

**TO: James L. App, City Manager**  
**FROM: Doug Monn, Interim Public Works Director**  
**SUBJECT: Status Update – Carnegie Library/Sulfur Spring**  
**DATE: April 19, 2005**

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**Needs:** For the City Council to review and file the following status update associated with the repair of the City's Carnegie Library and the Sulfur Spring located in the Library/City Hall Parking lot.

**Facts – Carnegie Library - History**

1. On December 22, 2003, the City of Paso Robles was subjected to a 6.5 earthquake.
2. One of many structures affected by the quake was a Carnegie Library owned by the City.
3. The unreinforced masonry building was constructed in 1908.
4. Chapter 34 is included in the California edition of the Uniform Building Code, which requires that if a building is damaged as a result of a natural disaster greater than 10%, but less than 50% of its replacement costs, then the building shall be rehabilitated to all current codes.
5. This chapter applies to all private and public buildings in the City of Paso Robles and has been applied to private buildings as a result of this disaster.
6. The City hired Architectural Resources Group (ARG) of San Francisco to conduct an Architectural and Engineering Assessment to determine applicability of Chapter 34, and if determined to apply, to then prepare design documents for the Carnegie Library's rehabilitation to current code standards.
7. Assessments of the structure were performed by OES and FEMA representatives.
8. City was notified by FEMA that the application of Chapter 34 of the UBC did not meet FEMA's five (5) criteria for being used as a governing document for rehabilitation of the Carnegie.
9. A Congressional Bill was passed that included language requiring FEMA to fully cover the cost of rehabilitating the Carnegie Library in accordance with all current building codes.
10. In an October 2004 conference call between FEMA and City staff subsequent to the Congressional Bill being passed, FEMA inquired as to the City's interpretation of the wording of the bill (i.e., what level of rehabilitation we expected as a result). City's interpretation was that the result would be the same as applying Chapter 34 and we were therefore proceeding according to our adopted procedures. FEMA staff indicated they reserved the right for any final interpretation and discretion, and maintained their position of dismissing the applicability of Chapter 34.

11. FEMA has since issued a project work sheet ("PW) in an amount of \$384,000.00 to restore the building to pre-earthquake (1908) standards.
12. The Architectural and Engineering Assessment completed by ARG concludes that the level of damage to the Carnegie qualifies under Chapter 34 for rehabilitation and estimates the cost of repair at approximately 1.2 million.

### **Facts – Carnegie Library – Present Status**

1. The City of Paso Robles filed an appeal of FEMA's project worksheet March 31, 2005. The reasons are, but not limited to, the following:
  - a. The first building code containing design standards was not written until 1927.
  - b. The building is an historical structure. Any repairs performed to the building should be of a type and degree that is consistent with its listing in the Register of Historical Buildings.
  - c. The Americans with Disabilities Act requires the building to be made accessible in conjunction with any structural work being performed.
  - d. The City believes that Appendix Chapter 34 of the California Edition of the Uniform Building Code is the document that should set the precedence for the rehabilitation of the Carnegie building.
  - e. In support of using Chapter 34 to rehabilitate the Carnegie, the City has provided FEMA with extensive reference materials, in addition to having Architectural and Engineering Assessment performed by Architectural Resources Group of San Francisco.
  - f. The Architectural and Engineering assessment provides the breakdown of specific work necessary to bring the Carnegie in to compliance with current code. It also establishes that the repair cost resulting from the earthquake damage as it relates to the building replacement cost assigned by FEMA is consistent with the requirements associated with Appendix Chapter 34 for repair.

### **Facts – Sulfur Spring - History**

1. Quake Event caused geo-thermal rupture - On December 22, 2003, the San Simeon Earthquake ruptured a geo-thermal hot spring causing it to surface in the City Hall parking lot.
2. Excavation to determine source - After excavating a portion of the parking lot, in an attempt to reach the source of the water, it was determined that the spring was emanating from a fissure that had been opened as the result of the quake.
3. Surface flow to River Safety caused safety concerns - Initially, the sulfur water was flowing out of the rupture at estimates of 400 gpm and traveling naturally via surface flow (streets and gutters) to the Salinas River. The fine silt and odor in the flow was

- cause for safety concerns in the public streets. Additionally, the flow was picking up oils and debris on its way to the river.
4. Diversion of flow to Sewer Plant - The spring was diverted into the City's sanitary sewer system using a mechanical pump system. The added impact on the City's waste water treatment plant was up to 1 million gallons per day. The extra quantity of sulfur water taxed the ability of the plant to remove contaminants and the discharge of effluent to the Salinas River exceeded approved limits for total dissolved solids.
  5. Diversion of flow to Storm Water System - The City then diverted the water into a temporary storm water system back to the Salinas River. The temporary system utilizes both CalTrans and Union Pacific Railroad right of way. This method of conveyance is reliant on a mechanical pumping system and continues, to date, while a permanent disposal solution can be determined. (Cost of approximately \$400/day).
  6. Technical data collection post quake - During the months immediately following the disaster, the City consulted with a variety of geotechnical engineers to investigate the fissure, compile existing information available, and collect new information to identify the source and nature of the spring water.
  7. Retention of Design Engineering Team - In March, 2004, the City retained a design team composed of Boyle Engineering Company and Fugro West Inc. (Boyle/Fugro) who combined their respective expertise in Structural, Civil and Soil Mechanics Engineering to develop a technical approach for the repair project.
  8. Three step repair approach envisioned - The City envisioned a three-step approach to the sulfur spring repair: a) Control of the flow; b) Repair of the Parking Lot; and c) Long term disposal of natural flow.
  9. Capture flow via artesian pressure preferred - The preferred alternative for capturing/controlling the flow was to place a vertical pipe into the source of the spring to achieve artesian pressure. The vertical pipe would operate similar to a well screen and casing to filter out the sand, and it was hoped it would eliminate the need for permanent facilities to treat and/or distribute the flow.
  10. Artesian flow unachievable - The City suspended work on the pipe installation in August 2004 when it only was able to capture 25% of the spring flow. The City shifted to "Plan B" which was to use a horizontal flow collection system (including a mechanical pumping system).
  11. Parking Lot repair and Disposal System design work continued - The horizontal flow collection system and parking lot repair design was nearly complete and ready to go to bid in fall 2004. The design team was beginning to identify a feasible list of alternatives for treatment and/or facilities for disposal of the spring water.
  12. Notification that Repair project cannot be separated from disposal - During an October 14, 2004 meeting, OES staff informed the City that repair of the parking lot, the water collection system, and disposal of the water must be designed and permitted as one project for purposes of environmental review.
  13. Design Team work scope expanded - In response to direction received from both FEMA and OES representatives, their work scope was amended in December, 2004 to

include coordination of environmental review, development of and preliminary design of water treatment processes and other required analyses, permitting, and selection of a preferred alternative.

14. FEMA requirement for list of preferred alternatives - FEMA recommended in November 2004 conference call that the City submit a prioritized list of water disposal alternatives, including costs. Upon receipt FEMA would review the alternatives for feasibility and NEPA environmental review requirements.
15. Environmental Roles determined – In November 2004 it was made clear that FEMA would serve as lead agency to comply with National Environmental Policy Act (NEPA) and prepare any required environmental review documentation. The City would serve as lead agency to comply with the California Environmental Quality Act (CEQA) and prepare any required environmental documentation.
16. List of Alternatives provided to FEMA – Based upon the analyses and surveys completed to date and the preliminary geotechnical report, the City formalized project alternatives for disposal of spring water and forwarded outline to FEMA. All of the disposal alternatives receive the flow of spring water from the same horizontal collection system installed beneath the parking lot.
  - a. No Action
  - b. Untreated Drainage to River
  - c. Drainage to Wastewater Treatment Plant
  - d. Site Treatment and Drainage to River
  - e. Injection
17. FEMA Environmental consultants on board – On March 9, 2005 an environmental kick-off meeting occurred with the contracted Environmental firm hired by FEMA. Protocol for discussion with Federal agencies was discussed and the roles of both environmental teams.

### **Facts – Sulfur Spring – Present Status**

1. Selection of Preferred Alternative - With input from OES and FEMA the City's goal is to select a disposal alternative and then proceed with environmental analysis
2. Awaiting FEMA confirmation of protocol - City is awaiting written confirmation of protocol and consultation discussions to be initiated through FEMA
3. Once the environmental review is complete - the City would then proceed with detailed design for collection of spring water, repair of the parking lot, and treatment and/or disposal of the water. The City will seek bids for the construction of the project and ultimately seek reimbursement from OES and FEMA based upon actual costs. It is also likely that once the entire project is identified and agreed upon, that the City will request to proceed with repair of the parking lot prior to completion of the disposal infrastructure.
4. No commitment from FEMA of design or repair costs being covered – The City has incurred and/or committed approximately \$350,000 in repair design costs to date. The ultimate repair costs are still undefined. On February 28, 2005, more than a year after

the hot springs fissure erupted, the City has formally requested FEMA provide a "PW" to cover the costs of repair design work AND to commit to the concept scope for the permanent repair of the parking lot and hot water disposal.

5. A Request 6-month time extension on repairs has been granted – FEMA has granted an extension to July 2005 for permanent repair work to be conducted. It is unknown if the City can perform within that time frame based on the pace of the process to date.
6. Since the earthquake the City has been working diligently with a wide variety of professional consultants and contractors to identify issues related to repair of the parking lot.
7. City continues to follow all prescribed steps by FEMA, State and local standards. However, the City still does not have a commitment from FEMA that they will reimburse the City for permanent repair work.
8. The City is anxious for an affirmative response to our February 28, 2005 request for a "PW" to be issued for all design and repair work.

**Summary:**

- ✓ The City will initiate the design process for the Carnegie Library in order to maintain compliance with its Seismic Safety Ordinance.
- ✓ Plans and specifications should be ready for bid early fall.
- ✓ The City will continue to work with FEMA and those environmental agencies having jurisdiction to arrive at a solution for disposal of the flow from the spring.