MEMORANDUM

Date: December 23, 2014

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Fleet Services Facility**

Attached is an information sheet regarding the new Fleet Services building that officially opened December 19, 2014.

This was an instance when Certificates of Participation (COPs) were the most appropriate financing instrument. Building an internal Fleet Services building is not very exciting to the public as compared to parks, streets, highways and other matters. Hence, we chose to finance the new Fleet Services Building using COPs being retired through the vehicle mileage rates charged to all users rather than General Obligation bonds. In essence, the users are paying for the facility.

The new Fleet Services facility replaces a more than 60-year old building that was inefficient and potentially dangerous. More importantly, the new facility is LEED Silver certified, represents state of the art systems for vehicle maintenance, and should reduce the actual maintenance cost associated with maintaining our fleet that totals over 1,800 vehicles.

In addition, the latest improvements to the facility include the installation of a solar energy system that will produce significant energy, offset our energy cost, save the County money, and reduce pollutants emitted into the atmosphere from traditional energy production facilities. The County continues to work toward meeting the majority of our existing and future energy needs through solar alternative energy production.

CHH/anc

Attachment

c: John Bernal, Deputy County Administrator for Public Works
Frank Samaniego, Director, Fleet Services
Michael Kirk, Director, Facilities Management

PIMA COUNTY
FLEET SERVICES

Fleet Services New Facility Information Sheet

Budget and Funding

CIP (XFLEET) Budget $	$18,549,000.00
Funding	Certificate of Participation (COPS)

Scope

Design and construct a new Fleet Services Maintenance Facility that will improve efficiencies by combining all Fleet Services functions and personnel under one roof.

Design and Construction Goals

- Cost effective methodologies utilized during all phases of design and construction
- Employee safety
- Efficiency of staff and resources
- Improved employee environment – Clean/Bright/Comfortable
- Employee retention and recruitment
- Improved customer service
- Leed Certified
- Modern, Simple, Professional

Schedule Milestones (actuals unless noted)

Facilities Management Conceptual Drawing	Early 2010
Architect - Solicitation for Qualifications issued	12/17/2010
Award Date	04/05/2011
Contract Start	05/18/2011
Permits issued	03/28/2013
Contractor – Invitation for Bid issued	04/12/2013
Award Date	06/04/2013
Contract Start Date	06/10/2013
Construction Start	07/08/2013
Owner Occupancy	09/08/2014

Contract Awards

WSM Architects 520-408-1044	4330 N. Campbell Ave. Tucson, Az. 85716	Paul Mickelberg Michael Becherer
D.L. Withers Construction 520-629-9500	147 N. Stone Tucson, Az. 85701	Dan Withers Ron Barter (PM)

December 17th, 2014

Facility and Site Overview

Due to the size and the diversity in the Pima County fleet (approximately 1,800 vehicles ranging from small passenger vehicles, SUV's, full size pickup trucks, heavy trucks, back hoes, bull dozers, graders, and several compactors with tracks), the building is organized into four basic areas; Administration/Service Writers, Auto/Light Truck and Medium/Heavy Truck Shop (primary shop), Heavy Equipment Shop, Parts. In order to increase efficiency, the main shops are arranged around the parts area and the staff support area, limiting the travel distances for the mechanics to the parts, supply, and support.

Careful site planning was required to provide a safe a secure site with the proper vehicle clearances required for the diverse fleet. Special consideration was needed to plan the vehicle circulation routes to simplify the process of moving the vehicles around the site, and to separate the public circulation from the shop areas of the facility.

The concrete in the shop areas has a shake on hardener used to increase the surface strength of the slab to better protect it from long term damage, particularly from dropped tools and other items that could chip the surface. The hardener increases the strength of the concrete from 4000 PSI to 12,000 PSI. A white pigmented hardener was used to make the shop floor a light reflective surface, helping to distribute the natural day lighting thus making the day lighting design more effective.

New facility total footage= 87,277 ft^2

Auto/Light Truck and Medium/Heavy Truck Shop (primary shop)

The Auto/Light Truck Shop has 20 mechanic bays for automobiles and light trucks, two up fit bays, two quick service bays, two tire service bays, two alignment bays and a machine shop. The Medium/Heavy Truck Shop has 11 large truck bays, one tire service bay, one Dyno bay and a JIB crane.

All of the bays are within a large open shop with one entrance and one exit. This arrangement limits the amount of openings in the building, allowing the HVAC system to be more efficient, adding to the comfort of the mechanics. The auto shop is day lit with a comprehensive general and vehicle exhaust system throughout the bays. Four fluids are distributed to each double bay as well as infrastructure for two additional fluids.

Bi-fold doors were used in the primary shop in place of standard roll-up doors. Although bi-fold doors are significantly more expensive (5x) than standard roll-up doors they do provide huge benefits. The bi-fold doors will require little or no maintenance over the life of the door. The bi-fold doors will open or close in 10 seconds as compared to 40 seconds for a standard roll-up door, this is critical in minimizing the loss of conditioned air.

Auto/Light and Medium/Heavy Truck Shop = 62,897 ft^2

Heavy Equipment Shop

The Heavy Equipment Shop has three eighty-foot drive-through bays. The heavy shop also includes three jib cranes, a bridge crane, welding shop, metal storage, 100' concrete aprons off both the north and south sides of the building and an awning over the south façade. Concrete slab is 12" thick to support the repair and maintenance of all types of heavy equipment. The heavy shop is also day lit, with comprehensive exhaust extraction systems as required for the heavy equipment.

Heavy Equipment Shop = 8,082 ft^2

Parts Room

The Parts Room will have approximately 4x more square footage than the existing Parts Room providing the much needed space to maintain adequate inventories and thus reducing vehicle downtime. New tire handling systems and racks will reduce the possibilities of back injuries to staff. Parts Room = 5,450 ft^2

Administration and Service Writers

The Administration area will provide staff with individual cubicles and offices providing a much improved work environment. A conference room capable of sitting 56 people will be used for department wide communication meetings and training; since all the tables and chairs are mobile the conference room provides flexibility for other uses.

The Service Writer area will have three vehicle drop of lanes and provide a comfortable customer waiting area with internet accessibility. **Administration and Service Writers = 10,848 ft^2**

Shop Area Heating and Cooling

The maintenance shop utilizes a multi-staged air handling system that use direct/indirect evaporative and DX cooling to obtain more comfortable temperatures with lower humidity.

1st Stage:
The multi stage air handlers also combine the code required maintenance bay exhaust fans in the air handlers. The exhausted air before exhausting to atmosphere is ducted through an energy recovery exchanger to pre-cool the incoming hot air in the summer and pre-heat the incoming cold air in the winter.

2nd Stage:
The multi stage air handlers also are equipped with indirect and direct evaporative cooling modules. The indirect module allows the unit to use evaporative cooling without adding moisture to the air stream. The direct cooling module allows the unit during hot dry periods to affectively cool the air without adversely affecting the moisture content of the air in the maintenance bay. The multi stage air handlers are constantly sampling the outdoor air psychometrics to determine when indirect or direct evaporative cooling should be utilized.

3rd Stage:
During periods of high temperature and high humidity (Monsoons) the multi stage air handlers are equipped with DX (air conditioning) coils. The DX coil combined with indirect evaporation section will be able to provide comfortable temperatures during the monsoon season.

Because the primary shop was designed with one entrance and one exit all three stages serve this area. The Heavy Equipment Shop does not use stage three of the system due to the multiple doors in this shop that will primarily be left in the open position during the work day.

Radiant heating units are used for heating all shop areas.

Solar System

- 607 kW-DC Solar system will produce 1,051,919 kWh / year
- Solar system will utilize 1,842 solar panels
- Solar will save Pima County more than $2,000,000 over the next 25 years
- Solar will provide enough electricity to power 96 average homes
- Solar will provide enough shade to cover approximately 240 parking stalls
- Solar system installed at $650k cost to Pima County. Pima County agrees to purchase the electricity from the solar power plant at a reduced rate from what they are currently paying TEP. Cost of solar electricity is fixed for the next 25 years (will not rise with utility rates)
- First Pima County solar system to be installed without incentives from local utility
- Annual environmental savings from system:
  - ✓ 2,299,484 pounds of Greenhouse Gases (CO2)
  - ✓ 6,986 pounds of Nitrogen Oxides
  - ✓ 8,257 pounds of Sulfur Dioxide
  - ✓ 17,467 milligrams of toxic metal mercury
  - ✓ 2,103,838 gallons of water

Leed Certification

The new facility is Leed Silver Certified.

Shop Bay Summary

Auto and Light Truck Shop	Bay Qty.	Lift/Crane Qty.	Description
Service Bays	20	10	6 – 2 Post Lift 12k 4 – 2 Post Lift 10k
Up Fit Bays	2	0	NA
Quick Service Bays	2	2	1 – 2 Post Lift 12k 1 – 2 Post Lift 10k
Tire Service Bays	2	1	1 – 2 Post Lift 10k
Alignment Bays	2	0	NA
Totals	**28**	**14**	

Medium/Heavy Truck Shop	Bay Qty.	Lift/Crane Qty.	Description
Service Bays	11	2	1 - 4-Post Platform 1 - 90K Scissor Lift
Tire Service Bays	1	0	NA
Dyno Bay	1	0	NA
JIB Crane		1	1 Ton, 18' Span
Totals	**12**	**3**	

Heavy Equipment Shop	Bay Qty.	Lift/Crane Qty.	Description
Service Bays	3 (80")	0	NA
JIB Crane	0	3	1 Ton, 18' Span
Overhead Crane	0	1	5 Ton, 40' Span
Totals	**3**	**4**	

Total Bays = 43