



Salcedo Group, Inc.

PROPOSAL

DATE: JANUARY 16, 2019

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Grand Prairie Engineering
P.O. Box 534045
Grand Prairie, Texas 75053-4045

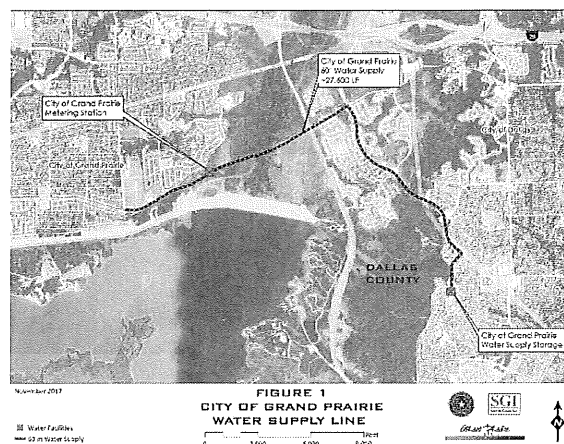
Attn: Gabe Johnson, P.E.
Public Works Director

Re: Amendment Proposal for Purchase Order 283588
For Large Diameter Water Main Pipe Inspection, Analysis and Repair

Dear Mr. Johnson:

Salcedo Group, Inc. (SGI) appreciates the opportunity to submit this proposal to **The City of Grand Prairie** for water main pipe inspection and analysis for the 60-inch water line along Camp Wisdom Road. We have prepared this proposal based upon discussions with the City of Grand Prairie, Pure Technologies U.S., Inc. (PURE) and our firm.

Our understanding is that the project consists contracting with a qualified firm that can perform the inspection and analysis of approximately 27,600 linear feet of 60" Prestressed Concrete Water Pipe. This important water supply line runs generally from the City of Cedar Hill along Mountain Creek Parkway, to the City of Grand Prairie along Camp Wisdom Road. A project map showing the project location, is included as Figure 1.



SGI researched available technologies of qualified large-pipe inspection firms to perform inspection and finite element analysis of large diameter water mains. The inspection technologies should consist primarily of two types of techniques: acoustic leak detection and electromagnetic inspection. SGI performed the research and recommended Pure as the provider for this service. A detailed scope of work and fee schedule from PURE for the inspection and structural assessment of the 60-inch pipe is attached.

The scope for the proposed amendment is as follows:

SGI BASIC SERVICES SCOPE

1. **Project Management/Coordination** : SGI will provide coordination between the City of Grand Prairie and PURE for the duration of the project. The main objective is to conclude the physical inspection within the City's preferred seasonal window of "winter water usage days". In addition, the PURE analysis will be coordinated with the Camp Wisdom Road Improvement design team for the structural analysis of the 60-inch pipe during and after road construction.
2. **Special Services (Survey)** : SGI will provide field survey for locating and developing cross-sections for PURE's use in their analysis, including areas east of FM1382.
3. **Civil Support** : SGI will provide technical assistance regarding the Camp Wisdom Road design to PURE for use in their analysis.

Based on this information, please find our fee proposal for the scope of work described below.

A. FEES FOR BASIC SCOPE OF SERVICES

Salcedo Group proposes to provide the Basic Scope of Services as described above based on an as needed, not to exceed fee basis as follows:

A.	Project Management/Coordination	\$12,500
B.	Special Services (Survey):	\$14,500
C.	Civil Support	\$13,500
D.	Reimbursable expenses	<u>\$1,500</u>
	TOTAL SGI BASIC SERVICES FEE	\$42,000
E.	Pure Technologies U.S., Inc.	
	i. Pure : Water Transmission Main Condition Assessment	
	1. Phase 1: 10,856 LF	\$217,358
	2. Phase 2: 13,409 LF	\$167,612
	3. Structural Analysis for Existing Conditions	\$42,775
	ii. Pure : Structural Analysis for Proposed Camp Wisdom	<u>\$16,640</u>
	TOTAL PURE FEES:	\$444,385
	TOTAL PROPOSED AMENDMENT	\$486,385

B. REIMBURSABLE EXPENSES

In-house reproduction and printing will be billed as a direct expense at our standard rates. Reimbursable expenses consisting of outside reproduction and printing charges, delivery and courier service charges, mileage and postage will be billed as a direct expense at cost plus ten (10%) percent. Plan submittal and review fees, permit, filing and other agency fees shall be paid directly by The City of Grand Prairie.

C. ASSUMPTIONS

In preparing this proposal, we have made the following assumptions:

- The fees and scope of work identified in this proposal are separate and excluding the fees and scope of work to be identified in a Scope of Work and fee schedule for Pure Technologies.

The current City of Grand Prairie Purchase Order is 283588. A summary of the proposed amendment fees are shown below:

P.O. 283588	
Engineering Services	\$43,000
Contingency	\$2,150
Total Original P.O. 283588	\$45,150
 Proposed Amendment	 \$486,385
 Proposed New Total P.O.	 \$531,535
 Invoiced on 05-17-2018 and Paid	 \$22,600
 Proposed Remaining on P.O. 283588	 \$508,905

This proposal along with Attachment "A" (Hourly Rates) comprise the entirety of this agreement. We will bill monthly based on work performed and at final completion. **All payments are due upon receipt of the invoice.** Invoices that are more than 60 days past due will result in work on this project being stopped. Work will recommence when all invoices are paid in full.

Professional Liability: Salcedo Group is insured by Travelers Casualty and Surety. Our coverage limit is \$2,000,000 for each claim \$2,000,000 annual aggregate. Our deductible is \$5,000 per claim, \$15,000 aggregate. The City of Grand Prairie will be named as additionally insured.

Salcedo Group appreciates the opportunity to provide you with this proposal for civil engineering services are very excited regarding the possibility of working with you. Please review the Proposal and the attached General Terms and Conditions. If you are in agreement, please sign both copies of the Agreement and return one to this office for our records. Receipt of the signed copy will serve as our notice to proceed.

Once again, thank you for this opportunity. Please do not hesitate to call if you have any questions or if we may provide additional information.

Sincerely,
Salcedo Group, Inc.

A handwritten signature in black ink, appearing to read 'M. Salcedo', written in a cursive style.

Michael Salcedo, SIT, GISP
President



RATE SCHEDULE

Design

Principal	\$150.00/hr.
Senior Engineer	\$150.00/hr.
E.I.T.	\$90.00/hr.
Resident Engineer	\$125.00/hr.
Sr. CADD Tech	\$95.00/hr.
Designer	\$75.00/hr.
CADD Tech.....	\$75.00/hr.
Clerical.....	\$50.00/hr.
Senior Inspector	\$125.00/hr.

Survey

Senior Registered Public Land Surveyor	\$150.00/hr.
2-man Survey Crew	\$150.00/hr.
3-man Survey Crew	\$180.00/hr.
4-man Survey Crew	\$200.00/hr.
Sr. Survey Technician	\$95.00/hr.
Survey/CADD Technician	\$75.00/hr.

Reimbursables

Direct Cost Multiplier	1.1
<i>(For example, deed research services, printing, travel)</i>	

December 24, 2018

Salcedo Group, Inc.
110 SW 2nd Street
Grand Prairie, TX 75050

Attention: Michael Salcedo, President

Subject: Pure Technologies U.S. Inc.

Dear Mr. Salcedo:

Pure Technologies Ltd. ("**Pure**") has created various leak detection and condition assessment technologies that are protected by various North American and international patents and form an integral part of Pure's intellectual property portfolio.

PureEM® - Manned EM and PipeDiver Platform

PureEM™ is an electromagnetic (EM) inspection technology for evaluating the current condition of prestressed concrete cylinder pipe (PCCP) (among other types of concrete pipe), bar wrapped pipe and metallic pipe.

PureEM™ is deployed on manned inspection tools and other propriety condition assessment platforms owned by Pure including the PipeDiver™ platform. PipeDiver is an innovative, free-swimming condition assessment platform for water and wastewater pipelines that operates while a main remains in service.

The PureEM technology is protected by various North American and international patents. The applicable U.S. patent is listed below.

Electromagnetic Analysis of Concrete Tensioning Wires – PureEM

United States	United States
Patent No. 6,791,318	Patent No. 6,781,369
Issue Date: 1/29/2002	Issue Date: 8/24/2004

*PureEM™ has been adapted for use in metallic pipe.

SmartBall® Leak Detection (SmartBall)

Pure's SmartBall leak detection platform is a free-swimming tool that can accurately identify leaks and air pockets in water and wastewater pipelines. It is capable of locating very small leaks typically within 6 feet (1.8 meters) of their actual location.

The applicable U.S. patent is:

Anomaly Detector for Pipelines (untethered, unpowered, rollable device to sense condition of pipeline wall)

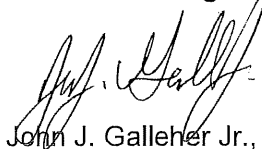
Patent No. 8,098,063

Issue Date: 1/17/2012

To our knowledge, Pure is not aware of any other company in the United States or elsewhere offering pipeline inspection platforms with the same capabilities and features. This technology is proprietary and forms an integral part of our Intellectual Property Portfolio.

If you require any further information, please feel free to contact Dave Kurtz, Business Development Manager at (214) 558-9902 or by email at dave.kurtz@puretechltd.com.

Pure Technologies U.S. Inc.

A handwritten signature in black ink, appearing to read "John J. Galleher Jr.".

John J. Galleher Jr., P.E.

Vice President, West Region

60-INCH SOUTH GRAND PRAIRIE
DELIVERY WATER TRANSMISSION MAIN
CONDITION ASSESSMENT SERVICES
PROPOSAL



Prepared by:

Pure Technologies U.S. Inc.
4505 Excel Parkway, Suite 600
Addison, TX 75001

December 8, 2017





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INTRODUCTION

The 60-inch South Grand Prairie Delivery Water Transmission Main delivers treated water from the South Grand Prairie Water Supply Storage on Strauss Road north approximately 4.6 miles (~24,265 feet) to serve areas of Grand Prairie. The water transmission main is a 60-inch prestressed concrete cylinder pipeline (PCCP) that was installed in 1985.

Pure Technologies US, Inc. ("Pure Technologies") is pleased to present the following Scope of Services and Fee Schedule to assess the condition of the 60-inch South Grand Prairie Delivery Water Transmission Main:

1. Perform a leak and gas pocket inspection over the entire length of the 60-inch water transmission main using the SmartBall® internal acoustic inspection tool.
2. Conduct transient pressure monitoring on the 60-inch water transmission main to identify maximum pressure surges that occur on the pipeline.
3. Perform electromagnetic inspection on the 60-inch prestressed concrete cylinder pipe (PCCP) to identify and quantify broken wire wraps.
4. Perform finite element analysis and provide a pipe performance curve for each distressed 60-inch PCCP pipe design, along with recommendations for repair, rehabilitation or rehabilitation.
5. Present all findings in a pipe-by-pipe geospatial GIS deliverable.

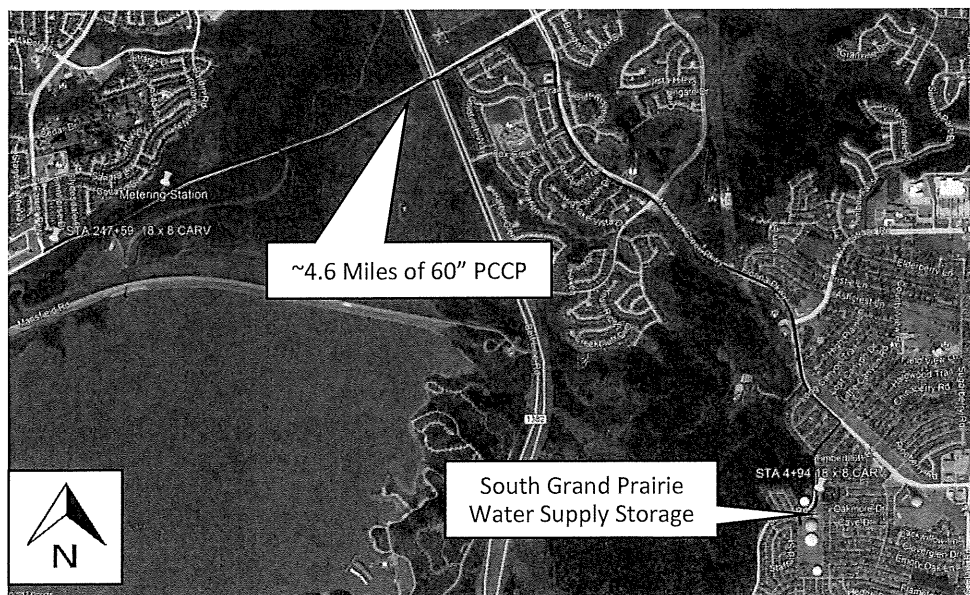


Figure 1: Aerial photograph showing approximate location of the 60" PCCP South Grand Prairie Water Transmission Main

The condition assessment will utilize Pure Technologies' proprietary electromagnetic inspection technology which provides a non-destructive method of reliably and accurately identifying the quantity and location of wire breaks on each pipe section. The electromagnetic inspection for the 60-inch PCCP will be performed using Pure Technologies' free-swimming delivery platform which requires minimal downtime to insert into and extract from the pipeline.

QUALIFICATIONS AND EXPERIENCE

Pure Technologies is a recognized industry leader in the inspection and assessment of pressurized pipelines and has built a reputation of providing state-of-the-art innovative solutions for our clients. We have a strong team of more than 500 engineers and scientists globally dedicated to condition assessment and proactive management of buried pipeline infrastructure.

Combining proprietary technologies and specialized engineering analysis allows Pure Technologies to identify distressed pipes and recommend specific pipes for repair. Identifying and locating pipeline defects will provide the Salcedo Group and the City of Grand Prairie with "actionable" information, enabling a more informed decision to selectively rehabilitate, replace or monitor specific pipes – resulting in significant cost savings compared to the replacement of an entire pipeline.

Experience: Pure Technologies has inspected and/or managed the condition assessment of more than 16,000 miles of pressure pipe, including many pipelines with similar diameter and manufactured in the same era as the 60-inch South Grand Prairie Water Transmission Main.

Expertise: Our engineers and scientists have authored national standards for condition assessment of pressurized water mains, as well as numerous technical papers on the subject. In addition, Pure Technologies' staff has proudly been involved in national committees within the industry.

Innovation: Our engineers and scientists are actively involved in research and development to provide new and innovative technologies and methods for pipeline assessment. This knowledge allows Pure Technologies to develop assessments that provide utilities with actionable information in to successfully manage their critical pressure pipeline infrastructure.

Inspection Toolbox: Pure Technologies has developed a suite of condition assessment tools and technologies for collecting critical data on pipelines. The environments our tools operate in are pressurized, at times adverse and often lack redundancy. These unique operational challenges, have pushed Pure Technologies' research and development efforts to refine our technology platforms to serve a wide variety of clients with varying pipe diameters, pipe materials and operational constraints. As critical infrastructure continues to deteriorate around the world, Pure Technologies will continue to develop services that help mitigate risk and extend the useful life of pipelines.

Since 1993, Pure Technologies has been a world leader in providing engineering analysis, non-destructive testing and monitoring technologies to better understand the condition of major infrastructure. Pure Technologies is committed to providing the Salcedo Group and the City of Grand Prairie a successful condition assessment with the best inspection techniques and technologies to cost effectively and comprehensively perform the required tasks.

PRESTRESSED CONCRETE CYLINDER PIPE (PCCP)

There are several designs of prestressed concrete cylinder (PCCP) pipe in use in the United States. The most common types are AWWA C301-E (Embedded Cylinder Pipe) and C301-L (Lined Cylinder Pipe). The 60-inch PCCP used to construct the South Grand Prairie Water Main is an embedded cylinder pipe manufactured by Gifford-Hill-American in 1985.

Figure 2 shows a cross-sectional view of the Embedded Cylinder PCCP which is representative of the 60-inch pipe used to construct the South Grand Prairie Water Transmission Main. Numerous excavations have confirmed the efficiency of the inspection technologies presented, as these technologies are now the most advanced available for assessing AWWA C301 pipelines.

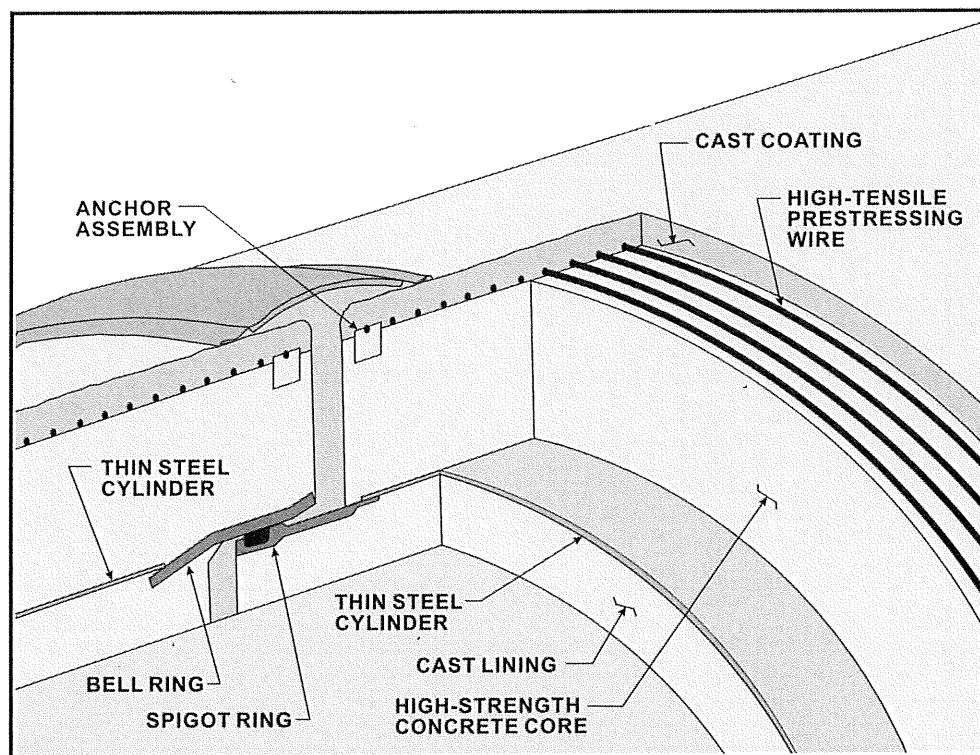


Figure 2: Typical PCCP Pipe Section for Embedded Cylinder Pipe AWWA C301 or "E-301"

PCCP pipe relies on high strength steel prestressing wire wrapped around the pipe under significant stress to provide its strength. Due to its vulnerability to corrosion, the wire is embedded in a mortar coating, which provides an alkaline environment that inhibits corrosion. Problems arise in PCCP when the mortar, and thus the alkaline environment, is compromised, leaving the wire susceptible to corrosion. When corrosion of the prestressing wire occurs, the wire eventually breaks, reducing the strength of the pipe at that location. In Figure 3, below, an example identified by Pure Technologies of when corrosion continues, multiple wire breaks may occur in the same region and can significantly reduce the pipe's strength, eventually to the point of failure.

The consequences associated with PCCP failure can be significant, resulting in emergency shutdown and repair. The primary goal of a condition assessment program is to provide an understanding as to the condition of the structural component that provides the pipe's strength—the prestressing wire. An electromagnetic inspection provides a non-destructive method of detecting broken prestressing wire and will estimate the quantity and location of wire breaks for each pipe.

Pure Technologies has developed and owns the electromagnetic inspection technology (PureEM®) and proposes to use this technology to assess the condition of the 60-inch South Grand Prairie Water Main.



Figure 3: PCCP failure avoided by proactive inspection

Electromagnetic Theory

A common analogy to describe the physics of electromagnetic inspections is to view the transmitter and receiver coils that use the prestressing wire as an inductor that can alter an induced field. The coils are placed in a horizontal configuration with the transmitting coil on one side of the pipe and the receiver coil on the other side. The transmitting coil generates a magnetic field on the prestressing wire and the resulting field on the opposite side of the pipe is recorded with the receiver coil. The equipment is moved through the pipe to obtain an electromagnetic signature of each pipe section.

If the prestressing wire, acting as an antenna, is intact, the receiver coil detects a consistent signal with certain characteristics. When the end of a pipe section is reached, the polarity of the detected field reverses because the coiled inductor ends. However, if the inductor is broken (i.e. the prestressing wire is broken), the signal is also altered and a new pole reversal occurs part way

through the pipe. These unexpected reversals delay the arrival of the signal at the receiver and can be quantified to estimate the number of wire breaks.

Capabilities and Limitations

An electromagnetic inspection reliably detects broken prestressing wire in PCCP mains, provides an estimate on the number of broken wire wraps, and provides a location (axially) of where wire break damage exists.

Electromagnetic inspections are a major advance when assessing the condition of PCCP pipelines. However, as with all technologies there are some limitations. Electromagnetic inspections detect electromagnetic anomalies that are consistent with anomalies caused by breaks in the prestressing wire of PCCP. However, same variables may affect the signal or interpretation of the signal.

Limitations include:

1. The magnetic field of interest is small and other interference can mask the measurements or distort their size. Unexpected changes in the manufacture of the pipe and the presence of ferromagnetic materials in the pipeline can create difficulty in evaluating the electromagnetic signals.
2. The accuracy of estimating the number of wire breaks near the end of pipe sections is reduced due to the increased presence of steel at the joints affecting the electromagnetic signal.
3. Wire breaks scattered across a wire break zone (usually associated with hydrogen embrittlement) may result in an overestimation of the number of wire breaks. Most wire break estimation algorithms assume that all wires are broken in an affected area.

COMPREHENSIVE CONDITION ASSESSMENT

Data Collection and Review

Prior to the development of any pipeline inspection project, existing information as it relates to the subject pipelines will be collected and reviewed. Data collected during this phase of the project will be used to develop a detailed project planning document.

The Planning Document will clearly detail how the inspections on the pipeline will be carried out and will, at a minimum, include:

- Background information: as-built records, failure history, operating information, etc.
- Technologies and methods to be used to inspect the pipeline.
- Access requirements: What access points will be needed to deploy selected inspection technologies.
- Detailed scope of field work.
- Schedule.

SmartBall® Leak and Gas Pocket Inspection

As part of a comprehensive baseline inspection on large diameter pipelines, Pure Technologies typically recommends that an internal acoustic based leak detection technology be deployed in conjunction with an electromagnetic inspection to identify and locate all existing leaks and/or air pockets in the pipeline. Because the data collected by the proposed direct measurement electromagnetic inspection technology can be 'masked' by the metallic mass at the joint rings and other metallic features, the SmartBall technology will determine if there are any leaks of concern that may lead to potential failure.

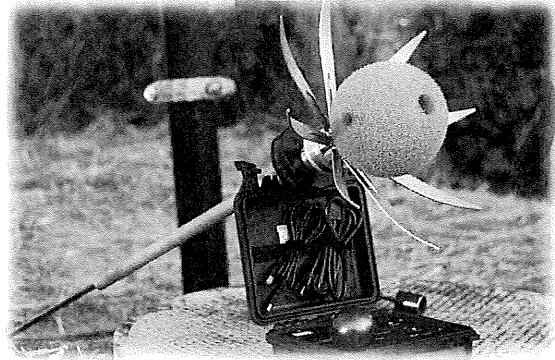


Figure 4: SmartBall®

Whereas the identification and location of leaks presents obvious benefits, gas (air) pockets in pressure pipelines can result in reduced flow capacity. The identification and elimination of gas pockets will assure maximum flow capacity and reduce energy consumption. The effects of transient events are also exacerbated by air pockets.

The SmartBall tool is designed to be inserted and extracted under fully flowing and operational conditions. Given the pipeline configuration, the SmartBall will require a flow velocity of 1.5 to 2 feet per second (fps). Also, to confidently identify leaks of 1 gallon per minute (gpm) or smaller, a minimum 15 psi pressure will be required in the pipeline. Based on our preliminary review of the pipeline, it appears that the SmartBall can be inserted via an existing Combination Air Relief Valve (CARV) located at Station 4+94, just outside of the South Grand Prairie Water Supply Storage facility. Salcedo Group and the City of Grand Prairie will need to remove the CARV, allowing Pure Technologies to attach the SmartBall insertion stack onto the 8-inch flange connection at the 8-inch gate valve. Similarly, the SmartBall can be extracted using an expandable, collapsible net system via the CARV located at Station 247+59.

The SmartBall will be tracked using specialty tracking receivers (SBRs) as it traverses the pipeline. The tracking receiver utilizes surface mounted sensors that are attached to a metallic surface in direct contact with the water column and/or flexible hydrophones that can be inserted into the water column. This allows Pure Technologies to detect an ultrasonic ping transmitted by the SmartBall up to ¼ to ½ miles away and track its progress in relation to the sensor location – approaching, passing and travelling beyond the sensor. Although we should be able to utilize the existing CARV's and Blow-off configurations to deploy the SBR's, it may be necessary to have the Salcedo Group and the City of Grand Prairie provide access on pipeline to accommodate attachment of an SBR surface mounted sensor directly on the external pipe wall. The spacing of the SBR's allows for tighter locating resolution of any leaks and/or gas pockets identified.

Transient Pressure Monitoring

An important aspect of any pressure pipeline condition assessment is the evaluation of pipeline pressures, specifically transient pressures, and their impact on the structural capacity of a pipe. While most pipelines operate well below the design capacity of the pipe material, when pipe wall degradation due to various failure modes is combined with either the operational pressure and/or surge pressure, the likelihood of failure can be significantly increased.

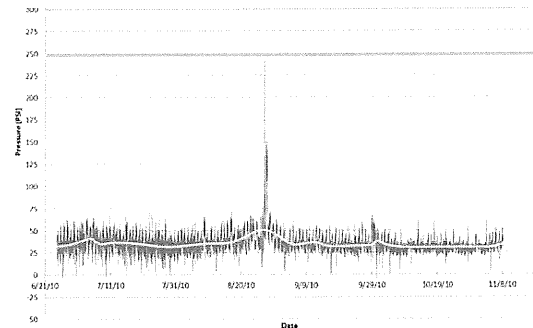


Figure 5: Transient Pressure Monitoring Data

Understanding the actual transient events is important, and must be accounted for when evaluating the Pipe Performance Curves for each pipe design.

PipeDiver Electromagnetic Inspection

To minimize potential disruption of service, Pure Technologies is proposing to utilize a free-swimming PipeDiver electromagnetic inspection device that can be inserted and extracted under de-pressurized conditions. The PipeDiver tool is neutrally buoyant and utilizes flexible fins that stabilize the tool and allow for the attachment of electromagnetic detectors. The flexible design of the fins allows for the tool to access the pipeline via the existing 18-inch access at the CARV locations and traverse the 60-inch in-line butterfly valves and the two (2) in-line 60-inch by 42-inch eccentric reducers at the meter station.

The Salcedo Group and the City of Grand Prairie will temporarily de-pressurize the pipeline and remove the 8-inch gate valve and the 18-inch blind flange to allow for insertion of the PipeDiver tool via the CARV at Station 4+94. Further, the Salcedo Group and the City of Grand Prairie may need to furnish a crane or other lifting mechanism to assist in placing the PipeDiver through the 18-inch opening. Pure Technologies will furnish an 8-inch by 4-inch adaptor with

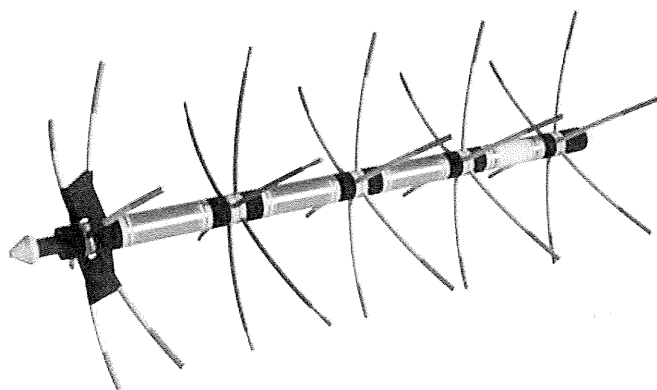


Figure 6: PipeDiver® Electromagnetic inspection

4-inch gate valve to accommodate Pure Technologies' "lasso" configuration used for the deployment of the PipeDiver tool under de-pressurized conditions. Once the PipeDiver is placed into the pipeline, the Salcedo Group and the City of Grand Prairie will pressurize the pipeline and establish the required flow velocity requirements (typically about 1.5 to 3 feet per second); allowing Pure Technologies to release the PipeDiver into the flowing pipeline.

As the water flow propels the PipeDiver through the pipeline, Pure Technologies will track the progress of the PipeDiver using the SBR tracking receivers used for tracking the SmartBall, as described above.

Pure Technologies is proposing to extract the PipeDiver using a caterpillar capture net deployed via the 18-inch CARV access located at Station 247+59, near South Carrier Parkway. The caterpillar net will be deployed in conjunction with the insertion of the PipeDiver, under de-pressurized conditions. The Salcedo Group and the City of Grand Prairie will remove the 8-inch blind gate valve and 18-inch reducing blind flange, allowing for Pure Technologies to deploy the capture net. After the 18-inch blind flange and 8-inch gate valve are re-installed, Pure Technologies will furnish an 8-inch by 4-inch reducer to accommodate attachment of the capture net system configuration. The Salcedo Group and the City of Grand Prairie will need to furnish lifting equipment to assist in placing the capture net and lifting out the PipeDiver tool once it is captured and the access is again opened under de-pressurized conditions.

In addition to providing the electromagnetic results in a line item (by pipe) summary spreadsheet, the pipeline and corresponding EM inspection results will be incorporated into a pipe-by-pipe geospatial GIS representation of the pipeline. Pure Technologies is unique in this approach; while other companies may provide pipeline mapping, Pure Technologies provides this mapping at a much higher level of detail.



Figure 7: Geospatial GIS displays pipe-by-pipe location along with inspection results

In addition to the spatial location of the pipeline, inspection information will then be associated with this pipeline representation and displayed via an ESRI Shapefile, geodatabase, KML or other geospatial formats compatible with the City's GIS or mapping

Structural Evaluation/ Pipe Performance Curves/Engineering Recommendations

While the electromagnetic inspection described herein will provide reliable data on wire breaks and potential areas of pipe deterioration, the challenge associated with assessing and managing distressed pipe is determining what level of distress (i.e., broken prestressing wires in PCCP) creates an unacceptable level of risk, thereby requiring repair and/or replacement actions.

Pure Technologies uses 3D finite element analysis (FEA) to develop a structural model based on the pipe design and incorporating hydraulic evaluation data that provides a decision-making tool – "Pipe Performance Curve" – for the management of a PCCP main.

Based on the Pipe Performance Curve results, distress in a pipe may be present, but this may not require the immediate rehabilitation or replacement of the pipe section allowing for management and/or monitoring deterioration; allowing the City to focus critical resources on higher risk areas.

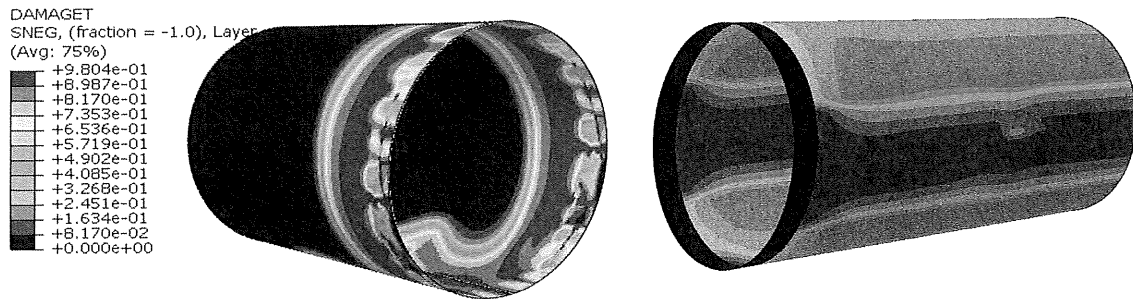


Figure 8: 3D Finite Element Analysis (FEA) used to determine Pipe Performance Curves for each class of distressed pipe

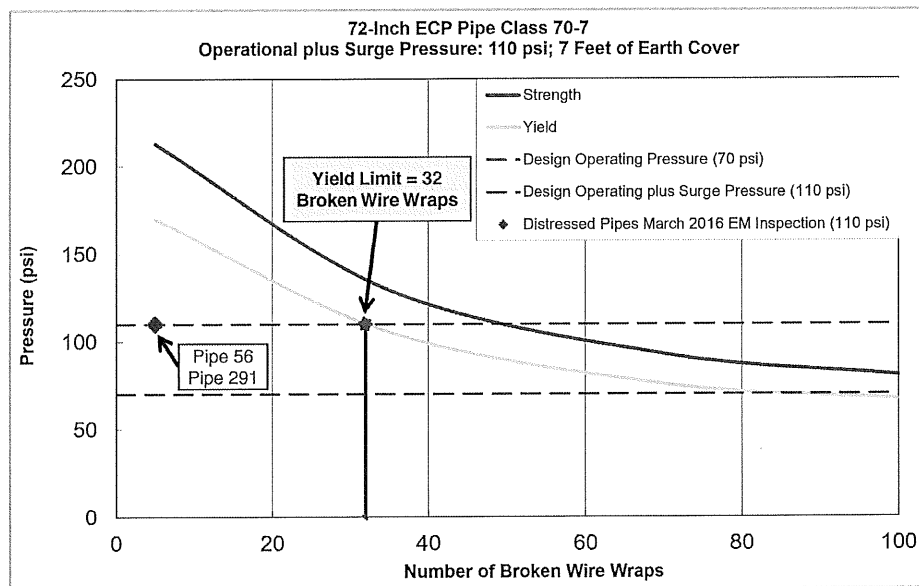


Figure 9: Pipe Performance Curves based on 3D FEA to determine pipe repair priorities relative AWWA C304 Limit States

Pure Technologies can develop Pipe Performance Curves for each design class of PCCP that is found to have broken prestressed wires. These curves can be used to determine how close the distressed pipe is relative to the yield and strength limits based on the operational and surge pressure identified using the transient pressure monitor or maximum pressures as provided by the City. If no surge data is available, Pure Technologies can utilize the allowable design factor in AWWA C304 (40 psi surge or 40% of operating pressure – whichever is greater)

Following completion of all field inspections and data analysis, Pure Technologies will generate a report presenting the results of the leaks and gas pocket inspection, a summary of the transient pressure monitoring results, and the results of the electromagnetic inspection, whereby the quantity and location of all wire breaks are listed for each pipe within the pipeline.

Should distressed pipes of concern be identified, the City can authorize Pure Technologies to develop a Pipe Performance Curve(s) as may be applicable, and evaluate distressed pipes to verify if they were manufactured in accordance with applicable AWWA Standard C301 at the time of manufacturing, as well as if it meets current design standards per AWWA Standard C304. The final report with recommendations for specific pipes to be repaired will be signed and sealed by a Professional Engineer licensed in the State of Texas.

SCOPE OF SERVICES

Pure Technologies' general scope of services includes the following:

1. Planning, coordination, and mobilization
2. Transient pressure monitoring for a minimum of 30 days.
3. Field inspection using internal acoustic SmartBall to identify and locate leaks and gas pockets.
4. Field inspection using free swimming PipeDiver electromagnetics with inspection report, including pipe-by-pipe geospatial GIS.
5. As needed and authorized by the City, structural evaluation and pipe repair priority report supported by Pipe Performance Curves developed using 3D finite element analysis.

Specific tasks to be performed by Pure Technologies include the following:

1. Plan and attend kickoff meeting with the Salcedo Group and the City of Grand Prairie to discuss project goals, scope, schedule, alternatives for accomplishing specific work tasks, division of responsibility, and lines of communication.
2. Collect and organize plan-and-profile drawings, lay drawings, GIS, mapping data, and other relevant pipeline information.
3. Conduct a site visit to gather missing information and plan potential access points for insertion, extraction and tracking of inspection tools. Collect sub-meter GPS of all pipeline appurtenances and install and collect data using a transient pressure monitor for a minimum of 30 days.
4. Develop a draft and final Project Planning Document that will include detailed procedures for accessing each manhole, inspection procedures, contingency planning, and health and safety plan.
5. Mobilize field crews and perform field inspection on approximately 4.6 miles (~24,265 LF) of 60-inch PCCP using the SmartBall leak/gas pocket tool and the PipeDiver electromagnetic platform.

6. Analyze the SmartBall data to identify and locate all leaks and gas pockets on the pipeline at the time the water main was inspected.
7. Process electromagnetic data and report location and quantity of estimated broken wire wraps and major defects.
8. Report findings in a draft inspection report, host a workshop with the City, incorporate the City's comments in a final inspection report, including a pipe-by-pipe geospatial GIS deliverable compatible with the City's GIS or mapping system.
9. If distress of potential concern is identified in pipes, Pure Technologies can, with authorization by the City:
 - a. perform a structural evaluation of the pipe(s);
 - b. develop a Pipe Performance Curve for relevant pipe design classes to estimate the number of wire breaks required to reach the yield limit and strength limit (failure);
 - c. prioritize the risk based on likelihood of failure;
 - d. provide an engineering report to include a risk prioritization of distressed pipes based on likelihood of failure, structural evaluation and recommendations in a draft report,
 - e. host a workshop with the City, incorporate the City's comments in a final condition assessment report.

DELIVERABLES

1. Submit draft meeting agendas at least one week before meetings. Document meeting minutes and action items for distribution following meetings with the City.
2. Develop a detailed Project Planning Document to include inspection procedures, maps of planned field work, and inspection schedule. A draft will be submitted to the City for comment prior to initiating field work and reviewed with the City in a workshop.
3. Develop a pipe list displaying electromagnetic results for each individual pipe.
4. Deliver a draft and final inspection report with results of the electromagnetic inspection and SmartBall inspection, including a pipe-by-pipe geospatial GIS deliverable which includes all inspection information (electromagnetic and leak/gas inspection).
5. If distress of potential concern is identified in pipes, Pure Technologies can, with authorization by the City perform a structural evaluation of the pipe(s); develop Pipe Performance Curves, develop a risk prioritization of distressed pipes, and submit in a supplemental engineering report with recommendations.

PERFORMANCE SCHEDULE

It is envisioned that the field work for this project will be completed sometime in 2018. The deliverables presented above will be provided according to the following schedule:

1. Site visit, installation of a transient pressure monitoring system and kickoff meeting with the City: Within 4 weeks following notice to proceed
2. Inspection Planning Document Draft: 2 weeks following completion of site visit and kickoff meeting workshop and at least 2 weeks prior to field work.
3. Workshop with the City following delivery of draft planning document
4. Final Planning Document: 2 weeks following receipt of comments from the City. If comments are not received by Pure within 2 weeks, the draft will be considered final.
5. Field Inspection to be coordinated with the City.
6. Letter report summarizing all transient pressure monitoring results; submitted within 2 weeks following minimum 30-day monitoring period.
7. Letter report summarizing the identification and location of all leaks and gas pockets identified by the SmartBall inspection; submitted within 4 weeks following completion of the field work.
8. Draft pipe list with electromagnetic results to be submitted within 10 weeks following completion of electromagnetic inspection.
9. Draft inspection report to include summary of results for SmartBall, Transient Pressure Monitoring and PipeDiver Electromagnetic: 12 weeks following completion of field work
10. Pipe-by-Pipe geospatial GIS deliverable of inspection results: 14 weeks completion of field work
11. Workshop with the City following receipt of draft inspection report
12. Final inspection report to be submitted 2 weeks following receipt of comments from the City.

If authorized, Structural Evaluation/Engineering Report with Risk Prioritization/Recommendations

1. Draft pipe performance curves: 6 weeks following additional authorization from the City
2. Draft condition assessment report: 8 weeks following additional authorization from the City
3. Workshop as scheduled by the City following receipt of draft report
4. Final condition assessment report: 2 weeks following receipt of comments from the City.

RESPONSIBILITIES OF SALCEDO GROUP/CITY OF GRAND PRAIRIE

1. Provide maps, pipeline plan and profile drawings, pipe manufacturer's lay schedule and designs and GIS.
2. Accommodate a site visit and provide personnel familiar with the pipeline system and accompany Pure Technologies' personnel when conducting the site reconnaissance and whenever our teams are going onto private property, accessing the pipeline to insert, extract or track the PipeDiver tool.
3. Notify landowners as may be required.
4. Provide access to insert and retrieve the SmartBall and PipeDiver EM tool as discussed herein. All insertions and extractions of the PipeDiver EM tool shall be conducted under de-pressurized conditions. The City shall de-pressurize the pipelines, remove blind flanges or cover plates, de-water the surrounding insertion/extraction vaults or areas as required, provide lifting equipment to assist with lowering the PipeDiver into and out of the pipelines, and securing the access upon completion of work.
5. Provide secure ladders, lifting equipment, scaffolding platforms, etc., as may be required to safely support the application of personnel and equipment.
6. Provide ¼-inch to 2-inch access on the pipeline to accommodate installation of a transient pressure monitor.
7. Assess lateral valves prior to the field inspections and Shut off flow to all laterals during the SmartBall and PipeDiver inspections.
8. Coordination and communication with other City staff and departments, general contractor's staff, sub-contractors and landowners.
9. Provide temporary de-pressurization of the water main to accommodate the installation of the PipeDiver capture net and insertion of the PipeDiver, as well as when extracting the PipeDiver.
10. Furnish lifting equipment to assist in the removal of the CARV and blind flange to insert the PipeDiver capture net, as well as lifting and placement of the PipeDiver into the pipeline and when pulling the PipeDiver tool from the pipeline.
11. Assist Pure Technologies in attaching surface mounted tracking sensors of flexible hydrophones at CARV's and/or blow-off configurations. Provide excavations or vacuum extraction excavations as may be deemed necessary, to allow for attachment of the SBR tracking sensors directly on the external pipe wall.
12. Provide traffic control as may be required.

FEE SCHEDULE

It is Pure Technologies' understanding that the City of Grand Prairie is requesting that we only provide inspection results for the portion of the water main that runs along Camp Wisdom Road, with the balance of the inspection results and report to be delivered at a later date. To accommodate this request, Pure Technologies is proposing to conduct the field inspections (SmartBall and PipeDiver EM) over the entire 24,265 feet of 60-inch pipeline. However, the first report will only include the results of the PipeDiver EM inspection for the portion of water main (~10,856 feet) that runs along Camp Wisdom Road (Station 139+03 to Station 247+59). The balance of the EM data collected along Mountain Creek Parkway would be held until such time as Salcedo and the City of Grand Prairie authorized Pure Technologies to proceed with the data analysis and reporting (~13,409 feet). Pure Technologies is unable to break out the reporting for the transient pressure monitoring or the analysis and reporting of the SmartBall data.

Task	Description	Cost
Phase 1: Inspection Services and Reporting:		
1	Project Planning, Site Visit and Planning Workshop with the City	\$14,650
2	Transient Pressure Monitoring for 30 days	\$9,500
3	SmartBall Leak/Gas Pocket Inspection (24,265 feet @ \$2.37 per foot)	\$57,508
4	PipeDiver EM Inspection and pipe-by-pipe geospatial GIS deliverable for the portion of water main along Camp Wisdom Road (10,856 feet @ \$12.50 per foot)	\$135,700
Phase 1 Total		\$217,358
Phase 2: Inspection Services and Reporting:		
5	PipeDiver EM Inspection and pipe-by-pipe geospatial GIS deliverable for the portion of water main along Mountain Creek Parkway (13,409 feet @ \$12.50 per foot)	\$167,612
Phase 2 Total		\$167,612
Engineering Services (Upon Authorization from the City of Grand Prairie):		
6	Finite element analysis and Pipe Performance Curve(s) (\$9,000 each)	\$18,000
7	Engineering Report to include structural evaluation, risk prioritization and recommendations, plus Client Workshop	\$24,775
Subtotal Engineering Services		\$42,775
External Verification & Forensic Evaluation Services		
8	External verification using external electromagnetic prior to repair	Refer to Note 5

Fee Schedule Notes and Invoicing Schedule on next page.

Fee Schedule Notes and Invoicing Schedule

1. Unit prices shall govern.
2. Unit pricing for the SmartBall Leak/Gas Pocket Inspection and the PipeDiver Electromagnetic Inspection are in accordance with the current pricing agreement between Pure Technologies and the City of Dallas.
3. Local, State or Federal permits or taxes are not included in the proposed fee.
4. These costs assume that work can commence upon arrival and be executed in a contiguous manner, without delay, until the work is complete. Thus, all preparation work should be performed prior to Pure Technologies' arrival.
5. External Verification and Forensic Evaluation in an OSHA-safe trench (provided by others), or internal EM verification in an empty pipe with safe air:
 - a. Verification of exposed PCCP using external electromagnetic technology:
 - i. Planning and mobilization: \$12,000 each
 - ii. EM testing and pipe marking showing location of broken wire wraps: \$5,000 per 8-hour day, one day minimum
 - iii. Pure Technologies can test several individual pipes per day if needed.
 - iv. This price includes a simple letter report with GPS coordinates and photographs of each site and pipe.
 - b. Gather adjacent soil sample and groundwater sample (if present) in conjunction with external EM verification and send to lab for testing: \$900 each (includes lab analysis)
 - c. Gather PCCP pipe samples (prestressing wires, concrete cores, cylinder and mortar coating) in conjunction with external EM verification and send to lab for testing: \$4,750 each (includes lab analysis)
6. Standby rates: If delays occur due to parties other than Pure Technologies, Pure Technologies shall be reimbursed for the delay at a rate of \$10,000 per day. Remobilization to complete field work shall be reimbursed to Pure Technologies at \$20,000.
7. The proposed fee schedule is valid from date of proposal through Dec 31, 2018
8. Services are contingent upon approval of Pure Technologies' Conditions of Engagement (attached)
9. Payment for Task 1 will be invoiced at 100% and Tasks 2, 3 and 4 will be invoiced at 80% upon completion of the field inspections. The balance of Tasks 2, 3 and 4 shall be invoiced on delivery of the final report for the inspection results.
10. Task 5 will be performed on receipt of authorization from Salcedo and/or the City of Grand Prairie to proceed and be invoiced 100% upon delivery of the data analysis and reporting of results.
11. Payment for Tasks 6 and 7 will be invoiced at 100% upon delivery of the final engineering report.

60-inch South Grand Prairie Water Transmission Main
Condition Assessment Proposal



We look forward to serving the Salcedo Group and the City of Grand Prairie on this project. If you have any questions or concerns, please do not hesitate to contact me.

Regards,

PURE TECHNOLOGIES U.S. INC.

A handwritten signature in black ink, appearing to read "David R. Kurtz".

Dave Kurtz
Pure Technologies
4505 Excel Pkwy., Suite 600
Addison, TX 75001
m: (214) 558-9902

Attachments:

- Attachment A – Conditions of Engagement
- Attachment B – PipeDiver Electromagnetic Specification

Attachment A – Conditions of Engagement

CONDITIONS OF ENGAGEMENT FOR THE PROVISION OF SERVICES

The Proposal is issued upon and is subject to these Conditions of Engagement. If the Proposal is accepted by the Client, these Conditions of Engagement and the Proposal will be deemed to form part of the Contract between the Client and Pure.

1. DEFINITIONS

In these Conditions of Engagement, the following definitions apply:

Client	means any person or persons, firm or company engaging Pure to provide the Services.
Contract	means the agreement awarded to Pure as a result of the Proposal.
Pure	means Pure Technologies Ltd., Pure Technologies U.S. Inc., Pure Engineering Services Inc., or any of their affiliates, as the case may be, which submitted the Proposal and is a party to the Contract.
Proposal	means Pure's offer to carry out the Services and includes all related correspondence plus agreed written variations or amendments thereto.
Services	mean those services of whatever nature to be supplied by Pure under the Contract.
Site	means the facility, land, installation or premises to which Pure is granted access for the purposes of the Contract and may include any combination of the foregoing.

2. PURE'S OBLIGATIONS

- 2.1 Pure will perform the Services in accordance with the procedures described in the Proposal, using reasonable skill, care and diligence and consistent with industry standards.
- 2.2 Pure will ensure that the equipment used in performing the Services is in a good and functional state.

3. CLIENT'S OBLIGATIONS

- 3.1 The Client will provide to Pure full, good faith co-operation to assist Pure in providing the Services. Unless otherwise specified in the Proposal and without limiting the generality of the foregoing, the Client will at its own expense:
 - (i) ensure, if required, access to private land will be given to Pure and that any official permits or permissions required for Pure to have access to the Site or carry out the Services are obtained and are in force for the duration of the Services;
 - (ii) inform Pure in writing of any special circumstances or danger which the execution of the Services may entail or which are inherent in the Site, including the existence and identity of any known hazardous substance or material;

- (iii) perform such additional duties and responsibilities and provide such information and resources as are described in the Proposal.
- 3.2 The description of the Services and related compensation amount set out in the Proposal will be based upon information that the Client shall have provided to Pure, and assumptions that Pure shall have identified in the Proposal. The Client acknowledges that if any such information provided by Client is materially incomplete or inaccurate, or if the assumptions identified by Pure are not correct, then the parties will modify the Proposal to reflect the actual information, assumptions, and Services required, and the compensation to Pure will be adjusted accordingly using the change order process set out in the Contract, or if there is no such process, on an equitable basis.

4. PROPRIETARY AND CONFIDENTIAL INFORMATION

- 4.1 All reports generated in the performance of the Services and delivered by Pure to the Client will become the property of the Client.
- 4.2 Pure's equipment which is made available to the Client in connection with the Contract and the raw data generated in the performance of the Services will remain the sole and exclusive property of Pure. The Client will not acquire any proprietary rights in Pure's equipment, systems, software, technology, inventions (whether or not patentable), patents, patent applications, documentation, specifications, designs, data, databases, methods, processes or know-how ("Pure's Proprietary Technology"). Any modifications or improvements to the Pure's Proprietary Technology made during the performance of the Services will be the sole and exclusive property of Pure.
- 4.3 Both parties agree to keep confidential all documentation and information provided by the other during the performance of the Contract. The obligations set out in this clause 4.3 will remain in full force and effect after any termination or expiry, as the case may be, of the Contract.

5. LIABILITY AND WARRANTIES

- 5.1 Pure will indemnify the Client against any expense, demand, liability, loss, claim or proceeding whatsoever in respect of personal injury to or the death of any person, or any loss, destruction or damage to any tangible property and arising directly or indirectly from the negligence of Pure, its employees, servants or agents except to the extent caused by the negligence of the Client or any person for whom the Client is responsible. The Client will similarly indemnify Pure.
- 5.2 Pure will not be liable for any loss of production, loss of use of property, loss of revenue or profit, equipment downtime, business interruption, loss of goodwill, loss of anticipated savings, cost of procurement of substitute goods or services, or for any consequential, indirect, incidental, or special loss or damage suffered by the Client or any third party, or for any punitive damages, even if advised of the possibility thereof and notwithstanding the failure of essential purpose of any remedy.
- 5.3 Pure's cumulative liability under the Contract, whether in contract, tort (including negligence), or otherwise, will in no event exceed the aggregate consideration paid by the Client to Pure for the portion of the Services that gave rise to the liability, provided, however, that this clause 5.3 shall not limit Pure's indemnification obligations under these Conditions of Engagement.
- 5.4 The report(s) and any other recommendations or advice made by Pure relating to the pipeline or the Services will be made in accordance with the procedures described in the Proposal, using reasonable skill, care and diligence consistent with industry standards, but do not and will not constitute a warranty of the pipeline's quality, capacity, safety or fitness for purpose. Pure will not be liable to the Client for any

liability or damages that arise from the Client's reliance upon or application or use of such final report or recommendations or advice made by Pure in relation to the pipeline or Services, and the Client will indemnify Pure against any liability to third parties resulting therefrom.

- 5.5 Pure's warranties for the Services will be set out in the Contract. Pure disclaims all implied or statutory warranties or conditions, including of merchantability, merchantable quality, durability, or fitness for particular purpose to the extent allowed by applicable law. This means Pure's warranty obligations will be limited to what is expressly set out in the Contract.

Attachment B – PipeDiver Electromagnetic Specification

Large Diameter PipeDiver® Condition Assessment

Physical Dimensions and Inspection Specifications

OPERATING ENVIRONMENT

Pipe Materials	PCCP, BWP (bars only), PCP
Maximum Pressure	250-500 psi, confirm with TPL for higher pressure
Minimum Pressure	0 psi
Pipeline Diameters	60 - 120 inches, confirm with TPL for other pipe sizes
Maximum Flow Rate	3 feet/second
Minimum Flow Rate	1 feet/second
Maximum Deployment Distance	100+ hrs. consult with TPL if more time needed
Maximum Degree of Bends	90° on a 60-inch pipe
Traversable Features	BFV, Ball Valves, Gate Valves, Vertical Sections, Reducers
Smallest Butterfly Valve	60-inch, always confirm with TPL

INSERTION REQUIREMENTS

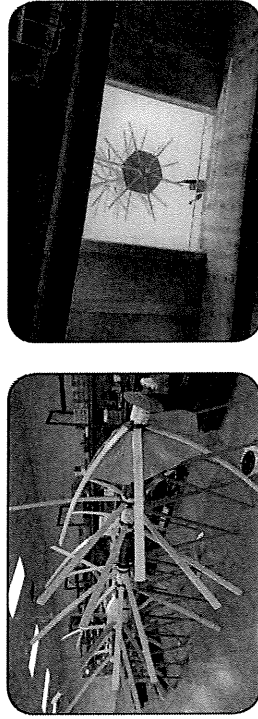
Insertion Methods (Depressurized)	Manhole access, open chamber, reservoir tank
Minimum Access Diameter	≥ 24 inches with a <1-foot riser, confirm with TPL for smaller access

EXTRACTION REQUIREMENTS

Extraction Methods (Depressurized)	Reservoir, Caterpillar Net, ROV, Divers, Tanks
Minimum Access Diameter	≥ 24 inches with a <1-foot riser

SPECIFICATIONS

PipeDiver Length	15 ft
Vehicle Weight	500 lbs
Tracking Kit	Line Finder, Tracking unit
Technology	PureEM
Detectors	7
Minimum WB Detection	5-10WB's
Video	Not Available
Limitations	Tuberculation and debris, protrusions, contact TPL for uncommon valves and appurtenances





January 2, 2018

Michael Salcedo
President
Salcedo Group, Inc.
110 SW 2nd Street
Grand Prairie, TX 75050

RE: Structural Evaluation of Loading Created by Pavement Modifications and New Retaining Wall

Michael,

Pure Technologies U.S. Inc. (Pure Technologies) offers the following with respect to assisting the Salcedo Group, Inc. and the City of Grand Prairie with the evaluation of the loading on the existing 60-inch South Grand Prairie Delivery Transmission Main on Camp Wisdom Road created by the proposed pavement modifications and new retaining wall construction.

1. Design Check Evaluation

Pure Technologies proposes to initially evaluate whether the existing pipeline will withstand the proposed loading conditions “assuming the pipe is in good condition.”

If the pipeline is unable to withstand the proposed surcharge loading created by the pavement modifications and new retaining wall, then Pure Technologies will advise Salcedo Group and the City of Grand Prairie accordingly, before construction is initiated. If so, Pure Technologies will also present recommended alternatives for your consideration.

2. Finite Element Analysis

Before construction is initiated and following condition assessment of the 60-inch pipeline, Pure Technologies will utilize 3D finite element modeling and structural analysis if any distressed pipes are identified in that portion of the pipeline affected by the anticipated loading conditions created by the pavement modifications and new retaining wall.

For Pure Technologies to perform the proposed scope of services presented above, we will require the following information from the Salcedo Group:

- Pipe specifications contained in the pipe manufacturer’s lay drawings;
- Details of retaining wall and pavement modifications;
- Geotechnical report including type and properties of soil, proposed compaction of soil beneath pavement; etc.
- Excavation height and construction equipment that will be utilized



Pure Technologies' fees for the proposed scope of services is:

Design Check Evaluation & Letter Report	\$4,380 lump sum
Finite Element Analysis & Letter Report	\$12,260 lump sum

All work shall be performed in accordance with the attached Conditions of Engagement presented in Attachment A.

Please allow for two (2) weeks to complete the Design Check Evaluation, and if required, an additional three (3) weeks to perform the finite element modeling and analysis following receipt of the electromagnetic data analysis.

Please note that the finite element analysis can only be performed following completion of the electromagnetic inspection and data analysis. Because analysis of the electromagnetic data typically takes 6 to 8 weeks, Pure Technologies will arrange for an expedited analysis of two weeks following completion of the field inspection on the portion of the pipeline of concern (~500 feet).

Michael, should you find everything to be in order and wish for us to proceed with the proposed scope of services, you may authorize us to proceed by signing and returning this document. In the meantime, please don't hesitate to call me if you have any questions.

Respectfully submitted,

PURE TECHNOLOGIES U.S. INC.

Dave Kurtz, P.E.

Salcedo Group, Inc.:
Authorized- to-Proceed: _____
Printed Name: _____
Date: _____

Attachment A: Conditions of Engagement



ATTACHMENT A

CONDITIONS OF ENGAGEMENT FOR THE PROVISION OF SERVICES

The Proposal is issued upon and is subject to these Conditions of Engagement. If the Proposal is accepted by the Client, these Conditions of Engagement and the Proposal will be deemed to form part of the Contract between the Client and Pure.

1. DEFINITIONS

In these Conditions of Engagement the following definitions apply:

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- Proposal means Pure's offer to carry out the Services and includes all related correspondence plus agreed written variations or amendments thereto.
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- 2.1 Pure will perform the Services in accordance with the procedures described in the Proposal, using reasonable skill, care and diligence and consistent with industry standards.
- 2.2 Pure will ensure that the equipment used in performing the Services is in a good and functional state.

3. CLIENT'S OBLIGATIONS

- 3.1 The Client will provide to Pure full, good faith co-operation to assist Pure in providing the Services. Unless otherwise specified in the Proposal and without limiting the generality of the foregoing, the Client will at its own expense:
- (i) ensure, if required, access to private land will be given to Pure and that any official permits or permissions required for Pure to have access to the Site or carry out the Services are obtained and are in force for the duration of the Services;

- (ii) inform Pure in writing of any special circumstances or danger which the execution of the Services may entail or which are inherent in the Site, including the existence and identity of any known hazardous substance or material;
- (iii) perform such additional duties and responsibilities and provide such information and resources as are described in the Proposal.

3.2 The description of the Services and related compensation amount set out in the Proposal will be based upon information that the Client shall have provided to Pure, and assumptions that Pure shall have identified in the Proposal. The Client acknowledges that if any such information provided by Client is materially incomplete or inaccurate, or if the assumptions identified by Pure are not correct, then the parties will modify the Proposal to reflect the actual information, assumptions, and Services required, and the compensation to Pure will be adjusted accordingly using the change order process set out in the Contract, or if there is no such process, on an equitable basis.

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4.2 Pure's equipment which is made available to the Client in connection with the Contract and the raw data generated in the performance of the Services will remain the sole and exclusive property of Pure. The Client will not acquire any proprietary rights in Pure's equipment, systems, software, technology, inventions (whether or not patentable), patents, patent applications, documentation, specifications, designs, data, databases, methods, processes or know-how ("Pure's Proprietary Technology"). Any modifications or improvements to the Pure's Proprietary Technology made during the performance of the Services will be the sole and exclusive property of Pure.

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5. LIABILITY AND WARRANTIES

5.1 Pure will indemnify the Client against any expense, demand, liability, loss, claim or proceeding whatsoever in respect of personal injury to or the death of any person, or any loss, destruction or damage to any tangible property and arising directly or indirectly from the negligence of Pure, its employees, servants or agents except to the extent caused by the negligence of the Client or any person for whom the Client is responsible. The Client will similarly indemnify Pure.



- 5.2 Pure will not be liable for any loss of production, loss of use of property, loss of revenue or profit, equipment downtime, business interruption, loss of goodwill, loss of anticipated savings, cost of procurement of substitute goods or services, or for any consequential, indirect, incidental, or special loss or damage suffered by the Client or any third party, or for any punitive damages, even if advised of the possibility thereof and notwithstanding the failure of essential purpose of any remedy.
- 5.3 Pure's cumulative liability under the Contract, whether in contract, tort (including negligence), or otherwise, will in no event exceed the aggregate consideration paid by the Client to Pure for the portion of the Services that gave rise to the liability, provided, however, that this clause 5.3 shall not limit Pure's indemnification obligations under these Conditions of Engagement.
- 5.4 The report(s) and any other recommendations or advice made by Pure relating to the pipeline or the Services will be made in accordance with the procedures described in the Proposal, using reasonable skill, care and diligence consistent with industry standards, but do not and will not constitute a warranty of the pipeline's quality, capacity, safety or fitness for purpose. Pure will not be liable to the Client for any liability or damages that arise from the Client's reliance upon or application or use of such final report or recommendations or advice made by Pure in relation to the pipeline or Services, and the Client will indemnify Pure against any liability to third parties resulting therefrom.
- 5.5 Pure's warranties for the Services will be set out in the Contract. Pure disclaims all implied or statutory warranties or conditions, including of merchantability, merchantable quality, durability, or fitness for particular purpose to the extent allowed by applicable law. This means Pure's warranty obligations will be limited to what is expressly set out in the Contract.

Task	Description	Cost	Dallas Pricing	Current Published Pricing
Phase 1: Inspection Services and Reporting:				
1	Project Planning, Site Visit and Planning Workshop with the City	\$14,650	\$85,000	\$107,000
2	Transient Pressure Monitoring for 30 days	\$9,500	\$9,500	\$9,500
3	SmartBall Leak/Gas Pocket Inspection (24,265 ft @ \$2.37/ft)	\$57,508	\$57,508	\$72,310
4	PipeDiver EM Inspection and pipe-by-pipe geospatial GIS deliverable for the portion of water main along Camp Wisdom Road (10,856 feet @ \$12.50 per foot)	\$135,700	\$135,700	\$161,862
Phase 1 Total		\$217,358	\$287,708	\$359,672
Phase 2: Inspection Services and Reporting:				
5	PipeDiver EM Inspection and pipe-by-pipe geospatial GIS deliverable for the portion of water main along Mountain Creek Parkway (13,409 feet @ \$12.50 per foot)	\$167,612	\$167,612	\$199,928
Phase 2 Total		\$167,612	\$167,612	\$199,928
Engineering Services:				
6	Finite element analysis and Pipe Performance Curve(s) (\$9,000 each)	\$18,000	\$18,000	\$19,950
7	Engineering Report to include structural evaluation, risk prioritization and recommendations, plus Client Workshop	\$24,775	\$36,000	\$45,000
Subtotal Engineering Services		\$42,775	\$54,000	\$64,950
Total		\$427,745	\$523,320	\$624,550