

This discussion was originated by Steve Hilger. We thank Steve for his thorough review and clarifying questions.

Here are Steve's questions and comments along with replies from the Road Study Group:

1. **Where will the water go?**

Q : This may be clear to others, but it is not clear to me. I see slides on infiltration testing, road surface permeability and a cross-section of a drainage ditch, but I do not see an answer on where the water will go. If the plan is to discharge the water by spreading it over homeowner property, isn't that what we have already? Since the permeability rates on the existing road surfaces are so low, isn't the absorption rate of the current road functionally the same as pavement? With the drainage ditch drawing, are we discharging into the lake or the bayou? It appears from the "Scope of Work" slide that the existing roadways will be built up 3 ½ ". Will that not have the functional effect of building a dam which will inhibit the free flow of water thus exacerbating the ponding and drainage issues? How will the planned drainage deal with the Sanibel system of opening and closing weirs that impact the levels of water in the Sanibel river basin that our community water drains into?

A: Our primary purpose is to increase water filtering, and to do no harm - not exacerbate standing water. As noted, there is little difference in permeability between the current road surface and a paved surface. More important is the high impermeability of the grass areas near the road, which have been plugged with particulate from the current road surface. Paving provides a permanent cap to prevent additional particulate runoff, and allows for the rehabilitation of the plugged grass surface, and improved drainage. Filtered water will ultimately flow to the river system as it always has. Weir control and water table are under the control of the Sanibel Public Works director.

2. **How will it get there?**

Q :This seems simple, but I do not see an answer. If we are moving water, how are we doing it? I see the cross section of the drainage ditch, but where does the drainage start? Where does it end? Are the drainage ditches proposed for the whole length of the road or only at certain places? Where does it discharge? What does it discharge in to? Will these ditches cross private property? If so, where & how?

A: We move water by crowning and pitching the road surface, either dirt or paving. The drainage features are best described as infiltration areas that coordinate between road surfaces, filtration surfaces and ultimate movement to the river system. Full designs will be provided.

3. **Are we allowed to put it there?**

Q (1) is there a plan to apply for a permit to SFWMD and the City prior to any CSM vote on road improvements?

A: The City of Sanibel does not require a permit for improvements made to private roads, including the paving of such roads. CSM will apply for an appropriate permit with SFWMD. We will also obtain DEP approval as required. Full approvals will likely be after the membership vote due to agency timing.

Q(2) What is the plan if the permit(s) is/are denied?

A: Any project must be properly permitted in order to proceed.

Q(3) Has anyone actually done a “net benefits analysis?” If so, what and where are the results?

A: Net benefit arises from the environmental improvements inherent in the design and performance of the road system. These features will be detailed in the permit application.

Q(4) Are not the permits needed, along with a plan, so that we can accurately anticipate costs?

A: The cost of a SFWMD permit is \$2,000

Q(5) Can we invite Brian Rose or Laura Layman to the February 28th meeting to clarify this for all of us?

A: They have committed to a meeting with the Road Study Group on March 10. We will report the results of that meeting to members. The purpose of this meeting is to confirm net benefit permit criteria so that the membership can have confidence that any design submitted for regulatory approval has a high likelihood of approval and a known cost.

Q (6) As above, what is the game plan if we vote on a solution, assuming the absence of a permit requirement from the SFWMD, only to find out that we are wrong and a permit is required?

A: We believe that a permit from SFWMD is required.

Q(7) Do we have a cash reserve for possible fines, penalties, reconstruction and/or remediation?

A: Work will be performed to engineering design criteria, with proper permitting in hand. See below for cost contingencies provided.

Q(8) We have no engineering report opining that a permit will be provided. Has our engineer made a recommendation regarding whether permitting is required?

A: See answer to Q(6) Also note that a report from Engineer Jim Strothers will be presented to CSM members after the March 10 meeting at SFWMD.

4. What will it cost?

Steve’s Preamble to Cost Questions :

All of the data on costs does not appear to be attributed to James Strothers, our only apparent expert/consultant. So, who put this data together, and on what assumptions?

The costs slides are confusing. For Cumulative Cash Outlays, it says that in Year 1, we will spend \$256K. In the Background slide, it says Lutz (in 2006) thought it would cost \$1.1 Million. That number today, assuming inflation, would be somewhere between \$1.4 and 1.5 million. That would be the Year 1 cost. How are those numbers reconciled? Also, the numbers on the “Improved Dirt” column do not appear to be correct. For example, if the “84K” is the preliminary cost plus first year annual then the

second row, year 12 should be $11 \times 15K = \$165K$. That calculation also ignores the time value of money, which is what has to be considered if “30 year” time frames are under consideration. A savings of \$211 30 years from now is not worth \$211 today.

Further, the slides do not say what the costs are prior to construction in order for construction to begin (and what actions that includes); and what the construction costs will be (and what actions that includes). Of the \$15K CSM budgeted allocation for the road study, how much has been spent so far and for what? Has the engineer charged the full amount for work performed? If he has further work, what will that cost? Does the existing engineer contract include all costs required to complete work required for application for permits? Are the permit costs included? What costs are included in the slide projecting year 1 improvement costs? Do the construction costs include any new drainage construction and landscaping along road edges such as new sod and replacement of sod subsoil?

We all understand that the 2006 estimate was based on the assumption that the roads would meet the City standards, which means the numbers will be different, but that fact simply underscores the problem: we have no way of knowing what the cost will be until the plans are fully developed in a manner that has the approval of all necessary permitting agencies.

RSG Comment on the preamble:

Cost data has been developed from multiple sources. See the scope of work section below.

The differences between the 2006 proposal and the current engineering study are found in the following areas:

- * The 2006 proposal did not include a formal survey of the road system.
- * The 2006 proposal did not include LBR testing.
- * The 2006 proposal did not include permeability testing
- * The 2006 proposal did consider SFWMD “greenfield” criteria that are no longer applied to existing neighborhoods.

We confirmed the significant cost impact that these changes drive with TDM, the company that prepared the 2006 proposal.

It is correct to observe that year one costs for the improved dirt option are overstated. We will correct this for the next presentation. In year one, we would not have a requirement for added material, but we would have some exposure for pothole remediation.

The time value of money is difficult to project. We make the comparison in current dollars in order to compare alternatives. We would expect that costs may increase in the future – both for dirt maintenance, and re layering the paved surface.

Total spent to date for engineer Jim Strothers = \$15,700

Total amount of contract for engineer Jim Strothers = \$20,500, Final design work has not been authorized at this writing.

Current cost estimates are:

Improved Dirt Road – \$82,825

Paved Road - \$264,300

Steve's Cost Questions :

Q: (1) Do we have any bids for any work?

A : Yes. We have a preliminary written paving proposal from PMI (runway paving company). We also have a written proposal from Soon Come for an improved dirt project.

Q (2) Who prepared the cost estimates and when?

A: Cost estimates are recent. Here are the providers / preparers and their project scope:

- Paving and Road Base – PMI
- Drainage improvements – Estimate provided by Jim Strothers
- Improved Dirt – Build up, grade, compact – Soon Come
- Paving sod edges – Soon Come
- Driveway tie ins – Soon Come
- Staking out road system – Sanibel Surveys
- Permits – SFWMD
- Contingencies - RSG

Please note that both project estimates contain contingency amounts, \$13,400 for the improved dirt project and \$35,000 for the paving project. Any unused contingency would be refunded to members at project completion. All final contracts will be available for member review.

Q(3) Has Strothers prepared any cost estimates?

A: See above

Q (4) What is the specific scope of work in the cost estimates?

A: See above

Q(5) Do the cost estimates assume a time and material contract or a guaranteed maximum price contract? Or some other form?

A: Major scope items, i.e. dirt material and installation, paving and road base, will be fixed price contracts. Sod has been estimated as approx. 15,000 square feet. Driveway ties in estimated at \$150 / driveway. These costs may vary upon completion, hence conservative contingencies. Final drainage is in process at this time. Again, conservative contingency covers.

Q(6) What are the short term and long term maintenance costs?

A: As far as a dirt surface, we lose 10 – 15% of the road surface each year, depending on weather. The \$15,000 per year covers replacement material (8 – 12 truckloads depending on weather), and grinding, smoothing, compacting vs potholes. As far as paving, we have applied the most conservative periodic maintenance regime. That being a surface re grind and re layer. These costs are laid out in the power point. There is a lower cost alternative to periodic maintenance that we are evaluating.

Q(7) Are there no annual maintenance costs for paving?

A: A review with our neighbors suggests that annual maintenance for paving is low. Gulf Shores spends less than \$1,000 / year to seal the occasional crack or support an edge where erosion may have occurred.

Q (8) Do we have a proposed contract that a contractor would be required to enter in order to do any work in connection with any of the recommendations?

A: No.

Other issues and positions raised by the RSG slides:

SAFETY

Steve's Comment: Since we have no expert report from our engineer, these statements are not based on any professional opinions. Is that correct?

RSG Comment :We did preliminary research and did not find any specific studies; however, we did find instances in county and city reports when it came to speeds that they generally increase on paved versus dirt roads. We did not see any specific numbers indicating an extent to which they may increase. On the flip side, traction is also typically improved on a paved versus dirt road and visibility was also generally reported to be better as well.

Steve's comment: The second "Safety" slide says that "***Speeds generally increase on paved roads versus dirt roads.***" It appears that everyone agreed that asphalt meant that speeds would increase. Doesn't this mean that safety issues would be more prominent on narrower paved roads as opposed to wider unpaved roads?

RSG Comment: We did not see any information pertaining to a difference based upon width. Have heard people state that narrower roads help prevent speed. Inclusion of the shared use report on Sanibel didn't indicate any directionality attributable to either road surface or width of road.

Steve's comment: Near the end of the presentation, there is a slide: "RSG Analyzed Costs based on Following Logic." This slide says "Safety Improvements" are "Yes can be done", but the footnotes say "No Safety improvements were specifically estimated. Deferred to future committee." Isn't that a contradiction? In addition, the presentation noted that the Fire Department does not like speed bumps. So for paving, isn't it true that we have no suggested ability to control the increased speeds, nor is any control mechanism budgeted?

RSG Comment: There are many potential opportunities to limit speed. The belief is that this is an overlay no matter the road surface. There was not goal/approach to suggest that this is not required now, but would be with a paved road surface. The costs associated to various options are not expected to be material.

LIABILITY CONSIDERATIONS

Steve's comment: There is a suggestion or inference that individual homeowners would be liable for damages associated with potholes. Who came up with that theory? Other portions of the RSG report make clear that none of the homeowners own the road, CSM owns the road. If homeowners are not owners of the easement areas, what is the theory that a non-owner is responsible for something which may happen on property they do not own?

RSG Comment: Florida law is clear that the holder of an easement, not the underlying owner, is primarily responsible for the maintenance of the property subject to the easement

Q: (1) How is this claim affected one way or the other based on the road surface?

A: Perceived Risks are higher on an impaired road surface. Generally, the RSG tried to understand who has liability. Liability would be prevalent no matter the road surface.

Q(2) If this truly is an issue, doesn't that issue apply equally to paving just as much as non-paving?

A: Perceived Risks are higher on an impaired road surface. Generally, the RSG tried to understand who has liability. Liability would be prevalent no matter the road surface.

Q (3) If the roads are narrower and vehicles travel faster on paved roads, if this truly is an issue, isn't it made worse by paving?

A: Possibly. Speed control is important no matter the surface. The RSG has looked at mitigation measures, including signage, visual roadway indicators, and speed humps / bumps which can be retrofitted on the roads, and have be used by the City of Sanibel (i.e. The Dunes neighborhood).

Q(4) Most importantly, haven't we been living with this risk for a very long time, ie the budget shows no payments for CGL insurance?

A: CSM has CGL, Umbrella, and D&O coverage. As noted above: Florida law is clear that the holder of an easement, not the underlying owner, is primarily responsible for the maintenance of the property subject to the easement

Q (5) Can't we solve this problem and make it a non-issue simply by purchasing an insurance policy?

A: See Q(4)

HEALTH CONSIDERATIONS

Steve's Comment: Q :These statements are not based on any professional opinions. Is that correct?

A: See medical citations below

Steve's comment:

Road dust (dirt): Putting aside the general complaints by some residents about dust, where is the evidence that the dust is a **health issue**? The information I have is that dust is not a medical condition. Where is the evidence that **CSM** has a health issue with the dust **in this neighborhood**? Again, we have been here over 50 years. My father lived to be 92. He was lucid until the end. He suffered no health issues from the dust even though he spent half the year here for five decades and all his time here the last few years. Plus, if anyone were to experience health issues, it would be our property: we have Rue Belle Mer on one side and Rue Bayou on the other. People may not like dust, but where is the hard evidence that this is a medical issue?

RSG Comment: Here are the medical citations relating to dust and health:

2011 the International Bank for reconstruction and development (a UN study) " for residents living near unpaved roads , traffic generated dust negatively impacts on their environ. , on their health, their livelihoods and on their safety " "awareness is increasing amongst the public and professionals of the potentially damaging healthof traffic generated dust " "water sources near unpaved roads are considered to be at risk of contamination by dust from nearby unpaved roads"

EPA Aug 2010although coarse particles have...adverse effects on susceptible people.....unpaved roads are a source of pollution..."

Cary Institute of Ecosystem Studies 12/21/16.....the dirty secret about unpaved roads is that they have a poor ecological record....even unpaved roads are so compacted that they allow very little water to soak in ..rainwater just runs off of unpaved roads as it does for paved roads any ecological benefit of unpaved roads is illusory...."" " Unpaved roads generate a lot of dust during dry periods ...the dust has been considered to harm human health "

Spokane Regional Clean Air Agency July 2015road dust can be a public health hazard...when inhaled damage lung tissue ..aggravate existing health problems those at highest risk the elderly "

URI Unpaved Roads Institute Montana State Univ.....particles in road dust can be held in the atmosphere for hours or even days....each passage of a vehicle adds additional fine particles making the total particle concentration cumulative ...particles penetrate the respiratory tract effects on breathing, damage to lung tissue ,cancer, and premature death "

Yale Univ Environment Review 5/28/2015....a number of epidemiological studies have indeed demonstrated associations between road dust and hospital admissions.....Conn and Mass depts of EPA using medicare base found cardiovascular admissions strongly associated with road dust patients 65 yrs and older..." The research team were scientists form Yale , Harvard, and Johns Hopkins Schools of Public Health "

Pima County Dept of Environmental Quality (Tucson) Particulate matter (road dust) is " harmful to human health " contributes to difficulty breathing, heart attacks, and premature death esp the elderly, people with heart disease, and respiratory disease

ENVIRONMENTAL CONSIDERATIONS

Steve's Comment: These statements are not based on any professional opinions. Is that correct?

Q (1) Has anyone done an environmental impact study?

A: No.

Q (2) Do we have plans to do an environmental impact study before proceeding with any road improvements?

A: We will demonstrate environmental improvements in conjunction with permitting.

Q(3) Has our engineer recommended in any way that an environmental impact study be performed?

A: Engineer will design to meet environmental / permitting criteria.

Q(4) How are the road improvements affected by the fact that we are at the headwaters of the Sanibel River?

A: A goal is improved water quality and has been with past efforts with our waterways.

PROPERTY VALUES

Steve's Comment: Since we have no expert report from our engineer, these statements are not based on any professional opinions. Is that correct?

RSG Comment: The property value information was developed from the Sanibel MLS