



FORT HOOD FAMILY HOUSING

MAINTENANCE OPERATIONS REVIEW

SEPTEMBER 2009

R-A ASSOCIATES, LLC

TABLE OF CONTENTS

Section	Page
INTRODUCTION	1
EXECUTIVE SUMMARY	2
FIELD WORK NOTES	
LEASING	10
RESIDENT MOVE-IN/MOVE-OUT.....	14
CHANGE OF OCCUPANCY MAINTENANCE	20
SERVICE ORDERS.....	27
CALL CENTER	32
WAREHOUSE AND PURCHASING.....	36
NEW CONSTRUCTION.....	38
SAFETY & ENVIRONMENT	40
EXHIBITS.....	42

Introduction

R-A ASSOCIATES, LLC was engaged by WinnResidential Military Housing Services to review maintenance operations at Fort Hood Family Housing. The primary focus of the review is to identify operational efficiencies and improve service delivery in the **C**hange of **O**ccupancy **M**aintenance and **S**ervice **O**rder processes.

The review was conducted at Fort Hood from September 23rd through September 30th, and involved direct observation and/or participation in each step of the housing rental process; from qualifying service members for housing through completion of the COM process at the end of the service member's occupancy.

While this report will necessarily focus on opportunities for improvement in the operation, it is important to recognize the high levels of professionalism, good will, and strong service ethic currently demonstrated by the management and staff at Fort Hood Family Housing. Fort Hood Family Housing appears to be much more than "just a job" to most of the employees met during the on-site review.

The report is divided into two main sections, an Executive Summary and Field Work Notes. The Executive Summary presents general observations and conclusions of this study, while the Field Work Notes provide detail of observations and recommendations for specific areas of the Fort Hood Family Housing operation.

Executive Summary

Actus Lend Lease and Winn Residential Military Housing Services have been engaged by the Army to provide leasing, maintenance, capital repair/replacement, and construction/development services at Fort Hood Family Housing over a 50 year contract term. The extremely long term of the contract places Actus and Winn in an unusual and advantageous position with regard to its business model. The luxury of taking the long view in the management of hard real estate assets can be turned to our benefit.

One of the major challenges of this business is developing strategies and tactics that respond to short and medium term business demands while respecting the long term goals of the business.

What is the long term goal of the business?

To provide the levels of service and product stipulated in the Army contract at the lowest possible levels of capital and operating expense over the term of the contract.

While this may not be the optimal “inspirational” goal for our employees, it must be the foundation for business decisions at Fort Hood Family Housing.

So, how does focus on the long term goal relate to reducing the time and expense of COM's and service orders, and to the purpose of this consulting engagement?

In short, direction that balances short term tactics with long term goals must be provided to the management and staff at Fort Hood Family Housing if we want to eliminate the sub-optimal behaviors that were observed at Fort Hood during this consulting engagement, i.e., wasted labor and materials, poor application of capital, and service and product delivery failures.

Specifically, the following four areas need to be addressed by Actus and Winn to ensure the success of this business over its 50 year term:

- Service and Product Standards
- Means and Methods
- Resources
- Management Systems

Before implementing any systematic changes in policies or procedures at Fort Hood Family Housing, maintenance operations at the other large military bases in the Actus/Winn portfolio should be reviewed. The greatest returns to the company will be realized only when the adoption of best practices and consistency of operations is implemented across the entire portfolio.

Service and Product Standards

“I wish they would just tell us what they want us to do”.

September 2009, numerous Fort Hood Family Housing employees

Fort Hood was established in 1942. The service and product standards for military housing were established over time by circumstance, past military practice, funding priorities, operational priorities, and past contractor performance. It quickly became apparent during my work with the technicians and staff that their understanding of Fort Hood Family Housing “Standards” were deeply influenced by their own military experience, and their tenure at Fort Hood.

Although Actus/Winn Executive Management is clearly responsible for setting the objective product standards for new and existing housing stock, there needs to be consensus at the Fort Hood level on what the standard is in order for our management and staff to deliver a satisfactory product. Success rests in the ability of Leasing Staff, Community Management, Maintenance Management, Development, Construction, and Executives to agree on product standards that satisfy our contract obligations and meet the needs of both the residents of the homes and the Army.

New construction at Fort Hood clearly exceeds the Army’s minimum standards for housing. However, it falls short of the Maintenance Department’s standards for maintainability. Lack of agreement on the standards results in wasted capital, and wasted maintenance expense for the life of the asset.

If the service member has a different expectation of the standards for their home at Fort Hood than the leasing consultant renting the house, then we are setting ourselves up to fail to satisfy the service member (and therefore the Army). To put it another way, if our standard is a Chevrolet, and we sell and deliver a Chevrolet, everyone should be satisfied. If we occasionally deliver a Cadillac instead, we will exceed expectations.

Maintenance management, community management, and the maintenance technicians need to agree on how these product standards for housing translate into work standards for COM houses and service orders. How badly worn can the carpet be and still be OK? How many marks are OK on a bedroom wall? These standards must be incorporated in the task standards for the COM and service order technicians and contractors.

A painter who has spent many years at Fort Hood fully repainting 100% of COM houses thinks of anything less as “sub-standard”. A cleaning crew that hasn’t ever washed the dirt and smudges off of walls in a COM house thinks that their sub-standard work meets “standards” for cleaning a house. The painter and the cleaning crew are both wrong in their perception of the work standards for Fort Hood Family Housing. Without clearly communicated work standards, how are they to know that they are wrong?

If a COM painter’s understanding of the standards for a “partial paint” is different than the understanding of her supervisor or COM management, then it is likely that the job will take more labor hours, more schedule time, and more paint than was budgeted and

planned for. Moving in the next service member will be delayed, rental revenue will drop. No one will be happy.

Product standards may vary over time and circumstance. We may want to “paint the pig” in a COM house that is slated for demolition in a year. We may want to completely repaint rooms in a newly constructed COM house in order to acceptably move away from the use of flat paint. However, in both cases, we need to clearly tell the COM technicians and their supervisors what the standard is for the particular task at hand. There is nothing more frustrating to a skilled tradesman than to be given inconsistent direction on how work is to be done.

Further, a “paint the pig” standard must meet the overall minimum standard for housing set by Actus/Winn and the Army. We have to consistently deliver the Chevrolet that we have promised, even when we have a backlog of 25 COM houses and an active waiting list of service member residents.

Service standards at Fort Hood Family Housing also need to be reviewed. Our service standards should be bifurcated, with a minimum service delivery standard for the customer, and a higher standard of delivery for Fort Hood Family Housing employees. *“Deliver more than you promise.”*

It would be beneficial for both residents and service order technicians to have specific standards for service order response, follow through, and resolution, along with standards for execution of the actual service work in occupied homes. Little things like wearing shoe covers, or doing a complete clean-up of the work area are very important to some residents. Our service should regularly exceed “standard”.

Means and Methods

There are substantial opportunities to improve service and product delivery, as well as to reduce costs by doing a better job of defining means and methods of executing work.

There is a correct way to dice an onion that is fast, neat, delivers consistent quality, and doesn’t make you cry. It can be a revelation to watch a skilled craftsman work. Tricks of the trade, methods of work, sequencing, and use of particular materials or products can dramatically increase efficiency and the quality of the finished product.

Many of the technicians at Fort Hood Family Housing were hired without necessary job skills and training. While much of the COM and service order work is neither technically complex nor difficult, skills knowledge or training is critical to ensuring efficient, quality work. No one is born knowing how to cut a line with a paintbrush. Someone needs to demonstrate how to properly cut a vinyl tile. Laying down a good silicone caulk joint requires training, practice, and a certain amount of “art”.

Many of the technicians at Fort Hood Family Housing were hired with years of experience and superb job skills and training. These technicians can be an incredibly valuable resource in developing standards for means and methods of executing work.

Development of means and methods standards is best carried out as a collaborative effort involving skilled and unskilled technicians, trade supervisors, and management. Collaborating on best practices can have an almost magical effect on teamwork, communication, and skills transfer. It also provides a venue for management to help the line level staff better understand the thinking behind decisions that affect their work or their jobs. In these collaborative sessions, it is important to develop adequate trust within the group so that line staff and management feel comfortable challenging each other in the effort to find the “best” solution.

Means and methods standards developed with this collaborative process are much easier to implement across the organization. Management is no longer asking technicians to *“do it this way because I said so”*, but rather *“This is the best way that we all could think of to do this job; have you got a better idea?”* This best practice process can also result in a certain amount of productive competition between teams of technicians, within Fort Hood or within the broader WinnResidential Military Housing Services community.

Technicians who have helped devise a best practice are great candidates to teach the best practice to other technicians. Skills training is badly lacking in the maintenance organization, and having our most skilled technicians transferring their knowledge to others within the group is both cost effective and builds teamwork. Every once and a while, one of these skilled technician/teachers turns out to be a great candidate for management.

Means and methods standards apply not only to physical tasks, but also to management and administrative tasks. For instance, if the recent changes to the call center Yardi system had been the result of a collaborative process between line, management, and technical staff, they would have reflected the feedback from everyone involved with creating or using the forms and processes. Collaborative efforts between the users create more comprehensive and thoughtful changes that are more easily implemented and accepted.

Opportunities for developing means and methods standards are not limited to the maintenance operation. Similar opportunities exist in the leasing office, the call center, and in the community offices.

Resources

Better facilities, labor, tools, and materials would yield significant returns on operational costs and customer service.

Facilities

The buildings and grounds assigned to maintenance functions are generally quite adequate. However, the call center facility stands out as a substantially dysfunctional space. Lack of proper workstations, technology, and call center systems severely limit the effectiveness of call center operations. The existing space could be reconfigured at moderate expense to improve the efficiency and effectiveness of the call center operators. New or used workstations, upgraded and additional computer equipment, and systems integration would transform the operation.

Labor

The labor force at Fort Hood Family Housing Maintenance Operations is made up of individuals with a broad range of skills and experience. The work in Maintenance at Fort Hood Family Housing is generally not technically complex, yet there are a surprising number of individuals who are lacking proper job skills to carry out their work assignments.

Hiring criteria, and compensation levels for COM and service order technicians need to be re-evaluated. Many of the existing technicians were hired without the job skills necessary to do their work. Formal job descriptions with specific skills requirements should be developed for each position in the department. Hiring criteria should be modified so that job applicant's technical skills are confirmed prior to hiring. Skills training and mentoring programs should be established for existing employees with deficient but acceptable skills, along with time schedule deadlines for completion of training and/or achieving specified skill levels.

Compensation levels for technicians, supervisors, and functional managers should be reevaluated. Competitive wage surveys should be conducted in the local labor market based on comparable job descriptions. Compensation levels for existing staff should be adjusted (up or down) to reflect skills, productivity, tenure, and market competitive wages. Consideration should be given to specific pay for performance compensation, and incentive compensation for productivity, work quality, and customer service.

Employee moral is reportedly at a low level. Better communication of work expectations and standards, a forward looking skills training program, pay for performance compensation, better tools and materials, and more teamwork within the organization should turn this problem around.

Tools and Materials

Having the right tools, materials, and supplies for the task at hand is critically important for safe, efficient work.

Generally speaking, the technicians at Fort Hood Family Housing are ill equipped with personal tools, and their service vehicles are ill equipped with larger machine and trade specific tools and equipment. While working with a service order plumbing technician, we made two special trips back to the maintenance shop in the morning to pick up tools that should have been in the technicians personal tool bag or part of the stock of tools on the service vehicle. Close to an hour of technician time was spent driving back and forth to get tools that should have been at hand from the beginning of the day.

The quality and condition of personal and company tools is also a problem. The plumbing torch provided by the company was a poor quality "homeowner" grade tool, that was ill suited to the work, and in poor operating condition. Technicians do not seem to take personal responsibility for tools that are issued to them, and in some cases seem to lack the skill necessary to select the correct tool for a particular task.

Gerry Williams is in the process of putting together a personal and company tool program, which should address many of the issues regarding tools.

The provision of parts, materials, and supplies is also contributing to the inefficiency of the technicians. Given the long travel distances between the maintenance shop and the Fort Hood Family Housing communities, it is imperative that service vehicles carry a complete complement of parts, materials, and supplies appropriate to the work being undertaken by the particular technician. This is particularly important for the COM and service order general maintenance technicians.

Consideration should be given to expanding the quantity and variety of material carried on the service vehicles. Since vehicles are generally dedicated to a single technician or team of technicians, accounting control of rolling parts inventories should not be too difficult. Eliminating trips back to the shop for parts would have an immediate and significant positive effect on the efficiency of COM and service order technicians.

Management Systems

Yardi is to be the single, all purpose, management information system at Fort Hood Family Housing. Yardi has some significant shortcomings when compared to dedicated computerized maintenance management systems in handling service order, COM, and preventative maintenance functions. Yardi also seems to be limited in terms of real time reporting of management data. Unfortunately, I did not have an opportunity to become familiar with Yardi during this visit, and could not confirm the reported shortcomings in the system.

Many of the existing data entry screens and reports generated by Yardi are not effective in the current Fort Hood Family Housing operation. There are opportunities for efficiencies in Leasing, Community Management, the Call Center, Maintenance Management, and the warehouse operation through fairly simple changes to data entry screens and reports.

Serious consideration should be given to implementing an integrated computerized maintenance management system at Fort Hood Family Housing that would support service order management, real time dispatching of service orders, integrated inventory and purchasing, preventative maintenance, maintenance labor tracking and management, and real time management information reporting.

Certain scheduling functions for COM and service orders are handled using Excel spreadsheets. Consideration should be given to using more appropriate scheduling software for these functions, or integrating the scheduling function in Yardi or a computerized maintenance management system.

Many of the manual forms in use in the operation could be replaced by a combination of Yardi generated "reports" and Excel spreadsheets. In particular, combining the Move-In/Move-Out Inspection form with a data table driven COM tasking spreadsheet would improve the efficacy of inspections while simplifying COM tasking and scheduling. Implementing these spreadsheets on a touch screen tablet PC would completely

eliminate the need for manual forms, and would directly capture inspection and COM tasking data in a spreadsheet form.

Conclusions

Most of the ideas and recommendations in this report were raised by the staff and management at Fort Hood Family Housing. Few of the recommendations represent permanent solutions to problems. The best operational solutions are the ones that get used every day and are tweaked as conditions, circumstances, and employees change.

Maintenance operations at Fort Hood Family Housing represent a number of straightforward and simple tasks, rendered complex by the sheer scale of the facility. The 6,000+ multiplier on every decision requires careful consideration of assumptions, unintended side affects, cost, and risks.

However, the maintenance and COM tasks are straightforward and simple, and that multiplier can be turned to advantage when looking at labor efficiencies, quantity pricing for materials and services, data applications, and management overhead.

We need to quickly do those things where the multiplier is on our side. For example, providing tools for the technicians, and materials for the service vehicles. There is no added cost to the maintenance operation for carrying the materials on the trucks instead of in the warehouse, so any eliminated trips back to the shop for materials are pure cost savings. At 6,000+ units times 12 service calls a year, reducing one trip back to the shop per unit per year results in immediate, large savings. The empirical data from my recent visit would indicate that we will save far more than a single trip per unit per year.

Making Move-In/Move-Out Inspections and COM tasking a single collaborative effort not only eliminates the need for separate COM tasking inspectors and speeds up the start of COM, but it fully informs the RSC's of the true costs of homes returned in damaged and dirty condition. Being fully informed of the costs places the RSC in a better position to recover those costs from departing residents, and much more importantly, allows the RSC's to fully inform incoming residents of their responsibilities and liabilities for maintaining their home. The multiplier on this idea is 3,000 units a year. Savings could be significant, particularly if the residents start returning homes in better condition.

Efficiencies in the call center service order process will yield 6,000+ units times 12 service calls a year for Fort Hood Family Housing, plus the other five bases times units times calls per year. Saving a minute or two of operator time or eliminating a service call adds up to large savings.

The Fort Hood Family Housing staff and management understand the need for changes to the current operation, and are enthusiastic about implementing those changes in the organization. With the appropriate leadership, the recommendations in this document can serve as the catalyst for positive change in Fort Hood Family Housing Maintenance Operations.