

LTPBR WORKSHOP

EXERCISE

Building a Post-Line Wicker Weave

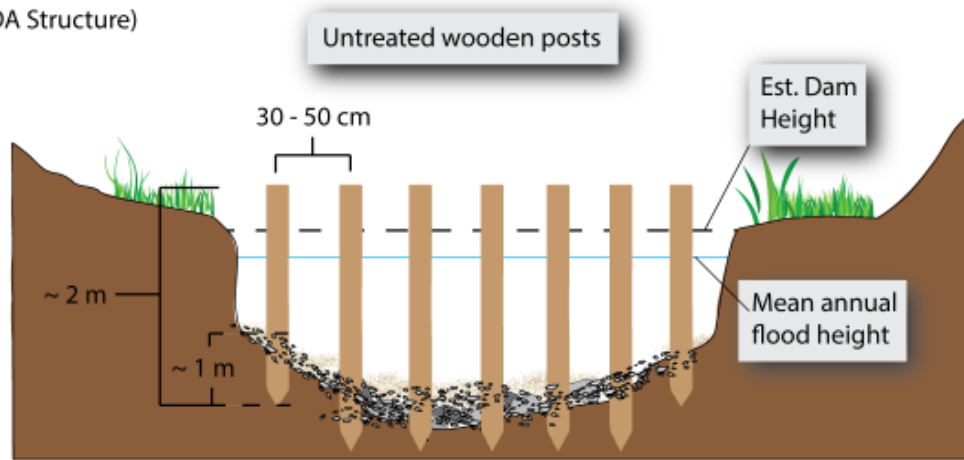


Learning: workshop participants building a post-line wicker weave structure, in a parking lot.

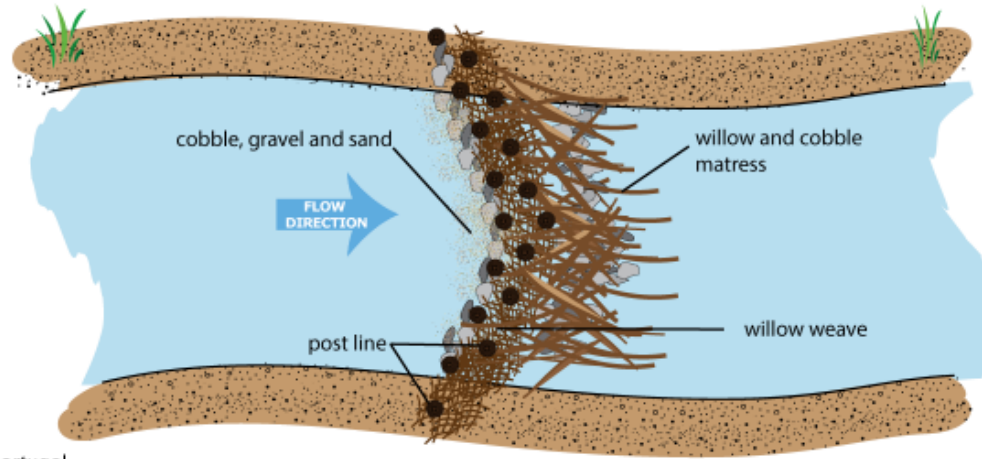


Ever seen this detail?

Cross Section View
(Generic BDA Structure)



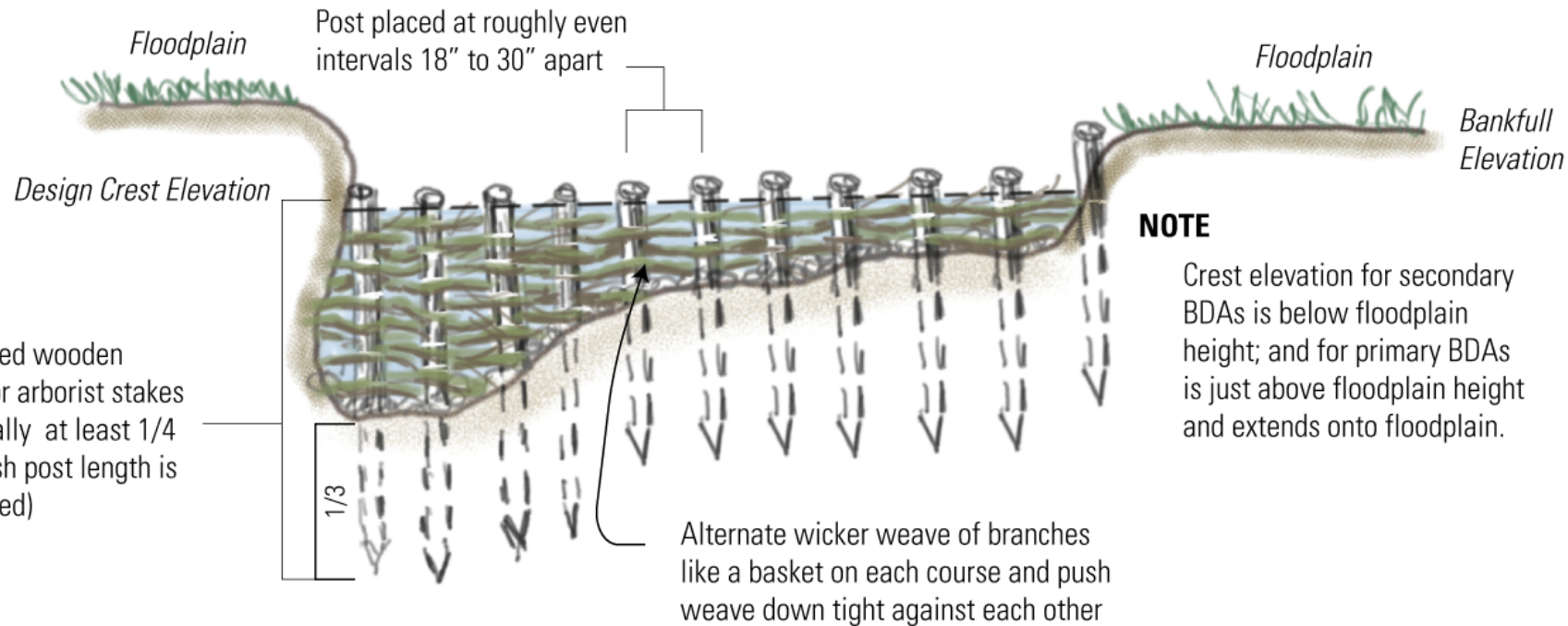
Plan View
(Convex Primary Dam)



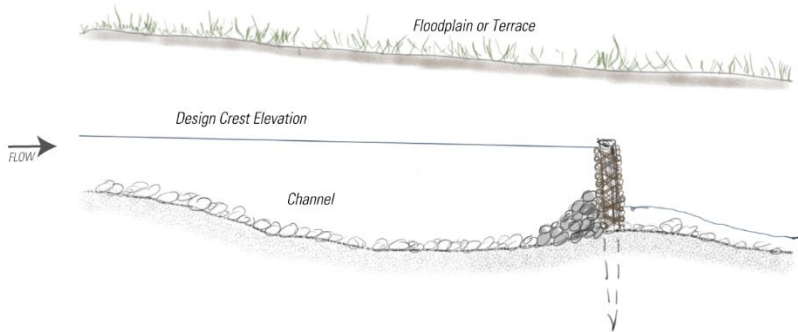
 Elijah Portugal

Figure 21 – Conceptual illustration of BDAs incorporating a downstream “mattress” and double post line. In practice BDAs can be built with or without posts and using a range of natural materials. Illustration credit: Elijah Portugal.

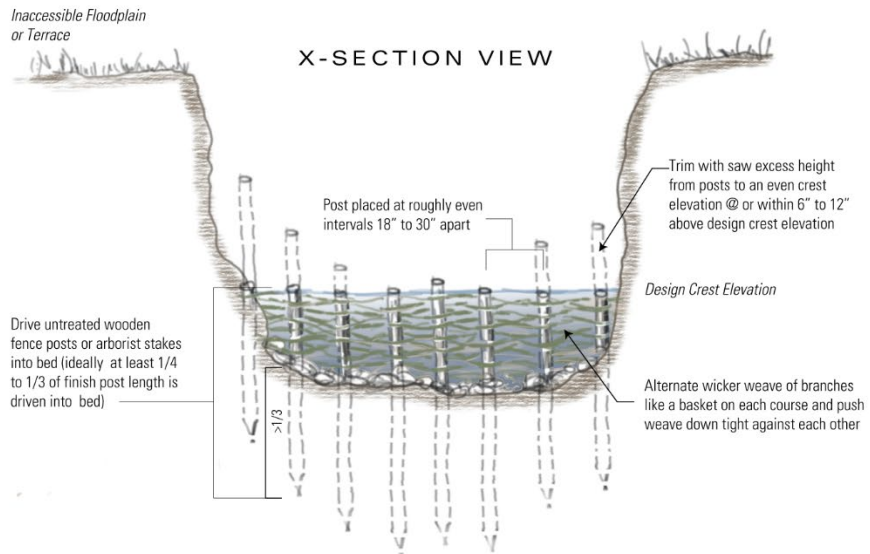
X-SECTION VIEW



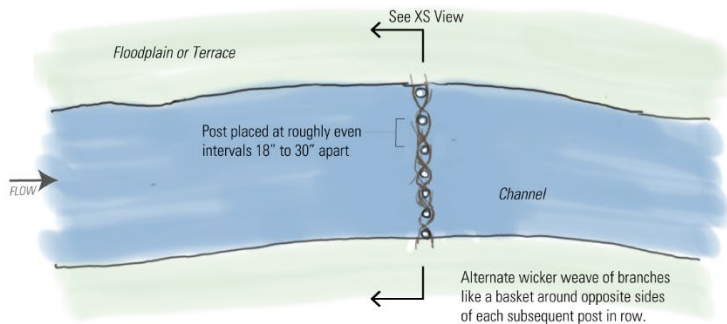
PROFILE VIEW



X-SECTION VIEW



PLANFORM VIEW



NOT-TO-SCALE

From Chap 4 Appendix of Wheaton et al. (2019)
LTPBR Manual. DOI: [10.13140/RG.2.2.19590.63049/1](https://doi.org/10.13140/RG.2.2.19590.63049/1)



Learning: workshop participants building a post-line wicker weave structure, in a parking lot.



PARKING LOT BDA EXERCISE

PURPOSE: To simulate many of the safety, design and construction considerations encountered when building post-line wicker weave low-tech structures (e.g., beaver dam analogues).

INGREDIENTS

- » 4 - 6 Untreated wooden fence posts (nominal diameter of 3" and cut to 4' to 5' in length)
- » 4 - 6 Five-gallon buckets
- » Willow weave material (long, i.e., > 4 ft), limbed branches of ¼" to 2" diameter willow branches
- » Cobble fill (to fill each bucket about half way up with post)

TOOLS

- » Personal Protective Equipment
- » Closed-toed shoes
- » Work gloves
- » Eye protection (e.g., safety glasses)
- » Hard Hat

INSTRUCTIONS

- 1** Decide location of BDA dam crest, configuration (e.g., straight or convex downstream), and crest elevation. Position yourself with your eye level at proposed crest elevation of dam (make sure it is < 1.5 meters in height), and look upstream to find where the pond will backwater to. Adjust crest elevation as necessary to achieve desired size of pond, inundation extent, and overflow patterns.
- 2** Put one post in each five gallon bucket, hold post plumb in center of bucket, and fill bucket half way up with cobble to keep post upright.
- 3** Place posts roughly one to two bucket widths apart in desired dam crest configuration.
- 4** Weave willow branches in between posts across the channel. Alternate weave pattern and pack branches down to minimize voids. Build up to desired design crest elevation.
- 5** Work a willow mattress (laying branches parallel to flow) into dam on downstream side and build to provide energy dissipation to overtopping flows.



Bring your Pocket Guide

