

Land Use, Transportation and Housing for Low Carbon Communities

12-1-18 VECAN Annual Conference

Deb Sachs Net Zero Vermont

Remarks

Welcome and Overview, Deb Sachs, Net Zero Vermont, and Session Moderator.

Smart Growth – Land use, transportation and housing, *Kate McCarthy, VNRC*

Role of housing and density to advance shared goals, Eileen Peltier, Downstreet

Q & A

THERE IS TOO MUCH TRAFFIC FOR BILLY TO WALK TO SCHOOL; SO WE DRIVE HIM.



Traffic Inducing Traffic

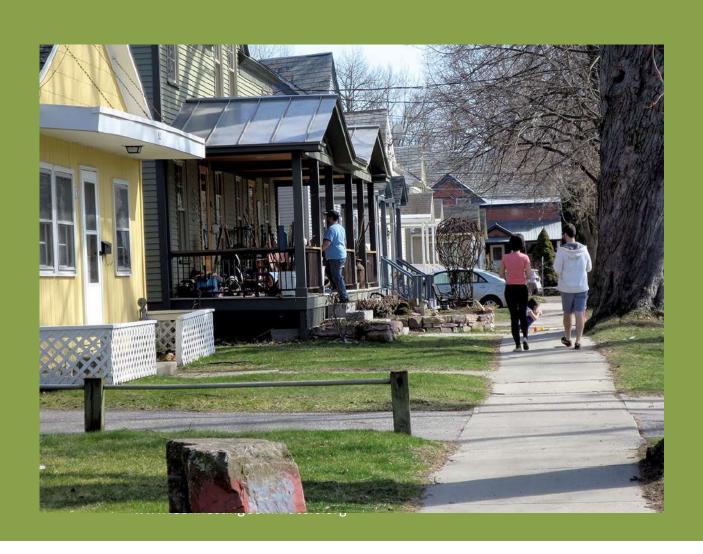






Source: Julie Campoli

Relocalize. Re-making communities to be walkable, connected, safe and fun!



Pathway to 2025: Top Ten Drivers

Emissions

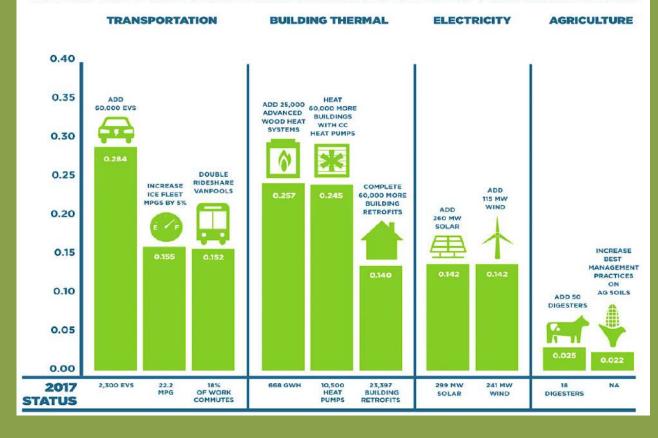
Suggest by 2025:

90K- EV's 87K Heat Pumps 80K Weatherize 500 MW Solar 200 MW Wind 10% Other

THE TOP 10 DRIVERS TO VERMONT'S 2025 MILESTONES

1.56 MMTCO, e REDUCTION BY 2025 IS REQUIRED TO MEET PARIS ACCORD

Update: Based on new 2015 emissions numbers, VT would now have to do 62% more than what is modeled here to meet our Paris commitment.



PG. 13

Source: EAN Annual Report 2017

About \$.78 of every transportation fuel dollar leaves Vermont Opportunity: capture \$1.3B leaking from VT?



Stop the Leakage



Free Transit for everyone



Railroad motor car service in VT

Renewables are Required

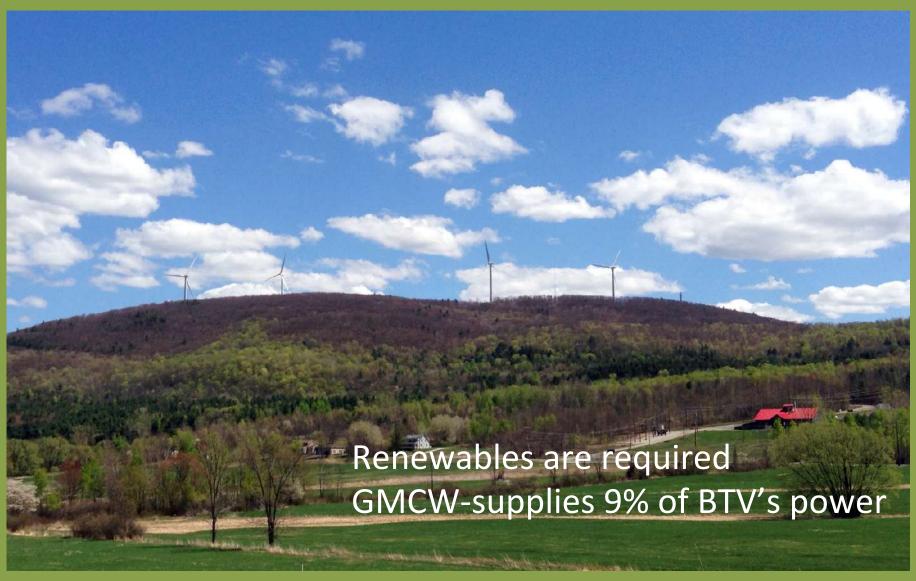
PRINCIPLES

- ENERGY EFFICIENCY & CONSERVATION (massive)
- RENEWABLES Solar & Commercial Wind, most viable
- EREI [Biofuels low, Wind is high]
- FUTURE ENERGY SYSTEM → Electricity based
 - Food systems lower energy intensity, relocalize
 - Mass transit –now is the wisest investment

FINANCING

Advance a price on carbon—ASAP

Georgia Mountain Community Wind



Why renewables: TRANSPORTATION Greening the fleet... 90,000 EV's by 2025 about \$2.7B invested in cars

Each car (on avg) demands: 3,000 kwh/year

New instate capacity of 30 MW will be needed

TOTAL Demand: 270 Million kWh year.

Assumption: Each is driving 9,000 mi/year

(36) 2.5 MW turbines

How Are Communities Reversing Energy Intensive Sprawl?



Vermont Communities are making strides.....

Develop a Vision and Be the change!

Roll up your sleeves

Take stock

Envision land use, housing and transportation

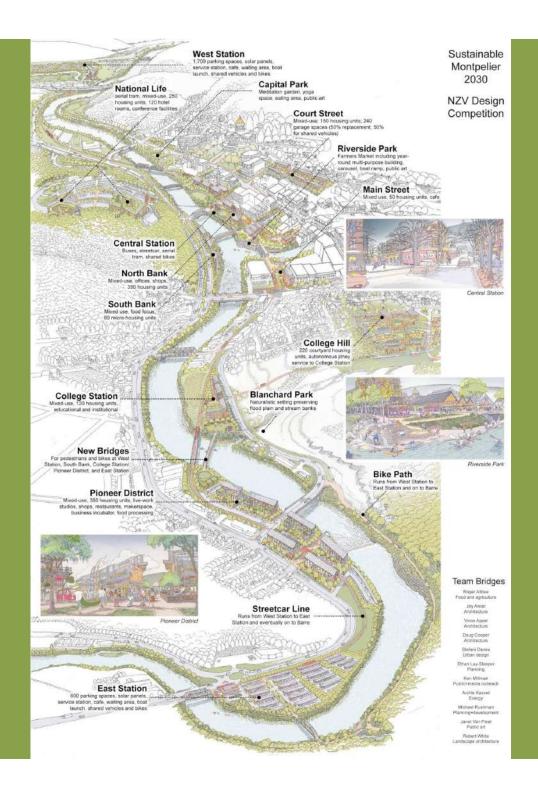
Implement Vision, good policies and practices

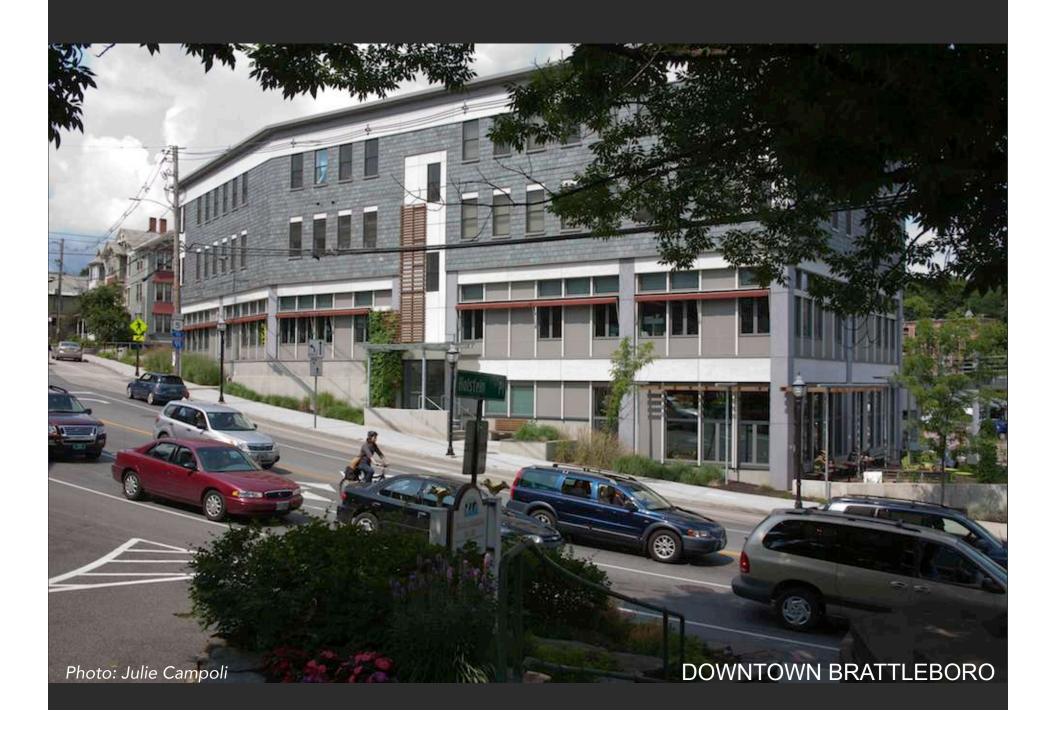
= SMART COMMUNITIES

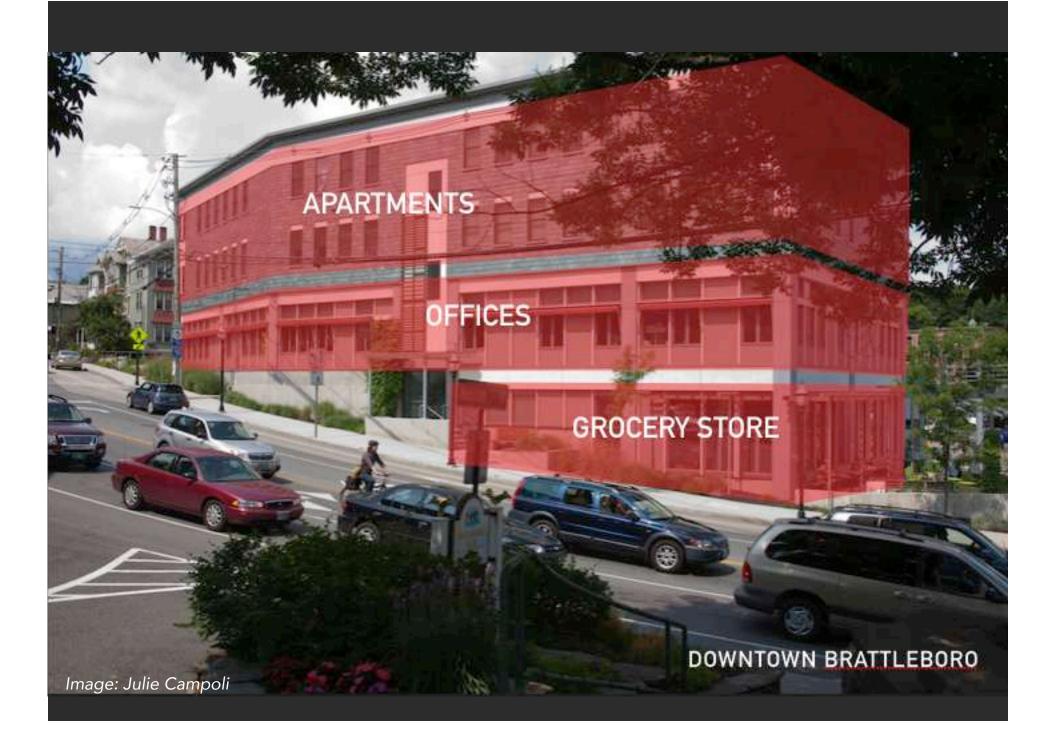
This could be any downtown in New England Montpelier's surface Parking Capacity in Red

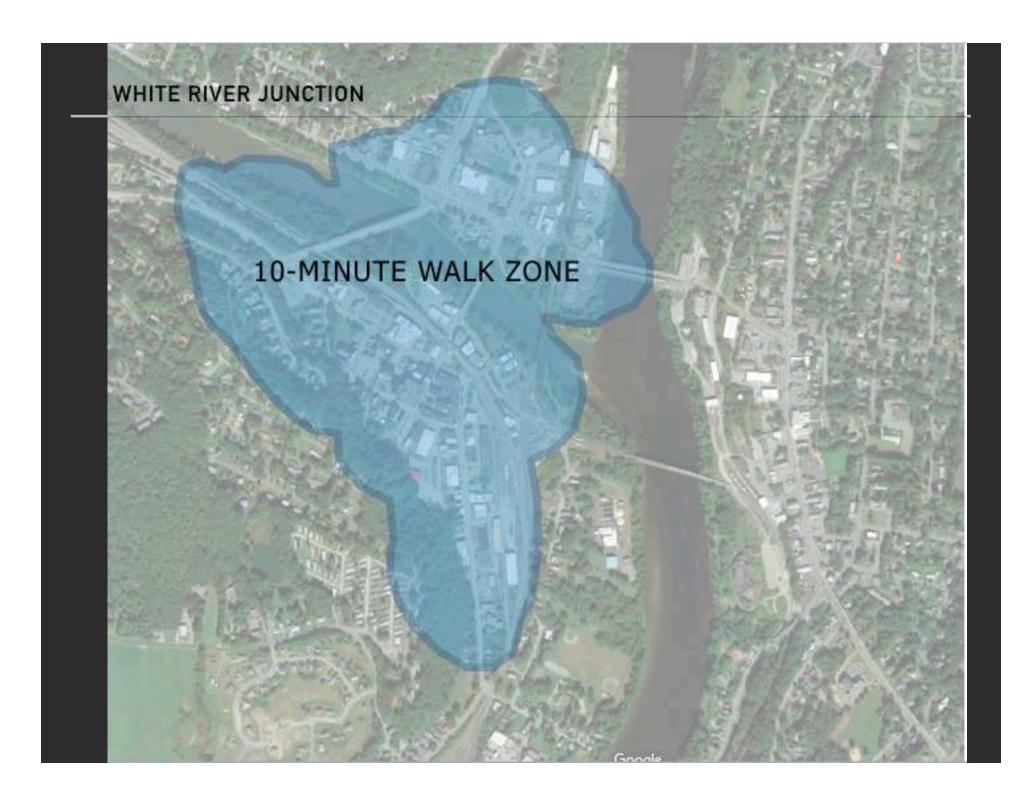


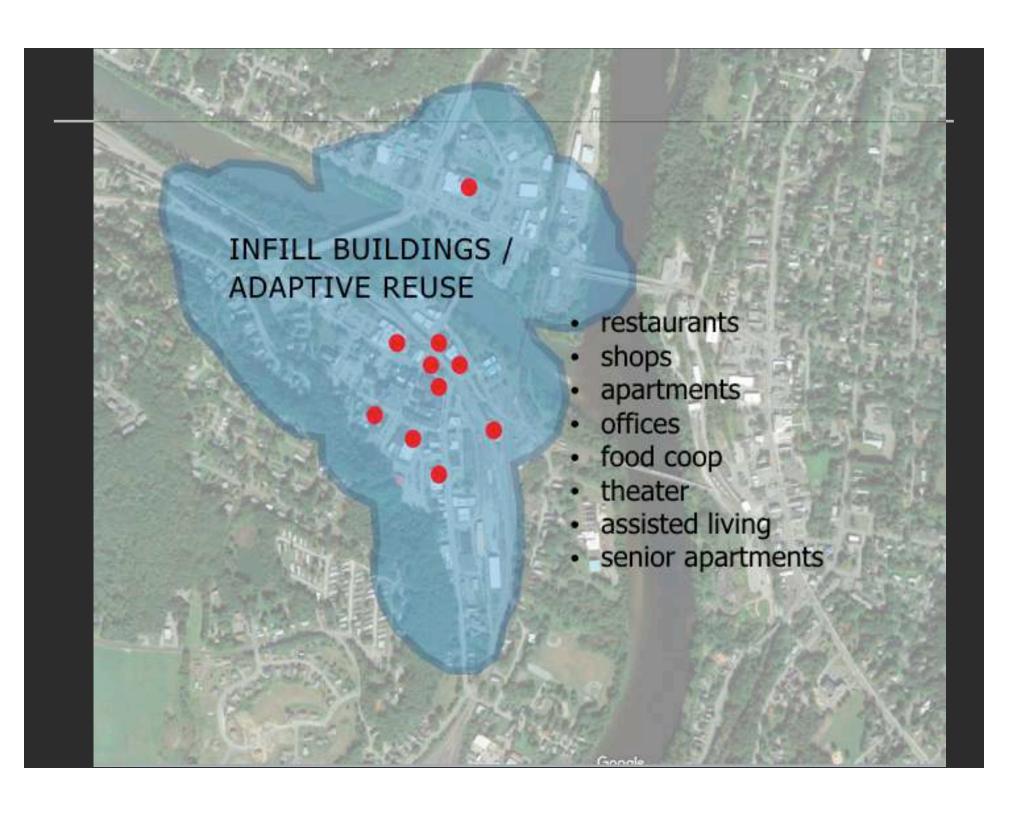
Winning Design—A vision of what your Town might be! Think big and take actions to advance your vision.

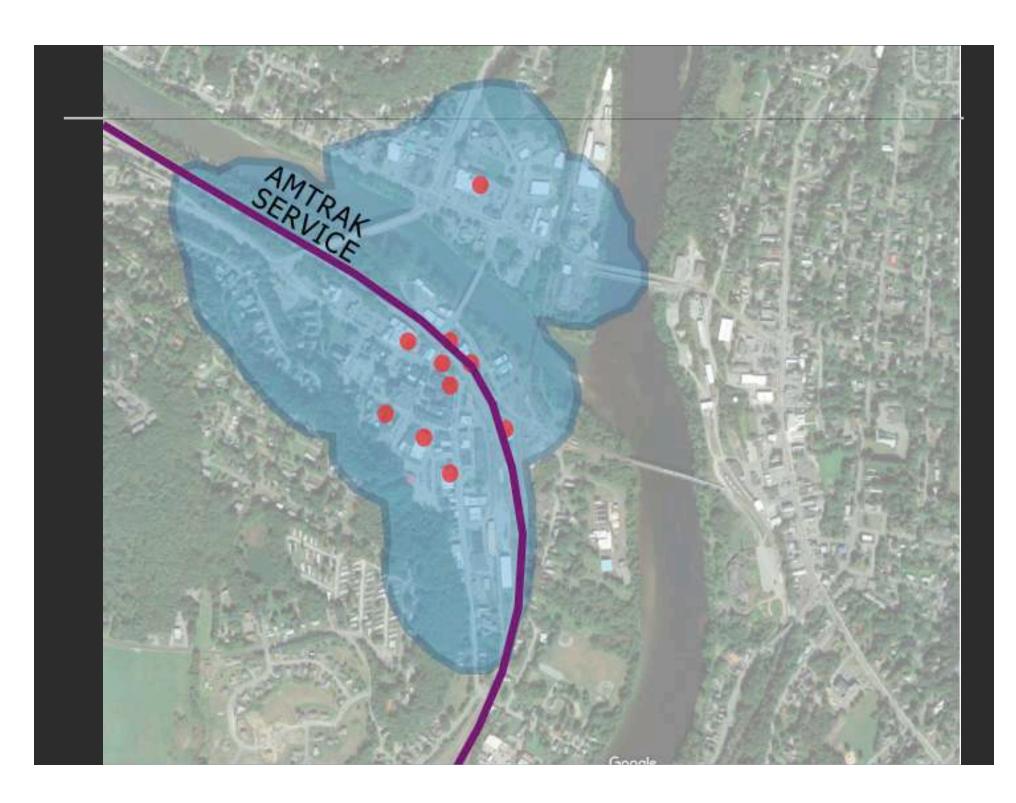


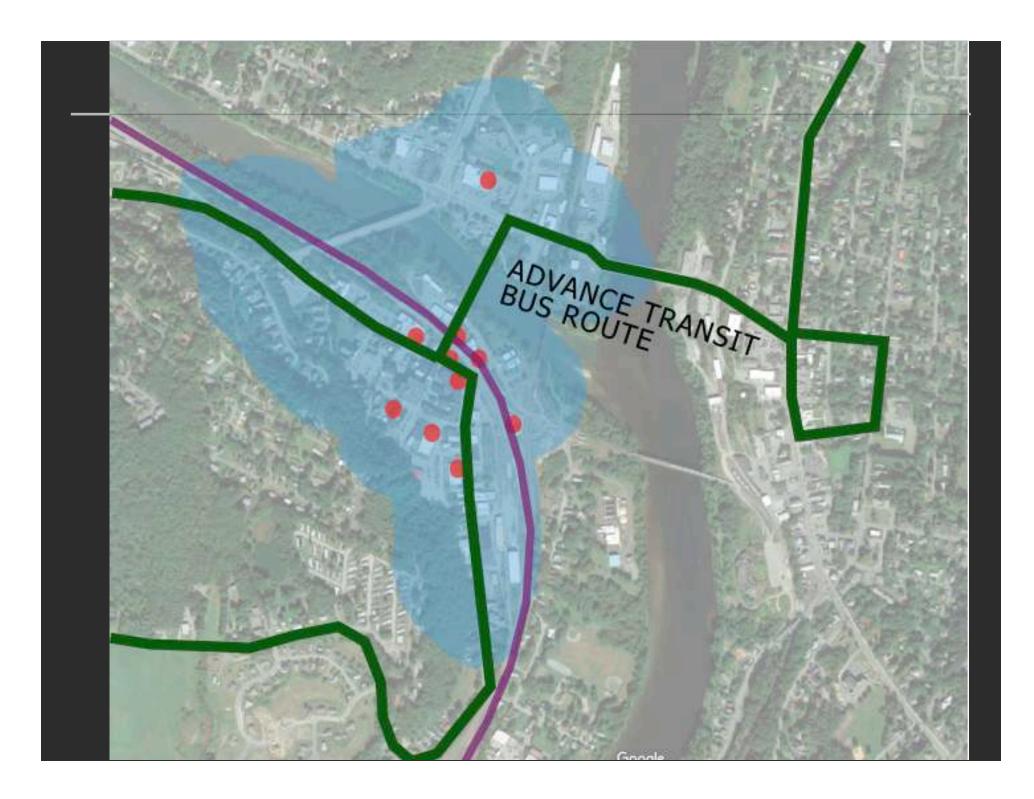


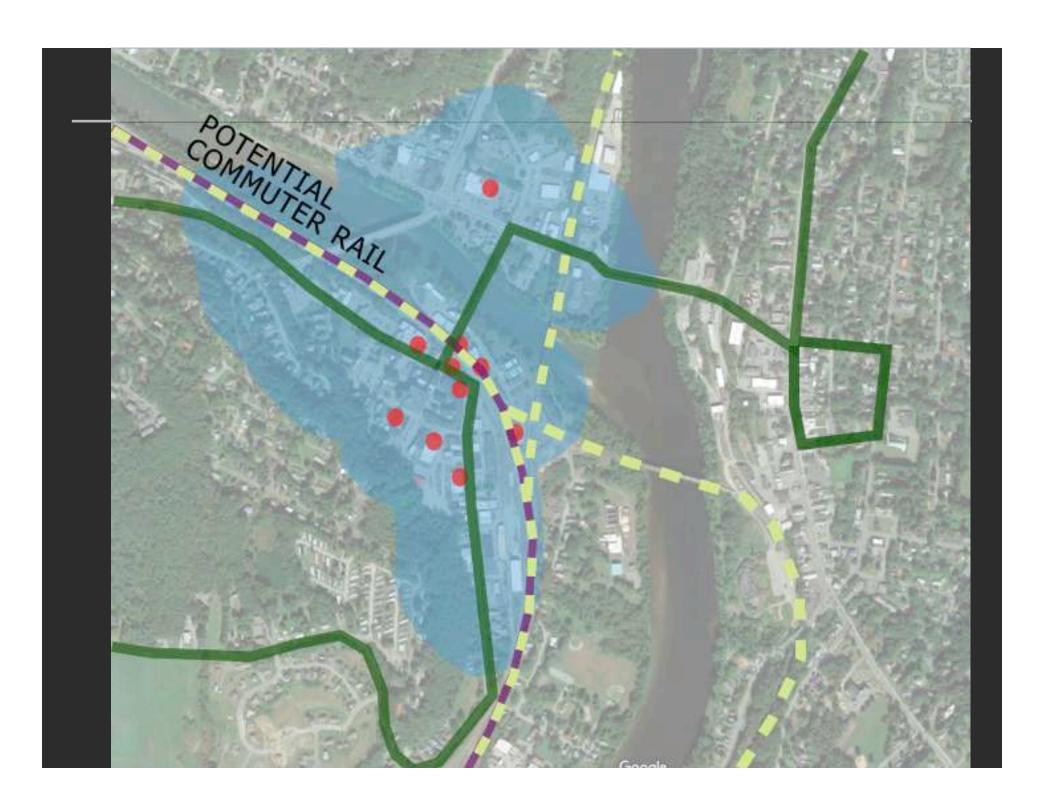








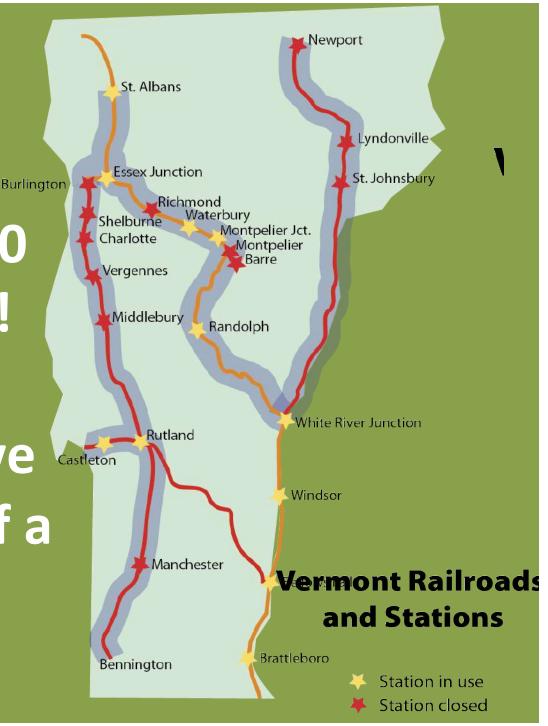




Community Rail?

VT once had 90 train stations! 80% of

Vermonters live within a mile of a train station.

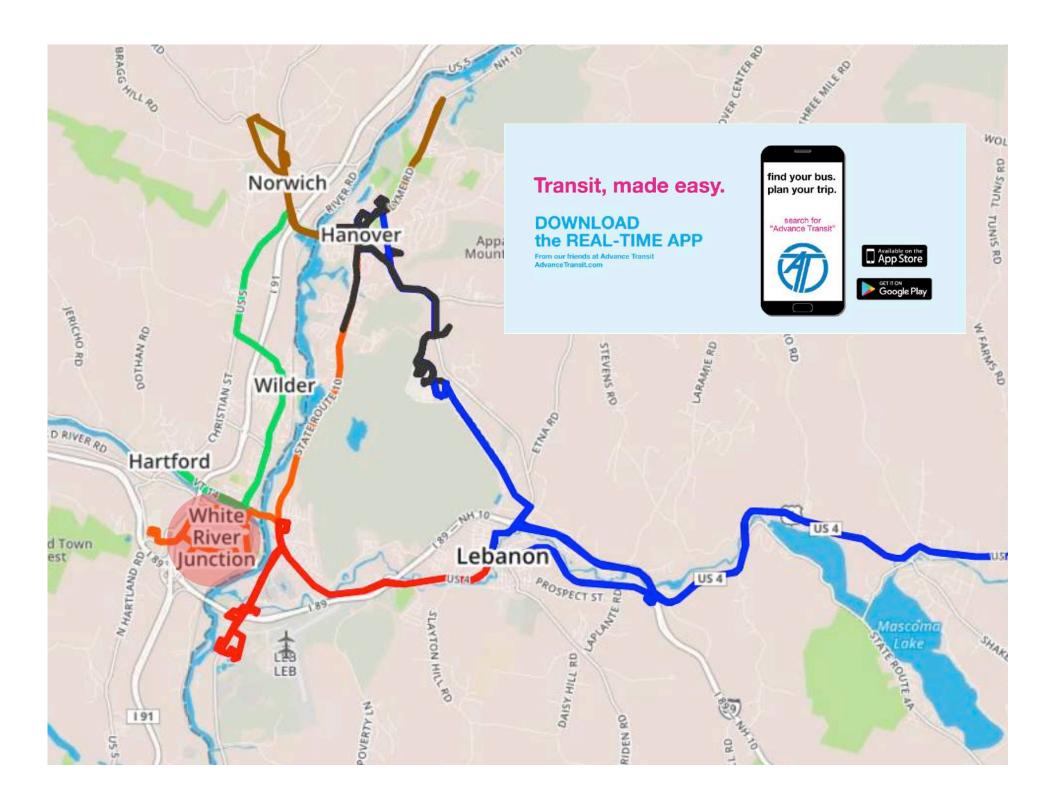




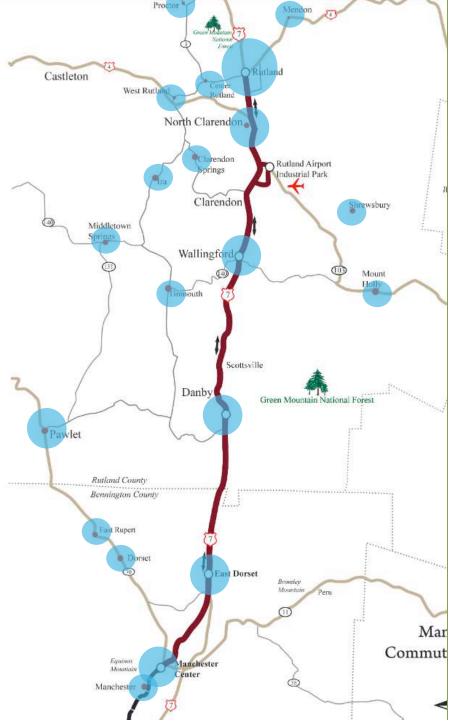


Open House Montpelier,VT













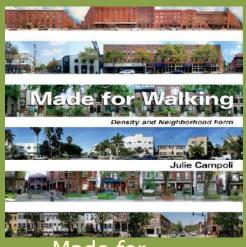


What We Can Do

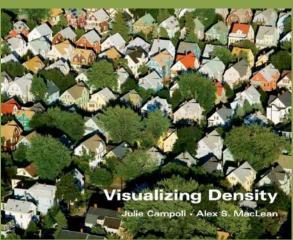
- Become knowledgeable about energy, metrics, and roll of land use planning, policies and zoning bylaws.
- Real-world issues mean physical science, accurate information, and solid math skills (i.e., capacity factor)
- Think like a Scientist. Fact-check sources, models and their reasoning, especially when considering policy.
- Engage with visionaries to promote thought leadership on public/ media dialogue of relevant issues and policies in your community and beyond.

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Special thanks and Slide credits to Julie. Specifically slides 5, 15, 16, 17,18,19,20,21, 25, 26, 27, 28, and 29



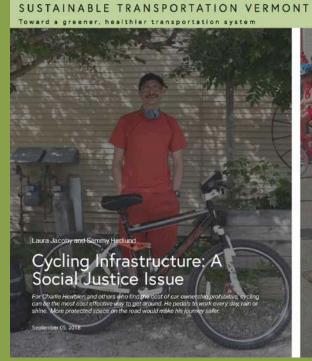




Visualizing Density

Sustainable Transportation Vermont

www.stvt.org





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