**Creating a Sustainable City and Reconnecting With the Riverfront** **80231**

In reimaging Montpelier's city design, we aim to create a more pedestrian-friendly downtown that connects to the river and offers numerous activities hubs that can be enjoyed by residents of all ages and physical ability. By expanding the existing bicycle path and creating a new public zone catering to foot traffic, a much more lively city will be established.

**Implementation and Community Involvement**
The following three types of development should expand simultaneously in order to create a more vibrant community:

> *1) Activities Hubs:* Various hubs of activities that can be enjoyed year-round will attract both tourists and residents alike to downtown
> *2) Commercial Spaces:* Thriving commercial spaces in a lively downtown setting will boost the local economy and create opportunities for more companies to move in, therefore creating new jobs
> *3) Residential:* Due to an influx of new jobs throughout the vibrant city center, there will be a need for more dwelling units

Bringing more people, activity hubs, and energy production to downtown should be done with care, and should consider both the input and acceptance of the Montpelier community.

**Social Sustainability**
The design of a pedestrian-friendly core proposes to close Langdon Street to vehicular traffic, creating an open-air marketplace catering solely to foot traffic. The section of State Street parallel to Langdon will remain open to vehicular traffic; however, the new design removes all street parking in this area to favor a larger pedestrian zone containing food service tables and sales displays. This section of State Street is to be raised and cobbled, signaling that it is a special zone for slow-moving vehicular traffic.

The largest change to this pedestrian core is to create a small boardwalk over the North Branch of the river spanning between Landon Street and State Street. This boardwalk will be a gathering location for festivals and community events, as well as overflow from the farmers' market. The bicycle path will link to this boardwalk, making it accessible to people without necessitating the use of a vehicle.

The plan also eliminates a majority of surface parking in downtown, opening spaces for new developments such as senior living communities, dwellings for young people and families, commercial spaces, and parks and activities hubs.

**Environmental Sustainability**
The majority of surface parking will be replaced with parking garages, which require much smaller footprints. This reduces the urban heat island effect by limiting the use of asphalt. In addition, the top floor of the garages will be shaded with canopies topped by photovoltaic panels, cooling the parking surface while making each parking garage an energy production hub to lower electrical loads for adjacent buildings. Local food will be provided by the creation of several community gardens throughout downtown, including on the rooftop of the new farmers’ market building.

**Durability**
The material selection for new construction will match the existing aesthetic of the downtown core. Facades will utilize brick, cement board paneling, metal paneling, and precast concrete. No imitation materials will be proposed for the new buildings, reducing future maintenance and expenses.

# A City for its People and for its Environment

80231

## River-Connected
### Downtown

Connecting downtown and the center of Montpelier with its Riverfront will offer a better lifestyle for residents.

A vibrant downtown riverfront should be fully open to the public, and provide year-round hubs of activities that can be enjoyed by all.

## Human-Centered
### Hubs + Connectors

Activity hubs will be placed along the riverfront from the visitor center area to the main commercial hub on State Street.

Ideally, each hub will be a multipurpose space appealing to people of all ages, levels of physical ability, and socioeconomic status, resulting in spaces that will be used frequently throughout the year. Connectors, such as bike and walking paths, will contribute to keeping these spaces active.

## Year-Round
### Activities

Currently, Montpelier is busy during the summer and legislative season. However, to support its economy, it is necessary to provide activities that can be enjoyed in all four seasons.

A successful riverfront should offer:
1) plenty of exposure to winter sun,
2) protection from prevailing winds, and
3) enclosed winter comfort stations within walking distance.

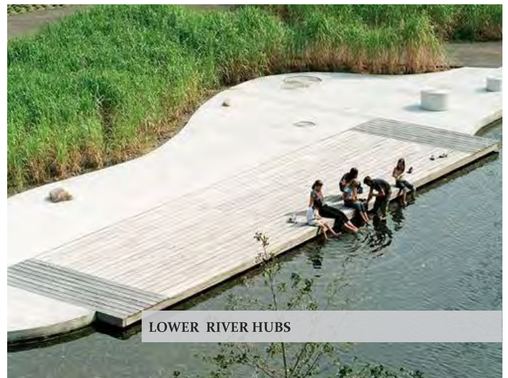
RIVERWALK
PROTECTED RIVER VEGETATION
PARKS + ACTIVITIES HUBS
BIKE PATH / SHARED STREET
PARKING / ENERGY PRODUCTION HUBS
PUBLIC BUILDINGS
RESIDENTIAL
RESIDENTIAL / COMMERCIAL

ACTIVITIES HUBS

1. VISITOR CENTER PARK
2. HOTEL / CONFERENCE CENTER
3. MULTI-MODAL TRANSIT CENTER
4. FARMERS' MARKET
5. SPORTS HUB
6. COMMERCIAL STREET
7. BOARDWALK AND PEDESTRIAN STREET

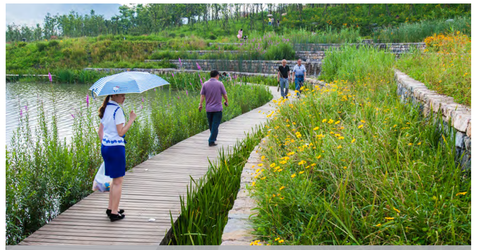

## Connecting to the River - Ideas to bring people to the water


SITTING DECKS


LOWER RIVER HUBS


RIVERWALK

## Activities Hubs


MINGHU WETLAND PARK

### Visitor Center Park

This new park will showcase local artists and net zero technology - a hub of nature, history, and culture with access to the river. This area has other potential uses. It could be transformed into a man-made wetland to treat stormwater prior to reentering the aquifer; or, greenhouses could be placed throughout the hub for food production.


BOARDWALK CONNECTOR BETWEEN STATE AND LANGDON STREET

### State & Langdon Boardwalk

A boardwalk over the river will connect State and Langdon Streets, creating a new downtown event space. Langdon Street will become pedestrian-only, serving as Montpelier's new arts district. The boardwalk will connect to the new riverwalk path, linking downtown to its river.


DUTCH SHARED STREET

### Commercial Downtown

The commercial part of State Street will become mainly pedestrian while still allowing low-speed automobile access. The new downtown area will also offer a multi-modal transit center, as well as a combined hotel and conference/learning center that will offer public services on the ground floor and access to the river.


RIVERPARK FARM

### Farmers' Market and Food Production Center

Multipurpose space for weekly farmers' markets, food processing, and events. The building will offer a community garden for food production on the rooftop.


ICE SKATING RINK IN MONTREAL

### Sports Center

The outdoor sports hub will feature playgrounds and courts that can also be utilized as ice skating rinks during the winter months.

Images credits: Minghu Wetland Park – archdaily.com; Dutch Shared Street – theplanner.co.uk; Riverpark Farm – seedstock.com; Ice Skating Rink- montrealinpictures.com; Sitting Decks urbankiev.com; Lower River Hubs – landarchs.com; Riverwalk – landarchs.com

# A City for its Environment and for its People

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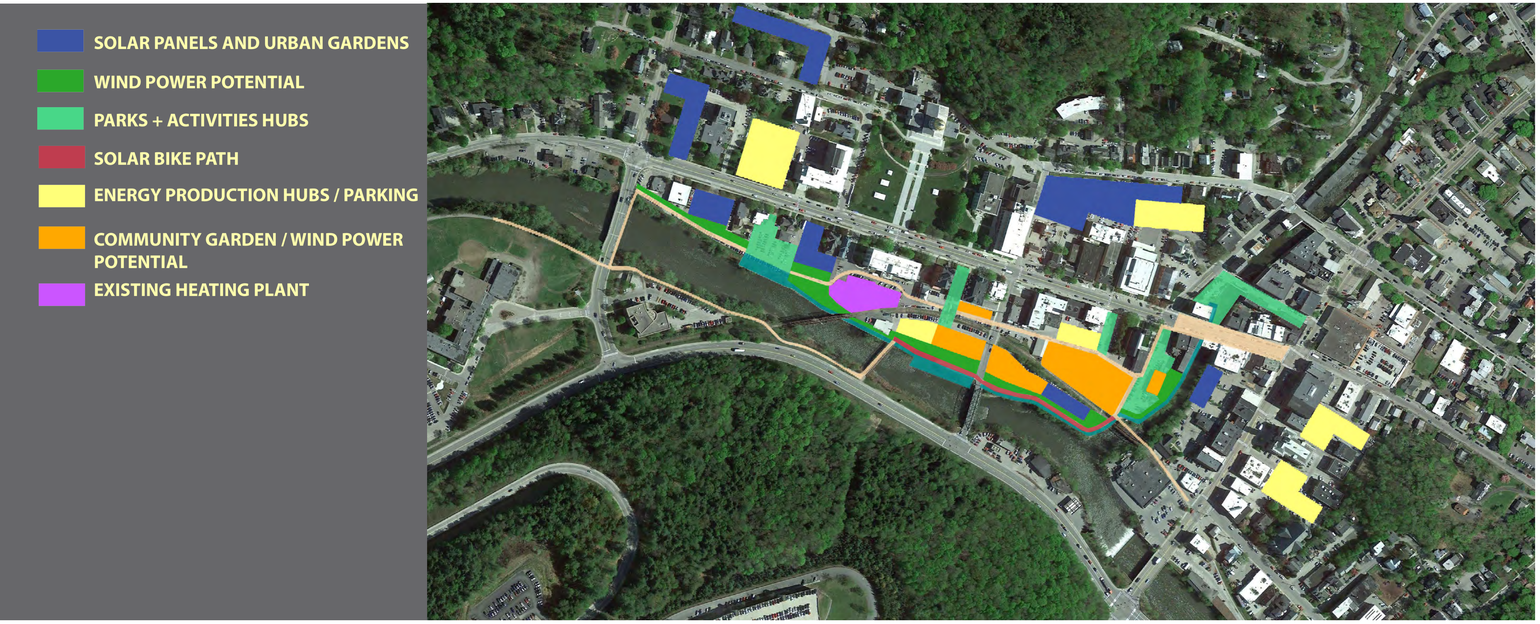
## Sustainable Approaches - Energy and Food Production Hubs




## Transportation

### Practical, reliable, and convenient for wintertime

One of the main challenges that public transportation faces in New England is the fact that it is not as practical, reliable, or as convenient as automobile transportation.

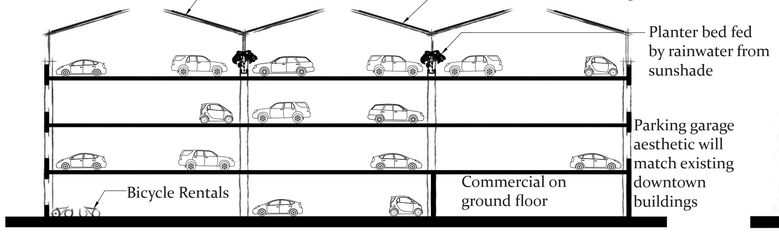
To encourage more people to start using public transportation, it is necessary for it to have a clear advantage over private cars - especially during wintertime, when waiting outdoors can be challenging.

In order to make public transportation functional and desirable, it must provide several options that suit different needs and regions. A multi-modal public transportation system could offer:
1) light rail paired with park-and-rides for those coming from neighboring towns,
2) more buses or vans during high-demand hours (business and school hours for example), and
3) public and rentable bikes, electric bikes, and scooters to circulate through downtown with several pick-up/drop-off stations.

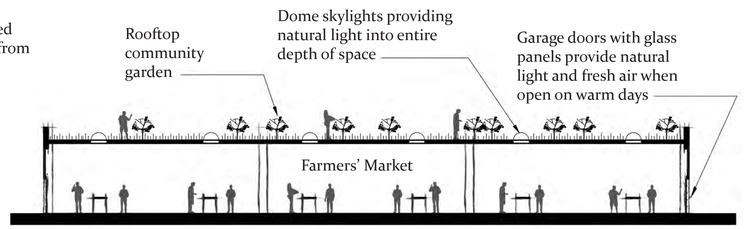
During wintertime, public transportation should provide stops that are sheltered from winds, and possibly heated. A reliable schedule must be adhered to so people can plan to leave their houses/businesses at a precise time to minimize exposure to cold. Apps and GPS systems can be utilized to alert people of the transportation schedule.

Affordability also plays a major role when opting to use public transportation. By using electric vehicles that can be charged with locally generated energy, the transportation cost might be greatly offset.

## Net positive parking garage will produce energy for its neighboring buildings




## Farmers' Market building will offer rooftop community garden, food processing, and event space




## New Development

### Improving building energy performance

Bringing more development to downtown Montpelier will increase energy demand; therefore, new construction should be net zero, or able to obtain its energy from the proposed energy generation hubs.

Buildings should have efficient envelope using the principles of natural heating, cooling, and ventilation (ground-source heat, cross-ventilation, exposure to winter sun to provide heat gain, and reduced summer sun exposure). If possible, these new buildings should also generate energy by offering rooftop solar panels.

A downtown residential district should offer a diverse residential typology suitable to seniors and young people alike, as well as growing families. Local policies should offer rent and size control in order to keep it affordable and pleasant for its citizens.


SOLAR PANEL WALKING / BIKING PATH


ELECTRIC BIKE CHARGING STATION


TREE-SHAPED WINDMILL


PARKING GARAGE SOLAR PANEL CANOPY

SHELTERED BUS STATION

**Images credits: Solar Panel Walking/Biking Path – en.solaroad.nl; Electric Bikes Charging Station – electricbikereport.com; Tree-Shaped Windmill – offgridworld.com; Parking Garage Solar Panel Canopy – Springs Preserve, Las Vegas, NV; Sheltered Bus Station – Bus Stop at Curitiba, Brazil**