



# CITY of NOVI CITY COUNCIL

Agenda Item D  
May 4, 2009

**SUBJECT:** Approval to award a service contract for the Sanitary Sewer Televising and Cleaning to Metro Sewer Cleaners/Metro Environmental Services, Inc., the lowest qualified bidder, in the estimated amount of \$18,125.

**SUBMITTING DEPARTMENT:** Department of Public Services *BTC* *\$*

**CITY MANAGER APPROVAL:** *[Signature]*

<b>EXPENDITURE REQUIRED</b>	<b>\$ 18,125</b>
<b>LINE ITEM NUMBER</b>	<b>592-592.00-936.500</b>

## BACKGROUND INFORMATION:

The Department of Public Services has continued the work that was initiated under the Capacity Management Operations and Maintenance (CMOM) program. The CMOM program is a systematic process of evaluating the sanitary sewer system to determine sources of inflow and infiltration from groundwater and surface water sources, remove the sources, and maintain the City's sanitary sewer capacity. The program was established as part of an overall asset management program for the sanitary sewer system as outlined in the attached technical memo from Orchard Hiltz & McCliment.

The City has been subdivided into 15 subdistricts to facilitate the assessment of the system. Areas D2 and E were assessed previously. Metering was completed last fall for Area G and now the evaluation of Area G is underway. The master schedule shown in Figure 3 of the technical memo that shows the overall implementation schedule for the entire sanitary sewer system.

Televising of the sanitary sewer system is one of four components of the program which includes: 1) metering the flow; 2) identification of inflow and infiltration through smoke testing, manhole inspections and televising; 3) rehabilitation of manholes and pipes to decrease inflow and infiltration; and 4) post construction metering to determine effectiveness. The televising contract will provide data to city staff for sanitary sewer evaluation. This data along with smoke testing results and manhole investigations will be used to develop a scope for rehabilitation of any deficient structures and pipes.

A total of 12 bids were received and opened on April 23, 2009 following a public bid solicitation period. The low bidder is Metro Sewer Cleaners. Metro's bid is recommended as being in the best interest of the City as it is responsive (i.e., Metro has complied with all requirements of the bidding instructions) and it is the lowest price. Water & Sewer Division staff has previously worked with Metro and recommend award.

A summary of the 12 accepted bids is as follows:

Bidder	Bid
<b>Metro Sewer Cleaners</b>	<b>\$18,125.00</b>
Doetsch	\$23,400.00
Down Under	\$24,471.25
Pipe View	\$24,900.00
American Hydro	\$32,645.00
EQ Industrial	\$32,775.00
DiPonio & Morelli	\$43,950.00
Aqua Group	\$45,685.00
Advanced Underground	\$48,770.00
Inland Waters	\$58,125.00
Robinson Pipe	\$58,225.00
Lakeshore Engineering	\$125,125.00

The work under this contract will be completed by early summer 2009.

**RECOMMENDED ACTION:** Approval to award a service contract for the Sanitary Sewer Televising and Cleaning to Metro Sewer Cleaners/Metro Environmental Services, Inc., the lowest qualified bidder, in the estimated amount of \$18,125.

	1	2	Y	N
<b>Mayor Landry</b>				
<b>Mayor Pro Tem Gatt</b>				
<b>Council Member Burke</b>				
<b>Council Member Crawford</b>				

	1	2	Y	N
<b>Council Member Margolis</b>				
<b>Council Member Mutch</b>				
<b>Council Member Staudt</b>				

City of Novi  
Sanitary Sewer Televising Cleaning  
April 23, 2009 3:00 p.m.

		Est. Qty		Metro Environ-mental - Unit Costs	Metro Total	Doetsch Unit Costs	Doetsch Total	Down Under Unit cost	Down Under Total	Pipe View Unit Cost	Pipe View Total	American Hydro Unit Costs	American Hydro Total	EQ Industrial Unit Costs	EQ Industrial Total
1.	Sanitary Sewer Video Inspection, 6-10"	21,000	LF	0.50	10,500.00	0.65	13,650.00	0.63	13,230.00	1.10	23,100.00	0.77	16,170.00	0.75	15,750.00
2.	Sanitary Sewer Cleaning, 6-10" as needed	10,000	LF	0.65	6,500.00	0.85	8,500.00	1.03	10,300.00	0.05	500.00	1.10	11,000.00	0.75	7,500.00
3.	Bypass Pumping	21,000	LF	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1,050.00	0.25	5,250.00	0.40	8,400.00
4.	Vactor waste debris removal & disposal	25	CYD	45.00	1,125.00	50.00	1,250.00	37.65	941.25	10.00	250.00	9.00	225.00	45.00	1,125.00
Bid Total					18,125.00		23,400.00		24,471.25		24,900.00		32,645.00		32,775.00

		Est. Qty		DiPonio & Morelli Unit Costs	DiPonio & Morelli Total	Aqua Group Unit Cost	Aqua Group Total	Advanced Undergrou nd Unit Costs	Adv. Undergroun d Total	Inland Waters Unit Costs	Inland Waters Total	Robinson Pipe Unit Costs	Robinson Pipe Total	Lakeshore Eng. Unit Costs	Lakeshore Eng. Total
1.	Sanitary Sewer Video Inspection, 6-10"	21,000	LF	1.40	29,400.00	1.60	33,600.00	0.90	18,900.00	1.00	21,000.00	1.60	33,600.00	2.25	47,250.00
2.	Sanitary Sewer Cleaning, 6-10" as needed	10,000	LF	0.75	7,500.00	1.00	10,000.00	1.85	18,500.00	2.35	23,500.00	0.25	2,500.00	3.50	35,000.00
3.	Bypass Pumping	21,000	LF	0.30	6,300.00	0.01	210.00	0.47	9,870.00	0.50	10,500.00	1.00	21,000.00	2.00	42,000.00
4.	Vactor waste debris removal & disposal	25	CYD	30.00	750.00	75.00	1,875.00	60.00	1,500.00	125.00	3,125.00	45.00	1,125.00	35.00	875.00
Bid Total					43,950.00		45,685.00		48,770.00		58,125.00		58,225.00		125,125.00

**METRO SEWER CLEANERS**  
**METRO ENVIRONMENTAL SERVICES, INC.**

P.O. BOX 725 • WALLED LAKE, MICHIGAN 48390-0725

April 23, 2009

City of Novi  
Office of the City Clerk  
45175 W. 10 Mile Rd.  
Novi, MI 48375-3024

Attn: Sue Morianti, Purchasing Manager


Dear Ms. Morianti,

Thank you for the opportunity to bid on your sewer cleaning and pipeline video inspection requirements. Please find our enclosed bid per the specifications. We look forward to the opportunity to serve the City of Novi.

Please don't hesitate to call me with any questions.

Sincerely,



John Schumacher  
Operations Manager  
Metro Environmental Services, Inc.  
Metro Sewer Cleaners 



cityofnovi.org

**CITY OF NOVI  
SANITARY SEWER TELEVISIONING & CLEANING**

**BID FORM**

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the City of Novi to perform the work, for the prices and times specified in this Bid and the Request for Bid. Bidder accepts all terms and conditions of the Request for Bid.

In submitting this Bid, Bidder represents that Bidder:

- is familiar and satisfied with the potential site conditions that may affect cost, progress, and performance of work
- is familiar and satisfied with all applicable federal, state, and local Laws and Regulations
- has given written notice when beginning work in the City of Novi of all conflicts, errors, ambiguities, or discrepancies discovered in the Request for Bid documents
- acknowledges that the quantities provided in the Bid Form are only estimates, and in some cases included in order to establish a unit price in the event the work is necessary, and that actual quantities may increase, decrease, or be zero based on actual work required
- will complete any required inspections by certified technicians using NASSCO's Pipeline Assessment and Certification Program (PACP) for identifying observations

The City of Novi reserves the right to accept any Bid, to reject any or all Bids, and to waive defects or irregularities in any Bid for any reason or no reason at all. The City of Novi also reserves the right to award some, none, or all of the contract.

Bidder will complete the work outlined in the Request for Bid for the following prices:

Item	Description	Estimated Quantity		Unit Price	Amount
1	Sanitary Sewer Video Inspection, 6-10 inches	21,000	LFT	\$ .50	\$ 10,500.00
2	Sanitary Sewer Cleaning, 6-10 inches (as needed)	10,000	LFT	\$ .65	\$ 6,500.00
3	Bypass Pumping	21,000	LFT	\$ 0	\$ 0
4	Vactor waste debris removal and disposal	25	CYD	\$ 45.00	\$ 1,125.00
<b>BID TOTAL:</b>					<b>\$ 18,125.00</b>

CITY OF NOVI  
SANITARY SEWER TELEVISIONING & CLEANING

BID FORM (CONTINUED)

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price bid items will be based on actual quantities of work performed.

Submitted on APRIL 23, 20 09

Corporation Name: Metro Environmental Services, Inc.  
Metro Sewer Cleaners (SEAL)

State of Incorporation: Michigan

By: \_\_\_\_\_  
(signature – attach evidence of authority to sign)

Name (typed or printed): Gary Mapes

Title: President

Attest: Gary Mapes (CORPORATE SEAL)  
(signature – attach evidence of authority to sign)

Business Address: PO Box 725 / 1025 Metro Dr

Walled Lake, MI 48390-0725

Phone No.: 248 960-1111 Fax No.: 248 669-0960

Date of Qualification to do business is: 3/17/1981

BIDDER'S AFFIDAVIT

STATE OF MICHIGAN

COUNTY OF OAKLAND

GARY MAPES being first duly sworn, deposes and says as follows:

That the said Affiant is the President  
of Metro Sewer Cleaners / Metro Environmental Services, Inc.  
the corporation submitting the attached proposals or bids;

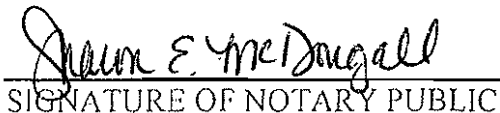
That the facts contained in the proposals submitted herewith  
are true to the best Affiant's knowledge and belief and that  
Affiant has made no material misstatements of fact in order to  
secure and advantage over other bidders or for any other reason.

And that the following officers are duly authorized to execute contracts on  
behalf of said corporation.

Gary Mapes

  
SIGNATURE OF AFFILIANT

Sworn and subscribed before me this 23<sup>rd</sup> day of April, 2009.

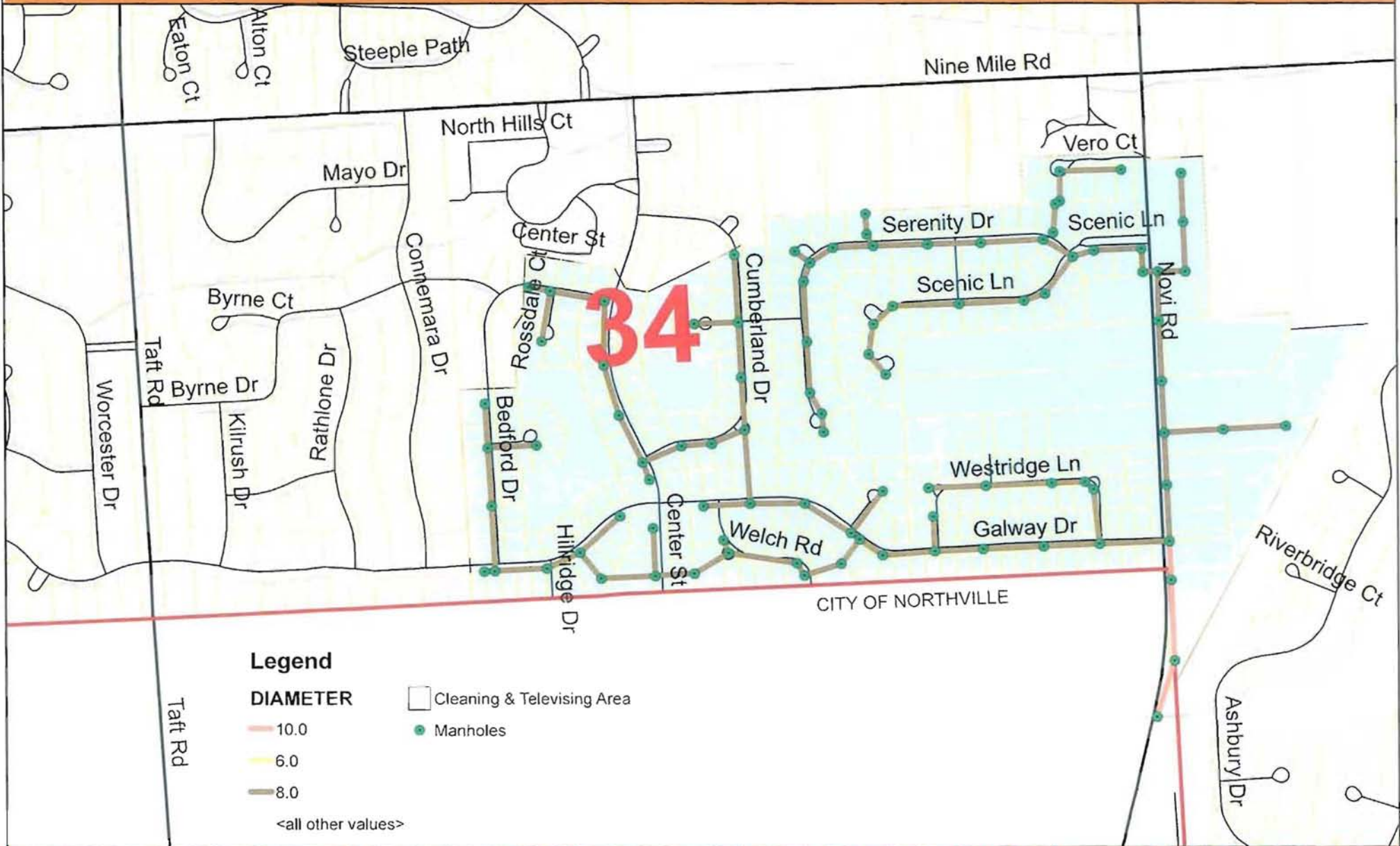
  
SIGNATURE OF NOTARY PUBLIC

A Notary Public in and for Oakland County, MICHIGAN.

My Commission expires 11-15-2011 [SEAL]

# Cleaning and Televising Area in Section 34

## Location Map



### Legend

#### DIAMETER

10.0

6.0

8.0

<all other values>

□ Cleaning & Televising Area

● Manholes

### CITY OF NOVI

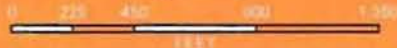
ENGINEERING DIVISION

4515 N. TEN MILE RD.

NOVI, MI 48241-1324

(248) 947-2454

MAP AUTHOR: FIRST LAST TITLE



1 INCH = 700 FEET

MAP PRINT DATE: 1/20/11

### SOURCES OF INFORMATION FOR THIS MAP

ENTER MAP SOURCES HERE

### MAP INTERPRETATION NOTICE

Map information depicted is not intended to create or substitute for any official or primary document. This map was prepared in strict accordance with the National Map Accuracy Standards and uses the most recent available source available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a Licensed Michigan Surveyor as defined in Michigan Public Act 133 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



## City of Novi CMOM Program “Next Steps” Technical Memo June 20, 2008

### Overall Program Goals

The City of Novi Capacity, Management, Operation and Maintenance (CMOM) program was developed to proactively manage the system and control peak flows. This is an important objective for the City due to their limited outlet capacity to Wayne County's North Huron Valley / Rouge Valley (NHV/RV) system. Rather than allowing the limited outlet capacity to be used for system inflow and infiltration (I/I), the City desires to manage and control I/I flows, thereby preserving available outlet capacity for future growth. It is anticipated that this is a more efficient and cost effective manner to operate and maintain the system than allowing the system to deteriorate and decay to the point of failure.

A CMOM is an infrastructure management tool for sanitary sewer systems that was developed by the EPA to serve as a guideline for communities to perform appropriate long-range planning, ensure adequate system capacity, improve operation and maintenance of the system, and ensure the integrity of the system. Implementation of a CMOM may be mandatory in the future and is expected to result in accomplishment of the following objectives in the City of Novi:

1. Provide confidence in the current state of the system
2. Ensure that adequate capacity is available for future growth
3. Meet customer and MDEQ expectations
4. Improve operational and maintenance efficiencies

The first phase of the CMOM program was completed in 2005 and focused on growth projections, a capacity assessment, and implementation of a sewer tracking system required by MDEQ under Part 41 Act 451 of 1994. Phase II was completed in 2007 and focused on performing a sewer system evaluation survey (SSES) in the high priority areas and in evaluating improved management tools. Phase III has focused on implementation of rehabilitation in a pilot area. Subsequent phases will focus on different sub-areas to continue the most cost effective methods of managing and improving the system. It is important that as much I/I removal as possible be completed prior to October 2011, which is when the regional system flow metering will be initiated for final sizing of the County's regional improvement program.

### Historical Municipal Course of Action (Delay Spending)

The City desires to manage and control I/I flows, thereby preserving available outlet capacity for future growth. Accomplishing this objective requires a new way of thinking in City leadership and system management that is different than the default. The default method of managing a sewer system has occurred in many of the City's neighboring communities. It involves making very little capital investment in system management while the system is aging, and allowing it to deteriorate to the point of having significant system defects and requiring substantial capital improvements to fix. It is easy to find oneself following this strategy, since underground systems deteriorate slowly and are costly to inspect. The problem with this default management strategy is that it requires a major capital investment in the system to fix later, at a time when the community can least afford it, because they are built-out and there is very little revenue from growth. Additionally, the cost of the big capital project to fix the system is more expensive than it would have cost to properly maintain

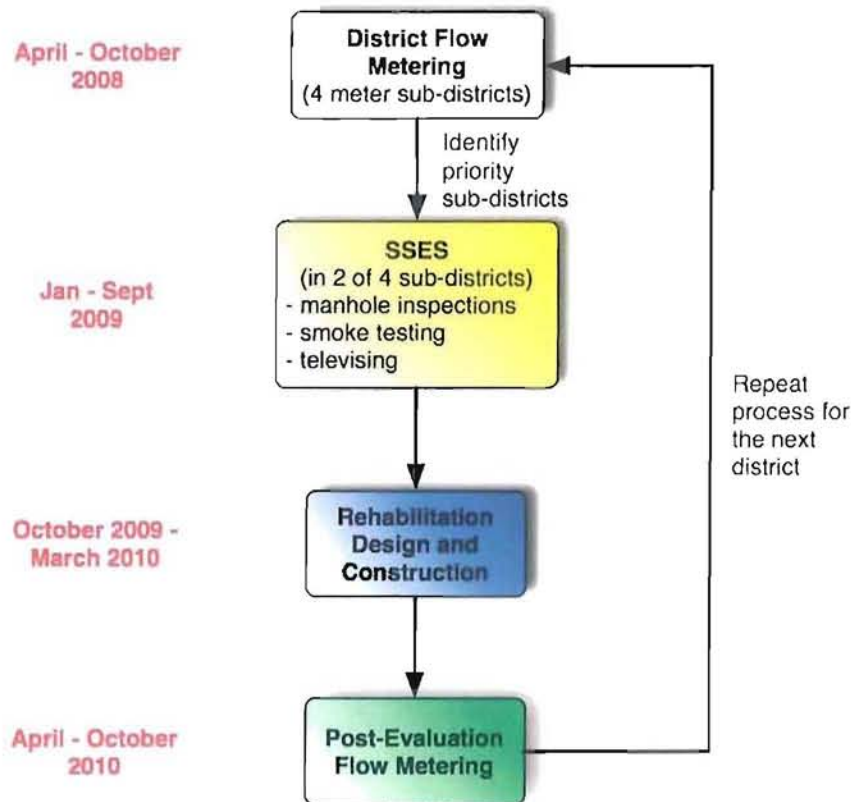
the system as it was aging. It is this default management of systems downstream of Novi, in part, that has driven the need for the NHV/RV regional tunnel project. This is a less than optimal way to operate the system, and it is the management strategy that the City of Novi hopes to avoid.

### The City of Novi CMOM Process

The City desires to proactively manage the system to avoid the pitfalls of the default management strategy. This allows the City to make more efficient maintenance investments into the system. This section provides a process for the City to follow and outlines the next steps for the CMOM program to accomplish the objectives with proactively managing and investing in the system. Critical elements of such an asset management approach are contained in Figure 1.

Prioritized districts for implementing the CMOM program were established from the flow metering performed in the CMOM Phase I Study. These districts have been organized by year for initiation of the sub-district flow metering. This information is depicted on a map of the City in Figure 2 and shown on the schedule in Figure 3. The work in each district involves initial flow metering to identify priority sub-districts, followed by a Sanitary Sewer Evaluation Survey (SSES) in the priority high flow sub-districts. The SSES may include sewer televising, manhole inspections and smoke testing to locate specific system defects. System defects will be corrected through rehabilitation of the sewer system, and the effectiveness of the rehabilitation will be measured with post evaluation flow metering. An example of this process is shown on the schematic below for District G.

### CMOM Example Steps For District G

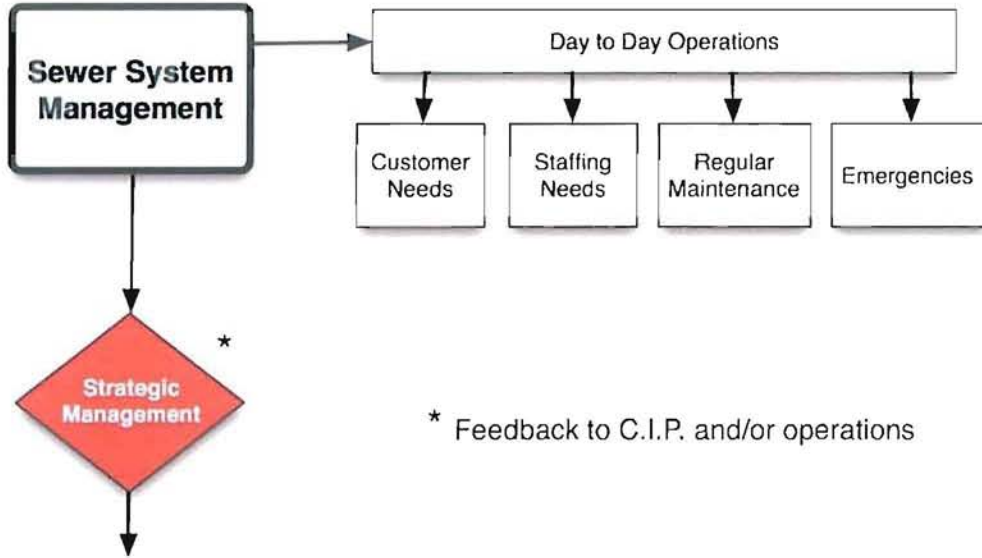


## Recommendations – Next Steps

The City has made great strides in the CMOM program through their efforts to date. The work in the CMOM Phase I and II projects have laid the foundation for the program, and the CMOM Phase III pilot work has provided the necessary feedback to make the implementation of the program go smoothly. Based on the results of this work to date and the CMOM process described above, we offer the following recommendations.

1. Continue to implement the CMOM program following the map and schedule shown in Figures 2 and 3. It will be important to complete the most critical areas prior to October 2011 when Wayne County will initiate the flow metering in the regional system to finalize the regional tunnel size and cost apportionment.
2. Perform the SSES in the areas identified in the "Area G Flow Analysis Technical Memo", and implement the recommendations from the pilot program contained in the "Country Place Sub-Area Rehabilitation Memo" (lessons learned).
3. If desired, the City should pursue a better quantification of monetary benefits of the CMOM program. Intuitively, an on-going investigation / repair / evaluation program makes good sense, but it does not fit in with the historical municipal perspective that is geared towards major capital projects after a system has reached its useful life. The most appropriate strategy should be developed while the City has a healthy capital reserve fund to support the chosen strategy.
4. Continue City management of the CMOM program and develop a City "champion" to lead the efforts:
  - a. Continue to manage as much of the CMOM program using City staff, rather than relying on consultants for the overall program management. The work done in the CMOM Phase I and II projects laid the groundwork for the City to manage the program in-house, and great strides have been accomplished towards this goal already. The City is now managing the overall program, performing the flow metering and coordinating the investigation, design and construction in-house.
  - b. The continuing work will involve significant efforts that are fairly routine. The City can evaluate whether this work is more appropriately performed by City staff or through the consultant procurement process. It may be desirable to use consultants to perform SSES work, design and construction observation. The City should lead the overall management and many of the technical aspects of the program. This CMOM program is critical for the successful long-term management of the City's sewer system, and a City leader needs to champion these efforts. This may require identifying a new role within the City or a new position for this champion. Some degree of specialized experience from a consultant may still be desirable in guiding and /or evaluating these efforts.

**Figure 1**  
**Management of Sanitary Sewer Systems**  
**OHM Sanitary Sewer Infrastructure Assessment Chart**



\* Feedback to C.I.P. and/or operations

**Risk = Probability of Failure X Consequence of Failure**

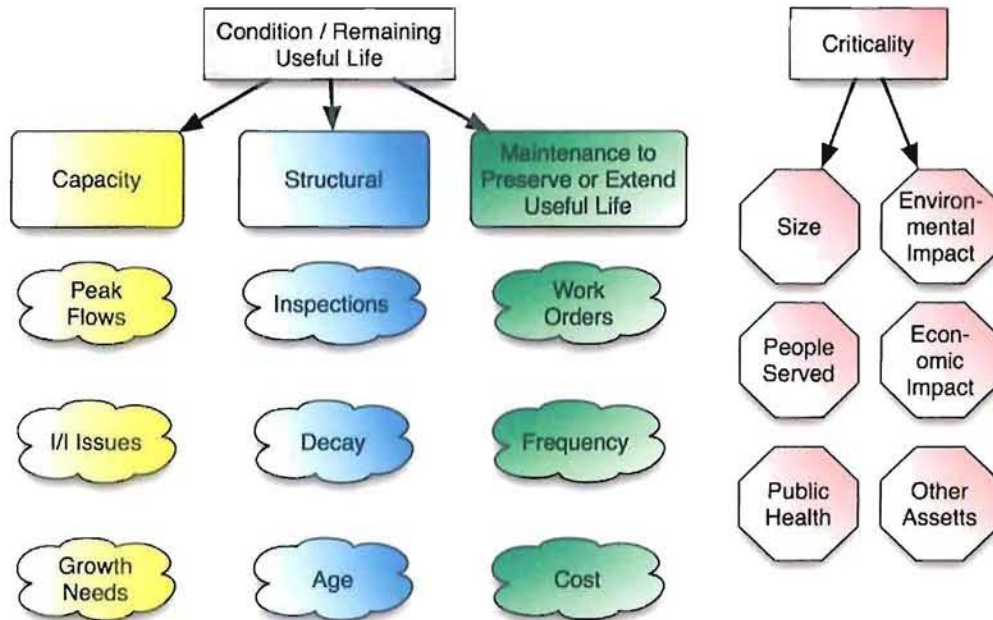




Figure 3: CMOM Implementation Schedule

Task/Project	2007 CY		2008 Calendar Year				2009 Calendar Year				2010 Calendar Year				2011 Calendar Year				2012 Calendar Year				2013 Calendar Year				2014 Calendar Year				2015 Calendar Year				2016 CY	
	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June	July - Sept	Oct - Dec	Jan - Mar	Apr - June				
	2007 Fiscal Year		2008 Fiscal Year				2009 Fiscal Year				2010 Fiscal Year				2011 Fiscal Year				2012 Fiscal Year				2013 Fiscal Year				2014 Fiscal Year				2015 Fiscal Year					
	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	1st 1/4	2nd 1/4		
1. Pilot Study - Pre- and Post-Evaluation and Rehabilitation																																				
2. Purchase Equipment / equipment maintenance																																				
3. Sub-district metering & pre-evaluation metering		G						B & C1					C2 & C3				F1 & F2				E3 & H				I & J				A & D1				D3 & E			
4. SSES Investigations																																				
5. Rehabilitation (design, bidding, construction)																																				
6. Post-Evaluation metering and analysis																																				

Wayne County NHV/RV Metering Starts

(Completion of District E Beyond 2015)

- NOTES
- The annual equipment and maintenance items are for purchase of additional bands, and general meter maintenance/repair as necessary
  - It is recommended to evaluate the effectiveness of the program on an annual basis