

PRINCIPALS

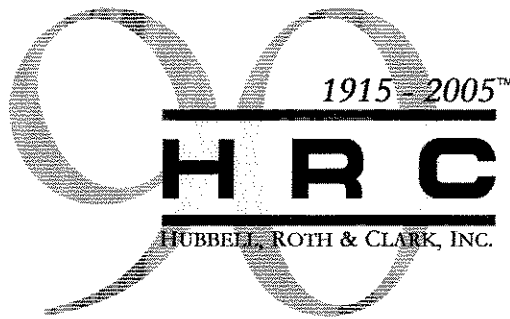
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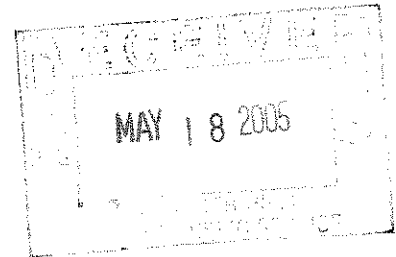
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May 17, 2005

City of Rochester Hills
 1000 Rochester Hills Drive
 Rochester Hills, MI 48309



Attention: Mr. Roger Moore, P.S.

Re: Proposal to Provide Engineering Services
 John R. Road Widening & E. Ferry Drain Improvements

HRC Job No. 20050147

Dear Mr. Moore:

Thank you for considering HRC to provide engineering services on the subject project. The scope of work is based on HRC's 1996 study of the East Ferry Drain and our previous conversations. In summary, the following details describe proposed engineering services for widening John R. Road and improving the East Ferry Drain:

1. The proposed project limits for the John R. Road widening and the E. Ferry Drain improvements are shown on the attached Figure 1. As shown, approximately 4,500-feet of roadway between Auburn and S. Boulevard and an additional 1,100-feet north of Auburn will be widened. Right turn lanes are provided at the entrance to Spencer Park and at the Auburn Road and John R. intersection. Storm drainage improvements are similar to HRC's 1996 Study, except the drainage improvements along Bendelow are not included and additional drainage in the area of the Auburn Road and John R. Road intersection are included. The bid documents will be formatted to allow tracking of the roadway and storm drainage improvements separately.
2. Drainage improvements to the existing Van Maele Drain in the area of the South Boulevard and John R Road intersection are included. It is anticipated that this work will include lowering the existing 48-inch culvert below John R Road and enclosing the open drain section west of John R Road to the Gibson Drain.
3. The widening of John R. Road is proposed to be completed by milling the existing pavement, extending the edge of roadway 5.5-feet on either side (thereby creating an 11-foot center lane), and then capping the entire roadway. A new 30-inch concrete curb and gutter section would also be provided, to make a total back of curb to back of curb width of 40 feet. A preliminary cross section of the proposed roadway is shown in Figure 2. It is noted that for the purposes of this proposal, the figure is not drawn to scale and details such as the proposed storm drain location, under drain/edge drain location, road alignment and pathway locations are not shown.

4. An 8-foot bituminous pathway along the west side of John R and a new cross walk from this path to the entrance to Thelma G Spencer Park is included. At this time it is anticipated that striping and signage would provide the necessary cross-walk identification. However, it is noted that the cross-walk may ultimately require pedestrian activated signalization. Pending the warrant for this signalization, it may be necessary to adjust the scope of services accordingly.
5. The intersections of John R with the M-59 Bridge and with Auburn Road will require coordination and permitting with the Michigan Department of Transportation (MDOT). HRC has allowed for two (2) meetings with MDOT. The City would like pedestrian pathways on both sides of John R Road at the M-59 Bridge. HRC has allocated 40 hours for this item. In addition, it is anticipated that the signalization at Auburn Road may require modification. The cost of this work typically ranges from \$6,000-\$8,000. Pending the results of the coordination efforts with MDOT, contract modifications for these items may be necessary.
6. The intersection of John R and South Boulevard will require coordination/permitting with the Oakland County Road Commission (RCOC), the Oakland County Drain Commissioner (OCDC) and the City of Troy. HRC has worked directly with each of these agencies and have included a total of six (6) meetings with these agencies. Pending the results of these meetings, it may be necessary to change the scope of work.
7. It is anticipated that the discharge of the E. Ferry Drain to the existing Gibson Drain will require coordination/permitting with the Michigan Department of Environmental Quality (MDEQ) and will likely require a forebay or other type of end-of-pipe treatment. HRC has allowed for two (2) meetings with MDEQ and the design of a forebay. Pending the results of these meetings, it may be necessary to change the scope of work to account for potential modifications to the existing Michelson Road Pumping Station.
8. Based on a cursory review of the City Master Plans, improvements to the sanitary sewage disposal systems are not required in the area and are therefore not included in the scope. However, it is anticipated that approximately 1,400 feet of existing AC water main will require replacement with new 12-inch ductile iron water main.
9. Services to prepare sketches and descriptions for the recommended easements and ROW acquisition are included. It is proposed that the City will contract the acquisition services directly.
10. It is proposed that the City will contract Soil Boring services directly. HRC services to coordinate and locate soil borings are included.
11. It is our understanding that the City bids their own contracts and will need the bid documents formatted in a manner that allows work relative to the road and drain to be tracked separately. As a result, HRC will provide electronic *.pdf files of the drawings and specs in addition to ten (10) bound hard copies.
12. The preliminary estimated construction cost for the project is detailed in Table 1. Note that the total approximate cost of \$3,525,000 includes 10 percent for contingencies.

Listed on Table 2 are the estimated hours and associated costs to complete the project design. As shown, the total engineering cost is estimated to be \$230,800.00. This cost is to be invoiced on a time basis with a multiplier of 2.9 times direct payroll and will not be exceeded without prior authorization.

In general, project design will require approximately 1-year following authorization to proceed. Currently, construction is proposed to begin in June 2006. A complete project schedule is shown in Figure 3.

Upon City staff review and concurrence with this proposal, HRC will modify the proposal format for inclusion and presentation to City Council. In the event the City would like HRC to provide additional services during the construction phase, an amendment to the scope could be supplied. If you have any questions or require any additional information, please contact the undersigned.

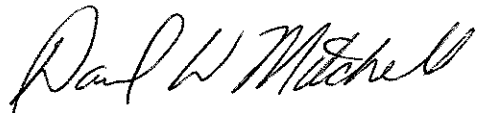
Thank you again for considering HRC and we look forward to our continued service to the City of Rochester Hills.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Walter H. Alix, P.E., P.S.
Vice President



Daniel W. Mitchell, P.E.
Associate

Enclosure

pc: Rochester Hills; P. Davis
HRC; N. Faught, S. Bhatia, File

Rochester Hills John R Road Widening & E. Ferry Drain Improvements

HRC Job No. 20050147

Figure 3

TASK NAME/Description	Year 2005								Year 2006					
	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June
Authorization to Begin Work	◆													
Project Kick-Off Meeting	■													
Topographical Survey		■	■											
Preliminary Design		■	■	■	■	■								
Soil Borings				■	■									
Submit 50% Review Plans						◆								
Owner Review						■	■							
Further Design						■	■	■						
Submit 90% Review Plans								◆						
Owner Review								■	■					
Permit Applications								■	■					
Finalize Plans & Specifications									■	■	■			
Advertise Bids											■	■		
Receive Bids												◆		
Review Bids & Award Contract												■	■	■
Begin Construction													■	■
Monthly Progress Meetings			◆	◆	◆	◆	◆	◆	◆					



Table 1: Preliminary Cost Estimate

City of Rochester Hills John R Road Widening & E. Ferry Drain Improvements

May 17, 2005

HRC Job No. 20050147.00

John R. Road Widening

NO.	ITEM DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1.	Mobilization	1 LS	\$ 35,000.00	\$ 35,000
2.	Tree Removal	15 ea.	\$ 400.00	\$ 6,000
3.	Remove 12" C.M.P.	800 lft.	\$ 5.00	\$ 4,000
4.	Remove & Replace Concrete Sidewalk 4" thick	600 sf	\$ 5.00	\$ 3,000
5.	Remove & Replace Bituminous Approach 6" thick	4,000 syd	\$ 25.00	\$ 100,000
6.	Remove & Reinstall Mail Boxes	50 ea.	\$ 100.00	\$ 5,000
7.	Remove & Replace Concrete Approach 6" thick	1,000 syd	\$ 38.00	\$ 38,000
8.	Remove & Replace Road Signs	20 ea.	\$ 100.00	\$ 2,000
9.	Sawcut & Remove Exist. Pavement	670 syd	\$ 6.50	\$ 4,355
10.	Base Repair of Exist. Pavement	320 ton	\$ 70.00	\$ 22,400
11.	Roadway Excavation	12,000 cyd	\$ 8.00	\$ 96,000
12.	Open-Graded Drainage Course, 5G, 6" C.I.P.	16,200 syd	\$ 5.00	\$ 81,000
13.	21AA Aggregate Base 8" - Thick	16,500 syd	\$ 6.00	\$ 99,000
14.	Subgrade Undercutting Type II (if needed)	800 cyd	\$ 18.00	\$ 14,400
15.	Non-Hazardous Contaminated Material, Handling & Disposal (LM) - if needed	500 cyd	\$ 50.00	\$ 25,000
16.	Geo-textile fabric, Type Non-Woven	33,500 syd	\$ 1.50	\$ 50,250
17.	6" Wrapped Edge Drain w/ Peastone Fill	11,000 lft.	\$ 10.00	\$ 110,000
18.	5" Thick - Bituminous Mix HMA 2C. for Pavement	3,700 ton	\$ 40.00	\$ 148,000
19.	2" Thick Bituminous Mix HMA 3C for Pavement Including Wedging	1,500 ton	\$ 42.00	\$ 63,000
20.	2" Thick Bituminous Mix HMA 13A for Overlay Entire Pavement	3,300 ton	\$ 35.00	\$ 115,500
21.	Concrete Curb & Gutter	10,200 lft.	\$ 11.00	\$ 112,200
22.	Soil Erosion & Sediment Control	1 LS	\$ 5,000.00	\$ 5,000
23.	4" Bit. Pathway on 4" Agg. Base	38,400 sft.	\$ 2.00	\$ 76,800
24.	Restoration w/ Sod and 3" Topsoil	10,000 syd	\$ 6.00	\$ 60,000
25.	Adjust Structure	10 ea.	\$ 500.00	\$ 5,000
26.	Temporary Patching w/ Bituminous	50 ton	\$ 90.00	\$ 4,500
27.	Cold Mill Existing Pavement	13,400 syd	\$ 4.00	\$ 53,600
28.	Traffic Signalization	1 LS	\$ 50,000.00	\$ 50,000
29.	Traffic Maintenance and Control	1 LS	\$ 50,000.00	\$ 50,000
30.	Pavement Markings	23,400 lft.	\$ 0.30	\$ 7,020
31.	Left Turn Arrow Symbol	20 ea.	\$ 100.00	\$ 2,000
32.	Temporary Pavement Marking	10,000 lft.	\$ 0.25	\$ 2,500
33.	Watering Sod 1,000 Gallon Unit	280 units	\$ 50.00	\$ 14,000
34.	Remove & Replace Headwall	6 ea.	\$ 200.00	\$ 1,200
35.	1" - Wide Edge Trimming	10,400 lft.	\$ 3.00	\$ 31,200
36.	Guard Rail	200 lft.	\$ 60.00	\$ 12,000
37.	12" Water Main Replacement Incl. Valves, Hydrants and Connection to Exist. Leads	1,400 lft.	\$ 80.00	\$ 112,000
Subtotal for John R. Road Widening				\$ 1,620,925

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Table 1: Preliminary Cost Estimate

City of Rochester Hills John R Road Widening & E. Ferry Drain Improvements

May 17, 2005

HRC Job No. 20050147.00

East Ferry Drain

NO.	ITEM DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1.	12" - Dia. Storm Sewer	675 lft.	\$ 60.00	\$ 40,500
2.	15" - Dia. Storm Sewer	1,225 lft.	\$ 65.00	\$ 79,625
3.	18" - Dia. Storm Sewer	2,695 lft.	\$ 95.00	\$ 256,025
4.	24" - Dia. Storm Sewer	630 lft.	\$ 110.00	\$ 69,300
5.	30" - Dia. Storm Sewer	700 lft.	\$ 135.00	\$ 94,500
6.	36" - Dia. Storm Sewer	595 lft.	\$ 160.00	\$ 95,200
7.	42" - Dia. Storm Sewer	1,155 lft.	\$ 190.00	\$ 219,450
8.	54" - Dia. Storm Sewer	1,050 lft.	\$ 230.00	\$ 241,500
9.	60" - Dia. Storm Sewer	455 lft.	\$ 310.00	\$ 141,050
10.	Lower/Enclose Existing 48" Van Maele Drain	360 lft.	\$ 225.00	\$ 81,000
11.	Forebay End Treatment	1 LS	\$ 20,000.00	\$ 20,000
12.	Trench Undercut & Backfill (If and where needed)	200 cyd	\$ 25.00	\$ 5,000
13.	Lower Existing Water Main	4 ea.	\$ 5,000.00	\$ 20,000
14.	21AA Gravel for Road Restoration	2,000 cyd	\$ 12.00	\$ 24,000
15.	Remove & Replace Water Services as needed	25 ea.	\$ 500.00	\$ 12,500
16.	Remove & Replace 6" Sanitary House Lead	100 ea.	\$ 500.00	\$ 50,000
17.	Remove & Replace Sump Pump Connections	20 ea.	\$ 400.00	\$ 8,000
18.	Remove & Replace Concrete Curb & Gutter	300 lft.	\$ 20.00	\$ 6,000
19.	Traffic Maintenance Local Streets	1 LS	\$ 1,000.00	\$ 1,000
20.	Riprap Natural Stone - 12" Thick	50 syd.	\$ 100.00	\$ 5,000
21.	Restoration w/ Sod and 3" Topsoil	17,000 syd.	\$ 4.00	\$ 68,000
22.	Remove & Replace Mail Box	53 ea.	\$ 100.00	\$ 5,300
23.	Mobilization	1 LS	\$ 15,000.00	\$ 15,000
24.	Soil Erosion Control	1 LS	\$ 2,000.00	\$ 2,000
25.	Watering Sod Areas (1,000 Gallon Unit)	450 units	\$ 50.00	\$ 22,500
Subtotal for East Ferry Drain				\$ 1,582,450

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Total for John R. Widening & East Ferry Drain	\$ 3,204,000
10% Contingencies	\$ 321,000
TOTAL CONSTRUCTION COST	\$ 3,525,000

**CITY OF ROCHESTER HILLS
JOHN R ROAD WIDENING & E. FERRY DRAIN IMPROVEMENTS**

**TABLE 2
ESTIMATED HOURS AND FEES**

May 17, 2005

HRC Job No. 20050147

Task Description	Classification/Rate								Total Hours
	Associate/ Proj Mgr.	Sr. Engineer	Engineer	Sr. Tech.	Technician	Survey Crew	Survey Office	Clerical/ Repro	
1 Topographical Survey	8					170			178
2 Survey File Processing	4	8					40		52
3 MDOT Intersections	12	16		40					68
4 Plans (Roadway & Pathway)	70	120	120	240	240				790
5 Plans (Storm Drain)	60	120	100	240	180				700
6 Plans (Water Main)	10	10	20	10	20				70
7 Specifications	20	60	60					16	156
8 Permits	10	25	25					4	64
9 Soil Boring Coordination	4	8			4	4			20
10 ROW/Easement Requirements	4	20			40		10		74
11 Traffic Signalization	8	40		20					68
12 Coordination w/ Others (MDEQ, OCDC, MDOT & Troy - 10 Mtgs.)	20	80						10	110
13 Progress Meetings	20	60						10	90
14 P&S Reproduction								20	20
PROJECT TOTALS	250	567	325	550	484	174	50	60	2,460

ESTIMATED FEE SUMMARY

PERSONNEL	HOURS	RATE	TOTAL
Associate/Proj Mgr.	250	\$ 40.00	\$ 10,000
Sr. Engineer	567	\$ 38.00	\$ 21,500
Engineer	325	\$ 30.00	\$ 9,800
Sr. Tech.	550	\$ 27.00	\$ 14,900
Technician	484	\$ 22.00	\$ 10,600
Survey Crew	174	\$ 60.00	\$ 10,400
Survey Office	50	\$ 28.00	\$ 1,400
Clerical/Repro	60	\$ 15.00	\$ 900
TOTAL DIRECT PAYROLL			\$ 79,500
TOTAL INDIRECT PAYROLL (1.9)			\$ 151,300
TOTAL HRC PAYROLL			\$ 230,800