

Submitted at SAC Meeting 2/14/17

NEW INFORMATION FOR STUDY ADVISORY COMMITTEE FINAL MEETING by Chris Hardwick

Subject: Road safety, increased pavement life and enhanced travel experience for everyone.

Travel can be made safer by adding a paved shoulder to all roads. **A paved shoulder is beneficial to cars, trucks, bicycles, farm equipment and people out for a walk. The added paved surface (outside car and truck travel lanes) will be a replacement for both the traditional bike lane, the traditional concrete sidewalk and traditional storm water systems.** The open ditches or curb gutters on existing roads would be replaced with French drains and dry wells made from permeable asphalt pavement. This would eliminate the need to buy additional right of way to widen existing roads. There is evidence that dry wells at the edge of roads (or other structures) will also limit damage from earth quakes. During an earth quake, soils become saturated with the upward movement of ground water and the ground itself acts like an ocean wave. The movement of ground water into foundation soils can also be caused by traffic. An example is the vibration of the ground caused by a large truck or bus.

It is necessary to keep the soil foundation of roads dry to maintain the bearing capacity of paved "roof" of the road. Existing roads that have little or no paved shoulder and/or a drainage ditch that holds water, are plagued with cracks and pot holes caused by wet foundation soils. An overlay of new pavement doesn't solve the problem any more than putting a new carpet over a wooden floor that is weakened by rot. Storm water management with French drains and dry wells will also address water born infectious diseases that thrive in the current storm water systems that are based on open ditches, catch basins and culverts. The ground water supplies needed for the long term water table maintenance would be better served by the use of dry wells. With wider roads, a trip to a vineyard or farm would be greatly enhanced!

It is dangerous to be right in matters on which the established authorities are wrong. Voltaire

New classes of vehicles exist. One out of five new bicycles in Germany are electric. The spawn of the Segway are smaller and faster. Electric wheel chairs have invaded paved bike lanes along with long distance runners. Our emotions tell us that the sidewalk is safer than the bike lane. There is nothing that can be shown to overcome this mental picture. People rely on their personal experience and not on actual measurements. This a test that we can do now to reframe your judgements. How many times can you remember being surprised by “sidewalk traffic” versus “bike lane traffic”? Most people will automatically check the road and not the sidewalk. Personally, sidewalk traffic gets missed most.

The details on how to build an asphalt French drain and dry well storm water management system along with the bike/Segway/wheel chair/runner/walker path are in a proposal that will go the the State of Colorado later this month.