

October 7, 2016

TO: City Council Member Mike Cappel, Chair
Public Works Committee of City Council

FROM: Wayne S. Davis, City Manager 

SUBJECT: Public Works Committee Meeting on Monday, October 10, 2016

As a reminder, the Public Works Committee is scheduled to meet on Monday, October 10, 2016 at 5:00 p.m. at City Hall. Those items to be discussed include:

1. Staff update on the proposed modifications to the Public Works facility – Brian Riblet, Public Works Director, will be present to provide an update to the Committee on the proposed modifications to the Public Works facility that is currently included in the 2017 Capital Improvement budget. Staff would appreciate the opportunity to discuss the proposed project, projected schedule and receive feedback from the Committee.
2. Staff update on Jolain Drive Storm Water Project – Brian Riblet, Public Works Director, will be present to provide an update to the Committee on storm water discussions with several residents on Jolain Drive and a proposed storm water project. Funding for a proposed storm water project has been included in the 2017 budget requests. Staff would appreciate the opportunity to discuss the project and receive feedback from the Committee.
3. Other Business – The purpose of this agenda item is to provide an opportunity to discuss any issue or ask questions that may be on your mind.

Also attached are the minutes from the June 13, 2016 meeting of your Committee for review and approval at Monday's meeting.

Should you have any questions or concerns pertaining to these topics, or have additional items to be discussed at the meeting, please do not hesitate to contact me.

c: Mayor and City Council Members (3)
Connie Gaylor, Administrative Coordinator
Department Heads
File



AGENDA

**October 10, 2016
City Hall
5:00 P.M.**

- 1. Call to Order**
- 2. Guests and Residents**
- 3. Communications**
- 4. New Business**
 - a. Staff update on the Proposed Modifications to the Public Works Facility
 - b. Staff update on Jolain Drive Storm Water Project
- 5. Approval of Minutes:** June 13, 2016
- 6. Other Business**
- 7. Adjournment**

October 7, 2016

TO: Wayne Davis, City Manager
FROM: Brian Riblet, Public Works Director 
REF: Jolain Drive Storm Water (7775 to 7885)

Background

The purpose of this memo is to provide a chronology of the Jolain Drive storm water discussions that began in October 2011 when a resident of Jolain Drive first contacted the City of Montgomery with concerns of storm water in his back yard. The nature of the concern from this resident was at times when heavy or sustained rainfalls occur it creates a large and rapid movement of water above ground in the rear of the property.

City staff began reviewing the issue and solicited a proposal from CDS Associates, Inc. to complete a drainage study at an estimated fee of \$17,000 to \$21,000 for the area in question to include: establishing a tributary drainage area, locating existing storm pipes and preparing a topographic survey of the existing drainage swale and storm pipes in the back yards of the project scope area.

The information and proposal was discussed at the Public Works Committee of Council on November 11, 2011 and authorization was given to CDS Associates, Inc. to proceed with the drainage study.

On January 10, 2012 CDS Associates, Inc. provide the results of the drainage study which indicated the storm drainage along the rear yards of 7775 to 7885 Jolain Drive is collected and conveyed under Jolain Drive by a 54" diameter concrete storm pipe located on 7875/7885 Jolain Drive. A drainage swale is evident from 7775 to 7815 Jolain Drive at which point a portion of the drainage water is collected at a headwall and conveyed by a 12" concrete storm pipe to the 54" concrete storm pipe. The rest of the drainage does not maintain a channel but travels over the land.

In the late 1970's a channel improvement was proposed and some channel construction easements were acquired for a 5' wide bottom within a 20' wide channel easement. Channel easements were only recorded on seven of the twelve properties. This information was discussed at the Public Works Committee of Council on January 17, 2012.

City staff continued to research and study the drainage area and worked with Law Director, Terry Donnellon on the issue. Mr. Donnellon prepared a memo with this information being discussed at the April 17, 2012 Public Works Committee of Council.

Mr. Donnellon's memo including: a review of the drainage study conducted by CDS Associates, Inc. already mentioned above, history of the project scope area was reviewed as City staff was able to find records dating back to 1794 with the City addressing the same storm water issue.

At that time the City's engineer prepared a cost estimate to address drainage complaints by installing a large storm pipe from 7775 to 7875 Jolain Drive at an estimated cost of \$112,000 but this project was never completed. In 1978 the City again studied the project scope area with engineers proposing two options to address storm drainage issues. Plan A to reopen the Jolain Drive drainage channel which had been filled in through the years by the various property owners at an estimated cost of \$100,000 or Plan B to install a storm pipe estimated at \$200,000. City Council declined Plan B but offered to pay for Plan A and give the residents the option to pay the difference for Plan B through a special assessment. In order to proceed the City of Montgomery needed to secure the easement rights however three of the residents refused the option therefore the City declined to go any further with the project without cooperation of all property owners.

Mr. Donnellon's memo continued with a legal opinion that the City has immunity from civil liability for damages arising from governmental operations under Chapter 2744 of the Revised Code. Since the City has never made the decision to intervene to design and construct a storm system we have immunity from any damage caused within or by this storm drainage channel and cannot be required to intervene because of potential liability.

And finally, Mr. Donnellon's memo outline potential options moving forward with a public/private partnership first discussed in the 1970's appearing to be the most logical and one the Public Works Committee of Council seemed to be supportive of with the key being agreement of all property owners to provide the necessary easements and some level of participation in the overall project costs.

City staff never lost sight of the issue and continued discussions with the residents of Jolain Drive as well as efforts to find solutions resulting in a positive impact on storm drainage in the area.

In April 2014, Public Works staff reconstructed a concrete spillway located at 7875 Jolain Drive at a cost of \$2,500.

In July 2014, Public Works staff installed a fence on the headwall located at 7875 Jolain Drive at a cost of \$500.

In October 2014, CDS Associates, Inc. was authorized to conduct a pond analysis at a cost of \$1500 for 10011 Zig Zag Road to identify existing impacts to the drainage area and possible solutions to positively impact the drainage area. An option to raise the pond storage elevation and to lower the water surface elevation was studied and it was determined the potential additional volume would not approach a volume that would make this option feasible.

Again, City staff never lost sight of the issue and continued discussion with residents of Jolain Drive.

In 2015 and 2016, Public Works staff were called to the project scope area on several occasions to investigate and make repairs to the existing 12" concrete pipe. Staff solicited Tele-Vac Inc. to video the 12" concrete pipe and found that there were multiple areas where the storm pipe had separations and other deficiencies.

Public Works staff also began researching and evaluating other potential solutions the storm drainage issue and only July 6, 2016, Wayne Davis, Brian Riblet and Gary Heitkamp met with residents of Jolain Drive to discuss and review potential options for consideration including:

- Reconstruction of the drainage swale with a 5' wide bottom and 20' channel easement at an estimated cost of \$140,000 to \$190,000
- Construction and installation of a 48" storm pipe along the back property lines at an estimated cost of \$240,000 to \$290,000
- Removal of existing 12" concrete pipe and installing dual 24" storm pipes at an estimated overall cost of \$175,000 with a public/private partnership approach to include:
 - All impacted property owners to grant any necessary easement required,
 - Financial participation by each homeowner to divide the estimated \$50,000 cost to install the second 24" storm pipe with a potential assessment option,
 - Confirmation by all property owners that this proposed solution is not a 100% guarantee that their homes would never be impacted.

This proposed solution was shared with all seven property owners within the project scope and all are supportive of this approach.

In August, 2016 City staff programmed funds in the 261.000.5470 (\$100,000) and the 228.000.5401 (\$75,000) accounts for consideration by City Council to be included in the 2017 City of Montgomery budget.

Recommendation

City staff respectfully requests the Public Works Committee of Council authorization to continue to work with the residents of Jolain Drive in pursuing the proposed storm drainage project to remove the existing 12" concrete storm pipe and installing dual 24" storm pipes at an estimated overall cost of \$175,000 with a public/private approach as indicated above and to continue consideration of the proposed budget funds included in the 2017 requests.

City staff would also pursue potential grant opportunities through the Hamilton County Storm Water District (HCSWD) for funds that may assist in subsidizing the proposed storm water project.

Should you have any questions please contact me.

Attachments:

- CDS Drainage Study – January 10, 2012
- Terry Donnellon Memo – April 12, 2012
- Exhibit A – Jolain Drive 20' Swale Easement
- Exhibit B – Jolain Drive 8' Drainage Easement
- Exhibit C – 1974 Proposed Solution
- Exhibit D – 1979 Memo from Law Director
- Exhibit E - 1993 Resolution
- CDS Pond Analysis – October 29, 2014
- Proposed Dual 24" Pipe Solution Plan Sheet
- Preliminary Estimate of Construction Cost
- Assessment Process



CDS ASSOCIATES, INC.

Knowledge * Expertise * Innovation

M E M O

TO: Brian Riblet
Acting Public Works Director
City of Montgomery

FROM: Allen Messer, P.E.
Project Manager
CDS Associates, Inc.

RE: **Jolain Drive Drainage Study**
2011015-024

DATE: January 10, 2012

This memo summarizes the investigation into the storm drainage along the rear yards of the residences on the south side of Jolain Drive from 7775 to 7885. The investigation included the following:

- Field visited the location to assess storm drainage characteristics / features of the property and determine the sources of the storm drainage runoff tributary to the location
- Researched improvement plans and easements effecting the location
- Conducted a topographic survey of the rear yards and prepared 11 x 17 plan showing topography and easements
- Developed 11 x 17 drainage map using CAGIS which shows buildings, driveways, streets, lot lines and contours at 2' intervals
- Summarize findings

The storm drainage along the rear yards of 7775 to 7885 Jolain Drive is collected and conveyed under Jolain Drive by a 54" diameter reinforced concrete pipe located on 7875 and 7885. The watershed tributary to the inlet of the 54" pipe is approximately 67.1 acres. The majority of the drainage flows from west to east across the rear yards south of Jolain Drive. A defined swale is evident from 7775 through 7815. At 7815 a portion of the water from the swale is collected at a headwall and is conveyed by 12" storm pipe across the properties to the 54" pipe. The rest of the drainage does not maintain a channel but fans out over the land.

During our investigation we found that the area was originally developed and homes were built along the south side of Jolain Drive in the mid 1950's (1956 and 1957 are listed as date of construction on the Hamilton County Auditor's site).

In the late 1970's a channel improvement was proposed and some channel construction easements were acquired. The channel improvement plans were designed by Frederick Schildhauer Engineers and show a channel with a 5' wide bottom located within a 20' wide channel easement. The easement appears to have been recorded on seven of the twelve properties investigated. It is unknown why easements were not recorded on the other properties and why the project was not constructed. The easements are shown on the attached 11 x 17 drawings.

In 1995 CDS Associates, Inc did an investigation into the tributary area for then Montgomery City Engineer, Joe Cron. Reasons for the investigation are unknown. The tributary area used in that investigation is consistent with the conditions today. No improvement plans were prepared as a result of the 1995 investigation.

Redevelopment of the properties on the south side of Jolain Drive began in 2008. Some of the original 1950's ranch homes were demolished and larger homes were built on the property. Because of the increased house sizes, the distance separating the homes and the storm water flow decreased and in some instances walk out basements were constructed on properties that were formerly had one story slab on grade homes.

In 2011, residents from Jolain Drive approached Montgomery City Council and requested that something be done to reduce the amount of overland flow across their rear yards. As a result, CDS was asked to perform this study to determine what could be done. Options for reducing the overland flow that were evaluated include:

- Piping a portion of the water directly to the 54" diameter pipe
- Redirecting flow so that it could bypass the rear yards
- Utilizing an existing pond, located to the south west, to detain the storm water and release it at a slower rate

As noted earlier, a portion of the flow is currently piped directly into the 54" diameter pipe through a 12" storm pipe. This pipe carries a flow of approximately 3 cfs, approximately 3% of the amount of runoff generated by a 10 -year storm event. A 48" diameter pipe would be needed to convey the runoff from a 10 - yr storm event. Unfortunately the topography of the rear yards and in some cases the walkout level of the homes are low in relation to the invert of the 54" pipe so a 48" diameter pipe could not be installed due to lack of cover. Topography would allow for up to 18" diameter pipe installation but increasing the pipe size from 12" to 18" would still only convey approximately 8% of the 10 - yr storm.

We investigated routing a portion of the flow from the rear yards to an existing 30" storm pipe located in the front yards along the south side of Jolain Drive. The invert of the existing pipe was too high to drain the rear yards. Also the 30" pipe is too small to convey the 10-yr storm. Installation of a larger pipe along Jolain Drive at a deeper elevation would conflict with the location of the existing sanitary laterals and would likely cost in excess of \$150,000. Thus redirecting the flow does not appear to be a viable option.

We were asked to limit our investigation into utilization of the existing pond as a storm water detention basin. Thus we did not survey the pond or prepare computations related to utilization of it as a detention basin. However we did notice that the surface area of the pond is only 1% of the approximate 40 acres tributary to it. The size of a detention basin needs to be at least 5% of the tributary area. Thus the pond would likely need to be increased in size by at least five fold to serve as a detention basin for the area.

Because of the physical constraints we found during our investigation we are seeking further input from you and the Public Works Committee of Council before proceeding with a more detailed evaluation of the options listed above.

ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

TO: Mayor Ken Suer
Members of City Council

FROM: Terrence M. Donnellon

RE: Jolain Storm Water

DATE: April 12, 2012

Over the past six months staff, and at times the Public Works Committee, has investigated complaints from residents from the south side of the 7700 and 7800 blocks of Jolain Drive concerning storm water accumulation and runoff through their yards. What we have discovered is that this is an issue which is forty or more years old. To address the issue we have completed our own field inspections, chronicled residents complaints, and we have engaged CDS Associates, Inc. (CDS) to investigate the issue and review possible solutions.

After receiving the recent report from Allen Messer from CDS, we continued our review of the Jolain area storm water runoff issue to determine what solution, if any, there may be to address resident complaints. This memo is being sent as a Confidential Attorney-Client Privileged Communication, but represents the collaborative work from all of us who have been copied on the memo.

Messer Study:

What Mr. Messer has told us, and what he has discussed at the meeting of Public Works, is that there is storm water drainage running along the back yards of the properties on the south side of Jolain Avenue east of Zig Zag from 7775 Jolain through at least 7865 Jolain through a defined swale. Storm water collects in these yards and flows to the east to the low point on Jolain at the Zilch property at 7865 Jolain Drive. There is a large sewer just west of Knollbrook and east of the Zilch property which takes the water underneath Jolain and discharges to the creek which crosses under Knollbrook Terrace. Only a portion of the runoff collects at the midpoint at 7815 Jolain and drains to the 54 inch pipe through a smaller 12 inch pipe. The remaining water fans out over the properties in question. To appropriately improve the properties would require a fix of more than \$150,000.00. This proposed project would run parallel lines through the Jolain properties drainage channel then connect to the larger 54 inch pipe near Knollbrook.

Mr. Messer believed there were easements along seven of the ten affected properties on Jolain, which he noted on his plat drawing presented to the Committee (See attached – A). These excluded properties were identified as the Kabakoff property at 7805 Jolain, the Stigler property at 7845 Jolain, and the Zepf property at 7855 Jolain. Separately there is a storm sewer easement running across all properties which appears to be part of the original subdivision plat (See attached – B). This earlier storm sewer easement was intended to contain a 12 inch pipe, but for the most part the pipe zigzags in and around the original easement area. There are also two easements running north and south as shown on Mr. Messer's plat, but they do not service the runoff area. The existing system obviously is inadequate to address the surface water complaints.

A review of the Hamilton County records indicates that in 1979 the City received options to purchase easements across several of these Jolain properties and the entry property on Zig Zag Road, for the purpose of a *Jolain Drive Channel Reconstruction Project*. The options ran until 1981 and could be exercised by the City for \$1.00 each. Despite what is noted on Mr. Messer's plat, it does not appear that the City exercised any of these easement options. Mr. Messer now agrees that no such drainage easements should be listed on his plat drawing.

History:

In researching the history of this project, we found records dating back to 1974 with the City addressing this same storm water runoff problem along Jolain.

In 1974 the City's engineers prepared a cost estimate to address drainage complaints along Jolain Drive. The engineer proposed the installation of a storm water sewer from the end of the 54 inch storm water pipe at the east end of the area in question westwardly to Zig Zag Road. The pipe would also pick up the perpendicular easements running from Jolain Drive. The engineer was concerned that the easements in place from the 1956 subdivision plat were inadequate to support the project and he noted additional easements would be required for this installation. We can assume that the needed easements and the proposed piping would run through this area on Jolain in the 7700 and 7800 blocks.

The proposed solution was a corrugated metal elliptical arch sewer extending west from the current Weller property at 7875 Jolain to the Sherry property at 7775 Jolain Drive. The elliptical arch sewer was proposed to minimize the hump that would run through the rear yards along Jolain. A typical circular sewer would have been one foot higher along the drainage area. The cost estimate at that time without the added expense to acquire the appropriate easements was \$112,000.00 (See attached reports – C). For some reason which is not discernible in the records, the City did not proceed with this project in 1974.

In 1978 the City again studied this drainage area. The engineers at that time proposed two plans to fix the storm water issue. Plan A, to reopen the Jolain Drive drainage channel which had been

filled-in through the years by the various property owners, would cost \$100,000.00. Plan B, to pipe the storm water underground, was now estimated to cost more than \$200,000.00. City Council declined the more expensive fix, but offered to pay for the drainage channel project and give the residents the option to pay the difference for the underground system through a special assessment.

To initiate the project the City Administration authorized the Law Director, Dick Dusterberg, to secure the easement rights for the channel project. Dick Dusterberg then contacted the various homeowners proposing an Option Agreement which would have allowed the City to acquire the easement rights when and if all residents concurred. Three of the residents refused the option, and as noted in Mayor Young's memo to Public Works dated March 13, 1979, the City declined to go any further with the project without the cooperation of all property owners (See attached reports – D). I confirmed this written history with Mr. Dusterberg. He recalled that while three homeowners ultimately refused to grant the option/easement, many more homeowners only reluctantly signed off on the project.

What is our obligation today to these property owners? Certainly there is the perception of a public problem because storm water is flowing over their properties and it is not appropriately discharged, but is it a public responsibility? As you can see, this debate is more than 30 years old.

If the City was utilizing the Jolain properties to discharge public water, then arguably we have a public responsibility as we are subjecting their real estate to a public storm water system. This is the issue we recently faced on Deerfield Road. While the entire drainage area extends up to Swaim Field, it does not appear from our review that there is identifiable public water being discharged across these Jolain lots. There may be incidental runoff from the roadway, but the various roadway systems all have been designed to control and contain the water and discharge storm water through public systems. Additionally, there is a small area of the Swaim Field subdivision around Bob White which drains across Zig Zag to the detention pond south of Jolain Drive. It is difficult to tell what water may or may not overflow from the pond as it detains water from a variety of sources only a part of which may contain the Swaim runoff.

If there is no public water discharging directly to the Jolain system, do we still have liability for any problems?

The City has immunity from civil liability for damages arising from governmental operations. This immunity arises under Chapter 2744 of the Revised Code. One of the identified governmental functions is *The provision or non-provision, planning or design, construction or reconstruction of a public improvement, including but not limited to a sewer system.* RC§ 2744.01 (C)(2)(l). On the other hand, the City does have liability for any damage proximately caused when exercising a proprietary function. One of the proprietary functions defined by statute is *The maintenance, destruction, operation and upkeep of a sewer system.* RC § 2744.01

(G)(2)(d). Under some circumstances we have immunity from storm water runoff problems and in other circumstances we do not. How do we distinguish between the two?

The courts have indicated the decision whether or not to design and construct a sewer system is the exercise of administrative discretion and clearly is a governmental function which gives the City immunity under Chapter 2744. In effect, the courts will not second guess a local government on decisions as to how to expend public funds. However, once a decision has been made to expend public funds, the courts will impose the responsibility on that government to maintain the system. In Hamilton County the case of *H. Hafner & Sons, Inc. v. Cincinnati Metropolitan Sewer District, et al.* (1997), 118 Ohio App3d 792, 694 NE2d 111, 1997 Ohio App. LEXIS 952, extended the maintenance responsibility to the City's duty to redesign a system once it has been put in place and proves to be inadequate over time. Courts throughout the state are split on this extension of immunity/liability with some courts contending that the redesign is a governmental function and not a maintenance function. However, in Hamilton County once a system is in place, it is our duty to maintain it and upgrade the system when appropriate.

Does this mean we have exposure for the Jolain Drive storm water problem? Looking back to 1974, the City recognized the problem the homeowners complained about and designed a system, but the City did not implement the system. In 1978/79 the City became more aggressive in designing a system and agreeing to install the system, but the project stopped when the residents would not cooperate to grant the appropriate easements. We believe it is safe to conclude that we have never constructed a storm water drainage system along Jolain Drive, so the current problem is not a failure to upgrade the system, but the current problem is the same problem which has existed for several decades. Since we have never made the decision to intervene to design and construct a system, we still have immunity from any damage caused within or by this storm water channel and we cannot be required to intervene because of any potential liability.

What are the options today to address this issue?

If we elected to undertake the responsibility now, we not only need appropriate easements from each of the property owners, but we face at a minimum \$150,000.00 cost to install a system. We do not know if this cost involves replacing landscaping, fences, or other property which may be disrupted. We also do not know if we will have the cooperation of everyone involved to grant us the easements without additional cost to forcibly acquire these easement rights. If we did undertake the project, we could pass the liability back to the homeowners through a special assessment. The cost of the system can be assessed based upon either the tax value of each property or based upon the finding of the benefit to each property. The latter is a very subjective standard and nearly impossible to calculate. When using the benefit-to-property analysis, we also would face the question as to whether or not other properties in the watershed other than Jolain Drive should also pay for the easements and the construction as they may be benefiting from discharging their water across these lands. The special assessment process requires a

legislative finding, an estimated assessment for each impacted property, and the right for each impacted property owner to file an appeal to City Council. This could be a much greater administrative burden than anyone would anticipate. Once we design and build the system, even if the cost is assessed to the property owners, we now assume all future responsibility for the system.

A second option is to walk away from the issue concluding it is not a public responsibility and allowing the homeowners to solve any storm water problem among themselves. We do have immunity since no system has ever been designed and constructed to address the issue. This solution may not be possible privately among the homeowners as we are not sure that everyone in the area is in agreement to undertake the cost as some of the properties have been converted to newer homes, some of the properties have never been rebuilt, and some of the neighbors blame the newer construction for the problem itself. If we walk away from the problem leaving it to the private property owners, we are doing nothing different than what has been done in at least 1974 and 1978/79 and history tells us that likely nothing will change.

A third option is a hybrid of the two, a public/private partnership. In 1993 the City approved such a program for a short period of time contributing \$15,000.00 to the cost to fix privately owned sewers (See attached – E). Homeowners who believed they were impacted by a storm water runoff problem in a private sewer system could apply to the City for relief. The homeowner was required to pay a minimum of 50% of the cost to fix the problem and the City would match their cost up to a maximum of \$5,000.00 per property. While that system in 1993 was not designed to correct the Jolain complaints, and in my discussions with the prior Law Director he did not believe it was directed at the Jolain problem, a similar system could be an option to cure the Jolain Drive storm water issue.

To exercise this option the City would create a line item account within the General Fund budget that the City is willing to commit to contribute to correct the problem. We would then set the parameters for participation in obtaining the funds. First, no monies could or should be expended until all affected property owners have agreed to participate. Second, the City would not design or build the system, but the cost contributed by the City can assist in engineering the system. We already have some of the engineering in place through CDS which we can give to the affected property owners. Third, the City would contribute its cost up to a certain percentage of the project. As an example, if the total project is \$150,000.00, the City could agree to contribute one-third of the cost capped at a total of \$50,000.00 and individually capped at a secondary level per property. Fourth, the City will only contribute the funds on the execution of an agreement including a release, which would acknowledge the responsibility of the individual property owners to build and maintain the storm water system.

Using this approach we would leave the resolution as a private solution and we would not take on the responsibility for the upkeep of the public sewer system. The failure of the system in the future would rest with the individual property owners. As a private project, with the City's limited contribution, the property owners should not be required to pay prevailing wage. With

the signed Releases, we are also freeing ourselves from any litigation or past problems. The downside to this approach is the potential precedent it would set. This is not the only area which has experienced storm water flooding. Also, the cost is not a small amount and it is not currently budgeted nor prioritized in the strategic plan, nor is it identified in the City's 2012-2016 Budget and Forecast.

How can we justify any expenditure of funds if there is no public responsibility? As mentioned above, there is a difference between a public problem as perceived by the homeowners and a public responsibility. We have no responsibility by statute nor is there a compensable taking of private property. It also appears we have no responsibility under Chapter 2744 as the City has never constructed a system across these properties. It is perceived as a public problem when more than one private property is impacted. The new NPDES water quality standards currently deal with maintaining the quality of storm water runoff so as not to pollute our streams. The future standards may require us to contain and control the quantity of storm water runoff. These are evolving standards in all communities and expending the funds now could be justified as moving ahead of the curve for the management of storm water, if Council elects to intervene.

Hopefully this memo gives you a good summary of the issues. We can address any questions more fully in an Executive Session, but we wanted to give you this report in advance for discussion purposes.

Respectfully submitted,

Terrence M. Donnellon,
Law Director

TMD/lld

Enclosures

cc: Wayne Davis
Jim Hanson
Brian Riblet
Frank Davis



SHEET: X OF X PLN1	DATE: 11-04-2011 TIME: 10:53 AM PROJECT: 201103-54	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	BY	DESCRIPTION					DRAWING TITLE PLAN SHEET PROJECT TITLE JOLAIN DRIVE DRAINAGE CITY OF MONTGOMERY HAMILTON COUNTY, OHIO	CONSULTANT PRELIMINARY NOT RELEASED FOR CONSTRUCTION	CONSULTANT CDS ASSOCIATES, INC. Planning • Design • Construction www.cdsassociates.com 11200 Elmwood Road Columbus, OH 43240-1200 614.291.1200 614.291.1201 7500 Ohio Highway Ross, OH 45069-0200 513.263.4444 513.263.4445
	NO.	DATE	BY	DESCRIPTION									

H.H. Hold till further notice

Exhibit "C"

SUCCESSORS TO
J. A. STEWART ENGINEERING CO.
H. A. NUNLIST, 1907-1946
H. E. FROLICHER, 1923
P. F. NUNLIST, 1934-1967
H. B. GARDNER, 1926
R. J. GEERS, 1930
C. A. RIGGS, 1907-1965

NUNLIST & FROLICHER
CIVIL ENGINEERS AND SURVEYORS
1012 TRI-STATE BUILDING
CINCINNATI, OHIO 45202
621-2476

MUNICIPAL ENGINEERING
SEWERAGE
SEWAGE DISPOSAL
SUBDIVISION DEVELOPMENT
CEMETERY PLANNING
PROPERTY SURVEYING

October 23, 1974

Mr. Herman C. Hansen, Service Director
City of Montgomery, Ohio
P. O. Box 42202
Cincinnati, Ohio 45242

Dear Mr. Hansen:

On October 15, 1974, we forwarded to you a plan and estimate for the cost of installing a storm water sewer from the end of the 54" storm water pipe on the Bakie property on the South Side of Jolain Drive, Westwardly to Zig Zag Road and connecting the three inlets on the South Side of Jolain Drive.

We wish to call to your attention that before you can proceed with this sewer it will be necessary to obtain a new easement for the construction of the sewer with the right of entry to construct said sewer. As a matter of fact a part of the sewer would be built in the existing easement as it appears on the Plat of Record, Block "B" Jolain Acres Subdivision, but there is no language in our opinion on the plan of Block "B" Jolain Acres Subdivision which permits the right of entry to construct the sewer and this will absolutely be necessary otherwise the contractor cannot perform the work.

We have designed the sewer as a corrugated metal elliptical arch sewer because of the lack of headroom through the properties and it will be necessary to fill over the sewer through Lots 19 to 29, inclusive. In filling over the sewer we will provide as smooth a slope both North and South of the sewer as possible in order to eliminate the appearance of a hump through the rear yards of the property. If a circular sewer were used it would extend approximately an additional foot higher vertically than the elliptical sewer.

There is at present no sewer easement across the Tafel and Maccani properties except along their rear lines which would not be the proper place to locate the sewer since we are connecting up the storm water drainage at Zig Zag Road. The recorded easements across these properties is in the rear which would create an adverse grade problem.

SUCCESSORS TO
J. A. STEWART ENGINEERING CO.
H. A. NUNLIST, 1907 1946
H. E. FROLICHER, 1923
P. F. NUNLIST, 1934 1967
H. B. GARDNER, 1926
R. J. GEERS, 1930
C. A. RIGGS, 1907 1965

NUNLIST & FROLICHER
CIVIL ENGINEERS AND SURVEYORS
1012 TRI-STATE BUILDING
CINCINNATI, OHIO 45202
621-2476

MUNICIPAL ENGINEERING
SEWERAGE
SEWAGE DISPOSAL
SUBDIVISION DEVELOPMENT
CEMETERY PLANNING
PROPERTY SURVEYING

- 2 -

October 23, 1974

Mr. Herman C. Hansen, Service Director
City of Montgomery, Ohio

It will be necessary to obtain easements on Lots 19, 21, 24 and 25 for pipes to drain the surface water as well as the new ditch easement to drain the water over lots 21 to 29, inclusive.

Whenever Council so desires we will prepare the necessary Right of Way Plats because the right of way in our judgment should be obtained and recorded before a contract is let for the installation of the sewer.

We have submitted to you our invoice for the preparation of plans and estimates for this sewer installation and if the sewer work is to be included in the 1975 budget we would appreciate obtaining payment for work done todate during 1974.

Respectfully submitted,

NUNLIST & FROLICHER


H. E. Frolicher

HEF:MB

SUCCESSORS TO
J. A. STEWART ENGINEERING CO.
H. A. NUNLIST, 1907 1946
H. E. FROLICHER, 1923
P. F. NUNLIST, 1934 1967
H. B. GARDNER, 1926
R. J. GEERS, 1930
C. A. RIGGS, 1907 1965

NUNLIST & FROLICHER
CIVIL ENGINEERS AND SURVEYORS
1012 TRI-STATE BUILDING
CINCINNATI, OHIO 45202
621-2476

MUNICIPAL ENGINEERING
SEWERAGE
SEWAGE DISPOSAL
SUBDIVISION DEVELOPMENT
CEMETERY PLANNING
PROPERTY SURVEYING

October 15, 1974

Mr. Herman C. Hansen, Service Director
City of Montgomery, Ohio
P. O. Box 42202
Cincinnati, Ohio 45242

Dear Mr. Hansen:

In accordance with the request of the City of Montgomery, we have prepared the plan and estimate for the installation of storm water sewer South of Jolain Drive and East of Zig Zag Road, in the City of Montgomery. We are enclosing two (2) prints of the plan and estimate, in duplicate, for this installation.

We wish to call to your attention that we are using in our estimate and in the plan at the present time a proposed corrugated multiple plate arch installation for the simple reason we can not install a circular sewer of adequate size without considerable more expense and creating a hump or greater grade change in the rear yard of these properties.

After you have had an opportunity to look over the plan carefully please give us a call and I will be glad to discuss it with you because it will be necessary to obtain in some places a new sewer easement because the sewer cannot be constructed in its entirety within the easement of record as it is on the record plat.

Respectfully submitted,

NUNLIST & FROLICHER


H. E. Frolicher

HEF:MB
encs.

SUCCESSORS TO
 J. A. STEWART ENGINEERING CO.
 H. A. NUNLIST, 1907 1946
 H. E. FROLICHER, 1923
 P. F. NUNLIST, 1934 1967
 H. B. GARDNER, 1926
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NUNLIST & FROLICHER
 CIVIL ENGINEERS AND SURVEYORS
 1012 TRI-STATE BUILDING
 CINCINNATI, OHIO 45202
 621-2476

MUNICIPAL ENGINEERING
 SEWAGE DISPOSAL
 SUBDIVISION DEVELOPMENT
 CEMETERY PLANNING
 PROPERTY SURVEYING

October 15, 1974

Approximate Estimate of the cost of constructing storm water sewer South of Jolain Drive and East of Zig Zag Road, in the City of Montgomery, Ohio.

FOR THE CITY OF MONTGOMERY, OHIO

Remove existing headwall at terminus of existing 54" Reinforced Concrete Sewer			lump sum	\$	500.00
Special Chamber at Junction of existing 54" Reinforced Concrete Pipe & 64" Standard Corrugated Metal Pipe Arch			lump sum		1,000.00
15" Reinforced Concrete Pipe	60 Lin Ft	(\$ 10.00)	per lin ft		600.00
18" Reinforced Concrete Pipe	525 Lin Ft	(18.00)	per lin ft		9,450.00
64" X 43" Corrugated I.P.	1010 Lin Ft	(60.00)	per lin ft		60,600.00
Junction Chamber on 64" Corrugated Pipe & 42" Reinforced Concrete Pipe			lump sum		4,000.00
42" Reinforced Concrete Pipe	42 Lin Ft	(35.00)	per lin ft		1,470.00
30" Reinforced Concrete Pipe	315 Lin Ft	(25.00)	per lin ft		7,875.00
27" Reinforced Concrete Pipe	285 Lin Ft	(25.00)	per lin ft		7,125.00
Rebuild inlets South Side of Jolain Drive	3	(300.00)	each		900.00
Proposed Headwall 15" Pipe	3	(300.00)	each		900.00
24" Reinforced Concrete Pipe	55 Lin Ft	(25.00)	per lin ft		1,375.00
Proposed Headwall 24" Reinforced Pipe	1	(300.00)	each		300.00
Proposed Headwall 42" Reinforced Pipe	1	(400.00)	each		400.00
Special Manholes	2	(600.00)	each		1,200.00
Standard Manholes	3	(800.00)	each		2,400.00
Remove Existing Inlet East Side Zig Zag Road & Replace with Manhole with Inlet Grating	1	(800.00)	each		800.00
Create New Drainage Ditch along South Side of Proposed Storm Water Sewer			lump sum		1,000.00
Finish grading, raking, seeding & mulching disturbed areas after back-fill has been thoroughly flushed and settled			lump sum		<u>2,500.00</u>
Amount Carried Forward					\$104,395.00

Exhibit "C"

SUCCESSORS TO
J. A. STEWART ENGINEERING CO.
H. A. NUNLIST, 1907-1946
H. E. FROLICHER, 1923
P. F. NUNLIST, 1934-1967
H. B. GARDNER, 1926
R. J. GEERS, 1930
C. A. RIGGS, 1907-1965

NUNLIST & FROLICHER
CIVIL ENGINEERS AND SURVEYORS
1012 TRI-STATE BUILDING
CINCINNATI, OHIO 45202

621-2476

- 2 -

October 15, 1974

MUNICIPAL ENGINEERING
SEWERAGE
SEWAGE DISPOSAL
SUBDIVISION DEVELOPMENT
CEMETERY PLANNING
PROPERTY SURVEYING

Amount Brought Forward	\$104,395.00
Engineering Services	6,263.70
Legal Services & Advertising	2,087.90
	<hr/>
Total Estimated Cost	\$112,746.60

NUNLIST & FROLICHER


H. E. Frolicher

HEF:MB

MEMORANDUM

May 24, 1978

TO: Ray Walther, Chairman
Public Works & Utilities Committee

FROM: Fred P. Young, Mayor

RE: Jolain Drainage Project - Status Report

In an effort to address the drainage problems in the Zig Zag Road - Jolain Drive area, the Administration authorized the City Engineer to study the problem and propose solutions. Mr. Schildhauer responded with two schemes; one involved the reconstruction of the existing drainage channel, the other called for the installation of underground drainage pipe.

Both alternatives affected the pond on the Uhl property and the rear yards of the houses on the south side of Jolain Drive. The Administration subsequently authorized Mr. Schildhauer to prepare detailed drawings of the first alternative (reconstruction of the drainage channel).

A public meeting was held on Thursday, February 23, 1978 to inform the affected residents and any interested parties of the proposed reconstruction project. This proposal met with considerable resident opposition. The majority of those present seemed to feel that a reconstructed channel would diminish the appearance and utility of their rear yards. They were fearful that the channel would hold standing water and would present maintenance problems.

In response to the residents' request, the Administration instructed Mr. Schildhauer to explore the pipe solution in greater detail. Mr. Schildhauer has reported that the problem can be solved through the use of underground pipe. Though more costly, the pipe will be consistent with the Campus Lane solution, and will permanently solve the area's drainage problems.

After careful study of the project and the alternatives, the Administration recommends that the pipe solution be implemented. We feel that the uniqueness of the Swaim development demands a more thorough solution than the drainage channel will allow. Since the Swaim Golf Course is the last large vacant tract that drains through the center of town, it will likely be the city's most visible storm drainage project. It would be very desirable to convert this area to pipe. In addition, the surrounding area has had drainage problems for years. These problems have been heightened by the new development but will be solved efficiently and permanently by pipe.

MEMORANDUM
Ray Walther
May 24, 1978
Page Two

The 1978 appropriation ordinance earmarks \$300,000.00 of the Street and Storm Sewer Fund to be used for the Jolain Drive and Campus Lane Storm Sewer projects. Of this total, \$60,000.00 was originally intended for the Jolain Drive project. Field inspections revealed some unforeseen problems with the cross-overs in the area which must be corrected. These corrections plus inflation drove the original project cost up to \$100,000.00. Underground pipe raises the price to \$202,000.00. The additional money can be obtained from construction notes which will later be paid through municipal bonds.

In order to continue with this project, we must authorize the City Engineer to prepare detailed construction drawings. Therefore, the Administration would like to recommend to Council that it move its favorable disposition of this project so that we may authorize construction drawings.

gtd

CITY OF MONTGOMERY



10101 MONTGOMERY ROAD
MONTGOMERY, OHIO 45242
PHONE 891-2424

June 29, 1978

FRED P. YOUNG - MAYOR

Dear Resident:

As you know, the City has been studying solutions to the drainage problem which exists in your area. A public meeting was held on February 23, 1978 to explain the problem and to solicit input from the residents.

At the time of the meeting, the City Administration was proposing to reconstruct the existing drainage channel which runs through the pond on the Uhl property and through the rear yards of about a dozen houses on the south side of Jolain Drive. Specifically, the proposal was to re-dig a small creek which has been filled in over the years. The banks of the creek would be very gradual and would allow maintenance with a lawn mower.

This proposal met with considerable resident opposition. The majority of those present objected to the drainage channel and asked instead that the Administration investigate the possibility of installing underground pipe.

In response to this request, we instructed the City Engineer, Mr. Fred Schildhauer, to study a piped solution in detail. He has reported back to us that the pipe solution would cost considerably more money to implement. Whereas the original proposal would have cost \$100,000.00, the cost of the pipe project would be \$202,000.00.

Despite the additional cost, the Administration felt that the piped approach would be a better solution to the problem since we would like to see the City move toward eventually piping all of its storm water run-off.

We recommended this approach to City Council at its May 24, 1978 Worksession. The Council, however, decided that it would be willing to implement the drainage channel solution only. Since Council is charged with overseeing municipal expenditures, the final decision is theirs. Council went on to state that they would approve a piped project if the residents in the area were willing to be assessed for the additional cost of pipe.

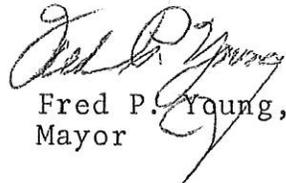
June 29, 1978
Page Two

At this point, the Administration is preparing to reconstruct the drainage channel. We have instructed the City Engineer to prepare working drawings and we hope to begin construction early next year. Mr. Dusterberg, the City Solicitor, will be contacting the affected residents to obtain the necessary easements in the near future.

If the residents would like to pursue the pipe solution (even though it means bearing the additional cost), they should contact us as soon as possible.

If we can be of assistance to you in this matter, or if we can answer any questions, please do not hesitate to call.

Sincerely,



Fred P. Young,
Mayor

FPY:gtd

MEMORANDUM

August 10, 1978

TO: Howard Smith, Councilman

FROM: Phillip Herrick, Administrative Assistant

SUBJECT: Cost Breakdown on Jolain Drainage Project

In response to your request at last night's special Council meeting, I have asked our City Engineer to allocate the cost of the Jolain Drainage Project to its separate components.

His office has provided the following information but cautions that these figures are approximations and can be as much as 10% off.

<u>Work Item</u>	<u>Drainage Channel</u>	<u>Pond</u>	<u>Jolain Dr. Culvert</u>
Clearing & Grubbing	\$ 3,500.	\$ 1,500.	\$ -
Remove & Reset Swing Set	500.	-	-
Pipe Removed	1,440.	-	-
Remove & Reset Existing Fence	800.	-	-
Remove & Stockpile Existing RR Ties	200.	-	-
Remove Existing Headwall	-	1,200.	-
Excavation, Not Including Embankment	8,400.	3,000.	-
Embankment	1,500.	500.	-
Aggregate Base	-	5,700.	-
Riprap	1,500.	500.	-
Rock Channel Protection	-	200.	-
Paved Channel, as Per Plan	-	10,500.	-
Concrete Masonry	900.	600.	-
30" Conduit	-	3,780.	-
CB 2-3 Catch Basin	-	800.	-
Topsoil Furnished & Placed	4,500.	1,000.	500.
Commercial Fertilizer	400.	200.	50.
Sodding	10,500.	3,000.	500.
Reconstruct Concrete Slab	-	-	2,000.
Miscellaneous	3,000.	1,000.	1,000.
Total Construction	\$37,140.	\$33,480.	\$4,050.
Percent of Total	50%	44%	6%
Total Construction	\$ 74,670.00		
Construction Layout	4,000.00		
Easements	15,000.00		
Legal & Advertising	1,000.00		
Engineering	6,720.00		
Total Project	\$101,390.00	(As of 3/23/78)	

MEMORANDUM

Howard Smith - Cost Breakdown on Jolain Drainage Project

August 10, 1978

Page Two

I was previously told that most of the increase in the price estimate from \$60,000 to \$101,000 was due to reconstructing the Jolain Drive culvert. I passed this information on to Council as it was explained to me. It is now obvious that the culvert accounts for a relatively minor part of the project. Mr. Schildhauer's office explained that the original \$60,000 estimate was prepared without extensive research at the request of the City of Montgomery. Subsequent study revealed that there was much more work than originally anticipated and hence, the \$101,000 figure. They have confidence in the current figure.

Phillip Herrick
Administrative Assistant

PH:gtd

Hernick

Exhibit "D"

MEMORANDUM

March 13, 1979

TO: Ray Walther, Chairman
Public Works and Utilities Committee

FROM: Fred P. Young, Mayor

RE: Jolain Drainage System

As you know, the City has been studying solutions to the drainage problem in the Zig Zag Road/Jolain Drive area. At our request, the City Engineer has prepared detailed engineering plans that have been presented to City Council and to the affected property owners. The plans call for the reconstruction of the existing drainage channel so that the present level of storm water run-off can be accommodated.

All of the affected property owners were contacted by Mr. Dusterberg in early December, 1978, requesting an option for the necessary permanent and temporary easements. After numerous visits and telephone calls, Mr. Dusterberg reports that three of the property owners (out of a possible 16) have refused to grant the easements. The Wobkenbergs, Mrs. Salatin, and the Grotos (7855, 7845, and 7805 Jolain Drive, respectively) have refused.

Their refusals detailed a variety of reasons, including: not wanting the project, wanting a piped solution only, not liking the manner in which the project has been handled, and fearing that the utility of their backyards will be lost. The only way to acquire these three remaining easements is to bring suit against the property owners.

After careful study, it is the Administration's recommendation that this project not be implemented. We refer to the four major criteria presented at the October 11, 1978 Capital Improvements meeting for the evaluation of storm drainage projects.

1. Magnitude of the problem.

The project area is very small, affecting 16-20 homes on 10-15 acres.

2. Severity of the problem.

There is no safety or health hazard; nor has there been any damage to buildings. The largest problem is that the backyards retain the drainage water preventing maintenance and use of the land.

CONTINUED -

MEMORANDUM
Ray Walther
Jolain Drainage System
March 13, 1979
Page Two

3. History of the problem.

A water course has always existed in the area. This fact is confirmed by record plats from the 1800's that depict an intermittent creek and by the private drainage easements that are recorded on the landowners deeds. This water course was gradually filled in by the residents who wished to level their backyards.

The argument has been raised that the City of Montgomery has a moral responsibility to correct this problem since it was aggravated by the development of the Swaim Field Subdivision. It must be remembered, however, that the law requires downstream landowners to accept water from upstream uses, even if the quantity of water is increased by development. It must also be remembered that the City did not grant a zone change on the old golf course allowing a greater density in the development. The land has always been zoned Residence A (our lowest density). The City could not have blocked a development on land that had the required zoning.

It should also be mentioned that while only three property owners refused easements, the reaction of those that signed can best be described as hesitant. None were enthusiastic about the project.

4. Cost of the solution.

Considering the small size of the project area and the minimal level of damage, the cost of the project (\$100,000.00) must be considered high.

Therefore, the Administration recommends that Council eliminate this item from the Capital Improvement Program and from consideration as a project warranting public funding.

FPY:gtd

cc: Council Members (5)
Mayor
✓ P. Herrick
L. Krapp
A. Blanton
R. Dusterberg
W. Fiedler
File

RESOLUTION NO. 18, 1993

A RESOLUTION ADOPTING A PROGRAM TO AID PROPERTY OWNERS
WITH THE REPAIR OF PRIVATELY OWNED STORM SEWERS
IN THE CITY OF MONTGOMERY

WHEREAS, there are a number of private storm sewers within the City of Montgomery which require some repair or maintenance in order that they continue to function, and

WHEREAS, the city has been asked by a number of homeowners to either undertake repair of these sewers or provide some sort of assistance in order to effect said repairs.

NOW THEREFORE, BE IT RESOLVED, by the Council of the City of Montgomery, Ohio:

SECTION 1. The City of Montgomery will continue, as it has in the past, to repair public storm sewers when there has been an expressed acceptance of the sewer system by the city. Additionally, the city will repair storm sewers when the problem exists in the public right-of-way, or when the existence of the problem causes a public health or safety hazard.

SECTION 2. In those situations other than those described in Section 1, and in order to aid the citizens of Montgomery with privately owned storm sewer repairs, the city adopts the following program:

- (A) The city will, for the one year period subsequent to the effective date of this Resolution, undertake a program aiding property owners in the repair of privately-owned sewers. The maximum amount allocated to that program for 1993 shall be \$15,000.00.
- (B) Any citizen of Montgomery who believes that he or she has a private sewer problem shall make the city aware of that problem. Upon receipt of the private sewer repair request, the City Manager, in conjunction with the City Engineer, shall review the problem, giving due weight to the public health or safety dangers the problem creates, the likelihood that the problem will cause some type of flooding or water accumulation upon the right-of-way of public streets, and shall also review the length of time during which the problem has existed.

- (C) Once the evaluation has been completed, the City shall notify the owners of the property that it has been selected for the program and shall ask the property owner to retain the services of a private contractor to effect the repairs. The city will not participate in this program with the private property owner unless the repairs or solution to the problem constitutes a permanent solution. The city will review the estimate of the private contractor and, if approved the city, will contribute 50% of the cost of the repairs to a maximum of \$5,000.00.

SECTION 4. For purposes of clarification, this program shall apply only to those privately owned storm sewers that meet the following criteria:

- (A) The privately owned storm sewer is directly connected to a drainage facility in the public right-of-way, such as a catchbasin providing drainage for dedicated public street or a pipe that runs under a dedicated street;
- (B) The pipe to be repaired must be in a storm sewer easement as shown on the dedicated plat for the subdivision.
- (C) This Resolution specifically does not apply to:
 - (a) Any drainage facility other than those that are piped below ground.
 - (b) Storm sewer pipes that provide drainage for other private property.
 - (c) Any storm sewer that encroaches upon any building in the City.
 - (d) Any waterway, creek, swale, pond or other drainage facility, be it man-made or natural.
 - (e) Those storm sewer pipes for which responsibility has been expressly accepted at the time of plat dedication by any single or group property owner or a homeowners association.

SECTION 5. This Resolution shall be in full force and effect from and after its passage.

PASSED FEB 3, 1993

ATTEST Jean L. Stevens
Mayor

Janet Korach
Clerk of Council



10/29/2014

Brian Riblet
City of Montgomery
10101 Montgomery Rd.
Montgomery, OH 45242

Re: *Pond Analysis for 10011 Zig Zag Rd.*

Dear Mr. Riblet:

The storage volume of the pond at 10011 Zig Zag Rd. was evaluated using CAGIS along with Stage 1 and Stage 2 storm volume calculations. Stage 1 and Stage 2 calculations are based on the Hamilton County 10-year and 100-year flow rates. A spreadsheet showing these calculations can be found attached to this document. Support drawings can also be found at the end of this document.

Stage 1 and Stage 2 required volumes are as follows:

Required Volumes	Units
94,554	ft ³
130,896	ft ³

The watershed area draining to the pond was determined to be 34.06 acres, which is shown on sheet 1.

Sheet 2 of the support drawings displays the existing pond limits with an existing surface elevation of 822.0 . Also shown is the existing overflow location when the pond exceeds an elevation of 823.0 .

Sheet 3 shows the additional volume gained by decreasing the pond surface to 819.0 , while leaving the pond s storage height at 822.0 . The cumulative additional volume is shown as 7,575ft³, which is minimal.

The final sheet shows the additional volume gained by decreasing the pond surface to 819.0 and increasing the storage height to 824.0 . The cumulative additional volume is 30,184ft³, which is the total volume gained from 819.0 -824.0 . Sheet 4 also shows the limits of the pond if the storage height was increased to 825.0 . The cumulative volume increases to 50,253ft³, but the water surface would extend approximately as close as 11.5 from the foundation of the house on the east side of the pond and inundates the driveway on the west side.



CDS Associates / CT Consultants

engineers | architects | planners

Since the pond is at a constant elevation (822.0') due to the outlet structure's elevation, the additional volumes below were calculated by decreasing the outlet structure's elevation and increasing the pond's storage height by one foot increments. The Cumulative Additional Volume column shows the volume gained from 822.0'-819.0' and also from 822.0'-825.0'.

	Water Elevation	Surface Area (sf)		Incremental Additional Volume (ft ³)	Cumulative Additional Volume (ft ³)
	825	63,501	+	20,068	42,677
	824	43,432	+	13,809	22,609
	823	29,623	+	8,800	8,800
Ex. Water Elev.	822	20,822	*	-	-
	821	18,140	-	2,682	2,682
	820	15,615	-	2,525	5,207
	819	13,247	-	2,367	7,575

Comparing the volume gained by modifying the pond and the required Stage 1 and Stage 2 volumes, these modifications do not provide sufficient storage to adequately decrease the outflow downstream. Lowering the pond limits to 819.0' essentially does nothing to improve the storage volume considering the large required volume of the 100-year storm. At 824.0' the additional volume is roughly 33% of the required Stage1 volume and 25% the Stage 2 volume.

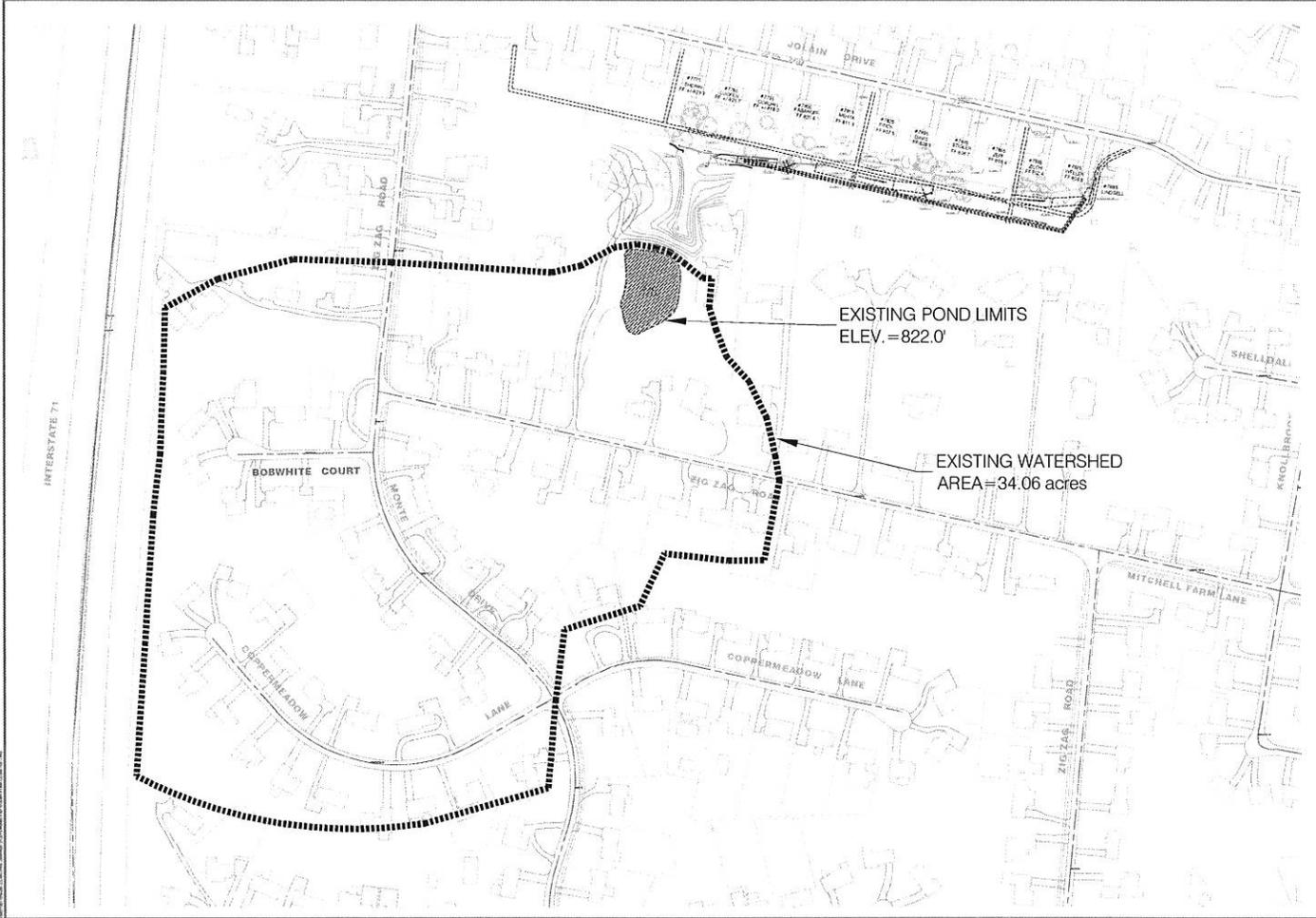
Summary:

Maximum volume provided by both raising the storage elevation to 825' and lowering the water surface elevation to 819' is 50,253ft³. While the magnitude volume required to reduce the 100-year flow to the pre-existing 10-year flow is approximately 131,000ft³. Therefore, the potential additional volume is not even approaching a volume that would make this option feasible.

Respectfully submitted,

CT CONSULTANTS, INC.

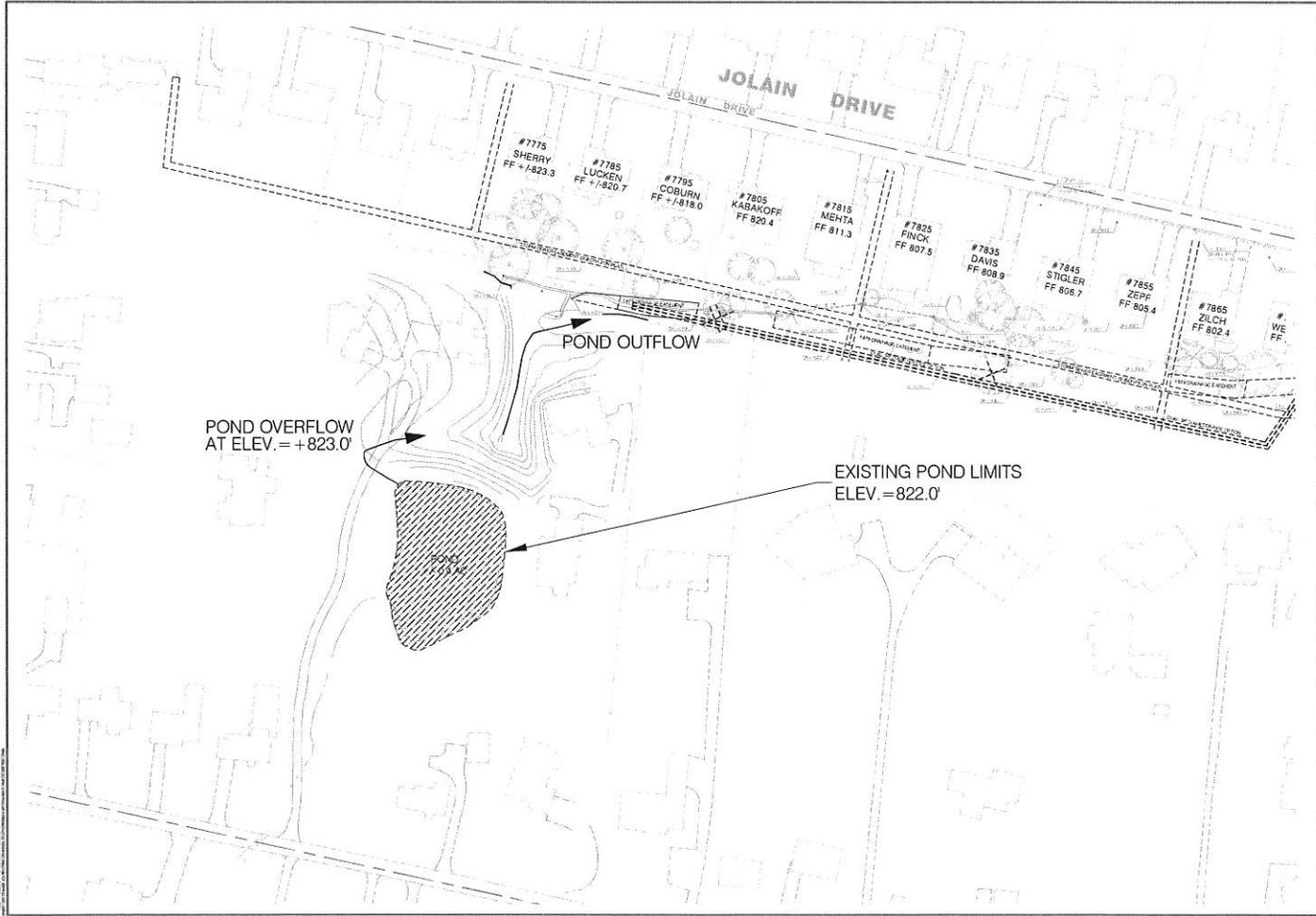
Pat Madl, EI
Project Engineer



PRELIMINARY
 NOT
 RELEASED FOR
 CONSTRUCTION

SITE OVERVIEW
 10011 ZIG ZAG ROAD
 CITY OF MONTGOMERY
 HAMILTON COUNTY, OHIO

DATE	BY
11/05	10/22/14
DESIGN	PMAD
14502108	



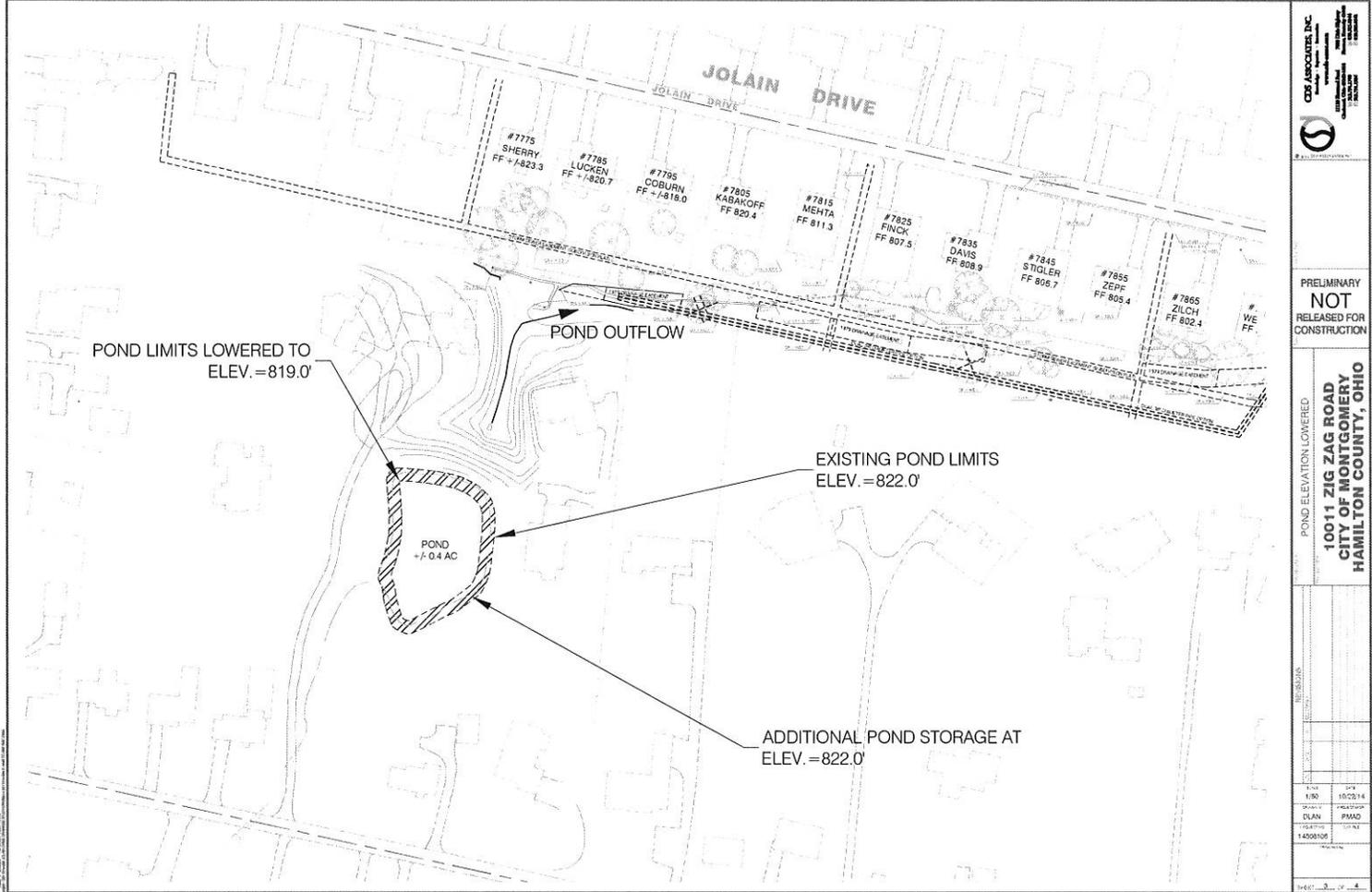
CDI Associates Inc.
 10011 ZIG ZAG ROAD
 HAMILTON COUNTY, OHIO 45015
 (513) 833-1111
 www.cdiassociates.com

PRELIMINARY NOT RELEASED FOR CONSTRUCTION

EXISTING CONDITIONS
 10011 ZIG ZAG ROAD
 CITY OF MONTGOMERY
 HAMILTON COUNTY, OHIO

DATE	DATE
1/10	10/03/14
DLAN	PMAC
1/20/10/10	

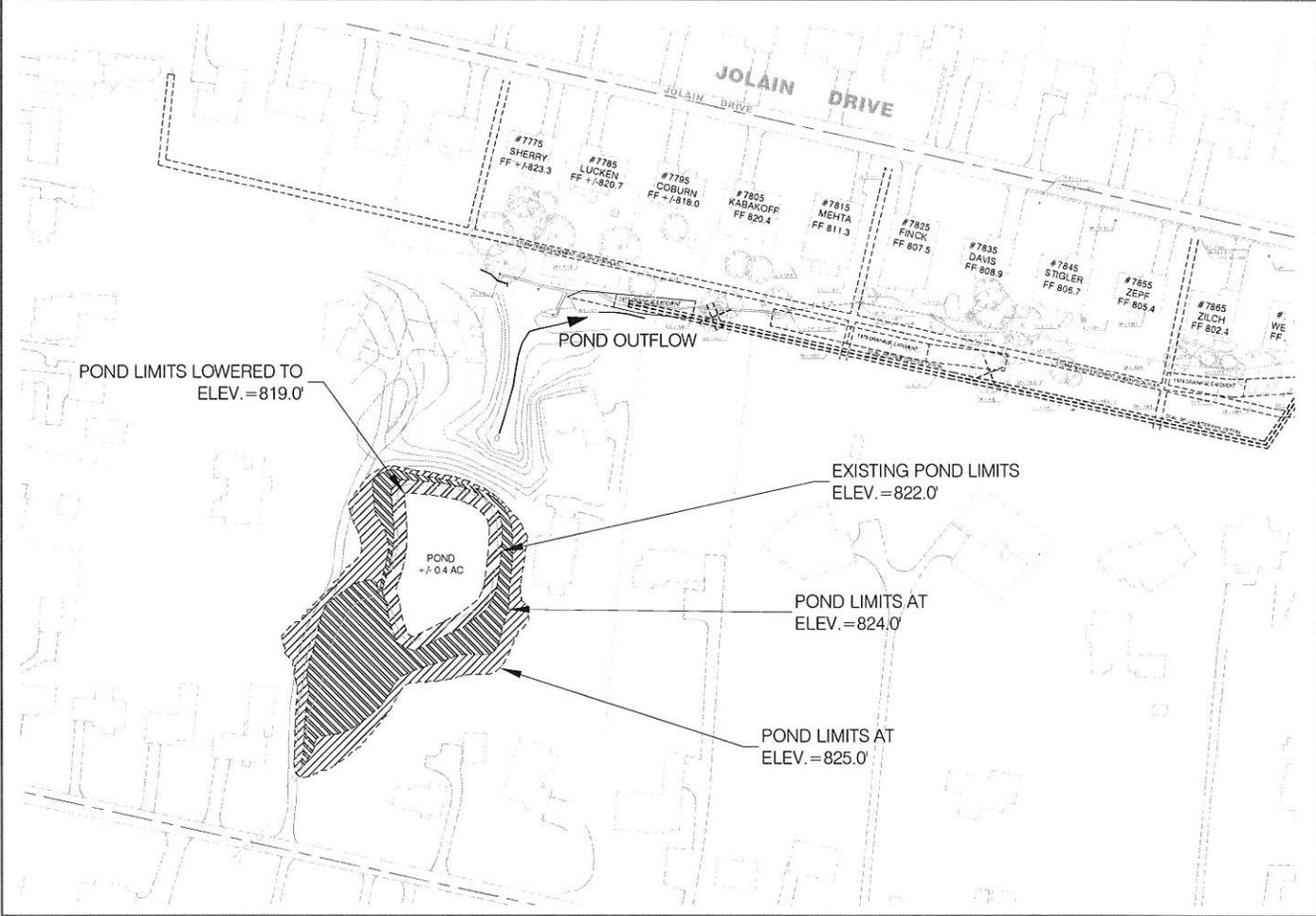
REV: 2 OF 4



PRELIMINARY
NOT
RELEASED FOR
CONSTRUCTION

POND ELEVATION LOWERED
10011 ZIG ZAG ROAD
CITY OF MONTGOMERY
HAMILTON COUNTY, OHIO

DATE	BY
1/30	100014
DLAN	PMAD
14000005	



PRELIMINARY
NOT
RELEASED FOR
CONSTRUCTION

POND STORAGE ELEVATION RAISED
10011 ZIG ZAG ROAD
CITY OF MONTGOMERY
HAMILTON COUNTY, OHIO

DATE	BY
1/30	MSG/14
2/20/07	MSG/14
PLAN	PMAD
14008100	

Hamilton County Public Works - Exhibit 33

Project Name: 14808106 Date: 10/28/2014

Project Address: 10011 Zig Zag Rd. Designer: CDS/CT

Exhibit 33 PRE Q1 to POST Q10 Stage One Volume and Q1 Release

EDIT GRAY CELLS - GREEN CELLS EQUAL RESULTS

Data Required:

a1	On-site pre-development drainage area (acres) section ST 711(d) (1)	34.06
a2	Off-site drainage area (acres) section ST 711 (d) (1)	0.00
a3	Total pre-development drainage area (acres)	34.06
a4	On-site post development drainage area to release structure	34.06
a5	Total post-development drainage area (acres) a2+a4	34.06
c1	On-site pre-development run-off coefficient, Section ST 711 (f)	0.40
c2	Off-site pre-development run-off coefficient, Section ST 711 (f)	0.00
c3	Adjusted pre-development run-off coefficient	0.40
c4	On-site post-development run-off coefficient, Section ST 711 (g)	0.65
c5	Off-site post-development run-off coefficient, Section ST 711 (g)	0.00
c6	Adjusted post-development runoff coefficient	0.65
tc1	Pre-development time of concentration. Exhibit No. 5	35.0
tc10	Post-development time of concentration, Exhibit No. 5	20.0

Bypass:

a byp	On-site post-develop. drainage area bypass release structure (a1 - a4)	0.00
c byp	On-site post-develop. run-off coefficient bypass release structure	0.00

Pre-Development 1 Year Storm

I1 = 1.63 in/hr

Pre Q1 = 22.24 cfs

I10bypass = in/hr

Q10post bypass = cfs

Qallow = Pre Q1 - Q10post bypass

Qallow = 22.24 cfs Maximum Release Rate

Storm Duration Producing Stage One Detention Storage

Tc = 54.56 minutes

Rainfall Intensity

I10 = 2.19 in/hr

Post Q10 = 48.53 cfs Peak Rate of Flow Post-Development Q10

Volume = 94,554 cu.ft. Stage One Detention Storage Volume

Volume = 2.17 acre ft.

Hamilton County Public Works - Exhibit 33

Project Name: 14808106 Date: 10/28/2014

Project Address: 10011 Zig Zag Rd. Designer: CDS/CT

Exhibit 33 PRE Q10 to POST Q100 Stage Two Volume and Q10 Release

EDIT GRAY CELLS - BLUE CELLS EQUAL RESULTS

Data Required:

a1	On-site pre-development drainage area (acres) section ST 711(d) (1)	34.06
a2	Off-site drainage area (acres) section ST 711 (d) (1)	0.00
a3	Total pre-development drainage area (acres)	34.06
a4	On-site post development drainage area to release structure	34.06
a5	Total post-development drainage area (acres) a2+a4	34.06
c1	On-site pre-development run-off coefficient, Section ST 711 (f)	0.40
c2	Off-site pre-development run-off coefficient, Section ST 711 (f)	0.00
c3	Adjusted pre-development run-off coefficient	0.40
c4	On-site post-development run-off coefficient, Section ST 711 (g)	0.65
c5	Off-site post-development run-off coefficient, Section ST 711 (g)	0.00
c6	Adjusted post-development runoff coefficient	0.65
tc10	Pre-development time of concentration. Exhibit No. 5	35.0
tc100	Post-development time of concentration, Exhibit No. 5	20.0

Bypass:

a byp	On-site post-develop. drainage area bypass release structure (a1 - a4)	0.00
c byp	On-site post-develop. run-off coefficient bypass release structure	0.00

Pre-Development 10 Year Storm

I10 = 2.93 in/hr

Pre Q10 = 39.93 cfs

I100bypass = in/hr

Q100post bypass = cfs

Qallow = Pre Q10 - Q100post bypass

Qallow = 39.93 cfs **Maximum Release Rate**

Storm Duration Producing Maximum Detention Storage

Tc = 56.84 minutes

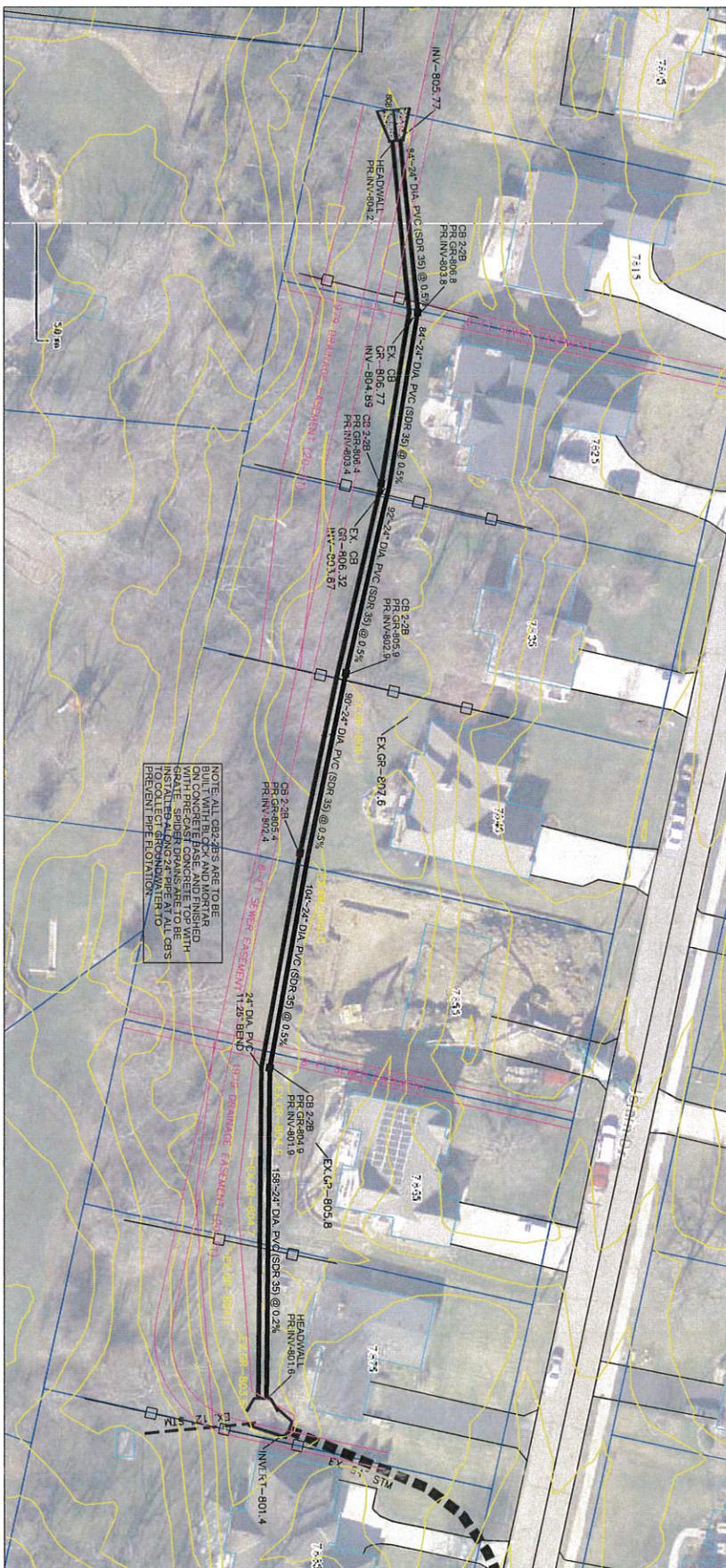
Rainfall Intensity

I100 = 3.30 in/hr

Post Q100 = 73.09 cfs **Peak Rate of Flow Post-Development Q100**

Volume = 130,896 cu.ft. **Required Detention Storage Volume**

Volume = 3.00 acre ft.



CITY OF MONTGOMERY
7795-7875 JOLAIN DRIVE (OPTION 5 - REPLACING 12" PIPE WITH DUAL 24"
PIPE IN SAME ALIGNMENT OPTION, RE-DO EASEMENT) - PRELIMINARY
ESTIMATE

DATE: 7/19/16

Item No.	Spec. No.	Item	Estimated Quantity	Unit of Measure	ENGINEER'S ESTIMATE	
					Unit Cost Total	Item Cost
Base Bid						
1	201	CLEARING AND GRUBBING	1	LS	\$10,000.00	\$10,000.00
2	202	FENCE REMOVED FOR REUSE (WOODEN SPLIT RAIL)	120	FT	\$10.00	\$1,200.00
3	202	STRUCTURE REMOVED: HEADWALL	1	EA	\$1,000.00	\$1,000.00
4	202	PIPE REMOVED: 12" RCP	650	LF	\$10.00	\$6,500.00
5	207	TEMPORARY SEDIMENT AND EROSION CONTROL (INCLUDING A TEMPORARY HAUL ROAD)	1	LS	\$5,000.00	\$5,000.00
6	601	ROCK CHANNEL PROTECTION, TYPE B OR C	120	CY	\$60.00	\$7,200.00
7	603	24" CONDUIT (SMOOTH INSIDE AND OUTSIDE PVC SDR-35)	1,240	LF	\$70.00	\$86,800.00
8	604	HEADWALL	1	EA	\$10,000.00	\$10,000.00
9	604	CATCH BASIN (CB 2-2B)	7	EA	\$3,000.00	\$21,000.00
10	607	FENCE (WOODEN SPLIT RAIL)	120	FT	\$25.00	\$3,000.00
11	614	MAINTAINING TRAFFIC	1	LS	\$2,500.00	\$2,500.00
12	623	CONSTRUCTION LAYOUT STAKES	1	LS	\$6,000.00	\$6,000.00
13	653	TOPSOIL FURNISHED AND PLACED	80	CY	\$50.00	\$4,000.00
14	659	SEEDING AND MULCHING	2,500	SY	\$2.00	\$5,000.00
15	660	SODDING, UNSTAKED (FLOWLINE)	300	SY	\$8.00	\$2,400.00
ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST=						\$171,600.00

* DENOTES CONTINGENCY ITEM - USE ONLY AT THE DISCRETION OF THE ENGINEER OR CITY REPRESENTATIVE

From: Lisa Dennis <ldennis@donnellonlaw.com> on behalf of Terry Donnellon <tmd@donnellonlaw.com>
Sent: Wednesday, September 28, 2016 4:19 PM
To: Brian Riblet
Subject: Jolain Special Assessment

Dear Brian:

In anticipation of your upcoming meeting with Public Works, I am writing to you to outline the process for a special assessment to complete the improvements anticipated in the Jolain stormwater runoff area.

Council is permitted to assess public improvements to the property owners which benefit specifically from the improvement. Stormwater management is one of the statutory bases for which a special assessment may be used.

The cost of the public improvements may be assessed in whole or in part based upon the specific special benefit each of the property owners receives. In general, an improvement which benefits the entire community is a general fund cost, but an improvement which specifically benefits a particular area may be the subject of a special assessment.

The costs which may be included in the assessment include acquiring any real estate rights, engineering and surveying costs, the cost of labor and material to complete the improvement, and any administrative/incidental costs associated with providing notice or managing the improvement. In the past I believe Council has elected solely to assess the cost to engineer and construct the improvements, with the City assuming any of the ancillary costs associated with the process for assessment.

The three methods under which the assessment can be made: the assessment can be made based upon the apportioned tax value of each of the properties, the identifiable cost of the benefit to each property, or the more common method for an assessment is based upon the street frontage of each of the properties in question. Using the street frontage avoids the need to breakdown the actual linear cost with each property and how each property is improved.

Council can determine the length of time over which the assessment can be paid and the assessment becomes a part of the real estate taxes collected by the Auditor. Generally the cost of assessment cannot exceed 20 years. It should be tied to the estimated useful life of the improvement, but it cannot exceed the length of time for which a bond would be issued to pay for the improvements (20 years). I do not anticipate bonds being issued in this case, so the practical issue may be the cost of the improvement and the relative cost to each property owner and how we would apportion this appropriately.

Given the fact that the City already will pay for one-half of the cost of the improvement and the anticipated assessment is only for upsizing the pipe, we are meeting the statutory requirement that the City participate in the improvement.

The process begins with passing a Resolution of Necessity which identifies the project, the anticipated cost, how the cost will be allocated, and the number of annual installments for which the cost will be paid. Once the Resolution of Necessity is adopted, notice is sent to each of the impacted property owners providing them notice of the process Council will undertake to initiate the construction and to assess the cost. Property owners then have a specific period of time within which to file an objection to the proposed assessed cost. Any objection is heard by an Equalization Board. In the past we have designated the Board of Review as the Equalization Board.

Once any objections have been heard or once the objection period has passed, Council then may proceed with the Resolution to levy the assessments.

At this preliminary stage it will be appropriate to have the project engineered and to give an estimate as to the total cost. Obviously the final cost will be based upon the bid received for construction, and if we would prefer to give a specific cost we can bid the construction in alternatives so the property owners will know exactly the cost which will be incurred and paid through their assessment. The downside to this approach is the long run-up from bidding until construction because of the need for passing the final Resolution and the need for the opportunity to allow appeals.

Hopefully this provides the information needed as you move forward with the evaluation of this process with the Public Works Commission. Please let me know if there are any questions.

Sincerely,

**Terrence M. Donnellon,
Attorney at Law**

*Donnellon
Donnellon & Miller*

A LEGAL PROFESSIONAL ASSOCIATION

9079 Montgomery Road

Cincinnati, Ohio 45242

Phone: (513) 891-7087

Fax: (513) 891-7125

Email: tmd@donnellonlaw.com

Website: www.donnellonlaw.com

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These minutes are a draft of the proposed minutes from the Public Works Committee of City Council meeting. They do not represent the official record of proceedings until formally adopted by the Public Works Committee of City Council. Formal adoption is noted by signature of the Chair within the minutes.

City of Montgomery
Public Works Committee Meeting
June 13, 2016

Staff Present

Wayne Davis, City Manager
Brian Riblet, Public Works Director
Connie Gaylor, Clerk of Council

Council Committee Members Present

Mike Cappel, Chair
Craig Margolis
Lynda Roesch

The meeting of the Public Works Committee of City Council convened in Council Chambers at 5:30 p.m. with Mr. Cappel presiding.

Staff update on the proposed expansion to the Public Works Facility

Brian Riblet, Public Works Director, presented an aerial picture of the current public works facility built in 1996. Mr. Riblet explained to the Committee that the preliminary drawings have been prepared by CT Consultants, Inc., and did come in over the current budgeted amount of \$75,000 for engineering costs and \$450,000 in construction costs. Mr. Riblet stated that this is primarily due to an expansion of the garage bay which was not included in the original budget projections and plans. Mr. Riblet referred to an estimated cost sheet supplied by CT Consultants that showed the project costs if the project was initiated in 2016 as opposed to the increased inflation costs if delayed to 2017 or 2018.

Mr. Riblet indicated that an assessment of the current electrical service would be conducted and depending on the outcome of the assessment, could result in additional costs.

Mr. Riblet stated that the City might consider pursuing LEED (Leadership in Energy and Environmental Design) building principles to make the facility more environmentally compatible.

Mr. Riblet also pointed out that if the expansion included adding additional garage bay space that the greenhouse would have to be taken down and reconstructed at some point.

Ms. Roesch asked if the timing of the construction would be along the same time frame of the Gateway Redevelopment Area (GRA).

Mr. Riblet stated that, if approved, the project could bid in the Spring of 2017 with construction beginning in that summer.

Mr. Margolis asked the Committee if this expansion was big enough to allow for growth in the future.

The Committee discussed future City projects, such as the GRA, and how that would affect the amount of equipment and staff that could be added in the future.

Ms. Roesch stated that she felt that we should include the additional garage bay space in the formal drawings and final estimation and that the additional space could always be removed from the bid if it was too cost prohibitive.

Ms. Roesch asked about constructing the project in phases.

Mr. Riblet indicated that we could, but we should keep in mind the costs of mobilization fees for each phase and consider that when making the decision on the scope of the project.

These minutes are a draft of the proposed minutes from the Public Works Committee of City Council meeting. They do not represent the official record of proceedings until formally adopted by the Public Works Committee of City Council. Formal adoption is noted by signature of the Chair within the minutes.

Public Work Committee of City Council Minutes
June 13, 2016
Page 2

The Committee discussed the inclusion of the LEED building principles and certification and if that would mean bringing the existing space up to the same standards.

Mr. Riblet stated that he would contact CT Consultants to see what the requirements regarding the LEED standards were in regards to expansion projects and also what the estimated cost of the certification would be.

Mr. Riblet stated that if the Committee supports moving the project forward with the goal of advertising the bid in early 2017, that CT Consultants would need to begin development of the plans and specifications soon.

Mr. Margolis stated that he was in favor of moving ahead with the engineering design, in order to bid the project in early 2017.

The Committee instructed Mr. Riblet to move forward with CT Consultants for the engineering design of the proposed expansion including the additional garage bay space.

Minutes

Mr. Margolis moved to approve the April 25, 2016 Public Works Committee minutes. Ms. Roesch seconded. The Committee unanimously approved the minutes.

Other Business

Mr. Davis updated the Committee on the status of the Cemetery software proposals.

Mr. Riblet stated that \$10,000 was budgeted in 2016 and another \$15,000 in 2018. He explained that the proposals have come in a little over the budgeted amount for this year but that we would not need the \$15,000 budgeted for 2018. He stated that with the addition of the software we would need to begin budgeting for annual maintenance and support. Mr. Riblet stated that we are in the final review phases of the proposal and would come back to the Committee with a formal recommendation at a future meeting.

Adjournment

Mr. Margolis made a motion for adjournment. Ms. Roesch seconded. The Committee unanimously agreed. The meeting adjourned at 6:25 p.m.

Chair