

DIDSON RAIL – WA SHORE ENTRANCE LPS

- The DIDSON rail system will be mounted to the underside of the WA Shore NDE LPS ramp (Figure 1). It consists of four (4) 8-ft aluminum rail sections built of 6061-T6 aluminum structural 4-in I-beam with web thickness of 0.17-in, flange width of 3-in, and flange thickness of 0.29-in. Each section weighs 30 lbs.
- Each 8-ft section will be secured with ¼-in x 6-in aluminum brackets, welded every 2 ft along the length of the rail (Figure 2). Each bracket will be attached to the side of the LPS ramp using three (3) 3/8-in bolts at a position 3-in up the side of the LPS to ensure that lamprey can pass easily on the ramp underneath the lowest bolt.
- The rail system will be fitted with a stop at the distal end to prevent the DIDSON/trolley from falling off the end, and each rail junction will be fitted with a receiver fitting to allow smooth connection to the next rail section.
- The highest rail section includes a smooth horizontal bend that transitions from the underside of the LPS ramp to the side of the existing LPS access platform (Figure 3). This will allow in-season deployment and retrieval of the DIDSON. Most of the bend is in the shadow of the LPS ramp. Only the final 2-ft 6-in of the rail will be outside the shadow of the LPS ramp. The rail then terminates 6-in above the floor of the access platform. Therefore, the offset section of the rail would only be underwater during the most extreme tailwater elevations (those capable of inundating the platform). In that case, the platform and its supporting struts represent a far larger in-water structure than the rail would be.

Figure 1. Diagram of the WA Shore NDE LPS system and location of proposed DIDSON rail.

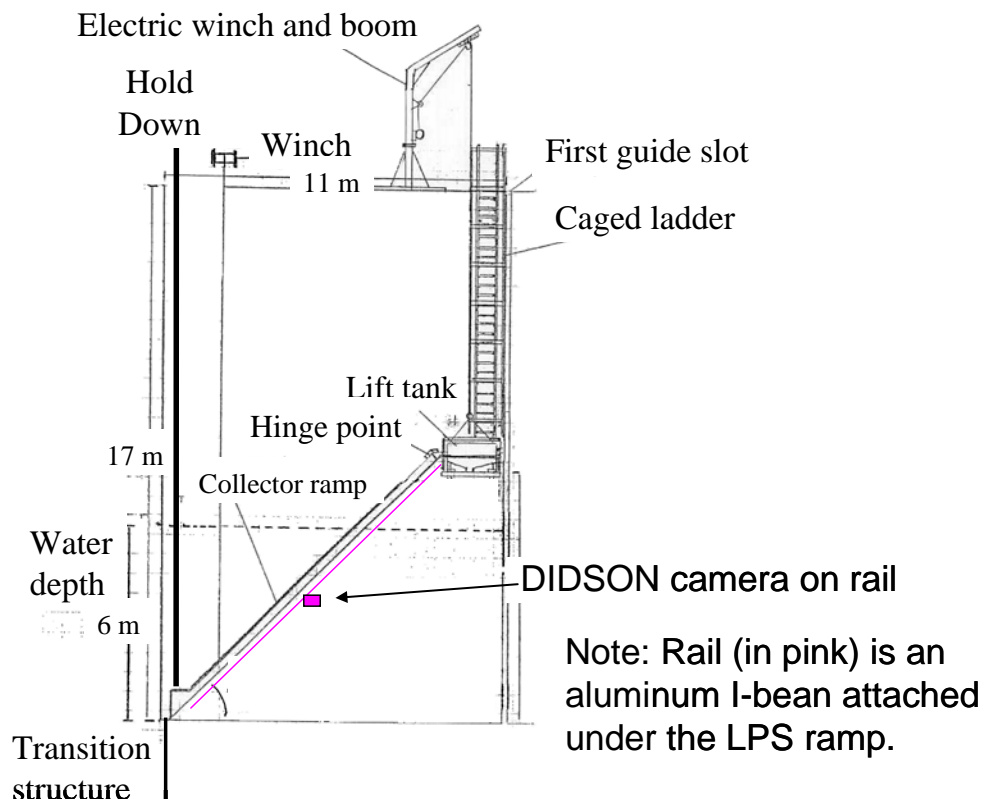


Figure 2. Drawings of proposed DIDSON rail and mounting bracket system. Drawing on left side shows vertical plane view of final rail section, which features a bend to facilitate deployment and retrieval of DIDSON/trolley combination. The drawing is not to scale. Figure 3 shows the shorter length of the bend section.

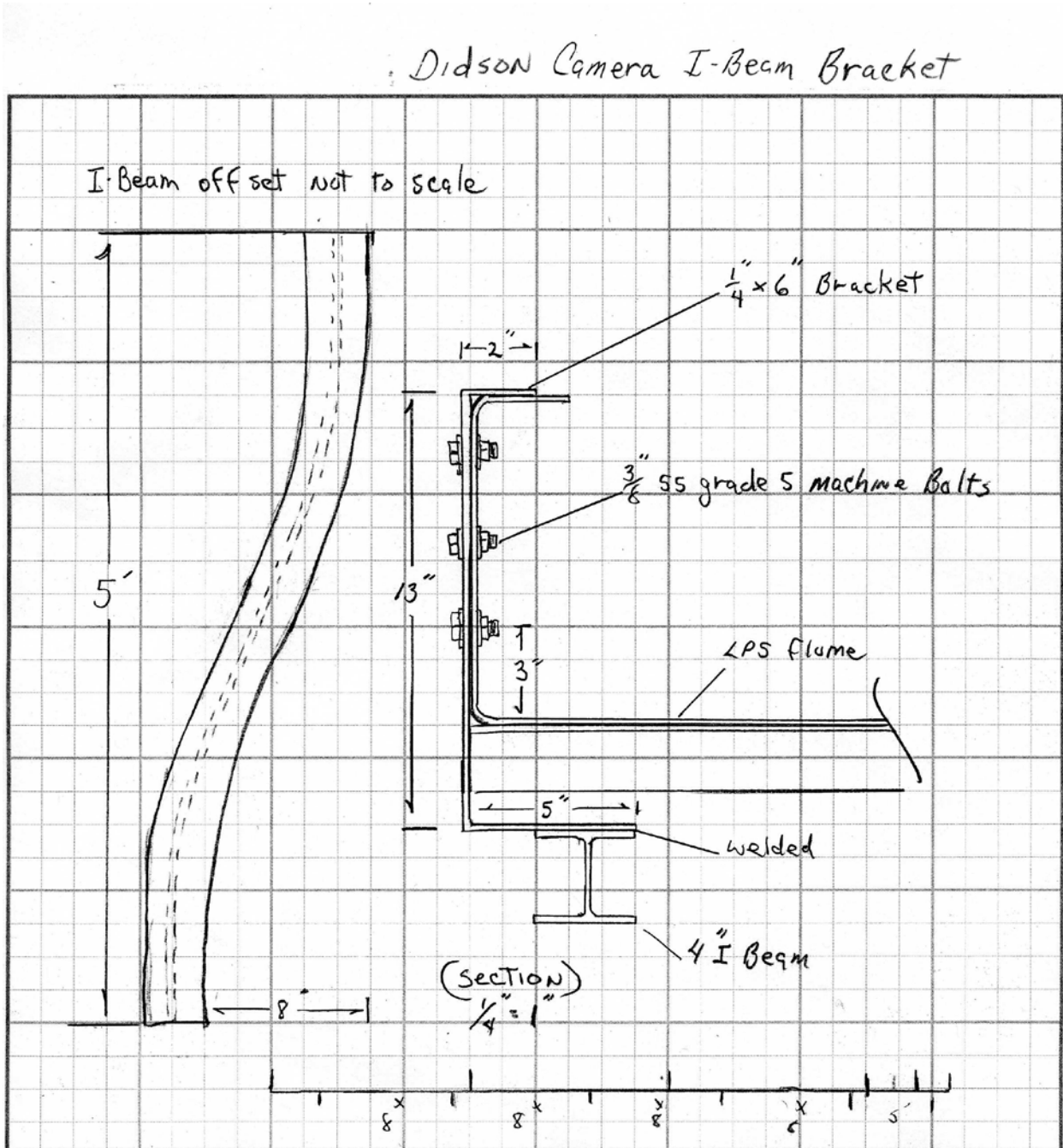


Figure 3. Upper section of DIDSON rail attached to mock-up LPS ramp. The rail will terminate near the floor of the LPS access platform to facilitate DIDSON deployment and retrieval. This bend is typically above water.

