City of Scottsbluff, Nebraska
Monday, April 15, 2019
Regular Meeting

Item Consent2

Council to approve the bid specifications for the replacement of the City's Sewer Camera Van and Equipment and authorize the city clerk to advertise for bids to be received by May 7, 2019 at 10:00 a.m.

Staff Contact: City Council

Agenda Statement

Meeting Date: April 15, 2019

AGENDA TITLE: Council to consider approval of Bid Specifications for the replacement of the City's Sewer Camera Van and Equipment.

SUBMITTED BY DEPARTMENT/ORGANIZATION: Public Works

PRESENTATION BY: Nathan Johnson, City Manager

SUMMARY EXPLANATION: As part of this fiscal year's budget, the Wastewater Department is scheduled to replace the existing sewer camera van and equipment. These Bid Specifications are for a new Long Range CCTV Pipe Inspection Camera with a High Room Cargo Van to continue with the City's sewer collection system maintenance and inspections. It also includes the option of trading in the old sewer camera van and equipment toward the cost of this purchase.

BOARD/COMMISSION RECOMMENDATION:

STAFF RECOMMENDATION: For Council to approve the Bid Specifications and authorize the City Clerk to advertise for bids to be received by May 7, 2019 at 10:00 a.m.

EXHIBITS

Resolution ☐   Ordinance ☐   Contract ☐   Minutes ☐   Plan/Map ☐

Please provide all visual presentation materials.

Other (specify) ☑ <u>Bid Specifications</u>

NOTIFICATION LIST: Yes ☐   No ☐   Further Instructions ☐

City of Scottsbluff
Office of the City Manager

Effective date: January 20, 2017

City of
SCOTTSBLUFF

BID SPECIFICATIONS

FOR THE PURCHASE OF

One (1) New Long Range CCTV Pipe Inspection Camera
With
High Room Cargo Van

Issue Date: April 15, 2019
Publish Dates: Fridays – April 19th, 26th and May 3rd, 2019
Closing Date/Time: Tuesday, May 7, 2019 10:00 a.m.

Contact

Lynn A. Garton – Water Reclamation Supervisor
308-630-6292

NOTICE TO BIDDERS
For the Purchase of One New, Long Range CCTV Pipe Inspection Camera
With High Room Cargo Van
for the
Department of Water Reclamation

The City of Scottsbluff is soliciting bids for the purchase of one new long range CCTV pipe inspection camera with a high room cargo van for the Department of Water Reclamation. All bids must be received by the City Clerk, of the City of Scottsbluff, 2525 Circle Drive, Scottsbluff, Nebraska, 69361, prior to 10:00 a.m., Tuesday, May 7, 2019. Bids must be submitted in a sealed envelope clearly marked "Bid for New Long Range CCTV Pipe Inspection Camera with High Room Cargo Van". Inquiries shall be addressed to Lynn A. Garton, Water Reclamation Supervisor, 2525 Circle Drive, Scottsbluff, Nebraska, 69361, 308-630-6292. A copy of the Bid Instructions and Specifications may be obtained from the City Clerk at City Hall at the above location noted herein.

_____

Kimberley Wright
City Clerk

Publish – 3T
     April 19, 2019
     April 26, 2019
     May 3, 2019

INSTRUCTIONS TO BIDDERS

1. All Proposals shall be submitted on Bid Forms provided for this purpose in order that they may be properly compared and evaluated.

2. The Proposal shall be for One (1) New Long Range CCTV Pipe Inspection Camera with High Roof Cargo Van.

3. The Proposal shall include the option of trading in (1) One Used 2011 CUES Multi Conductor TV Pipeline Inspection High Cube Van on a Chevy C3500 Cut-A-Way 2X4 Chassis and all related camera equipment toward this purchase. The used equipment is listed on the Bid Form provided. Used equipment may be viewed at the City of Scottsbluff Water Reclamation Facility photos and details may be obtained by contacting the Water Reclamation Supervisor at 308-630-6292 or lgarton@scottsbluff.org.

4. The Proposal shall be quoted F.O.B. Scottsbluff, NE.

5. Proposals shall state the make and model of proposed unit and includes complete detailed specifications with manufacturer's brochure, specifying the identical model being bid.

6. The City of Scottsbluff ("City") is exempt from Federal Excise or State Sales Taxes. A tax exemption certificate will be furnished by the City.

7. The Proposals shall be submitted to the City Clerk's office by 10:00 a.m., May 7, 2019, in a sealed envelope, and the envelope clearly marked "New Long Range CCTV Pipe Inspection Camera with High Roof Cargo Van."

8. The City Council reserves the right to reject any and all proposals and to waive any irregularities for any reason deemed necessary.

9. Award of purchase by the City will not become final until a formal Notice of Award has been issued authorizing this purchase.

10. City will pay for equipment meeting all specifications upon proper documentation of same, no sooner than the first City Council meeting following delivery of same.

11. Delivery time shall be ninety (90) days or less from the date of the Notice of Award.

12. Price that is stated on the Proposal shall be good for 30 calendar days following bid opening.

12. Any items of noncompliance or variations to the minimum specification requirements listed on the following pages shall be written and submitted with the Proposal.

13. Actual equipment subject to the Proposal must be available for inspection by City personnel after the Proposals are opened and before the next City Council meeting when the Notice of Award is issued and the purchase will be approved.

PROPOSAL FOR FURNISHING
ONE (1) NEW LONG RANGE CCTV PIPE INSPECTION CAMERA
WITH HIGH ROOF CARGO VAN

Mayor and City Council
Scottsbluff, Nebraska

    I (we) have examined the Notice to Bidders, dated April 15, 2019, Instructions to Bidders, and the Specifications, and submit the following Proposal to furnish One (1) New Long Range CCTV Pipe Inspection Camera with High Roof Cargo Van for the Water Reclamation Department (Wastewater).

_____ _____ _____   **Bid Price: $**_____
Year   Make   Model #

Trade in: 2011 CUES Multi Conductor TV Pipeline Inspection High Cube Van on a Chevy C3500 Cut-A-Way 2X4 Chassis and all related camera equipment.

             Less Trade-In Price for High Cube Van & Equipment: $_____

                     Bid Price with Trade-In: $_____

My Proposal for the described One (1) New Long Range CCTV Pipe Inspection Camera with High Roof Cargo Van with trade-in is:

_____
(Amount written out fully)

If the City places an order with my firm for the specified equipment, I hereby certify I will deliver a new unit on or before:
_____ which meets the following specifications.
    Month   Day   Year

Signature of Bidder:_____

Name of Bidder:_____

Company Represented by Bidder:_____

Address of Bidder:_____

Telephone and FAX Number of Bidder:_____

MINIMUM SPECIFICATIONS FOR: ONE (1) NEW LONG RANGE CCTV PIPE INSPECTION CAMERA WITH HIGH ROOF CARGO VAN

INTENT

It is the intent of this specification to provide for the purchase of one complete color video pipeline system, ready for operation. The system shall be capable of conducting the video inspection of 6" through 36" diameter pipes and sewer lines. The system shall inspect underground sewer and water piping and related connections from a single access point.

It is also the intent to provide for the purchase of the safest inspection system that is rated to offer protection to the operator and equipment. System must be tested for both electrical system and wet and damp environment safety. Must comply with NRTL certifications, OSHA 29 CFR 1910 303 (a) and resulting in UL 60950-1:2003 and CAN/CSA-C2.22 No. 60950-2003 electrical safety system standard and the second to comply with IP68 (IEC 60529 or NEMA 250) standard for NEMA enclosure type 6P components that are inserted into the pipeline and offer protection for the equipment and operator in wet and damp environments.

Chassis Specifications

	Yes (Y) or No (N)
1. Chassis based off of 2019 Ram ProMaster 2500 High Roof 159" WB.	
2. 3.6L V6 24V Engine with 6 Speed Automatic Transmission.	
3. Package must be setup for MEPS power system to power build out and camera equipment.	
4. Front wheel drive with 3.86 axle ratio.	
5. 220 Amp alternator.	
6. 8,900 lb. GVWR.	
7. 24 gallon fuel tank.	
8. Stainless steel exhaust.	
9. 4-wheel disc brakes with ABS and brake actuated limited slip differential.	
10. Brite white clearcoat finish.	
11. Steel spare wheel and tire.	
12. Rear step bumper.	
13. Power folding/heated mirrors.	
14. Variable intermittent wipers.	
15. Sliding side door and swing out rear doors.	
16. Radio – Uconnect 3 Nav.	
17. 4-way driver and passenger bucket seats with manual operation.	
18. Telescoping steering column.	
19. Remote keyless entry.	
20. Air conditioning.	
21. Driver and passenger airbags.	
22. Back up camera with color monitor mounted in cab.	
23. Rear step bumper with cone storage.	
24. Rear corner mounted LED spotlights.	
25. Front roof mounted LED strobe.	
26. Rear LED arrow stick.	
27. Back up alarm.	

Chassis Build Out for Sewer Inspection Camera System

Operator Studio

	Yes (Y) or No (N)
1. Solid bulkhead wall with fixed smoke-glass window.	
2. Formica desk with wall outlets above and below.	
3. Cork board wall above desk surface.	
4. Overhead recessed LED lighting.	
5. Under cabinet lighting with switch.	
6. Pass-through door with aluminum kick plate.	
7. 3 – 19" Tru-Vu desk-mount monitors – one for observation, one for software entries, and one for GIS/City software.	
8. High-back operator chair.	
9. Carpeted walls and ceiling with insulation.	
10. Black diamond tread rubber floor.	
11. Safety light switches in truck cab.	
12. Rack cabinet for computer (computer specs below).	
13. Wall file.	
14. Video distribution booster.	
15. USB charger.	
16. 13,500 BTU roof air conditioner with 5,600 BTU heat strip – thermostat controlled.	
17. Filing cabinet with two drawers.	
18. Desk mount color printer – Toner style.	

Equipment Bay

	Yes (Y) or No (N)
1. Stainless steel work surfaces.	
2. Built in, heavy duty storage/tool box.	
3. Slide out crawler drawer under cable reel.	
4. Wash-down system with 18 gallon water tank and 25' retractable reel.	
5. Overhead recessed LED lights.	
6. Rear facing 19" Tru-Vu monitor.	
7. Plywood ceiling/walls covered in grey FRP with insulation.	
8. Black diamond tread rubber floor.	
9. Aluminum storage shelf and caddy with trash can.	
10. Crawler wheel drawer.	
11. Rubber glove dispenser.	
12. Tool package – manhole hook, pick, sledge hammer, and shovel.	
13. Under cabinet lighting with switch.	
14. 110V swing out light mounted above cable reel.	
15. Cable reel slide out swivel with support frame.	
16. 12V receptacle, wall mounted above work surface.	
17. Magnetic tool holder mounted above work surface.	
18. 6.3kW MEPS RoadPower source .	
19. Shore power wall adapter.	
20. Breaker box.	
21. Auto-transfer switch.	

Rackmount Computer

1. Intel – Quad Core 1333FSB Processor 3.2 GHZ.	
2. Intel X-97, S#1150 Copper Cool System Mainboard.	
3. 2x4GB DDR-3 1600FSB RAM I-7 Optimization RAM.	
4. 4U 19" Rack Mount Case 17.5"x16.9"x6.9".	
5. 1 500 GB Enterprise SSD.	
6. DVDRW Disk Drive 24X All-Rite.	
7. PCI-E 1GB Dual Monitors HDTV/S-Video Out Fan Less.	
8. 2x9-Pin Serial Comm Port.	
9. UN 650W Server Power Supply.	
10. Windows – Pro Base System.	
11. PCI Wireless 802.1 lb/g/n Dual Band Extended Range.	
12. Business HR Standard Service 1 year Parts/Labor.	

Long Range CCTV Inspection Camera System
System Basics

1. Three components:
   a. Automatic cable drum with cable
   b. Single hand held operator pendant with viewing, digital recording and system controls
   c. Crawler with zoom camera for 6" diameter and larger pipe inspection	

2. Can Bus communications protocol.	
3. Ability to connect to a network via network cable port for lifetime remote firmware upgrades and/or diagnostic services.	
4. Camera and crawler operator functions to be able to work simultaneously.	
5. Electrical requirement not more than 575W, or 5 A at 115 VAC.	
6. Ability to be portable with full operation of reel/crawler/camera and must have full pendant controls. This includes video recording, still pictures, and full Wincan Software report generation.	

Operator Pendant and Wireless Controller

Yes (Y) or No (N)

1.	8" (21cm), hand held color touch-screen monitor with 800 x 600 display resolution for viewing, recording video and accessing control and configuration functions.	
2.	Pendant to have side strap-handles and be curved for comfortable operation.	
3.	Power on/off switch.	
4.	Standard ability to connect to a network in order to access remote server download of for lifetime automatic performance and feature upgrades.	
5.	Ability to connect to a network in order to work with repair studio software for remote diagnosis.	
6.	Integral error code maintenance and repair protocol which informs the operator of current or pending operating or maintenance tasks that need to be addressed by flashing a code during use. Codes correlate with a specific repair or maintenance activity.	
7.	System to provide a tilting-mount on a desktop or other flat surface.	
8.	Dual software programmed joysticks for camera and crawler functions.	
9.	Video signal output.	
10.	Right multifunction joystick to control crawler's forward/reverse, left/right turning and speed.	
11.	Left multifunction joystick to control camera's pan/tilt, zoom and home functions.	
12.	Controls for manual and automatic focus of camera.	
13.	Ability to control cable reel functions: auto, manual, speed, direction, torque of the cable reel.	
14.	Have a master single button to regain control from wireless controller.	
15.	Minimum 20' control cable that connects the automatic cable drum with the pendant via an emergency on/off switch box junction.	
16.	Ability to record digital video.	
17.	Ability to capture digital stills.	
18.	Ability to generate text on video.	
19.	Ability to inform operator if one is getting close to flipping the crawler.	
20.	Ability to directly engage or disengage electronic clutch.	
21.	Ability to capture, correlate and store still images with distance and observation information, all of which can be output into several reporting packages or viewed onscreen.	
22.	Captured data can be output via a file which will automatically populate relevant fields within included software database.	
23.	Captured visual data can be printed in an inspection report that has manhole to manhole schematic, observations, distances, asset information, operator details and PACP codes.	
24.	Ability to operate crawler in cruise control mode where an operator does not need to touch the joystick for crawler speed.	
25.	Ability to view system operational history and performance.	
26.	Ability to view a full schematic and observation inspection report on the pendant.	
27.	Ability to pause video when adding an observation as to not waste video file storage capacity.	
28.	Ability to generate a graphic inclination report to show pipe grade along inspection route.	
29.	64 GB file storage for an average of 40 hours of digital video or thousands of digital stills.	
30.	Output compartment at top of pendant that contains s-video, USB and network connections.	
31.	On/off control of digital zoom function.	
32.	On/off control of auto shutter speed.	
33.	Ability to toggle front-view camera, integral rear view camera. If equipped, accessory rear view camera.	

34. On/off control for camera lasers.	
35. Ability to control laser intensity of increments of 25%.	
36. Control for remotely controlled motorized camera lift.	
37. Button to activate automated software routine (Macro) for viewing laterals on the left.	
38. Button to activate automated software routine (Macro) for viewing laterals on the right.	
39. Button to activate automated software routine (Macro) for performing a circumferential scan of a pipe joint.	
40. Button to activate automated software routine (Macro) for auto-return that automatically returns the crawler within 5 feet of the insertion manhole and alerts the operator of its return for final extraction.	
41. All Macro's shall be programmable to our requirements.	
42. The ability to operate larger (10" minimum diameter) and smaller crawlers (minimum 4" diameter) with no need for additional control unit or cable upgrades.	
43. CAN-bus control architecture allowing for precision control, diagnostic monitoring and future upgradeability.	
44. Ability to measure cracks and other observations without the need for external software.	
45. Total weight of no more than 6 lbs.	
Wireless Controller Shall Have:	
1. Portable battery powered belt clip wireless controller with crawler, camera and cable reel functions for easy direct single person deployment and retrieval of the crawler at the access point (manhole/basin).	
2. Wireless controller to have 8 dual function buttons with clear labels as the function of each.	
3. Wireless controller to have colored LED indicators to inform operator as to what functions the buttons are activated for.	
4. Wireless controller to be digitally encoded to the system with which it is delivered.	
5. Digital control to have a range of at least 50' without radio frequency interference being able to compromise the signal. RF systems will not be accepted.	
6. Wireless encoder must work with a single specific system in order to provide secure control when several systems are being operated in the same area. For operator safety and system protection, there can be no chance for operational interference.	

Steerable Motorized Crawler

Yes (Y) or No (N)

1. 6-wheel drive (3 wheels per side) to generate traction necessary to crawl 1000' in wet and slippery pipes.	
2. In 8" configuration with the middle wheel remaining, the 4 larger wheels will overlap the middle ones to provide continuous traction to go over joints and debris and avoid high centering where 4 wheel crawlers can no longer move forward.	
3. The tractor shall have proportional left, right, forward and reverse capability via manual and automatic controls via a joystick and direct buttons amongst the operator pendant and wireless controller.	
4. Proportional steering means that the 3 wheels on the left and the right of the crawler will move proportionally at the same time to move the crawler in the intended left, right, forward, backward or combination direction. Crawlers that can only drive in a single direction to the left, right, forward or backward at a time (bump steering) will be deemed unacceptable.	
5. Maximum size of 12.2 x 4.3 x 3.5" (lwh), allowing proper clearance in 6" and lined pipes.	
6. A minimum of two powerful EC drive motors. Motors must maintain full power even at lower speeds without depending on drawing more current to do so.	
7. An electronic clutch that can be engaged and disengaged without needing to move the crawler. Clutch must disengage when system power is off. Systems that demand movement of the crawler to engage or disengage a mechanical clutch will be deemed unacceptable.	
8. System to be isolated in a way where major crawler electronic components will not be destroyed if there is a cut and connection between power and other wires within the cable.	
9. When in 8" wheel configuration, crawler must insure that the bottom of the pan and tilt zoom camera is at least 1 3/8" from the bottom of a flat surface to enable crawling over obstacles.	
10. Full sensor package with inclination, roll, sonde, pressure, heat and motor readings.	
11. Integral rearview color camera with high-lux tri-LED lighting to be positioned at the top rear of the crawler body and not to have any visible increase in the diameter of the crawler body or be integrated with the rear connector.	
12. Ability to remotely toggle between rear- and forward-viewing cameras using the operator control pendant.	
13. Lever locking mechanism, the simple turn of which drives 3 stainless bearings into the rotate shaft of the camera for secure, easy attachment with 1-bar waterproof rating.	
14. Keyway on camera rotation shaft to ensure damage-free mating of electrical pins between crawler and camera.	
15. Rear receptacle that allows cable attachment with 2 turns of the stainless-steel cable connector's outer barrel. Not tools required.	
16. A spring-loaded pin on the rear receptacle to lock the stainless-steel cable connector's outer barrel, ensuring a secure connection and delivering pull strength beyond the 1000-lb-rated break strength of the cable.	
17. Minimum weight of 18.5 lbs. (with small wheels).	
18. Length of no more than 12.2" (18" with camera) for easy navigation through 90-degree inverts without rolling.	
19. Crawler body must be machined from a single continuous and complete piece of machined aluminum. Two piece bodies from top to bottom or front to rear crawlers will be deemed unacceptable.	
20. Single piece crawler body to have single top-plate access for control boards, single bottom-plate access for motors, and dual side-plate access for gears, ensuring maximum protection against leaks caused by bending stress. Tractor chassis of bronze, brass or other soft metals shall be deemed unacceptable.	
21. Tapered wheels that conform to pipe sidewall.	

22. Machined keyway on all 6 axles to ensure positive drive and facilitate quick wheel change out.	
23. Machined tight fitting axle to wheel keyway to assure wheel stays on the unit without turning, if a bolt loosens. Systems that use bolts and washers as the only means to secure a wheel will be deemed unacceptable.	
24. CAN-bus control architecture allowing for precision control, diagnostic monitoring and future upgradeability.	
25. Three (3) wheel sets and spacers for inspection of pipes 6-24".	

26. Compatibility with the following standard wheels to be provided:
    a. Set of (6) quick change hubs that allow the changing of wheels with no tools.
    b. Set of (6) small quick change rubber wheels (6" pipe)
    c. Set of (4) medium quick change rubber wheels (8" pipe)
    d. Set of (4) large quick change rubber wheels (12" pipe)
    e. Set of (4) medium carbide wheels (8" pipe)
    f. Set of (4) medium grease wheels (8" pipe)	

27. A tilting rear cable connector that points vertically to protect cable during deployment into manhole, but which tilts to horizontal position during operation. Rear connectors that integrate a rear camera will not be accepted.	
28. Strong stainless steel locking mechanism to augment the strain relief internal to the cable.	
29. Stainless cable connector shell to carry a lifetime warranty.	
30. 512 Hz integral sonde to facilitate locating crawler.	
Camera Lift:	
1. The Crawler must allow for an electronically controlled lift to raise and lower the camera automatically once the crawler is deployed in the pipe via the main remote pendant and the wireless auxiliary remote control. Manual or fixed lifts will not be accepted.	
2. The camera lift must have a range of 3.1 inches to 10.2 inches.	
3. The crawler with the remote lift attached must fit from pipes ranging from 12 inch ID to 48 inch ID.	
4. The remote lift must house the rotation unit of the camera to protect it from damage and wear.	
5. The remote lift must be operated by a CAN-bus control architecture allowing for precision control, diagnostic monitoring and future upgradeability.	
6. The remote lift must be made from solid, aluminum and stainless steel.	
7. Solid-state circuitry designed to withstand shock and vibration while being pushed, pulled or propelled through the pipe.	
8. Housing that is fully sealed and waterproof per IP68 to withstand external pressure up to 1 bar without damage or leaking.	

Pan/Tilt Zoom Camera

Yes (Y) or No (N)

1.	10X optical zoom with 12X digital zoom multiplier for a total zoom of 120X.	
2.	Ability to produce a high-quality color video image with a readable resolution of no less than 420 HTV lines.	
3.	Pan and tilt motors with no exposed gears or wires.	
4.	Ability to pan a full 360 degrees and tilt ±135 degrees for full viewing of laterals and joints.	
5.	Ability to view behind crawler for upstream lateral rubber seal view on gravity-flow PVC pipes.	
6.	Dual projection lasers, 50mm apart, to be able to measure observations and gauge pipe diameter.	
7.	CAN-bus control architecture allowing for precision control, diagnostic monitoring and future upgradeability.	
8.	Solid-state circuitry designed to withstand shock and vibration while being pushed, pulled or propelled through the pipe.	
9.	Ability to connect to crawler body via a 1.5" long, 5/8" diameter stainless-steel keyed connection plug with 10-pin internal female connection port. Connection must be waterproof.	
10.	Front housing made of aluminum and stainless steel, with windshield made of impact-resistant, distortion-free material.	
11.	Housing that is fully sealed and waterproof per IP68 to withstand external pressure up to 1 bar without damage or leaking.	
12.	Encoders to measure pan and tilt position, allowing camera to be controlled using automated software routines (Macros) stored in the operator pendant and to show camera position on the pendant.	
13.	Ability to attach to the front of the crawler by a simple turn of a slotted locking mechanism atop the crawler that drives 3 stainless bearings into the rotate shaft of the camera, all while maintaining a 1-bar waterproof seal.	
14.	Illumination provided by a minimum of 40 LEDs within the front housing area of 1 7/8 w x 2 ½ h and deliver a 13,000-lux reading at 1' and a 3-lux reading at 25'. Lighting must illuminate targets beyond 10'. Lifetime warranty on light ring.	
15.	A valve for pressurization of camera-body, this will notify operator of potential system leak.	
16.	A total weight of no more than 3.3 lb	
17.	A maximum size of 7" x 3" x 3" (lwh) in order to fit within a diameter of 3.5" (88mm).	
18.	Integral clutches to protect pan and tilt motors.	

Motorized Automatic Cable Drum

Yes (Y) or No (N)

1. Capacity for the systems 1000' cable.	
2. A hub equipped with a continuous-contact slip-ring assembly to allow the cable to be dispensed and retrieved while the camera and tractors are operational.	
3. An environmentally sealed slip ring whose contacts shall be of an alloy of gold.	
4. A motorized system with sensors that monitor cable tension in order to coordinate cable feed/retrieval with direction and exact speed of the crawler.	
5. Ability to perform all forward, backward and different speed functions without the operator having to control any cable reel functions directly.	
6. An emergency stop switch.	
7. Ability to operate in both automatic and manual modes.	
8. External cable reel chassis to be made of strong and lightweight aircraft grade aluminum.	
9. Work with pendant based speed and torque controls to adjust for different pipe conditions and user preferences.	
10. Weight of no more than 75 lb. (including 1000' of cable). Reels that exceed this are not a portable system and deemed unacceptable.	
11. CAN-bus control architecture allowing for precision control, diagnostic monitoring and future upgradeability.	
12. Work with a remote wireless pendant granting control of crawler and reel while away from the primary control pendant.	
13. Ability to operate manually, with direct control of speed, direction and torque.	
14. Large extension pulley arm option for extending the cable drop point 3' from the cable reel.	
15. Teflon coated integral drip tray at bottom beneath stored cable. Allows for liquids to drain and be collected in a specific area for health and safety reasons. Can be slid out the front without tools for emptying and cleaning.	
16. BNC video output for local video connection.	
17. Size of no larger than 21 x 14.5 x 24.5" (hwd) with standard cable roll bar that extends 15" from the front of the reel.	
18. Two handles to be at the top left and right of the cable reel for moving and transport.	
19. Extended roll bar to be able to be placed back against the reel for storage and shipment without the need for additional fasteners or tools.	
20. Pendant-based power/torque controls for winching back crawler in optional free-wheel mode.	
21. Ability to run automated software routines (Macros) in which the reel, crawler and camera function are automatically coordinated to accomplish a specific task without operator intervention.	
22. All moving hazardous components to be completely covered/enclosed to prevent injury – hand or clothing can't reach dangerous moving parts. Open access design of the front, top and sides where an operator can touch level-wind mechanism, gears, chains and belts will be deemed unacceptable.	

Lightweight Heavy Duty Transmission Cable

Yes (Y) or No (N)

1.	1000' of cable with maximum 6-wire continuous-length multi-conductor wires for lightweight and easy maintenance performance.	
2.	Kevlar reinforcement to provide a minimum break strength of 1000 lbs.	
3.	Diameter of no more than 0.255" (6.5mm).	
4.	Weight of no more than 10.8 lb. per 328' (.03 lb. per ft.) to promote portability, long crawler runs and easy handling for multiple sized crawlers.	
5.	Strain relief to be internal to the cable and cable connector. No external wires, pig tails or other visible external strain mechanisms will be accepted.	
6.	Waterproof rating of at least 1 bar or 1 atmosphere.	
7.	Tough outer jacket to resist tears and scrapes.	
8.	Smooth outer jacket to reduce friction.	
9.	Steel-armored jacket at crawler end to prevent cable damage around pipe bends.	
10.	Solid stainless steel screw on connector at crawler end that locks with two turns, and which engages a locking spring-loaded pin on the rear of the crawler to secure the cable and provide strain relief. Connections that require **ANY** tools or screws will be deemed unacceptable.	
11.	Crawler electrical connection with keyway to prevent damage to electrical pins when mating with camera or crawler.	
12.	Ability to be re-terminated by soldering no more than 6 wires, and then sealed and strain-relieved using a quick-dry epoxy. Procedure shall take no more than half an hour to complete. More than 6-wire wire solder repair and Scotch-cast style solutions that require longer cure times will be deemed unacceptable.	
13.	Compatibility with fully automatic cable reel, manual cable reel.	
14.	Cable to be only single connection regardless of use of optional items such as additional lighting, side scanning camera, rear camera, laser circle, laser dots, remotely operated lift or large pipe carriage.	

Software Specifications

Specification for Product Vendor

Yes (Y) or No (N)

1. The product vendor must be an associate member of NASSCO.	
2. The product vendor must be a Microsoft Partner.	
3. The product vendor shall maintain a website that includes application updates to all available modules and is updated on a daily basis.	
4. The product vendor shall maintain technical staff knowledgeable in the support and maintenance of computer hardware provided by product vendor or purchased and supplied by client.	
5. The product vendor shall have a local application dealer that is available to present the product in detail, assist with implementation, and support the application integration into a GIS application (including ESRI, Autodesk, and Intergraph).	
6. The product vendor must be an authorized Member ESRI Silver Business Partner Network.	
7. The product vendor must be a certified Azteca Cityworks Business Partner and contained Azteca Trained personnel on staff.	
8. The product shall be supported by a software based company that provides business hour support with a full application and computer hardware technical support team.	
9. The product vendor shall maintain technical staff that is regularly certified on application product knowledge.	
10. The product purchased shall be supported by a company that is able to provide application technician's on-site for application integration training and deployment.	
11. The product vendor shall have a regional software dealer that is available to present, assist with implementation, and support the application integration into an asset management or work order application, including Hansen Neztek, Azteca Citiworks, Cartegraph, Lucity, and Maximo.	
12. The product shall be supplied by a company that supports a software application that can be used with all camera manufacturers' equipment.	
13. The product vendor shall maintain overlay/titler hardware from multiple camera manufacturer's for testing and support including Aries, Envirosight, Cues, Ibak, Rausch, Inuktun, Spering, and Ipek.	
14. Application Maintenance and Support Plans	
15. The product vendor shall have a support plan available for per incident support.	
16. The product vendor shall have a support plan available for annual and multi-year support.	
17. The product vendor shall have a support and maintenance plan available to pay an annual fee that provides all application version upgrades, application updates, and support.	
18. The product vendor shall have a support plan available for 24/7 support.	
19. The product vendor shall include web access to downloads for client purchased modules	
20. The product vendor shall maintain a website that is accessible via application for user name and individual password, based on client maintaining support agreement.	
21. The product vendor shall maintain an alternate online second download source site available for application download in the event the primary site is unavailable.	
22. The product shall be supported by a company that has online support available for remote control for troubleshooting and technical assistance.	
23. The client shall be able to install the product application on multiple workstations for application access. There shall be a hardware key, for each license purchased that is transient between workstations.	
24. The client shall be available to purchase additional hardware keys for application usage direct from the product vendor's local application dealer.	
25. To ensure client security, the application shall not be usable with application identification keys that can be reproduced or compromised.	
26. Network hardware keys that allow for concurrent licensed users shall be available for	

purchase.	
27. The hardware key shall have an optional Assurance Plan available that allows for client replacement at a lowered cost of lost or damaged hardware keys.	
28. The software must also be able to operate minus a USB dongle key and work off a software registration code or license.	

WinCan VX Entry License

Home Tab:
Login:

1. Software shall have the ability to log on as specific user with rights with username and password.	
2. Software shall have the ability to save password.	
3. Software shall have the ability to auto log in suppressing the log in dialog.	

Settings:

1. General:	
a. Software shall have a check box to suppress the warning message that the user does not enter in all of the required field in the data entry field.	
b. Software shall have the ability to open the last project used when the software open.	
c. Software shall have the ability to impose the observation on the video before saving the observation	
d. Software shall have the ability to keep the observation entry interface open with saving.	
e. Software shall have the ability to change colors on the text boxes for the required fields, section list, lateral list, node list, observation list and continuous defect list.	
2. Live Video:	
a. Software shall have the ability to configure live video capture device (VITEC, WDM device, etc.)	
b. Software shall have the ability to automatically start live video feed upon opening.	
c. Software shall have a video setup screen allowing the user to choose device, input, output, video norm, video format, frame rate, codec and video quality.	
d. Software shall have slider bars to adjust brightness, contrast, hue, saturation and gamma.	
e. Software shall have the ability to save the current settings as default.	
3. On Screen Display: a. OSD module required to control text and footage to the software.	
4. Speech:	
a. Software shall have the ability to choose to activate the Windows based text to speech option.	
b. Software shall have the ability to choose between the installed voice options installed with Windows (Microsoft Anna, etc.).	
5. Keyboard Entry:	
a. Software shall have the ability to set up configurable keyboard shortcuts for the edit data, save data, cancel new/edit, new record, delete record, start video recording, pause video recording, stop video recording, snap photo, quick-add observation, and quick-edit observation.	
6. Presets:	
a. Software shall have the ability to save presets for creation of new projects. Country, language, software standard, data collection template, database type (SQL CE, SQL Server or Oracle), Meta, and the default project root directory. b. Software shall have the ability to save project visibility as public of private.	

User Management:

1.	Software shall have the ability to add and delete user groups, group rights, users and the visibility of each user for VX system directory.	
2.	Software shall have to filter users and groups based on two criteria.	
3.	Software shall have the ability to add administrator users and guest users.	
4.	Software shall have the ability to create operator users and simple users.	
5.	Software shall have the ability to add attributes for each users including name, full name, password, language description.	
6.	Software shall have the ability to add an image of the user.	
7.	Software shall have the ability to delineate if the user is a system user or not.	
8.	Software shall have the ability to disable a user.	
9.	Software shall have the ability to allow the user web access.	
10.	Software shall have the ability to restrict certain projects, Meta projects, catalog and data hosts for each user individually.	
11.	Software shall have the ability to name and rename individual groups.	
12.	Software shall have the ability change a group's individual icon with an .icon file.	
13.	Software shall have the ability to delineate in a group is a system group, disabled or enabled and if web access is granted.	
14.	Software shall have the ability to restrict access level from one to nine. One being the lowest access and nine being the highest as administrator.	
15.	Software shall have the ability to set up an auto timeout in seconds. If a value of zero will disable the auto timeout.	
16.	Software shall have the ability to enter a description for each group.	

Directory Management:

1.	Software shall have the ability to edit the connection parameters for each project and Meta project data directory.	
2.	Software shall have the ability to filter directories of projects, metas, catalogs and hosts by two criteria.	
3.	For each project, the Software shall have the ability to update project description.	
4.	For each project, the Software shall have the ability to create a memo regarding the project in rich text format. The memo can be saved and printed from the memo interface.	
5.	For each project, the Software shall have the ability to set the default connection parameters and an alternative connection.	
6.	For each project, the Software shall have the ability to list the creation date, owner, lasted used date and time what user accessed the project, the last process completed against the project and list the primary and alternative host. This dialog shall have the ability to test the connection as well as update and save the connection parameters.	
7.	For each project, the Software shall have the ability to set the default connection parameters including server or file type (MS SQL server compact, Oracle server 11gr2 or higher, MS SQL server compact 2005 or higher, web service host data layer or application ,Media, rule machine or data server).	
8.	For each project, the Software shall have the ability to set the default connection parameters including a trusted connection SSPI , SQL authentication or web service authentication.	
9.	For each project, the Software shall have the ability to set the default connection parameters including server or path name, service name or TNS (if Oracle option is sued), database name, server user name, server password. And local data folder.	
10.	For each Meta project, the Software shall have the ability to update project description.	
11.	For each Meta project, the Software shall have the ability to create a memo regarding the project in rich text format. The memo can be saved and printed from the memo interface.	
12.	For each project, the Software shall have the ability to set the default connection parameters and an alternative connection.	
13.	For each Meta project, the Software shall have the ability to list the creation date, owner, lasted used date and time what user accessed the project, the last process completed	

against the project and list the primary and alternative host. This dialog shall have the ability to test the connection as well as update and save the connection parameters.	
14. For each meta project, the Software shall have the ability to set the default connection parameters including server or file type (MS SQL server compact, Oracle server 11gr2 or higher, MS SQL server compact 2005 or higher, web service host data layer or application ,Media, rule machine or data server).	
15. For each Meta project, the Software shall have the ability to set the default connection parameters including a trusted connection SSPI, SQL authentication or web service authentication.	
16. For each meta project, the Software shall have the ability to set the default connection parameters including server or path name, service name or TNS (if Oracle option is sued), database name, server user name, server password, and local data folder.	
17. For each Meta project, the Software shall have the ability to set the default connection parameters including check boxes for database encryption (SQLC only), attach file (SQL Server only), SYSDBA (Oracle only) and a read only database. 18. Software shall have the ability to try to connect to the Meta database based on the connection properties and to update or save existing settings.	
19. For each catalog, the Software shall have the ability to update catalog description.	
20. For each catalog, the Software shall have the ability to create a memo regarding the catalog in rich text format. The memo can be saved and printed from the memo interface.	
21. For each catalog, the Software shall have the ability to set the default connection parameters and an alternative connection.	
22. For each catalog, the Software shall have the ability to list the creation date, owner, lasted used date and time what user accessed the project, the last process completed against the catalog and list the primary and alternative host. This dialog shall have the ability to test the connection as well as update and save the connection parameters.	
23. For each catalog, the Software shall have the ability to set the default connection parameters including server or file type (MS SQL server compact, Oracle server 11gr2 or higher, MS SQL server compact 2005 or higher, web service host data layer or application ,Media, rule machine or data server).	
24. For each catalog, the Software shall have the ability to set the default connection parameters including a trusted connection SSPI, SQL authentication or web service authentication.	
25. For each catalog, the Software shall have the ability to set the default connection parameters including server or path name, service name or TNS (if Oracle option is used), database name, server user name, server password, and local data folder.	

Program Information:

1. Software shall have the ability manage the system, update catalogs and default templates.	
2. Software shall have the manage licenses. The software will create a specific fingerprint file that is unique to that machine called a status file.	
3. Software shall have the ability to create a status file for a new installation or an upgrade to an existing system.	
4. Software shall have the ability to list the current license id, license type and all modules that are specific to that license id and the expiration dates that are associated.	

Projects Tab:

1.	**New Project:**	
	a.	Software shall have a project creation wizard that guides the user through the creation of the project.	
	b.	Software shall have the ability to name the project or chose the default name which is the date in yyyy-mm-dd format.	
	c.	Software shall have the ability to choose the country in which the project was created in which will correspond to the pertinent data collection standard associated with that region.	
	d.	Software shall have the ability to choose a data collection standard (PACP6, PACP6 metric for PACP4).	
	e.	Software shall have the ability to choose information regarding the project participants including client, contractor or manager.	
2.	**Open Project:**	
	a.	Software shall have should open a dialog to browse for an existing project by choosing a WinCan VX based file with the .sdf extension or a V8 based project with the .mdb file extension. IF the WinCan v8 file is chose, it will be converted automatically into VX format.	
3.	**Refresh Project:**	
	a.	Software shall have the ability to refresh the current project loaded with the click of the refresh button.	
	b.	Software shall have the ability to rescore individual and overall grades of the database according to the recognized standard of the data. (I.E. PACP, WRc, Etc.).	
4.	**Manage Project:**	
	a.	Software shall have a WinCan VX project manager interface that will create new projects, add existing projects, remove or delete projects from the main interface window.	
	b.	Software shall have the ability to search for private, public, manhole, PIT (pressure), ERD (enterprise dispatch) and other projects on up to three criteria.	
	c.	Software shall have to ability to list private sewerage, public sewerage, manhole, PIT (pressure test),ERD (enterprise resource dispatch) and other projects listing data source, creation date, project owner, data modified on, last user of and order.	
	d.	Software shall have an interface with in the project manager screen to create a new projects with the following options:	
		a.	Database (choose project name, country, language, path, description and standard)	
		b.	Job options (choose project type from private sewerage, public sewerage, and manhole, PIT (pressure test) or ERD (enterprise dispatch).	
		c.	Visibility (choose if the project is active, globally visible and web visible)	
		d.	Create default TEA (choose TEA from default, airport, chemical, farming, industrial, military, power plant, township or waste disposal area.)	
		e.	Create default job (choose inspection name and number)	
	e.	Software shall have the ability to choose the following options for a private sewerage project:	
		a.	Job type (choose between Tv inspection or other).	
		b.	Job name (choose specific job name).	
		c.	Base standard (choose standard along with the versions or the section catalog and template, node catalog and template and lateral catalog and template.)	
	f.	Software shall have the ability to choose the following options for a public sewerage project:	
		a.	Job type (choose between TV inspection, On-site inspection, Surface inspection or other).	

b. Job name (choose specific job name).	
c. Base standard (choose standard along with the versions or the section catalog and template, node catalog and template and lateral catalog and template.)	
g. Software shall have the ability to choose the following options for a manhole project:	
a. Job type (choose between TV inspection, On-site inspection, Surface inspection or other).	
b. WJob name (choose specific job name).	
c. Base standard (choose standard along with the versions or the section catalog and template, node catalog and template and lateral catalog and template.)	
d. Base standard (choose standard along with the versions or the section catalog and template, node catalog and template and lateral catalog and template.)	
h. Software shall have the ability to choose the following options for a public ERD (enterprise resource dispatch) project:	
a. Job type (choose between Flushing, Suction, Rehabilitation or other type).	
b. Job name (choose specific job name).	
c. Base standard (choose standard along with the versions or the section catalog and template, node catalog and template and lateral catalog and template.)	
i. Software shall have the ability to choose to create thee search keys for each project created including a mandatory, order number and the visibility for each level of security.	
j. Software shall have the ability to choose participants for each new project participant.	
k. Software shall have the ability to add an existing project using the project interface.	
l. Software shall have the ability to perform maintenance on each project with the ability to update the following: modifying catalog data (import, delete), modifying project meta data , modifying system data, purging deleted records, updating database schema and project cloning.	

Tools Tab:

Import:

1. Software shall have the ability to import existing project.	
2. Software shall have the ability to browse for an import file via browsing to the SQL CE or MS Access file type.	
3. Software shall have the ability to check the validity of the project to be updated.	
4. Software shall have the ability to choose a target project that the project to be imported in to.	
5. Software should produce a summary of the import process including Import file path, schema, standard, validation satis. Project name, project Meta name, system database, system database, system server or path, system database type, and project database before the import process begins.	

Export:

1. Software shall have a data exchange interface to export existing projects.	
2. Software should the ability to choose the target project, project source and destination.	
3. Software shall have the ability to choose what data collection standard was used originally.	
4. Software should produce a summary that list the project name, project Meta name, standard, export file name and path, and what data collection standard export type is used.	
5. Software should create a log file that summarizes the export process and list any issues in the export.	

Convert:

1. Software shall have a WinCan VX conversion wizard to convert projects to VX format.	
2. Software shall have the ability to choose the existing section, lateral, manhole catalog and the destination section, lateral, manhole catalog.	
3. Software shall have the ability to choose an updated standard for the section, lateral, manhole catalog that is being exported.	
4. Software should produce a summary that includes source path, source media path, mapping file, old section, lateral, manhole catalogs.	

Merger:

1. Software shall have a merging wizard to merge projects.	
2. Software shall have a merging interface shall have the ability to choose a target database and destination database.	
3. Software should list all available databases that can be merged and include the source of the file, date created, file owner, last modified, last user and order number.	
4. Software shall have a summary that list the VX source project, media path, target backup, target history, simulated merging (y/n), VX target database type, VX target authentication, VX target data source, VX target database and VX target user name.	

Validator:

1. Software shall have an interface to validate a project based on the standard it was collected in.	
2. The validator will allow for quick validation of data based on the NASSCO or WRc data collection codes and templates.	
3. Errors in the data shall be displayed on a simple list format and link automatically to the sections of the software that contain the error for rapid analysis and correction.	

Media Distribution (viewer):

1. Software shall have a WinCan VX media distribution wizard to share projects with license free viewer software.	
2. Software shall have an interface that will allow to choose CD, DVD or Blu-ray disk. The option to choose unlimited file size for export or the option to limit the file size.	
3. Software shall have the ability to choose what projects to be included in the export.	
4. Software shall have the ability to choose to dispense picture files on the first CD or DVD.	
5. Software shall have the ability to choose to register media name/number on the source project.	
6. Software shall have the ability to rename the media filenames for all media associated via a defined media/number interface.	
7. Software shall have a defined media/number interface with the ability to build a media name for all media associated with the project to be populated with attributes of fields in the database.	
8. Software shall have the ability to choose a temp image folder while using the media/number interface.	
9. Software shall have the ability to have choose location and create a disc image.	
10. Software should create a log file that summarizes the export process and list any issues in the export.	

Transfer tool (to database or FTP web):

1. Software shall have an interface that will transfer data.	
2. Software shall have a transfer interface that allows to set vehicle name, city, log directory location and the option to shut down the computer after transfer is complete.	
3. Software shall have a transfer interface that can have the option of FTP upload/download or network transfer. FTP options shall include upload or download, FTP server host name, user name, password, remote directory and source directory.	
4. Software shall have a transfer interface that can upload directly to the network with the ability to choose the source directory and the destination directory.	
5. Software shall have a transfer interface that allows the user to test the settings of the transfer and to confirm the settings of transfer.	

Printing:

1. Software shall have a printing panel that allows for the printing of built in reports for cover page, table of contents, Project information, legend of classification (section, legend of classification (node_, legend of classification lateral, section profile report section inspection pictures report, section drawings, inclination report, deformation report, temperature report, scanexplorer over report, 3D report, node inspection report, node inspection pictures report, node drawings, satellite inspection report, satellite inspection pictures report, satellite drawings.	
2. Software shall have options for the section inspection report that include optimum, minimum or six photos for report scale.	
3. Software shall have options for the section inspection report that include the choice of the pipe beginning or manhole center for pipe start.	
4. Software shall have options for the sections inspection report that include the choice of graphical or list for layout.	
5. Software shall have options for the section inspection report that include the ability to include grade, observation code, observation remarks and time code for each report via radio box selection.	
6. Software shall have options for the section inspection report that include the choice to have the pictures on the report including picture name and picture number.	
7. Software shall have options for the section inspection report that include the ability to choose potion for pictures on report, print repeating sections once only, special forma, wrc coloring and duplex.	
8. Software shall have options for the section inspection pictures report that include two pictures or four pictures for layout.	
9. Software shall have options for the section inspection pictures report that include the ability to choose pictures name or picture number.	
10. Software shall have options for the section inspection pictures report that include the ability to print repeating sections once only.	
11. Software shall have options for the section drawing report that include includes the ability to printer repeating sections once.	
12. Software shall have options for the inclination report giving the ability to choose the internal WinCan data or the VAV-P50 data.	
13. Software shall have options for the inclination report giving the ability to choose to show the inclination curve or to smite inclination.	
14. Software shall have options for the node inspection report giving the ability to choose to print the report in portrait or landscape mode.	
15. Software shall have options for the node inspection report giving the ability to choose to print the report separately, to print the node report with the sections report and to print repeating nodes only once.	
16. Software shall have options for the node inspection pictures report giving the ability to choose two pictures and four pictures per page.	
17. Software shall have options for the node inspection pictures report giving the ability to choose picture name and numbers.	
18. Software shall have options for the node inspection pictures report giving the ability to choose to print each node separately or to print each node with section report and to print each node once.	
19. Software shall have options for the node drawing report to print each node separate or to print with the section report.	

WinCan VX Digital Capture Module

1. The Digital Software Capture Module shall capture digital video including a pause feature to begin recording, pause, then continue recording with all digital video being recorded into one consistent video file, no "re" or "after" rendering required.	
2. The Digital Software Capture Module shall include a feature to simultaneously pause recording of the digital device and a computer controllable VCR (if client owns or will purchase the product VCR Control Module), with the selection of only one pause icon on screen.	
3. There shall be an available module, for later purchase, to include indexing of video.	
4. The Digital Software Capture Module shall give user ability to select file naming convention using all available fields within the database for input; the software shall store images and movie files using that convention. For example, a user shall be able to select a file naming convention of: manholestart_streetname_reverseinspectionflag_cityname_date_time.jpg.	
5. The Digital Software Capture Module shall include the option to automatically pause recording during operator entry of the observation description, to shorten recorded video time. The recording shall auto-start after the observation is entered.	
6. The Digital Software Capture Module shall store the frame number of each observation's recording point into the application database.	
7. The Digital Software Capture Module shall automatically link video files to a specific inspection, with no user intervention.	
8. The Digital Software Capture Module shall have the option to modify specific settings related to any part of the digital video creation, such as bitrates, frames per second, resolution, and video interlacing.	

WinCan VX Lateral Module

1. The module shall have the ability to include a "sub-inspection" report attached to a main inspection report.	
2. The module, when used in conjunction with Digital Capture Control, shall have the ability to pause the main inspection video recording and create a second video recording, then continue the main inspection video recording.	
3. The module, when used in conjunction with Digital Capture Control, shall have the ability to include the lateral video recording within and separate from the main inspection video recording.	

WinCan VX Manhole/Structural Inspection Module

1. The module shall have the ability to create a "top-down" schematic of the manhole.	
2. The module shall have the ability to attach a sketch of the site.	
3. The module shall have the ability to create a sketch of the site.	
4. The module shall have the ability to store symbols that can be used within the sketch. This shall let the user browse to images files to import those as symbols.	
5. The module shall have the ability to store symbols as a toolbar, for use in later projects and drawings.	

WinCan VX Expert with Map Expert Module (Truck GIS)

1.	The product will open GIS shapefiles and associated attribute data into the product itself.	
2.	The product will display GIS within the software for easy selection and location of assets.	
3.	The product will automatically transfer existing GIS shape file data into the specific software project to populate section detail (eliminates re-entry of GIS information such as manhole numbers, pipe ID, pipe material, shape, size, etc. by sending info straight in from GIS).	
4.	The product will review attribute data for structures within software itself.	
5.	The product will allow users to select an item within the software and the item's information will transfers into the open software project; eliminates data entry of manhole or pipe information by transferring data automatically.	
6.	The product will offer a search tool that lets the user input identifier number and have that item highlighted on the map.	
7.	The product will have a review tool that highlights inspections on the map that have been completed within the software, or inspections that "need" completion.	
8.	The product will select an inspection in the inspection software to view the location of that structure in map software.	
9.	The product must store project related file references in xml or MXD file for later reuse.	
10.	The product will allow the client to create new GIS shape files with queried information from the software inspections (using options transfer window to set up database fields; fields must exist in shape file prior to new file being created).	
11.	The product must allow the client to create new points or lines in new GIS shape file.	
12.	The product will allow the user to use an Analysis module for these options shown below:	
	a. Run report of queried assets and send those items to ESRI shape file, which can be opened in the map software or GIS application.	
	b. Run report of queried items and have those items highlighted in map software for visual review of locations.	
	c. Run report of queried and filtered assets and send those items to ESRI shape file or to the map software for visual review of locations.	

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WinCan VX Expert with Office ESRI GIS Module

1. The product must be compliant with ESRI ArcGIS 10.X.X Software.	
2. The product shall install and function as an ESRI Run Time tool located on the ESRI Arc GIS Tool Bar.	
3. The product must be able to be tied into a WinCan VX Concurrent Network set up allowing multiple users to interface WinCan VX with ESRI ArcGIS.	

4. The product must dynamically create the following feature classes into a scratch Geodatabase:
    i. WinCan Observations
    ii. WinCan Inspections
    iii. WinCan Sections
    iv. WinCan Manholes
    v. WinCan (real time locator in VX application).	

5. The product shall allow for feature class attributes to be configured from templates and catalogs in WinCan VX.	
6. The product shall allow for the transfers pipe header information into header columns in WinCan VX.	
7. The product shall have a button to "show in WinCan" highlight the section in WinCan VX.	
8. The Product shall allow checking and highlighting pipe information that is different than pre-populated header information between the WinCan VX Database and the ESRI ArcGIS Database.	
9. The product shall allow for the synchronization of data collected in field, and allow for either an automatic correction to the ESRI ArcGIS database or a manual change to reflect the difference between the database sets.	

WinCan VX Inspection and Administrative Training

1. Two days of WinCan VX Inspection and Administrative Training.	
2. The vendor shall provide three days of on-site, at our location, training.	
3. The vendor's trainer shall be a Certified Trainer for the company that is developing the software.	
4. The vendor's trainer shall have been providing training and working with this product for a minimum of 2 years.	
5. The training shall include "simulated" inspections with the camera system driving underneath of the mobile unit.	
6. The trainer shall be extensively familiar with different software modules available with the product used in the field.	
7. The trainer shall be extensively familiar with different media types and processes used for exchanging data between the field and office.	
8. The trainer will be required to train 2 people on the inspections portion of the software, as it will be used in the mobile system.	
9. Two days of camera system training to be provided in addition to software training.	

Operating Manuals (Written or Digital):

Operating manuals shall be furnished that contain the recommended operating instructions and maintenance procedures for all systems and components being purchased. The instructions shall provide step-by-step use methods and include adequate illustrations, diagrams and other aids. Special attention shall be given to safety considerations for personnel and the equipment.

Systems Parts Books (Written or Digital):

A parts book supporting field repair and replacement of the various components of the delivered systems shall be furnished. This book shall include exploded or cutaway drawings of numerous components and assemblies with each drawing referencing a manufacturer's part number and description.

End of specifications