

Exhibit "A"

2012 Sewer Interceptor Condition Assessment Project
Scope of Basic Services

PROJECT UNDERSTANDING

The City of Reno (City) has approximately 754 miles of Sanitary Sewer pipelines ranging from 6" to 72" in diameter of which 66 miles of these pipelines are 18" in diameter or greater. This portion of the City's Sewer System is defined as the Interceptor System. The Interceptor System is the highest priority and has the greatest risk because it conveys the majority of wastewater from all areas around the City to the wastewater treatment plant. This project is to perform a reinspection of this system similar to the inspection and assessment work performed in 2003.

The diameter of the pipelines and the amount of flow requires specialized equipment for inspection. Additionally, most of inspection work must be performed late at night when flows are low to be able to observe more of the internal surface of the pipelines and to be able to access manhole structures that are located in major streets.

From 2003-2008 the City rehabilitated approximately 32 miles of the Interceptor System as a result of this first inspection program. The City has a desire to re-inspect and assess the condition of its Interceptor System that has not been rehabilitated in the past eight years. The goal of this condition assessment project is to inspect and rank all interceptor sewer pipelines based upon their physical condition.

Components of the project will include: closed circuit television inspection of each manhole structure, physical entry and inspection of selected manhole structures, closed circuit television inspection or sonar inspection of the interceptor sewers, and a professional condition assessment for all components of the Interceptor Sewer System inspected under this project.

The closed circuit television inspection of the pipelines will be completed using Panoramo Scanner technology and conventional pan and tilt digital camera technology. A small portion of the Interceptor System will be inspected using sonar technology instead of Panoramo or conventional pan and tilt technology due to surcharged conditions. The inspection procedures will take into account vehicular traffic, special community events and sensitivities, easements, Right of Way (R.O.W.) issues, road conditions, depth of existing pipe, size of existing pipe, and existing pipe materials.

The overall inspection and condition assessment work is expected to be completed no later than June 30, 2012. The results of the condition assessment project will enable the City to implement a prioritized rehabilitation schedule based on severity of corrosion and structural deterioration with sensitivity to the relative importance of the manhole structures and pipelines to public safety and health.

Project Team. The project team will consist of Holmes International with Hoffman Southwest Corp., doing business as Professional Pipe Services, herein referred to as Pro-Pipe, a qualified CCTV specialty company, approved by the City in advance, working as a subconsultant. Holmes International staff will coordinate the field work and perform the condition assessment. Pro-Pipe crews and equipment will inspect the pipelines and gather the data needed for the pipeline assessment.

Scope and Schedule for Physical Inspection. The Consultant will provide the City with a proposed scope and schedule for all sewer inspections, including manhole and pipe inspections. A new schedule will be submitted if the Consultant's work schedule or work location will be changed from the original schedule.

SCOPE OF WORK

Task 1 – Project Management

Management. The Consultant shall manage, monitor and review work progress and the budget of the project team, including subconsultants.

Project Manager. The Consultant and the City shall each designate a Project Manager.

Progress Meetings. Consultant shall participate in progress meetings every two weeks. Meetings with City staff will be held at City Hall. The purpose of the bi-weekly progress meetings is to provide an opportunity for Consultant and City to review progress of the work, present and discuss interim results, anticipate and mitigate any performance problems and address other issues and concerns. Consultant shall provide the City the most recent evaluated investigation data at the bi-weekly Progress Meetings.

Review. The Consultant shall perform periodic quality reviews of the work progress, as required, to ensure that the project scope is achieved. The Consultant shall review and edit all deliverables in-house for quality assurance prior to submittal to the City.

Monthly Invoices. The Consultant shall prepare and submit to the City monthly invoices including a brief written narrative, which will include an updated schedule and an actual and projected budget of project team including sub-consultants.

Subtask 1.1 Kickoff Meeting

The first activity to be accomplished will be to hold a kickoff meeting. During this meeting the lead people for the City, the Consultant's staff, and the Subconsultants will be introduced. We also plan to discuss and agree on a number of key issues including:

- Onsite Coordination
- Reporting protocols and schedules
- Specific field procedures, including:

- Traffic control
- Safety - Draft manuals to be provided for TVI and MH entry
- Any special access permits required
- Any locations where specific traffic control plans will be required
- Special local events during which the work will be suspended in the area where the event is being held
- Emergency response to issues in case the Consultant team needs help in the middle of the night
- Emergency reporting. Procedures and contacts in case something is found that needs to be brought to the attention of the City immediately
- Right of entry on private property and public easements
- The procedures to be followed if and when significant structural or maintenance defects are located.
- Quality assurance / quality control steps

Subtask 1.2 Bi-weekly Progress Reports

Under this Subtask we will prepare bi-weekly progress reports, including the following task-by-task information:

- Review work completed during the last period
- Review work scheduled during the next two week period.
- Review the work remaining.
- Estimated percent complete.
- Deliver approved videos and inspection logs
- Review “hidden treasures” found during the inspection work
- Discuss issues like access needs, right of way encroachment, needed coordination with other agencies including the City of Sparks, NDOT, others
- Discuss outstanding issues to be resolved.
- Once a month review the budget summary—total task budget, spent-to-date, percent spent-to-date, and remaining budget

Work Products

- Progress meetings agenda and meeting minutes.
- Monthly project status reports.
- Consultant reviewed video
- Consultant reviewed manhole inspection information

Subtask 1.3 Permits

The Consultant will obtain all necessary permits from the governing agencies that apply to permit requirements, including traffic control, encroachment permits, allowable work hours, and other provisions the agencies impose. All City of Reno and City of Sparks permit fees will be waived. The Consultant will pay for NDOT permit fees.

Task 2 –Field Work Oversight

Under this subtask the Consultant will coordinate the field work with the City, Pro-Pipe and any other subconsultants. This subtask will continue only through the duration of the field work portion of the project. Items included in this subtask include the following:

- Provide daily interface with the City
- Coordinate daily access needs
- Review where the work will be performed and identify any special traffic issues.
- Immediately review any “hidden treasures” found during the inspection work
- Immediately inform the City of any failed structures that cause a hazard to the public
- Provide data transfer from field crews to condition review staff.

City Provided Support

The City will work with the Consultant and the Consultant’s team under this Task to facilitate the field work. Specific support that the City will provide includes:

- Marking every sewer structure to be inspected with the associated 9-digit structure ID number
- Providing maps and aerial photography with connectivity for field work
- Providing live access to and training for use of the City’s IMS system, providing continuous 24/7 access to this system

Work Products

- Daily phone conversations with selected City staff.

Task 3 – Manhole and Structure Inspections

The City will provide assistance to Consultant in locating manholes that Consultant is unable to locate. The City will provide access to manholes that Consultant cannot access and will open manholes that are sealed, locked shut, etc.

Written logs of each manhole inspection shall be recorded by the Consultants field inspectors. These logs will be provided to the City in hardcopy and electronic format. The Consultant shall use the City’s inspection forms.

Traffic Control. Each manhole inspected will require appropriate traffic control. In general, it is expected that the manholes can be inspected without the need for formal traffic control plans following appropriate traffic safety procedures. Where the inspection work must be performed from an intersection or along a major street where a formal traffic control plan is needed, the manhole will be inspected when the sewer pipeline is inspected.

Subtask 3.1 Manhole Structure Panaramo Inspections

Under this subtask, the Consultant will inspect approximately 760 manholes located on the Interceptor System using the Panaramo inspection system. It is anticipated that the majority of the manholes will be located in streets. While a high percentage of the manholes are located in streets, it is anticipated that most of these manholes can be inspected during normal daytime

hours (7:00 a.m. to 5:00 p.m.) without the need for formal traffic control plans following appropriate traffic safety coning and signage procedures. All manholes in the scope of this project will be located and identified by the City prior to inspection by the Consultant. The City will paint the structure asset number on each structure either on the structure collar, cover, or on the pavement as appropriate. The City will assist the Consultant with locating and/or opening any manhole structures that the Consultant's field crews are unable to locate or open.

During the manhole inspections the Panoramio data will be collected in one continuous recording.

These manhole inspections shall also include the following digital pictures taken from the ground surface prior to the entry of the Panoramio continuous recording:

- Picture of the surface facing the structure to establish location
- Picture of the top of the manhole cover with asset identification showing of the asset being inspected
- Picture looking down into the manhole structure with the outgoing flow in the 3 o'clock position
- Pictures of any unusual conditions observed around or inside the manhole structure.

Work Products

- Continuous digital video files taken during the manhole inspections
- Minimum of three digital photographs taken at each location
- Evaluation of the condition of the manhole.

Subtask 3.2 Physical Entry Inspections

Physical entry inspections are expected to be performed on approximately 10% of the manhole structures that appear to be in the worst condition based on the manhole structure inspections completed in Subtask 2.1. During the physical inspections the following activities and data will be collected:

- Picture of the surface facing the structure to establish location
- Picture of the top of the manhole cover with asset identification showing of the asset being inspected
- Picture looking down into the manhole structure with the outgoing flow in the 3 o'clock position
- Pictures of any unusual conditions observed around or inside the manhole structure.
- Perform corrosion and penetration scrape tests in accordance with City established procedures.
- Pictures of any specific defects noted

To gather this information, confined space manhole entry will be required for each manhole. The data collected during this work will be entered into a database developed by the City. Nevada OSHA confined space entry requirements will be followed for the performance of this work. A field safety manual will be supplied to the City for approval before the field work begins.

Work Products

- Field safety manual
- Database file of the manhole inspection results (electronic)
- Digital video files of the photos taken during the manhole inspections

Task 4 –Closed Circuit Television Pipeline Inspection (TVI) and Sonar Inspections

Under this Task the Consultant will inspect the interceptor sewer pipelines included in the project. The City has identified approximately 196,200 feet of pipelines to be inspected as part of this project. This footage includes the pipeline length of single and multiple barrel siphons. There are five siphons (four that convey wastewater under the Truckee River along the Interceptor System alignment and one that loops under a 54" storm drain downtown) included in the project.

Traffic Control. Each pipeline inspected will require appropriate traffic control. In general, the Consultant will attempt to inspect pipeline segments from manholes requiring minimal traffic control. Where the inspection work must be performed from a intersection or along a major street where a formal traffic control plan is needed, the Consultant will notify the City, and traffic control plans will be submitted by the Consultant for approval per the governing agencies.

Subtask 4.1 Closed Circuit Television of Interceptor System (TVI) using Panoramio Scanner technology

Under this subtask, the Consultant will inspect most of the City's Interceptor System that is included in this project using Panoramio Scanner technology. As with the conventional pan and tilt technology, illumination of the interior of the pipeline and camera clarity will be special issues in the performance of this work, but illumination issues will be unique to the Panoramio Scanner technology. Since this work must be accomplished during the cold winter months in order to meet the City's schedule, the specialty firm used for the internal inspection work will be required to take special steps to minimize and limit the development of steam and fog in the pipelines during the inspection. Service lateral connection locations will be coded for inclusion in the City data base.

The pipeline television inspection (TVI) work will normally proceed down the pipeline from an upstream manhole where access is available. Where the inspection is continuing downstream in a relatively straight series of pipelines or where access is limited, the next pipeline segment downstream may be inspected without moving the camera truck. When this occurs and as the camera enters one of these manholes, the camera will be stopped in the middle (centerline) of the manhole and the footage counter will be reset to zero. A new video log will then be started identifying the new pipeline segment to be inspected. The use of reverse setups will be discouraged and only used where other reasonable means are not available.

The video files will be captured using an IPF file format available in the television inspection trucks. The video files will be transferred to the City using removable hard drives that will allow the transfer of a large number of video inspections files at one time. The Consultant will use the

City's asset identification system to identify each pipe segment inspected. Each digital video file will be named according to the associated asset ID.

Work Products

- Digital files of the pipeline inspections
- All visible connection locations

Subtask 4.2 Closed Circuit Television of Interceptor System (TVI) Using Conventional Pan and Tilt Technology

Under this subtask, the Consultant will inspect the remaining pipeline that can not be inspected using Panoramo Scanner technology or which will be inspected using sonar technology as included in Subtask 4.3 below using conventional pan and tilt technology. The inspection work will be performed using conventional pan and tilt technology according to City standard procedures. Illumination of the interior of the pipeline and camera clarity will be special issues in the performance of this work. Since this work must be accomplished during the cold winter months in order to meet the City's schedule, the specialty firm used for the internal inspection work will be required to take special steps to minimize and limit the development of steam and fog in the pipelines during the inspection. Service lateral connection locations will be coded for inclusion in the City data base.

The pipeline television inspection (TVI) work will normally proceed down the pipeline from an upstream manhole where access is available. Where the inspection is continuing downstream in a relatively straight series of pipelines or where access is limited, the next pipeline segment downstream may be inspected without moving the camera truck. When this occurs and as the camera enters one of these manholes, the camera will be stopped in the middle (centerline) of the manhole and the footage counter will be reset to zero. A new video log will then be started identifying the new pipeline segment to be inspected. The use of reverse setups will be discouraged and only used where other reasonable means are not available.

Consultant will not inspect pipelines where sediment, roots, or grease prohibit inspecting the interceptor sewer pipelines. Where pipelines are encountered with significant deposits of sediment, roots, or grease, the City will clean these pipelines as needed only after the first attempt is made by the Consultant to inspect. If the cleaning does not remove enough of the material to then allow inspection, these pipelines will be deleted from the list of pipelines to be inspected as part of this project.

The City recognizes that the flow levels may be high in some of the pipelines to be inspected. Thus, there is no specific portion or percentage of the interior pipe diameter that must be exposed during the inspections. While plugging will not likely be used or permitted as a general part of the inspection work due to concern about flooding or sewer overflows, the City has indicated it has the ability to transfer flows in some interceptors and lower the water levels in key locations during inspection of the pipelines. The City has also indicated that the interceptor sewers are used for daily storage of wastewater to equalize flows into the main treatment facility. The Consultant will work with the City on inspection scheduling so the City can try to minimize the amount of flows staged in each interceptor pipeline during inspection.

The video files will be captured using video formats available in the television inspection trucks. The video files will be transferred to the City using removable hard drives that will allow the transfer of a large number of video inspections files at one time.

Work Products

- Safety Manual
- Digital video files of the pipeline inspections
- All visible connection locations
- Database file of the pipeline inspection results (electronic)

Subtask 4.3 Sonar Inspections

Due to the very high depth of flow in the some portions of the interceptors near the main treatment plant, it will be necessary to use specialized sonar equipment to inspect these pipelines. Under this Task the Consultant will inspect up to 4,500 linear feet of the interceptors and any portions of the siphons that cannot be emptied for inspection using sonar inspection equipment. Some portions of the interceptors where flow levels are deep enough that an above water TVI does not provide sufficient information to determine the condition may also require a sonar imaging for adequate evaluation.

The sonar inspection will provide and quantify dimensional data on silt level, grease accumulation, pipe deformation, offsets, blockages, etc. below the waterline. The system is applicable for use in submerged and semi-submerged pipelines ranging from 24" to 18 feet and is used with CCTV to provide simultaneous image of pipe delivering both above and below waterline data with "real-time" cross-sectional views of the pipe utilizing the high resolution/short range sonar.

Work Products

- Digital sonar files of the pipeline inspections
- All below surface connection locations
- Database file of the pipeline inspection results (electronic)

Task 5 - Engineering Evaluation

Under this task the Consultant will review the collected data and assign condition assessment ratings to each manhole structure and interceptor pipe asset inspected in conformance with the current City condition assessment rating system. This rating system accounts for the internal physical condition of the manhole structure and pipeline, age of the system components, types of construction materials used and number of physical defects observed. This condition assessment rating system will be used to classify and rank the condition of every asset inspected. The Consultant will apply the final 1 to 5 rating system developed and in current use by the City.

The evaluation will include the a preliminary evaluation of the data collected as a quality control check and to complete an initial assessment of the inspection for significant damage or corrosion that should be brought to the attention of the City.

The Consultant will provide the Panoramio Scanner software for editing and viewing video files collected using this technology. The Consultant shall use this software for the duration of the project and provide it to the City at the end as one of the final deliverables.

Task 6 – Summary Report

Under this Task, the Consultant will prepare a draft and, after City review and approval, the final condition assessment summary report. The summary report will include an Executive Summary, a description of the purpose of the investigation, the procedures used and the findings of the investigation. To the extent that graphics will assist in understanding the information they will be used. The Consultant will also provide a reinspection plan for the interceptors based upon their condition assessment findings. The report is not expected to exceed 25 pages.

Work Products

- Condition Assessment Summary Report, Draft and Final PIPELOGIX License for Full Reporting with 360 Panoramio Analysis and 6 month PIPELOGIX Software Support Program

Task 7 – Supplemental Services

Under this Task, the Consultant will provide supplemental services for extra work that the City may need the Consultant to provide which cannot be determined in advance to respond to unforeseen needs. Work under this task will be provided on a time and materials basis including equipment charges and other miscellaneous expenses.