TAPPAN BRIDGE PARK

STRATEGIC PLAN + REPORT

prepared for the
TAPPAN BRIDGE PARK ALLIANCE & COLUMBIA UNIVERSITY
CREDITS

REPORT PREPARED BY
Nicole Buchholz
Danielle Dowler
Norabelle Greenberger
Steven Loehr
Greg Mirza-Avakyan
Lucy Robson
Josh Saal
Abby Scattergood
Qian Wang

STUDIO LEADERSHIP
Eldad Gothelf
Milagros Lecuona
Alex McQuilkin (TA)

SPECIAL THANKS TO
Moshe Adler, GSAPP
Kristin Brinker, Advisory Council on Historic Preservation
Robert Camoin, Camoin Associates
Dan Keefe, NY State Office of Parks, Recreation and Historic Preservation
Devin McDowall, GSAPP
Fred Schaeffer, Walkway Over the Hudson
Graham Trelstad, GSAPP

This report is submitted as part of the degree requirements for the Master of Science in Urban Planning at Columbia University’s Graduate School of Architecture, Planning and Preservation. All research and recommendations are purely an academic exercise.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>Context</td>
<td>11</td>
</tr>
<tr>
<td>Location</td>
<td>12</td>
</tr>
<tr>
<td>The Studio</td>
<td>13</td>
</tr>
<tr>
<td>History</td>
<td>14</td>
</tr>
<tr>
<td>Current Conditions</td>
<td>17</td>
</tr>
<tr>
<td>Competing Scenarios</td>
<td>19</td>
</tr>
<tr>
<td>Justification</td>
<td>23</td>
</tr>
<tr>
<td>Outdoor Recreation</td>
<td>24</td>
</tr>
<tr>
<td>Tourist Destination</td>
<td>26</td>
</tr>
<tr>
<td>Economic Benefits</td>
<td>27</td>
</tr>
<tr>
<td>Ownership &amp; Funding</td>
<td>29</td>
</tr>
<tr>
<td>Implementation</td>
<td>37</td>
</tr>
<tr>
<td>Stage 1: Pre-Construction</td>
<td>38</td>
</tr>
<tr>
<td>Stage 2: Bare Necessities</td>
<td>41</td>
</tr>
<tr>
<td>Stage 3: Further Improvements</td>
<td>50</td>
</tr>
<tr>
<td>Appendices</td>
<td>53</td>
</tr>
<tr>
<td>A: Economic Benefits Methods</td>
<td>54</td>
</tr>
<tr>
<td>B: Open Design Competition Guidelines</td>
<td>56</td>
</tr>
<tr>
<td>C: Professional Competition Guidelines</td>
<td>58</td>
</tr>
<tr>
<td>D: Works Cited</td>
<td>60</td>
</tr>
</tbody>
</table>
INTRODUCTION
The Tappan Zee Bridge connects Westchester and Rockland Counties across the Hudson River nearly 20 miles north of New York City. It is one of the main transportation arteries of the Lower Hudson Valley. After more than 50 years of heavy use, the bridge has fallen into disrepair and is currently 6 years past its projected life span. In response, the new Hudson River Crossing is expected to be completed by 2017. Regardless of the new bridge’s construction, questions remain for what should be done with the existing Tappan Zee Bridge.

In conjunction with our client, The Tappan Bridge Park Alliance, a not-for-profit organization dedicated to converting the existing bridge into a park, this studio group at Columbia University’s GSAPP is advocating for the adaptive reuse of the existing Tappan Zee Bridge into a linear greenway and recreational space with pedestrian and bicycle access.

**JUSTIFICATION**

The conversion of the Tappan Zee Bridge into a park was justified through our research in three main areas: Increasing recreational opportunities, bringing tourism to the region, and the economic benefits to both counties derived from the first two justifications.

**RECREATION OPPORTUNITIES**

Although there is a substantial network of parks and trails in the Lower Hudson Valley, Tappan Bridge Park presents a unique opportunity to connect trails and parks across the Hudson and become a recreational destination for hikers and cyclists.

**TOURISM**

Through our cost-benefit analysis and analysis of other similar adaptive reuse projects, we estimate that the park will generate 1.3 million visitors to the two counties combined annually.

**ECONOMIC BENEFITS**

We estimate that non-local visitors would on average generate $64,36 direct daily spending, and roughly 65 million dollars per year, thereby generating over 1,000 jobs, and 25.5 million in new local wages. The new net local spending would amount to 1.4 million in local sales tax and an additional $124,000 in sales tax generated from new wage earnings.

Although the creation of Tappan Bridge Park will provide many benefits to the region, there are still several challenges to address. These challenges focus on three different issues central to the conversion project: ownership, funding, and physical design.

**PUBLIC OWNERSHIP**

Based on experience owning and managing parks as well as greater access to resources and funding, we recommend that Tappan Bridge Park be publicly owned.

**PARK OPERATIONS & MANAGEMENT**

We advise that operations be done cooperatively between various stakeholders through the formation of a Tappan Bridge Park Board, which would encourage inter- and intra-agency local, county and state level collaboration.

**FUNDING**

Sources of park funding will vary depending on the immediacy of funding needs, ability to pay back investments, constituent support, and amount of initial capital needed. For public funding, we recommend focusing on bonds and grants for the immediate conversion, and using tax revenue for remaining improvements and park maintenance. Private sources of funding include grants, donations, and sponsorships.

**STAGES**

Because the sources and amount of funding for the project are uncertain, we recommend...
the conversion be implemented in stages so as to ensure that improvements can be added later on.

STAGE 1: PRE-CONSTRUCTION

In this stage, we determine the steps that must be taken for construction to commence. We determined that an engineering feasibility study, a regulatory compliance review, and fostering community support for the project to be key steps in this stage.

STAGE 2: BARE NECESSITIES

This stage makes up the bulk of bridge implementation and represents the minimum actions that must be taken for the Tappan Zee Bridge to be converted into a park. In this stage we also locate and recommend locations for parking and access points so that Tappan Bridge Park is accessible to local and non-local visitors alike.

STAGE 3: FURTHER IMPROVEMENTS

Though we have laid out the basic elements necessary to open the park to the public, the long-term success will be bolstered by the programming and design potential of the Tappan Bridge Park. While the landscaping and programming of the bridge will inevitably be contingent on available funds, the Tappan Bridge Park Board should use community input and design competitions to create a park for locals and tourists alike.

DESIGN COMPETITIONS

In this report, we recommend utilizing separate international design competitions for two purposes. First, an initial competition would garner support and draw attention to the bridge’s potential to be a world-renowned destination and to finalize a final design for the conversion of the bridge. After this initial international design competition, a second competition could be held by invitation only. This would serve the dual purpose of designing and programming the bridge with the input of leading architects, urban designers, and engineers.

All of these recommendations provide guidance towards implementing the conversion of the Tappan Zee Bridge into Tappan Bridge Park. It is the hope of the Tappan Bridge Park Studio that this document can serve as a conceptual and practical roadmap for the Tappan Bridge Park Alliance.
<table>
<thead>
<tr>
<th>MAPS</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Land Use</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>Transit Options</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Existing Park &amp; Trail Infrastructure</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>Tarrytown Access Points</td>
<td>43</td>
</tr>
<tr>
<td>5</td>
<td>South Nyack Access Points</td>
<td>46</td>
</tr>
<tr>
<td>6</td>
<td>South Nyack Parking</td>
<td>47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Population Projections</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Funding Choices Flowchart</td>
<td>32</td>
</tr>
<tr>
<td>3</td>
<td>Grants</td>
<td>35</td>
</tr>
<tr>
<td>4</td>
<td>Alternative Sources of Taxes</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>Stage 2 Estimated Costs</td>
<td>48</td>
</tr>
<tr>
<td>6</td>
<td>Stage 2 Funding &amp; Expenses</td>
<td>49</td>
</tr>
<tr>
<td>7</td>
<td>Stage 3 Funding &amp; Expenses</td>
<td>51</td>
</tr>
</tbody>
</table>
# Glossary of Acronyms

## Acronym

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEIS</td>
<td>Draft Environmental Impact Statement</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>EFS</td>
<td>Engineering Feasibility Study</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>FEIS</td>
<td>Final Environmental Impact Statement</td>
</tr>
<tr>
<td>GSAPP</td>
<td>Graduate School of Architecture, Planning &amp; Preservation</td>
</tr>
<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
</tr>
<tr>
<td>NYSBA</td>
<td>New York State Bridge Authority</td>
</tr>
<tr>
<td>NYS DOT</td>
<td>New York State Department of Transportation</td>
</tr>
<tr>
<td>NYSTA</td>
<td>New York State Thruway Authority</td>
</tr>
<tr>
<td>NYS OPRHP</td>
<td>New York State Office of Parks, Recreation &amp; Historic Preservation</td>
</tr>
<tr>
<td>RFP</td>
<td>Request for Proposals</td>
</tr>
<tr>
<td>SEQR</td>
<td>State Environmental Quality Review</td>
</tr>
<tr>
<td>TBPA</td>
<td>Tappan Bridge Park Alliance</td>
</tr>
</tbody>
</table>
This page is left blank for intentional purposes.
CONTEXT
## THE BRIDGE

- **Opened**: December 15, 1955
- **Length**: 16,013 ft
- **Width**: 90 ft
- **Lanes**: 7 traffic lanes
- **Surface Area**: 1,441,170 ft²
- **Acreage**: 33.08 acres
- **Deck Height**: 138.5 ft
- **Tower Height**: 293 ft
- **Materials**: concrete, steel and timber
- **Towns traversed**: Tarrytown and South Nyack
- **Counties traversed**: Westchester and Rockland
- **Roads**: Interstate 87, Interstate 287
- **Owner**: New York State Thruway Authority

![Looking west to Nyack across the Tappan Zee Bridge](https://therealdeal.com)
THE CHALLENGE

The Tappan Zee Bridge, constructed in 1955, is currently 6 years past its projected lifespan. In response, New York State has proposed a replacement Hudson River vehicular crossing that has been expedited by the Obama administration for federal review and funding.

As part of Columbia University’s Graduate School for Architecture, Planning, and Preservation program, our working group has studied the potential conversion of the current Tappan Zee Bridge into a linear park for our client the Tappan Bridge Park Alliance.

The Tappan Bridge Park Alliance is a non-profit dedicated to advancing the conversion of the current bridge into a greenway for pedestrian and bicycle access. Adjunct professors Eldad Gothelf and Milagros Lecuona led our group with the assistance of Alex McQuilken, MSUP Candidate ‘12.

Our assignment from the Academic Subcommittee of the Tappan Bridge Park Alliance is two-fold:

1. Draft a strategic plan for converting the bridge into a linear park.
2. Create guidelines for an international design competition.

The Studio has worked from January to May 2012 analyzing the facts and issues concerning the potential of an adaptive reuse project for the Tappan Zee Bridge. Although the project is unfolding in real time, this study group seeks to consider the project as an academic exercise for student development.

THE REPLACEMENT PROJECT

The New York State Department of Transportation, the Federal Highway Administration and the New York State Thruway Authority have proposed that the Tappan Zee Bridge should be replaced with a new double span bridge structure.

In the Draft Environmental Impact Statement for the proposed Hudson River Crossing, it became apparent that the replacement project would be costly and time-consuming. In addition to the construction of the new bridge, the plan calls for the demolition of the current bridge posing additional financial costs and environmental risks to the project.

The current bridge is slated for demolition for several reasons:

1. It costs $50 million per year in maintenance and construction to keep the Tappan Zee Bridge structurally sound to carry the current vehicular load.
2. It has only seven narrow lanes and no shoulders for emergency access vehicles.
3. Population projections predict that future demand for crossing the Hudson River will be greater than the Tappan Zee Bridge’s capacity.

It remains to be seen whether the costs of maintenance will be greatly reduced through adaptive reuse for non-vehicular activities.

Additionally, current engineering plans specify that the new structure will use the same landings that are currently in place. This specification makes initial construction more complicated, and creates an obstacle to converting the current bridge into a park and walkway.

Despite these challenges towards converting the Tappan Zee Bridge into a park, there has been a swell of grassroots and high-profile interest in this adaptive reuse option. Most notably, New York’s Governor Andrew Cuomo expressed interest in February 2012, saying, “It’s an exciting option.”

Many mass transit advocates, however, fear that an emphasis on adaptive reuse will distract from what they consider to be a more important issue: the inclusion of rail or bus-rapid-transit in the new Hudson River Crossing. Some critics have even proposed that the current Tappan Zee Bridge be repurposed for mass transit uses. However, for reasons
this report will later explore, this option is not viable. Moreover, the planned new Hudson River Crossing includes specifications that allow for the accommodation of rail or bus rapid transit at a future date.

**HISTORY**

The Tappan Zee Bridge is 56 years old, a lifespan dwarfed by the long and rich history of Hudson River Valley region. Considering the effects of historical events provides a deeper understanding to considering the bridge’s potential reuse.

1540 French explorers start trading with Weckquaesgeek and Nyack Native Americans on the Hudson River

1609 Henry Hudson explores the Hudson River

1645 Tarrytown area settled by Dutch pioneers

1681 Flour mills constructed in Tarrytown, beginning its industrial transformation

1684 Nyack area also settled by the Dutch

1773 1773 – American Revolutionary War begins

1776 Declaration of Independence signed

1780 Major John Andre, collaborator of famous traitor Benedict Arnold, is captured near Tarrytown and jailed near Nyack

1783 Revolutionary War ends

1785 Quarries begin Nyack’s industrial period

1834 Ferry service across the river begins

1849 New York & Hudson River Railroad joins New York City and Albany through Tarrytown. Rail construction cuts off direct local access to the waterfront

1870 Tarrytown incorporates as a village

1881 Erie Railroad reaches Nyack

1883 Nyack incorporates as a village

1953 Construction starts on the Tappan Zee Bridge, over 200 homes are demolished in Tarrytown and Nyack, changing the physical and social fabric of the towns

1955 Tappan Zee Bridge opens, ending ferry service
1963  Erie Railroad is abandoned

1965  Nyack receives $7 million in urban renewal funding to repair harm caused by bridge construction

1980 – Tarrytown rejects proposed shopping center to focus on downtown revitalization

Major repairs start on Tappan Zee Bridge

$160 Million Tappan Zee Repair Project proposed

2009  Tappan Zee Replacement Project announced

2011  Draft Environmental Impact Statement released

The geographical proximity to the Hudson River has indelibly shaped the built environment of both Tarrytown and South Nyack. The two villages’ histories are intertwined with the development of the Hudson River as a major shipping waterway that connected suppliers to manufacturers in the region’s trade capital, New York City.

Although separate industrial developments in each village led to early achievements in manufacturing and transportation, the villages and their corresponding counties were always connected. Whether by small maritime craft, sailing ferries or steam-powered ferry service, differing degrees of linkage were created by cross-river transportation. Nonetheless, the further development of industry coupled with the expansion of rail made the river increasingly unappealing as a means of transport, thus maintaining the two villages’ separation.

The Tappan Zee Bridge did not solve these problems – in fact, it exacerbated them. Its construction, costing over $80 million dollars, was besieged by engineering problems, and forced the removal of over 200 homes, creating tremendous damage to the physical and social fabric of the villages. The effects it had on Nyack were especially dramatic, and can be associated directly with Nyack’s successful application for over $7 million in federal urban renewal funds in the following years.

Today, these communities are poised to undergo dramatic change due to the construction of the Tappan Zee River Hudson River Crossing. This new bridge provides an opportunity to convert the existing Tappan Zee Bridge into a park that will connect the two counties and villages while reconnecting them to the rich history of trans-Hudson movement and recreation.
CURRENT CONDITIONS

LAND USE

Around the eastern landing of the Tappan Zee Bridges is Tarrytown, part of Westchester County. North of the current structure lies the traditional village core of Tarrytown, including a bustling Main Street and the Metro-North Railroad Station. Tarrytown’s higher-density residential districts are also in this area. Throughout the historic village core, the residential density is often surpasses 5 residential units per acre. South of the bridge, land uses vary more, and are characterized by corporate, commercial and residential uses.

Immediately surrounding the western landing is South Nyack, part of Rockland County. The Village of South Nyack lies mostly to the north of the bridge, and is characterized by higher residential density. In the adjacent village of Nyack, there exists a thriving commercial corridor along Main Street. To the south of the bridge, Grand-View-on-Hudson is primarily low-density residential. Land uses are seen to the left in Map 1.
HISTORIC CHARACTER

The Tappan Zee Bridge is considered by many a structure of historic importance given its value to the engineering and construction history of the region. It is eligible for – but not yet listed on – the National Register of Historic Places. Although being listed in the Registry might save the current bridge from demolition, it would require high-levels of endorsement and support from important officials at all levels of government. Inclusion within the National Register could potentially delay the construction of the new Tappan Zee Hudson River Crossing, a scenario that would make most officials hesitant to provide support for historic consideration.

DEMOGRAPHICS

The population around the bridge landings grew during the ten-year period from 2000 to 2001 – both at the village and the county level. Population growth in both Westchester and Rockland Counties outpaced overall growth in the State of New York. The New York City Metropolitan Statistical Area overall showed strong growth during those ten years. Given the Tappan Zee Bridge’s regional importance, looking at population trends at different levels is relevant to our analysis.

By the year 2020, Westchester County is projected to grow to over 1 million residents, accounting for a 5.61% population change from 2010 to 2020. Rockland County is projected to reach over 328,000 residents, growing by 5.23% during the same time period.

Figure 1 | Population Projections | Nicole Buchholz
TRANSPORT CONNECTIVITY

Automobile transit is the dominant mode of travel for most non-work related trips in both Rockland and Westchester Counties. The Tappan Zee Bridge constitutes the merging of two major routes: Interstate 87 and Interstate 287. These routes provide connections to other major interstate highways throughout the East Coast. Mass transit capabilities in each county vary widely, and are represented in Map 2.

The TAPPANZEEExpress (TZX), a commuter bus, connects points in Rockland County with both Tarrytown Metro-North Station and White Plains, an employment hub in Westchester.

Transport of Rockland, Clarkstown MiniTrans and the Westchester Bee-Line provide local bus service within Westchester and Rockland Counties.

Only Westchester County has a direct commuter rail link to New York City. Metro-North Railroad lines travel up the eastern shore of the Hudson River, as well as along the Long Island Sound Coast and up through the heart of Westchester County. New Jersey Transit marginally serves Rockland County’s western section with periodic service.
Given the current conditions, the future of the Tappan Zee Bridge is contentious: many groups are mobilizing around various issues. The different options available each have their own political, environmental, and local implications. Overall, there are three competing scenarios for the future of the Tappan Zee Bridge:

1. Rehabilitation
2. Demolition
3. Adaptive reuse

REHABILITATION

The rehabilitation of the Tappan Zee Bridge has been largely supported by environmentalists and transit advocates. The two key issues they have identified are:

1. Lack of public transportation on the new bridge
2. Negative impacts on the surrounding habitat and wildlife.

Transit advocates call for the rehabilitation of the Tappan Zee Bridge to include bus rapid transit (BRT) and other mass transportation options in order to decrease automobile dependency in the area. The current project proposes only that the new bridge would have the option of integrating public transit in the future, but contains no current plans for the implementation of public transit.

Various local groups and politicians have increasingly rallied around the idea of including public transportation in the new bridge and also rehabilitating the old bridge to add even more public transportation options. State Senator Andrea Stewart-Cousins stated in support of this option that it “is critical that the new bridge include mass transit options such as bus rapid transit, so that it can sustain increased usage for years to come. This is what’s best for our environment, our economy, and our transportation system as a whole.”

Environmental concerns center on issues of habitat destruction and local wildlife disturbance caused by not only the construction of the new bridge, but the demolition of the current Tappan Zee Bridge. Hudson River habitat destruction could particularly impact the endangered Shortnose and Atlantic Sturgeon by disrupting their spawning migrations, a concern largely cited by the non-profit, Riverkeeper.

The DEIS (Draft Environmental Impact Statement) found the rehabilitation option implausible, citing that rehabilitation would cost an estimated $2.5-2.7 billion more than replacing the bridge. Even then, rehabilitation would only extend the life of the bridge without a guarantee of the long-term structural integrity of the bridge (DEIS, Executive Summary).
COMPETING SCENARIOS

DESTRUCTION

As stated in the DEIS and RFP (Request for Proposals), the current Tappan Zee Bridge is slated for demolition after the Tappan Zee Hudson River Crossing is completed in 2017. The demolition scenario, which would cost an estimated $150 million, is officially supported by New York State as well as many local and state politicians foremost concerned with efficiency and pragmatism.

Concerns of cost and the financial burden of rehabilitating or converting the old bridge are echoed in the Journal News of the Lower Hudson Valley, where Westchester County Executive Rob Astorino’s opined that “to leave the old bridge up doesn’t make sense.” Astorino, as well as several state agencies and politicians, view the financials barriers as too high and demolition as the clearest course of action.

ADAPTIVE REUSE

The idea to transform the Tappan Zee Bridge was first raised in 2000 by Tarrytown resident Jean Schneider. Her idea was viewed as by many as implausible because of the costs of bridge repairs and lack of political support.

However, with the popularity of adaptive reuse projects such as the Highline and Walkway Over the Hudson, the idea of converting the bridge into a linear park has gained public support and media attention.

Adaptive reuse is supported by several local and state officials as well as specials interests groups, such as Bike Walk Alliance of Westchester & Putnam County. The increase in open space, bike and running connectivity, and the large variety of possible amenities that this conversion would bring has fostered strong support for adaptive reuse.

Rockland County assemblywoman Amy Paulin summarized these benefits, stating her support on her website “for turning the old Tappan Zee Bridge into a park and a crossing for pedestrians and cyclists. The deconstruction of the bridge is costly and adds to industrial waste. The Hudson River is one of New York’s most beautiful views. Making it available to people of all ages for leisure and recreation is a boon to the state.”

The DEIS and state officials question adaptive reuse as an alternative, due to lingering questions of financial sustainability and the structure’s stability.
COMPETING SCENARIOS

HISTORIC PRESERVATION IMPACTS

In all of these scenarios, historic implications must be addressed. Although the Tappan Zee Bridge might not appear historically significant, the bridge is an important mid-20th century example of bridge infrastructure located in the historic Hudson Valley.

As previously mentioned in the introduction, the bridge is currently eligible for the National Register of Historic Places. In the research and interviews with officials there exists a general consensus that protecting the viewshed of the Hudson River is a priority for preservationists.

Although the Tappan Zee Bridge has historic value, it is more important to consider the impact of a new vehicular crossing on the historic Hudson River viewshed, as the design of the bridge will undoubtedly impact the views. Moreover, the adaptive reuse of the Tappan Zee Bridge would cause additional concerns. The impact on the viewshed of two bridges next to each other must therefore be acutely addressed. One must consider the design of each bridge together and their cumulative visual effect on the landscape and viewshed.
JUSTIFICATION
RECREATION

Due to the Tappan Bridge Park Alliance’s mission to convert the existing Tappan Zee Bridge into a park, it is necessary to evaluate the benefits that this adaptive reuse can bring to the region. There are three emerging ways in which the creation of Tappan Bridge Park will benefit the region: through recreation, tourism, and economic benefits.

RECREATION

First, both Rockland and Westchester counties have strong recreational infrastructure with public state and county parks, in addition to extensive trails. However, there is a clear lack of regional connectivity among these assets. Currently, there are no available connections for cyclists to cross the Hudson River between the George Washington Bridge and Bear Mountain Bridge, roughly a 40 mile gap. Tappan Bridge Park would serve as a link between these two counties and would help make the Hudson River Valley a more popular recreational destination.

Both Rockland and Westchester counties have indicated in their regional plans that there is a need for facilities, like open space, in order to encourage healthier lifestyles. In Rockland County, 24.1% of the population is considered obese and 59.8% of the population is overweight. Westchester County has similar statistics, with 19.1% of the population considered obese and 58.6% of the population classified as overweight. The emphasis on green and open spaces in both regional plans aims to decrease the rates of obesity by encouraging recreational activity. This in turn helps negate costs that both counties are accruing with regards to increasing medical expenses.

EXISTING PARK AND TRAIL INFRASTRUCTURE

The total existing parkland in Westchester and Rockland Counties exceeds 50,000 acres. The majority of parkland is located in Rockland County, with 18,000 acres located in Westchester. The total park space in Westchester and Rockland counties comprises roughly 59 Central Parks. Large national parks in the area include Harriman State Park, at 4,600 acres, and Bear Mountain State Park, 5,000 acres.

In addition to parkland, both counties have extensive trail systems. There are nearly 2,000 miles of hiking trails in the two counties. These trails include the famous Appalachian Trail extending from Georgia to Maine, the Old Croton Trail, which connects to Central Park, and the Long Trail, which extends for 350 miles from New Jersey to the Albany area. There are also two new trails in development on both sides of the Hudson: The Rockland County Greenway Trail and the Westchester Riverwalk.

If the bridge were to become a park, both counties would benefit from physically connecting existing trails to the park providing an additional attraction for hikers and cyclists. The Hudson River Valley is making strides towards becoming a bicycling destination and the implementation of this bridge conversion works towards to solidifying that goal.

Currently existing parks and trails are shown to the right in Map 3.

The potential for the Tappan Zee Bridge to become a park also allows for the creation of possible waterfront vantages. As mentioned earlier, the water fronts in Westchester and Rockland counties have been traditionally used for industry. As the industrial sector has declined, much of the waterfront has gone unused and is difficult to access.

As a result, waterfront access on either side of the Hudson is very restricted. In Rockland, the two major public access points to the Hudson are Memorial Park and North Shore Walkway in Piermont. In Westchester, Losee and Matthiessen Parks are the only waterfront access points.

Because of limited waterfront access, town regional plans have pushed for the creation of the Greenway Trail in Rockland and the Riverwalk in Tarrytown. These trails will provide new recreational opportunities as
The lack of waterfront access points also restrict possible recreation activities, such as kayaking, sailing, fishing, swimming, all of which have become increasingly popular as a form of recreation. Further investigation will be needed to see if such activities could be integrated with the conversion of the Tappan Zee Bridge into a park.
The benefits of creating the Tappan Bridge Park would extend beyond outdoor recreational opportunities. Tappan Bridge Park would build upon the existing tourist economy, creating a link for recreation as well as providing a place where people of all ages could come and enjoy the views of the Hudson River.

In 2011 alone, over 6 million people visited state-owned parks, trails, and historic sites in Westchester and Rockland Counties. These visitors already provide a great tourist base for Tappan Bridge Park. By category, roughly 93% of these visits were to parks & trails, while 7%, or about 400,000 visits were to historic sites.

By comparison, approximately 4.5 million people visit the Grand Canyon each year. The large number of visitors in Westchester and Rockland counties demonstrates the accessibility of the area throughout the region.

**THE REGION**

Westchester and Rockland counties are home to a diverse range of historic and cultural attractions. Some of the highlights of the region include Lyndhurst (gothic revival architecture and mansions within Westchester), Kykuit (home to four generations of the Rockefeller Family), Tarrytown Music Hall (the oldest theater in Westchester County, attracting over 80,000 people annually), Turning Point Café (a regional destination for live music), and The Old 76 House (built in 1668, and used for Revolutionary-era Patriots).

**CASE STUDY**

In order to assess the potential effect that the bridge conversion could have on tourism, another adaptive reuse project, The Walkway Over the Hudson, was analyzed and used as a basis to determine the potential impact that Tappan Bridge Park could have on regional tourism.

Prior to the opening of Walkway Over the Hudson, the economic development firm, Camoin Associates, conducted an economic and fiscal impact analysis study. Camoin has since released its follow-up study based on actual park visitation. These numbers are more than double what was initially predicted. On average, the Walkway welcomed 500,000 visitors annually, accounting for increased usage during the first two months after opening, the busiest time for the Walkway.

Based on over 1,000 surveys conducted on site, 52% of these visitors were from the neighboring two counties, 20% were from New York State (but not Dutchess and Ulster Counties), and 28% were from outside of New York State.

In total, the study found that the Walkway generated over $23 million in new spending locally and $22 million in state, creating a little under 600 jobs, and over $775,000 in local sales and hotel tax revenue and $575,000 in state sales tax revenue.

Based on the methodology employed by Camoin (Appendix A), we determined that Tappan Bridge Park has the potential to drive up regional tourism. In fact, we estimate that the park would draw approximately 1.3 million visitors annually. This figure accounts for increased usage during the first two months after opening.
As a corollary to the gains in tourism, the bridge has the potential to draw in a significant amount of funds for the region.

**CASE STUDY FINDINGS**

Again, using Camoin Associates methodology, we estimate that non-local visitors would on average generate $64.36 direct daily spending, and roughly 65 million dollars per year, thereby generating over 1,000 jobs, and 25.5 million in new local wages.

The new net local spending would amount to 1.4 million in local sales tax and an additional $124,000 in sales tax generated from new wage earnings. Because 70% of accommodations in the area are located in Westchester County, visitors would generate an additional $300,000 in local revenues based on Westchester County’s 3% hotel occupancy tax.

At the state level, the predicted 379,000 non-NYS visitors to the park will generate over $59 million in spending and $1.4 million in state sales tax revenue. The increased state spending is predicted to create 561 new state jobs and $23 million in new state wages, adding another $129,000 in sales tax revenue along with these new earnings.

**ADDITIONAL BENEFITS**

Currently the bridge is slated for demolition. It is approximated that the cost of demolition will amount to $150 million. This figure does not include the additional $1.5 billion that has been allocated to maintaining the bridge while the new project is underway. In brief, if the bridge is preserved and turned into a park, the region stands to gain a significant amount of revenue.
OWNERSHIP & FUNDING
OWNERSHIP

PUBLIC OR PRIVATE?

Given all the benefits outlined above, the rest of our report considers different challenges and opportunities for the conversion of the Tappan Zee Bridge into a park. For example, there are several competing ownership structures that could potentially be realized. Three general ownership options are described and analyzed below:

PRIVATE NON-PROFIT

There are few, if any, precedents for a pure private non-profit owned megastructure of this kind. Although this ownership model has benefits including the potential of being a self-sustaining entity that is directly controlled by the owner/operator, the weaknesses are also apparent. Non-profit bridge ownership leaves the structure without a clear and proven path for funding, authority, and credibility. Additionally, it is unclear whether a non-profit alone would be able to muster enough resources – financial, political, and physical – to successfully act as an owner-operator.

PRIVATE FOR-PROFIT

Privately owned, for-profit public spaces do have precedent in the forms of privately-owned public spaces such as Zucotti Park, and amusement piers like Coney Island Amusement Park. Private, profit-seeking ownership provides the benefit of making the entity self-sustaining.

However, some characteristics of this ownership method seem antithetical to Tappan Bridge Park's interests. A private for-profit park would have reduced access to public funding potentially necessary for reconstruction. Profit-seeking behavior is also not directly linked to the public interest. Additionally, it is unclear whether there is enough potential in an amusement pier-like bridge for a truly profitable enterprise.

PUBLIC

Many of New York State and New York City's most prized public spaces, like Central Park, Walkway Over the Hudson and the High Line, are publicly owned. The benefits of this ownership model are impressive. Public ownership affords projects a high degree of public accountability and gives access to an experienced, resource-rich infrastructure with the ability to apply for public funding. Public ownership has a proven mandate to act in the public interest, and may have the greatest degree of credibility among these ownership models.

This model, however, has drawbacks. The proverbial red tape associated with the public sector along with potential budget-shortfall cutbacks and competition with other public entities for funding and resources are significant challenges.

POTENTIAL STATE AGENCIES

Based on precedent and the scope of the bridge park concept as a catalyst for the local, regional and state economies, we recommend public ownership. There are a multitude of public stakeholders that could potentially be the owners of the Bridge.

Because of the bridge’s location between two counties, the three primary options for public ownership are at the state level: the New York State Thruway Authority (NYSTA), the New York State Bridge Authority (NYSBA), and the New York Office of Parks, Recreation and Historic Preservation (NYS OPRHP). These three potential public owners are analyzed below:

NEW YORK STATE THRUWAY AUTHORITY

NYSTA are the current owners of the Tappan Zee Bridge and are responsible for the operation of New York State’s 570 mile Thruway system. With the change in use from vehicular traffic to open space for pedestrians and cyclists, their role in the bridge’s operation would be eliminated.

NEW YORK STATE BRIDGE AUTHORITY
NYSBA’s mission is “to maintain and operate the vehicle crossings of the Hudson River entrusted to its jurisdiction for the economic and social benefit of the people of the state.” Bridges under their jurisdiction are the Bear Mountain Bridge, Newburgh-Beacon “Hamilton Fish” Bridge, Mid-Hudson “Franklin D. Roosevelt” Bridge, Kingston-Rhinecliff “George Clinton” Bridge, and the Rip Van Winkle Bridge.

Additionally, they are the owners of the Walkway Over the Hudson pedestrian bridge. Their experience with bridge maintenance and the Walkway in addition to their focus on economic and social benefits of bridges make them an ideal owner for the Tappan Bridge Park. However, NYSBA has some constraints; they are a small organization, and the scale of this project is potentially beyond their current organizational and budget capacity.

NEW YORK STATE OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION

The NYS OPRHP operates hundreds of state parks and close to 1,500 miles of trails. They manage the Walkway Over the Hudson, a state historic park. While they do have experience with bridge management, their focus is primarily on parkland. Given the complexity and span of the Tappan Zee Bridge, their experience in managing walkway may not be sufficient to pass ownership of the Tappan Zee to them.

Therefore, we recommend that the New York State Bridge Authority act as primary owners of the park after its use as a vehicular bridge has concluded in 2017. Their bridge maintenance and inspection expertise in addition to their experience with the Walkway Over the Hudson make them an ideal owner of the Tappan Bridge Park.

Unless the budget and staff of the NYSBA expands by 2017, though, we recommend that ownership be shared with the two other state agencies outlined above. This would allow for a greater state budget allotment to match the large scope of the Tappan Bridge Park project.

OPERATIONS STRUCTURE

While it is our recommendation that NYSBA act as primary owner of the Tappan Bridge Park, we advise that operations be done cooperatively between the various stakeholders. This goal can be implemented through the formation of a Tappan Bridge Park Board, which would encourage inter- and intra-agency local, county and state level collaboration.

This Board model is not without precedent, Central Park, Walkway Over the Hudson, Bryant Park, and the High Line are just a few of the area parks following this model. The members of the Board could include representatives from:

Public: NYSBA, NYS OPRHP, and local government

Non-Profit: TBPA, major private investors and area non-profits with a vested interest in the project.

The tasks carried out by the Board would include, but not be limited to, park maintenance, fundraising, events planning, general operations and finances, promotion, selection of the Invitational Design Competition participants, and planning for future improvements. The Board would be made up of subcommittees each tasked with addressing these areas.
Just as we proposed that operations and management of the Tappan Bridge Park be conducted collaboratively between public and private entities from the local to state level, funding strategies would also come from both public and private sources. Each strategy has its advantages and disadvantages. By employing both public and private entities, the Tappan Bridge Park will be economically viable to create and maintain.

In order to maximize the potential for the Park, no option should be left unconsidered. While we do provide a recommendation for funding, by no means does this exclude other potentially available funding sources. A helpful flowchart to determine appropriate funding sources is shown in Figure 2.

**PUBLIC FUNDING**

Sources of public park funding will vary depending on the immediacy of the funding needs, ability to pay back the investment in the future, constituent support, and the amount...
of capital needed. Initially, with the large amount of funding required for the immediate conversion of the park, we recommend focusing on bonds and grants. For continued maintenance and further improvements that require less capital investment, we recommend also seeking funding through taxes. These three general types of public funding are outlined below:

**BONDS**

Municipal bonds are an ideal source of initial financing for the Tappan Bridge Park, as they have the benefit of providing large amounts of capital in a timely fashion. As bond referendums require voter approval, gaining constituent support for the Park project is integral for their successful passage. Bonds must be paid back, and can have higher interest rates as the repayment period is extended.

**GRANTS**

Grants offer the benefits of not requiring voter approval or repayment. The amount of capital varies by grant, and, because they are essentially a source of free capital, the process for obtaining and following up on grants can be burdensome. Some grants relevant to the Tappan Bridge Park are outlined in Figure 3.

**TAXES**

Taxes can come in many forms, and can be structured in a way to direct tax revenue directly to the Tappan Bridge Park for its maintenance and general operations. Taxes that might be relevant to the park are described in Figure 4. New taxes do require voter approval. It is therefore imperative that the structure of the tax be appropriate for the project given the voting history of area constituents.

**PRIVATE FUNDING**

Similar to public financing, there are a multitude of sources of private financing relevant to the Tappan Bridge Park. Private funding sources that will initially be most applicable in generating large amounts of capital include grants, donations, and sponsorships. Gifts, volunteers programs, and fundraising are more appropriate for continued maintenance and further improvements. These forms of private financing are briefly described below:

**GRANTS**

Grant applications can also be made by private organizations and individuals. As described above, benefits of grants are the large amounts of capital they can potentially provide. This is especially important for the initial conversion of the bridge and for large-scale future improvements to the Park's physical structure and the surrounding regional infrastructure.

**DONATIONS**

Like grants, donations do not require repayment and can potentially provide large amounts of capital immediately. These sources are not dependable though. While every effort should be made to procure donations, they cannot be relied upon as the sole source of funding.

**SPONSORSHIPS**

Corporate sponsorship of one or multiple elements of the Park offers another funding opportunity. The key is identifying what kinds of assets can be leveraged with sponsors. Corporate sponsorship does not necessarily necessitate putting banners and signs all around parks, which may create backlash. The driving force behind corporations’ interest in park sponsorship is reaching the people that go to the park. Corporate sponsorship of park events is an example of a funding source that would be temporal and could raise significant funds for the park. Parks can also leverage the products and services that they would normally buy, offsetting costs and raising additional funds.

**GIFTS**

Gift catalogs are an excellent means of raising funds, large and small, from all facets of the
private sector. An online park gift catalog would include a list of various items that the Board would like to see added to the park, such as new railings, benches or lighting. The public could buy all or portions of these gifts, and, as recognition, have their name placed on a plaque or on the purchased gift once installed in the park. Gift catalogs are an opportunity to expand interest in the park and make the general public feel more personally invested in its future.

**VOLUNTEER PROGRAMS**

Volunteer programs similar to the national “Adopt-a-Highway” program could be used to offset some of the park maintenance costs. Organizations and individuals could volunteer their time to maintain a portion of the park, again, increasing personal investment in the park.

**REVENUES**

In addition to the potential public and private funding sources outlined above, the park itself has the potential to provide revenue that can be used for both maintenance and future park improvements. While it is not our recommendation that the park charge admission, potential sources of revenue include, but are not limited to, vendor licences, special event fees, and parking fees. These three revenue sources are described below:

**VENDOR LICENSES**

Once the park is open, selling vendor licenses for food and beverage concessions could earn revenue. Interested vendors could apply to the Board, who would select the vendors best suited to the needs of the park visitors. These licenses could be renewed seasonally or annually. Varying levels of license fees could apply depending on the size and the location of the vendor.

**SPECIAL EVENT FEES**

While we do not suggest charging a user fee, charging special event fees to attendees is a potential revenue source. These fees could be applicable to all event attendees, or to non-local attendees to offset the potential free-riding non-tax paying visitors making use of the benefits of the park’s special events.

**PARKING FEES**

Another means of offsetting the potential free-rider problem is by charging for parking. This revenue source also encourages using alternate transit means to access the park, furthering the park’s sustainability goals.

By diversifying all the funding sources available, the project gains financial flexibility from the pre-construction stage of the project towards its completion. In today’s economy, it has become increasingly difficult to predict available funding. In order to partially mitigate this uncertainty, we recommend splitting the project into three different stages. This provides further flexibility and ensures the success of the project through a multi-stage process.
# Funding

## Figure 3 | Grants

<table>
<thead>
<tr>
<th>Grant</th>
<th>Involved Agency</th>
<th>Purpose</th>
<th>Amount</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational Trails Program</td>
<td>NYS DOT; Office of Parks, Recreation and Historic Preservation</td>
<td>Acquisition, new development, renovation or maintenance of public trails or trail-related facilities</td>
<td>Range from $5,000 to $200,000 per project and recipients must provide at least a 20 percent match to the awards</td>
<td><a href="http://www.nysparks.com/grants/recreational-trails/default.aspx">www.nysparks.com/grants/recreational-trails/default.aspx</a></td>
</tr>
<tr>
<td>Environmental Protection Plan</td>
<td>New York State</td>
<td>Create jobs, eliminate solid waste, prevent pollution and invasive species, protect natural resources and community character, revitalize urban areas, and connect people with the outdoors</td>
<td>Ranges based on project size, total funds allocated for FY 2012-13 = $134 million, $17.5 for open space preservation</td>
<td>keepprotectingny.com/the-epf.html</td>
</tr>
<tr>
<td>Growing Grassroots Capacity-Building Grants</td>
<td>Parks &amp; Trails New York</td>
<td>Help not-for-profits better fulfill their missions; improve their reach, effectiveness, and impact; leverage more resources; and increase community support for and involvement in park and trail planning, development, and stewardship</td>
<td>Up to $3,000</td>
<td><a href="http://www.ptny.org/advocacy/grants.shtml">www.ptny.org/advocacy/grants.shtml</a></td>
</tr>
<tr>
<td>SAFETEA-LU (Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users)</td>
<td>Department of Transportation</td>
<td>Improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment</td>
<td>$370 million investment in recreational trails; $100 million investment in non-motorized transportation pilot</td>
<td>www fhwa dot gov/ safetealu</td>
</tr>
</tbody>
</table>
### FIGURE 4 | ALTERNATIVE SOURCES OF TAXES

<table>
<thead>
<tr>
<th>TAX</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate Transfer Tax</td>
<td>Tax on the sale, granting, and transfer of real property or an interest in real property</td>
</tr>
<tr>
<td>Special District Tax</td>
<td>Tax levied on specific properties that are part of the board-run special district</td>
</tr>
<tr>
<td>Hotel Occupancy Tax</td>
<td>Tax is imposed on the occupancy - or the right to occupancy - of a room or rooms in a hotel. The term “hotel” includes an apartment hotel, motel, boardinghouse, bed-and-breakfast, bungalow, or club, whether or not meals are served</td>
</tr>
</tbody>
</table>
IMPLEMENTATION
STAGE 1

INTRODUCTION
In order to accommodate for varied funding sources, we recommend a staged conversion of the Tappan Zee Bridge into a park. The first stage addresses necessary steps that must be taken before the bridge can be opened to the public. The second stage constitutes the functional and safety measures for the park to be opened at a bare minimum. Lastly, the third stage suggests further processes that can be implemented in order to add additional amenities to the park and make connections to regional infrastructure.
ENGINEERING FEASIBILITY STUDY

NECESSITY

One of the most prominent objections raised to the conversion project is the structural stability and engineering health of the current structure. In order to pursue the conversion project, it is vital to rigorously examine the current structure's present and future capacity to act as a cycling and pedestrian structure.

An Engineering Feasibility Study (EFS), undertaken by an appropriately skilled engineering firm, will definitively determine the state of the current structure as well as its future projected structural and load-bearing capacities. Engineering Feasibility Studies are common features of large physical projects like the conversion project.

SCOPE OF ENGINEERING FEASIBILITY STUDY

The Virginia-based Engineering Groupe, Inc. defines an EFS as an “in-depth analysis of a potential engineering project that looks at the complete picture of costs... as well as the potential benefits of completion. When... benefits are significant enough, the project moves forward...” Adjunct Professor Graham Trelstad of Columbia University’s Graduate School of Architecture, Planning and Preservation, notes that a study for the Tappan Zee Bridge would be more complex than a simple cost-benefit analysis.

In addition to assessing the long-term structural stability of the bridge structure, an appropriate EFS must consider the type and amount of preventative maintenance the bridge requires. The engineering firm will conduct a full and comprehensive investigation of the bridge and construct a computer model that simulates varying loads and possible future conditions.

Due to the Tappan Zee Bridge’s large size and its location above the Hudson River, it is likely that an EFS of these relatively complex scope will take the better part of a year. Trelstad estimates that its costs are likely to be several hundred thousand dollars, with the possibility of rising with complexity to several million dollars.

RECOMMENDATIONS FOR ENGINEERING FIRM

Due to the Tappan Zee Bridge’s age, unusual construction featuring floating cussions, and size, it is most appropriate that an engineering firm with the proven ability to handle bridge projects conduct the EFS. The following engineering firms are recommended for their ability to provide quality work for the Tappan Zee Bridge based on similar engineering projects, listed below:

- Moffatt & Nichol, www.moffattnichol.com, Rt. 123 Bridge in VA.
- Bechtel, www.bechtel.com, Tacoma Narrows Bridge, Seattle, WA.

REGULATORY COMPLIANCE

It will be necessary for the conversion project to be compliant with federal, state and local requirements for fact-finding and impact assessment.

DETERMINING LEVEL OF REVIEW

If federal funds are involved in project financing, the project will be subject to NEPA, the National Environmental Policy Act. This federal legislation ensures that governmental
branches give proper consideration to the environment prior to undertaking any major federal action that could significantly affect the environment. To be compliant with NEPA, assessments of the likelihood of impacts from alternative courses of action, such as Environmental Assessments (EAs) and Environmental Impact Statements (EISs) are required from all federal agencies. The central element in the environmental review process is a rigorous evaluation of alternatives, including a “no action” or “no build” alternative. NEPA requirements compel agencies to disclose impacts found to stakeholders and to the public.

New York State has similar requirements for state-level action and agencies. Most projects or activities proposed by a state agency or a unit of local government require an Environmental Impact Assessment under SEQR, the State Environmental Quality Review. SEQR requires agencies or government bodies to identify and mitigate the significant environmental impacts of the activity it is proposing or permitting.

The appropriate level of environmental review—and the associated lead agency for the review process—will also depend on the ownership of the structure. The lead agency, according to Trelstad, is the “involved agency that has the most direct and primary role in funding, approving, or implementing a project.” Should the New York State Thruway Authority remain the owner of the Tappan Zee Bridge, it is the only governmental agency that can serve in that capacity.

Mr. Trelstad notes that lead agencies can be different for fulfilling compliance with NEPA and SEQR legislation. It is possible that lead agencies for each, review and prepare a joint NEPA/SEQR Environmental Impact Statement and individually report findings.

DETERMINING TIME COMMITMENT

Although it is likely that the number of analyses required are few for determining the environmental impact of this conversion project, estimating a timeline for compliance with environmental review legislation is still difficult. Mr. Trelstad notes that typically, the more complex a project is, the lengthier its EIS processes will be. He estimates that a timeline for an EIS for this conversion project could take anywhere from 6 months to 24 months. Furthermore, costs are a function of time.

ALTERNATIVES

It is possible that a full environmental review will not be indicated for the conversion project. The appropriate lead agency can document all of the environmental impact issues that might result from the project in an Environmental Assessment. Then, that Agency could issue a Finding of No Significant Impact (for NEPA) and/or a Negative Declaration (under SEQR). The timeline for this process is potentially shorter than the process for a full environmental review.

COMMUNITY PARTICIPATION

The first stage of the conversion project is an opportunity to build community support for the future Tappan Bridge Park. Additionally, it is the appropriate time to seek community input on future design and construction elements.

MEDIA

TBPA will “set up shop” online, using social networks to serve as a conduit for community reactions and concerns. TBPA will apply print, television, and online media sources to engage a local and extra-local audience of potential supporters.

OUTREACH

TBPA will partner with the bridge’s owner to determine a schedule of public meetings and comment periods for the bridge’s future plans. TBPA will commission a study for locals and visitors at local tourist destinations to determine what design and physical elements are preferred.
Several important physical development measures need to be tackled before the Tappan Bridge Park can be opened to the public. Chief among these are two elements that address the interrelated challenges of park access:

1. Constructing new access points to the park
2. Determining and/or developing additional parking sites to serve the park.

Firstly, there are several smaller-scale physical elements that are imperative to the park’s initial opening.

**BASIC PHYSICAL ELEMENTS**

Because of financial uncertainties facing the construction of Tappan Bridge Park, the physical development, landscaping, and construction of amenities will occur in several phases according to the level of funding available. In order to build momentum and
ensure the initial success of the park, the first phase of physical development is the most crucial. However, to boost the feasibility of the park’s construction, only basic elements that are vital to the primary function of the park (a pathway for pedestrians and bicyclists) are required for the initial opening. These basic elements are:

**RAILINGS**

Protective railings of 54” in height in accordance with NYS guidelines will help to improve safety for bicyclists and pedestrians.

**SURFACE PAINTING AND STRIPING**

Demarcations separating bikers, joggers, walkers, and others who are simply enjoying views of the Hudson provide the simplest and most affordable surface treatment.

**PORTABLE BATHROOMS**

Though unattractive, portable restroom facilities are needed along a three-mile pathway and should be sited appropriately with caution.

**TRASHCANS**

In order to prevent littering, basic waste and recycling receptacles are needed at regular intervals.

Each one of these alternatives presents unique implications for community concerns, spatial challenges, and financial constraints. The options for each end of the park are outlined below:

### ON THE TARRYTOWN SIDE

**TARRYTOWN ALTERNATIVE A: USING NORTHERN SPAN SHARED PATH TO ROUTE 9**

This alternative uses a portion of the shared bicycle/pedestrian pathway that is currently proposed along the Tappan Zee Hudson River Crossing’s northern side of the westbound span. At 1100 feet from the shoreline, a linking structure would diverge from the new bridge, descend roughly 30 feet below the two vehicular spans, and connect with Tappan Bridge Park. It is depicted to the left in Map 4 with the other Tarrytown access points.

This option is expected to be a medium-cost alternative, as it would partially utilize already planned infrastructure. Despite the benefits of connecting the park to Route 9 and providing access to Downtown Tarrytown just one mile north, the area around this access point is already developed and has limited parking. There are also issues posed by the gradient of the accessway due to the need to descend from and continue underneath the future bridge.

**ACCESS POINTS**

On both the Tarrytown and the South Nyack shores, the future Tappan Zee Hudson River Crossing is slated to utilize the same landing points as the current bridge. Therefore, the Hudson River Crossing’s construction calls for the removal of the landings of the existing Tappan Zee Bridge -- approximately 2,000 feet of the western causeway and 3,000 feet of the eastern causeway.

Given these plans, the preservation and conversion of the existing Tappan Zee requires the construction of one or more new access structures in order to link the remaining span with its surrounding communities. It is expected that this construction element will be the largest expenditure involved in Tappan Bridge Park’s opening.

Our studio has identified several alternatives that link Tappan Bridge Park with its shores.

**OTHER**

Based on the level of available funding, additional amenities, landscaping, and decorative elements may be included in the park’s first phase or pursued in later phases of development. These elements will be discussed later in the Phase 3 section of this document.

**PORTABLE BATHROOMS**

Though unattractive, portable restroom facilities are needed along a three-mile pathway and should be sited appropriately with caution.

**TRASHCANS**

In order to prevent littering, basic waste and recycling receptacles are needed at regular intervals.
MAP 4 | TARRYTOWN ACCESS POINTS

Access Points
- Tappan Bridge Park
- New Crossing
- Shared Use Path
- Metro-North Railroad
- Trailways
- Parks

0.25 mile

Source: Rockland County Department of Planning
Westchester County Department of Planning
Federal Highway Administration
New York State Department of Transportation
New York State Thruway Authority

Qian Wang
TARRYTOWN ALTERNATIVE B: USING NORTHERN SPAN SHARED PATH TO RIVERWALK

Similar to Alternative A, this option also involves using roughly 1100 feet of the shared bicycle/pedestrian pathway currently proposed for the northern side of the Hudson River Crossing. Again, such an accessway would diverge from the new bridge and link with Tappan Bridge Park. The accessway would connect the bridge to the planned extension of the Westchester Riverwalk along the waterfront.

Although Westchester County has yet to determine the exact placement of the route, ramps, stairways, and/or elevators should be explored in order to connect this riverfront pathway with the Tappan Bridge Park, creating a key link in the network of trails and paths of the Lower Hudson Valley.

TARRYTOWN ALTERNATIVE C: RIVERFRONT LINK TO LOSSEE PARK

This alternative calls for the construction of a 2,400-foot long pathway paralleling the eastern Hudson shoreline, linking the Tappan Bridge Park to the downtown Tarrytown waterfront. In addition to serving as a picturesque gateway, this option provides greater connectivity to downtown Tarrytown businesses, the Tarrytown Metro-North station, and a sizeable supply of parking. This alternative, however, may obstruct the river views of nearby residences and impact boater access to the adjacent marina.

Additionally, this alternative is poorly connected to the nearby interstate, adds a sizeable distance to the approach for park visitors, and will require a sufficient slope from the bridge elevation. It is also expected to be the most costly of the Tarrytown access alternatives.

ADDITIONAL TARRYTOWN ALTERNATIVES

Additional alternatives that were also considered for access along the eastern side of the Hudson have been ruled out for various reasons. Several involve the construction of a shared bicycle/pedestrian access path just to the south of the future Tappan Zee Hudson River Crossing, either partially on the eastbound span of the new bridge or as a completely separate structure. This option is not politically feasible because any alternative using the eastern span of the new bridge would reconfigure the current Tappan Zee Hudson River Crossing proposal thereby requiring additional public review. An entirely separate southern access path would be redundant given Options A and B outlined above. Moreover, an additional southern access path would significantly increase costs while connecting the bridge to a poorly-suited residential area south of the Tappan Zee toll plaza. A final alternative, a waterfront accessway connecting with the Tarrytown Waterfront to the west of the Metro-North station was also evaluated, but was deemed more environmentally disruptive and costly while providing little added benefit given option C.

RECOMMENDATION FOR TARRYTOWN SIDE

Based on surrounding land use and connectivity, alternative C is recommended for initial access on the Tarrytown side of the Hudson. This access point minimizes direct disruption to residential areas, and is well connected with Downtown Tarrytown and its Metro-North Station. There are concerns over potential traffic increases through Tarrytown and obstruction of the Hudson River views of nearby residences.

These concerns can be mitigated by encouraging public transit use, providing more convenient parking, and carefully designing the new accessway so as to enhance the viewshed. Alternative C does not preclude providing additional access points in later stages of development in order to maximize equity of access and provide additional connectivity.

ON THE SOUTH NYACK SIDE:
COMMUNITY PARTICIPATION

As the project moves forward, community involvement will be a key element of ensuring community physical support, financial backing, and locally-appropriatedesign elements.

GRASSROOTS SUPPORT CAMPAIGN

A grassroots effort seeks to organize active allies for the park conversion who can spread the word about TBPA’s mission and donate funds to make the project happen.

COMMUNITY MEETINGS

In order to determine an appropriate mitigation for this project’s impact on the historic Hudson River viewshed, TBPA should hold community meetings.

VISIONING SESSIONS

TBPA should host visioning sessions and consider a community needs survey to inform the guidelines for the Professional Design Competition (Appendix C). By starting visioning sessions early, community members can have a powerful stake in the future bridge’s design.

SOUTH NYACK ALTERNATIVE D: USING NORTHERN SPAN SHARED PATH TO RIVER ROAD

Similar to the Westchester side, this alternative includes using a portion of the Tappan Zee Hudson River Crossing’s shared bike/pedestrian pathway currently proposed along the northern side of the westbound span. At 1900 feet from the shoreline, a new linking structure would diverge from the new bridge, descend roughly 30 feet below the two vehicular spans, and connect with Tappan Bridge Park, shown in Map 5.

This option is also expected to be a moderate cost alternative partially utilizing already planned infrastructure. Due to the necessary rise in elevation of the accessway, this alternative will require that ramps, stairways, and/or an elevator be constructed. Because of the area’s quiet residential character, this alternative would primarily serve local residents and others arriving from nearby Piermont.

SOUTH NYACK ALTERNATIVE E: USING NORTHERN SPAN SHARED PATH TO ROUTE 9W

This alternative also uses part of the Hudson River Crossing’s shared path, with the same linking structure as Alternative D to connect with Tappan Bridge Park. Unlike Alternative D, this path would be extended an additional half-mile to link with the reconfigured Route 9W interchange of I-87/287. This alternative would provide direct connectivity to the interstate and to the Raymond Esposito Trail. Moreover, this alternative provides the potential for ample parking as detailed in the parking section below.

ADDITIONAL ALTERNATIVES:

As on the Tarrytown side, additional alternatives considered for the South Nyack side of the Hudson include constructing a separate shared access path to the south of the future Hudson River Crossing, or transferring the shared-use path to the new bridge’s southern span before ultimately diverging to Tappan Bridge Park. These alternatives were considered unfeasible due to:

1. limited space on the southern side of the bridge landing
2. the residential character of the area
3. the impracticality of reconfiguring the Hudson River Crossing proposal.

RECOMMENDATION FOR SOUTH NYACK SIDE:

For the initial stage of development, Option E is recommended on the Tarrytown side of the Hudson. This option would provide access to park visitors arriving from near and far without disrupting nearby residential communities. It is also situated closer to Downtown Nyack, encouraging visits to local businesses while...
providing easy access I-87/287 and the Raymond Esposito Trail.

**PARKING**

Given the projected 1.3 million annual visitors for Tappan Bridge Park, sufficient parking is one of the most crucial elements to ensuring the park's success. Because of limits in the area’s existing infrastructure as well as the traditional travel patterns of the Lower Hudson Valley, many visitors to the park will inevitably arrive via automobile. Although connections to pedestrian paths, bike routes, and public transit networks will be emphasized modes of travel to reach Tappan Bridge Park, accommodating visitors who travel by car is important.

Based on parking provided at Walkway Over the Hudson while acknowledging the goal of encouraging alternative transportation modes, we estimate that roughly 300 spaces would be the minimum parking needed to serve Tappan Bridge Park. This amount of...
A parking space requires approximately 2 acres of land.

Due to the sizeable supply of parking currently within ½ mile of our Tarrytown access points, it is recommended that existing parking facilities be used and improved where possible. Free, metered, and resident-only lots are located near the Tarrytown Metro-North Station, the Tarrytown waterfront, and in downtown Tarrytown. These areas, however, are often near capacity, particularly during peak business and commuting hours. There are also several private lots that currently serve commercial buildings and office parks. Agreements that would allow the use of these lots on weekends or during special events should be pursued.

For later stages, a few large undeveloped or poorly utilized spaces have been identified as potential new parking sites. These include the former General Motors Plant along the Hudson River, and the current maintenance and staging area adjacent to the Tappan Zee
Toll Plaza.

However, given the proximity of the Tarrytown Metro-North Station to Tappan Bridge Park as well as the limited amount of vacant land for additional new parking within close proximity of our access points, it is recommended that the primary focus of initial parking lot development occur on the South Nyack side of the Hudson.

In Rockland County, there is extremely limited existing parking within a half-mile radius of Tappan Bridge Park’s landings. Although there is a modest supply of parking in Downtown Nyack, it is already often near capacity and not well connected with the bridge accessway itself. However, there are 24 acres of vacant land within a half-mile distance of our access points.

The most suitable site is located adjacent to the soon-to-be-reconfigured interchange of Route 9W, which has already been identified as a potential parking site for the Village of South Nyack and the NYS Thruway Authority. This site could easily be repurposed as parking for Tappan Bridge Park.

Shown in Map 6, This potential parking area is directly adjacent to preferred access point E, and would eliminate the need for vehicular traffic to travel through the residential areas of South Nyack thanks to its location adjacent to the interchange. This parcel is also already state-owned and is relatively flat, bolstering its suitability.

While Route 9W interchange parking is recommended for the initial phase of Tappan Bridge Park’s development, additional later parking in vacant lots just to the south and west of this interchange is also an alternative. However, due to the steep incline of and poor connectivity to these lots, such an endeavor could be costly. Overall though, the combination of public transportation, trail connections, and parking will provide sufficient means of reaching the park for visitors from near and far.

### FIGURE 5 | STAGE 2 ESTIMATED COSTS

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>COST</th>
<th>BASIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessways</td>
<td>$4-7 million</td>
<td>(1872ft + 2400ft) x 10ft wide x $100/sf</td>
</tr>
<tr>
<td>Parking</td>
<td>$87,000-$522,000</td>
<td>87,000sf (2 acres) x $1-6/sf</td>
</tr>
<tr>
<td>Railings</td>
<td>$1.4-2.8 million</td>
<td>4881 meters (x 2) x $295/m</td>
</tr>
<tr>
<td>Restroom Facilities + Trashcans</td>
<td>~$25,000</td>
<td>$19,000 portable bathrooms $200 x 16 trash cans</td>
</tr>
<tr>
<td>Structural Improvements</td>
<td>Unknown</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$5-10 MILLION</td>
<td></td>
</tr>
</tbody>
</table>
FUNDING EXPENSES AND SOURCES

The basic physical elements of stage 2 include resurfacing and making structural repairs to the bridge, constructing access points and parking lots, and installing railings, bathroom facilities and trashcans: the minimum requirements to make the park safe, functional, and accessible. We estimate the costs of these improvements at roughly $5-10 million dollars, without accounting for the costs of ongoing structural maintenance.

As shown in Figure X, Stage 2 will draw from the $150 million currently allocated for the bridge’s demolition, as well as potential grant opportunities, municipal bonds, and private sponsorships and donations.
Though we have laid out the basic elements necessary to open the park to the public, the long-term success will be bolstered by the programming and design potential of the Tappan Bridge Park.

The bridge’s 1,441,170 feet of surface area provide an expansive blank slate of possibilities for active, commercial, and recreational use. These elements will help make the Tappan Bridge a world-class tourist destination. While the landscaping and programming of the bridge will inevitably be contingent on available funds, the Tappan Bridge Park Board can and should use community input and design competitions to create a park for locals and tourists alike. The possibilities are far too many to list, but through these two processes, they can be narrowed down and implemented according to funding.

**INTERNATIONAL DESIGN COMPETITIONS**

International design competitions can generate an immense amount of support and help draw worldwide attention to the Tappan Bridge Park project.

The first competition, whose guidelines are found in Appendix B, would be held as an open forum allowing for all ages and disciplines to submit their ideas for the 30 acres of parkland. The purpose of the first international design competition is to garner support and draw attention to the bridge’s potential to be a world-renowned destination. This open-ended process would lead to an exchange of many ideas and vision for the park. Such a competition could also inspire potential donors to subsequently contribute funding opening the door for these visionary ideas to develop into a concrete project.

After the initial international design competition, a second competition could be held by invitation only. The guidelines for this competition are found in Appendix C. This would serve the dual purpose of designing and programming the bridge with the input of leading architects, urban designers, and engineers. The Tappan Bridge Park Board, with a set of specific guidelines and design criteria, would choose these competitors.
COMMUNITY PARTICIPATION

COMMUNITY NEEDS SURVEY

We recommend that a community-needs survey be conducted. This survey would allow the Tappan Bridge Park Board to prioritize the many potential components that fit under the umbrella term “improvements,” and provide guidance for the participating design teams.

DESIGN COMPETITION SELECTION

We also recommend that the public be involved in the selection process. The three month commenting period between the initial and final submissions should be an open process. In addition, there should be continued public input once the winning design is chosen. Local feedback should be addressed as work moves forward on the winning design’s implementation.

FUNDING EXPENSES AND SOURCES

Potential Stage 3 expenses, found in Figure 7 below, include landscaping improvements, building construction, playgrounds, recreational facilities, and regional infrastructure improvements, such as improved public transit and access.

In addition to the funding sources for Stage 2, Stage 3 funding includes both tax and park revenue.
THE TAPPAN BRIDGE PARK might seem implausible to many of its opponents. However, the project has its precedents. Challenges posed by the conversion of this bridge into a park necessitate solutions that provide flexibility while simultaneously moving the project forward. With this report, we have outlined some of the basic options, strategies and visions for making the project a reality. We hope that this report has provided informative analysis and perspective that visionaries, politicians and advocates will be able to use moving forward.
APPENDICES
ECONOMIC & FISCAL IMPACT ANALYSIS METHODOLOGY

The Tappan Bridge Park economic and fiscal impact analysis was based on the model of Camoin Associates, used for a previous study on Walkway Over the Hudson. Two primary documents were consulted: their initial 2007 report and a follow-up study conducted in 2012.

ESTIMATING VISITORSHIP

Visitorship to the proposed Tappan Bridge Park was calculated using the Walkway Over the Hudson Usage Ratio (0.542), a ratio between the local population and the number of annual local visitors the site receives. The Tappan Bridge Park local population was defined as the total expected 2017 population of both Westchester and Rockland Counties. These numbers are provided in Table 1, below. Looking at the Walkway as precedent, their visitor breakdown of local, out of county, and out of state visitors was used to calculate the total number of expected visitors to the Tappan Bridge Park, beginning in 2017 (Table 2).

ESTIMATING LOCAL & STATE ECONOMIC IMPACTS

Based on the number of expected visitors to the Tappan Bridge Park and the average daily spending of visitors to the Walkway Over the Hudson ($64.36/day for non-local visitors and $74.99/day for out-of-state visitors). We calculated total expected new direct and indirect spending, jobs, and total new wages using the ratios contained in Tables 3 and 4, below.

ESTIMATING LOCAL & STATE FISCAL IMPACTS

Based on 2010 tax rates obtained from the Westchester and Rockland County Government websites (Table 5) and the expected economic impacts for Tappan Bridge Park, local and state fiscal impacts were calculated based on the following assumptions taken from the Camoin Associates model:

- Visitor spending is divided equally between the two counties
- 60% of new local spending is on taxable goods
- 70% of new wage earnings is spent locally
- 20% of spending from new wages is spent on taxable goods
- 72.58% of local hotel spending is at Westchester County Hotels

### TABLE 1: LOCAL PARK USERS (2017)

<table>
<thead>
<tr>
<th></th>
<th>Westchester County Population (2017)</th>
<th>978,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rockland County Population (2017)</td>
<td>320,500</td>
</tr>
<tr>
<td>&quot;Local&quot; Population</td>
<td>Usage Ratio</td>
<td>1,298,500</td>
</tr>
<tr>
<td></td>
<td>Local Park Users</td>
<td>0.542</td>
</tr>
<tr>
<td></td>
<td>Local Park Users</td>
<td>703,337</td>
</tr>
</tbody>
</table>

### TABLE 2: ANNUAL VISITORS (2017)

<table>
<thead>
<tr>
<th>ORIGIN</th>
<th>%</th>
<th>EXPECTED VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>52%</td>
<td>703,337</td>
</tr>
<tr>
<td>Out of County</td>
<td>20%</td>
<td>649,234</td>
</tr>
<tr>
<td>Out of State</td>
<td>28%</td>
<td>378,720</td>
</tr>
</tbody>
</table>

### TABLE 3: LOCAL PARK USERS (2017)

<table>
<thead>
<tr>
<th></th>
<th>Westchester County Population (2017)</th>
<th>978,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rockland County Population (2017)</td>
<td>320,500</td>
</tr>
<tr>
<td>&quot;Local&quot; Population</td>
<td>Usage Ratio</td>
<td>1,298,500</td>
</tr>
<tr>
<td></td>
<td>Local Park Users</td>
<td>0.542</td>
</tr>
<tr>
<td></td>
<td>Local Park Users</td>
<td>703,337</td>
</tr>
</tbody>
</table>
### TABLE 3: ANNUAL LOCAL ECONOMIC IMPACTS

<table>
<thead>
<tr>
<th></th>
<th>Out of County Visitors</th>
<th>Direct Spending</th>
<th>Indirect Spending</th>
<th>Total Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Spending</td>
<td>$649,234</td>
<td>$41.78 m</td>
<td>$0.55</td>
<td>$22.98 m</td>
</tr>
<tr>
<td>Indirect Spending</td>
<td></td>
<td>$64.76 m</td>
<td></td>
<td>$1.87 x 10^5</td>
</tr>
<tr>
<td>Total Spending</td>
<td></td>
<td></td>
<td></td>
<td>$64.76 m</td>
</tr>
<tr>
<td>Direct Jobs</td>
<td>784</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Jobs</td>
<td>0.321</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Jobs</td>
<td>1,036</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wage (Direct Jobs)</td>
<td>$19,959</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wage (Indirect Jobs)</td>
<td>$39,211</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Wages</td>
<td>$25.52 m</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 4: ANNUAL STATE ECONOMIC IMPACTS

<table>
<thead>
<tr>
<th></th>
<th>Out of State Visitors</th>
<th>Direct Spending</th>
<th>Indirect Spending</th>
<th>Total Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Spending</td>
<td>$378,720</td>
<td>$28.40 m</td>
<td>$1.09</td>
<td>$59.35 m</td>
</tr>
<tr>
<td>Indirect Spending</td>
<td></td>
<td>$30.95 m</td>
<td></td>
<td>$1.23 x 10^5</td>
</tr>
<tr>
<td>Total Spending</td>
<td></td>
<td></td>
<td></td>
<td>$22.99 m</td>
</tr>
<tr>
<td>Direct Jobs</td>
<td>351</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Jobs</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Jobs</td>
<td>561</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wage (Direct Jobs)</td>
<td>$70,621</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Wage (Indirect Jobs)</td>
<td>$58,181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Wages</td>
<td>$22.99 m</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 5: TAX RATES

<table>
<thead>
<tr>
<th>TAX</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rockland County Sales Tax</td>
<td>4%</td>
</tr>
<tr>
<td>Westchester County Sales Tax</td>
<td>3%</td>
</tr>
<tr>
<td>Average &quot;Local&quot; Sales Tax</td>
<td>3.5%</td>
</tr>
<tr>
<td>State Sales Tax</td>
<td>4%</td>
</tr>
<tr>
<td>MTA Sales Tax (Westchester only)</td>
<td>0.38%</td>
</tr>
<tr>
<td>Westchester Hotel Tax</td>
<td>3%</td>
</tr>
</tbody>
</table>
OPEN DESIGN COMPETITION

INTRODUCTION

In recent years, adaptive reuse has become an increasingly popular means for repurposing aging infrastructure worldwide. Drawing from nearby precedents including the High Line in New York City and Walkway Over the Hudson in Poughkeepsie, New York the Tappan Bridge Park Alliance has proposed a project to preserve and reuse the 3-mile long Tappan Zee Bridge as an iconic linear park and pedestrian/bike pathway. This proposal has garnered community groups.

In order to maximize the potential for innovative and creative design possibilities, we are now inviting architects, landscape architects, designers, planners, artists, and community members to create visionary design proposals for the structure’s reuse as a public promenade and recreational space. We encourage bold ideas that take advantage of the unprecedented aesthetic, recreational, and functional opportunities presented by the Tappan Bridge Park while also addressing important practical issues such as access challenges, safety concerns, and structural weaknesses in creative ways.

The conversion of the Tappan Zee Bridge to public open space will be a reclamation of vehicular transportation infrastructure unparalleled in this country. Once opened to the public, residents and visitors will be able to walk and bike between Rockland and Westchester Counties for the first time. In addition to serving as a vital functional connection and a recreational space, the Tappan Bridge Park will also serve as a major destination for visitors to the Lower Hudson Valley and as a symbolic link between the two counties long separated by the Hudson River. All of these unique roles should be important considerations in any proposed design.

THE CHALLENGE

We challenge competitors to create compelling visions for a new public space on 3 miles of the Tappan Zee Bridge. The initiative to reclaim the Tappan Zee Bridge for pedestrian and cyclist use faces complex political, legal, and financial hurdles. Competitors can play a vital role in overcoming these hurdles by proposing captivating designs that will garner support and raise public awareness of the unique potential of the Tappan Bridge Park. Innovative visions will demonstrate how the bridge can be transformed in bold, optimistic ways to benefit the Hudson Valley for generations.

OBJECTIVES

This open competition seeks to identify proposals for reuse of the Tappan Zee Bridge that:
1. Depict a creative design proposal for the conversion of the Tappan Zee Bridge to an iconic recreational space.
2. Ensure that ample space is provided for pedestrian, bicycle, passive, and active recreational use.

ELIGIBILITY

The competition is freely open to all. The Tappan Bridge Park Alliance seeks to attract a wide range of participants, from young to old, amateur to professional, and local to international.

COMPETITION OUTLINE

Submissions should be submitted via the Tappan Bridge Park Alliance’s online platform. Hard copies of submissions will not be accepted. The submissions will be narrowed down to 20 via an online voting process lasting one month. After the online voting period, the Tappan Bridge Park Alliance will choose 3 winners and 5 honorable mention selections from the submissions.

DEADLINE

December 1, 2012

SUBMISSION GUIDELINES
Submissions for the Open Design Competition shall total no more than two (2) U.S. Letter-sized, 8.5” x 11” PDF pages. Submitters may use a full color array, and are encouraged to let their creative ideas shine through text, graphic and pictorial elements. Submissions are accepted via the online submission form available at www.tappanbridgepark.com.
INTRODUCTION
In recent years, adaptive reuse has become an increasingly popular means for repurposing aging infrastructure worldwide. Drawing from nearby precedents including the High Line in New York City and Walkway Over the Hudson in Poughkeepsie, New York the Tappan Bridge Park Alliance has proposed a project to preserve and reuse the 3-mile long Tappan Zee Bridge as an iconic linear park and pedestrian/bike pathway. This proposal has garnered the support of various elected officials and community groups.

In order to maximize the potential for innovative and creative design possibilities, we are now inviting architects, landscape architects, designers, planners, artists, and community members to create visionary design proposals for the structure’s reuse as a public promenade and recreational space.

We encourage bold ideas that take advantage of the unprecedented aesthetic, recreational, and functional opportunities presented by the Tappan Bridge Park while also addressing important practical issues such as access challenges, safety concerns, and structural weaknesses in creative ways.

The conversion of the Tappan Zee Bridge to public open space will be a reclamation of vehicular transportation infrastructure unparalleled in this country. Once opened to the public, residents and visitors will be able to walk and bike between Rockland and Westchester Counties for the first time. In addition to serving as a vital functional connection and a recreational space, the Tappan Bridge Park will also serve as a major destination for visitors to the Lower Hudson Valley and as a symbolic link between the two counties long separated by the Hudson River. All of these unique roles should be important considerations in any proposed design.

THE CHALLENGE
We challenge competitors to create a thoughtful, compelling design for a new public space on the 3 miles of the Tappan Zee Bridge. The design must address certain special conditions and must also address multiple levels of financing. Because this project faces complex hurdles, competitors will have to address such hurdles through their designs. Innovative but realistic visions will demonstrate how the bridge can be transformed into a focal point of the Hudson Valley.

SPECIAL CONSIDERATIONS
There are several considerations unique to the Tappan Zee Bridge and park conversion that will need to be addressed in the Design Competition. Currently, the ownership and maintenance of the Tappan Bridge Park are uncertain. We envision that the park will be publicly owned but maintained by a private entity that specializes in park maintenance. Additionally, the amount of funding for the Tappan Bridge Park is still unclear. Therefore, we have laid out several options for the design of the park – ranging from a bare necessities scenario to a fully realized park design scenario. We would like for the proposal to incorporate a staged design that fits funding availability and can easily be adapted as more funding becomes available. The bridge also has a limited weight capacity due to overuse and poor upkeep over the years. Because of these structural issues, maintenance costs and bridge preservation will be key considerations in the design. The Bridge’s current structural capacity is outlined further in the DEIS.

OBJECTIVES
1. Define a comprehensive vision for the reuse of the Tappan Zee Bridge as a one-of-a-kind 3-mile long public open space.
2. Identify design solutions to the challenge of providing plentiful access to the Tappan Zee Bridge, including: universal or ADA compliant, access facilities, and access systems integrated into existing and/or future construction surrounding Tappan Bridge Park.
3. Conceive an innovative plan for the environment to be experienced by a visitor to the Tappan Bridge Park - an environment that might include (but is not limited to): landscaping/plantings, decorative elements, art-related uses, and recreational amenities.
EVALUATION CRITERIA

- The following factors will be considered in the evaluation of design proposals:
  - Cost-effectiveness
  - Connectivity to surrounding municipalities
  - Flexible design to allow for changing needs and varying levels of funding
  - Low maintenance costs
  - Appropriate noise mitigation efforts
  - Anti-self-harm efforts
  - Safety considerations
  - Appropriate landings & access points
  - Aesthetic fit with environment and architecture
  - Sustainability efforts
  - Sensitivity to view
  - Appropriate consideration of weather conditions (wind, rain, etc.)
  - Allows diverse array of uses
  - Addresses concerns over bridge slope
  - Must allow emergency vehicle access
  - Meet ADA requirements

COMPETITION OUTLINE (ONE YEAR COMPETITION TIMELINE)

Day 0: Initial Request for Portfolios
End of 2nd Month: Deadline for Portfolio Submissions
End of 4th month: Tappan Bridge Park Alliance selects five participating firms and distributes official competition guidelines and design specifications.
End of 8th month: Initial proposals due from participants. Begin comment period from TBPA.
End of 11th month: Final proposals due.
End of Year 1: Tappan Bridge Park Alliance chooses winning design.

SUBMISSION GUIDELINES

Entrants should submit two 30” x 40” (0.762 x 1.016 meters) presentation boards, with the 40” sides oriented vertically, and organized side-by-side. The boards should have a maximum thickness of 0.5” (12.7 mm) and weigh no more than 5 pounds (6.8 kilograms) each. The boards must lie flat against an easel or wall, and may not include anything that projects more than 0.25” (6.35mm) from the surface.

Presentation drawings are at the discretion of the entrant, but must reflect the competition’s objectives (see “Objectives,” above).

The presentation board should document clearly and concisely the entrant’s approach to the project. Ideas about the form, organization, materials, site planning, and design direction of the Tappan Bridge Park should be included. Any verbal description must be included on the presentation side of the board and incorporated into the graphic layout of the concept.

Presentations should be easily understood by a lay audience. Several members of the competition jury will not be familiar with architectural drawings and symbols. Further, the sponsors intend to display the competition entries in a high-traffic public setting and utilize them in education programs about the Tappan Bridge Park.

No models will be accepted. However, photographs or computer renderings of models may be incorporated into the presentation.

All entries must be submitted without any marks, logos, insignia, or writing that identify their authorship. Competitors must affix an opaque envelope to the rear of each competition board. Both the envelope and the board must be labeled only with the competitor’s identification number (which will be assigned upon registration). Sealed inside this envelope should be a copy of the registration confirmation.
WORKS CITED

COST-BENEFIT ANALYSIS


FINANCING


PARK & TRAIL USERS


PHYSICAL PARK ELEMENTS
APPENDIX D


PRECEDENTS


REGIONAL DEMOGRAPHICS & EMPLOYMENT


APPENDIX D


REGIONAL HISTORY


Talman, Wilfred Blanch. How Things Began...in Rockland County and Places Nearby: People, Customs, Language and Manners of Living During the Early Times in a Border County of New York State. The Historical Society of Rockland County, 1977.

REGIONAL PARKS & TOURISM


REGIONAL PLANS


REGIONAL TRANSPORTATION

Rockland County Department of Public Transportation. Accessed January


TAPPAN ZEE HUDSON RIVER CROSSING PROJECT


WALKABILITY