



Update on Desert Housing Renovation Program

Engineering & Operations Committee
Item 6a

August 20, 2018

Location Map



Significant Work in Progress for Infrastructure Support Projects



Potable Water Treatment System Replacement

Auxiliary Power System Rehabilitation

Sewer and Water Line Replacement

Pool Upgrade

Lodge Upgrade

Seismic Evaluation of Bldgs.

Update Housing

Kitchen Upgrade

Asphalt Replacement

Iron Mountain Pumping Plant



Background

- Housing provided due to remoteness & for quick response time
- Houses aging after decades of use in harsh desert environment
- May 2017 Board action provided funding for new house construction & renovation pilot program
- Collaboration with bargaining units
- Ongoing maintenance & repair program



Update Topics

- Desert Housing Working Group
- Ongoing maintenance & repair program
- Desert Housing Renovation Program
 - Project delivery approach
 - Accomplishments - new construction & renovations
 - Budget
 - Project delivery evaluation
- Lessons learned from pilot program
- Next steps

Desert Housing Working Group

- Working Group formed in March 2017
- Includes members of desert region staff, bargaining units, & management
- Meetings held once per month
- Discussion topics include housing specifications & design features, relocation logistics, & project schedules



Ongoing Maintenance & Repair Program

- Created on-line E-form in April 2017
- Employees describe needed repairs & determine priority level
- E-form forwarded directly to planner/scheduler
- Simplifies tracking of repairs & time to complete
- 70 repair requests received to date
 - Improved response times & resolution
 - Monthly tracking shared with Desert Housing Working Group

Desert Housing Renovation Program

- Project Delivery Approach

- Board Appropriated \$11.5 million
- Construct 10 new houses to replace those that were not cost effective to renovate
- Expedite renovations at 20 houses under a pilot program
 - Renovate existing houses, where practical, to a condition that is similar in nature & scope to new houses
- Evaluate three delivery methods
 - Contractor renovation
 - In-house renovation utilizing Metropolitan forces & temporary labor
 - Tear-down of houses & replacement with new units
- Assess results & costs, then return to Board with recommendation to address the remaining houses

Desert Housing Renovation Program

- Accomplishments: New Houses

- Completed demolition of two old houses
- Completed site work for new houses
 - Grading
 - Compaction
 - Utilities
- Constructed 10 new manufactured houses & garages
- Hardscape for 10 new houses scheduled to be completed in October
 - Driveways
 - Walkways
 - Stairs

Manufactured Houses



Manufactured Houses



Manufactured Houses

- Accompanying site work
 - Grading
 - Utility connections
 - Stairs
 - Walkways
 - Driveways
 - Drainage features
 - Pet enclosures



Desert Housing Renovation Program

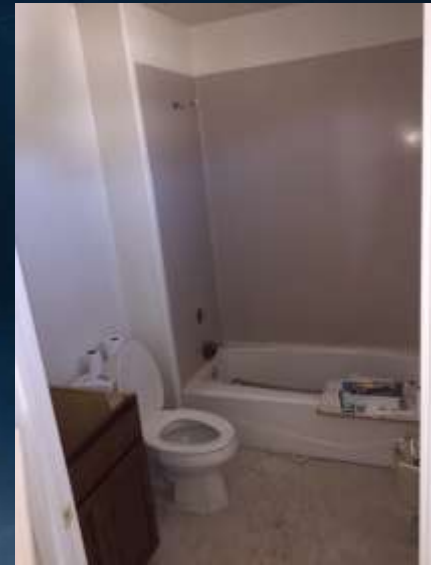
- Accomplishments: House Renovations

- Completed detailed condition assessments for 20 existing houses in pilot program
- Completed design & bid packages for 11 houses
- Renovated houses
 - Four renovations complete
 - Four renovations scheduled to be completed in October
- Purchased & installed four temporary trailers & storage containers for relocation needs

House Renovations

● Interiors

- Kitchens & bathroom cabinets, fixtures, & appliances
- Flooring, lighting, doors & paint



Updated Bathrooms

● Exteriors

- Windows, paint, roofs & structural repairs

● Systems

- Plumbing, electrical, & code compliance



Updated Windows, Siding, & A.C. Unit

House Renovations



House Renovations



Eagle Mountain

Temporary Trailers and Storage Units

- Four trailers completed
 - 3 bedroom, 2 bathroom
 - Approx. 880 sq. ft.
 - Car Ports
 - Pet enclosures
- Four storage units installed



Desert Housing Renovation Program

- Budget

	Project Description	Budget	Estimated Completion Costs
1	New houses	\$5,723,118	\$7,070,000
2	Renovation of houses in pilot program	\$4,432,000	\$3,579,957
3	Temporary trailers and relocation support	≈\$400,000	\$609,000
	Subtotal	\$10,555,118	\$11,258,957
	Remaining Budget	\$941,882	\$238,043
	Total	\$11,497,000	\$11,497,000

Desert Housing Renovation Program

- Project Delivery Evaluation

- New house construction - Approx. 1,500 sq. ft. manufactured house & 400 sq. ft. garage
 - New houses, garages, site work & utilities by contractor
 - Original contractor bid was rejected - \$565,625/house or \$298/sq. ft.
 - New houses & garages by contractor - site work & utilities by Met. forces
 - Actual cost \$507,500/house or \$267/sq. ft.
 - With soft costs: Actual cost \$707,000/house or \$372/sq. ft.

Desert Housing Renovation Program

- Project Delivery Evaluation

- Renovations by contractor - Approx. 1,300 sq. ft. existing house & 300 sq. ft. garage
 - Materials abatement included
 - Varies from \$190,000 to \$275,000/house or \$119 to \$172/sq. ft.
 - With soft costs: Actual cost range \$376,000 to \$462,000/house or \$235 to \$289/sq. ft.
- In-house renovation utilizing Metropolitan forces & temporary labor
 - Deferred based on resources & cost evaluation

Desert Housing Renovation Program

- Project Delivery Evaluation

- Desert/remote locations, logistics, & market conditions resulted in less interest by contractors & higher prices
- Materials abatement costs are higher than expected
- Project development & management costs are higher than expected
- Scope of construction & renovation work is greater than anticipated

Lessons Learned from Pilot Program

- House renovations & new construction costs are higher than anticipated
- Collaboration with bargaining units & desert region staff benefitted project development & implementation
- Contractor renovation may be the preferred project delivery method
 - Renovation is more cost effective than new construction
 - Renovation costs appear relatively consistent
 - Comparable quality & longevity
 - Eliminates grading & utility costs
 - Utilize a specification/bid package template
 - Construction materials
 - Quality
 - Schedule

Lessons Learned from Pilot Program

- Long Term House Renovation Program will take time
 - Maximum of up to 16 houses per year
- Use of in-house labor for site-work & construction impacts resources dedicated to core business & not cost effective
- Staff recruitment and attrition complicate relocation logistics and project scheduling

Next Steps

- Request funding and award construction contract for three house renovations in September
- Prepare comprehensive Housing Renovation Plan for remaining houses & provide Board update in December
- Continue to transition the District Housing Program to the Real Property Group

