

NRPC 2022 Traffic Counting Program Summary



2022 Traffic Counting Summary

What are traffic counts?

- Annual regional requirement for NH DOT
 - List of required count locations provided in spring
 - Fieldwork typically done May through November
 - May also include locally requested counts

1	TOWN	Site ID	LOCATION	CLASS	Install Date	Sent to DOT	Accepted by	Starnex	PDF	PRN	XLS
2	TOTAL	118									
3	NASHUA	813150610000	TEMPLE ST EB WEST OF EAST PEARL ST		16-May	YES	YES	Done	Done	Done	Done
4	NASHUA	813150910000	WEST PEARL ST EB BETWEEN CHESTNUT ST AND WALNUT ST		7-Nov	YES	YES	Done	Done	Done	Done
5	NASHUA	813152650000	SPRING ST NB SOUTH OF EAST PEARL ST		9-May	YES	YES	Done	Done	Done	Done
6	AMHERST	820130520000	HORACE GREELEY RD NORTH OF AUSTIN RD	YES	8-Aug	YES	YES	Done	Done	Done	Done
7	AMHERST	820130543070	NH 101A (MILFORD RD) EAST OF NH 122 (EB-WB) (81013086-81	YES	8-Aug	YES	YES	Done	Done	Done	Done
8	AMHERST	820130620000	BOSTON POST RD OVER BEAVER BROOK NORTH OF NH 101		8-Aug	YES	YES	Done	Done	Done	Done
9	AMHERST	820130630000	THORNTONS FERRY RD OVER BEAVER BROOK	YES							
10	AMHERST	820130640000	BOSTON POST RD OVER BEAVER BROOK NORTH OF JONES	YES	8-Aug	YES	YES	Done	Done	Done	Done
11	AMHERST	820130930000	MANCHESTER RD OVER BEAVER BROOK		8-Aug	YES	YES	Done	Done	Done	Done
12	AMHERST	820130960000	BOSTON POST RD OVER SOUHEGAN RIVER	YES	8-Aug	YES	YES	Done	Done	Done	Done
13	HUDSON	222290217030	NH 102 (DERRY RD) AT LITCHFIELD TL	YES	27-Jun	YES	YES	Done	Done	Done	Done
14	HUDSON	822290300000	WEBSTER ST SOUTH OF ELM AVE	YES	20-Jun	YES	YES	Done	Done	Done	Done
15	HUDSON	822290410000	NH 102 (DERRY RD) NORTH OF EASY ST		20-Jun	YES	YES	Done	Done	Done	Done
16	HUDSON	822290423070	NH 111 (BURNHAM RD) NORTH OF CENTRAL ST (EB-WB) (8122	YES	31-Oct	YES	YES	Done	Done	Done	Done
17	HUDSON	822290440000	NH 3A (CENTRAL ST) WEST OF LIBRARY ST		13-Jun	YES	YES	Done	Done	Done	Done
18	HUDSON	822290510000	NH 111 (FERRY ST) EAST OF LIBRARY ST		13-Jun	YES	YES	Done	Done	Done	Done
19	HUDSON	822290545010	DRACUT RD AT MASS SL (SB-NB) (81229094-81229095)	YES	27-Jun	YES	YES	Done	Done	Done	Done
20	HUDSON	822290600000	KIMBALL HILL RD SOUTH OF NH 111	YES	24-Oct	YES	YES	Done	Done	Done	Done
21	HUDSON	822290690000	BELKNAP RD SOUTH OF CENTRAL ST	YES	24-Oct	YES	YES	Done	Done	Done	Done
22	HUDSON	822290863070	OLD DERRY RD EAST OF NH 102	YES	11-Jul	YES	YES	Done	Done	Done	Done
23	LITCHFIELD	822630120000	ALBUQUERQUE AVE NORTH OF PAGE RD	YES	27-Jun	YES	YES	Done	Done	Done	Done
24	LITCHFIELD	822630120000	ALBUQUERQUE AVE NORTH OF PAGE RD	YES	27-Jun	YES	YES	Done	Done	Done	Done

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Value yesterday. Enhance tomorrow. Plan today

2022 Traffic Counting Summary

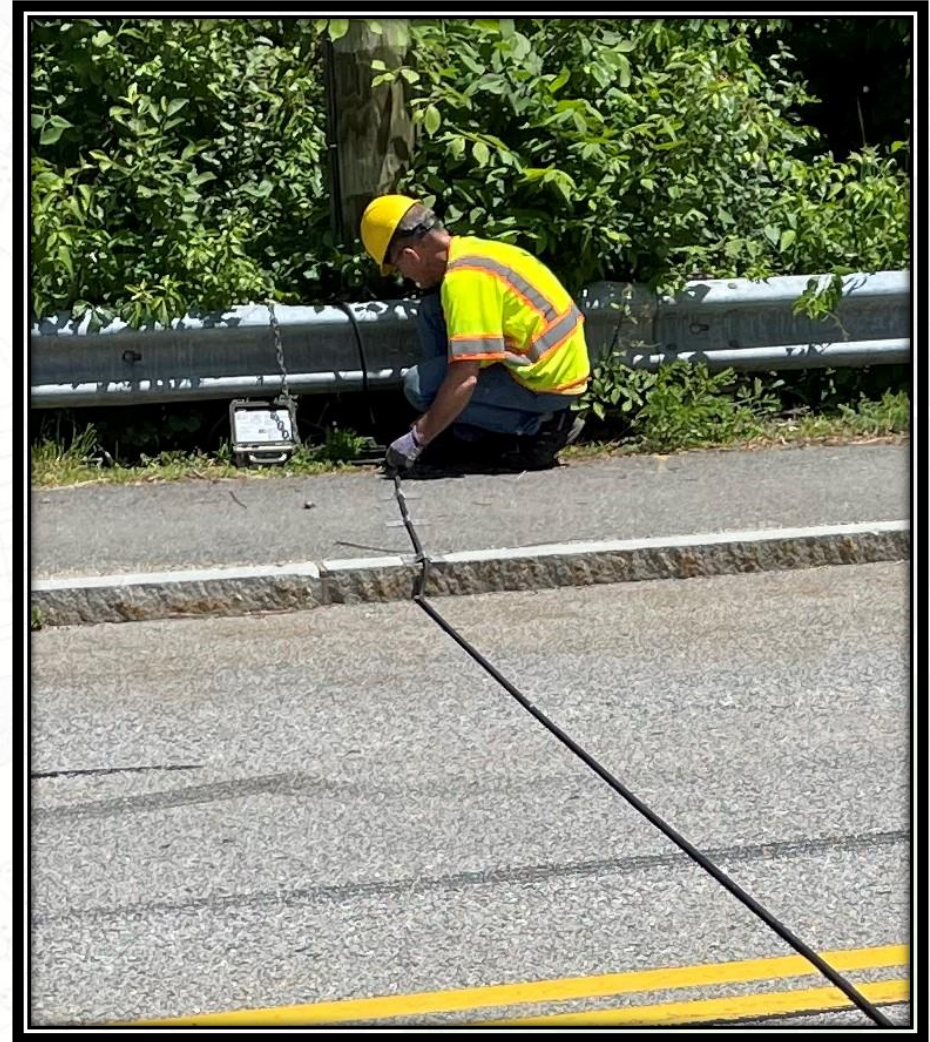
Types of counts:

- **DOT: Required for HPMS (Highway Performance Monitoring System). Tuesday-Thursday, 24-hours, 15-minute intervals, no holidays**
 - ~120 locations/year on a 3-year rotating schedule
- **Local counts**
 - 32 total for 2022 in communities of Amherst, Hudson, Milford, Nashua and Pelham
- **Volume**
- **Classification**

2022 Traffic Counting Summary

Volume

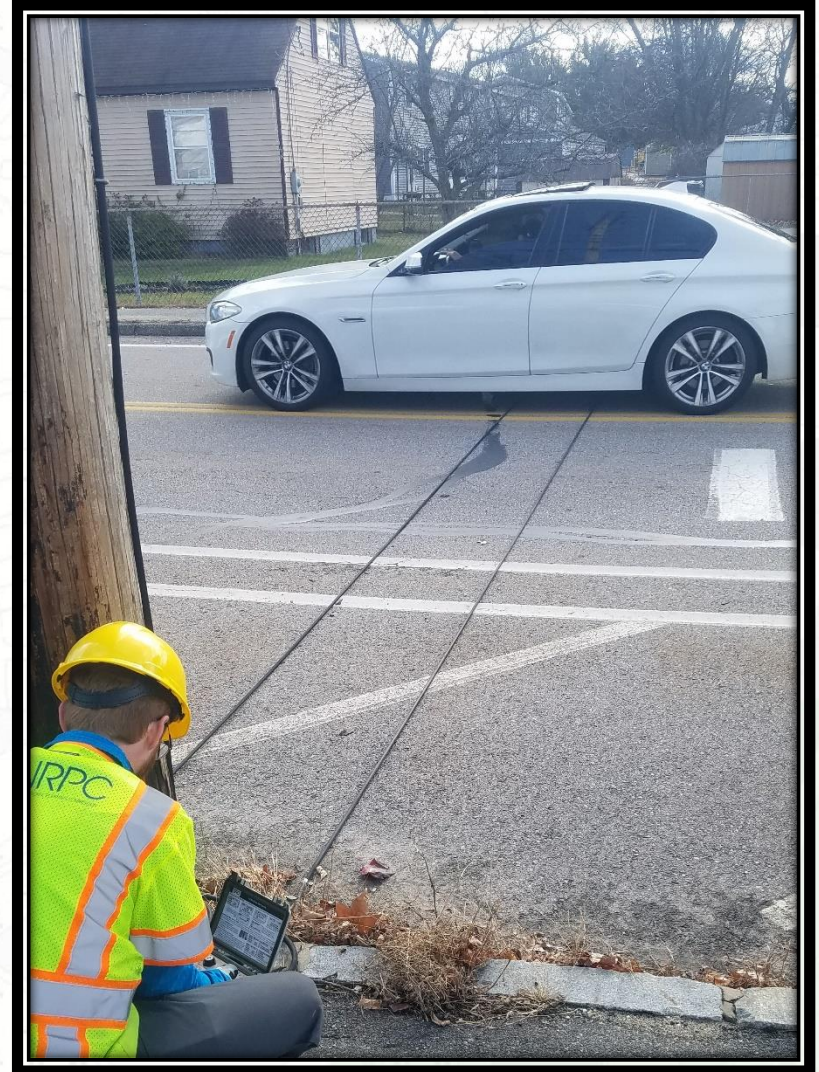
- Single tube in roadway, only counts number of vehicles passing a single point
- Can also be directional but requires two tubes
- Historically, 90% of all DOT counts were volume only



2022 Traffic Counting Summary

Classification

- Class counts require 2 tubes in the roadway
- Capable of collecting data for volume, speed, direction and vehicle type
- 13 different vehicle classifications
- Historically, 10% of all DOT counts were classification



2022 Traffic Counting Summary

FHWA Vehicle Classifications

1. Motorcycles
2 axles, 2 or 3 tires



2. Passenger Cars
2 axles, can have 1- or 2-axle trailers



3. Pickups, Panels, Vans
2 axles, 4-tire single units
Can have 1 or 2 axle trailers



4. Buses
2 or 3 axles, full length



5. Single Unit 2-Axle Trucks
2 axles, 6 tires (dual rear tires), single-unit



6. Single Unit 3-Axle Trucks
3 axles, single unit



7. Single Unit 4 or More-Axle Trucks
4 or more axles, single unit



8. Single Trailer 3- or 4-Axle Trucks
3 or 4 axles, single trailer



9. Single Trailer 5-Axle Trucks
5 axles, single trailer



10. Single Trailer 6 or More-Axle Trucks
6 or more axles, single trailer



11. Multi-Trailer 5 or Less-Axle Trucks
5 or less axles, multiple trailers



12. Multi-Trailer 6-Axle Trucks
6 axles, multiple trailers



13. Multi-Trailer 7 or More-Axle Trucks
7 or more axles, multiple trailers



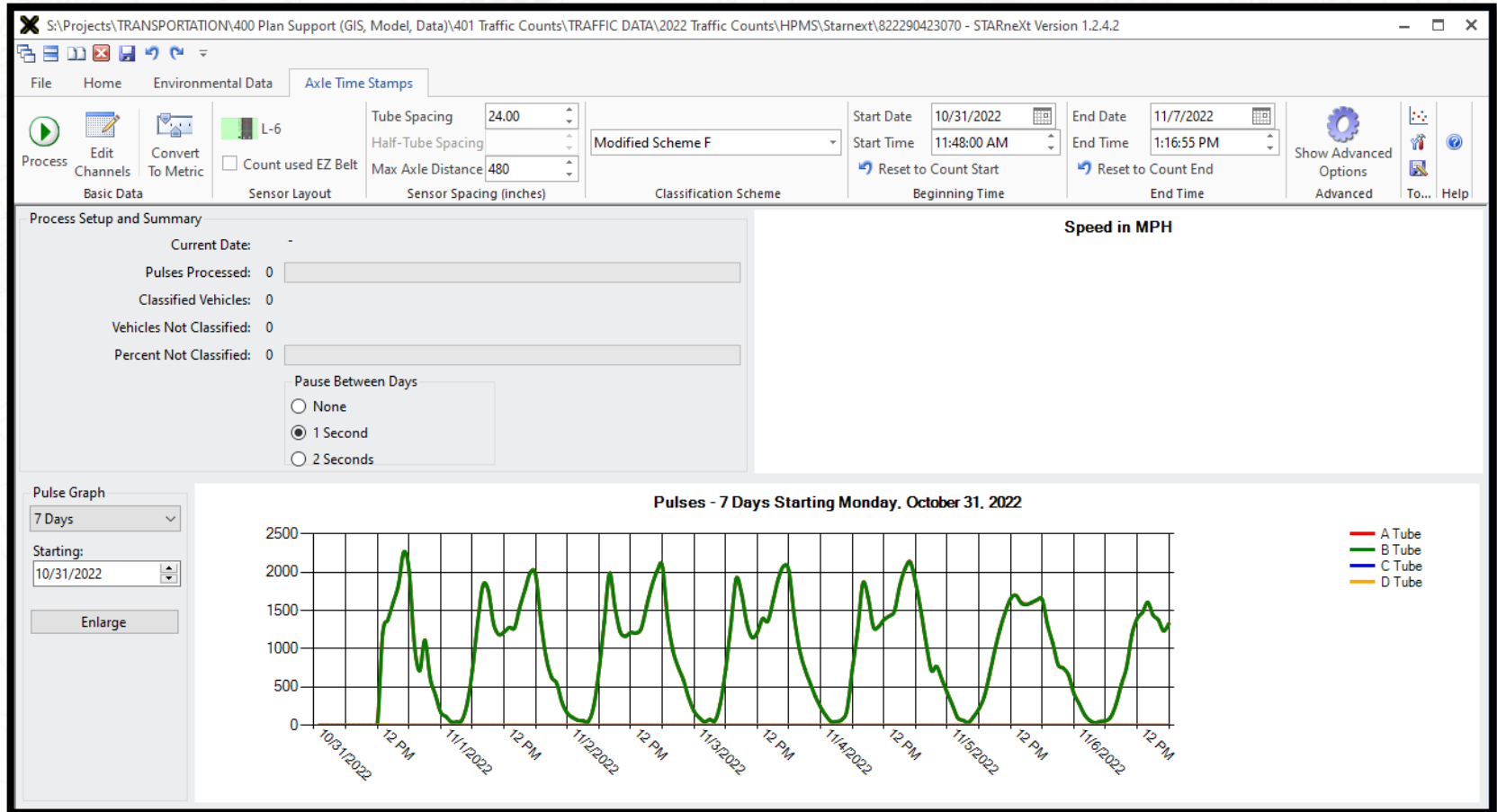
2022 Traffic Counting Summary

What do we do with the data?

- **DOT HPMS count data is processed and sent to DOT staff to be entered into the Transportation Data Management System (MS2). The data is used to:**
 - Generate AADT (Annual Average Daily Traffic)
 - Analyze trends in traffic
 - Create projections for future years
- **NRPC posts entire week of data through our website via the NRPC Traffic Count Viewer. Data can be viewed by anyone and contains traffic data from as far back as 2010**

2022 Traffic Counting Summary

How it looks in the field (STARnext)



2022 Traffic Counting Summary

What we send to DOT (CSV file)

```
822630505010.PRN - Notepad
File Edit Format View Help
822630505010 000000000000 01 0000 102522 2400 102722 0015 00 2 100 0576 000
0000 0000 0000 0000 0000 0000 0000 0000 0000 20000000
'Town: Litchfield 'HPMS - 2022 'October, 2022
02 14 0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013
01 02 0001 0002
00 00
01 01 2 2400 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 2400 0000 0000 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0015 0000 0000 0004 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0015 0000 0000 0002 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0030 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0030 0000 0000 0002 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0045 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0045 0000 0000 0003 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0100 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0100 0000 0000 0003 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0115 0000 0000 0003 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0115 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0130 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0130 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0145 0000 0000 0001 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0145 0000 0000 0001 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0200 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0200 0000 0000 0002 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0215 0000 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0215 0000 0000 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0230 0000 0000 0002 0001 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0230 0000 0000 0000 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0245 0000 0000 0000 0000 0000 0000 0000 0000 0000 0001 0000 0000 0000 0000
01 02 0 0245 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0300 0000 0000 0002 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 02 0 0300 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
01 01 2 0315 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000
```

2022 Traffic Counting Summary

NH DOT Transportation Data Management System

The screenshot displays the NH DOT Transportation Data Management System interface. On the left, there is a navigation menu with options like Home, Login, Locate, and Locate All. Below this is a record navigation bar showing 'Record 1 of 1'. The main content area is divided into two sections: 'Record' and 'STATION DATA'. The 'Record' section contains a table with various attributes for the selected location. The 'STATION DATA' section contains a table with traffic counting data for the years 2017 through 2021. On the right, a map shows the location of the station in Hillsborough, NH, with a pop-up window displaying the location ID (82297029), location name (Industrial Dr), direction (2-WAY), and traffic counts for AADT, EB, and WB for the year 2021.

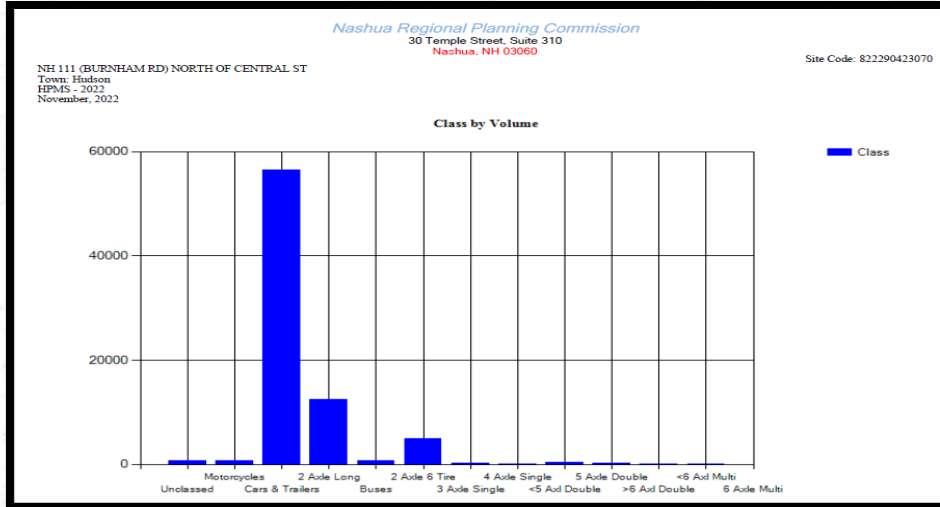
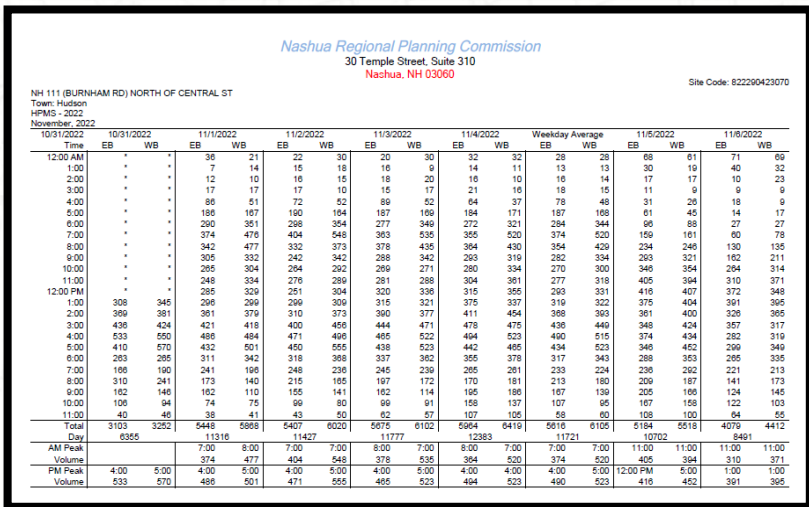
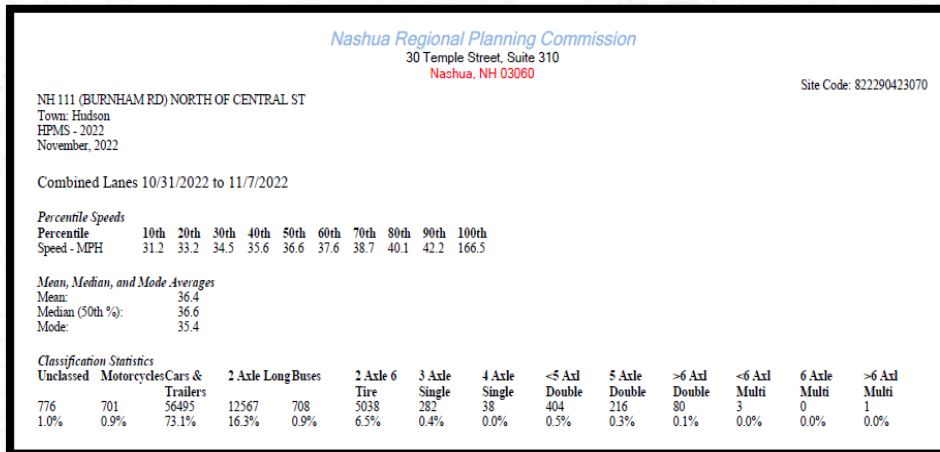
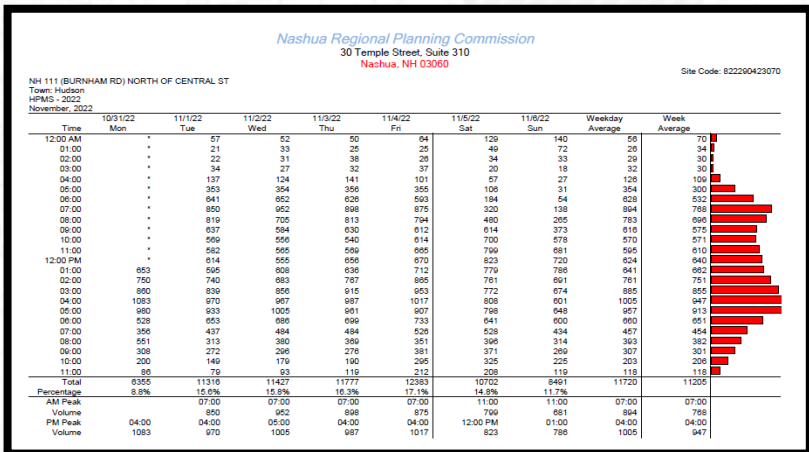
Record	1 of 1		Goto Record	go
Location ID	81315035	MPO ID		
Type	SPOT	HPMS ID		
On NHS	Yes	On HPMS	Yes	
LRS ID	S0000111	LRS Loc Pt.		
SF Group	04	Route Type		
AF Group	04	Route		
GF Group	E	Active	Yes	
Class Dist Grp	Default	Category	4	
Seas Class Grp	Default			
WIM Group	Default			
QC Group	Default			
Funct'l Class	Other Principal Arterial	Milepost		
Located On	Kinsley St			
Loc On Alias	NH 111 (KINSLEY ST) EB WEST OF RITTER ST			

STATION DATA								
Directions: 1-WAY								
AADT	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2021	8,717 ³		10		7,925 (91%)	792 (9%)	Grown from 2020
	2020	7,860	803	10		7,096 (90%)	764 (10%)	
	2019	10,973 ³		9		10,050 (92%)	923 (8%)	Grown from 2018
	2018	10,843 ³		9		9,997 (92%)	846 (8%)	Grown from 2017
	2017	10,630	923	9		9,669 (91%)	960 (9%)	

2022 Traffic Counting Summary

How we present the data on the viewer

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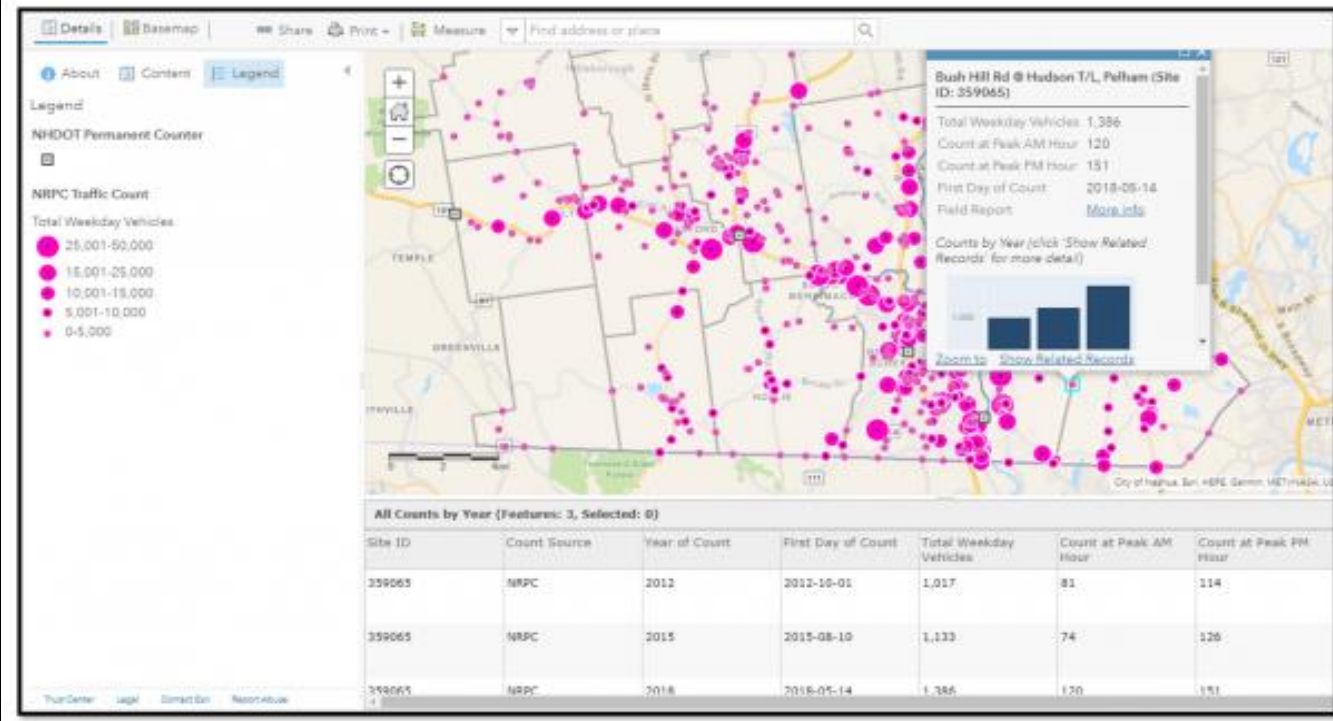
Value yesterday. Enhance tomorrow. Plan today.

2022 Traffic Counting Summary

NRPC Traffic Counts

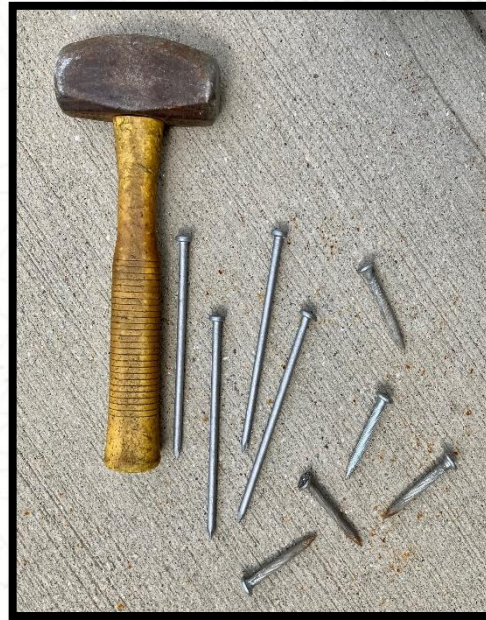
https://www.nashuarpc.org/transportation/traffic_counts.php

View the NRPC Traffic Count Viewer



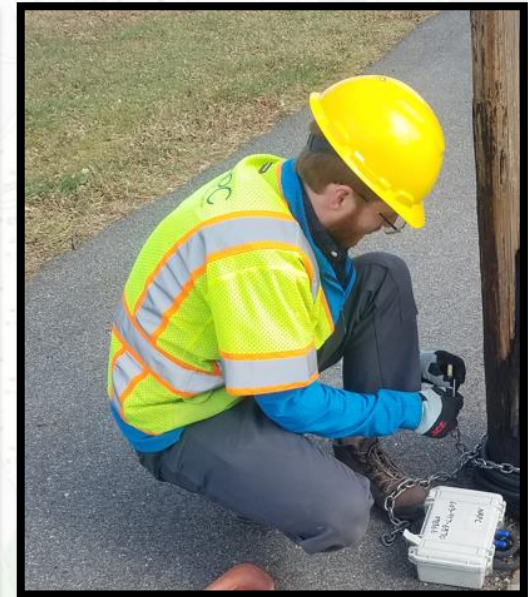
2022 Traffic Counting Summary

Fieldwork equipment



2022 Traffic Counting Summary

Fieldwork safety



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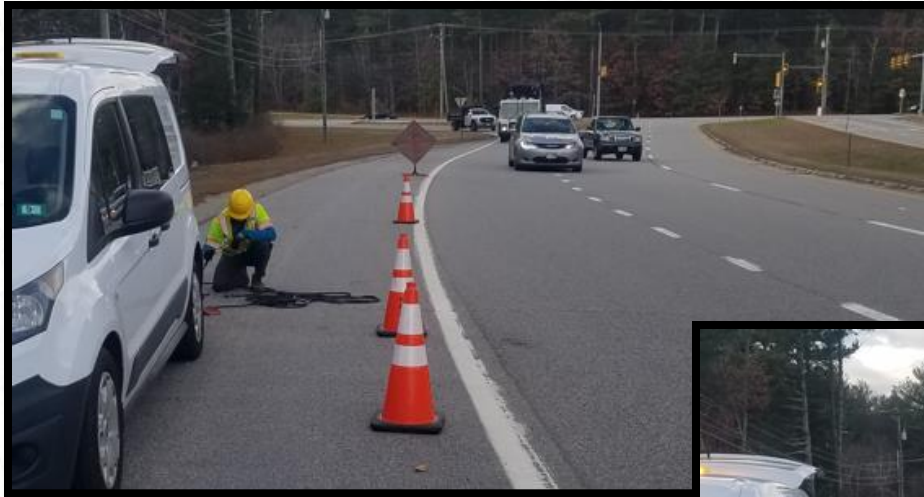
2022 Traffic Counting Summary

Safety considerations

- **Distracted drivers**
- **Speeding**
- **Low visibility**
 - Large trucks and small cars
 - Inclement weather
 - Blind curves
 - Obstructions to view
- **Failure of operator to move over to a safe distance from our work zone**

2022 Traffic Counting Summary

Fieldwork safety



2022 Traffic Counting Summary

Fieldwork safety



2022 Traffic Counting Summary

Fieldwork safety



2022 Traffic Counting Summary

New for 2022

DOT increases class counts from 10% to 30% of total 37 class counts for 2022

How this affects NRPC fieldwork staff:

- Increased potential for bad counts/data (punctured, broken, or cut tubes, clips pulled from asphalt, counter box failure, etc.)
- Increased safety risks with more time in the roadway
- Need for more tubes, clips, nails, and counters
- Longer days out installing counters and collecting data
- Risk of incomplete data for the season

2022 Traffic Counting Summary

The future of traffic counting

➤ **Leetron Vision AI-100 camera traffic counter**

- Collects class data using artificial intelligence technology
- Major safety improvement for most-hazardous locations reducing the amount of time spent in the road setting up counts
- Quick setup to save time
- NH DOT uses this technology for their traffic counts
- Future potential to collect bicycle/pedestrian data

2022 Traffic Counting Summary

The future of traffic counts



2022 Traffic Counting Summary

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Thank you for your time!

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