City of Birmingham
A Walkable Community

MEMORANDUM

Engineering Dept.

DATE: **September 3, 2015**

TO: **Joseph Valentine, City Manager**

FROM: **Paul T. O'Meara, City Engineer**

SUBJECT: **Acacia Drain Replacement**
Catalpa Dr. – Edgewood Dr. to Grant St.

In late 2014, our office was asked to attend a meeting at the Oakland Co. Water Resources Commissioner's office (OCWRC) regarding the current condition of a part of the Acacia Drain located in Catalpa Dr. Both jurisdictions that benefit from the Acacia Drain (Birmingham and Beverly Hills) were present. At that meeting, we were notified that a recent inspection of the drain section located on Catalpa Dr. from Pierce St. to Edgewood Ave. was in very poor condition, and should be scheduled for replacement. Although this section of sewer was deep, it was decided that open cut construction made the most economic sense. Since the pavement and water main were also in marginal condition, and since we already had similar work planned nearby on streets such as Henrietta St. and Maryland Blvd. for 2015, our office offered to add this work to our upcoming construction contract. Beverly Hills endorsed this approach, and agreed to pay their share.

During this first meeting, I noted that there were runs both upstream and downstream of the subject section of sewer that were the same age. I asked the question as to whether inspections revealed that either of those areas should also be repaired or replaced. I was told that those sections did not need any action at this time.

As you know, we proceeded as planned. Hubbell, Roth, & Clark was hired to complete the plans for this short project, and the westerly two blocks of Catalpa Dr. were completely rehabilitated over the past four months. The work is now drawing to a close.

During initial scoping of the job and design work, our staff noted that a section of concrete east of Edgewood Dr. was cracking and settling. The failing area was on centerline, but was also at the point where catch basins drain into the main line pipe. Since we had been led to believe that the main line County sewer was in good condition here, we assumed that the failure was likely resulting from a problem in the shallow catch basin drain pipe. Our Dept. of Public Services staff was alerted, and they promptly inspected the pipe draining the catch basins. They concluded that this pipe was in good condition, and was not causing the settlement issue. That left only the deeper County drain as the cause. The OCWRC office was notified. They questioned our conclusion, and asked us to inspect the area again. A second inspection revealed that the catch basin drainage pipe was clearly in good condition. At this point, the County started researching inspection records in their office for the County drain. They then determined that this segment of sewer had in fact not been studied as thought, and that this section of sewer was also in poor condition.

We received the attached written request from the OCWRC asking that we proceed with the remaining replacement of the Acacia Drain on Catalpa Dr. Since the work is very similar in nature to the work that was just completed, bidding and contract administration costs can be reduced if this work could be added to the existing Contract #2-15(P). Our contractor, DiPonio Contracting, studied the issue for about two weeks, and decided that they would be able to add this project to their workload, with the intention that it would be constructed and paved prior to the end of the 2015 construction season.

Since funding for this project is shared with Beverly Hills, it is anticipated that the City will be reimbursed for the Acacia Drain portion of the project by the OCWRC. In order to expedite this work, it is requested that the City Commission endorse this concept of proceeding with the work at this time, and direct the City Attorney's office to work with the OCWRC to prepare an agreement that will define the terms of reimbursement to the City. If approved, the Engineering Dept. will move quickly to have Hubbell, Roth, & Clark prepare plans for this remaining section of Catalpa Dr., designed as a similar project to that done on the rest of Catalpa Dr. Plans will have to then be reviewed and approved both at the County and State level. In the meantime, our contractor DiPonio can make provisions to include this work in their schedule, hopefully starting some time in October of this year. The additional costs reflected in this additional work will need to be authorized as Contract Change Order #1.

While plans have not yet been prepared, estimated costs for budgeting purposes have been extrapolated by increasing the costs incurred on the first Catalpa Dr. project, and assuming that Phase II is 84% as large as Phase I (see attached memo for details). Estimated costs for the Change Order, are as follows, rounded up to the nearerst $1,000:

Acacia Drain – Birmingham	$ 91,000.00
Acacia Drain – Beverly Hills	$220,000.00
Sewer Fund	$ 46,000.00
Water Fund	$ 94,000.00
Local Street Fund	$ 24,000.00

While the total value of the Change Order is $475,000, approximately $311,000 of this cost will be reimbursed by the OCWRC to be spelled out in the agreement referenced above, as a transfer from the Acacia Drain maintenance fund.

Finally, on the Phase I project, a special assessment district was created to pay for the replacement of older sewer laterals. On Phase II, sewer laterals should also be replaced. Since bids have been taken and prices established, a public hearing to establish this sewer lateral replacement assessment can be set at this time. A three part resolution is prepared below:

SUGGESTED RESOLUTION:

1. To accept the request from the Oakland Co. Water Resources Commissioner's office to replace the remaining 589 feet of the Acacia Drain on Catalpa Dr. from Edgewood Dr. to Grant St., to be funded by Acacia Drain maintenance fund reserves, subject to a cost reimbursement agreement between the OCWRC and the City being finalized, and

2. To authorize Change Order #1 to the 2015 Local Streets Paving Program, Contract #2-15(P), in the amount of $475,000, to be charged to the following accounts, subject to a cost reimbursement agreement being finalized:

Acacia Drain Maintenance Fund	590-536.001-985.6900	$311,000.00
Sewer Fund	590-536.001-981.0100	$ 46,000.00
Water Fund	591-537.004-981.0100	$ 94,000.00
Local Street Fund	203-449.001-981.0100	$ 24,000.00

and

3. To set a public hearing for the replacement of sewer laterals as follows:

RESOLVED, that the City Commission shall meet on Monday, October 12, 2015 at 7:30 P.M., for the purpose of conducting a public hearing of necessity for the installation of lateral sewers on Catalpa Dr., between Edgewood Dr. and Grant St. Should the district be declared at that time, be it further

RESOLVED, that the City Commission meet on Monday, October 26, 2015 at 7:30 P.M. for the purpose of conducting a public hearing to confirm the roll for the installation of lateral sewers on Catalpa Dr., between Edgewood Dr. and Grant St.

STOP

Paul O'Meara <pomeara@bhamgov.org>

Acacia Park CSO Drain

1 message

McMahon, Michael R <mcmahonm@oakgov.com> Tue, Aug 11, 2015 at 10:28 AM
To: Paul O'Meara <pomeara@bhamgov.org>
Cc: "tmeszler@villagebeverlyhills.com" <tmeszler@villagebeverlyhills.com>, "Korth, Steven A" <korths@oakgov.com>, "Nigro, Gary A" <nigrog@oakgov.com>

Paul,

This is a follow up to our recent telephone conversations regarding approximately 589' of 15" combined sewer pipe on Catalpa between Edgewood and Grant in the City of Birmingham. This sewer pipe is part of the Acacia Park CSO Drain (Chapter 20). As discussed, Wade-Trim has recommended the replacement of this pipe based on their evaluation of the sewer and review of the CCTV inspection records.

Last year, a decision was made to replace approximately 365' of 20" pipe and 345' of 18" pipe, which is the section of the Acacia Park CSO Drain on Catalpa immediately downstream of this run, between Pierce and Edgewood. The City of Birmingham and the Village of Beverly Hills opted to include replacement of this pipe in a previously scheduled local project. It is understood that the City and the Village were directly paying for the improvements and had a cost sharing agreement that generally reflects the apportionment percentages established for the Acacia Park Drain. A permit was issued by our office to allow oversight and documentation of the work.

Replacement of the pipe between Pierce and Edgewood was recently completed. It is my understanding that when approached, the Contractor who accomplished this work expressed a willingness to extend his unit prices and add the replacement of the second section of the Acacia Park CSO Drain on Catalpa to his contract. It would seem to be cost effective and expeditious to have the additional work executed in this manner. However, the Village of Beverly Hills has indicated that they do not have funds available at this time to cover the additional work.

Based upon our previous conversations, the cost to replace the section of pipe on Catalpa between Edgewood and Grant would be roughly $300,000. A review of the reserve accounts in the Acacia Park CSO Drain fund indicates that there are sufficient funds to pay for the proposed work.

Considering that this pipe is part of the Acacia Park CSO Drain, and given the extremely poor condition of the pipe and the need to have the work done promptly, I would ask that you proceed with having your Contractor perform the work under the existing contract and in accordance with his established unit prices. When the work is completed, please invoice the Acacia Park CSO Drainage District and I will present it to the Board for reimbursement. As previously requested, please provide a more refined and detailed line-item breakdown of the estimated cost for our records and eventual review of the final invoice.

Thanks!

Mike

Michael R. McMahon, P.E.

Chief Engineer

Water Resources Commissioner's Office

One Public Works Drive, Building 95 West
Waterford, MI 48328-1907

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WADE TRIM

June 24, 2015

Oakland County Water Resources Commissioner
One Public Works Drive
Building 95 West
Waterford, MI 48328-1907

Attention: Mr. Mike McMahon, PE
Chief Engineer

Re: Acacia Park CSO Drain
Video Inspections and Maintenance Recommendations

Dear Mr. McMahon:

We have completed our review of the closed circuit television inspection videos of the Acacia Park CSO Drain reaches BLT 144-602 to BLT 144-603 and BLT 144-603 to BLT 144-604. The purpose of our review was to assess the condition of the sewers and provide recommendations, if necessary, for rehabilitation. We used the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) to complete the assessment and document the pipeline conditions.

The inspection included two reaches of sewer totaling 590 linear feet. Both sections of sewer consist of 295 linear feet of 15-inch pipe. Both reaches are vitrified clay pipe. The pipe is located on Catalpa Drive, between Edgewood Drive and Grant Street, in the City of Birmingham. The pipe appears to be located under the pavement and ranges in depth from approximately 14 feet at Edgewood to eight feet at Grant.

Both reaches of sewer are in distress. The majority of the sewer is cracked and quartered to varying degrees. There are segments of cracked pipe that appear to be generally stable with no sign of movement while, in other segments, the cracks have opened and displacement is evident.

In the first segment of sewer (BLT 144-602 to BLT 144-603), 75% of the sewer is cracked and quartered. At least 50% of the pipe is showing signs of displacement of varying degrees with up to 25% displacement. A pipe with displacement in the area of 25% is in danger of collapsing totally. This pipe should be replaced in the near future in order to continue providing service in the long-term.

The second segment of sewer (BLT 144-603 to BLT 144-604) is in better condition overall, however, approximately 70% of it is still cracked and quartered, although less severely overall. The short 6-foot section near manhole BLT 144-604 was slip lined with a PVC pipe, probably because it was near collapsing. Many of the services in this section of pipe are protruding into the line and are in poor condition contributing to the overall non-satisfactory condition of the pipe. This segment of sewer should also be replaced in order to continue to provide long-term service. Replacing these sewers is the most viable alternative that will ensure long-term service.

Wade Trim Associates, Inc.
25251 Northline Road
P.O. Box 10
Taylor, MI 48180

734.947.9700
800.482.2864
734.947.9726 fax
www.wadetrim.com

Please feel free to contact our office if you have any questions or require further information.

Very truly yours,

Wade Trim Associates, Inc.

Andrew J. McCune, PE

AJM:ka
OAD 2060-01D
Video Inspection Summary 6-24-15.docx

PHASE 2

Catalpa Dr. - Edgewood Dr. to Grant St.

NORTH SIDE

425	Catalpa	PVC	2004	N	0	$0
457		PVC	2011	N	0	$0
475		Cast Iron	1945	Y	28	$1,540
499		PVC	2011	N	0	$0
517		Clay	1945	Y	28	$1,540
527		PVC	2005	N	0	$0
543		PVC	2011	N	0	$0
567		PVC	2005	N	0	$0
577		PVC	2003	N	0	$0
591		Orangeburg	1952	Y	28	$1,540

SOUTH SIDE

410		PVC	2007	N	0	$0
420		PVC	2005	N	0	$0
440		PVC	2005	N	0	$0
470		Clay	1946	Y	28	$1,540
490		Clay	1946	Y	28	$1,540
Lot 63		None	---	Y	28	$1,540
520		PVC	2005	N	0	$0
544		Orangeburg	1963	Y	28	$1,540
560		Clay	1946	Y	28	$1,540
576		Clay	1946	Y	28	$1,540
592		On Grant	2006	N	0	$0

TOTAL = 252 $13,860

RATIO = 9/21 43%