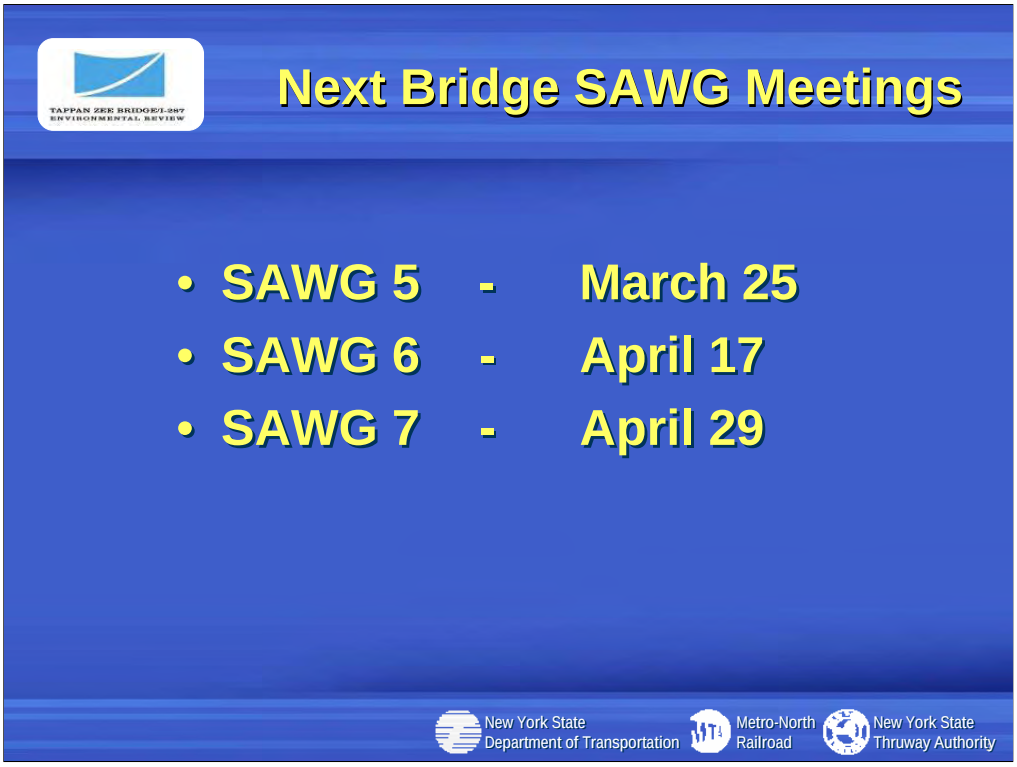
Slide 1

Title slide for meeting 5 of the Bridge Stakeholders' Advisory Working Group (BSAWG).

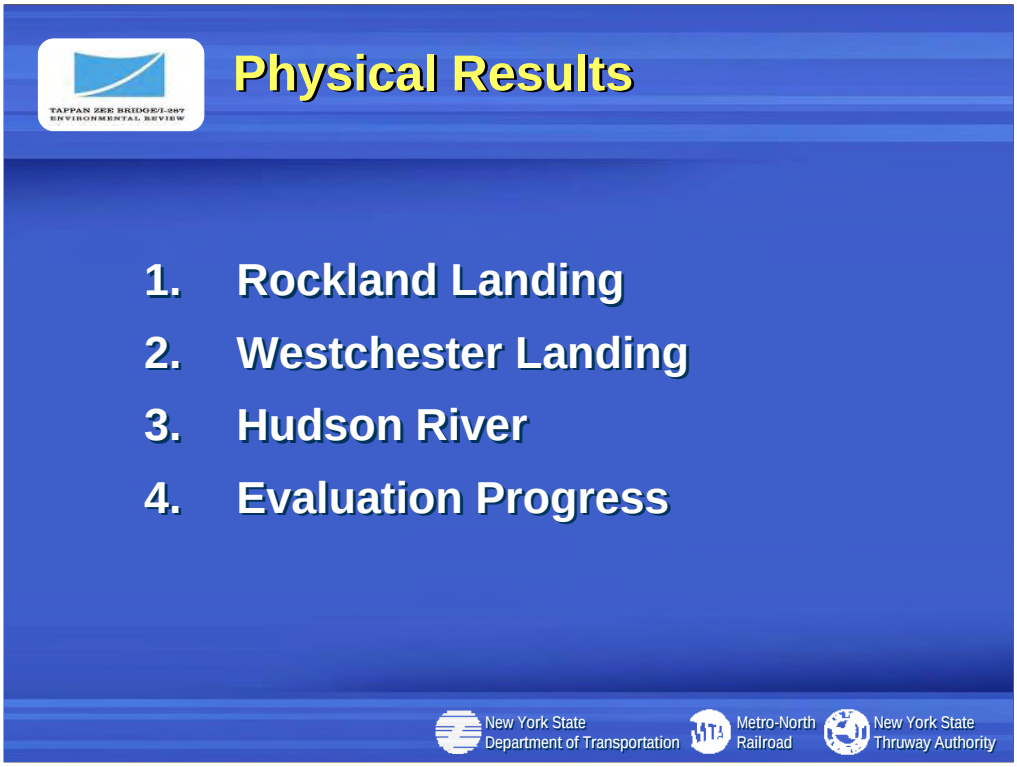
This meeting was the first in a series of three to examine the developing results for comparison of the four Rehabilitation and Three Replacement options of the TZB.

This meeting introduced the participants to the drawings used as the basis of the comparison among options.



Slide 2

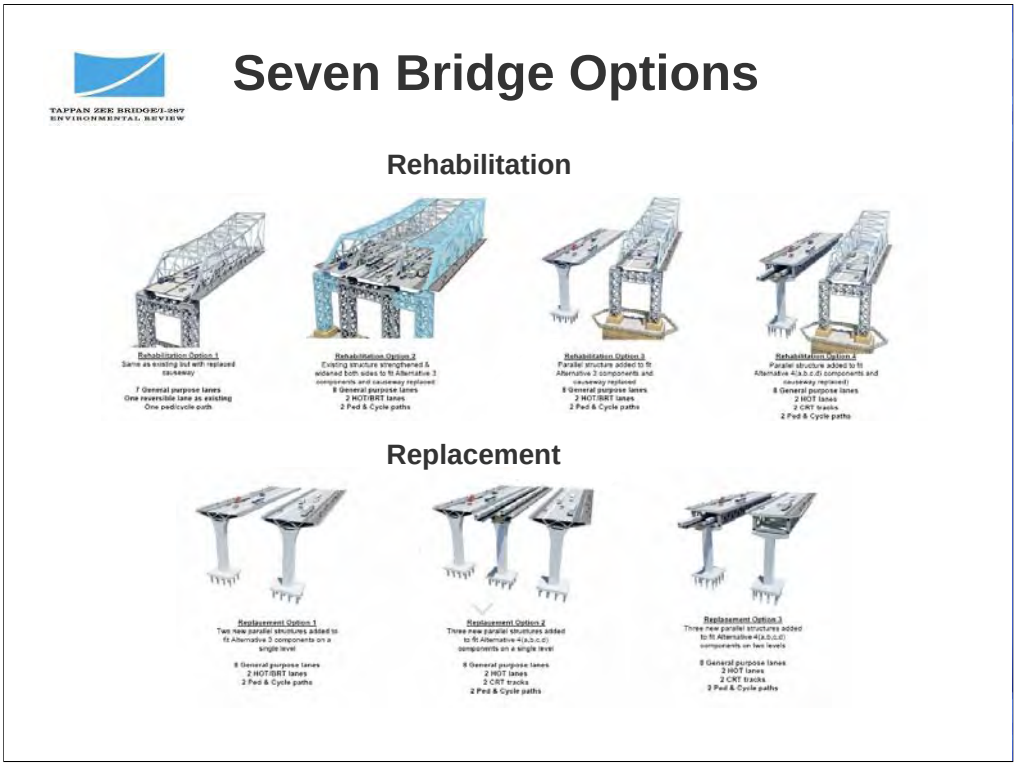
This slide presents the dates for the upcoming Bridge SAWG meetings.



Slide 3

The presentation had four parts. The first three parts focused on the physical areas of the crossing.

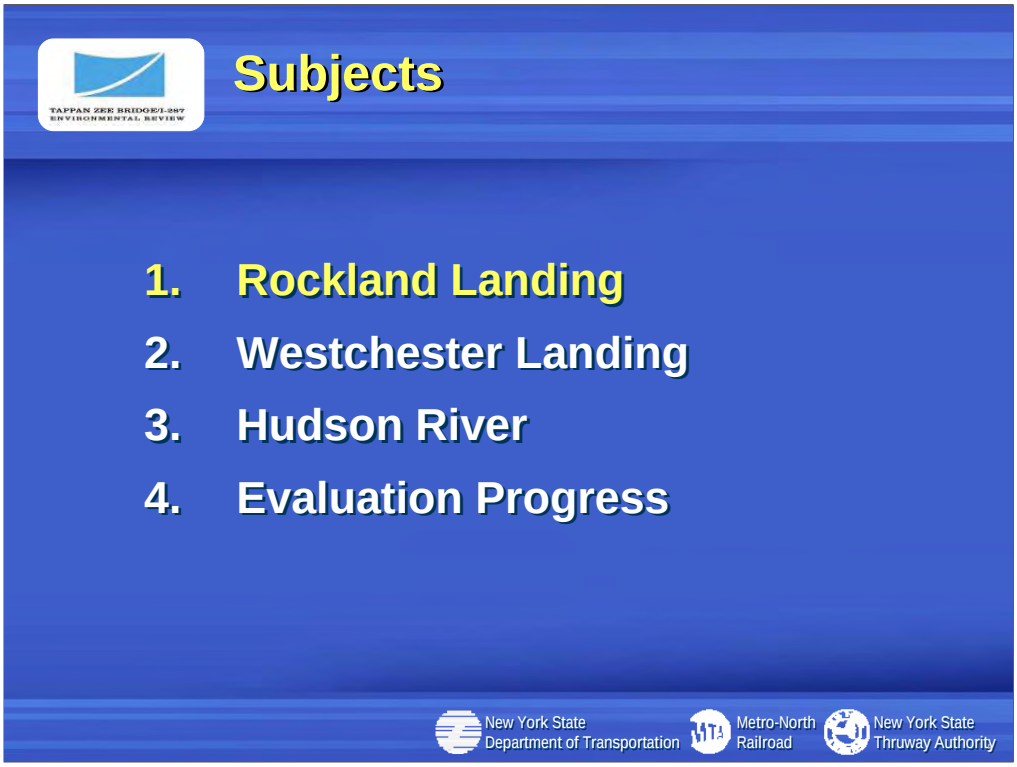
The last section lists the evaluation criteria used in the comparison of the Rehabilitation and Replacement TZB options.



Slide 4

This slide presents the four rehabilitation options and three replacement options.

The details of each option were discussed at the previous bridge SAWG (Meeting 4).



Slide 5

Title slide introducing Part 1 - Rockland Landing.

Slide 6

This slide presents an aerial photograph of the Rockland Landing.

The landing consists of the area between the South Broadway Bridge over the Thruway and the Hudson River.

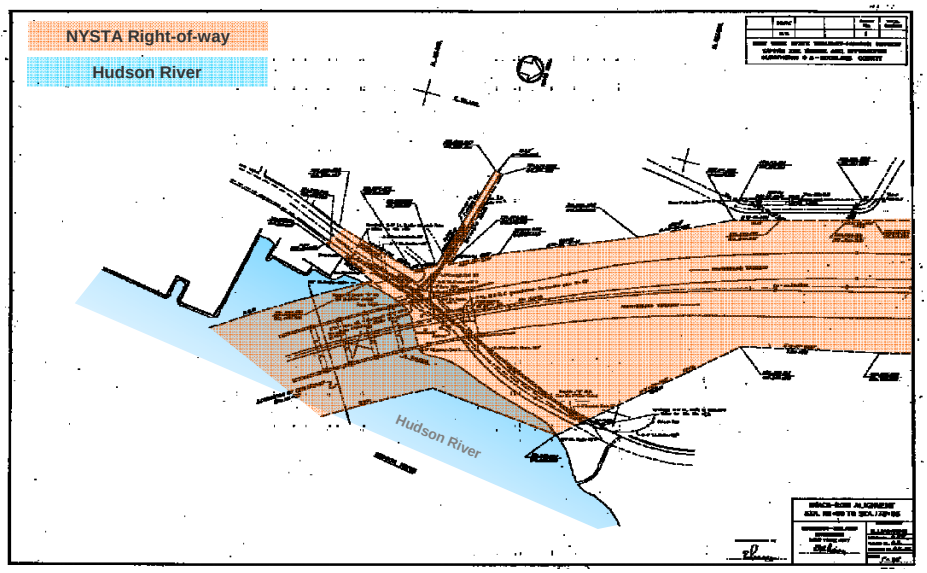
Slide 7

This slide presents a closer view of the aerial photograph with the street names highlighted.

Slide 8

This slide presents a view of the Rockland Landing from the South Broadway Bridge over the Thruway, facing east.

NYSTA Right-of-way Boundary
(Extract from 1953 Plans)



Slide 9

This slide presents the historic Thruway right-of-way boundary at the Rockland Landing.

The drawing is dated 1953 and is part of the records used to establish the Thruway boundaries.

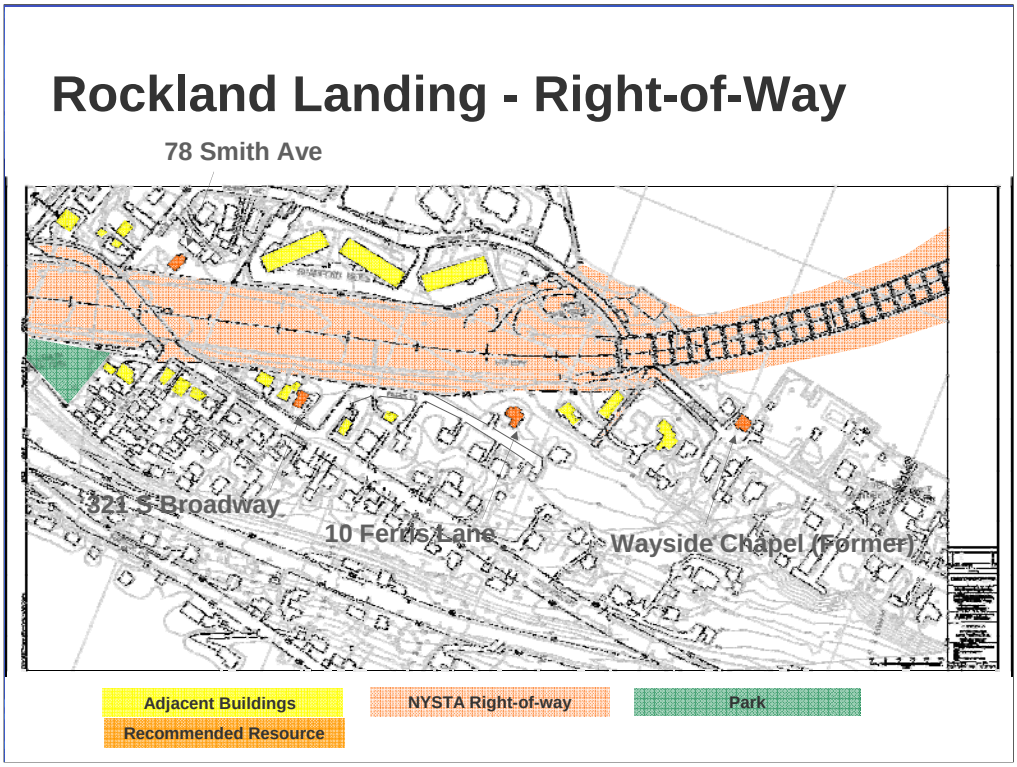
Slide 10

This slide presents the aerial view of the Rockland Landing overlaid with the Thruway right-of-way boundary.

Slide 11

This slide presents a wider view of the Rockland Landing and identifies the historical and cultural resources.

A number of properties adjacent to the bridge landing are recommended National / State Register eligible.



Slide 12

This slide highlights the Thruway right-of-way.

This slide also highlights all the properties adjacent to the Thruway, including four properties that are recommended National / State Register eligible, and Elizabeth Park.

Slide 13

This is the first in a series of slides that present images of the Rockland Landing's north side.

This photograph was taken from TZB Span 158 facing Rockland.

Slide 14

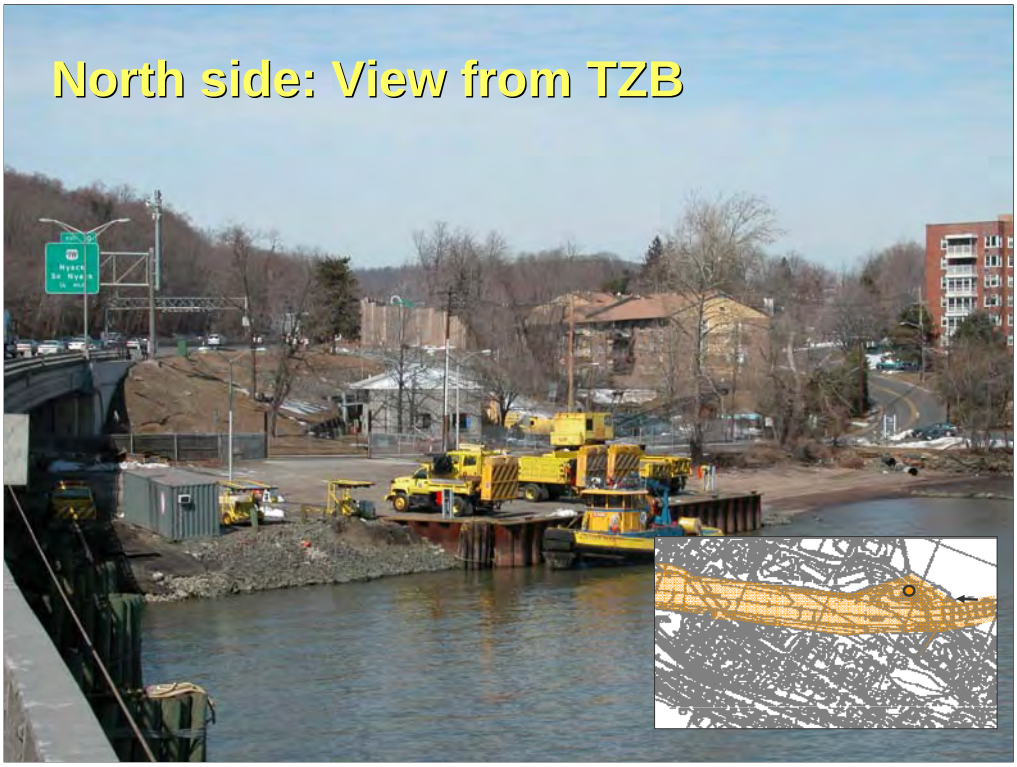
This winter photograph was taken from a boat in the Hudson River adjacent to the TZB.

The image presents the Thruway's maintenance area located under the TZB. It also shows the adjacent Bradford Mews and Salisbury buildings.

Slide 15

This summer photograph was taken from the TZB.

The image again shows the thruway's maintenance area and the adjacent buildings.



Slide 16

This winter photograph shows the Thruway's maintenance area is utilized for emergency and safety vehicle storage.

Underneath the TZB, the maintenance area includes docking facilities for a number of security and maintenance boats.

The existing noise wall is visible in the background.

Slide 17

This summer photograph shows the Thruway's maintenance area is utilized for emergency and safety vehicle for storage.

Slide 18

This photograph presents a view of the Thruway's maintenance area from River Road facing southeast.

Slide 19

This photograph was taken from River Road facing south. The image shows the end of the TZB as it crosses over River Road.

The TZB ends at the River Road Bridge abutment that shown on the right side of this image.

Slide 20

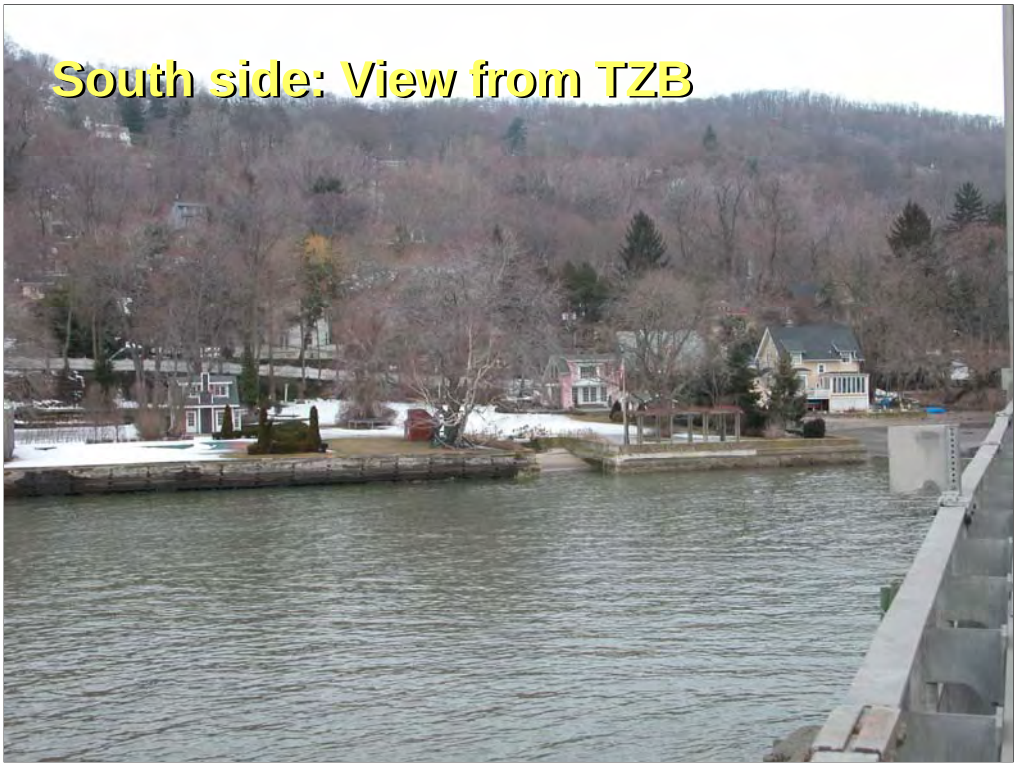
This photograph, looking west, shows the Bradford Mews Apartment Buildings adjacent to the Thruway. The noise barrier separating the Thruway and the apartments is visible through the trees on the left.

Slide 21

This photograph, looking east, shows the Bradford Mews Apartment Buildings adjacent to the Thruway. The noise barrier separating the Thruway and the apartments is visible through the trees on the Right

.

Historic Thruway drawings show the Thruway boundary extends a distance outside the noise barrier.



Slide 22

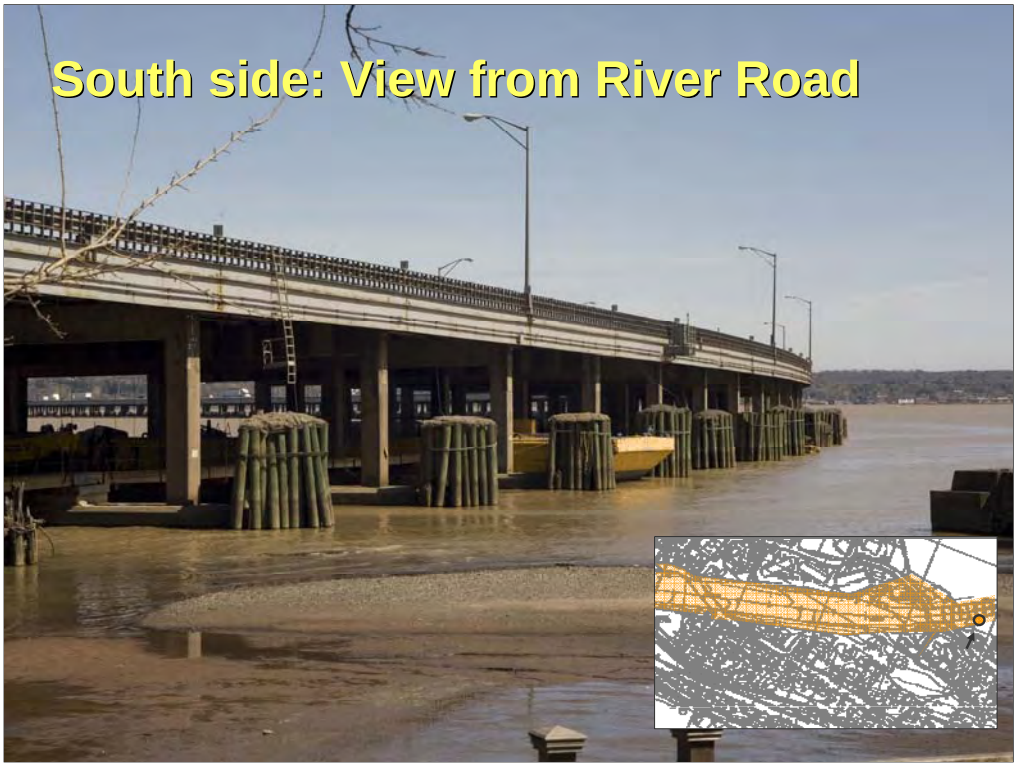
This is the first in a series of slides that present images of the Rockland Landing's south side.

This winter photograph was taken from the TZB looking towards Rockland.

Slide 23

This winter photograph was taken from underneath the TZB and shows the buildings that are closest to the south side of the bridge.

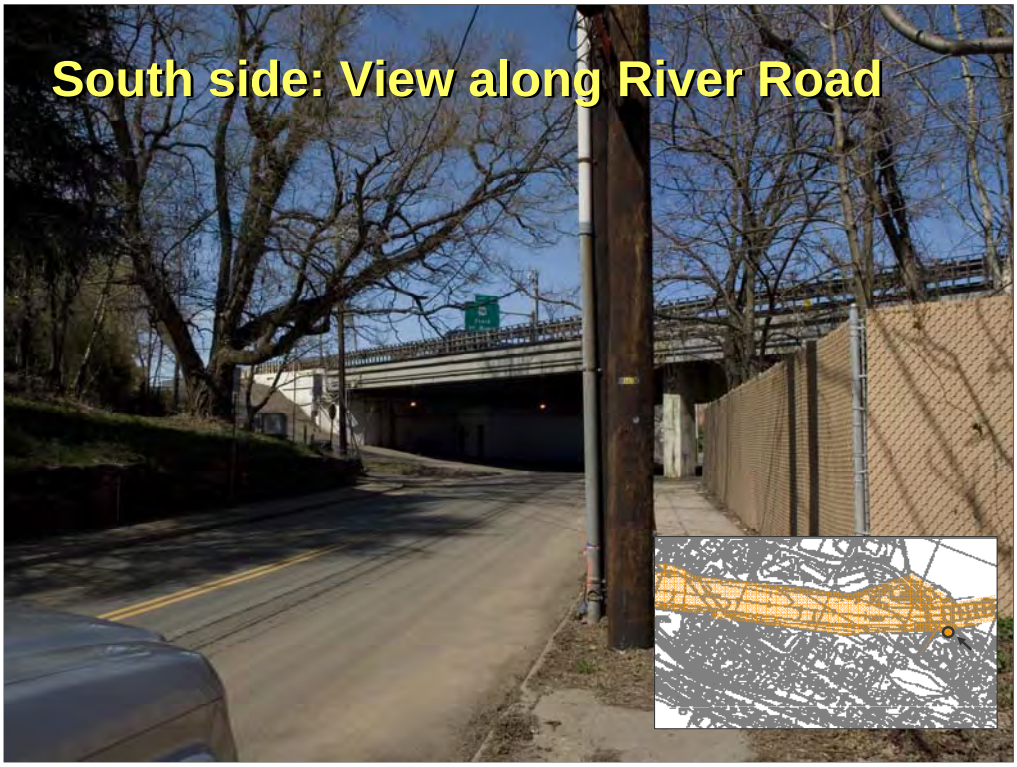
The absence of river water highlights that the photograph was taken at low tide. Note the poor condition of the timber piles adjacent to the bridge pier.



Slide 24

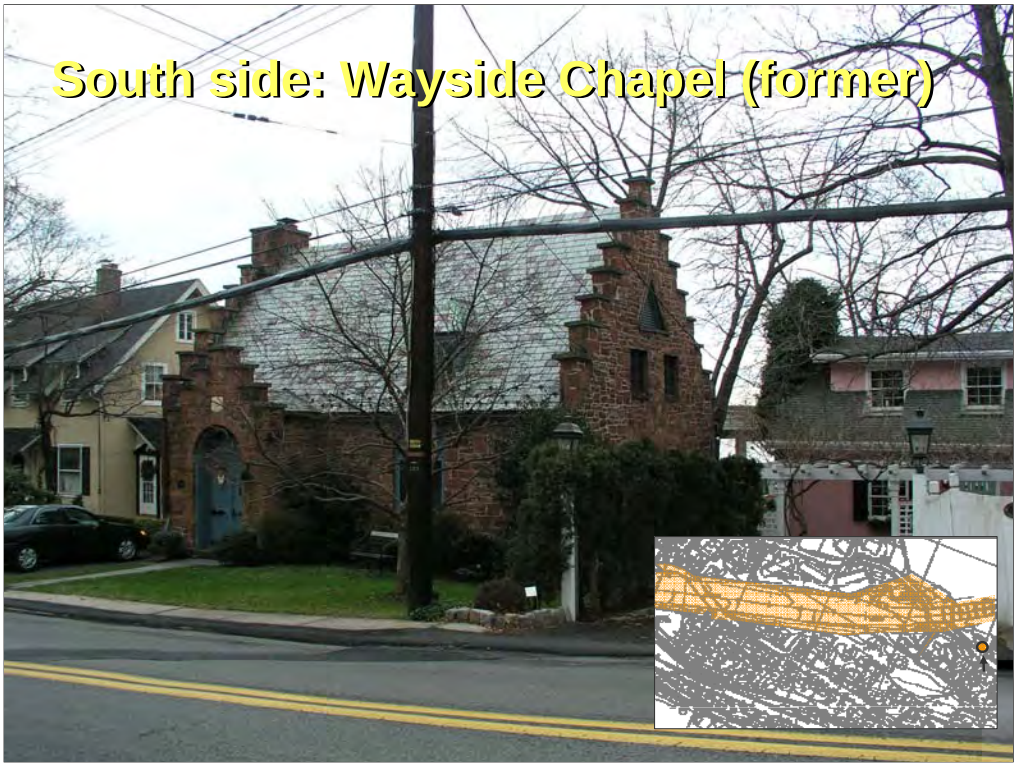
This photograph was taken from River Road looking towards the TZB. The image shows one of the maintenance barges used by the Thruway under the bridge.

Again the image was taken at low tide, as indicated by the low water level.



Slide 25

This photograph shows River Road looking north towards the TZB. The TZB ends at the abutment at the left.



Slide 26

This slide shows the Wayside Chapel. This historic building was one of the cultural resources highlighted earlier in the presentation. It is currently used as a private residence.

The TZB can be seen in the background between the buildings.

Slide 27

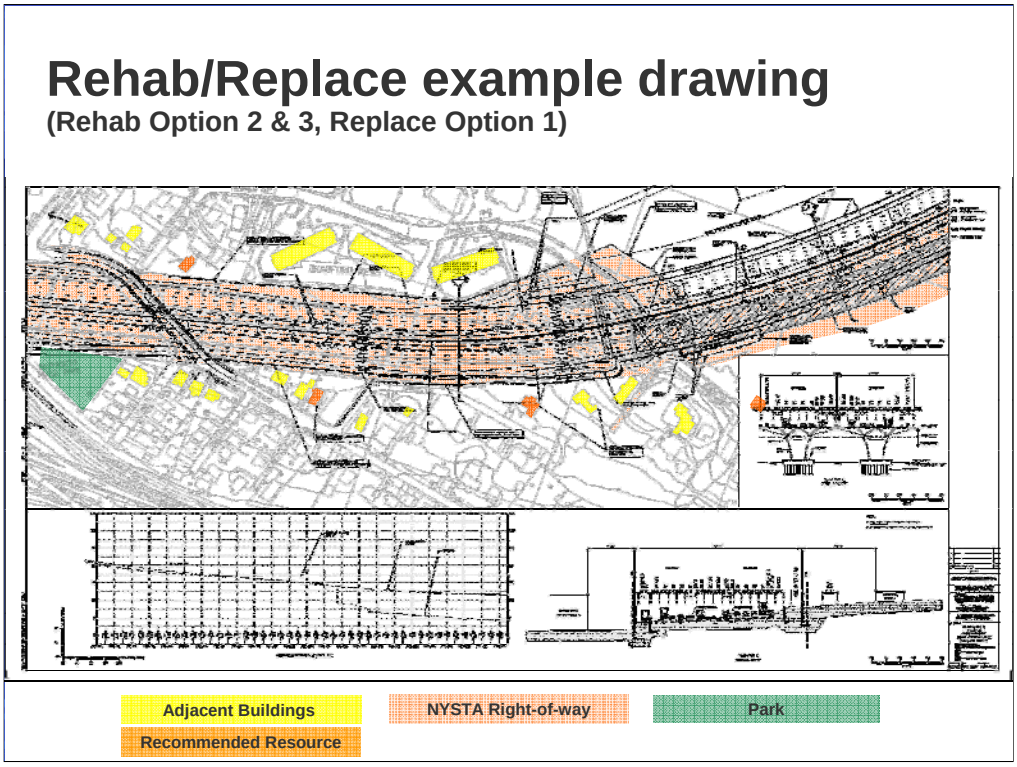
This slide shows the intersection of Elizabeth Place and the South Broadway bridge over the Thruway.

Access to Elizabeth Park (see slide 12) is via Elizabeth Place.

Slide 28

This is the last image of the Rockland Landing.

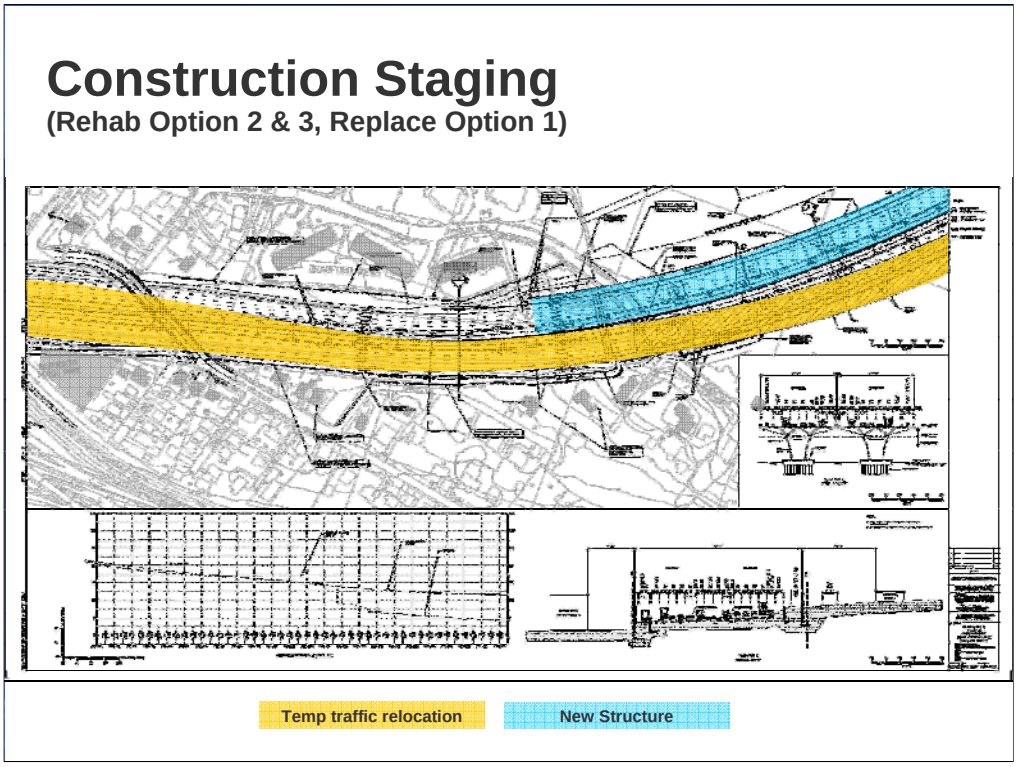
The total pavement width in the area is approximately 140 feet. The overall width between the NYSTA right-of-way boundaries is approximately 250 feet. The right-of-way extends beyond the noise wall shown on the left and the trees on the right.



Slide 29

This slide is an example of the drawings in preparation for the comparison of the 7 options. This drawing of the Rockland Landing shows how the area would change if either Rehab Options 2 and 3 or Replacement Option 1 were implemented.

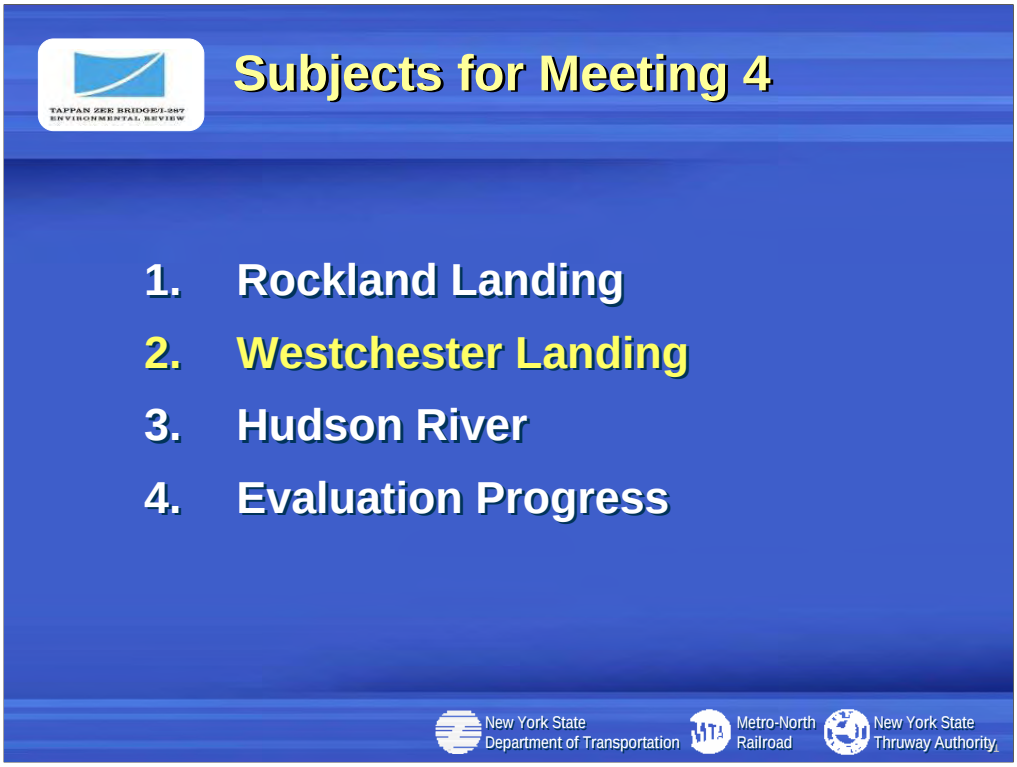
Similar drawings are in preparation for all options.



Slide 30

This slide shows one of the temporary construction stages that would be necessary if the options listed in the previous slide were implemented.

The slide shows that one half of the replacement structure in these options could be constructed while maintaining traffic on the existing TZB. Once completed traffic would be shifted to the constructed half of the new bridge while the second half was constructed in the same place as the existing TZB.



Slide 31

Title slide introducing Part 2 - Westchester Landing.

Slide 32

This slide shows an aerial photograph of the Westchester Landing.

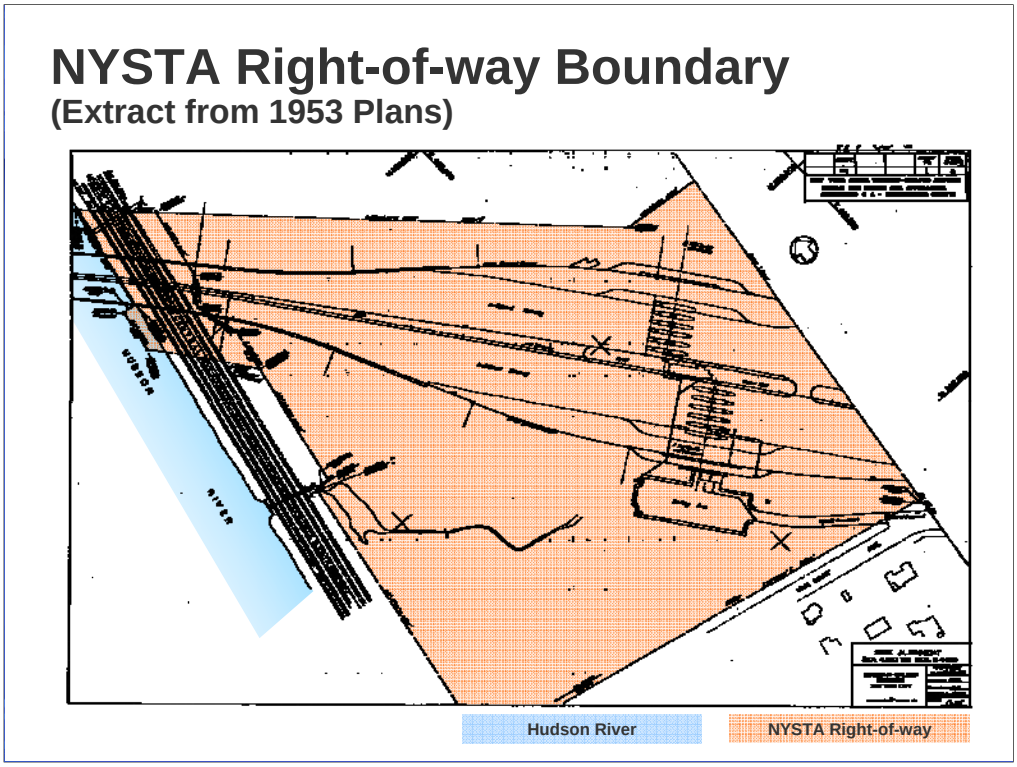
The landing consists of the area between the NY Route 9 (Broadway Bridge) over the Thruway and the Hudson River.

Slide 33

This slide shows a closer view of the Westchester Landing highlighting street names.

Slide 34

This slide shows a view of the Westchester Landing from the Broadway Bridge over the Thruway.



Slide 35

This slide presents the historic Thruway right-of-way boundary at the Westchester Landing.

The drawing is dated 1953 and is part of the historical records used to establish the Thruway boundaries. The southern edge of the boundary has changed substantially since the construction of the TZB as shown in the next slide.

Slide 36

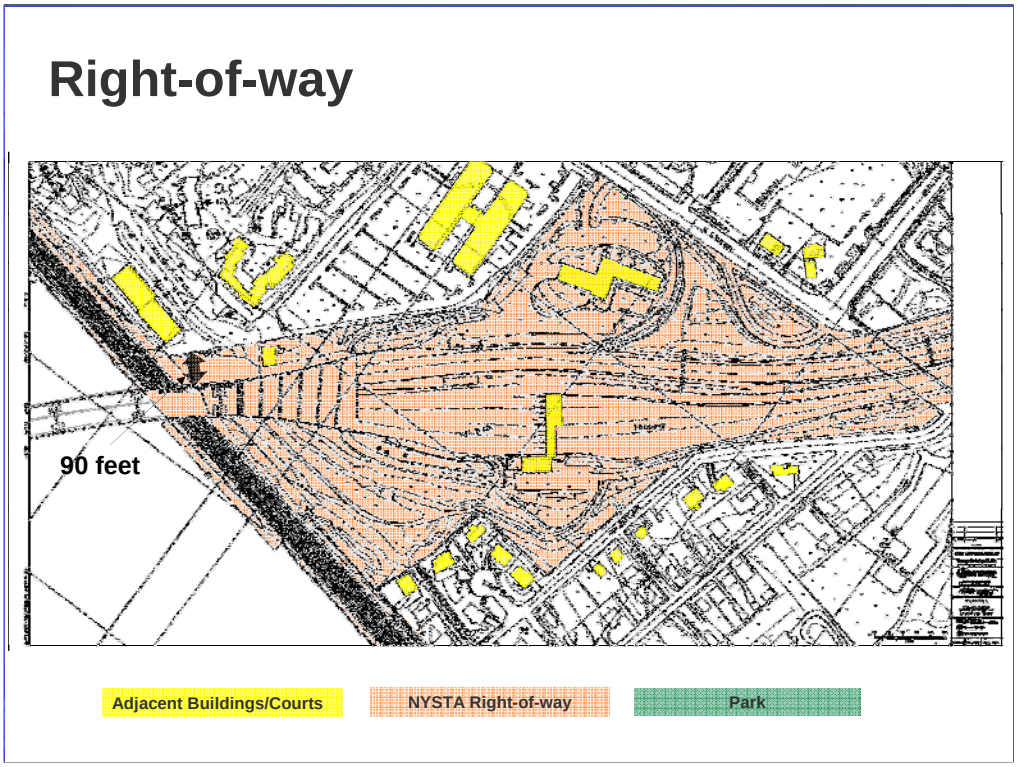
This slide presents the aerial view of the Westchester Landing overlaid with the Thruway right-of-way boundary.

The southern right-of-way boundary has been changed to reflect changes at Hudson Place.

Historical and cultural resources

Slide 37

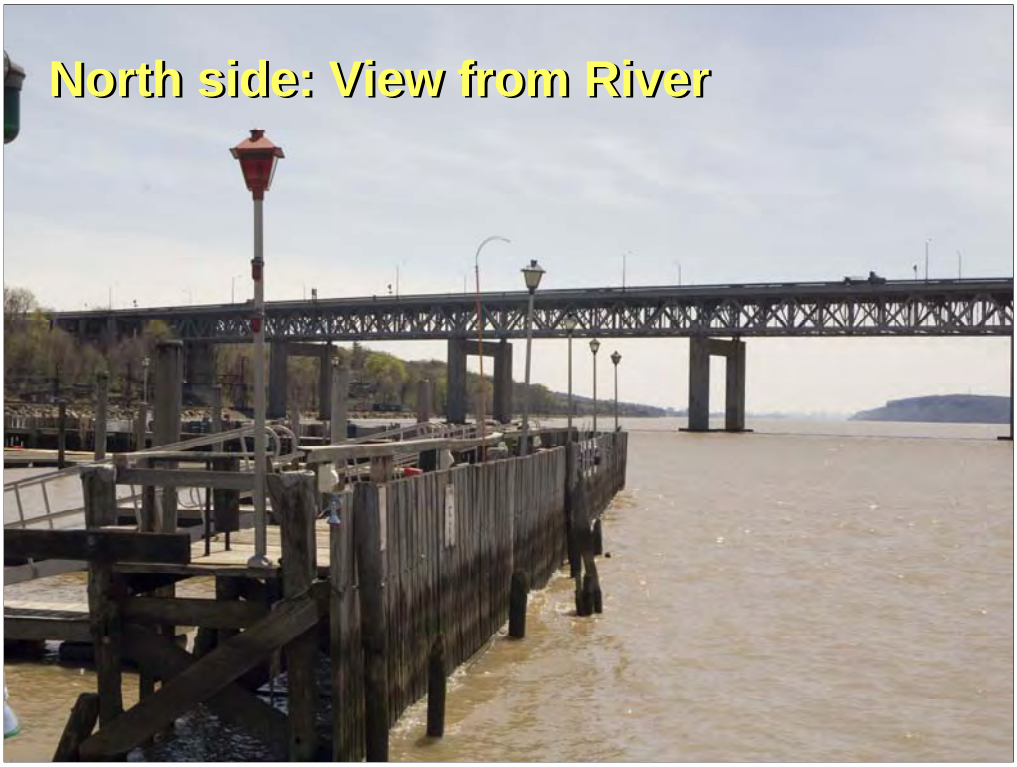
This slide shows a wider view of the landing area and identifies the historical and cultural resources. Two districts near the landing are recommended National/State Register eligible.



Slide 38

This slide highlights all the buildings/courts adjacent to the Thruway. The three buildings highlighted within the NYSTA right-of-way boundaries are NYSTA facilities.

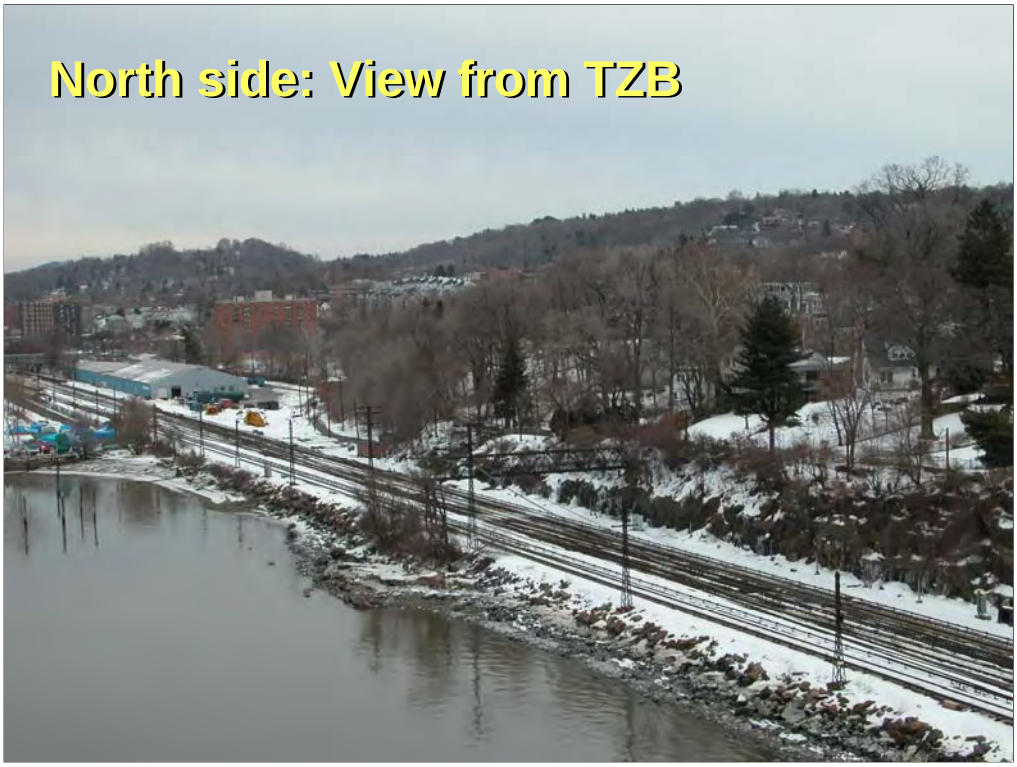
The Thruway area between the right-of-way boundaries is highlighted.



Slide 39

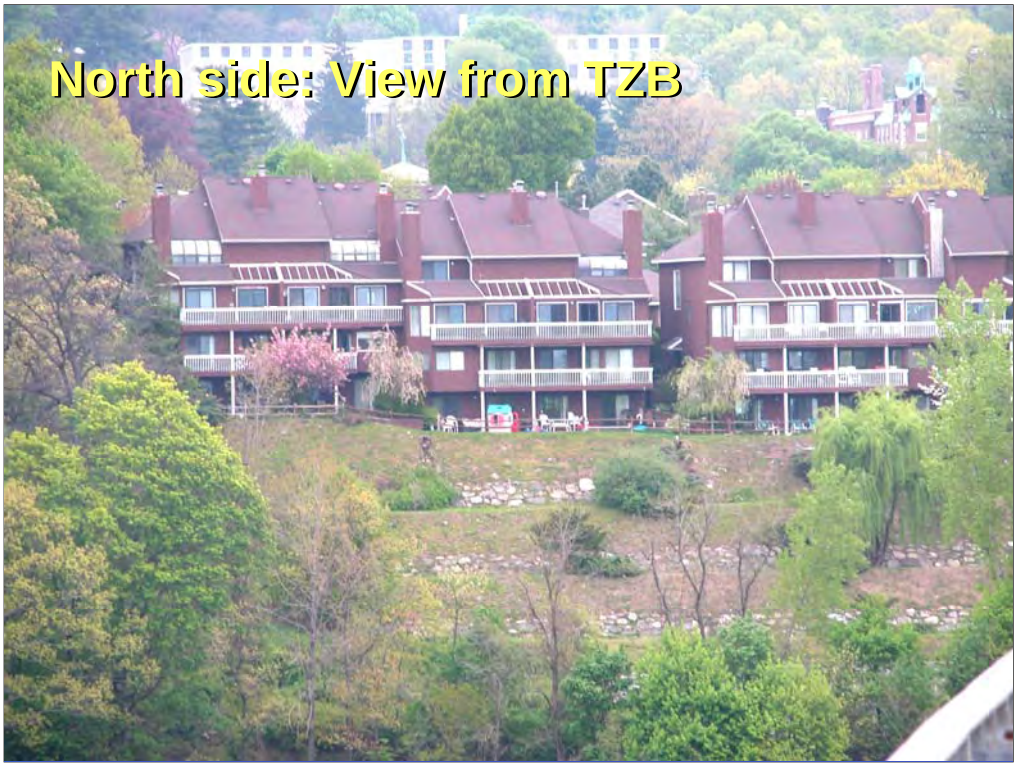
This is the first in a series of slides that present images of the Westchester Landing's north side.

This photograph was taken from shore in Tarrytown.



Slide 40

This photograph was taken from the TZB looking northeast towards the Metro-North Railroad tracks.

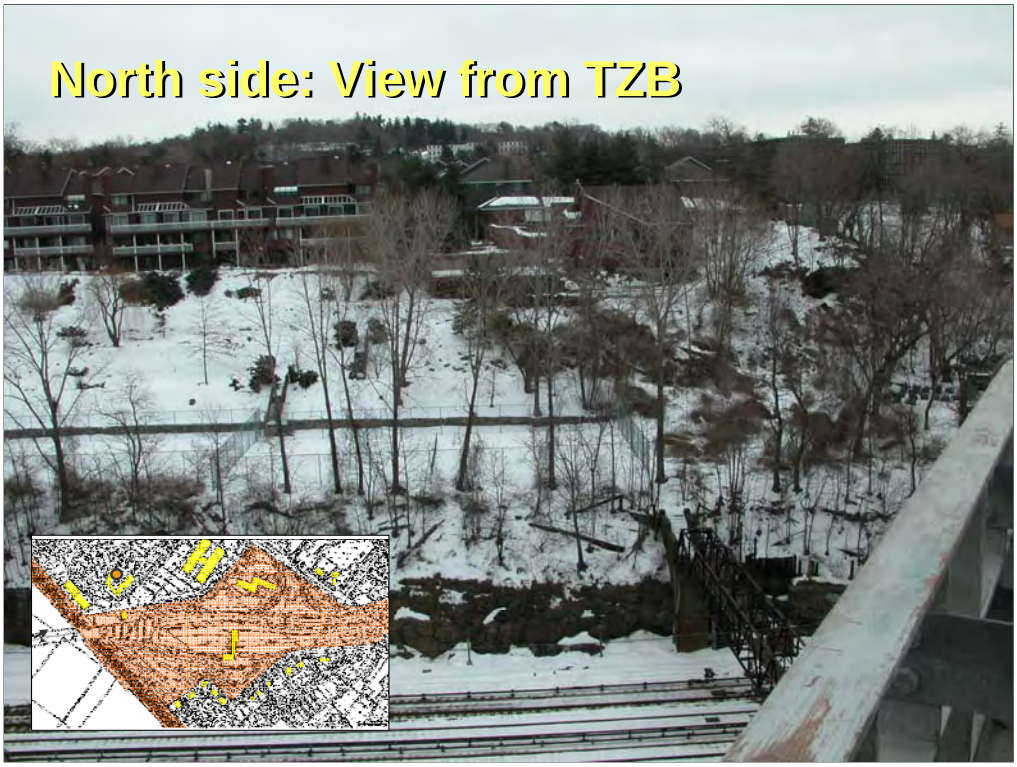


Slide 41

This photograph was taken from the TZB looking east towards the Quays.

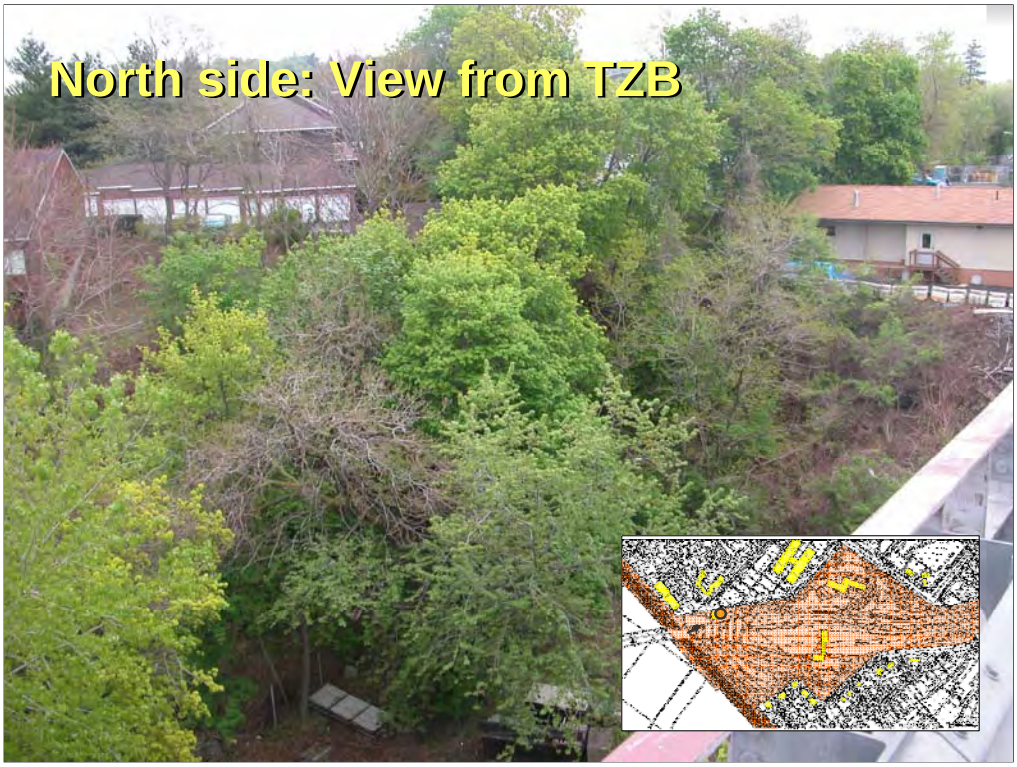
Slide 42

This photograph was taken from under the TZB looking northeast towards the Quays.



Slide 43

This winter photograph was taken from the TZB looking east towards the Quays.



Slide 44

This photograph was taken from the TZB looking east at the area between the Quays and the TZB.

Slide 45

This photograph was taken from the TZB northeast looking at the area between the Quays and the TZB.

The structure in the image is one of the Thruway's storage buildings located within their right-of-way.

Slide 46

This photograph was taken from the TZB looking at the area between the Quays and the TZB. The image shows the back of the commercial office building at 303 Broadway.

Slide 47

This photograph was taken from the TZB maintenance area looking west towards the Hudson River.

The image shows the tennis courts that are part of the Quays.

Slide 48

This photograph was taken from the TZB maintenance area looking north. The image shows the tennis courts that are part of the Quays.

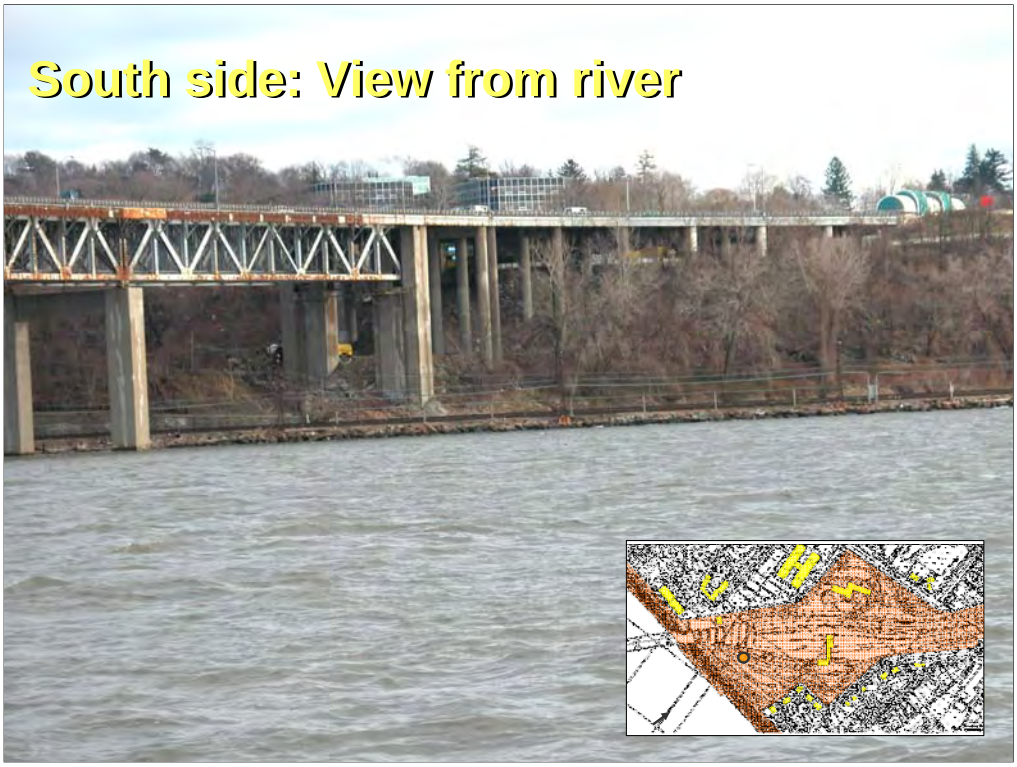
Slide 49

This photograph was taken from the TZB maintenance area looking northeast towards the Quays.

The image is taken at the same elevation as the tennis courts that are part of the Quays.

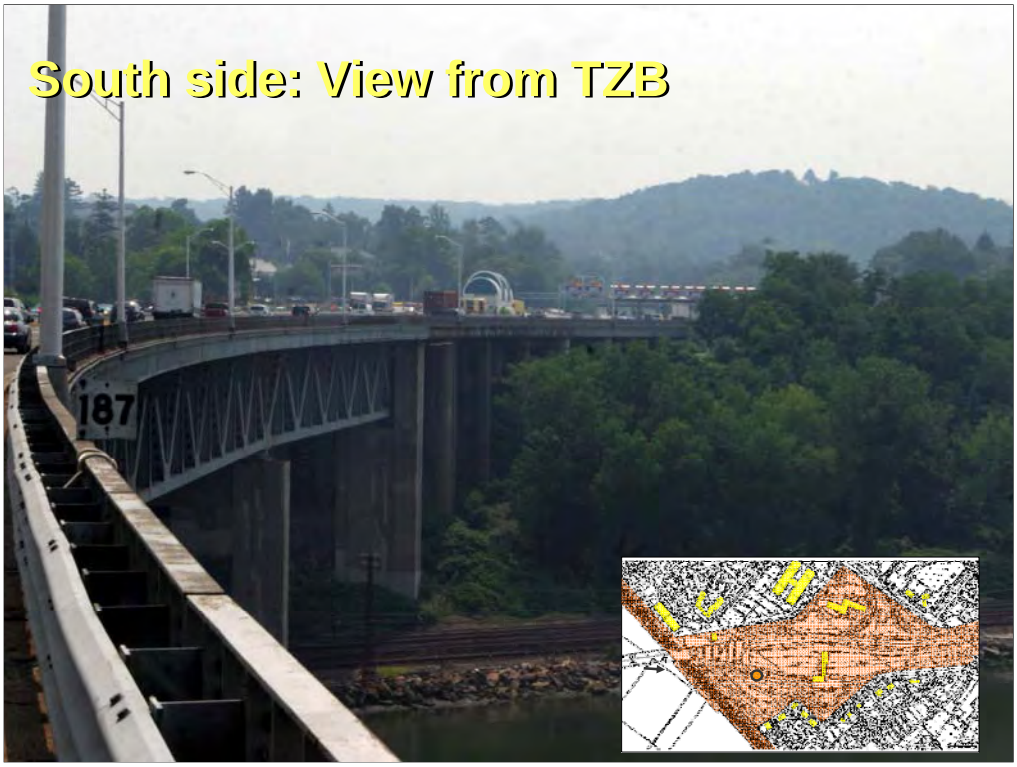
Slide 50

This photograph was taken from within the TZB maintenance area looking east. The image gives an indication of the change in elevation at the landing.



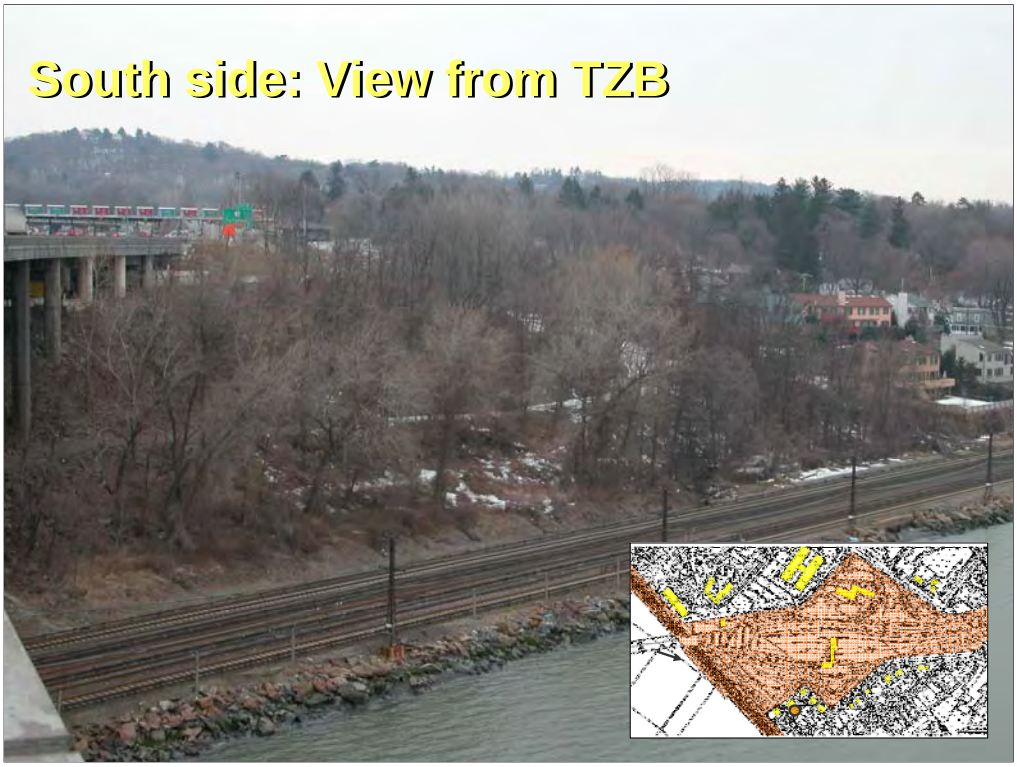
Slide 51

This is the first in a series of slides that present images of the Westchester Landing's south side.



Slide 52

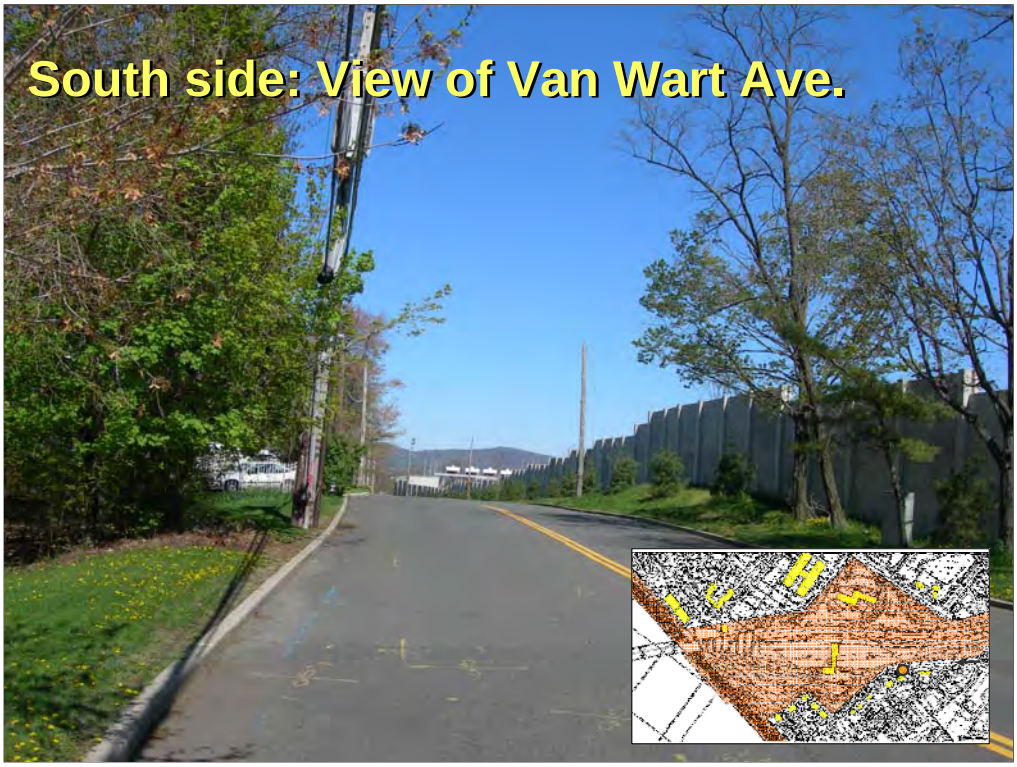
This summer photograph was taken from the TZB looking east towards the toll plaza.



Slide 53

This winter photograph was taken from the TZB looking towards the area at the south of the toll plaza.

The image shows the residences on Hudson Place to the right.



Slide 54

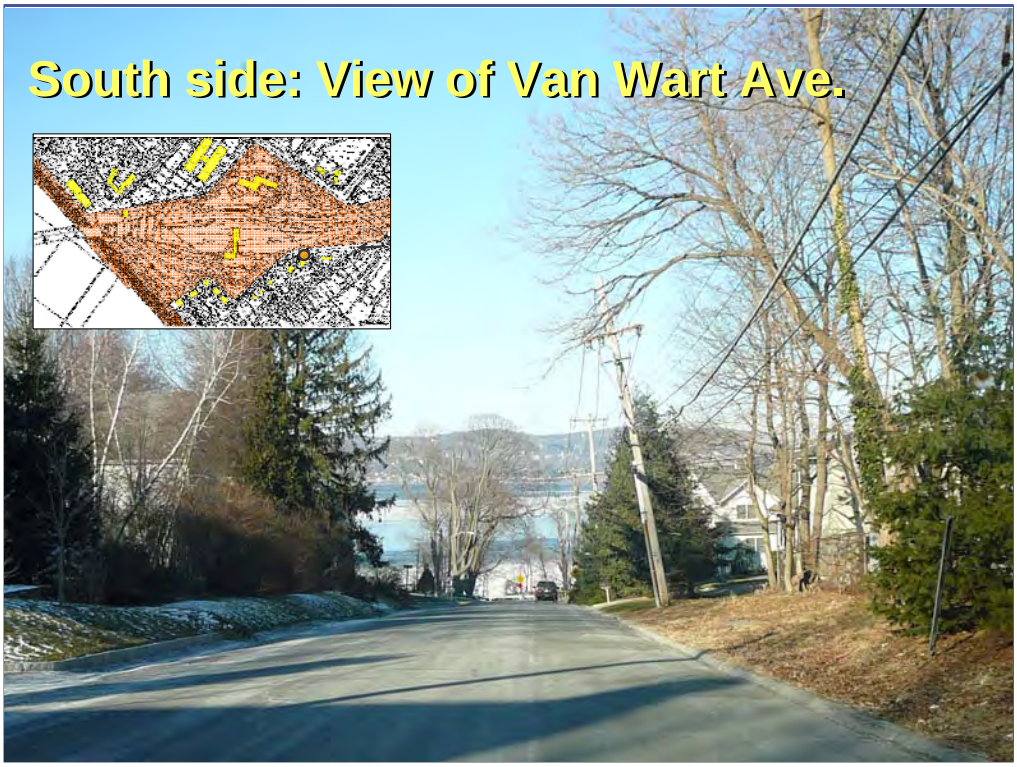
This summer photograph was taken on Van Wort Avenue.

The image shows the noise barrier adjacent to the southern edge of the toll plaza.

Slide 55

This summer photograph was taken on Van Wort Avenue.

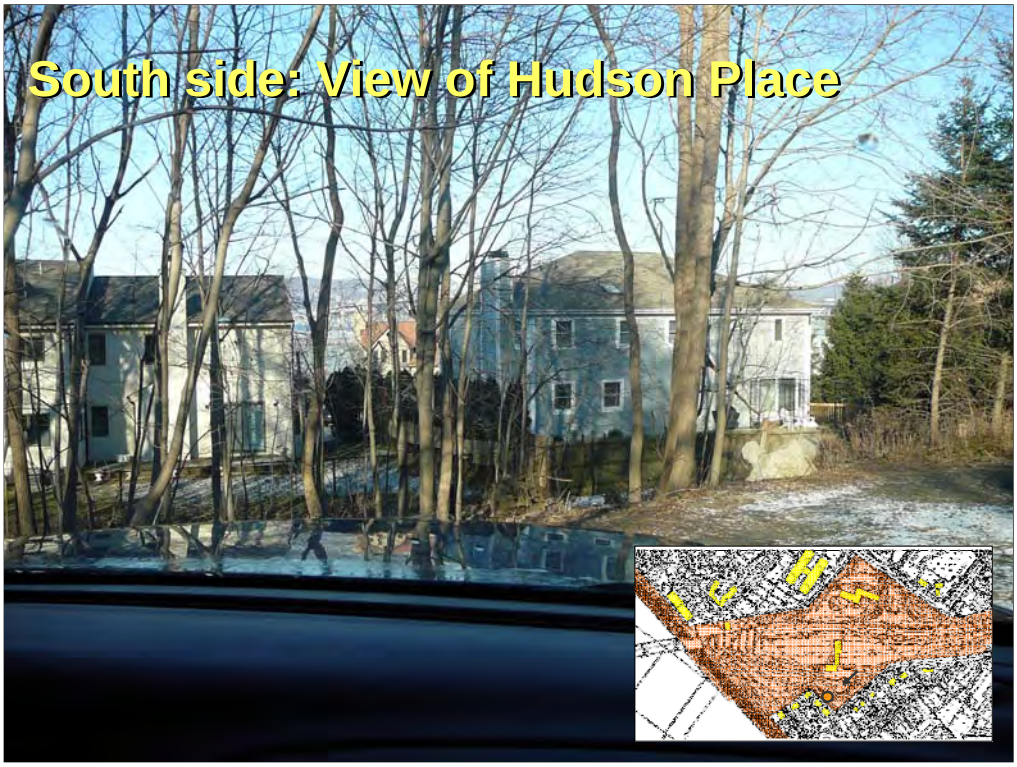
The image shows the noise barrier adjacent to the southern edge of the toll plaza and the entrance to the maintenance area.



Slide 56

This summer photograph was taken on Van Wort Avenue.

The image shows the Hudson River in the background and the properties on Hudson Place to the right.



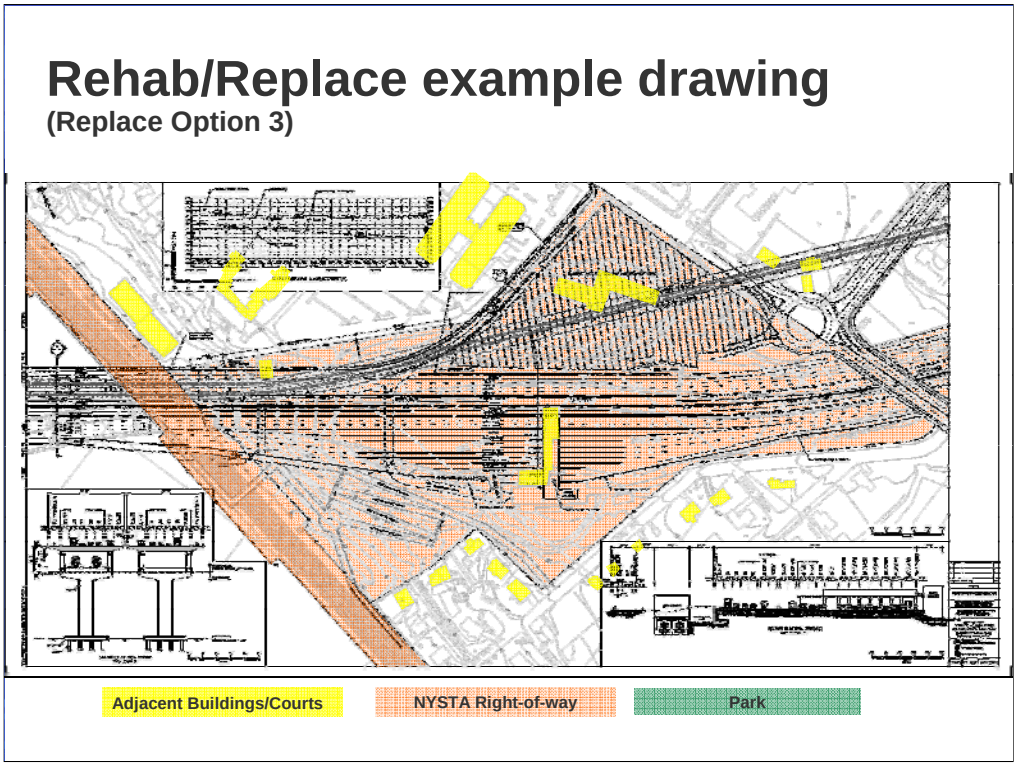
Slide 57

This winter photograph was taken from the maintenance area on the south side of the toll plaza.

The image shows the back of the residences on Hudson Place.

Slide 58

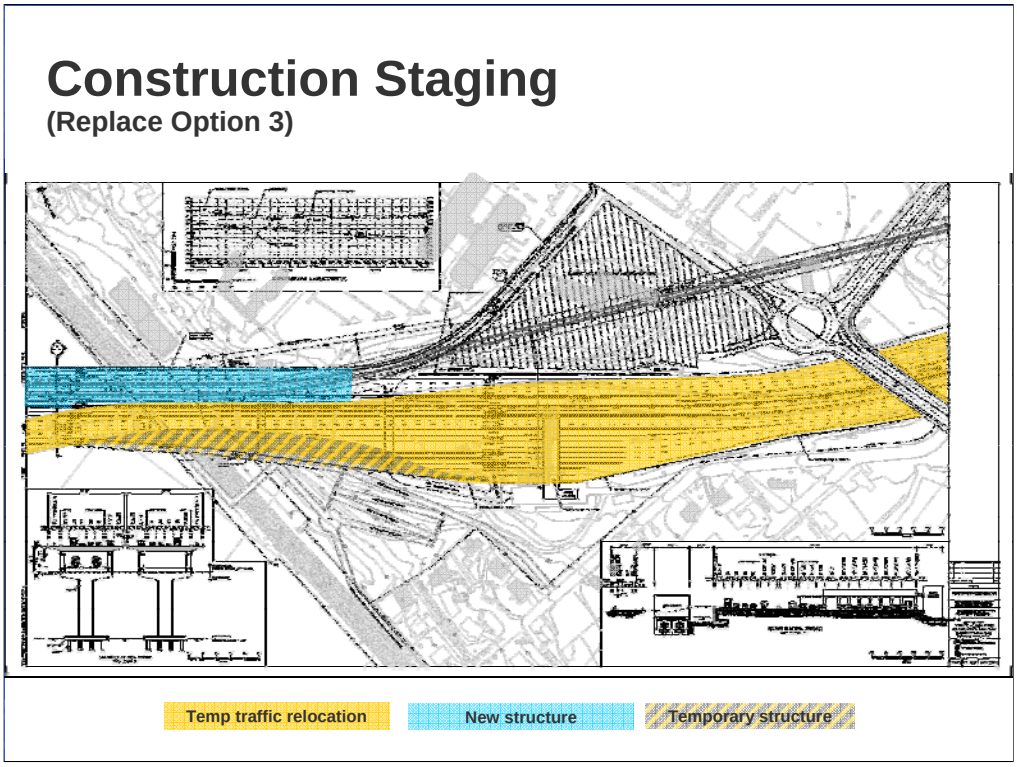
This summer photograph was from Van Wort Avenue looking towards the residences on Hudson Place.



Slide 59

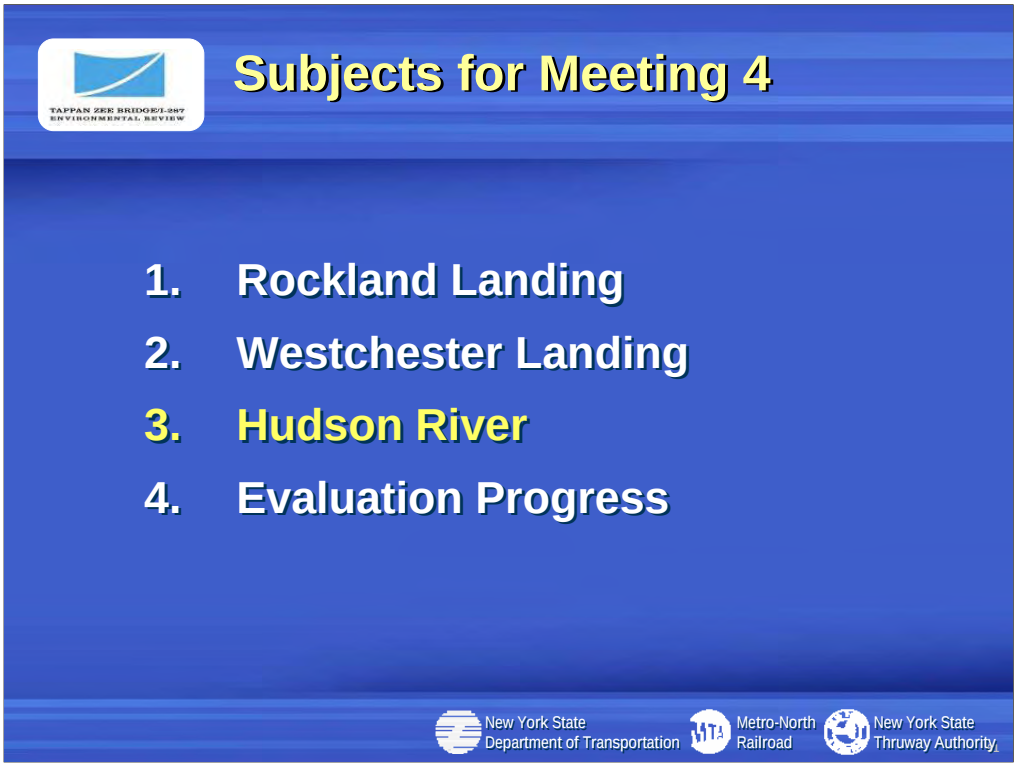
This slide is an example of the drawings in preparation for the comparison of the 7 options. This drawing of the Westchester Landing shows how the area would change if Replacement Option 3 were adopted.

Similar drawings are in preparation for all options.



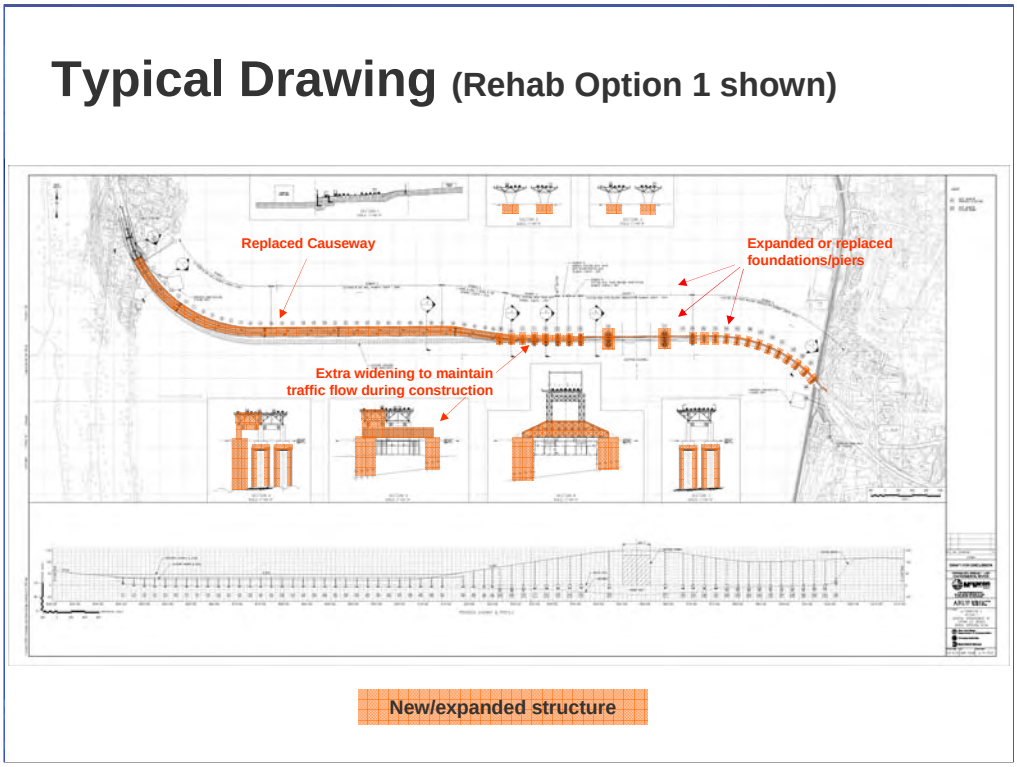
Slide 60

This slide shows an example of the temporary construction staging.



Slide 61

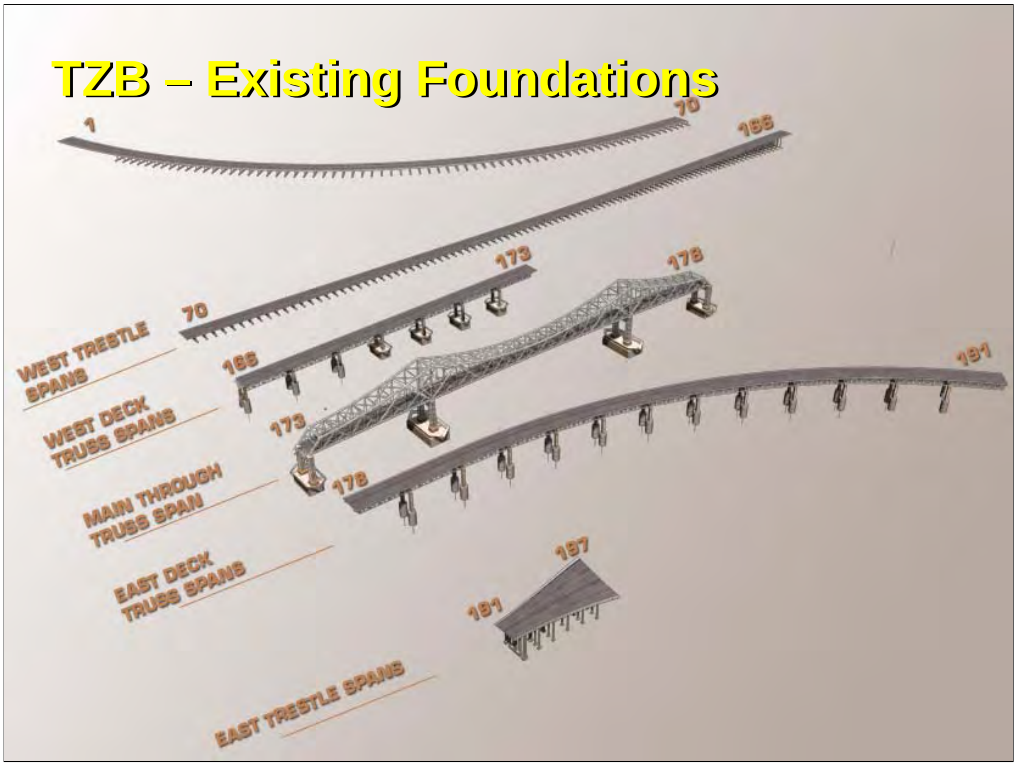
Title slide introducing Part 3 – Hudson River



Slide 62

This slide is an example of the drawings in preparation for the comparison of the 7 options. This drawing for rehabilitation Option 1 shows (orange color) those areas of the existing bridge that require modification.

Similar drawings are in preparation for all options.



Slide 63

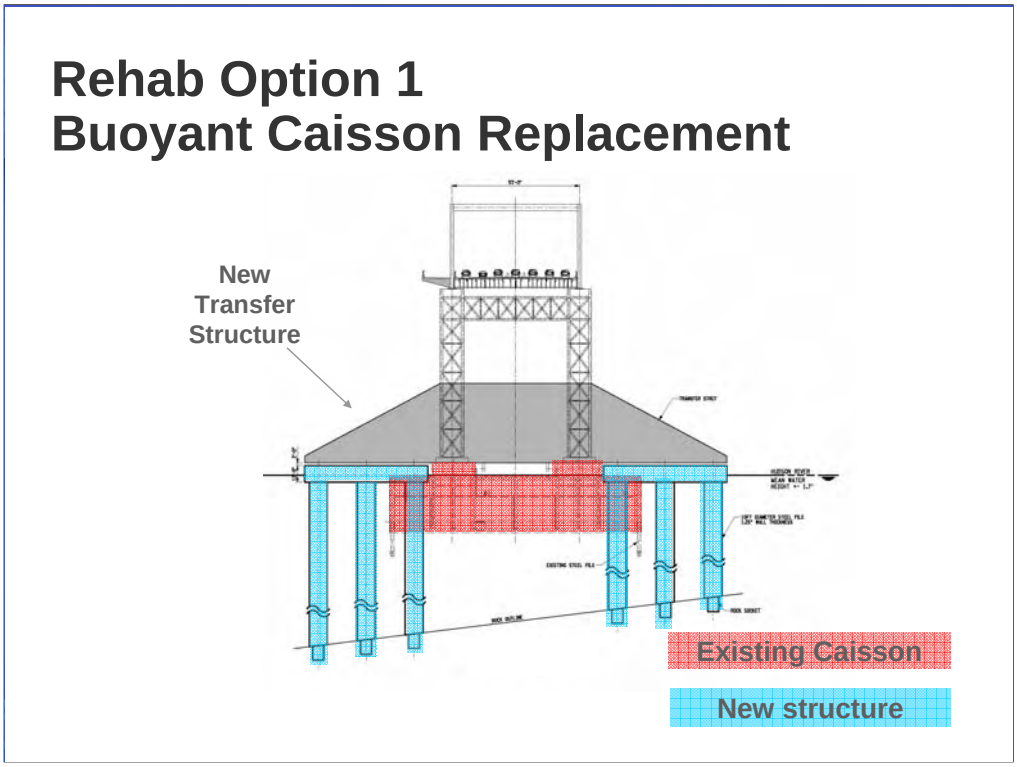
To facilitate discussion of the foundation changes required for the existing TZB in Rehabilitation Option 1, this slide shows the present form of the all of the existing foundations.

The following series of slides focus on the modification to one existing foundation – the main foundation supporting the main piers of the Through Truss Spans.

Slide 64

This photograph taken from underneath the existing TZB shows the current arrangement of the pier supporting the main spans.

Note the yellow and black pier protection around the pier. This protects the buoyant foundation from arrant ship impacts.

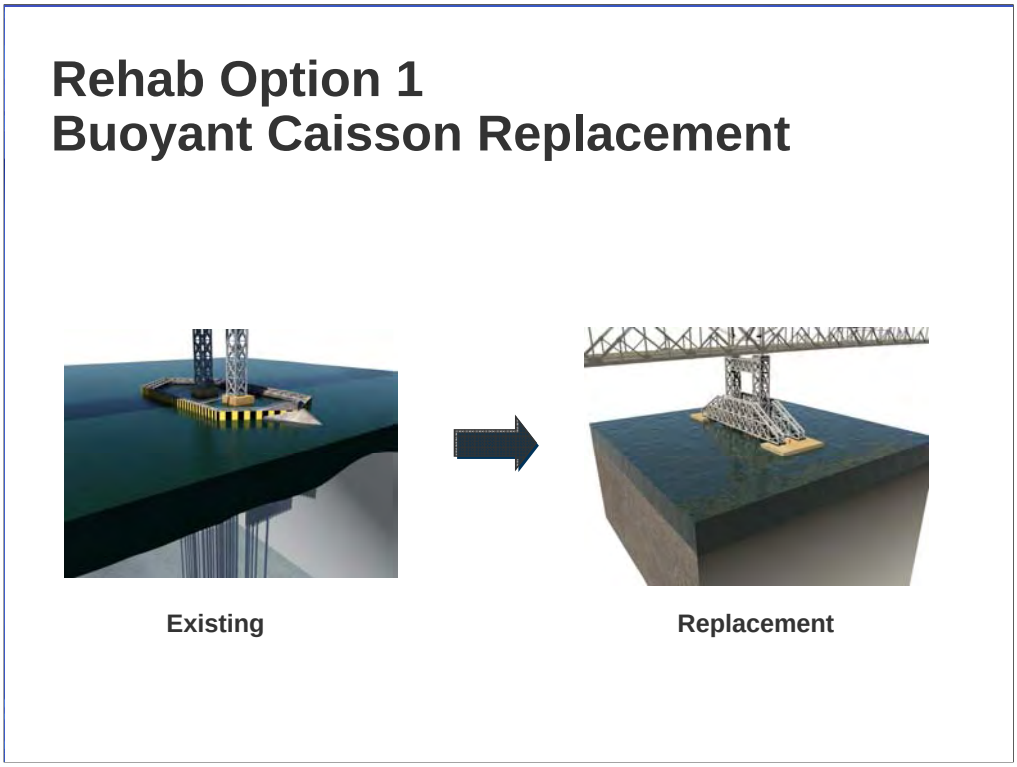


Slide 65

This sketch shows how the existing pier (in red) would be replaced as part of Rehabilitation Option 1.

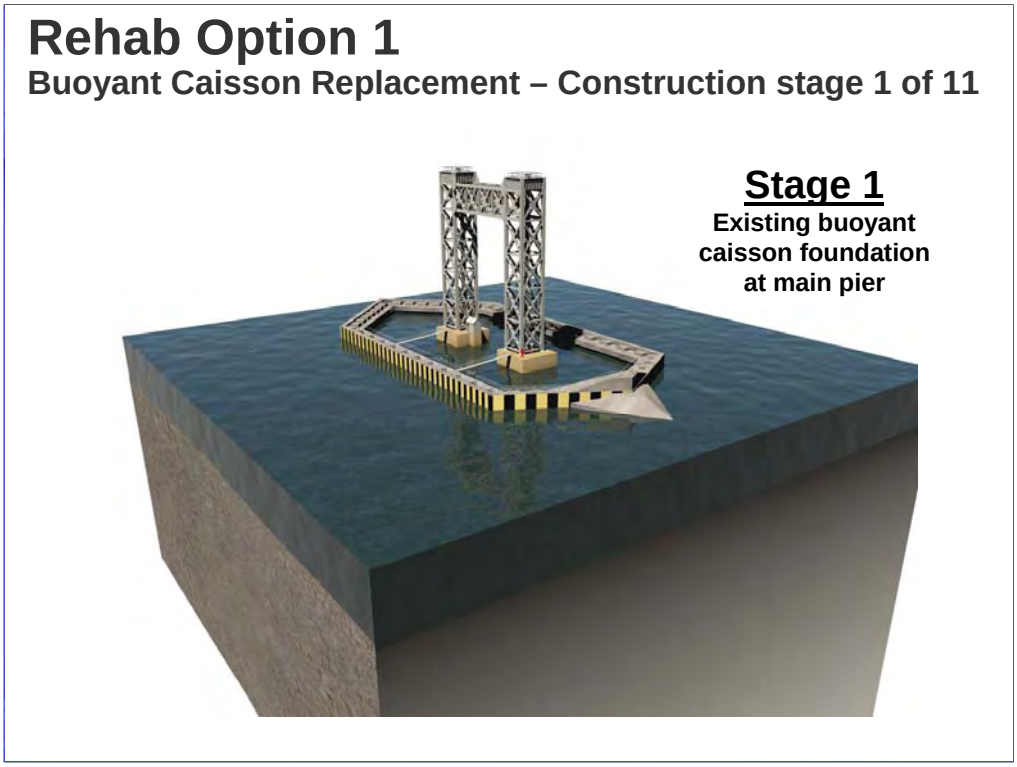
Additional foundation piles are shown in blue. These new piles would be connected together via a transfer structure (in grey) that would also support the existing steel piers and superstructure above.

The existing buoyant foundation would not be part of the final structural system.



Slide 66

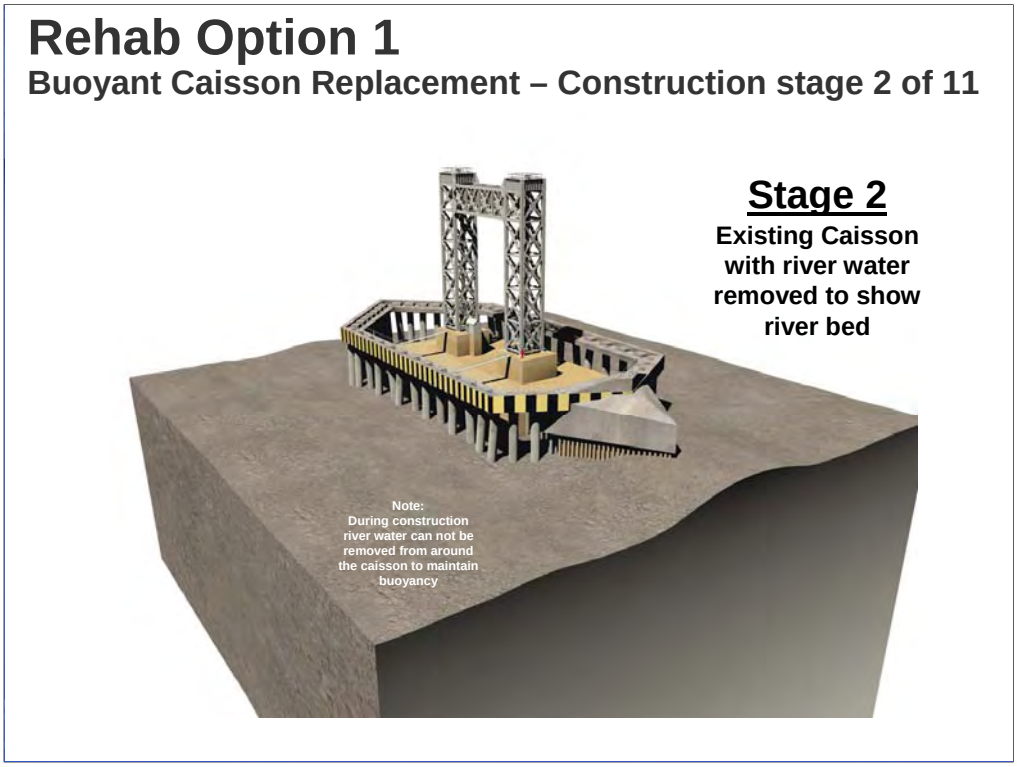
This and the next series of slides show the activities in the river that would be required to construct the replacement foundations for the main piers.



Slide 67

This slide shows the existing arrangement of the main piers.

Note the superstructure above has been removed for clarity.

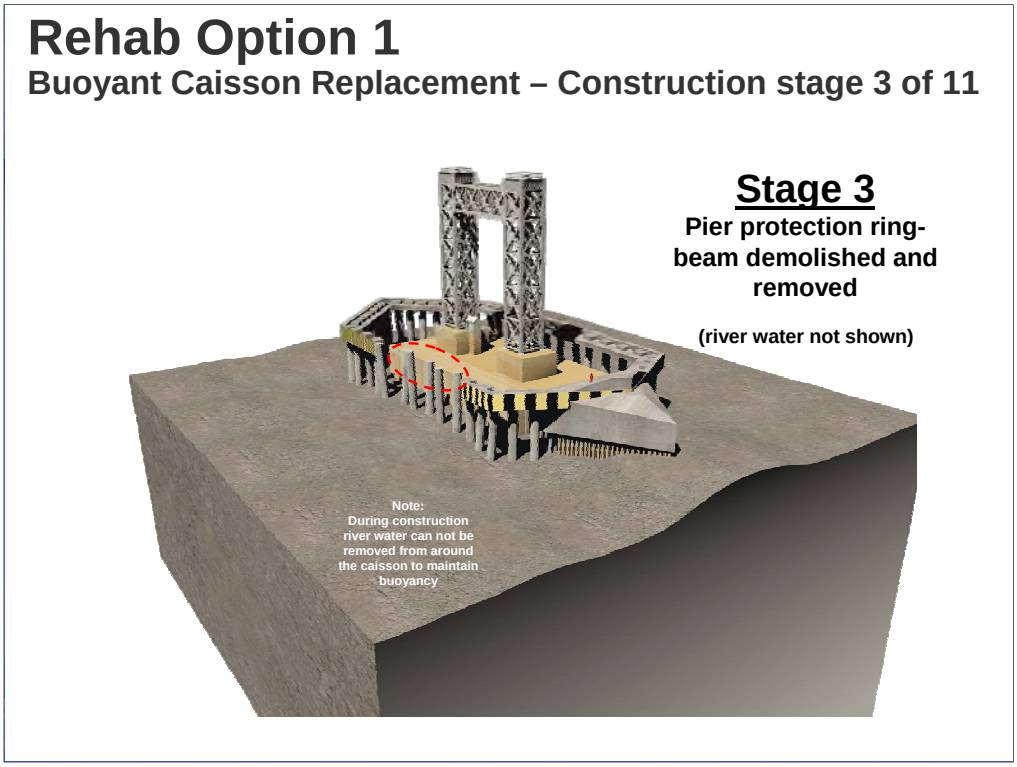


Slide 68

This slide is the same as the previous slide but the river has been removed to show the river bed.

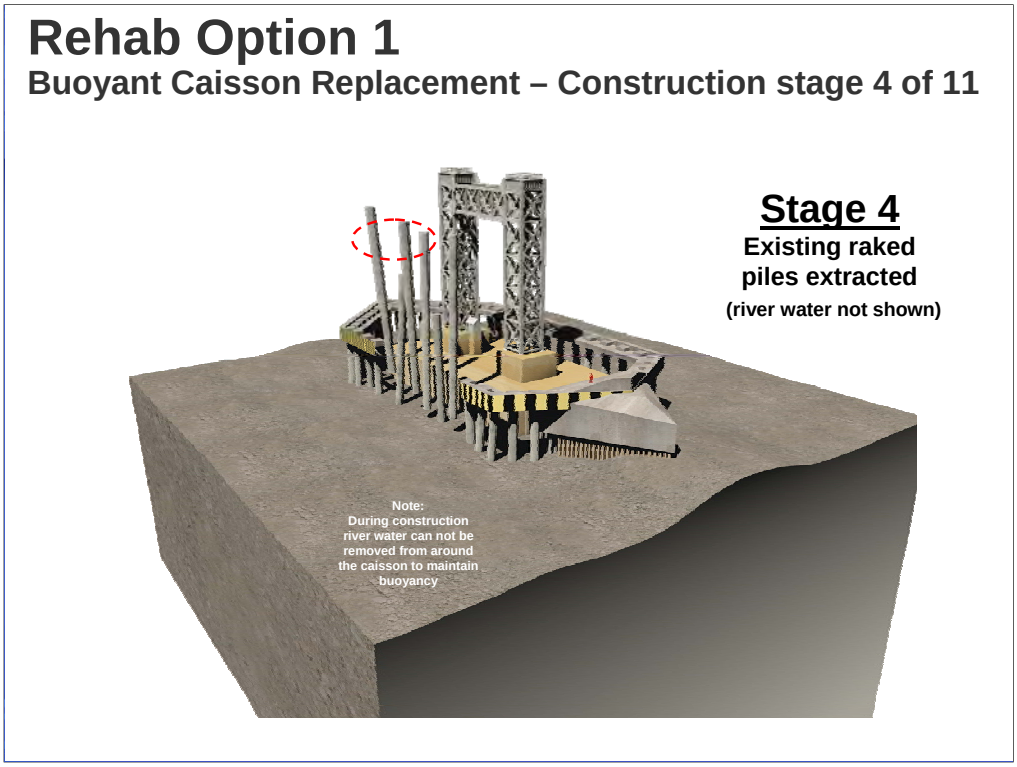
The variation in the river bed is real and has been taken from hydrographic surveys completed in 2007.

Note: During construction river water can not be removed from around the existing foundation to keep it buoyant. This buoyancy supports the weight of the bridge.



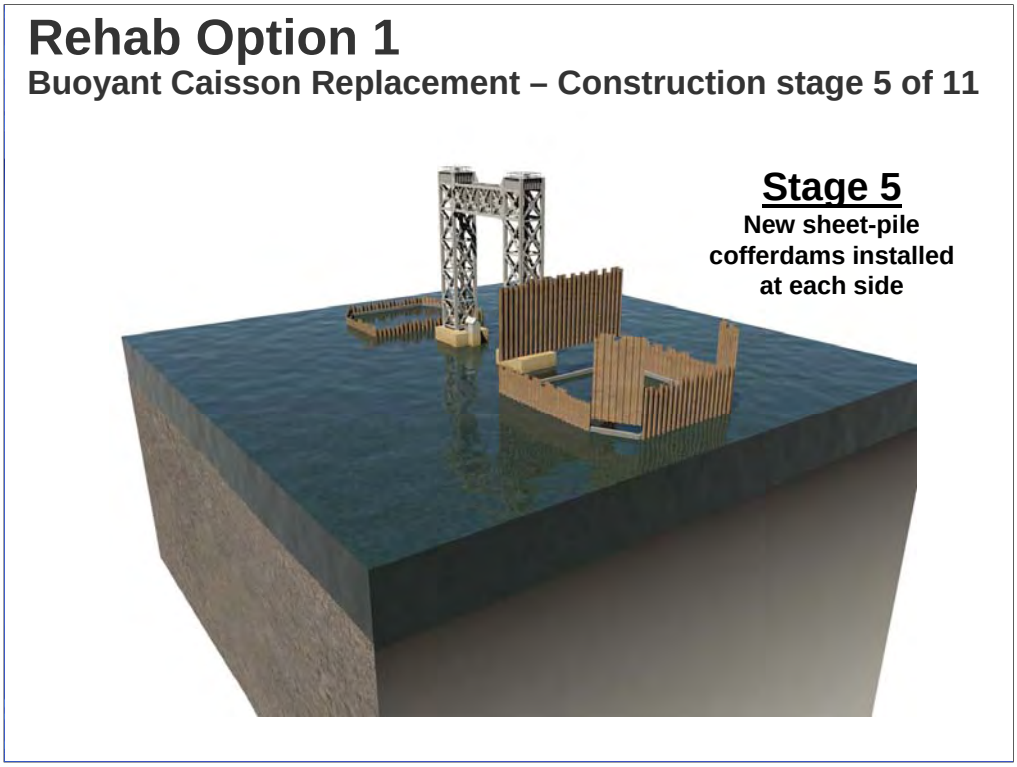
Slide 69

In this slide the black and yellow pier protection system is removed to allow for access around the buoyant foundation in later construction stages.



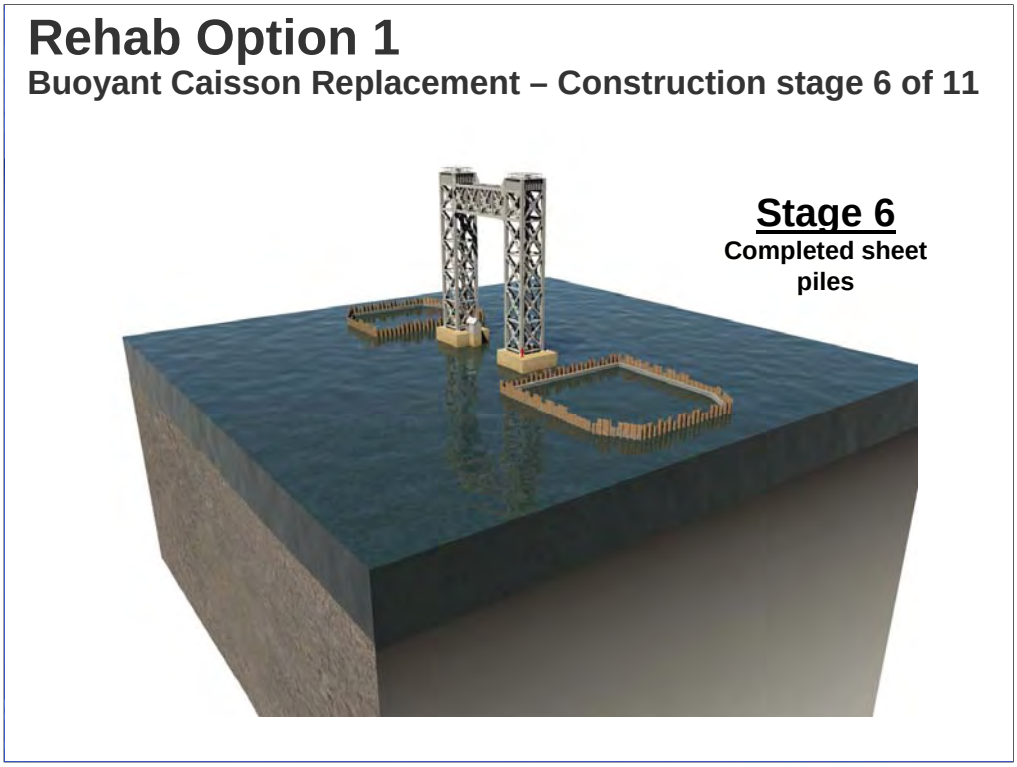
Slide 70

In this slide the piles supporting the pier protection system are removed to allow for access around the buoyant foundation in later construction stages.



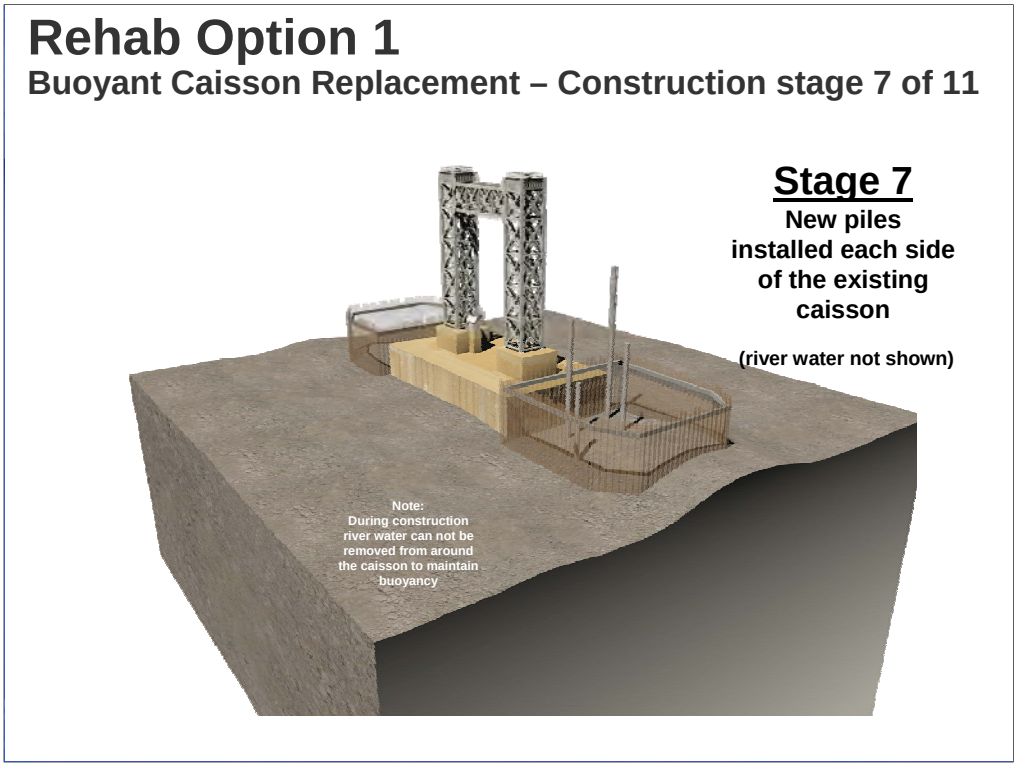
Slide 71

In this slide new sheet piles are installed to form cofferdams around the areas of the replacement foundations. The replacement foundations would be located on the northern and southern edges of the existing foundations.



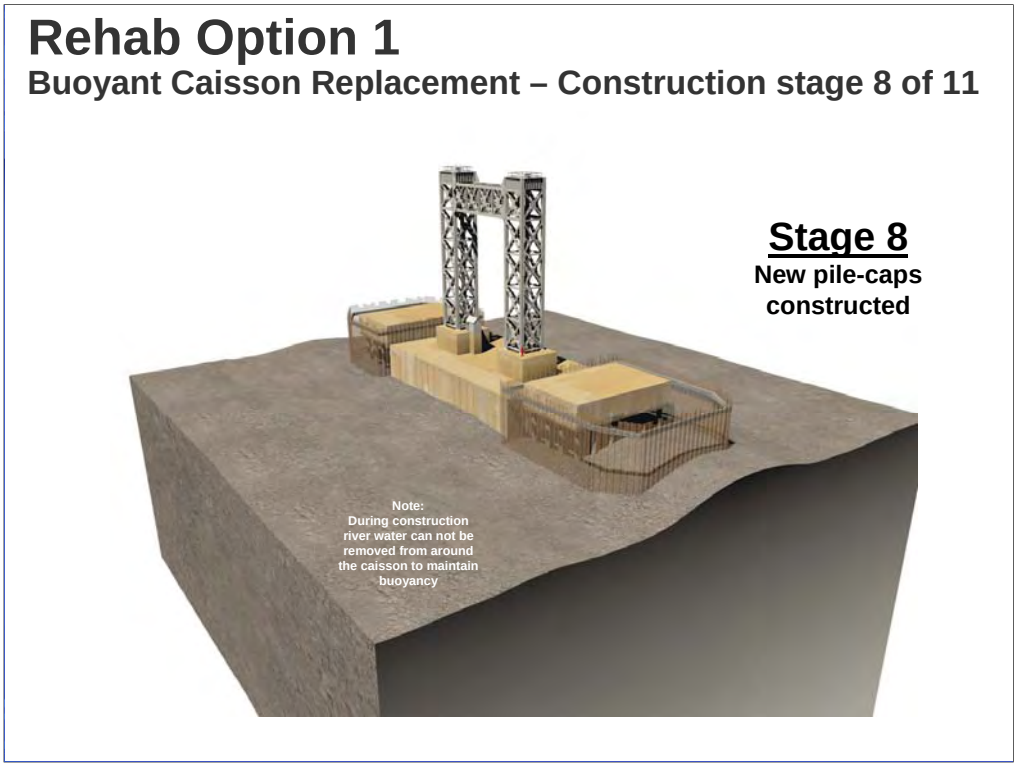
Slide 72

This slide shows the completed cofferdams.



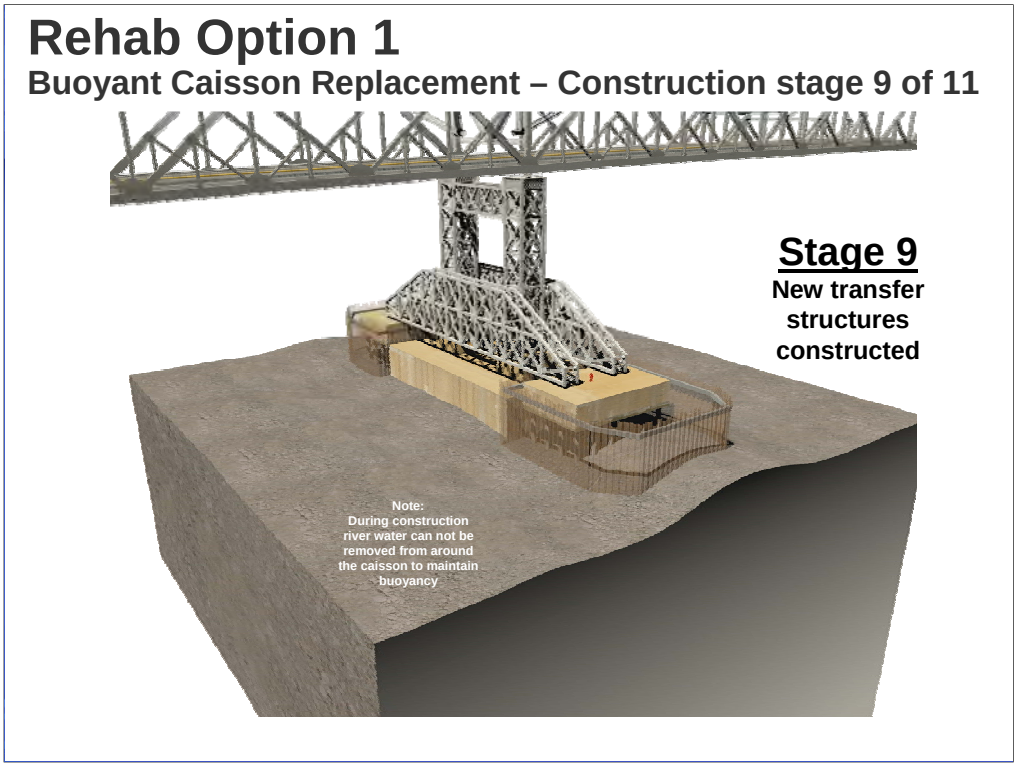
Slide 73

This slide shows the installation of new steel tubular piles within the cofferdams.



Slide 74

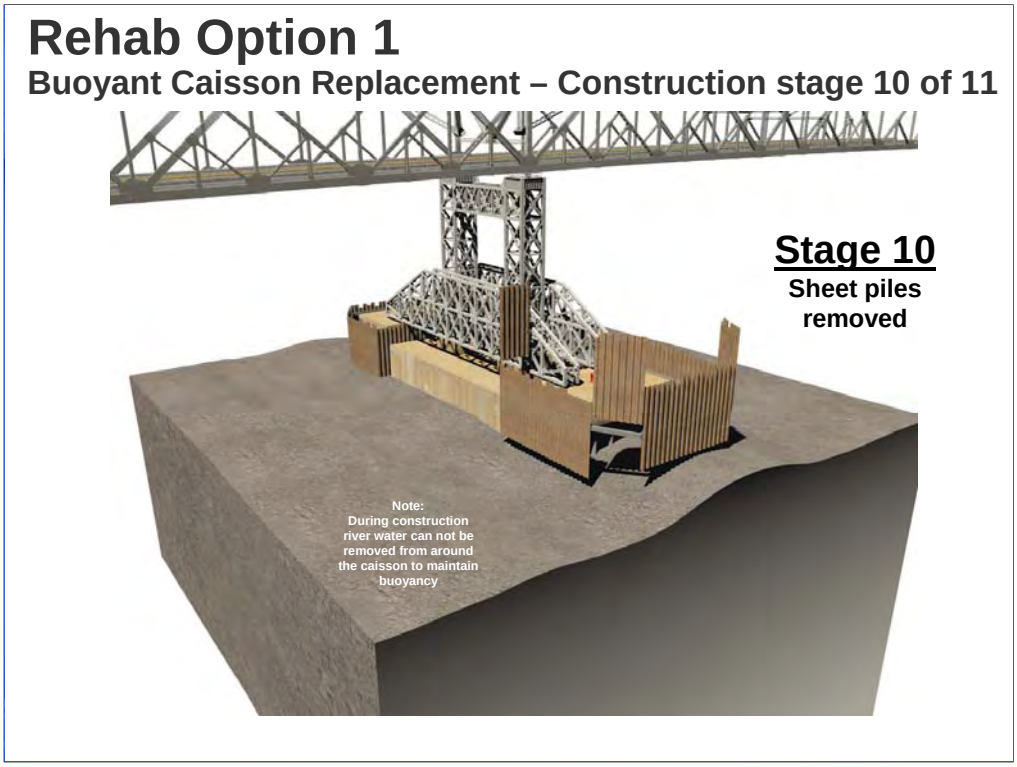
In this slide the installation of piles is complete and new pilecaps are constructed to hold all the piles together.



Slide 75

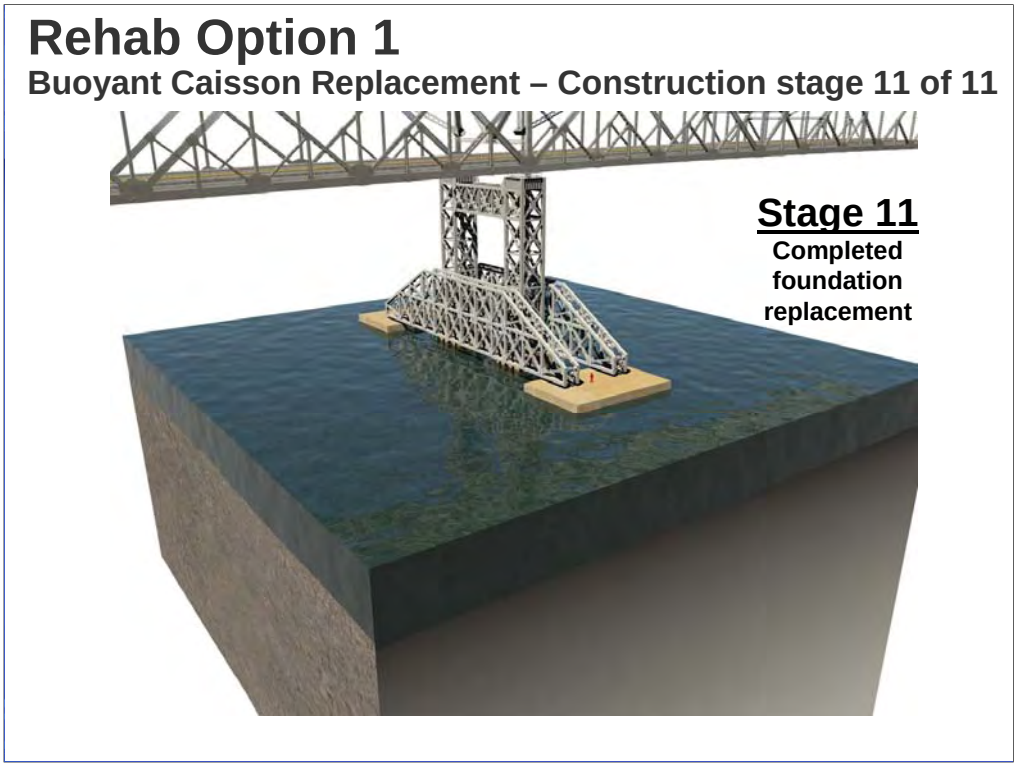
In this slide an indicate transfer structure is shown to connect the two new foundations at each side of the existing foundation.

In a complicated procedure the weight of the bridge above would be transferred from the buoyant foundation to the new transfer structure. The complexity of this operation may require closure of the TZB for short durations.



Slide 76

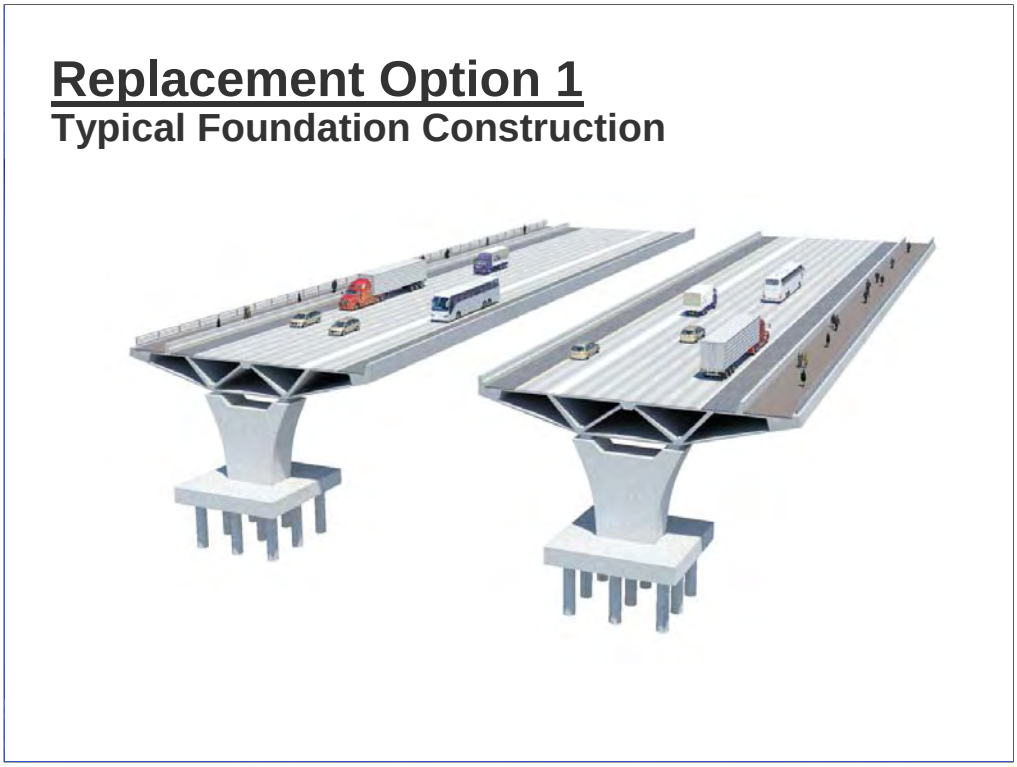
This slide shows removal of the sheet piles in the cofferdams after all construction is completed.



Slide 77

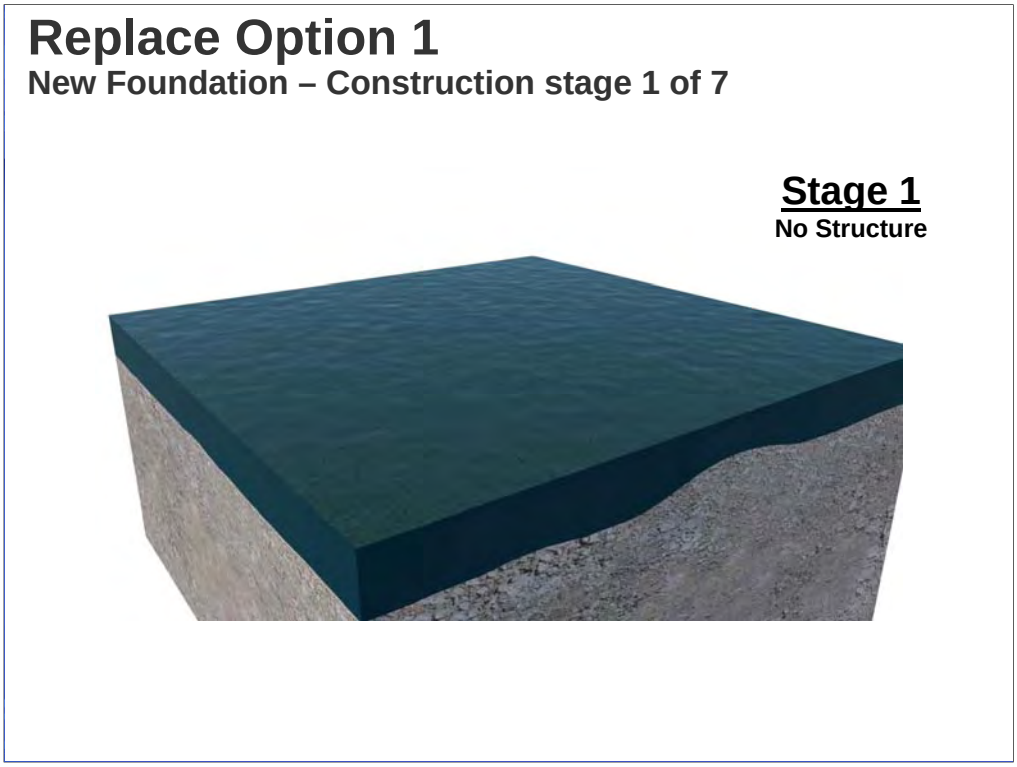
This slide shows the final foundation arrangement.

The deactivated buoyant caissons may be removed.



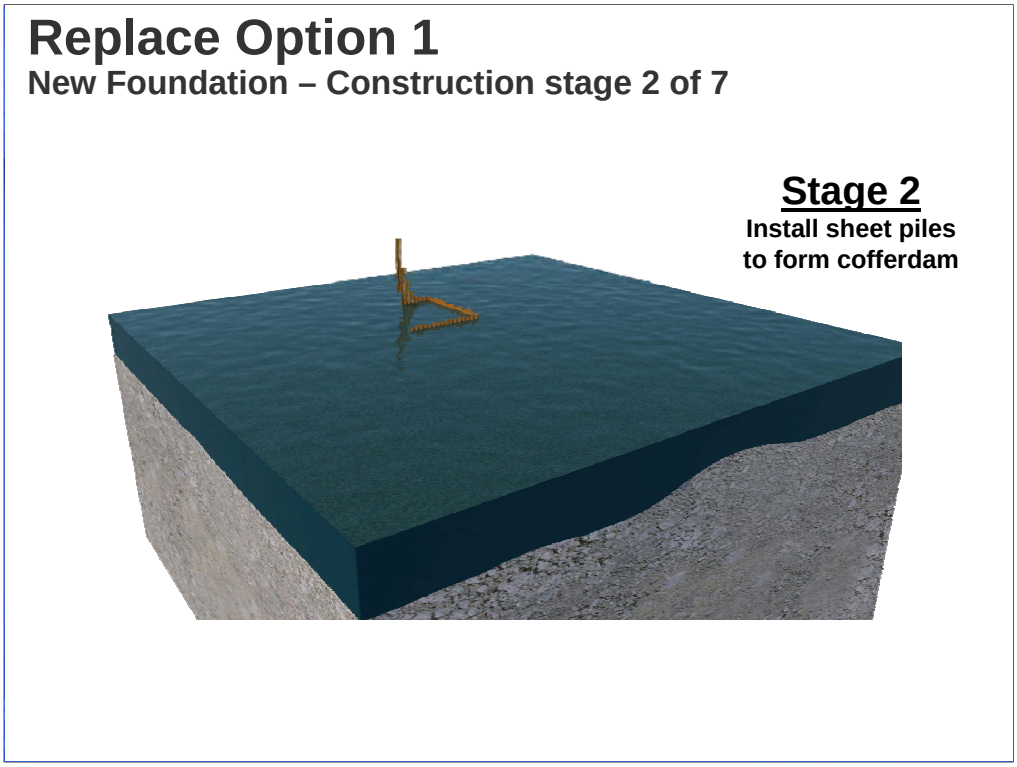
Slide 78

This series of slides shows the construction sequence for a typical foundation in one of the TZB replacement options.



Slide 79

This slide shows the existing condition.



Slide 80

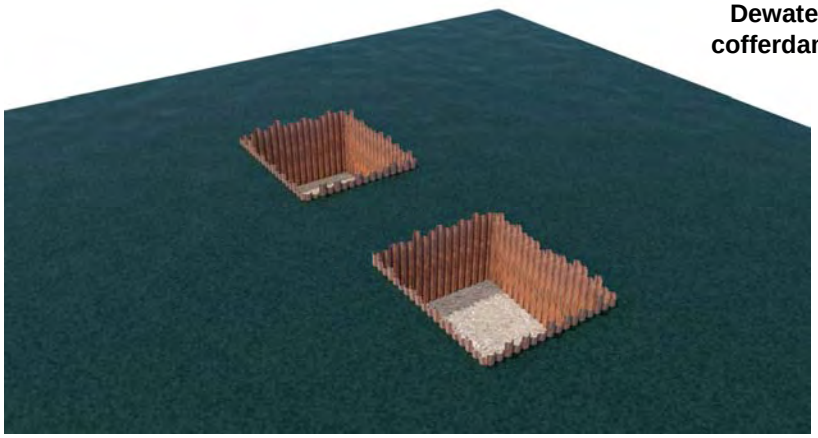
One of the first activities would be to install sheet piles to form two cofferdams around the new foundations.

Replace Option 1

New Foundation – Construction stage 3 of 7

Stage 3

Dewater cofferdams



Slide 81

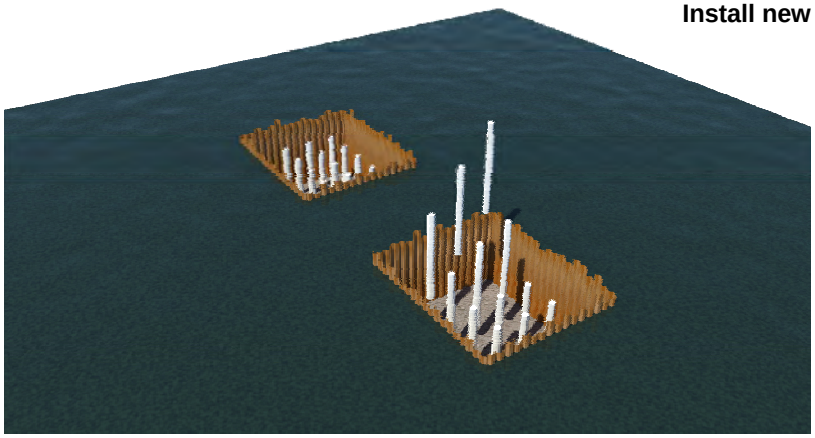
This slide shows the two completed cofferdams with the river water removed from within.

Replace Option 1

New Foundation – Construction stage 4 of 7

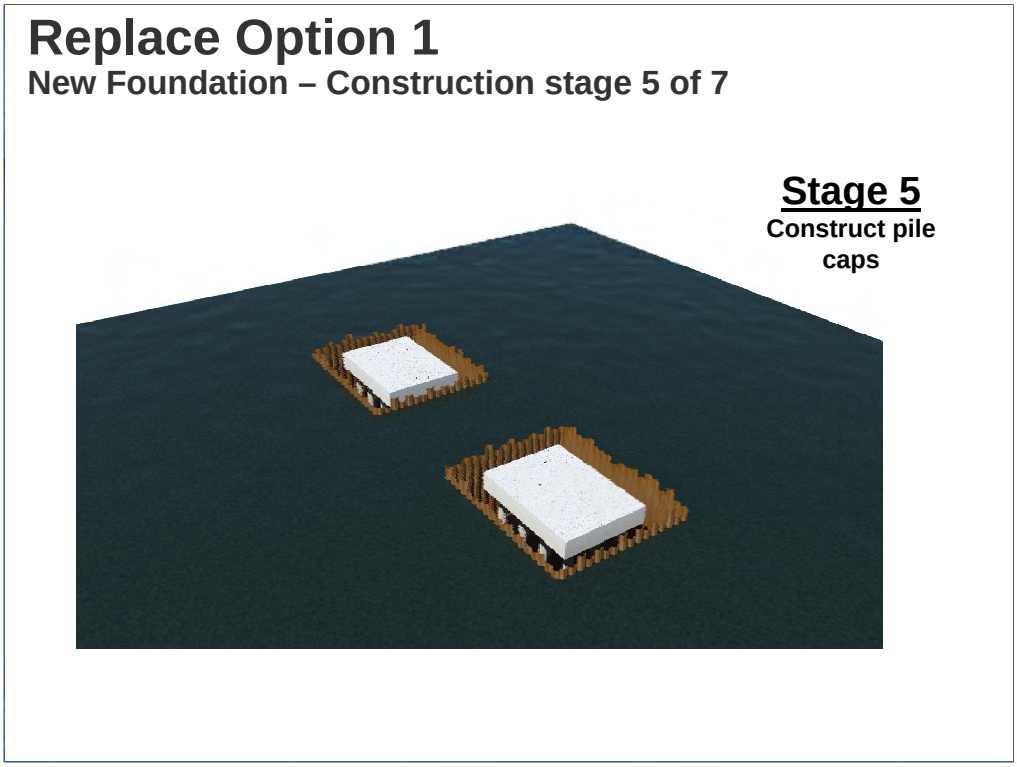
Stage 4

Install new piles



Slide 82

This slide shows the installation of new steel piles within each cofferdam.



Slide 83

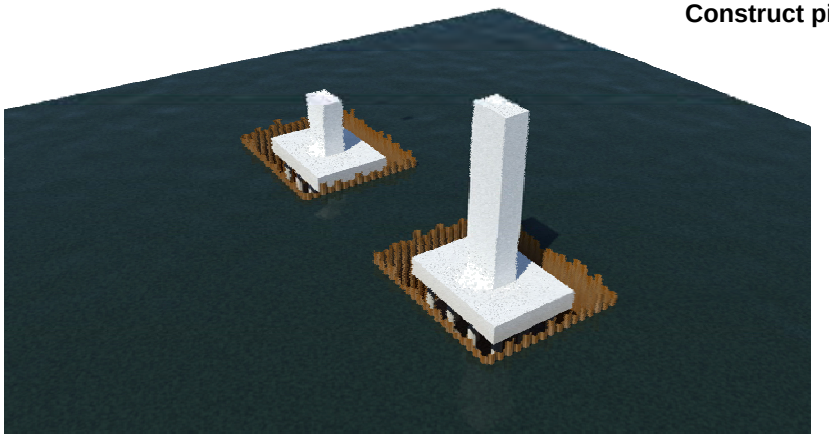
This slide shows the installation of new pile caps to connect all the piles.

Replace Option 1

New Foundation – Construction stage 6 of 7

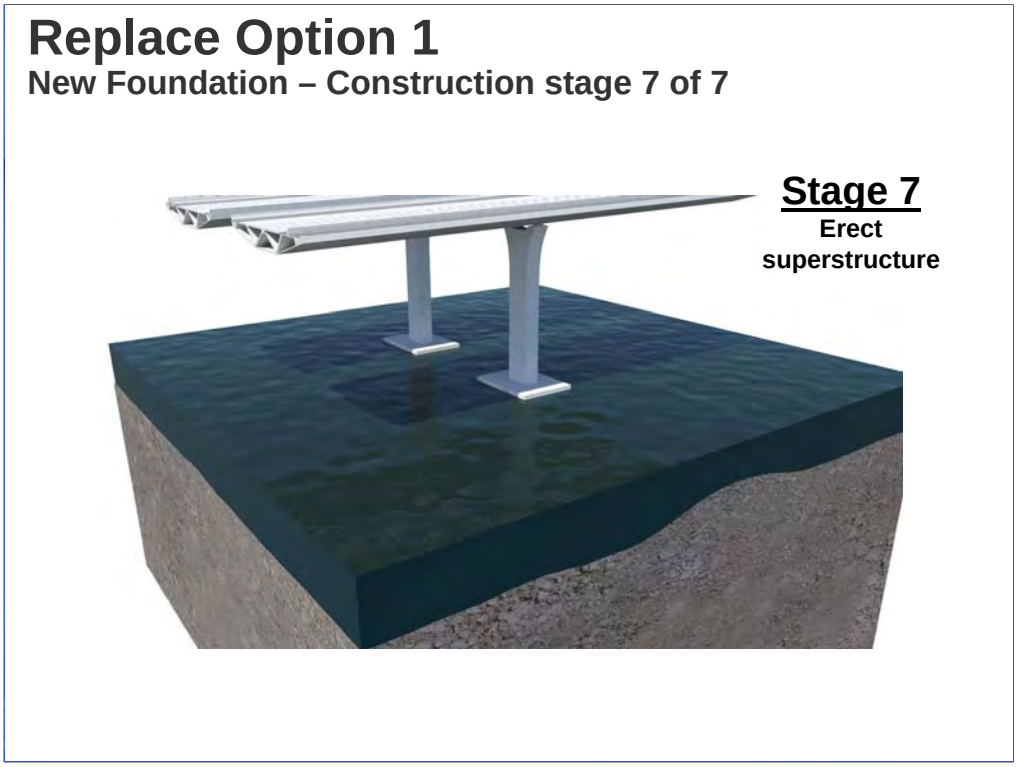
Stage 6

Construct piers



Slide 84

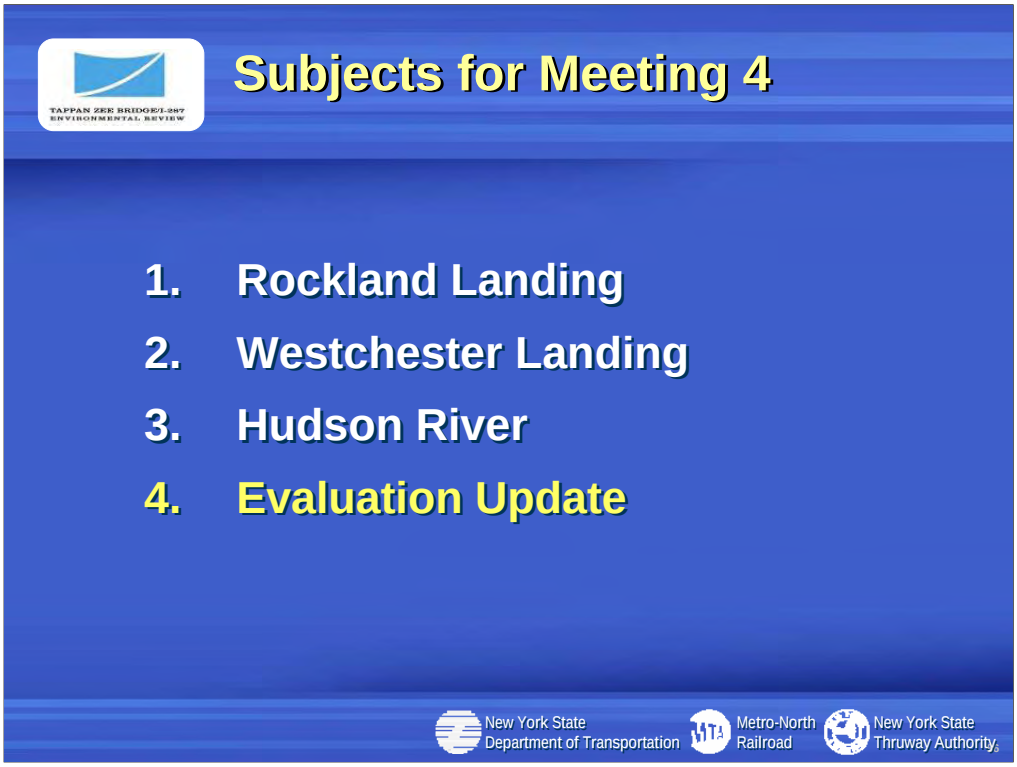
This slide shows the construction of a pier on each pilecap.



Slide 85

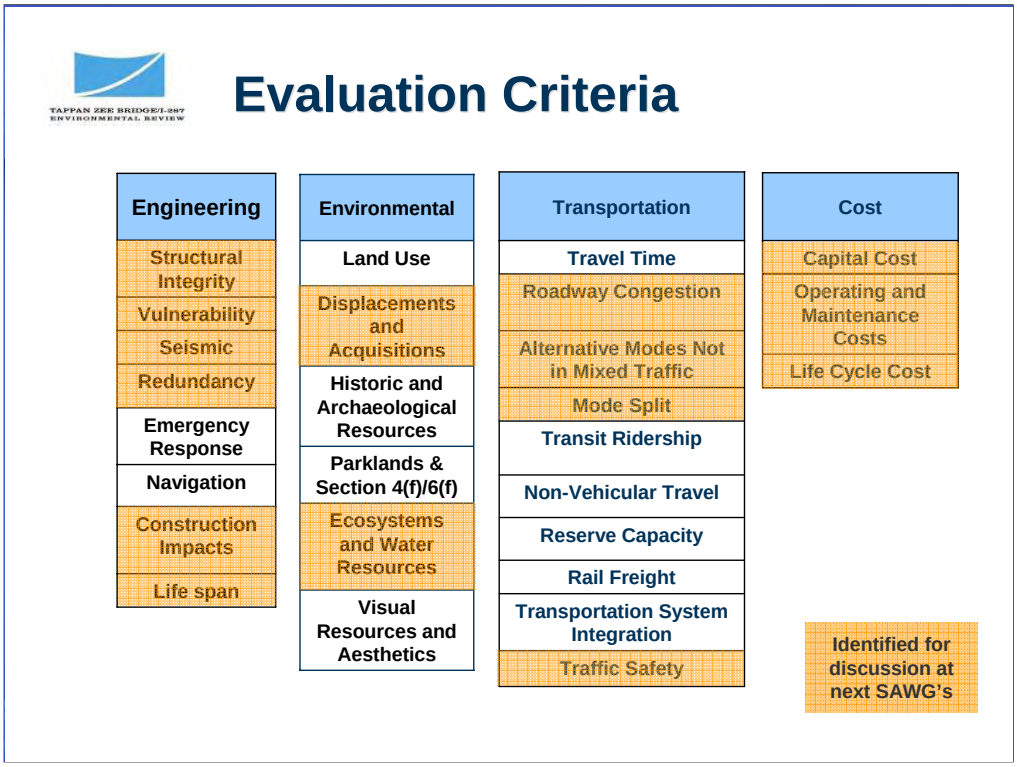
This slide shows the completed structure including the superstructure.

Upon completion of the bridge traffic would be transferred from the existing TZB and the existing structure including its foundations would be removed.



Slide 86

Title slide introducing Part 4 of the presentation about the evaluation criteria used to compare the 7 options.

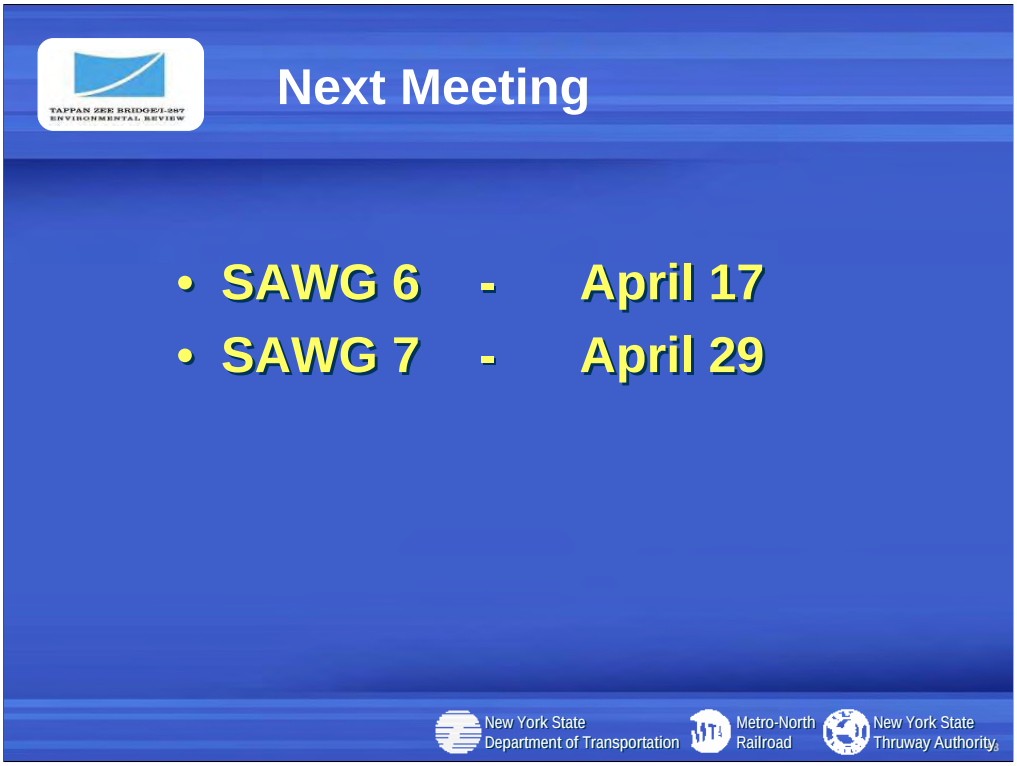


Slide 87

There is only one slide in this section of the presentation.

The slide lists all the criteria used to evaluate the 7 rehabilitation and replacement options.

Those criteria highlighted in orange are expected to be the focus of the group discussions at the next bridge SAWG meetings.



Slide 88

This slide shows the dates for the next bridge SAWG meetings.