Figure 1: Aerial photo showing sand cut (blue) and disposal (red) areas. Also shown is the winter wind vector, which can be used to predict where sand may blow in greater abundance in the first year or two after the dune is removed and before the new beach grasses take over. Note that beach grasses lie west of the intended excavation area.

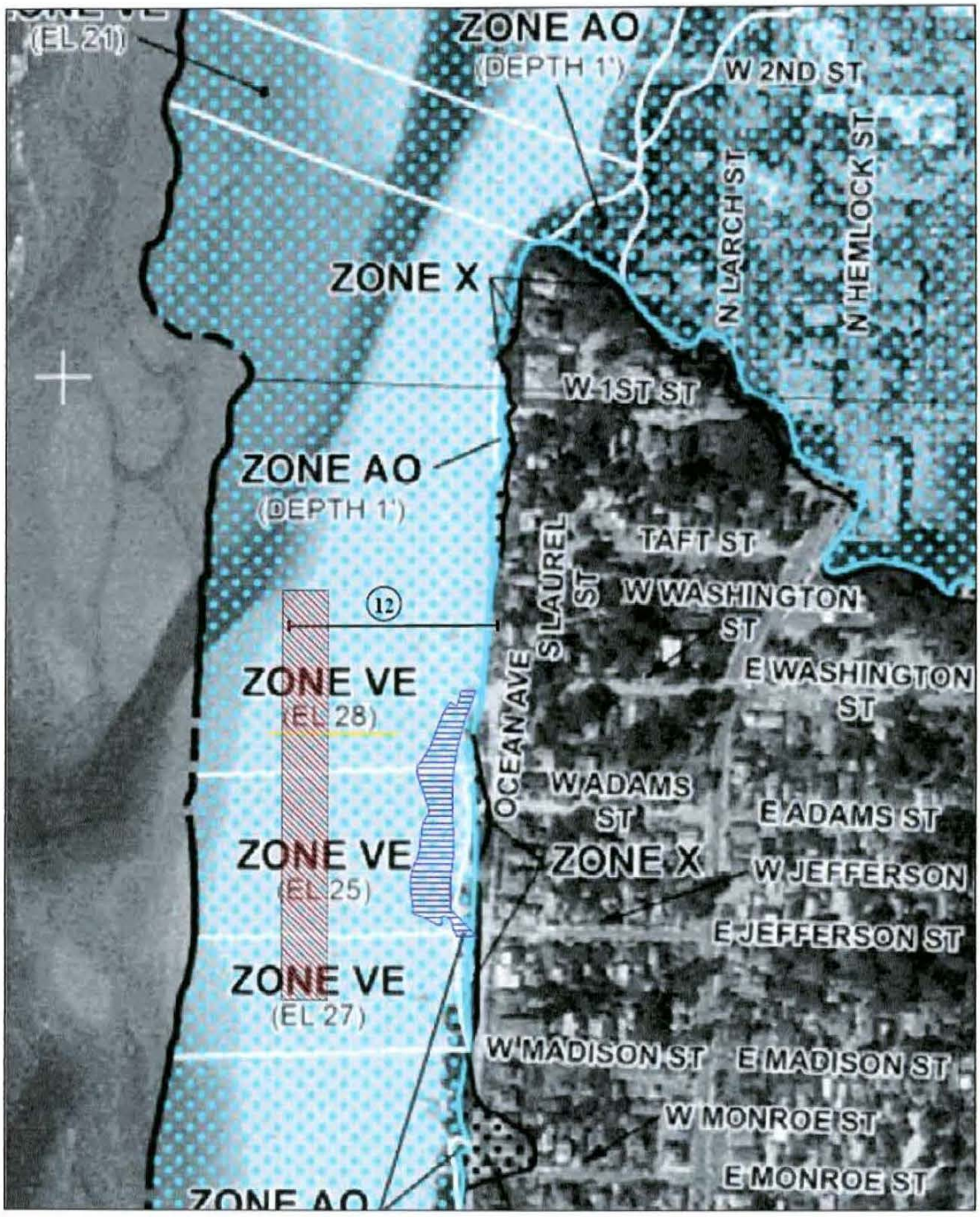

Figure 2: Flood hazard map for the reach south of Ecola Creek; V-Zone elevations are given in ft NAVD88. The areas to be cut and filled are shown in blue and red, respectively. The pertinent V-Zone elevation for this project is 28 ft NAVD88. The cut and disposal areas are superimposed into the flood map for illustration purposes.

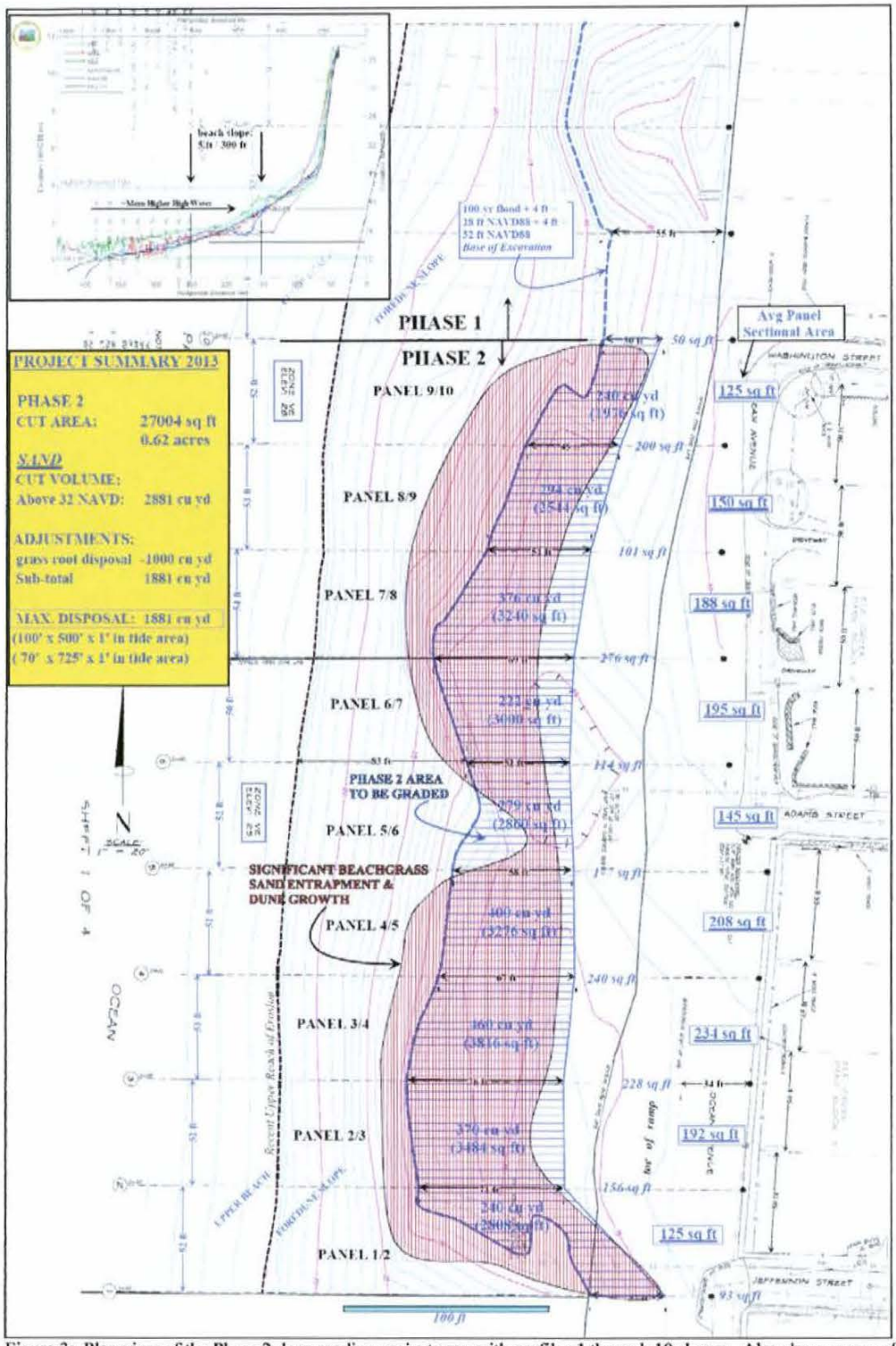

Figure 3: Plan view of the Phase 2 dune grading project area with profiles 1 through 10 shown. Also shown are profile cross sectional areas, mean panel cross sectional areas, panel surface areas, and panel sand volumes. Results are summarized in yellow box. Blue hatched areas are proposed for excavation. Red hatched areas demarcate where dune grasses have been trapping sand and causing dunes to grow. Survey by HLB-OTAK of Gearhart, Oregon. NANOOS beach survey section is provided in box in the upper left hand corner.

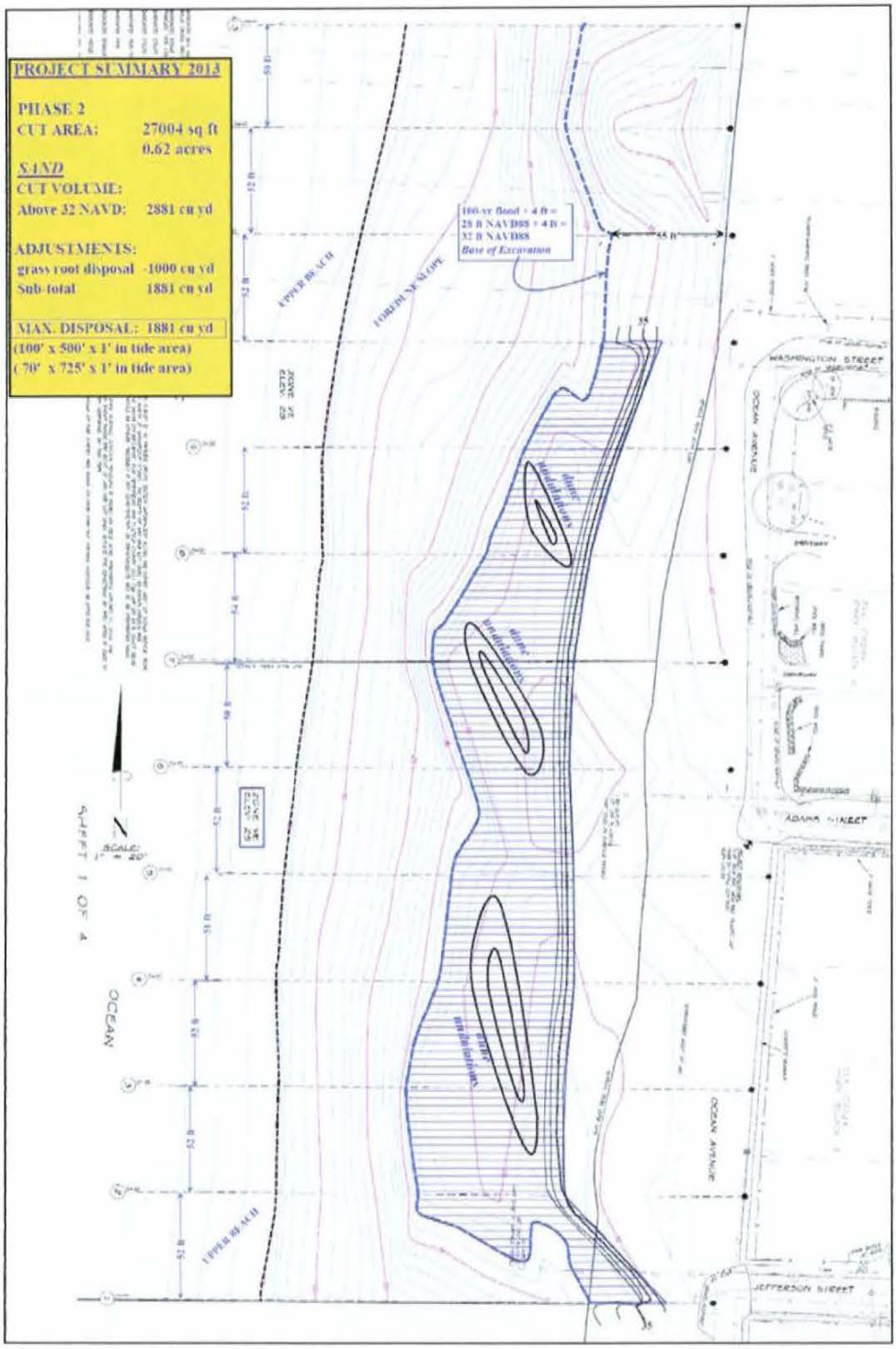

Figure 4: Dune grading plan, showing cut area in blue hatch and three oval NW-trending dunes to be constructed prior to dune grass planting. New contour elevations are shown with black lines.

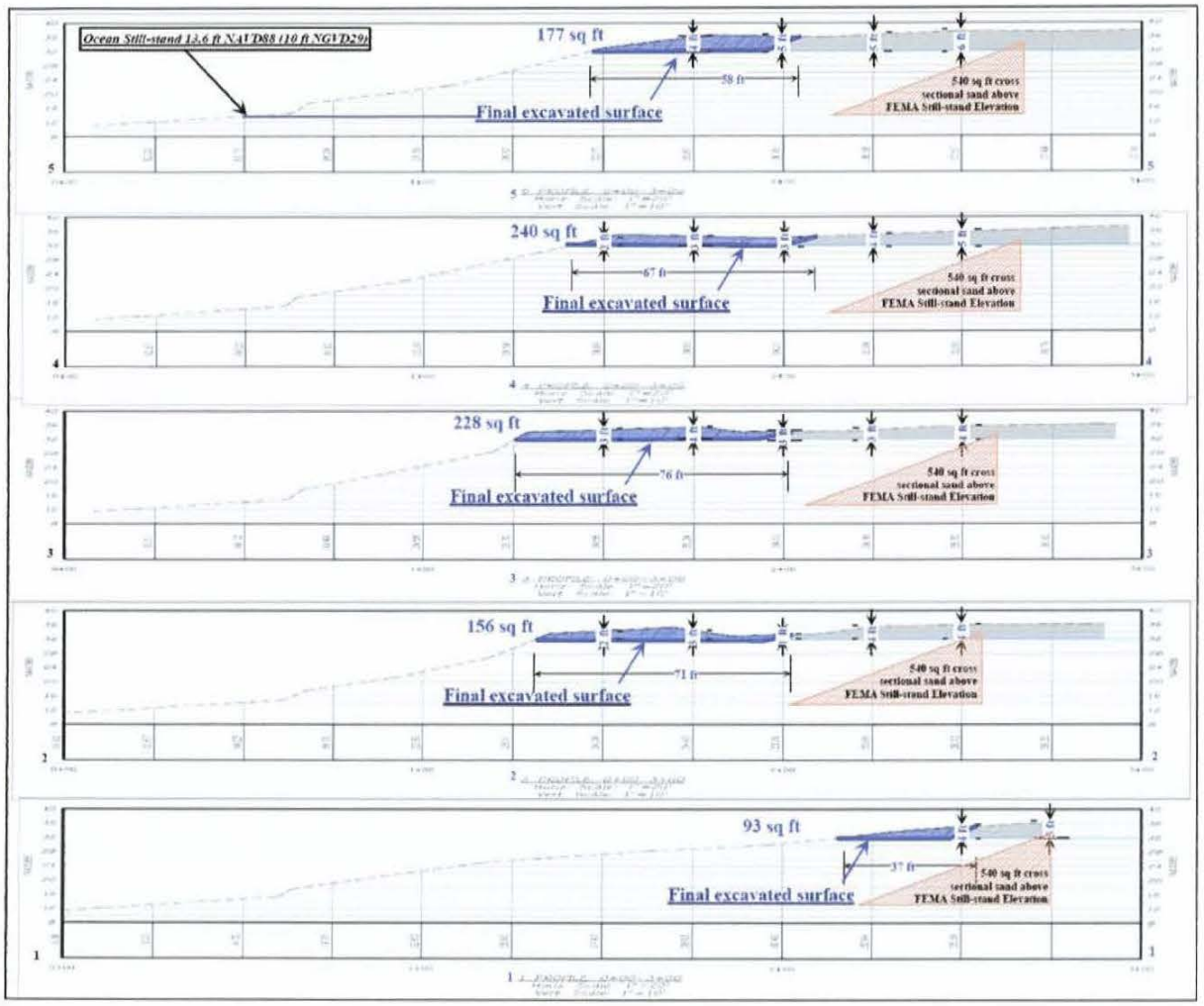

Figure 5: Cross sectional profiles for the southern part of the cut area. The blue areas highlight where sand will be removed. The areas listed above each cross section are for sand that will be excavated for that cross section.

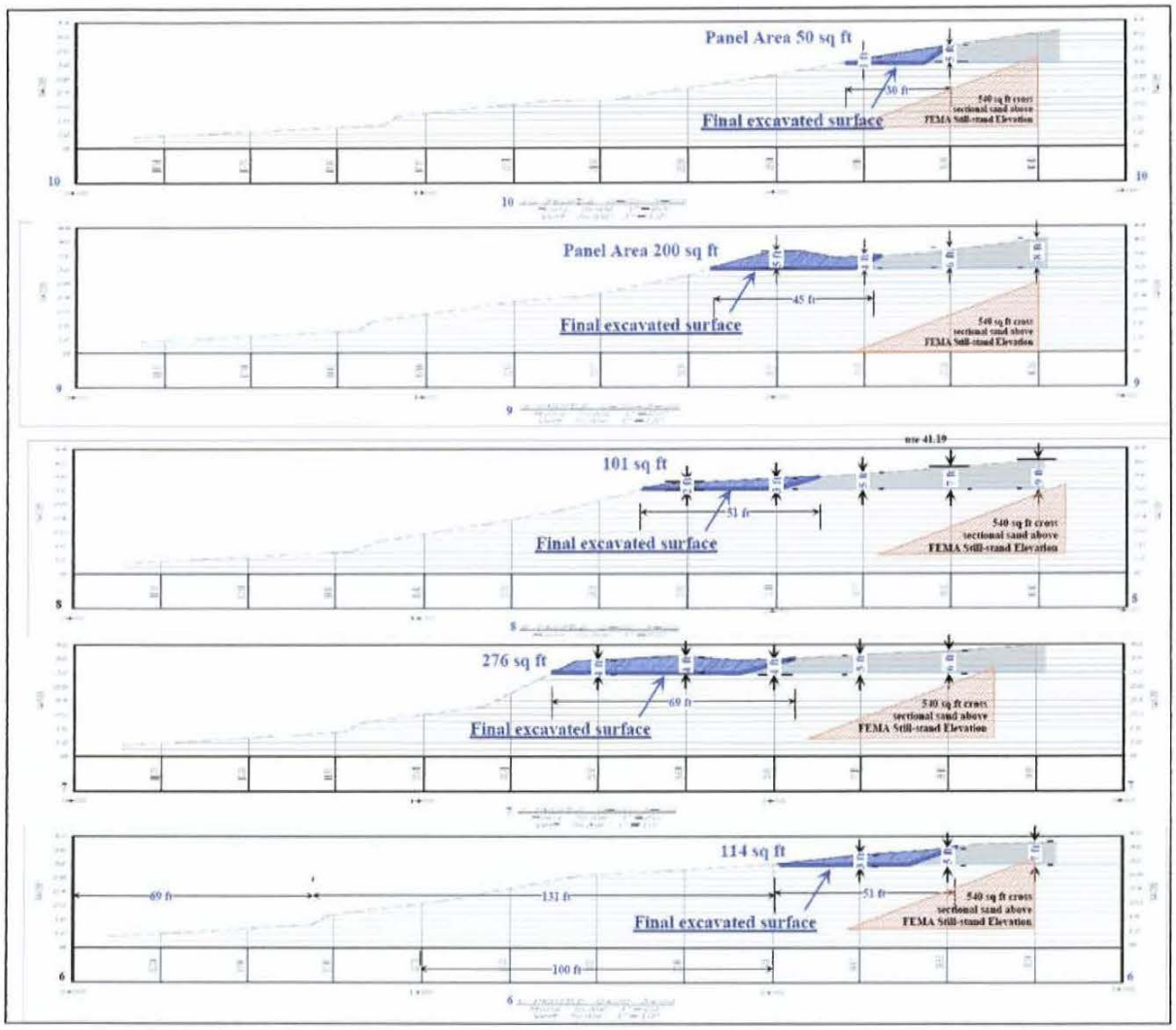

Figure 6: Cross sectional profiles for the northern part of the cut area. The blue areas highlight where sand will be removed. The areas listed above each cross section are for sand that will be excavated for that cross section.

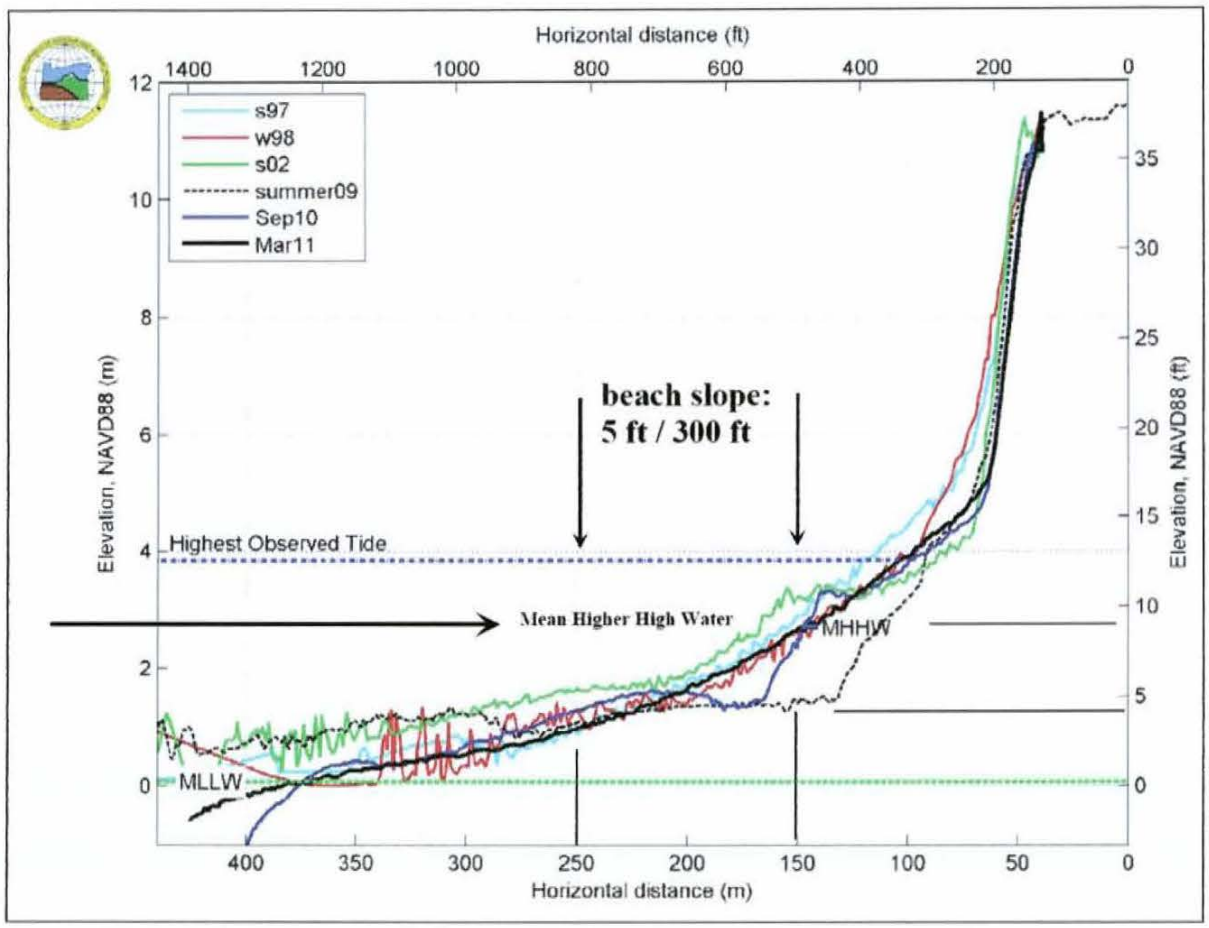

Figure 7: NANOOS foredune and beach survey lines for the shore due west of Jefferson Street, annotated to show beach slope and position of Mean Higher High Water (MHHW) within the area where sand is proposed to be moved for incorporation into the littoral processes of the beach-ocean littoral environment.