

District 5
Certcode 0111-0

**CERTIFICATE OF HIGHWAY MILEAGE
YEAR ENDING FEBRUARY 10, 2020**

Fill out form, make and file copy with the Town Clerk, and mail ORIGINAL, before February 20, 2020 to:
Vermont Agency of Transportation, Division of Policy, Planning and Intermodal Development, Mapping Section
219 N. Main Street, Barre, VT 05641.

We, the members of the legislative body of MIDDLEBURY in ADDISON County
on an oath state that the mileage of highways, according to Vermont Statutes Annotated, Title 19, Section 305,
added 1985, is as follows:

PART I - CHANGES TOTALS - Please fill in and calculate totals.

Town Highways	Previous Mileage	Added Mileage	Subtracted Mileage	Total	Scenic Highways
Class 1	3.889				0.000
Class 2	15.720				0.000
Class 3	46.45				0.000
State Highway *	16.827		032	16.795	1.386
Total	82.886			82.854	1.386
* Class 1 Lane	0.510				
* Class 4	2.89				0.000
* Legal Trail	0.65				

Total by S.Moulton 2020-07-08

S.M.

* Mileage for Class 1 Lane, Class 4, and Legal Trail classifications are NOT included in total.

PART II - INFORMATION AND DESCRIPTION OF CHANGES SHOWN ABOVE.

1. NEW HIGHWAYS: Please attach Selectmen's "Certificate of Completion and Opening".

2. DISCONTINUED: Please attach SIGNED copy of proceedings (minutes of meeting).

3. RECLASSIFIED/REMEASURED: Please attach SIGNED copy of proceedings (minutes of meeting).

* Per Kerry Alley, VTrans Mapping section, Route 125 was remapped, and the remeasurement resulted in a (.032) mile change in distance on the Middlebury portion of the road.

4. SCENIC HIGHWAYS: Please attach a copy of order designating/discontinuing Scenic Highways.

Received

FEB 19 2020

Policy, Planning & Intermodal
Development Division

IF THERE ARE NO CHANGES IN MILEAGE: Check box and sign below.

PART III - SIGNATURES - PLEASE SIGN.

Selectmen/ Aldermen/ Trustees Signatures:

Kathleen Ramsay

T/C/V Clerk Signature:

[Signature]

Date Filed: 2-13-2020

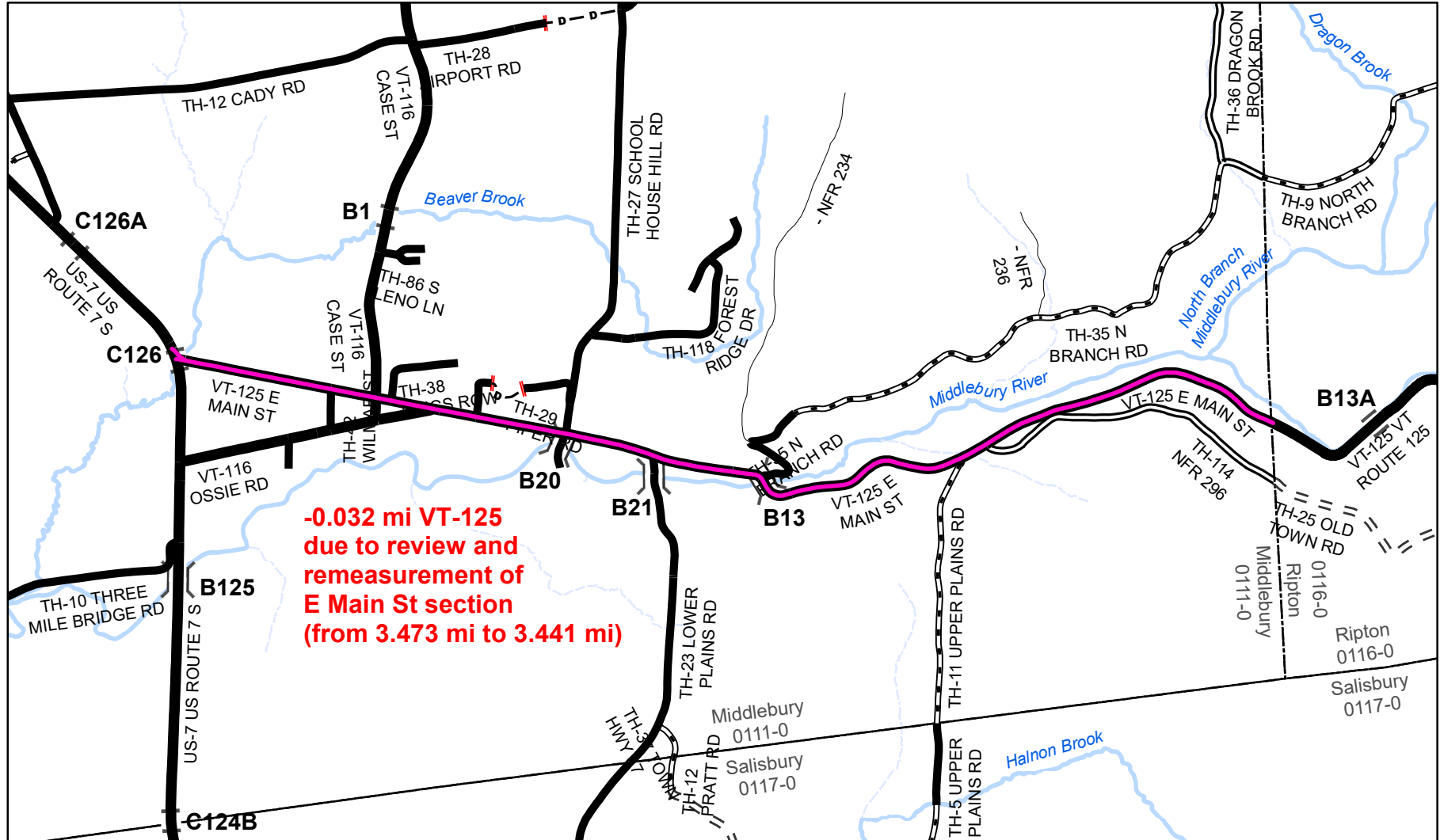
Please sign ORIGINAL and return it for Transportation signature.

AGENCY OF TRANSPORTATION APPROVAL: Signed copy will be returned to T/C/V Clerk.

APPROVED:

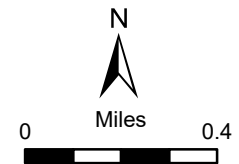
 E-SIGNED by Johnathan Croft on 2020-07-08 13:39:33 EDT
Representative, Agency of Transportation

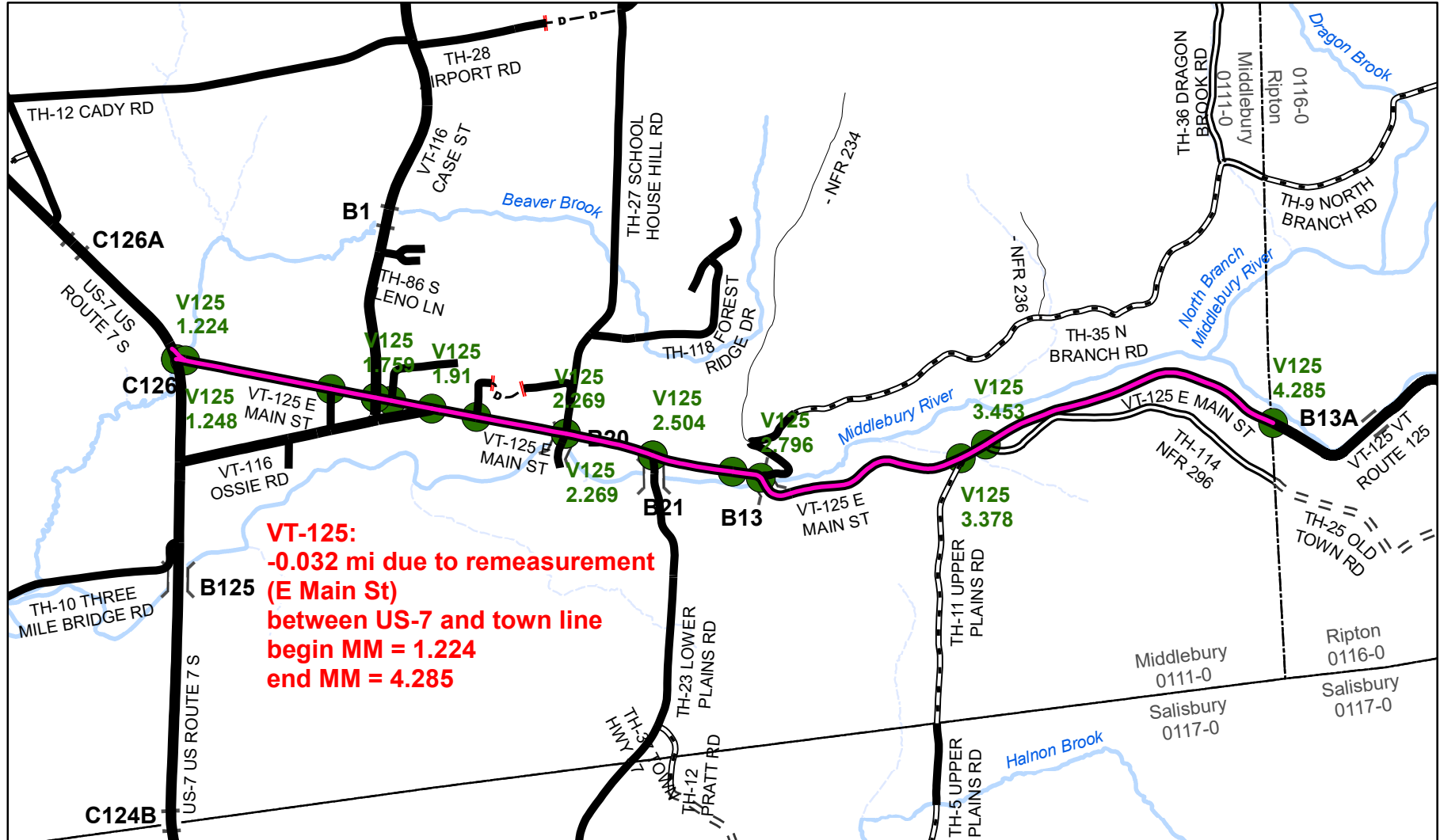
DATE: July 08, 2020



**Mileage Certificate Change 2020
MIDDLEBURY
(CERTCODE: 0111-0)**

Mapping Section
Division of Policy, Planning and Intermodal Development
Vermont Agency of Transportation -- February 28, 2020

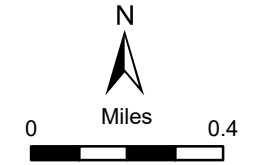




VT-125:
-0.032 mi due to remeasurement
(E Main St)
begin MM = 1.224
end MM = 4.285

Mileage Certificate Change 2020
MIDDLEBURY
 (CERTCODE: 0111-0)

Mapping Section
 Division of Policy, Planning and Intermodal Development
 Vermont Agency of Transportation -- February 28, 2020



VT-125 Middlebury							
2019							
	New Stations	New Mileage	New Distance	New ETE Mileage	STATION	LR_TWN	TWN_MM
RDFLNAME					TWN_ST	TWN_LR	TWN_MM
US ROUTE 7	6463	1.224	1.224	15.532	6463	V125-0111	1.224
E MAIN ST RAMP	6592	1.248	0.024	15.556	6600	V125-0111	1.25
WILMAR ST	8656	1.639	0.391	15.947	8834	V125-0111	1.673
CASE ST	9288	1.759	0.120	16.067	9473	V125-0111	1.794
KINGS ROW	9513	1.802	0.043	16.110	9659	V125-0111	1.829
OSSIE RD	10083	1.91	0.108	16.218	10259	V125-0111	1.943
MAPLE CT	10714	2.029	0.119	16.337	10922	V125-0111	2.069
SCHOOL HOUSE HILL RD	11978	2.269	0.240	16.577	12158	V125-0111	2.303
LOWER PLAINS RD	13221	2.504	0.235	16.812	13403	V125-0111	2.538
N BRANCH RD	14762	2.796	0.292	17.104	14878	V125-0111	2.818
UPPER PLAINS RD	17835	3.378	0.582	17.686	18063	V125-0111	3.421
TH-114	18231	3.453	0.075	17.761	18448	V125-0111	3.494
RIPTON TOWN LINE	22624	4.285	0.832	18.593	22796	V125-0111	4.317
			4.285				
	396						
	4363						
		Actual Change	-0.032				
		Original Mileage	4.317				
		Updated Mileage	4.285				

								Inventory	Joe's Inventory
RL_DISTANCE	AOTMILES	ARCMILES	Delta - RL vs ARCMILES	ARCMILES Running Total	Project Station	Project MM 06c222	Project Distance	Primary Station	Primary Mileage
1.224	1.224	1.224	0.000	1.22400				6463	1.224
0.026	0.026	0.024431	-0.002	1.24843			0.000		
0.423	0.423	0.390933	-0.032	1.63936	7730	1.464	1.464	8659	1.640
0.121	0.121	0.119715	-0.001	1.75908	8364	1.584	0.120	9288	1.759
0.035	0.035	0.042654	0.008	1.80173	8591	1.627	0.043	9509	1.801
0.114	0.127	0.107899	-0.019	1.90963	9150	1.733	0.106	10074	1.908
0.126	0.113	0.11947	0.006	2.02910	9789	1.854	0.121	10708	2.028
0.234	0.234	0.239426	0.005	2.26853	11062	2.095	0.241	11986	2.270
0.235	0.236	0.235467	-0.001	2.50400	12302	2.33	0.235	13226	2.505
0.280	0.279	0.291879	0.013	2.79587	13844	2.622	0.292	14763	2.796
0.603	0.603	0.57907	-0.024	3.37494	16959	3.212	0.590	17862	3.383
0.073	0.073	0.074913	0.002	3.44986			-3.212		
0.823	0.823	0.831033	0.008	4.28089	21685		0.000	22641	4.288
4.317	4.317	4.281	-0.036						

Joe's Inventory		Inventory	Inventory	Inventory		
Primary Distance	Delta Inventory vs. ArcMiles	Secondary Station	Secondary Mileage	Secondary Distance	Proposed New Stations	New Distance Mileage
1.224			0		6463	1.224
			0	0.000	6592	0.024 ✓
0.416	0.025		0	0.000	8656	0.391 ✓
0.119	-0.001		0	0.000	9288	0.12 ✓
0.042	-0.001		0	0.000	9513	0.043 ✓
0.107	-0.001		0	0.000	10083	0.108 ✓
0.120	0.001		0	0.000	10714	0.12 ✓
0.242	0.003		0	0.000	11978	0.239 ✓
0.235	0.000		0	0.000	13221	0.235 ✓
0.291	-0.001		0	0.000	14762	0.292 ✓
0.587	0.008		0	0.000	17819	0.579 ✓
			0	0.000	18215	0.075 ✓
0.905	0.074		0	0.000	22603	0.831 ✓
4.288						4.281

- 0.119
 - 0.240
 - 0.582 } train
 - 0.832 }
 3.057 east
 west
 0.334

 3.391
 VT125
 rdsmall
 2022-2-27

Moulton, Sara

From: Croft, Johnathan
Sent: Thursday, February 27, 2020 2:56 PM
To: Moulton, Sara
Subject: FW: Middlebury VT-125, East of US-7
Attachments: VT_125_Middlebury_Mileage.xls

FYI

Johnathan

Johnathan Croft | Mapping Section Chief
Vermont Agency of Transportation
219 North Main Street | Barre, VT 05641
802-828-2600 | johnathan.croft@vermont.gov



From: Croft, Johnathan
Sent: Thursday, February 6, 2020 4:26 PM
To: Kelly, Joe <Joe.Kelly@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>; Alley, Kerry <Kerry.Alley@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good afternoon Joe,

I have looked into the Middlebury – Ripton town boundary some more. The existing sign is 25 feet east of where we had the town boundary and the sign is near the location on at 1955 plan for the boundary. Where we had the boundary mapped was also 31 feet west of the boundary between Middlebury and Ripton on a 2011 project plan. Interestingly, the Google Street view photo show the stationing from the 2011 project painted on the pavement at the boundary sign, where it is currently located. The plans and the sign don't match their locations. The parcel data shows the boundary even farther to the west than were we have the boundary mapped.

So, I have opted to use the sign location for now, since it is roughly the location from the 1955 project plan. The total mileage for VT-125 is 4.285 miles, based on my calculations from the geometry measures and addition of 0.004 miles for terrain. The route has gone from 4.317 miles in length to 4.285 miles, with a delta of -0.032 miles. This will be reflected in the linear reference system to be posted by June 1st.

Please find attached the updated spreadsheet of the stations and mileage. Thanks for your patience with this.

Johnathan

Johnathan Croft | Mapping Section Chief
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From: Croft, Johnathan
Sent: Monday, February 3, 2020 4:55 PM
To: Kelly, Joe <Joe.Kelly@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good afternoon Joe,

I am not sure if the town line is mapped well in our data or not, as there is some differences between Middlebury and Ripton's parcel data and where the line is. The sign might be in the right place, or possibly not. Before the sign gets moved, it would be good to figure out the proper location of the sign and make adjustments at that point. The sign location might be introducing a little bit of difference in the measured mileage than in the GIS geometry mileage. I need to look into this a little more, so the mileage on the last arc in Middlebury on VT-125 needs to be nailed down, so I have a tentative measure, but it is subject to change. We are 0.008 miles apart from the new mileage to your measures.

Regarding the arcs being Z-aware, I haven't applied the elevation to the arcs yet, but do want to do this. I ran a test last week to see what we were talking about for differences in mileage between planimetric and in a 3D view. This required applying the centerline to the digital elevation model from the lidar data and I got some interesting results. Please take a look at the attached shapefile and the fields at the end of the table, this provides the delta of the geometry mileage and 3D mileage. I expected to see a lot of terrain effects, but the last 3 arcs before the town line gave a delta of 0.003113 miles, so in the realm of 15 feet difference. This does make a difference, but not as huge as I thought it might be. This is essentially the addition of 0.002 miles on the arc just past the bridge arc, and 0.001 for the last arc before the town line. I can account for these in the spreadsheet, which will change the overall mileage by the 0.003. Of note, the arc on the bridge shows a huge delta because the digital elevation model does not include the bridge, so the arc gets the surface data down to the stream and back up, gaining significant extra length due to the terrain.

I have attached the modified spreadsheet of mileage with terrain added for the last 3 arcs.

Johnathan

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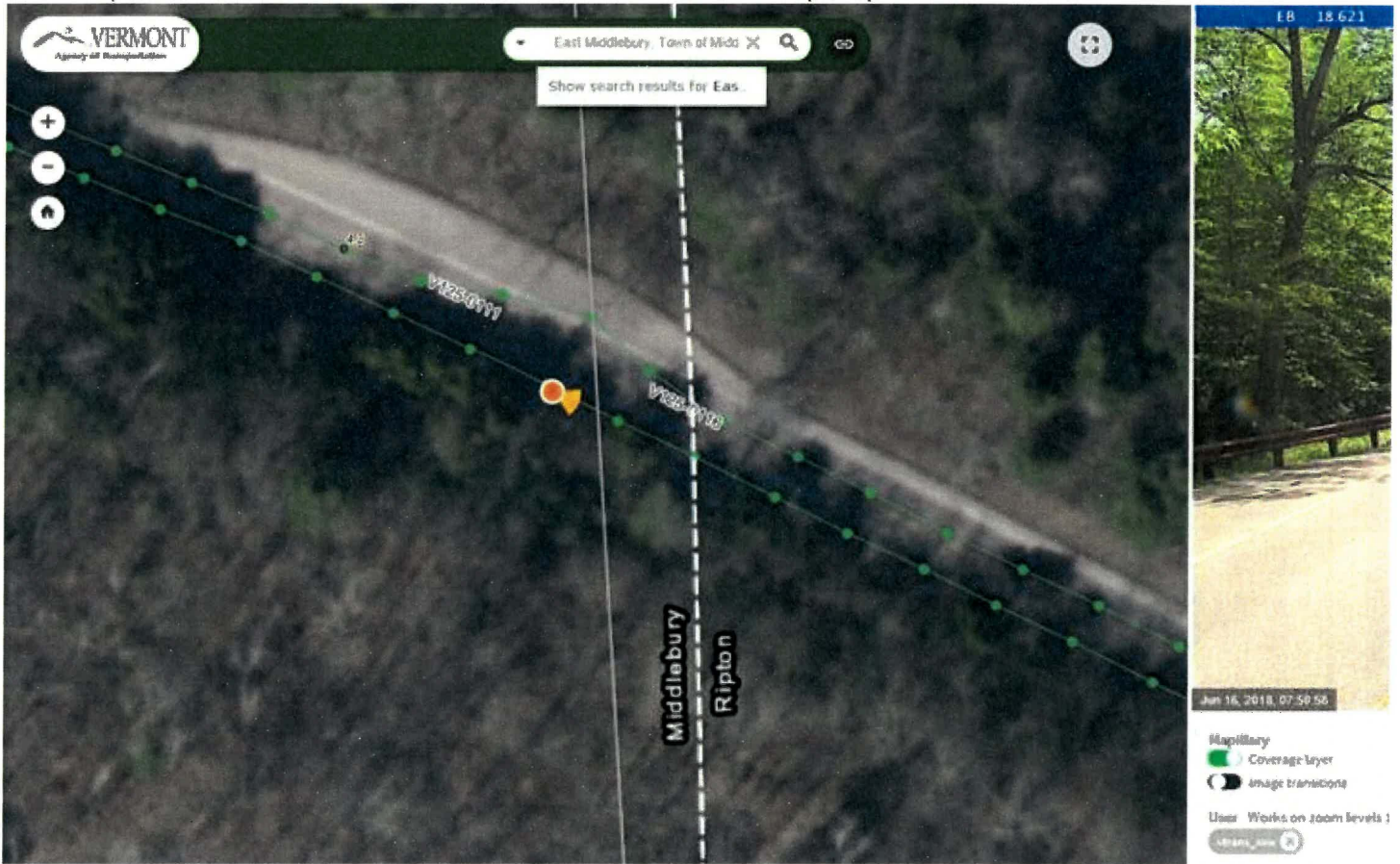


From: Kelly, Joe <Joe.Kelly@vermont.gov>
Sent: Monday, February 3, 2020 11:25 AM
To: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good Monday morning Gentlemen –

Thank you so much for all the work you have done on this stretch of roadway. I see that we compare quite favorably for all intersections along the flat section of VT-125 (US-7 to bridge #13 at mp 2.85+/-). At this point the roadway climbs considerably (400 FT+/- elevation change) as one heads easterly to the town line. I am wondering if your measurements for Upper Plains Rd, TH-114 and the Ripton town line account for these vertical changes (Z-aware).

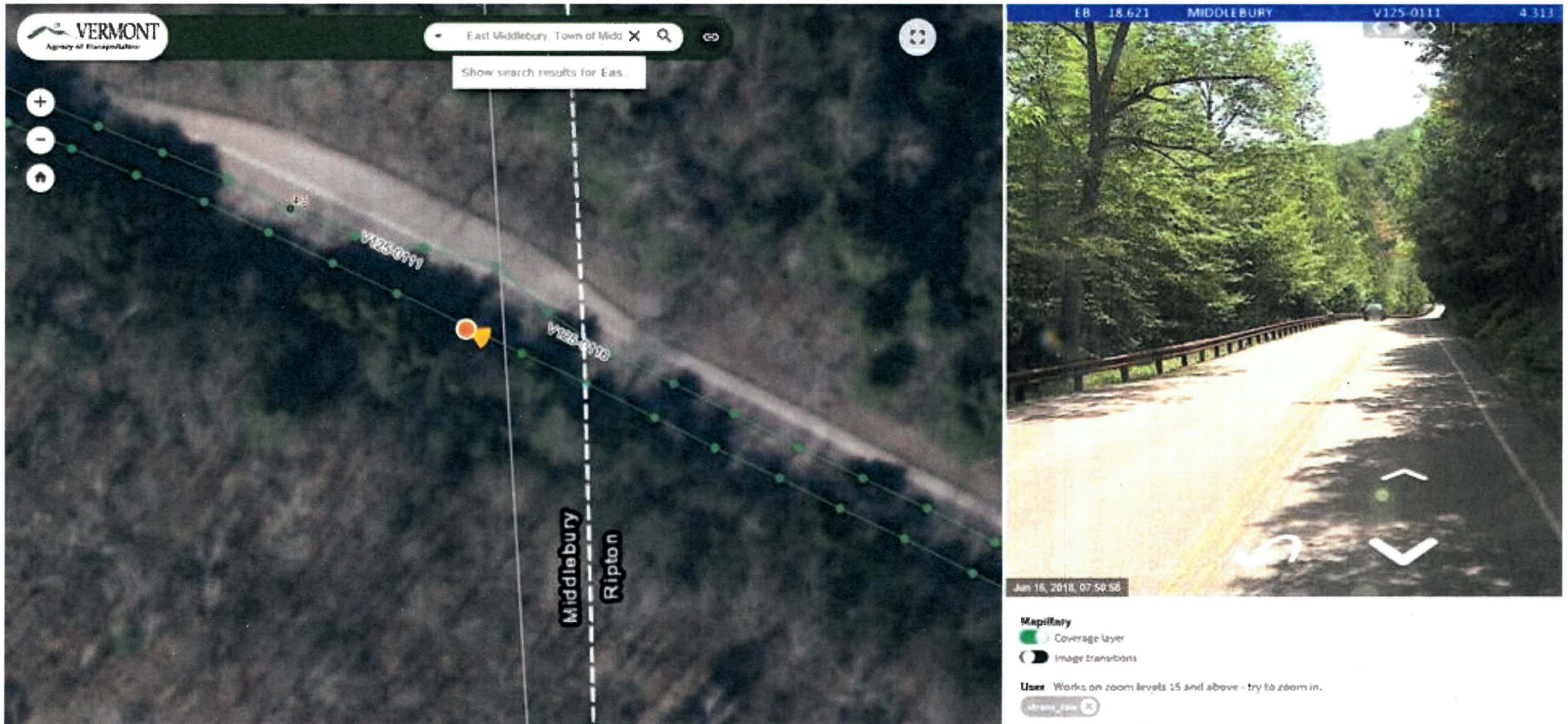
The location of the current Middlebury/Ripton town line sign assembly is installed a little further east of where the line in ArcMap indicates. It is closer to the white dashed line shown in Mapillary:



Once all is nailed down solid, I'll take a look at the town line sign assembly to see if it can be relocated. There is lots of ledge in the area.

J. (aka Very Happy Camper).

Joseph A. Kelly, SW Regional Traffic Safety Investigator
Operations & Safety Bureau | Highway Division
2178 Airport Road | Berlin, VT 05641
802-279-8821 cell joe.kelly@vermont.gov



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From: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Sent: Thursday, January 30, 2020 4:17 PM
To: Kelly, Joe <Joe.Kelly@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good afternoon Joe,

I wanted to send along a spreadsheet of calculated stations and mileage based on the road centerline geometry that we have updated based on the latest project data and orthophotography. Some of these values match very well with your stations, and some are a bit different. Can you take a look at this info and give it a gut check? I think the measures look good, but are different from some of your numbers and I might be missing something. The one slight difference is where we have the Middlebury / Ripton town boundary, which might be 10 to 15 feet different than your measured mileage.

If you want to access the latest road centerline data layer, you can add the attached layer file to ArcMap to get the nightly cut of the RDS, so you can see changes we have made the day before. Fresh updates made daily.

Please let me know your thoughts on this.

Johnathan

Johnathan Croft | Mapping Section Chief
Vermont Agency of Transportation
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802-828-2600 | johnathan.croft@vermont.gov



From: Kelly, Joe <Joe.Kelly@vermont.gov>
Sent: Wednesday, January 22, 2020 2:29 PM
To: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: Re: Middlebury VT-125, East of US-7

Thank you.

Get [Outlook for iOS](#)

From: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Sent: Wednesday, January 22, 2020 2:28:12 PM
To: Kelly, Joe <Joe.Kelly@vermont.gov>

Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

We can work on this and get you an update before the middle of February. I think we should be able to get this solved, based on the info that you provided and some project plans that are available.

Johnathan

Johnathan Croft | Mapping Section Chief
Vermont Agency of Transportation
219 North Main Street | Barre, VT 05641
802-828-2600 | johnathan.croft@vermont.gov



From: Kelly, Joe <Joe.Kelly@vermont.gov>
Sent: Wednesday, January 22, 2020 2:25 PM
To: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Thank you both very much.

Most of the time my inquiries are open-ended and are simply inconsistencies that I notice and pass on to you. This one, however is tied to possible changes to speed limits and no parking zone certificates at the next Traffic Committee meeting (March 9th). I'm hoping not to be too much of a pest, but if I could have validated numbers by mid-February I'd be a very happy camper.

Please let me know if you need field assistance or if the town line sign assembly needs to be relocated.

Much appreciated,
J.

From: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Sent: Wednesday, January 22, 2020 2:08 PM
To: Kelly, Joe <Joe.Kelly@vermont.gov>
Cc: Trunzo, Michael <Michael.Trunzo@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good afternoon Joe,

Michael did a bunch of work looking into this back in December and passed it over to me and I dropped the ball. I need to get back onto this and review what Michael put together and your mileage values to determine the solution to the stations through this section of VT-125. Part of this will also be whether the Middlebury / Ripton town line is in the proper location. Sorry to have dropped this, but I will get back on it and get you a response.

Johnathan

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Vermont Agency of Transportation
219 North Main Street | Barre, VT 05641
802-828-2600 | johnathan.croft@vermont.gov



From: Kelly, Joe <Joe.Kelly@vermont.gov>
Sent: Wednesday, January 22, 2020 12:49 PM
To: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Subject: RE: Middlebury VT-125, East of US-7

Good Wednesday afternoon Johnathan –

Has there been any movement on the request below? Please let me know if I can provide any additional information.

Thank you,
J.

From: Kelly, Joe
Sent: Wednesday, December 11, 2019 10:14 AM
To: Croft, Johnathan <Johnathan.Croft@vermont.gov>
Cc: Driscoll, Kristin <Kristin.Driscoll@vermont.gov>
Subject: Middlebury VT-125, East of US-7

Good Wednesday morning Johnathan –

I have reviewed the section of VT-125 in (East) Middlebury east of US-7 with a calibrated DMI. Using the US-7 intersection (mp 1.224+/-) as a starting point, none of my intersection mile points line up with what is shown on ArcMap GIS. Even the ending mileage at the Ripton town line is different. Measurements deviate between 140 FT and 215 FT.

Could you or your team look at this stretch of roadway to determine if there is a bust in the data? I am confident in the field measurements as I calibrated in the AM using a 1 mile calibration site and verified it again in the PM with no difference in measurement.

<u>Location</u>	<u>Field Measure</u>	<u>ArcMap GIS</u>	<u>Difference</u>
Wilmar St.	1.640	1.673	0.033
VT-116	1.759	1.794	0.035
King's Row	1.801	1.829	0.028
Ossie (VT-116)	1.908	1.943	0.035
Maple CT.	2.028	2.069	0.041
School House Hill Rd.	2.270	2.303	0.033
Lower Plains Rd.	2.505	2.538	0.033
N. Branch Rd.	2.796	2.822*	0.026
Upper Plains Rd.	3.383	3.421	0.038
Ripton town line	4.288	4.317	0.029

*Represents approximate intersection location and not where node is located in ArcMap GIS.

Once we nail down these mile points I will be drafting updated Traffic Committee certificates for the speed limits and No Parking zones.

Thank you,

J.

Joseph A. Kelly, SW Regional Traffic Safety Investigator
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