REPORT / RECOMMENDATION

To: MAYOR AND COUNCIL

Agenda Item #: IV. F.

From: Wayne D. Houle P.E., Director of Engineering

Action [X]
Discussion [ ]
Information [ ]

Date: June 18, 2013

Subject: Engineering Services – Trunk Sewer Infiltration Abatement Study

Action Requested:
Authorize City Manager to approve attached proposal for Engineering Services for a Trunk Sanitary Sewer Infiltration Abatement Study and authorize Mayor and City Manager to sign attached Master Agreement for Professional Engineering Services.

Information / Background:
This study is to prioritize which trunk sanitary sewer lines that the City should line for the 2013-2014 Trunk Sanitary Sewer Lining Project. The proposed engineering fee is $47,336 and will be funded through the sanitary sewer utility fund. This project is identified in the 2013-2017 Capital Improvement Plan under #UT-08-014.

Attachments:
Proposal for Professional Engineering Services – Trunk Sewer Infiltration Abatement Study Dated May 31, 2013
Master Agreement for Professional Engineering Services

BOLTON & MENK, INC.
Consulting Engineers & Surveyors
12224 Nicollet Avenue • Burnsville, MN 55337
Phone (952) 890-0509 • Fax (952) 890-8065
www.bolton-menk.com

May 31, 2013

Mr. Wayne D. Houle, P.E., Director of Engineering
City of Edina – Engineering Department
7450 Metro Boulevard
Edina, MN 55439

RE: Proposal for Professional Engineering Services
Trunk Sewer Infiltration Abatement Study
City of Edina, Minnesota

Dear Mr. Houle,

Bolton & Menk, Inc. is pleased to present this proposal to you for professional engineering services related to the City of Edina's Trunk Sewer Infiltration Abatement Study. As a part of this proposal, we describe our understanding of the project, detail our proposed scope of work, and provide our fees for service. This proposal is being offered as a Supplemental Agreement to our June 18, 2013 Master Agreement for Professional Engineering Services with the City of Edina.

PROJECT UNDERSTANDING

The City of Edina currently maintains a citywide sanitary sewer collection system. This system consists of smaller diameter lateral lines that traverse and serve neighborhoods and business districts throughout the City. These lateral lines then connect to and flow into larger diameter trunk lines. In addition to their larger diameter, these trunk lines can generally be identified by their deeper depths and by their alignments along creeks and other low terrain. The trunk lines are a critical component of the City's sanitary sewer system, as they ultimately collect and rout all sewer flows out of the City and ultimately into Metropolitan Council facilities. Therefore it is imperative that they are maintained in a structurally sound condition and are free of excessive "clear water" flows via groundwater infiltration.

The City of Edina's trunk lines are relatively aged, and based on previous condition assessments, flow monitoring and system modeling, groundwater and storm water infiltration flows into the trunk lines are evident. In an effort to reduce this infiltration as well as to support overall trunk sewer system renewal, the City is interested in completing a Trunk Sewer Infiltration Abatement Study to assist in identifying pipe segments most susceptible to infiltration, prioritizing their needs for rehabilitation, determining appropriate mitigation techniques, and estimating mitigation costs. The trunk lines of particular interest and those subject to this study are highlighted in the attached exhibit.

SCOPE OF WORK

Bolton & Menk proposes to complete the Trunk Sewer Infiltration Abatement Study through the following detailed tasks:

Task 1: Existing Data Review and Identification of Suspect Pipe Segments
Bolton & Menk will review documents relative to the existing trunk line conditions and their susceptibility for infiltration. These documents include, but are not limited to record drawings, previous I/I studies, comprehensive sanitary sewer plan, previous infiltration measurements and calculations,

groundwater contours, and available pipe televising videos and reports. We also understand that the City's current sanitary sewer model is available for review, however additional modeling is not currently included or anticipated to be needed for the completion of this study. The available data will be evaluated to determine which trunk sewer pipe segments are likely allowing infiltration. Quantitative estimates will be provided, as made possible by the data reviewed. A field review of the suspect pipe alignments will also be completed for the purpose of revealing any other pertinent conditions that might help determine the extent of infiltration problems.

Task 2: Prioritize, Evaluate and Identify Appropriate Infiltration Mitigation Techniques
Based on the pipe segments and conditions identified during Task 1, Bolton & Menk will consider a variety of pipe rehabilitation techniques that could address the dual goals of infiltration reduction and trunk line renewal. It is anticipated that any particular pipe segment may be compatible with more than one solution, therefore cost comparisons will be made and consideration will be given to the comprehensive approach of rehabilitating multiple pipe segments. Other factors to be considered that may influence pipe segment prioritization and rehabilitation techniques include, but are not limited to estimated reduction in infiltration, pipe segment material type and age, economic development opportunities, disturbance of environmentally sensitive areas, pipe access and available easements, and unique construction issues.

Task 3: Final Recommendations
Based on the determinations and outcomes of Task 2, Bolton & Menk will provide specific trunk sewer pipe rehabilitation recommendations. These recommendations will include the pipe rehab technique; primary construction considerations such as flow bypass means, pipe access and surface restoration needs; estimated construction costs and scheduling considerations. We will also provide recommended CIP programming based on total estimated improvement costs, reasonable individual project limits, annual budget considerations and the overall implementation timeline desired by the City of Edina. A summary of our evaluations and recommendations will be compiled into a final report.

Task 4: Meetings
This proposal includes provisions for up to three meeting with City Staff to discuss and review the study's evaluations and recommendations.

Project Assumptions and Qualifications
To date, the City of Edina has compiled several different sources of information that will support the completion of this study (as described in Task 1 above). While it is anticipated that the available information will yield suitable recommendations, limitations in available pipe televising and flow monitoring information can present an inherent level of uncertainty in the applicability and effectiveness of various pipe rehabilitation techniques. As the study proceeds, we would advise the City of any significant deficiencies in information that we observe and would provide recommendations for additional data acquisition, either relative to the completion of this study or to the advancement of future final design and construction phases of the improvements.

PROPOSED FEES

Our estimates of time and associated fees to complete scope of work as described above are included in the attached cost breakdown. The itemized costs for the various tasks are estimates. Bolton & Menk proposes to complete all tasks for a not to exceed fixed fee of $47,336.

If you find this proposal satisfactory, your signature of this proposal will constitute acceptance of the terms outlined and your authority for us to proceed. Please call if you wish to discuss this proposal. We look forward to providing these professional engineering services to you on this project and appreciate your consideration of Bolton & Menk, Inc.

Sincerely,

BOLTON & MENK, INC.

Marcus A Thomas

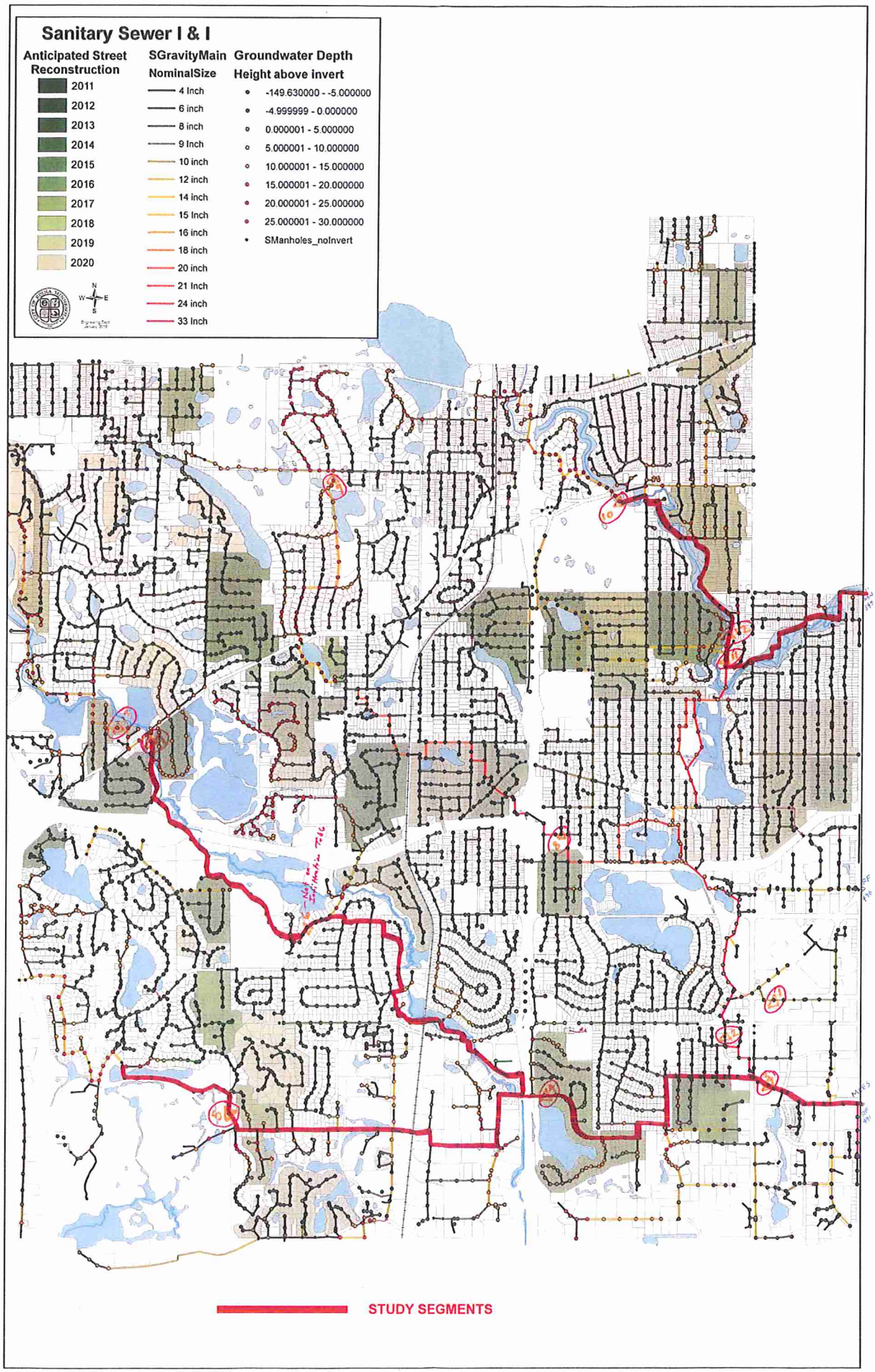
Marcus A. Thomas, P.E.
Principal Engineer

Attachments

Signed

Date

Printed Name


Sanitary Sewer I & I
Anticipated Street Reconstruction
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
SGravityMain NominalSize
4 Inch
6 inch
8 inch
9 Inch
10 inch
12 inch
14 inch
15 Inch
16 inch
18 inch
20 inch
21 Inch
24 inch
33 Inch
Groundwater Depth Height above invert
-149.630000 - -5.000000
-4.999999 - 0.000000
0.000001 - 5.000000
5.000001 - 10.000000
10.000001 - 15.000000
15.000001 - 20.000000
20.000001 - 25.000000
25.000001 - 30.000000
SManholes_noInvert
N
W
E
S
STUDY SEGMENTS

DETAILED COST ESTIMATE

CLIENT: City of Edina PROJECT: Trunk Sewer Infiltration Abatement Study		BOLTON & MENK, INC.			
TASK NO.	WORK TASK DESCRIPTION	Senior Project Manager/Principal Engineer	Project Engineer	Engineering Technician	Totals
1.0	**Existing Data Review and Identification of Suspect Pipe Segments**				
1.1	Compilation and Review of Available Data	8	24	8	40
1.2	Data Evaluation and Determination of Suspect Pipe Segments	16	40	8	64
1.3	Field Review	16	16		32
	SUBTOTAL HOURS - TASK 1	40	80	16	**136**
2.0	**Prioritize, Evaluate and Identify Appropriate Infiltration Mitigation Techniques**				
2.1	Identify Viable Pipe Rehabilitation Options	16	32		48
2.2	Complete Cost Comparisons Between Rehabilitation Options	4	16		20
2.3	Identify Other Factors Influencing Rehabilitation Options	8	8		16
2.4	Prioritize Trunk Sewer Line Rehabilitation Recommendations	8	16		24
	SUBTOTAL HOURS - TASK 2	36	72	0	**108**
3.0	**Final Recommendations**				
3.1	Identify Recommended Rehabilitation Technique for Each Pipe Segment	16	24		40
3.2	Describe Special Project Considerations	8	16		24
3.3	Project Cost Estimating	8	16		24
3.4	CIP Recommendations	4	8		12
3.5	Final Report	8	32	8	48
	SUBTOTAL HOURS - TASK 5	44	96	8	**148**
4.0	**Meetings**				
4.1	Three (3) City Staff Meetings	10	10		20
	SUBTOTAL HOURS - TASK 6	10	10	0	**20**

DETAILED COST ESTIMATE

CLIENT: City of Edina PROJECT: Trunk Sewer Infiltration Abatement Study		BOLTON & MENK, INC.				
TASK NO.	WORK TASK DESCRIPTION	Senior Project Manager/Principal Engineer	Project Engineer	Engineering Technician	Total Hours	Total Cost
1.0	Existing Data Review and Identification of Suspect Pipe Segments	40	80	16	136	$15,400
2.0	Prioritize, Evaluate and Identify Appropriate Infiltration Mitigation Techr	36	72	0	108	$12,564
3.0	Final Recommendations	44	96	8	148	$16,852
4.0	Meetings	10	10	0	20	$2,520
	TOTAL HOURS	130	258	24	412	
	AVERAGE HOURLY RATE	$155.00	$97.00	$90.00		
	SUBTOTAL	$20,150	$25,026	$2,160		
	TOTAL FEE					**$47,336**

MASTER AGREEMENT
FOR
PROFESSIONAL ENGINEERING SERVICES

AGREEMENT made between the **CITY OF EDINA**, a Minnesota municipal corporation, hereinafter called the "OWNER", and **Bolton & Menk, Inc.**, hereinafter called the "ENGINEER". OWNER intends to secure professional ENGINEERING services, according to the terms of this Agreement.

1. SUPPLEMENTAL AGREEMENT

OWNER intends to secure professional consulting engineering, architectural, planning and/or land survey services on an ongoing basis for general City services and multiple projects, according to the terms of this agreement. OWNER and ENGINEER shall enter into project specific supplemental agreements. This Master Agreement shall be deemed incorporated into the Supplemental Agreements unless a Supplemental Agreement specifically provides that it is not incorporated. If there is a conflict between the terms of the Supplemental Agreement and the Master Agreement, the terms of the Master Agreement shall control unless the Supplemental Agreement specifically provides that despite the conflict the terms of the Supplemental Agreement apply.

2. PUBLIC IMPROVEMENT PROJECT SERVICES OF ENGINEER

2.1 STUDY AND REPORT PHASE / FEASIBILITY REPORT

2.1.1. Consult with OWNER to clarify and define OWNER'S requirements for the Project, review available data and attend necessary meetings and be available for general consultation.

2.1.2. Advise OWNER as to the necessity of OWNER'S providing or obtaining from others data or services of the types described in paragraph 4, and assist OWNER in obtaining such data and services.

2.1.3. Identify and analyze requirements of governmental authorities having jurisdiction to approve the design of the Project and participate in consultations with such authorities.

2.1.4. Provide analyses of OWNER'S needs, planning surveys, site evaluations and comparative studies of prospective sites and solutions.

2.1.5. Provide a general economic analysis of OWNER'S requirements applicable to various alternatives.

2.1.6. The ENGINEER shall conduct and prepare preliminary studies, layouts, sketches, preliminary field work, preliminary cost estimates, estimates of assessment rates, and shall assist the OWNER in obtaining required subsurface investigations as required for the preparation of the Feasibility Reports. The Feasibility Reports shall conform to the requirements of Minn. Stat.

Chapter 429 if the cost of the project may be assessed in whole or part. The report shall contain schematic layouts, sketches and conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved (including applicable requirements of governmental authorities having jurisdiction as aforesaid) and the alternative solutions available to OWNER and setting forth ENGINEER'S findings and recommendations. This Report will be accompanied by ENGINEER'S opinion of probable costs for the Project, including the following which will be separately itemized: construction cost and indirect cost consisting of engineering costs and contingencies, and (on the basis of information furnished by OWNER) allowances for such other items as charges of all other professionals and consultants, for the cost of land and rights-of-way, for compensation for or damages to properties, for interest and financing charges and for other services to be provided by others for OWNER. The total of all construction and indirect costs are hereinafter called "Total Project Costs".

2.1.7. Furnish five (5) printed copies of the Study and Report documents and one (1) electronic file and review them in person with OWNER.

2.1.8. The ENGINEER shall assist with presenting the Feasibility Reports to the proper reviewing agencies and to the City Council. The ENGINEER shall appear at the public hearing to present the information.

2.2 PRELIMINARY DESIGN PHASE

2.2.1. In consultation with OWNER and on the basis of the accepted Study and Report documents, determine the general scope, extent and character of the Project; attend necessary meetings and be available for general consultation.

2.2.2. Prepare Preliminary Design documents consisting of final design criteria, preliminary drawings, outline specifications and written descriptions of the Project.

2.2.3. Advise OWNER if additional data or services of the types described in paragraph 4.4 are necessary and assist OWNER in obtaining such data and services.

2.2.4. Based on the information contained in the Preliminary Design documents, submit a revised opinion of probable Total Project Costs.

2.2.5. Furnish preliminary legal descriptions and exhibits for all permanent and temporary easements anticipated to construct the Project.

2.2.6. Furnish three (3) copies of the above Preliminary Design documents and one (1) electronic copy and present and review them in person with OWNER

2.3 FINAL DESIGN PHASE

2.3.1. On the basis of the accepted Preliminary Design documents, the City's design standards, and the revised opinion of probable Total Project Costs prepare for incorporation in the Bidding Documents final drawings to show the general scope, extent and character of the work to be furnished and performed by Contractor(s) (hereinafter called "Plans") and Specifications.

2.3.2. Provide technical criteria, written descriptions and design data for use in filing applications for permits with or obtaining approvals of such governmental authorities as have jurisdiction to approve the design of the Project, and assist OWNER in consultations with appropriate authorities. The ENGINEER shall submit all applications and permit support data to the appropriate agencies and submit copies to the OWNER.

2.3.3. Based on property information received from Owner in accordance with Paragraph 4.4, provide legal descriptions and exhibits for all easements, property surveys or related engineering services needed for the transfer of interests in real property and field surveys for design purposes and engineering surveys and staking to enable Contractor(s) to proceed with their work.

2.3.4. Advise OWNER of any adjustments to the latest opinion of probable Total Project Costs caused by changes in general scope, extent or character or design requirements of the Project or Construction Costs. Furnish to OWNER a revised opinion of probable Total Project Costs based on the Plans and Specifications.

2.3.5. Prepare for review and approval by OWNER, its legal counsel and other advisors contract agreement forms, general conditions and supplementary conditions, and (where appropriate) bid forms, invitations to bid and instructions to bidders, and assist in the preparation of other related documents.

2.3.6. Attend necessary hearings and meetings and be available for general consultation.

2.3.7. Furnish three (3) copies of the listed Final Design documents, including the Plans and Specifications, and present and review them in person with OWNER.

2.3.8. The ENGINEER shall furnish one copy of all design calculations when requested by OWNER.

2.4 BIDDING OR NEGOTIATING PHASE

2.4.1. The ENGINEER shall prepare and forward the Advertisement for Bids to the designated publications, official newspaper and the OWNER. The ENGINEER shall supply up to thirty (30) sets of full size final Plans and Specifications for use in obtaining bids and submitting for general review. The ENGINEER shall maintain a record of prospective bidders to whom Bidding Documents have been issued, attend pre-bid meetings and receive and process deposits for Bidding Documents.

2.4.2. Prepare Contract Documents.

2.4.3. Issue addenda as appropriate to interpret, clarify or expand the Bidding Documents.

2.4.4. Consult with and advise OWNER as to the acceptability of the prime contractor and subcontractors, suppliers, and other persons and organizations proposed by the prime contractor(s) (herein called "Contractor(s)") for the portions of the work where acceptability is required by the Bidding Documents.

2.4.5. Consult with and advise OWNER concerning and determining the acceptability of substitute materials and equipment proposed by Contractor(s) when substitution prior to the award of contracts is allowed by the Bidding Documents.

2.4.6. Attend the bid opening, prepare bid tabulation sheets and assist OWNER in evaluating bidder qualifications and recommendations on bids, and in assembling and awarding contracts for construction, materials, equipment and services.

2.5 CONSTRUCTION PHASE

2.5.1. General Administration of Construction Contract. ENGINEER shall consult with and advise OWNER and act as OWNER'S representative. All of OWNER'S instructions to Contractor(s) will be issued through ENGINEER who will have authority to act on behalf of Owner to the extent provided in the General Conditions except as otherwise provided in writing. The General Conditions shall not be modified without the written agreement of the OWNER.

2.5.2. Visits to Site and Observation of Construction. In connection with observations of the work of Contractor(s) while it is in progress:

2.5.2.1. ENGINEER shall make visits to the site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress and quality of the various aspects of Contractor(s) work. In addition, if requested by OWNER, ENGINEER shall provide the services of a Resident Project Representative (and assistants as agreed) at the site to assist ENGINEER and to provide more continuous observation of such work. Based on information obtained during such visits and on such observations, ENGINEER shall endeavor to determine in general if the work is proceeding in accordance with the Contract Documents and ENGINEER shall keep OWNER informed of the progress of the work.

2.5.2.2. The Resident Project Representative (and any assistants) will be ENGINEER'S agent or employee and under ENGINEER'S supervision.

2.5.2.3. The purpose of the ENGINEER'S visits to and representation by the Resident Project Representative (and assistants, if any) at the site will be to enable ENGINEER to better carry out the duties and responsibilities assigned to and undertaken by ENGINEER during the Construction Phase, and, in addition, by exercise of ENGINEER'S efforts as an experienced and qualified design professional, to provide for OWNER a greater degree of confidence that the completed work of Contractor(s) will conform to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by Contractor(s). On the other hand, ENGINEER shall not, during such visits or as a result of such

observations of Contractor(s)' work in progress, supervise, direct, or have control over Contractor(s)' work, nor shall ENGINEER have control or charge of and shall not be responsible for the Contractor(s)' means, methods, techniques, sequences, or procedures of construction selected by Contractor(s), for safety precautions and programs incident to the work of Contractor(s) or for any failure of Contractor(s) to comply with laws, rules, regulations, ordinances, codes, or orders applicable to Contractor(s) furnishing and performing their work. Accordingly, ENGINEER can neither guarantee the performance of the construction contracts by Contractor(s) nor assume responsibility for Contractor(s)' failure to furnish and perform their work in accordance with the Contract Documents.

2.5.2.4. If ENGINEER observes or otherwise becomes aware of defects or deficiencies in the work, or nonconformance to the Contract Documents, ENGINEER shall promptly give written notice thereof to OWNER.

2.5.3. Defective Work. During such visits and on the basis of such observation, ENGINEER may disapprove of or reject Contractor(s) work while it is in progress if ENGINEER believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.

2.5.4. Interpretations and Clarifications. ENGINEER shall issue necessary interpretations and clarifications of the Contract Documents and in connection therewith prepare work directive changes and change orders as required for OWNER'S approval.

2.5.5. Shop Drawings. ENGINEER shall review and approve (or take other appropriate action in respect of) Shop Drawings, samples and other data which Contractor(s) are required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Such reviews and approvals or other action shall not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto.

2.5.6. Substitutes. ENGINEER shall evaluate and determine the acceptability of substitute materials and equipment proposed by Contractor(s).

2.5.7. Inspections and Tests. ENGINEER shall have authority, as OWNER'S representative, to require special inspection or testing of the work by Contractor, and shall receive and review all certificates of inspections, testing and approvals required by laws, rules, regulations, ordinances, codes, orders or the Contract Documents (but only to determine generally that their content complies with the requirements of, and the results certified indicate compliance with, the Contract Documents). ENGINEER shall be entitled to rely on the results of such tests.

2.5.8. ENGINEER shall respond to all written claims submitted by Contractor in a timely fashion. ENGINEER shall not be liable for the results of any such interpretations or decisions rendered in good faith.

2.5.9. Applications for Payment. Based on ENGINEER'S on-site observations as an experienced and qualified design professional, on information provided by the Resident Project Representative and on review of applications for payment and the accompanying data and schedules:

2.5.9.1. ENGINEER shall determine the amounts owing to Contractor(s) and recommend in writing payments to Contractor(s) in such amounts and the OWNER shall verify the amounts. Such recommendations of payment will constitute a representation to OWNER, based on such observations and review, that the work has progressed to the point indicated, and that, to the best of ENGINEER'S knowledge, information and belief, the quality of such work is generally in accordance with the Contract Documents (subject to an evaluation of such work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and to any other qualifications stated in the recommendation). In the case of unit price work, ENGINEER'S recommendations of payment will include final determinations of quantities and classifications of such work (subject to any subsequent adjustments allowed by the Contract Documents).

2.5.9.2. By recommending any payment ENGINEER will not thereby be deemed to have represented that exhaustive, continuous or detailed reviews or examinations have been made by ENGINEER to check the quality or quantity of Contractor(s)' work as it is furnished and performed beyond the responsibilities specifically assigned to ENGINEER in this Agreement and the Contract Documents. ENGINEER'S review of Contractor(s)' work for the purposes of recommending payment will not impose on ENGINEER responsibility to supervise, direct or control such work or for the means, methods, techniques, sequences or procedures of construction or safety precautions or programs incident thereto or Contractor(s)' compliance with laws, rules, regulations, ordinances, codes or orders applicable to their furnishing and performing the work. It will also not impose on ENGINEER responsibility to make any examination to ascertain how or for what purposes any Contractor has used the money paid on account of the Contract Price, or to determine that title to any of the work, materials or equipment has passed to OWNER free and clear of any lien, claims, security interests or encumbrances, or that there may not be other matters at issue between OWNER and Contractor that might affect the amount that should be paid.

2.5.10. Contractor(s)' Completion Documents. ENGINEER shall receive and review maintenance and operating instructions, schedules, guarantees, bonds and certificates of insurance, tests and approvals which are to be assembled by Contractor(s) in accordance with the Contract Documents (but such review will only be to determine that their content complies with the

requirements of, and in the case of certificates on inspection, tests and approvals the results certified indicate compliance with, the Contract Documents); and shall transmit them to OWNER with written comments.

2.5.11. Inspections. ENGINEER shall conduct an inspection to determine if the work is substantially complete and a final inspection to determine if the completed work is acceptable so that ENGINEER may recommend, in writing, final payment to Contractor(s) and give written notice to OWNER and the Contractor(s) that the work is acceptable (subject to any conditions therein expressed), but any such recommendation and notice will be subject to the limitations expressed in paragraph 2.5.5.

2.5.12. Limitation of Responsibilities. ENGINEER shall not be responsible for the acts or omissions of any Contractor, or of any subcontractor or supplier, or any of the Contractor(s)' or subcontractors' or suppliers' agents or employees of any other persons (except ENGINEER'S own employees and agents) at the site or otherwise furnishing or performing any of the Contractor(s)' work; however, nothing contained in paragraphs 2.5.1 through 2.5.12 inclusive, shall be construed to release ENGINEER from liability for failure to properly perform duties and responsibilities assumed by ENGINEER in the Contract Documents.

2.6 OPERATIONAL PHASE

2.6.1. Provide assistance in the closing of any financial or related transaction for the Project.

2.6.2. Provide assistance in connection with the refining and adjusting of any equipment or system.

2.6.3. Assist OWNER in training OWNER'S staff to operate and maintain the Project. Extensive training shall be mutually agreed upon within the Supplemental Agreement as Additional Services as defined in Section 3 of this agreement.

2.6.4. Assist OWNER in developing systems and procedures for control of the operation and maintenance of and record keeping for the Project.

2.6.5. Within ninety (90) days after completion of a Project, prepare a set of reproducible record prints of Drawings and an electronic version that satisfy the City of Edina Record Drawing requirements, attached hereto, showing those changes made during the construction process, based on the marked-up prints, drawings and other data furnished by Contractor(s) to ENGINEER and which ENGINEER considered significant. ENGINEER will not be responsible for any errors or omissions in the information provided by Contractor that is incorporated in the record drawings and record documents. Final payment will be made only after record drawings are received by the OWNER.

2.6.6. In company with OWNER, visit the Project to observe any apparent defects in the completed construction, assist OWNER in consultations and discussions with Contractor(s) concerning correction of such deficiencies, and make recommendations as to replacement or correction of defective work.

2.6.7. Assist OWNER in preparation of assessment roll for City improvement projects, and attend assessment hearings.

3. ADDITIONAL PUBLIC IMPROVEMENT PROJECT SERVICES OF ENGINEER

3.1 SERVICES REQUIRING ADVANCE AUTHORIZATION. If authorized in writing by OWNER, ENGINEER shall furnish or obtain from others Additional Services of the types listed in paragraphs 3.1.1 through 3.1.12, inclusive. These services are not included as part of Basic Services except to the extent provided otherwise by attached Supplemental Agreement or Work Order and will be paid for by OWNER as indicated in Section 6.

3.1.1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effect on the design requirements of the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

3.1.2. Field Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished to OWNER by others, including surveys to verify location or improve accuracy of record information provided by Contractor under Paragraph 2.6.5.

3.1.3. Services resulting from significant changes in the general scope, extent or character of the Project or its design including, but not limited to, changes in size, complexity, OWNER'S schedule, character of construction or method of financing; and revising previously accepted studies, reports, design documents or Contract Documents when such revisions are required by changes in laws, rules, regulations, ordinances, codes or orders enacted subsequent to the preparation of such studies, reports or documents, or are due to any other causes beyond ENGINEER'S control.

3.1.4. Providing renderings or models for OWNER'S use.

3.1.5. Preparing documents for alternate bids requested by OWNER for Contractor(s)' work which is not executed or documents for out-of-sequence work.

3.1.6. Investigations and studies involving, but not limited to, detailed consideration of operations, maintenance and overhead expenses; providing value engineering during the course of design; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing; assisting OWNER in obtaining process licensing; detailed quantity surveys of material, equipment and labor; and audits or inventories required in connection with construction performed by OWNER.

3.1.7. Furnishing services of independent professional associates and consultants for other than Basic Services (which include, but are not limited to, customary civil, structural, mechanical and electrical engineering and customary architectural design incidental thereto); and providing data

or services of the types described in paragraph 4.4 when OWNER employs ENGINEER to provide such data or services in lieu of furnishing the same in accordance with paragraph 4.4.

3.1.8. Services during out-of-town travel required of ENGINEER other than visits to the site or OWNER'S office.

3.1.9. Assistance in connection with bid protests, rebidding or renegotiating contracts for construction, materials, equipment or services, except when such assistance is required to complete services called for in paragraph 2.4.

3.1.10. Preparation of operating, maintenance and staffing manuals to supplement Basic Services under paragraph 2.5.10.

3.1.11. Preparing to serve or serving as a consultant or witness for OWNER in any litigation, arbitration or other legal or administrative proceeding involving the Project unless the ENGINEER is a defendant (except for assistance in consultations which is included as part of Basic Services.

3.1.12. Additional services in connection with the Project, including services which are to be furnished by OWNER in accordance with Section 4, and services not otherwise provided for in this Agreement.

3.2 SERVICES NOT REQUIRING ADVANCE AUTHORIZATION. When required by the Contract Documents in circumstances beyond ENGINEER'S control, ENGINEER shall furnish or obtain from others, as circumstances require during construction and without waiting for specific authorization from OWNER, Additional Services listed in paragraphs 3.2.1 through 3.2.5, inclusive. These services are not included as part of Basic Services except to the extent provided otherwise by attached Supplemental Agreement. ENGINEER shall advise OWNER promptly after starting any such additional services which will be paid for by OWNER.

3.2.1. Services in connection with work directive changes and change orders to reflect changes requested by OWNER if the resulting change in compensation for Basic Services is not commensurate with the additional services rendered.

3.2.2. Services in making revisions to Plans and Specifications occasioned by the acceptance of substitutions proposed by Contractor(s); and services after the award to each contract in evaluating and determining the acceptability of an unreasonable or excessive number of substitutions proposed by Contractor.

3.2.3. Services resulting from significant delays, changes or price increases occurring as a direct or indirect result of material, equipment or energy shortages.

3.2.4. Additional or extended services during construction made necessary by (1) work damaged by fire or other cause during construction, (2) a significant amount of defective or neglected work of any Contractor, (3) acceleration of the progress schedule involving services beyond normal working hours, and (4) default by any Contractor.

3.2.5. Services (other than Basic Services during the Operational Phase) in connection with any partial use of any part of the Project by OWNER prior to Substantial Completion.

4. OWNER'S PUBLIC IMPROVEMENT PROJECT RESPONSIBILITIES. OWNER shall do the following:

4.1 Designate in writing a person to act as OWNER'S representative with respect to the services to be rendered under this Agreement, such person shall have complete authority to transmit instructions, receive information, interpret and define OWNER'S policies and decisions with respect to ENGINEER'S services for the Project.

4.2 Provide criteria and information as to OWNER'S requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of design and construction standards OWNER will require to be included in the Plans and Specifications.

4.3 Assist ENGINEER by placing at ENGINEER'S disposal all available information pertinent to the Project including previous reports and any other data relative to design or construction of the Project.

4.4 Furnish to ENGINEER as required for performance of ENGINEER'S Basic Services except to the extent provided otherwise by attached amendment, the following:

4.4.1. Data prepared by or services of others, including without limitation, borings, and subsurface explorations, hydrographic surveys, laboratory tests and inspections of samples, materials and equipment;

4.4.2. Appropriate professional interpretations of all the foregoing;

4.4.3. Environmental assessment and impact statements, if needed;

4.4.4. Property, boundary, easement, right-of-way, topographic and utility surveys;

4.4.5. Property descriptions; and

4.4.6. Zoning, deed and other land use restrictions;

All of which ENGINEER may use and rely upon in performing services under this Agreement.

4.5 Provide engineering surveys or authorize ENGINEER to establish reference points for construction to enable Contractor(s) to proceed with the layout of the work.

4.6 Arrange for access to and make all provisions for ENGINEER to enter upon public and private property as required for ENGINEER to perform services under this Agreement.

4.7 Examine all studies, reports, sketches, Drawings, Specifications, proposals and other documents presented by ENGINEER. Obtain advice of an attorney, insurance counselor and other

consultants as OWNER deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of ENGINEER.

4.8 Prepare applications and provide support for approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.

4.9 Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such legal services as OWNER may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project including any that may be raised by Contractor(s), such auditing service as OWNER may require to ascertain how or for what purpose any Contractor has used the monies paid under the construction contract, and such inspection services as OWNER may require to ascertain that Contractor(s) are complying with any law, rule, regulations, ordinance, code or order applicable to their furnishing and performing the work.

4.10 If OWNER designates a person to represent OWNER at the site who is not ENGINEER or ENGINEER'S agent or employee, the duties, responsibilities and limitations of authority of such other person and the affect thereof on the duties and responsibilities of ENGINEER and the Resident Project Representative (and any assistants) will be set forth in a supplemental agreement.

4.11 If more than one prime contract is to be awarded for construction, materials, equipment and services for the entire Project, designate a person or organization to have authority and responsibility for coordinating the activities among the various prime contractors.

4.12 Furnish to ENGINEER data or estimated figures as to OWNER'S anticipated costs for services to be provided by others for OWNER so that ENGINEER may make the necessary findings to support opinions of probable Total Project Costs.

4.13 Attend the pre-bid meeting, bid opening, pre-construction meetings, construction progress and other job related meetings and substantial completion inspections and final payment inspections.

4.14 Give prompt written notice to ENGINEER whenever OWNER observes or otherwise becomes aware of any development that affects the scope of timing of ENGINEER'S services, or any defect or nonconformance in the work of any Contractor.

4.15 Furnish, or direct ENGINEER to provide, Additional Services as stipulated in paragraph 3.1 of this Agreement or other services as required.

4.16 Require all Private Utilities with facilities in the OWNER'S right of way to:

(a) Locate and mark said utilities upon request;
(b) Relocate and/or protect said utilities as determined necessary to accommodate the proposed Work;
(c) Submit a schedule of the necessary relocation/protection activities to the OWNER for review.

4.17 Bear all costs incident to compliance with the requirements of this Section 4.

5. PERIODS OF PROJECT SERVICE

5.1 The provisions of Section 6 and the various rates of compensation for ENGINEER'S services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion of the Construction Phase. ENGINEER'S obligation to render services hereunder will extend for a period which may reasonably be required for the design, award of contracts, construction and initial operation of the Project including extra work and required extensions thereto.

5.2 The services called for in the Study and Report Phase will be completed and the Report submitted within the agreed period after written authorization to proceed with that phase of services which will be given by OWNER.

5.3 After acceptance by OWNER of the Study and Report Phase documents indicating any specific modifications or changes in the general scope, extent or character of the Project desired by OWNER, and upon written authorization from OWNER, ENGINEER shall proceed with the performance of the services called for in the Preliminary Design Phase, and shall submit preliminary design documents and a revised opinion of probable Total Project Costs within the agreed period.

5.4 After acceptance by OWNER of the Preliminary Design Phase documents and revised opinion of probable Total Project Costs, indicating any specific modifications or changes in the general scope, extent or character of the Project desired by OWNER, and upon written authorization from OWNER, ENGINEER shall proceed with the performance of the services called for in the Final Design Phase; and shall deliver Contract Documents and a revised opinion of probable Total Project Costs for all work of Contractor(s) on the Project within the agreed period.

5.5 ENGINEER'S services under the Study and Report Phase, Preliminary Design Phase, and Final Design Phase, shall each be considered complete when the submissions for that phase have been accepted by OWNER.

5.6 After acceptance by OWNER of the ENGINEER'S Drawings, Specifications and other Final Design Phase documentation including the most recent opinion of probable Total Project Costs and upon written authorization to proceed, ENGINEER shall proceed with performance of the services called for in the Bidding or Negotiating phase. This Phase shall terminate and the services to be rendered thereunder shall be considered complete upon commencement of the Construction Phase or upon cessation of negotiations with prospective Contractor(s).

5.7 The Construction Phase will commence with the execution of the first prime contract to be executed for the work of the Project or any part thereof, and will terminate upon written recommendation by ENGINEER of final payment on the last prime contract to be completed. Construction Phase services may be rendered at different times in respect of separate prime contracts if the Project involves more than one prime contract.

5.8 The Operational Phase will commence during the Construction Phase and will terminate upon the last of the following events: (1) one year after the date of Substantial Completion, as defined in the Contract Documents, if the last prime contract for construction, materials and equipment on which substantial completion is achieved; (2) after final payment to the Contractor(s); (3) after all known issues have been satisfactorily resolved.

5.9 If OWNER requests significant modifications or changes in the general scope, extent or character of the Project, the time of performance of ENGINEER'S services shall be adjusted equitably.

5.10 OWNER shall give prompt authorization to proceed or not proceed with any phase of services after completion of the immediately preceding phase.

5.11 In the event that the work designed or specified by ENGINEER is to be furnished or performed under more than one prime contract, or if ENGINEER'S services are to be separately sequenced with the work of one or more prime contractors (such as in the case of fast-tracking), OWNER and ENGINEER shall, prior to commencement of the Final Design Phase, develop a schedule for performance of ENGINEER'S services during the Final Design, Bidding or Negotiating and Construction Phases in order to sequence and coordinate properly such services as are applicable to the work under such separate contracts.

6. PAYMENTS TO ENGINEER

6.1 PAYMENT. For Project services, ENGINEER will be paid in accordance with the Supplemental Agreement between the parties for the Project.

6.2 OTHER PROVISIONS CONCERNING PAYMENTS.

6.2.1. If OWNER fails to make any payment due ENGINEER for services and expenses within thirty five (35) days after receipt of ENGINEER'S statement therefor, the amounts due ENGINEER will be increased at the rate of one-half percent (1/2%) per month from said thirtieth day, and in addition, ENGINEER may, after giving seven (7) days' written notice to OWNER, suspend services under this Agreement until ENGINEER has been paid in full all amounts due for services, expenses and charges.

6.2.2. In the event of termination by OWNER under paragraph 8.1 upon the completion of any phase of the Basic Services, progress payments due ENGINEER for services rendered through such phase shall constitute total payment for such services. In the event of such termination by OWNER during any phase of the Basic Services, ENGINEER will be paid for services actually and necessarily rendered during that phase by ENGINEER'S principals and employees engaged directly on the Project, on the basis of ENGINEER'S Hourly Costs based upon the fee schedule on file with the City.

In the event of any such termination, ENGINEER also will be reimbursed for the reasonable charges of independent professional associates and consultants employed by ENGINEER to render Basic Services, and paid for all unpaid Additional Services and unpaid reimbursables.

6.2.3. Records of ENGINEER'S time pertinent to ENGINEER'S compensation under this Agreement will be kept in accordance with generally accepted accounting principles. Copies will be made available to OWNER at cost on request prior to final payment for ENGINEER'S services.

6.2.4. ENGINEER shall comply with Minnesota Statute § 471.425. ENGINEER must pay Subcontractor for all undisputed services provided by Subcontractor within ten (10) days of ENGINEER'S receipt of payment from OWNER. ENGINEER must pay interest of one and five-tenths percent (1.5%) per month or any part of a month to Subcontractor on any undisputed amount not paid on time to Subcontractor. The minimum monthly interest penalty payment for an unpaid balance of One Hundred Dollars ($100) or more is Ten Dollars ($10).

7. CONSTRUCTION COST AND OPINIONS OF COST

7.1 CONSTRUCTION COST. The construction cost of the entire Project (herein referred to as "Construction Cost") means the total cost to OWNER of those portions of the entire Project designed and specified by ENGINEER, but it will not include indirect costs such as ENGINEER'S compensation and expenses, the cost of land, rights-of-way, or compensation for or damages to, properties unless this Agreement so specifies, nor will it include OWNER'S legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project or the cost of other services to be provided by others to OWNER pursuant to paragraph 4. (Construction Cost is one of the items comprising Total Project Cost which is defined in paragraph 2.2.6).

7.2 OPINIONS OF COST. Since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s) methods of determining prices, or over competitive bidding or market conditions, ENGINEER'S opinions of probable Total Project Costs and Construction Cost provided for herein are to be made on the basis of ENGINEER'S experience and qualifications and represent ENGINEER'S best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but ENGINEER cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by ENGINEER.

8. GENERAL

8.1 INDEPENDENT CONTRACTOR. The City hereby retains the Engineer as an independent contractor upon the terms and conditions set forth in this Agreement. The Engineer is not an employee of the City and is free to contract with other entities as provided herein. Engineer shall be responsible for selecting the means and methods of performing the work. Engineer shall furnish any and all supplies, equipment, and incidentals necessary for Engineer's performance under this Agreement. City and Engineer agree that Engineer shall not at any time or in any manner represent that Engineer or any of Engineer's agents or employees are in any manner agents or employees of the City. Engineer shall be exclusively responsible under this Agreement for Engineer's own FICA payments, workers compensation payments, unemployment compensation payments, withholding amounts, and/or self-employment taxes if any such payments, amounts, or taxes are required to be paid by law or regulation.

8.2 TERMINATION. OWNER may terminate this Agreement and any Supplemental Agreement without cause by written notice delivered to the ENGINEER. Upon termination under this provision if there is no fault of the ENGINEER, the ENGINEER shall be paid for services rendered and reimbursable expenses until the effective date of termination. If however, the OWNER terminates the Agreement because the ENGINEER has failed to perform in accordance with this Agreement, no further payment shall be made to the ENGINEER, and the OWNER may retain another contractor to undertake or complete the work identified in the Contract Documents. If as a result, the OWNER incurs total costs for the work (including payments to both the present contractor and a future contractor) which exceed the not to exceed amount specified in the Contract Documents, if any, then the ENGINEER shall be responsible for the difference between the cost actually incurred and the Agreement amount.

8.3 DOCUMENTS. All documents including Plans and Specifications prepared or furnished by ENGINEER (and ENGINEER'S independent professional associates and consultants) pursuant to this Agreement are instruments of service in respect of the Project and the OWNER will be provided with information and reference in connection with the use and occupancy of the Project by OWNER and others; however, such documents are not intended or represented to be suitable for reuse by OWNER or others on extensions of the Project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER'S sole risk. If the OWNER or ENGINEER terminates this Agreement, copies of all files, records, and drawings in ENGINEER'S possession relating to service performance for OWNER shall be turned over to OWNER without cost to OWNER.

8.4 MINNESOTA GOVERNMENT DATA PRACTICES ACT. The ENGINEER must comply with the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, as it applies to (1) all data provided by the City pursuant to this Agreement, and (2) all data, created, collected, received, stored, used, maintained, or disseminated by the ENGINEER pursuant to this Agreement. The ENGINEER is subject to all the provisions of the Minnesota Government Data Practices Act, including but not limited to the civil remedies of Minnesota Statutes Section 13.08, as if it were a government entity. In the event the ENGINEER receives a request to release data, the ENGINEER must immediately notify the OWNER. The OWNER will give the ENGINEER instructions concerning the release of the data to the requesting party before the data is released and the ENGINEER will be reimbursed as Additional Public Improvement Services by OWNER under Paragraph 3.1for ENGINEER'S reasonable costs in complying with a request to release data. ENGINEER agrees to defend, indemnify, and hold the OWNER, its officials, officers, agents, employees, and volunteers harmless from any claims resulting from ENGINEER'S officers', agents', owners', partners', employees', volunteers', assignees' or subcontractors' unlawful disclosure and/or use of protected data. The terms of this paragraph shall survive the cancellation or termination of this Agreement.

8.5 INSURANCE

8.5.1. ENGINEER shall secure and maintain such insurance as will protect ENGINEER from claims under the Worker's Compensation Acts, automobile liability, and from claims for bodily injury, death, or property damage which may arise from the performance of services under this Agreement. Such insurance shall be written for amounts not less than:

Commercial General Liability	$2,000,000 each occurrence/aggregate
Automobile Liability	$2,000,000 combined single limit
Excess/Umbrella Liability	$2,000,000 each occurrence/aggregate

The OWNER shall be named as an additional insured on the general liability and umbrella policies on a primary and non-contributory basis. That part of the Excess/Umbrella Liability Insurance limit in excess of the required Excess/Umbrella coverage may be utilized to supplement and meet the required limits for Commercial General and Automobile Liability Insurance.

8.5.2. Professional Liability Insurance. The ENGINEER shall secure and maintain a professional liability insurance policy. Said policy shall insure payment of damages for legal liability arising out of the performance of professional services for the OWNER, in the insured's capacity as ENGINEER, if such legal liability is caused by a negligent act, error or omission of the insured or any person or organization for which the insured is legally liable. Said policy shall provide minimum limits of $1,000,000 with a deductible maximum of $50,000 unless the OWNER agrees to a high deductible.

8.5.3. Before commencing work the ENGINEER shall provide the OWNER a certificate of insurance evidencing the required insurance coverage in a form acceptable to OWNER. The certificate shall provide that such insurance will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to ENGINEER and OWNER in the case of cancellation due to non-payment of premium and at least 30 days prior written notice for any other reason, or such longer notification periods as may be required by statute. Within three days of receipt of such written notice, ENGINEER shall provide a copy of the notice to OWNER.

8.6 INDEMNIFICATION. The ENGINEER agrees, to the fullest extent permitted by law, to indemnify and hold OWNER harmless from any damage, liability, or cost (including reasonable attorney's fees and costs of defense) to the extent caused by ENGINEER's acts, errors, or omissions in the performance of professional services under this Agreement and those of his or her subcontractors or anyone for whom the ENGINEER is liable.

8.7 PROFESSIONAL STANDARDS. ENGINEER shall exercise the same degrees of care, skill, and diligence in the performance of the Services as is ordinarily possessed and exercised by a professional engineer under similar circumstances. No other warranty, expressed or implied, is included in this Agreement. ENGINEER shall comply with applicable laws, statutes, ordinances, and regulations and the OWNER's mandated standards that OWNER has provided ENGINEER in writing. OWNER shall not be responsible for discovering deficiencies in the accuracy of ENGINEER'S services.

8.8 NO THIRD PARTY BENEFICIARIES. Nothing in this Agreement shall be construed to give any rights to anyone other than OWNER and ENGINEER.

8.9 CONTROLLING LAW/VENUE. This Agreement shall be governed by and construed in accordance with the laws of the State of Minnesota, without giving effect to the principles of conflict of laws. All proceedings related to this contract shall be venued in the Hennepin County District Court.

8.10 SUCCESSORS AND ASSIGNS

8.10.1. OWNER and ENGINEER each is hereby bound and the partners, successors, executors, administrators and legal representatives of OWNER and ENGINEER are hereby bound to the other party, to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

8.10.2. Neither OWNER nor ENGINEER shall assign, sublet or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Agreement without the written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent ENGINEER from employing such independent professional associates and consultants as ENGINEER may deem appropriate to assist in the performance of services hereunder.

8.10.3. Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than OWNER and ENGINEER, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of the OWNER and ENGINEER and not for the benefit of any other party.

8.11 PROMPT PAYMENT TO SUBCONTRACTORS. Pursuant to Minn. Stat. §471.25, Subd. 4a, the Contractor must pay any subcontractor within ten (10) days of the Contractor's receipt of payment from the City for undisputed services provided by the subcontractor. The Contractor must pay interest of 1½ percent per month or any part of the month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of $100.00 or more is $10.00. For an unpaid balance of less than $100.00, the Contractor shall pay the actual penalty due to the subcontractor. A subcontractor who prevails in a civil action to collect interest penalties from the contractor shall be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

8.12 COPYRIGHT/PATENT INFRINGEMENT. ENGINEER shall defend actions or claims charging infringement of any copyright or patent by reason of the use or adoption of any designs, Drawings or Specifications supplied by it, and it shall hold harmless the OWNER from loss or damage resulting there from.

8.13 NOTICES. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

8.14 SURVIVAL. All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

8.15 SEVERABILITY. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and ENGINEER, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

8.16 WAIVER. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

9. PRIOR AGREEMENT

This Agreement supersedes all prior written and oral contracts and agreements except for the following: _____
_____.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER:

CITY OF EDINA

BY:_____
Its Mayor

AND_____
Its City Manager

ADDRESS FOR GIVING NOTICES:
Wayne D. Houle, PE
Director of Engineering
City of Edina
7450 Metro Blvd
Edina, MN 55439

ENGINEER:

Bolton & Menk, Inc.

BY:_____
Its _____

ADDRESS FOR GIVING NOTICES:
Marcus A. Thomas, PE
Principal Engineer
Bolton & Menk, Inc.
12224 Nicollet Ave
Burnsville, MN 55337

City of Edina Record Drawings

1. All plan sheets must be provided in Record Drawing format. Refer to attached exhibit #1-3 for examples. All data shall be placed on a "**Record Drawing**" layer in base files.

    - (B) - General Contractor, General Contractors mailing address, a list of Sub Contractors, the year constructed/completed, name of inspector onsite. (All sheets)
    - (C) - Record Drawing Note: *"This drawing is our record knowledge of the project as constructed. Information is furnished without warranty as to accuracy. Users should field verify locations and elevations prior to use."* (All sheets)
    - (D) - Complete revision block (All sheets)
    - (E) - Strike out existing information and add field verified data such as rim and invert elevations.
    - (F, G, H, & I) - Stationing of clean outs, wyes, services, etc as detailed in line items below:

2. Record Drawing data collection must be completed in Hennepin County coordinate system.

3. Shoot all X,Y,Z, coordinates on all sanitary/storm structures, inverts, sump drain services, clean out locations, gate valve boxes, curb stops, hydrants, lighting units and hand holes, etc., that are found within the project limits once the wear course has been placed.

4. All X,Y,Z, coordinates must be within 0.05 foot tolerance for horizontal and vertical measurements.

5. All distances, elevations and ties are based on field measurements or verified shots taken after construction.

6. Survey shots must be taken at the following locations:

    - Center of all castings and inlets.
    - Center of each gate valve box
    - Center of curb stops
    - Top nut on hydrant
    - Center of isolation gate valve box at hydrant
    - Center of cleanouts on sump drain and sanitary sewer
    - Center of sump drain service stub
    - Center of hand hole
    - Adjacent to lighting unit
    - Center of Lift Station

7. Below is an approved list of the following point code naming conventions used by the City. These point code naming conventions must be used for all record information gathered upon completion of the project.

   - **ASAN** sanitary manhole
   - **ASCO** sanitary clean out
   - **ALIFT** sanitary lift station
   - **AAIRMH** air release manhole
   - **ACB** catch basin manhole
   - **ADMH** storm sewer manhole
   - **AIN** storm sewer inlet FES
   - **AOUT** storm sewer outlet FES
   - **AGV** gate all valve box locations – including isolation GV's at Hydrants
   - **AHYD** hydrant locations
   - **APIV** Post Indicator Valve
   - **AWMH** gate valve manholes
   - **AWSO** curb stop shut off boxes
   - **ACO** sump drain cleanout locations
   - **ASR** sump drain service locations
   - **ALP** city-owned light poles
   - **AHH** hand holes

8. All gate valve boxes found within the project limits shall be tied off with a minimum of 2 ties. These ties will be recorded on gate valve tie sheets (provided by the City of Edina). Ties are to be recorded to the nearest **0.5'** and are to be taken in the following order:
   - Tie to top nut on hydrants
   - Center of sanitary sewer or storm sewer manhole castings
   - Center @ back of curb on catch basin inlets.
   - Back of curb
   - NOTE: Do <u>not</u> tie gate valves to other gate valves, light poles, or house corners. Ties are not to exceed 200'. Isolation gate valves in front of hydrants are exempt of this requirement.

9. A bench loop is required to provide benchmark elevations for all fire hydrants in the project limits. The level of precision shall be a minimum of Second Order, Class 1. GPS or Robot elevations for this task are not acceptable. Work must be done using a level and traverse the jobsite recording TNH's accordingly. These notes are to be given to the Edina Survey Department for their record use.

10. Wye service locations for **SANITARY SEWER** are stationed off of the downstream **<u>SANITARY</u>** manhole. Stations are to be recorded to the nearest foot. All X,Y,Z, coordinates are required for all new sanitary sewer mainline service connections. *(no ties required – stationing only) (example: **S0+00**)*

11. Wye service locations for **SUMP DRAIN** services and **SUMP DRAIN CLEANOUT** locations are stationed off the downstream **SANITARY** manhole. Stations shall be recorded to the nearest foot. *(no ties required – stationing only) (example:* ***SERV=0+00 or CO=0+00)***

12. Water service **CORPORTATIONS** and **CURB BOX STOP** locations are stationed off the downstream **SANITARY** manhole. Stations shall be recorded to the nearest foot. Corporation stations only need to be recorded if large deviations in alignment exceeding 5 feet, or are not perpendicular to the water main. *(no ties required – stationing only) (example:* ***W0+00 or CORP0+00)***

13. All X,Y,Z, coordinates for buried utility items such as **BENDS, REDUCERS, SLEEVES, TEES, CROSSES** and **PLUGS** are required and stationed off the downstream **SANITARY** manhole. Stations shall be recorded to the nearest foot. *(no ties required – stationing only) (example:* ***BEND0+00, REDUCER0+00, SLEEVE0+00, TEE0+00, CROSS0+00, PLUG0+00)***

14. Update record plan sheets to reflect updated elevations, inverts, structure builds and locations. Strike out proposed plan information and add the new information to reflect field changes in bold text.

15. Submit one 11 x 17 set of preliminary record plans and CAD drawing to the City of Edina for review and comments.

16. Upon approval of the preliminary record plans and CAD drawing, the City requires the following information on CD/DVD:

    - 1 hard copy set of 11 x 17 record plans.
    - 1 complete record set of 11 x 17 record plan sheets in PDF format.
    - Individual record plan sheets using the following naming convention example for a contract. (year/contract number/page number – see below)

      Example: For Highlands Reconstruction Project (ENG 08-8) would look like this:

      20080801 = PAGE 1 OF PLANSET
      20080802 = PAGE 2 OF PLANSET
      20080803 = PAGE 3 OF PLANSET

    - Electronic AutoCAD drawing containing field gathered record data.
    - Spreadsheet file of field gathered data and coordinates in Microsoft Excel format.

Please note the following information: At this time, the City of Edina does not require consultants to redraw line work in the base files as long as record X, Y, Z coordinates have been shot to reflect exact field locations of structures onsite **AND** consultants have used the appropriate naming conventions of field gathered points. The City of Edina does require new line work if major deviations from the original construction plans are added or found.

Sanitary Sewer Manholes

Request Facility ID maps from City Staff. Use maps to gather new record data.

Update and redline existing "**Sanitary Sewer Manhole Inspection Reports**" with applicable information. (see attached)

Shoot all X, Y, Z coordinates for each newly constructed or adjusted manholes and castings on site. All coordinates must be within 0.05 foot tolerance for horizontal and vertical measurements.

All shots must be taken in the center of the casting lid at finished grade.

Comments required for any information not addressed in the report.

Storm Sewer: Catch Basins, Manholes, Inlets, & Outlets

Request Facility ID maps from City Staff. Use maps to gather new record data.

Update and redline existing "**Storm Sewer Manhole Inspection Reports**" with applicable information. (see attached)

Shoot all X, Y, Z coordinates for each newly constructed, or adjusted, catch basin, or manhole and casting on site. All coordinates must be within 0.05 foot tolerance for horizontal and vertical measurements.

All shots must be taken in the center of the casting on the structure at finished grade. In the case of inlets and outlets - a shot will be taken at the end of the apron structure. In the absence of an apron, an invert will be taken at the end of pipe.

Comments required for any information not addressed in the report.

Watermain: Gate Valves & Hydrants

Request Facility ID maps from City Staff. Use maps to gather new record data.

Shoot all X, Y, Z coordinates for each new hydrant and gate valve on site. All coordinates must be within 0.5 foot tolerance for horizontal and vertical measurements.

All shots must be taken on the top nut of the new fire hydrant, or in the center of the gate valve box cover.

All gate valves, including isolation gate valves at hydrants will require X,Y,Z coordinates.
Gate valve manholes will also require an inspection and a shot on the center of the casting lit at finished grade.

Roadway Lighting

Shoot all X, Y, Z coordinates for each new lighting standard and hand hole on site.

All coordinates must be within 0.5 foot tolerance for horizontal and vertical measurements.

All shots must be taken adjacent to the new lighting unit or at the center of a hand hole cover at finished grade.

Signs

Shoot all X, Y, Z coordinates for each new and existing sign on site.

All coordinates must be within 0.5 foot tolerance for horizontal and vertical measurements. All shots must be taken adjacent to the sign.

CITY OF EDINA, MINNESOTA

HIGHLANDS NEIGHBORHOOD RECONSTRUCTION & DONCASTER WAY SIDEWALK

CONSTRUCTION PLAN FOR: ROADWAY, SIDEWALK AND UTILITY RECONSTRUCTION

LOCATED ON: AYRSHIRE BLVD., CROYDEN LN., DUNCRAIG RD., GLENBRAE CIR., LOCHLOY DR. & DONCASTER WAY

- CATCH BASIN
- BEE HIVE CATCH BASIN
- STORM MH, DRAINAGE
- SANITARY MH
- SANITARY CLEAN OUT
- HYDRANT
- WATER VALVE
- WATER VALVE MH
- STOP BOX
- POST INDICATOR VALVE
- ELECTRIC MH
- UTILITY POLE
- LIGHT POLE
- UTILITY POLE W/LIGHT
- GUY WIRE
- GUY POLE
- GROUND LIGHT
- TRAFFIC SIGNAL
- HAND HOLE
- TELEPHONE PEDESTAL
- TELEPHONE MH
- TELEVISION PEDESTAL
- GAS VALVE
- MAIL BOX
- RETAINING WALL
- CHAIN LINK FENCE
- WOOD FENCE
- SILT FENCE
- SAWCUT
- STORM SEWER
- SUMP DRAIN
- WATER LINE
- SANITARY SEWER
- GAS LINE
- TELEPHONE UG LINE
- ELECTRIC UG LINE
- OVERHEAD

PROPOSED=BOLD\SOLID

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

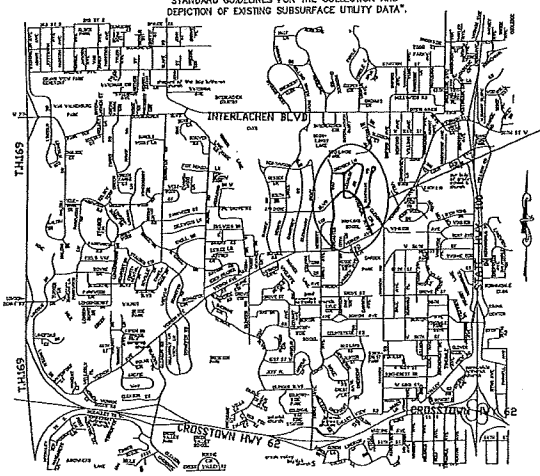


EXHIBIT #1

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY
1/1/09	RECORD PLAN REVISION	AK

(B)

RECORD DRAWING

GENERAL CONTRACTOR: NORTHWEST ASPHALT, INC.
ADDRESS: 1451 STAGECOACH RD., SHAKOPEE, MN 55378
CONSTRUCTED SUMMER 2008
PROJECT MANAGER: JACK SULLIVAN, PE., CITY OF EDINA
PROJECT OBSERVER: AARON KUZNIA, CITY OF EDINA

(C)

RECORD DRAWING NOTE:

THIS DRAWING IS OUR RECORD KNOWLEDGE OF THE PROJECT AS CONSTRUCTED. INFORMATION IS FURNISHED WITHOUT WARRANTY AS TO ACCURACY. USERS SHOULD FIELD VERIFY LOCATIONS AND ELEVATIONS.

PROJECT LOCATION
COUNTY: HENNEPIN

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND THE SPECIFICATIONS FOR CONSTRUCTION BY THE CITY OF EDINA SHALL GOVERN THIS PROJECT

NOTE: ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES & STANDARD PLATES
3	CONSTRUCTION/SOILS NOTES & TYPICAL SECTIONS
4	PLAN AND PROFILE-AYRSHIRE BLVD.
5-8	RANDOM CURB AND GUTTER AND DRIVEWAY REPLACEMENT
9	STORMWATER POLLUTION PREVENTION PLAN
10-11	STORM SEWER PLANS
12-17	UTILITY PLAN
18-20	RAW WATER MAIN
21-25	DONCASTER WAY SIDEWALK AND HIGHLANDS SCHOOL ENTRANCE

THIS PLAN CONTAINS 25 SHEETS

LOCAL AGENCY SIGNATURES

DESIGN ENGINEER: I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

DATE: _____ LICENSE NO. 42375

SIGNATURE _____ NAME: JACK D. SULLIVAN

_____ DATE: _____
APPROVED: CITY ENGINEER

EDINA CONTRACT NO. ENG 08-8

EDINA IMP. NO. BA-342, SS-438
WM-476, STS-343, S-092

SHEET 1 OF 25

GENERAL NOTES:

ALL WATERMAIN SHALL BE A MINIMUM OF 10 FOOT HORIZONTAL OR 18 INCHES VERTICALLY FROM ALL SANITARY AND STORM SEWER PIPE AND APPARATUSES.

LIMITS OF CONSTRUCTION SHALL BE AS DETERMINED AND MARKED IN THE FIELD BY THE ENGINEER.

THE EXACT LOCATION OF THE UNDERGROUND UTILITIES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY BEFORE COMMENCING UNDERGROUND EXCAVATION AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

EROSION CONTROL NOTES:

INLET PROTECTION SHALL BE USED ON ALL CB'S, MH'S AND DI'S FOR THE DURATION OF THE PROJECT BEFORE THE ROAD IS PAVED IN ACCORDANCE WITH MnDOT SPEC. 2573.

ALL AREAS DISTURBED BY CONSTRUCTION SHALL RECIEVE 6" OF TOPSOIL AND BE SODDED WITHIN 14 DAYS OF COMPLETING THE WORK NECESSARY TO PROCEED WITH FINISH GRADING

CB = TYPE "BB" (SEE STD. PLATE #220)

CBMH = TYPE "CC" (SEE STD. PLATE #230)

TS = TREATMENT STRUCTURE (SEE SPECIAL CONDITIONS-STM)

(D) 50' – 4" DRAINTILE WITH SOCK

(S) REMOVE SEWER PIPE (STORM)

(2) FIELD VERIFY PRIOR TO INSTALLATION TOP OF EX SAN SEWER. BLOCK SUPPORT STORM SEWER ON BOTH SIDES OF EX SAN SEWER. INSULATE AREA BETWEEN.

(B)

RECORD DRAWING

GENERAL CONTRACTOR: NORTHWEST ASPHALT, INC.
ADDRESS: 1451 STAGECOACH RD., SHAKOPEE, MN 55379
CONSTRUCTED SUMMER 2003
PROJECT MANAGER: JACK SULLIVAN, P.E., CITY OF EDINA
PROJECT OBSERVER: AARON KUZNIA, CITY OF EDINA

(C)

RECORD DRAWING NOTE:

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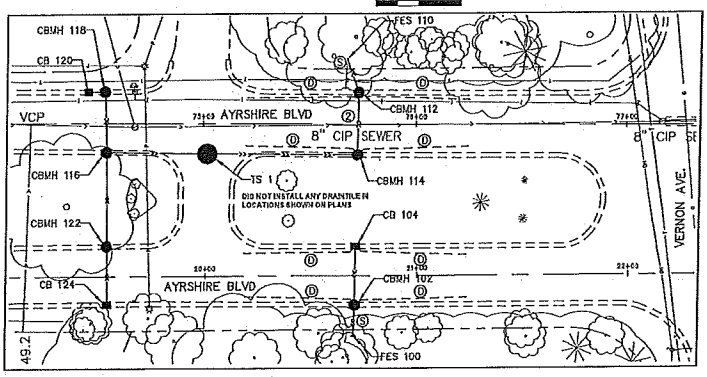


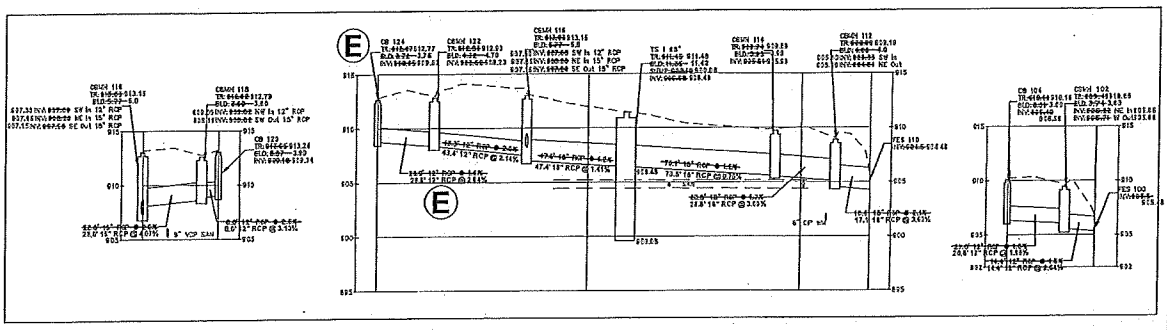


EXHIBIT #2

1	10/10/08	JAC	RECORD PLAN REVISION
1	5/24/08	JAC	UTILITY REVISIONS
NO.	DATE	BY	REVISIONS

(D)

STORM SEWER
AYRSHIRE BLVD.

CITY OF EDINA
4801 West 50th Street
Edina, MN 55424-1394
Ph: 952-927-8861
Fax: 952-826-0389

HIGHLANDS AREA RECONSTRUCTION

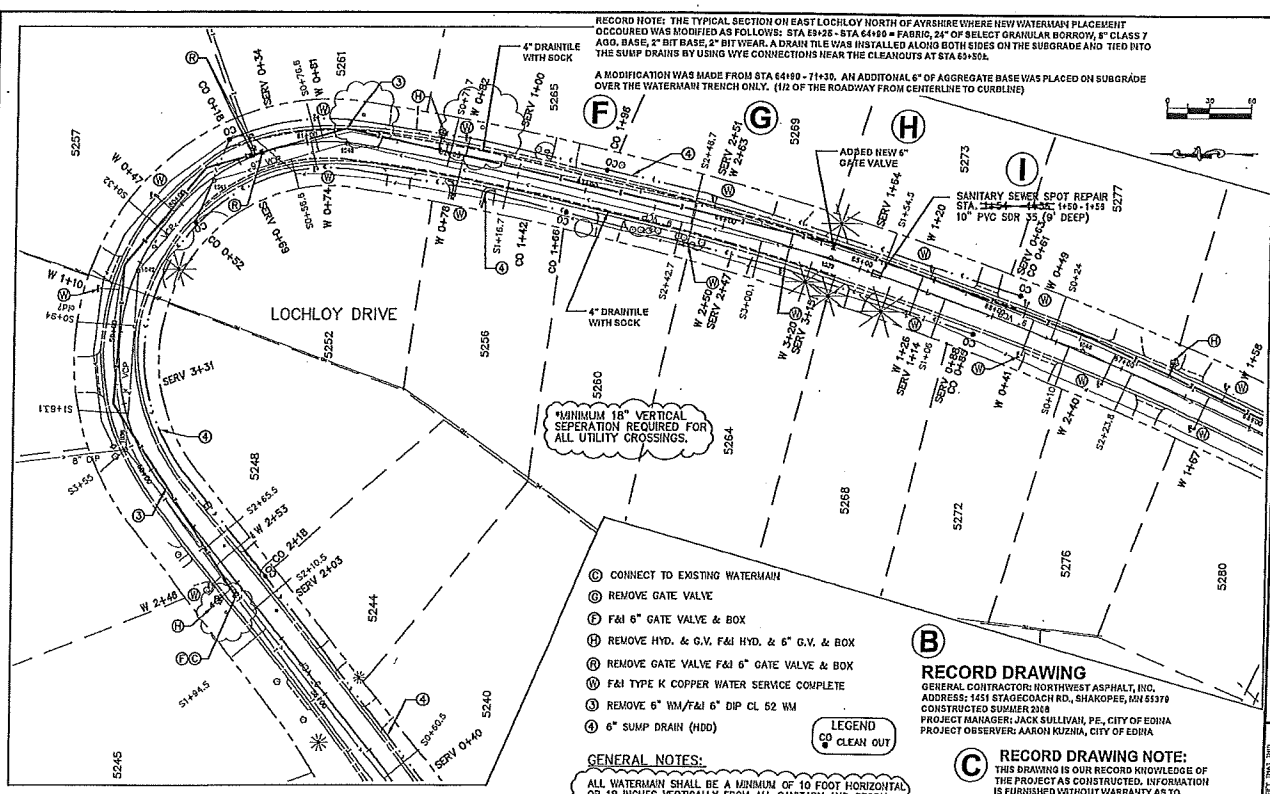
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE: UR. No. 42275

DRAWN: JCB
CHECKED: JDS
APPROVED: JDS
DATE: 5-14-03
G.P.# STS-343
CONTR.# ENG 08-5
SHEET 11 of 25

RECORD NOTE: THE TYPICAL SECTION ON EAST LOCHLOY NORTH OF AYRSHIRE WHERE NEW WATERMAIN PLACEMENT OCCOURED WAS MODIFIED AS FOLLOWS: STA 59+25 - STA 64+80 = FABRIC, 24" OF SELECT GRANULAR BORROW, 8" CLASS 7 AGG. BASE, 2" BIT BASE, 2" BIT WEAR. A DRAIN TILE WAS INSTALLED ALONG BOTH SIDES ON THE SUBGRADE AND TIED INTO THE SUMP DRAINS BY USING WYE CONNECTIONS NEAR THE CLEANOUTS AT STA 63+50±.

A MODIFICATION WAS MADE FROM STA 64+80 - 71+30. AN ADDITONAL 6" OF AGGREGATE BASE WAS PLACED ON SUBGRADE OVER THE WATERMAIN TRENCH ONLY. (1/2 OF THE ROADWAY FROM CENTERLINE TO CURBLINE)



Ⓒ CONNECT TO EXISTING WATERMAIN
Ⓖ REMOVE GATE VALVE
Ⓕ F&I 6" GATE VALVE & BOX
Ⓗ REMOVE HYD. & G.V. F&I HYD. & 6" G.V. & BOX
Ⓡ REMOVE GATE VALVE F&I 6" GATE VALVE & BOX
Ⓦ F&I TYPE K COPPER WATER SERVICE COMPLETE
③ REMOVE 6" WM/F&I 6" DIP CL 52 WM
④ 6" SUMP DRAIN (HDD)

LEGEND
CO CLEAN OUT

GENERAL NOTES:

ALL WATERMAIN SHALL BE A MINIMUM OF 10 FOOT HORIZONTAL OR 18 INCHES VERTICALLY FROM ALL SANITARY AND STORM SEWER PIPE AND APPARATUSES.

LIMITS OF CONSTRUCTION SHALL BE AS DETERMINED AND MARKED IN THE FIELD BY THE ENGINEER.

THE EXACT LOCATION OF THE UNDERGROUND UTILITIES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY BEFORE COMMENCING UNDERGROUND EXCAVATION AND VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

ALL CURB BOXES SHALL BE LOCATED AND ADJUSTED AS RECOMMENDED BY THE ENGINEER IN THE FIELD. CURB BOX LOCATION MARKERS SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE PROJECT.

EROSION CONTROL NOTES:

INLET PROTECTION SHALL BE USED ON ALL CB'S, MH'S AND DI'S FOR THE DURATION OF THE PROJECT BEFORE THE ROAD IS PAVED IN ACCORDANCE WITH MnDOT SPEC. 2573
ALL AREAS DISTURBED BY CONSTRUCTION SHALL RECIEVE 6" OF TOPSOIL AND BE SODDED WITH IN 14 DAYS OF COMPLETING THE WORK NECESSARY TO PROCEED WITH FINISH GRADING

Ⓑ **RECORD DRAWING**
GENERAL CONTRACTOR: NORTHWEST ASPHALT, INC.
ADDRESS: 1451 STAGECOACH RD., SHAKOPEE, MN 55379
CONSTRUCTED SUMMER 2008
PROJECT MANAGER: JACK SULLIVAN, PE., CITY OF EDINA
PROJECT OBSERVER: AARON KUZNIA, CITY OF EDINA

Ⓒ **RECORD DRAWING NOTE:**
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EXHIBIT #3

NO.	DATE	BY	REVISION
1	5/21/08	JTC	UTILITY REVISIONS
2	8/22/08	JAK	RECORD PLAN REVISION

Ⓓ UTILITY PLANS

CITY OF EDINA
4801 West 50th Street
Edina, MN 55424
Ph: 952-826-0371
Fax: 952-826-0390

HIGHLANDS AREA RECONSTRUCTION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE: LIC. NO. 22775

DRAWN	AFK
CHECKED	JBS
APPROVED	JBS
DATED	5-14-08
IMP.#	BA-342
CONTR.#	ENG 08-8
SHEET	16 of 26

Archival process for City of Edina Record Drawings:

Create all Record Drawings in CAD using City of Edina Standards. Plot to Cute PDF.

Create a new Record Drawing folder in the Contract Folder for the project.

Name the PDF sheets in the plan set. Use the following naming convention when placing them in the Contract Folder for the project:

(Year/contract #/sheet # = (description of sheet not needed)

Example: For Highlands Reconstruction Project (ENG 08-8) would look like this

20080800 = SIGNED TITLE SHEED
20080801 = TITLE
20080802 = SEQ
20080803 = PLAN

By using this format, when the PDF's are created and transferred to the Archive folder and placed in the appropriate archive year, they will populate according to the year, contract number and page number accordingly. This will keep them all in an easy to understand, continuous order.

In the Archive folder, locate the appropriate year Record Archive folder. Copy and paste your Record Drawings from your Contract Folder into this Record Archive folder. They will populate according to the naming convention with the year, contract number and page number accordingly.

In the appropriate Archive Folder, find the utility appropriate excel spreadsheet. Begin adding information and filling out information in the appropriate columns to the bottom of the existing list. Only add and hyperlink the sheets that are specific to the appropriate utility folder.

I created a Contract # drop down on top of the excel spreadsheet so you can search the spread sheet and sort the sheets by contract number if need be.

By transferring all Record Drawing plan sheets to the Archive Folder, it will be easier to reconstruct a complete set of Record Drawings from this location in the future.