

October 29, 2025

Stefanie Casella Planner

Portsmouth Planning Department 1 Junkins Avenue Portsmouth, NH 03801 (603)610-7290

RE: Project Narrative and Variance Analysis for Hang10 Portsmouth, NH

Project narrative

The proposed development at 2299 Lafayette Road, Portsmouth, NH 03801, is planned as a Hang10 Car Wash. Hang10 offers two monthly membership tiers or single washes to meet a range of customer needs. Following their wash, customers will have access to complimentary high-powered vacuums. Members at the Big Kahuna level receive additional perks, such as a premium wash and access to the Hang10 Dog Wash, a self-contained wash station equipped with soap, conditioner, and a dryer for convenient pet cleaning.

This site is an excellent fit for Hang10's express-wash model, supported by demographic and pro forma analysis. Hang10 is headquartered in Seabrook, NH, and the company's founder is a New Hampshire native.

In addition to the fully enclosed car wash, the site includes parking spaces with vacuum stations, vacuum enclosures, employee parking, and a dumpster.

Hang 10 is applying for three variances for the following design elements.

- 1. Off-street parking is located between the principal building and the street.
- 2. The dumpster is located 2' from the left property line; code requires a minimum setback of 10'.
- 3. The proposed building setback is 157' from the Lafayette Rd centerline, exceeding the 90' maximum allowed.

Variance Analysis Criteria from section 10.223 of the Zoning Ordinance

- 1. 10.233.21 The variance will not be contrary to the public interest;
 - a. The proposed site layout is consistent with other commercial uses along Lafayette Road, many of which have off-street parking or vehicle circulation areas located between the building and the street. The design aligns with the established development pattern and will not alter the visual character of the neighborhood. Green space has been provided around the parking for the option of natural screening for Lafayette Rd. The visually appealing

- building will remain visible from the road and serve as an architectural feature for Lafayette Rd.
- b. The dumpster will be surrounded with a 7-foot-high enclosure that matches the proposed building and will not have a negative visual impact on the neighboring Taco Bell site or those driving by.
- c. Due to the operational needs of a car wash, additional setback is necessary to ensure safe circulation and functionality. Allowing this variance enables a reasonable and beneficial use of the property without detriment to the community.
- 2. 10.233.22 The spirit of the Ordinance will be observed;

The spirit and intent of the City of Portsmouth's ordinance have been preserved. The site has been thoughtfully designed to avoid impacts to the 100-foot wetland buffer at the rear of the property, while still accommodating safe and functional customer circulation.

3. 10.233.23 Substantial justice will be done;

Granting these variances will result in substantial justice because the relief requested allows for a reasonable and functional use of the property without creating any harm to the public or neighboring properties. Strict compliance with the ordinance would prevent the applicant from developing the site in a manner that both protects environmental resources and provides safe, efficient site operations.

- 4. 10.233.24 The values of surrounding properties will not be diminished; and
 The placement of the dumpster, employee parking spaces, and building should
 not adversely affect the value of surrounding properties. Landscaping will be
 incorporated to ensure compatibility with neighboring uses.
- 5. 10.233.25 Literal enforcement of the provisions of the Ordinance would result in an unnecessary hardship.

Strict enforcement of the ordinance would necessitate relocating essential site features to the rear of the property, thereby increasing disturbance within the 100-foot wetland setback. This outcome would conflict with the intent of the ordinance to protect sensitive environmental areas.

Respectfully,

Paige Weidner, PE Project Manager

Paix Whither

4445 Lake Forest Drive, Suite 275

Cincinnati, OH 45242

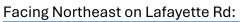
O 937.648.3213

paige.weidner@cesoinc.com



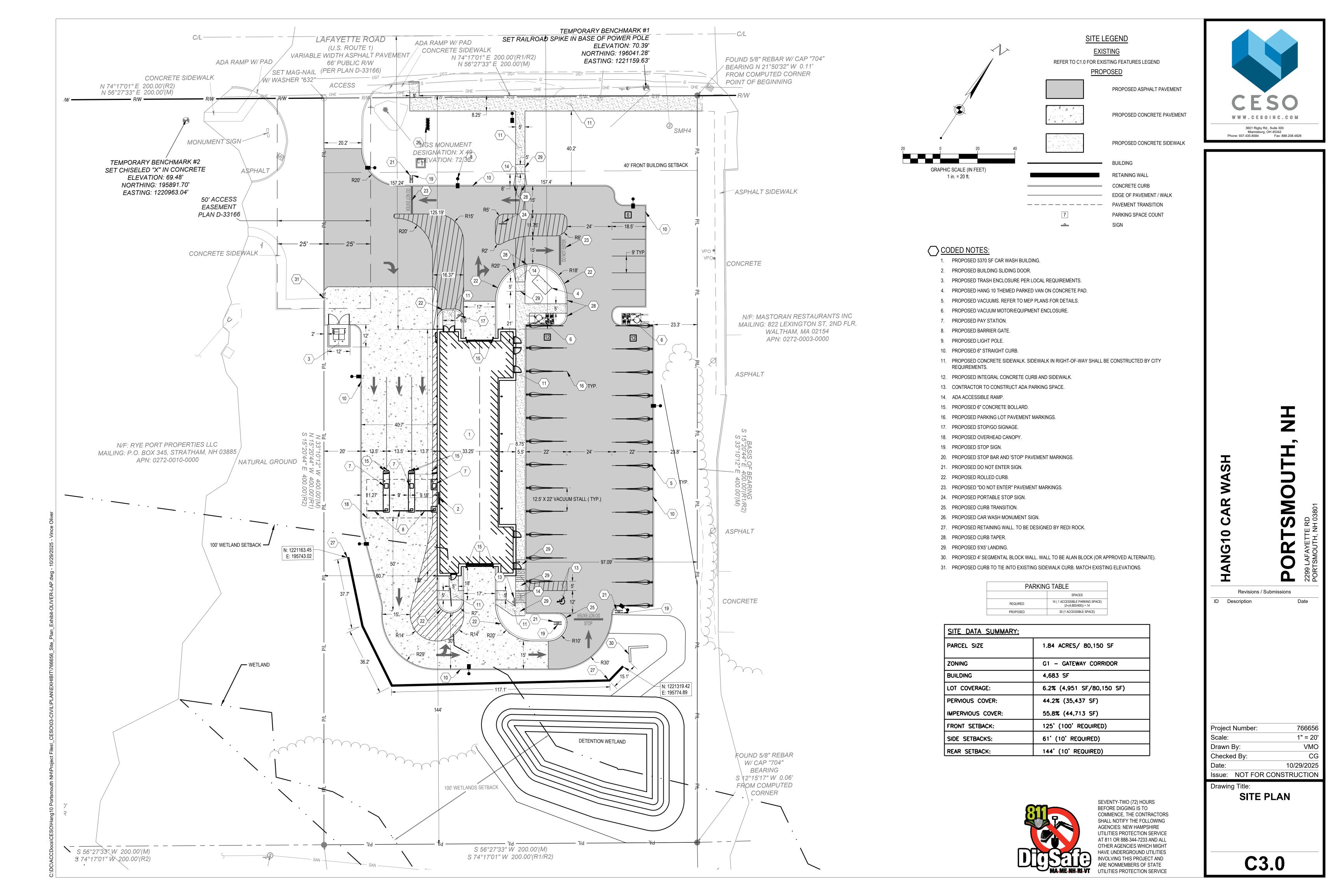
Arial View:











SITE INFORMATION

N/F: RYE PORT PROPERTIES LLC 2299 LAFAYETTE RD, PORTSMOUTH, NH 03870 APN: 0272-0004-0000 79,998 ± SQUARE FEET, OR 1.837 ± ACRES

TITLE COMMITMENT INFORMATION

AWAITING TITLE COMMITMENT

SCHEDULE A DESCRIPTION

AWAITING TITLE COMMITMENT

NOTES CORRESPONDING TO SCHEDULE B

AWAITING TITLE COMMITMENT

REFERENCE DOCUMENTS

. WARRANTY DEED, RECORDED AS BOOK 5083, PAGE 763 ON JANUARY 15, 2010, ROCKINGHAM COUNTY REGISTRY OF DEEDS. 2. SUBDIVISION PLAT, RECORDED AS PLAN D-33166 ON OCTOBER 24, 2005, PORTSMOUTH

TOWN CLERK RECORDS 3. TITLE INSURANCE PLAN, RECORDED AS PLAN D-20705 ON NOVEMBER 7, 1990,

PORTSMOUTH TOWN CLERK RECORDS. 4. ASBUILT SITE PLAN, RECORDED AS PLAN D-15321 ON AUGUST 8, 1986, PORTSMOUTH TOWN

PARKING INFORMATION

REGULAR= 40 HANDICAP= 2

FLOOD ZONE INFORMATION

BY GRAPHIC PLOTTING ONLY. THIS PROPERTY IS IN ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 33015C0270F, WHICH BEARS AN EFFECTIVE DATE OF 01/29/2021 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

ZONE "X" - AREA OF MINIMAL FLOOD HAZARD, USUALLY DEPICTED ON FIRMS AS ABOVE THE 500-YEAR FLOOD LEVEL. ZONE "X" IS THE AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD AND PROTECTED BY LEVEE FROM 100-YEAR FLOOD.

THE BASIS OF BEARING OF THIS SURVEY IS GRID NORTH BASED ON THE NORTHEAST LINE OF THE SUBJECT PROPERTY. THE BEARING IS DENOTED AS \$33°10'12"E PER GPS COORDINATE OBSERVATIONS NEW HAMPSHIRE STATE PLANE NAD83. LATITUDE = 43°02'03.4920" LONGITUDE = -70°46'49.2583"

CONVERGENCE ANGLE = 00°36'17.57"

SIGNIFICANT OBSERVATIONS

AWAITING TITLE COMMITMENT

UTILITY INFORMATION

THE UTILITIES SHOWN ON THIS DRAWING HEREON HAVE BEEN LOCATED BY FIELD MEASUREMENTS, UTILITY MAP DRAWINGS, NEW HAMPSHIRE 811 DIG UTILITY LOCATE REQUEST, AND PRIVATE UTILITY LOCATE CONTRACTED BY BLEW AND ASSOCIATES. BLEW AND ASSOCIATES MAKES NO WARRANTY TO THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES SHOWN OR NOT SHOWN ON THIS DRAWING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ANY AND ALL UTILITIES PRIOR TO CONSTRUCTION. TICKET NUMBER: 20253216635

COMCAST - NH CONSOLIDATED COMMUNICATIONS EVERSOURCE - ELECTRIC PORTSMOUTH DPW

CONTACT: (317) 810-8269 (207) 852-8315 x1 (603) 427-1530 (603) 294-5177

BEARING N 46°18'06" E 0.06'

FROM COMPLITED CORNER

UNITIL - NORTHERN UTILITIES - NH - GAS

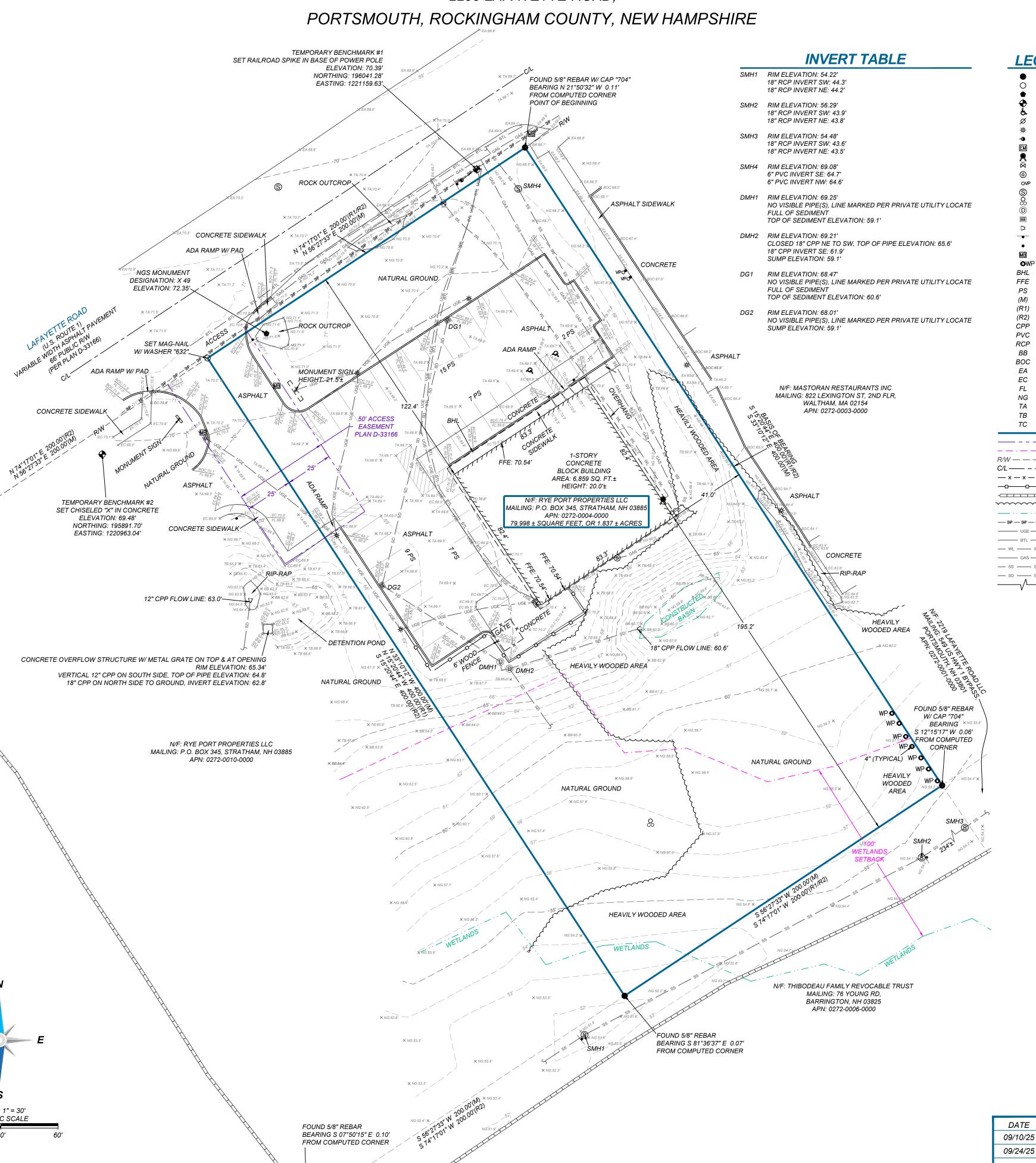
PRIVATE UTILITY LOCATE NOTES: 1. UNKNOWN WATERLINE PIPE TYPE/SIZE, NO GIS MAP PROVIDED TO SURVEYOR.

ZONING INFORMATION

PROPERTY IS	ED: <u>AWAITING Z</u>	ONING REPORT	
OBSERVED USE: COMME	RCIAL; US	SE PERMITTED BY ZOI	NE:YES,
ITEM	REQUIRED	OBSERVED	
MIN. SETBACKS FRONT		122.4'	
MIN. SETBACKS SIDE		41.0'	
MIN. SETBACKS REAR		195.2'	
MAX. BUILDING HEIGHT		20.0'	
MIN. LOT AREA		79,998 SQ. FT.	
MIN. LOT WIDTH		200.00'	
MAX. BLDG COVERAGE		8.6%±	
PARKING REGULAR		40	
PARKING HANDICAP		2	
PARKING TOTAL		42	1

ALTA/NSPS LAND TITLE SURVEY

2299 LAFAYETTE ROAD,



LEGEND & SYMBOLS FOUND MONUMENT AS NOTED SET MONUMENT AS NOTED FOUND NGS MONUMENT SET TEMPORARY BENCHMARK HANDICAP PARKING POWER POLE LIGHT POLE **GUY ANCHOR** ELECTRIC METER WATER SPIGOT WATER VALVE GAS METER FUEL STATION TANK VENT PIPE SANITARY MANHOLE (SMH#) CLEANOUT STORM MANHOLE DRAIN GRATE (DG#) STORM CULVERT PIPE BOLLARD MAILBOX **WOOD POST** BUILDING HEIGHT LOCATION FINISHED FLOOR ELEVATION PARKING SPACE(S) MEASURED/CALCULATED DIMENSION RECORD DIMENSION PER BK. 5083, PG. 764 RECORD DIMENSION PER PLAN D-33166 CORRUGATED PLASTIC PIPE POLYVINYL CHLORIDE PIPE

REINFORCED CONCRETE PIPE **BOTTOM OF BANK** BACK OF CURB EDGE OF ASPHALT EDGE OF CONCRETE FLOW LINE NATURAL GROUND TOP OF ASPHALT TOP OF BANK **BOUNDARY LINE** ---- EASEMENT LINE

SETBACK LINE R/W — — — RIGHT-OF-WAY LINE C/L — — CENTERLINE OF RIGHT-OF-WAY $-- \times - \times - \times - FENCE LINE$ ——— METAL GUARDRAI TREE CANOPY --- · · - · · LIMITS OF WETLANDS — ભ − ભ − OVERHEAD POWER LINE ----- UGE ----- UNDERGROUND ELECTRIC LINE

----- BTL ---- UNDERGROUND TELEPHONE LINE — WL — WL — UNDERGROUND WATER LINE ——— GAS ——— UNDERGROUND GAS LINE — ss — ss — SANITARY SEWER LINE — SD — STORM SEWER LINE ———— NOT TO SCALE

REVISION HISTORY

WETLANDS DELINEATION

CLIENT COMMENTS

VICINITY MAP

GENERAL NOTES

. SOME FEATURES SHOWN ON THIS PLAT MAY BE SHOWN OUT OF SCALE FOR CLARITY

DIMENSIONS ON THIS PLAT ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED. MONUMENTS WERE FOUND AT POINTS WHERE

3. IN REGARD TO ALTA/NSPS TABLE A ITEM 16, THERE WAS NO OBSERVABLE EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR ADDITIONS EXCEPT AS SHOWN HEREON.

4. IN REGARD TO ALTA/NSPS TABLE A ITEM 17, THERE WERE NO KNOWN PROPOSED CHANGES IN RIGHT OF WAY LINES, RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS EXCEPT AS SHOWN HEREON.

AT THE TIME OF THE ALTA/NSPS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP, OR SANITARY LANDFILL.

AT THE TIME OF THE ALTA/NSPS SURVEY, THERE WAS NO OBSERVABLE EVIDENCE OF SITE USE AS A CEMETERY, ISOLATED GRAVE SITE OR BURIAL GROUNDS.

7. COMPLETED FIELD WORK WAS AUGUST 15, 2025.

8. THE DISTANCES SHOWN HEREON ARE UNITS OF GROUND MEASUREMENT.

9. THE NEAREST INTERSECTING STREET IS THE INTERSECTION OF LAFAYETTE ROAD AND CONSTITUTION AVENUE, WHICH IS APPROXIMATELY 755' FROM THE NORTHWEST CORNER OF THE SUBJECT PROPERTY.

10. THE SUBJECT PROPERTY HAS DIRECT & INDIRECT ACCESS TO LAFAYETTE ROAD, BEING A PUBLICLY DEDICATED RIGHT-OF-WAY, AS SHOWN PER PLAN D-33166.

11. EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS PLAT, THIS SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT PROPERTY: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS WHICH WERE VISIBLE AT THE TIME OF SURVEY; RESTRICTIVE COVENANTS; SUBDIVISION RESTRICTIONS OR OTHER LAND USE REGULATIONS; AND ANY OTHER FACTS WHICH AN ACCURATE TITLE SEARCH MAY DISCLOSE.

12. NO SURVEYOR OR ANY OTHER PERSON OTHER THAN A LICENSED NEW HAMPSHIRE ATTORNEY MAY PROVIDE LEGAL ADVICE CONCERNING THE STATUS OF TITLE TO THE PROPERTY DESCRIBED IN THIS SURVEY ("THE SUBJECT PROPERTY"). THE PURPOSE OF THIS SURVEY, AND THE COMMENTS RELATED TO THE SCHEDULE B-II EXCEPTIONS, IS ONLY TO SHOW THE LOCATION OF BOUNDARIES AND PHYSICAL OBJECTIONS IN RELATION THERETO TO THE EXTENT THAT THE SURVEY INDICATES THAT THE LEGAL INSTRUMENT "AFFECTS" THE SUBJECT PROPERTY, SUCH STATEMENT IS ONLY INTENDED TO INDICATE THAT PROPERTY BOUNDARIES INCLUDED IN SUCH INSTRUMENT INCLUDE SOME OR ALL OF THE SUBJECT PROPERTY. THE SURVEYOR DOES NOT PURPORT TO DESCRIBE HOW SUCH INSTRUMENT AFFECTS THE SUBJECT PROPERTY OR THE ENFORCEABILITY OR LEGAL CONSEQUENCES OF SUCH INSTRUMENT.

13. NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS WERE TAKEN FROM THE CITY OF PORTSMOUTH GIS.

THE SUBJECT PROPERTY SHOWN HEREON FORMS A MATHEMATICALLY CLOSED FIGURE AND IS CONTIGUOUS WITH THE ADJOINING PUBLIC RIGHT-OF-WAY AND/OR ADJOINING PARCELS WITH NO GAPS OR OVERLAPS.

15. IN REGARD TO ALTA/NSPS TABLE A ITEM 10, NO VISIBLE DIVISION OR PARTY WALLS WITH RESPECT TO ADJOINING PROPERTIES WERE OBSERVED AT THE TIME THE FIELD SURVEY WAS PERFORMED, NOR WERE ANY DESIGNATED BY THE CLIENT.

16. ELEVATIONS ESTABLISHED WITH GPS OBSERVATIONS UTILIZING THE NATIONAL GEODETIC SURVEY (NGS) NETWORK WITH ORIGINATING BENCHMARK DESIGNATION: X 49, VERTICAL DATUM BASED UPON NORTH AMERICAN VERTICAL DATUM (NAVD88) IN US SURVEY FEET. CONTOURS SHOWN ARE ONE FOOT INTERVALS. PUBLISHED ELEVATION: 72.35'

MONUMENT DESCRIPTION: BENCHMARK DISK STAMPED "X 49 1966" SET IN A ROCK

17. WETLAND LOCATIONS SHOWN HEREON WERE PROVIDED BY BL COMPANIES, A

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6A, 6B, 7B1, 7C, 8, 9, 10, 11B, 13, 14, 16, 17, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 08/15/2025

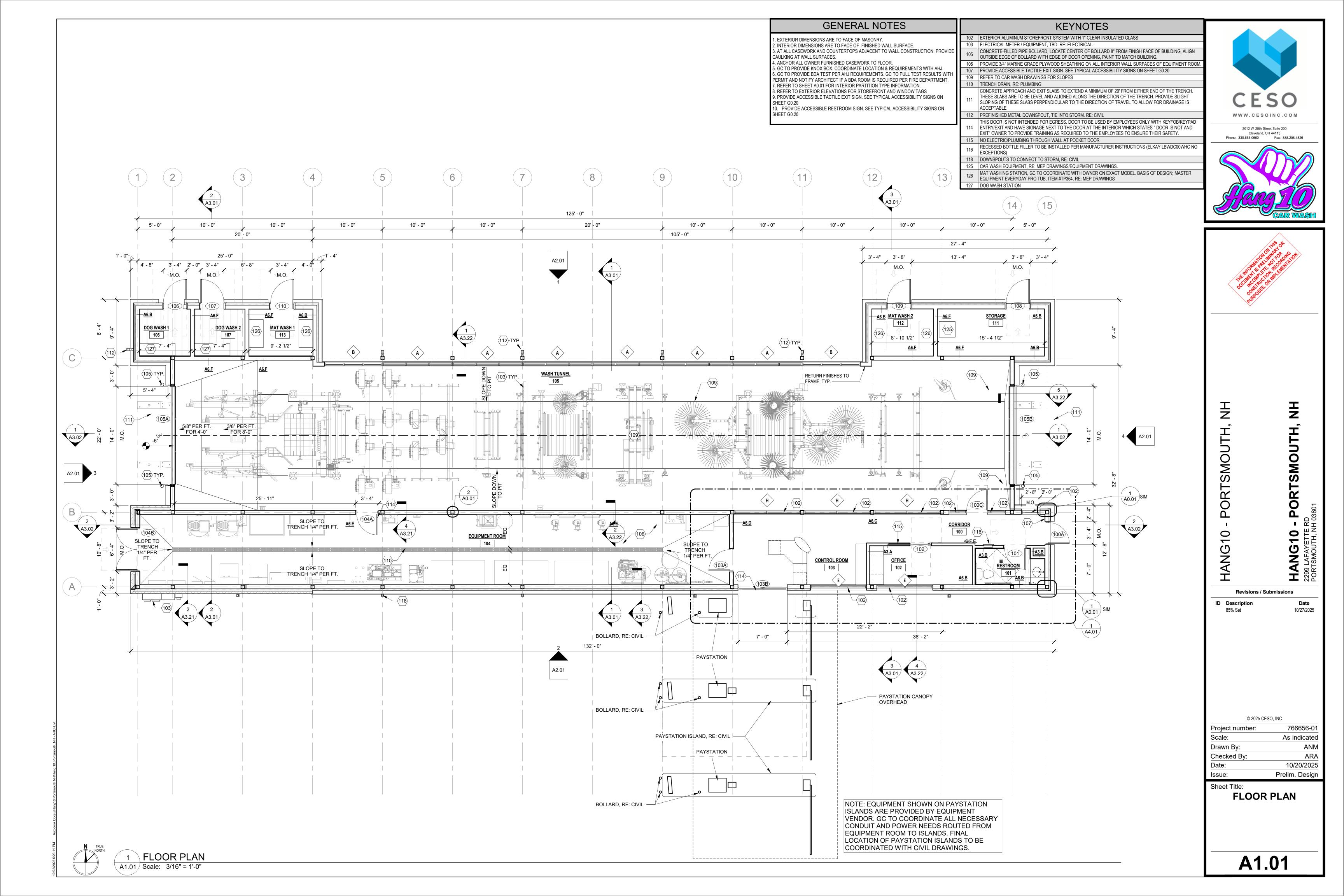
DATE OF PLAT OR MAP: 08/22/2025

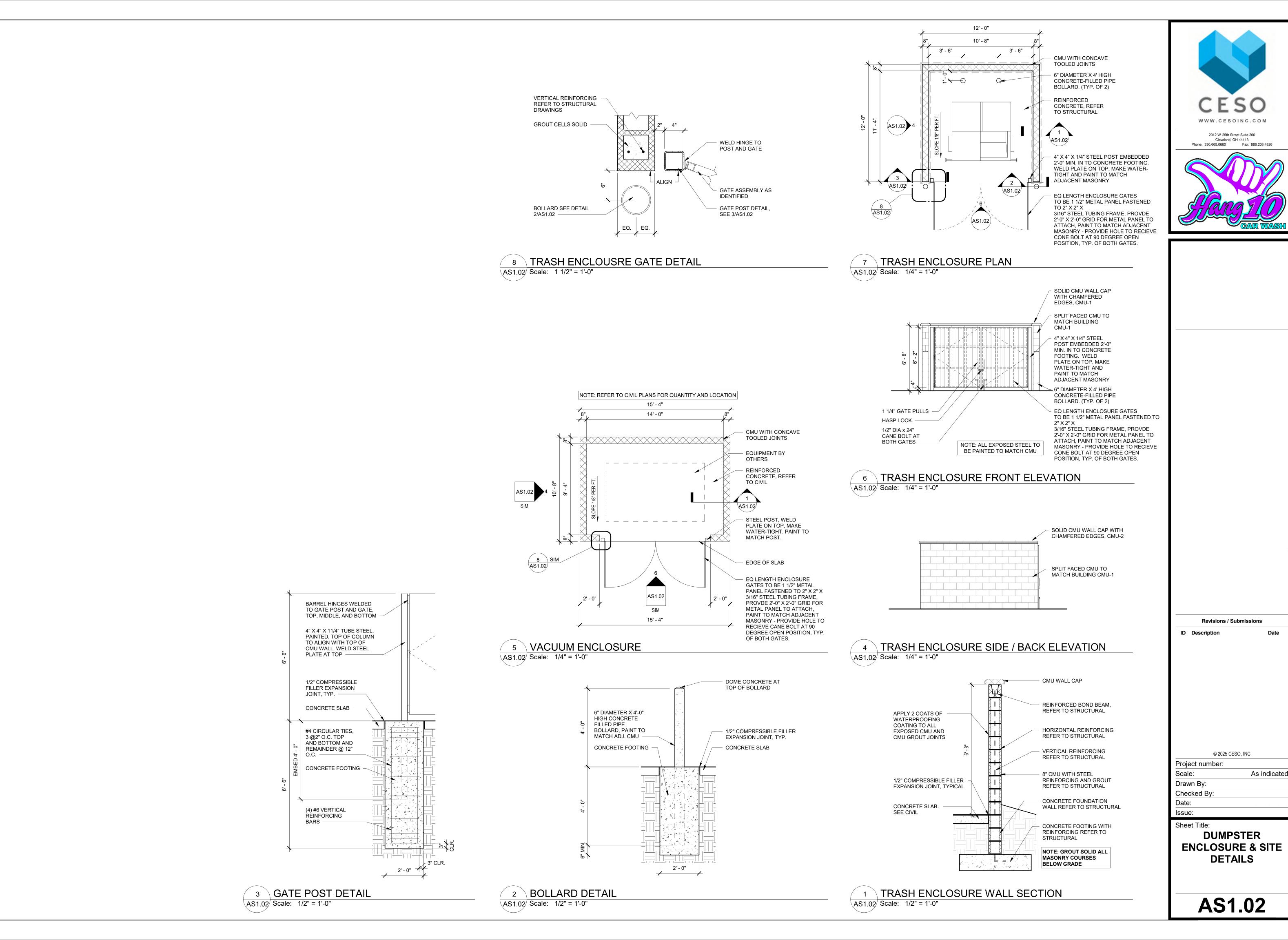
PROFESSIONAL LAND SURVEYOR NO. 632 STATE OF NEW HAMPSHIRE NEW HAMPSHIRE C.O.A. 00545

Surveying | Engineering | Environmental 3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703 EMAIL: SURVEY@BLEWINC.COM

OFFICE: 479.443.4506 FAX: 479.582.1883 WWW.BLEWINC.COM SURVEY DRAWN BY:

SURVEYOR JOB NUMBER AJK - 08/22/2025 **SURVEY REVIEWED BY:** SHEET: 1 OF 1





Date



October 14, 2025

Lucas Miller Access & Utilities Supervisor New Hampshire Department of Transportation District 6 271 Main Street, PO Box 740 Durham, NH 03824

RE: Traffic Generation Letter for proposed Hang10 Car Wash
Located at 2299 Lafayette Road, Portsmouth, Rockingham County, New Hampshire

Dear Mr. Miller:

INTRODUCTION

The proposed Hang10 Car Wash is to be located at 2299 Lafayette Road in Portsmouth, NH. The site is currently occupied by a 7,475 S.F. building, which will be demolished to be replaced by the new car wash building. The proposed Hang10 Car Wash will be approximately 4,500 S.F. in size and will include one (1) car wash conveyer/tunnel and vehicle parking.

This Traffic Generation Letter has been performed in general accordance with locally accepted standards and industry practice. Based on these guidelines, the purpose of this Traffic Statement is to summarize the trips generated by the proposed Hang10 Car Wash.

SITE DESCRIPTION

The proposed development is planned to occupy approximately 1.42 acres of land at the site location. The site is surrounded by residential and commercial areas.

The existing site has one (1) curb cut for a shared access driveway that currently connects to Lafayette Road. The proposed Hang10 Car Wash is planning to use the existing curb cut and shared access driveway to provide full access to the site.

Figure 1 illustrates the site location and Figure 2 illustrates an aerial of the existing site. A site plan of the proposed Hang10 Car Wash is shown in Attachment A.

Figure 1
Site Location

Madelenes Daughter Bridg

Madelenes Daughter Dau

Figure 2 Site Aerial

EXISTING ROADWAY CONDITIONS

<u>Lafayette Road</u>: Lafayette Road generally has a north/south alignment and is a three-lane undivided roadway with a four-lane roadway configuration near the site. Lafayette Road is a classified as a Principal Arterial under the jurisdiction of the NHDOT. The posted speed limit on Lafayette Road in the vicinity of the site is 35 mph.

SITE TRAFFIC GENERATION

Studies of similar developments throughout North America have shown that the amount of traffic generated will be functionally related to some unit of activity (i.e., gross floor area). Site traffic fluctuates substantially on different days and hours throughout the day. Therefore, it is imperative to select an appropriate hourly volume on which to base the design of the external roadway and site access facilities. The Weekday PM and Saturday peak hours were selected based on the adjacent street traffic during these hours.

The existing site consists of:

• A 7,475 S.F. Automobile Parts Sales building.

The proposed Hang10 Car Wash includes:

• The construction of a 4,500 S.F. automated car wash to include one (1) car wash tunnel.

Trip generation was based on methods outlined in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Specifically, CESO used ITE Land Use Category 943 (Automobile Parts Sales) to estimate trips for the existing site, and ITE Land Use Category 948 (Automated Car Wash) to estimate trips for the proposed Hang10 Car Wash.

The Site Generated Traffic Volumes are presented below in Table 1.

Table 1
Site Generated Traffic Volumes

				Total Generated Trips								
ITE Land Use Description	ITE Cat. Size l	Unit	Weekday		Weekday PM Peak Hour		Saturday Peak Hour					
2000	5 at.			Total	In	Out	Total	ln	Out	Total	ln	Out
Automobile Parts Sales	843	7,475	S.F.	408	204	204	37	18	19	86	44	42
ITE Cat. 948 Entering (%)/Exiting (%)			100%	50%	50%	100%	48%	52%	100%	51%	49%	
Automated Car Wash	948	1	Wash Tunnel	N/D	N/D	N/D	78	39	39	41	19	22
ITE Cat. 948 Entering (%)/Exiting (%)			N/D	N/D	N/D	100%	50%	50%	100%	46%	54%	
Net Generated Trips Generated			N/D	N/D	N/D	41	21	20	-45	-25	-20	

N/D - Insufficient Data Available

ITE Trip Generation Category 948 Sheets and the trip generation calculations utilized to calculate the values presented in Table 1 are included in Attachment B.

Note: Due to limited data available in the ITE Trip Generation Manual 11th Edition for Automated Car Wash, only Weekday PM Peak Hour of Adjacent Street traffic and Saturday Peak Hour of Generator traffic were used to compare trips with the existing site's estimated traffic volumes.

CONCLUSIONS

In comparison to the existing site, the proposed Hang10 Car Wash is forecasted to generate a net 41 total trips additional (21 entering and 20 exiting) during the PM peak hour, and a net 45 total trips less (25 entering and 20 exiting) during the Saturday peak hour. Based on the proposed site's trip generation, the proposed development will have minimal impacts on Lafayette Road and the adjoining roadway network. Furthermore, as the development will generate less than 100 total trips during the Weekday PM and Saturday peak hour, a traffic impact study is not required for this development.

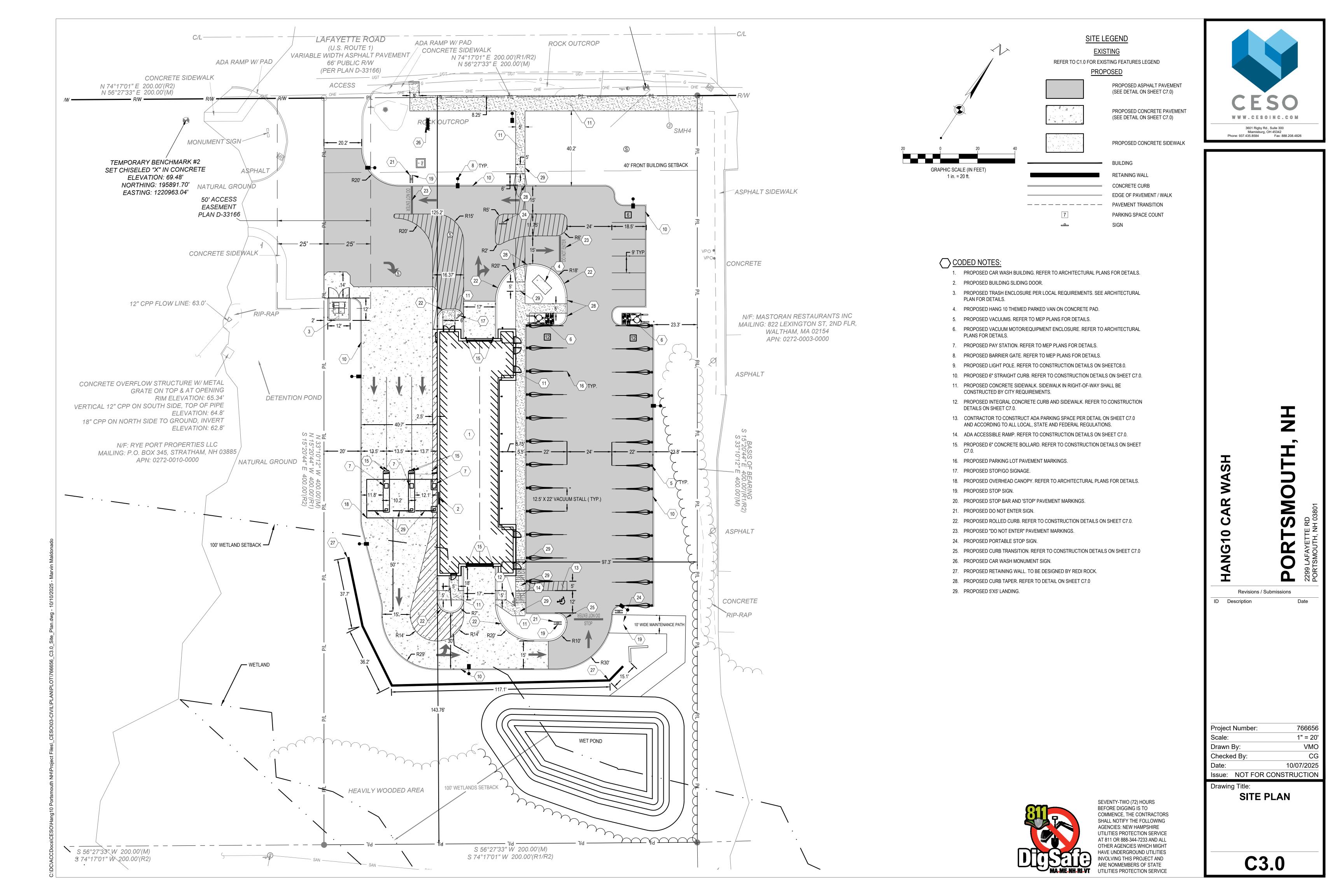
Please review the above analysis and provide concurrence that the New Hampshire Department of Transportation (NHDOT) District 6 will not require a Traffic Impact Study (TIS) to be performed for this development. Sincerely,

Robert Matko, P.E., P.S., PTOE

Senior Engineering Manager

Mr. Mo

ATTACHMENT A SITE PLAN



ATTACHMENT B ITE TRIP GENERATION CALCULATIONS AND RESOURCES

Land Use: 843 **Automobile Parts Sales**

Description

An automobile parts sales facility specializes in the sale of automobile parts for maintenance and repair. The facilities within this land use are not typically equipped for on-site vehicle repair. Tire store (Land Use 848), tire superstore (Land Use 849), and automobile parts and service center (Land Use 943) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/tripand-parking-generation/).

The sites were surveyed in the 1990s, the 2000s, and the 2010s in Alberta (CAN), Florida, Montana, New Hampshire, Texas, and Wisconsin.

Source Numbers

436, 439, 618, 881, 882, 959, 975, 1047



Automobile Parts Sales (843)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA On a: Weekday

Setting/Location: General Urban/Suburban

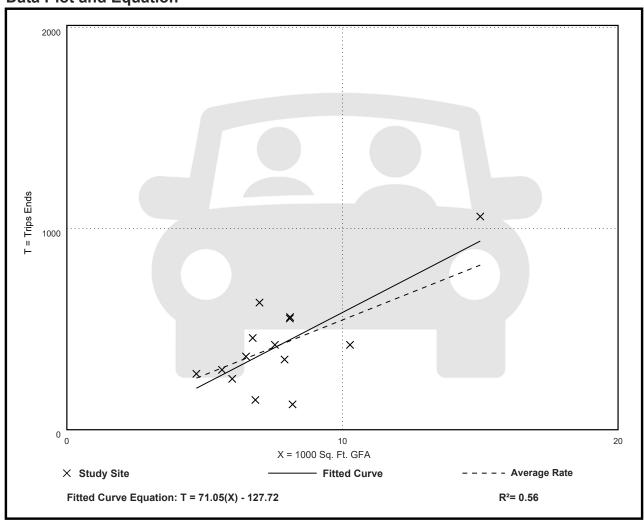
Number of Studies: 14 Avg. 1000 Sq. Ft. GFA: 8

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
54.57	15.38 - 90.41	20.19

Data Plot and Equation





Automobile Parts Sales (843)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

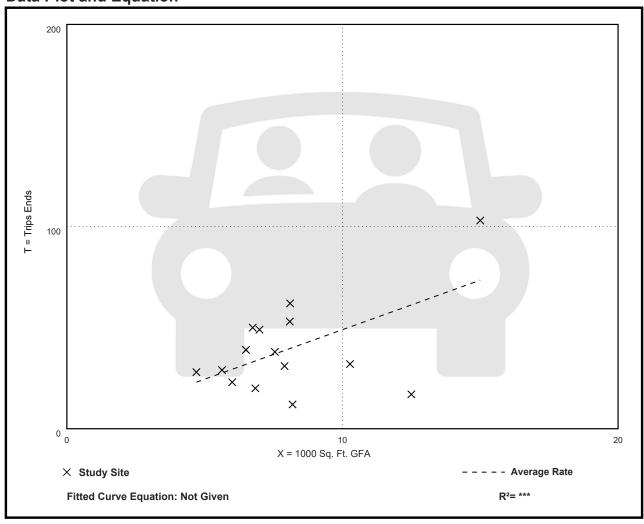
Number of Studies: 16 Avg. 1000 Sq. Ft. GFA: 8

Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.90	1.36 - 7.65	2.17

Data Plot and Equation





Automobile Parts Sales (843)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

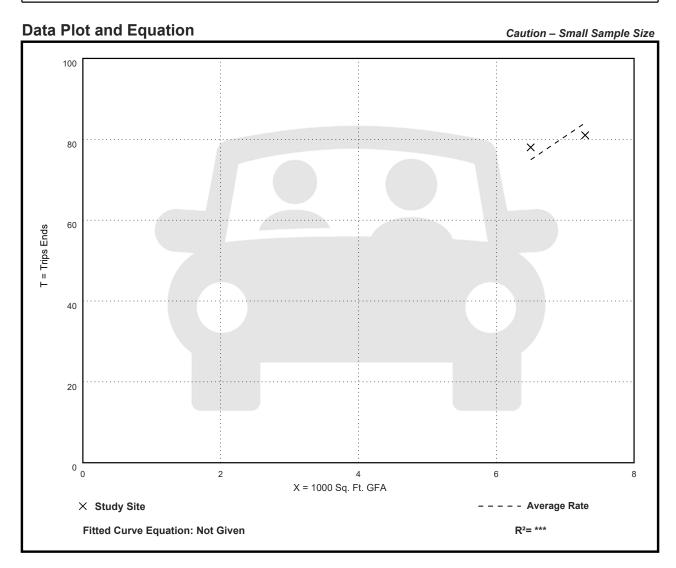
Setting/Location: General Urban/Suburban

Number of Studies: 2 Avg. 1000 Sq. Ft. GFA: 7

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.53	11.11 - 12.00	***







October 14, 2025

Trip Generation Letter – Proposed Hang10 Car Wash

Portsmouth, New Hampshire

CESO Trip Generation Calculations

ITE 943 - Automobile Parts Sales

For Weekday → 50% Enter/50% Exit

54.57 x 7.475 Car Wash Tunnel = 408 Trips

408 Trips x 0.50 (50%) = 204 Trips Enter/Exit

For PM Peak Hour → 48% Enter/52% Exit

4.90 x 7.475 Car Wash Tunnel = 37 Trips

37 x 0.48 (48%) and 37 x 0.52 (52%) = 18 Trips Enter/19 Trips Exit

For Saturday Peak Hour → 51% Enter/49% Exit

11.53 x 7.475 Car Wash Tunnel = 86 Trips

86 x 0.51 (51%) and 86 x 0.54 (49%) = 44 Trips Enter/42 Trips Exit

Land Use: 948 **Automated Car Wash**

Description

An automated car wash is a facility that allows for the mechanical cleaning of the exterior of vehicles. Manual cleaning service may also be available at the facility. Self-service car wash (Land Use 947) and car wash and detail center (Land Use 949) are related uses.

Additional Data

The sites were surveyed in the 1990s and the 2000s in New Jersey, New York, and Washington.

Source Numbers

552, 555, 585, 599, 954



Automated Car Wash (948)

Vehicle Trip Ends vs: Car Wash Tunnels

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

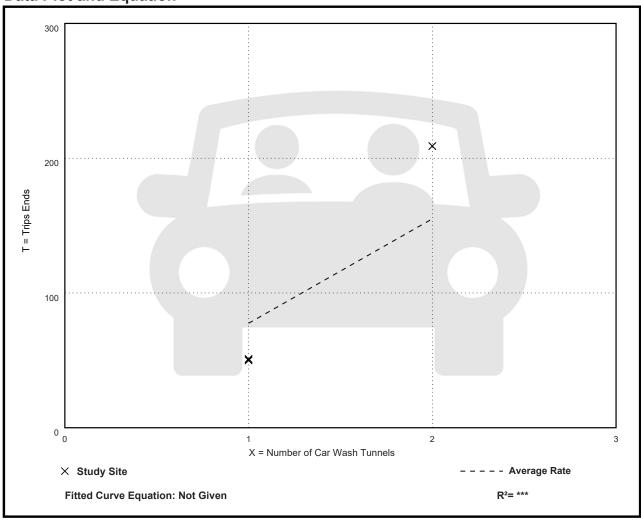
Number of Studies: 3 Avg. Num. of Car Wash Tunnels: 1

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
77.50	50.00 - 104.50	33.07

Data Plot and Equation





Automated Car Wash (948)

Vehicle Trip Ends vs: Car Wash Tunnels

On a: Saturday, Peak Hour of Generator

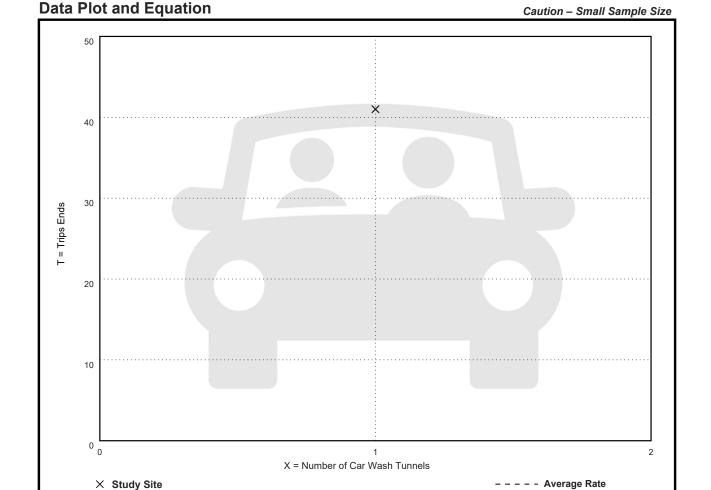
Setting/Location: General Urban/Suburban

Number of Studies: 1
Avg. Num. of Car Wash Tunnels: 1

Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Car Wash Tunnel

Average Rate	Range of Rates	Standard Deviation
41.00	41.00 - 41.00	***





R2= ***

Fitted Curve Equation: Not Given



August 21, 2025

Trip Generation Letter – Proposed Hang10 Car Wash

Portsmouth, New Hampshire

CESO Trip Generation Calculations

ITE 948 - Automated Car Wash

For PM Peak Hour → 50% Enter/50% Exit

 $77.50 \times 1 \text{ Car Wash Tunnel} = \frac{78 \text{ Trips}}{100}$

78 Trips x $0.50 (50\%) = \frac{39 \text{ Trips Enter/Exit}}{10.000 \text{ Trips Enter/Exit}}$

For Saturday Peak Hour → 46% Enter/54% Exit

41.00 x 1 Car Wash Tunnel = 41 Trips

Primary Trips = 41 x 0.46 (46%) and 41 x 0.54 (54%) = $\frac{19 \text{ Trips Enter}}{22 \text{ Trips Exit}}$