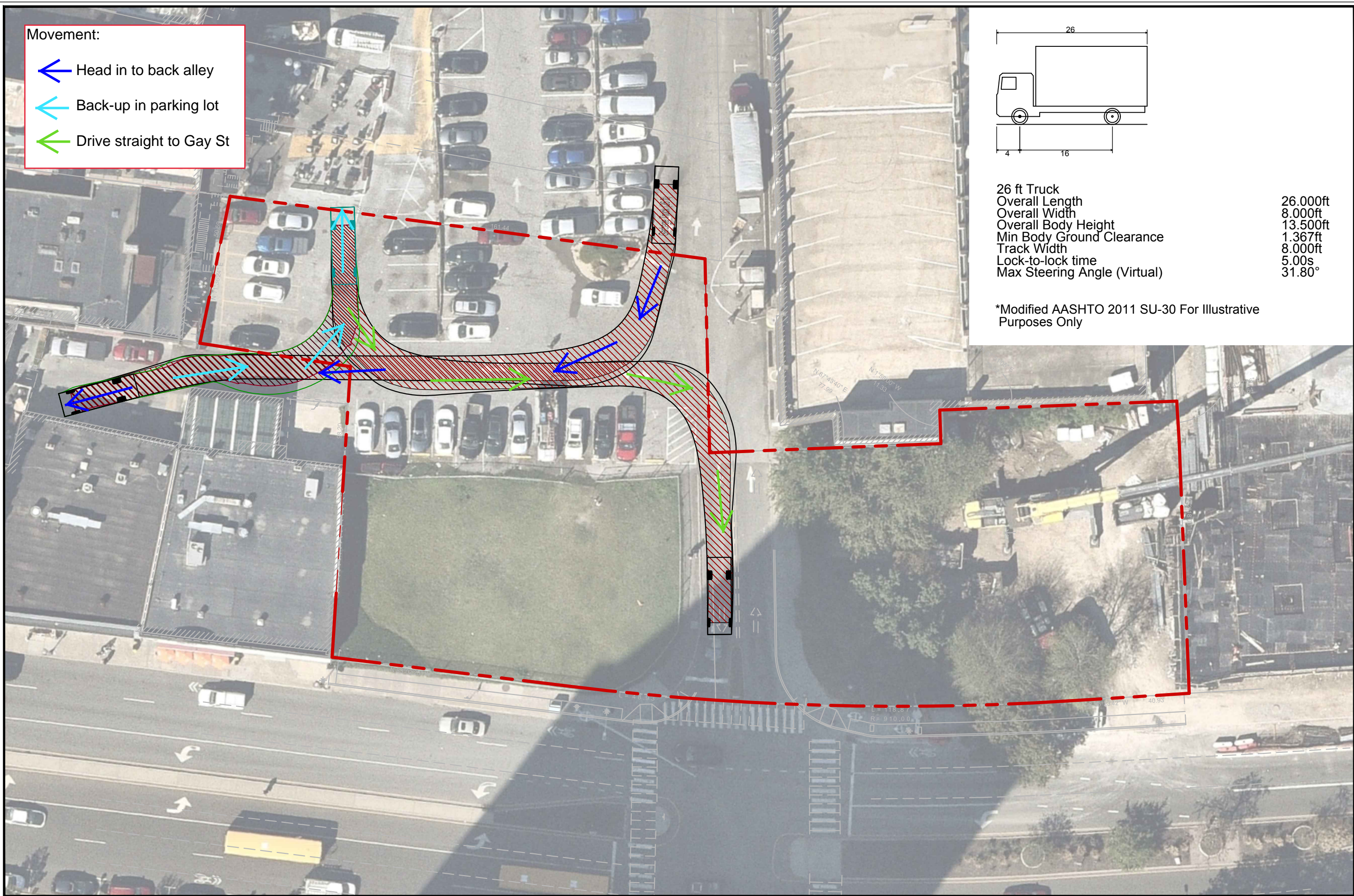
Figures

- Figure 1a – Existing Delivery Circulation – SU-26 Truck Head-In
- Figure 1b – Proposed Delivery Circulation – SU-26 Truck Head-In
- Figure 2a – Existing Delivery Circulation – SU-30 Truck Head-In
- Figure 2b – Proposed Delivery Circulation – SU-30 Truck Head-In
- Figure 3a – Existing Delivery Circulation – SU-30 Truck Back-In
- Figure 3b – Proposed Delivery Circulation – SU-30 Truck Back-In
- Figure 4a – Existing Delivery Circulation – SU-40 Truck Head-In
- Figure 4b – Proposed Delivery Circulation – SU-40 Truck Head-In
- Figure 5a – Existing Delivery Circulation – SU-40 Truck Back-In
- Figure 5b – Proposed Delivery Circulation – SU-40 Truck Back-In

Drawing: C:\Users\FOSTER\AppData\Local\Temp\ACAD\ISH-24360\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab:01A
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm

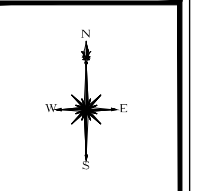
Movement:

- Head in to back alley
- Back-up in parking lot
- Drive straight to Gay St



26 ft Truck
 Overall Length 26.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

*Modified AASHTO 2011 SU-30 For Illustrative Purposes Only



REVISIONS

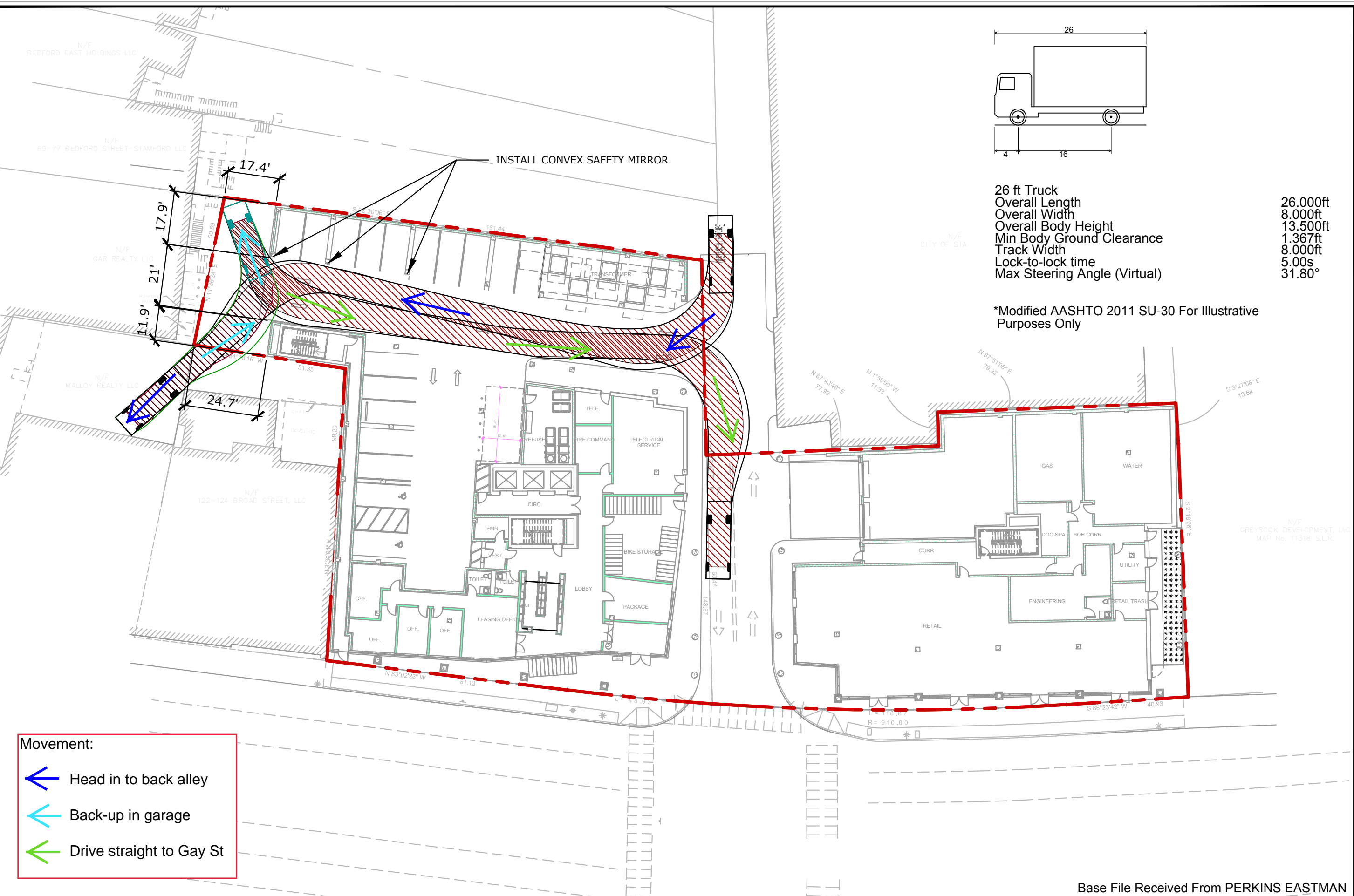
EXISTING DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT
 SU-26 TRUCK HEAD-IN
 128-132 BROAD STREET
 STAMFORD, CT

DESIGNED	EAJ	DGS
SCALE	1"=30'	CHECKED
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	

01A

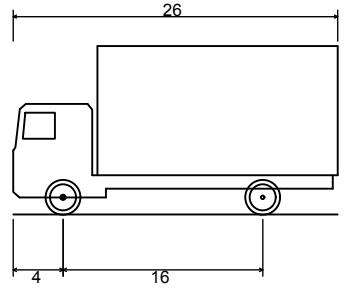
Copyright SLR International Corporation - 2021

Drawing: C:\Users\FOSTER\APPDATA\LOCAL\TEMP\ADPUSH_24360\BROAD STREET - GARAGE & DELIVERY CIRCULATION.DWG Layout Tab01B
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm



Movement:

- Head in to back alley
- Back-up in garage
- Drive straight to Gay St



26 ft Truck	
Overall Length	26.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

*Modified AASHTO 2011 SU-30 For Illustrative Purposes Only

99 REALTY DRIVE
STAMFORD, CT 06410
203.371.1100
SLRCONSULTING.COM

REVISIONS	

PROPOSED DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

SU-26 TRUCK HEAD-IN

128-132 BROAD STREET
STAMFORD, CT

DESIGNED	EAF	DGS
DRAWN		CHECKED
SCALE: 1"=30'		
DATE: MARCH 2023		
PROJECT NO: 141.13311.00012		
01B		

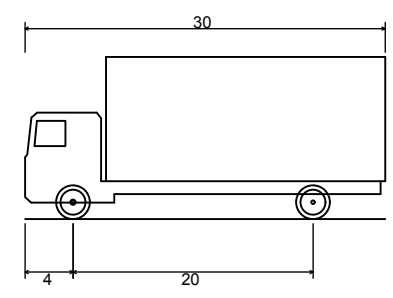
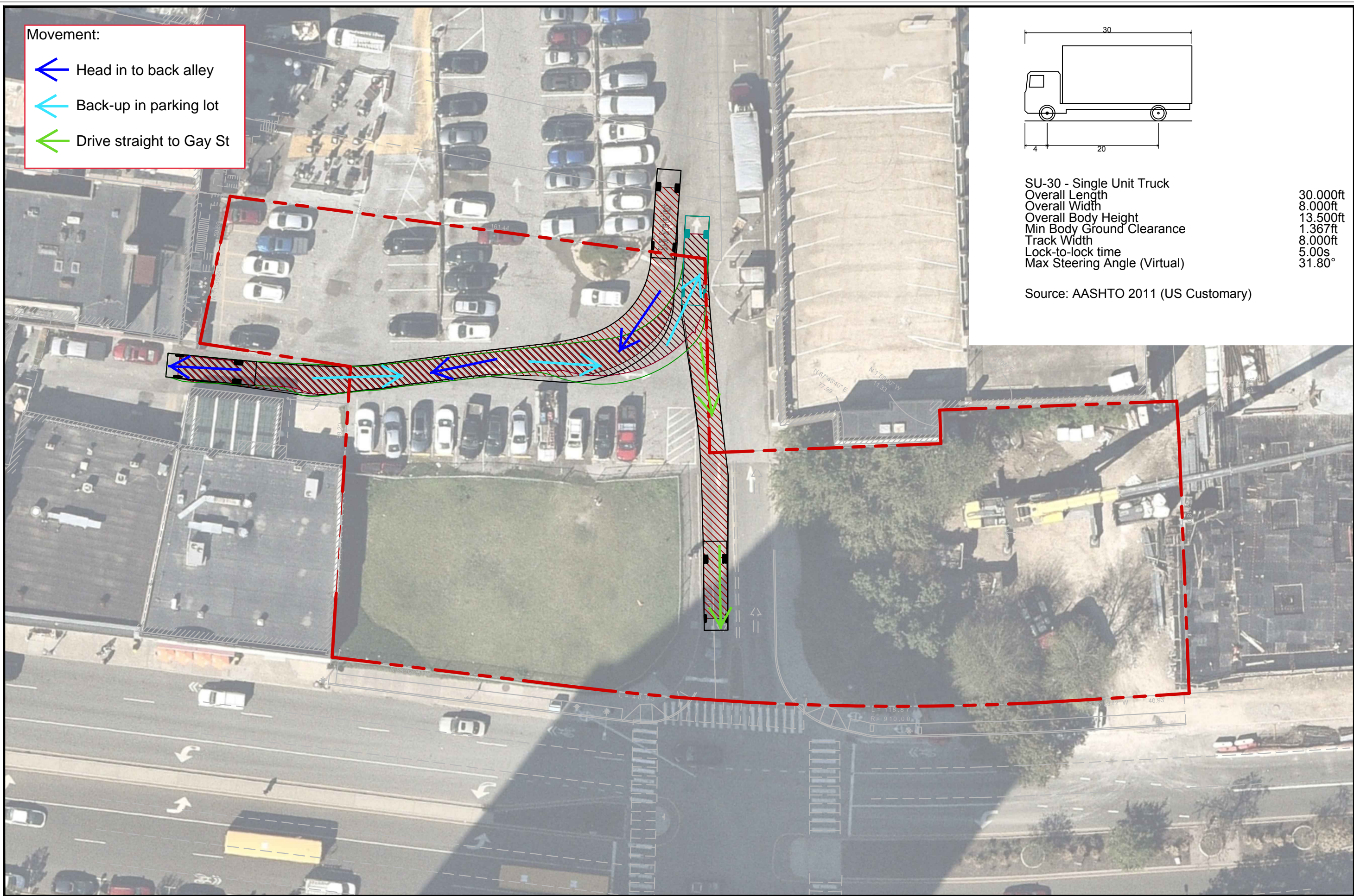
Base File Received From PERKINS EASTMAN

Copyright SLR International Corporation - 2021

Drawing: C:\Users\FOSTER\AppData\Local\Temp\ACAD\ISH-2436\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab02A
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm

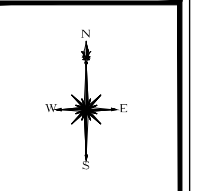
Movement:

- ← Head in to back alley
- ← Back-up in parking lot
- ← Drive straight to Gay St



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)



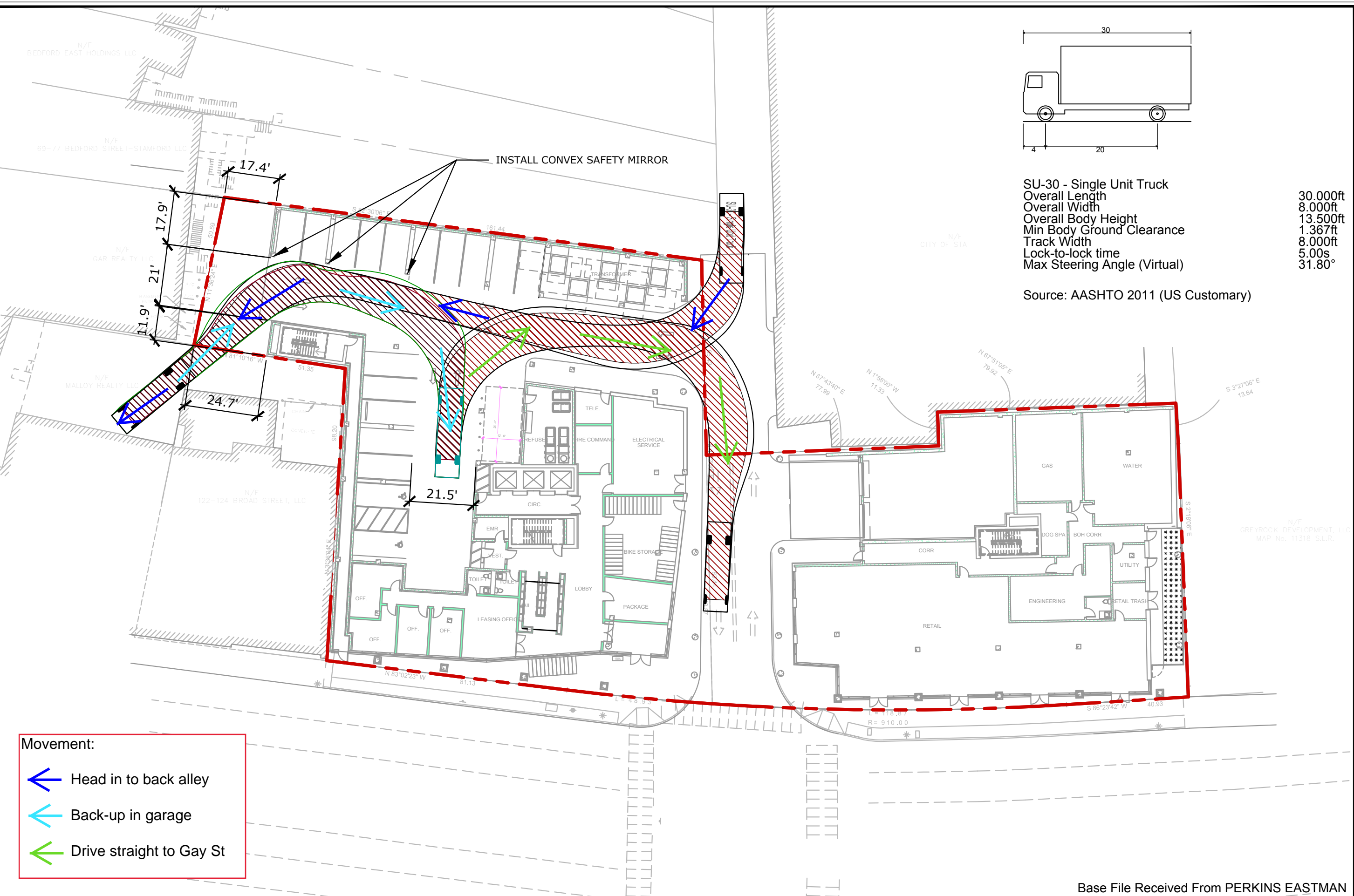
REVISIONS	

EXISTING DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT
 SU-30 TRUCK HEAD-IN
 128-132 BROAD STREET
 STAMFORD, CT

DESIGNED	EAF	DGS
SCALE	1"=30'	CHECKED
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	

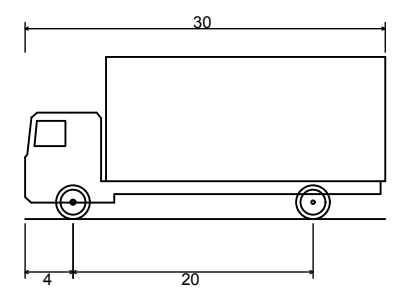
02A

Drawing: C:\Users\FOSTER\APPDATA\LOCAL TEMP\ADJUSTED\24360\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab02B
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:19pm



Movement:

- Head in to back alley
- Back-up in garage
- Drive straight to Gay St



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)

99 REALTY DRIVE
STAMFORD, CT 06410
203.371.1000
SLRCONSULTING.COM

REVISIONS	

PROPOSED DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

SU-30 TRUCK HEAD-IN

128-132 BROAD STREET
STAMFORD, CT




DESIGNED	EAF	DGS
SCALE: 1"=30'		
DATE: MARCH 2023		
PROJECT NO: 141.13311.00012		
02B		

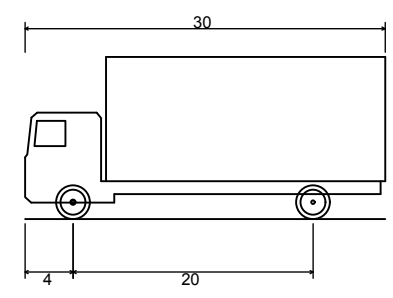
Copyright SLR International Corporation - 2021

Base File Received From PERKINS EASTMAN

Drawing: C:\Users\FOSTER\AppData\Local\Temp\ACAD\BUSH-2436\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab03A
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm

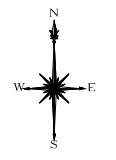
Movement:

-  Pull forward on Gay St
-  Back in to back alley
-  Drive straight to Gay St



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)



REVISIONS

NO.	DESCRIPTION	DATE

EXISTING DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

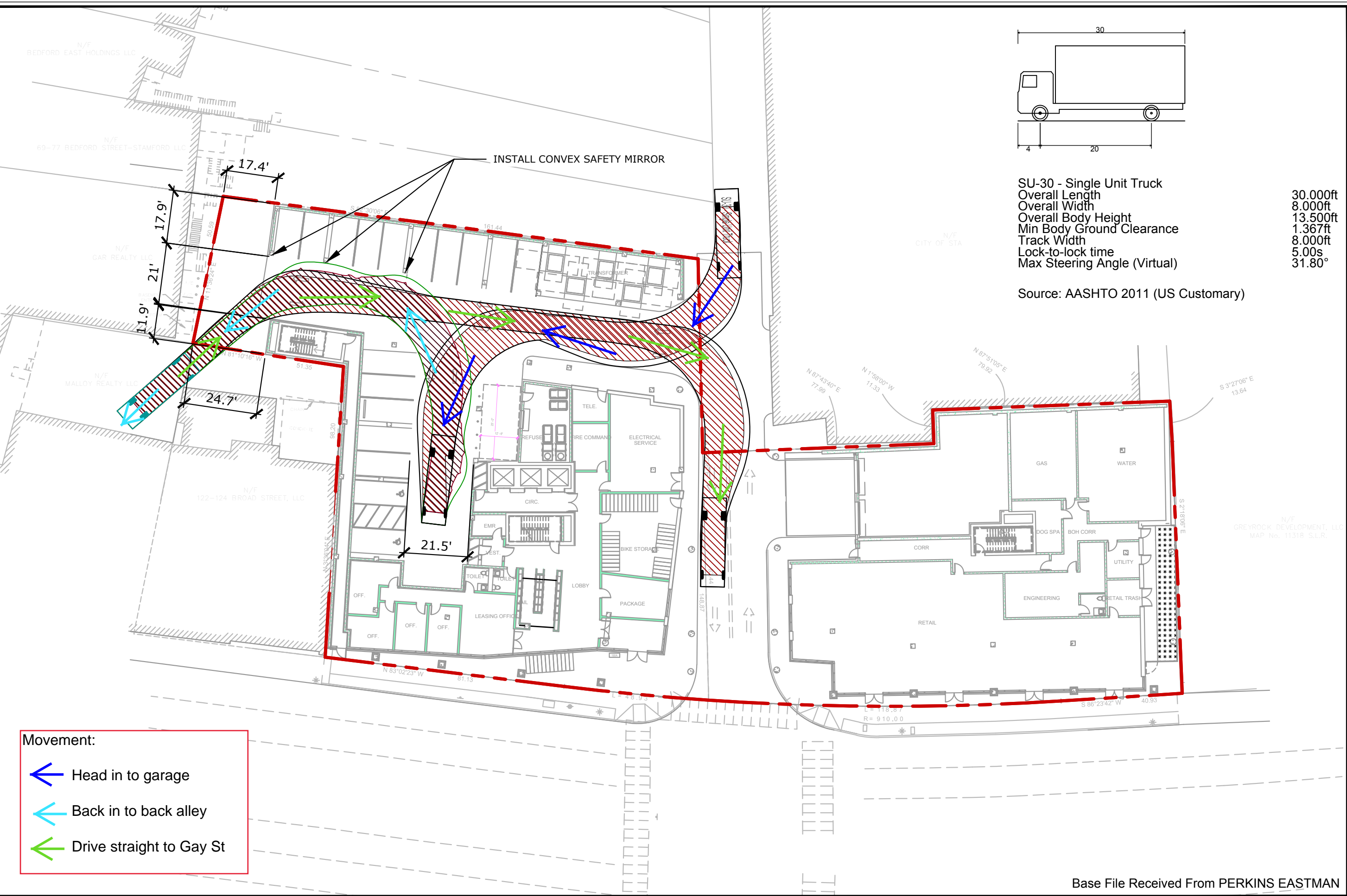
SU-30 TRUCK BACK-IN
 128-132 BROAD STREET
 STAMFORD, CT

DESIGNED	EAF	DGS
DRAWN		CHECKED
SCALE		
1"=30'		
DATE		
MARCH 2023		
PROJECT NO.		
141.13311.00012		

03A

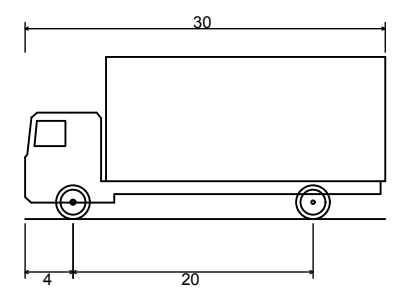
Copyright SLR International Corporation - 2021

Drawing: C:\Users\FOSTER\APPDATA\LOCAL TEMP\APPDRSHW-24360\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab03B
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm



Movement:

- Head in to garage
- Back in to back alley
- Drive straight to Gay St



SU-30 - Single Unit Truck
 Overall Length 30.000ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)

99 REALTY DRIVE
STAMFORD, CT 06410
203.371.1000
SLRCONSULTING.COM

REVISIONS	

PROPOSED DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

SU-30 TRUCK BACK-IN

128-132 BROAD STREET
STAMFORD, CT

DESIGNED	EAF	DGS
SCALE: 1"=30'		
DATE: MARCH 2023		
PROJECT NO: 141.13311.00012		
03B		

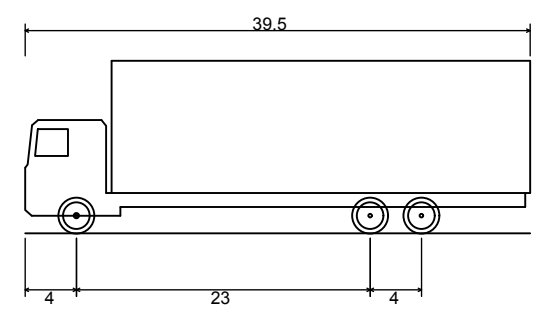
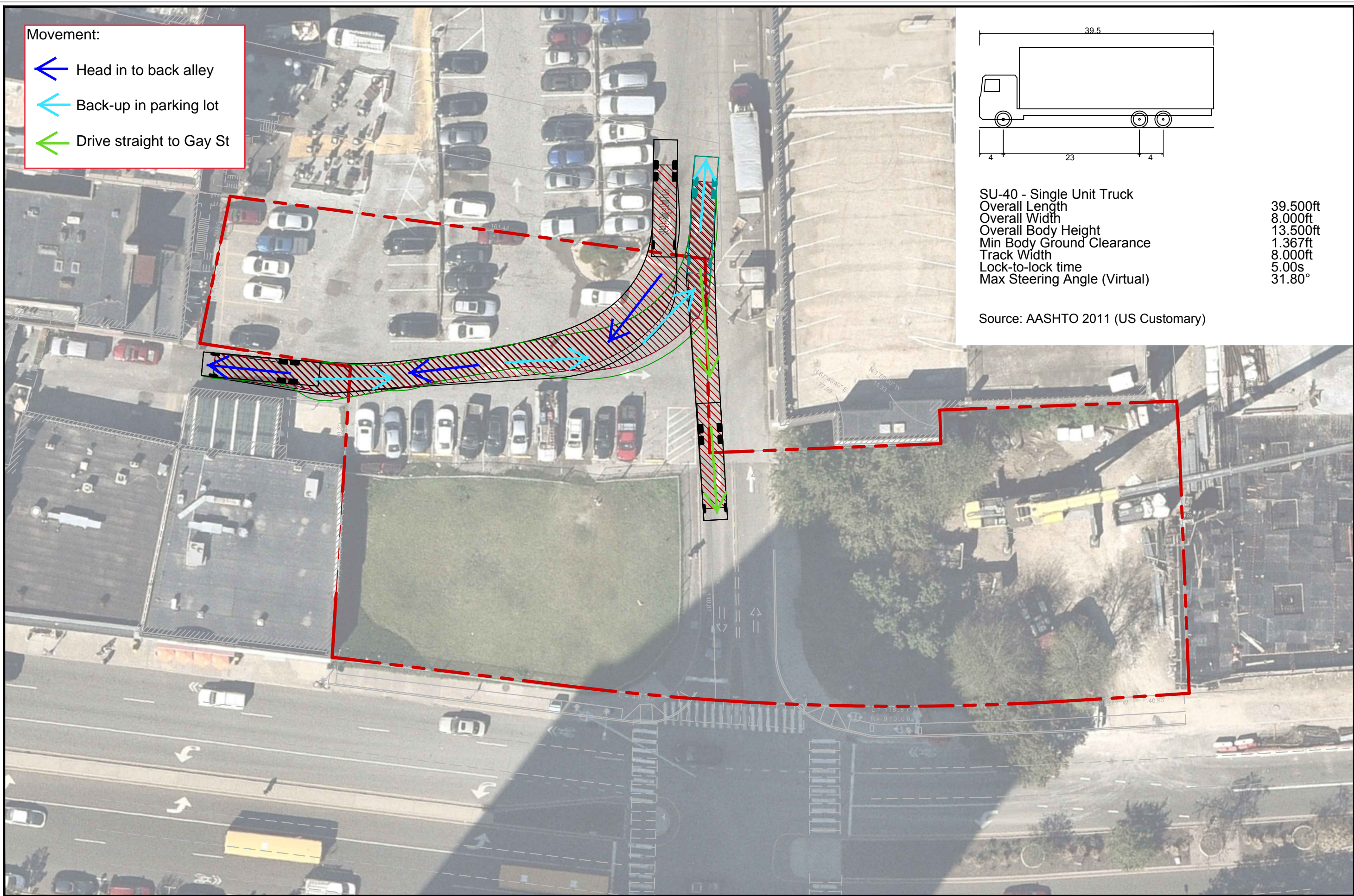
Base File Received From PERKINS EASTMAN

Copyright SLR International Corporation - 2021

Drawing: C:\Users\FOSTER\APPDATA\LOCAL TEMPORARY\APPDATA\LOCAL TEMPORARY\2436\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout: 10A.DWG
 Plotted by: FOSTER On this date: Tue, 2023 March 14 - 12:16pm

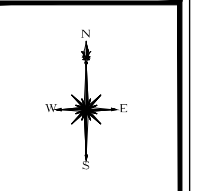
Movement:

- ← Head in to back alley
- ← Back-up in parking lot
- ← Drive straight to Gay St



SU-40 - Single Unit Truck
 Overall Length 39.500ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)



REVISIONS

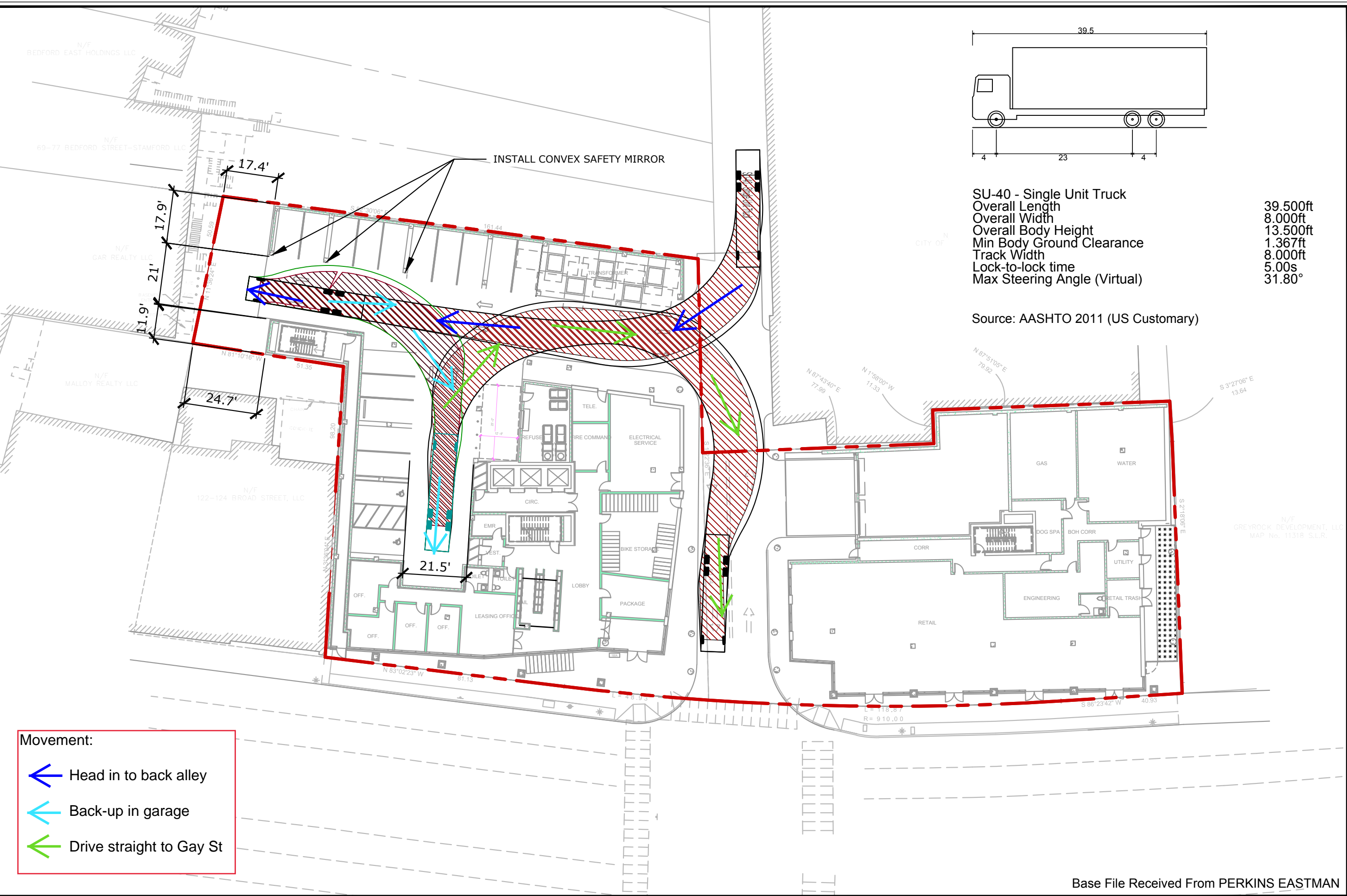
EXISTING DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT
 SU-40 TRUCK HEAD-IN
 128-132 BROAD STREET
 STAMFORD, CT

DESIGNED	EAJ	DGS
SCALE	1"=30'	CHECKED
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	

04A

Copyright SLR International Corporation - 2021

Drawing: C:\Users\EFOSTER\APPDATA\LOCAL TEMP\ADJUSTED\24360\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab04B
 Plotted by: EFOSTER On this date: Tue, 2023 March 14 - 12:16pm



SU-40 - Single Unit Truck
 Overall Length 39.500ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)

Movement:

- Head in to back alley
- Back-up in garage
- Drive straight to Gay St

99 REALTY DRIVE
 STAMFORD, CT 06410
 203.371.1000
 SLRCONSULTING.COM

REVISIONS	

PROPOSED DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

SU-40 TRUCK HEAD-IN

128-132 BROAD STREET
STAMFORD, CT

DESIGNED	EAF	DGS
SCALE	1"=30'	
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	
04B		

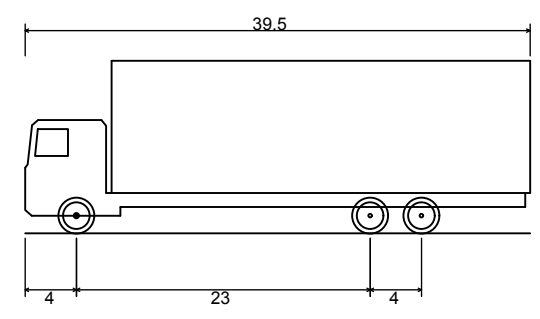
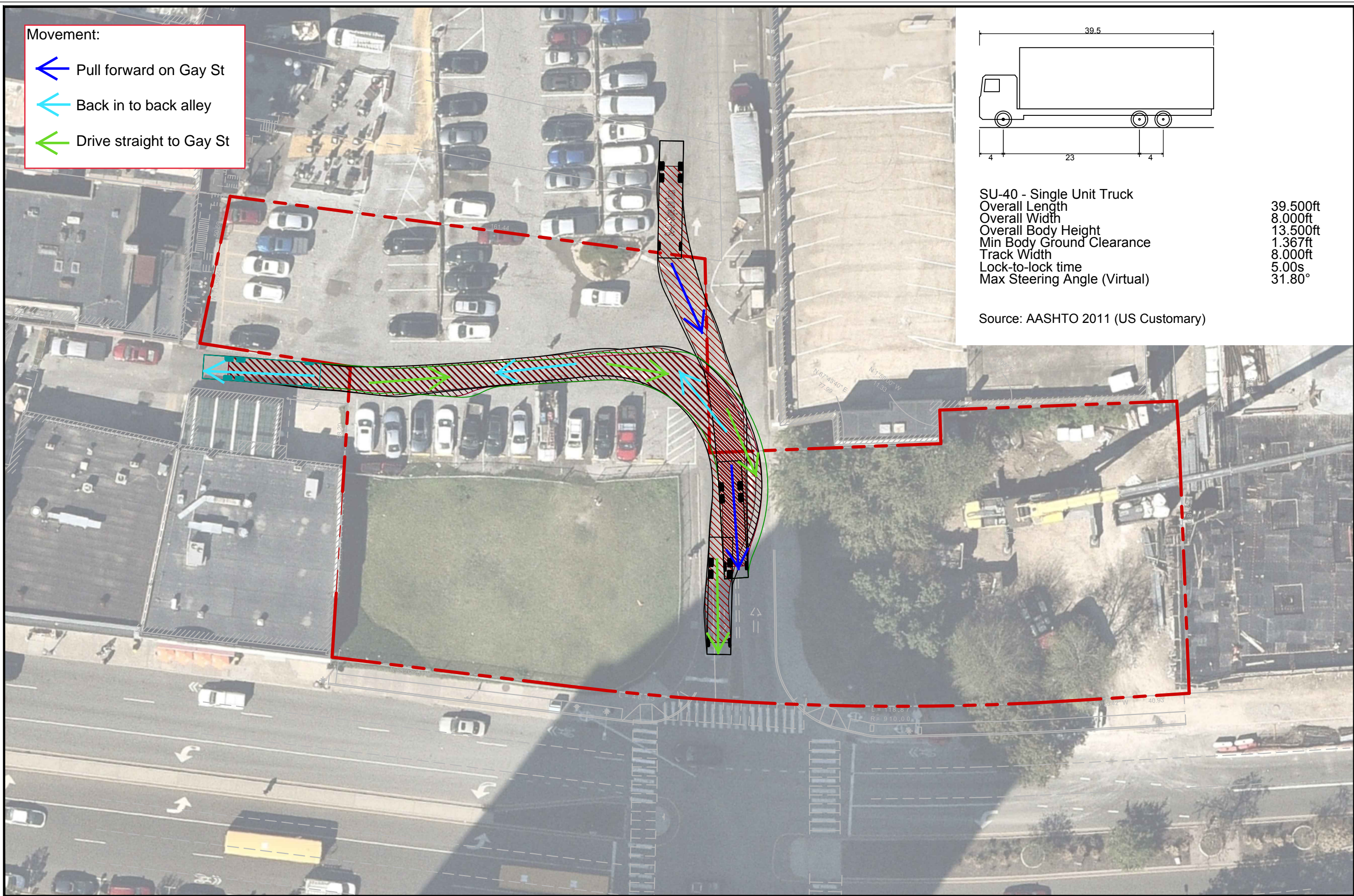
Base File Received From PERKINS EASTMAN

Copyright SLR International Corporation - 2021

Drawing: W:\CAD\DESIGN\13311.00012-DE-CAD\NONPLANSET\BROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout 1a.rvt
 Plotted by: FOSTER On this date: Wed, 2023 March 15 - 2:52pm

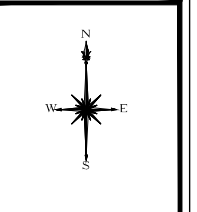
Movement:

- ← Pull forward on Gay St
- ← Back in to back alley
- ← Drive straight to Gay St



SU-40 - Single Unit Truck
 Overall Length 39.500ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)



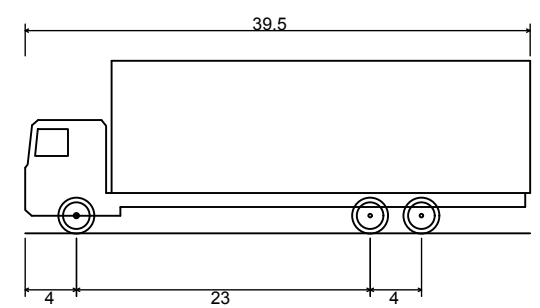
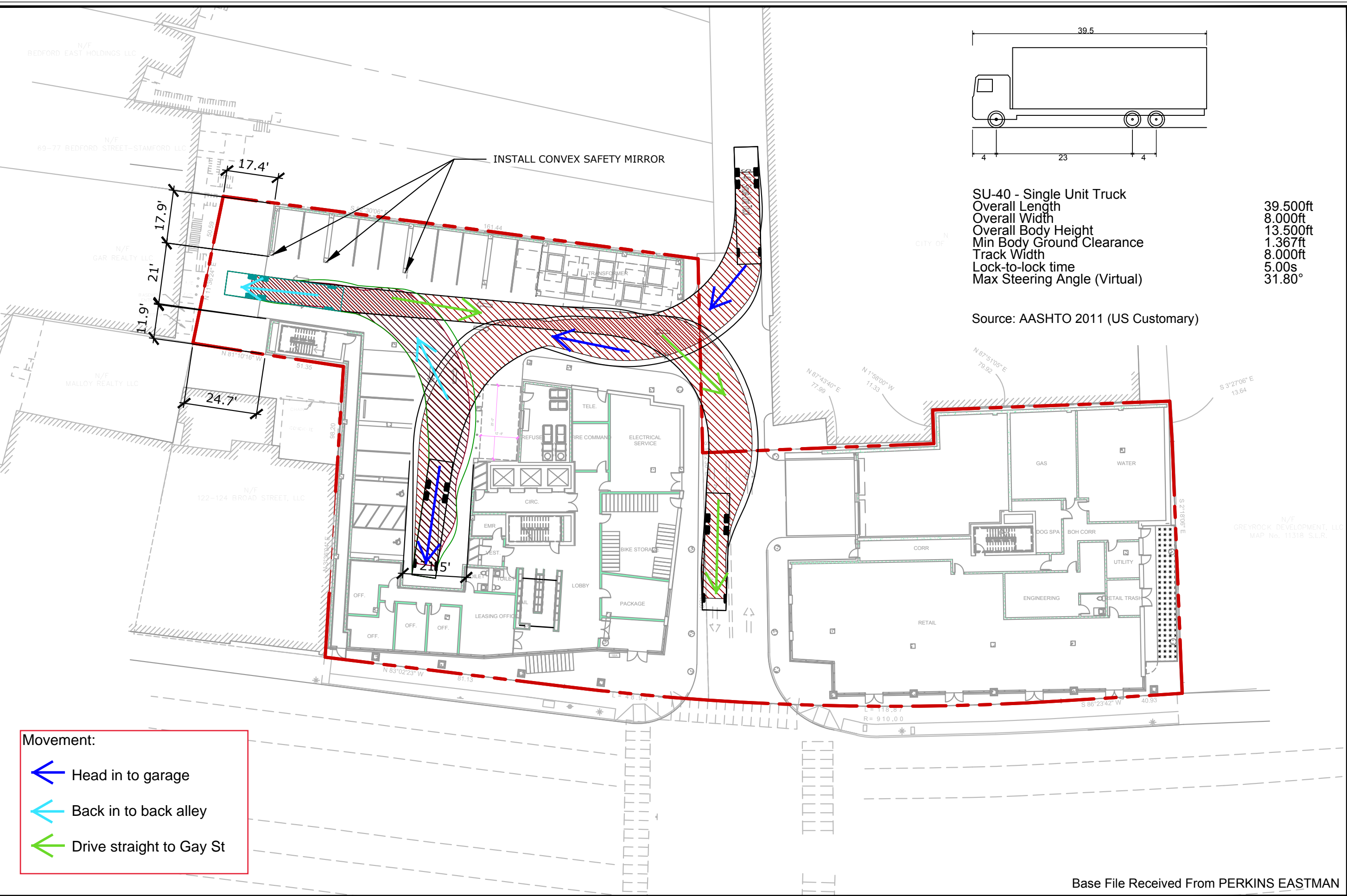
REVISIONS

EXISTING DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT
 SU-40 TRUCK BACK-IN
 128-132 BROAD STREET
 STAMFORD, CT

DESIGNED	EAJ	DGS
SCALE	1"=30'	CHECKED
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	

05A

Drawing: W:\CAD\DESIGN\13311.00012-DE-CAD\NONUNANSETBROAD STREET - GARBAGE & DELIVERY CIRCULATION.DWG Layout Tab:05B
 Plotted by: FOSTER On this date: Wed, 2023 March 15 - 2:52pm



SU-40 - Single Unit Truck
 Overall Length 39.500ft
 Overall Width 8.000ft
 Overall Body Height 13.500ft
 Min Body Ground Clearance 1.367ft
 Track Width 8.000ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 31.80°

Source: AASHTO 2011 (US Customary)

Movement:

- Head in to garage
- Back in to back alley
- Drive straight to Gay St

99 REALTY DRIVE
STAMFORD, CT 06410
203.371.1000
SLRCONSULTING.COM

REVISIONS	

PROPOSED DELIVERY CIRCULATION - ILLUSTRATIVE CONCEPT

SU-40 TRUCK BACK-IN

128-132 BROAD STREET
STAMFORD, CT

DESIGNED	EAF	DGS
SCALE	1"=30'	
DATE	MARCH 2023	
PROJECT NO.	141.13311.00012	
05B		

Copyright SLR International Corporation - 2021

Base File Received From PERKINS EASTMAN