

»»» HAROLD HALL QUARRY BEACH RENOVATION - BATAVIA PARK DISTRICT

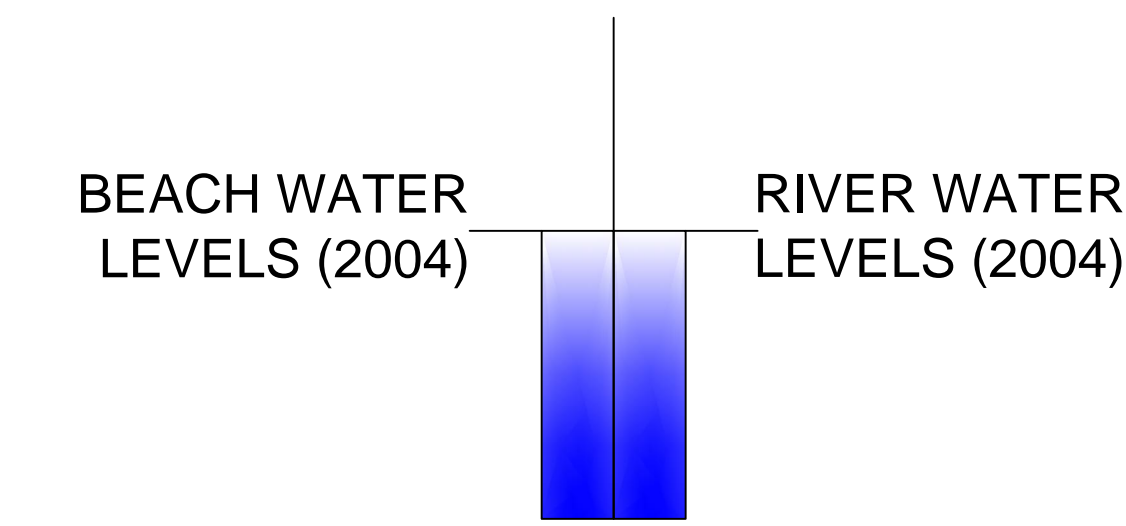


WHAT HAPPENED TO THE WATER?

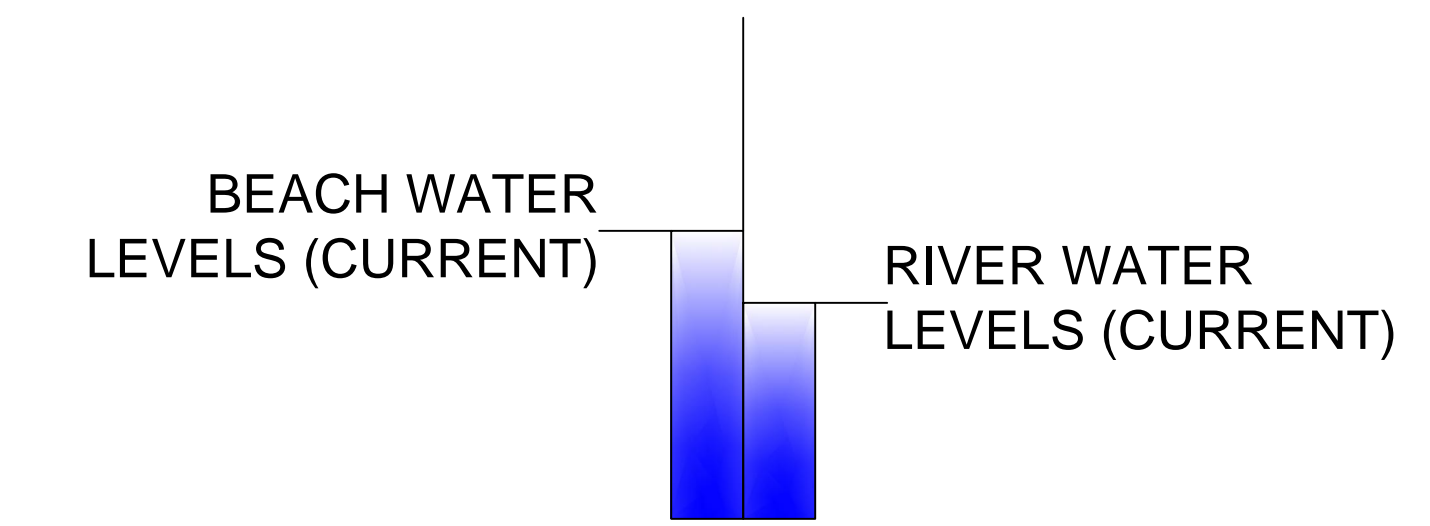
APPLIED FLUID DYNAMICS AND HYDROGEOLOGY

PROBLEM: WHEN THE DOWNSTREAM DAM ON THE FOX RIVER WAS REMOVED IN 2004 THE GROUND WATER LEVELS AROUND THE BEACH AREA FELL TWO FEET BELOW THE ELEVATION OF THE POOL YOU SWIM IN. SINCE THEN WATER HAS BEEN FLOWING OUT OF THE SWIMMING AREA THROUGH THE BEACH SAND INTO THE GROUND TO MAKE UP THE DIFFERENCE.

SOLUTION: A RUBBER-LIKE MATERIAL (GEOMEMBRANE) WILL BE INSTALLED BENEATH THE SAND TO HOLD WATER IN THE WATER.



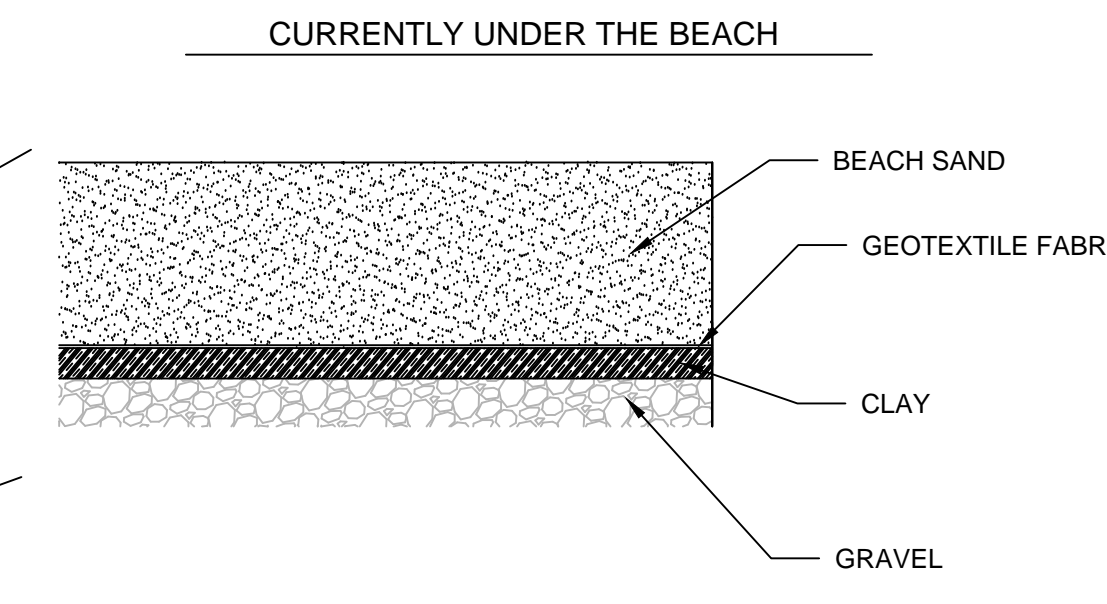
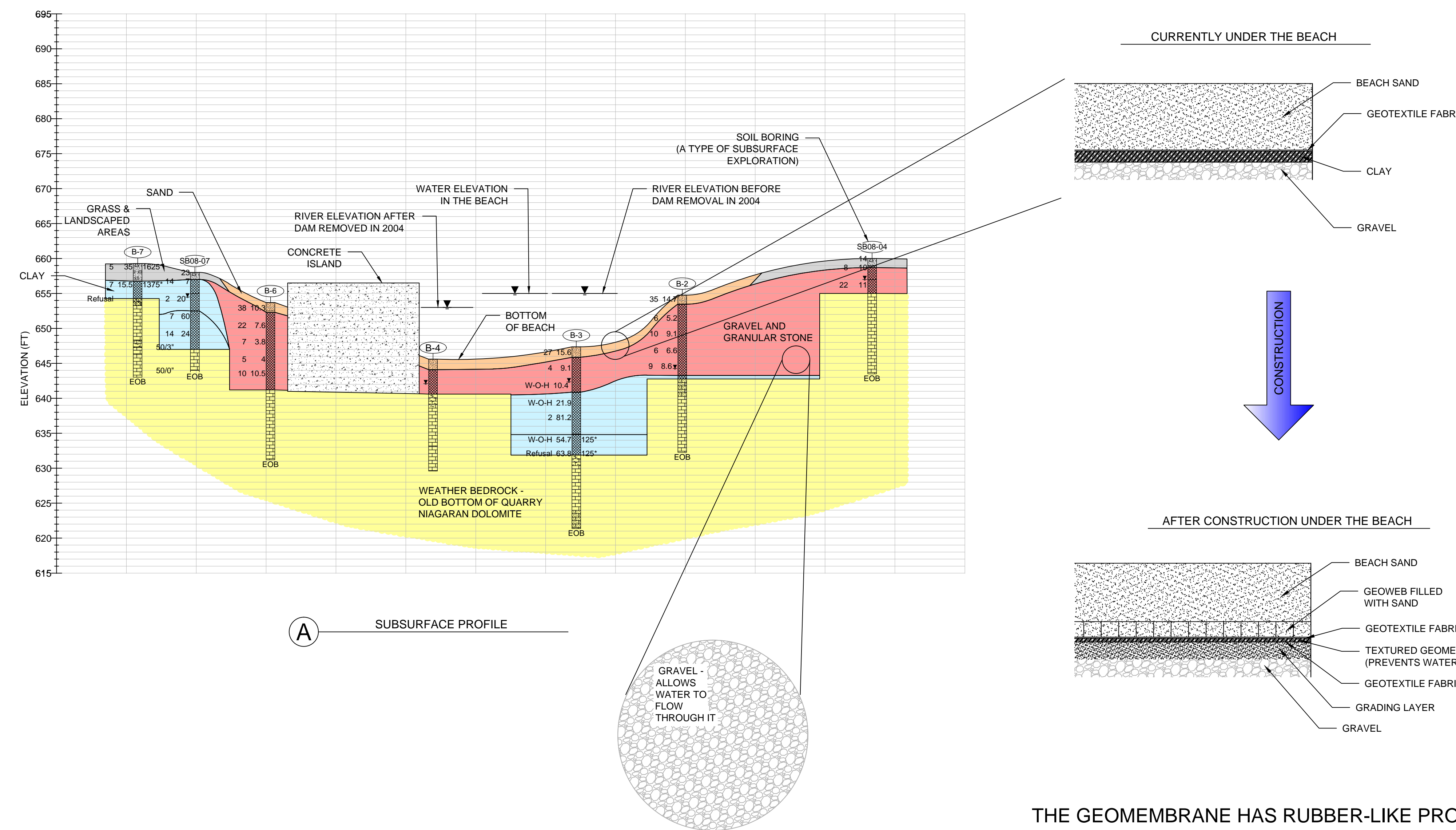
WATER LEVELS EQUAL - NO FLOW



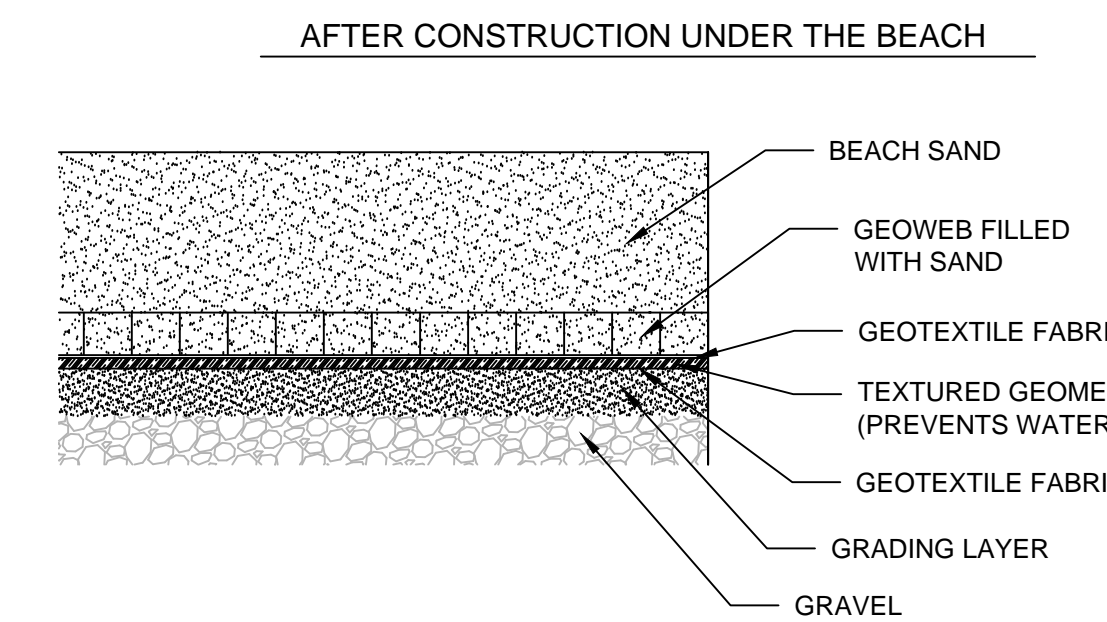
WATER LEVELS DIFFERENT - WATER WILL FLOW FROM THE BEACH THROUGH THE SOIL AND GRAVEL TOWARD THE RIVER

WHAT IS UNDERNEATH THE BEACH?

BEACH SUBSURFACE CROSS SECTION DERIVED FROM SUBSURFACE BORINGS AND LEGACY DESIGN DOCUMENTS



IN THE OLD SYSTEM, WATER FLOWS (VIA A PROCESS CALLED PIPING) FROM THE BEACH THROUGH THE CLAY INTO THE GROUND AND FINALLY OUT TOWARD THE RIVER.



IN THE NEW SYSTEM, THE GRADING LAYER PROVIDES A SMOOTH SURFACE TO PLACE GEOTEXTILE FABRIC WHICH PROTECTS THE WATER-PROOF GEOMEMBRANE BY SANDWICHING IT. ON TOP, A HONEYCOMB LIKE PLASTIC GEOWEB HOLDS THE BEACH SAND IN PLACE

THE GEOMEMBRANE HAS RUBBER-LIKE PROPERTIES THAT PREVENT WATER FROM FLOWING THROUGH IT



HI-RES ORTHO-AERIAL

IMAGERY PROVIDED BY THE ILLINOIS NATURAL RESOURCES
GEOSPATIAL DATA CLEARINGHOUSE 2005 CUA



WHEN DOES CONSTRUCTION BEGIN?

SEPTEMBER 2011

WHEN IS CONSTRUCTION COMPLETE?

NOVEMBER 2011

WHEN DOES THE SWIMMING BEGIN AGAIN?

JUNE 2012

