

phase 1

solar boombox

PLACEMAKING VISION
LOCALLY SOURCED - LOCALLY INTENDED

"When shared in a public space, a boombox is a campfire, drawing in those nearby to enjoy a warm analog musical experience and connecting them in a spontaneous community."

Miles Lightwood, Boombox historian + collector

The Solar Boombox artwork will celebrate the vitality, multiculturalism and fun that the Willimantic Whitewater Park embodies as a hub of community energy. Inspired by cultural movements such as Pop Art and Hip Hop - and artists such as Claes Oldenburg, Andy Warhol and Red Grooms - the Boombox will be a magnetic and unifying landmark. Citizens arriving by bike, hiking, by auto or by kayak will find the Boombox a symbol of a community in action.

When considering possibilities of an artwork for the city of Willimantic we studied the iconic elements of Windham. Two major icons of Willimantic, frogs representing a historic narrative of a colonial era "frog invasion" and a spool of thread representing Willimantic's industrial mill past, are depicted on the Frog Bridge. That led us to consider a more contemporary, vibrant symbol of the city: the Boombox.

"In 1986, no marching band could be found for Windham's Memorial Day Parade. Parade lover Kathy Clark suggested the novel concept that WILL play marching band music and people bring radios. Five weeks later, the "Boombox Parade" concept was born for the Independence Day parade, with WILL playing the marching band music on the air, while thousands march and watch, loudly playing their radios (Boomboxes)."

WILL website

The Boombox Parade famously represents the creative, generous, and eclectic spirit of Willimantic's community and its ability to make something exciting within limited resources. The Boombox Parade itself - from which this symbol is derived - is a living work of art that represents authentic community spirit and energy.

As artists and designers, working in the context of Willimantic Whitewater Partnership's park vision and grass roots movement, this vision is entirely **LOCALLY SOURCED + LOCALLY INTENDED**. We can't think of a symbol that better represents the completely unique *genius loci* of Willimantic Connecticut.

This new landmark - the Boombox - encapsulates the spark of Willimantic.

BOOMBOX South façade with solar panels, functioning speakers, interactive control panel + solar kWh dashboard display within entry plaza.

program

PROGRAMMING VISION

“This is so Willimantic! “

“Quirky + iconic + functional...Great for photo ops!”

“I like that this looks very buildable to budget.”

“I love this + would love to put Willi on the pop art map!

Funny, memorable + appropriate.”

Participant testimonies from 25 February 2018 design charrette

The exterior of the structure has been designed to closely replicate the appearance of a Boombox, with a scale of roughly 1:15 times a life-size unit, with two “front” sides, one facing toward the river and the other out to the street. Each of these primary sides has large round speakers and a tuning dial/energy information display. The street side has an interactive control panel where users tune in to programmed sound features, while the river side has an operable window for a kiosk or other public interface. The end facades have doors to access the interior for kayak storage or other uses.

There are many creative and innovative potentials for audio content to program through the Boombox. We envision open-ended development of the Boombox programming as the function and the site evolve with client, community and expert input. These functions could include:

Nature sounds from the Willimantic River corridor (water, birds, wind, rain)
Sporting event broadcasts
Changing curated music mixes created by local DJ's
Local spoken word or storytelling performance
Local musical performance broadcasts – school groups, Willimantic Orchestra, etc.
WILI radio
Jukebox function

The uniqueness of the Boombox could attract the attention of innovative national storytelling radio programs such as *The Moth Radio Hour* or *Storycorps*, and possibly draw them to host shows in Willimantic, Connecticut.

The sound will emanate from the Boombox through an interactive system with sound settings that will be low for everyday use (55dB) and higher for events. The sound will shut off for evening hours and park closure. With careful control and monitoring of sound levels and audio content, the sound element will be sensitive and enriching for specific park uses and non-intrusive for adjacent properties.

Different options exist for how interactive this audio content might be for the public. A physical interface with the sound system would be provided within the control panel window on the Bridge Street side of the Boombox. A large, lighted, functioning radio dial display is included on both sides of the Boombox across the top, as well as a 20' antenna that will glow as a landmark beacon.

Enabling the audio content programming and delivery, the Boombox will also act as the source for park WIFI access. A QR Code could be established to tie site and community information and activities together through a Willimantic activities app. This would allow access to an energy and sound dashboard for the Boombox, entertainment and recreational event programming, as well provide a platform for activities such as geocaching, group hikes or other spontaneous community use.



1 CONTROL PANEL
NORTH SIDE facing the city, a radio knob for tuning to WILI and access to Jukebox features and QR codes
SOUTH SIDE facing the river, a flip board kiosk booth for concession or DJ, information panel

2 SPEAKERS exterior grade speaker equipment is positioned behind grills

3 DISPLAY BOARDS The solar readout from solar panels will be displayed in kWh and the radio dial has a faint nighttime glow

4 LOUVERS contribute to a passive temperature management of the structure during the warm season. Louvered windows will help cool the structure

5 SOLAR PANELS solar panels are located on the east, west and south facades and the rooftop. The north facade will express a matching visual treatment. The entire surface of the boombox will contain a light dotted pattern to reduce glare, to minimize bird collisions, and be treated with a mark-resistant surface

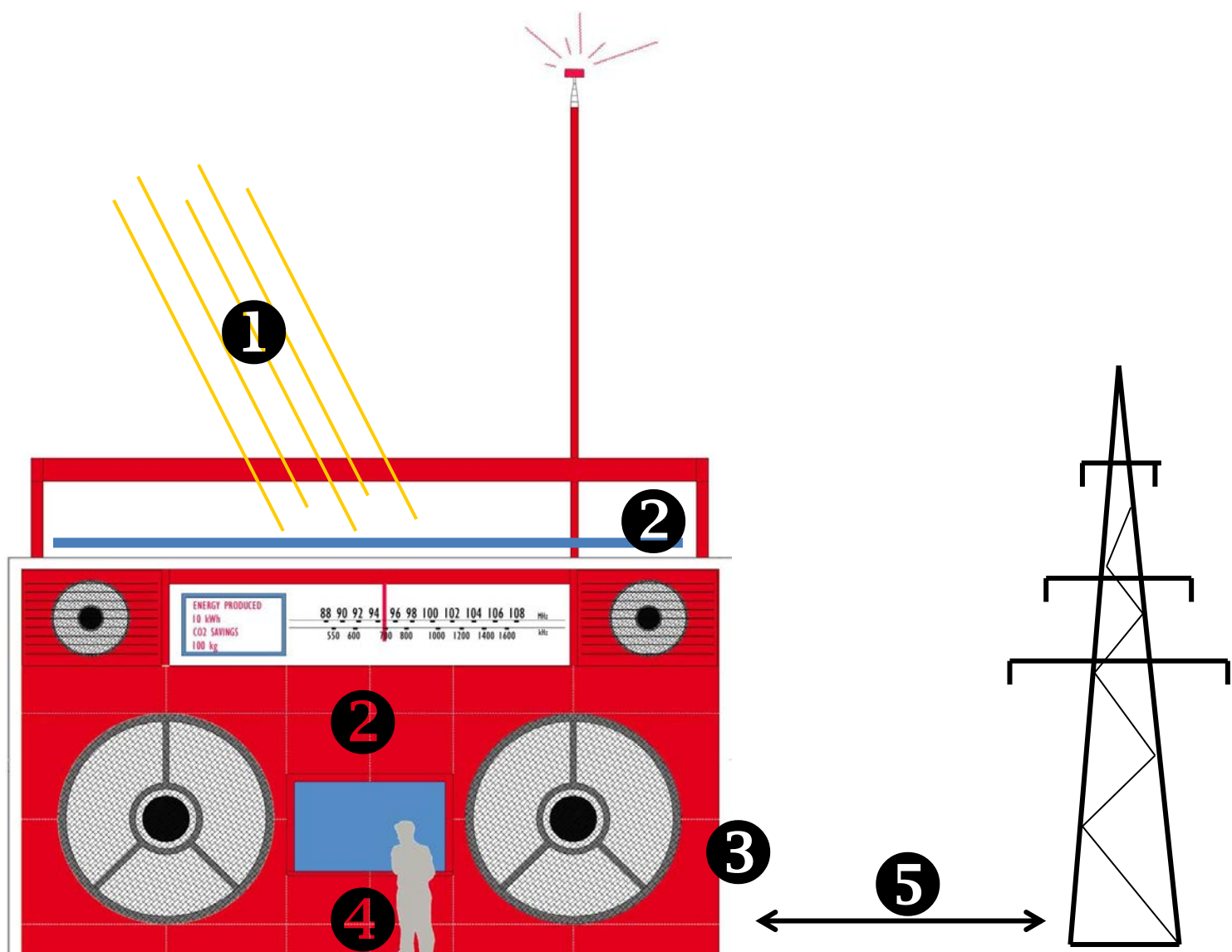
6 KAYAK STORAGE The boombox structure will be created from two shipping containers set one atop the other and secured. In addition to housing the sound system, the area within the boombox has potential for several uses including a restroom or kayak locker storage

7 KINETIC ENERGY PAVERS a small number of newly installed plaza pavers will be interactive. When stepped upon, they will light up as kids dance to their favorite WILI tunes

8 THE WILLIMANTIC SPARK a landmark to be seen from Main Street and beyond - a whip antenna with a small blue/green light rises to a height of 25'-30'. Blue/green light has been shown to NOT distract birds during migration

features

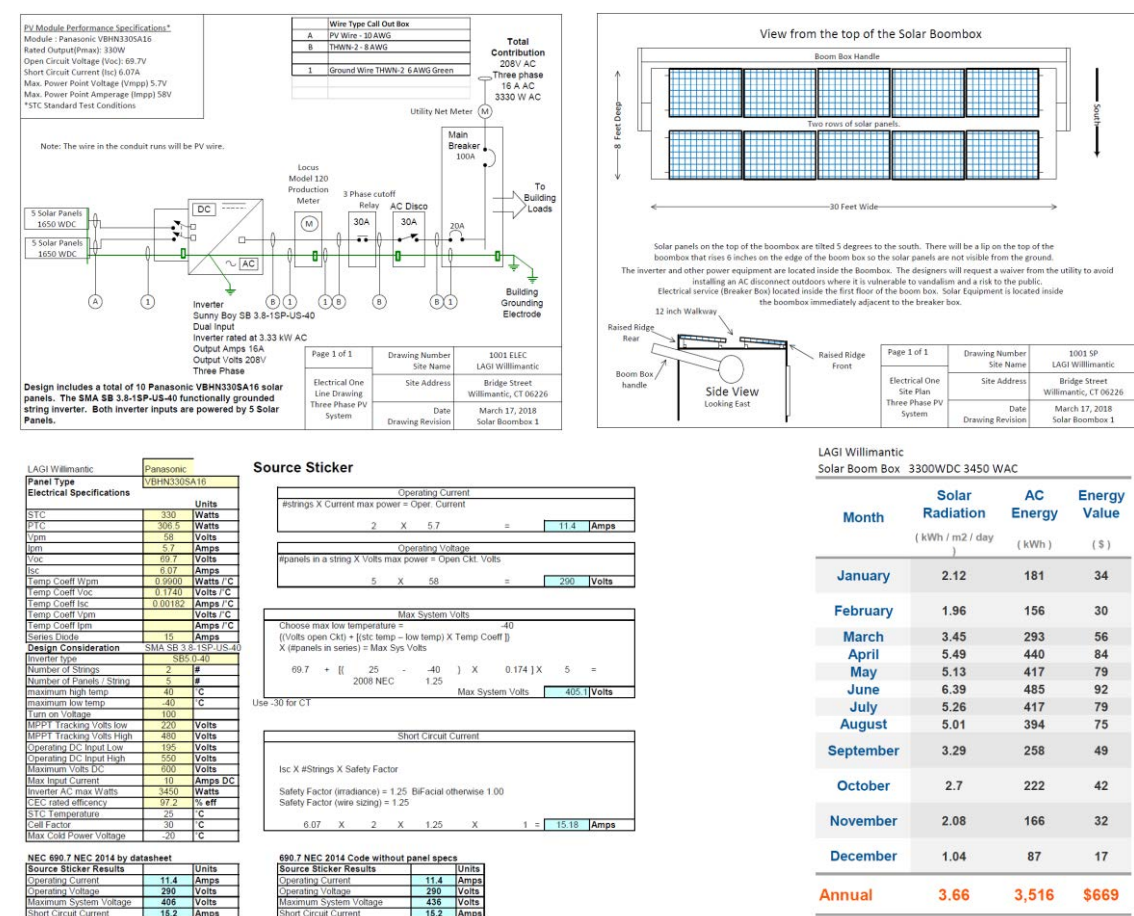
1 SOLAR ENERGY



SOLAR BOOMBOX COMPONENTS

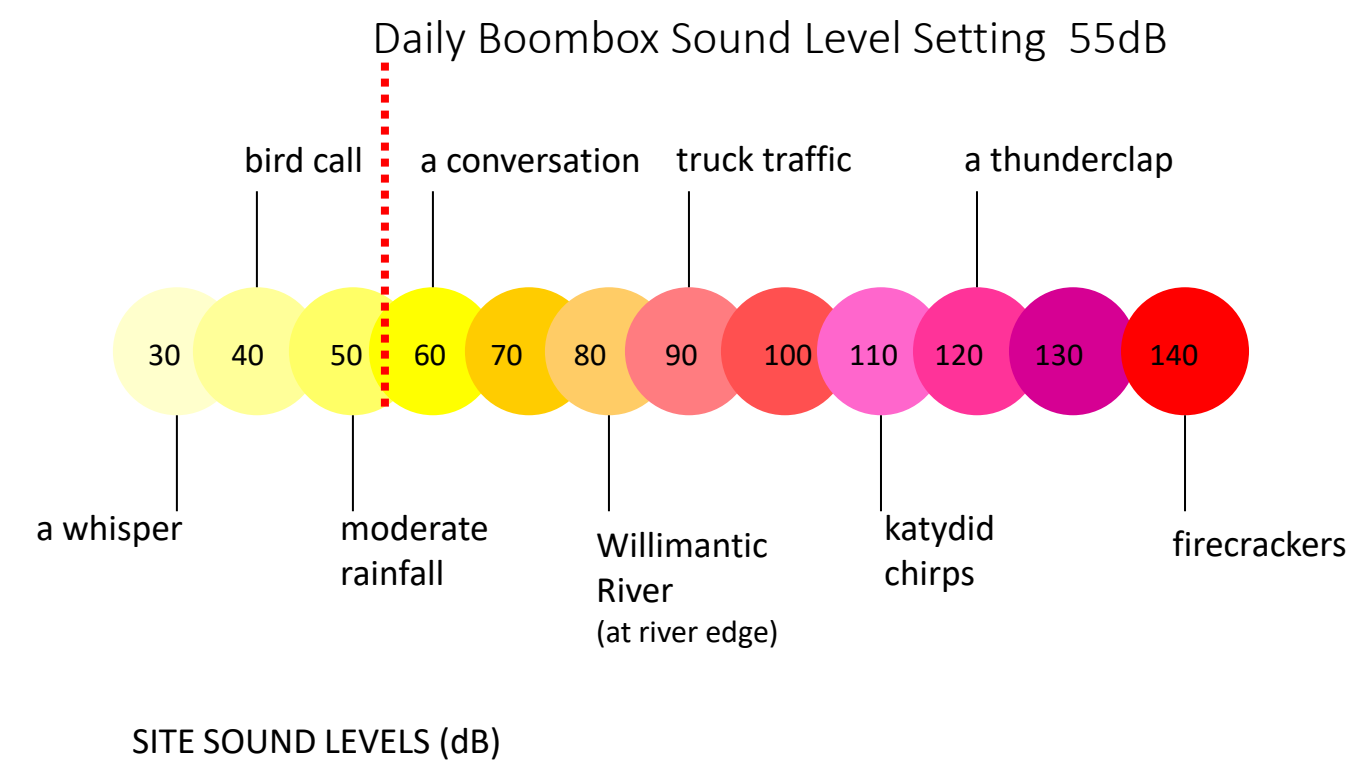
- 1 SUNSHINE** Pollutant-free, noiseless, and consistent
- 2 Pv MODULE** Sunlight converts into direct current via solar panels
- 3 INVERTER** Converts direct current into usable alternating current
- 4 YOU** Visitors listen to music, to the river, events
- 5 EXTRA** Unused power feeds into/out of the grid

The kWh production of the system will power the boom box first and excess power will go back to the grid. The system will get credit for kWh sent back to the grid. Annual production of this system, as designed, will be 3500 kWh. By connecting to the grid, the boom box could run all the time – even when it's cloudy.



SAMPLE OF SOLAR PANEL DESIGN SPECS FOR BOOMBOX ROOF PANELS

2 SOUND SYSTEM



JUKEBOX + PROGRAMMING COMPONENTS

With any sound system comes the responsibility to balance and regulate sound within a community spaces. Nature, bird song and the river are a balm to the ears. At the same time music and stories are part of the very essence of human existence.

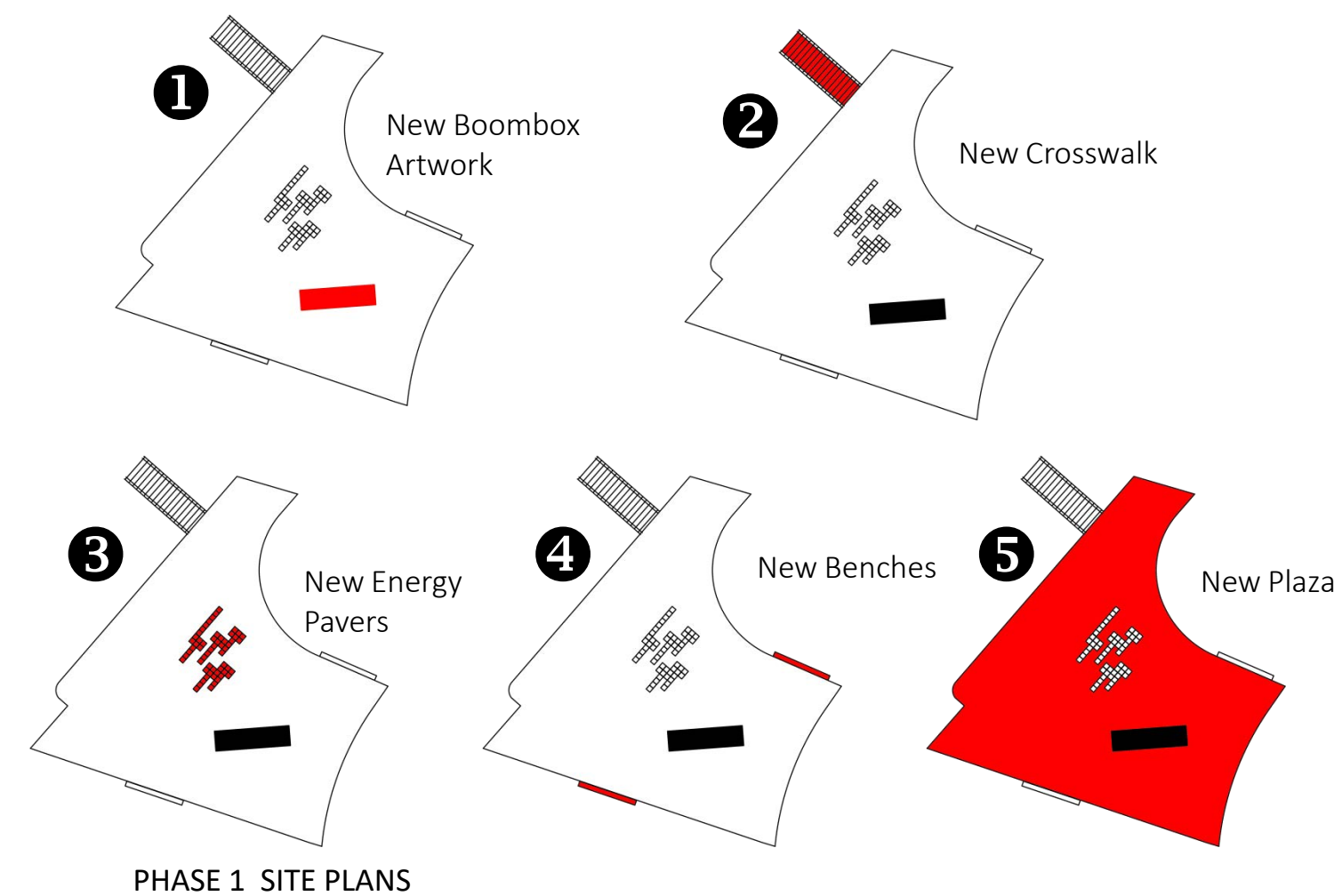
Research of cities such as Portland Oregon show noise ordinance levels set at 55dBA for open space between the hours of 7am-10pm, and this setting is recommended for adoption here. A special event switch will be controlled by Willimantic Whitewater Park.



HOW IT WORKS A local jukebox operator will supply + service the box to be housed within the Boombox. The public pays for songs via a phone app. Internet access is required. The operator works out a split of the revenue with the Willimantic Whitewater Partnership (WWP). WWP uses the profits for park maintenance.

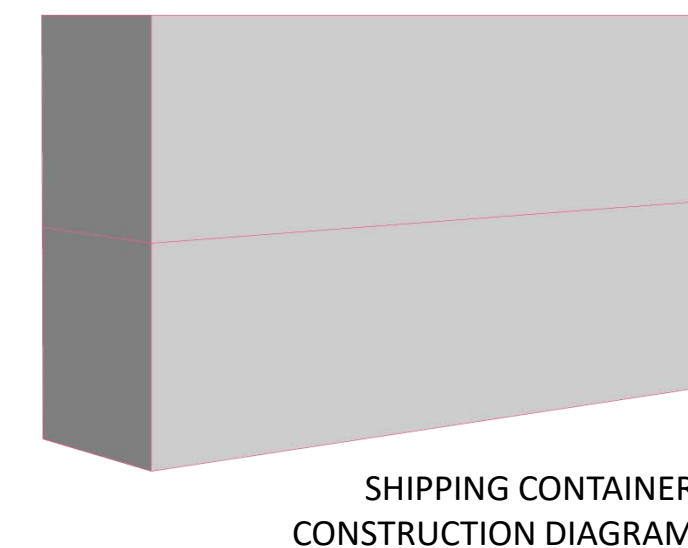
MUSIC configurable selections of locally stored music such as a Yoga Mix, Latin Mix, Oldies Mix, Red Hot Chili Pepper Mix, Classical Mix, Local Music Mix, Euro Mix, Rock Jam Mix, etc.

3 SPATIAL PLANS

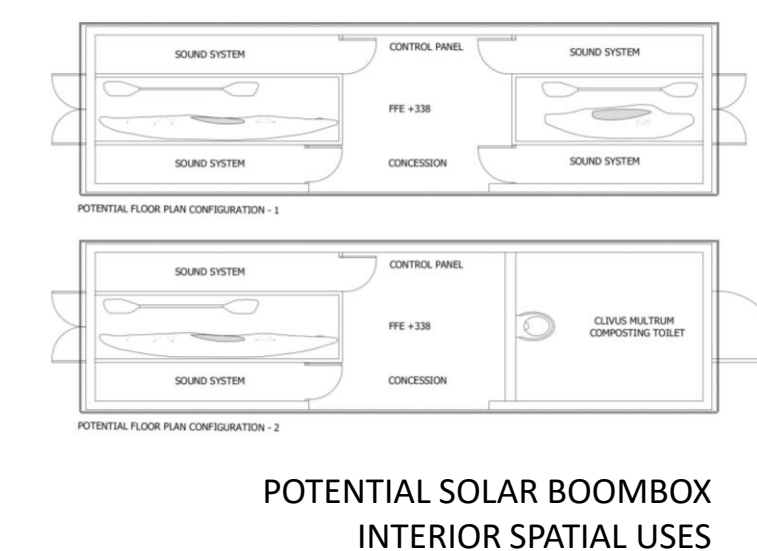


PHASE 1 COMPONENTS for RENEWABLE ENERGY ARTWORK

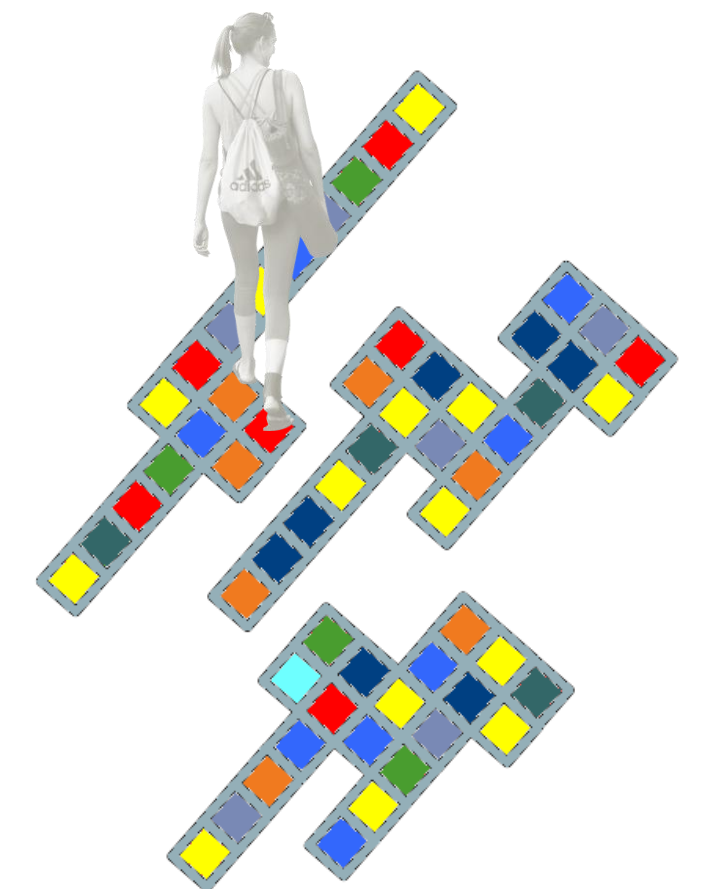
BOOMBOX STRUCTURE
The Boombox structure will be constructed from two shipping containers that will be put on a railroad car in New London, arriving in Willimantic via freight train. Each container is 30'x8'x8.5' to meet the desired Boombox shape and size. The diagram shows the basic construction with containers set one on top of the other.



INTERIOR SPATIAL USES
The Boombox structure will have some space inside left over once the sound system is installed. One potential use could be that the end facades provide kayak locker storage. Another use could be a composting toilet.



4 PIEZO ENERGY



KINETIC ENERGY PAVERS with VIBRATION ENERGY HARVESTING

VISUALIZING ENERGY
This is an idea of bringing an element of fun to energy production as well as a exploring green energy.

As people walk across the pavement system, the weight from their footsteps causes generators to vertically displace. This radial movement creates energy through electro-magnetic induction. Piezoelectric materials convert normally wasted vibration energy in the environment to usable electrical energy to light up the pavement creating an on-demand lighting that illuminates your path while you walk.

- Provides
- off-the-grid fun
 - helps improve safety
 - is interactive
 - powers way-finding in public spaces

To learn more about our team's community engagement, research, process and inspiration go to: www.dinepschwab.com/willisound



A RECREATION HUB . Water is the irresistible and compelling site feature here. Historically, Willimantic was a hub – of innovation, transportation, production and culture - and the River was its centerpiece. Situated along its banks and a few minutes walk from Main Street, the Willimantic Whitewater Park forms a critical juncture between numerous modes of access, promising to be a cultural and recreation hotspot within the region.

FEATURES: KAYAKING TRAIL + WHITEWATER PARK+HIKING TRAILS + CYCLING TRAILS + EXERCISE + STATIONARY BIKES + BIKE REPAIR STATION + INFORMATION MAPS + MUSIC + PERFORMRANCE + ACCESS TO MAIN STREET + RIVER VIEW + EVENTS

- 1 VIEWING PLATFORM** A captivating sculptural platform – an exciting new piece of civic infrastructure - will connect the River directly to the downtown Willimantic experience. Potential for future connection to opposite bank and trails.
- 2 TURNABLE STAGE + BOARDWALK** a circular platform referencing train turntables – and inspired by the Connecticut Eastern Railroad Museum - that spins via handles with a little effort by visitors and serves as a stage for performances by the ECSU Department of Performing Arts, Performing Arts High School, and other local groups. wood boardwalk maximizes river access
- 3 RIVER ACCESS + KAYAK TAKEOUT** Beautiful existing bedrock feature will be added to and made accessible with additional wall seating at area of future permanent wave
- 4 FUTURE SMALL SCALE HYDROENERGY TURBINE** to provide for future energy security. This system is specifically designed for medium to low river flows

- 5 NEW SPILLWAY WATERFALL** releases excess site stormwater into river after on-site biofiltration. Stormwater is directed through the site via vegetated biofiltration swales and basins.
- 6 AMPHITHEATER** Like hundreds of years earlier, stone quarried from the river, (this time from the decommissioned dam) will be used for construction of amphitheater-style seating, taking advantage of the gently falling grade to highlight the river's edge. Large grassy areas allow for picnic spreads
- 7 ENERGY GENERATING BIKES** Bike awareness, phone charging, civic exercise for people who do not own exercise equipment or belong to a gym
- 8 NEW CONNECTOR PATH** future new connector between existing trails along the river
- 9 SOLAR BOOMBOX ARTWORK** Solar Boombox will energize the site as a landmark icon in Willimantic and is envisioned to be Phase 1 of the Willimantic Whitewater Park site development plan.
- 10 STREETSCAPE** Photovoltaic electric vehicle (EV) chargers, bike racks to encourage low carbon footprint to get to and from the site, parallel Street parking with new shade tree planting, sidewalk painting with a wave theme.

