ADDENDUM TO APPLICATION OF GIRI HOTEL MANAGEMENT, LLC
505 U.S. ROUTE 1-BYPASS
Map 234, Lot 5

This project was designed and submitted to seek the necessary zoning relief associated with the construction of a hotel and fast-food restaurant at the subject property which is currently located in the General Business zone. The only two variances that were being sought for the project were related to the location of a drive-through along the front lot line of Route 1 Bypass.

After submitting an application for relief, the applicant was made aware by City staff that the subject property was posted for a Zoning District change from General Business to Gateway District just two days prior to our filing. As a result, the project needs the additional following relief:

1. Section 10.5B22.20 – Building Setback
2. Section 10.5B34.7- Large Commercial Building height
3. Section 10.5B34.50 - Small Commercial Building Maximum setback.
4. Section 10.5B33.20. - Front Lot Line Build Out.

1. **Building Setback** The Ordinance requires that buildings taller than 35 feet that front on streets with right of way widths of 60' or less shall be required to be set back or stepped back from the right of way line in accordance with the figure below. The Applicant is seeking a height variance because the designed project does not need to meet these standards. It is unlikely that this parcel land is going to ever be used for pedestrian use. It's a high-density commercial area along a major highway and is not well suited for pedestrian use in any way, shape or form.

10.5B22.20 **Building Stepback** and **Street** Enclosure: **Building**s taller than 35 feet that front on **street**s with right-of-way widths of 60' or less shall be required to be set back or stepped back from the right-of-way line in accordance with Figure 10.5B22.10. The purpose of this requirement is to enhance the pedestrian environment and prevent excessive shadowing on narrower **street**s in the district.

Distance from **street** right-of-way line	Maximum **building height**
0' to 24'	35'
25' to 49'	45'
50' or more	60'

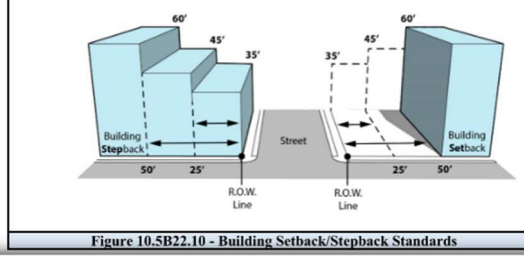


Figure 10.5B22.10 - Building Setback/Stepback Standards

2. **Large Commercial Building Height** . This section of the Ordinance requires Design Standards limiting building height to 50 feet. For the reasons stated above, the hotel was designed for the allowed building height in the General Business district and is consistent in height to the surrounding buildings in the area.

3. **Small Building Maximum Setback** The buildings have been located in a manner that pushes the buildings up along the Coakley Road and Route 1 Bypass frontages and places parking to the side and rear of these buildings. In order to allow for a drive-though, the fast-food restaurant cannot meet the maximum setback distance of 20ft.

4. **Front Lot line Buildout** The subject property is located at the corner of Route 1 Bypass and Coakley Road. Given the properties location, site constraints and length of frontage associated with this corner lot, the project cannot meet this requirement.

Conclusion.

For the foregoing reasons, the applicant respectfully requests the Board grant the variances required under Section 5B of the pending adopted ordinance.

Respectfully submitted,

Dated: April 12, 2024

By: */s/ John K. Bosen*
John K. Bosen, Esquire

APPLICATION OF GIRI HOTEL MANAGEMENT, LLC
505 U.S. ROUTE 1-BYPASS
Map 234, Lot 5

APPLICANT'S NARRATIVE

A. The Project.

The Applicant, Giri Hotel Management, LLC, owns and operates the Port Inn located at 505 U.S. Route 1 Bypass. According to the City tax records, the motel was built in 1957 and has fifty-six rooms with associated parking. The structure is severely outdated for the modern traveler. This property has unique site constraints in that it is a corner lot bound by two streets to the front and Hodgson Brook to the rear.

The proposed project consists of the demolition of the existing motel and the construction of a five story, 115 key hotel that will operate under the Cambria brand. The hotel will have parking underneath the hotel. There will also be a one-story Starbucks restaurant with an accessory drive-through. The project will include associated site improvements such as parking, pedestrian access, utilities, stormwater management, lighting, and landscaping.

The proposal includes two (2) driveways off Coakley Road. The main driveway will be a two-way access that is approximately 400 feet west of the Coakley Road/Route 1 Bypass intersection and will reduce the width of a large curb cut that exists there today. The secondary driveway will be a one-way exit only that will utilize an existing curb at the north corner of the property. An existing curb cut on Route 1 Bypass and an existing curb cut on Coakley Road are eliminated as part of this design.

The proposed parking and buildings have been sited in a manner such that all impervious surfaces will be removed within twenty-five feet of Hodgson Brook and all buildings will be removed within 50 feet of Hodgson Brook. The project will require a CUP from the Planning Board for a reduction in the parking requirement through use of a parking demand analysis. Per the City of Portsmouth zoning, this project would require 168 parking spaces. However, utilizing data from the Institute of Transportation Engineers (ITE) Parking Generation Manual for a preliminary parking demand analysis, the average peak parking demand for this project is 106 spaces where 106 are provided. This reduction in the parking required will not only eliminate unnecessary impervious surface but also will be beneficial for the implementation of buffer improvements along Hodgson Brook.

Overall, this concept will reduce impervious surface within the 100-foot wetlands buffer by approximately 9,507 SF and incorporates opportunities for buffer enhancement along the brook. This is also an improvement over the plan we last submitted to the Zoning Board of Adjustment. The proposed project will also enhance water quality with the addition of stormwater treatment practices that do not currently exist on the site. The project is anticipated to incorporate a stormwater management system that will provide pretreatment via offline deep sump catch basins with oil separator hoods and collected in an underground

detention system prior to flowing through a stormwater filtration device that will provide stormwater treatment.

This project will require the following variances:

(a) – For a reduction in drive-through/Bypass lands distance from lot line per 10.835.32
(b) – For reduction in menu board and speaker distance from front line lot per 10.835.31

Hotels are permitted in the General Business zone by special exception. §10.440.10.40. Given that a motel currently operates on this site, the Applicant believes the requested relief is reasonable given the site's existing conditions and the significant environmental benefit the project will provide for Hodgson's Brook.

B. <u>The Special Exception.</u>

The Applicant believes the proposal easily meets the criteria for the necessary special exception. Those criteria are set forth in the ordinance at §10.232.20.

First, the use proposed here, "hotel," is permitted within this district by special exception, see §10.440 Table of Uses, no. 10.40. §10.232.10.

Second, the proposed use will pose no hazard to the public or adjacent properties on account of potential fire, explosion or release of toxic materials. §10.232.22. No explosives, toxic materials or unusual accelerants will be stored on site. To the best knowledge of the Applicant, there has never been any fire, explosions, or release of toxic materials at this location since the hotel was built in 1957.

Third, there will be no detriment to property values in the vicinity or change in the essential characteristics of any area including residential neighborhoods or business and industrial districts on account of the location or scale of buildings and other structures, parking areas, accessways, odor, smoke, gas, dust, or other pollutant, noise, glare, heat, vibration, or unsightly outdoor storage of equipment, vehicles or other materials. §10.232.23. A motel has existed on this site since 1957 and is surrounded by other hotels and commercial uses. The proposed hotel is also smaller than many of the neighboring hotels. For instance, the Holiday Inn has 130 rooms, the Hampon Inn has 125 rooms, the Best Western Plus has 168 rood and the Marriot Courtyard has 133 Room. This hotel is not a large hotel and will not cause any detriment to property values or change the essential characteristics of the neighborhood.

Fourth, there will be no creation of a traffic safety hazard or a substantial increase in the level of traffic congestion in the vicinity. §10.232.23. The existing use is comprised of a motel. Attached to this submission is a traffic impact analysis conducted by Tighe & Bond.

The study concludes the addition of site-generated traffic is expected to have a negligible impact on traffic operations within the study area following minor timing revisions by NHDOT.. The proposed project will also require Site Plan Review from the Planning Board and a Driveway Permit from the New Hampshire Department of Transportation (NHOT), where a Traffic Impact Study will be required for approval. The project will also require a CUP from the Planning Board for parking. Utilizing data from the ITE Parking Generation Manual for a preliminary parking demand analysis, the average peak parking demand for a 115-key hotel is 93 spaces and the average peak parking demand for Starbuck's is 13 spaces. Based on this, the total peak parking demand for the project is 106 spaces which is provided on Site Plan.

Fifth, there will be no excessive demand on municipal services, including, but not limited to, water, sewer, waste disposal, police and fire protection and schools. §10.232.24. None of these services will be implicated by this proposal.

Finally, the project will result in no significant increase of stormwater runoff onto adjacent property or streets. §10.232.25. Currently, the motel is built right up to Hodgdon's Brook. The Applicant intends to remove all buildings within 50 feet of Hodgson Brook and all pavement within 25 feet of Hodgson Brook resulting in a significant improvement over the exiting condition. The site currently has no stormwater treatment either. However, as part of the site improvements for this project, the Applicant will collect and treat all stormwater before it goes into Hodgson Brook.

C. The Variances.

The Applicant submits that the proposal meets the criteria for granting the requested variances.

Granting the requested variance will not be contrary to the spirit and intent of the ordinance nor will it be contrary to the public interest. The "public interest" and "spirit and intent" requirements are considered together pursuant to Malachy Glen Associates v. Chichester, 152 NH 102 (2007). The test for whether or not granting a variance would be contrary to the public interest or contrary to the spirit and intent of the ordinance is whether or not the variance being granted would substantially alter the characteristics of the neighborhood or threaten the health, safety and welfare of the public.

The proposed use fits in well with the mix of hotels and other commercial uses characteristic of this neighborhood. A new, modern code compliant hotel will improve the health, safety and welfare of the public. Further, the enhancements to Hodgson's Brook support this conclusion. Health, safety and welfare of the public will thus be enhanced by this project. The project will require further review and approval by the Planning Board (and review by the Conservation Commission) further assuring the public health, safety and welfare will be adequately preserved.

Substantial justice would be done by granting the variance. Whether or not

substantial justice will be done by granting a variance requires the Board to conduct a balancing test. If the hardship upon the owner/applicant outweighs any benefit to the general public in denying the variance, then substantial justice would be done by granting the variance. It is substantially just to allow a property owner the reasonable use of his or her property.

In this case, there is no benefit to the public in denying the variances that is not outweighed by the hardship upon the owner. The existing motel already violates many of the sections of the zoning ordinance the Applicant here seeks relief from. The project was designed to site the building and structures as far away from Hodgson's Brook as possible. Impervious surface adjacent to the brook of 8,597 square feet will be removed and stormwater management infrastructure will be introduced. With respect to the relief needed for the Starbucks menu board, the fact that the speaker itself will be adjacent to the highway alleviates the noise concerns the ordinance seeks to protect against.

Accordingly, the loss to the applicant clearly outweighs any gain to the public if the Applicant were required to conform to the ordinance.

The values of surrounding properties will not be diminished by granting the variance. The proposal will bring a modern, state of the art, code compliant hotel to the property. The area is already surrounded by similar uses so the values of surrounding properties will not be negatively affected in any way.

There are special conditions associated with the property which prevent the proper enjoyment of the property under the strict terms of the zoning ordinance and thus constitute unnecessary hardship. The property has unique site constraints because it is a corner lot bound by two streets to the front and Hodgson Brook, an impaired waterway, to the rear. The existing condition is non-compliant with respect to front building setback (15ft provided where 30ft is required); parking setback from the front lot line (1ft provided where 40ft is required); and parking is located between a principal building and street along both frontages. Runoff from existing impervious surfaces directly discharge to Hodgson Brook without any stormwater treatment. The existing built environment impacts the 100ft wetland buffer adjacent to Hodgson Brook with buildings and parking. The existing condition includes approximately 37,000 SF of total impervious surface impact within the 100ft buffer. Within that total wetland buffer impact, approximately 5,000 SF is located within the 25ft of Hodgson Brook where the ordinance seeks to provide a 25ft natural vegetated buffer strip. Also, structures are located within the 50ft limited cut buffer with existing buildings setback as close as 24ft from the brook. The proposed project will now comply with front building setback requirements and more importantly will provide a meaningful environmental improvement to Hodgson Brook. The proposed project will result in a 25% net overall reduction of impervious surface within the 100ft wetland buffer. The proposed condition will remove all impervious surfaces within 25ft of Hodgson Brook and return those areas to a natural vegetated buffer strip that consists of native plantings. The proposed condition will locate all proposed buildings greater than 50ft from Hodgson Brook. In addition, the project's stormwater management system will collect and treat all runoff generated by

impervious surfaces on the property before it is discharged to the brook. Compliance with the ordinance would prevent these meaningful improvements to Hodgson Brook.

The use is a reasonable use. The proposed hotel use is permitted by special exception in this Zone and is consistent with the intent of the General Business zone and the existing use. The Starbucks restaurant is permitted in this zone as well.

There is no fair and substantial relationship between the purpose of the ordinance as it is applied to this particular property. All of the variance relief here requested is driven by existing site restraints and the applicant's desire to provide meaningful improvements to Hodgson's Brook.

Accordingly, the relief requested here would not in any way frustrate the purpose of the ordinance and there is no fair and substantial relationship between the purpose of these requirements and their application to this property.

D. Conclusion.

For the foregoing reasons, the applicant respectfully requests the Board grant the special exception and variances as requested and advertised.

Respectfully submitted,

Dated: March 27, 2024

By: /s/ John K. Bosen
John K. Bosen, Esquire

Attachments: Proposed Site Plan
Aerial Overlay Exhibit
Floor Plans and Elevations
Traffic Impact Study
Owner Authorization Letter

SITE DATA:
LOCATION: TAX MAP 234, LOT 5
505 USA ROUTE 1-BYPASS
PORTSMOUTH, NEW HAMPSHIRE

ZONING DISTRICT: GENERAL BUSINESS
PRINCIPAL USE: HOTEL(1), FAST FOOD RESTAURANT
ACCESSORY USE: DRIVE-THROUGH (2)

DIMENSIONAL REQUIREMENTS:

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	1 ACRE	±2.56 ACRES	±2.56 ACRES
CONTINUOUS STREET FRONTAGE	200 FT	±225 FT	±225 FT
MINIMUM FRONT YARD	30 FT	±15 FT	±30 FT
MINIMUM SIDE YARD	30 FT	±32 FT	±114 FT
MINIMUM REAR YARD	50 FT	±87 FT	±114 FT
MAXIMUM BUILDING HEIGHT	60 FT	<60 FT	<60 FT
BUILDING COVERAGE	30%	±10.8%	±16.86%
MINIMUM PARKING SETBACK FROM FRONT LOT LINE:	40 FEET	±1 FT	±40 FT
DUMPSTER SETBACK FROM LOT LINE:	10 FEET	±17 FT	±42 FT

DRIVE-THROUGH REQUIREMENTS:

MINIMUM DRIVE-THROUGH, BYPASS, AND STACKING LANES DISTANCE FROM LOT LINE:	30 FT	N/A	±5 FT(3)
MINIMUM TRANSACTION WINDOW, MENU BOARD, AND SPEAKER LOCATION FROM LOT LINE:	50 FT	N/A	±18 FT(4)

(1) - HOTEL USE ALLOWED THROUGH A SPECIAL EXCEPTION
(2) - CONDITIONAL USE PERMIT REQUIRED FOR DRIVE-THROUGH FACILITY AS AN ACCESSORY USE
(3) - ZONING RELIEF REQUIRED FOR A REDUCTION IN DRIVE-THROUGH, BYPASS, AND STACKING LANES DISTANCE FROM LOT LINE PER 10.835.32
(4) - ZONING RELIEF REQUIRED FOR A REDUCTION IN TRANSACTION WINDOW, MENU BOARD AND SPEAKER DISTANCE FROM FRONT LOT LINE PER 10.835.31
(5) - CONDITIONAL USE PERMIT REQUIRED FOR WORK WITHIN WETLAND BUFFER

PARKING CALCULATIONS:

ZONING MINIMUM REQUIREMENT:
HOTEL: 1.25 SPACE PER GUEST ROOM
RESTAURANT: 1 SPACE PER 100 SF

PROPOSED SPACE CENTER (TOTAL):

USE	SIZE	MINIMUM SPACES ZONING	ITE ANALYSIS	PROVIDED
HOTEL:	115 ROOMS	144 SPACES	93 SPACES	
RESTAURANT:	2,400 SF	24 SPACES	13 SPACES	
TOTAL:		179 SPACES	106 SPACES(6)	106 SPACES

(6) - CONDITIONAL USE PERMIT REQUIRED FOR USE OF ALTERNATIVE PARKING DEMAND ANALYSIS

ACCESSIBLE PARKING REQUIREMENT:

	REQUIRED	PROVIDED
ACCESSIBLE SPACES:	5 SPACES	5 SPACES
VAN ACCESSIBLE SPACES:	1 SPACE	1 SPACE

DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
90° PARKING STALL SIZE:	8.5 FT X 19 FT	8.5 FT X 19 FT
90° DRIVE AISLE:	24 FT	24 FT
0° PARKING STALL SIZE:	8.5 FT X 20 FT	8.5 FT X 20 FT
0° DRIVE AISLE (1-WAY TRAFFIC):	14 FT	14 FT

PERMANENT BUFFER IMPACTS (SF)			
WETLAND BUFFER	EXISTING	PROPOSED	NET
0 - 25'	5,187 SF	0 SF	-5,187 SF
25 - 50'	10,704 SF	10,697 SF	-7 SF
50 - 100'	21,509 SF	17,196 SF	-4,313 SF
TOTAL	37,400 SF	27,893 SF	**-9,507 SF**

Last Saved: 3/26/2024
Printed: Mar 27, 2024 - 12:26pm By: CKrzaiuk
Tighe & Bond:J:\G\G5088 GIRI Hotel Management, LLC\001 Route 1 Hotel\Drawings\AutoCAD\G-5088-001-C-DSGN.dwg

Tighe&Bond

CAMBRIA HOTEL

GIRI HOTEL MANAGEMENT, LLC

505 USA ROUTE 1-BYPASS
PORTSMOUTH, NH

MARK	DATE	DESCRIPTION

PROJECT NO:	G5088-001
DATE:	3/27/2024
FILE:	G-5088-001-C-DSGN.dwg
DRAWN BY:	CJK
DESIGNED/CHECKED BY:	NAH
APPROVED BY:	PMC

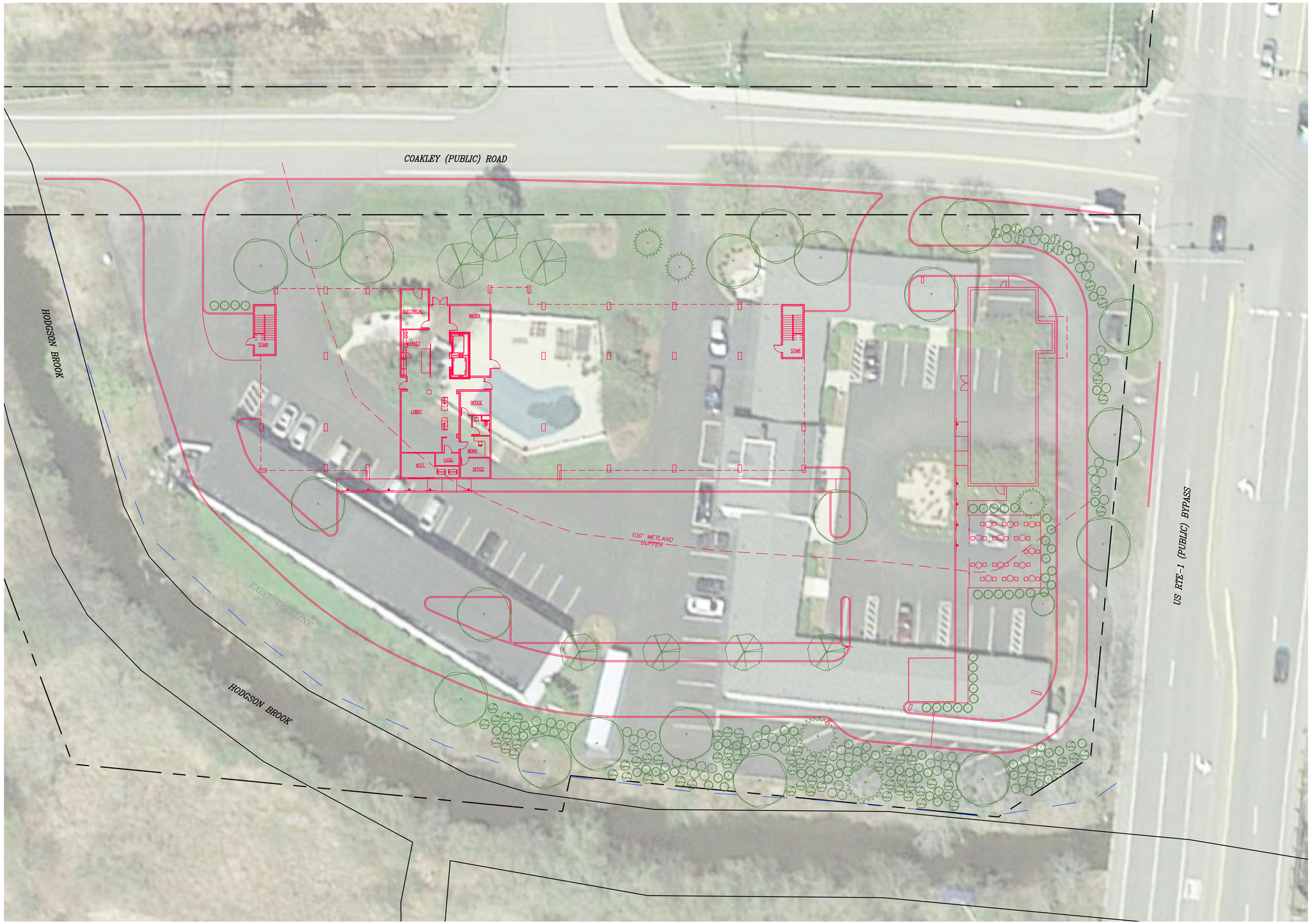
SITE PLAN

SCALE: AS SHOWN

C-102

505 USA ROUTE 1-BYPASS

PORTSMOUTH, NEW HAMPSHIRE

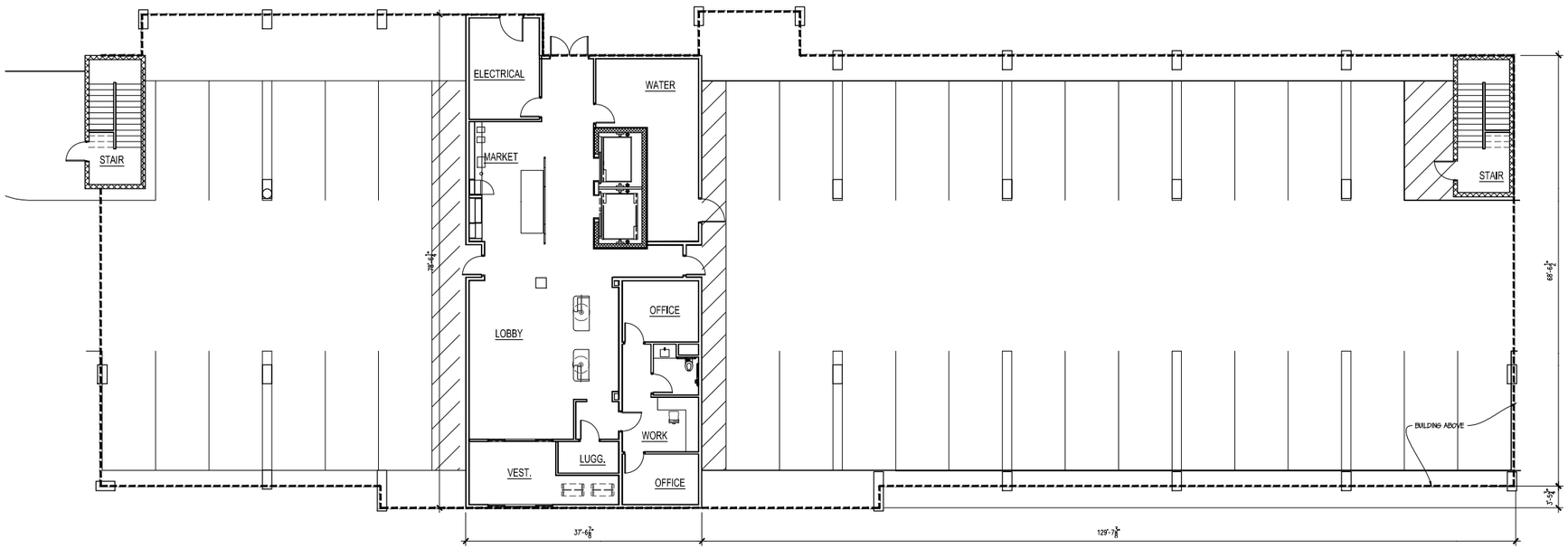


AERIAL OVERLAY EXHIBIT

SCALE IN FEET
0 10 20 40

Tighe&Bond
Engineers | Environmental Specialists
177 Corporate Drive
Portsmouth, NH 03801
(603) 433-8818

G-5088-001-C-DSGN.dwg



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

TRUE NORTH

BUILDING AREA

1ST FLOOR:	3,282 S.F.
2ND FLOOR:	16,419 S.F.
3RD FLOOR:	16,419 S.F.
4TH FLOOR:	16,419 S.F.
5TH FLOOR:	16,419 S.F.
TOTAL	69,958 S.F.

Guest Room Count Breakdown

	1ST FLOOR	2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	TOTAL
KS-01 (KING SUITE SOFA)	0	8	11	11	11	30
KS-02 (KING SUITE)	0	7	7	7	7	21
KS-03 (WIDE KING SUITE)	0	0	1	1	1	2
QQS (QQ SUITE)	0	4	10	10	10	24
H.C. KS-01 (H.C. KING SUITE SOFA)	0	1	1	1	1	3
H.C. KS-03 (H.C. KING SUITE)	0	1	0	0	0	1
H.C. QQS (QQ SUITE)	0	1	1	1	1	3
	0	22	31	31	31	115

CAMBRIA HOTELS

PORTSMOUTH, NH

#222037

03-21-24

MUSSACHIO ARCHITECTS
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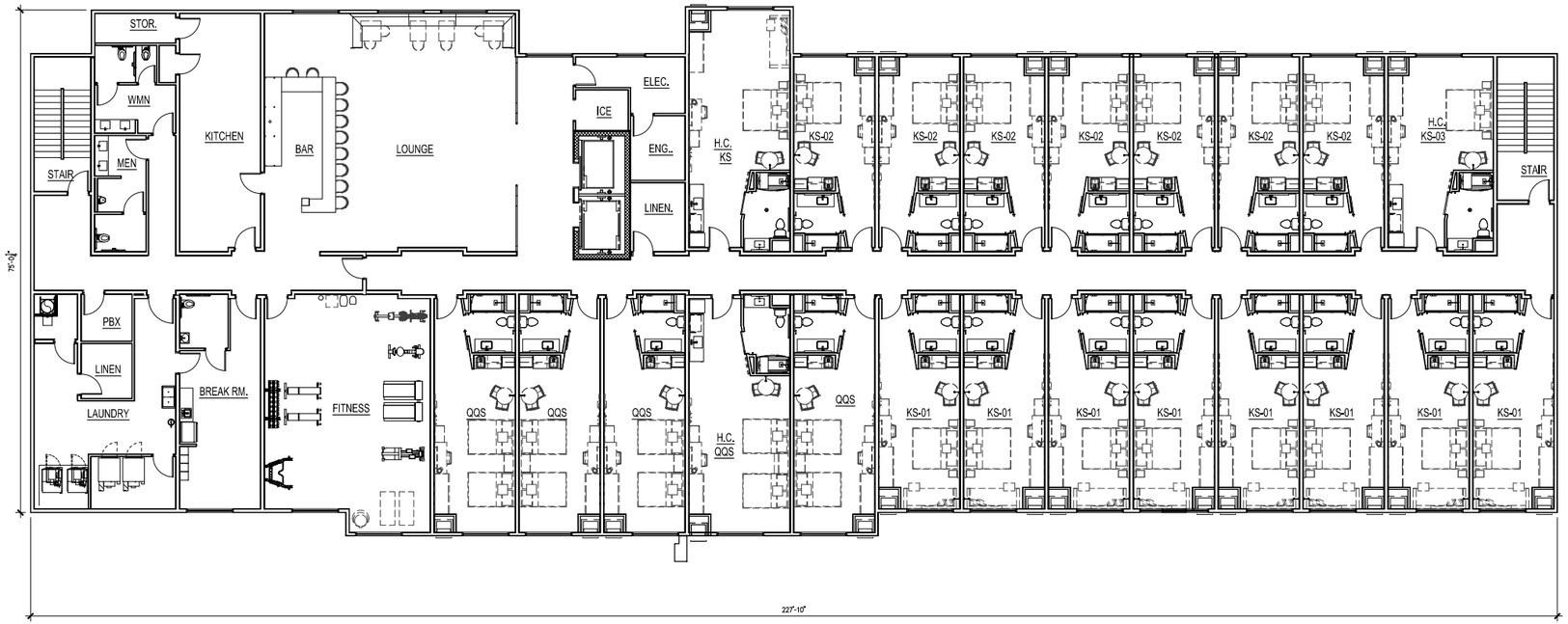

SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

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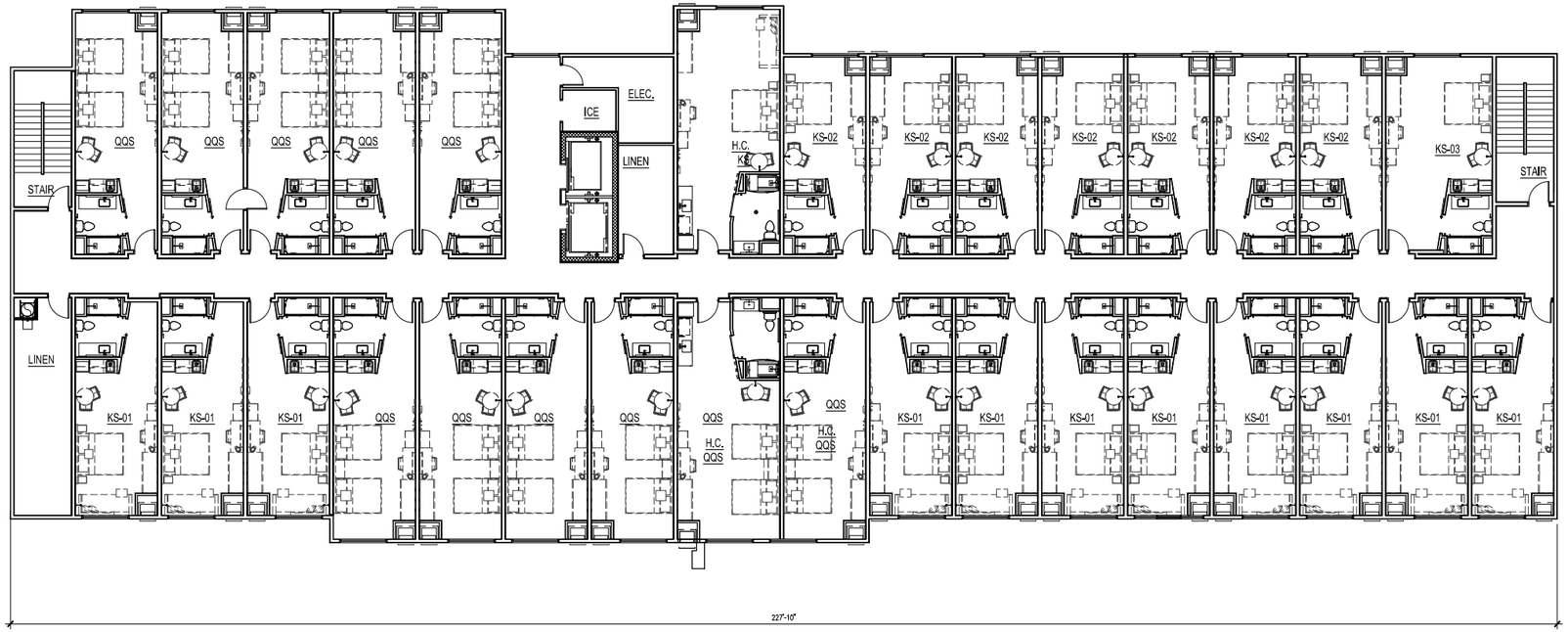

THIRD - FIFTH FLOOR PLAN

SCALE: 1/8" = 1'-0"

TRUE NORTH

CAMBRIA HOTELS

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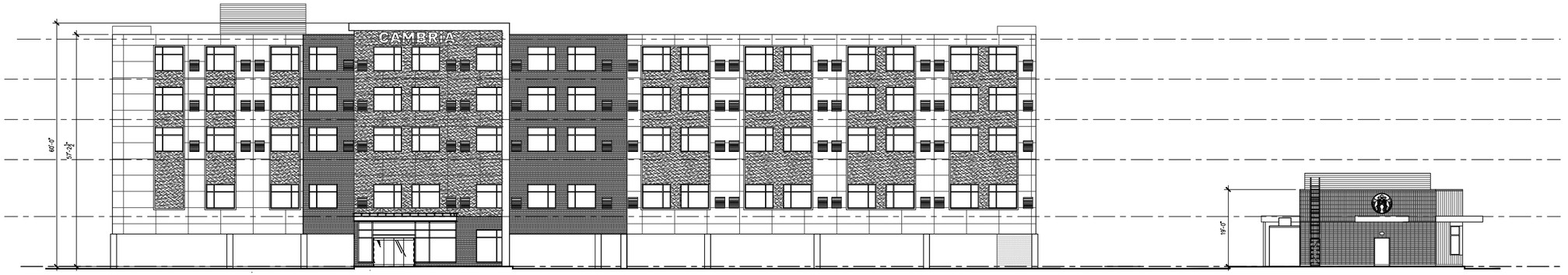

SOUTH ELEVATION - CAMBRIA HOTEL

SCALE: 3/32" = 1'-0"

SOUTH ELEVATION - STARBUCKS

SCALE: 3/32" = 1'-0"

SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR FINISH

EX 1	MATERIAL:	FIBERCEMENT PANEL
	COLOR:	GRAY SLATE
	MFG:	JAMES HARDIE
EX 2	MATERIAL:	FIBERCEMENT PANEL
	COLOR:	PEARL GRAY
	MFG:	JAMES HARDIE
EX 3	MATERIAL:	6" FIBERCEMENT TRIM
	COLOR:	MIDNIGHT BLACK
	MFG:	JAMES HARDIE
EX 4	MATERIAL:	FIBERCEMENT PANEL
	COLOR:	NIGHT GRAY
	MFG:	JAMES HARDIE
EX 5	MATERIAL:	FIBERCEMENT PANEL
	COLOR:	ARCTIC WHITE
	MFG:	JAMES HARDIE
EX 6	MATERIAL:	FIBERCEMENT BRICK PANEL
	PRODUCT:	MODERN BRICK
	COLOR:	MIDNIGHT
	MFG:	NICHIHA

CAMBRIA HOTELS

PORTSMOUTH, NH

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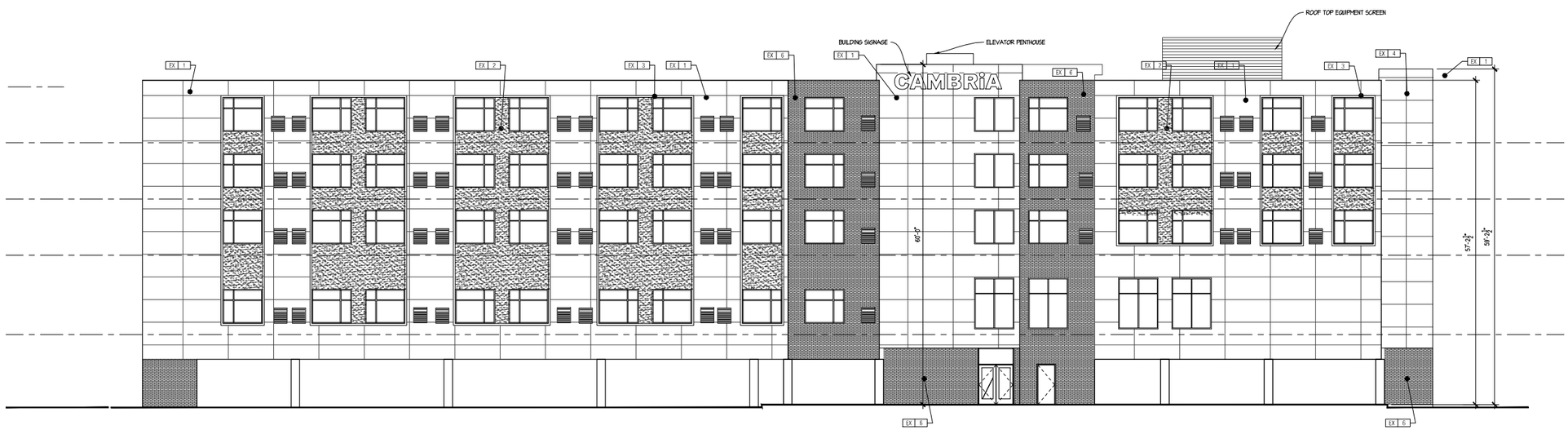
NORTH ELEVATION - STARBUCKS

SCALE: 3/32" = 1'-0"

NORTH ELEVATION - CAMBRIA HOTEL

SCALE: 3/32" = 1'-0"



NORTH ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR FINISH

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CAMBRIA HOTELS

PORTSMOUTH, NH

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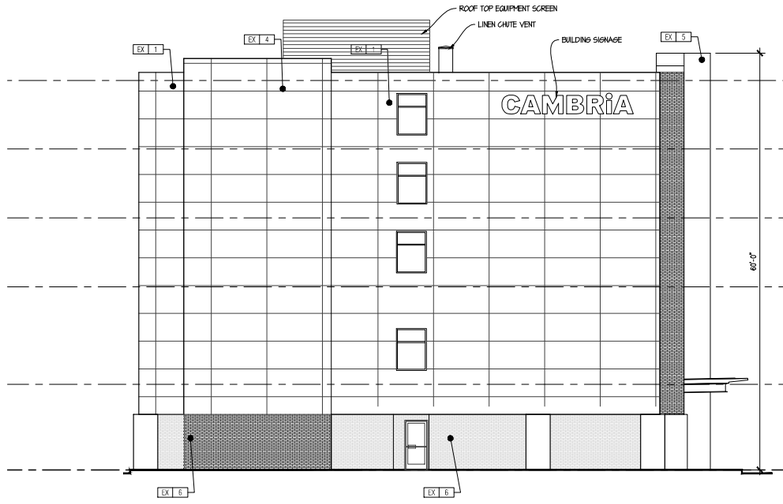
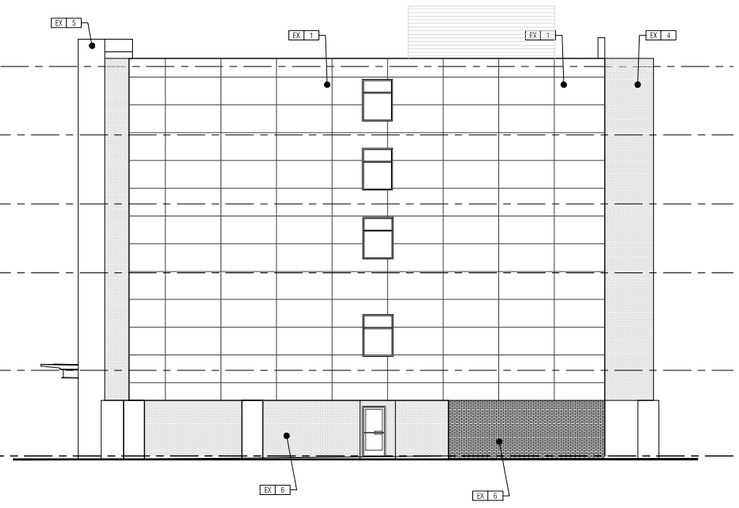


WEST ELEVATION

SCALE: 1/8" = 1'-0"



EAST ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR FINISH

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	MFG:	JAMES HARDIE
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	PRODUCT:	MODERN BRICK
	COLOR:	MIDNIGHT
	MFG:	NICHIHA

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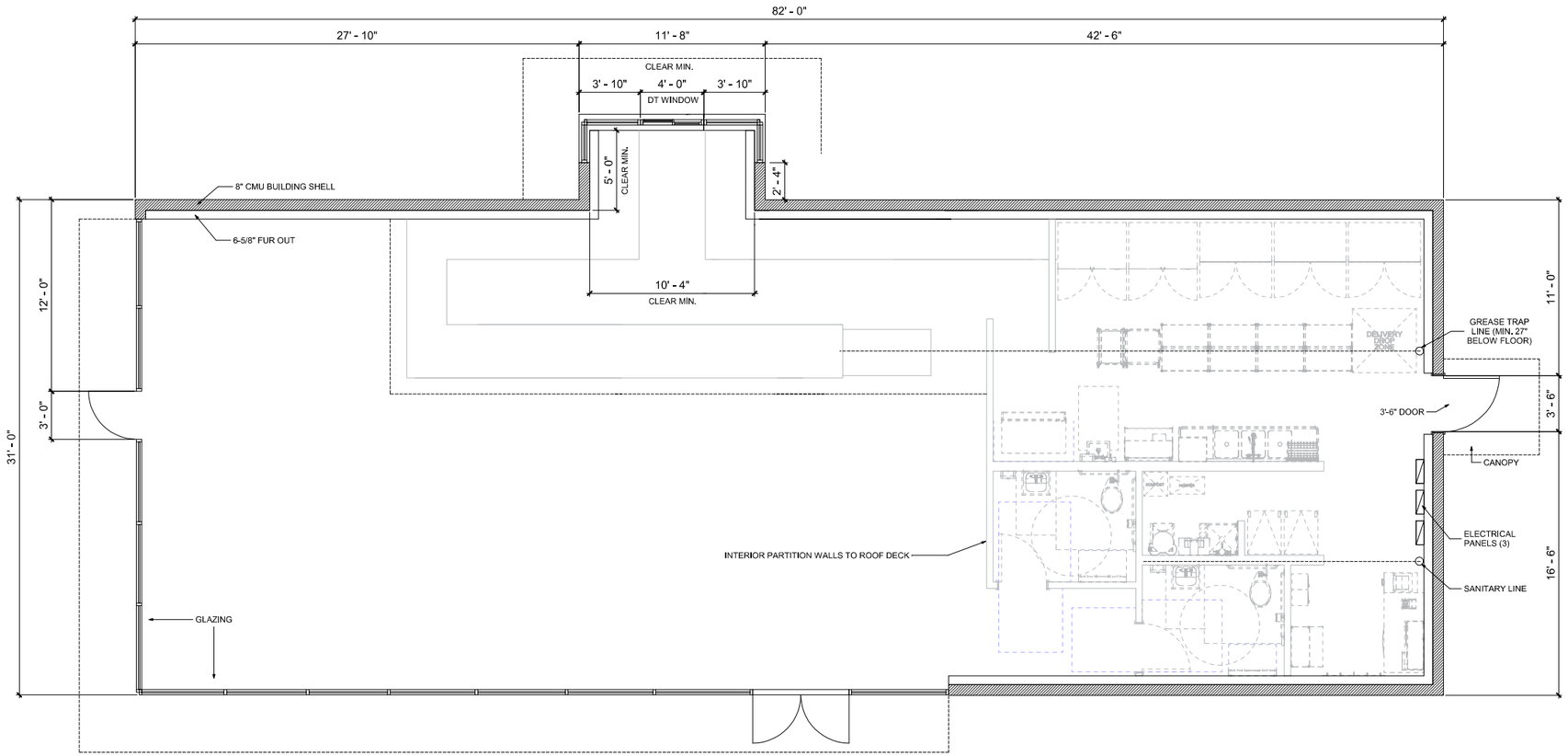

FLOOR PLAN

SCALE: 1/4" = 1'-0"

TRUE NORTH

STARBUCKS COFFEE

USA ROUTE 1-BYPASS, PORTSMOUTH NH

#224011

03-21-24

MUSSACHIO ARCHITECTS
30 NORTH FOREST RD.
WILLIAMSVILLE, NEW YORK 14221
(716) 631-9949T (716) 631-0521 F
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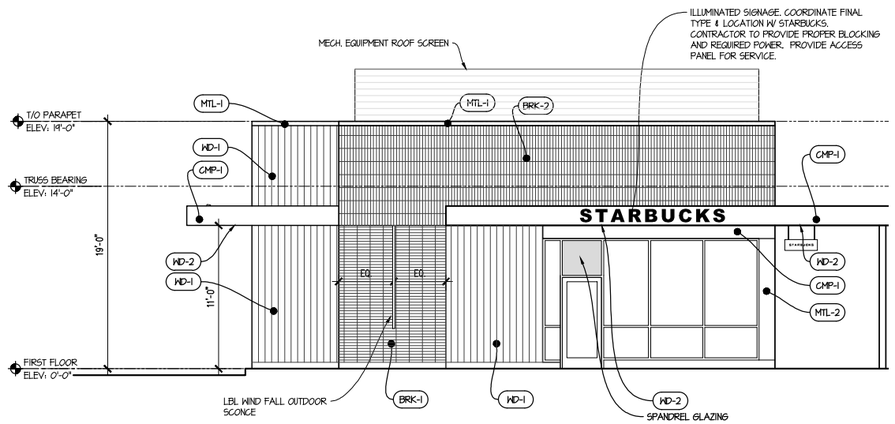
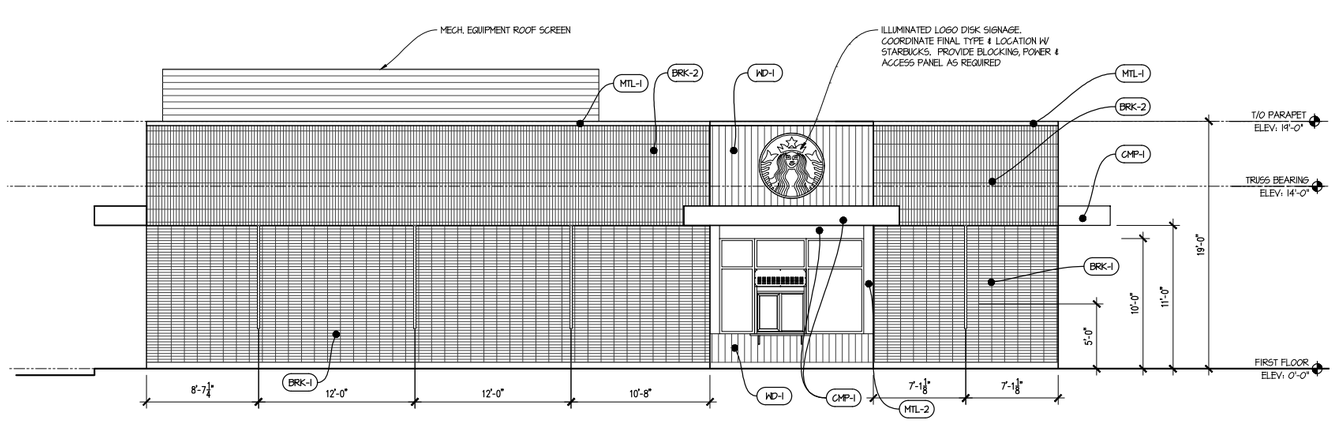
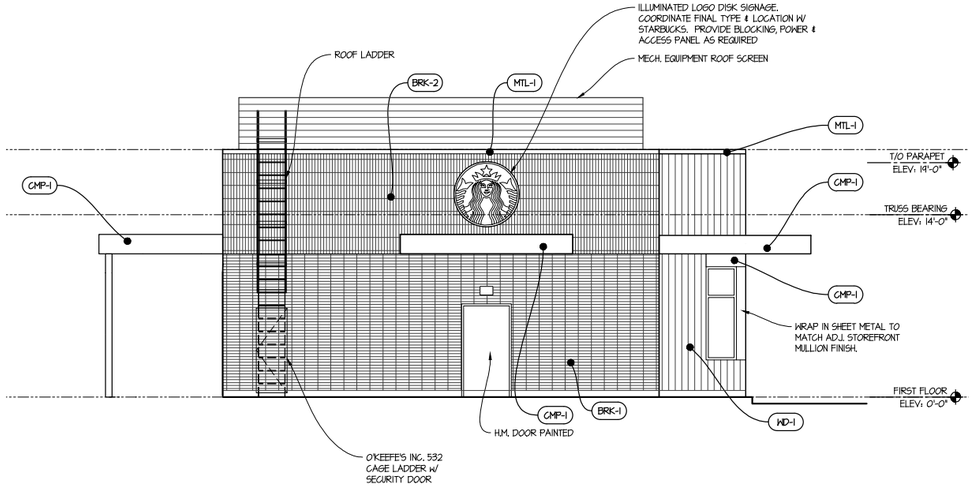


1 NORTH ELEVATION (FRONT)
SCALE: 3/16" = 1'-0"

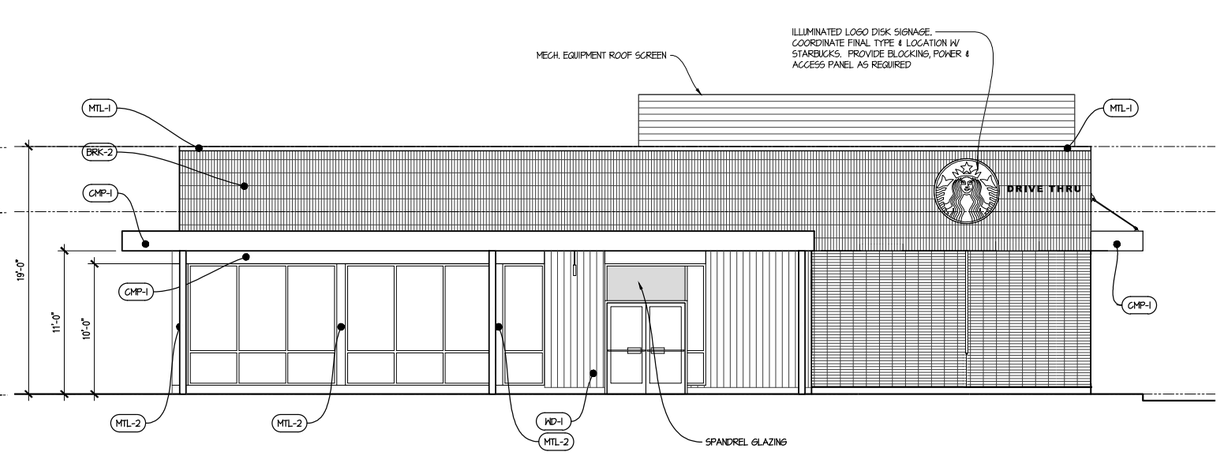


2 EAST ELEVATION (DRIVE-THRU LANE)
SCALE: 3/16" = 1'-0"

EXTERIOR FINISH LEGEND PALETTE C	-
BRK-1	MASONRY BRICK - MANUFACTURE - MORA CREMICA - COLOR - CLINKER; MANHATTEN
BRK-2	MASONRY BRICK - MANUFACTURE - MORA CREMICA - COLOR - CLINKER; MANHATTEN
WD-1	TONGUE & GROVE ADOBO & ACCOYA WOOD SIDING - RESAWN TIMBER CO. COLOR - MEKA FINISHED ON FACE ONLY, SEALED ON ALL 4 SIDES
WD-2	EAE EASED EDGE ADOBO WOOD SIDING COLOR - MEKA FINISHED ON FACE ONLY, SEALED ON ALL 4 SIDES
MTL-1	ANODIZED METAL COPING - COLOR - TO MATCH RAL#1021 MATTE MT0028 - FLAT BLACK
MTL-2	POWDER COATED METAL CANOPY - COLOR - TO MATCH RAL#1021 MATTE MT0028 - FLAT BLACK
CMP-4	PAINTED HOLLOW METAL - COLOR - TO MATCH RAL#1021 MATTE MT0028 - FLAT BLACK



3 SOUTH ELEVATION (REAR)
SCALE: 3/16" = 1'-0"



4 WEST ELEVATION (MAIN ENTRANCE/PATIO)
SCALE: 3/16" = 1'-0"

STARBUCKS COFFEE

USA ROUTE 1 BYPASS, PORTSMOUTH NH

#224011
03-27-24

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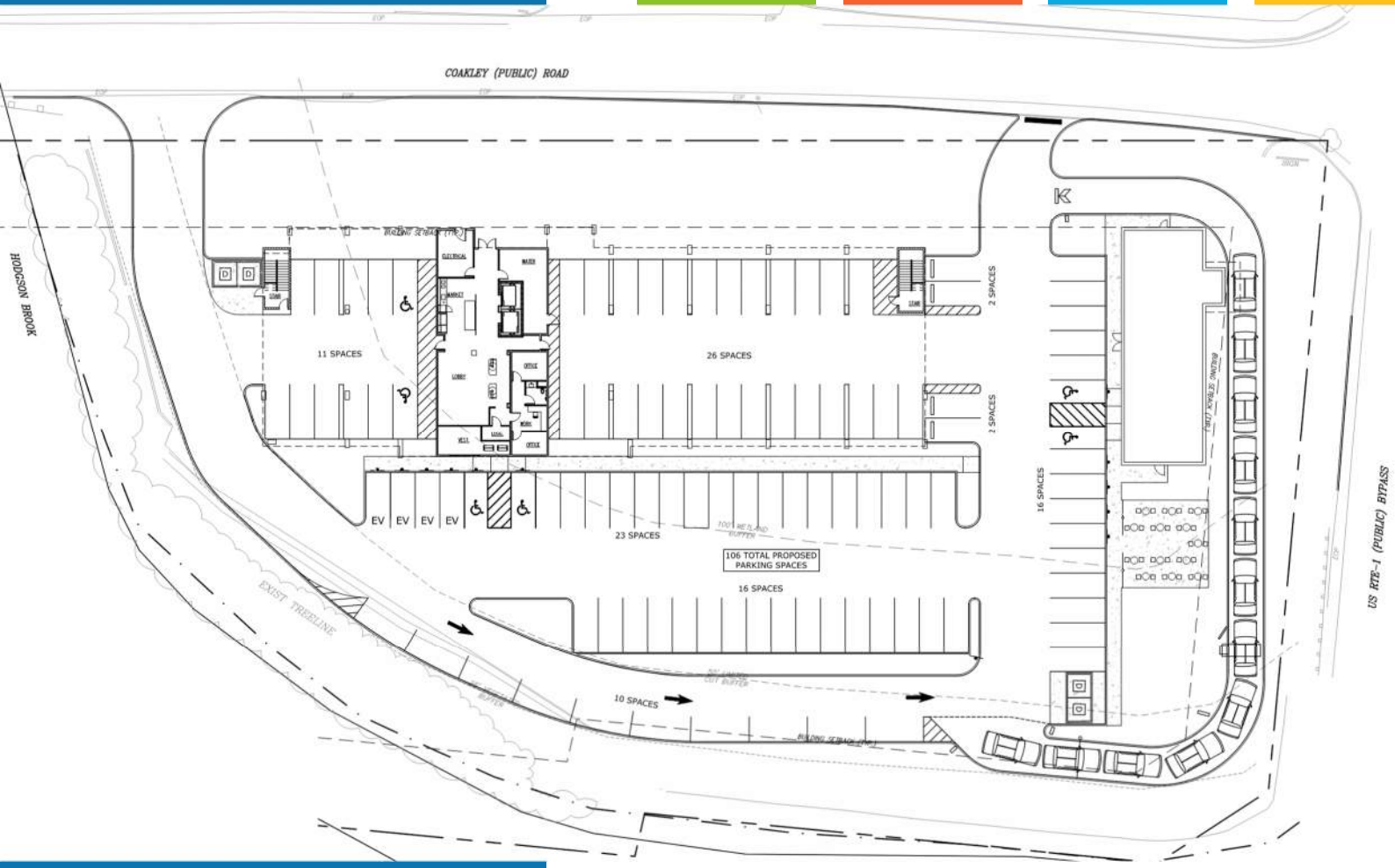


505 U.S. Route 1 Bypass Development
Portsmouth, New Hampshire

TRAFFIC IMPACT STUDY

GIRI Hotel Management, LLC

March 27, 2024

Tighe&Bond

G5131-001
March 27, 2024

Mr. Roger Appleton, P.E.
Assistant District 6 Engineer
New Hampshire Department of Transportation
271 Main Street, P.O. Box 740
Durham, New Hampshire 03824

Re: **Certification Letter**
505 U.S. Route 1 Bypass Development
Portsmouth, New Hampshire

Dear Roger:

This letter certifies that the Traffic Impact Study for the 505 U.S. Route 1 Bypass development located in Portsmouth, New Hampshire, dated March 27, 2024, was prepared under the oversight of a licensed Professional Engineer in the state of New Hampshire. I am a licensed Professional Engineer in the State of New Hampshire (NH PE No. 17429). I also hold Professional Traffic Operations Engineer (PTOE) (Certificate No. 2845) and Road Safety Professional 1 (RSP1) (Certificate No. 116) certifications from the Transportation Professional Certification Board (TPCB).

Sincerely,

TIGHE & BOND, INC.

Greg Lucas, PE, PTOE, RSP1
Senior Project Manager

Copy: Peter Britz, Director of Planning & Sustainability, City of Portsmouth

J:\G\G5088 GIRI Hotel Management, LLC\001 Route 1 Hotel\Reports\Traffic Impact Study\505 Route 1 Bypass Certification Letter.docx

Technical Appendices (Available Upon Request Under Separate Cover)

Section 1
Study Overview

This Traffic Impact Assessment (TIA) evaluates the potential traffic impact of the proposed hotel and coffee shop development located at 505 U.S. Route 1 Bypass in Portsmouth, NH. The TIA was prepared in accordance with NHDOT and industry standards. The site is bounded by US Route 1 Bypass to the east, Coakley Road to the north, and Hodgson Brook to the west and south. The site location is shown in Figure 1.

The project proposes to demolish the existing Port Inn hotel and construct a 115-room hotel and coffee shop with a drive-through window. The proposed Site Plan Layout is enclosed in Appendix G. The proposed facility is expected to be complete and occupied in 2025.

Based on the analyses conducted, it is the professional opinion of Tighe & Bond that the additional traffic expected to be generated by the proposed development is not expected to have a significant impact to traffic operations within the study area.

Section 2
Existing Conditions

The Site is currently occupied by the Port Inn hotel. The property is accessible via three driveways on Coakley Road on the north side of the site and one driveway on U.S. Route 1 Bypass on the east side of the site.

2.1 Roadways

The following sections provide details on the adjacent roadways within the study area.

2.1.1 US Route 1 Bypass

U.S. Route 1 Bypass is classified as a principal arterial under NHDOT District 6 jurisdiction. The roadway runs in a north-south direction, running from Lafayette Road (U.S. Route 1) to the Portsmouth Traffic Circle, then running parallel with I-95 before ending at U.S. Route 1 in Kittery, Maine. Within the study area, U.S. Route 1 Bypass generally provides two travel lanes in each direction with left turn lanes at Coakley Road/ Cottage Street and Borthwick Avenue/ Cate Street Extension with 3-to-4-foot shoulders There are no sidewalks provided along the roadway. The speed limit is posted at 35 miles per hour (mph).

2.1.2 Coakley Road

Coakley Road is classified as a local road and maintained by the City of Portsmouth. The roadway runs from U.S. Route 1 Bypass to the west, providing access to a small residential neighborhood. Coakley Road carries one lane in each direction in the project area with narrow 1-to-2-foot shoulders. There is a 5-foot sidewalk on the north side of Coakley Road between U.S. Route 1 Bypass and the Portsmouth Chevrolet driveway. The speed limit is posted at 20 mph.

2.1.3 Cottage Street

Cottage Street is classified as a local road and maintained by the City of Portsmouth. The roadway runs east to west between Woodbury Avenue to the east and U.S. Route 1 Bypass to the west. Cottage Street carries one lane in each direction in the project area with narrow 1-to-2-foot shoulders. The road widens at US Route 1 Bypass to provide a designated right turn lane. A 5-foot wide sidewalk is provided on the north side of Cottage Street between U.S. Route 1 Bypass and Woodbury Avenue. The speed limit is posted at 20 mph.

2.1.4 Borthwick Avenue

Borthwick Avenue is classified as a major collector and is maintained by the City of Portsmouth. The roadway runs from east to west between U.S. Route 1 Bypass to the east and Greenland Road to the west. Borthwick Avenue carries one through lane in each direction in the project area with narrow 1-to-2-foot shoulders. The road widens at U.S. Route 1 Bypass to provide a three-lane approach with dedicated left and right turn lanes and one shared left/ through lane. There are no sidewalks provided along Borthwick Avenue and the speed limit is posted at 35 mph.

2.1.5 Hodgdon Way

Hodgdon Way, formerly known as Cate Street Extension, is classified as a local road and is privately maintained. The roadway runs from east to west between by Cate Street to the east and U.S. Route 1 Bypass to the west. Hodgdon Way carries one through lane in each direction in the project area with narrow 1-to-2-foot shoulders. The road widens at U.S. Route 1 Bypass to provide a three-lane approach with dedicated left and right turn lanes and one shared right/ through lane. A 10-foot wide shared-use path is provided on the north side of the roadway. The speed limit is posted at 20 mph.

2.2 Study Area Intersections

2.2.1 U.S. Route 1 Bypass at Coakley Road/ Cottage Street

Coakley Road and Cottage Street intersect U.S. Route 1 Bypass from the west and east, respectively, to form a 4-way, signalized intersection. Two through lanes and a single dedicated left-turn lane are provided on the northbound and southbound approaches. A dedicated right-turn lane and shared through/ left lane is provided on the Cottage Street approach. Coakley Road provides one general purpose lane. The northbound and southbound left-turns operate under a protected phase. A marked crosswalk with exclusive pedestrian phase is provided on the north leg of the intersection. Traffic signal equipment at the intersection was recently upgraded as part of the West End Yards off-site mitigation.

2.2.2 US Route 1 Bypass at Borthwick Avenue/ Hodgdon Way

Borthwick Avenue and Hodgdon Way intersect U.S. Route 1 Bypass from the west and east, respectively, to form a 4-way, signalized intersection. The northbound approach provides two through lanes and dedicated left and right-turn lanes. The southbound approach provides two through lanes and a dedicated left turn lane. The eastbound approach provides dedicated left and right-turn lanes and a shared left/ through lane. The westbound approach provides dedicated left and right-turn lanes and a shared through/ right lane. The northbound and southbound left-turns operate under a protected phase. A crosswalk is provided on the north leg of the intersection with an exclusive pedestrian phase provided.

2.2.3 Port Inn Driveways at Coakley Road

Three separate full-access driveways to the Port Inn are provided on Coakley Road. The westernmost driveway is located 350 feet west of U.S Route 1 Bypass, the middle driveway is located 200 feet west of U.S. Route 1 Bypass, and the eastern driveway is located 25 feet west of U.S. Route 1 Bypass. Each driveway allows two-way traffic and is under assumed stop control with no stop sign present.

2.2.6 Port Inn Driveway at U.S. Route 1 Bypass

The Port Inn eastern driveway intersects U.S. Route 1 Bypass from the west to form a 3-way, unsignalized intersection. The driveway entrance and exit lanes are separated by a raised median island. The entrance is full access while the exit is right-only. A stop sign is provided at the driveway exit.

2.3 Traffic Volumes

Turning movement counts (TMC) were collected at the study area intersections on September 13, 2023 during the weekday morning (7:00 AM to 9:00 AM) and weekday

afternoon (3:00 PM to 6:00 PM) peak periods and on September 16, 2023 during the Saturday midday peak period (11:00 AM to 1:00 PM). Automatic Traffic Recorder (ATR) counts were collected on Route 1 Bypass, north of Coakley Road during a five-day period from Tuesday (September 12, 2023) through Saturday (September 16, 2023) concurrently with the TMC to record hourly traffic volumes and vehicular speeds.

Based on current NHDOT guidance, 2023 traffic volumes were compared to 2019 traffic volumes to determine if adjustments should be made to the collected traffic volumes. NHDOT continuous count station No. 02125090, located on Spaulding Turnpike (NH Route 16) one half mile north of the U.S. Route 4 interchange, was used for comparison purposes. The average traffic volumes from Tuesday to Thursday during the same week in Semtember 2019 and September 2023 were used as a basis for the comparison. The review shows September 2023 traffic volumes on Route 16 during the week the TMC were collected were 14.7% lower during the weekday morning peak hour, 7.3% lower during the weekday afternoon peak hour, and 15.3% lower during the Saturday midday peak hour when compared to September 2019 traffic volumes. Total weekday volumes were 3.5% lower while Saturday volumes were 18.7% lower in 2023 compared to 2019 traffic volumes. Therefore, the September 2023 weekday morning, weekday afternoon, and Saturday midday peak hour TMC and September 2023 daily traffic volumes were adjusted upward by 14.7%, 7.3%, and 15.3%, respectively. The weekday and Saturday total daily volumes were adjusted upward by 3.5% and 18.7%, respectively.

The adjusted ATR data indicates weekday average daily traffic (ADT) on U.S. Route 1 Bypass of approximately 15,130 vehicles per day in the northbound direction and 11,310 vehicles per day in the southbound direction.

The weekday morning, weekday afternoon, and Saturday midday turning movement counts were each seasonally adjusted to the peak and adjusted as applicable based on the historical volume comparison per NHDOT guidelines. The adjusted 2023 existing traffic volumes for the weekday morning, weekday afternoon, and Saturday midday peak hours are shown in Figure 2. The raw TMC data and ATR data are provided in Appendix A. The NHDOT traffic volumes on Route 16, seasonal adjustment factors, and historical growth rates are enclosed in Appendix B. The Traffic Volume Adjustment Factor calculation is provided in Appendix C.

2.4 Capacity and Queue Analyses - Existing Condition

Capacity and queue analyses were performed for the study intersections for the 2023 Existing Conditions during the weekday morning, weekday afternoon, and Saturday midday peak hours. Analyses were conducted using Trafficware Synchro Studio 11 software, which conducts the analysis based on *Highway Capacity Manual (HCM)* methodology. Consistent with NHDOT guidelines, analyses for signalized intersections were conducted using methods of the 2000 HCM, while analysis for unsignalized intersections utilized the HCM 6th Edition methodology. The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. A summary of the HCM capacity analysis methodology and a detailed definition of LOS is provided in Appendix D. The queue analysis results are summarized based upon the length of vehicle queueing on an intersection approach. For unsignalized intersections, queues are quantified for 95th percentile (design queues). For signalized intersections, queues are quantified by 95th percentile (design) and 50th percentile (average) queues. Tables 1 and 2 in Section 7 summarize the capacity and queue analyses results,

respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix E.

As shown in Table 1, the majority of the overall intersections and individual intersection approaches operate acceptably at LOS D or better during the peak hours with the exception of the following:

- **U.S. Route 1 Bypass at Cottage Street/ Coakley Road:**
    - The westbound shared through/ left and southbound left movements operate at LOS E during all peak periods.
    - The northbound left movement operates at LOS E during the weekday morning peak hour.
- **U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:**
    - The intersection operates at overall LOS E during the weekday morning and Saturday midday peak hours and overall LOS F during the weekday afternoon peak hour with several individual movements experiencing failing operations during the same time periods.

A review of the queuing results in Table 2 shows that the majority of the design queues are accommodated within available storage between intersections. The following queues extend past available storage:

- **U.S. Route 1 Bypass at Cottage Street/ Coakley Road:**
    - Design queues on the shared northbound through/ right movement are shown to exceed available storage by approximately four vehicle lengths and spill back beyond the Hodgdon Way intersection to the south during the weekday afternoon and Saturday midday time periods.
- **U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:**
    - Southbound design queues are shown to spill back to the Coakley Road intersection to the north during all peak periods.
    - Design queues on the eastbound left movement are shown to exceed available storage by six vehicle lengths during the weekday afternoon peak period, causing spillback and blockage of the eastbound through lane.

2.5 Collision History

Vehicle collision history from 2020 through 2023 was obtained from the Portsmouth Police Department at the study area intersections. Table 3 provides a summary of the reported collisions at the study intersections as well as the types and severity of the collisions. Appendix F includes detailed collision summaries for each of the intersections. There were no reported collisions in 2020.

There were ten reported motor vehicle collisions at the study area intersections within the period analyzed. The most frequent type of collision was angle (50% of the collisions); the second most frequent type was rear-end (30% of the collisions, or three collisions); the remaining collision types were single vehicle crashes and sideswipe, same direction (one each).

Throughout the period analyzed, there were no reported fatalities, with three of ten of the collisions reporting injuries. The remaining seven the collisions reported property damage only.

As shown in Table 3, the U.S. Route 1 Bypass at Cottage Street and Coakley Road intersection experienced seven of the 10 total reported collisions, while the U.S. Route 1 Bypass at Borthwick Avenue and Hodgdon Way intersection experienced the remaining three collisions. No collisions were reported at the existing site driveways.

TABLE 3

Study Area Crash History Summary

COLLISION TYPE						
	2020	**2021**	**2022**	**2023**	**Total**	**Percent**
Angle	0	1	2	2	**5**	**50.0%**
Rear-End	0	1	1	1	**3**	**30.0%**
Single Vehicle Crash	0	1	0	0	**1**	**10.0%**
Sideswipe, Same Direction	0	1	0	0	**1**	**10.0%**
TOTAL	**0**	**4**	**3**	**3**	**10**	**100%**
CONTRIBUTING FACTOR						
	2020	**2021**	**2022**	**2023**	**Total**	**Percent**
Unknown	0	4	3	3	**10**	**100.0%**
TOTAL	**0**	**4**	**3**	**3**	**10**	**100%**
SEVERITY						
	2020	**2021**	**2022**	**2023**	**Total**	**Percent**
Personal Injury	0	0	2	3	**3**	**30.0%**
Property Damage Only (PDO)	0	4	1	2	**7**	**70.0%**
TOTAL	**0**	**4**	**3**	**3**	**10**	**100%**
DAY & TIME						
	2020	**2021**	**2022**	**2023**	**Total**	**Percent**
Weekday 6-9 A.M.	0	1	0	0	**1**	**10.0%**
Weekday 3-6 P.M.	0	2	1	0	**3**	**30.0%**
Weekday Off-Peak	0	0	1	2	**3**	**30.0%**
Saturday 11 A.M. - 2 P.M.	0	0	1	1	**2**	**20.0%**
Weekend Off-Peak	0	1	0	0	**1**	**10.0%**
TOTAL	**0**	**4**	**3**	**3**	**10**	**100%**
CRASHES BY STUDY AREA INTERSECTION						
	2020	**2021**	**2022**	**2023**	**Total**	**Percent**
U.S. Route 1 Bypass at Cottage Street/Coakley Road	0	4	0	3	**7**	**70.0%**
U.S. Route 1 Bypass at Borthwick Avenue/Hodgdon Way	0	0	3	0	**3**	**30.0%**
TOTAL	**0**	**4**	**3**	**3**	**10**	**100%**

2.6 Alternative Travel Modes

The study area is in an urban setting in the City of Portsmouth where sporadic multimodal travel options are readily available. The following summarizes the details of alternative travel modes supported within the study area.

The Cooperative Alliance for Seacoast Transportation (COAST) provides transit service within the study area. Bus Route 40 is the primary bus route in the study area. Existing stops are located along Cottage Street east of U.S. Route 1 Bypass and on Borthwick Avenue west of U.S. Route 1 Bypass. The route operates from 6:00 AM to 8:49 PM Monday through Saturday. The Route 40 map and schedule are included in Appendix H.

Existing sidewalks are provided on the north side of Coakley Road and Cottage Street in the vicinity of the site. A 10-foot wide shared use path is provided in the vicinity of the West End Yards development along Hodgdon Way to the southeast of the site.

Section 3
No-Build Conditions

The No-Build Condition represents the projection of traffic volumes and operating conditions without the anticipated additional site generated traffic. Consistent with NHDOT guidelines, the study area is analyzed for an Opening Year (2025) and Design Year (2035). This section describes the growth and development considerations included in the 2025 and 2035 No-Build traffic volumes.

3.1 Background Traffic Volumes

To develop the traffic volumes for the 2025 and 2035 No-Build Conditions, the 2023 Existing traffic volumes were grown by one percent per year to represent the general growth of traffic on the study area roadways. This growth rate is consistent with the average growth rate in NHDOT Region E - Southeast, the region in which Portsmouth is located. Background NHDOT growth data is included in Appendix B.

NHDOT and the City of Portsmouth were contacted about other planned/approved developments in the area that may add new traffic to the study area prior to 2025. The following developments were identified:

- **428 US Route 1 Bypass – West End Yards Mixed-use Development:** The project includes 273 residential units, 22,000 SF of retail/ restaurant space, and 22,000 SF of office space. The project is constructed and occupied except for Parcel D of the project which includes a proposed commercial space. A review of the previous traffic analyses indicates a portion of traffic from the remaining development is anticipated to be added to the study area. The traffic volumes are included in the background traffic volume growth and have been added to the 2025 and 2035 No-Build traffic volumes for the weekday afternoon and Saturday midday time periods. The development traffic volumes are included in Appendix I.

- **105 Bartlett Street – North Mill Pond Residential Development:** The project proposes to construct 152 residential units. The project has been approved and construction is anticipated to begin in Spring 2024. Based on a review of the previous analyses, it was determined that the estimated project trips will not add measurable traffic to the study intersections based on anticipated travel patterns, and therefore was not added to the No-Build traffic volumes.

It is assumed that other smaller developments or small vacancies in existing developments are also captured by the background traffic growth rate. The 2025 and 2035 No-Build traffic volumes for the weekday morning, weekday afternoon, and Saturday midday peak hours are shown in Figures 3 and 4.

3.2 Planned Roadway Improvements

NHDOT has indicated there are future plans to remove the existing traffic signal located at the intersection of U.S. Route 1 Bypass and Coakley Road/ Cottage Street. The project will remove the traffic signal, extend the center raised median through the intersection, and add a new access roadway between Coakley Road and Borthwick

Avenue. Based on discussions with NHDOT, the project is currently in the planning phase, and it is estimated the project will not be constructed prior to the 2025 opening year. As such, the improvements have been included in the 2035 No-Build and 2035 Build conditions. Turning movements that will be impacted by the planned improvements were redistributed as appropriate and included in the 2035 No-Build condition traffic volumes. The redistributed 2035 No-Build traffic volumes are included in Appendix J.

3.3 Capacity and Queue Analyses – No-Build Conditions

Capacity and queue analyses were conducted for the 2025 and 2035 No-Build Conditions traffic volumes for each peak period using the methodology described in Section 2.4. Tables 1 and 2 in Section 7 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix E.

The increase in expected future traffic based on the one percent per year compounded growth rate and background development traffic volumes that were added to the existing 2023 traffic volumes result in no degradation in LOS of operations when compared to existing conditions for the 2025 No-Build Condition, except for the intersection of U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way westbound through movement which experiences a degradation in LOS from E to F in the weekday morning peak period.

As mentioned in Section 3.2, the 2035 No-Build condition scenario includes the removal of the traffic signal at the U.S. Route 1 Bypass at Coakley Road/ Cottage Street intersection. Based on the new intersection geometry, the 2035 No-Build Traffic volumes were redistributed to the roadway network. The redistribution of the 2035 No-Build traffic volumes adds significant burden to the U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way intersection, exacerbating failing operations experienced in 2023. The following intersection movements are predicted to experience a degradation in LOS in 2035:

- **U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:**
    - The overall intersection LOS degrades from LOS E to LOS F during the weekday morning and Saturday midday peak periods. The intersection continues to operate at LOS F with significant increases in overall delay during the weekday afternoon peak hour.
    - The westbound left, westbound through, and southbound left movements degrade from LOS E to LOS F and the southbound shared through/ right movement degrades from LOS D to LOS F during the weekday morning peak period.
    - The westbound through and northbound left movements degrade from LOS E to LOS F during the weekday afternoon peak period.
    - The southbound left movement degrades from LOS D to LOS F and the northbound through movement degrades from LOS D to LOS E during the Saturday midday peak period.

Design queues increased by two vehicle lengths or less at all intersection approaches between the existing and 2025 No-Build conditions. Design queues exceeding available storage that were not predicted in 2023 are now predicted at the following movements in 2035 as a result of the redistributed traffic volumes:

U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:

- An increase in design queue of approximately 14 vehicle lengths is predicted on the westbound left movement in the weekday morning and afternoon peak periods.
- The southbound left movement experiences a predicted increase in design queue of approximately six vehicle lengths during the weekday afternoon peak hour.
- An increase in design queue of approximately five vehicle lengths is predicted on the eastbound left movement during the weekday afternoon peak hour.

Section 4
Proposed Conditions

The proposed development includes the demolition of the existing Port Inn hotel and construction of a 115-room hotel and coffee stop with drive-through. The project will provide 106 parking spaces including several electric vehicle charging and accessible spaces. Site access will be provided via the existing western and easternmost site driveways on Coakley Road. The western site driveway will be full access, while the eastern site driveway will be exit-only. The existing site driveway opposite the Portsmouth Chevrolet driveway on Coakley Road and the site driveway on U.S. Route 1 Bypass will be removed as part of the project. The project is expected to be completed in 2025.

4.1 Site Access

Access to the site will be provided via two driveways on Coakley Road: one full access driveway located approximately 400 feet west of U.S. Route 1 Bypass and a second exit-only driveway located 100 feet west of U.S. Route 1 Bypass. The western proposed site driveway will be located approximately 50 feet west of the existing western site driveway, while the eastern proposed site driveway will be located approximately 70 feet west of the existing eastern site driveway on Coakley Road. The exit-only driveway on U.S. Route 1 Bypass will be removed as part of the project.

Intersection sight distance was reviewed at the proposed site driveways in accordance with criteria set forth in the AASHTO publication *A Policy on the Geometric Design of Highways and Streets*, 7th Edition, 2018. Available site distances were estimated based on the site layout plan and available aerial mapping. An assumed operating speed of 30 miles per hour on Coakley Road was used as a basis for the analysis.

Based on AASHTO guidelines and the assumed operating speed of the roadway, the desirable intersection sight distance (ISD) is 335 feet for passenger cars under *Case B1 – Left Turn from Stop*. The required stopping sight distance (SSD) based on the 30 mph operating speed is 200 feet. The proposed western site driveway on Coakley Road provides sight distance in excess of the required SSD and desirable ISD. Available sight distance looking right at the eastern site driveway on Coakley Road is limited by the intersection with U.S. Route 1 Bypass. It is important to note that vehicles turning onto Coakley Road from U.S. Route 1 Bypass may travel at lower speeds, requiring less sight distance. As mentioned previously, sight distance has been maximized to the greatest extent practical by locating the proposed site driveway approximately 70 feet west of the existing driveway.

4.2 Trip Generation

Site generated traffic volumes for the proposed development were estimated using rates published in the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition, 2021. Land use code (LUC) 310 – Hotel and LUC 937 – Coffee/ Donut Shop with Drive-Through were used to estimate traffic for the proposed development.

As mentioned, the existing hotel will be replaced by the proposed hotel and coffee shop. Therefore, the existing site-generated trips, which were collected by intersection turning movement counts at each of the four existing site driveways, were subtracted from the

proposed site generated trips to obtain the new trips that will be generated by the proposed development.

Based on the location of the site in relation to a major roadway and the nature of the coffee shop component of the proposed development, it is reasonable to assume the site may generate pass-by trips. Pass-by trips were estimated to account for the proportion of vehicles already on the adjacent roadway who will access the coffee shop use on site. Pass-by trips are not new trips added to the roadway network; rather these trips will divert from their route, access the site, and re-enter the network to continue on their route. Because ITE does not provide a pass-by rate for LUC 937, pass-by rates for similar LUCs were reviewed to determine an appropriate pass-by rate. The average pass-by rate for LUC 934 (Fast-Food Restaurant with Drive-Thru) is 50% during the weekday morning peak hour, and 55% during the weekday afternoon peak hour. The average pass-by rate LUC 938 (Coffee/ Donut Shope with Drive-through and No Indoor Seating) was 90% for the weekday morning peak hour and 98% for the weekday afternoon peak hour. No pass-by data is available for the Saturday midday peak hour. Based on the review of pass-by rates for similar land use codes, it was determined a pass-by rate of 75% would be applied to the estimated coffee shop trips.

It is important to note that hotel guests may also use the coffee shop during their stay. However, no internal capture credit was applied to the trip generation estimate, representing a conservative trip generation estimate.

The net total of new site-generated traffic is summarized in Table 4. After applying the existing hotel and pass-by trip credits, it is anticipated that the proposed development may generate a total of 78 new trips (48 entering, 30 exiting) during the weekday morning peak hour, 66 new trips (34 entering, 32 exiting) during the weekday afternoon peak hour, and 126 new trips (67 entering, 59 exiting) during the Saturday midday peak hour, respectively.

4.3 Arrival and Departure Distribution

The distribution of the proposed site-generated traffic entering and exiting the Site was reviewed based on existing travel patterns and anticipated travel patterns to and from the site for each use. The following arrival/departure distributions are anticipated for the hotel use:

- 40% to/ from the South via I-95
- 25% to/ from the South via US Route 1 Bypass
- 15% to/ from the North via I-95
- 10% to/ from the North via US Route 1 Bypass
- 10% to/ from the North via Route 4

The following arrival/departure distributions are anticipated for the coffee shop use:

- 65% to/ from the South via US Route 1 Bypass
- 20% to/ from the North via US Route 1 Bypass
- 5% to/ from the South via I-95
- 5% to/ from the North via I-95

- 5% to/ from the North via Route 4

Figures 5 through 8 presents the arrival and departure distributions of the traffic for the hotel and coffee uses through the study area by intersection movement for both 2025 and 2035. While arrival and departure sources and distribution are the same in 2025 and 2035 as described above, variances exist in entering and exiting distribution at the site due to proposed improvements to the intersection of U.S. Route 1 Bypass and Coakley Road/ Cottage Street. The redistribution of the proposed pass-by trips is included in Appendix K. Figures 9 through 12 show the proposed site generated traffic distributed to the study area roadways for the hotel and coffee shop uses for 2025 and 2035.

Section 5
Build Conditions

The anticipated site generated traffic volumes associated with the proposed development were added to the 2025 and 2035 No-Build Conditions traffic volumes to develop the 2025 and 2035 Build Conditions traffic volumes, which are presented in Figures 13 and 14, respectively.

5.1 Capacity and Queue Analyses - Build Conditions

Capacity and queue analyses were conducted for the 2025 and 2035 Build Conditions for the peak hours using the methodology described in Section 2.4. Tables 1 and 2 in Section 7 summarize the capacity and queue results, respectively. Capacity analysis worksheets with full inputs, settings, and results are provided in Appendix E.

A majority of the study area intersections and individual intersection approaches continue to operate at acceptable LOS D or better during the peak hours in the 2025 and 2035 Build Conditions. Study area intersections that were identified in Section 2.4 and 3.3 to operate at LOS E or LOS F in the No-Build Conditions continue to operate at the same LOS under Build Conditions. Degradation in LOS is experienced in 2025 Build Condition at:

- **U.S. Route 1 Bypass at Cottage Street/ Coakley Road:**
    - The eastbound approach is predicted to degrade from LOS D to LOS F during all peak periods in 2025.
    - The northbound left movement is predicted to degrade from LOS D to LOS E in 2025 during the weekday afternoon peak hour.
- **U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:**
    - The southbound shared through/ right movement degrades from LOS D to LOS E in 2025 during the weekday morning peak period and from LOS D to LOS E in 2035 during the Saturday midday peak period.
    - The northbound left movement is predicted to degrade from LOS E to LOS F in 2035 during the weekday morning and Saturday midday peak periods.
    - The westbound left movement is predicted to degrade from LOS E to LOS F in 2035 during the Saturday midday peak period.

Design queues on all intersection approaches increased by less than approximately two vehicle lengths (50 feet) or experience increases in design queues that are accommodated within available storage, with the exception of the following:

- **U.S. Route 1 Bypass at Cottage Street/ Coakley Road:**
    - The shared northbound through/ right movement predicts an increase in design queue of approximately 12 car lengths during the weekday morning peak period, 10 car lengths during the weekday afternoon peak period, and 5 car lengths during the Saturday midday peak period in 2025.

- **U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way:**
    - The eastbound left movement predicts an increase in design queue of approximately four vehicles in 2035 during the weekday morning peak period.
    - The northbound left movement predicts an increase in design queue of approximately seven vehicles in 2035 during the weekday morning peak period.
- **Coakley Road at Northern Site Driveway (West):**
    - The northbound movement predicts an increase in design queue of approximately four vehicles in 2035 during the Saturday midday peak period.

Section 6
Conclusions & Recommendations

1. The project proposes to demolish the existing Port Inn hotel and construct a 115-room hotel with a separate coffee shop with drive-through window. The project includes approximately 106 parking spaces on site. The development is expected to be complete and occupied in 2025.

2. Access to the site will be provided via one full access driveway located approximately 50 feet west of the existing western site driveway and one exit-only driveway located approximately 70 feet west of the existing eastern site driveway on Coakley Road. The existing middle site driveway on Coakley Road and the existing driveway on U.S. Route 1 Bypass will be removed as part of the project.

3. Based on the ITE data, the project is expected to generate 78 new trips during the weekday morning peak hour (48 entering, 30 exiting), 66 new trips during the weekday afternoon peak hour (34 entering, 32 exiting), and 126 new trips during the Saturday midday peak hour (67 entering, 59 exiting). The trip generation estimate includes a credit for the existing hotel trips that will be replaced by the proposed development and a pass-by credit for the coffee shop trips. No credit for internal capture trips was taken.

4. Consistent with NHDOT guidelines, existing traffic volumes have been seasonally adjusted to the peak month condition and adjusted as necessary based on a comparison between 2023 and 2019 continuous count station data to represent a pre-pandemic condition.

5. Limited pedestrian facilities are provided in the study area. Transit service within the study area is provided via COAST Route 40 along Cottage Street and Borthwick Avenue.

6. Vehicle collision history, compiled from local police reports, do not indicate a significant or notable pattern of collisions in the study area.

7. The capacity analyses show that the study area intersections will generally continue to operate at the same or acceptable LOS under Build Conditions as compared to the No-Build Conditions for both the 2025 opening year and 2035 design year with minimal increases in delay or queues, with the following exceptions:

    a. The eastbound approach at the intersection of U.S. Route 1 Bypass at Coakley Road/ Cottage Street experiences a predicted degradation in LOS from D to F during all three time periods in 2025.

    b. The northbound left movement at the intersection of U.S. Route 1 Bypass at Coakley Road/ Cottage Street is predicted to degrade from LOS D to LOS E in 2025 during the weekday afternoon peak hour.

    c. The northbound left movement at the intersection of U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way is predicted to degrade from LOS E to LOS F in 2035 during the weekday morning and Saturday midday peak periods. The westbound left movement is projected to degrade from LOS E to LOS F during the Saturday midday period in 2035.

8. Based on the predicted degradation of LOS on the eastbound approach at the intersection of U.S. Route 1 Bypass at Coakley Road/ Cottage Street in 2025, it is recommended that NHDOT consider potential retiming of the intersection to accommodate changes in traffic patterns resulting from the site redevelopment and other potential area development.

9. The operational deficiencies predicted at the U.S. Route 1 Bypass at Borthwick Avenue/ Hodgdon Way intersection in 2025 are exacerbated by the traffic volumes added to the intersection due to the planned removal of the traffic signal at U.S. Route 1 at Cottage Street/ Coakley Road intersection in 2035. It is recommended that NHDOT continue to monitor traffic volumes and consider traffic signal modifications as necessary to accommodate the added traffic to the intersection as a result of the planned project.

10. Based on the results of the foregoing analysis, it is the professional opinion of Tighe & Bond that the addition of site-generated traffic is expected to have a negligible impact on traffic operations within the study area following minor timing revisions by NHDOT. Predicted future vehicle delays at the study intersections are primarily due to ongoing development in the area and planned roadway improvements.

Section 7
Tables

TABLE 1
Intersection Operation Summary - Capacity

	Lane Use	Weekday Morning Peak Hour														
		2023 Existing			2025 No-Build			2025 Build			2035 No-Build			2035 Build		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Overall		**B**	**19.9**	**0.77**	**C**	**20.3**	**0.76**	**D**	**40.1**	**0.94**	**--**	**--**	**--**	**--**	**--**	**--**
Coakley Road	EB	D	52.0	0.51	D	52.4	0.52	F	88.0	0.94	--	--	--	--	--	--
Cottage Street	WBLT	E	67.9	0.77	E	67.4	0.76	D	48.3	0.61	--	--	--	--	--	--
	WBR	D	45.7	0.02	D	45.5	0.02	D	38.1	0.02	--	--	--	--	--	--
U.S. Route 1 Bypass	NBL	E	63.3	0.36	E	63.4	0.37	E	62.3	0.62	--	--	--	--	--	--
	NBTR	A	9.8	0.60	B	10.2	0.61	C	24.5	0.66	--	--	--	--	--	--
	SBL	E	62.2	0.46	E	62.4	0.47	E	64.1	0.51	--	--	--	--	--	--
	SBTR	B	18.3	0.67	B	19.0	0.69	D	40.8	0.91	--	--	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way																
Overall		**E**	**63.3**	**2.03**	**E**	**66.8**	**2.08**	**E**	**73.2**	**2.08**	**F**	**140.0**	**2.95**	**F**	**184.2**	**3.53**
Borthwick Avenue	EBL	F	279.7	1.30	F	286.7	1.32	F	286.7	1.32	F	**	1.98	F	**	2.66
	EBT	F	**	2.03	F	**	2.08	F	**	2.08	F	**	2.95	F	**	3.53
	EBR	D	39.8	0.02	D	39.8	0.02	D	39.8	0.02	D	37.9	0.02	D	37.5	0.02
Hodgdon Way	WBL	E	72.2	0.70	E	73.6	0.72	E	73.6	0.72	F	**	1.94	F	**	2.00
	WBT	E	78.8	0.79	F	80.9	0.80	F	80.9	0.80	F	96.1	0.89	F	96.1	0.89
	WBR	E	65.0	0.00	E	65.0	0.00	E	65.0	0.00	E	65.0	0.00	E	65.0	0.00
U.S. Route 1 Bypass	NBL	E	72.2	0.67	E	73.1	0.68	E	73.1	0.68	E	77.1	0.76	F	205.6	1.23
	NBT	C	31.4	0.64	C	31.8	0.65	C	32.3	0.67	D	35.5	0.73	C	34.2	0.69
	NBR	B	14.8	0.05	B	14.8	0.05	B	14.8	0.05	B	15.4	0.05	B	15.4	0.05
	SBL	E	76.4	0.65	E	77.5	0.66	E	68.1	0.66	F	129.5	1.00	F	129.5	1.00
	SBTR	D	46.3	0.99	D	51.8	1.01	E	66.5	1.03	F	85.0	1.08	F	95.2	1.10
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway																
Site Driveway	EB	C	16.1	0.01	C	16.4	0.01	--	--	--	C	17.0	0.01	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)																
Site Driveway (East)	NB	A	8.9	0.03	A	8.9	0.03	A	9.9	0.25	A	8.5	0.02	A	8.8	0.11
Coakley Road	WB	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)																
Site Driveway (Middle)	NB	A	8.7	0.01	A	8.7	0.01	--	--	--	A	8.4	0.01	--	--	--
Coakley Road	WB	A	7.4	0.01	A	7.4	0.01	--	--	--	A	7.3	0.01	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)																
Site Driveway (West)	NB	A	8.6	0.01	A	8.6	0.01	A	8.6	0.02	A	8.6	0.01	B	14.9	0.43
Coakley Road	WB	A	7.3	0.00	A	7.3	0.00	A	7.7	0.14	A	7.3	0.00	A	7.7	0.07
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Coakley Road	EB	--	--	--	--	--	--	--	--	--	C	18.8	0.13	C	24.1	0.36
Cottage Street	WB	--	--	--	--	--	--	--	--	--	C	15.7	0.11	C	15.8	0.00

**Delay exceeds 300 seconds

Legend

LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 1 (CONTINUED)
Intersection Operation Summary - Capacity

	Lane Use	Weekday Afternoon Peak Hour														
		2023 Existing			2025 No-Build			2025 Build			2035 No-Build			2035 Build		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Overall		**C**	**24.8**	**0.82**	**C**	**25.6**	**0.85**	**C**	**32.1**	**0.91**	**--**	**--**	**--**	**--**	**--**	**--**
Coakley Road	EB	D	46.9	0.52	D	46.7	0.53	F	85.2	0.91	--	--	--	--	--	--
Cottage Street	WBLT	E	60.0	0.76	E	59.8	0.77	E	58.6	0.77	--	--	--	--	--	--
	WBR	D	40.1	0.03	D	39.8	0.03	D	38.2	0.03	--	--	--	--	--	--
U.S. Route 1 Bypass	NBL	D	52.5	0.43	D	52.4	0.43	E	60.1	0.55	--	--	--	--	--	--
	NBTR	C	23.8	0.82	C	25.2	0.85	C	28.7	0.86	--	--	--	--	--	--
	SBL	E	59.8	0.46	E	59.7	0.46	E	59.7	0.46	--	--	--	--	--	--
	SBTR	B	14.9	0.47	B	15.5	0.49	B	19.8	0.55	--	--	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way																
Overall		**F**	**289.0**	**5.24**	**F**	**299.9**	**5.33**	**F**	**298.3**	**5.33**	**F**	******	**6.52**	**F**	******	**6.87**
Borthwick Avenue	EBL	F	**	3.78	F	**	3.86	F	**	3.86	F	**	4.92	F	**	5.32
	EBT	F	**	5.24	F	**	5.33	F	**	5.33	F	**	6.52	F	**	6.87
	EBR	C	30.1	0.06	C	30.1	0.06	C	30.1	0.06	C	30.2	0.06	C	30.2	0.06
Hodgdon Way	WBL	F	276.9	1.32	F	282.9	1.33	F	282.9	1.33	F	**	4.21	F	**	4.21
	WBT	E	62.3	0.53	E	66.2	0.58	E	66.2	0.58	F	147.9	0.98	F	147.9	0.98
	WBR	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00
U.S. Route 1 Bypass	NBL	E	64.1	0.50	E	65.2	0.52	E	63.6	0.48	F	180.5	1.00	F	**	1.78
	NBT	D	39.4	0.84	D	40.4	0.85	D	41.1	0.86	D	47.0	0.93	D	45.0	0.91
	NBR	B	19.6	0.07	B	19.6	0.08	B	19.6	0.08	B	19.7	0.09	B	19.7	0.09
	SBL	F	**	1.71	F	**	2.05	F	**	2.05	F	**	2.92	F	**	2.92
	SBTR	C	35.0	0.72	C	35.0	0.73	D	35.2	0.74	C	33.7	0.69	C	34.0	0.70
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway																
Site Driveway	EB	B	12.5	0.02	B	12.8	0.02	--	--	--	B	12.8	0.02	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)																
Site Driveway (East)	NB	A	9.1	0.00	A	9.1	0.00	A	9.4	0.15	A	8.6	0.00	A	8.6	0.07
Coakley Road	WB	A	7.4	0.00	A	7.4	0.00	A	7.4	0.00	A	7.3	0.01	A	7.2	0.00
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)																
Site Driveway (Middle)	NB	A	8.8	0.01	A	8.8	0.01	--	--	--	A	8.4	0.01	--	--	--
Coakley Road	WB	A	7.4	0.01	A	7.4	0.01	--	--	--	A	7.3	0.01	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)																
Site Driveway (West)	NB	A	8.5	0.00	A	8.5	0.00	A	8.5	0.01	A	8.4	0.00	B	10.5	0.12
Coakley Road	WB	A	7.3	0.00	A	7.3	0.00	A	7.5	0.08	A	7.3	0.00	A	7.5	0.04
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Coakley Road	EB	--	--	--	--	--	--	--	--	--	B	13.4	0.05	B	14.4	0.14
Cottage Street	WB	--	--	--	--	--	--	--	--	--	C	23.0	0.21	C	23.4	0.22

**Delay exceeds 300 seconds

Legend

LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 1 (CONTINUED)
Intersection Operation Summary - Capacity

	Lane Use	Saturday Midday Peak Hour														
		2023 Existing			2025 No-Build			2025 Build			2035 No-Build			2035 Build		
		LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Overall		**B**	**17.9**	**0.62**	**B**	**18.9**	**0.64**	**C**	**32.7**	**1.01**	**--**	**--**	**--**	**--**	**--**	**--**
Coakley Road	EB	D	49.3	0.32	D	49.2	0.33	F	105.3	1.01	--	--	--	--	--	--
Cottage Street	WBLT	E	56.8	0.62	E	57.1	0.63	D	43.9	0.47	--	--	--	--	--	--
	WBR	D	46.3	0.02	D	46.2	0.02	D	38.6	0.02	--	--	--	--	--	--
U.S. Route 1 Bypass	NBL	D	49.1	0.33	D	47.7	0.33	D	52.7	0.52	--	--	--	--	--	--
	NBTR	B	16.9	0.62	B	18.8	0.64	C	20.9	0.69	--	--	--	--	--	--
	SBL	E	59.7	0.41	E	60.0	0.43	E	62.2	0.48	--	--	--	--	--	--
	SBTR	B	11.2	0.47	B	11.6	0.49	C	25.4	0.67	--	--	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way																
Overall		**E**	**57.3**	**2.02**	**E**	**59.7**	**2.08**	**E**	**60.5**	**2.08**	**F**	**100.4**	**2.69**	**F**	**155.0**	**3.46**
Borthwick Avenue	EBL	F	269.2	1.31	F	281.9	1.34	F	281.9	1.34	F	**	1.80	F	**	2.71
	EBT	F	**	2.02	F	**	2.08	F	**	2.08	F	**	2.69	F	**	3.46
	EBR	D	38.0	0.01	D	38.0	0.01	D	38.0	0.01	D	36.9	0.01	C	34.6	0.01
Hodgdon Way	WBL	E	55.5	0.45	E	55.3	0.45	E	55.3	0.45	E	76.0	0.84	F	80.3	0.86
	WBT	D	53.4	0.32	D	53.4	0.34	D	53.4	0.34	D	47.0	0.40	D	46.5	0.39
	WBR	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00	E	60.0	0.00
U.S. Route 1 Bypass	NBL	E	58.8	0.32	E	58.8	0.32	E	58.8	0.32	E	59.2	0.47	F	129.2	0.98
	NBT	D	35.9	0.78	D	39.3	0.82	D	40.5	0.85	E	68.5	1.01	E	57.6	0.96
	NBR	B	16.7	0.04	B	17.6	0.04	B	17.6	0.04	B	16.0	0.04	B	15.7	0.04
	SBL	D	52.9	0.52	D	52.6	0.55	D	54.2	0.55	F	141.2	1.04	F	159.4	1.09
	SBTR	C	27.2	0.67	C	27.5	0.69	C	29.4	0.71	D	42.2	0.85	E	55.4	0.95
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway																
Site Driveway	EB	B	12.9	0.01	B	13.2	0.01	--	--	--	B	13.6	0.01	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)																
Site Driveway (East)	NB	A	9.0	0.00	A	9.1	0.00	B	12.8	0.54	A	8.7	0.00	A	9.2	0.20
Coakley Road	WB	A	7.3	0.00	A	7.3	0.00	A	0.0	0.00	A	7.2	0.00	A	0.0	0.00
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)																
Site Driveway (Middle)	NB	A	0.0	0.00	A	0.0	0.00	--	--	--	A	0.0	0.00	--	--	--
Coakley Road	WB	A	7.3	0.00	A	7.3	0.00	--	--	--	A	7.2	0.00	--	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)																
Site Driveway (West)	NB	A	8.5	0.00	A	8.5	0.00	A	8.6	0.03	A	8.4	0.00	C	21.8	0.63
Coakley Road	WB	A	7.3	0.00	A	7.3	0.00	A	7.7	0.17	A	7.3	0.00	A	7.8	0.09
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road																
Coakley Road	EB	--	--	--	--	--	--	--	--	--	B	13.8	0.03	C	16.6	0.24
Cottage Street	WB	--	--	--	--	--	--	--	--	--	C	17.3	0.10	C	17.7	0.10

**Delay exceeds 300 seconds

Legend

LOS - Level of Service
Delay - average delay per vehicle in seconds
V/C - volume to capacity ratio

TABLE 2
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Weekday Morning Peak Hour									
			2023 Existing		2025 No-Build		2025 Build		2035 No-Build		2035 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	200	64	81	66	83	201	213	--	--	--	--
Cottage Street	WBLT	240	125	181	126	184	114	184	--	--	--	--
	WBR	100	0	0	0	0	0	0	--	--	--	--
Route 1 Bypass	NBL	300	18	29	20	30	83	204	--	--	--	--
	NBTR	300	138	193	142	203	353	514	--	--	--	--
	SBL	175	40	81	41	82	41	85	--	--	--	--
	SBTR	900	366	672	382	701	588	797	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way												
Borthwick Avenue	EBL	325	74	195	76	196	76	196	141	284	207	365
	EBT	>1000	101	222	105	226	105	226	172	314	237	396
	EBR	250	0	0	0	0	0	0	0	0	0	0
Hodgdon Way	WBL	350	76	154	77	158	77	158	337	512	341	516
	WBT	>1000	112	225	114	232	114	232	138	287	138	287
	WBR	230	0	0	0	0	0	0	0	27	0	27
Route 1 Bypass	NBL	250	66	119	66	121	66	121	96	187	205	362
	NBT	>1000	326	398	334	408	347	423	373	453	345	421
	NBR	430	0	3	0	4	0	4	0	6	0	6
	SBL	300	67	137	69	137	80	141	140	289	140	289
	SBTR	300	671	826	724	856	731	880	721	863	740	882
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway												
Site Driveway	EB	50	--	0	--	0	--	--	--	0	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)												
Site Driveway (East)	NB	75	--	3	--	3	--	25	--	3	--	10
Coakley Road	WB	25	--	0	--	0	--	0	--	0	--	0
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)												
Site Driveway (Middle)	NB	125	--	0	--	0	--	--	--	0	--	--
Coakley Road	WB	175	--	0	--	0	--	--	--	0	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)												
Site Driveway (West)	NB	75	--	0	--	0	--	3	--	0	--	53
Coakley Road	WB	50	--	0	--	0	--	13	--	0	--	5
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	100	--	--	--	--	--	--	--	10	--	40
Cottage Street	WB	100	--	--	--	--	--	--	--	10	--	10

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 2 (CONTINUED)
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Weekday Afternoon Peak Hour									
			2023 Existing		2025 No-Build		2025 Build		2035 No-Build		2035 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	200	63	89	64	90	137	168	--	--	--	--
Cottage Street	WBLT	240	134	170	137	172	135	175	--	--	--	--
	WBR	100	0	0	0	0	0	0	--	--	--	--
Route 1 Bypass	NBL	300	16	16	16	17	45	91	--	--	--	--
	NBTR	300	405	662	435	705	527	961	--	--	--	--
	SBL	175	28	62	29	64	29	64	--	--	--	--
	SBTR	900	139	381	148	404	252	423	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way												
Borthwick Avenue	EBL	325	324	486	288	496	288	496	394	618	436	667
	EBT	>1000	326	528	333	536	333	536	434	652	473	698
	EBR	250	0	20	0	21	0	21	0	28	0	28
Hodgdon Way	WBL	350	83	186	84	189	84	189	376	541	376	541
	WBT	>1000	31	125	34	135	34	135	63	197	63	197
	WBR	230	0	0	0	0	0	0	0	0	0	0
Route 1 Bypass	NBL	250	21	64	22	66	20	61	43	130	111	224
	NBT	>1000	407	497	420	511	427	521	476	577	462	561
	NBR	430	0	21	0	22	0	22	2	26	2	26
	SBL	300	116	231	149	271	147	271	229	373	229	373
	SBTR	300	366	451	376	462	339	417	307	382	314	389
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway												
Site Driveway	EB	50	--	3	--	3	--	--	--	3	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)												
Site Driveway (East)	NB	75	--	0	--	0	--	13	--	0	--	5
Coakley Road	WB	25	--	0	--	0	--	0	--	0	--	0
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)												
Site Driveway (Middle)	NB	125	--	0	--	0	--	--	--	0	--	--
Coakley Road	WB	175	--	0	--	0	--	--	--	0	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)												
Site Driveway (West)	NB	75	--	0	--	0	--	0	--	0	--	10
Coakley Road	WB	50	--	0	--	0	--	5	--	0	--	3
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	100	--	--	--	--	--	--	--	5	--	13
Cottage Street	WB	100	--	--	--	--	--	--	--	20	--	20

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 2 (CONTINUED)
Intersection Operation Summary - Queues (In Feet)

	Lane Use	Available Storage	Saturday Midday Peak Hour									
			2023 Existing		2025 No-Build		2025 Build		2035 No-Build		2035 Build	
			50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Traffic Signal - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	200	34	48	35	49	209	198	--	--	--	--
Cottage Street	WBLT	240	82	122	84	125	77	124	--	--	--	--
	WBR	100	0	0	0	0	0	0	--	--	--	--
Route 1 Bypass	NBL	300	12	17	12	15	74	207	--	--	--	--
	NBTR	300	226	404	274	418	360	531	--	--	--	--
	SBL	175	23	55	24	57	24	59	--	--	--	--
	SBTR	900	118	365	126	385	322	410	--	--	--	--
Traffic Signal - U.S. Route 1 Bypass at Borthwick Avenue / Hodgdon Way												
Borthwick Avenue	EBL	325	74	185	77	190	77	190	124	245	215	348
	EBT	>1000	98	203	102	208	102	208	151	266	235	364
	EBR	250	0	0	0	0	0	0	0	0	0	0
Hodgdon Way	WBL	350	36	68	37	70	37	70	122	205	123	214
	WBT	>1000	25	77	27	81	27	81	58	120	58	120
	WBR	230	0	0	0	0	0	0	0	0	0	0
Route 1 Bypass	NBL	250	16	42	16	42	16	42	30	68	115	242
	NBT	>1000	375	504	400	520	415	568	482	631	448	582
	NBR	430	0	0	0	0	0	0	0	0	0	0
	SBL	300	66	100	79	122	78	140	147	284	147	284
	SBTR	300	375	500	386	516	356	491	421	517	435	563
Unsignalized TWSC - U.S. Route 1 Bypass at Eastern Site Driveway												
Site Driveway	EB	50	--	0	--	0	--	--	--	0	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (East)												
Site Driveway (East)	NB	75	--	0	--	0	--	83	--	0	--	20
Coakley Road	WB	25	--	0	--	0	--	0	--	0	--	0
Unsignalized TWSC - Coakley Road at Northern Site Driveway (Middle)												
Site Driveway (Middle)	NB	125	--	0	--	0	--	--	--	0	--	--
Coakley Road	WB	175	--	0	--	0	--	--	--	0	--	--
Unsignalized TWSC - Coakley Road at Northern Site Driveway (West)												
Site Driveway (West)	NB	75	--	0	--	0	--	3	--	0	--	110
Coakley Road	WB	50	--	0	--	0	--	15	--	0	--	8
Unsignalized TWSC - U.S. Route 1 Bypass at Cottage Street / Coakley Road												
Coakley Road	EB	100	--	--	--	--	--	--	--	3	--	23
Cottage Street	WB	100	--	--	--	--	--	--	--	8	--	8

Legend

50th & 95th - 50th and 95th percentile queue lengths in feet

TABLE 4
Site-Generated Traffic Summary

Existing - 57 Room Hotel **Peak Hour Period**	**Enter**	**Exit**	**Total**
Weekday Morning	8	15	23
Weekday Afternoon	13	13	26
Saturday Midday	5	3	8

Proposed - 115 Room Hotel **Peak Hour Period**	**Enter**	**Exit**	**LUC 310** **Total**
Weekday Morning	30	23	53
Weekday Afternoon	35	33	68
Saturday Midday	46	37	83

Proposed - 2,400 SF Coffee Shop with Drive-Through **Peak Hour Period**	**Enter**	**Exit**	**LUC 937** **Total**
Weekday Morning	105	101	206
Weekday Afternoon	47	47	94
Saturday Midday	106	105	211

Total Trips **Peak Hour Period**	**Enter**	**Exit**	**Total**
Weekday Morning	135	124	259
Weekday Afternoon	82	80	162
Saturday Midday	152	142	294

Pass-By Trips **Peak Hour Period**	**Enter**	**Exit**	**75%** **Total**
Weekday Morning	79	79	158
Weekday Afternoon	35	35	70
Saturday Midday	80	80	160

New Vehicular Trips (Total minus Existing Hotel Trips & Pass-By Credit) **Peak Hour Period**	**Enter**	**Exit**	**Total**
Weekday Morning	**48**	**30**	**78**
Weekday Afternoon	**34**	**32**	**66**
Saturday Midday	**67**	**59**	**126**

Source: Institute of Transportation Engineers, Trip Generation, 11th Edition, 2021
Land Use - 310 [Hotel]
Land Use - 937 [Coffee/Donut Shop with Drive-Through]

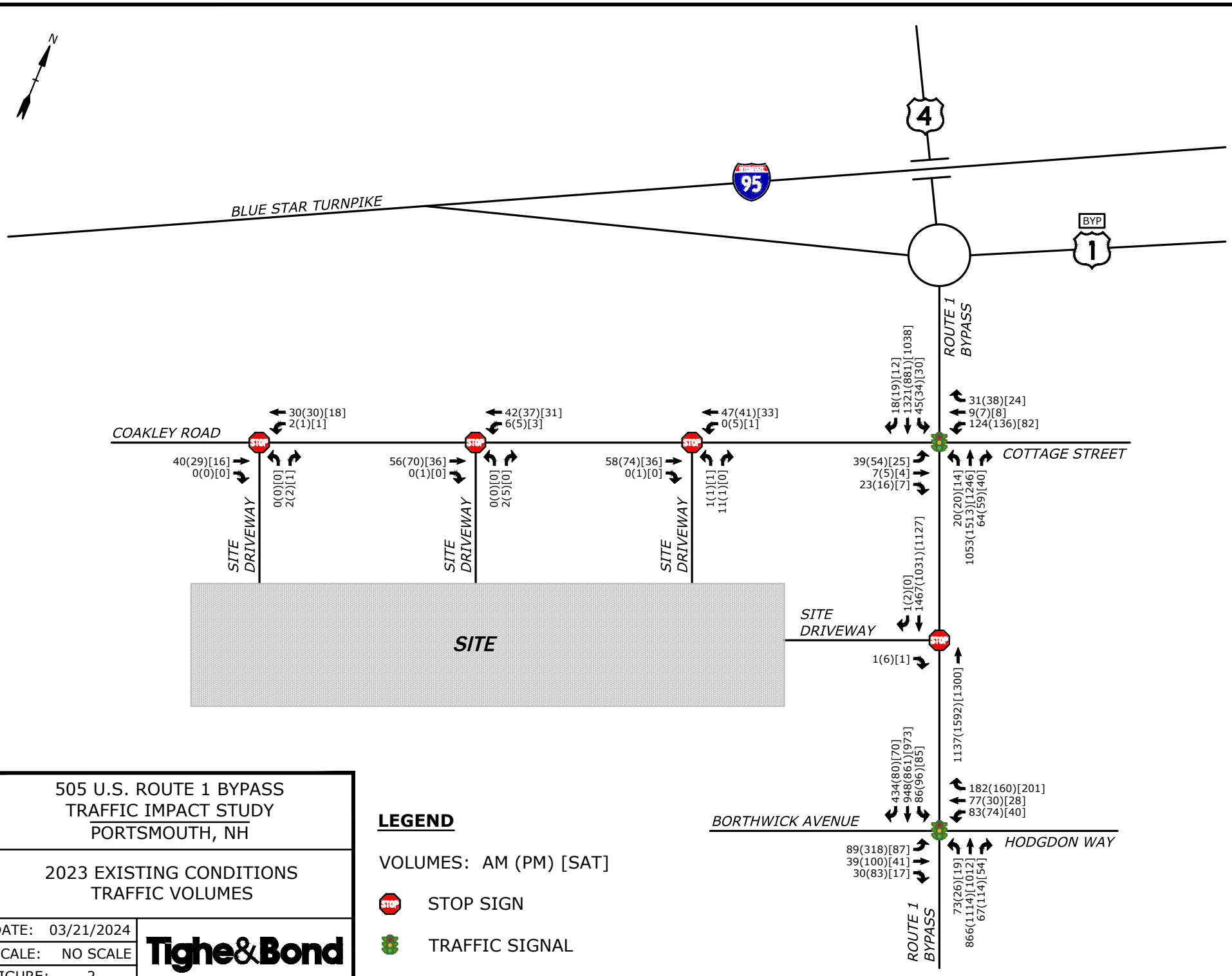
Section 8
Figures

505 ROUTE 1 BYPASS REDEVELOPMENT
PORTSMOUTH, NH

STUDY AREA

DATE:	11/20/2023
SCALE:	1" = 750'
FIGURE:	1

Tighe&Bond



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2023 EXISTING CONDITIONS
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 2

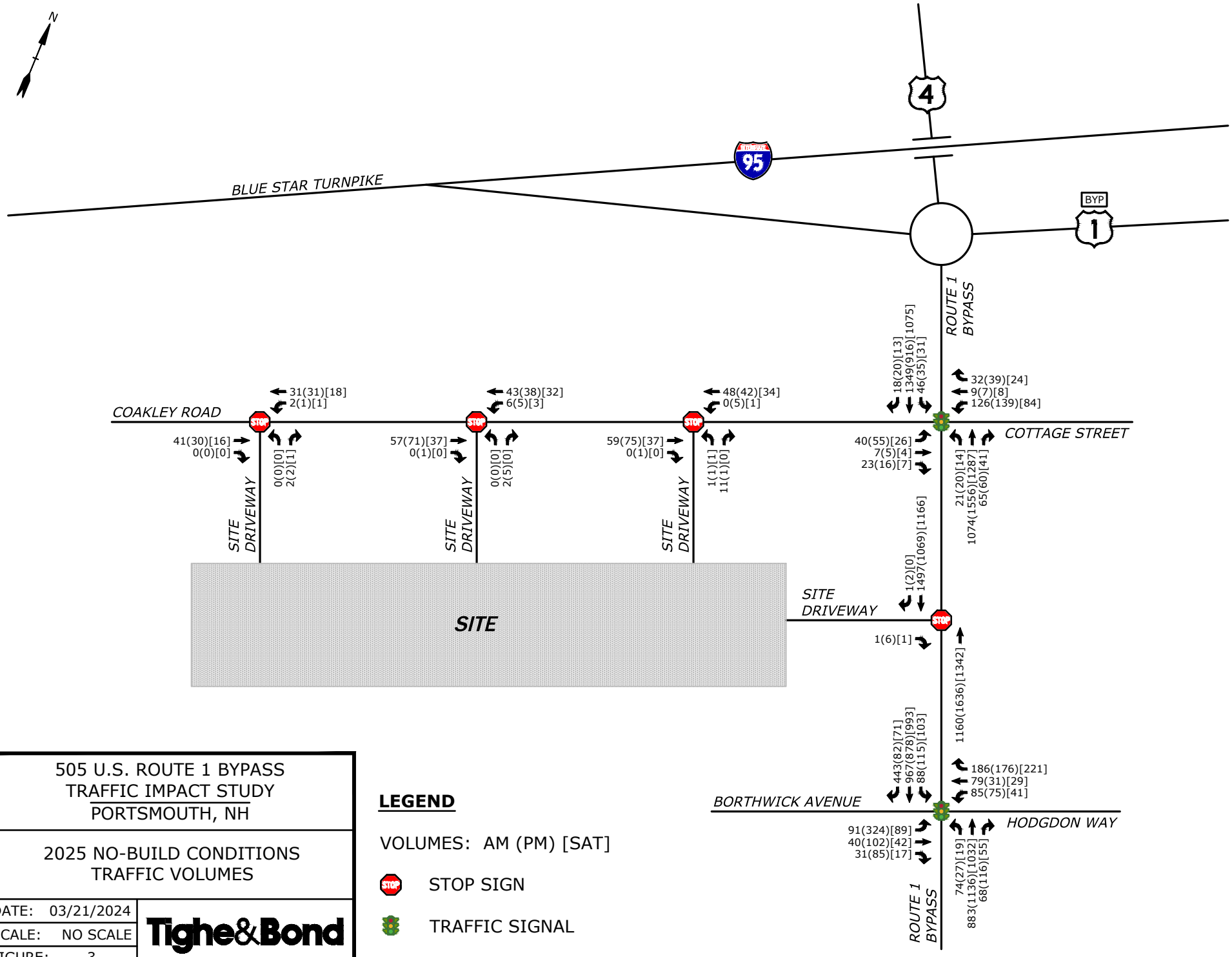
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 NO-BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	03/21/2024
SCALE:	NO SCALE
FIGURE:	3

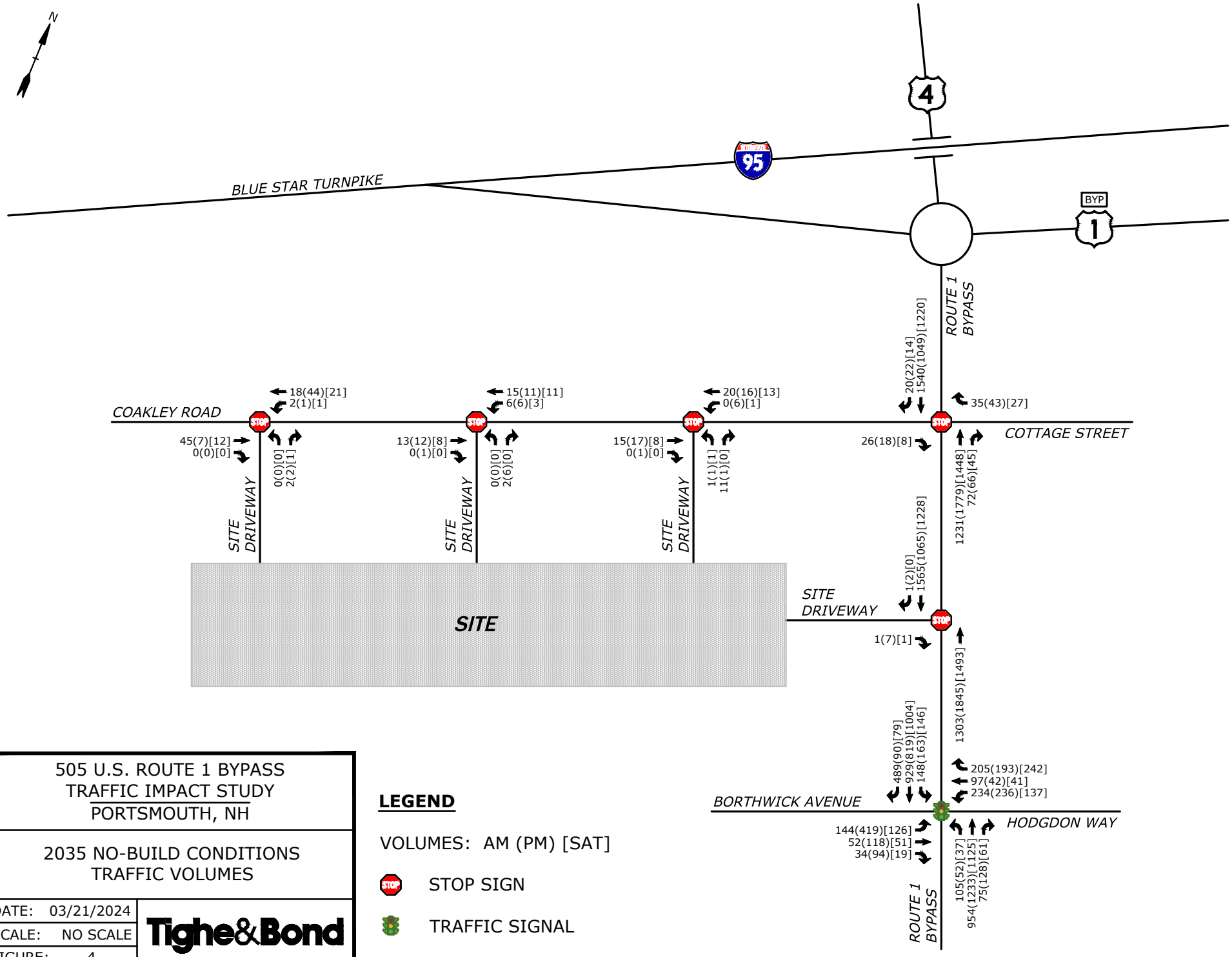
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 NO-BUILD CONDITIONS
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 4

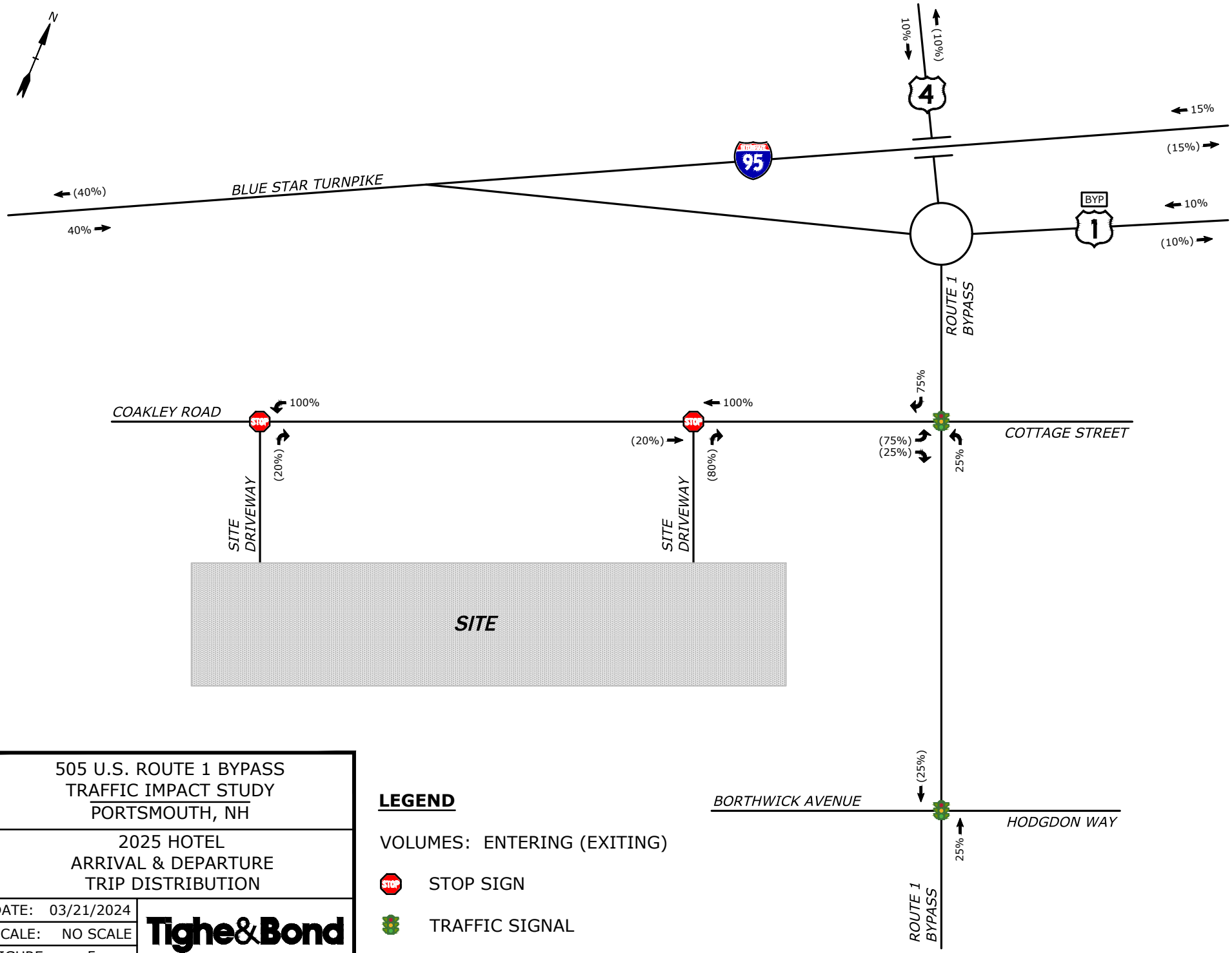
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 HOTEL
ARRIVAL & DEPARTURE
TRIP DISTRIBUTION

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 5

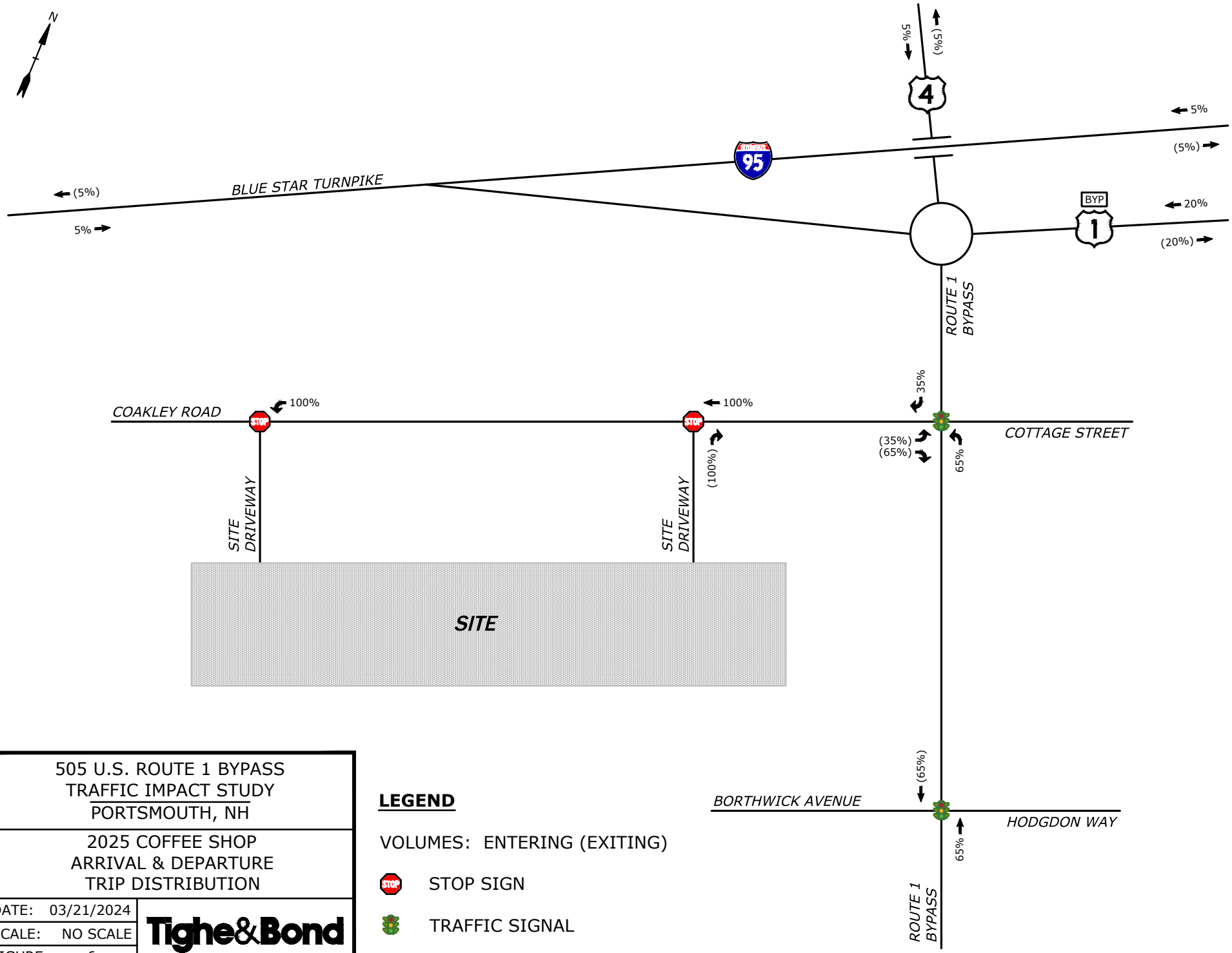
Tighe&Bond

LEGEND

VOLUMES: ENTERING (EXITING)

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 COFFEE SHOP
ARRIVAL & DEPARTURE
TRIP DISTRIBUTION

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 6

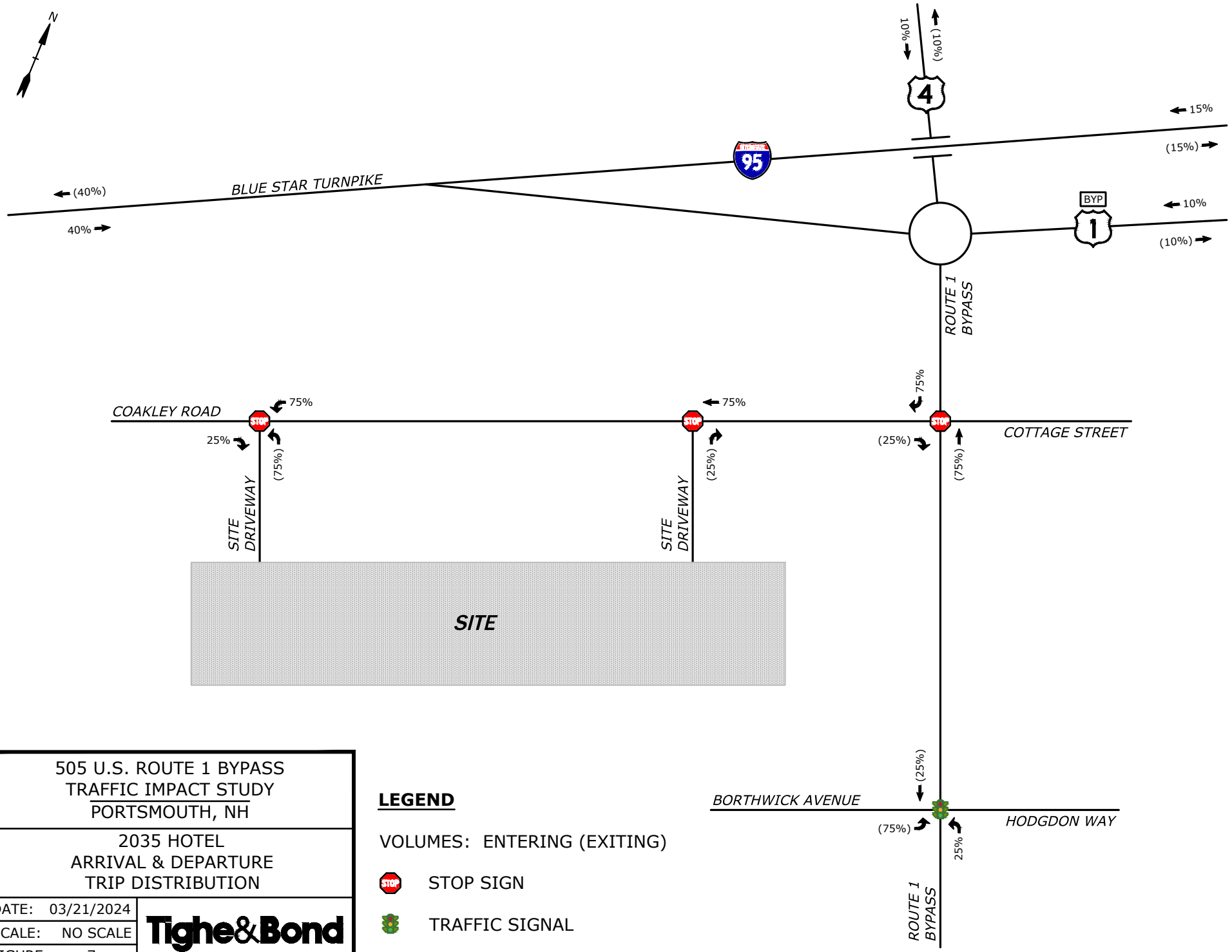
Tighe&Bond

LEGEND

VOLUMES: ENTERING (EXITING)

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 HOTEL
ARRIVAL & DEPARTURE
TRIP DISTRIBUTION

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 7

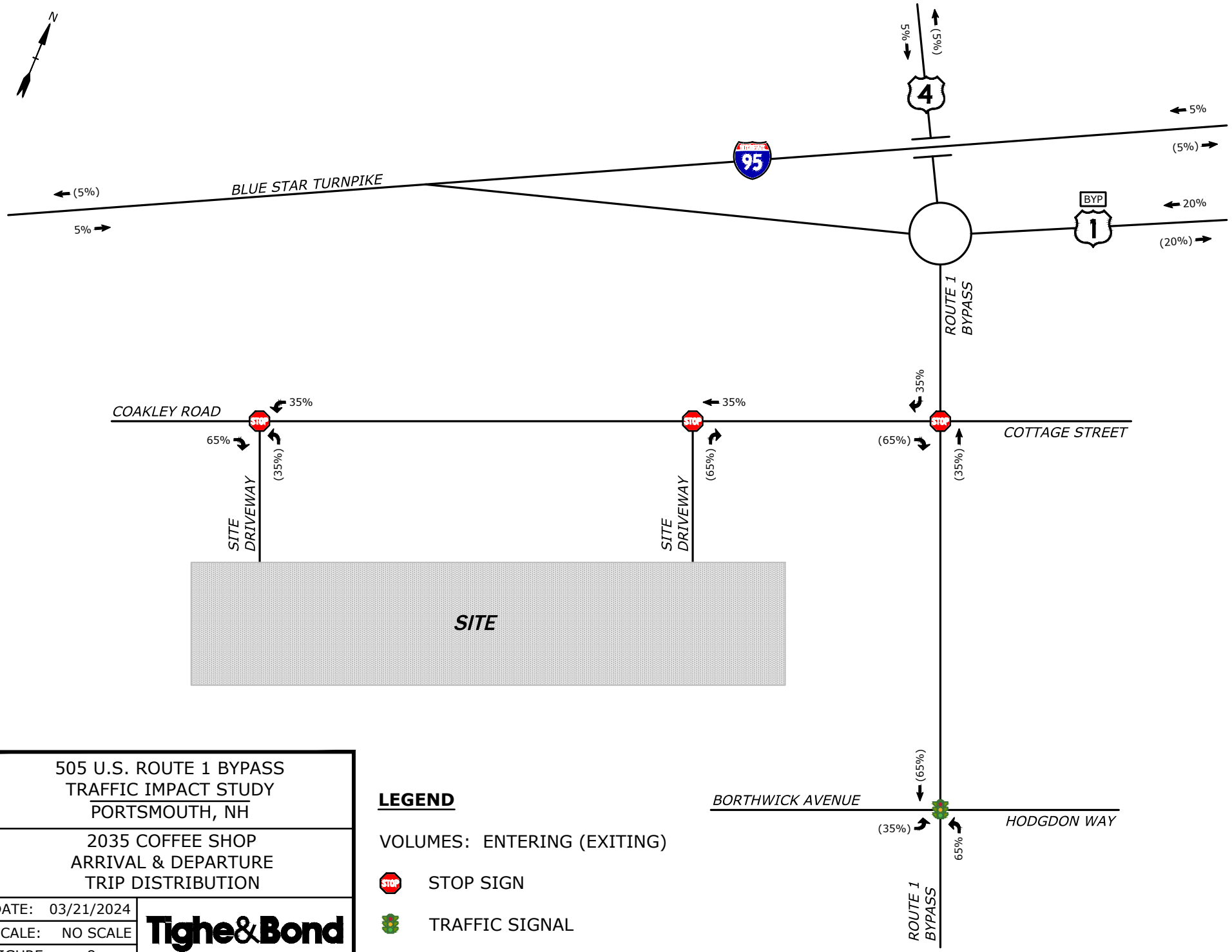
Tighe&Bond

LEGEND

VOLUMES: ENTERING (EXITING)

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 COFFEE SHOP
ARRIVAL & DEPARTURE
TRIP DISTRIBUTION

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 8

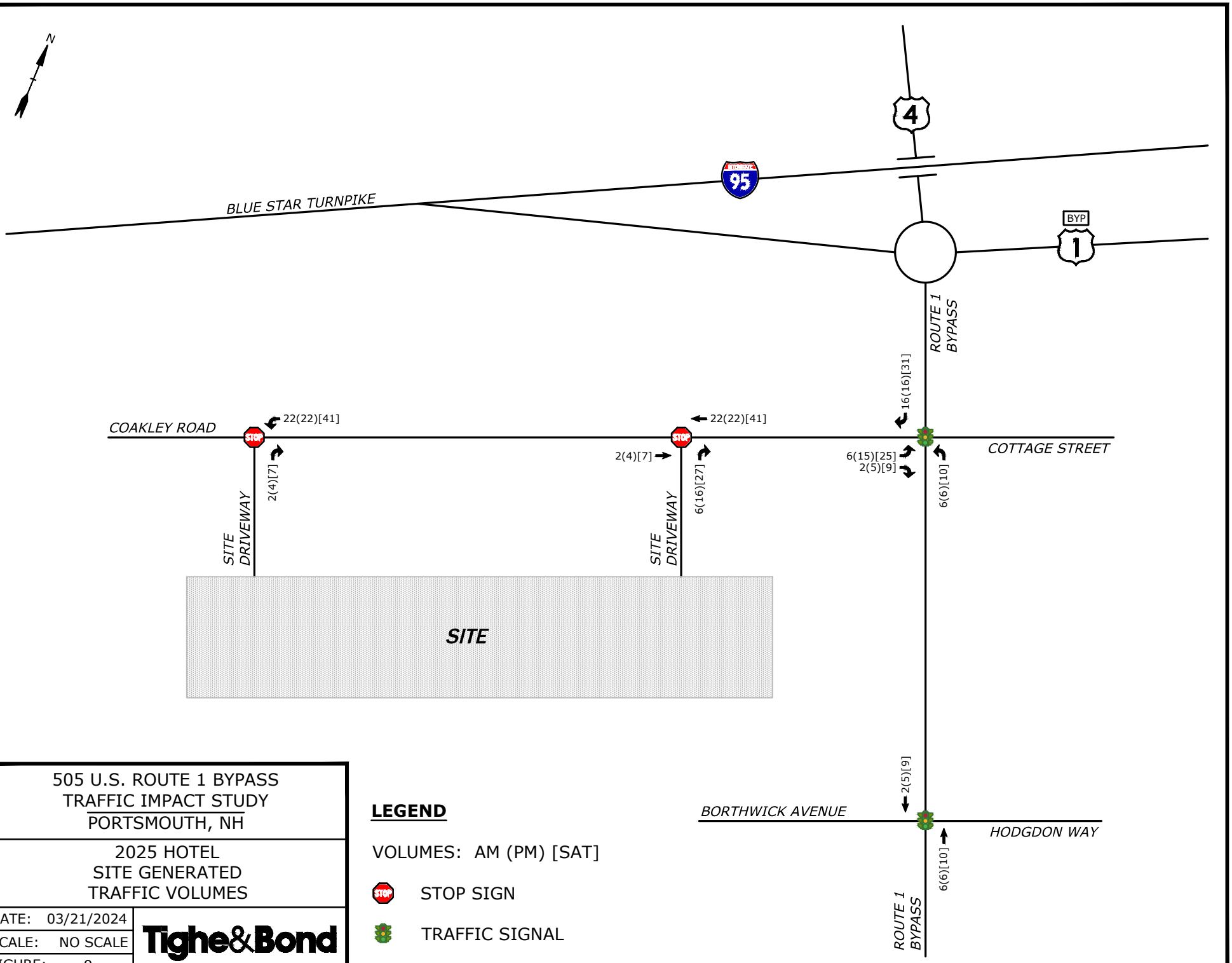
Tighe&Bond

LEGEND

VOLUMES: ENTERING (EXITING)

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 HOTEL
SITE GENERATED
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 9

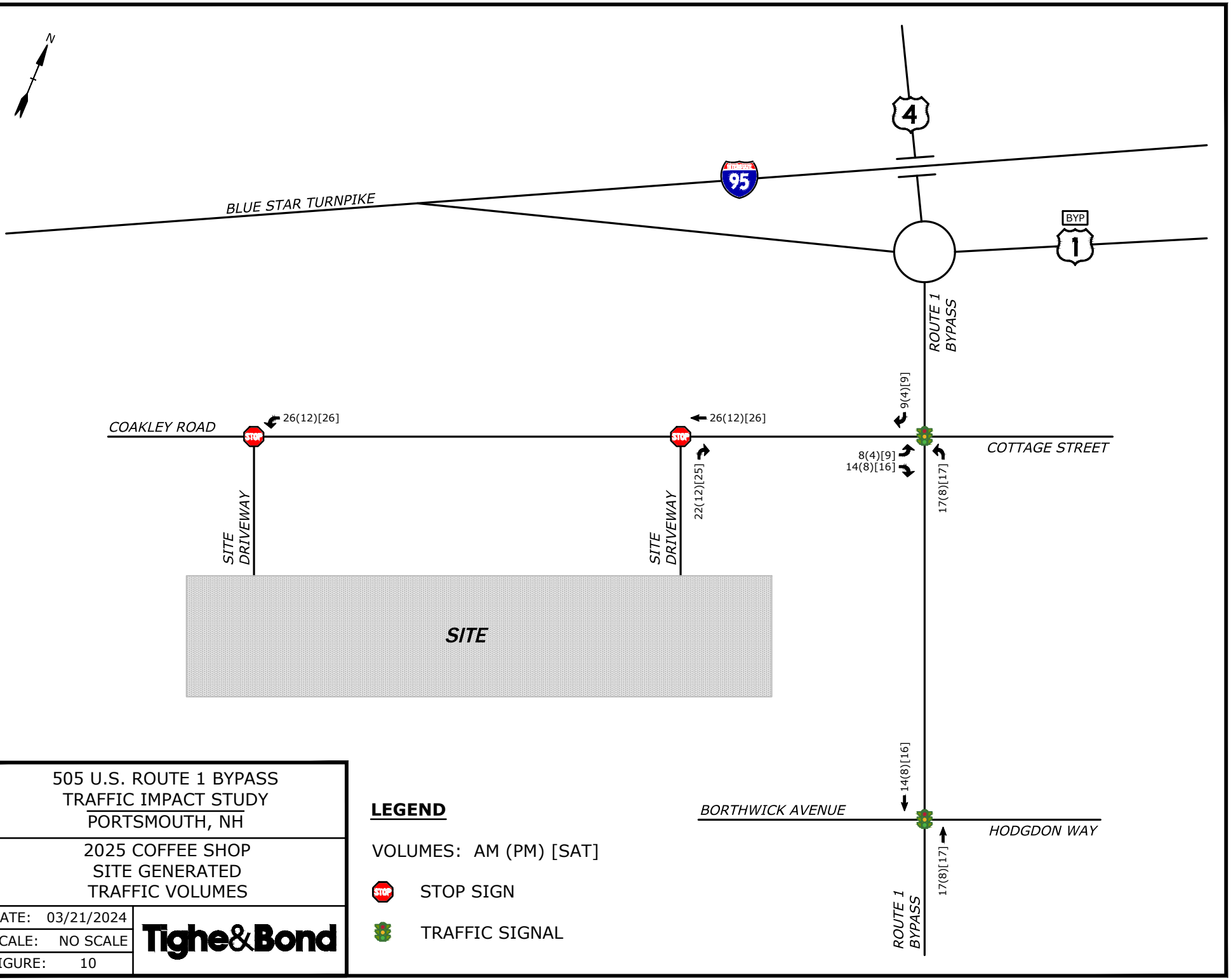
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 COFFEE SHOP
SITE GENERATED
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 10

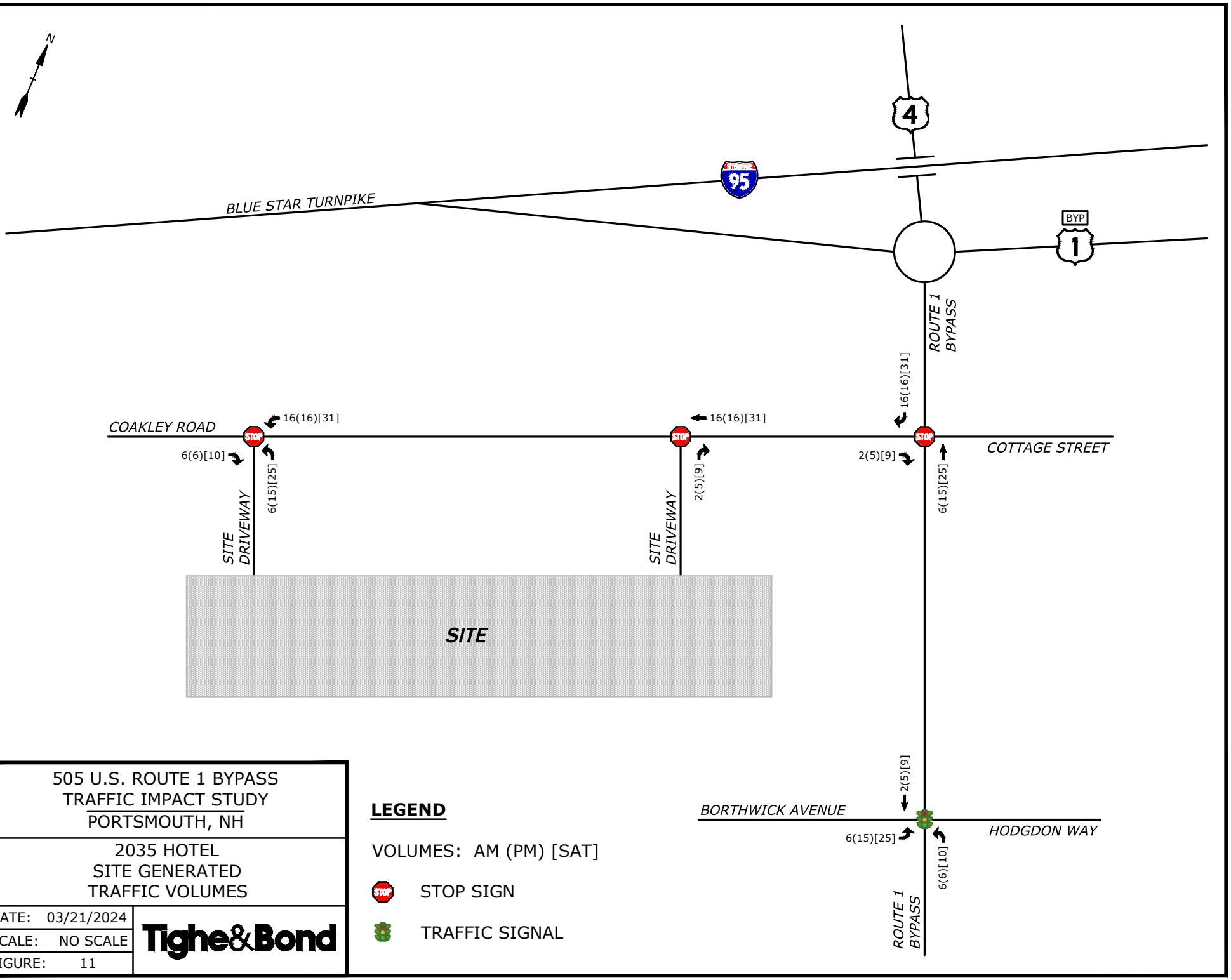
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 HOTEL
SITE GENERATED
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 11

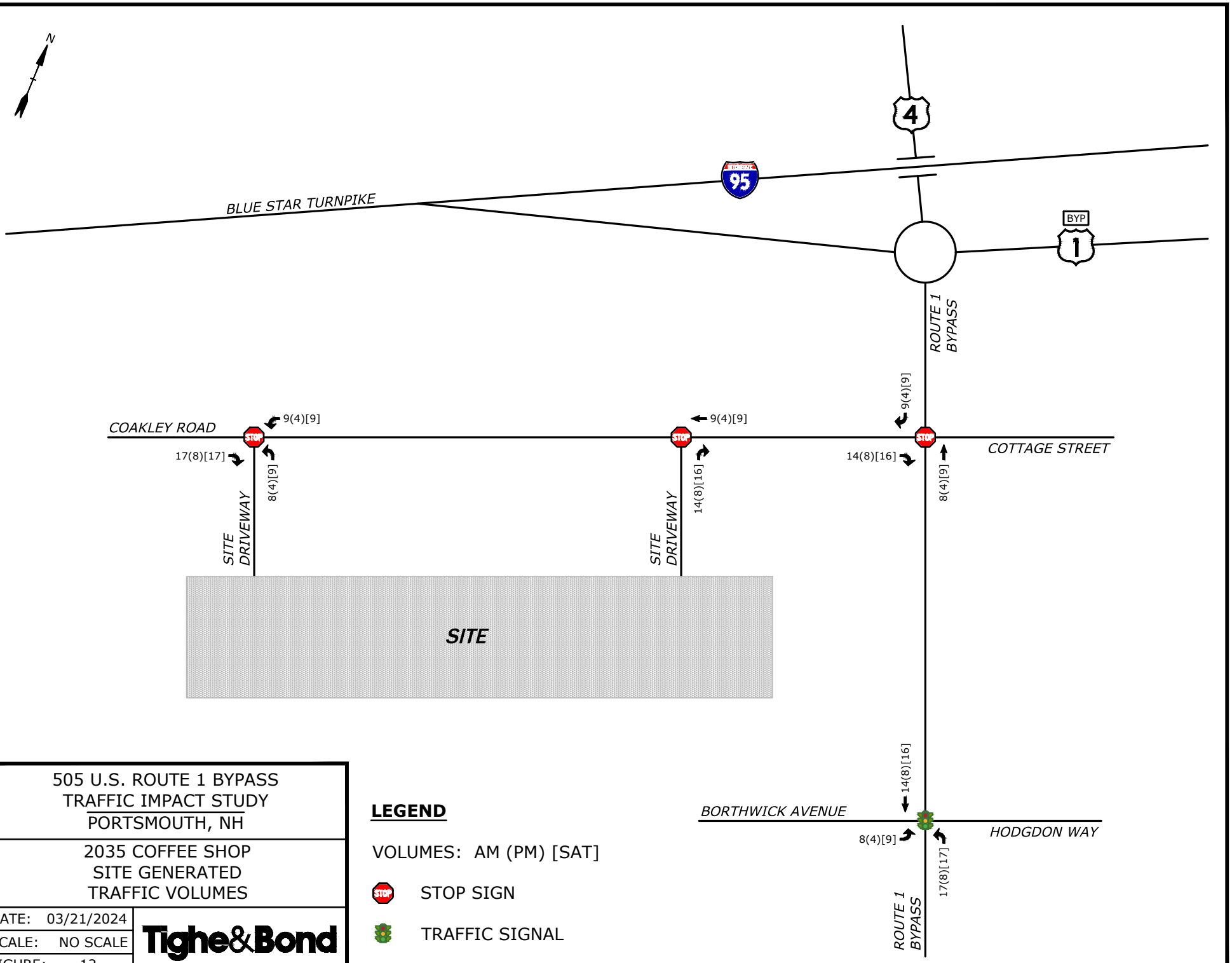
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 COFFEE SHOP
SITE GENERATED
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 12

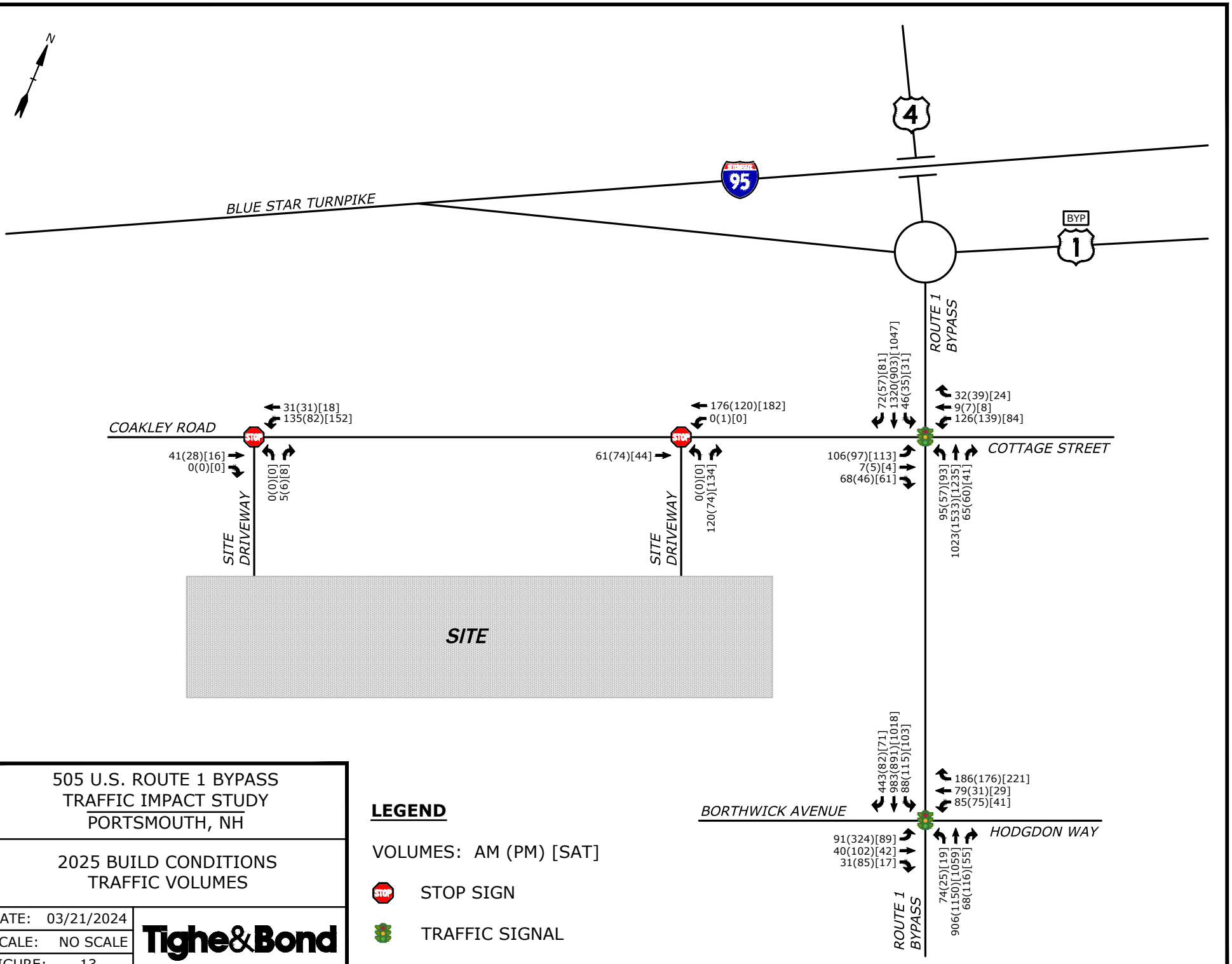
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2025 BUILD CONDITIONS
TRAFFIC VOLUMES

DATE:	03/21/2024
SCALE:	NO SCALE
FIGURE:	13

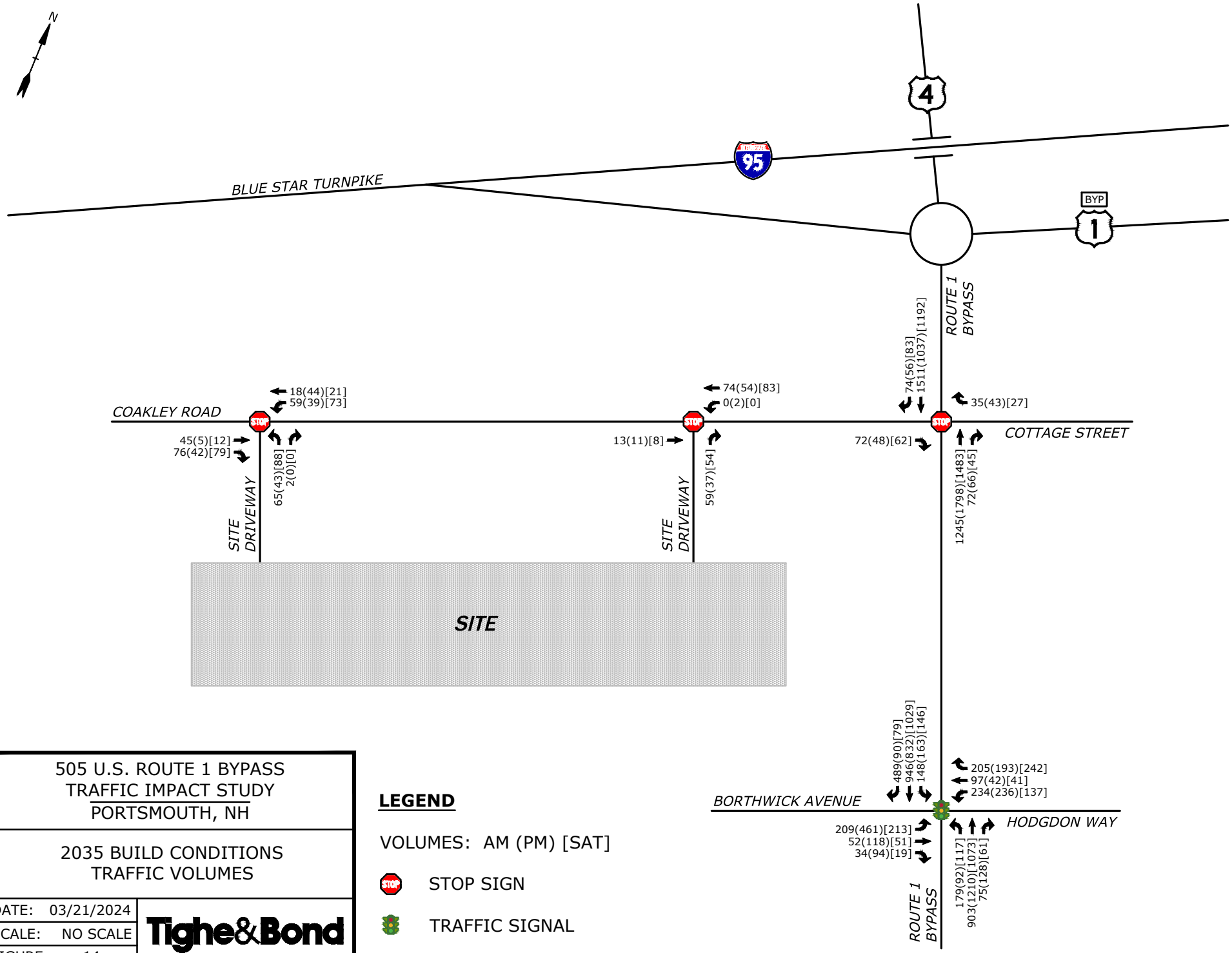
Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL



505 U.S. ROUTE 1 BYPASS
TRAFFIC IMPACT STUDY
PORTSMOUTH, NH

2035 BUILD CONDITIONS
TRAFFIC VOLUMES

DATE: 03/21/2024
SCALE: NO SCALE
FIGURE: 14

Tighe&Bond

LEGEND

VOLUMES: AM (PM) [SAT]

STOP SIGN

TRAFFIC SIGNAL

www.tighebond.com

100% Recyclable

AUTHORIZATION OF GIRI HOTEL MANAGEMENT, LLC
505 U.S. ROUTE 1-BYPASS
Map 234, Lot 5

The undersigned, on behalf of Giri Hotel Management, LLC , owner of the above-referenced property, hereby authorizes representatives of Bosen & Associates, PLLC and Tighe & Bond, to represent its interests before the Portsmouth land use boards and to submit any and all applications and materials related thereto on its behalf.

GIRI HOTEL MANAGEMENT, LLC

Dated: `

By: 

Name: Ankur Patel
Title: Principal