

Pillar Point Harbor Shoreline Erosion

5/29/13, L.Ketcham



West Shoreline Trail

- trail owned by Harbor District
- 700 ft section threatened by wave action erosion

Rubble covers beach.
Vulnerable 6-ft cliff face
at trail edge.



West Trail Erosion Report

June 2012, by GHD for Harbor District

Erosion repair alternatives proposed:

- Riprap boulders (1.5 to 1 slope, 6 ft high, covering 12 ft of beach)
- Sheet pile retaining wall backfilled with soil
- Soldier pile & lagging retaining wall (vertical steel piles with horizontal lagging of wood, steel or concrete panels)

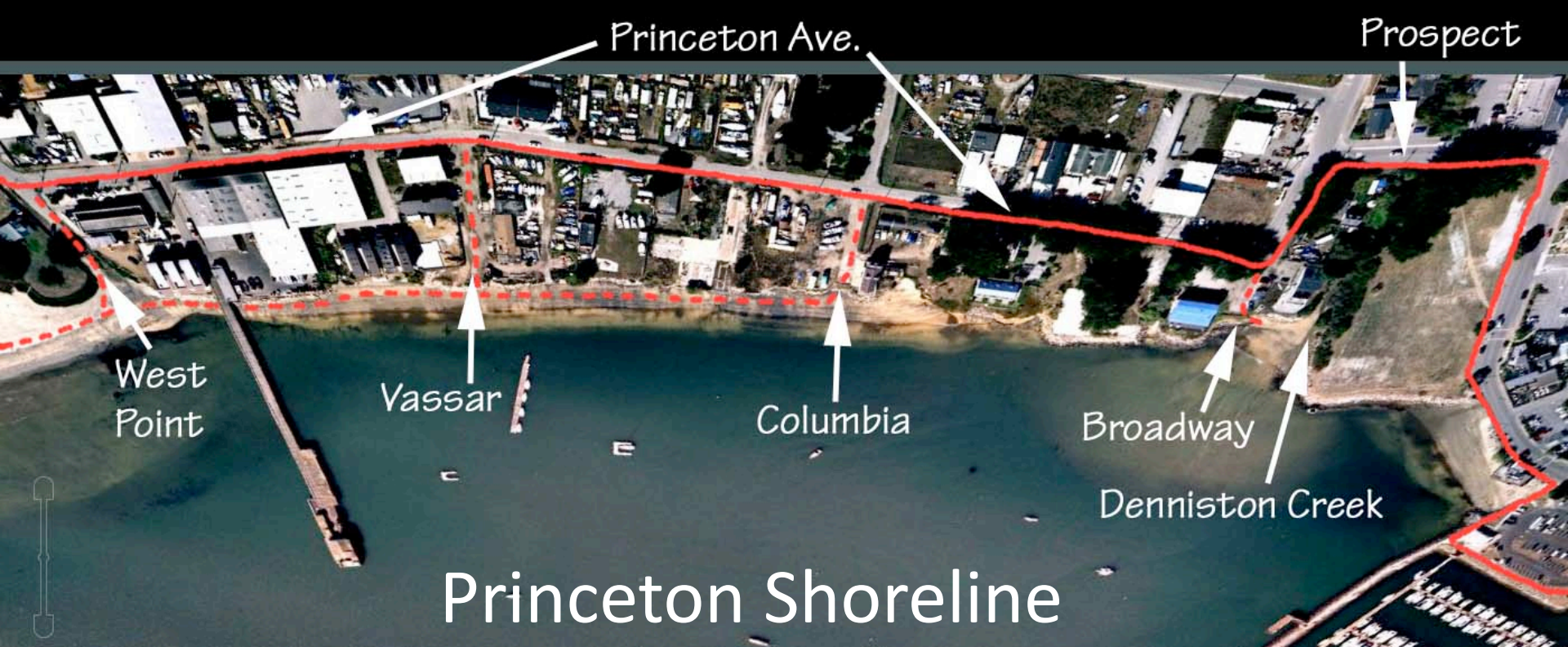
Beach nourishment was not considered, though District acknowledges need for new dredge disposal site.

Report is a year old, but has not been released to Harbor Commissioners or public (obtained by Public Records Request).

West Trail repair is included with Harbor District top priorities. Money has been allocated in budget.

Project inexplicably on hold -- No discussion or action to date.





Princeton Shoreline

3 blocks long:

from West Point Ave & Romeo Pier on the west,
to Broadway & Denniston Creek on the east.

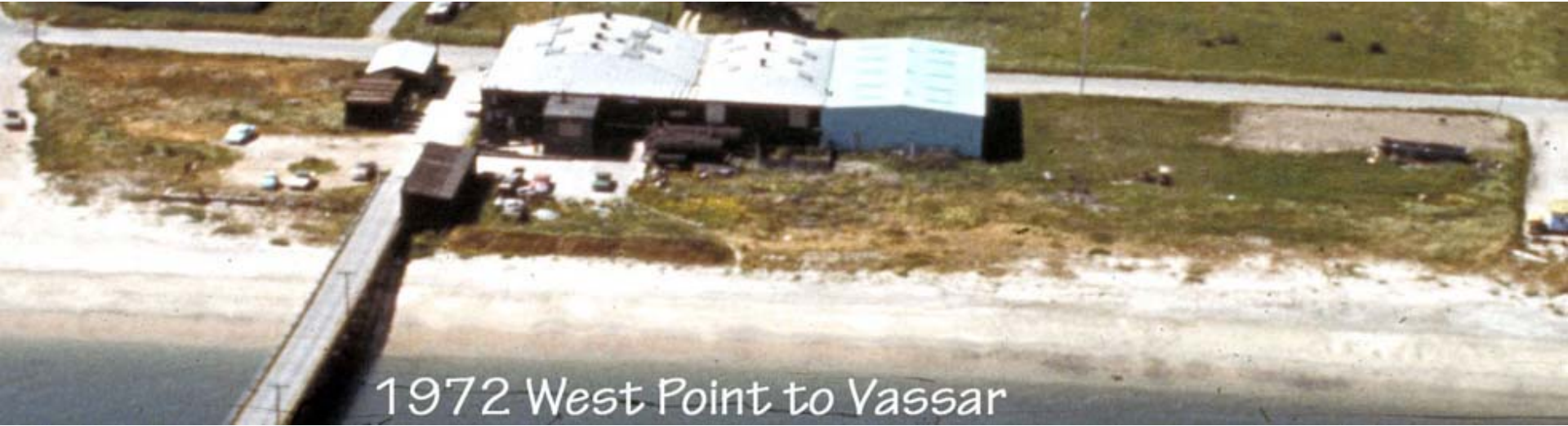
Princeton Ave. is the current designated CA Coastal Trail route (in red).

The beach is walkable west of Columbia at low to medium tide.

Harbor District has jurisdiction to mean high tide line.

Above mean high tide line is private property.

West Point to Vassar – 1972/2009

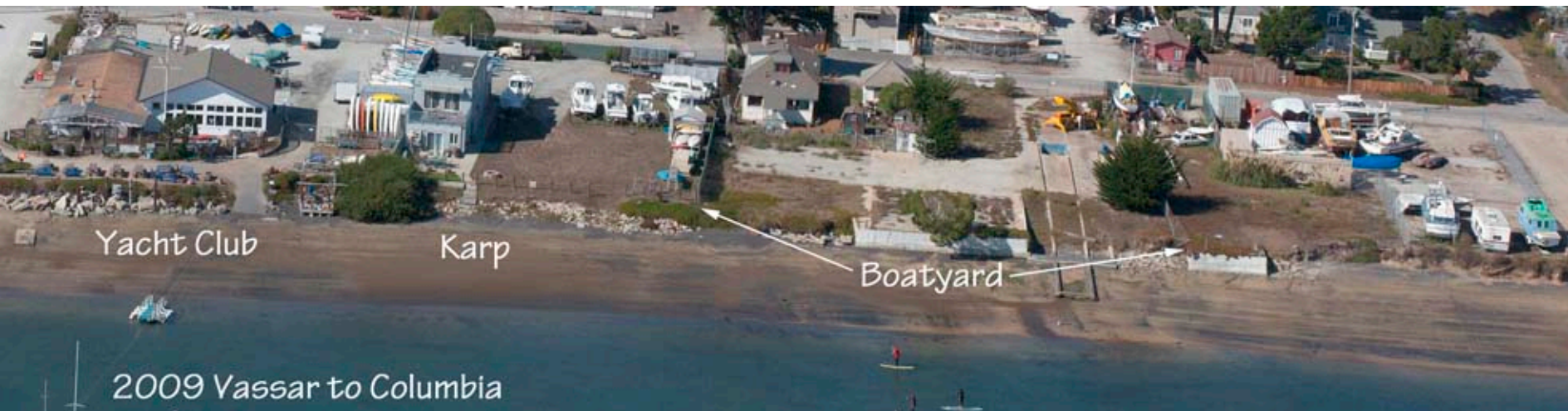


1972 West Point to Vassar



10/1/2009

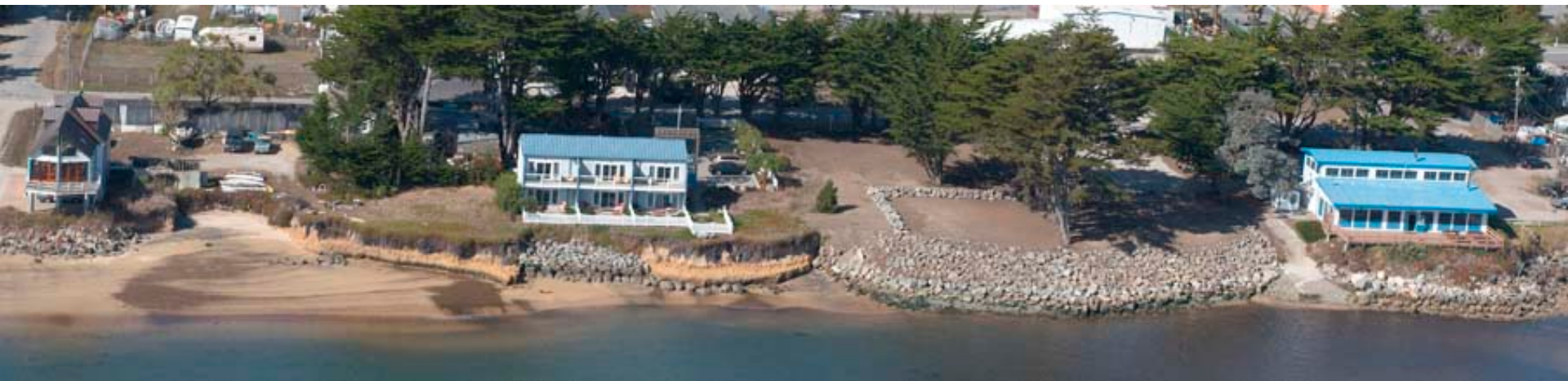
Vassar to Columbia – 1972/2009



Columbia to Broadway – 1972/2009



1972 Columbia to Broadway



Sea wall being undermined by erosion
Built without permit in 1970's at toe of bank and backfilled



Unpermitted armoring added only a few years after development



Riprap undermined by erosion

Emergency armoring added before construction of last building was complete.



Armoring already being undermined by erosion.



Extensive erosion of parcels next to riprap

Rubble-strewn beach at foot of Columbia
-- inevitable result of unmaintained armoring



Lateral beach access blocked by illegally-placed riprap.



High tide at end of West Point Ave.
Development allowed too close to the shoreline



2001 Princeton Shoreline Protection Study

by Moffatt & Nichol Engineers

Initiated by Harbor District - funded by Coastal Conservancy

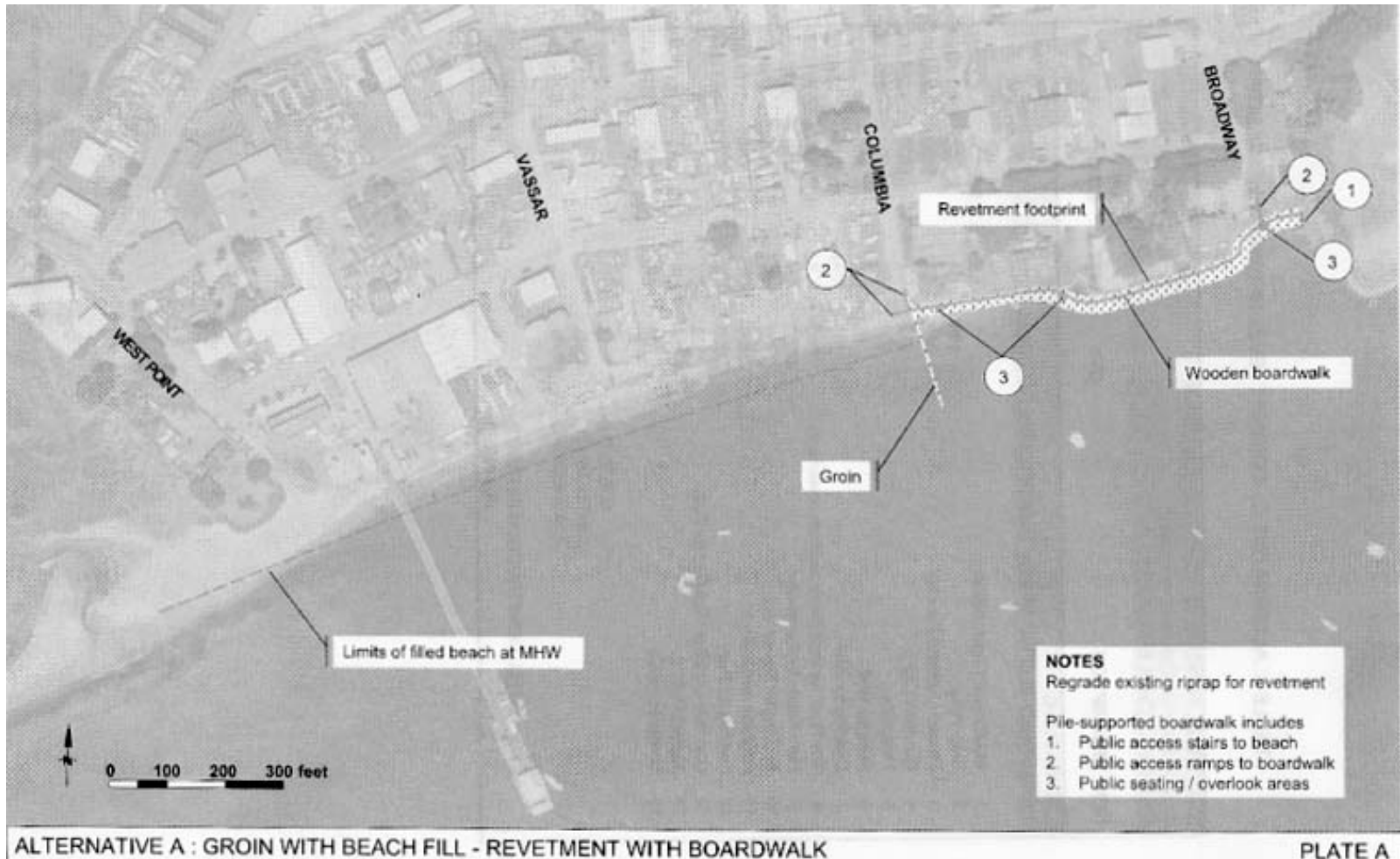
Shoreline erosion analysis (averaging 7 to 17 inches/yr)

Protection concepts considered:

- steel or concrete seawalls
- groin with beach nourishment
- dune or low cost structure such as geotextile bags with beach nourishment
- revetment with a boardwalk on the seaward side or a promenade on the landward side

“Much of the shoreline has already been armored with rock and concrete rubble that has been randomly dumped... If shoreline improvement plans are not implemented it is expected that little to no beach will remain in the near future.”

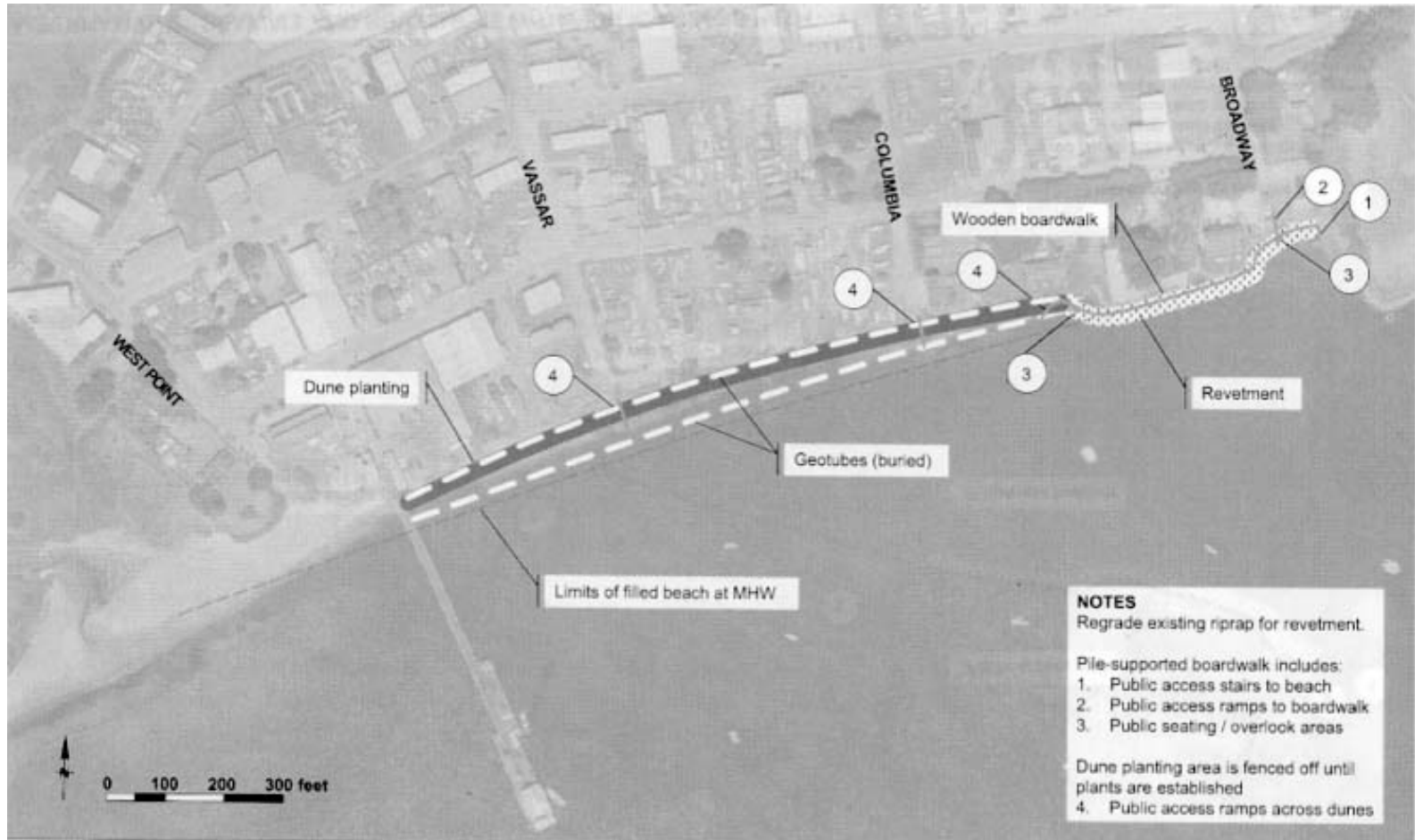
Alternative A:
Groin with beach fill: Romeo Pier to Columbia
Revetment with boardwalk: Columbia to Broadway



Alternative B:

Geotubes with beach fill & dune: Romeo Pier to Columbia

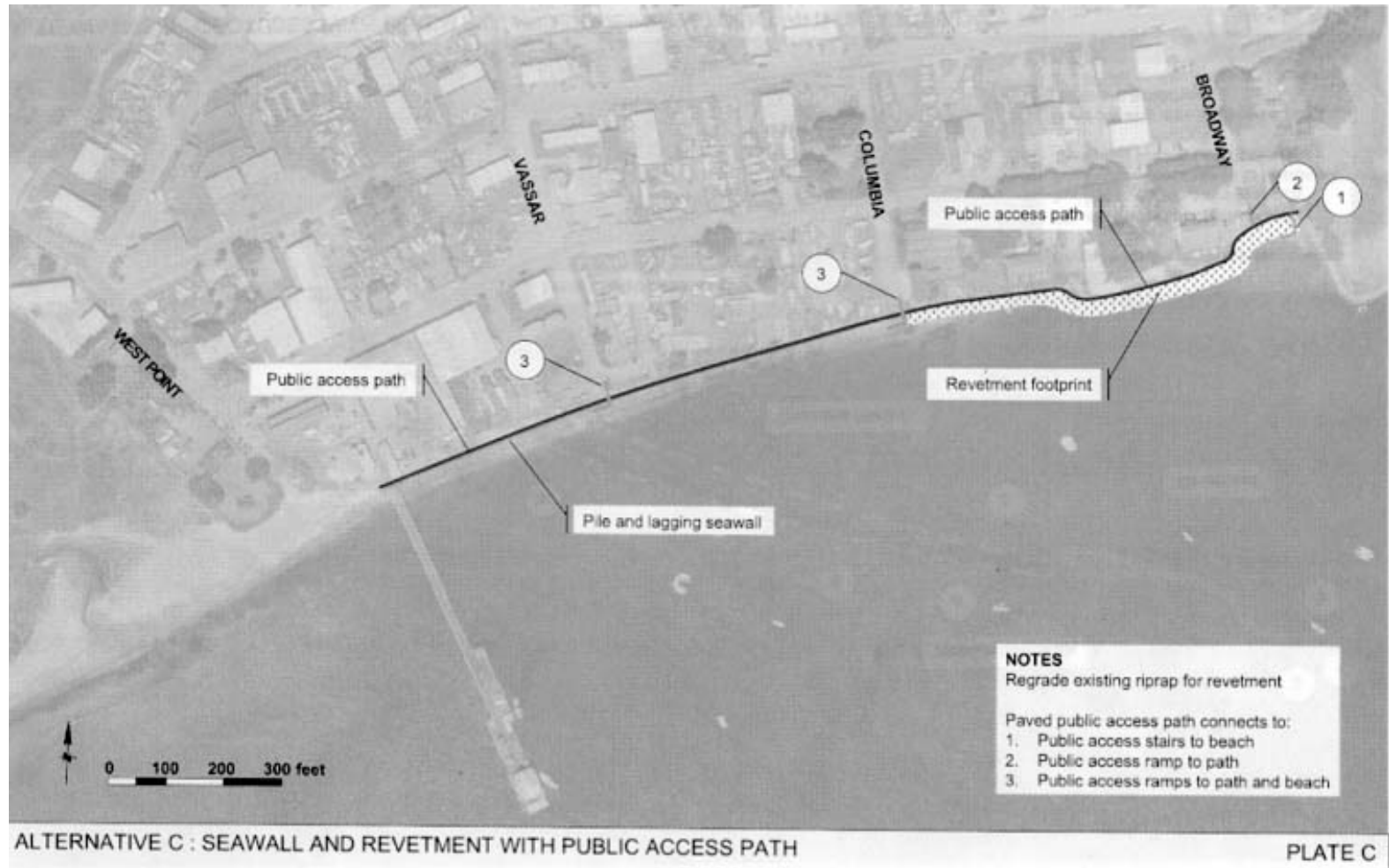
Revetment with Boardwalk: Broadway to Columbia



ALTERNATIVE B : GEOTUBES WITH BEACH FILL AND DUNE - REVETMENT WITH BOARDWALK

PLATE B

Alternative C:
Seawall and revetment with public access path on top



Plan Princeton

Comprehensive planning update for Princeton area begun in 2013

Task 3. Background studies

Princeton Shoreline Erosion & Protection (Noble Consultants):

A Shoreline Erosion and Protection Analysis that documents erosion rates, coastal access issues, and existing shoreline armoring structures will be undertaken. The shoreline management plan will be developed to afford reasonable protection of property and backlands in a manner that is consistent with the region's aesthetic qualities, public access needs, and other community goals and objectives, taking into account sea level rise.

Preliminary engineering studies performed for the County have recommended a combined revetment, stabilized beach nourishment, and relatively simple public access improvements at key street end locations. The final shoreline management plan will lay out significant details such as the location of a uniform string line, consistent design section requirements, and maintenance obligations so that a meaningful long term action plan can be proposed, adopted by the community, and ultimately implemented.

Referenced documents posted at:
www.MidcoastCommunityCouncil.org

Pillar Point Harbor page:
<http://www.midcoastcommunitycouncil.org/harborshoreline/>

Plan Princeton page:
<http://www.midcoastcommunitycouncil.org/princeton-planning-update/>

Princeton Shoreline page:
<http://midcoastcommunitycouncil.org/princeton-shoreline>