

# Boating Access Development Considerations

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# Topics of Consideration

- Use
- Boat Type
- Site Criteria
- Permits
- Design
- Construction
- Materials

# Use - recreational

- Public – launch and retrieve
- Type of boat – car top, trailered;
- Type of use – fishing, skiing, pleasure
- Size of boat – 12 to 20 feet

# Site Criteria

- Proximity to other ramps
- Site Accessibility – maintained roads, access road to ramp
- Water body – seasonal, 3-4 feet deep (mean low), width, channel, ramp length and slope, water hazards
- Siltation Rates – can change the water depth, wind and wave fetch, sand bars, tidal, river flooding, dredging issues
- Size – “usable land area”; type of use, number of ramps lanes, parking, drive lanes, turning radius, staging, other amenities
- Topography – in concert with size may determine usable land area, suitability for ramp, wetlands

# Permits

- VMRC - The Virginia Marine Resource Commission manages the State's submerged bottom lands, tidal wetlands, sand dunes and beaches in order to preserve and protect Virginia's natural resources and the habitat for fisheries (<http://www.mrc.virginia.gov/hmac/hmoverview.shtm>).
- VDEQ - The Virginia Department of Environmental Quality, through the State Water Control Board, regulates water resources and water pollution in the state and is responsible for certain water permitting/compliance (<http://www.deq.virginia.gov/Programs/Water/PermittingCompliance.aspx>).

# Permits (continued)

- USACE - The United States Army Corps of Engineers, regulates and permits certain activities in navigable waters under the authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act ([http://www.nao.usace.army.mil/regulatory\\_branch](http://www.nao.usace.army.mil/regulatory_branch)).
- VDHR - The Virginia Department of Historic Resources represents the State's interest in significant historic, architectural, archaeological and cultural resources. The Office of Review and Compliance serves to advise and assist in determining if projects will affect significant historic/cultural resources and if so, how to address and resolve those effects ([http://www.dhr.virginia.gov/review/orc\\_home.html](http://www.dhr.virginia.gov/review/orc_home.html)).

# Permits (continued)

- Prepare a site plan sketch
- Prepare a design concept
- Apply for necessary permits (Joint Permit Application)
- A local wetland board and local building permit may be required

# Design Requirements

- VA Statewide Building Code
- Local Ordinances, Zoning, Setbacks
- Lighting – local power company
- DGIF Design Standards – boat cradle, ramp slope, parking space, turning radius, courtesy pier, specifications, configurations
- Americans for Disability Act Standards



# Design Details

- Contact DGIF staff
- <http://www.dgif.virginia.gov/boating/building-boat-ramps.asp>
- <http://www.sobaus.org>
- Seek professional services

# Construction (marine)

- Ramps – Dry, coffer dam; excavation and concrete pour for ramp
  - Wet, no coffer dam; more difficult to excavate and push ramp slab into water
- Piers – Pile driving most critical, method and depth
  - test piles, understand geology

# Materials

- Must weather time and the environment
- Extreme heat
- Extreme cold
- Extreme water forces
- Saltwater and Freshwater

# Materials

- Geotextile fabrics – bridge over soft material, wrap stone
- Stone – subgrade base, crushed compacted surface, rip rap
- Concrete – psi, thickness, air entrainment, properly worked and finished (V groove)
- Wood – Chromated Copper Arsenic, Copper Azole
- Synthetic – Fiberglass, Plastics, Composites
- Hardware – bolts and nails hot dipped galvanized, stainless steel

# Typical Material Life Span

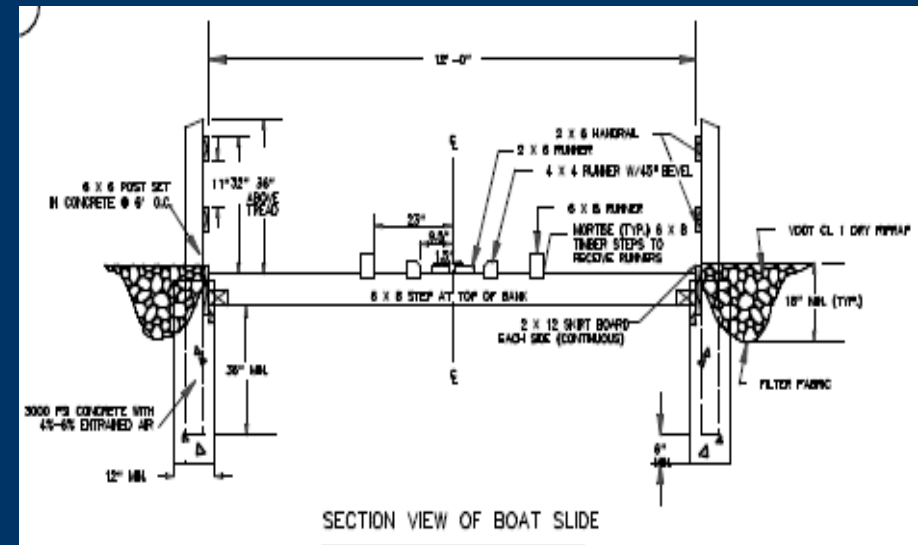
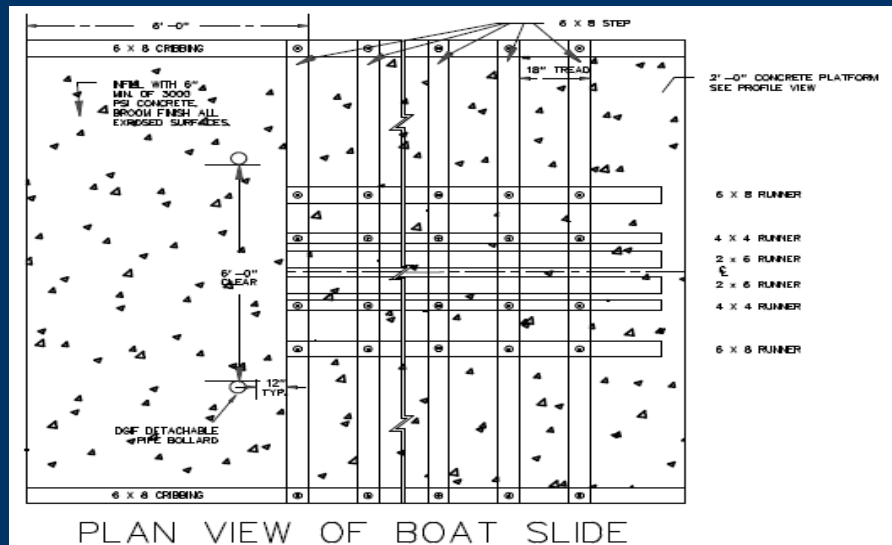
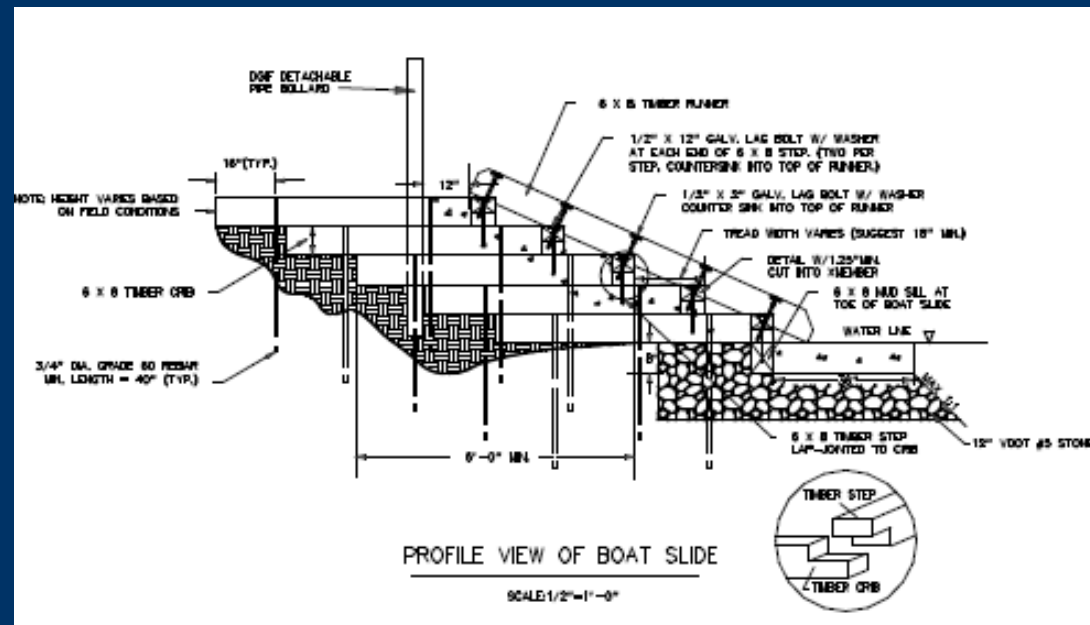
- Pressure treated timber frame & deck – 12.5 years
- Pressure treated piles – 20 years
- Concrete piles – 25 years
- Composite decking – 25 to 50 years
- High Density Polyethylene (HDPE) – 50 years
- Composite Fiberglass Reinforced Plastic (FRP)  
pile and framing – 50 years
- Composite FRP decking – 50 years
- PVC sheet piling – 50 years

Compare material life cycle costs!

# Synthetics — Lawnes Creek, Surry Co., James R.



# Hand Launch, boat slide details





Car  
Top?

Hand  
Launch?





# Covington, Jackson River



# Clifton Forge, Jackson River





# Lynch Memorial Park, Franklin Co., Pigg River



# Emporia, Meherrin River





# Waid Recreation Area, Franklin Co., Pigg River



# Glasgow, Rockbridge Co., James R.





# Hunting Run, Spotsylvania Co., Rapidan River



# St. Paul, Russell Co., Clinch River





# Grottoes, Rockingham Co., South R.



# Questions

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# Contact Information

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