

MEETING DATE: 03/10/08

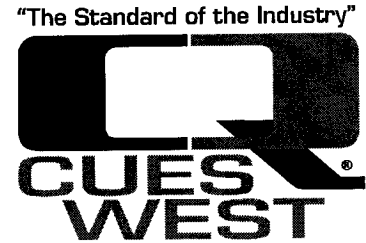
AGENDA ITEM: Authorization to Purchase a CUES West Portable Closed Circuit Television Sewer Line Inspection System Through their Authorized Distributor, Plumbers Depot, Inc., and to Waive the Formal Competitive Bidding Process as Authorized by § 3.07.065(C) of the Culver City Municipal Code.

ATTACHMENTS

		<u>Pages</u>
1	Letter of agreement from CUES West to offer the same terms and conditions provided to the City of Ontario.	1
2	Copy of the City of Ontario's Notice Inviting Bids.	2-3
3	Copy of the City of Ontario's Purchase Order for their CCTV System	4-32

2/21/08

Eric Mirzaian
City of Culver City
9505 W. Jefferson Blvd
Culver City, CA 90232



1943 S. Augusta Ct.
Ontario, CA 91761
(909) 923-2001
(909) 923-2091 (Fax)
(800) 544-8695 (WATTS)

Re: Ontario Bid # 07.06-01
Sent Via email: eric.mirzaian@culvercity.org

Dear Eric,

Please be advised that Cues will honor the same pricing that was provided to The City of Ontario California in the attached bid for the Portable Mainline CCTV System. This can be used as a cooperative inter-local "piggyback" purchase.

Attached, please find a copy of the original bid response from Cues, as well as the purchase order. You will notice a list of optional items in the bid, and I would highly recommend you to consider some of these items, especially the ESRI interface module.

If you have any questions, please do not hesitate to give me a call on my direct cell at 407-493-7402.

Best Regards,

Tom Rebozo
Regional Sales Manager

cc. Benjamin R. Tenorio



GENERAL SERVICES DEPARTMENT
 300 East "B" Street, Ontario CA 91764
 (909) 395-2012 FAX (909) 395-2385
 E-Mail: purchasing@ci.ontario.ca.us

Purchase Order

Purchase Order	Date	Revision	Page
ONTCA-0000022426	10/25/2007		1
Payment Terms	Freight Terms	Ship Via	
Net 30	Destination	Common	
Buyer	Currency		
JoAnne Cassio	USD		

Vendor: 0000003547
 Cues, Inc.
 1943 S. Augusta Court
 Ontario CA 91761

Ship To: Utilities
 1425 South Bon View Ave.
 Ontario CA 91761

Bill To: Fiscal Services (909) 395-2027
 303 East "B" Street
 Ontario CA 91764

Line-Sch	Item	Description	Quantity	UOM	PO Price	Extended Amt	Due Date
1-1		Portable Mainline CCTV System	1.00	LOT	89,990.00	89,990.00	10/25/2007
Schedule Total						89,990.00	



Per description in seller's quotation dated 10/12/07 from Tom Rebozo
 Phone: 909-923-2001
 Fax: 909-923-9091

Please furnish us with the items and/or services listed above in accordance with the terms and conditions specified on the front and the reverse side of this Purchase Order including specifications, changes, and other attachments herein.

Total PO Amount

89,990.00

Authorized Signature

10-26-07

2



GENERAL SERVICES DEPARTMENT
303 East "B" Street, Ontario CA 91764
(909) 395-2012 FAX (909) 395-2385
E-Mail: purchasing@ci.ontario.ca.us

Purchase Order

Purchase Order	Date	Revision	Page
ONTCA-0000022426	10/25/2007		2
Payment Terms	Freight Terms	Ship Via	
Net 30	Destination	Common	
Buyer		Currency	
JoAnne Cassle		USD	

Vendor: 0000003547
Cuos, Inc.
1943 S. Augusta Court
Ontario CA 91761

Ship To: Utilities
1425 South Bon View Ave.
Ontario CA 91761

Bill To: Fiscal Services (909) 395-2027
303 East "B" Street
Ontario CA 91764

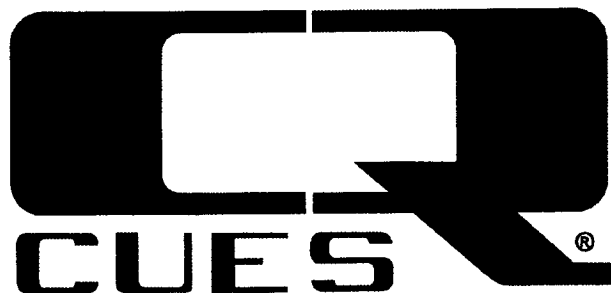
Line-Sch	Item	Description	Quantity	UOM	PO Price	Extended Amt	Due Date
----------	------	-------------	----------	-----	----------	--------------	----------

62010-026-143

89,990.00

3

"The Standard of the Industry"



**One (1) CUES Portable
CCTV System**



Table of Contents

Section 1		Optional Equipment
Section 2		References
Section 3		Ontario, CA Bid Document
Section 4		CUES Bid Specifications
Section 5		Brochures



Ontario, CA

Optional Equipment

1. Provide transport wheels for K2 reel.

Add-On Price: \$ 557.00

2. Provide collapsible transport frame for K2.

Add-On Price: \$2,618.00

3. Provide manual camera lift for Compact Pipe Ranger Steerable Transporter.

Add-On Price: \$2,850.00

4. Provide Ultra Shorty III transporter for 6"-15" Pipe.

Add-On Price: \$9,900.00

5. Provide weighted adapters for 18"-30" Pipe for Ultra Shorty III transporter.

Add-On Price: \$ 750.00

6. Provide an OZ II Pan & Tilt camera in lieu of OZIII camera.

Add-On Price: \$No Charge

7. Provide an Ultra Shorty 21 Transporter in lieu of Ultra Shorty III transporter

Deduct Price: \$1,000.00

8. Provide Built in Sonde for OZ II or OZ III camera.

Add-On Price: \$2,500.00

9. Provide Built in Inclinometer for OZ II or OZ III

Add-On Price: \$4,200.00

10. Provide Laser Diodes and video Micrometer for OZ II camera to measure offset joints and cracks.

Add-On Price: \$8,400.00*

* price includes one(1) day of training

6

USER'S LIST

Allen Turner
Placer County, of
916-757-5686
916-758-4738
1717 5th Street
23 Russel Blvd.(mail)
Davis, CA 95616

Billy Leivas
PW Maint Supt
Casa Grande, City of
520-421-8715
520-836-2278
202 East First Avenue
Casa Grande, AZ 85222

Tom Fisk
Supervisor
Baker City
541-524-2020
541-523-2603
PO Box 650
Baker City, OR 97814

Bob Main
Newton Water Pollution Control, City of
641-792-3422
641-791-0823
1915 East 5th Street South
Newton, IA 50208
bobm@newtongov.org

Jeff Gerhard
Foreman
Coplay Whitehall Sewer Authority
610-437-4462
610-437-0696
3213 MacArthur Road
Whitehall, PA 18052

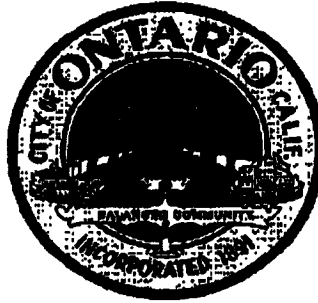
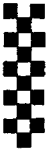
Darrell Dunlap
Paragould, The City of
870-239-7700
1901 Jones Road
Paragould, AR 72451

James Stancil
Sewer Superintendent
Parker Fire & Sewer District
864-467-4030
864-467-4032
117 Smythe Street
Greenville, SC 29611
United States

Don Anthis
Director of UT
Noblesville, City of
317-776-6353
317-776-6364
197 West Washington St.
Noblesville, IN 46060

Stephen Kelly
Sedalia, City of
816-827-7830
816-827-7834
2nd Osage
Sedalia, MO 65301
wpc@iland.net

Dewey Garrett, Jr.
Collection Systems Manager
Watsonville, City of
831-728-6145
408-763-1970
P.O Box 50000
City Hall 250 Main St.
Watsonville, CA 95077-5000



**CITY OF ONTARIO
NOTICE INVITING BIDS
FORMAL BID NO. 07.06-01**

PUBLIC NOTICE IS HEREBY GIVEN that sealed bids will be received in the City of Ontario Records Management Department, 303 East "B" Street, Ontario, CA 91764, until **11:00 a.m., Monday, June 25, 2007**, at which time they will be publicly opened for

ONE (1) CUES PORTABLE CCTV SYSTEM

together with all incidental and appurtenant equipment and services necessary thereto, and in accordance with the provisions and specifications therefore, which are on file in the Purchasing Division of the City of Ontario.

Copies of the above mentioned proposal may be obtained by interested parties by contacting the Purchasing Division at (909) 395-2012 or by visiting www.ci.ontario.ca.us and selecting "Current Bids & Proposals" under "Quick Links" of the City home page.

All bids shall be submitted in a sealed envelope plainly marked on the outside, "Cues Portable CCTV System, Bid No. 07.06-01" with the bidder's name and address in the upper left hand corner. Each bid must be submitted on the Bid Response Form included in the bid package also available at the Records Management counter in City Hall.

The City Council reserves the right to reject any or all bids in the best interest of the City.

Ilona De Rosa, C.P.M.
Purchasing Supervisor

Post-It™ brand fax transmittal memo 7671			
To	Jose Martin	From	Ilona
Co.	Plumbers Dept	Co.	
Dept.		Phone #	909 395-2460
Fax #	310-355-1711	Fax #	

PURCHASING DIVISION
303 East "B" Street
Ontario, California 91764
Telephone (909) 395-2012

FORMAL BID NO. 07.06-01

REQUIREMENT: One (1) Cues Portable CCTV System

DATE OF OPENING: Bids for furnishing the above must be received in the Records Management Department of the City of Ontario, 303 East "B" Street, Ontario, CA 91764 by 11:00 a.m., Monday, June 25, 2007, at which time they will be publicly opened.

TRANSPORTATION: All transportation charges to be paid by the bidder.

EXCISE TAX: The City is exempt from Excise Tax. Exemption Certificates will be furnished when required.

SALES OR USE TAX: Bidder shall add sales or use tax as a separate item on bid.

BID BOND: WILL NOT be required.

PAYMENT TERMS: Bidders shall state payment terms offered. Payment will be made only after acceptance of goods and receipt of invoice. The City's payment cycle takes approximately 30 days after receipt of invoice.

ENCLOSURES:

General Bid Conditions
Bid Specifications
Non-Collusion Affidavit
Bid Response Form

CONTACTS:

Purchasing Inquires: Ilona DeRosa
General Services Dept.-Purchasing Div.
(909) 395-2456

Technical Inquires: Victor Moraga, Utilities
(909) 395-2685

**CITY OF ONTARIO
General Bid Conditions**

1. INSTRUCTIONS TO BIDDERS

- 1.1 **PROPOSAL** All proposals shall be made on the attached "Bid Response Form." All equipment, supplies or materials proposed herein must be NEW unless otherwise stated in the "Bid Specifications."
 - 1.2 **EXCEPTIONS TO SPECIFICATIONS** Any proposed exception to the specifications must be fully explained in writing and attached to the proposal. The City Council reserves the right to accept any changes to the specifications.
 - 1.3 **IRREGULARITIES** Should a bidder find any discrepancies or omissions in the plans or specifications, he may request an interpretation from the City General Services Director.
 - 1.4 **DELIVERY OF BIDS** All bids shall be delivered in sealed envelopes or packages plainly marked on the outside, "One (1) Cues Portable CCTV System, Bid No. 07.06-01" with the bidder's name and address in the upper left hand corner. Bids arriving after the designated time will not be considered. The Recorder's Management clock is the prevailing clock.
 - 1.5 **ESTIMATED QUANTITIES** The quantities set forth in the specification document are approximate and represent the estimated requirements for the City for the contract period. The actual quantity of materials necessary may be more or less than the estimate listed in the specifications document, but the City shall be neither obligated nor limited to any specified amount.
 - 1.6 **BID PRICES** Bidders must state on the proposal form if the bid prices will remain for the full contract period.
 - 1.7 **LOCAL BIDDER PREFERENCE** Bids from vendors located within the City limits of Ontario will be evaluated based on a one (1) percent discount from their bid price due to the ultimate receipt by the City of a proportionate amount of the Sales Tax.
 - 1.8 **AWARD OF CONTRACT** The City Council reserves the right to accept any part of proposal submitted, unless otherwise stated on the proposal form. The bid will be awarded to the most responsible and responsive bidder, at the direction of the City Council.
 - 1.9 **REJECTION OF BIDS** The City Council reserves the right to reject any or all bids.
 - 1.10 **BIDDER'S SPECIFICATIONS** Each bidder is requested to furnish three (3) copies of detailed specifications with their proposal. Additional information for evaluation purposes should also be submitted with bid.
 - 1.11 **LEGAL ADDRESS** The address given in the proposal shall be considered the legal address of the bidder.
 - 1.12 **INSPECTION** Unless otherwise stipulated, all materials or equipment purchased under the contract resulting from this bid will be inspected at the City's specified receiving points and there accepted or rejected.
 - 1.13 **NON-COLLUSION AFFIDAVIT** Bidder shall declare that the only persons or parties interested in the proposal as principals are those named therein; that no officer, agent, or employee of the City of Ontario is personally interested, directly or indirectly, in the proposal; that the proposal is made without connection to any other individual, firm or corporation making a bid for the same work; and that the proposal is in all respects fair and without collusion or fraud.
2. **GENERAL GUARANTEE** Unless otherwise provided in the specifications, the supplier shall guarantee for a period of one year after final completion and acceptance of the entire contract work that all equipment, materials and workmanship furnished shall be free from defects. Supplier shall repair or replace all such defective equipment, materials or workmanship F. O. B., Ontario, California.
3. **BID BOND** Bid Bonds shall be furnished by all bidders in the amount of 10% of the bid, if required on the face of the Formal Bid Package. Said bid bond will be a guarantee that the bidder will enter into a contract to furnish the proposed materials or equipment at the prices stated. Cash, Certified or Cashier's check, or Money Order may be submitted in lieu of a Bid Bond.
4. **ACCEPTANCE OF PROPOSAL** Unless otherwise stated, the proposals shall be subject to acceptance by the City within a period of ninety (90) days after date of bid opening.
5. **BIDDER'S PROPOSAL** The bidder shall complete the "Bid Response Form" in its entirety. It shall be signed by the individual, a partner, or an officer of the corporation authorized to bind corporation.

**SPECIFICATIONS FOR THE CITY OF ONTARIO
CUES PORTABLE CCTV SYSTEM**

NOTICE: "SPECIAL INSTRUCTIONS TO THE BIDDER"

Equipment: Bidder shall complete right hand column indicating specific size and/or make and model of all components when not exactly as specified. State "As Specified" if item is exactly as set forth in the left hand column.

FAILURE TO COMPLETE RIGHT HAND COLUMN WILL INVALIDATE BID

**As Spec or
Exception**

Equipment to be Supplied:

Portable Color TV Inspection System

General Provisions:

1. The City of Ontario, CA, is soliciting bids for a portable Closed Circuit Television Sewer Line Inspection System to be integrated with their present Granite XP data acquisition system that will be equipped with a system as described below. The City of Ontario reserves the right to require any perspective bidder to demonstrate the equipment described on this bid specification within 2 weeks of the bid opening. The system must be capable of running all CUES cameras and transporters owned by the city of Ontario.
2. The perspective bidder must state clearly all exceptions taken to the bid specifications or they will be deemed non-responsive. If a bidder states they meet the bid requirements, but it is found during the bid evaluation or demonstration that the equipment does not meet the bid requirements, this will be basis for disqualification.
3. The system can be demonstrated to work with the city's present Granite XP system.
4. Please supply 10 references of the equipment in the options described as steerable wheeled transporter for 6" - 24" pipe. The city will not accept any units that have not been in production for a minimum of 1 year. Supply a list of these references on a separate sheet.

As specified

As specified

As specified

As specified

- | | |
|---|--|
| 5. The length of the steerable camera / transporter assembly cannot exceed 19.5". It must operate in 6" relined through 24" pipe and be able to pull the minimum of 1200 ft. high strength multi conductor cable. | As specified |
| 6. The transporter must have a built in two-speed transmission to double the torque of the drive train when the large tires are installed. | As specified |
| 7. The transporter must have a rear tip up connector to minimize stress on the cable and connections during insertion and retrieval. | As specified |
| 8. The camera must have 40:1 digital / optical zoom ratio. | As specified |
| 9. The supplier cannot provide third party software. The supplier is expected to have expended the funds to write and support their own data acquisition software. Third party software will not be accepted. | As specified |
| 10. The video cable reel must have an auto payout feature that automatically tracks the speed of the transporter and synchronizes the feed out of the cable with the transporter speed to minimize cable drag on the transporter drive train. | As specified |
| 11. The camera must connect directly to the transporter with no external cables. | As specified |
| 12. The system must have a portable hand-held controller that can control all transporter, reel, and camera functions to include steering, camera movements and reel. | As specified |
| 13. Perspective Supplier must have a service center within a 30 mile radius of the city of Ontario that stocks parts, has repair facilities for the pan and tilt zoom camera, and loaner equipment. This facility must be an authorized distributorship and have at least a one-year relationship with the perspective bidder stocking parts, completing repairs, and loaner equipment. List address, contact, and phone number. The city of Ontario reserves the right to visit this facility for an audit before the bid award. | CUES West
1943 S. Augusta Court
Ontario, CA 91761
909-923-2001
Contact: Tom Rebozo |
| 14. Delivery: Must occur within 90 days of receipt of order. | As specified |
| 15. Video Cable must be lightweight / high strength with a maximum diameter of .375" and maximum weight of 63 | As specified |

lbs. per 1000 ft. A 1200 ft. length must be supplied. Cable weighing 65 lbs or more per 1000 ft. will not be acceptable.

As specified

16. Inter-local Purchase: Any city, county, or government institution can complete an inter-local or "piggyback" purchase based on the configuration and pricing of this bid for a period of 2 years after the bid award.

As specified

Equipment List:

Each camera, camera transporter, and external lighthouse to be supplied on this specification must be labeled and listed as a minimum by a Nationally Recognized Testing Laboratory (NRTL) to the applicable Standard for Safety for Closed Circuit Television Equipment, UL 2044, 2nd edition, 11/9/01. A listing report must be supplied that certifies the aforementioned equipment is acceptable as defined by 29 CFR 1910.399 and required by 29 CFR 1910.303(a). Self-certification or certification by a laboratory that is not an NRTL will be deemed unacceptable. NRTL labeled and listed equipment shall be supplied as required by the FEDOSHA memorandum, dated September 25, 2002, page 3, Section on Compliance, prepared by John L. Henshaw, Assistant Secretary of Occupational Safety and Health.

As specified

- 1 Combination Color Mini-Camera Control System/Monitor (120 volt/ 60 Hz NTSC) mounted in a transportation vibration proof cabinet to include:

As specified

- 1 10" Flat Screen Monitor
- 1 Set Connecting Jacks for Video In and Video Out
- 1 Power supplies to operate all CUES track and wheeled and transporters
- 1 Full Length Sun Shield Protective Cover
- 1 Wireless receiver
- 1 ATA rated carrying / transport case

- 1 Integral Data Display System to include:

As specified

- 1 Alpha Numeric Information Display, with Multi Paging and Defect Coding
- 1 Remote "QWERTY" Keyboard for Data Entry
- 1 On screen footage display
- 1 Built in video cable diagnostics
- 1 Built in Camera diagnostics
- 1 Must display transporter speed on screen

- | | |
|---|---------------------|
| <ul style="list-style-type: none"> 1 PACP codes must be programmed and displayed 1 Inclinator display if Inc. is supplied in camera | <p>As specified</p> |
| <p>1 Universal Hand Held Portable Controller, Wireless to include: - Mounted and can be removed for hand portable use</p> | |
| <ul style="list-style-type: none"> a. Wireless transmitter. b. Logitech Joystick control for pan and tilt zoom camera to include 360 degree rotate, 330 degree optical pan. Transporter. c. Logitech Joystick control for all steering functions and forward / reverse directions for the transporter. d. Camera lift control for optional electronic camera lift. e. All other controls to include camera iris and focus override, zoom, camera lights, shutter control for light enhancement, and auto home. f. Cruise control to set speed of transporter for hands off operation. g. All reel controls to include retrieve, release, and variable speed. h. All controls for reel must be on the same hand held controller. | <p>As specified</p> |
| <p>1 OZIII Pan, Tilt, and Zoom Camera System to include:</p> | |
| <ul style="list-style-type: none"> 1 Solid State Color Sewer TV Camera with a Pan & Rotate Camera Head, 40:1 Zoom Ratio, 10x Optical Zoom, 4x Digital Zoom, NTSC Color Standard, 4x Light Integration 1 Camera Controller 1 Camera Lighting System, built in for 6" through 30" pipe, White LED 1 Camera Transportation and Storage Case 1 Camera head must pan and tilt within a 4" sphere. | <p>As specified</p> |
| <p>1 Pipeline Data Collection & Real Time Video Capture System, Rack Mount, to include:</p> | |
| <ul style="list-style-type: none"> 1 Desk top Color Ink Jet Printer, 600x300 dpi, 512K | <p>As specified</p> |

- | | |
|---|---------------------|
| <ul style="list-style-type: none"> 1 Windows XP Professional Operating System 1 GRANITE XP Inspection Edition Version 2.0 Software 1 User Guide, Hard-copy 1 User Guide, CD 1 Quick Reference Card, Menu Shortcuts 1 One Year Enhanced Software Support 1 PACP Software Module | <p>As specified</p> |
| <ul style="list-style-type: none"> 1 Provide Laptop Computer 600MHz Intel Celeron® Notebook with 12.1 inch Display | <p>As specified</p> |
| <ul style="list-style-type: none"> 1 Combination VCR/DVD Player/Recorder System to include: <ul style="list-style-type: none"> 1 Rack Mount for VCR/DVD 1 Sony RDR VX500 VCR/DVD player/recorder 1 Cable Assembly - DVD to Power Control Unit | <p>As specified</p> |
| <ul style="list-style-type: none"> 1 Portable Cable Reel to include: <ul style="list-style-type: none"> 1 Electric Motor Rewind 1 Automatic Payout feature for video cable 1 Automatic Levelwind 1 Electronic Footage Meter 1 Mounting frame for Power Control Unit 1 Must have available Optional wheeled frame for easy transport | <p>As specified</p> |
| <ul style="list-style-type: none"> 1 Combination TV Transmission & Tow Cable Assembly to include: <ul style="list-style-type: none"> 1 1200' Multi Conductor Kevlar Fiber Armored Cable, .395" Diameter 1 Kevlar Armored Cable Terminal Connector 1 Stainless Steel bullet connection - field repairable - no scotch-cast accepted 1 Cable Strain Relief | <p>As specified</p> |
| <ul style="list-style-type: none"> 1 Self-propelled Compact Steerable Camera Transporter, Wheel Driven, to Include: <ul style="list-style-type: none"> 1 Steerable Unit Designed to Turn 360 Degrees Within its Own Radius 1 Set of Rubber Wheels to inspect 6" Pipe 1 Set of Rubber Wheels to inspect 8" Pipe 1 Set of Rubber Wheels to inspect 10" - 15" Pipe 1 Two Speed Transmission to Maximize Torque in Larger Diameter Pipe with Manual Shifter on Camera Carrier 1 The Unit Shall Have Forward, Free Wheel, and Powered Reverse Capabilities | <p>As specified</p> |

16

1	All Six (6) Wheel Drive Transporter Assembly to Include Motor and Enclosed Drive Train	As specified
1	Transporter Controller w/Automatic Safety Off Joystick Control for Full Proportional Steering of Transporter	
1	Tip-up Rear 12-pin Connector	
1	Transporter Control Unit	
1	Transporter / camera assembly cannot exceed 19.56"	
1	Camera must connect direct to the transporter. Exterior cable pigtail connector will not be acceptable.	
1	Equipment Retrieval Tool	As specified
1	Tiger Tail	As specified
1	Top Manhole Roller Guide	As specified
3	Training Days	As specified
1	Delivery	As specified

Optional Equipment:

Item 1:

1	GRANITE XP EXRI Bi-Directional Interface with 2 Days Web Ex Training by Software Engineers	As specified
---	--	--------------

Item 2:

1	GRANITE XP Azteca Interface Module	As specified
---	------------------------------------	--------------

17

NON-COLLUSION AFFIDAVIT

STATE OF ~~CALIFORNIA~~ FLORIDA)
COUNTY OF ORANGE)

David Doolittle, being first duly sworn, deposes and says
(Name of Affiant)

that he/she is Vice President of ELXSI d/b/a CUES
(Title) (Name of Bidder)

the party making the foregoing bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.


(Signature)

David Doolittle, Vice President.

(Typed Name)

6/20/07

(Date)

**BID RESPONSE FORM
BID NO. 07.03-02**

Please submit your bid price for each item requested below. The City reserves the right to order more, less, or no items at the "per unit cost" stated in the bid proposal. The City reserves the right to award its total requirements to one bidder, or to apportion those requirements among several Bidders as the City may deem to be in its best interests.

<u>Qty</u>	<u>Unit</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Amount</u>
1	EA	Cues Portable CCTV System	\$ 89,990.00	\$ 89,990.00
Sub-Total:			\$89,990.00	
Sales Tax (7-3/4 %):			\$6,967.25	
Net Cost to City:			\$96,957.25	

Optional Equipment Cost Item 1: \$12,900.00

Optional Equipment Cost Item 2: \$7,450.00

EXCEPTIONS OR DEVIATIONS: None

PROMISED DELIVERY: 90 Days ARO working days after award.

NUMBER OF DAYS BID VALID: 90

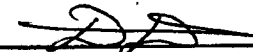
TERMS OFFERED: Net 30 days

Upon the acceptance of this proposal the undersigned hereby agrees to furnish and deliver the items as described in the accompanying specifications at the prices stated.

COMPANY NAME: ELXSI d/b/a CUES

ADDRESS: 3600 Rio-Vista Avenue, Orlando, FL 32805

PHONE NUMBER: 800-327-7791 FAX: 407-425-1569

AUTHORIZED SIGNATURE:  TITLE: Vice President

PRINT NAME: David Doolittle DATE: 6/20/07

CONTACT PERSON: Paul Stenzler 94-2691593

E-MAIL ADDRESS: PaulS@cuesinc.com Federal I.D. Number

COOPERATIVE PURCHASING CLAUSE Other public agencies located in Southern California shall have the option to participate in any award resulting from this solicitation. Bidders shall state whether said option is granted:
Yes ☒ , No ☐

** See enclosed Optional Equipment Price Page for additional equipment available **

19



Equipment to be Supplied:

Portable Color TV Inspection System

EQUIPMENT LIST:

Each camera, camera transporter, and external lighthouse to be supplied on this specification must be labeled and listed as a minimum by a Nationally Recognized Testing Laboratory (NRTL) to the applicable Standard for Safety for Closed Circuit Television Equipment, UL 2044, 2nd edition, 11/9/01. A listing report must be supplied that certifies the aforementioned equipment is acceptable as defined by 29 CFR 1910.399 and required by 29 CFR 1910.303(a). Self-certification or certification by a laboratory that is not an NRTL will be deemed unacceptable. NRTL labeled and listed equipment shall be supplied as required by the FEDOSHA memorandum, dated September 25, 2002, page 3, Section on Compliance, prepared by John L. Henshaw, Assistant Secretary of Occupational Safety and Health.

- 1 **Combination Color Mini-Camera Control System/Monitor (120 volt/ 60 Hz NTSC) mounted in a transportation vibration proof cabinet to include:**
 - 1 10" Flat Screen Monitor
 - 1 Set Connecting Jacks for Video In and Video Out
 - 1 Power supplies to operate all CUES track and wheeled and transporters
 - 1 Full Length Sun Shield Protective Cover
 - 1 Wireless receiver
 - 1 ATA rated carrying / transport case
- 1 **Integral Data Display System to include:**
 - 1 Alpha Numeric Information Display, with Multi Paging and DefectCoding
 - 1 Remote "QWERTY" Keyboard for Data Entry
 - 1 On screen footage display
 - 1 Built in video cable diagnostics
 - 1 Built in Camera diagnostics
 - 1 Must display transporter speed on screen
 - 1 PACP codes must be programmed and displayed
 - 1 Inclinator display if Inc. is supplied in camera
- 1 **Universal Hand Held Portable Controller, Wireless to include: - Mounted and can be removed for hand portable use**
 - a. Wireless transmitter
 - b. Logitech Joystick control for pan and tilt zoom camera to include 360 degree rotate, 330 degree optical pan. transporter
 - c. Logitech Joystick control for all steering functions and forward / reverse directions for the transporter
 - d. Camera lift control for optional electronic camera lift
 - e. All other controls for to include camera iris and focus override, zoom, camera lights, shutter control for light enhancement, and auto home.
 - f. Cruise control to set speed of transporter for hands off operation.
 - g. All reel controls to include retrieve, release, and variable speed.
 - h. All controls for reel must be on the same hand held controller
- 1 **OZIII Pan, Tilt, and Zoom Camera System to include:**
 - 1 Solid State Color Sewer TV Camera with a Pan & Rotate Camera Head, 40:1 Zoom Ratio, 10x Optical Zoom, 4x Digital Zoom, NTSC Color Standard, 4x Light Integration
 - 1 Camera Controller
 - 1 Camera Lighting System, built in for 6" through 30" pipe, White LED
 - 1 Camera Transportation and Storage Case



- 1 Camera head must pan and tilt within a 4" sphere.
- 1 **Pipeline Data Collection & Real Time Video Capture System, Rack Mount, to include:**
 - 1 Desk top Color Ink Jet Printer, 600x300 dpi, 512K
 - 1 Windows XP Professional Operating System
 - 1 GRANITE XP Inspection Edition Version 2.0 Software
 - 1 User Guide, Hard-copy
 - 1 User Guide, CD
 - 1 Quick Reference Card, Menu Shortcuts
 - 1 One Year Enhanced Software Support
 - 1 PACP Software Module
- 1 **Provide Laptop Computer 600MHz Intel Celeron® Notebook with 12.1 inch Display**
- 1 **Combination VCR/DVD Player/Recorder System to include:**
 - 1 Rack Mount for VCR/DVD
 - 1 Sony RDR VX500 VCR/DVD player/recorder
 - 1 Cable Assembly - DVD to Power Control Unit
- 1 **Portable Cable Reel to include:**
 - 1 Electric Motor Rewind
 - 1 Automatic Payout feature for video cable
 - 1 Automatic Levelwind
 - 1 Electronic Footage Meter
 - 1 Mounting frame for Power Control Unit
 - 1 Must have available Optional wheeled frame for easy transport
- 1 **Combination TV Transmission & Tow Cable Assembly to include:**
 - 1 1200' Multi Conductor Kevlar Fiber Armored Cable, .395" Diameter
 - 1 Kevlar Armored Cable Terminal Connector
 - 1 Stainless Steel bullet connection – field repairable – no scotch-cast accepted
 - 1 Cable Strain Relief
- 1 **Self-propelled Compact Steerable Camera Transporter, Wheel Driven, to Include:**
 - 1 Steerable Unit Designed to Turn 360 Degrees Within Its Own Radius
 - 1 Set of Rubber Wheels to inspect 6" Pipe
 - 1 Set of Rubber Wheels to inspect 8" Pipe
 - 1 Set of Rubber Wheels to inspect 10" – 15" Pipe
 - 1 Two Speed Transmission to Maximize Torque in Larger Diameter Pipe with Manual Shifter on Camera Carrier
 - 1 The Unit Shall Have Forward, Free Wheel, and Powered Reverse Capabilities
 - 1 All Six (6) Wheel Drive Transporter Assembly to Include Motor and Enclosed Drive Train
 - 1 Transporter Controller w/Automatic Safety Off
 - 1 Joystick Control for Full Proportional Steering of Transporter
 - 1 Tip-up Rear 12-pin Connector
 - 1 Transporter Control Unit
 - 1 Transporter / camera assembly cannot exceed 19.56"
 - 1 Camera must connect direct to the transporter. Exterior cable pigtail connector will not be acceptable.



Ontario, CA

- 1 Equipment Retrieval Tool**
- 1 Tiger Tail**
- 1 Top Manhole Roller Guide**
- 3 Training Days**
- 1 Delivery**

Optional Equipment:

Item 1:

- 1 GRANITE XP EXRI Bi-Directional Interface with 2 Days Web Ex Training by Software Engineers**

Item 2:

- 1 GRANITE XP Azteca Interface Module**

THE STANDARD OF THE INDUSTRY

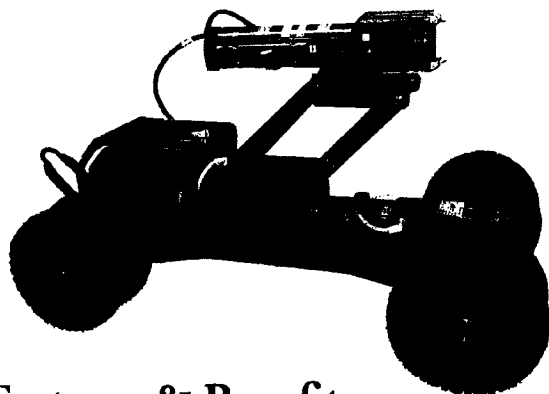
CUES

STEERABLE MUDMASTER

Multi and Single Conductor III Wheeled Transporters

The Steerable Mudmaster is a camera transporter that's specifically designed with the necessary weight, power, high clearance, and all wheel drive for pipelines ranging from 24" to 200". The unit is designed to operate with 2000' of single-conductor cable or 1500' of multi-conductor cable and combines high ground clearance with pneumatic tires to provide the traction and camera stability that's required for operation under the most adverse pipeline conditions including high flow, deep mud, sand and large amounts of debris. Optional tandem wheels are available.

The Steerable Mudmaster can turn 360 degrees within its own radius and traverse pipelines with multiple 45 and 90-degree bends. The waterproof remote-operated camera lift can be inserted through a 19" diameter manhole with the camera in the lowest position to preclude the operator from confined space entry. This rugged all wheel drive robot can operate all CUES cameras, including OZ (Optical Zoom Pan and Tilt series) and Night Lite pan and tilt. The unique portable joystick controller enables the operator to control all transporter, camera, and camera lift functions with one hand! Non steerable units with remote or manual camera lifts are also available.

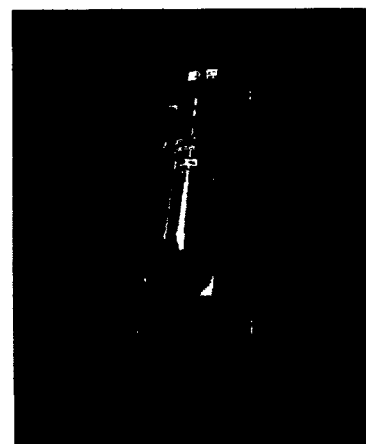
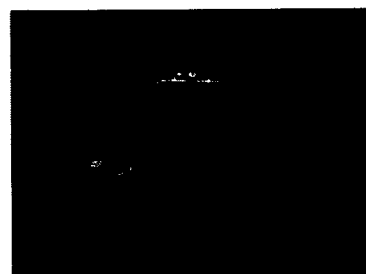


*operates with multi &
single conductor systems!*



Features & Benefits:

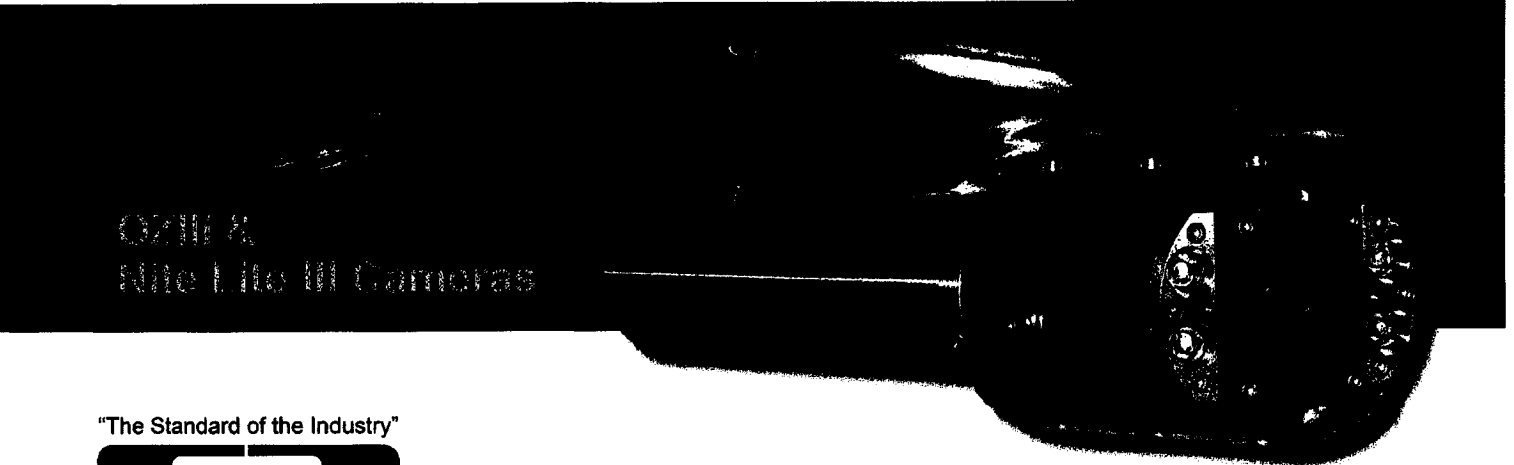
- Operates with CUES multi or single conductor systems
- Can operate on all truck-mounted and portable systems
- Operates with all CUES cameras
- Four or eight (tandem) wheels provide greater traction in all types of pipe, under all conditions
- Matched weight and power to maximize efficiency and capability
- Simple dual-wheel installation and captured hardware
- Remote-operated adjustable camera lift to position the camera for best available picture; stable center of gravity when the camera lift is extended
- Inspects 24" through 200" lines
- Rugged, durable and sealed to eliminate water intrusion
- 255 watt light system, variable, adjustable, 3 lamps (2-lamps for single-conductor III units-170 watts total)
- The unit has variable speed drive, power forward, power reverse, and freewheel capabilities
- Flight stick controller to control the transporter and camera movements with one hand; provides operational simplicity
- Operates on 2000' (maximum) of single conductor cable; 1500' of multi conductor cable
- Fits through a manhole with an inside diameter of 19"
- Provide maximum traction on wet or dry surfaces through all types of sediment
- Can turn 360 degrees within its own radius and traverse curved pipe; can turn at 90 degree elbows and tees within larger pipelines; can traverse pipelines with multiple 45 and 90-degree bends
- Utilizes all-wheel drive in conjunction with a low center of gravity to traverse and steer through pipelines
- Longer wheel base to prevent accidental roll-over
- Dual motors to ensure adequate power for longer inspections
- High-clearance for operation in debris-filled pipes



Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com

23



OZIII &
The New III Cameras

"The Standard of the Industry"



OZIII

Pan and Tilt Optical Zoom Camera

The OZIII optical zoom pan-and-tilt camera system offers built-in directional field replaceable lighting for 6" to 36" pipe to produce the highest quality image to enhance the details of your CCTV inspection. The OZIII camera provides up to 40:1 optical/digital zoom, automatic focus, remote focus and iris control to assure the best quality video within varying pipe conditions. This compact zoom pan and tilt camera can operate within a 4" circle! The robust design of the OZIII camera includes protective forks for the camera head to protect it during insertion and retrieval and to shield it from roots and other obstructions in the pipe. Get the finest detailed video inspections with the CUES OZ III (Optical Zoom) Camera!

This unit can be used in conjunction with the steerable Compact Pipe Ranger (CPR) to inspect 6" relined through 30" sanitary and storm sewers and connects directly to the CPR transporter with no exterior wires or cables. When the OZ III is installed on the CPR transporter, it produces a compact assembly only 19.5" long with superior pulling power and the ability to negotiate difficult entry conditions and standard 45- and 90-degree sweeps and turns.

CUES "Light Enhancement Technology" eliminates the need for an external lighthouse! Easy operation at the controller allows the operator to change the sensitivity of the camera at their fingertips! There's no need to remove the camera to install an external lighthouse if the pipe material or pipe diameter changes! Let the CUES "Light Enhancement Technology" do it for you!

NITE LITE III

Pan and Tilt Camera

The Nite Lite III is a unique pan-and-tilt inspection camera that incorporates the latest video technology to provide up-close imaging of pipe walls and surfaces during sewer line inspections of 6" relined pipe through 200" diameter pipe. The multi-conductor Nite Lite III pan-and-tilt camera system offers unparalleled imaging technology to produce the clarity of pictures with enhanced detail. The Nite Lite III camera is designed to pan 285 degrees and rotate 360 degrees. Remote control for iris and focus is provided to assure the highest picture quality in unusual or special conditions.

Easy Upgrade to the OZIII optical zoom camera!

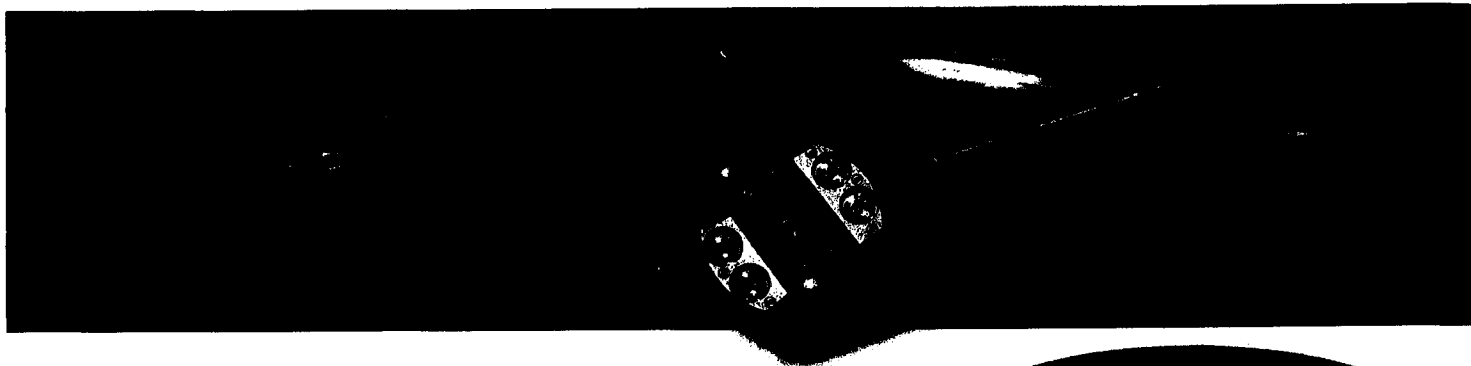
The Nite Lite III can be easily upgraded to include 10x optical zoom and 4x digital zoom! Refer to the OZIII information in this brochure!

24

Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com





"The Standard of the Industry"



OZII

Pan and Tilt Optical Zoom Camera

Available in multi or single conductor format, the OZII optical zoom pan-and-tilt camera system offers unparalleled imaging technology and built-in lighting for 6" to 72" pipe to produce clarity of picture with enhanced detail. Auxiliary lighting is available to inspect 84" through 200" diameter pipe. The OZII camera provides up to 40:1 optical/digital zoom, automatic focus, remote focus and iris control to assure the highest quality picture within varying pipe conditions. When an obstruction blocks movement in a pipe or for quick-look inspections, details can be observed from far-away distances with perfect clarity. Inspection of multiple lines adjoining junction boxes can be completed without traversing the lines! Get the finest detailed video inspections with the CUES OZ II (Optical Zoom) Camera!

CUES "Light Enhancement Technology" eliminates the need for an external lighthouse! Easy operation at the controller allows the operator to change the sensitivity of the camera at their fingertips! There's no need to remove the camera to install an external lighthouse if the pipe material or pipe diameter changes! Let the CUES "Light Enhancement Technology" do it for you!

Features & Benefits:



- ◆ 10X optical zoom and 4X digital zoom; total 40:1 zoom capability
 - Enhances image details from faraway distances for inspection and assessment
- ◆ NTSC at 470 H lines of resolution
 - Higher image resolution means sharper pictures with maximum detail
- ◆ Sensitivity: 1.5 lux (F1.8, 1/60 s) and 0.13 lux (F1.8, 1/4 s) Electronic shutter speed: 1/4 to 1/10,000 s
 - Increased sensitivity provides brighter pictures with reduced lighting requirements
- ◆ 360 x 285 degree pan and rotate viewing capability
 - Detailed lateral inspection up to 250 feet without having to traverse the lateral
- ◆ Four field replaceable lights (available with white LEDs or halogen lamps)
 - Internal lights are directional with the moving camera head for optimum illumination in various pipeline conditions
- ◆ Back light compensation
 - No spotlight reflection blooming in image
- ◆ Auto-tracking white balance
 - Perfect color under all conditions
- ◆ Auto-focus
 - Quickly focus on an area of interest
- ◆ Manual override of focus, iris, and shutter
 - Flexible for unusual or special conditions
- ◆ Pan, rotate, zoom, and focus homing
 - Quick and easy to reorient to the current location
- ◆ Waterproof to 50 psi
 - Camera can be submerged in water over 100 feet deep without compromising integrity
- ◆ 400 degree rotation optical viewing angle; 331 degree pan viewing angle range
 - View minute defects and voids around the entire diameter of the pipe wall
- ◆ Compatible with up to 4000' multi-conductor cable and up to 2000' single-conductor cable
 - Camera is compatible with existing CUES TV inspection systems with minimal modification
- ◆ Can be used in pipelines as small as 5"
- ◆ Optical-grade sapphire camera window
 - Helps prevent image distortion
- ◆ Includes an internal diagnostic system
 - Continually monitors camera functions, including run time, serial number identification, camera head temperature, humidity, light supply voltage, and camera input voltage

Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com

25

Features/Benefits:

- Superior pulling power
- Wheels can be installed or removed from a single point of contact
- 2-speed transmission doubles the torque of the transporter for large pipe inspections
- Locking bayonet-style rear bulkhead connector - durable/stable
- Operates in 6" relined pipe through 30" diameter pipe
- Transporter assembly is a compact length of 19.5" with the optical zoom pan and tilt camera installed
- Full proportional steering and can complete a 360 degree turn within its own radius
- Use with your multi-conductor TV inspection vehicle to perform sewer-line inspections
- Four different wheel sets to accommodate your needs
- Optional high traction wheels available for slippery PVC pipe
- Operates with CUES OZIII & Nite Lite III Cameras

* Complete specifications are on the reverse side of this brochure



COMPACT PIPE RANGER (CPR) Multi-Conductor Wheeled Transporter

The Compact Pipe Ranger (CPR) is a lightweight, compact, and rugged steerable CCTV camera transporter that is used to inspect sanitary and storm sewers. It is made to traverse long distance and tough pipe conditions, and to facilitate ease of handling during insertion and retrieval.

The Compact Pipe Ranger (CPR) is designed to operate on a minimum of 1000' ft of multi-conductor TV cable to inspect 6" relined pipe through 30" diameter pipe. Its unique two-speed transmission doubles the torque of the unit to produce maximum pulling power in the larger diameter pipes! The Compact Pipe Ranger (CPR) includes full-proportional steering to traverse meandering pipe and 45 and 90 degree turns.

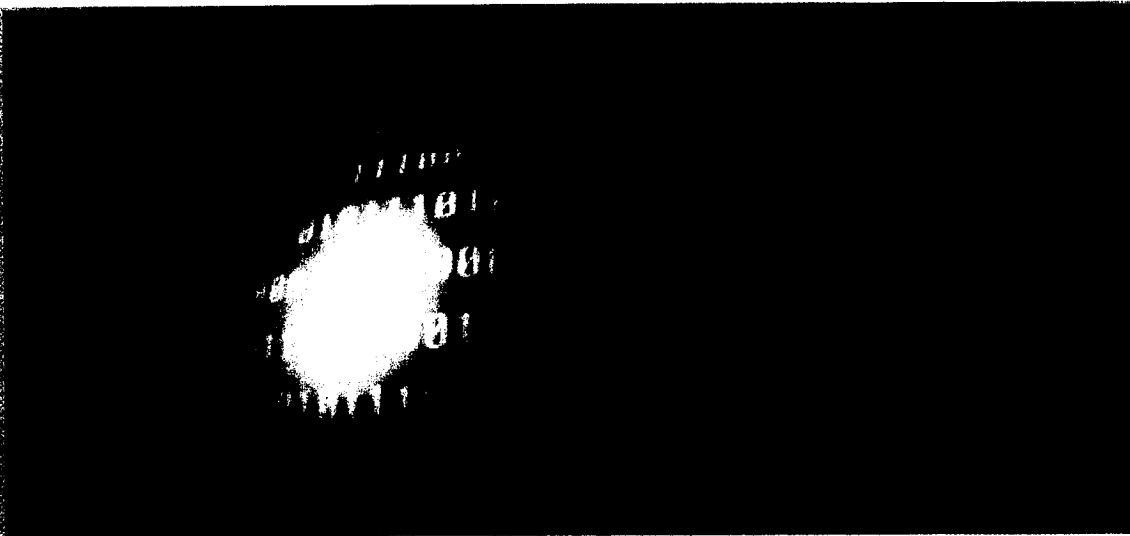
When assembled with the CUES OZIII zoom pan and tilt camera, the CPR has a length of only 19 1/2", enabling the unit to negotiate most difficult entry conditions and standard sweeps.

The superior pulling power of the CPR, combined with the optics and directional lighting of the compact OZ III zoom pan and tilt camera (with the ability to rotate in a 4" circle), creates video inspection quality that's unsurpassed in the industry. CPR operates most efficiently with the new CUES lightweight / high strength multi conductor video cable. This rugged cable does not compromise durability, abrasion resistance, or working strength like so many of the smaller diameter cable alternatives from Europe and other manufacturers.

Multiple wheel sets are available to maximize bottom-clearance, traction, and optimum camera position. Ease of operation is accomplished with one joystick control for all transporter and camera movements. A variable "cruise control" setting is also available for transporter speed-for hands-off operation!

.....
*Go the distance with the Compact
Pipe Ranger (CPR)! Contact Your
CUES Representative Today!*
.....

GRANITE^{XP}



Asset Inspection / Decision Support Software
for the Water, Wastewater, & Stormwater Industries

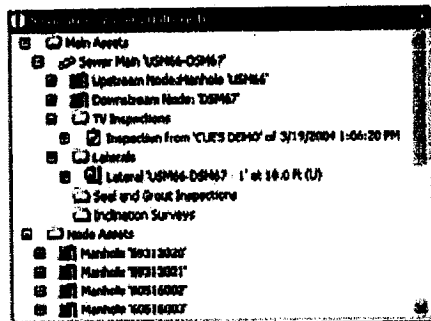
"The Standard of the Industry"



Version 020507

Precise Asset Data Enables Effective Regulatory Compliance!

How can you tell if a pipeline inspection package is Asset-based?



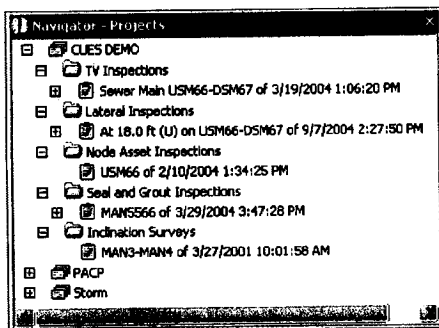
Browse/display by Assets

A
s
s
e
t
s

Can your software import an entire asset database? In Granite XP, separate database tables are created and maintained which allow an entire GIS asset database to be imported into the software and enable the information to be constantly updated (synchronized) with 'official' asset information from the municipality or City's master GIS database. We know of no other package which can do this.

This means that people are all able to look at the same master data and able to eliminate costly manual data entry errors and avoid asset naming discrepancies often found in inspection-based systems. Imperfect information often originates out in the field in trucks which creates cascading errors and inefficiencies throughout the entire municipality to correct and translate inspection information into precise asset information. With Granite XP, what used to take hours of manual data entry can now be performed more efficiently and exactly, with the click of a mouse allowing enormous productivity gains by your most important assets....your employees!

Precise Asset data enables effective regulatory compliance as well as creating the foundation for a proactive maintenance program. But Granite XP can still collect data the old fashioned way using the inspection-based method, should you prefer this, while simultaneously allowing for an Asset-based approach. You decide how you'd like to view the data - and that's one of the many powerful features that Granite XP provides.



Browse/display by Projects

P
r
o
j
e
c
t
s

Granite XP offers two ways to organize and display pipeline inspections: the classic "project-based" method and the "asset-based" view of pipeline infrastructure. A project is defined as a set of inspections. The "Project Navigator" will display the set of inspections defined by the user, whereas the "Asset Navigator" will display all of the historical inspections of a particular asset.

Granite XP Editions

Which one is right for you?

Whether you're a truck operator, an IT professional, an Engineering firm, a municipality, or a GIS administrator, the CUES Granite XP Infrastructure Management Software is a solution designed to integrate all aspects of the TV inspection process. In order to meet the needs of different users, Granite XP offers 4 different Editions to meet your infrastructure assessment needs:

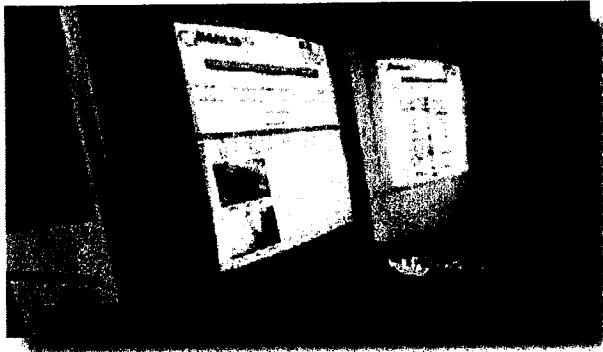
Inspection Edition - allows users to perform pipeline inspections out in the field often connected to camera systems to capture, assess and store inspection data.

Office Edition - allows users to manage inspection information and create customized inspection analysis in the form of reports, videos, still pictures, and database files to meet a wide array of data requirements. Capable of running on Enterprise databases such as Oracle 9i and SQL Server, the Granite XP Office Edition offers unmatched data synchronization power to enable multi-truck environments to manage disparate data within one master database. Additionally the Office Edition can import, export and manipulate data to meet virtually any requirement from GIS to PACP.

Engineering Edition - allows users to modify inspections and observations gathered in the field, to review existing data, synchronize inspections, capture images from playback and generate reports.

Viewer Edition - allows users to review and share information gathered during inspections and generate reports.





Key Advantages Unique to Granite XP!

Granite XP offers built-in flexibility and extensibility for continuous innovation and easy upgrading!

Extensibility - Granite XP is "future-proof"!

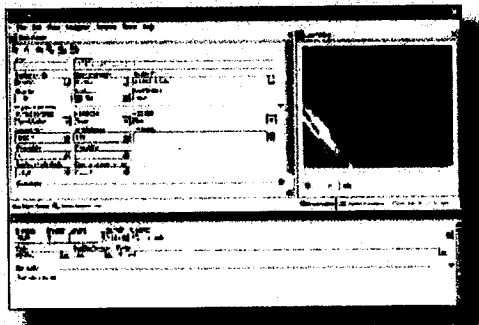
The revolutionary flexibility of Granite XP comes from the use of software plug-ins. Plug-ins provide the ability to add new features to Granite XP so that the core application can continually grow and accept new technologies from the vast spectrum of robotic devices that will enter the industry. With the use of plug-ins, third-party software, custom-designed modules, and asset infrastructure management systems can be easily integrated without rebuilding the program! What this means to our customers is that they can purchase various technology "modules" that they require on an "as needed" basis. When new equipment is purchased, a specific software module can be purchased as well when the time is right for your organization.

Multiple Compatibility Modes!

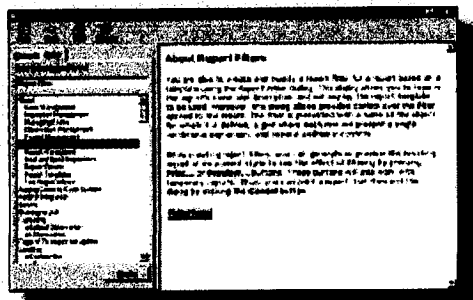
Compatibility Modes ensure that files and reports are fully compatible with other software products and standards. The Compatibility Modes that are currently available with Granite XP include Standard, Hansen, Azteca Cityworks, PACP, WRc, and WinCan. Each compatibility mode displays the correct fields and logic required for the selected system. You can activate multiple compatibility modes at the same time or change the mode without having to load different software! Contractors and Engineering firms who serve multiple customers can leverage Granite XP to accommodate the varying data format needs of their customers.

Flexible, Customizable Code Systems!

Granite XP includes a Code Editor that's equipped with several standard code systems, including PACP, WRc, and supports user-defined code systems. Each project can have its own code system and measurement units based on individual inspection requirements! A code system not only includes observation codes, but also pipe types, surface condition, operators, etc. Code "hotkeys" can also be implemented per your preferences and can be linked to actions, such as "Start Lateral Inspection". Granite XP also provides a quick and easy way to customize the fields and labels based on your specific requirements!



GRANITE XP'S SIMPLE USER INTERFACE



GRANITE XP'S INTEGRATED ONLINE HELP

Microsoft Windows™ Technology!

Granite XP uses familiar Microsoft Windows™ layout standards to provide simple, intuitive layout screens that are customizable to meet your needs depending on your preferences, including:

- Use of tool bars for operation
- Drop-down menus and auto-complete feature for quick and accurate selection and data entry
- Detailed HELP files available within the program
- Ability to create custom layouts with movable "panes" to create and save your favorite layout
- Easy navigation provided by Windows™ user-friendly tree-structure



Video Access By



ESRI and the ESRI logo are trademarks of ESRI, registered in the United States and certain other countries; registration is pending in the European Community.

"The Standard of the Industry"



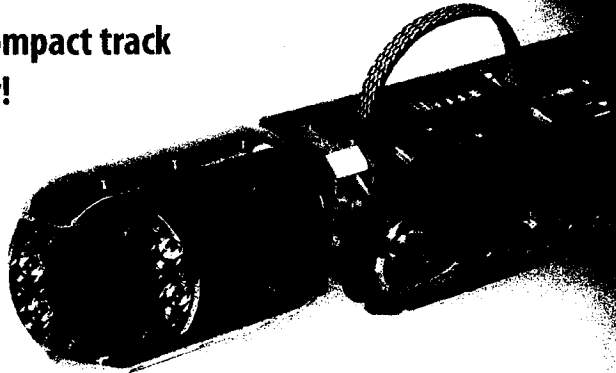
NEW!

ULTRA SHORTY

Variable Weight Tracked Transporter

Ultra Shorty III offers the most compact track transporter in the industry today!

When used with the CUES OZ III optical zoom camera, the total length of the camera / transporter assembly is only 23.5" long, with a width of 4.25" when set up to inspect 6" pipe. Maximum clearance is provided for 6" and 6" relined pipe. The Ultra Shorty III can inspect 6" relined to 24" lines with major offsets and protruding laterals. The Ultra Shorty III is provided with a built in protective housing and bulkhead connector to accommodate the mounting and direct connection of the CUES OZ III Zoom Pan and Tilt Camera. Weighted adapter blocks are available to optically center the camera, and increase traction and bottom clearance in 8" through 24" lines. With added versatility, the Ultra Shorty III with OZ III can be used with any multi-conductor system.



Maximize your advantage in 6" relined pipe!

Features & Benefits:

- Reduced camera/tractor length to 23.5" with optical zoom pan & tilt camera [OZ III]; allows line entry through inverts with limited space and traverses 22, 45, and 90 degree sweeps in smaller diameter lines
- * Built in connector and protective housing for direct insertion of the OZIII camera. No camera interface cables are required.
- * Reduced width (4.25") enables full pan and tilt / zoom capabilities in 6" relined pipe
- Proven transmission with power forward, freewheel and power reverse; high speed retract without running over the cable and easy to back out of a dropped manhole
- Weighted track extenders to optically center the camera; greater weight for increased traction, increase bottom clearance as pipe diameter increases
- Waterproof motor with bulkhead connector; protection against leaks and motor damage
- Self-cleaning drive sprockets; maximum performance in mud and sand
- Contoured high traction cleats; maximum pipe wall contact for greater traction
- Inspection speed can be optimized to match pipe size and conditions
- Operates in 6" relined to 24" lines; maximum versatility and applications
- Dual track fasteners; increases track and cleat life

30

Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com

THE STANDARD OF THE INDUSTRY

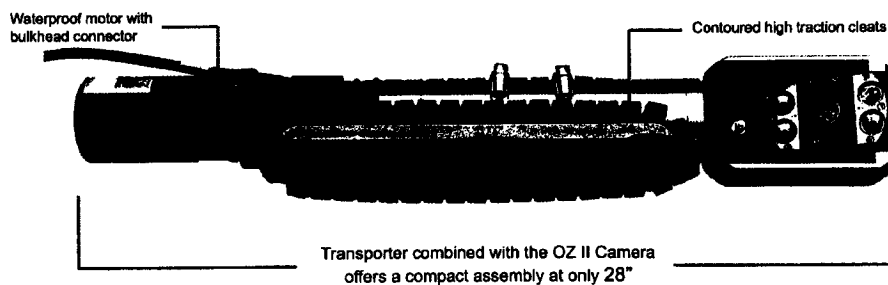
CUES

ULTRA SHORTY 21

Variable Weight Tracked Transporter

Ultra Shorty 21 offers the same quality and proven performance as the Ultra Shorty transporter but also provides a reduced length measuring under 21". This transporter can inspect 6" to 36" lines with major offsets and protruding laterals. Adapter blocks are available to optically center the camera in 30" to 36" lines. The Ultra Shorty 21 transporter combined

with the CUES OZ II optical zoom camera offers you one of the most compact assemblies in the industry at only 28" achieving maximum clearance in 6" or 6" relined pipe. For added versatility, the Ultra Shorty 21 can be used with your Inspector General mini-system. A retro kit is available to convert the Ultra Shorty to an Ultra Shorty 21.



One of the most compact assemblies in the industry!

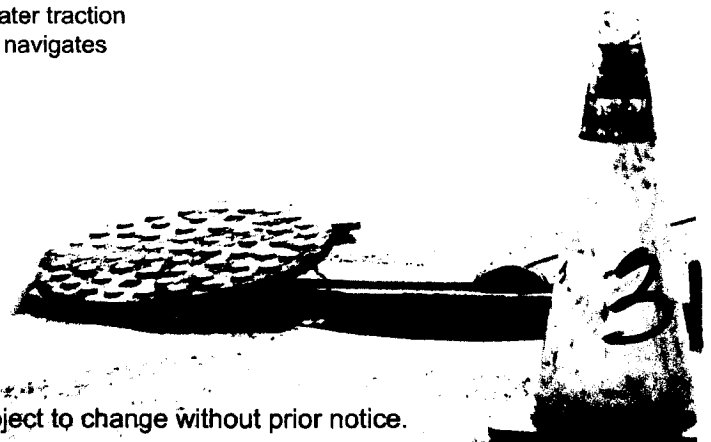


Features & Benefits:

- Reduced camera/tractor length to 28" with optical zoom pan & tilt camera [OZ II]; allows line entry through inverts with limited space and traverses 22, 45, and 90 degree sweeps in smaller diameter lines
- Proven transmission with power forward, freewheel and power reverse; high speed retract without running over cable and easy to back out of a dropped manhole
- Weighted track extenders that lift to optically center camera; greater weight for increased traction
- Waterproof motor with bulkhead connector; protection against leaks and motor damage
- Self-cleaning drive sprockets; maximum performance in mud and sand
- Contoured high traction cleats; maximum pipe wall contact for greater traction
- Greater than 1" top clearance and 1" bottom clearance in 6" lines; navigates through offsets and protruding laterals
- Operates in 6" to 36" lines; maximum versatility and applications
- Dual track fasteners; increases track and cleat life
- Inspection speed can be optimized to match pipe size and conditions

www.cuesinc.com
800.327.7791
Email: salesinfo@cuesinc.com

Specifications subject to change without prior notice.



Slopemaster Inclinometer

"The Standard of the Industry"



SLOPEMASTER Inclinometer

The Slopemaster grade verification inclinometer is designed to fully meet existing code requirements for pipeline television inspection and slope verification. Improperly installed or sunken lines often results in rapid pipe failure. Failures may include the accumulation of dangerous materials, debris, early fatigue, fractures, and open joints. In water waste lines, it can also include the heavy accumulations of grease, increased levels of hydrogen sulfide gas, foul odors, increased bacterial growth, internal/external leakage, corrosion and reductions in flow.

The heart of the system is a vertical sensing, single axis, precision, military grade inclinometer mounted on a single internal circuit board. It's accuracy, rugged construction, reliability, and wide range environmental parameters meet the special requirements necessary for accurate slope measurement in industrial and utility pipelines.

The Slopemaster operates with CUES multi conductor or single conductor TV inspection systems. The simultaneous display of the grade information with the live television picture precludes possible misinterpretation of slope due to debris, offset joints, etc., which is a restriction that's often found with measurement-only type verification systems.

The Slopemaster has a tilt-angle measurement range of ± 15 degrees with a maximum non-repeatable accuracy of less than 0.2 degrees. It is mercury free and does not contain any hazardous materials. The Slopemaster can be used with many CUES data display and recording systems. Data systems are available for automatic slope data collection, display, recording, and plotting.



The new CUES Inclinometer has been re-designed to read and transmit pipe grade variations in the range of ± 5 degrees from horizontal with an error of ± 0.2 degrees while providing greater stability over a wider range of conditions.

Features & Benefits:

- The system is supplied with a pipe grade verification system to detect and record variations in pipe angle from true horizontal.
- The inclinometer is able to read and transmit pipe grade variations of ± 5 degrees from horizontal ($\pm 8.7\%$ grade) with an error of ± 0.2 degree.
- Depending on the data system used in conjunction with the inclinometer, the data shall be able to be displayed in a numerical or graphical format, which may be printed or exported to an external database.
- The inclinometer includes a vertical sensing, single axis, precision sensor mounted internally to the camera.
- Pipe Grade Verification System (Inclinometer) can operate with all CUES pan & tilt and pan, tilt & zoom cameras (excluding CUES OZII sonde cameras).

32

Specifications subject to change without prior notice.

Visit our web site at www.cuesinc.com