

## 102 - CONSTRUCTION VIDEO AND PHOTOGRAPHY

### 102.1 DESCRIPTION

Furnish all labor, materials and equipment necessary to provide high quality color digital audio/video recording and digital photographs of the Project site surface conditions as specified herein.

Furnish to the Owner a continuous high quality color audio/video recording of surface conditions along the entire route of the proposed Work. Furnish to the Owner high quality color digital photographs. The Contractor may keep a copy for his/her own records.

The video recording and photographs shall be taken:

- (1) Prior to any construction activity.
- (2) After completion of all construction activities.

The Owner reserves the right to reject audio/video recordings and digital photographs which do not conform to the project specifications. This includes, but is not limited to, poor quality, unintelligible audio or uncontrolled pan or zoom. Any audio/video recording or digital photographs rejected by the Owner will be re-recorded/re-photographed at no cost to the Owner. Under no circumstances shall construction begin until the Owner has received and accepted the audio/video recording and photographs.

A qualified, established audio/video recording firm knowledgeable in construction practices and experienced in audio/video recording and photographing of construction projects shall perform the video. If requested, the videographer/photographer shall provide examples of prior work and/or references.

### 102.2 CONSTRUCTION REQUIREMENTS

The Contractor shall submit the required photos and video prior to the issuance of a Notice to Proceed, during construction as directed by the Engineer, and immediately prior to acceptance of the project. Final payment for the project will not occur until the Contractor has completed this item.

#### **a. Color Audio/Video Recording and Digital Photography Survey**

- (1) Coverage shall include, but not be limited to, all existing roadways, sidewalks, fences, curbs, driveways, buildings and structures, ditches, above ground utilities, traffic signal and street light cabinets, landscaping, trees, culverts, headwalls, retaining walls, signage and other physical features located within the zone of influence of the construction. Particular and detailed attention shall be given to any defects noted, such as cracks, disturbed areas, damaged items, or as Owner may direct. The coverage may be expanded if Owner so directs.
- (2) All filming or photography will be done during daylight hours. No filming or photography shall be performed if weather is not acceptable, such as rain, fog, snow, etc.
- (3) It is the intent of this coverage to accurately and clearly document and define pre-existing, post-construction and/or construction conditions to minimize potential construction claims. Physically mark the excavation areas with highly visible fluorescent paint prior to audio/video recording and photography. The markings shall include stationing information.
- (4) The Owner will have the opportunity to accompany the videographer/photographer.
- (5) Sufficient time will be allowed for the Owner to review the Audio/Video recording and the digital photographs prior to construction.

#### **b. Audio and Color Video Recording [Viewable on Windows media]**

- (1) Audio/Video Recording shall be commercial grade in a standard write protected format. Video system shall have capability of producing selected individual still frames. Video shall be formatted to be played in the Standard Install Windows Media player.
- (2) Video recordings shall be divided into multiple segments, and a field log listing those segments shall be provided with the recordings. A visual recording of the field notes and log (listing the video segments) shall be included at the end of each respective original recording. Items to note on the field log include, but are not limited too, the tract number, street or road viewed, filming start- and stop-times, side (of street) being viewed, point starting from, traveling direction and ending destination point. Written documentation must coincide with the information

on the recording so as to make easy retrieval of locations sought for at a later date. All original video field notes and logs shall be released to the owner.

(3) Audio/Video recordings shall begin with a verbal description of the current date and time, the Owner's name, Project or Contract name and number, Contractor's name, and location information such as street name, direction of travel, viewing side, etc. Translucent information consisting of the month, day, year and time of recording must appear on the viewing screen on all video recordings, by electronic means. Information appearing on the recording must be continuous and run simultaneously by the computer generated translucent digital information. No editing or overlaying of information at a later date will be acceptable.

(4) Audio shall be recorded at the same time as the video recording and provide the same information as on the video log sheet. Recordings shall include "continuous" narration identifying the viewing direction, street address or station number location, direction of progress, description of features and the existing condition of improvements or damage within the zone of influence shown on the viewing screen. Identify houses and buildings by house number, when visible, in such a manner that structures of the proposed construction, (i.e. manholes, etc.) can be located by reference. Special commentary will be given for unusual conditions of buildings, sidewalks and curbing, foundations, trees and shrubbery, etc.

(5) The zone of influence shall be defined as an area within the temporary construction easement or public right-of-way as Drawings indicate, or within 35 feet of the proposed Work. The Contractor shall obtain permission from the owners of private property prior to entering private property for the purpose of filming.

(6) The rate of speed in the general direction of travel during the recording shall not exceed 100 feet per minute. Panning rates and zoom-in and zoom-out rates shall be controlled sufficiently such that during playback, the picture shall be in focus and maintain clarity at all times.

(7) Adequate lighting, to produce the proper detail and perspective, will be required to fill in the shadow area caused by trees, structures, utility poles, road signs, and other such objects in residential areas, or as directed by the Owner's Representative.

(8) Engineering station numbers recorded, if applicable, must be continuous, be accurate and correspond to Project stationing. The symbols should be the standard engineering symbols (i.e. 16+64).

(9) Recordings shall be provided to the City via external hard drive or USB thumb drive. The file name of the recordings shall provide the following information::

- (a) Date of Recording
- (b) Project Name and Number
- (c) Location of Recording

**c. Digital Photography**

(1) Photographs shall be captured on digital camera equipment. Original digital image files shall have dimensions of 1500 x 2100 pixels or greater and delivered in TIFF format or JPEG format WITHOUT added compression. Each image must be assigned a unique filename that includes the date of photography.

(2) Each digital image file must be delivered with matching descriptive information that accurately describes the direction and location of the individual photograph, plus notation of any noteworthy damage that is not readily visible in the image. This information may not be provided as the (editable) image filename, but must be delivered in a permanent form such as a photo log or digital plans linked to the picture files.

(3) Sufficient digital photographs shall be taken to document existing features such as roadways, sidewalks, fences, curbing, driveways, buildings and structures, ditches, above ground utilities, traffic signal and street light cabinets, landscaping, subdivision monuments, trees, culverts, headwalls, retaining walls, signage and other physical features located within the zone of influence of the construction. Particular and detailed attention shall be given to any defects noted,

such as cracks, disturbed areas, damaged items, or as Owner may direct. The coverage may be expanded if Owner so directs.

(4) The zone of influence shall be defined as an area within the temporary construction easement or public right-of-way as Drawings indicate, or within 35 feet of the proposed Work. The Contractor shall obtain permission from the owners of private property prior to entering private property for the purpose of taking photographs.

(5) Adequate lighting, to produce the proper detail and perspective, will be required to fill in the shadow area caused by trees, structures, utility poles, road signs, and other such objects in residential areas, or as directed by the Owner's Representative.

(6) Engineering station numbers recorded (in the image or as a descriptor), if applicable, must be accurate and correspond to Project stationing. The symbols should be the standard engineering symbols (i.e. 16+64).

(7) Photographs shall be provided to the City via external hard drive or usb thumb drive.

### **102.3 MEASUREMENT AND PAYMENT**

The Engineer will not measure the specified work for separate payment.

Payment for the audio/video recordings and photographs shall be subsidiary to the other contract items.