



November 10, 2010

**REQUEST FOR PROPOSAL
2010-2011 SANITARY SEWER CCTV INSPECTION AND CLEANING
PROJECT NO. 2010-17**

Dear Sir/Madam:

The City of Barstow will receive sealed proposals until November 22, 2010 at 2:00 p.m. Proposals must be received by City of Barstow by the date and time herein above set forth. Deliver and/or mail responses to the RFP to:

**City of Barstow
220 E. Mountain View Street, Suite A
Barstow, California 92311
Attention: Domingo D. Gonzales, Assistant Engineering**

Proposals must be submitted in accordance with all provision to the specifications. Specifications, proposal forms, and further information may be obtained at the above address or by calling (760) 255-5156.

Should you have any further questions regarding this request for proposals, please feel free to call me at (760) 255-5156.

Sincerely,

City of Barstow

Domingo D. Gonzales
Engineer Assistant

TABLE OF CONTENTS

SECTION I. REQUEST FOR PROPOPOSAL (RFP)	1
SECTION II. GENERAL PROVISIONS.....	2
SECTION III. CONTRACT PROVISIONS	3
SECTION IV. PROPOSAL FORMAT AND CONTENT.....	6
SECTION V. EVALUATION PROCEDURES.....	8
SECTION VI. EVALUATION CRITERIA.....	8
ATTACHMENT A	A
COST PROPOSAL FORM.....	A
ATTACHMENT B	B
NON-COLLUSION AFFIDAVIT.....	B
ATTACHMENT C	C
ACKNOWLEDGEMENT OF INSURANCE REQUIREMENTS.....	C
ATTACHMENT D	D
TERMS AND CONDITIONS	D
ATTACHMENT E.....	E
SCOPE OF SERVICES	E
ATTACHMENT F.....	F
2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers	F
ATTACHMENT G	G
MAPS	G

SECTION I. REQUEST FOR PROPOPOSAL (RFP)

The City of Barstow will receive sealed proposals until November 22, 2010 at 2:00 p.m. Proposals must be received by City of Barstow by the date and time herein above set forth. Deliver and/or mail responses to the RFP to:

**City of Barstow
220 E. Mountain View Street, Suite A
Barstow, California 92311
Attention: Domingo D. Gonzales, Assistant Engineer**

No Pre-Proposal meeting has been scheduled as part of this RFP.

Proposal must be submitted in accordance with all provision to the specifications. Specifications, proposal forms, and further information may be obtained at the above address, or by telephone at (760) 255-5156.

ATTENTION SUBMITTORS

In addition to the above RFP, this package includes the following. If any items are missing from your proposal package, please contact the City of Barstow at the above telephone number.

General Provisions
Contract Provisions
Proposal Format and Content
Evaluation Criteria
Attachment A; * Cost Proposal Form
Attachment B, *Non-Collusion Affidavit
Attachment C, *Acknowledgement of Insurance Requirements
Attachment D, Terms and Conditions
Attachment E, Scope of Services
Attachment F, Guidelines for CCTV Inspection and Cleaning of Sanitary Sewers
Attachment G, 2010 CCTV Maps

*These pages must be submitted and sealed in the enclosed self-addressed envelope.

SECTION II. GENERAL PROVISIONS

The following general proposal provisions, contract provisions, proposal format and content, evaluation procedure, evaluation criteria, all attachments, Terms and Conditions (Attachment D) scope of services (Attachment E) including appendices provided herein shall apply to all proposals.

A. Request for Proposal, Forms and Certificates. All forms and certificates shall be completed in full with all blank spaces properly filled in using ink or typewriter. A duly authorized agent of the firm or company shall properly execute the Cost Proposal Form. Facsimile (FAX) transmission of proposals will not be accepted. The following items 1-6 listed below shall be included within the submitted package;

1. Letter of Offer (Section IV)
2. Technical Proposal (Section IV)

Items 3-6 listed below shall be submitted and sealed in a separate envelope within the submittal package:

3. Cost Proposal Form (Attachment A)
4. Non-Collusion Affidavit (Attachment B)
5. Acknowledgement of Insurance Requirements (Attachment C)
6. Acknowledgement of all Addendum Confirmation Forms, if applicable

B. Proposal Validity. Proposals submitted hereunder shall be valid for a period of not less than 90 calendar days from the date of submittal.

C. Disqualifications of Proposals. More than one proposal from any person, firm, partnership, corporation or association under the same or different names will not be accepted and reasonable grounds for believing that any Submitter is interested in more than one proposal will be cause for rejecting all proposals by that Submitter in which such Submitter is interested. Apparent collusion among the Submitters will likewise be sufficient cause for rejecting any or all proposals, and the participants in such collusion may be eliminated from future proposals, and the participants in such collusion may be eliminated from future proposing. The enclosed Non-Collusion Affidavit must be executed and submitted with the proposal (Attachment B)

Proposals in which the prices obviously are unbalanced may be rejected. The wording of the proposals shall not be changed. Any additions, conditions, limitations, or provisions inserted by the submitter will render the proposal irregular and may cause its rejection. Erasures or interlineations in the proposal must be explained and initiated by the Submitter. The City of Barstow reserves the right to reject any all proposals, extend deadlines, and enter into negotiations with any Submitter.

D. Receipt of Proposals. Three (3) copies of the proposal plus one (1) original proposal must be received in a sealed package at the City Clerks Office by the time and date called for. All proposal packages must have the Project Number Clearly marked on the outside of the package.

Any proposal(s) received after the time and date stipulated will be disqualified and returned to the Submitter(s), showing time and date received at City of Barstow. The official time is as indicated at the City Clerk's Office.

- E. Addenda.** Any City of Barstow change to the requirements will be made by written addendum to this RFP. Any written addenda issued pertaining to this RFP shall be incorporated into the terms and conditions of any resulting Contract. City of Barstow will not be bound to any modifications to or deviations from the requirements set forth in this RFP as the result of oral instructions. Submitters are not entitled to rely on any oral representations made by City of Barstow or its employees and agents.
- F. Clarifications.** Should an Submitter require clarification of this RFP, the Submitter shall notify The City of Barstow in writing in accordance with Section G below. Should it be found that the point in question is not clearly and fully set forth, The City of Barstow will issue a written addendum clarifying the matter, which will be sent to all persons who have requested the RFP.
- G. Inquiries.** Prospective Submitters are required to put all RFP questions, clarifications or comments in writing and fax to Domingo D. Gonzales at fax number (760) 256-1750, or e-mail dgonzales@barstowca.org. Questions, clarifications or comments must be received no later than 5:00 p.m. on November 10, 2010. The Submitters must verify that the City of Barstow received the fax or e-mail transmission.

SECTION III. CONTRACT PROVISIONS

- A. Contract.** CITY OF BARSTOW will require the Submitter to whom the contract is awarded (“Awarded Service Provider”) to enter into a Professional Service Agreement binding all the terms, conditions and provisions of the specifications defined in the Proposals and associated documents.
- B. Assignment of Contract.** This contract shall not be assigned by Service Provider without prior written authorization from CITY OF BARSTOW.
- C. Award.** CITY OF BARSTOW may negotiate contract terms with the tentatively selected Submitter prior to award, and expressly reserves the right to negotiate with several Submitters simultaneously and, thereafter, to award a contract to the Submitter offering the most favorable terms to CITY OF BARSTOW. CITY OF BARSTOW reserves the right to award its total requirements to one (1) Submitter or to apportion those requirements among several Submitters as CITY OF BARSTOW may deem to be in its best interest. In addition, negotiations may or may not be conducted with Submitters; therefore, the proposal submitted should contain Submitter’s most favorable terms and conditions, since the selection and award may be made without discussion with any Submitter. CITY OF BARSTOW reserves the right to award the contract to the Submitter it believes, in its sole discretion, is the most qualified, and may not award the contract to the apparent lowest Submitter.
- D. No Commitment to Award.** This RFP is not an offer. Issuance of this RFP and receipt of proposals does not commit CITY OF BARSTOW to award a contract. CITY OF BARSTOW expressly reserves the right to postpone the proposal opening, to accept or reject any or all proposals received in response to this RFP, to negotiate with more than one Submitter concurrently, or to cancel all or part of this RFP.
- E. Contract Term.** The services provided under this Contract shall be completed as outlined in the Scope of Work.
- F. Governing Law.** The Contract with the Awarded Service Provider shall be governed by the laws of the State of California.

- G. Termination.** CITY OF BARSTOW reserves the right to terminate the Contract, in whole or in part, without cause, at any time, by written notice to Awarded Service Provider. Such notice of termination shall release CITY OF BARSTOW from any further liability, fee, cost or claim by the Awarded Service Provider other than for work performed to the date of termination. Upon receipt of a termination notice, the Awarded Service Provider shall immediately discontinue all work under the Contract (unless the notice directs otherwise). CITY OF BARSTOW shall thereafter, within thirty (30) days of receipt of a valid invoice, pay the Awarded Service Provider for unpaid work performed to the date of termination.
- H. Payment and Invoicing.** Upon approval by an authorized CITY OF BARSTOW employee, CITY OF BARSTOW will pay, within 30 days after receipt of valid, itemized invoices, in a form acceptable to CITY OF BARSTOW to enable audit of the charges thereon. All such invoices shall be mailed to CITY OF BARSTOW, 220 E. Mountain View St, Suite A, Barstow, California 92311, attention Engineering.
- I. Pre-contractual Expenses.** Pre-contractual expenses are defined as any expenses incurred by the Submitter including, without limitation, the following: 1) preparing its proposal in response to this RFP; 2) submitting that proposal to CITY OF BARSTOW; 3) negotiating with CITY OF BARSTOW any related matter related to this RFP, including a possible contract; 4) engaging in any other activity prior to the effective date of award, if any, of a contract resulting from this RFP. CITY OF BARSTOW will not, under any circumstance, be liable for any precontractual expenses incurred by Submitters, and Submitters shall not include any such expenses as part of their proposals. The subsequent discovery by CITY OF BARSTOW of evidence such that expenses have been included in the Offer of the Awarded Service Provider will be considered a material breach of the Contract by that Provider resulting in a deductive Change Order in favor of CITY OF BARSTOW and termination of the Contract.
- J. Work Hours.** The work required by this proposal package may include normal business hours, evenings, nights and weekends. The Awarded Service Provider shall provide CITY OF BARSTOW with all required premiums and/or overtime work at no charge beyond the price provided in the Awarded Service Provider's proposal. **CITY OF BARSTOW will not pay Travel Time.**
- K. Damage to CITY OF BARSTOW Property.** Any CITY OF BARSTOW property damaged by the Awarded Service Provider, or its employees, agents or subcontractors, shall be repaired or replaced by the Awarded Service Provider at no cost to CITY OF BARSTOW.
- L. Prevailing Wage Law.** CITY OF BARSTOW is subject to the provisions listed in the prevailing wage determination made by the Director of Industrial Relations pursuant to California Labor Code, Sections 1770, 1773, and 1773.1. It is agreed that all provisions of law applicable to public contracts may be applicable to this contract. If required by law, Awarded Service Provider shall not pay less than the prevailing wage.
- M. Mojave Desert Air Quality Management District's (MDAQMD) Requirements.** It is the Awarded Service Provider's responsibility that all equipment furnished and installed be in accordance with the latest rules and regulations of the Mojave Desert Air Quality Management District (MDAQMD). All contract work practices, which may have associated emissions such as sandblasting, open field spray painting or demolition of asbestos containing components or structures, shall comply with the appropriate rules and regulations of the MDAQMD. Awarded Service Provider warrants that all functionality described in product user's manual has been tested to work for usage and data dates between January 1, 1900 and January 1, 2100. Should it

be determined that the product would stop or otherwise fail for dates in this range, then Awarded Service Provider shall provide at no additional cost to CITY OF BARSTOW a repair, upgrade or replacement in a timely fashion. If such repair or upgrade is not acceptable to CITY OF BARSTOW, then at the sole discretion of CITY OF BARSTOW, product may be returned to Awarded Service Provider for a full refund. This warranty shall be valid until the later of December 31, 2011 and 18 months after the first date of installation whichever is later.

- O. Insurance.** Submitters must meet all insurance requirements as outlined in Attachment C, the “Acknowledgement of Insurance Requirements and Certification of Ability to Provide Coverages Specified” affidavit, which must be executed and submitted with the proposal. Certificate of Insurance shall only be completed by the Awarded Service Provider and the Awarded Service Provider’s subcontractors, and CITY OF BARSTOW shall be an additional insured on Awarded Service Provider’s and the subcontractor’s comprehensive liability insurance coverages, with the right of subrogation waived as to CITY OF BARSTOW.
- P. Drug Free Workplace.** Awarded Service Provider’s employees, agents and subcontractors shall adhere to, and comply with, the California Drug Free Workplace Act at Government Code, Sections 8350 through 8357.
- Q. Safety.** Awarded Service Provider agrees to conform to, and comply with all applicable Federal and State Occupational Safety and Health Act (OSHA) regulations. Awarded Service Provider assumes complete responsibility for the safety of its employees, agents and subcontractors, and shall indemnify and hold harmless CITY OF BARSTOW from any claims, damages, fines, penalties or attorney’s fees and costs arising from any injuries or damages or claims relating to the Contract or services provided thereunder or related thereto. The Service Provider shall provide CITY OF BARSTOW with Material Safety Data Sheets (MSDS) for all applicable materials before the material is brought to the project site.
- R. Right to Review Services, Facilities, and Records.** CITY OF BARSTOW reserves the right to review any portion of the services performed by the Awarded Service Provider under this Contract, and the Awarded Service Provider agrees to cooperate to the fullest extent possible. The Awarded Service Provider shall furnish to CITY OF BARSTOW such reports, statistical data, and other information pertaining to the Awarded Service Provider’s services as may be reasonably required by CITY OF BARSTOW. The right of CITY OF BARSTOW to review or approve drawings, specifications, procedures, instructions, reports, test results, calculations, schedules, or other data that are developed by the Awarded Service Provider shall not relieve the Awarded Service Provider of any obligation set forth in this Contract.
- S. Permits, Ordinances and Regulations.** Any and all fees required by State, County, local laws, regulations and/or tariffs that pertain to work performed under the terms of this Contract shall be paid by the Awarded Service Provider.
- T. Independent Contractor.** The Awarded Service Provider, and its employees, agents and subcontractors, in performing the related Contract operate as **independent contractors** and not as employees or agents of CITY OF BARSTOW.

SECTION IV. PROPOSAL FORMAT AND CONTENT

- A. Presentation.** Proposals shall be typed, double spaced, and submitted on 8 ½” x 11” size paper, using a single method of fastening. Please do not include any unnecessarily elaborate or promotional material.

For ease of review, the data submitted shall be organized in a logical manner consistent with the Scope of Services described in Attachment E. Non-compliance with this format may be deemed as non-responsive and cause for proposal rejection.

- B. Letter of offer.** A Letter of Offer shall be addressed to CITY OF BARSTOW and shall, at a minimum contain the following:

1. Identification of Submitter, including name, qualifying licenses or certifications or registrations, address and telephone number.
2. Proposed working relationship between Submitter and subcontractors, if applicable.
3. Name, title, address and telephone number of contact person during period of proposal evaluation.
4. A statement to the effect that the proposal shall remain valid for a period of not less than 90 calendar days from the date of submittal.
5. Signature of a person authorized to bind Submitter to the terms of the proposal.

C. Technical Proposal.

1. Qualifications, Related Experience and References of Submitter

This section of the proposal should establish the ability of Submitter to satisfactorily perform the required work by reasons of: training and NASSCO certification, experience in performing work of a similar nature; demonstrated competence in the services to be provided; strength and stability of the firm; staffing capability; work load; record of meeting schedules on similar projects; and supportive client references.

Submitters shall:

- a. Provide a brief profile of the firm, including the types of services offered; the year founded; form of the organization (corporation, partnership, sole proprietorship); number, size and location of offices; and number of employees.
- b. Provide a general description of the firm’s financial condition and identify any conditions (e.g., bankruptcy, pending litigation, planned office closures, impending merger) that may impede Submitter’s ability to complete the project.
- c. Describe the firm’s experience in performing work of a similar nature to that solicited in this RFP, and highlight the participation in such work by the key personnel proposed for assignment to this project.
- d. Identify subcontractors by company name, address, contact person, telephone number and project function. Describe Submitter’s experience working with each subcontractor.

- e. Provide as a minimum three (3) Southern California references for the projects cited as related and comparable experience, and furnish the name, title, address and telephone number of the person(s) at the client organization who is most knowledgeable about the work performed. Submitter may also supply references from other work not cited in this section as related experience.
- f. Describe equipment and tools to be used including safety and traffic control.
- g. Provide compliance information regarding SB 198 CAL-OSHA.
- h. Provide Title 8, Section 5157 and employee training logs.
- i. Provide sample video recording and Inspection Report representing the quality of video inspection and text to be provided by the Service Provider in conformance with the Contract Documents. Samples shall include various pipe sizes anticipated for this Contract.

2. Proposed Staffing and Project Organization

This section of the proposal should establish the method that will be used by the Submitters to manage the project as well as identify key personnel assigned.

Submitters shall:

- a. Provide education, experience, and applicable professional credentials of project staff. Include NASSCO training/certification of inspection equipment technicians and operators.
- b. Furnish brief resumes (not more than two (2) pages each) for the proposed Project Manager and other key personnel.
- c. Indicate adequacy of labor resources utilizing a table projecting the labor hour allocation to the project by individual task.
- d. Identify key personnel proposed to perform the work in the specified tasks and include major areas of subcontract work.
- e. Include a project organization chart that clearly delineates communication/reporting relationships among the project staff.
- f. Include a statement that key personnel will be available to the extent proposed for the duration of the project acknowledging that no person designated as “key” to the project shall be removed or replaced without the prior written concurrence of CITY OF BARSTOW.

3. Work Plan

Submitters shall provide a narrative that addresses the Scope of Work and shows Submitters’ understanding of CITY OF BARSTOW’s needs and requirements. Submitters shall:

- a. Describe the approach to completing the tasks specified in the Scope of Work.
- b. Outline sequentially the activities that would be undertaken in completing the tasks and specify who would perform them.
- c. Identify methods that Submitters will use to ensure quality control as well as budget and schedule control for the project. Submitters may also propose procedural or technical

enhancements/innovations to the Scope of Work which do not materially deviate from the objectives or required content of the project.

4. Exceptions/Deviations

Exceptions/deviations are strongly discouraged. If the Submitter feels an exception/deviation is required, then Submitters shall state any exceptions to or deviations from the requirements of this RFP, segregating “technical” exceptions from “contractual” exceptions. Where Submitters wish to propose alternative approaches to meeting CITY OF BARSTOW’s technical or contractual requirements, these should be thoroughly explained.

5. Appendices.

Information considered by Submitters to be pertinent to this project and which has not been specifically solicited in any of the aforementioned sections may be placed in a separate appendix section. Submitters are cautioned, however, that this does not constitute an invitation to submit large amounts of extraneous materials. Appendices should be relevant and brief.

SECTION V. EVALUATION PROCEDURES

An Evaluation Committee comprised of CITY OF BARSTOW staff, in accordance with the criteria listed below, will evaluate all proposals received as specified. The evaluators in applying the major criteria to the proposals may consider additional sub-criteria beyond those listed. The final selection of an Awarded Service Provider to perform this service will be the Submitter, which in CITY OF BARSTOW’s opinion, is the most qualified, responsive and responsible, and meets CITY OF BARSTOW’s requirements in providing this service and is in CITY OF BARSTOW’s best interest. CITY OF BARSTOW maintains the sole and exclusive right to evaluate the merits of the proposals received. CITY OF BARSTOW reserves the right to award the Contract to an Submitter that meets the above criteria even if such Submitter is not the apparent lowest bidder.

SECTION VI. EVALUATION CRITERIA

CITY OF BARSTOW will evaluate the Offers received based on the following criteria (in no particular order) including, but not limited to:

1. Qualifications of the Submitter

Technical experience in performing work of a closely similar nature; experience working with public agencies; strength and stability of the Submitter; strength, stability, experience and technical competence of Submitter’s subcontractors, if any; assessment by Submitter’s references; knowledge of the various permits that may or may not be required; knowledge of applicable laws and regulations.

2. Staffing and Project Organization

Qualifications of Submitter’s staff, including NASSCO certification, particularly key personnel and especially the Submitter’s Project Manager; key personnel’s level of involvement in

performing related work cited in “Qualifications of the Submittor” section; logic of project organization; adequacy of labor commitment; concurrence in the restrictions on changes in key personnel.

3. Work Plan

Depth of Submittor’s understanding of CITY OF BARSTOW’s requirements and overall quality of work plan; logic, clarity and specificity of work plan; appropriateness of labor distribution among the tasks; ability to meet the project deadline; reasonableness of proposed schedule; utility of suggested technical or procedural innovations.

4. Cost and Price

Reasonableness of the total price and competitiveness of this amount with other offers received; adequacy of data in support of quoted amounts; reasonableness of individual task budgets.

5. Completeness of Response

Completeness and responsiveness of the Offer in accordance with RFP instructions; exceptions to or deviations from RFP requirements which CITY OF BARSTOW cannot or will not accommodate; other relevant factors not considered elsewhere. Any errors, omissions, insertions or other irregularities in an Offer may be grounds for rejections of such an offer as determined in the sole discretion of CITY OF BARSTOW, no matter how minor, insignificant or immaterial such irregularity may appear to be.

September, 2010
Project No. 2010-17
2010-2011 Sewer Cleaning and Closed Circuit Television (CCTV)

**ATTACHMENT A
COST PROPOSAL FORM
PROJECT NO.**

2010-2011 SANITARY SEWER CCTV INSPECTION AND CLEANING

Due Date and Time for Proposal Submittal: November 22, 2010 at 2:00 p.m. Any omissions, additions, substitutions, conditions or alternates in Submittor’s proposal will be considered irregularities and may be cause for rejection of the Submittor’s proposal, no matter how insignificant or immaterial such irregularity may be. Proposals must be completed in ink, indelible pencil or by typewriter. Erasures or “strike-outs” must be initialed by the Service Provider.

The undersigned does hereby propose to provide services in accordance with all provisions of the Request for Proposals including, but not limited, to the Scope of Work, Exhibits, and references for the following price. Incomplete submittal of requested information as called out in the proposal specification requirements may deem the proposal as non-responsive. The cost proposal shall be submitted in separate envelope provided herein. All envelopes shall be clearly marked with the Specification number and envelope content. Submit total Contract amount not to exceed, as follows:

Item No.	Description	Qty	Unit	Unit Cost	Total
1.	CCTV Inspection 8” Sanitary Sewer Lines	10,846	LF		
2.	CCTV Inspection 10” Sanitary Sewer Lines	678	LF		
3.	Cleaning of 8" Sanitary Sewer Lines	10,846	LF		
4.	Cleaning of 10” Sanitary Sewer Lines	678	LF		
5.	Traffic Control	1	LS		
6.	Mobilization	1	LS		
				Total:	

TOTAL (In Words):

The enclosed proposal includes the following required submittals.

- (1) Cost Proposal Form (Attachment A)
- (2) Non-Collusion Affidavit (Attachment B)
- (3) Acknowledgement of Insurance Requirements (Attachment C)
- (4) Copies of All Addendum Confirmation Form, if applicable.

_____	_____	_____
Name of Firm	Signature	Date

Address Authorized Agent (Printed or Typed)		

City, State, Zip Code E-mail address		

_____	_____	
Telephone	Fax	

California License No.	Expiration Date	

September, 2010
Project No. 2010-17
2010-2011 Sewer Cleaning and Closed Circuit Television (CCTV)

September, 2010
Project No. 2010-17
2010-2011 Sewer Cleaning and Closed Circuit Television (CCTV)

ATTACHMENT C

ACKNOWLEDGEMENT OF INSURANCE REQUIREMENTS

Insurance Requirement Summary

The CONTRACTOR shall purchase and maintain insurance provided by insurance companies admitted in and regulated by the State of California, as required in the Contract Documents, and in amounts equal to the requirements set forth in the Contract Documents, and shall not commence work under this contract until all insurance required by the Contract Documents is obtained in a form acceptable to the CITY, nor shall the CONTRACTOR allow any subcontractor to commence work on a subcontract until all insurance required for the Subcontractor has been obtained.

CITY reserves the right to establish different coverage limits for Commercial General Liability and Property Damage including Motor Vehicle by so providing in writing as an official notice, as a permit requirement, or as a requirement contained elsewhere in the Contract. In such event, the coverage limits therein shall prevail, otherwise, the SERVICE PROVIDER shall meet the following requirements:

1. Service Provider shall procure and maintain for the duration of this Contract insurance against claims for personal injuries or property damages which may arise from or relate to the performance of the work hereunder by the Service Provider, its employees, agents, subcontractors or representatives, as follows:
 - A. Commercial General Liability, including operations, products and completed operations shall have a liability limit of \$2,000,000 per occurrence for bodily injured, personal injury and property damage. If commercial general liability insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work required by this Professional Service Agreement or the general aggregate limit shall be twice the required occurrence limit. Coverage shall at least be as broad as Insurance Services Office Commercial General Liability Coverage (Form CG 00 01) or Insurance Services Office Form (CG 00 09 11 88 CITYs and Contractors Liability Coverage Form.)
 - B. Automobile liability coverage shall be no less than \$1,000,000 per accident for bodily injury and property damage and coverage shall be at least as broad as Insurance Services Office Form CA 0001 covering Automobile Liability, Code C1 (any auto.)
 - C. Workers Compensation Insurance as required by the State of California and Employer's Liability Insurance.
 - D. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by CITY OF BARSTOW in advance.
 - E. CITY OF BARSTOW as Additional Insured. The Commercial General Liability and Automobile Liability Policies shall provide that CITY OF BARSTOW, its officers, officials, employees, agents, volunteers and supervising engineer are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Service Provider or arising out of work or operations performed by or on behalf of the Service Provider under this Professional Service Agreement , including materials, parts or equipment furnished in connection with such work or operations. For any claims related to the work formed under this Professional Service Agreement , the Service Provider's insurance coverage shall be primary as to CITY OF BARSTOW, its officers, officials, employees, agents,

volunteers or supervising engineer shall be excess to Service Provider's insurance and shall not contribute with it. Each insurance policy required by this subsection shall be endorsed to state that coverage shall not be cancelled by either party except after thirty (30) days prior written notice to CITY OF BARSTOW.

- F. Waiver of Subrogation. Service Provider hereby agrees to waive subrogation which any insurer of Service Provider may require from Service Provider by virtue of the payment for any loss. Service Provider agrees to obtain any endorsement that may be necessary to give effect to this waiver of subrogation. The Workers Compensation policy shall be endorsed with a waiver of subrogation in favor of CITY OF BARSTOW for all work performed by Service Provider, its employees, agents and subcontractors.
- G. Acceptability of Insurers. Insurance required by this Section 14 is to be placed with an insurer admitted in and regulated by the State of California with a current AM Best rating of no less than A-:VII, unless otherwise approved by CITY OF BARSTOW in writing.
- H. Coverage Verification. Service Provider shall furnish CITY OF BARSTOW with original certificates and amendatory endorsements effecting coverage required by this Section 14. All certificates and endorsements shall be in a form acceptable to CITY OF BARSTOW. Service Provider shall require and verify that all of its subcontractors maintain insurance meeting all of the requirements of this Section 14.

The SERVICE PROVIDER shall have presented, at the time of execution of the Contract, the Insurance Certifications and Endorsements required in the Contract.

**ACKNOWLEDGEMENT OF INSURANCE REQUIREMENTS AND
CERTIFICATION OF ABILITY TO PROVIDE COVERAGE SPECIFIED
(To be filled out by Insurance Agent, Carrier, Provider)**

I, _____, the _____ of
(President, Manager, Owner)

(Name of Company, Corporation) certify that these insurance requirements have been
read and understood and that _____ (Name of Insurance Provider) is able to
provide the coverage, as specified.

Signature of President, Manager, Owner

Date

ATTACHMENT D
TERMS AND CONDITIONS

1. **APPROVAL.** This Professional Service Agreement is of no force or effect until signed by both parties. Service Provider shall not commence performance until such approval has been obtained.
2. **AMENDMENT.** No amendment or variation of the terms of this Professional Service Agreement shall be valid unless made in writing and signed by the parties. No oral understanding or agreement not incorporated in the Professional Service Agreement is binding on any of the parties.
3. **COMPLIANCE WITH LAWS AND REGULATION.** The Service Provider agrees that it shall, at all times, comply with, and require all of its subcontractors to comply with, all applicable federal, state, and local laws, rules, regulations, guidelines. Service Provider, and its subcontractors, shall obtain and pay for all appropriate permits and licenses in order to perform the scope of work required by this Professional Service Agreement .
4. **GOVERNING LAW.** This Professional Service Agreement shall be governed by the laws of the State of California.
5. **ASSIGNMENT OF CONTRACT.** This shall not be assigned by Service Provider without prior written authorization from the City of Barstow.
6. **CONTRACT TERM.** The services provided under this Professional Service Agreement shall be completed as outlined in the Scope of Work.
7. **TERMINATION.** CITY OF BARSTOW reserves the right to terminate this Professional Service Agreement, in whole or in part, without cause, at any time, by written notice to Service Provider. Such termination shall release CITY OF BARSTOW from any further liability, fee, cost or claim by the Service Provider other than for work performed to the date of termination. Upon receipt of a termination notice, the Service Provider shall immediately discontinue all work under this Professional Service Agreement (unless that notice directs otherwise.) CITY OF BARSTOW shall thereafter, within thirty (30) days of receipt of a valid invoice, pay the Service Provider for unpaid work performed to the date of termination.
8. **PREVAILING WAGE LAW.** CITY OF BARSTOW is subject to the provisions listed in the prevailing wage determination made by the Director of Industrial Relations pursuant to California Labor Code, Sections 1770, 1773 and 1773.1. It is agreed that all provisions of law applicable to public contracts may be applicable to this Professional Service Agreement. If required by law, Service Provider shall not pay less than the prevailing wage.
9. **DAMAGE TO CITY OF BARSTOW PROPERTY.** Any CITY OF BARSTOW property damaged by the Service Provider, or its employees, agents or subcontractors, shall be repaired or replaced by the Service Provider at no cost to CITY OF BARSTOW.
10. **PAYMENTS AND INVOICING.** Upon approval by an authorized CITY OF BARSTOW employee, CITY OF BARSTOW will pay, within 30 days after receipt of valid, itemized invoices, submitted in duplicate, in a form acceptable to CITY OF BARSTOW to enable audit of the charges thereon. All such invoices shall be mailed to CITY OF BARSTOW, 220 E Mountain View Street, Suite A, Barstow, California 92311. Attention: Engineering.

11. **DRUG FREE WORKPLACE.** Service Provider's employees, agents and subcontractors shall adhere to, and comply with, the California Drug Free Workplace Act at Government Code, Sections 8350 through 8357.
12. **SAFETY.** Service Provider agrees to conform to, and comply with all applicable health and safety laws and regulations, including the Federal and State Occupational Safety and Health Act (OSHA) regulations. Service Provider assumes complete responsibility and liability for the safety of its employees, agents and subcontractors, and shall indemnify and hold harmless CITY OF BARSTOW From any claims, damages, fines, penalties, attorney's fees and costs arising from any injuries, damages or claims relating to this Professional Service Agreement.
13. **INDEMNIFICATION.** Service Provider shall hold harmless, defend and indemnify CITY OF BARSTOW and its officers, officials, employees, agents, volunteers and supervising engineer from and against any and all liability, loss, damage, expense, fines, penalties, and costs (including, without limitation, attorney's fees and litigation expenses) of every nature arising out of or in connection with Service Provider's performance of the work under this Professional Service Agreement or its failure to comply with any of its obligations contained in this Professional Service Agreement , except such loss or damage which was caused by the active or sole negligence or willful misconduct of CITY OF BARSTOW.
14. **INSURANCE REQUIREMENTS.** Service Provider shall procure and maintain for the duration of this Professional Service Agreement insurance against claims for personal injuries or property damages which may arise from or relate to the performance of the work hereunder by the Service Provider, its employees, agents, subcontractors or representatives, as follows:
 - A. Commercial General Liability, including operations, products and completed operations shall have a liability limit of \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If commercial general liability insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work required by this Professional Service Agreement or the general aggregate limit shall be twice the required occurrence limit. Coverage shall at least be as broad as Insurance Services Office Commercial General Liability Coverage (Form CG 00 01) or Insurance Services Office Form (CG 00 09 11 88 CITYs and Contractors Protective Liability Coverage Form.)
 - B. Automobile liability coverage shall be no less than \$1,000,000 per accident for bodily injury and property damage and coverage shall be at least as broad as Insurance Services Office Form CA 0001 covering Automobile Liability, Code C1 (any auto.)
 - C. Workers Compensation Insurance as required by the State of California and Employer's Liability Insurance.
 - D. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by CITY OF BARSTOW in advance.

- E. CITY OF BARSTOW as Additional Insured. This Commercial General Liability and Automobile Liability Policies shall provide that CITY OF BARSTOW, its officers, officials, employees, agents, volunteers and supervising engineer are to be covered as insured with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of Service Provider or arising out of work or operations performed by or on behalf of the Service Provider under this Professional Service Agreement , including materials, parts or equipment furnished in connection with such work or operations. For any claims related to the work formed under this Professional Service Agreement , the Service Provider's insurance coverage shall be primary as to CITY OF BARSTOW, its officers, officials, employees, agents, volunteers and supervising engineer. Any insurance maintained by CITY OF BARSTOW, its officers, officials, employees, agents, volunteers or supervising engineer shall be excess to Service Provider's insurance and shall not contribute with it.

Each insurance policy required by this subsection shall be endorsed to state that coverage shall not be cancelled by either party except after thirty (30) days prior written notice to CITY OF BARSTOW.

- F. Waiver of Subrogation. Service Provider hereby agrees to waive subrogation which any insurer of Service Provider may require from Service Provider by virtue of the payment of any loss. Service Provider agrees to obtain any endorsement that may be necessary to give effect to this waiver of subrogation. The Workers Compensation policy shall be endorsed with a waiver of subrogation in favor of CITY OF BARSTOW for all work performed by Service Provider, its employees, agents and subcontractors.
- G. Acceptability of Insurers. Insurance required by this Section 14 is to be placed with an insurer admitted in and regulated by the State of California with a current AM Best rating of no less than A-VII, unless otherwise approved by CITY OF BARSTOW in writing.
- H. Coverage Verification. Service Provider shall furnish CITY OF BARSTOW with original certificates and amendatory endorsements effecting coverage required by this Section 14. All certificates and endorsements shall be in a form acceptable to CITY OF BARSTOW. Service Provider shall require and verify that all of its subcontractors maintain insurance meeting all of the requirements of this Section 14.

15. RIGHT TO REVIEW SERVICES, FACILITIES AND RECORDS. CITY OF BARSTOW reserves the right to review any portion of the services performed by the Service Provider under this Professional Service Agreement , and the Service Provider agrees to cooperate to the fullest extent possible. The Service Provider shall furnish to CITY OF BARSTOW such reports, statistical data, and other information pertaining to the Service Provider's services as may be reasonably required by CITY OF BARSTOW. The right of CITY OF BARSTOW to review or approve drawings, specifications, procedures, instructions, reports, test results, calculations, schedules, or other data that are developed by the Service Provider shall not relieve the Service Provider of any obligation set forth in this Professional Service Agreement.

16. PERMITS, ORDINANCES AND REGULATIONS. Any and all fees required by State, County, local laws, regulations and/or tariffs that pertain to work performed under the terms of this Professional Service Agreement shall be paid by the Service Provider.

17. INDEPENDENT CONTRACTOR. The Service Provider, and its employees, agents and subcontractors operate as **independent contractors** and not as employees or agents of CITY OF BARSTOW.

18. DISPUTES. Contractor shall continue to perform as required by the Professional Service Agreement during any dispute between CITY OF BARSTOW and Service Provider.

19. TIMELINESS. Time is of the essence for this Professional Service Agreement. The Service Provider agrees to be bound by the schedule presented as part of this Professional Service Agreement.

20. UNENFORCEABLE PROVISIONS. In the event that any provision of this Professional Service Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Professional Service Agreement shall continue to be in full force and effect and shall not be affected thereby.

21. DISPUTE RESOLUTION. Any dispute which may arise under this Agreement shall first be submitted to non-binding mediation. Should any dispute remain unresolved by the mediation, then the parties shall submit the dispute to binding arbitration. In the event of any litigation or arbitration between the parties to enforce any of the provisions of this Agreement or any right of any party hereto, the unsuccessful party to such litigation or arbitration agrees to pay to the successful party all such costs and expenses, including reasonable attorneys' fees, incurred therein by the successful party.

ATTACHMENT E SCOPE OF SERVICES

PART 1: GENERAL

1.01 DEFINITIONS

The following definitions shall apply to this technical specification for CCTV Inspection Services:

1. “CITY”: CITY OF BARSTOW.
2. “CCTV”: Closed-circuit Television
3. “CONTRACTOR”: Service Provider awarded the work under this contract.
4. “Manhole”: When used to describe an access way to the sewer system or a starting/finishing location for line inspection, the term “manhole” should be construed as any access port to the sewer system.
5. “Segment”: When used to describe a section of the sewer line, the term “segment” should be construed as that portion of the sewer pipe between two manholes (access ports.)
6. “NASSCO”: National Association of Sewer Service Companies.

1.02 SCOPE OF WORK

A. GENERAL

CONTRACTOR shall furnish all labor, materials, equipment, and incidentals necessary for the inspection and cleaning of approximately 11,550 linear feet of sanitary sewer lines and manholes described herein.

The pipelines are constructed of, but not limited to, VCP, PVC-lined RCP, RCP, and PVC, and range in sizes from, but not limited to, 8-inches to 10-inches in diameter for this project. The inspection services will be provided as requested by CITY.

B. DESCRIPTION OF WORK

All Work shall conform to the “2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers” (Attached) and the “2009 Edition of the Standard Specifications for Public Works Construction and all supplements.

CONTRACTOR shall provide Traffic Control plans if required by the appropriate permitting agency.

In addition, CONTRACTOR shall provide all traffic control in accordance with the latest Edition of California Manual of Uniform Traffic Control Devices (CAMUTCD) and all supplements. Additional local regulations may have precedence.

CONTRACTOR shall supply all signs, barriers, markers, flagmen and traffic control devices as required to maintain traffic.

C. CCTV INSPECTION AND CLEANING

Shall conform to the City of Barstow's 2010 Guidelines for CCTV Inspection of Sanitary Sewer.

1.03 SUBMITTALS

The CONTRACTOR shall submit the following to the CITY:

- A. Pre-Inspection Submittals:** Inspection operations shall not commence until the following have been received, reviewed, and approved by the CITY where noted.
1. A description, including the manufacturer's specifications, for all CCTV equipment.
 2. A description of the traffic control plan for the temporary closing of streets or traffic lanes and rerouting of traffic. The traffic control plan shall include the anticipated length of time that each specific street will have traffic disruptions, and shall conform to the regulations and standards in effect for the affected jurisdiction and Caltrans. Final scheduling shall be coordinated with the affected jurisdiction for the purpose of defining street detours, closings and interruptions of service for mass transit. Submitter will obtain and pay for all permits.
- B. Progress Submittals:** The CONTRACTOR shall submit a report no later than seven (7) days after CCTV inspection took place according to the following provisions:
1. Progress Report / Work Documentation: Progress reports shall be submitted for CITY review no later than seven (7) days after the inspection took place. CONTRACTOR's log sheets, with a section by section breakdown including comments, shall be maintained on site, in a legible manner for review at all times.

Comments on log sheets shall include notice of badly work manhole frames and covers, and badly deteriorated manhole concrete structures.
 2. All CCTV inspection footage shall be submitted on CD-ROM/DVD or External Hard Drive as defined in the 2010 Guidelines for CCTV Inspection of Sanitary Sewers
 3. All reports shall be provided in electronic format (PDF version.) and in a hard copy format as defined in the 2010 Guidelines for CCTV Inspection of Sanitary Sewers.
 4. Summary table (in MS Excel 2003, MS Word 2003, or later format) listing sewer segments cleaned (using unique numbering system to be provided by the CITY), location, unique inspection DVD tracking number, and any relevant notes.
 5. All CCTV inspection footage/video clips, pictures, audio clips, databases, software, and hardware defined in the 2010 Guidelines for CCTV Inspection of Sanitary Sewers.

6. All CD-ROM or DVD must be submitted on encoded DVD playable by any North American computerbased DVD player (using WinDVD or similar computer software) and/or standard television-based video system DVD player:
 - a. All CCTV inspection footage/video clips (with audio) converted to playable encoded DVDs.
 - b. Each DVD will be labeled as defined in the 2010 Guidelines for CCTV Inspection of Sanitary Sewers.

1.04 QUALITY ASSURANCE / TRAINING REQUIREMENTS

Quality Assurance / Training Requirements shall conform to the City of Barstow's 2010 Guidelines for CCTV Inspection of Sanitary Sewer

1.05 PROJECT DESCRIPTION, REQUIREMENTS, AND CONDITIONS

Project Description, Requirements, and Conditions shall conform to the City of Barstow's 2010 Guidelines for CCTV Inspection of Sanitary Sewer.

1.06 MEASUREMENT AND PAYMENT

- A. CONTRACTOR will be paid based on the actual work performed in accordance with the unit rate schedule provided on Submitted Bid Form.
- B. CONTRACTOR shall submit all inspection reports and supporting documentation and data with an itemized invoice.
- C. All CCTV data shall be provided in accordance to the specifications of this Scope of Work. Failure to abide by the stipulations in this Scope of Work or any of the Terms and Conditions of the agreement could result in non-payment and might require re-inspection by the CONTRACTOR prior to approval of any invoices.

PART 2: CCTV PRODUCTS

2.01 VIDEO INSPECTION EQUIPMENT

Video inspection equipment shall conform to the 2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers.

2.02 DATA COLLECTION / INSPECTION SOFTWARE

Data Collection / Inspection Software shall conform to the 2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers.

PART 3: CCTV EXECUTION

3.01 EVALUATION CRITERIA

- A. Sewer condition grades for all CCTV evaluations in this contract shall be based upon the condition grade schedule presented in the latest edition of the NASSCO guidance, and shall conform to the 2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers.
- B. The worst defect along the individual sewer segment will be used to give a single condition grade for that particular sewer segment; i.e., the grade for the sewer segment is based on the worst internal condition grade along the sewer segment.
- C. It will be the responsibility of the CONTRACTOR to ensure that defects are reported uniformly and consistently by all inspection crews.

3.02 PROCEDURE

- A. Prior to opening manhole covers or other access points, the atmosphere of the access point shall be checked by CONTRACTOR to ensure a non-explosive and non-hazardous atmosphere. The portable gas detection equipment shall measure and alarm the following hazardous gasses: hydrogen sulfide, carbon monoxide, methane, and low oxygen. CONTRACTOR shall ventilate all access points as required for the safe execution of the work in this contract. CONTRACTOR shall ensure that at no time the ventilation be the cause of public nuisance odor problems.
- B. Many of the manholes along the segments to be inspected under this contract have not been opened for extended periods and, therefore, may be surcharged. As such, CONTRACTOR shall exercise caution when accessing all manholes.
- C. The camera shall be moved through the sewer segment at a uniform rate, stopping when necessary to ensure proper documentation of the sewer's condition, or to "image capture" defects. **At no time will the television camera be pulled at a speed greater than 30 feet per minute.** Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions may be used to move the camera through the sewer line.
- D. The camera shall be stopped to inspect any areas of concern by using the pan and tilt feature of the television camera. For the purposes of this technical specification, an "area of concern" shall be considered as any one of the following:
 - 1. Locations of structural damage to the piping, manholes and other appurtenant structures, including sagging, cracked or collapsed segments.
 - 2. Locations of PVC liner or weld strip defects.
 - 3. Joints which appear to be damaged, incorrectly installed, shifted, or in anyway deficient.
 - 4. Areas in which noticeable infiltration is occurring. The approximate flow into the pipe at these locations shall be recorded as a field observation.
 - 5. Unusual or deficient conditions such as roots, storm sewer connections, and the presence of vermin, scale, corrosion, grease and grit.

6. Any other discernible feature or condition, which, in the opinion of CONTRACTOR or CITY, may pose a problem to the integrity or functionality of the sewer.
 7. All sewer service connections
- E. Whenever possible, CONTRACTOR shall complete the inspection of a pipe segment in one continuous run. CONTRACTOR shall complete each sewer segment in its entirety before stopping work for the day. No partial segment of sewer inspection will be permitted.
 - F. CONTRACTOR shall provide a minimum of four video frame snapshots per segment of pipeline between manholes regardless of the condition of the pipeline segment.
 - G. All formatted data, video and corresponding reports shall be submitted, as defined in the 2010 Guidelines for CCTV Inspection and Cleaning of Sanitary Sewers, on CDROM, DVD, or external hard drive with software, and cables to the CITY no later than seven (7) days after CCTV inspection took place. All CD-ROMs, DVDs, or external drives and their peripherals shall become the property of the CITY once submitted.

3.03 CCTV PERFORMANCE

- A. Color CCTV
All CCTV work shall use color CCTV reproduction.
- B. CCTV Picture Quality
An approved test device shall be provided and be available on site throughout the Contract, enabling the tests specified in this clause to be checked. The test card shall be Marconi Regulation Chart No. 1 or its derivatives with a color bar, clearly differentiating between colors, with no tinting, to show the following: 1) white; 2) yellow; 3) cyan; 4) green; 5) magenta; 6) red; 7) blue; 8) black.
- C. At the start of each and every working shift, the camera shall be positioned centrally and at right angles to the test card at a distance where the full test card just fills the monitor screen. The CONTRACTOR shall ensure that the edges of the test card castellations coincide with the edges of the horizontal and vertical scan (raster). The card shall be illuminated evenly and uniformly without any reflection. The type of camera used is to be identified in the test recording. The recording must show the camera being introduced into the test device and reaching its stop position. Other test devices may be used subject to approval by CITY.
- D. The electronic systems, television camera and monitor shall be of such quality as to enable the following to be achieved:
 - a. Shades of Gray. The gray scale shall show equal changes in brightness ranging from black to white with a minimum of five clearly recognizable stages.
 - b. Color. With the monitor adjusted for correct saturation, the six colors plus black and white shall be clearly resolved with the primary and complementary colors in order of decreasing luminance. The gray scale shall appear in contrasting shades of gray with no tint.

- c. Linearity. The background grid shall show squares of equal size, without convergence/divergence over the whole of picture. The center circle shall appear round and have the correct height/width relationship ($\pm 5\%$).
 - d. Resolution. The live picture must be clearly visible with no interference and capable of registering a minimum number of TV lines/pictures height lines. The resolution shall be checked with the monitor color turned down. In the case of tube cameras this shall be 600 lines.
 - e. Color Constancy. To ensure the camera shall provide similar results when used with its own illumination source, the lighting shall be fixed in intensity prior to commencing the inspection. In order to ensure color constancy, generally no variation in illumination shall take place during the inspection.
 - f. The CONTRACTOR shall note that CITY may periodically check both the live and video picture consistency against the color bar. Any differences will require re-inspect of the new length or lengths affected, at the CONTRACTOR's expense.
- E. CD-ROM Playback.
CD-ROM playback shall be capable of a resolution of a minimum of 250 lines recorded at standard speed.
- F. CCTV Focus/Iris/Illumination.
The adjustment of focus and iris shall allow optimum picture quality to be achieved and shall be remotely operated. The adjustment of focus and iris shall provide a minimum focal range from 6 inches in front of the camera's lens to infinity. The distance along the sewer in focus from the initial point of observation shall be a minimum of twice the vertical height of the sewer. The illumination must be such as to allow an even distribution of the light around the sewer perimeter without the loss of contrast, flare out of picture or shadowing.

3.04 FORMATTING

A. Video

1. At the start of each segment, a data generator shall electronically generate and clearly display on the viewing monitor and video recording a record of data as defined in the 2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers.
2. Once the survey of the pipeline is under way, specific data should be continuously displayed on the viewing monitor and video recording. The size and position of the data display shall be such as not to interfere with the main subject of the picture yet shall be easily readable when the recording is replayed. At a minimum, the following data should be displayed but all data shall conform to the 2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers:
 - a. Automatic update of the camera's position, in feet and tenths, in the sewer line from adjusted zero.
 - b. Upstream manhole and downstream manhole identification numbers.
3. Each segment length (consecutive manhole to manhole) shall be entered on a separate coding sheet. Thus, where CONTRACTOR elects to "pull through" a manhole during a CCTV survey,

CONTRACTOR shall start a new coding sheet at the manhole “pulled through” and shall reset the distance to zero on the coding sheet, viewing monitor, and video recording.

B. CD-ROM, DVD, External Harddrive

Permanently label each CD-ROM/DVD with the following information:

- a. CITY OF BARSTOW
- b. Date Inspected (Month-Day-Year (MM-DD-YYYY))
- c. Contractor:
- d. Unique CD/DVD No:
- e. Location/s
- f. Start MH:
- g. Finish MH:

C. Report

A hardcopy and an electronic (PDF) report shall be submitted and contain the following information:

1. Report Cover
 - a. City of Barstow
 - b. Project Description
 - c. Associated DVD Number
 - d. Date
 - e. Location
 - f. Report Number
2. Table of Content (See Example in the 2010 Guideline for CCTV Inspection and Cleaning of Sanitary Sewer Cleaning)
 - a. Date
 - b. Distance
 - c. Flow Direction
 - d. Sewer ID #
 - e. Pipe Size
 - f. Location
 - g. Length
 - h. Start Manhole ID
 - i. End Manhole ID
 - j. PACP Quick Struct Rating
3. Project Information
 - a. See Example in the 2010 Guideline for CCTV Inspection and Cleaning of Sanitary Sewer Cleaning.
4. Observation Log (See Example in the 2010 Guideline for CCTV Inspection and Cleaning of Sanitary Sewer Cleaning)
 - a. Distance
 - b. Fault Observation
 - c. Time
 - d. Picture of the observation
 - e. Date

- f. Street
 - g. Length Surveyed
 - h. Run Number
 - i. Pipe Diameter
 - j. Pipe Segment Reference (Sewer ID #)
 - k. Upstream MH
 - l. Downstream MH
 - m. Direction of Survey
 - n. Material of Pipe
5. Graph of Observation (See Example in the 2010 Guideline for CCTV Inspection and Cleaning of Sanitary Sewer Cleaning)
- a. Date
 - b. Street
 - c. Length surveyed
 - d. Run Number
 - e. Diameter(Height)
 - f. Pipe Segment Reference (Sewer ID #)
 - g. Upstream Mh
 - h. Downstream Mh
 - i. Direction of Survey
 - j. Material
 - k. Graphic of Pipe Line with observations using PACP codes and length of run from starting manhole.
6. Rating Report (See Example in the 2010 Guideline for CCTV Inspection and Cleaning of Sanitary Sewer Cleaning)

ATTACHMENT F

2010 Specifications for CCTV Inspection and Cleaning of Sanitary Sewers



2010

*Specifications for
CCTV Inspection and Cleaning of
Sanitary Sewers*

City of Barstow
Engineering Division

Table of Contents

Table of Contents

Technical Specifications.....	4
1. GENERAL DESCRIPTION OF THE WORK	4
1.1 Definitions	4
1.2 CCTV Inspection.....	4
1.3 Manholes	4
1.4 FED_OSHA and CAL-OSHA.....	5
1.5 Noise Restrictions.....	5
1.6 Spill Prevention and Emergency Response Plan.....	5
2. WORK AND MATERIALS PROVIDED BY THE CONTRACTOR.....	5
2.1 Traffic Control:.....	5
2.2 Permits:.....	6
2.3 Sewer Cleaning:.....	6
2.4 Sewer Inspection:	6
A. Quality Assurance / Training Requirements:	6
B. Equipment:	7
C. Observations:.....	8
D. Video	9
E. Photographs	10
F. Additional Inspection Procedures.....	11
3. SPECIAL CONDITIONS	12
3.1 Excessive Depth of Flow:.....	12
4. SUBMITTALS AND DELIVERABLES AND REVIEW.....	12
4.1 Submittals:.....	12
4.2 Deliverables:.....	13
4.3 Review:.....	14
5. ADDITIONAL RESPONSIBILITIES OF THE CONTRACTOR	14
Appendix A	15
Typical Inspection Procedure:	15
Appendix B.....	17
Emergency Information:.....	17
Appendix C.....	18
Examples.....	18
RUNNING SCREEN TEXT:.....	23
OBSERVATION SCREEN TEXT:	24
PACP Codes:.....	25
Submittal Check List:	26

Technical Specifications

1. GENERAL DESCRIPTION OF THE WORK

The City's Sewer collection system consists of approximately 113 miles of pipeline with approximately 2,170 manholes. The sewer collection system includes pipelines with diameters ranging for 4 inches to 33 inches. The sewer lines are constructed of, but not limited to, VCP, PVC, PVC-lined RCP, RCP, Orangeburg, and/or Ductile Iron.

CONTRACTOR shall furnish all labor, materials, equipment, and any incidentals necessary for the inspection and cleaning of sanitary sewer lines and/or manholes.

Maps and a list of inspection services required will be provided by the City of Barstow.

1.1 Definitions

The following definitions shall apply to this technical specification for CCTV Inspection and Cleaning Services;

1. "CITY": City of Barstow
2. "CCTV": Closed-Circuit Television
3. "CONTRACTOR": Service Provider awarded the work under this Specification.
4. "Segments": The sanitary sewer line between two manholes or manhole and clean-out

1.2 CCTV Inspection

- a. The CCTV inspection work must be completed by certified National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) trained operator(s) using established PACP coding and observations.
- b. Electronic digital recordings shall be made of the CCTV inspections and copies of both the recordings and inspection reports shall be supplied to the CITY. Format of copies to be provided to CITY as specified in Section 4.2.

1.3 Manholes

- a. Manholes along the segments to be inspected may be non-standard, pressurized lids, bolted closed, welded, locked, or may require cleaning for access.

Manholes may be located in but not limited to, native terrain areas subject to seasonal flooding, sandy soil conditions, in streets, within intersections, shoulders or other paved areas. As such, accessing such manholes will require special consideration and coordination with CITY. CONTRACTOR may be directed by the CITY to expose the manholes at no additional cost to the CITY

CONTRACTOR shall field verify all conditions and anticipate any increased coordination and setup time for inspection operations prior to submitting bid.

- b. Inspection and entrance into manholes may be located in high vehicle traffic

areas. As such, accessing these manholes may require special consideration, coordination, and compliance with the requirements of City of Barstow, Caltrans, San Bernardino County, and any affected jurisdictions.

CONTRACTOR shall field verify all conditions and anticipate any increased coordination and set-up time for inspection operations prior to submitting bid

1.4 FED OSHA and CAL-OSHA

All work performed and equipment utilized by CONTRACTOR shall conform to FED-OSHA and CAL-OSHA Title 8 requirements, including, but not limited to, work performed in confined spaces. CONTRACTOR shall provide a minimum of a two-person crew at all times.

1.5 Noise Restrictions

CONTRACTOR shall provide all necessary equipment to meet local noise restrictions.

1.6 Spill Prevention and Emergency Response Plan

CONTRACTOR shall conform to Sub-Section 7-8.53 of the Standard Specifications for Public Works Construction (SSPWC).

In the event of a sewer overflow, interruption, or contamination caused by CONTRACTOR's actions, CONTRACTOR shall immediately notify CITY and shall contain overflow and/or contamination. CONTRACTOR shall be responsible for any fines levied by others, reimbursement of any CITY incurred costs, damage, cleanup, restoration of flow, and any disruption of service costs.

CONTRACTOR shall also notify CITY immediately of any observed non-contractor related spills and/or any abnormal conditions

2. WORK AND MATERIALS PROVIDED BY THE CONTRACTOR

2.1 Traffic Control:

- a. The CONTRACTOR shall submit Traffic Control plans to CITY.
- b. The CONTRACTOR shall provide all traffic control in accordance with the latest California Manual of Uniform Traffic Control Devices (CAMUTCD) regulations. Additional local regulations may have precedence. Contractor shall supply all signs, barriers, markers, arrow-boards, flagmen, and traffic control devices as required.
- c. CONTRACTOR will be responsible for managing and controlling traffic in a safe manner at all times, including, but not limited to, reconnaissance, land survey, sewer bypass, sewer cleaning, and CCTV inspection activities.

2.2 Permits:

The CONTRACTOR shall obtain all permits required by the appropriate permitting jurisdiction. The CONTRACTOR shall submit a City of Barstow encroachment permit, at no cost to the CONTRACTOR.

2.3 Sewer Cleaning:

- a. Pipeline cleaning shall be performed prior to closed circuit television (CCTV) inspection. The CONTRACTOR shall protect the manholes to withstand forces generated by equipment, water, and air pressure. After cleaning, the CONTRACTOR shall also confirm the inside minimum and maximum size (diameter and / or configuration of the pipeline. The CONTRACTOR shall be responsible for the removal of debris from the pipeline and restore the pipeline to a minimum of 95% of the original diameter or area. Pipeline debris is described as, **but not limited to**, sludge, harden deposits, dirt, sand, rocks, grease, roots, concrete, and other solid or semi-solid materials.
- b. Cleaning shall be completed by the Contractor within 72 hours and no less than one hour prior to CCTV inspection to reduce the impact of the natural flow within the pipeline during inspection.
- c. Debris Trap
 1. The Contractor shall trap all debris at the downstream manhole and properly dispose and haul away debris when cleaning pipe segments.
 2. Contractor shall inspect the trap for damage, deficiencies, and proper fit before each installation and use. Should the trap not perform as intended, it shall be replace at the contractor expense before any further sewer cleaning shall continue.
 3. Should debris from sewer cleaning create a blockage downstream, the CONTRACTOR will be responsible for all expenses occurred for clean-up and for any damage transpired.

2.4 Sewer Inspection:

A. **Quality Assurance / Training Requirements:**

1. Qualifications of the Inspection Crew Supervisor shall have five years minimum experience.
2. CITY reserves the right to approve personnel used and to request new personnel if the personnel used is not performing to the satisfaction of CITY.
3. CONTRACTOR shall utilize a commercial-off-the-shelf (COTS) CCTV data collection/inspection software package furnished by a single manufacturer who is fully experienced, reputable and qualified in the manufacture of the equipment to be furnished.

4. CONTRACTOR's employees responsible for data collection and preparation of the final inspection report shall each have a minimum CCTV inspection experience level of 5-years and have experience spanning the full operational capabilities of the software package. Evidence of experience shall be provided to CITY in advance of the work for each person operating the inspection equipment and preparing the final inspection reports.
5. The methodology of evaluation, data collection, and reporting criteria shall be based upon the latest edition of the NASSCO guidance for all CCTV inspections under this contract.
6. All inspection equipment technicians and operators shall have been trained and certified to assess the conditions of the sewers according to the NASSCO guidelines. Training of personnel shall be through the Pipeline Assessment and Certification Program (PACP). Proper evidence of certification shall be provided to the CITY in advance of the work for each person assessing the sewers and operating the inspection equipment.

B. Equipment:

1. The Contractor's CCTV equipment shall include inspection studio (mobile truck), video cameras, a video monitor cable, power sources, video capture equipment and all equipment necessary to perform a CCTV inspection as outlined in this Technical Specifications.
2. The cameras shall meet Cal-OSHA requirements for operating in the sanitary sewer environment.
3. **The inspection equipment shall be capable of inspecting up to 2,000 feet in one direction by a self-propelled unit.** The equipment package shall be able to provide a picture of acceptable quality at this maximum length, regardless of the vibration caused by normal movement of the camera within the pipe and the distance length of the conductor cable between the cameras and the recording device. If necessary, longer runs of pipe may be inspected by completing separate portions from manholes at either end of the segment.
4. The cameras shall have Pan-and-Tilt capabilities, and shall have a minimum of 360 x 270 degree rotation and illumination sensitivity shall be three lux or less and produce a picture having not less than 650 lines of resolution. The focal distance shall be adjustable through a range from 25 mm (1 inch) to infinity.
5. CCTV Camera Head Prime Position: Whenever prevailing conditions allow, the CCTV camera head shall be positioned to reduce the risk of picture distortion. The CCTV camera lens head shall be positioned centrally (i.e. in prime position) within the sewer conduit. The camera lens shall be positioned looking along the axis of the conduit. A position of $\pm 10\%$ of the vertical pipeline dimension shall be allowed when the camera is positioned centrally.
6. During CCTV inspection, lighting intensity shall be adjusted to

minimize glare. Illumination and picture quality shall be adjusted to provide a clear, in-focus picture of the entire periphery of the pipeline for all conditions encountered.

7. All camera systems shall be able to navigate around minor objects, roots, and debris. The system used to move the camera through the pipe shall not obstruct the camera's view or interfere with proper documentation of the sewer conditions.
8. The camera cable shall be retracted to remove slack and to ensure an accurate footage reading.
9. The distance shall be measured between the exit of the start manhole and the entrance of the finish manhole for a true measurement of the length of the pipe segment, as required by PACP. It shall be recorded in standard units and the video display readout shall display units to one-tenth of a foot.
10. The cable footage-counter shall be accurate to plus or minus 2 feet per 1,000 feet.
11. Video inspection and reporting shall be submitted in a NASSCO compatible format.
12. The camera lens shall be kept clear of condensation and debris during the CCTV inspection.
13. When the television equipment is towed by winch and bind through the sewer line, all winches shall be stable with either locking or ratcheting drums. All winches shall be inherently stable under loaded conditions. The binds shall be or of an equally non-elastic material to ensure the smooth and steady progress of the Camera equipment. The binds shall be oriented as to enable unhindered extension or retraction through the sewer conduit. All effort shall be made to prevent damage to the sewer conduit during the television inspection. In the case where damage is caused by the CONTRACTOR, for any reason, such as would be caused by incorrect deployment of binds or retrieval of lodged equipment, the cost of repair or remedy shall be absorbed by the CONTRACTOR and shall be considered an incidental part of the work and no separate measurement or payment shall be made

C. Observations:

1. All observations and defects shall be documented in a database and shall include digital video recording, digital audio, and digital photographs as defined in Sections 2.D, 2.E and 2.F. Digital media shall be linked to the database to provide quick access and a centralized information system.
2. Each video clip, photograph, and audio files provided shall correspond to inspection data in the database, and each set of inspection data listed in the database shall be properly linked to the appropriate video clip and photos.

3. All observations shall be selected from a standard table of descriptions incorporated in the inspection reporting software, as required by PACP. Any additional comments regarding the observation shall be indicated in the remarks box.
4. The severity of each defect or observation shall be recorded and rated according to the PACP method.
5. All observations shall be recorded using PACP codes as outlined in NASSCO's PACP Reference Manual, and in this document.

D. Video

1. The Contractor shall make a continuous color digital recording in MPEG 4 format for each pipe segment inspected, unless specified by CITY.
2. Video files shall have a minimum resolution of 352 x 240 pixels and an interlaced frame rate at a minimum of 24 frames per second.
3. Consent audio reporting will be avoided to prevent inconsistent operator subjectivity. Audio shall be used to describe the location, starting and ending manholes, whom is the operator, the pipe size and material, the date and time, and the PACP coding of the observation.
4. Video inspection will not exceed a traverse rate of 30 feet per minute.
5. The Contractor shall pause the digital recording at any time there is a delay in the inspection and restart the digital video recording in the same digital file. The pause shall in no way affect, freeze, or interrupt the replay of the video and shall not close the video file during the inspection.
6. Each pipe segment (manhole to manhole) shall be identified with an initial text screen and completed in accordance with PACP's CCTV inspection form header Instructions and shall be as follows:

Line Number & Description

Line 1:	Surveyed By
Line 2:	City
Line 3:	Street
Line 4:	Location Code*
Line 5:	Weather*
Line 6:	Direction of Survey
Line 7:	Use of sewer*
Line 8:	Pipe Material
Line 9:	Pipe Diameter/Height
Line 10:	Pipe Length (on plans)
Line 11:	Start Manhole Number
Line 12:	End Manhole Number
Line 13:	Pipe ID (PSR or MMS #)
Line 14:	Inspection Date and Time

Line items noted with an asterisk (*) are optional depending on the

line capacity of the text overlay equipment.

7. This data must completely match the data entered in the database header information.
8. The initial text screen shall appear no more than 15 seconds at the beginning of the video footage, and shall appear before the 360 degree pan of the starting manhole.
9. During the CCTV inspection, the video shall show the following text at all times:

<u>Line Number</u>	<u>Description</u>
Line 1:	Inspection Date / Time / City
Line 2:	Start Manhole Number / End Manhole Number
Line 3	Direction of Inspection
Line 4:	Street Name / Sewer ID Number
Line 4:	Pipe Size / Pipe Material / Running Total

10. During the CCTV inspection, the camera shall stop at all defects and significant observations to ensure a clear and focused view of the pipe condition and shall rotate the camera head at the defect to allow for adequate evaluation at a later time.
11. All defects and significant observations shall include a text overlay of the recorded observation.
12. The video recording shall include on-screen observation text for every observation recorded in the database, including AMH, in addition to the text in Section 2.4.D.6.
13. The naming of the video file shall consist of the “FROM MANHOLE STATION NUMBER”, “TO MANHOLE STATION NUMBER”, and the eight digit inspection date, as shown in the following example, or as pre-approved by CITY OF BARSTOW:

100_120_20050101.mp4 (FromMHID_ToMHID_YYYYMMDD)

Note: “Manhole ID Number” are from the City’s GIS numbering of the sanitary sewer system.

E. Photographs

1. Digital photographs in JPEG format shall be made of all recorded observations. These photographs will be computer generated with the use of the inspection reporting system software.
2. JPEG images shall be captured at a minimum resolution of 640x480 pixels.
3. At a minimum, all photographs shall be named consisting of the following descriptions: “FROM MANHOLE STATION NUMBER”,

“TO MANHOLE STATION NUMBER”, eight digit inspection date, and the defect 'station' location along the pipe. It is in the Contractor's discretion as to additional data information that may be needed in the naming of the files to make each file unique within the file naming constraints of their inspection software.

100_120_20100101_125_A.jpg
(FromMHStation_ToMHStation_YYYYMMDD_Defect
position_UniqueData)

4. Any additional information shall be included after the mandatory info specified above. The naming convention shall be consistent throughout the project.
5. A minimum of TWO but not limited to two photographs of each defect shall be taken, one with a perspective view and one with a close-up view.
6. A minimum of one photograph is required for each lateral connection looking directly at the connection and each AMH observation from the bottom of the manhole looking up.

F. Additional Inspection Procedures

1. Bulkheads shall be removed along the entire segment of the sewer line from manhole to manhole. Otherwise, the segment is considered incomplete.
2. A full 360 degree pan of all manholes is required. This video footage shall occur at the beginning of each pipe segment survey inspection from the bottom of the manhole panning up the manhole shaft. The Contractor shall cover the manhole opening to prevent too much light from entering the structure and to ensure a clear and focused view of the manhole interior. In instances when the manhole is the terminating manhole, then the pan shall occur at the end of the pipe segment survey inspection.
3. Video footage shall be taken centered on the pipe with the water level running horizontally. The camera shall run along the invert of the pipe and not at its side, unless it is passing a point obstacle. If extended driving on the side of the pipe is required, then either the pipe needs a more thorough cleaning or an observation should be noted from the PACP codes describing the nature of the obstacle.
4. Obstructions may be encountered during the course of the CCTV inspection that prevents the travel of the camera. In instances when obstructions are not passable, the Contractor shall withdraw the equipment and begin a CCTV inspection from the opposite end of the

sewer reach.

5. If a particular line is inspected more than once, then the Contractor shall include all versions of the inspections in the database. The MGO observation shall be used on all inspections except at the first occurrence. The Contractor shall provide an explanation for the additional inspections in the Remarks section.

3. SPECIAL CONDITIONS

3.1 Excessive Depth of Flow:

- a. Maximum depth of flow for CCTV inspections shall be 25 percent of the pipe diameter. If the depth of flow is greater, then the CCTV inspection shall be performed during the low flow periods between the hours of 10:00 p.m. to 6:00 a.m.
- b. The Contractor shall pay special attention to all local jurisdiction rules and regulations, especially regarding activities during off-peak hours.
- c. If the flow is still above 25 percent on the return trip, then the Contractor can use a flow-controlling mechanism (i.e. flow reducer) to control the flow and proceed with the inspection. After the initial screen and AMH observation, the MGO observation shall be used to note the reason for the return to this location and indicate the use of such flow-controlling equipment, in the appropriate box in the section header information screen.
- d. The Contractor shall include the original inspection in the final submittal even with high flow conditions.
- e. If the Contractor encounters a surcharging manhole (whereas the flow at the manhole is at least 50 percent of the sewer pipe diameter), then the Contractor shall immediately notify the Engineering Division at (760) 255-5156.

4. SUBMITTALS AND DELIVERABLES AND REVIEW

4.1 Submittals:

The Submittal will consist of:

- a. A hard drive, CD(S) or DVD(s) containing the database, digital videos, photos and audio files.
- b. A printed Report in a hardcover white clear view 3-ring binder labeled as described in Section 4.4, containing the following information:
- c. Footage calibration report for each camera used.

- d. PACP Certificate copies of all operators.
- e. Summary table of all pipeline segments inspected with the following fields in the order listed:

Column 1: Date of Inspection
 Column 2: Start Manhole
 Column 3: Stop Manhole
 Column 4: Total Pipe Length (per as-built plan / GIS Information)
 Column 5: Televised Length
 Column 6: Quick Maintenance Rating (per PACP)
 Column 7: Quick Structure Rating (per PACP)
 Column 8: Sewer ID Number (Section Number)

(*NOTE: The table shall be sorted by StartManhole)

- f. An observation table of all pipeline segments inspected with the following fields in the order listed:

Column 1: Section Number
 Column 2: Position of Defect
 Column 3: Observation Code (per PACP)
 Column 4: Observation Description (per PACP)
 Column 5: Structural Grade (per PACP)
 Column 6: O&M Grade (per PACP)

(*NOTE: The table shall be sorted by Sewer ID number (Section Number))

4.2 Deliverables:

As part of the Submittal, the Contractor shall submit all video recordings, image files, and databases on a maximum of 10 DVDs or a rectangular shaped external hard drive with USB 2.0 connection, or similar, as pre-approved by CITY OF BARSTOW. If a hard drive is submitted, the submittal shall include the power cord, USB connection cable, software and shall be compatible with the City's Information System. The external hard drive, cables, software, and peripherals will become property of CITY OF BARSTOW.

- a. DVD's or External hard drive(s), binder cover and binder spine label shall include the following information on computer-generated labels:
- b. City of Barstow – Engineering Division
- c. General Contractor Name and Sub-contractor Name
- d. Project Name (e.g. Project 2010-15: 2011 Sanitary Sewer System Inspection and Cleaning)
- e. Start Date of CCTV Inspections (e.g. MM/DD/YYYY)

- f. Finish Date of CCTV Inspections (e.g. MM/DD/YYYY)
- g. Volume Number / Disk Number

All files included as part of the deliverables shall be contained within one single folder on the DVD or hard drive and labeled with the project name, and the date as:

PRJ2010-15_52369-02_AcceptanceReview_20071220_1

(ProjectNumber_AcceptanceReview_ YYYYMMDD _Submittal#)

4.3 Review:

- a. The video recordings, photographs, and data shall be reviewed by CITY OF BARSTOW for focus, lighting, clarity of view, and technical quality.
- b. Videos or photographs recorded while a camera has flipped over in the process of traveling or the viewing of laterals, obstructions, or defects are blocked by cables, skids or other equipment will not be accepted. CONTRACTOR will borne all expense to re-video the section/s at no CITY.
- c. Shape, focus, proper lighting, and clear, distortion-free viewing during the camera operations shall be maintained. Failure to maintain these conditions will result in the rejection of the video and/or photographs by the CITY OF BARSTOW.
- d. Videos or photographs recorded showing steam, inadequate lighting, or other poor image quality will be cause for rejection by CITY OF BARSTOW.
- e. Any reach of sewer where recording quality, inspection, and/or report is not acceptable according to this Technical Specifications to CITY OF BARSTOW shall be re-televised, and /or data modified at the Contractors expense.

5. ADDITIONAL RESPONSIBILITIES OF THE CONTRACTOR

- a. In the event of any Contractor-related overflow or interruption/backup of customer service, the Contractor shall immediately notify the Engineering Division at (760) 255 – 5156, and shall contain and eliminate the overflow.
- b. The Contractor shall be responsible for any fines levied by others, reimbursement of any agency incurred costs, damage, cleanup, restoration of flow, and any disruption of service costs to customers as a result of the Contractor's work. This is in addition to any and all costs incurred by the customer.
- c. The Contractor shall respect the rights of property owners, and not enter upon private property without obtaining permission from the owner of the property.
- d. For manholes located in easements of private property, the Contractor shall provide the resident with 24-hour advanced notice for easement access prior to entering the property, unless the resident provides immediate permission.

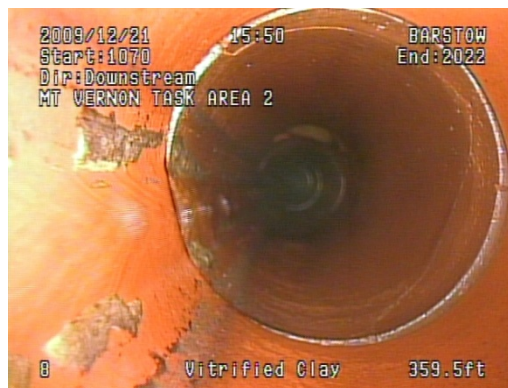
Appendix A

Typical Inspection Procedure:

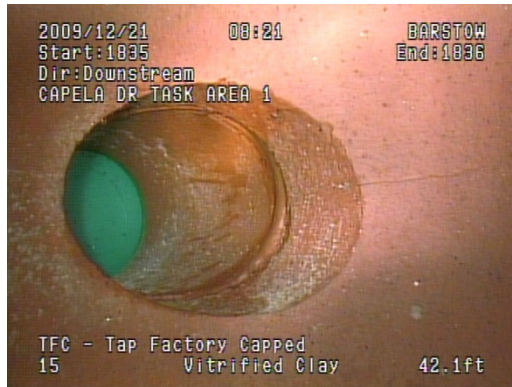
- 1 Display Overlay with Segment details
- 2 Pan Manhole 360 degrees, from bottom looking up
- 3 Start inspection from edge of pipe, resetting the footage to zero at the start of pipe inspection.
- 4 Indicate AMH (Manhole) and MH Number in Remarks to start survey
- 5 Indicate MWL (Water Level)
- 6 Indicate MWM (Water Mark) if visible
- 7 Conduct survey
 - a. Record all defects & taps
 - b. Take 2 Photos of each defect
 - i. Close-up



- ii. Perspective View (looking down the pipe at the defect)



iii. Take 1 Photo of each tap



8. End Inspection

a. If the camera can not pass or continue due to:

i. Water level > 25%

1. Attempt during low flow period

2. If flow is high use a flow reducer and inspect

ii. Roots/Collapsed/Blockage

1. Abandon Survey

a. Use MSA Code to indicate Survey Abandoned; Indicate in the remarks why survey is abandoned.

b. Setup Camera at next manhole, and repeat Inspection Procedure toward the original start manhole until:

i camera cannot pass, and end inspection with MSA code

ii If camera is able to make it through, end with AMH code, and include an MGO code to indicate that on the reverse attempt a full inspection was completed

b. If the camera reaches the end Manhole:

Indicate AMH and MH number in Remarks

Display Ending Screen Text

360 degree Pan of Manhole, if the manhole is the terminal manhole.

Appendix B

Emergency Information:

In the event of any Contractor-related overflow or interruption/backup of customer service, the Contractor shall immediately notify the following:

The City Engineering at (760) 255 – 5154 or his representative at (760) 255 – 5156.

The engineering personnel will notify United Water On-Call personnel at (760)792-2674, the Water Plant Operator at (760) 217-4209, and the City's Sewer System Management Plan (SSMP) Manager at (760) 927-7450.

The SSMP manager will then activate the City's Sanitary Sewer Overflow (SSO) plan.

If necessary, The SSO plan will activate the notification process to the following agencies;

San Bernardino County Department of Health Services;	(800)472-2376
State Office of Emergency Services;	(800)852-6550
Lahontan Regional Water Quality Control Board (LRWQCB)	(760)241-4942

Should the City Engineer or his representative not be available, the Contractor shall immediately notify the **Police Dispatch Center at (760)256-2211** and inform the dispatcher of the SSO. The CONTRACTOR shall inform the dispatcher of the location and the amount of sewer overflow.

The CONTRACTOR shall contain and eliminate the overflow. The SSMP manager and the City Engineer will confirm that all necessary containment and cleanup actions have been taken.

PACP Codes:

AMH – All inspections shall start with AMH, or other appropriate code for access point. (Refer to PACP Reference manual pg 7-13)

MSA – All inspections where a segment is abandoned due to a blockage, obstruction, or collapsed sewer shall end with this code, and a reverse inspection shall be attempted. (Refer to PACP Reference manual pg 1-4, 8-2, and 8-7)

MGO – This code shall be used when additional remarks are necessary...such as, reverse inspection, re-inspected during low flow, segment excused by DPW. Also, any defects in Manholes, such as a hole in the trough shall be recorded as an MGO.

MWL – This code shall be used at the beginning of each survey to indicate the water level, and shall be used throughout the survey if the water level changes by 5% or more. (Refer to PACP Reference manual pg 8-2)

MWM – This code shall be used when there is an obvious mark on the side of the sewer line, where the water regularly reaches. (Refer to PACP Reference manual pg 8-2)

RBL – This code shall be used when roots have formed a mass and, in doing so, are restricting the flow. This code should be used when the cross sectional area lost is greater than 50% **INSIDE** the service pipe connection **ONLY**(i.e. lateral or tap connections) (Refer to PACP Reference manual pg 6-7)

RBC – This code shall be used when roots have formed a mass and, in doing so, are restricting the flow. This code should be used when the cross sectional area lost is greater than 50% and the roots extend **OUTSIDE** the service pipe connection and into the main sewer pipe. (Refer to PACP Reference manual pg 6-7)

RBB – This code shall be used when roots have formed a mass and, in doing so, are restricting the flow. This code should be used when the cross sectional area lost is greater than 50% and the roots are **ENTIRELY WITHIN** the main sewer pipe. (Refer to PACP Reference manual pg 6-7)

Appendix C

Examples

File Naming

Database File Name: ProjectNumber_YYYYMMDD_Acceptance Review_Submittal#.mdb
Ex. 2010-17_20101220_AcceptanceReview_1.mdb

Photo Name(s): FromMH_ToMH_YYYYMMDD_DefectLocation_UniqueData.jpg
Ex. 100_145_20100101_125_A.jpg

*NOTE: Photographs shall be taken as follows: 2 photographs of each defect & 1 photograph of each lateral connection

Video Name(s): FromMH_ToMH_YYYYMMDD.mp4
Ex. 100_145_20100101.mp4

Section Header Data:

Dates: YYYYMMDD (4 digit year, 2 digit month, 2 digit day)

Manhole ID: ### (GIS Manhole ID #)
Ex. MH100 to MH101

Feet Televised: This distance shall be measured from the exit of the start manhole and the entrance of the finish manhole. (i.e. only the distance of the pipe)

Example Label:

City of Barstow

Engineering Division

Project Name

Volume #

Name of the CCTV Service Provider

2010-17_20101202_1

Start: 01/05/2008

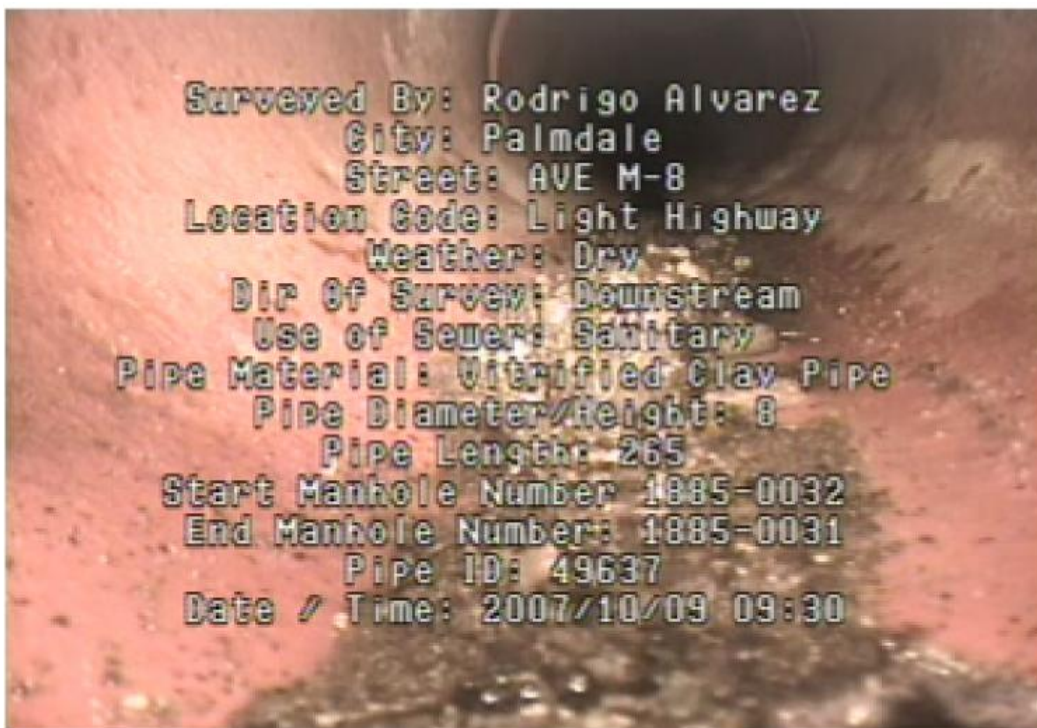
Finish: 02/07/2008

Screen Overlays

INITIAL TEXT SCREEN:

Include all of the following lines of text in the order listed; if your software/hardware does not allow for 14 lines of text, the lines marked OPTIONAL can be omitted as needed.

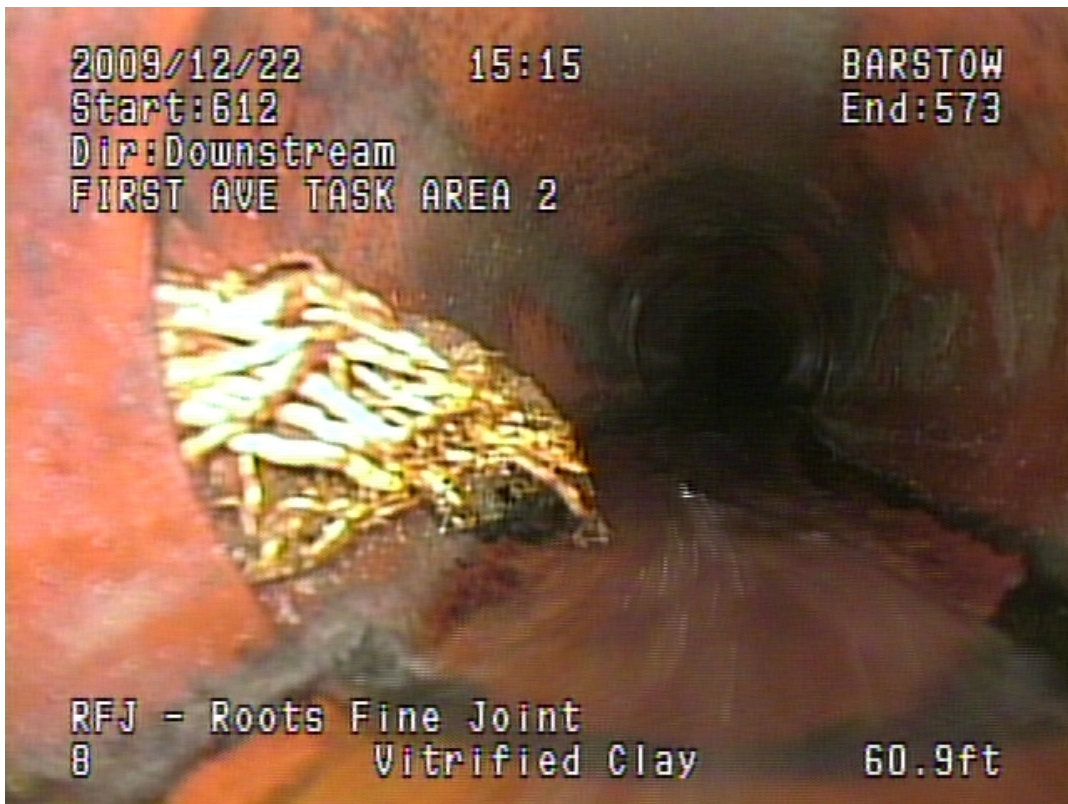
Line 1: Surveyed By
Line 2: City
Line 3: Street
Line 4: Location Code (OPTIONAL)
Line 5: Weather (OPTIONAL)
Line 6: Direction of Survey
Line 7: Use of Sewer (OPTIONAL)
Line 8: Pipe Material
Line 9: Pipe Diameter/Height
Line 10: Pipe Length (Total length provided)
Line 11: Start Manhole Number
Line 12: End Manhole Number
Line 13: Inspection Time/ Date/ Feet TV'd



OBSERVATION SCREEN TEXT:

The video shall the display the following screen when an observation is recorded.

- Line 1: Date/ Time/ City
- Line 2: Start Manhole Number/ End Manhole Number
- Line 3: Direction of Survey
- Line 4: Street Name
- Line 5: Observation Code – Observation Text Description
- Line 6: Pipe Diameter/ Pipe Material/ Current Footage



RUNNING SCREEN TEXT:

During the CCTV inspection, the video shall show the following text at all times:

- Line 1: Date/ Time/ City
- Line 2: Start Manhole Number/ End Manhole Number
- Line 3: Direction of Survey
- Line 4: Street Name
- Line 5: Pipe Diameter/ Pipe Material/ Current Footage





**SANTIARY SEWER CCTV INSPECTION AND
CLEANING**

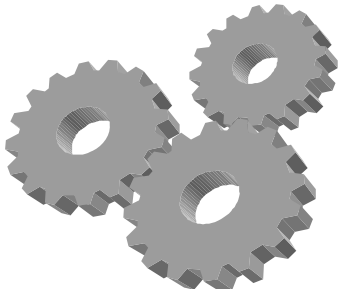
Volume Number: 1

Associated DVD/CD/Hard Drive Number: 11012010-1
Date: November 2, 2010

Location

Main Street
Elm Avenue
Agnes Avenue
Frances Avenue

Service Providers Logo



Service Providers Name
Address, State, Postal Code
Telephone, FAX,
Email

Contact Person Name

**SERVICE PROVIDERS LOGO AND
 INFORMATION
 ADDRESS
 TELEPHONE NUMBER
 CONTACT PERSON**

SWR ID #	Date	Location	Manhole Numbers	Pipe Length	Size
1719	2009/12/21 08:15	CAPELA DR TASK AREA 1	1835 To 1836	219.4	149 MB
1718	2009/12/21 08:38	CONTRY CLUB DR TASK AREA 1	1836 To 1837	292.6	203 MB
1722	2009/12/21 08:54	CONTRY CLUB DR TASK AREA 1	1837 To 1838	229	160 MB
1721	2009/12/21 09:21	CONTRY CLUB DR TASK AREA 1	1838 To 1839	349.2	208 MB
1720	2009/12/21 09:36	CONTRY CLUB DR TASK AREA 1	1839 To 1840	343.4	199 MB
1723	2009/12/21 10:16	CONTRY CLUB DR TASK AREA 1	1840 To 1841	239.2	196 MB
1724	2009/12/21 10:29	CONTRY CLUB DR TASK AREA 1	1841 To 1842	221	137 MB
1725	2009/12/21 10:54	CONTRY CLUB DR TASK AREA 1	1842 To 1843	299.5	146 MB
1730	2009/12/21 11:09	CONTRY CLUB DR TASK AREA 1	1843 To 1844	330.7	165 MB
1727	2009/12/21 12:01	CONTRY CLUB DR TASK AREA 1	1845 To 1846	237.5	129 MB
1726	2009/12/21 12:20	CONTRY CLUB DR TASK AREA 1	1846 To 1847	238.2	134 MB
1729	2009/12/21 12:39	CONTRY CLUB DR TASK AREA 1	1844 To 1845	300.7	131 MB
1728	2009/12/21 13:14	CONTRY CLUB DR TASK AREA 1	1847 To 2011	299.5	151 MB
1717	2009/12/21 14:14	CONTRY CLUB DR TASK AREA 1	2011 To 1848	275.3	166 MB
2403	2009/12/21 15:26	MT VERNON	1070 To 447	394.5	410




SERVICE PROVIDERS LOGO AND INFORMATION ADDRESS, TELEPHONE NUMBER	Contact
	<div style="border: 1px solid red; height: 40px; width: 100%;"></div>
	Address Orange CA
	Operator Rigo Alvarez




Project Information 1			
Surveyor Name	Rigo Alvarez	Certificate Number	U-103-581
Owner	BARSTOW	Customer	BARSTOW
Drainage Area		PO Number	Task Area 1
Pipe Segment Reference	1719	Date	2009/12/21 08:15
Street	CAPELA DR TASK AREA 1	City	BARSTOW
Manhole			
Upstream MH	1835	Rim to Invert (U)	
Grade to Invert (U)		Rim to Grade (U)	
Downstream MH	1836	Rim to Invert (D)	
Grade to Invert (D)		Rim to Grade (D)	
Sewer Use	Sanitary	Direction of Survey	Downstream
Pipe			
Height (Diameter)	15	Width	15
Shape	Circular	Material	Vitrified Clay Pipe
Lining Method		Pipe Joint Length	
Total Length		Length Surveyed	219.4
Year Laid		Year Renewed	
Misc			
Flow Control	Not Controlled	Media Label	R001
Purpose	Routine Assessment	Run Number	001
Pre-Cleaning	Jetting	Date Cleaned	
Weather	Dry	Location Code	Light Highway
Additional Info		Location Details	
Custom			
MaintWeight		StructWeight	
Run Number	001	Custom4	
Custom5		Custom6	
Custom7		Custom8	0
Custom9	0	Video Location	0

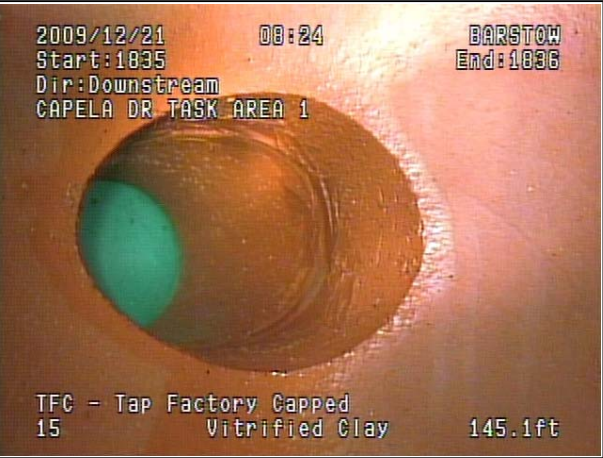


Project Name: 1719

Date: 2009/12/21 8:15:00 AM
Street: CAPELA DR TASK AREA 1
Length Surveyed: 219.4
Run Number: 001
Height (Diameter): 15

Pipe Segment Reference: 1719
Upstream MH: 1835
Downstream MH: 1836
Direction of Survey: Downstream
Material: Vitrified Clay Pipe

Distance	Fault Observation	Time	Picture
0.0	Manhole Severity: None Percent: 0 Remarks: 1835	37 00:00:00	<div style="font-family: monospace; font-size: small;"> 2009/12/21 08:17 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1 </div>  <div style="font-family: monospace; font-size: x-small; margin-top: 5px;"> AMH - Manhole 15 Vitrified Clay 0.1ft </div>
6.0	Tap Factory Active Position: 2 Severity: None Size: 4 Percent: 0	01:22 00:00:00	<div style="font-family: monospace; font-size: small;"> 2009/12/21 08:18 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1 </div>  <div style="font-family: monospace; font-size: x-small; margin-top: 5px;"> TFA - Tap Factory Active 15 Vitrified Clay 6.0ft </div>
9.9	Water Level Severity: None Percent: 5	02:24 00:00:00	<div style="font-family: monospace; font-size: small;"> 2009/12/21 08:19 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1 </div>  <div style="font-family: monospace; font-size: x-small; margin-top: 5px;"> MWL - Water Level 15 Vitrified Clay 9.9ft </div>

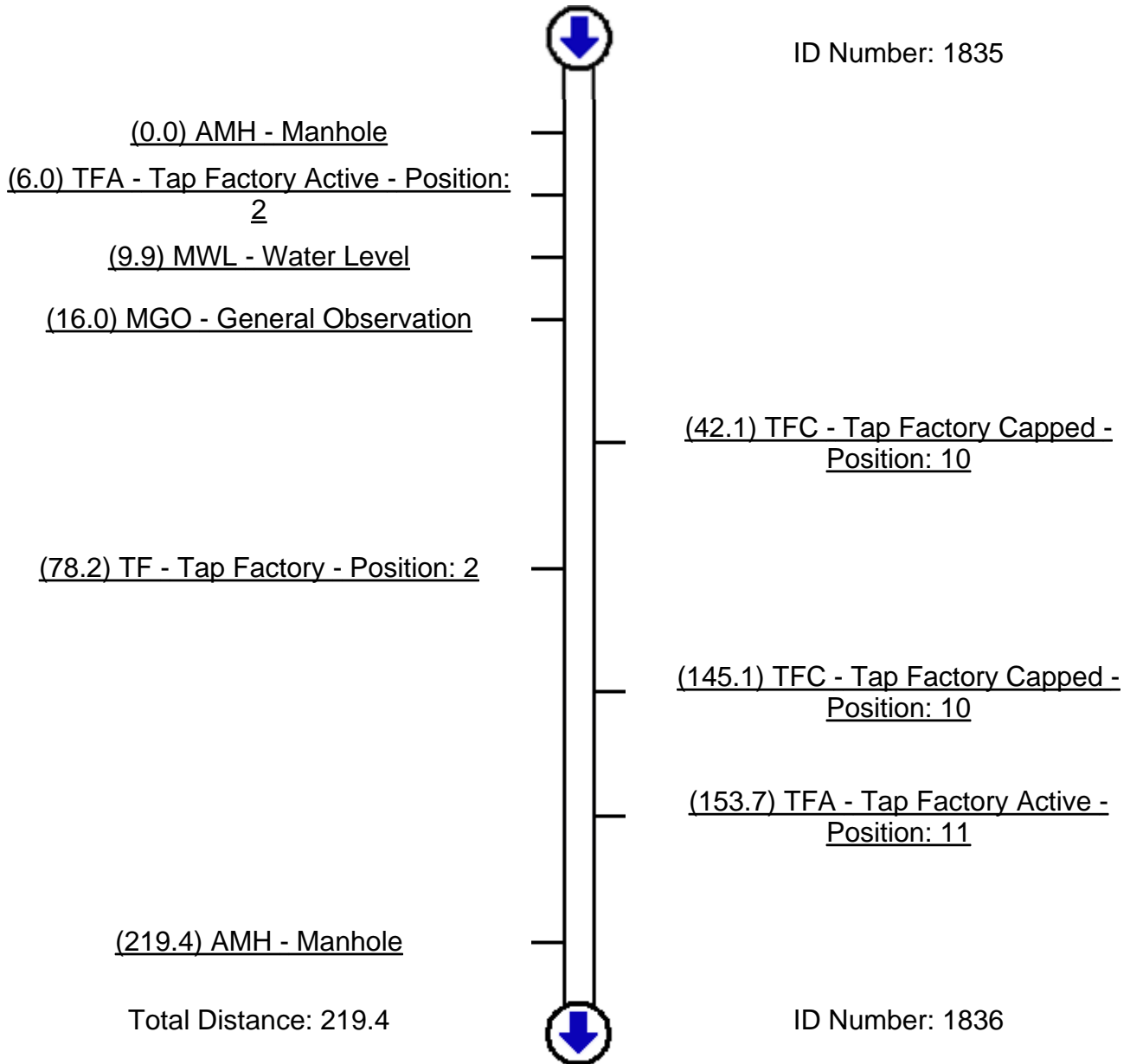
Distance	Fault Observation	Time	Picture
16.0	<p>General Observation Severity: None Percent: 0 Remarks: Pipe Joint Length 6'</p>	<p>03:30 00:00:00</p>	<p>2009/12/21 08:20 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p>  <p>MGO - General Observation 15 Vitrified Clay 16.0ft</p>
42.1	<p>Tap Factory Capped Position: 10 Severity: None Size: 4 Percent: 0</p>	<p>04:20 00:00:00</p>	<p>2009/12/21 08:21 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p>  <p>TFC - Tap Factory Capped 15 Vitrified Clay 42.1ft</p>
78.2	<p>Tap Factory Position: 2 Severity: None Size: 4 Percent: 0</p>	<p>05:39 00:00:00</p>	<p>2009/12/21 08:22 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p>  <p>TF - Tap Factory 15 Vitrified Clay 78.2ft</p>

Distance	Fault Observation	Time	Picture
145.1	Tap Factory Capped Position: 10 Severity: None Size: 4 Percent: 0	07:28 00:00:00	 <p>2009/12/21 08:24 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p> <p>TFC - Tap Factory Capped 15 Vitrified Clay 145.1ft</p>
153.7	Tap Factory Active Position: 11 Severity: None Size: 4 Percent: 0	08:04 00:00:00	 <p>2009/12/21 08:24 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p> <p>TFA - Tap Factory Active 15 Vitrified Clay 153.7ft</p>
219.4	Manhole Severity: None Percent: 0 Remarks: 1836	10:08 00:00:00	 <p>2009/12/21 08:26 BARSTOW Start:1835 End:1836 Dir:Downstream CAPELA DR TASK AREA 1</p> <p>AMH - Manhole 15 Vitrified Clay 219.4ft</p>

Project Name: 1719

Date: 2009/12/21 8:15:00 AM **Pipe Segment Reference:** 1719
Street: CAPELA DR TASK AREA 1 **Upstream MH:** 1835
Length Surveyed: 219.4 **Downstream MH:** 1836
Run Number: 001 **Direction of Survey:** Downstream
Height (Diameter): 15 **Material:** Vitrified Clay Pipe

Severity
Light
Moderate
Average
Heavy
Severe



Session Information			
Surveyors Name	Rigo Alvarez	Certificate Number	U-103-581
System Owner	BARSTOW	Survey Customer	BARSTOW
Drainage Area			
P/O Number	Task Area 1	Pipeline Segment Ref	1719
Date	2009/12/21	Time	08:15
Location	CAPELA DR TASK AREA 1		
Locality	BARSTOW		
Further Location Details:			
Manhole Information			
Upstream Manhole Number: 1835			
Rim to Invert		Grade to Invert	
Rim to Grade			
Downstream Manhole Number: 1836			
Rim to Invert		Grade to Invert	
Rim to Grade			
Sewer			
Use of Sewer	Sanitary	Direction	Downstream
Flow Control	Not Controlled	Height	15
Width	15	Shape	Circular
Material	Vitrified Clay Pipe	Lining Method	
Pipe Joint Length		Total Length	
Length Surveyed	219.4	Year Laid	
Year Rehabilitated		Tape/Media Number	R001
Purpose	Routine Assessment	Sewer Category	
Pre-Cleaning	Jetting	Date Cleaned	
Weather	Dry	Location Code	Light Highway
Additional Information			

Grade	Structural	O&M	Overall
5	0	0	0
4	0	0	0
3	0	0	0
2	0	0	0
1	0	0	0
Overall	0	0	0
Number of Defects	0	0	0
Pipe Rating	0000	0000	0000

Distance	Video Ref	Code	Cont Defect	Value			Joint	Circumferential Location	
				Dimension		%		At / From	To
				1st	2nd				
0	00:00:00	AMH - Manhole				0			

	37								
		1835							
6	00:00:00 82	TFA - Tap Factory Active		4		0		2	
9.9	00:00:00 144	MWL - Water Level				5			
16	00:00:00 210	MGO - General Observation				0			
		Pipe Joint Length 6'							
42.1	00:00:00 260	TFC - Tap Factory Capped		4		0		10	
78.2	00:00:00 339	TF - Tap Factory		4		0		2	
145.1	00:00:00 448	TFC - Tap Factory Capped		4		0		10	
153.7	00:00:00 484	TFA - Tap Factory Active		4		0		11	
219.4	00:00:00 608	AMH - Manhole				0			
		1836							

Submittal Check List:

The following items shall be included in your submittal to CITY OF BARSTOW before it will be processed for the Acceptance of Sewer into the CITY OF BARSTOW.

_____ DVD(s) (maximum 10) or a rectangular shaped hard drive or containing:

- _____ Database file (mdb),
- _____ Video files (mp4), and
- _____ Photo files (jpg).

(NOTE: VHS video tapes will not be accepted)

_____ A hardcover white clear view 3-ring binder labeled as described in Section 4.3 including the following items:

_____ Footage calibration report for each CCTV camera used. _____ PACP Certificate copies of all operators.

_____ Summary table of all pipeline segments inspected with the following fields in the order listed:
Column 1: Date of Inspection Column 2: Start Manhole Column 3: Stop Manhole

- Column 4: Total Pipe Length (per as-built plan)
- Column 5: Feet TV'd Televised Length
- Column 6: Quick Maintenance Rating (per PACP)
- Column 7: Quick Structure Rating (per PACP)
- Column 8: Section Number

(*NOTE: The table shall be sorted by Start Manhole)

_____ An observation table of all pipeline segments inspected with the following fields in the order listed:

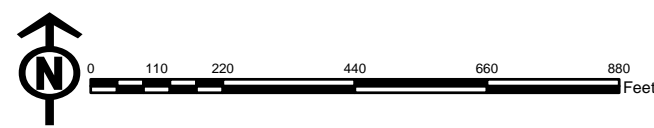
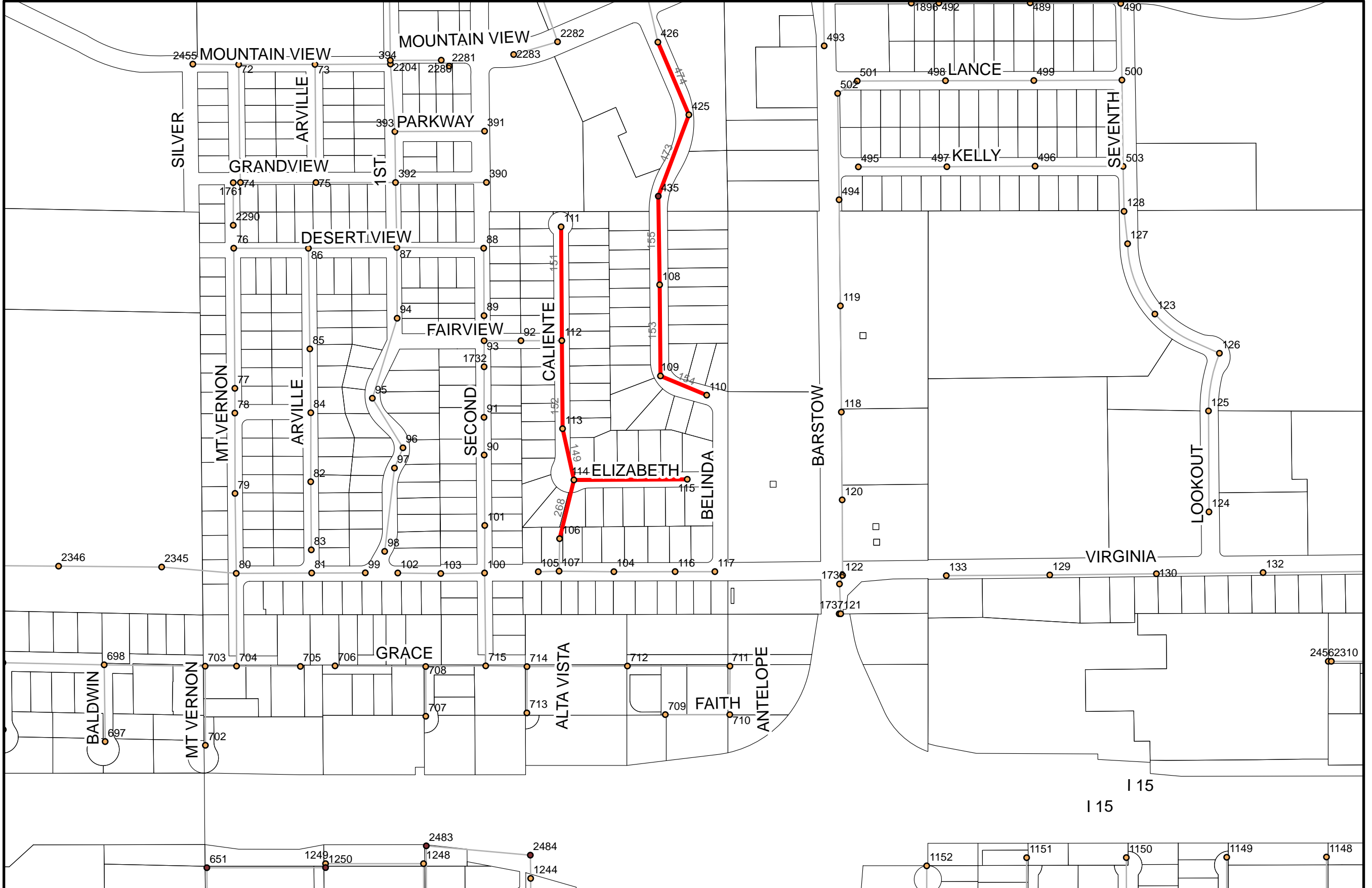
- Column 1: Section Number
- Column 2: Position of Defect
- Column 3: Observation Code (per PACP) Column 4: Observation Description (per PACP)
- Column 5: Structural Grade (per PACP)
- Column 6: O&M Grade (per PACP)

(*NOTE: The table shall be sorted by Section Number)

ATTACHMENT G
MAPS

Legend

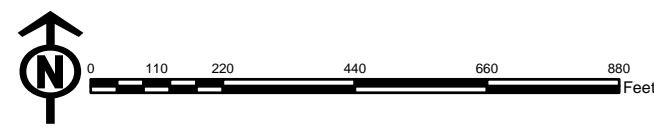
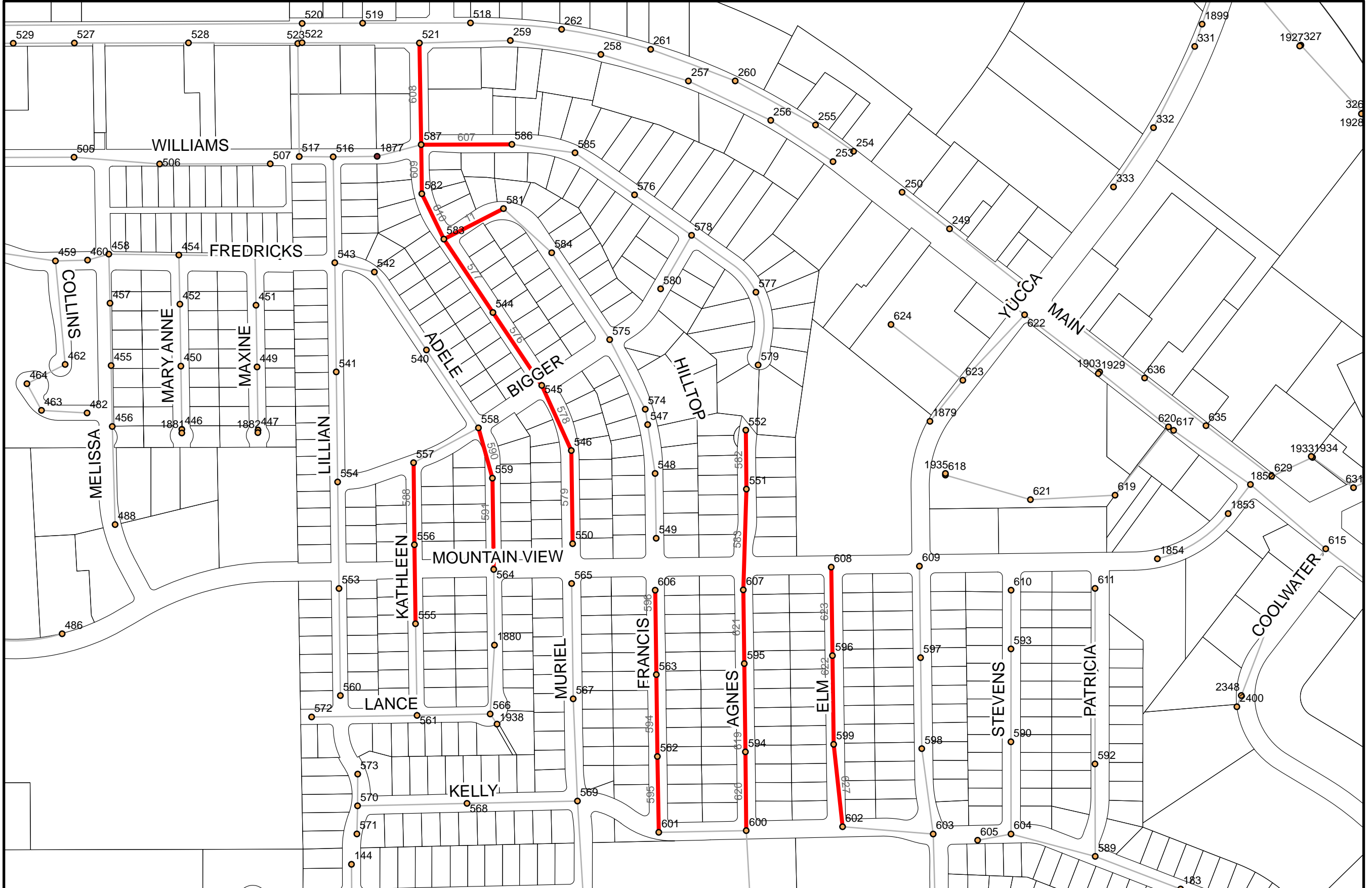
- Existing Sewer
- CCTV Lines



**2010 CCTV PROJECT
AREA 2**

Legend

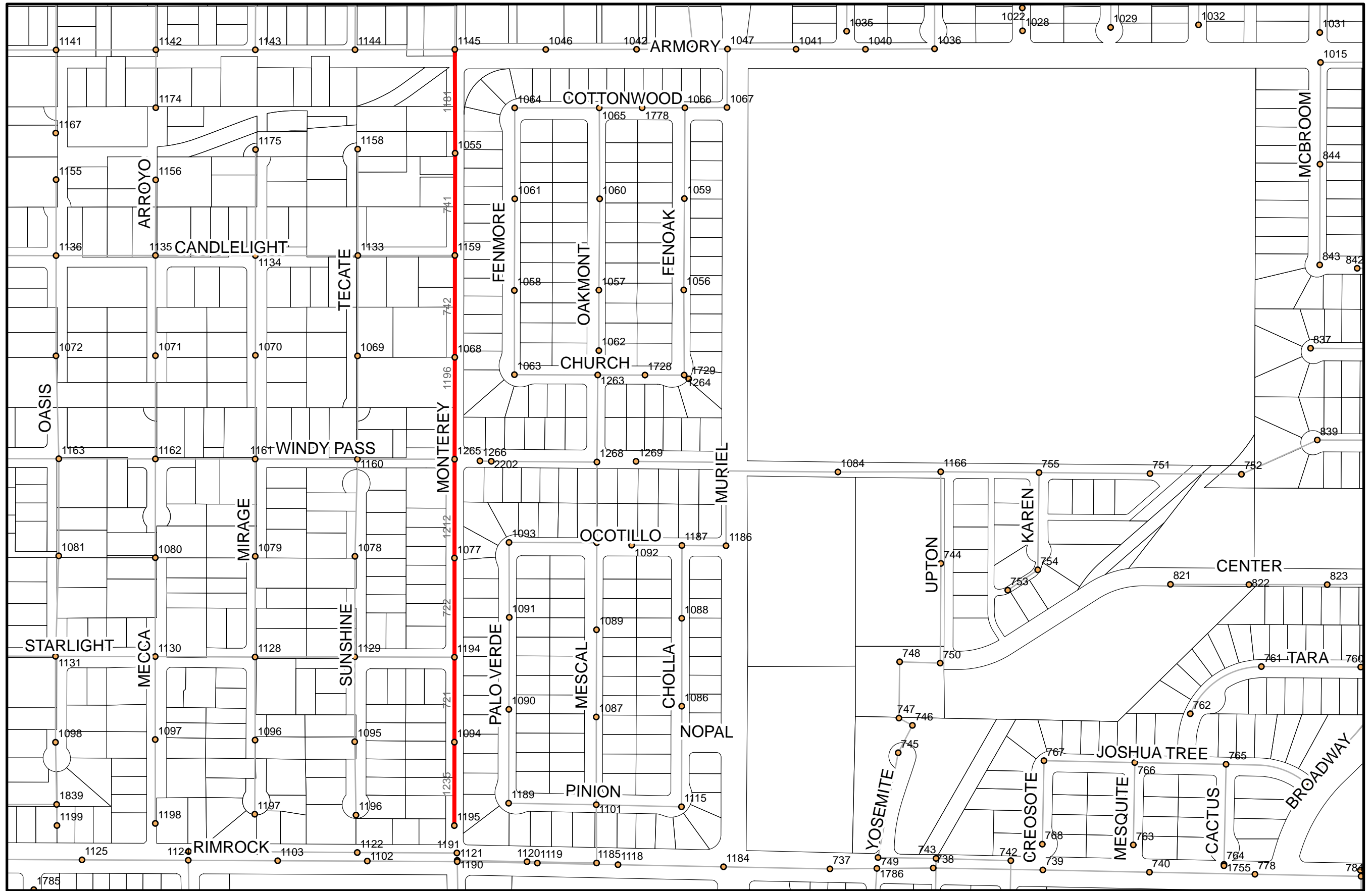
- Existing Sewer
- CCTV Lines



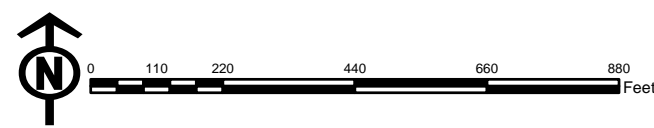
**2010 CCTV PROJECT
AREA 1**

Legend

- Existing Sewer
- CCTV Lines



September 24, 2010



2010 CCTV PROJECT AREA 3