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CITY of NOVI CITY COUNCIL

Agenda Item G
January 23, 2012

SUBJECT: Approval to award a contract for design engineering services for the 2012 Capital Preventative Maintenance road program to Spalding DeDecker Associates, Inc. (SDA) for a not-to-exceed design fee of \$14,708.

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division ^{RA} *BTC*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$4,761 (Local Roads) <u>\$9,947 (Major Roads)</u> \$14,708 TOTAL
AMOUNT BUDGETED	\$ 75,000 (Local Roads Eng and Construction) <u>\$150,000 (Major Roads Eng and Construction)</u> \$225,000 TOTAL
LINE ITEM NUMBER	203-203.00-866.500 (Local Roads) 202-202.00-866.500 (Major Roads)

BACKGROUND INFORMATION:

One of the primary goals of the Department of Public Services' asset management program is the preservation of the City's roadways to prevent costly reconstruction. Some preventative and most routine maintenance including crack sealing, road patching, curb repairs, and shoulder grading are routinely performed by in-house DPS staff to help keep the good roads in good condition. However, a key component of road preservation is capital preventative maintenance, which is maintenance that is more resource-intensive but less costly than reconstruction. The objective of preventative maintenance is to preserve good quality roads using lower-cost rehabilitation techniques, rather than allowing the roads to deteriorate to a point that requires road reconstruction involving much more effort at a higher cost. Novi's preventative maintenance program, in conjunction with the other road programs, is intended to result in an overall improvement in the quality of the City's roadways and increase the overall PASER rating for the roadway network. The asset management discussion from the City website is attached for additional background.

The City Council approved a Capital Preventative Maintenance Program (CPM) as part of the FY11-12 budget to help improve the City's local and major roadways to limit further deterioration of existing pavement defects and extend the service life of the pavement. Preventative maintenance typically addresses discrete areas or short segments of streets containing minor cracks or pavement defects. The streets receiving capital preventative maintenance generally have PASER ratings of 4 through 6.

Staff will work with the selected consultant for this project, Spalding DeDecker Associates (SDA), to identify street segments needing various levels of maintenance for the 2012 CPM program and evaluate these road segments to determine the best candidates to receive preventative maintenance. Treatment to be considered will include joint/crack repair and discrete concrete slab replacement as well as other low cost preventative maintenance techniques such as a cape seal, slurry seal, chip seal, hot-in-place asphalt recycling and others.

SDA's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects. The design fees for this project will be \$14,708, which is 7.8% of the remaining budget for construction of \$188,564 (original budget of \$225,000 less \$14,708 for design engineering, and \$21,728 estimated for construction engineering). The construction phase engineering fees will be awarded at the time of construction award and will be based on the contractor's bid price and the fee percentage established in the Agreement for Professional Engineering Services for Public Projects. A draft of the Supplemental Professional Engineering Services Agreement for this project is enclosed and includes the project scope and schedule.

The road rehabilitation is anticipated to begin in the summer 2012 and completed by the end of the 2012 construction season.

RECOMMENDED ACTION: Approval to award a contract for design engineering services for the 2012 Capital Preventative Maintenance road program to Spalding DeDecker Associates, Inc. (SDA) for a not-to-exceed design fee of \$14,708.

	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				

PASER (Pavement Surface Evaluation and Rating System)

What is PASER?

PASER is an acronym for Pavement Surface Evaluation and Rating system. It is a system for visually rating the surface condition of a pavement from a scale of 1 to 10, with 1 being a pavement in a failed condition and 10 being a pavement in excellent condition. Guidelines for rating the pavement surface using the PASER system have been developed by the [Michigan Transportation Asset Management Council](#).

Novi has conducted a pavement rating analysis in 2001, 2004 and 2008. [The 2008 report can be found here](#). Beginning in 2010, the PASER analysis is being completed by City staff over a three year period. A third of the City will be completed each year in 2010, 2011, and 2012.

 [2008 & 2010 PASER Ratings Map](#)

Why does the City conduct a pavement survey?

Pavements age with time and gradually deteriorate due to environmental effects and traffic loadings. Resources for maintaining and repairing roads can be efficiently managed so that the money is spent in the right place at the right time by knowing the condition of the pavement network. The City of Novi has recognized the benefits of performing regular pavement condition surveys to evaluate the existing pavement conditions and to allocate maintenance and construction funds. The pavement survey is one aspect of a larger asset management program not only for pavements but for all infrastructure in the City.

What do the PASER ratings actually mean?

Most pavements will deteriorate through various phases as shown. The rate at which pavement deteriorates from an excellent (10) to a very poor condition (1) depends largely on its environment, traffic loading conditions, original construction quality, and interim maintenance procedures. Two pavements constructed at the same time may have significantly different lives, or certain portions of a pavement may deteriorate more rapidly than others, due to material or construction problems.

The PASER rating scale can generally be translated into maintenance categories as shown. The normal maintenance or rehabilitation procedure has been found helpful in relating to the surface rating scheme. However, choosing an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique. Future traffic projections, original construction and pavement strength should be considered since these may dictate a more comprehensive rehabilitation. On the other hand, it may be appropriate under special conditions to do nothing and let the pavement fully deteriorate, then rebuild when funds are available.

Asphalt Streets

PASER Rating	Condition	Treatment
9 & 10	Excellent	No maintenance required
8	Very Good	Little or no maintenance
7	Good	Crack sealing and minor patching
5 & 6	Fair - Good	Preservative treatments (non-structural)
3 & 4	Poor - Fair	Structural improvement (overlay)
1 & 2	Failed	Reconstruction

Concrete Streets

PASER Rating	Condition	Treatment
9 & 10	Excellent	No maintenance required
7 & 8	Very Good	Routine maintenance
5 & 6	Fair - Good	Surface repairs, sealing, partial-depth patching
3 & 4	Poor - Fair	Extensive slab or joint rehabilitation
1 & 2	Failed	Reconstruction

What is the current condition of pavement surface in Novi?

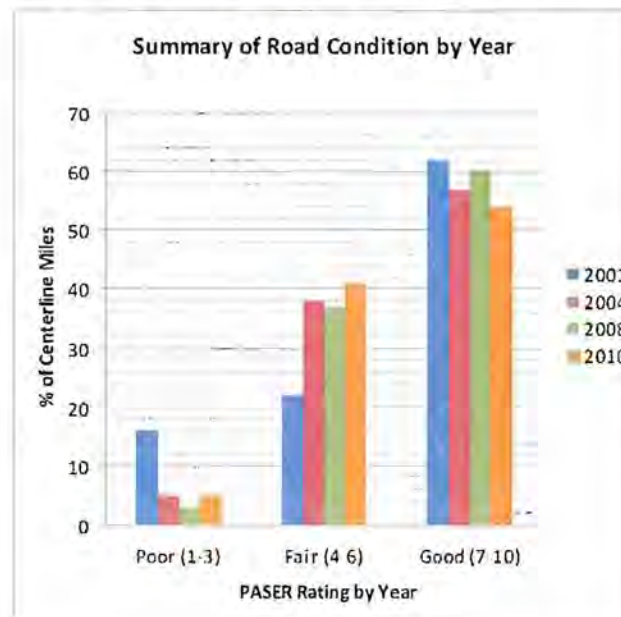
Of the 182.1 miles of city controlled streets, 72% of the roads have a PASER rating of 6 or higher (i.e., pavement condition is rated as good or better). Eighty percent of major roads and 68% of minor roads have a PASER rating of 6 or higher. The report also finds that asphalt surfaced roads are in better overall condition than concrete roads: 83% of asphalt surfaced roads and 57% of the concrete roads have a PASER rating of 6 or higher.

A comparison to previous years' data shows that the city's overall average PASER rating has essentially remained unchanged:

Year	Average PASER Rating	% Centerline Miles with PASER of 6 or Better
2001	6.6	74%
2004	6.9	81%
2008	6.6	76%
2010	6.4	72%

 [2008 & 2010 PASER Ratings Map](#)

The graph below summarizes the overall condition of Novi's streets.



What is Novi doing to improve the condition of City streets?

The City's Asset Management approach for pavements was established in 2009 and is summarized in the figure and tables below which illustrates that there are appropriate fixes for the various pavement ratings. Routine maintenance, such as crack sealing, should occur when the road is in good condition (PASER 7-10). Preventative maintenance, such as non-structural overlays and joint repair, should occur when the pavements are in fair to good condition (PASER 4-6). Reconstruction, which is the most costly fix, should be reserved for segments that exhibit a structural failure of the pavement (PASER 1-3).



The table below illustrates the costs associated with street maintenance and construction. Using an asset management approach to street maintenance will provide a mix of treatments to keep the good roads in good condition through maintenance while spending some funds on reconstruction of roads that are failing.

Recommended Asphalt Treatments and Associated Costs

RASER Rating	Condition	Treatment	Estimated Cost per mile
9 & 10	Excellent	No maintenance required	\$0
8	Very Good	Little or no maintenance	\$0
7	Good	Crack Sealing and Minor Patching	\$1,000
5 & 6	Fair-Good	Preservative treatments (non-structural)	\$200,000
3 & 4	Poor - Fair	Structural Improvement (overlay)	\$404,000
1 & 2	Failed	Reconstruction	\$850,000

Recommended Concrete Treatments and Associated Costs

RASER Rating	Condition	Treatment	Estimated Cost per mile
9 & 10	Excellent	No maintenance required	\$0
7 & 8	Very Good	Routine maintenance	\$1,000
5 & 6	Fair-Good	Surface repairs, sealing, partial depth patching	\$225,000
3 & 4	Poor - Fair	Extensive slab or joint rehabilitation	\$400,000
1 & 2	Failed	Reconstruction	\$1,000,000

As we continue to use this proactive approach, we will look for opportunities to optimize the available road funds provided for neighborhood roads by performing routine and preventative maintenance in addition to reconstruction.

For More Information

For more information, please contact:
 Brian Coburn, P.E., Engineering Manager, Department of Public Services, 248-735-5632 or
 Ben Croy, P.E.; Civil Engineer, Department of Public Services, 248-735-5635.

SUPPLEMENTAL PROFESSIONAL ENGINEERING SERVICES AGREEMENT

2012 CAPITAL PREVENTATIVE MAINTENANCE PROGRAM
LOCAL AND MAJOR ROADS

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 Spalding DeDecker Associates, Inc., whose address is 905 South Boulevard East, Rochester Hills, MI 48307, 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 September 24, 2009.

The project includes the design and the preparation of plans and specifications for the 2012 capital preventative maintenance program for local and major roads. The project will consist of assistance with the selection of the road segments to be rehabilitated, and the design of the road segments selected.

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. Design Phase Services: The Consultant shall complete the design phase services as described herein for a lump sum fee of \$14,708, which is 7.80% of the estimated construction cost (\$188,564) as indicated on the design and construction engineering fee curve provided in Exhibit B of the Agreement for Professional Engineering Services for Public Projects.

- b. Construction Phase Services will be awarded at the time of construction award, should it occur.

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 L. Van Tiflin, P.E., Project Manager

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

Spalding DeDecker Associates, Inc.

By: James L. Van Tiflin, P.E.
Its: Project Manager

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:
Its:

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.**

[see attached]

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.