

**MINUTES OF THE  
WORK STUDY SESSION  
HELD BY THE MOORE CITY COUNCIL  
APRIL 3, 2023 – 5:15 P.M.  
UPSTAIRS CONFERENCE ROOM  
301 N. BROADWAY, MOORE, OKLAHOMA**

The City Council of the City of Moore met at Moore City Hall in the upstairs conference room, 301 North Broadway, Moore, Oklahoma on April 3, 2023, at 5:15 p.m. with Vice-Mayor Adam Webb presiding.

*Adam Webb*  
*Councilman, Ward I*

*Danielle McKenzie*  
*Councilwoman, Ward I*

*Melissa Hunt*  
*Councilwoman, Ward II*

*Mark Hamm*  
*Councilman, Ward II*

*Jason Blair*  
*Councilman, Ward III*

*Louie Williams*  
*Councilman, Ward III*

PRESENT: McKenzie, Hunt, Williams (arrived at 5:20 p.m.), Hamm, Webb

ABSENT: Blair, Lewis

STAFF MEMBERS PRESENT: City Manager, Brooks Mitchell; Assistant City Manager, Jerry Ihler; City Clerk, Vanessa Kemp; Community Development Director, Elizabeth Weitman; Finance Director, John Parker; Fire Chief Greg Herbster; Public Affairs Director, Director, Deidre Ebrey; and Public Works Director, Tony Mensah.

**Agenda Item Number 2 being:**

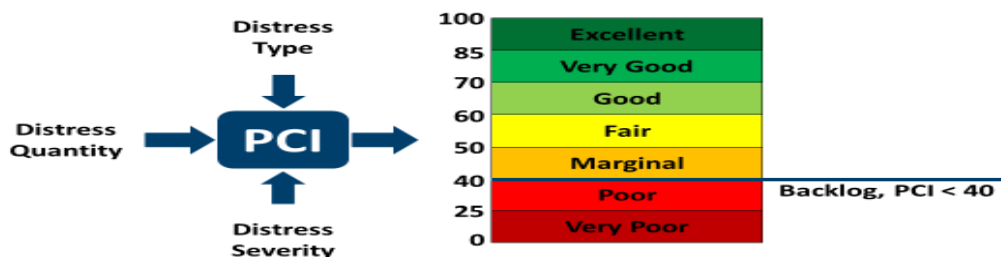
RECEIVE A PRESENTATION FROM INFRASTRUCTURE MANAGEMENT SERVICES, LP ("IMS") REGARDING THE PAVEMENT MANAGEMENT STUDY AND DATA COLLECTION FOR THE CITY OF MOORE.

Jerry Ihler, Assistant City Manager, stated that the City retained Infrastructure Management Services ("IMS") to perform a pavement management study. IMS collected data utilizing special equipment to conduct a pavement analysis on all of the roadways within the City. In addition to providing the condition of the roadways, the study would also provide a program that gives estimated costs for various types of repairs, and includes a Pavement Condition Index number which is an industry standard. Mr. Ihler noted that the City has a \$5 million annual budget for street improvements. He introduced Megan Foshee with IMS who presented their findings.

**Pavement Management Process:**

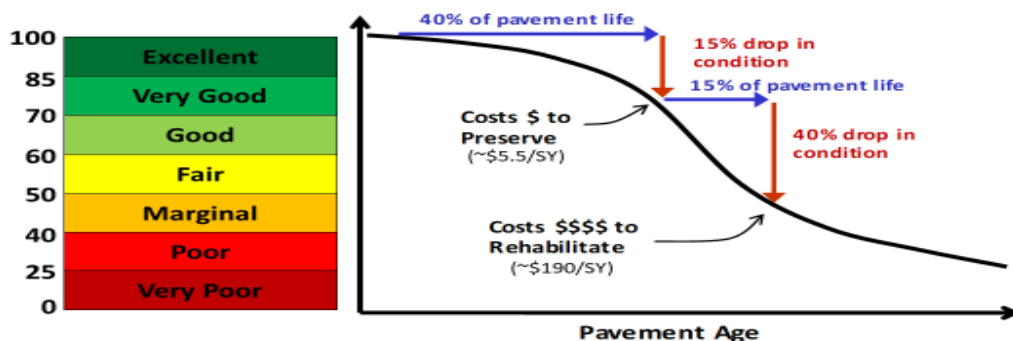
Ms. Foshee stated that the purpose of the Pavement Management Study was to survey the roadways, analyze the data, and come up with a logical plan to manage the pavement network in a way that best utilizes the budget. The Pavement Condition Index ("PCI") is determined from the ASTM-D6433 standard which assigns a score from 0 to 100 to quantify pavement condition. The best score is 100 with 40 and below considered Poor and Very Poor (known as "backlog").

## PAVEMENT CONDITION INDEX (PCI)



Ms. Foshee advised that there are several different types of distresses or cracks. The crack is quantified by length and width to determine if they are low, moderate, or high, in severity which are predefined within the standards. She discussed the deterioration curve which graphically plots new streets and tracks deterioration. The map also shows when it reaches a point when roadway deterioration occurs at a much quicker rate.

## RIGHT TREATMENT AT THE RIGHT TIME



If treatments are started before rapid deterioration begins the treatment is much cheaper and the roadway can be kept in good condition for a longer period of time. Ms. Foshee advised that crack sealing is an inexpensive maintenance option where you use a product to fill in surface cracks. Chip sealing is a slightly more expensive surface treatment where a protective barrier or overlay is applied to the surface without the need for excavation. The most expensive option is reconstruction of the roadway. This is the only option for cracks considered to be the most severe.

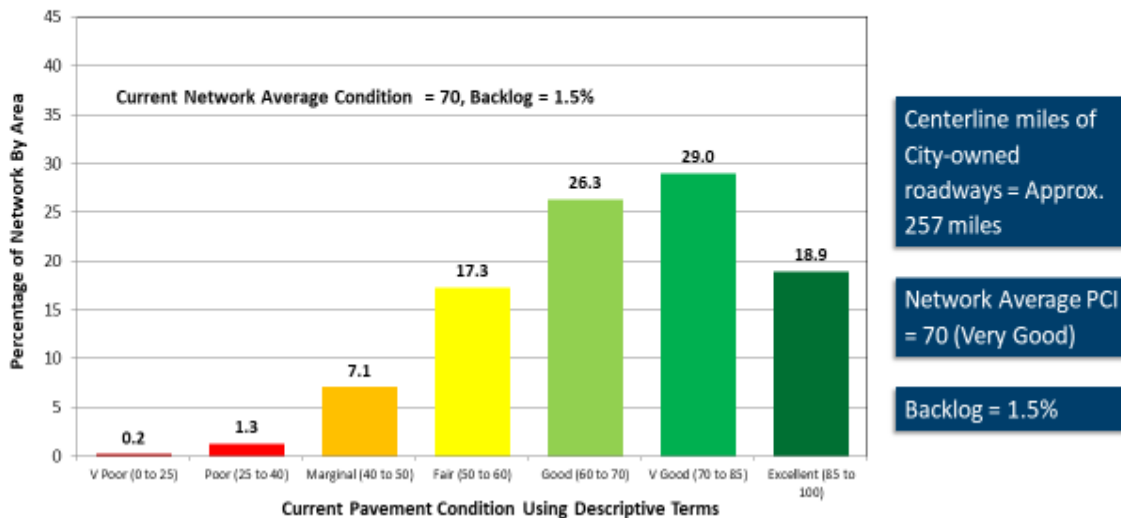
### **Pavement Management Survey Performed:**

Ms. Foshee advised that the City determines objectives, implements policies, and determines budgets. IMS assesses the pavement conditions, evaluates the priorities, and performs an analysis to predict performance. She stated that IMS performed a continuous scan of the roadway using high tech lasers attached to vans to count the cracks, quantify the length and width of the cracks, and to measure the roughness of the roads, patches, and potholes. The scan was performed on the outside lanes which are typically more distressed than the inside lanes. Ms. Foshee showed an example of the scans and noted that different colors indicate the difference in severity. The green color reflects low severity, orange moderate, and red high. Sealed cracks and concrete joints were also scanned and manholes detected. Ms. Foshee noted that structural testing was performed on the entire network to look below the surface and evaluate the structural condition in order to preemptively see if cracks are coming to the surface.

### **Overview of the City's Road Conditions:**

Ms. Foshee advised that the average condition of the roadways in Moore was determined to have a PCI of 70 and a backlog of 1.5% which was considered to be very good. Although there is no published value for the nation; many cities on average have a PCI of 65 with a backlog of 9%. She stated that the City's low backlog was impressive and felt that it was sustainable by implementing a pavement management plan.

## CONDITIONS AT TIME OF ANALYSIS



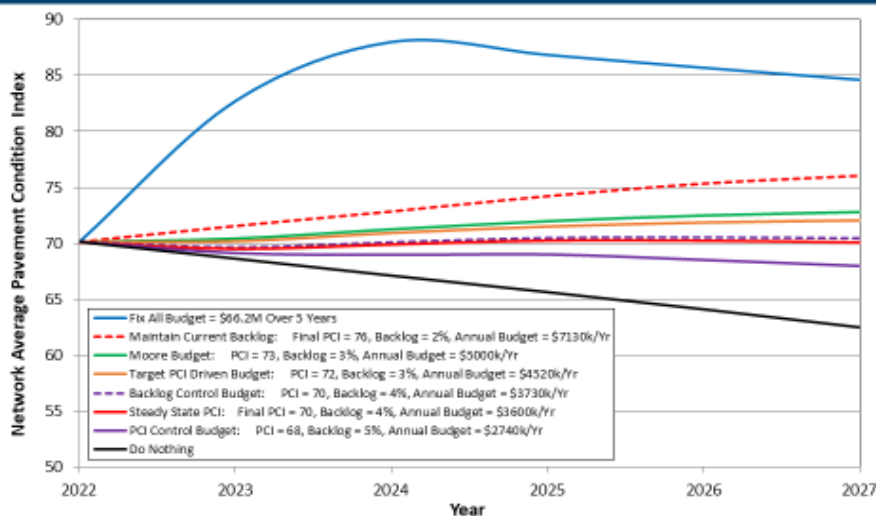
Ms. Foshee showed slides of various roadways with different roadway conditions rated from Excellent to Poor. The slide of N. Broadway reflected an Excellent PCI of 97 for the 10 year old roadway. There was little deterioration which indicated it was constructed well. Renita Way was rated as Very Good with a PCI of 74. Although it had a transverse crack, the width of the cracks did not indicate structural failure; they appear to be old cracks which occurs through normal expansion and contraction. Lost Creek was an example of a street in Good condition with a PCI of 69. Regency Blvd. was rated as Fair with a PCI of 58. This example had mild structural failure with alligator cracking which cannot be treated with a surface treatment. This would require reconstruction of the section instead of the entire segment. She advised that SE 12<sup>th</sup> Street was rated as Marginal with a PCI of 48 and Highland Drive was rated as Poor with a PCI of 30. Examples of concrete pavement with load related cracks would require replacement of the entire slab in a few places.

### **Analysis and Project Planning:**

Ms. Foshee stated that the analysis would show the effect of the current funding and what that does to the PCI and backlog numbers along with the type of budgets generated to maintain the PCI and the backlog. The point being to minimize deterioration in a cost effective way. Ms. Foshee indicated that projects were priority based for the most efficient use of money. She stated that there are arterial, collector, and residential roadways. The arterials should be prioritized due to the amount of traffic that travels the roadway. It is also based on conditions that would best improve the entirety of the network for the least amount of money. They would start by doing a needs analysis using the types of rehabilitation methods currently being used. She utilized rates for the area and customized the analysis by creating projects that were grouped together based on proximity and condition. An estimate of inflation, which is very high right now, was estimated for a five-year period.

Ms. Foshee presented a graph with their findings. The PCI was located on the left and the year up to 2027 along the bottom. She stated that if all of the roadways were repaired, the PCI would rise to the top of the chart. If nothing is done the PCI would go down to a score of 62. The City is improving the network with the budget that we have. She indicated that the City must spend a certain amount to achieve a certain amount. Ms. Foshee referenced the red baseline that is the steady state PCI. The goal is to keep the PCI at the same value over the next five years. The City is above the baseline which reflects a structurally healthy network.

## IMPACT OF FUNDING LEVELS ON PAVEMENT CONDITIONS



The blue is the projected conditions at the end of five years which shows a PCI of 73; however, the backlog went up to 3%. She realized that an increase in backlog would be unexpected considering the maintenance being done; however, roads will continue to deteriorate and slip into the poor and very poor category. The average backlog nationwide is 9% with 15% being the maximum allowable amount. Because of that she felt that 3% over the next five years was definitely manageable.

### **Overview and Recommendations:**

- Baseline for Moore is PCI of 70 and backlog below 4%.
- City's current funding of \$5 million per year is forecasted to increase PCI to approximately 73 and a backlog of 3% after five years.
- Strategic and proactive annual maintenance and rehabilitation saves money in the long run.
- City should resurvey every five years to update condition data, track pavement performance, and improve pavement management plan. This would allow the deterioration curves to be customized to the area and to the network by utilizing data instead of a standard curve.

**Questions:**

Councilman Hamm asked if the data could be obtained for the streets within each ward. Councilwoman Hunt also asked if there was a determination on whether the streets were better or worse by ward. Jerry Ihler, Assistant City Manager, stated that the information wasn't categorized by ward; however, since every street was catalogued with a PCI number the information could be presented by ward. Councilman Williams asked if the information was available in a database. Ms. Foshee indicated that it was available in an Excel Spreadsheet along with several maps. She stated that the analysis could be run on a ward or zone basis.

Councilwoman Hunt asked if the backlog is maintained for the next five years would it continue to rise in the future. Ms. Foshee stated that there would be no way to adequately determine ten years in the future without benefit of another analysis. Mr. Ihler stated that if the City does not address the marginal and fair categories the backlog would likely increase. Councilman Williams stated that it must be a balanced approach by maintaining the good roads and working to improve the bad roads. Mr. Ihler stated that technology is so much better today regarding surface treatments. Moisture must be kept out of the asphalt because freeze and thaw and temperature changes allows water into the base and creates the poor and very poor roadways.

Councilman Hamm requested the street condition data for Ward 2. Ms. Foshee stated that if the City has a GIS Shape File it would be very easy to join the data. She offered to put the wards on the report maps to make it more convenient. Councilman Hamm expressed his appreciation to Ms. Foshee for supplying the requested information and for her presentation.

**Agenda Item Number 3 being:**

ADJOURNMENT

**Councilwoman Hunt moved to adjourn the City Council meeting, second by Councilman Williams. Motion carried unanimously.**

Ayes: McKenzie, Hunt, Williams, Hamm, Webb  
Nays: None  
Absent: Blair, Lewis

**The meeting was adjourned at approximately 5:48 p.m.**

TRANSCRIBED BY:

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RHONDA BAXTER, Executive Assistant

FOR:

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MELISSA HUNT, MPWA Secretary

These minutes passed and approved as noted this \_\_\_\_ day of \_\_\_\_\_, 2023.

ATTEST:

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VANESSA KEMP, City Clerk