

## **LOGISTICS SECTION**

### **Maintenance Division**

#### **Current Assignment: Lead Mechanic Dirk Carner**

Cowlitz 2 Fire & Rescue maintains a full service apparatus maintenance and repair facility in cooperation with the City of Kelso. The shop building is located at 2300 Parrott Way in Kelso and is owned by the City with approximately 5,800 square feet dedicated for use by the District. The shop is staffed by two mechanics that are Emergency Vehicle Technician certified. The maintenance shop has the only dedicated fire pump testing facility in the area.

In addition to District fire apparatus, the Maintenance Division services the heavy equipment owned and operated by the City of Kelso and Longview Fire Department apparatus under contractual maintenance agreements. Occasionally surrounding fire departments request equipment repairs that are accepted if there is available shop time.

#### **Maintenance Division Goals and Objectives**

**Goal A** – Maintain the current level of service capability and improve efficiency where possible.

**Goal B** – Expand the capacity of the shop to make it a true regional maintenance facility.

#### **Goal A – Objectives**

The following objectives have been identified as being needed to meet current Cowlitz 2 maintenance needs and contracted maintenance obligations. These objectives should be accomplished in 2005 and 2006 and are needed even if the program is not expanded.

#### **Computer Software:**

- Current Firehouse software may not be adequate for the maintenance division. Additional research is currently underway to resolve the issues with Firehouse. If the current software is not capable of accomplishing the tasks required, new software will be identified for use.

#### **Program Development:**

- Enhance the shop safety program to ensure that all state and federal requirements are being met. This will be accomplished in conjunction with the department wide safety program.
- Develop a breathing air maintenance program. It is anticipated that the District will be able to put a breathing air compressor in service within this short-range period. It is essential that appropriate and consistent maintenance and monitoring be conducted to insure that the air quality meets legal requirements.
- On-going personnel training and certification. The current maintenance staff is continuing their efforts to maintain necessary training for their existing certifications and to obtain additional certification where necessary and appropriate.

**Facility:**

- Develop a more efficient parts storage area and inventory control system. The current parts storage area is too small and not efficiently organized. Additional space and rack system is needed to properly store necessary parts. An inventory control system also needs to be implemented to ensure that essential parts are immediately available for critical repairs. Inventory control is a major component of the computer software for the shop. Potential areas to explore with the City of Kelso include the current sign shop area or the old parts room that the City no longer uses. The current sign shop would be closer and a more efficient space if it were available.
- Reorganize the shop office to make record keeping, shop manual storage, work order management and scheduling more efficient. The existing office area has never been planned and the office furnishings are simply cast offs that have been salvaged for use. The current configuration is not conducive to managing necessary records and work orders. Additional bookshelves are necessary to properly store and organize service manuals and service records. If the sign shop area could be used both the office and parts storage could be coordinated in the same area.
- Evaluate the electrical system and add appropriate outlets and lighting. There are a number of areas in the shop that have limited access to electrical outlets. An electrical contractor should be able to give guidance about adding additional outlets and facilitate added lighting if necessary.
- Repair or enhance the building ventilation system. The building currently has exhaust fans on the roof to help remove fumes from the shop area. The fans appear to be large enough but actual airflow is not adequate. They may simply need to be serviced, however; if they are functioning correctly additional capacity is needed to ensure air quality in the building.
- Repair the in-floor hydraulic vehicle lift. One of the repair bays identified in the agreement with the City has a hydraulic lift that will only partially extend. The lift needs to be evaluated to see if it is feasible to repair to provide additional lift capacity for smaller vehicles without tying up the heavy vehicle lift system. If the hydraulic lift is not repairable it is recommended that an above ground lift system be obtained and installed in the same area.
- Install paving for the pump test area. The pump test tank is installed in a gravel area. This increases the possibility of rock and debris entering the tank and becoming a source of water contamination and damage to equipment being tested. A paved area will prevent any foreign material from entering the test tank.

**Equipment Needs:**

- Bead Blaster. This piece of equipment is used to clean and prepare small parts for painting.
- Bigger air compressor. The current air compressor is owned by the City of Kelso and is the original unit that was installed when the building was built for use as a new auto preparation center. The capacity of the air compressor limits the use of air tools and equipment and needs to be replaced with a larger capacity unit. The existing compressor is located inside the old parts storage room. It will be proposed to the City that we relocate the new compressor outside, which will allow the City to use the space as they

wish. Our thoughts are to ask the City to move their sign shop to this space to free the area adjacent to the current office space for use as the shop office and parts room.

- Installation of lubrication equipment. Additional lubrication equipment, consisting of overhead hose reels, has been ordered and will need to be installed with the necessary piping. This equipment is intended to improve the ease, efficiency and speed of servicing of apparatus by having the most commonly used lubricants dispensed from a centrally located area.

#### **Vehicle:**

- Replace chassis of the older shop vehicle. The shop has two service vehicles assigned. One was acquired last year and is a low mileage, reasonably late model pickup with a service body mounted in place of the normal box. The other is an older higher mileage pickup that also has a service body. This service body is still in good condition and can be mounted on a new or newer used chassis.

#### **Goal B – Objectives**

##### **Expansion of the maintenance program:**

- Continue to market and expand the contracted maintenance program to include additional fire departments in the local area. Current contracts are in place for the City of Kelso heavy equipment and the Longview Fire Department. These contracts guarantee at least \$48,000 in revenue from the shop. Additional work is also scheduled from time to time from other fire departments but at current capacity there can be no expectation of quick completion for non-contract entities and the mechanics have been instructed to turn down work if it can not be reasonably scheduled. If it is the desire of the Board to add capacity to the Maintenance Shop there are a number of issues to address including:
  - **Staffing:** Current staffing is at or above capacity to accomplish existing contract work and Cowlitz 2 needs with two mechanics. A common ratio of mechanics to vehicles, for heavy equipment work, is one mechanic to 20 vehicles. Due to the competency and efficiency of the current staff the ratio that currently exists is much closer to one mechanic to 30 vehicles, which includes all of the Cowlitz 2 apparatus and the contracted equipment. If the non-contract work is added the ratio approaches 1 to 40. Additional staffing requirements for expanded service load would be the addition of one mechanic and a person to schedule work, record data, shuttle apparatus, run parts, etc.
  - **Facility:** The current facility has been made available through a cooperative agreement with the City of Kelso. It provides 5,800 square feet of shop space that translates to three service bays, a metal fabrication area, tire maintenance and storage area and a small office space. In order to facilitate additional capacity, the following issues will need to be addressed.
    - Negotiate to square up current shop space and add additional space to the use agreement with the City of Kelso. This will provide additional space for maneuvering apparatus and addressing limited repairs such as changing a flat tire, preliminary diagnosis of potential repairs and indoor parking of partially disassembled apparatus that are waiting for parts.

- Install an additional overhead door to better facilitate use of the third service bay. The space that is being used by Cowlitz 2 is served by one large overhead door. There is another large overhead door in the opposite end of the shop that is available but is used primarily by the City and is not located to efficiently use the third service bay. To better use the third bay an additional door needs to be installed. This installation will require approval by the City of Kelso.
- Install additional lighting to enhance the work area in the third service bay.
- **Equipment Needs:** The Cowlitz 2 Maintenance Shop is well equipped to provide quality maintenance and repairs for the entities that are under contract. If additional work is brought into the shop the listed equipment will also be needed:
  - Additional set of heavy vehicle lifts.
  - Additional lubrication equipment.