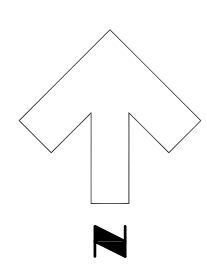


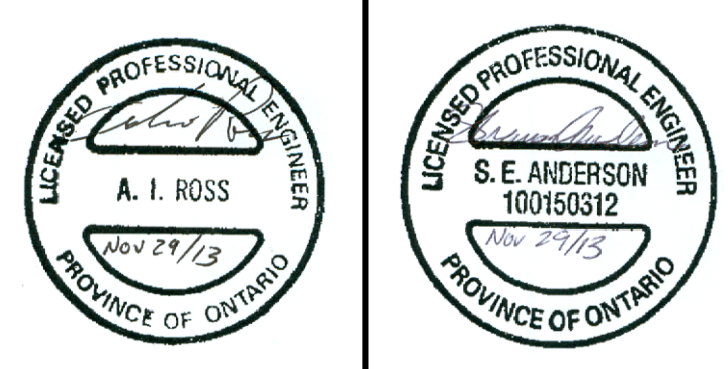


Key Plan
N.T.S.



The locations of existing underground utilities are not shown and have not been independently verified by the owner or its representative. The contractor shall determine the exact location of all existing utilities before commencing work and agrees to be fully responsible for any damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities.

Design By: A.I.R. Checked By: S.E.A.



| No. | DATE | REVISION |
|-----|------------|--------------------------|
| 1. | AUG 1/13 | Issued for DFO Review |
| 2. | SEPT 19/13 | Issued for Approval |
| 3. | OCT 9/13 | Issued for County Review |
| 4. | NOV 6/13 | Issued for CA Approval |
| 5. | NOV 29/13 | Issued for Tender |



Goderich (519) 524-2641 Mount Forest (519) 323-2945

Canada Fisheries and Oceans / **Canada** Pêches et Océans

Port Dover

S.A.R. Floating Dock

| | |
|--------------------------|------------------------------|
| Contract No. 1 | Project No. 13122 |
| Scale As Shown | Drawing No. 1 of 1 |

NOTES

GENERAL

- Co-ordinate all operations with the departmental representative to avoid conflict with operations of search-and-rescue craft and staff.
- All structural work to be in conformance with Division 9 of Ontario Provincial Standard Specifications. Wood framing to be to latest edition of the National Building Code.
- Contractor shall remove existing floating dock. Contractor shall take ownership of all scrap materials and excavated earth (except rocks) and remove from the site. Also Search-and-Rescue crew to remove and salvage fenders or other equipment tied to the existing dock.
- Drawing dimensions are in millimetres.
- Drawing elevations are relative to Chart Datum of 173.5, (IGLD 1985).
- Project creates additional aquatic habitat for a net gain of 11.6 m².

FLOATING DOCK

- Contractor to submit engineer-sealed shop drawings of detailed dock design, product data, and installation instructions, for review by the Departmental Representative two weeks before starting fabrication.
- Floating dock to have top of deck level at an elevation between 0.55 m and 0.65 m above water level when there is no live load.
- Dock system to be made of two segments with structural hinges between them designed to hold the deck at the same elevation on each side of the hinge.
- Design live load is 2.5 kPa.
- The floating dock is to be made of pontoons supporting a structural metal frame and sheathed in pressure-treated wood.
- Pontoons: metal or high density polyethylene with pump hole or closed-cell foam filled.
- Structural Metal Frame: Structural steel sections of grade 350W steel, hot-dip galvanized to CAN/CSA G164 after all cutting, drilling, welding, or Structural aluminum of grade 6061-T6. All welding shall be done by a company certified to the CSA standard appropriate for fusion welding of the metal used.
- Lumber for decking shall be graded and stamped as species: SPF, Grade No. 2; grading authority: NLGA. Minimum dimension 38 mm. Treat lumber with water-borne salt preservative by full cell process to CAN/CSA-080 Series.
- Wood fasteners to be appropriate for the preservative used and shall be resistant to weathering.
- Bollards for tie-offs shall be the same metal and grade as the structural metal frame. (hot-dip galvanized if steel) and shall be fastened directly to the metal frame. Bollards fastened by welding shall be attached to frame prior to galvanizing if applicable. Cleats fastened to wood decking are NOT permitted.
- Ladders: stringers and rungs to be made of aluminum, stainless steel or hot-dip galvanized steel. Fasten to wood sheathing and deck. Extend not less than 300 mm above deck and not less than 400 mm below water in unloaded condition.
- Provide metal collar at each end of dock to hold dock in horizontal position on pipe piles and allow vertical movement. Collar to be sleeved in HDPE or PVC plastic to reduce noise.
- Install 200mm long sections of 50mm wide, 3M diamond grade, white, flexible prismatic conspicuity tape along dock edge, 100mm to 200mm below top of dock. Sections shall be placed at 610mm c/c. If required, install aluminum backing and fasten to wood decking using hot dip galvanized nails, or epoxy coated screw nails.

RAMP

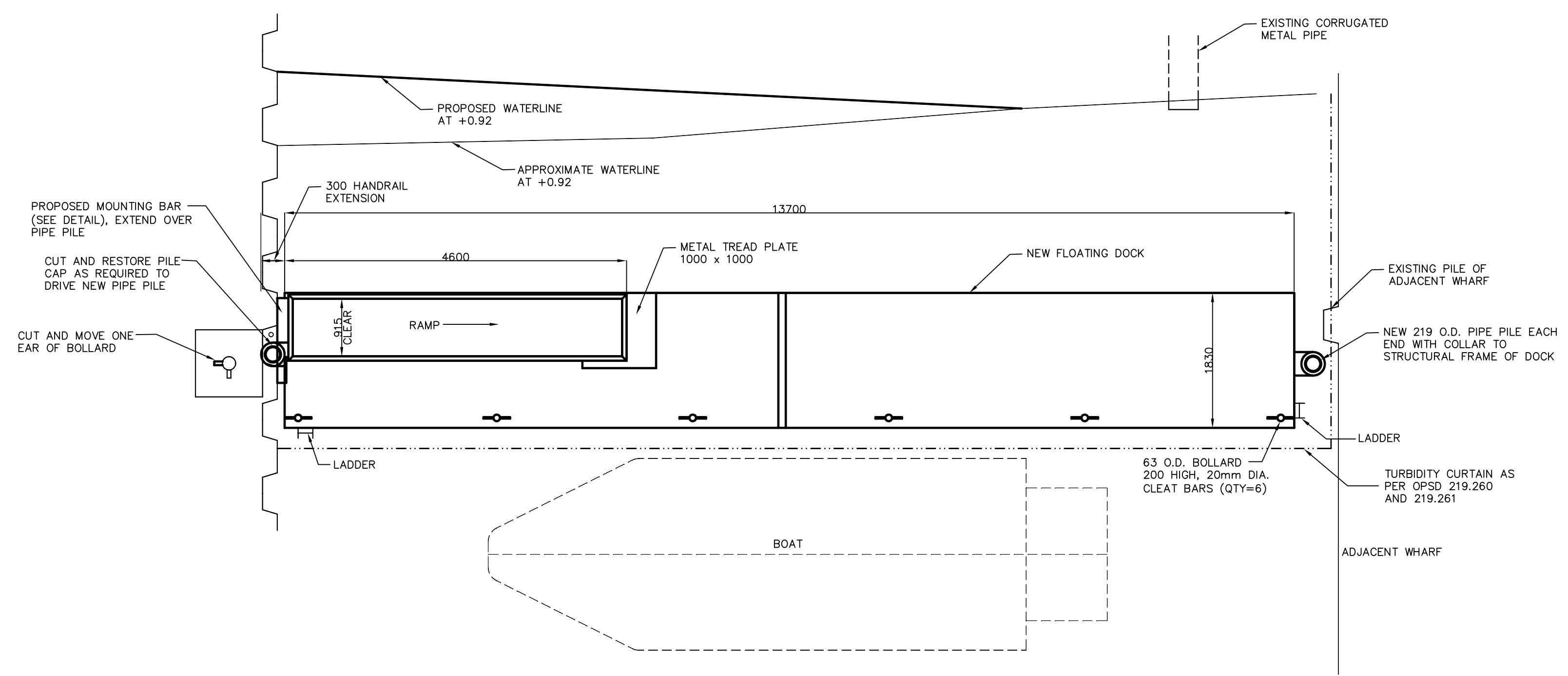
- Ramp shall have minimum dimension of 915 mm clear between the railings. Top railing to be 1070 mm measured perpendicular to the deck surface of the ramp. Provide mid-height rail and 75 mm high toe plate. Railings and posts to be round metal tubing. Top rail 50 mm outside diameter. Top rail to extend 300 mm beyond ramp hinge and curve down to provide snag-free approach.
- Design load for ramp is 2.5 kPa. Ramp framing shall be made of structural aluminum grade 6061-T6 or hot-dip galvanized steel grade 350W.
- Deck of ramp to be open grating of aluminum or hot-dip galvanized steel. Use manufactured grating and hold-down clips.
- Provide rollers and metal wear plate fastened to the deck planks at lower end of ramp
- Manufacturer of ramp to design and provide hinges at top end of ramp to fasten to the mounting bar detailed on the contract drawing.
- Contractor to include relocation of existing bollard ear to prevent conflict with path to the ramp.

PILES

- Supply and install concrete filled pipe piles at each end of dock, located to suit site and dock location. Pipe piles to be steel HSS 219 x 8.0, grade 350W, fitted with 12 mm driving shoe. Driving shoe to be steel grade 300W minimum. Fill pipes with concrete CSA exposure class C-2, 32 MPa compressive strength, after driving. Ensure adequate vibration to completely fill cross section of pipe.
- Provide piles in lengths of 7.3 m without splicing.
- Drive piles with an impact hammer or vibrator capable of a minimum dynamic mass of 600 kg and minimum push/pull force of 75 kN.
- Drive piles to refusal or minimum 4 m below datum.
- Tolerances for driven piles:
 - cutoff elevation: ±25mm
 - horizontal location at cutoff: ±100mm
 - vertical alignment: 1% off plumb
- Piles are to be field primed and painted from 300mm above the waterline at the time of application, to the top of the pile. Primer coat is to be Benjamin Moore fresh start alkyl rust inhibitive primer K163 or approved equivalent. Top coats are to be two coats of Benjamin Moore Ben 100% acrylic exterior salt glass finish K543 in colour Coliente AF-290, or approved equivalent. Paint drip trays around the pile, and other equipment, as required, are to be used to prevent paint and primer from entering the water.
- Install 50mm wide, horizontal band of 3M diamond grade, white, flexible conspicuity marking tape, series 963. Band is to be located 200mm down from the top of the pile.

ROCK RETEMENT

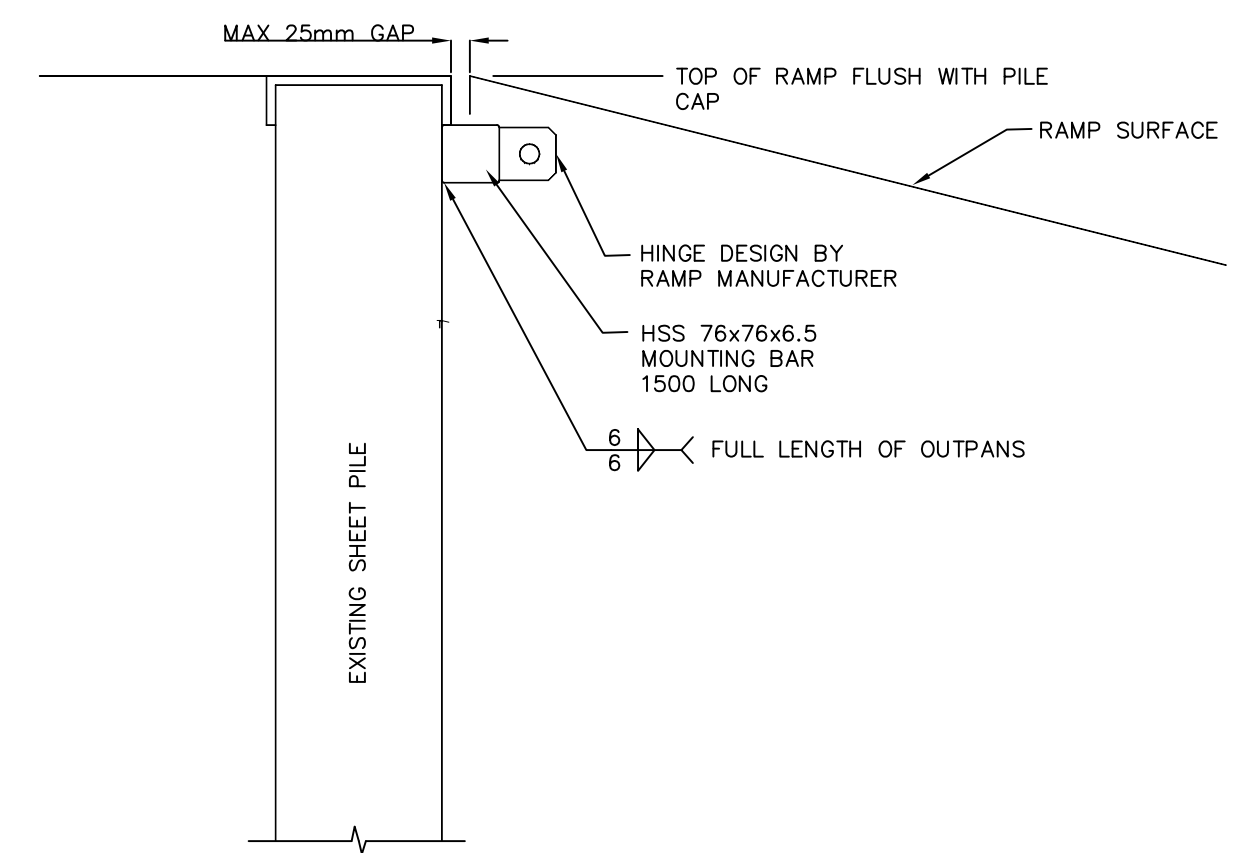
- Contractor to locate, mark and preserve all utilities and adjacent structures.
- Remove and stockpile existing stone for re-use.
- Excavate to grade all base soils and haul from site.
- Place non-woven geotextile over base soil prior to replacing stones. Geotextile to have a weight of 240 g/m² or more; grab tensile strength of 800 N or more; apparent opening size of 0.18 mm or less. Place with overlap and staples as per manufacturer's recommended installation guide.
- Restore disturbed surfaces at top of revetment as required.



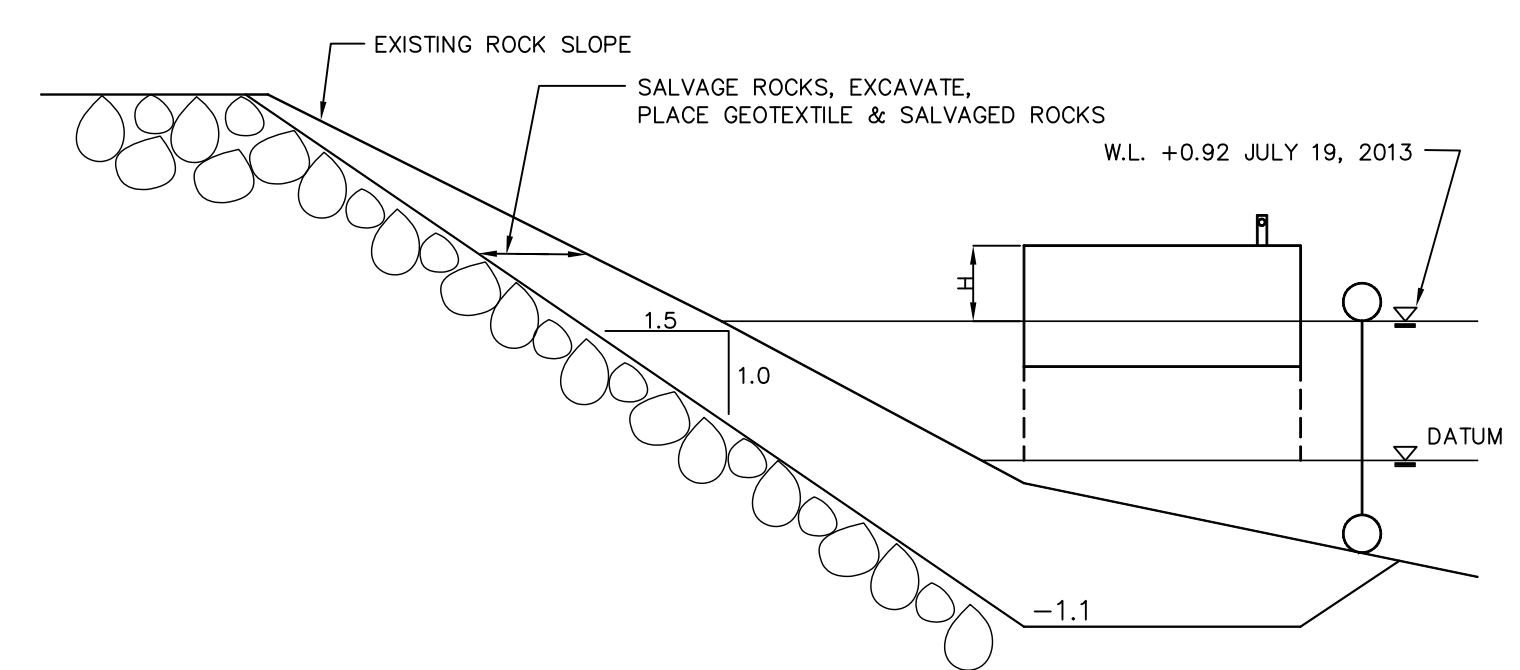
PROPOSED PLAN
SCALE 1:50

ENVIRONMENTAL PROTECTION NOTES

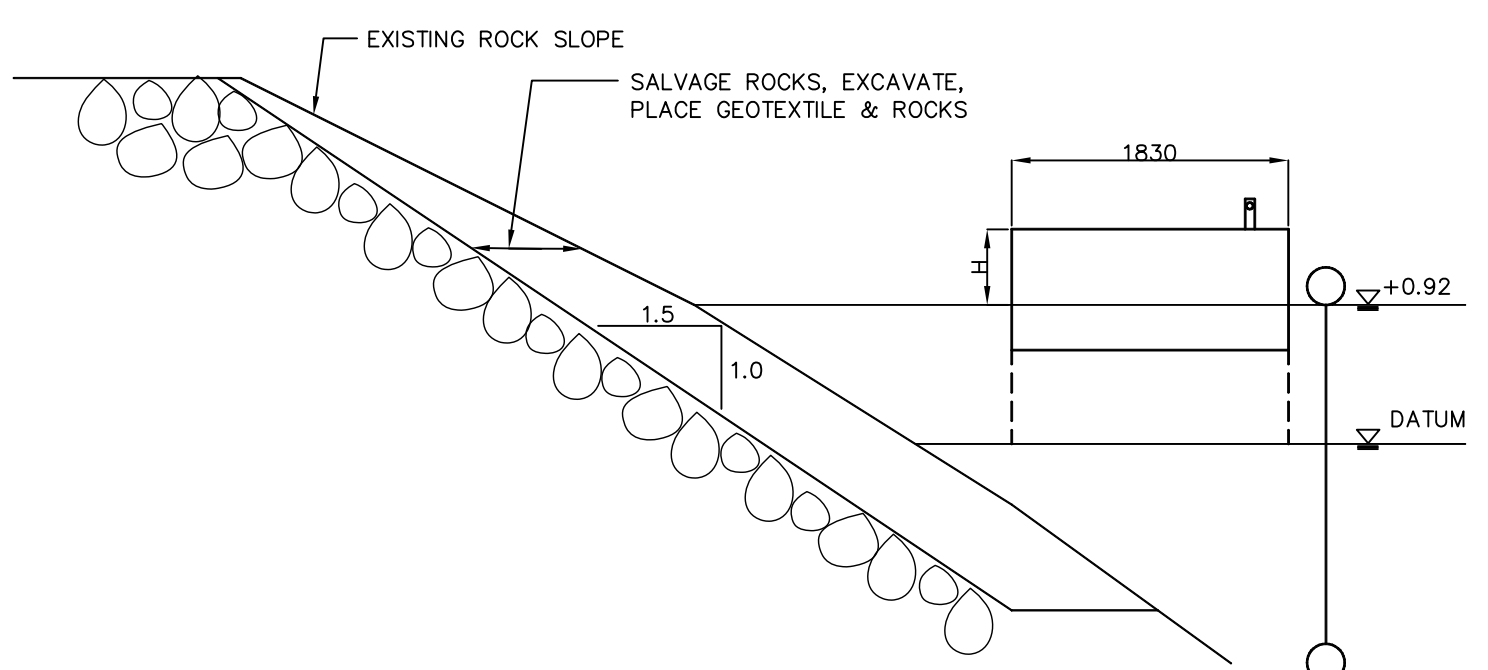
- All in-water work shall take place between the specified time period and other requirements outlined in the approval from the conservation authority and any other governing body.
- Sediment and erosion control measures, such as installation of silt fencing or straw-bale check dams placed downslope of any silt materials stock piled and exposed to soil, shall be placed and maintained as directed by the Departmental Representative during construction and until a suitable catch of grass is established.
- Disturbed areas not covered with riprap or a gravel surface shall be covered with topsoil and restored with seed and mulch or sod where directed by the Departmental Representative.
- Refueling of equipment shall be performed in an environmentally responsible manner, where practical refueling shall be done more than 30m from the stream, any significant spills shall be reported to the ministry of environment spills action centre, an emergency spill kit shall be kept on site in case of fuel leaks or spills from machinery.
- In-water work for adjustments to the rock slope shall take place with a turbidity curtain installed between the disturbed area and the remainder of the marina. Turbidity curtain shall remain in place for a minimum of 24 hours after placement of last rock to allow sufficient time for settlement. Turbidity curtain shall be removed upon completion of the contract.
- The contractor shall have contingency plans in place to minimize the amount of silt released should a major storm event take place during the construction period.
- While a proposed outline of sediment control measures is provided, any changes the contractor would like to propose and clarification of the requirements should be submitted in writing to the Departmental Representative for consideration.
- The location of sediment control measures are shown in an approximate way, the exact location of components in the field may vary from the location shown on the drawing.
- Piles, metal frame, pontoons, and any other element which will come in contact with the water body, shall be washed free of chemicals and organic matter inside and outside prior to being placed in the water body.
- Prevent deleterious substances such as uncured concrete, grout, paint, sediment and preservatives from entering the water body or storm drains.



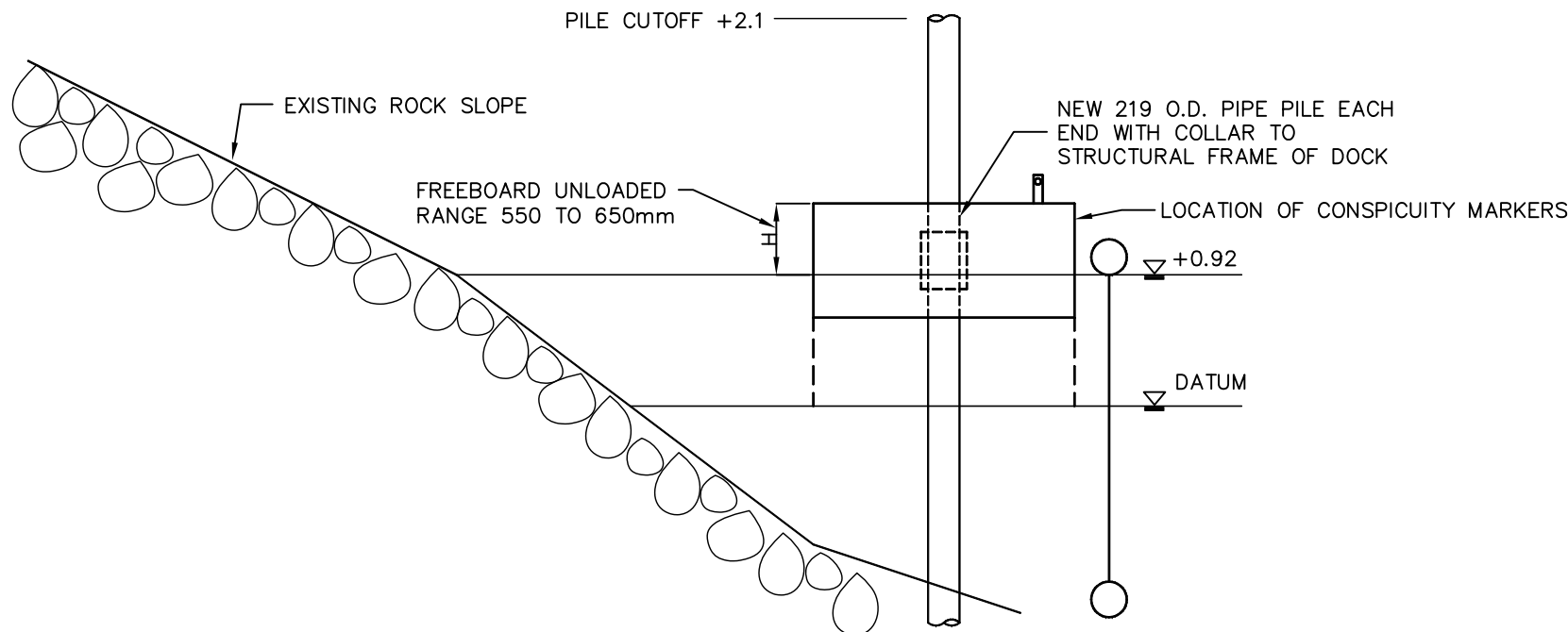
DETAIL- RAMP MOUNTING BAR
SCALE 1:10



SECTION 1m FROM WALL
SCALE 1:50



SECTION 5m FROM WALL
SCALE 1:50



SECTION 10m FROM WALL
SCALE 1:50