


East Ocean View Living Shorelines

Planning and Design Discussion



CHESAPEAKE BAY Landscape Professional

Living Shorelines Collaborative

BAY ENVIRONMENTAL, INC. Environmental Consulting Services

1

East Ocean View Shorelines To Date

Phase I included approximately 80 linear feet of shoreline constructed with oyster castles with sand backfill and planting, completed in 2017

Phase II included 40 linear feet of shoreline constructed with oyster castles, coir log, sand backfill, and planting, completed in 2022


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2

Phase I Existing Conditions May 2016



Eroding bank

Exposed roots from Live Oak

No vegetation

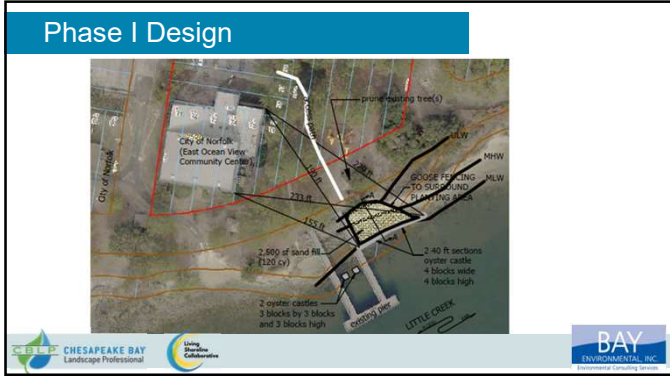
Adjacent vegetated marsh for biological benchmarks

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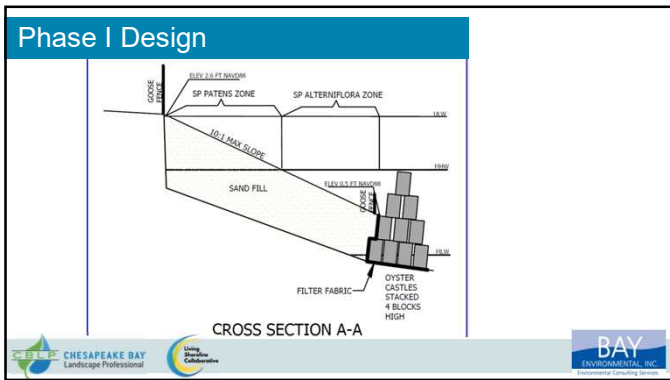
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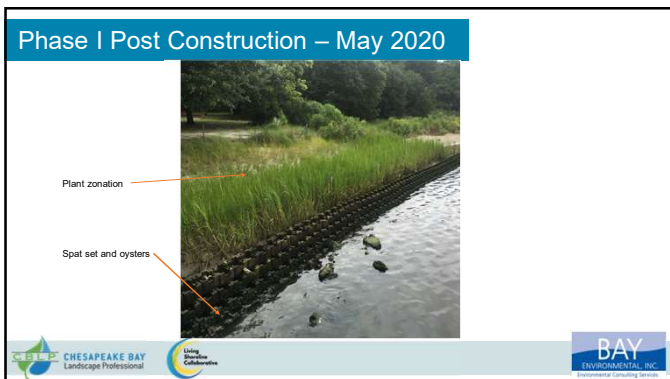
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4



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6

Phase II Existing Conditions Feb 2022

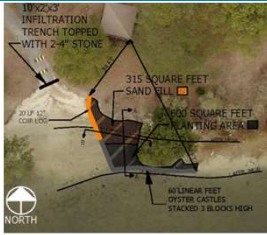


- Eroding bank
- Exposed roots
- No vegetation
- Adjacent vegetated marsh for biological benchmarks

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7

Phase II Design

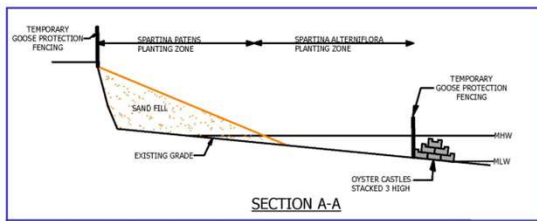


EXISTING ELEVATIONS ARE APPROPRIATE FOR SPARTINA ALTERNIFLORA AND SPARTINA PATENS PLANTING. SAND FILL INTENDED TO LEVEL OUT EXISTING BROODING CAMP. OYSTER CASTLES WILL ADAPT WITH DRENCH TO ESTABLISH PLANTINGS.

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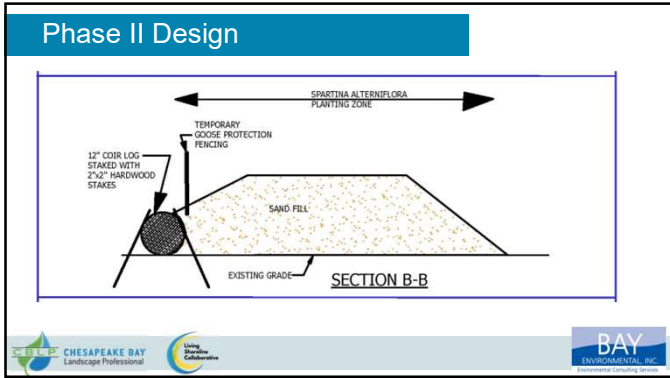
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Phase II Design



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9



10



11

Lessons Learned For Shorelines

Where are your access points with relation to your material laydown area?
 How will you build it – water based or land based?
 What size equipment will you need for reach and will that equipment fit where you want it to?
 Will the shoreline sink or does it need some special geotechnical treatment?
 What is the appropriate toe treatment?

12

Lessons Learned For Shorelines

Accessibility

- Both Phases had access either directly by truck or with small equipment (skid steer, wheelbarrow, etc)
- Adequate lay down area in close proximity
- No clearing required for access
- Easy land-based construction due to good accessibility



13

Lessons Learned For Shorelines

Geotechnical Considerations

- Existing hard sand bottom beneath both Phases, so no significant “mud wave”, no special geotechnical considerations
- Geotextile fabric used under oyster castles for both Phases to minimize sinkage of the sill, very common



14

Lessons Learned

Toe Treatment

None	We chose oyster castles for additional habitat value although a high density coir log would have been adequate with a less than 0.5 mile glancing fetch
Coir log	
Shell/shell bags	
Riprap	
Oyster castles	
Fetch	Coir log used above mid-tide for Phase II because of limited opportunity for spat set above that elevation
Slope	
Access	
Price	



15

Lessons Learned

Planting Seasons

Grasses

Spring is best

Shrubs/Trees

Fall is best

Contractual and/or grant deadlines



16

Lessons Learned

Maintenance

Living Shorelines are gardens.

Gardens need tending.

(May be a market for shoreline maintenance contractors)



17

Lessons Learned

Contractor Qualifications

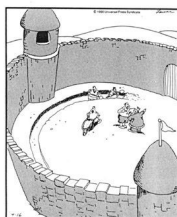
Have they built living shorelines before?

Do they have a wetland scientist on their team?

Do they clearly understand the goals of the project?

Consider qualified bid – low bid is not always the best option for living shoreline construction

THE FAR SIDE By GARY LARSON

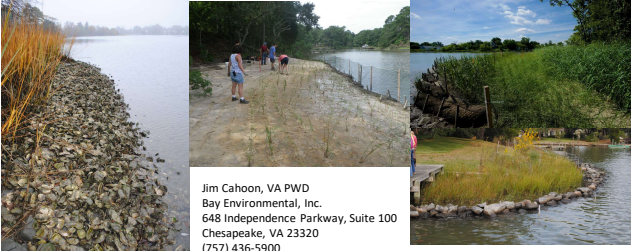


Suddenly, a heated exchange took place between the king and the most contractor.



18

Questions?



Jim Cahoon, VA PWD
Bay Environmental, Inc.
648 Independence Parkway, Suite 100
Chesapeake, VA 23320
(757) 436-5900