

Mix design(6):

- Porous asphalt Is not acceptable, susceptible to damage, at least 5in thick. Typically 3 lift, multiple lift is fine.
- Contractor know how to make it work, but infrequently look. Not smooth.
- New structure design coming out. Technology make us do multiple works.
- The issue are plot trucks not smooth. When asphalt is sealed, they don' t care. When get funky breaks.
- Colourful DIC 2014, noise is 80 percent
- During winter season, the storm came so the work stop.
- Pervious pavement damage sometimes caused by transportation sometimes it caused by poor quality.
- They put higher concentration on short term.
- Asphalt sand has more coarse material.
- permeable pavement require less
- when winter came, it will froze the surface, ground froze is true, it will melt fast, dynamically destroy ,
- urban heat island is same, lower temperature will be warmer than pavement, permeable

- Winter maintenance, don't use snow melt on pervious concrete.
- Owner didn't know how to handle their own material
- Education on producer level

7

- If you can get enough people that is interested, we can get people to sponsor, most of people is one truck load, invite surrounding to join in.
- contractor like the product, but it takes more time and effort
- Some company like porous, they use whatever time they get. Not incentive in industry to make that effort
- Logistic point, concrete is easy, asphalt is harder
- People more likely to do small demo, contractor do 3-4 hour.
- Perception issue, not always material issue
- Five of DIC winter, there is a perception, there is a hurdle that needs more it.
- Difficulty maintenance in the winter
- More construction issue

- Over hundreds location, there is shrinkage crack
- Plug the core and check
- Minisota apply salt
- Surface go through a freeze stock cycle, 6 in, surface go through a lot.
- Give education is the most important
- there is manual that guide people
- Education go to engineering first
- Why interlocking is so well, because some one guide that
- No faculty take pavement class

11

- Even regular pavement design can't go to the education system
- Do a combo on pavement design and stormwater design
- Because of pre requisite to teach porous pavement, 3 credit, teaching material
- Contract has been trained, since if you can pave OGFC you can pave porous
- Best we can do, if you let someone not educated, it's quite possible you will redo the work
- You can reject the work, but the problem is how to check the quality

16 communication

- Permeable pavement, NSF: we not fund pavement research
- Engineering is comfortable with real, they don' t know abstract, don't like balance, since we are trained to do tangible things
- When talking to DOT, different area have different rules,