CITY of NOVI CITY COUNCIL

Agenda Item F
March 12, 2012

SUBJECT: Approval to award an amendment to the engineering services agreement to Orchard, Hiltz & McCliment for additional design engineering services related to the Brookfarm Park Streambank Stabilization Project in the amount of $9,784 for the design of a pathway connecting Ripple Creek with Village Oaks Elementary and additional grading in the park.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division

CITY MANAGER APPROVAL:

EXPENDITURE REQUIRED	**$ 1,671 (Neighborhood Connector Segment 2)** **$ 1,313 (Brookfarm Park Pathway)** **$ 6,800 (Brookfarm Park Streambank Stabilization)** **$ 9,784 TOTAL**
AMOUNT BUDGETED	**$ 0 (Neighborhood Connector Segment 2)** **$ 0 (Brookfarm Park Pathway)** **$120,000 (Brookfarm Park Streambank Stabilization)**
ADDITIONAL AMOUNT REQUIRED	**$ 1,671 (Neighborhood Connector Segment 2)** **$ 1,313 (Brookfarm Park Pathway)** **$ 2,934 TOTAL to be included in future Budget Amendment**
LINE ITEM NUMBER	**204-204.00-974.429 (Neighborhood Connector Segment 2)** **208-691.00-974.060 (Brookfarm Park Pathway)** **210-211.00-869.510 (Brookfarm Park Streambank Stabilization)**

BACKGROUND INFORMATION:

A design engineering contract was awarded to Orchard, Hiltz & McCliment in July 2011 for the design of this project which includes the following improvements in and adjacent to Brookfarm Park:

- Streambank stabilization at multiple locations along Ingersol Creek
- Stabilization at the confluence of Ingersol Creek and Bishop Creek
- Hydrologic/Hydraulic evaluation of existing and proposed conditions
- Rehabilitation of footings for the existing pedestrian bridge crossing Ingersol Creek

During the design phase of the project, staff identified an opportunity to include a pathway segment identified as a high priority neighborhood connector in the Non-Motorized Master Plan (segment NC 2) as part of this project. This path segment would extend from the south end of Ripple Creek Road to the existing foot bridge over Ingersol Creek and connect to the existing path on Village Oaks Elementary School property. This 8-foot wide path would be located along the western edge of the maintained portion of the park, and would provide a valuable pedestrian connection between the school and the residential neighborhoods to the north. The estimated construction cost for segment NC 2 is $38,700.

Following discussions with the Parks, Recreation and Cultural Services (PRCS) and Community Development Departments, another pathway was identified as a potential improvement to the park. This path would run along the top of the streambank (new top of bank following the streambank improvements) to provide better access adjacent to Ingersol Creek. The estimate construction cost for the pathway segment within the park is $24,000. The attached sketch shows the two proposed pathways within the park.

The streambank stabilization project design includes the removal of some of the bank's soil to create a benched streambank as a measure to better stabilize the eroded streambank, as shown in the attached sketch. This method of streambank stabilization results in a large quantity of excess soil. PRCS has requested that the excess soil that would have been hauled off-site be placed within the park and graded to help eliminate some low areas that are causing ponding within Brookfarm Park. The cost to prepare a grading plan that uses the excess soil within the park is less than the cost to haul and dispose of the soil, therefore staff recommends regrading the park.

The attached scope and estimate from Orchard, Hiltz & McCliment has been provided for the design of the pathways within the park (NC-2 and along the stream) and development of a grading plan for the park to decrease the amount of excess soils to be hauled off the site.

RECOMMENDED ACTION: Approval to award an amendment to the engineering services agreement to Orchard, Hiltz & McCliment for additional design engineering services related to the Brookfarm Park Streambank Stabilization Project in the amount of $9,784 for the design of a pathway connecting Ripple Creek with Village Oaks Elementary and additional grading in the park.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Casey				
Council Member Fischer				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Wrobel				

Authorization for Additional Services #1

Project: **Engineering Services for** Date: 1-26-2012
BROOKFARM PARK STREAMBANK STABILIZATIO N SERVICES
Design, Contract Administration and Construction Observation Services

Description of Additional Services
To date, the following extra work items that have come up:
1. Pre-Application Permit fees - This item includes $100 in pre-application meeting fees with the MDEQ.
2. MDEQ Joint Permit fees – This item includes $500 in joint permit fees for the Brookfarm Park site.
3. Additional sidewalk work for the Brookfarm Park site – Based on an estimated sidewalk area of 5,100 sq.ft. (1,020 feet in length) with a unit cost of $4.50/sq.ft., the estimated construction cost is $22,950. Using the City's fee curve, this equates to $2,983.50 in additional engineering fees.
4. Additional survey and grading design for soccer field spoils leveling – Our effort to complete a spoils leveling plan to meet the soccer field needs $6,200. This effort includes:
- Survey of the soccer field located in the Brookfarm Park ($1,500)
- Base plan preparation of Brookfarm Park site ($1,000)
- Grading plan preparation of soccer field site ($2,500)
- Contract quantities & specifications for additional soccer field work ($500)
- Hydraulic modeling to verify impacts of spoils leveling in floodplain, if needed ($700)
This cost assumes the following:
- There will be no under drain or storm sewer required to drain the site, and that drainage can be achieved by surface drainage through swales toward the outlet.
- Revisions of plans will be provided based on a City review of 50% and 100% plans. Six (6) hours of engineering time has been allocated to make plan revision based on the comments.
- The additional hydraulic modeling will only be required if the spoils are leveled within the existing floodplain.
- The proposed design is effectively a "base model" soccer field design and does not include additional park features such as sprinkler systems, park benches, striping plans, or soccer goal installations. If these features are to be incorporated into the design, additional effort will be required.

Original scope of work:
[*Provide itemized list of tasks related to scope change, and provide cost associated with each task*]

- See attached scope of work
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Amount authorized for original scope: $19,600.00

Proposed scope of work:
[*Provide itemized list of tasks related to scope change, and provide cost associated with each task*]

- Permit fees - This item includes $100 in pre-application meeting fees with the MDEQ.
- MDEQ Joint Permit Fees – This item includes $500 in permit fees for the MDEQ Joint Permit.
- Additional sidewalk work for the Brookfarm Park site –Using the City's fee curve, this equates to $2,983.50 in additional engineering fees.
- Additional survey and grading design for soccer field spoils leveling – Our effort to complete a spoils leveling plan to meet the soccer field needs $6,200.

Proposed budget amount for new scope: $29,383.50

Based on the revised scope of services, we request authorization for an increase of $9,783.50 to the amount authorized under the previous scope of services.

Approved By
Orchard, Hiltz & McCliment, Inc.

_____
Timothy Kuhns, Project Manager

CITY OF NOVI

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_____ _____
[*Name, Title*] [*Date*]

Brookfarm Park

Map Produced Using the
City of Novi, Michigan
Internet Mapping Portal

Date: 11/30/2011

0 100 200 400
Feet
1 inch = 199 feet

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Pleased contact the City GIS Manager to confirm source and accuracy information related to this map. This map was produced under the terms of the City's Internet Site Use Policy available at http://cityofnovi.org/Resources/SiteUsePolicy.asp

LEGEND

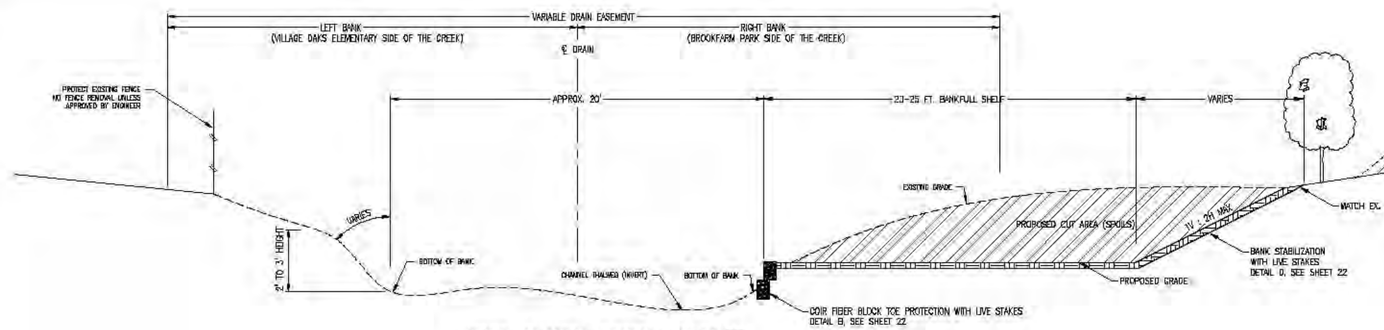
PAVED PATH

POTENTIAL FUTURE PATH

INGERSOL CREEK

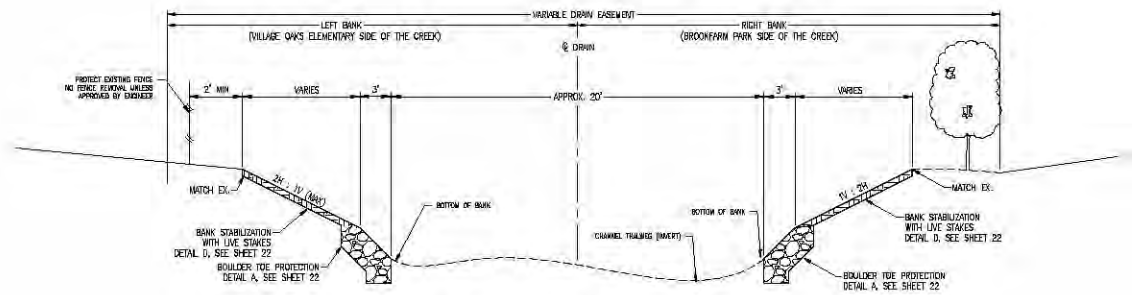
11/9/11
11/29/11 REV.

NOTE:
ALL CHANNEL CROSS SECTIONS REFERENCED LEFT TO RIGHT LOOKING DOWNSTREAM.



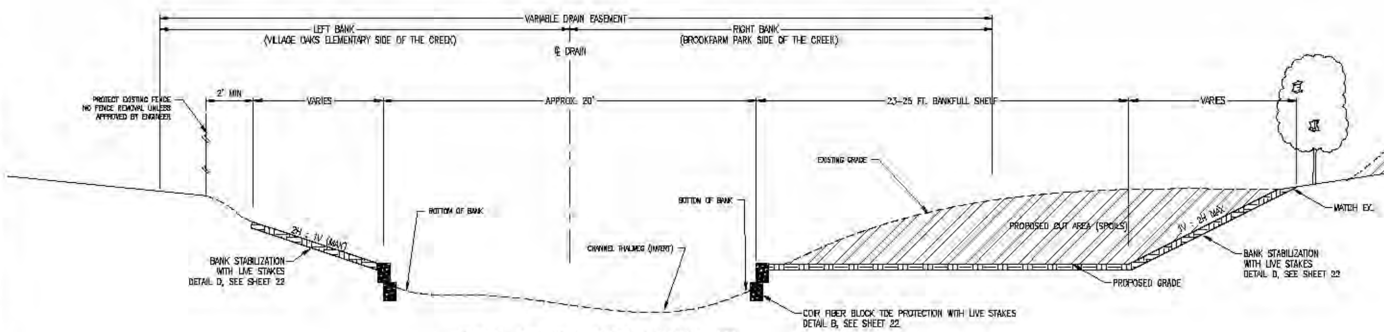
VARIABLE DRAIN EASEMENT
LEFT BANK
(VILLAGE OAKS ELEMENTARY SIDE OF THE CREEK)
RIGHT BANK
(BROOKFARM PARK SIDE OF THE CREEK)
℄ DRAIN
PROTECT EXISTING FENCE NO FENCE REMOVAL UNLESS APPROVED BY ENGINEER
APPROX. 20'
23-25 FT. BANKFULL SHELF
VARIES
SPOILS LEVELING WITHIN BROOKFARM PARK
EXISTING GRADE
MATCH EX.
VARIES
PROPOSED CUT AREA (SPOILS)
1V : 2H MAX
2' TO 3' HEIGHT
BOTTOM OF BANK
CHANNEL THALWEG (INVERT)
BOTTOM OF BANK
BANK STABILIZATION WITH LIVE STAKES DETAIL D, SEE SHEET 22
PROPOSED GRADE
COIR FIBER BLOCK TOE PROTECTION WITH LIVE STAKES DETAIL B, SEE SHEET 22

TYPICAL CHANNEL CROSS SECTION [A]
INGERSOL CREEK
(STA: 7+50 TO STA: 10+86)



VARIABLE DRAIN EASEMENT
LEFT BANK
(VILLAGE OAKS ELEMENTARY SIDE OF THE CREEK)
RIGHT BANK
(BROOKFARM PARK SIDE OF THE CREEK)
℄ DRAIN
PROTECT EXISTING FENCE NO FENCE REMOVAL UNLESS APPROVED BY ENGINEER
2' MIN
VARIES
3'
APPROX. 20'
3'
VARIES
MATCH EX.
2H : 1V (MAX)
BOTTOM OF BANK
BOTTOM OF BANK
CHANNEL THALWEG (INVERT)
1V : 2H
MATCH EX.
BANK STABILIZATION WITH LIVE STAKES DETAIL D, SEE SHEET 22
BOULDER TOE PROTECTION DETAIL A, SEE SHEET 22
BANK STABILIZATION WITH LIVE STAKES DETAIL D, SEE SHEET 22
BOULDER TOE PROTECTION DETAIL A, SEE SHEET 22

TYPICAL CHANNEL CROSS SECTION [B]
INGERSOL CREEK
(STA: 6+50 TO STA: 7+50)



VARIABLE DRAIN EASEMENT
LEFT BANK
(VILLAGE OAKS ELEMENTARY SIDE OF THE CREEK)
RIGHT BANK
(BROOKFARM PARK SIDE OF THE CREEK)
℄ DRAIN
PROTECT EXISTING FENCE NO FENCE REMOVAL UNLESS APPROVED BY ENGINEER
2' MIN
VARIES
APPROX. 20'
23-25 FT. BANKFULL SHELF
VARIES
SPOILS LEVELING WITHIN BROOKFARM PARK
EXISTING GRADE
BOTTOM OF BANK
BOTTOM OF BANK
CHANNEL THALWEG (INVERT)
2H : 1V (MAX)
PROPOSED CUT AREA (SPOILS)
1V : 2H MAX
MATCH EX.
BANK STABILIZATION WITH LIVE STAKES DETAIL D, SEE SHEET 22
BANK STABILIZATION WITH LIVE STAKES DETAIL D, SEE SHEET 22
PROPOSED GRADE
COIR FIBER BLOCK TOE PROTECTION WITH LIVE STAKES DETAIL B, SEE SHEET 22

TYPICAL CHANNEL CROSS SECTION [C]
INGERSOL CREEK
(STA: 2+66 TO STA: 6+50)

OHM

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CITY OF NOVI
OAKLAND
0163-11-0011

CITY OF NOVI - 2012 REGIONAL STORMWATER SYSTEM IMPROVEMENTS
TYPICAL CHANNEL CROSS SECTIONS

SHEET 21