1037-57-240 Ko Honda, William H. Kazez and Gordana Matić* (gordana@math.uga.edu), Department of Mathematics, University of Georgia, Athens, GA 30602. *Heegaard Floer Homology, Contact Structures, and TQFT.*

To a contact manifold with convex boundary we associate a contact element in its sutured Floer homology. We then describe the natural gluing map on sutured Floer homology induced by inclusion of one sutured manifold (M', Γ') into another (M, Γ) in presence of a contact structure compatible with the dividing sets on the complement $M \setminus M'$. As an application we produce a (1+1)-dimensional TQFT and study its properties. (Received February 04, 2008)