



CITY of NOVI CITY COUNCIL

Agenda Item F
January 6, 2014

SUBJECT: Approval to award an engineering services agreement with Orchard, Hiltz & McCliment for the construction phase engineering services related to the 2014 Bridge Rehabilitation Project in the amount of \$27,833.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *BTC*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 22,289 (Cranbrooke/Willowbrook Bridges) \$ 5,544 (Brookfarm Park Pedestrian Bridge) \$ 27,833 Total
AMOUNT BUDGETED	\$ 57,970 (Cranbrooke/Willowbrook Bridges) \$ 40,000 (Brookfarm Park Pedestrian Bridge) \$ 97,970 Total
APPROPRIATION REQUIRED	\$ 22,289 (Cranbrooke/Willowbrook Bridges) (To be included on the next budget amendment)
LINE ITEM NUMBER	204-204.00-866.011 (Cranbrooke/Willowbrook Bridges) 204-204.00-974.060 (Brookfarm Park Pedestrian Bridge)

BACKGROUND INFORMATION:

The City is required to perform inspections on each of the four bridges under the City's control (Cranbrooke Drive, Willowbrook Drive, Meadowbrook Road, and West Park Drive) every two years. The most recent bridge inspections were completed in 2012 and the inspection reports recommended minor repairs to each of the bridges. None of the recommended repairs identified in the report are critical to the bridge structures.

Funds were budgeted in FY12-13 to complete repairs recommended in the inspection report for the bridges at Cranbrooke Drive and Willowbrook Drive, along with some additional improvements at the Willowbrook Bridge and the adjacent area that were identified subsequent to the report. The following improvements will be completed as part of the project:

Cranbrooke Bridge

- Replacement of the settled concrete pavement sections on the bridge.
- Joint and crack sealing on the bridge deck on the southbound side.
- Repair of the south abutment delamination.

Willowbrook Bridge

- Stabilization of the slopes at the abutments.
- Repair of the abutment spalls at beam seats.
- Completion of a 5-foot wide sidewalk along the west side of Willowbrook from the south side of the bridge over Ingersol Creek to the north property line of Brookfarm Park.
- Elimination of open curb drainage from the bridge.
- Enclosure of the ditch along Willowbrook and installation of storm sewer as necessary.

- Install a new guardrail and terminal for the southbound approach to the bridge.
- Remove the existing small wooden pedestrian bridge over the wet area at the northeast corner of Brookfarm Park, north of Willowbrook Bridge.
- Regrade/reconstruct the sidewalk in the park to make an ADA compliant connection to the proposed Willowbrook Drive sidewalk.

This project also includes the replacement of the pedestrian bridge over Ingersol Creek between Brookfarm Park and the Village Oaks Elementary School property. During a recent inspection, City staff observed noticeable deterioration of the bridge’s structure. With the assistance of OHM, staff determined that the bridge was unsafe and should be closed immediately. The replacement of this pedestrian bridge was then added to this upcoming construction project (see attached November 6, 2013 memo).

The construction phase engineering fees are determined using two components: 1) the contract administration fee, which is determined using the fee percentage in Exhibit B of the Agreement For Professional Engineering Services for Public Projects, and 2) the construction inspection fee determined using a cost per inspection (crew) day from Exhibit B of the consultant’s agreement that is then multiplied by the number of days of inspection specified by the contractor. The construction phase fees for this project include a contract administration fee of \$8,633 (7.5% of the \$115,101.50 construction bid) and an inspection fee of \$19,200 (\$640 per crew day, multiplied by the 30 days provided in the contractor’s bid) for a total fee of \$27,833.

The construction contract award is proposed for consideration elsewhere on this agenda. It is anticipated that this project will be completed this this spring or summer, but will be dependent upon the lead time required for fabrication of the pedestrian bridge.

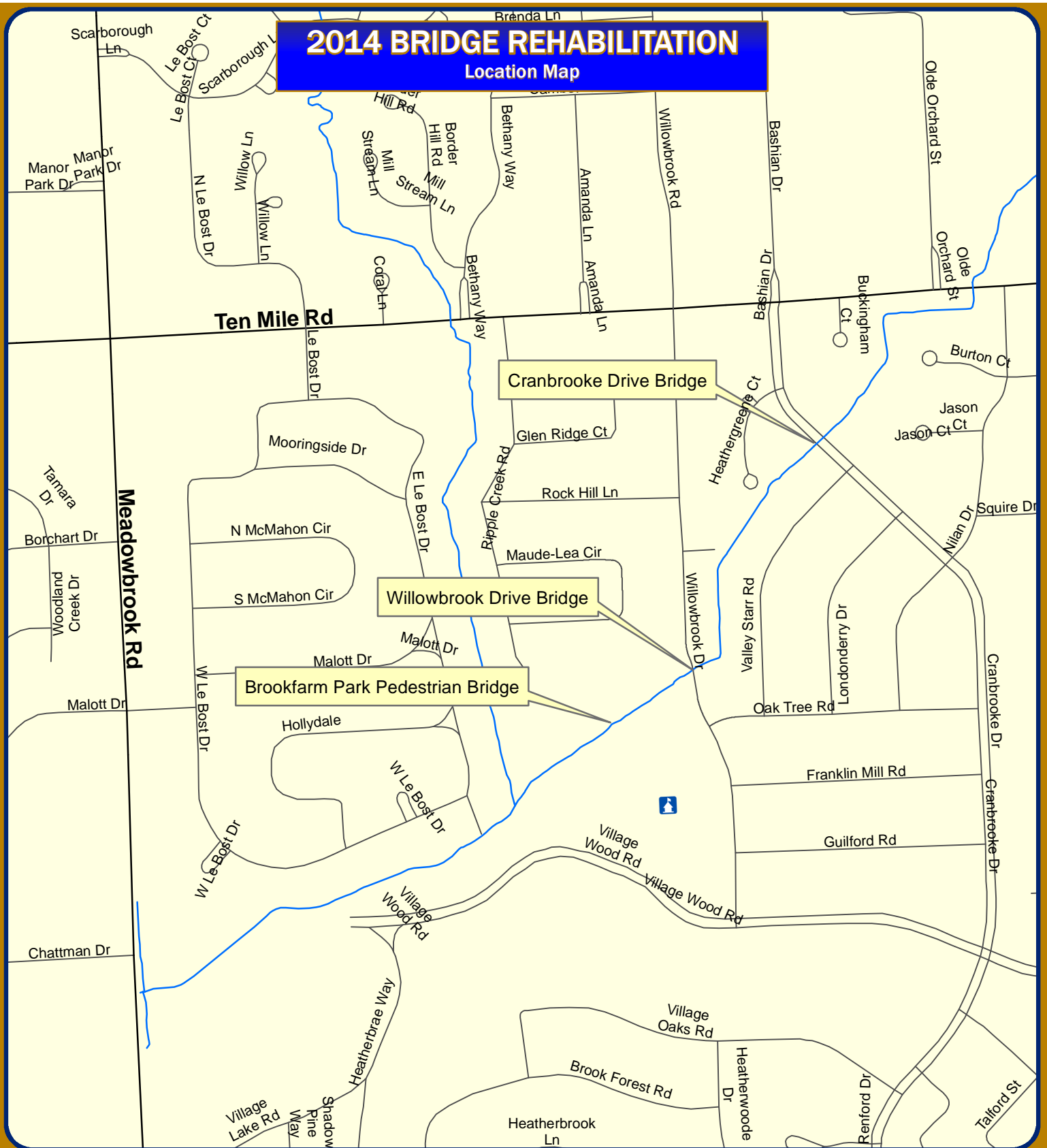
RECOMMENDED ACTION: Approval to award an engineering services agreement with Orchard, Hiltz & McCliment for the construction phase engineering services related to the 2014 Bridge Rehabilitation Project in the amount of \$27,833.

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

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

2014 BRIDGE REHABILITATION

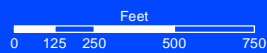
Location Map



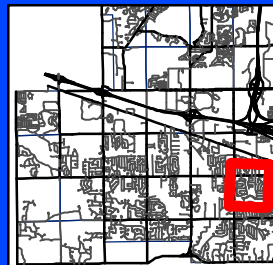
Map Author: Croy
 Date: 12/20/13
 Project: 2014 Bridge Rehabilitation
 Version #: v1.0

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. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



1 inch = 600 feet



City of Novi

Engineering Division
 Department of Public Services
 26300 Lee BeGole Drive
 Novi, MI 48375
cityofnovi.org

SUPPLEMENTAL PROFESSIONAL ENGINEERING SERVICES AGREEMENT

2014 BRIDGE REHABILITATION

This Agreement shall be considered as made and entered into as of the date of the last signature hereon, and is between the City of Novi, 45175 W. Ten Mile Road, Novi, MI 48375-3024, hereafter, "City," and Orchard, Hiltz & McCliment, Inc., whose address is 34000 Plymouth Road, Livonia, Michigan 48150, hereafter, "Consultant."

RECITALS:

This Agreement shall be supplemental to, and hereby incorporates the terms and conditions of the AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR PUBLIC PROJECTS, and attached exhibits, entered into between the City and the Consultant on December 18, 2012.

The project includes the design and the preparation of plans and specifications for the 2014 Bridge Rehabilitation project. The project includes repairs to the Cranbrooke Bridge and Willowbrook Bridge, some drainage improvements and sidewalk construction near the Willowbrook Bridge, and the replacement of the pedestrian bridge in Brookfarm Park.

NOW, THEREFORE, in consideration of the foregoing, the City and Consultant agree as follows:

Section 1. Professional Engineering Services.

For and in consideration of payment by the City as provided under the "Payment for Engineering Services" section of this Agreement, Consultant shall perform the work described in the manner provided or required by the following Scope of Services, which is attached to and made a part of this Agreement as Exhibit A, all of said services to be done in a competent, efficient, timely, good and workmanlike manner and in compliance with all terms and conditions of this Agreement.

Exhibit A Scope of Services

Section 2. Payment for Professional Engineering Services.

1. Basic Fee.

- a. Construction Phase Services: The Consultant shall complete the construction phase services as described herein according to the fee schedule as described below:
 - i. Contract Administration: The Consultant shall complete Contract Administration services for a lump sum fee of \$8,635, which is 7.5% of the awarded construction cost (\$115,101.50) as indicated on the Design and Construction Engineering Fee Curve. Construction Inspection: The Consultant shall complete Construction Inspection services for \$640 per crew day as described in the request for

proposals. "Crew days" shall be defined by the construction contract documents as an 8 hour day. Crew days shall be billed in 4 hour increments rounded to the next half day, therefore a 10 hour day shall be 1.5 crew days, a 3 hour day is 0.5 crew days, a 6 hour day shall be 1.0 crew days. The minimum crew day charged for a no-show by the contractor shall be 2 hours (0.25 crew days) which is reflective of the actual cost to the Consultant for traveling to the site and traveling back to the office. There will be no payment to the consultant for extra crew days that were not charged to the contractor. The Consultant acknowledges that intent of using crew days for inspection services is to provide a method for the consultant to recoup costs associated with slow progress by the contractor.

2. Payment Schedule for Professional Engineering Services Fee.

Consultant shall submit monthly statements for professional engineering services rendered. The statements shall be based on Consultant's estimate of the proportion of the total services actually completed for each task as set forth in Exhibit A at the time of billing. The City shall confirm the correctness of such estimates, and may use the City's own engineer for such purposes. The monthly statements should be accompanied by such properly completed reporting forms and such other evidence of progress as may be required by the City. Upon such confirmation, the City shall pay the amount owed within 30 days.

Final billing under this agreement shall be submitted in a timely manner but not later than three (3) months after completion of the services. Billings for work submitted later than three (3) months after completion of services will not be paid. Final payment will be made upon completion of audit by the City.

3. Payment Schedule for Expenses.

All expenses required to complete the scope of services described herein, including but not limited to costs related to mileage, vehicles, reproduction, computer use, etc., shall be included in the basic fee and shall not be paid separately. However, as compensation for expenses that are not included in the standard scope of services, when incurred in direct connection with the project, and approved by the City, the City shall pay the Consultant its actual cost times a factor of 1.15.

Section 4. Ownership of Plans and Documents; Records.

1. Upon completion or termination of this agreement, all documents prepared by the Consultant, including tracings, drawings, estimates, specifications, field notes, investigations, studies, etc., as instruments of service shall become the property of the City.

2. The City shall make copies, for the use of the Consultant, of all of its maps, records, laboratory tests, or other data pertinent to the work to be performed by the Consultant under this Agreement, and also make available any other maps, records, or other materials available to the City from any other public agency or body.

3. The Consultant shall furnish to the City, copies of all maps, records, field notes, and soil tests that were developed in the course of work for the City and for which compensation has been received by the Consultant.

Section 5. Termination.

1. This Agreement may be terminated by either party upon 7- days' prior written notice to the other party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party.

2. This Agreement may be terminated by the City for its convenience upon 90 days' prior written notice to the Consultant.

3. In the event of termination, as provided in this Article, the Consultant shall be paid as compensation in full for services performed to the date of that termination, an amount calculated in accordance with Section 2 of this Agreement. Such amount shall be paid by the City upon the Consultant's delivering or otherwise making available to the City, all data, drawings, specifications, reports, estimates, summaries, and that other information and materials as may have been accumulated by the Consultant in performing the services included in this Agreement, whether completed or in progress.

Section 6. Disclosure.

The Consultant affirms that it has not made or agreed to make any valuable gift whether in the form of service, loan, thing, or promise to any person or any of the person's immediate family, having the duty to recommend, the right to vote upon, or any other direct influence on the selection of consultants to provide professional engineering services to the City within the two years preceding the execution of this Agreement. A campaign contribution, as defined by Michigan law shall not be considered as a valuable gift for the purposes of this Agreement.

Section 7. Insurance Requirements.

1. The Consultant shall maintain at its expense during the term of this Agreement, the following insurance:

- A. Worker's Compensation insurance relative to all Personnel engaged in performing services pursuant to this Agreement, with coverage not less than that required by applicable law.
- B. Comprehensive General Liability insurance with maximum bodily injury limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate and minimum Property Damage limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate.
- C. Automotive Liability insurance covering all owned, hired, and non-owned vehicles with Personal Protection insurance to comply with the provisions of the Michigan No Fault Insurance Law including Residual Liability insurance with minimum bodily injury limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate minimum property damage

limits of \$1,000,000 (One Million Dollars) each occurrence and/or aggregate.

D. The Consultant shall provide proof of Professional Liability coverage in the amount of not less than \$1,000,000 (One Million Dollars) per occurrence and/or aggregate, and Environmental Impairment coverage.

2. The Consultant shall be responsible for payment of all deductibles contained in any insurance required hereunder.

3. If during the term of this Agreement changed conditions or other pertinent factors should in the reasonable judgment of the City render inadequate insurance limits, the Consultant will furnish on demand such additional coverage as may reasonably be required under the circumstances. All such insurance shall be effected at the Consultant's expense, under valid and enforceable policies, issued by the insurers of recognized responsibility which are well-rated by national rating organizations and are acceptable to the City.

4. All policies shall name the Consultant as the insured and shall be accompanied by a commitment from the insurer that such policies shall not be canceled or reduced without at least thirty (30) days prior notice to the City.

With the exception of professional liability, all insurance policies shall name the City of Novi, its officers, agents, and employees as additional insured. Certificates of Insurance evidencing such coverage shall be submitted to Sue Morianti, Purchasing Manager, City of Novi, 45175 West Ten Mile Road, Novi, MI 48375-3024 prior to commencement of performance under this Agreement and at least fifteen (15) days prior to the expiration dates of expiring policies.

5. If any work is sublet in connection with this Agreement, the Consultant shall require each subconsultant to effect and maintain at least the same types and limits of insurance as fixed for the Consultant.

6. The provisions requiring the Consultant to carry said insurance shall not be construed in any manner as waiving or restricting the liability of the Consultant under this Agreement.

Section 8. Indemnity and Hold Harmless.

A. The Consultant agrees to indemnify and hold harmless the City, its elected and appointed officials and employees, from and against any and all claims, demands, suits, losses and settlements, including actual attorney fees incurred and all costs connected therewith, for any damages which may be asserted, claimed or recovered against the City by reason of personal injury, death and/or property damages which arises out of or is in any way connected or associated with the actions or inactions of the Consultant in performing or failing to perform the work.

The Consultant agrees that it is its responsibility and not the responsibility of the City to safeguard the property and materials used in performing this Agreement. Further, this

Consultant agrees to hold the City harmless for any loss of such property and materials used pursuant to the Consultant's performance under this Agreement.

Section 9. Nondiscrimination.

The Consultant shall not discriminate against any employee, or applicant for employment because of race, color, sex, age or handicap, religion, ancestry, marital status, national origin, place of birth, or sexual preference. The Consultant further covenants that it will comply with the Civil Rights Act of 1973, as amended; and the Michigan Civil Rights Act of 1976 (78. Stat. 252 and 1976 PA 4563) and will require a similar covenant on the part of any consultant or subconsultant employed in the performance of this Agreement.

Section 10. Applicable Law.

This Agreement is to be governed by the laws of the State of Michigan and the City of Novi Charter and Ordinances.

Section 11. Approval; No Release.

Approval of the City shall not constitute nor be deemed release of the responsibility and liability of Consultant, its employees, associates, agents and subconsultants for the accuracy and competency of their designs, working drawings, and specifications, or other documents and services; nor shall that approval be deemed to be an assumption of that responsibility by the City for any defect in the designs, working drawings and specifications or other documents prepared by Consultant, its employees, subconsultants, and agents.

After acceptance of final plans and special provisions by the City, Consultant agrees, prior to and during the construction of this project, to perform those engineering services as may be required by City to correct errors or omissions on the original plans prepared by Consultant and to change the original design as required.

Section 12. Compliance With Laws.

This Contract and all of Consultants professional services and practices shall be subject to all applicable state, federal and local laws, rules or regulations, including without limitation, those which apply because the City is a public governmental agency or body. Consultant represents that it is in compliance with all such laws and eligible and qualified to enter into this Agreement.

Section 13. Notices.

Written notices under this Agreement shall be given to the parties at their addresses on page one by personal or registered mail delivery to the attention of the following persons:

City: Rob Hayes, P.E., Director of Public Services and Maryanne
Cornelius, Clerk, with a copy to Thomas R. Schultz, City Attorney

Consultant: James Stevens, P.E.

Section 14. Waivers.

No waiver of any term or condition of this Agreement shall be binding and effective unless in writing and signed by all parties, with any such waiver being limited to that circumstance only and not applicable to subsequent actions or events.

Section 15. Inspections, Notices, and Remedies Regarding Work.

During the performance of the professional services by Consultant, City shall have the right to inspect the services and its progress to assure that it complies with this Agreement. If such inspections reveal a defect in the work performed or other default in this Agreement, City shall provide Consultant with written notice to correct the defect or default within a specified number of days of the notice. Upon receiving such a notice, Consultant shall correct the specified defects or defaults within the time specified. Upon a failure to do so, the City may terminate this Agreement by written notice and finish the work through whatever method it deems appropriate, with the cost in doing so being a valid claim and charge against Consultant; or, the City may preserve the claims of defects or defaults without termination by written notice to Consultant.

All questions which may arise as to the quality and acceptability of work, the manner of performance and rate of progress of the work, and the interpretation of plans and specifications shall be decided by the City. All questions as to the satisfactory and acceptable fulfillment of the terms of this agreement shall be decided by the City.

Section 16. Delays.

No charges or claims for damages shall be made by the Consultant for delays or hindrances from any cause whatsoever during the progress of any portions of the services specified in this agreement, except as hereinafter provided.

In case of a substantial delay on the part of the City in providing to the Consultant either the necessary information or approval to proceed with the work, resulting, through no fault of the Consultant, in delays of such extent as to require the Consultant to perform its work under changed conditions not contemplated by the parties, the City will consider supplemental compensation limited to increased costs incurred as a direct result of such delays. Any claim for supplemental compensation must be in writing and accompanied by substantiating data.

When delays are caused by circumstances or conditions beyond the control of the Consultant as determined by the City, the Consultant shall be granted an extension of time for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the permitting of the Consultant to proceed to complete the services, or any part of them, after the date to which the time of completion may have been extended, shall in no way operate as a waiver on the part of the City of any of its rights herein set forth.

Section 17. Assignment.

No portion of the project work, heretofore defined, shall be sublet, assigned, or otherwise disposed of except as herein provided or with the prior written consent of the City. Consent to

sublet, assign, or otherwise dispose of any portion of the services shall not be construed to relieve the Consultant of any responsibility for the fulfillment of this agreement.

Section 18. Dispute Resolution.

The parties agree to try to resolve any disputes as to professional engineering services or otherwise in good faith. In the event that the parties cannot resolve any reasonable dispute, the parties agree to seek alternative dispute resolution methods agreeable to both parties and which are legally permissive at the time of the dispute. The parties agree to use their best efforts to resolve any good faith dispute within 90 (ninety) days notice to the other party. In the event the parties cannot resolve that dispute as set forth above, they may seek such remedies as may be permitted by law.

WITNESSES

Orchard, Hiltz & McCliment, Inc.

By:

Its:

The foregoing _____ was acknowledged before me this ____ day of _____,
20____, by _____ on behalf of
_____.

Notary Public

_____ County, Michigan

My Commission Expires: _____

WITNESSES

CITY OF NOVI

By: Robert J. Gatt

Its: Mayor

The foregoing _____ was acknowledged before me this ____ day of _____,
20____, by _____ on behalf of the City of Novi.

Notary Public

Oakland County, Michigan

My Commission Expires: _____

EXHIBIT A - SCOPE OF SERVICES

Consultant shall provide the City professional engineering services in all phases of the Project to which this Agreement applies as hereinafter provided. These services will include serving as the City's professional engineering representative for the Project, providing professional engineering consultation and advice and furnishing customary civil, structural, mechanical and electrical engineering services and customary engineering services incidental thereto, as described below.

A. Basic Services.

Contract Administration and Construction Inspection services for the 2014 Bridge Rehabilitation Project consistent with the General Agreement for Professional Services dated December 18, 2012 and with the plans and specifications for the project.

B. Performance.

1. The Consultant agrees that, immediately upon the execution of this Agreement, it will enter upon the duties prescribed in this agreement, proceed with the work continuously, and make the various submittals on or before the dates specified in the attached schedule. The City is not liable and will not pay the Consultant for any services rendered before written authorization is received by the Consultant.
2. The Consultant shall submit, and the City shall review and approve a timeline for submission of plans and/or the completion of any other work required pursuant to this Scope of Services. The Consultant shall use its best efforts to comply with the schedule approved by the City.
3. If any delay is caused to the Consultant by order of the City to change the design or plans; or by failure of the city to designate right-of-way, or to supply or cause to be supplied any data not otherwise available to the Consultant that is required in performing the work described; or by other delays due to causes entirely beyond the control of the Consultant; then, in that event, the time schedules will be adjusted equitably in writing, as mutually agreed between the City and the Consultant at the moment a cause for delay occurs.
4. Since the work of the Consultant must be coordinated with the activities of the City (including firms employed by and governmental agencies and subdivisions working with the City), the Consultant shall advise the City in advance, of all meetings and conferences between the Consultant and any party, governmental agency, political subdivision, or third party which is necessary to the performance of the work of the Consultant.

11/7/2013
To: Mayor and City
Council members
FYI. Clay



MEMORANDUM

TO: ROB HAYES, P.E.; DIRECTOR OF PUBLIC SERVICES/CITY ENGINEER
FROM: BRIAN COBURN, P.E.; ENGINEERING MANAGER *BIC*
SUBJECT: BROOKFARM PARK-VILLAGE OAKS SCHOOL PEDESTRIAN BRIDGE
DATE: NOVEMBER 6, 2013

The pedestrian bridge that connects Brookfarm Park to Village Oaks Elementary School was closed by City staff in August 2013 due to safety concerns. During routine maintenance on the bridge, an inspection by City staff revealed that the main beams beneath the bridge were significantly deteriorated due to rust. One of the City's engineering consultants, Orchard, Hiltz & McCliment (OHM), was then dispatched to formally inspect the bridge and to provide some recommendations. OHM agreed with the decision by staff to close the bridge and provided the attached email, which recommends a full replacement of the existing bridge deck and superstructure.

The pedestrian bridge provides a non-motorized connection between Ripple Creek Drive and Village Oaks School and is used by school children in the area to get to school. In order to expedite the replacement of the pedestrian bridge, it was added to the nearby bridge rehabilitation work on Willowbrook Drive and Cranbrooke Drive to be completed as one project, with an expedited schedule to reopen the pedestrian bridge as soon as possible. The last budget amendment included \$40,000 of funding for the design and construction of the replacement pedestrian bridge.

The project will include the replacement of the existing superstructure but will reuse the existing concrete abutments. While the existing bridge was four feet wide, staff is proposing a replacement bridge that is six feet wide to make it more consistent with the City's standard sidewalk width. The increased cost for a wider bridge is approximately \$5,000. The proposed bridge along with the selected options (indicated with red circles) are shown in the attached brochure. The new bridge will be galvanized steel to prevent rusting and to prolong the life of the bridge. Similar to the existing bridge, the new bridge will have wood or decking which is necessary to minimize the weight of the bridge so the existing abutments can be used. (Staff is reviewing the feasibility of using composite decking as an alternate material).

In order to minimize the impact to Brookfarm Park, we are proposing to install the bridge this winter while the ground is frozen. We anticipate advertising the project for bid in December, awarding construction in January 2014 and have the new bridge in place before spring. Once we have a contractor in place, we will be able to provide a more detailed construction schedule. The rest of the bridge rehabilitation work on Willowbrook and Cranbrooke would be completed once the ground thaws in spring and early summer of 2014.

Please let me know if you have any questions in this regard.

cc: Matt Wiktorowski, Field Operations Senior Manager
Jason Mangum, Parks, Recreation and Cultural Services Director

Location Map

Pedestrian Bridge at Brookfarm Park



Map Author: Brian Coburn
 Date: 11/6/13
 Project:
 Version #:

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. Please contact the City GIS Manager to confirm source and accuracy information related to this map.



City of Novi
 Engineering Division
 Department of Public Services
 26300 Lee BeGole Drive
 Novi, MI 48375
cityofnovi.org



1 inch = 236 feet

Coburn, Brian

From: Stevens, James <james.stevens@ohm-advisors.com>
Sent: Friday, August 23, 2013 3:31 PM
To: Coburn, Brian
Cc: Rychwalski, Adam; O'Rear, Kim
Subject: FW: Brookfarm Park Pedestrian Bridge Estimate
Attachments: Novi Ped Bridge Replacement Estimate.pdf; Galvanized Bridge 1.jpg; Galvanized Bridge 2.jpg

Brian,

Our Structures department have evaluated the pedestrian bridge located in Brookfarm Park in Novi and recommend replacing the bridge for a total estimated cost between \$27,000 and \$32,000. It is our opinion that a rehab of this structure will not be competitive from a time, cost, and longevity perspective.

The bridge is currently 20' long by 4' clear width and a weathering steel finish. The existing condition of the structure is poor. There is severe section loss of the main load carrying members on the bottom chord of the truss as well as the cross members underneath which support the deck and create stability in the structure. The cross members appeared to be filled with a combination of wet sandy material and pack rust. Rehabilitating the structure would require removing the existing deck and associated brackets, likely removing all of the cross members underneath, blast cleaning the entire steel structure, temporary bracing of the remaining members, field welding additional steel to the bottom chord and installing new cross members, painting the entire structure, and installing a new deck system. This process will be difficult to do in place as all of the work will be in the water. To mitigate shock risk the contractor would likely need to remove the bridge anyway to perform the welding. We estimate this work will take 4-8 weeks depending on lead time for steel ordering and shop bending the members. It will be difficult to paint this structure on site this year as we anticipate painting would occur in late October or early November when warm dry conditions can be difficult to achieve. The end result can be good but rehabilitation projects do not to produce the longevity of new construction. We do not anticipate this option will produce significant cost savings to the City over new construction.

For the above reasons we recommend a new bridge of similar construction. The new bridge should be hot-dipped galvanized to extend the service life. Painting is another option but will require more maintenance in the future and will not offer significant savings over the galvanized option. The traditional weathering steel finish is not recommended for this application. The bridge can be replaced in kind for approximately \$27,000 or can be replaced with a 6' wide bridge for approximately \$32,000. Both estimates represent all work anticipated on the bridge and approaches and include a 25% contingency. The intent is to use the existing substructure and install some modifications if the 6' option is selected.

It is our opinion that the bridge replacement work can be completed this fall if funding is available. It will be difficult to perform a rehabilitation yet this year.

I have included a couple of pictures from a project in Dexter that used a hot-dipped galvanized protective coating.

Please feel free to call if there are any questions.

JAMES C. Stevens, PE
ASSOCIATE

OHM Advisors | ARCHITECTS. ENGINEERS. PLANNERS.

T 734.522.6711
F 734.522.6427
D 734.466.4588

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Rail, Deck & Finish Options

Our truss structures offer a wide range of rail, deck and finish options that guarantee a distinctive look for any bridge.

R
A
I
L



Cable



W-Beam



Safety Rail/Wood Rub Rail



Vertical Picket/Pipe Handrail

D
E
C
K



Concrete



Asphalt



Wood



Steel Grate

F
I
N
I
S
H



Weathering Steel



Painted Steel



Painted-Weathering Steel



Galvanized Steel

Tech Support

Options & Support

All of our truss structures are accompanied by extensive technical support. Our experienced sales team and national Project Consultant network are available to provide technical assistance for every aspect of your project, from concept to installation.

Visit our website www.contech-cpi.com to find your local Project Consultant, view additional project photos and Request a Quote for your bridge project.



For Vehicular & Pedestrian Truss Bridges

Design Specifications:

- AISC
- AASHTO Standard Specifications for Highway Bridges
- AASHTO Guide Specifications for Pedestrian Bridges
- AWS D1.1, D1.5

Material & Finishes:

Steel Types Used (50 ksi material):

- A572 Painted (2 Coat and 3 Coat (Zinc Rich Primer) – Any Color)
- A572 Galvanized (35-year Limited Warranty)
- A325 Galvanized or Type 3 Weathering (bolts provided)
- A307 Galvanized anchor bolts are specified (by contractor)

Manufacturing/Installation

Specifications:

- AISC Shop Certification
 - Simple Bridge Certification
 - Major Bridge Certification
 - Sophisticated Paint Endorsement
 - Fracture Critical Endorsement
- AWS Certified Welders



CONTECH® Construction Products offers a full range of pedestrian and vehicular truss styles for your project's needs. As highly skilled solution providers, we are ready to support you in every phase of your project, from concept to installation.



Archway®



Capstone®



Keystone®



Connector®



Link®



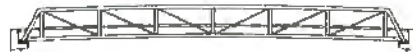
Steel Stringer



***Cable-Stayed**



***Expressway®**



***Gateway®**



*These styles are available for pedestrian truss applications only.
Custom styling is available to make your project a reality.



To learn more about CONTECH Construction Products Inc. visit www.contech-cpi.com, or call 800-338-1122.

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