City of Rochester, New Hampshire
PUBLIC WORKS DEPARTMENT
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MEMO PUBLIC WORKS & BUILDING COMMITTEE AGENDA

TO: **PUBLIC WORKS AND BUILDINGS COMMITTEE**

FROM: **PETER C. NOURSE, PE**
DIRECTOR OF CITY SERVICES

DATE: January 16, 2024

SUBJECT: Public Works & Buildings Committee Meeting
Meeting Date ***Tuesday January 23, 2024, at 7PM***

There will be a Public Works and Buildings Committee Meeting held on Tuesday January 23, 2024, at 7PM. This meeting will be at City Hall in City Council Chambers

AGENDA

1. Roll Call
2. Approval of the November 16, 2023, PWC Minutes
3. Public Input
4. Overview of the City's Municipal Separate Storm Sewer (MS4) Permit, and Progress Update
5. Overview of Topics to be Discussed at Public Works Committee in 2024

Public Works and Buildings Committee
City Hall Council Chambers
Meeting Minutes
November 16, 2023

MEMBERS PRESENT

Councilor Donald Hamann, Chairman
Councilor John Larochelle
Councilor Alexander de Geofroy
Councilor Steve Beaudoin

MEMBERS ABSENT

Councilor Jim Gray, Vice Chairman (excused)

OTHERS PRESENT

Peter C. Nourse PE, Director of City Service
Dan Camara, Coordinator GIS & Asset Mgmt.
Lisa Clark, Deputy Director, DPW
John Bersue, Dry Hill Road

MINUTES

Councilor Hamann called the Public Works and Building Committee to order at 7PM

1. **Roll Call**
   Ms. McDormand took the roll call attendance. Chair Hamann, Councilor Larochelle, Councilor de Geofroy and Councilor Beaudoin were all present. Councilor Gray was excused.
2. **Approval of October de Geofroy** ***made a motion to accept the minutes of the October 19, 2023, meeting as presented. Councilor Larochelle seconded the motion. The motion passed unanimously.***
3. **Public Input**
   John Bersue of Dry Hill Road was present for the paving plan that was being presented tonight. He is interested to know if Dry Hill and Sheepboro Road will be on the 2024 paving list. Councilor Hamman stated that this was next on the agenda.
4. **FY24 Proposed Paving List**
   Mr. Nourse stated that the Fiscal Year 2024 CIP budget carried $1.5 Million for paving. He stated that there are rollover funds from the Fiscal Year 2023 program & the SB 401 State Aid Block Grant that will result in a total of $1.7 million for the FY2024 Pavement Rehab Program. Mr. Nourse stated the City has employed the Pavement Conditions Index (PCI) management system again and has run our annual pavement condition maintenance algorithm. He stated that the streets that resulted from the algorithm have been field checked. He displayed the attached final proposed list. Councilor de Geofroy asked the question if there are streets that have a higher PCI that are already on the list, why are they not on this list? Mr. Nourse stated that the algorithm is quite complex. Mr. Nourse further stated it's a cost deferral-based algorithm, it's set up to keep good roads good, an as there is limited amount of money each year, it is set up to recommend roads that disperse those

funds to good condition or fair condition roads to keep them good or to move them into the good bracket. Mr. Nourse noted that this philosophy is used by the New Hampshire Department of Transportation and other municipal agencies across the country. Mr. Nourse stated that there is only so much money for the program and that money goes further when the money is directed to a fair or good condition road. He noted that a full rehabilitation of a road could cost as much as a ½ million dollars per mile. Mr. Nourse stated that a poor condition road rises to the surface depending on the PCI of the road and how much annual funding is available and what type of road it is. Mr. Nourse stated he would attach the fiscal year 2024 recommended paving list to the minutes and he noted that the streets included are all or sections of the following streets: Old Dover Road, Shady Hill Drive, Brickyard Drive, Thomas Street, Yvonne Street, Darrell Street, Evergreen Lane, Sidney Street, Young Street, Lamy Road, Snow Street, Amanda Street, Given Circle, Mandela Drive, Cove Court, Haskell Avenue, Marketplace Boulevard and Columbus Avenue. ***Councilor de Geofroy MOVED to recommend the full City Council approve the FY24 proposed paving list. Councilor Beaudoin seconded the motion. The Motion was carried by unanimous voice vote.***

5. **Public Information Meetings Upcoming**

Mr. Nourse stated that there will be 2 informational meetings coming.

Route 11 Capacity and Safety Enhancements

Mr. Nourse stated the Route 11 Capacity and Safety Enhancements project will have a Local Concerns meeting for this project. He noted that a Local Concern Meeting is a requirement of Local Public Agency (LPA) projects that are a partnership for funding with NHDOT. This meeting will be held on Wednesday January 31, 2024, at 7:00 PM at The Public Works Department, 209 Chestnut Hill Road, Rochester NH. The public is encouraged to attend.

Milton Road/Salmon Falls Road/Amarosa Drive Intersection Improvements

Mr. Nourse stated that there will be a public informational meeting for the Milton Road/Salmons Falls Road/Amarosa Drive Intersection Improvements on Thursday January 25, 2024, at 7:00PM at The Public Works Department, 209 Chestnut Hill Road, Rochester, NH. Mr. Nourse further stated this is a City project. The public is encouraged to attend. Councilor de Geofroy asked if these meetings will be posted. Mr. Nourse stated that both meetings will be posted on the website and that as part of the LPA requirements the abutters for the Rt.11 would be sent letters.

6. **Other**

Mr. Nourse reviewed the Standard Calculations Regarding the Cost of Transporting and Treatment (T and T) of Wastewater and Infiltration/inflow of the Sewer System. See Attached;

Trash Accumulating roadside & areas around WM Facility

Councilor Larochelle said he had a constituent call regarding trash near her property. She lives on the southern edge of town on Route 125. Councilor Larochelle said in the past Waste Management has picked up the trash that has accumulated from big loads that were not secured down. He stated that he was not sure if this was their responsibility or if they were just being good neighbors in the past. He stated he remembers WM being diligent in the past about clean up. Councilor Larochelle asked if Lisa Clark of DPW could call Waste Management to suggest maybe having this taken care of.

Clarification of Yard Waste in Trash Cart

Ms. Clark stated that last month or the month before Ms. Raab from East Rochester came in to talk about yard waste collection and Ms. Clark had told her she could put that in her trash cart if there was room. Ms. Clark stated that a recent conversation with WM suggested that they do not condone that practice. Ms. Clark apologized for the confusion, but residents should not put yard waste in their trash or recycle carts.

Strafford Square Round About

Councilor de Geofroy wanted to congratulate everyone for the great work on the Strafford Square Round About. Councilor de Geofroy asked the question how it was going and timeline for finishing touches. Mr. Nourse stated that they opened the Strafford Round About 2 weeks ago tomorrow. Mr. Nourse further noted to his knowledge there have been no fender benders reported and he noted that there were some motorists going the wrong way through the circle during the first couple of days. Mr. Nourse noted they have started to install curbing, will have concrete next week. Mr. Nourse stated that he will open up the double crosswalks when they get the Rapid Reflectorized Flashing Beacons operational. Mr. Nourse further stated that the speed table is going to be installed in the next couple of weeks. He stated that the final pavement will be down next spring and ne noted that there will be some shimming on both sides of the speed table, it is concrete. In the springtime they will go out and put another 1 ½" of pavement and restripe the entire thing. Councilor Beaudoin asked what the illumination was going to be. Mr. Nourse stated that the lighting is like the historical lighting they have downtown. The temporary lighting is out now until the permanent lighting is ready.

Councilor Hamann adjourned the meeting at 7:47 PM

Minutes respectfully submitted by Laura McDormand, DPW Administration & Utility Billing Supervisor

FY24 CIP Roadwork Proposed Assignments						
Roadway	**Starting Cross Road**	**Ending Cross Road**	**PCI**	**Rehabilitation Method**	**Estimated Cost**	**Running Cost**
Old Dover Rd	Columbus Ave	Meadow St	43	Full Width Mill and Overlay (>2"-3")	$462,006	$462,006
Shady Hill Dr	Pickering Rd	End	26	Full Width Mill and Overlay (>2"-3")	$371,904	$833,910
Brickyard Dr	Pickering Rd	Brickyard Dr	45	Full Width Mill and Overlay (>2"-3")	$9,030	$842,940
Thomas St	Ten Rod Rd	Darrell St	53	Full Width Mill and Overlay (2"-3")	$21,511	$864,451
Yvonne St	Darrell St	Evergreen Ln	53	Full Width Mill and Overlay (2"-3")	$49,568	$914,019
Darrell St	Yvonne St	Thomas St	53	Full Width Mill and Overlay (2"-3")	$25,535	$939,554
Evergreen Ln	Yvonne St	Thomas St	53	Full Width Mill and Overlay (2"-3")	$28,210	$967,764
Sidney St	Charles St	Wilson St	51	Full Width Mill and Overlay (2"-3")	$34,169	$1,001,933
Young St	Sidney St	Broad St	51	Full Width Mill and Overlay (2"-3")	$38,215	$1,040,148
Lamy Rd	Oak St	End	31	Reclaim and Pave (4")	$65,504	$1,105,652
Snow St	Amanda St	Link St	31	Full Width Mill and Overlay (>2"-3")	$76,800	$1,182,452
Amanda St	Snow St	Hale St	29	Full Width Mill and Overlay (>2"-3")	$57,984	$1,240,436
Given Cir	Anderson Ln	End	30	Full Width Mill and Overlay (>2"-3")	$115,840	$1,356,276
Mandela Dr	Whitehall Rd	End	29	Full Width Mill and Overlay (>2"-3")	$116,832	$1,473,108
Cove Ct	N Main St	End	29	Full Width Mill and Overlay (>2"-3")	$49,024	$1,522,132
Haskell Ave	Winter St	End	26	Full Width Mill and Overlay (>2"-3")	$26,112	$1,548,244
Marketplace Blvd	Rt 11	Roundabout	80	Microsurface	$7,792	$1,556,036
Columbus Ave	250' north of Linscott Ct	Wakefield St	62	Full Width Mill and Overlay (2"-3")	$29,138	$1,585,174
					Total Cost:	**$1,585,174**

A Review of the Standard Calculations Regarding the Cost of Transporting and Treatment (T and T) of Wastewater and Infiltration/Inflow of the Sewer System

The Cost of Treating Wastewater in Rochester (2022):

Cost to Treat Rochester Wastewater (2022)			
Item	**Avg Gallons Annually**	**Avg Gallons per Day**	**O&M and CIP Costs**
Admin and O&M	1,110,549,000	3,042,600	$3,101,029
Capital Improvements	1,110,549,000	3,042,600	$2,467,500
Debt Service	1,110,549,000	3,042,600	$3,305,079
Total Cost			$8,873,608
Cost to treat per gallon			$0.007990

Rochester wastewater in 2022 cost $0.00799/gal to convey and treat. The actual user rate would be more than this value to run the enterprise system.

The cost to treat and transport I/I is the same as to treat wastewater.
A per-rate (flow-based) multiplier or index is needed to estimate the costs of treatment and transport of I/I and, to prioritize corrective measures to minimize I/I.

This T and T index is calculated as the overall annual cost per average GPD transported and treated: For 2022: $8,873,608 per year / 3,042,600 GPD for the year. The quotient is $2.91 / GPD for the year. Stated another way, this is $2.91 per gallon per day, per year, in the present time. This is considered the T and T cost and is an index for subsequent benefit-cost analysis.

Note that the $2.91 / GPD is a 2022 figure. This index can change from year to year as the cost of transport and treatment changes.

This quotient can also be derived from:
$0.00799 / gallon x 365 days/yr = $2.91 / GPD per year.

For Infiltration, we seek the T and T cost. The equation is:

T and T Cost/year of Infiltration = (GPD of I/I) x ($2.91/GPD per year), or
T and T Cost/year of Infiltration = (GPD of I/I) x ($0.00799/gal x 365 day/yr)

Ex.

$419,969/yr = (144,000 GPD Infiltration) x ($2.91/GPD per year), or
$419,969/yr = (144,000 GPD Infiltration) x ($0.00799/gal x 365 day/yr)

$2.91 / GPD is *not* directly related to the user rate. It is a rate-based quotient.

The same approach is not used for Inflow. Whereas it is expected that about ½ of infiltration can be corrected, due to natural migration of groundwater from improved to unimproved areas of the collection system, Inflow is considered cost effective as it is ALWAYS an undesirable condition and is considered that it should be eliminated entirely. However, it can be used to perform a cost analysis to prioritize repairs.

The $2.91 is a number related to the cost to treat and transport wastewater and I/I. *But, more importantly,* the $2.91/GPD number is an *index,* used to determine if the costs to implement structural improvements to infrastructure are cost effective over a set number of years or life-cycle (of a recommended rehab measure). Infiltration is

considered excessive if the costs of the removal of its source are less than the costs for T and T of these flows. This is done by comparing the T and T cost to the cost of the improvement over the life cycle of the improvement.

The present value of the T and T cost is obtained so that the annual O&M costs and capital costs are on an equal time basis, and it reflects the life cycle of the improvement. This planning period is generally 20 years. Per MA DEP annual percentage rate used is 2.5%. The Present Worth for the $2.91/GPD per year over a 20 year life cycle becomes $41.88/GPD per year

Ex.

For a pipe run, 864 GPD of infiltration has been determined to be removeable through improvements. Present Worth over 20 years of T and T cost is $41.88/GPD per year.

864 GPD x $41.88 = $36,184. This is the value of the problem over 20 years of no action. Compare this cost with the cost of near-term improvements, estimated to be $10,558. $10,558 < $36,184, therefore the improvements are considered recommended.

The index is conservative. Infiltration varies throughout the year, generally being higher in spring/fall. Infiltration is however a 365 day per year event. The index is very conservative when applied to inflow, and not advised as inflow is a relatively short duration event as compared to infiltration. The index is not generally applied to inflow but can be used to prioritize areas of inflow removal.