



# CITY of NOVI CITY COUNCIL

[www.cityofnovi.org](http://www.cityofnovi.org)

**Agenda Item 3  
May 14, 2007**

**SUBJECT** Consideration of a cost participation agreement with ITC Transmission for extending sanitary sewer for future connection to the Country Cousins Mobile Home Park.

**SUBMITTING DEPARTMENT:** Engineering Department *RJH*

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

<b>EXPENDITURE REQUIRED</b>	N/A
<b>AMOUNT BUDGETED</b>	N/A
<b>APPROPRIATION REQUIRED</b>	N/A
<b>LINE ITEM NUMBER</b>	N/A

**BACKGROUND INFORMATION:** ITC Transmission has agreed to partially fund the extension of sanitary sewer to the Country Cousins Mobile Home Park, which is currently operating with an on-site sewage treatment system that has recently had operational problems. Twice in 2004 and once in 2005, Country Cousins reported sanitary sewer overflows (SSOs) to MDEQ because the effluent infiltration lagoons near Haggerty Road flooded during rain events and released partially treated sewage to the surrounding land. Although Country Cousins currently has an MDEQ groundwater discharge permit, MDEQ reported the system to be non-compliant and noted several deficiencies during its most recent bi-annual compliance inspection completed in December 2005 (MDEQ's December 20, 2005 letter, attached). We have yet to receive current compliance status from MDEQ. Because it is unknown how much longer on-site treatment will be feasible (either on a regulatory or technical basis), it would be prudent to extend public sanitary sewer to the Country Cousins MHP now so that it is available for future connection of the park when on-site treatment is no longer an option.

The opportunity to extend sanitary sewer to Country Cousins exists concurrent with ongoing site work at the ITC Headquarters site. ITC has presented four sanitary sewer construction options to the City as possible cost participation alternatives. Two options (A and B) involve partial extension and are coupled with easements from ITC so that the remainder of the sewer could be extended in the future. The two other options (C and D) entail the full extension of sanitary sewer to Country Cousins (see attached figures). Each option presents different cost alternatives for the City to consider, as follows:

Option	Sewer Description	Distance (ft)	ITC's Cost	City's Cost	Total Cost
A	On-site force main	320	\$26,604	\$0	\$26,604
B	On-site force main	580	\$26,604	\$29,965	\$56,569
C	On- and off-site force main to Country Cousins	995	\$26,604	\$63,316	\$89,920
D	On-site gravity, on- and off-site force main to Country Cousins	1600	\$36,734	\$63,316	\$100,050



ITC prefers Option D because this alignment avoids existing and proposed construction on the ITC site. The Water & Sewer Department estimates future tap fees from Country Cousins in the amount

of \$424,000 could be used to recoup whatever funds the City commits to this project once Country Cousins connects to the public sanitary sewer system.

There are several benefits of extending sewer now concurrent with ITC site work now rather than later. Work would be done by ITC's contractor, so the cost would be lower than what it would be if a separate contractor were procured in the future. If Country Cousins' on-site system were to fail, public health would be protected more immediately with the public sewer already in place. Finally, if the sewer were to be constructed in the future, there would be disruption to the ITC site and the potential for damage to ITC's extensive buried infrastructure.

**RECOMMENDED ACTION:** Consideration of a cost participation agreement with ITC Transmission for extending sanitary sewer for future connection to the Country Cousins Mobile Home Park.

	1	2	Y	N
<b>Mayor Landry</b>				
<b>Mayor Pro Tem Capello</b>				
<b>Council Member Gatt</b>				
<b>Council Member Margolis</b>				

	1	2	Y	N
<b>Council Member Mutch</b>				
<b>Council Member Nagy</b>				
<b>Council Member Paul</b>				



STATE OF MICHIGAN  
 DEPARTMENT OF ENVIRONMENTAL QUALITY  
 SOUTHEAST MICHIGAN DISTRICT OFFICE



JENNIFER M. GRANHOLM  
 GOVERNOR

STEVEN E. CHESTER  
 DIRECTOR

December 20, 2005

CERTIFIED MAIL

Mr. Russel A. Button  
 Country Cousins Mobile Home Park  
 26955 Haggerty Road  
 Novi, Michigan 48377

RECEIVED BY  
 ENVIRONMENTAL DIVISION  
 DEC 28 2005  
 CITY OF NOVI

NOTICE LETTER  
 NL-001705

CITY CLERK'S OFFICE  
 05 DEC 27 PM 3:30

Dear Mr. Button:

SUBJECT: Compliance Evaluation Inspection  
 Designated Facility: Country Cousins Mobile Home Community  
 Groundwater Discharge Permit No.: M00749

On October 21, 2005, Michigan Department of Environmental Quality (hereafter Department), Water Bureau (WB) staff performed a Compliance Evaluation Inspection at the Country Cousins Mobile Home Community (Country Cousins) facility located at 26955 Haggerty Road, Novi, Michigan 48377. The purpose of the inspection was to determine the compliance status of the facility with the conditions of the Groundwater Discharge Permit No. M00749 (hereto referred as Permit) and the Part 22 Groundwater Discharge Rules of the Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

The inspection consisted primarily of a review of WB files, a review of Compliance Monitoring Reports, an interview with you and Chris Coffey of the Oakland Country Drain Commission (OCDC), and visual observations of the wastewater treatment plant (WWTP).

The following are the observations and required corrective actions that resulted from the inspection:

1. The Department has not received complete Compliance Monitoring Reports (CMRs) for the first or third quarters of 2005. In addition, the Department has not received monthly monitoring reports for May 2003, May 2004, or April, July, August, or October of 2005.

**Required Corrective Action:** The Permittee shall submit all required CMRs and monthly monitoring reports to the Department in accordance with Part 1 Sections B, C, and F of the Permit.

2. The Permittee reported the following violations between November 2004 and September 2005.

*Engineering*

**Required Action:** The Permittee shall submit a RMP in accordance with Part 1 Section D4 of the Permit.

**Required Action:** The Permittee shall submit an O&M manual in accordance with Part 1 Section D5 of the Permit and in accordance with 323.2218(4)b of the Michigan administrative code (MAC). The manual shall include, at a minimum:

- The function, start-up, shutdown and periodic maintenance procedures for each unit process and item of mechanical and electrical equipment.
- The appropriate response or facility adjustment to minimize the impact of an emergency situation so as to facilitate rapid implementation of a correct response during emergencies.
- A monitoring program to monitor process efficiency.
- The details of how inspections will be conducted and a schedule for the inspection collection system and pump stations, where applicable.
- The periodic maintenance procedures for the collection system and pump stations where applicable.
- Procedures for the routine maintenance and inspection of lagoons and equipment used for irrigation, where applicable.

**Please note:** Updates to the O&M manual shall be submitted to the Department when there are authorized changes to the WWTP system. The O&M shall be thoroughly reviewed and updated on a yearly basis to correspond to current treatment system processes and requirements. Please review the attachment, Guidesheet IV "Operation and Maintenance Manual" for information necessary to be included in a complete O&M manual.

6. At the time of the inspection, WB staff observed a 55-gallon drum labeled "Chi-X Odor Eliminator" in the operations and chemical feed building. According to Chris Coffey, the drum contains aluminum sulfate (alum). Although alum is a standard wastewater treatment chemical, a file review for this facility does not indicate the Department has been informed of any operational changes, including the use of treatment chemicals or additives through submittal of an O&M.

**Required Action:** The Permittee shall submit to the Department a thorough explanation for the use of chemical treatment or additives, i.e. alum, odor reducing liquids, etc. A thorough explanation should discuss when and where the additives are incorporated into the WWTP as required in an O&M manual and how the use of the additive meets current Part 22 standards.

**Required Action:** The Permittee shall submit a request for any operational changes that affect the O&M activities. The request must be approved by the Water Bureau, prior to implementation.

**Required Action:** The Permittee shall properly label all containers containing any chemical or additive material.

Country Cousins Mobile Home Community  
M00749  
NL-001705

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for the application, the location to be applied, application and/or mixing rates proposed. The request must include copies of all applicable Material Safety Data Sheets and the manufacturer's label/application directions for each herbicide proposed to be used.

Country Cousins MHC is required to immediately attain compliance with terms and conditions with Groundwater Discharge General Permit Number M00749, the Part 22, Groundwater Discharge Rules and Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended.

Please be advised the current Permit will be superseded by Permit No. GW 1810079 that has already been issued on December 13, 2005 and will become effective on February 1, 2006. You are reminded that M00749 remains in effect until February 1, 2006.

Please submit a written response to the required actions items 1 thru 7 identified above to this office on or before **January 20, 2006**. Submittals should be sent to Robert Fields, Michigan Department of Environmental Quality, Water Bureau, Southeast Michigan District Office, 27700 Donald Court, Warren, Michigan 48092.

Thank you for your cooperation during the inspection. Should you require additional information regarding this letter, or have any other questions please contact me at the number below.

Sincerely,



Robert Fields  
Environmental Quality Analyst  
Southeast Michigan District Office  
Water Bureau  
586-753-3765

#### Attachments

cc: City of Novi  
Bureau of Construction Codes and Fire Safety, MDLEG  
Oakland County Health Department  
Hae-Jin Yoon, WB  
Derrick Simmons, WB  
File

# Sanitary Sewer Overflow (SSO) Summary Report

## January 1, 2004 - December 31, 2004

**Commerce Twp**

**County: Oakland**

**Corunna**

**County: Shiawassee**

**Reported Events:**

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
4859	05/24/04 6:00 A	05/27/04 9:00 A	6 Million Gallons	Diluted raw sewage	701 Pine Street. Land: unknown, Waterbody: None entered	Heavy rainfall

**Summary for Corunna:**

**1 of 1 Events with a Reported Volume Total SSO Volume Reported: 6 Million Gallons**

**Outfall Corrective Actions: (No corrective actions entered)**

**Country Cousins Mobile Home Park**

**County: Oakland**

**Reported Events:**

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
4732	05/10/04 9:00 A	05/10/04 11:00 A	0.0005 Million Gallons	Diluted raw sewage	WWTP-26855 Haggerty Road. Land: None, Waterbody: Lagoon @ WWTP	HYDRAULIC OVERLOAD DUE TO HIGH VOLUME OF RAIN IN A SHORT DURATION.
5020	07/12/04 12:00 P	07/12/04 12:45 P	0.000125 Million Gallons	Diluted raw sewage	WWTP-26855 Haggerty Road. Land: None, Waterbody: Lagoon @ WWTP	Hydraulic overload due to high volume of rain in a short time span

**Summary for Country Cousins Mobile Home : 2 of 2 Events with a Reported Volume Total SSO Volume Reported: 0.000625 Million Gallons**

**Outfall Corrective Actions: (No corrective actions entered)**





# Sanitary Sewer Overflow (SSO) Detail Report

## January 1, 2005 - December 31, 2005

**Columbia Township**

County: Jackson

Outfall Corrective Actions: (No corrective actions entered)

**Commerce Twp**

County: Oakland

Reported Events:

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
6774	08/04/05 3:15 P	08/04/05 9:00 P	0.01 Million Gallons	Raw sewage	Polvadera Dr bet. Sherbrooke & Creedmore. Land: Bridge excavation area, Waterbody: None entered	Contractor damaged pressure sewer with sheet piling for bridge construction project.
6780	08/08/05 3:30 P	08/08/05 10:15 P	0.0075 Million Gallons	Raw sewage	Polvadera Dr bet. Sherbrooke & Creedmore. Land: Bridge excavation area, Waterbody: None entered	Pressure on repair clamp caused sewer to fail.
7443	10/10/05 2:25 P	10/10/05 4:45 P	0.001 Million Gallons	Raw sewage	Benstein and Best Dr. Land: Area adjacent to structure, Waterbody: None entered	Failed air release valve.

**Summary for Commerce Twp: 3 of 3 Events with a Reported Volume Total SSO Volume Reported: 0.019 Million Gallons**

Outfall Corrective Actions: (No corrective actions entered)

**Country Cousins Mobile Home Park**

County: Oakland

Reported Events:

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
6786	07/16/05 10:00 A	07/16/05 3:00 P	0.0015 Million Gallons	Partially treated sewage	WWTP-26855 Haggerty Road. Land: None, Waterbody: Lagoon @ WWTP	Hydraulic overload due to high volume of rain in a short span.



# Sanitary Sewer Overflow (SSO) Detail Report

January 1, 2005 - December 31, 2005

Country Cousins Mobile Home Park

County: Oakland

**Reported Events:**

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
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**Summary for Country Cousins Mobile Home :** 1 of 1 Events with a Reported Volume Total SSO Volume Reported: 0.002 Million Gallons

**Outfall Corrective Actions:** (No corrective actions entered)

Dimondale / Windsor

County: Eaton

**Reported Events:**

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
6140	02/02/05 10:30 A	02/02/05 3:30 P	0.00005 Million Gallons	Raw sewage	6661 Canal. Land: public right of way around leak, Waterbody: None entered	small hole in force main

**Summary for Dimondale / Windsor:** 1 of 1 Events with a Reported Volume Total SSO Volume Reported: 0.00005 Million Gallons

**Outfall Corrective Actions:** (No corrective actions entered)

Dorr/Leighton Wastewater Authority

County: Allegan

**Reported Events:**

Event ID	Start Date/Time	End Date/Time	Event Volume	Discharge Quality	Point(s) of Discharge	Reason for Discharge
7001	10/27/05 1:30 P	10/27/05 3:30 P	0.002936 Million Gallons	Raw sewage	12th Street between 146th and 147th (Force main break caused by excavation contractor). Land: Dry drainage ditch, Waterbody: None entered	County broke force main while installing storm line

**Summary for Dorr/Leighton Wastewater Aut:** 1 of 1 Events with a Reported Volume Total SSO Volume Reported: 0.003 Million Gallons



1875

1875

1875

1875

1875

1875

1875

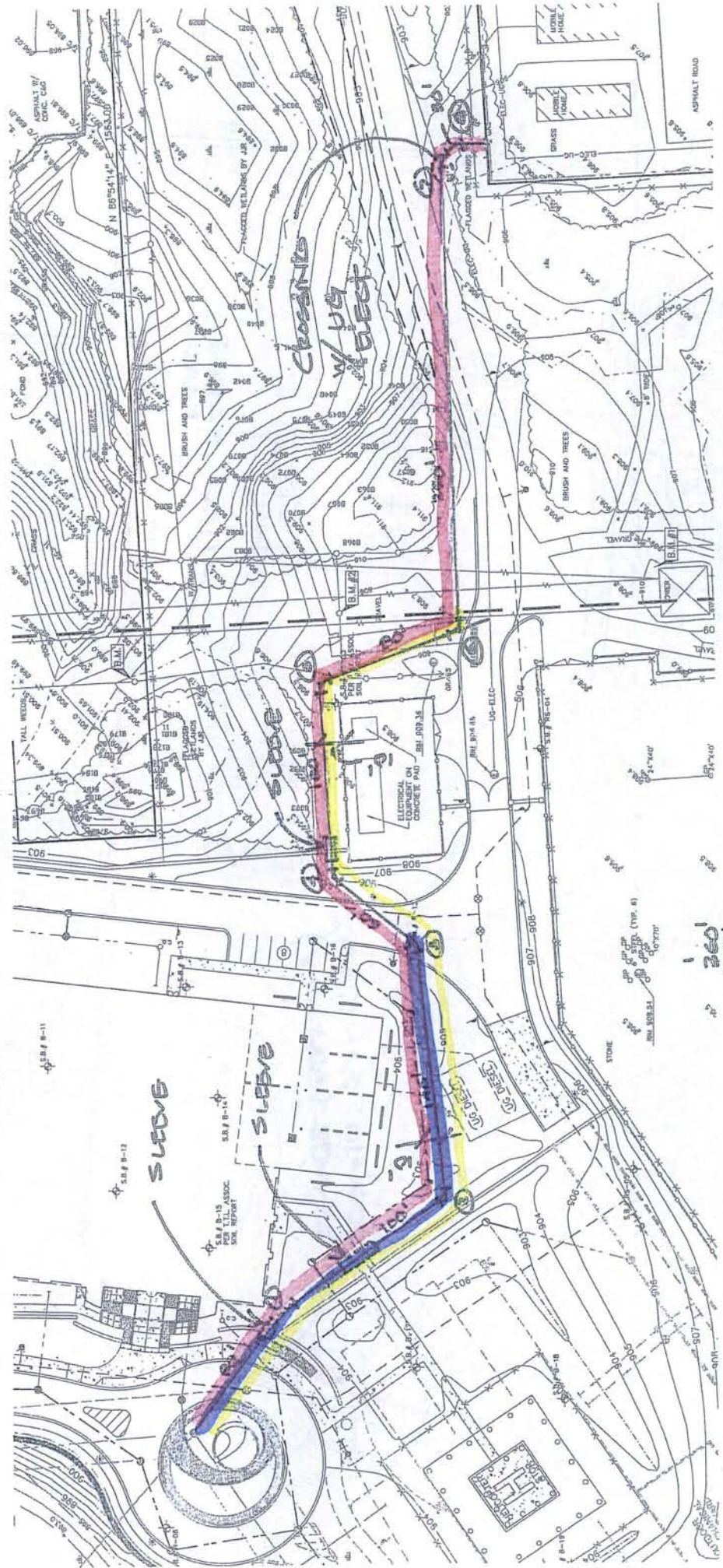
1875

1875

OPTIONS A, B & C



SCALE: 1"=80'

CASING PIPE



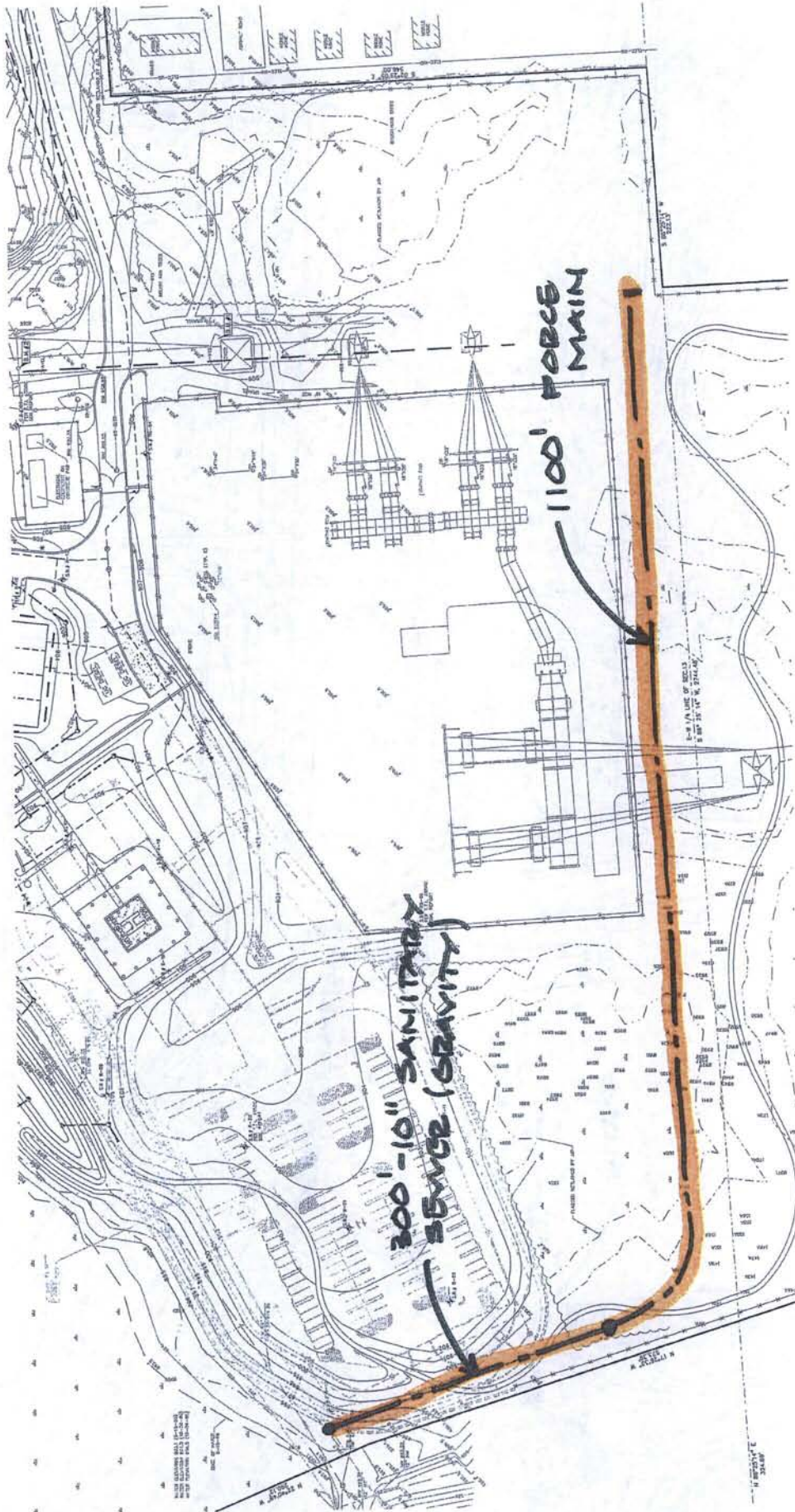
340' - 4/6" φ

SEA-BONDS

- A 
- B 
- C 



OPTION D



ITC HQ SANITARY  
SEWER ROUTE "D"

D



MEMORANDUM

53  
T. Hayes  
City Engineer  
-----  
Clay Pearson  
City Manager  
-----  
Pam Antil  
Assistant City Manager

To: Clay Pearson, City Manager  
Pam Antil, Assistant City Manager

From: Rob Hayes, City Engineer

Re: **Proposed Sanitary Sewer Extension from ITC Site to Country Cousins MHP**

Date: May 3, 2007

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Preliminary site plan approval for the ITC Transmission Headquarters site was granted by the Planning Commission with the provision that ITC would extend sanitary sewer to the neighboring Country Cousins Mobile Home Park. Although Section 11-164(a)(2)a. of the Ordinance requires that sanitary sewer stubs be extended to property lines of un-served parcels, this requirement is premised on sanitary sewer being available along a site's frontage. There is no sanitary sewer on ITC's Haggerty Road frontage, and the Twelve Mile Road sanitary sewer extends to the south through the site less than 100 feet from the proposed building footprints.

The Country Cousins site currently uses an on-site sewage treatment lagoon system to handle sanitary flow. This system is rife with operational and maintenance issues and is nearing the end of its useful life. The owners of the mobile home park are aware that once a public sanitary sewer is available they must connect to it. Because of the nearly half-mile expanse of MDOT right-of-way taken up by I-96, I-275, and I-696 to the south, the only existing sanitary sewer along Country Cousins' Haggerty Road frontage is over a half-mile to the north at Twelve Mile Road. Consequently, the only feasible opportunity to serve Country Cousins is to connect to the existing 18" gravity sewer that traverses the ITC site.

After meeting with ITC officials to discuss this matter, ITC provided the attached letter and cost estimates to describe the various options for extending sanitary to Country Cousins (ITC's April 19, 2007 letter, attached). Each option deals with different lengths of sewer extension on- and off-site. (Options A, B and C follow the same alignment as depicted on Figure 1; Option D is a separate alignment shown on Figure 2).

In general, ITC is willing to use its contractor to extend sanitary sewer to Country Cousins, but does not desire to pay for the full length of the extension. Accordingly, Options A and B would extend a force main sewer on the ITC site toward Country Cousins, and easements would be provided for the remaining future extension to Country Cousins. Option C would completely extend a force main sewer all the way to the Country Cousins site. Option D also would extend a gravity/force main sewer to Country Cousins, but it takes an alignment that would avoid site conflicts altogether and is 605 feet longer than Option C. As with Option C, Option D would not involve easements from ITC for future sewer extension.



A summary of ITC's proposed options and cost-share arrangements is provided in the following table:

Option	Sewer Description	Distance (ft)	ITC's Cost	City's Cost	Total Cost
A	On-site force main	320	\$26,604	\$0	\$26,604
B	On-site force main	580	\$26,604	\$29,965	\$56,569
C	On- and off-site force main	995	\$26,604	\$63,316	\$89,920
D	On-site gravity, on- and off-site force main	1600	\$36,734	\$63,316	\$100,050

Our Water & Sewer Department reports that future tap fees to be collected from 307-unit Country Cousins site are estimated to be \$424,000, which could be used to recoup whatever funds the City commits to this project.

Please provide your guidance on how to proceed with this issue.

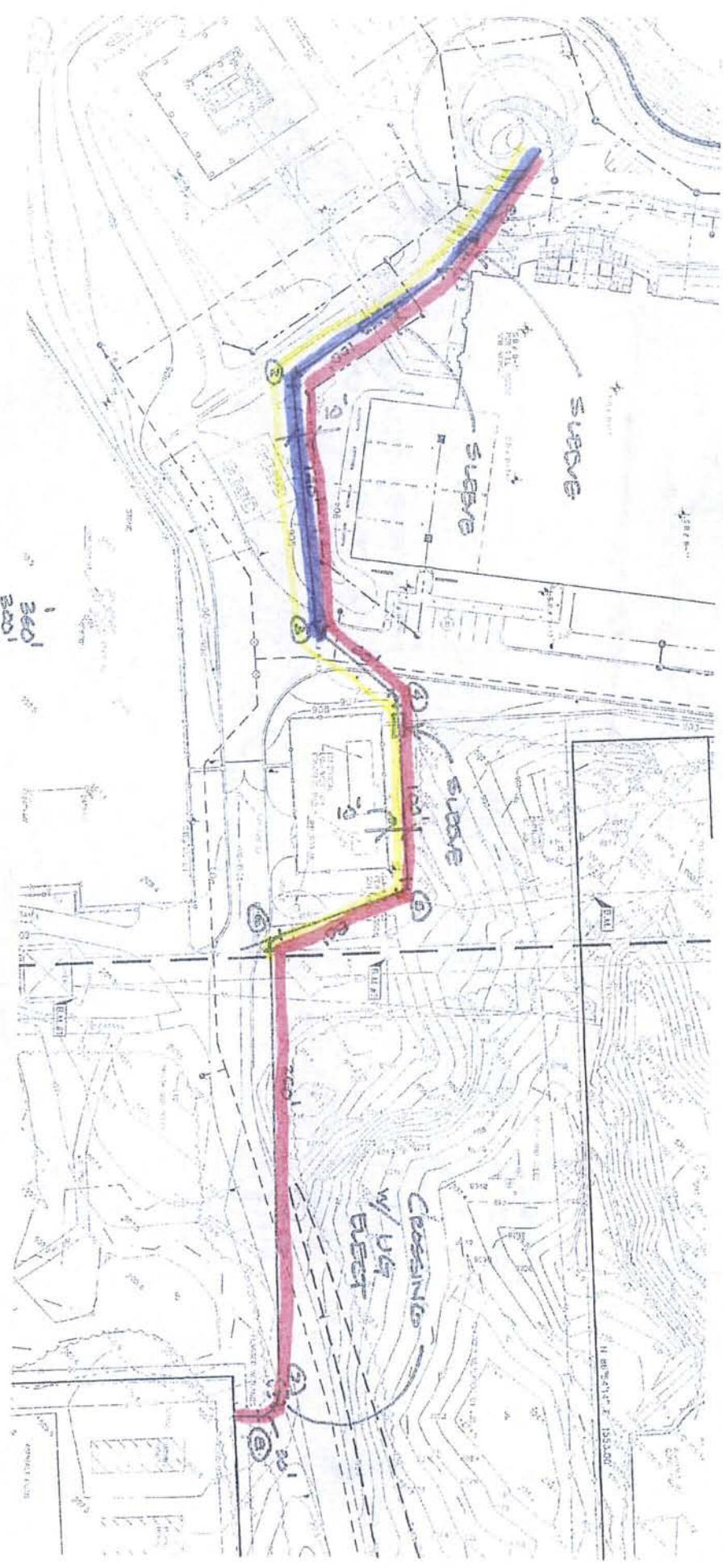
cc: Benny McCusker, Director of Public Works  
Kathy Smith-Roy, Finance Director  
Ben Croy, Civil Engineer

OPTIONS A, B & C



CASING PIPE

SCALE: 1"=60'



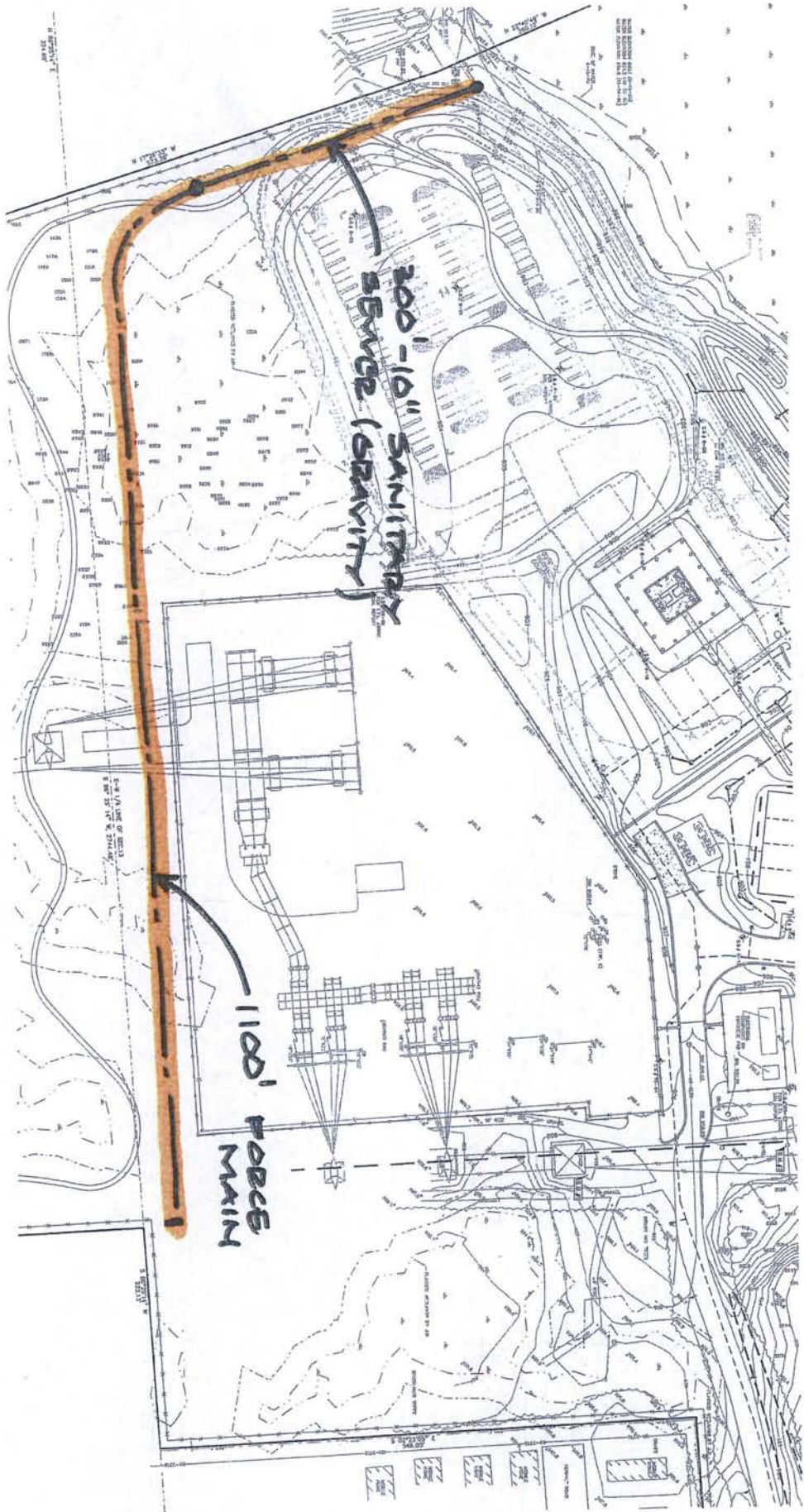
360'  
320'  
180'  
340' - 4/6"  $\phi$   
2 EA - BGNIPS

- A
- B
- C

FIG 1



OPTION D



300' - 10" SANITARY  
SEWER (GRAVITY)

1100' FORCE  
MAIN

ITC HQ SANITARY  
SEWER ROUTE "D"

D



April 19, 2007

Mr. Rob Hayes  
City of Novi  
45175 W. Ten Mile Road  
Novi, MI 48375

Dear Mr. Hayes:

I am writing to inform you that ITC *Transmission* is committed to working with the City of Novi to come up with a mutually accepted solution for extending the sanitary sewer line across our property to the Country Cousins mobile home park.

Pursuant to earlier discussions with the City, we considered an option of installing this sanitary sewer extension between our two buildings and routing it around all of the underground utilities in this area. Attached are the quotes from our Civil Engineer, Professional Engineering Associates (PEA), for doing this work. The quotes are broken down into Option A, B and C, where Option A extends the sewer ~~230~~ <sup>320</sup> linear feet to a location under our building connector, Option B extends the sewer 580 linear feet to a location just outside of our security wall and Option C extends the sewer 995 linear feet all the way to Country Cousins mobile home park. ITC *Transmission* previously agreed to pay for and install the first 230 linear feet (Option A) the cost to extend it the remaining distance is the difference between Option C and Option A, which is \$63,316.

Upon further review of this, ITC *Transmission* is proposing an alternate route to the south of our facility, which is shown on the attached map. This route is a longer distance, but is much straighter and completely avoids all of the underground utilities, does not go underneath our future building and is outside of our highly secure area. The cost of this option is included in the quotes as Option D. The cost of Option D is \$10,130 more than Option C but will likely be much easier to service and maintain because it is outside of our building envelope.

ITC *Transmission* is proposing to pay for the extra cost of going with Option D over Option C, just so that we can ensure that it is out of the way of our building and that future maintenance will not interrupt our operation. Including the costs we previously agreed to pay for if we went with Option A, ITC *Transmission* would end up paying \$36,734 and the City of Novi would end up paying \$63,316, which for the City is the same costs that would be incurred if we went with Option C. This equates to roughly a third of the cost allocated to ITC *Transmission* and two thirds allocated to the City of Novi.

We understand that the City may not be ready to extend the sewer to Country Cousins at this time. However, in order to fulfill ITC *Transmission* obligation we will install the first 300 linear feet of the 10" PVC gravity feed sanitary line at this time. This would include the cost of the two manholes, the testing and the backfill, which per the quote would be \$39,000 (\$26,000 in construction and \$13,000 in soft costs and contingencies).





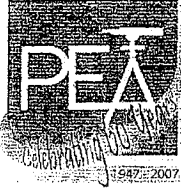
In order to extend the force main portion of the sewer the remaining distance to the Country Cousins mobile home park, we are providing two options:

- 1) If the City of Novi agrees to pay now for the cost of extending the sewer the remaining distance to the Country Cousins mobile home park property line, *ITC Transmission* will have our contractors install this sewer extension while they are at our site completing the construction of our new headquarters. The completion of this work would be subject to our successfully obtaining the proper permits which will be handled totally separately from the approval of our headquarters construction so as not to cause any delays in our progress toward completion.
- 2) If the City of Novi is not able to fund the project at this time, *ITC Transmission* will provide the City of Novi with an easement through our property so that the City of Novi is able to come in at a later date and extend the tap to the Country Cousins mobile home park.

If we do not have a decision on one of the two options by the end of September 2007, *ITC Transmission* will proceed with the option of providing an easement to the City of Novi. Should you have any questions or require additional information, please don't hesitate to contact me at (734) 332-5140.

Sincerely,

Denis DesRosiers  
Director of IT and Facilities



**PROFESSIONAL ENGINEERING ASSOCIATES, INC.**

**CIVIL ENGINEERS / LAND SURVEYORS**

2430 Rochester Ct., Suite 100, Troy, MI 48083-1872

Telephone (248) 689-9090

Facsimile (248) 689-1044

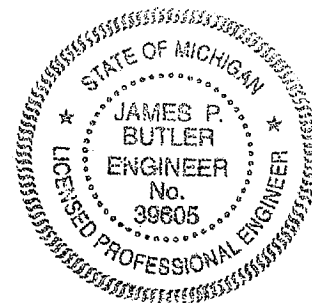
**PRELIMINARY COST OPINION**

<b>PROJECT DESCRIPTION</b>	<b>ITC HEADQUARTERS</b>	<b>JOB NO.</b>	<u>2006-178C</u>
<b>PREPARED BY</b> <u>JPB</u>	<b>REVIEWED BY</b> <u>JPB</u>	<b>DATE</b>	<u>04/10/07</u>

**SUMMARY**

Option A - Sanitary Sewer	\$14,780.00
<b>CONTINGENCIES (20%)</b>	\$2,956.00
<b>DESIGN AND SURVEY (25%)</b>	\$3,695.00
<b>REVIEW (15%)</b>	\$2,217.00
<b>INSPECTION (20%)</b>	\$2,956.00
<b>TOTAL</b>	\$26,604.00

NOTE: The engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractors method of determining prices, or over competitive bidding or market conditions. His opinions of probable project costs and construction costs provided for herein are to be made on the basis of his experience and qualifications and represent his best judgement as an experienced and qualified engineer familiar with the construction industry. But, the engineer cannot and does not guarantee that proposals bids or actual project or construction costs will not vary from opinions of probable costs prepared by him.



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Engineer's Cost Estimate

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PROJECT NAME:

ITC HEADQUARTERS

JOB NO. 2006-178C

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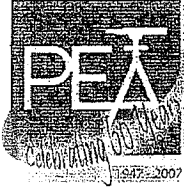
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OPTION A - SANITARY SEWER

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PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM PRICE
1	EA.	TAP EXISTING MANHOLE	\$1,400.00	\$1,400.00
230	L.F.	6" DIAMETER PVC DR 18 FORCE MAIN	\$30.00	\$6,900.00
40	L.F.	12" DIAMETER CASING PIPE	\$50.00	\$2,000.00
2	EA.	BENDS	\$165.00	\$330.00
3	EA.	CROSSINGS	\$500.00	\$1,500.00
1	LS	TESTING	\$1,300.00	\$1,300.00
150	CY	COMPACTED SAND BACKFILL	\$9.00	\$1,350.00
TOTAL SANITARY SEWER				\$14,780.00



**PROFESSIONAL ENGINEERING ASSOCIATES, INC.**

**CIVIL ENGINEERS / LAND SURVEYORS**

2430 Rochester Ct., Suite 100, Troy, MI 48083-1872

Telephone (248) 689-9090

Facsimile (248) 689-1044

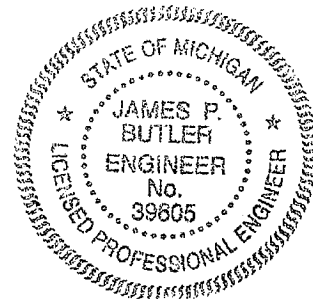
**PRELIMINARY COST OPINION**

<b>PROJECT DESCRIPTION</b>	<b>ITC HEADQUARTERS</b>	<b>JOB NO.</b>	2006-178C
<b>PREPARED BY</b> <u>JPB</u>	<b>REVIEWED BY</b> <u>JPB</u>	<b>DATE</b>	<u>04/10/07</u>

**SUMMARY**

Option B - Sanitary Sewer	\$32,325.00
<b>CONTINGENCIES (20%)</b>	\$6,465.00
<b>DESIGN AND SURVEY (20%)</b>	\$6,465.00
<b>REVIEW (15%)</b>	\$4,848.75
<b>INSPECTION (20%)</b>	\$6,465.00
<b>TOTAL</b>	\$56,568.75

NOTE: The engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractors method of determining prices, or over competitive bidding or market conditions. His opinions of probable project costs





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Engineer's Cost Estimate

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PROJECT NAME:

ITC HEADQUARTERS

JOB NO.

2006-178C

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**OPTION B - SANITARY SEWER**

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PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM PRICE
1	EA.	TAP EXISTING MANHOLE	\$1,400.00	\$1,400.00
1	EA.	AIR RELEASE VALVE IN MANHOLE	\$3,900.00	\$3,900.00
580	L.F.	6" DIAMETER PVC DR 18 FORCE MAIN	\$30.00	\$17,400.00
55	L.F.	12" DIAMETER CASING PIPE	\$50.00	\$2,750.00
5	EA.	BENDS	\$165.00	\$825.00
5	EA.	CROSSINGS	\$500.00	\$2,500.00
1	LS	TESTING	\$1,300.00	\$1,300.00
250	CY	COMPACTED SAND BACKFILL	\$9.00	\$2,250.00
TOTAL SANITARY SEWER				\$32,325.00



**PROFESSIONAL ENGINEERING ASSOCIATES, INC.**

**CIVIL ENGINEERS / LAND SURVEYORS**

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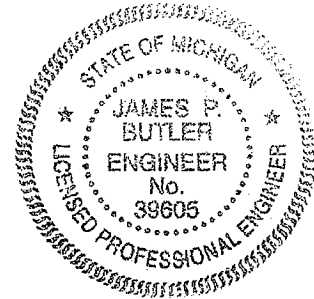
**PRELIMINARY COST OPINION**

<b>PROJECT DESCRIPTION</b>	<b>ITC HEADQUARTERS</b>	<b>JOB NO.</b>	<b>2006-178C</b>
<b>PREPARED BY</b> <u>JPB</u>	<b>REVIEWED BY</b> <u>JPB</u>	<b>DATE</b>	<u>04/10/07</u>

**SUMMARY**

Option C - Sanitary Sewer	\$56,200.00
<b>CONTINGENCIES (15%)</b>	\$8,430.00
<b>DESIGN AND SURVEY (15%)</b>	\$8,430.00
<b>REVIEW (15%)</b>	\$8,430.00
<b>INSPECTION (15%)</b>	\$8,430.00
<b>TOTAL</b>	\$89,920.00

NOTE: The engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractors method of determining prices, or over competitive bidding or market conditions. His opinions of probable project costs



Engineer's Cost Estimate

PROJECT NAME: ITC HEADQUARTERS JOB NO. 2006-178C

OPTION C - SANITARY SEWER

PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM PRICE
1	EA.	TAP EXISTING MANHOLE	\$1,400.00	\$1,400.00
2	EA.	AIR RELEASE VALVE IN MANHOLE	\$3,900.00	\$7,800.00
995	L.F.	6" DIAMETER PVC DR 18 FORCE MAIN	\$30.00	\$29,850.00
155	L.F.	12" DIAMETER CASING PIPE	\$50.00	\$7,750.00
8	EA.	BENDS	\$165.00	\$1,320.00
6	EA.	CROSSINGS	\$500.00	\$3,000.00
1	LS	TESTING	\$1,300.00	\$1,300.00
420	CY	COMPACTED SAND BACKFILL	\$9.00	\$3,780.00
TOTAL SANITARY SEWER				\$56,200.00



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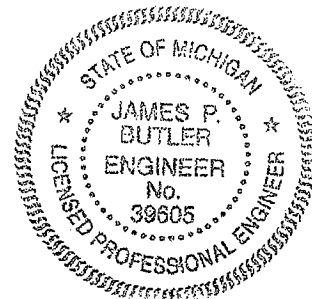
**PRELIMINARY COST OPINION**

<b>PROJECT DESCRIPTION</b>	<b>ITC HEADQUARTERS</b>	<b>JOB NO.</b>	2006-178C
<b>PREPARED BY</b> <u>JPB</u>	<b>REVIEWED BY</b> <u>JPB</u>	<b>DATE</b>	<u>04/10/07</u>

**SUMMARY**

Option D - Sanitary Sewer	\$66,700.00
<b>CONTINGENCIES (15%)</b>	\$10,005.00
<b>DESIGN AND SURVEY (15%)</b>	\$10,005.00
<b>REVIEW (10%)</b>	\$6,670.00
<b>INSPECTION (10%)</b>	\$6,670.00
<b>TOTAL</b>	\$100,050.00

NOTE: The engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractors method of determining prices, or over competitive bidding or market conditions. His opinions of probable project costs





Engineer's Cost Estimate

PROJECT NAME: ITC HEADQUARTERS JOB NO. 2006-178C

OPTION D - SANITARY SEWER

PLAN QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ITEM PRICE
1	EA.	CONSTRUCT MANHOLE OVER EXISTING SANITARY	\$9,200.00	\$9,200.00
2	EA.	AIR RELEASE VALVE IN MANHOLE	\$3,900.00	\$7,800.00
1	EA.	4' DIAMETER MANHOLE	\$2,400.00	\$2,400.00
300	L.F.	10" DIAMETER PVC TRUSS PIPE	\$37.00	\$11,100.00
1	EA.	EXTERNAL DROP CONNECTION	\$2,100.00	\$2,100.00
1,100	LF	4" FORCE MAIN (DIRECTIONALLY DRILLED)	\$28.00	\$30,800.00
1	LS	TESTING	\$1,500.00	\$1,500.00
200	CY	COMPACTED SAND BACKFILL	\$9.00	\$1,800.00
TOTAL SANITARY SEWER				\$66,700.00