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The Special Called Work Session of the Mayor and Council of the City of Milton was held on July 27, 2009 at 6:00 PM, Mayor Joe Lockwood presiding.

Council Members Present: Councilmember Karen Thurman, Councilmember Bill Lusk, Councilmember Burt Hewitt, Councilmember Tina D'Aversa, Councilmember Alan Tart

Council Member Absent: Councilmember Julie Zahner Bailey absent/excused.

Mayor Lockwood

- Work sessions are a more informal setting to update the Council on business items.
- No votes will be taken.
- We will add an Executive Session to discuss personnel.
- There will be a short break after the first item.
- Public comment is allowed that is germane to an agenda item.
- Anyone wishing to speak must fill out a card and turn it into the City Clerk staff.
- Public comment will be allowed for a total of ten minutes per item and no more than two minutes per person.
- Public comment will be heard at the beginning of each item.
- Once the item is called no other cards will be accepted.

City Clerk Marchiafava read the agenda item.

Presentation on Pavement Management Plan.

Carter Lucas, Principal Engineer

- This is continuing the discussion on pavement management.
- He would like to get feedback on the overall recommendations.

Angela Priest, Kimley Horn and Associates gave the following power point presentation.

Project Background

- In 2007 extensive pavement management study of city-owned paved roadways
Completed by IMS Infrastructure
- In 2009 the City engaged KHA to conduct a review of the existing pavement management study

Project Objectives

- Review of existing system
- Field verification of pavement condition data
- Review of internal customization data
- Development of recommended projects list
- Review of anticipated backlog
- Gravel road maintenance investigation

Review of Existing Pavement Management System

- GBA Master Series application used
- KHA focused on evaluating the *outcomes* of the software
- Necessary data was attained to complete the outlined project objectives external to the GBA software
- Additional updates to the software can be made
 - Updating unit costs

- Reprioritizing project lists
- Updating backlog expectations

Review of Existing Pavement Management System (cont.)

- Pavement Manager module was applied correctly, outputting valid results
- Accuracy of program inputs has a direct effect on program outputs
 - Unit Costs
 - Maintenance Techniques

What is Pavement Condition Index (PCI) Value?

- Indicator of the overall condition of the pavement
- Distress types provide a indication of failure mechanisms
- Pavements with PCIs between 70-100 will benefit from preventative maintenance
- Pavements between 40-70 are candidates for rehabilitation (i.e. mill and overlay)
- Pavements with PCIs less than 40 are candidates for reconstruction

Verification of Pavement Condition Data

- Windshield verification of the data conducted
- KHA validated the PCI results provided by IMS
 - A few segments have fallen into lower PCI ranges
 - A few segments have been rehabilitated
- Area-weighted PCI of 57 reported in 2007

Review of Internal Customization Data

- Includes unit costs and prioritization guidelines
- Unit costs reviewed by
 - Talking with industry leaders
 - Reviewing recent bid tabulations of similar construction projects
- Valid prioritization guidelines ultimately provide guidance on what pavement segments to rehabilitate based on varying funding levels

Findings of Customization Data Review

- Previous unit cost potentially outdated resulting in inflated budget needs
 - Unit costs applied were 15-30 % higher than currently being experienced
- Updated unit costs that are neither at the high nor low end of the construction pricing spectrum
- Competitive pricing being experienced now is beneficial to the City in the short term but likely not good for long term budgeting
- KHA recommends using a unit cost that represents a stable market and that the City re-visit the specific cost data on a annual basis when preparing budgets
- IMS applied valid prioritization guidelines

Development of Specific Maintenance and Rehabilitation Recommendations

- Develop a prioritized list of projects for the City to consider for 3-5 years
 - List for arterial/collector roadways and a list for residential roadways
- Initially, IMS ran 6 budget scenarios

Determined that the City needed \$2.25 million annually to increase the area-weighted PCI value of the City to 70 and reduce the backlog to an acceptable level (20%) in 10 years

Considerations When Developing Prioritized Project Lists

- City's desired Level of Service, i.e. acceptable area-weighted PCI of the City
- Public Works staff perceived rehabilitation priorities
- Data provided in the IMS report

- Maintenance and rehabilitation strategy applied
 - Worst-First Strategy

Preventative Maintenance Strategy

Worst-First vs. Preventative Maintenance Strategy

- Worst-First Strategy (Area-weighted PCI < 70)
 - Funds highest priority segments that are significantly deteriorated first
 - Deteriorated pavement segments should not be neglected
- Preventative Maintenance Strategy (Area-weighted PCI > 70)
 - Applies funding to pavement segments that are in good condition maintaining them at a high level before addressing the deteriorated segments
- City of Milton area-weighted PCI = 57
 - KHA recommends using a worst-first strategy for the coming years then shifting to a preventative maintenance strategy when a desirable PCI is reached

Additional Considerations of Prioritized Project Lists

- Segments with PCIs less than 40 are candidates for reconstruction
 - Not always a viable option
 - Anticipated cost for reconstruction also show in table giving the City flexibility in planning and budgeting
- Anticipated that LARP funding will not be adequate to address all residential needs
 - 15-30 percent of capital budget allotted to residential roadways in addition to LARP
 - Pre-overlay repairs prior to LARP are the responsibility of the City and impact the capital budget
 - \$30k/mile of LARP roadway should be anticipated annually

Anticipated Backlog at Current Funding Levels

- Difficult to accurately review the backlog expectations
 - Changes in scope and lack of available long-term budget numbers
- Anticipated that \$1.75-\$2.0 million annually will be needed (10 years)
 - Increase the City's area-weighted PCI value to 70
 - Attain an acceptable level of backlog (20%)
- Capital budgets for the City of Milton have ranged between \$1 and \$2 million in recent years, some lower
- At this level the City will not reach the goals outlined in IMS's report and backlog will continue to increase
- The City needs to identify what area-weighted PCI value and backlog level is acceptable
 - Achieve the level of service expected by the residents
 - Balance the City's budget expectations

Gravel Roads: the Facts

- Milton, GA – 13 miles of unbound roads
- Require routine maintenance
- Relatively little published information regarding maintenance and cost

Concerns about maintenance frequency and cost

Gravel Roads: Role in Milton

- Important piece of rural character
- Enjoyed by residents and neighboring residences

Objectives

Assist Milton in locating available research, gather data, and access gravel road maintenance technique and cost

Outline

- Literature Review
- Comparative maintenance scenarios
 - Including asphalt option
- Role of traffic volumes

Conclusions and Recommendation

Background

- Low Volume Road
 - 400 veh/day (ADT)
 - < 50mph
- Typical Maintenance Techniques
 - Blading
 - Ditch shaping
 - Spot re-gravel or Pot hole repair
 - Grading, shape cross section
 - Re-gravel

Literature Review

MnDOT: LRRB

- Considered historical and estimated cost data
- Life-cycle cost analysis
- Construction and user cost included
- Traffic considerations

Main goal: economic analysis of when to pave a road (asphalt vs. gravel)

NPW Calculations

Historical data used to understand maintenance schedule and costs and cash flow diagrams to determine

Net Present Worth (NPW)

- Gravel Road NPW = \$68,000
- Asphalt Road NPW = \$92,000

Specifics: 30 year life cycle, $i=4%$, $ADT \sim 100$ veh/day

Maintenance Schedule

Routine grading with re-gravel every 5yrs

- Blading:
 - 21 times per year (3 times/mo. April-Oct)
 - \$1,400/mi/yr
- Re-gravel:
 - Once every 5yrs
 - \$13,800/mi/yr (2.5' @ \$7.00/cyd)

Annual Maintenance Cost = \$4,160 / mile

SDDOT: Low Vol Roads

- Considered estimated cost data
- Defined historical maintenance schedule
- Life cycle cost analysis
- Construction and user cost included
- Created an interactive software tool to compare cost of different strategies

Main goal: tool for jurisdictions to make decision - pave or not pave

Design Tool

Maintenance cost calculations with user inputs to make decision of Asphalt or Gravel based on construction cost, user cost, ADT, etc.

Maintenance Schedule

Routine grading and spot repair with re-gravel every 6yrs

- Blading:
 - 50 times per year
 - \$3,250/mi/yr
- Re-gravel:
 - Once every 6yrs
 - \$7,036/mi/yr
- Spot gravel:
 - Once per year
 - \$2,420/mi/yr

Annual Maintenance Cost = \$6,843 / mile

Applicable to Milton?

Fulton County

- Prior responsible party
- Annual Maintenance Reported = \$73,442
- Blading
 - 3 times / yr
- Dust abatement
 - When required
- Gravel repair
 - When required

Annual Maintenance Cost = \$5,650 / mile

Cost

Applicable to Milton?

- Costs reported by agencies not comparable to private bids
- Costs reported assumedly do not include:
 - Capital and O&M cost of equipment
 - Overhead to run crews, store equipment
- Level and description of work may not be comparable
- Milton does not have on-staff maintenance crew and equipment; see cost in bids
- Competitive bids
 - Included overhead, profit
- Cost Comparison: Blading Activity
 - MN/SD average = \$66/mi
 - Milton = \$1,500/mi

Maintenance Scenarios

- ✓ Variety of Gravel strategies
- ✓ Compare to Asphalt paving
- ✓ Life-cycle cost

Asphalt Maintenance Schedule and Cost Detail

Times per year	Start Year	Unit Cost \$/mile
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Crack Seal	1	5	\$3,000
Striping	1	10	\$1,000
Patching	1	1	\$1,600
Mill & Overlay (1.5")	1	20	\$200,000
Average Annual (not adjusted for inflation)			\$12,300

Gravel Maintenance Schedule and cost Detail
Scenario 2 – GDOT Unit Cost

	Times per year	Start Year	Unit Cost \$/mile
Blading	2	1	\$1,500
Re-shape Cross			
Section with Ditch	1	1	\$7,400
Spot Gravel	1	1	\$650
Dust Abatement	3	1	\$2,050
Re-gravel (1.0")	1	6	\$13,000
Average Annual (not adjusted for inflation)			\$19,367

Gravel Maintenance Schedule and Cost Detail
Scenario 3 – Milton Unit Cost

	Times per year	Start year	Unit Cost \$/mile
Blading	2	1	\$2,800
Re-shape Cross			
Section with ditch	1	1	\$5,400
Spot	1	1	\$350
Dust Abatement	3	1	\$1,750
Average Annual (not adjusted for inflation)			\$16,600

Life Cycle Cost (\$/mile) Summary

	Asphalt 1	Asphalt 2	Scenario 1	Scenario 2	Scenario 3
Agency Cost	\$330,222	\$280,222	\$429,052	\$242,742	\$215,373
User Cost	\$16,271	\$16,271	\$10,994	\$10,994	\$10,994
TOTAL Cost	\$346,492	\$296,492	\$440,046	\$253,736	\$226,367

Role of Traffic: ADT Threshold

- Relative maintenance costs become more expensive for gravel roads ~ 150 ADT
- Determine 100-200 ADT is threshold

Carter Lucas, Principal Engineer

- One of the questions that he has is in regards to this fiscal budget.
- We have available 1.4 million in our pavement budget.
- Morris Road and Hickory Flat were targeted for this year.
- Morris Road has come back as our number 1 section with Hickory Flat a little further down the list.
- The section from Webb and Bethany has rated high in this scenario also.
- He would like some feedback on whether to proceed with last year's scenario and Hickory Flat or move forward with this year's which is Morris Road.

Councilmember Thurman

- Asked if there was a chance of getting any money for these roads from LARP.

Carter Lucas, Principal Engineer

- No, it is the City's responsibility for reconstruction.

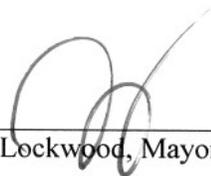
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- Typically they target residential for the LARP money.

After no further business, the Work Session adjourned at 7:58 p.m.

Date Approved: August 17, 2009



Jeanette R. Marchiafava, City Clerk



Joe Lockwood, Mayor