Generic specifications for video inspections using flexidataTM
(As provided by Pipelogix, Inc.)

DEFINITIONS

MPEG—stands for Moving Pictures Expert Group, the nickname given to a family of Internaional Standards used for coding audio-visual information in a digital compressed format.

MPEG1—ISO-MPEG Level 1 standard digital audio-visual coding having a resolution of 352 pixels x 240 pixels and an interlaced frame rate of thirty (30) frames per second. All MPEG codings shall be named using .mpg as the file extension.

MPEG2—ISO-MPEG Level 2 standard digital audio-visual coding have a resolution of 740 pixels x 480 pixels and an interlaced frame rate of thirty (30) frames per second. All MPEG codings shall be named using .mpg as the file extension

WMV—Windows Media Format for compressed video files with audio files. All Windows Media Format codings shall be named using .wmv as the file extension.

JPEG—compressed picture file specified by the Joint Photographic Experts Group.

PACP—Pipe Assessment and Certification Program. CCTV Inspection standard developed by NASSCO for the inspection of pipes.

WRc—Water Research committee . CCTV Inspection standard as published in the Manual of Sewer Condition Classification

DATABASE REQUIREMENTS

A. The software is PACP certified by NASSCO
B. The software can export to the standard PACP database
C. The software can import from the standard PACP database
D. The software will be compatible with Microsoft Windows XP, and 2000.
E. The footage reading from the camera equipment shall be automatically entered into the Survey Log
F. The inspection and reporting software program will be menu driven.
G. A context sensitive complete on screen help file will be available.
H. Drop-down boxes shall be utilized to quickly reference common information as specified by the PACP standard such as defects, pipe materials, survey purpose, locations, pipe usage, etc.
I. The basic module software shall also have search (filter) capabilities in order to find information about past surveys located in the database(s).
J. The basic module software shall maintain a database of underground pipe and manhole assets. The entry form will allow additional detail about the pipe to be added including map coordinates.

K. A Reader will be provided for viewing and printing all information. JPEG files can be taken using the Reader from the mpeg file.
L. A site sketch feature shall also be supplied so that a drawing or sketch will indicate special details or locations about a particular set-up site.

DIGITAL VIDEO/AUDIO RECORDING

A. Continuous digital video recordings of the inspection view as it appears on the television monitor shall be made. The recording shall be used as a permanent record of defects. The digital video encoding shall include both sound and video information.
B. Images or video clips shall be easily launched for viewing during inspection report review.
C. Video logging and image capturing shall be available to enter video surveys either in real time or at a later time from previously videotaped inspections.
D. The user will be able to select MPEG 1, WMV or MPEG 2 as a recording standard
E. The MPEG or WMV files can be created from the live video or from recorded video files.
F. As each observation is saved, the time link into the MPEG will be automatically recorded.
G. The recording will be able to be paused for brief periods.
H. The recording will be able to be stopped and be able to be continued via the APPEND feature.
I. Playback speed shall be continuously adjustable from one-quarter normal speed to ten times normal speed with no video distortion.
J. The Live Video, as well as the the recorded video may be played side by side on screen for comparison.

REPORTING CAPABILITIES

A. If the television inspection of an entire section (manhole to manhole) cannot be successfully performed from one manhole, a reverse setup shall be performed per PACP requirement as a second survey. Both of these inspections shall be displayed as a single report in Pipe Graphic and Tabular Reports.
B. Section summary reports are to be made available so that all surveys within a section are listed showing purpose of inspection, dates, work order numbers, manholes, road names and total lengths.
C. Service and structural aspect scoring reports are to list the pipe segment reference number, total observed length, number of defects and total score with reference to the condition of the total pipe, average of the pipe, total defects and average of defects.
D. PACP Quick Rating Report will be available.

training for a total of sixteen (16) hours of on-site software and computer specific operation. Software and computer training shall cover the full operational capabilities of the camera inspection system reporting software. The software training shall include an appropriate amount of field training under live field pipeline inspection conditions including training in the generation of field reports covering all possible reporting functions of the software.