



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Board Report

Integrated Operations, Planning, and Support Services Group

- **Colorado River Housing Community Planning Update**

Summary

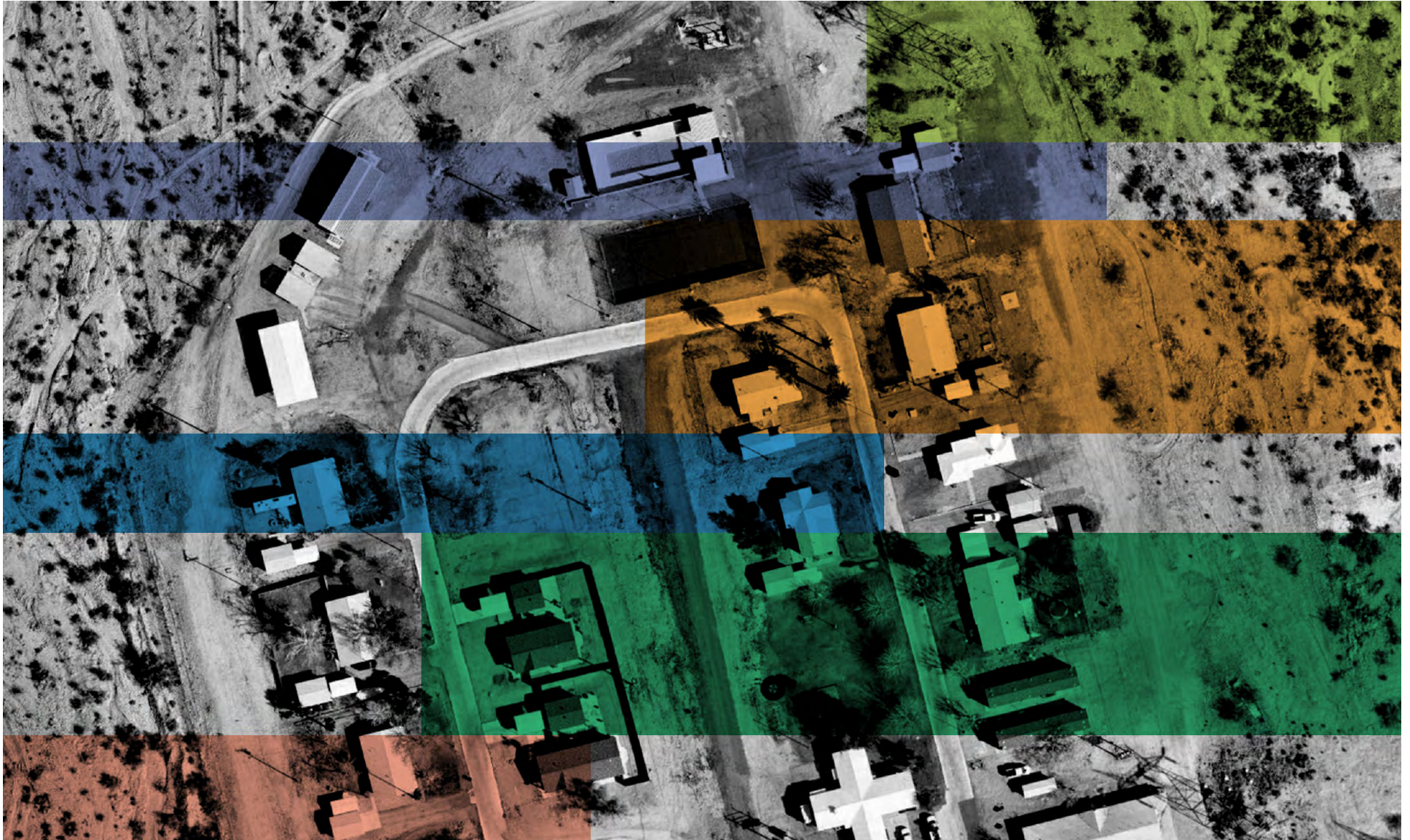
This is an informational update to provide the final report from the community planner on the District Housing & Property Improvements Program at the Desert Facilities. During the summer of 2023, Metropolitan hired a community planner to explore the long-term housing strategy to help create a vibrant, healthy, and sustainable community that will attract and retain the current and future generations of employees working and living at Metropolitan's five Colorado River Aqueduct pumping plants. Through an extensive iterative process over nine months, the consultant team has completed the community planning effort, and their recommendations are included in the attached report. Staff plans to review these recommendations in detail and return to the Board at a later date with final staff recommendations and next steps.

Purpose

Informational

Attachments

Community Planning Study Report



COMMUNITY PLANNING STUDY

MWD Housing & Property Improvements Program At The Desert Facilities



**CIVIL
TAS**

EXECUTIVE SUMMARY

PURPOSE OF STUDY

Metropolitan Water District (MWD) has initiated a long-term housing program to evaluate the current and future needs of the Desert workforce housing. The study analyzes how best to support a remote workforce at Metropolitan's five Desert pumping plants at Hinds, Eagle Mountain, Iron Mountain, Gene, and Intake. Primary themes that were considered include the best way to support employee well-being through better work-life balance, whether villages should continue to support families, as well as Metropolitan's mission to deliver water in a fiscally responsible manner. As MWD considers how to attract and retain the current and future generation of desert employees, this study explores what the next 75 years of living and working in the remote villages and pumping plants will be. The outcome of this process is a recommended philosophical shift regarding Metropolitan's approach to workforce housing and employee support at these remote facilities.

BACKGROUND

Metropolitan owns five pumping plants located along the Colorado River Aqueduct at Intake, Gene, Iron Mountain, Eagle Mountain, and Hinds. Due to the sparse availability of community resources in the desert region and long commute times from the nearest cities at the time the pumping plants were built, Metropolitan developed employee villages adjacent to each pumping plant. The original housing is aging and needs to be either rehabilitated or replaced in the near future. A 2022 study was performed to determine the costs to replace all housing at the pumping plants. That study estimated the cost to replace all housing with new three-bedroom, two-bath housing, new kitchen and lodge facilities at two pumping plants and an amenities package at four facilities (Hinds, Eagle Mtn., Iron Mtn., and Gene) at \$190 million dollars. In the spring of 2023, Executive Management decided to pause the construction and engage in a community vision plan to explore the best long-term work-force housing strategy in the context of changing workforce, advancements in technology, and expansion of some adjacent Desert communities.

PROCESS

In the summer of 2023, Civitas and RNT Architects were selected to explore a long-term strategy for the Desert villages. The consultant team led an extensive outreach process that included visiting each village to listen and learn from current employees and having exploratory conversations with Executive and Desert Management regarding future housing and operations at the five pumping plants. The consultant team developed a series of village strategies that were vetted with leadership and the desert communities through an iterative process. Feedback from the communities was received through a second round of in-person discussions and an anonymous online survey. This report summarizes the outreach, understanding, and recommendations that came out of this process.

KEY COMMUNITY TAKEAWAYS

- Compensation and benefits were the most significant factor in new employee recruitment and retention.
- Housing plays an important role in decision to work at Metropolitan.
- A significant portion of the current workforce likes their single family homes as it allows the option for families to live there or visit during extended work shifts (holidays, covering vacation, on-call).
- The sense of community and ability to have family present in villages is valued for personal mental health.
- Future generations may be accepting of alternative housing types, including townhomes, if combined with other benefits.
- Employees understand the need and logic behind consolidating villages but are also strong advocates for future generations of desert employees.

GUIDING PRINCIPLES

- Support the long-term operation of the Colorado River Aqueduct (CRA) system.
- Create a financially resilient and socially sustainable 75-year housing strategy.
- Provide standard of living that supports employee recruitment, retention, and satisfaction.
- Create safe and healthy villages that contribute to the mental well-being for current and future workforce.
- Introduce new housing strategies, but remain flexible to ever changing market conditions.
- Maintain current housing for all current employees.

PREFERRED VILLAGE STRATEGY

The consultant team tested and vetted over a dozen different Desert village strategies with Executive Management, Desert Management, Labor leadership and Desert employees. The proposed strategy anticipates striking a balance between providing a housing strategy and village environment that will continue to attract and retain talent necessary to run the pumping plants, while also being fiscally responsible both near- and long-term.

A Pilot Program has been identified as part of a phased approach to implementation, that will allow MWD to test the new housing strategy and make informed decisions at each subsequent implementation phase through the program's completion.

The preferred desert housing strategy 1) maintains current housing for existing employees at all current plants and villages; 2) consolidates villages to increase amenity offerings while decreasing overall costs; 3) initiates a pilot program

to introduce and test new housing models; 4) provides commercial kitchens, hotel lodges, and upgraded amenity packages during the first phase; 5) provides a phased approach that is trigger based, relying on regular review and assessment over a 15-year build-out timeline that allows flexibility to adapt to changing market conditions.

The recommended strategy is to focus resources on the two most remote villages, Eagle Mountain and Iron Mountain as well as Gene pumping plant during the first five years. After year 5, there is flexibility to either maintain or scale-back Gene as a remote desert village after the Phase 1 pilot project. This philosophy extends from the following critical observations:

- Gene and Hinds are no longer 'remote desert villages' as Lake Havasu, Parker, and Indio have grown into fully operational communities over the past 75 years, and are anticipated to continue to grow. These towns are within reasonable commuting distances from Gene and Hinds pumping plants.
- Eagle Mtn. and Iron Mtn. are the most isolated and include the Pump Maintenance Team and O&M Team, respectfully, in addition to the Pumping Plant, that would be costly and inefficient to relocate.
- Hinds should be combined with Eagle Mtn. to consolidate amenities, resources, and create a critical mass for a sense of community at Eagle Mtn. Hinds will operate as a 'satellite pumping plant' that includes hotel style housing and minimal amenities to support employees who are on stand-by. Employees will commute to Hinds from Eagle Mtn. daily.

In addition, Intake pumping plant is uniquely positioned to provide staff amenities due to its location on Lake Havasu and its significance as the beginning of the CRA. Currently, on-call response at Intake relies on a two-lane road that serves employees commuting from Gene. Therefore, program to be considered for Intake includes short term housing, vacation rental homes, and a conference room. This program is flexible and will be refined in subsequent phases based on MWD priorities and constraints of this site.

CONCLUSION

Executive Management's decision, in the spring of 2023, to pause construction and engage in a community vision plan to explore the best long-term work-force housing strategy resulted in a cost benefit. The recommended housing and amenity packages aim to foster a better work-life balance for future employees, while providing a good value to Metropolitan, its employees, and ratepayers, due to the increased efficiency of Desert workforce housing, a focus on amenities that matter to employees, and its adaptability to future conditions. This preferred approach for Desert workforce housing outlined in this report is \$145.6 million (2024 dollars) and offers a cost savings in comparison to the 2022 approach which was estimated at \$190 million (in 2022 dollars).

Depending on the eventual mix of townhomes and single-family housing at each pumping plant (Eagle Mtn., Iron Mtn., and Gene), the anticipated project cost ranges from \$145.6 million (all townhomes) to \$249 million (all single-family homes) in 2024 dollars; not including site prep, site improvements, mechanical and electrical utilities, survey, and escalation.

MWD should use a phased approach, based upon triggers, that will allow MWD to move towards a fully supported townhome village model at Eagle Mtn., Iron Mtn., and Gene. The phased approach is envisioned as four phases over a period of 15 years, which will allow MWD to test the acceptance of a townhome housing model* with new employees while allowing for the decommissioning of single-family housing coinciding with retirement of current workforce. Phase 1 investments are spread over a 5-year period and include upgraded amenity packages and strategically located one-bedroom townhome pilot projects at Eagle Mtn., Iron Mtn., and Gene. The range of amenities and investments identified for each village represent long-term usable investments regardless of which village build-out strategy is ultimately chosen. The opinion of probable cost, across all villages, for Phase 1 is approximately \$82 million dollars (2024 dollars). This opinion of probable cost does not include site prep, site improvements, mechanical and electrical utilities, survey, and escalation which is estimated at about \$21 million (2024 dollars) across all villages. Site improvement estimates are variable depending on coordination with on-going infrastructure updates.

Opinion of Probable Costs of Preferred Strategy

■ Phase 1	81.9M
■ Phase 2	24.7M
■ Phase 3	28.2 M
■ Phase 4	10.8M
■ Total:	145.6M

Phase 1 Includes the following:

- Construction of twenty-four, one-bedroom townhomes distributed among Eagle Mtn., Iron Mtn., and Gene pump plants.
- Construction of 56 short-term hotels for temporary workers distributed among Eagle Mtn., Iron Mtn., and Gene pump plants.
- Short-term hotel at Hinds to support 'stand-by' plant team members.
- New or upgraded kitchens at Eagle Mtn., Iron Mtn., and Gene.
- Upgrade village amenity package at Eagle Mtn., and Iron Mtn.

NEXT STEPS

- Provide staff recommendation to the Board.
- Proceed with preliminary design for Phase I which includes space allocation and phasing strategy

LONGTERM PLANNING

1. Determine if consolidating villages is appropriate based on the pilot results.
2. Confirm recommended long-term phasing and investment strategy.
3. Create a review committee to assess the success of the Townhome Pilot Program (Phase I). The committee to include union and employee participation.
4. Evaluate current capital improvement program against preferred village strategy.
5. Develop transition plan to relocate Hinds employees to Eagle Mountain.

* The townhome housing model is a cluster of one-bedroom apartments located on a single lot with shared walls. Each unit is dedicated to one employee and has a front door to the outside.

SUMMARY

COST

MODEL

THREE DESERT VILLAGES: 100% EXTENDED-STAY TOWNHOMES Preferred Scenario

105 extended-stay townhomes
 12 vacation rentals
 64 guest hotels
 3 upgraded amenity packages
 2 guest amenity packages
 3 kitchens

\$145M



THREE DESERT VILLAGES: 50% EXTENDED-STAY TOWNHOMES/50% SINGLE FAMILY HOMES

54 single family homes
 53 extended-stay townhomes
 9 vacation rentals
 64 guest hotels
 3 upgraded amenity packages
 2 guest amenity packages
 3 kitchens

\$189M



THREE DESERT VILLAGES: 100% SINGLE FAMILY HOMES

105 single family homes
 24 extended-stay townhomes
 64 guest hotels
 3 upgraded amenity packages
 2 guest amenity packages
 3 kitchens
 9 vacation rentals

\$249M



Notes:

1. Intake will include a 800 sq. ft. conference room estimated at +/- \$750,000.
2. Includes 10% housing increase across all villages and scenarios
3. These cost estimates do not include the estimated site improvement costs, which is about \$21 million across all villages for complete build out. Final site improvements cost is variable depending on coordination with on-going infrastructure updates.



Community Planning Study

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PROJECT PURPOSE

For over 75 years, the Metropolitan Water District of Southern California (MWD) has been bringing water to the greater parts of Southern California. The most critical components of this process are the pumping plants along the Colorado River Aqueduct (CRA) and their respective employees that have been housed on-site in villages for generations. In days past, these sites were thriving communities that were the permanent homes for employees and their families. These remote communities were places that employees wanted to live and create a life.

However, over the years, the way people work and where they choose to live has evolved. Desert communities of Indio, Parker, and Lake Havasu have grown in population and provide all lifestyle amenities (schools, grocery stores, medical facilities, and entertainment) that once had to be provided by the MWD Pumping Plant Villages. As the communities have shifted, more employees choose to maintain permanent residences in these adjacent communities or elsewhere. As such, the sense of community and quality of lifestyle at the pumping plants has changed, and the residential and amenity facilities have aged and become less desirable to employees and their families. In response, MWD is considering a new approach to housing and facilities at these plants and villages. As MWD prioritizes the development of quality communities for the next generation of employees, management is looking beyond near-term repairs and is considering the next 75 years of employment in the remote pumping plants of the Desert. While salary and benefits packages are an important factor, today's employees are making decisions more holistically, considering the quality of work-life balance.

Key considerations include:

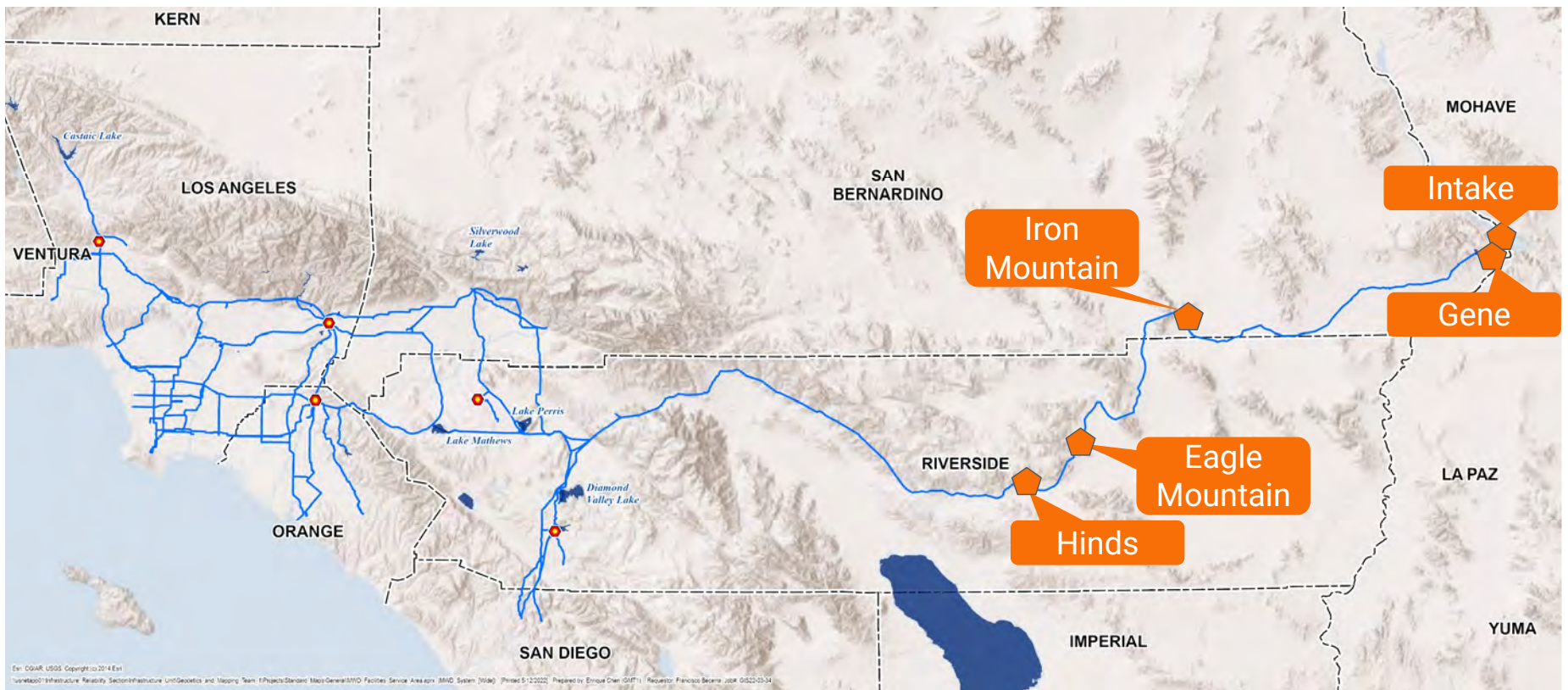
- The right housing and amenity package that will attract the next generation of employees at these remote desert sites
- Whether the next generation of employees want to live and work at these facilities
- The type of environment and housing model that will enable employees to thrive during work shifts and enjoy life outside of work hours
- Validation of previous work and discovering areas requiring refinement, or establishing a new direction for future desert workforce housing
- The long term environmental, social, and fiscal resiliency of Desert villages

*“So to all who have helped in its building,
In places if great or if small;
There is more than the wage collected;
There’s glory for each and for all.*

*And may millions partaking of blessings
To their lives the Aqueduct brings,
Give sometimes a thought to its builders
And a toast, as onward Time swings!*

“The Honor Roll”

*The Aqueduct: Tunnel, Camp, and Trail
by Charles F. Thomas, Jr.*

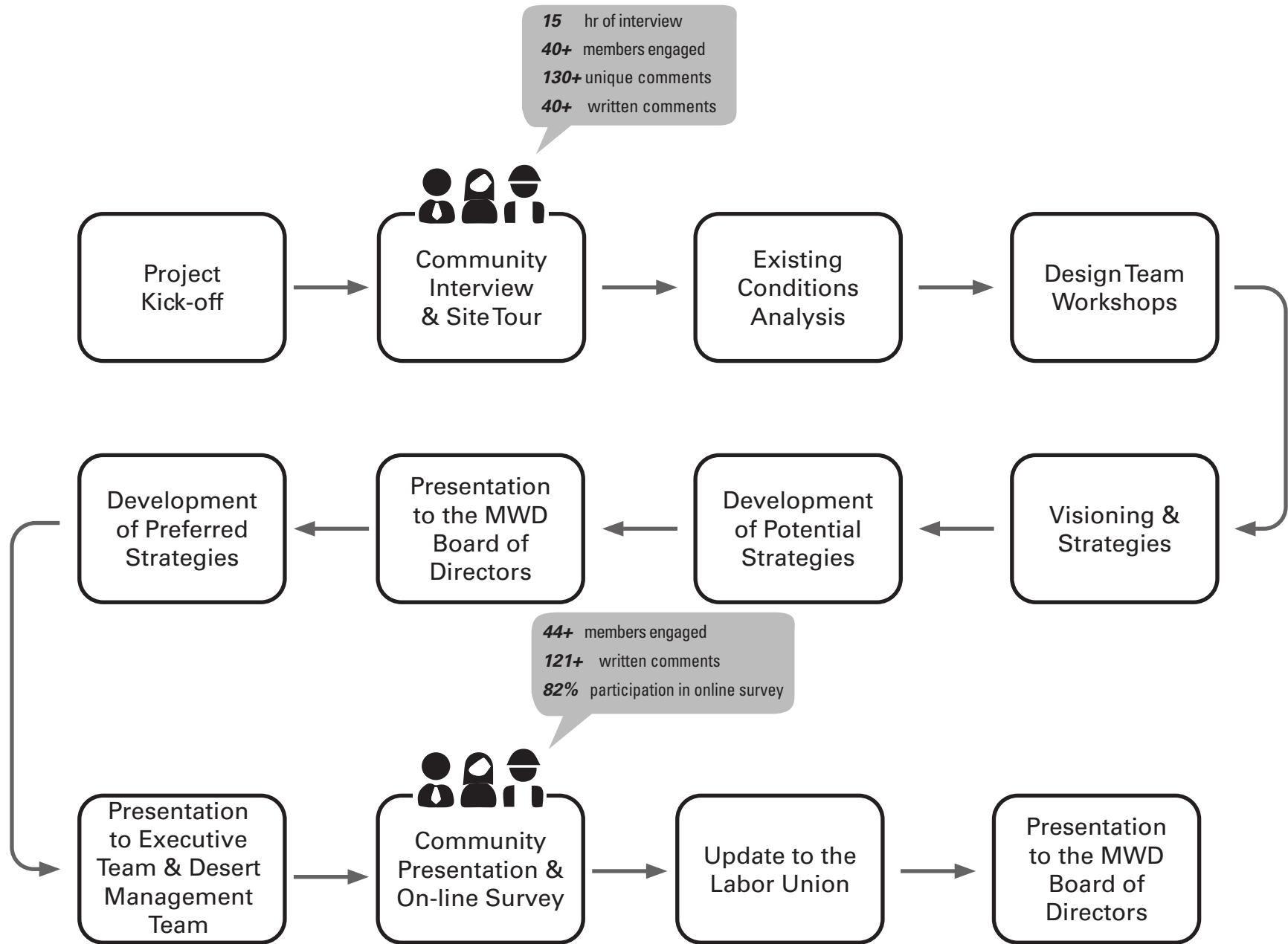


2 METHODOLOGY

The consultant team engaged in a robust community and management outreach process that included multiple site visits, hours of community listening sessions, and analysis of the physical attributes of each pumping plant village. Through numerous, in-depth conversations with employees and Desert Management, the consultant team was able to garner a sound understanding of how pumping plant teams and support teams operate in the Desert villages; what's working and what's not working; the hopes, concerns, and desires from the perspectives of various stakeholder groups (employees, Labor management, Desert Management, and Executive Management). This insight allowed Civitas and RNT to conceptualize a range of potential Desert village and housing strategies that were debated and refined through an iterative process with the stakeholder groups.

This has led to the development of a preferred framework for how Desert villages may evolve over a fifteen year period allowing MWD to provide high quality employment, communities, and housing for the future generations of Desert employees. A conceptual phasing strategy has been created that will allow MWD to make fiscally responsible capital investments of new housing types and in long term villages over the course of 15 years. Strategic decisions points at years 5, 8, and 11 will allow MWD to evaluate progress and employee acceptance of a new desert housing typology and village organization strategy. Housing types for subsequent phases of construction will depend on which housing types have been most successful at attracting and retaining the skilled employees that MWD relies on for operating its desert pumping plants.





WHAT WE HEARD

MANAGEMENT PERSPECTIVE

The consultant team had multiple conversations and touchpoints with Executive Management, Desert Management, and Labor throughout the process. We identified common themes from these conversations that influenced our thinking about Desert villages strategies:

Lifestyle and Culture

Management recognizes that living and working in the desert environment is a challenging lifestyle and that the village strategy for the next 75 years needs to provide appropriate housing and amenity packages to support MWD employees and people who live there by providing a safe and healthy environment and creating opportunity for work-life balance.

Recruitment and Retention

Supporting the mission and function of the CRA is the critical role of MWD. To that end, recruiting and retaining talent will always be necessary. Management acknowledges the current employees' preference for single-family housing in the villages, but believe that employee-only housing with additional compensation is a strategy that may prove just as attractive to many potential employees. Management's goal to balance 1) near term construction costs; 2) long-term management and maintenance costs of operating four remote, family-centric villages; 3) navigate a cultural shift towards more work-life balance, has led to a workforce housing strategy and amenity package designed to support pumping plant operators and support crews while they are living on-site during work shift.

All current employee housing arrangements are grandfathered in and will remain as is. All current employees will not be required to move into the new townhome housing model; however, there may be an opportunity for current employees to opt into a new housing/compensation package.

Housing

Management team would like a resilient village strategy that is adaptable to future workforce housing and lifestyle needs. There is recognition that future generations may not all want three-bedroom single family homes but would prefer smaller dwelling units (with less maintenance and yard responsibility) and a better amenity package. There is also a strong desire for MWD to move away from being the owner and manager of a single-family gated community. Migrating the villages to a townhome housing model focused on supporting the 'on-shift' workforce, rather than full-time families, will reduce the amount of time and money allocated to managing the community, thus allowing MWD to focus their efforts on their mission and strengths – operating the CRA.

VILLAGE RESIDENTS' PERSPECTIVE

Through extensive community conversations, discussions with union leaders, site visits and an anonymous survey, we identified common themes shared by village residents that has influenced our thinking about housing typologies and amenity packages:

Lifestyle and Culture

Many residents appreciate the small-town culture, safety and sense of community offered by the villages. The sense of community pride and camaraderie is strongest in Hinds, Eagle Mtn. and Iron Mtn. due to the remote lifestyle. A higher percentage of employees are full-time residents and have therefore created a stronger community network. This is visually evident in the upkeep of homes and yards, shared public spaces as well as the informal community events, and neighborly favors (maintaining yards, group dinners, bringing supplies from town, etc.). This exists less so at Gene because most employees have a primary residence outside of Gene camp.

Housing

There is a strong preference for single-family detached housing across all communities. A common theme is to have their 'own front door' and ability to 'go home' at the end of the work shift with emphasis placed on work/life balance and the need for personal space/physical separation from co-workers/managers when they are not working. There are mixed opinions about the maintenance and upkeep of homes. Some employees appreciate the back yards and personal space, while others lament the fact that they must maintain the property, the latter of which becomes an eyesore and issue of contention between employees who maintain the property and those who do not. There are also mixed opinions of having to furnish the home, while many employees are steadfast about continuing to be provided 3 bed/2 bath homes, there is a contingent who do not want to have to furnish the homes. The conversation about switching to a townhome model (i.e individual 1 bed/1 bath dwelling units with shared walls and individual front doors), was initially met with some resistance, but some residents warmed to the idea if this model was combined with upgraded amenities and compensation packages.

Shade for outdoor patio space and for parked vehicles is also a high priority and should be included in any housing scenario.

There is also much desire for physical separation between housing and pumping plant operations (pumping plant, electric yard, lay down area, fuel station, maintenance facilities, truck access, etc.). The physical design and programmatic organization of villages should be considered in the future to help create a physical separation between living areas and pumping plant operations.

Amenities

A common theme among the villages is that they would like the existing amenities upgraded (increased pool hours, separate dining hall and business meeting/training space, independent game room/community room, increased shade at outdoor spaces, separate work-out rooms for residents and outsiders, and upgraded air conditioning). The longer-term desires include providing more shade and beautification throughout the community along streets, creating more usable public spaces with shade and amenities, providing shade at pools for use during day and heated pools that allow use during evening hours after work shift, and providing consistent lighting on basketball and tennis courts. The idea of creating an indoor, climate-controlled field house that included large flexible turf area and/or gymnasium space was highly favored. This could be combined with locker room, weight room, community room and access to outdoor pool. Reliable Wi-Fi connectivity is also a highly requested amenity as bandwidth is not adequate in evening hours to support the villages.

Community Safety

Public safety is a primary concern at Hinds, Eagle Mtn., and Iron Mtn. All residents appreciate the sense of safety living in a secured community, but the remoteness and limited access to EMS/Fire/health care is a concern.

KEY TAKEAWAYS

- Enhanced villages are critical to attract and retain staffing at each facility (most if not all plants are currently understaffed due to difficulty in attracting qualified employees).
- Emphasize the need to create a welcoming environment and community spaces through shade trees and landscape at key locations to enhance employee comfort and mental health.
- Openness to modifying the current approach to shifts and staffing to facilitate alternative housing/village strategies.

3 GUIDING PRINCIPLES

SUPPORT THE LONG-TERM OPERATION OF THE CRITICAL CRA INFRASTRUCTURE



- Balance near-term investment with long-term economic resiliency, operational needs, maintenance requirements, and employee on-boarding costs.
- Consider anticipated changes and long-term needs for pump plant staff and operations.
- Design for adaptability and flexibility for the next 75 years of desert communities.

CREATE A FINANCIALLY RESILIENT AND SOCIALLY SUSTAINABLE 75-YEAR STRATEGY



- Create village design tailored to remote desert location and climate.
- Utilize appropriate building technologies to support MWD's commitment to resiliency and sustainability.
- Develop a phased village build-out strategy that allows MWD to strategically invest in each village in a manner that has flexibility to adapt to future unknown needs.

PROVIDE STANDARD OF LIVING THAT SUPPORTS EMPLOYEE RECRUITMENT, RETENTION, AND SATISFACTION.



- Design villages to support the health and safety for employees and residents at each villages for the next generation.
- Offer a package of housing, amenities, services, and/or other benefits that will attract and retain high-quality employees.
- Create a community and sense of place that provides where employees unwind after a long day of work.
- Provide the right mix of amenities and flexibility for amenities to evolve with the interests of future generations

CREATE SAFE AND HEALTHY VILLAGES THAT CONTRIBUTE TO THE MENTAL WELL-BEING FOR CURRENT AND FUTURE WORKFORCE.



- Provide privacy for residents and separation between housing and pump plant operations.
- Provide opportunity for residents to build social connections and a sense of community.
- Enhance access to EMS/fire/safety resources to support remote living.
- Enable active living, stress reduction activities, and safe recreation opportunities.

INTRODUCE NEW HOUSING STRATEGIES, BUT REMAIN FLEXIBLE TO EVER CHANGING MARKET CONDITIONS.



- Housing typologies tailored to the needs of current and future full-time residents.
- Consider critical mass of residents necessary to create meaningful sense of community.
- Develop amenity packages are tailored to the number of residents in each village.

MAINTAIN CURRENT HOUSING FOR ALL CURRENT EMPLOYEES.



- Current residents to remain in their current home until they retire or voluntarily move into a different housing package.
- Create a strategic phasing plan that decommissions/demolishes oldest, unoccupied homes first.

LEGEND

The following legend introduces the icons used throughout the report and appendixes. This visual language is used to describe the different housing and amenities explored throughout the design process.



**STAND-BY
SATELLITE CAMP**
SHIFT HOUSING
(1-2 WEEKS)



**EXTENDED STAY
CAMP**
WORKFORCE HOUSING
(182 DAYS)

Primary Amenity Icons

The icons will represent conceptual housing and amenities throughout the report.



Descriptive Amenity Icons

Each primary amenity icon represents a variety of potential elements. See Appendix pg. 137 for full description of program elements.

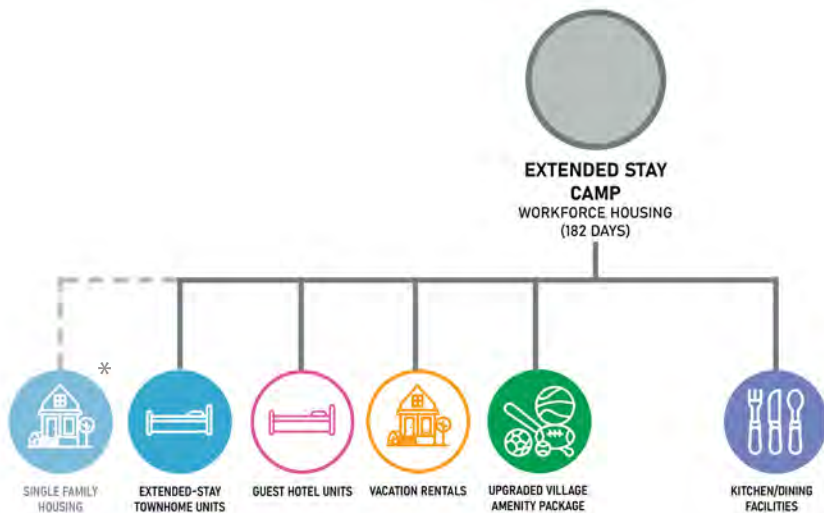


VILLAGE FRAMEWORKS

Extended-stay camp framework

Each desert employee will be provided their own personal living unit in the form of an extended-stay townhome which will be co-located with a robust amenity package at Eagle Mtn., Iron Mtn., or Gene.

The townhomes are intended to provide housing to MWD employees during their work shift.

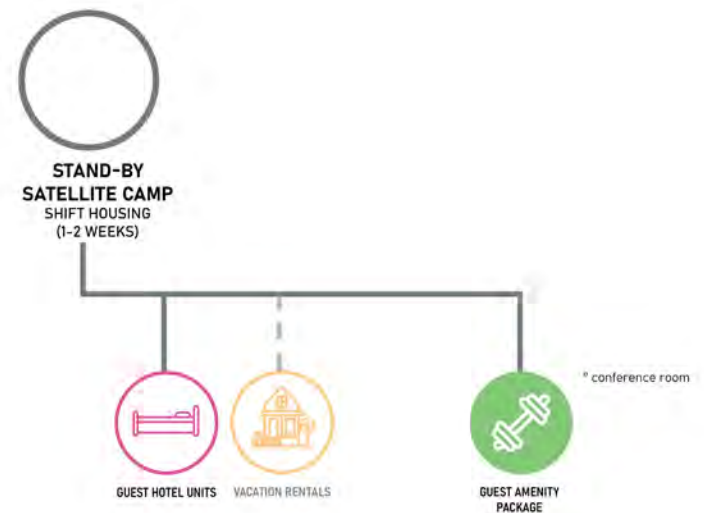


*Single family housing could be reincorporated should extended-stay townhomes not be desirable by employees

Standby satellite camp framework

Hinds and Intake pumping plants will operate as satellite camps where employees will temporarily stay on-site during stand-by. Extended-stay housing will be provided at adjacent consolidated village while employees are on-shift.

Intake will also include vacation rentals and a conference room in order to enjoy the proximity to Lake Havasu. Sewer system upgrades should be studied to understand feasibility.



HOUSING TYPOLOGIES



SINGLE FAMILY HOUSING

SINGLE FAMILY DETACHED WITH 2 CAR GARAGE



+/- 1,350 sq. ft.



EXTENDED-STAY TOWNHOME

MULTI-FAMILY HOUSING WITH INDIVIDUAL FRONT DOOR, 1BD W/ KITCHEN SUITE



+/- 750 sq. ft.



GUEST HOTEL

MOTEL ROOM



+/- 350 sq. ft.

ALTERNATIVE EXTENDED-STAY HOUSING TYPES:

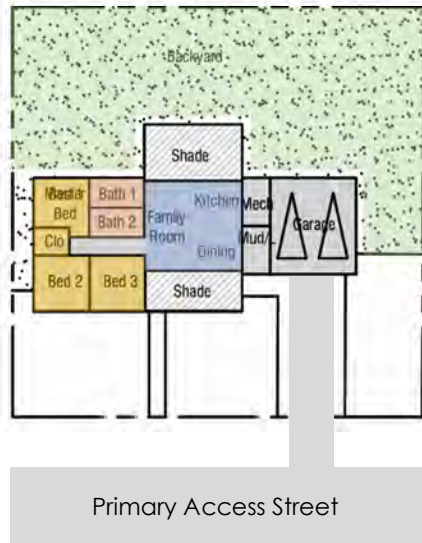


CASITA

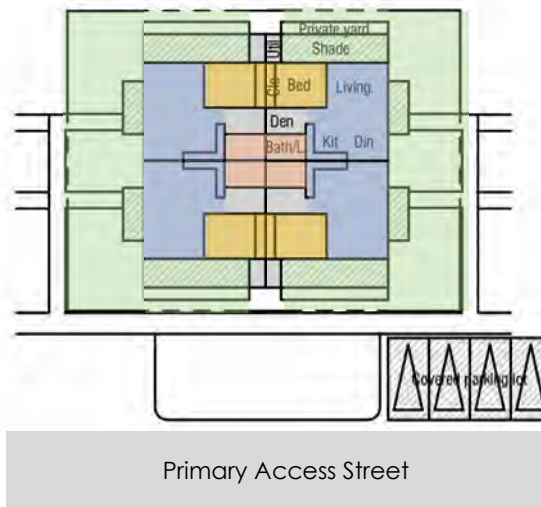


RV SITES W/HOOKUPS
USE OF PERSONAL RV'S FOR HOUSING

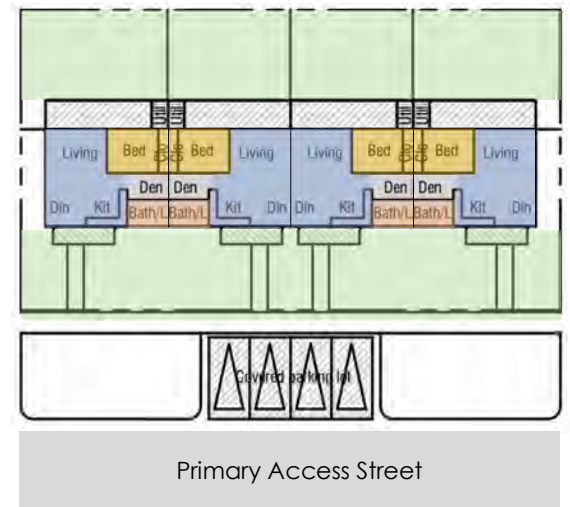
Single-family Homes



Extended-stay Townhome / Hotel (Pin-wheel type)



Extended-stay Townhome / Hotel (Linear type)



The extended-stay townhomes and hotels can be clustered with four units together in either a 'pin-wheel' or 'linear' manner. This can be done to fit future townhome products onto existing single family home lots.

PHASING PHILOSOPHY

Utilizing a phased investment approach will allow MWD to move towards the goal of a fully supported townhome village model at Eagle Mtn., Iron Mtn, and Gene.

The phased approach is envisioned as four phases over 15 years, with each subsequent phase of housing development based upon analysis of the prior phase. It is recommended that reassessment will occur after each phase, allowing MWD to make informed decisions as to whether they should continue to build townhomes or implement some mix of townhomes, casitas, and single-family homes based upon employee feedback. This phased approach will also provide a staggered expenditure plan to Metropolitan's budget, thus, meeting its fiduciary responsibility to renovate villages in a financially responsible manner.

A conceptual phasing strategy has been developed that can be applied simultaneously to Eagle Mtn., Iron Mtn, and Gene. The strategy allows for a Pilot townhome housing typology to be constructed in each of the villages during year one and evaluated over the first five years. This will allow MWD to test and evaluate acceptance of the townhome housing type with new employees while simultaneously allowing for the decommission of single-family housing coinciding with retirement of current workforce. Phase 1 will also include necessary guest hotels, village amenities, new/upgraded commercial kitchens and vacation rental housing. All capital investments identified for Phase 1 represent long-term, permanent investments in each village regardless of the ultimate determination of housing product mix.

Figure 1 represents a hypothetical phased approach at Iron Mountain to convey how a phased strategy can be applied to each village. It is anticipated that all current employees will remain in their current housing with currently scheduled upgrades. New facilities will include: eight extended stay townhomes, twenty-

five guest hotel rooms, two vacation rentals, one village amenity and new commercial kitchen. After year five, MWD will assess the community design strategy and acceptance of townhome housing model. At this point in time MWD can modify the number and type of housing constructed in later phases based upon employee and management feedback, pivoting in the build-out strategy to either 1) Continue build-out to all extended stay townhomes; 2) introduce a mix of single family/casita/townhome housing units to better align with employee recruiting/retention needs; 3) If the townhome model is deemed unsuccessful, MWD can revert back to build-out of all single-family homes. In this scenario, the initial townhomes built in Phase 1 will be converted to short-term guest hotels to meet future hotel needs. A conceptual phased approach is outline below with the goal of completing each village build-out within 15 years.

PHASE 1 (YEAR 1-5) :

Pilot Program, assess and evaluate annually, modify plan in Phase 2

PHASE 2 (YEAR 6-9):

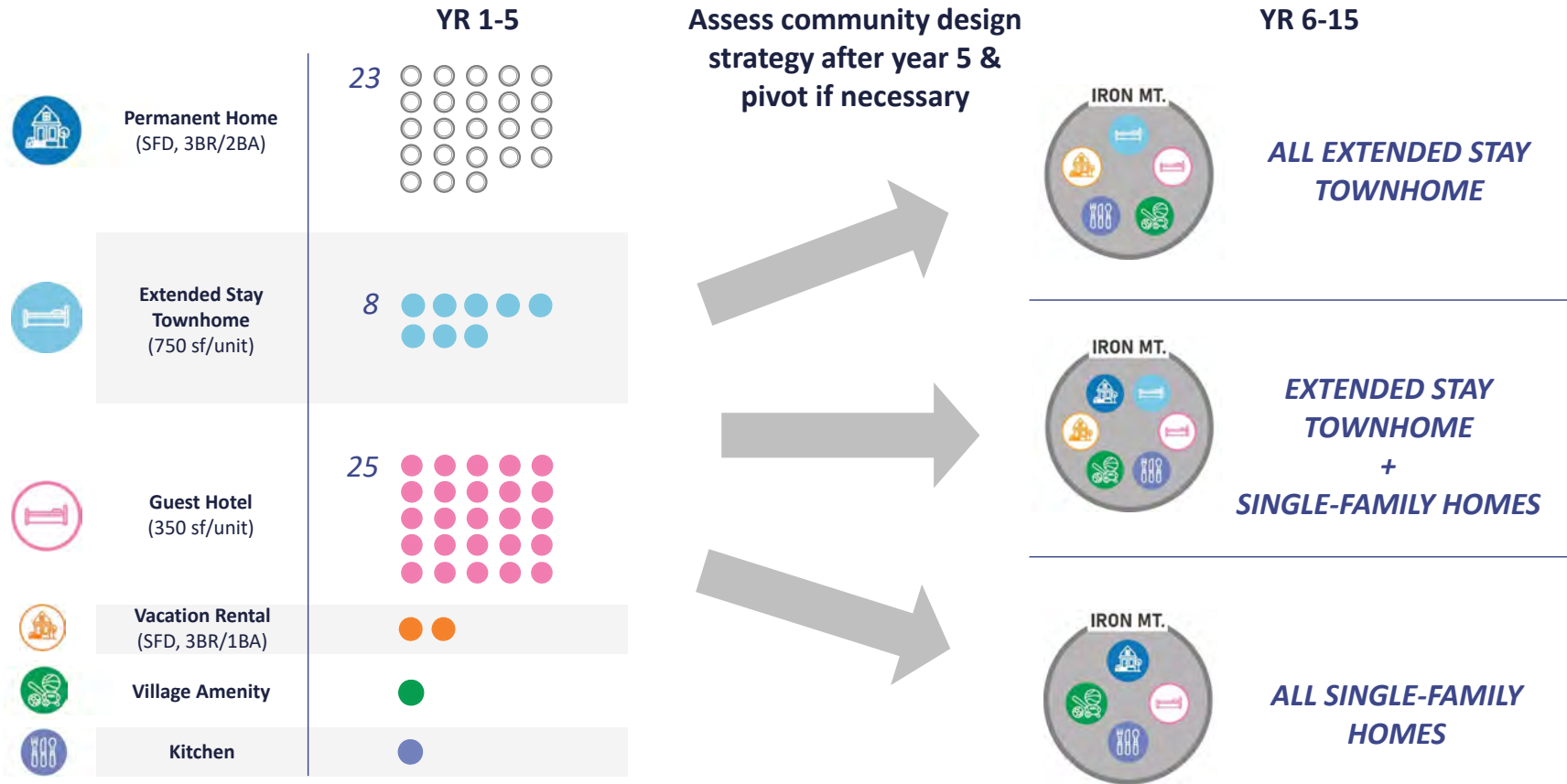
Assess and evaluate at year 9, modify housing program as necessary in Phase 3

PHASE 3 (YEAR 10-12):

Assess and evaluate at year 12, modify housing program as necessary in Phase 4.

PHASE 4 (YEAR 13-15):

Complete Build-Out



Phase 1 includes the following:

- Pilot program to test 1-bedroom townhomes at Eagle Mtn., Iron Mtn., and Gene.
- Short-term hotels for temporary workers at Eagle Mtn, Iron Mtn., and Gene Village.
- Short-term hotel at Hinds and Intake to support 'stand-by' plant team members.
- New or upgraded kitchens at Eagle Mtn., Iron Mtn., and Gene.
- Upgrade village amenity package at Eagle Mtn. and Iron Mtn.

FIGURE 1

See appendix pg. 100 for a detailed phasing strategy that demonstrates how each village could be phased to accommodate a range of options from all extended-stay townhomes to all single family homes.

RECOMMENDED STRATEGY

The recommended strategy for the next 75 years at Metropolitan Water District is to provide three fully supported villages at Eagle Mtn., Iron Mtn., and Gene utilizing the extended-stay townhome housing typology for future employee housing.

The intent of these villages is for employees to live on-site during their work shift in their own personal housing unit with an upgraded amenity package. Meal plans and housekeeping may be considered as added benefits for recruiting and retaining future employees living in smaller housing units. Three-bedroom/2-bathroom homes will be provided as vacation rentals at each village to allow for families of employees to temporarily stay in the village while employees need to be on-site for extended periods of time and/or are on-shift during holiday hours.

Eagle Mtn. and Iron Mtn., which include the Pump Maintenance Team and the O&M Team, are the most remote villages and have the greatest difficulty with recruitment and retention of employees. Therefore, MWD should focus resources and energy on these villages to create highly amenitized 'oases' for employees while on shift. In order to create a critical mass of people living on-site and co-locate employees with significant investment in upgraded amenity packages, Hinds Pump plant employee housing will be relocated to Eagle Mtn. village with employees commuting to Hinds Pump plants on a daily basis.

Hinds and Intake will function as 'standby satellite camps' providing a limited number of studio hotel units and a scaled back amenity package intended to support only those employees staying on-site temporarily to fulfill the 'stand-by' requirement of 15-minute response time. Intake will also include vacation rentals and a conference room in order to take advantage of its proximity to Lake Havasu as an amenity.

The diagram to the right depicts all future housing and program amenities at each of pump plant.

Note: Gene is included in this strategy as a fully operational village since it has historically operated as the 'main desert village'. However, in the past 75 years, Lake Havasu City and Parker have evolved into fully functioning towns offering all the services desired by families. In addition, many Gene/Intake employees rarely live at Gene village unless fulfilling 'stand-by' requirements. Therefore, there may be a scenario where Gene is no longer considered a village offering full-time housing and upgraded amenity package, which would lead to additional cost savings.

THREE DESERT VILLAGES
 100% EXTENDED-STAY
 TOWNHOMES
 105 HOUSING UNITS



	TOTAL COST	COST PER VILLAGE				
	\$ 145.6M	\$2.4M	\$44.6M	\$45.4M	\$45.3M	\$7.9M
SUMMARY OF HOUSING AND AMENITIES						
Single Family Homes	0	-	-	-	-	-
Extended Stay Townhomes 750 sq. ft.	105	-	35	33	37	-
Vacation Rental	12	-	3	3	3	3
Guest Hotel 350 sq. ft.	64	3	17	25	15	4
Upgraded Amenities	3	-	1	1	1	-
Guest Amenity	2	1	-	-	-	1 ^o
Kitchen	3	-	1	1	1	-

^o Intake will include a 800 sq. ft. conference room estimated at +/- \$750,000.

*10% housing increase across all villages and scenarios

** These cost estimates do not include the estimated site improvement costs, which is about \$21 million across all villages for complete build out. Final site improvements cost is variable depending on coordination with on-going infrastructure updates.

*** New facilities at Intake requires further technical study to understand feasibility of required infrastructure.



RECOMMENDED PHASING

One-bedroom extended-stay townhomes should be implemented in year one for all new employees and be assessed over a period of five years to gauge ability to recruit and retain employees with the new housing type.

Total capital improvements at all pump plants (three western villages and two satellite camps) will begin with an initial investment in the following:

- 64 studio style hotel rooms.
- 24 one-bedroom extended-stay townhomes.
- 3 new commercial kitchens at Eagle Mtn., Iron Mtn., and Gene.
- 2 upgraded village amenities at Eagle Mtn. and Iron Mtn.
- 2 guest amenities at Hinds and Intake
- 1 conference room at Intake
- 9 single family homes at to be used as temporary rental units for visitors.

The opinion of probable cost, across all villages, for Phase 1 is approximately \$82 million dollars (2024 dollars; not including soft costs, sitewide infrastructure costs, or escalation).

If the model is successful, MWD should continue a phased approach introducing new townhome units and decommissioning single-family homes over subsequent phases, assessing employee satisfaction at the end of each phase. The phasing strategy on page 26 and 27 demonstrates how the villages can be built-out in three successive, three-year phases in terms of program allocation and capital costs.

If the townhomes are less successful, housing typology can adjust during phases 2-4 in order provide a more balanced mix of single-family housing, casita, and townhome units to reflect MWD strategy for recruiting and retaining future workforce. Refer to page 27 for potential cost differences depending on the housing mix pursued by MWD.

THREE DESERT VILLAGES 100% EXTENDED-STAY TOWNHOMES
105 HOUSING UNITS

	PHASE 1 YRS 1-5			PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15			
HINDS 	3 guest hotel	1 guest amenity	-	-	-				
EAGLE 	8 townhome	17 guest hotel	2 vacation rental	8 townhome	13 townhome	1 vacation rental	6 townhome		
IRON MT. 	8 townhome	25 guest hotel	2 vacation rental	8 townhome	13 townhome	1 vacation rental	4 townhome		
GENE 	8 townhome	15 guest hotel	2 vacation rental	8 townhome	13 townhome	1 vacation rental	8 townhome		
INTAKE 	4 guest hotel	3 vacation rental	-	-	-	-			
TOTAL	24 townhome	64 guest hotel	9 vacation rental	24 townhome	1 amenity	39 townhome	3 vacation rental	8 townhome	18 townhome

° Intake will include a 800 sq. ft. conference room estimated at +/- \$750,000.

THREE DESERT VILLAGES 100% EXTENDED-STAY TOWNHOMES
105 HOUSING UNITS

VILLAGE TOTAL	PHASE 1 YRS 1-5	PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
 <p>HINDS \$2.4M</p>	<p>\$2.4M</p> <p>3 GUEST HOTEL 1 GUEST AMENITY</p>	-	-	-
 <p>EAGLE \$44.6M</p>	<p>\$26.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 17 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	<p>\$4.8M</p> <p>8 EXTENDED STAY TOWNHOMES</p>	<p>\$9.4M</p> <p>13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL</p>	<p>\$3.6M</p> <p>6 EXTENDED STAY TOWNHOMES</p>
 <p>IRON MT. \$45.4M</p>	<p>\$28.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 25 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	<p>\$4.8M</p> <p>8 EXTENDED STAY TOWNHOMES</p>	<p>\$9.4M</p> <p>13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL</p>	<p>\$2.4M</p> <p>4 EXTENDED STAY TOWNHOMES</p>
 <p>GENE \$45.3M</p>	<p>\$16M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 15 GUEST HOTEL 1 KITCHEN</p>	<p>\$15.1M</p> <p>8 EXTENDED STAY TOWNHOMES 1 UPGRADED AMENITY</p>	<p>\$9.4M</p> <p>13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL</p>	<p>\$4.8M</p> <p>8 EXTENDED STAY TOWNHOMES</p>
 <p>INTAKE \$7.9M</p>	<p>\$7.9M</p> <p>4 GUEST HOTEL 1 GUEST AMENITY + CONFERENCE ROOM 3 VACATION RENTALS</p>	-	-	-
<p>TOTAL \$145.6M</p>	<p>\$81.9M</p>	<p>\$24.7M</p>	<p>\$28.2M</p>	<p>\$10.8M</p>
















° Intake will include a 800 sq. ft. conference room estimated at +/- \$750,000.

*10% housing increase across all villages and scenarios

** These cost estimates do not include the estimated site improvement costs, which is about \$21 million across all villages for complete build out. Final site improvements cost is variable depending on coordination with on-going infrastructure updates.

*** New facilities at Intake requires further technical study to understand feasibility of required infrastructure.

ALTERNATIVE HOUSING MIXES

SUMMARY	COST	MODEL				
THREE DESERT VILLAGES: 100% EXTENDED-STAY TOWNHOMES Preferred Scenario						
105 extended-stay townhomes 12 vacation rentals 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens	\$145M	HINDS 	EAGLE 	IRON MT. 	GENE 	INTAKE 
THREE DESERT VILLAGES: 50% EXTENDED-STAY TOWNHOMES/50% SINGLE FAMILY HOMES						
54 single family homes 53 extended-stay townhomes 9 vacation rentals 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens	\$189M	HINDS 	EAGLE 	IRON MT. 	GENE 	INTAKE 
THREE DESERT VILLAGES: 100% SINGLE FAMILY HOMES						
105 single family homes 24 extended-stay townhomes 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens 9 vacation rentals	\$249M	HINDS 	EAGLE 	IRON MT. 	GENE 	INTAKE 

° Intake will include a 800 sq. ft. conference room estimated at +/- \$750,000.

*10% housing increase across all villages and scenarios

** These cost estimates do not include the estimated site improvement costs, which is about \$21 million across all villages for complete build out. Final site improvements cost is variable depending on coordination with on-going infrastructure updates.

*** New facilities at Intake requires further technical study to understand feasibility of required infrastructure.

The preferred strategy is for 100% townhomes at Eagle Mtn., Iron Mtn., and Gene with satellite camps at Hinds and Intake.

Should Phase 1 prove unsuccessful as indicated by a future assessment of the Townhome Pilot Program, MWD could change course and implement an alternative housing program that best suits the needs of the future desert workforce. The adjacent page demonstrates two other potential village strategies; 1) 50% townhomes / 50% single family homes at each village and 2) 100% single family homes at each village.



NEXT STEPS

DECISIONS

The following decisions will guide the design and implementation phase.

1. Confirm consolidated village strategy as outlined in this report is the preferred direction.
2. Confirm recommended phasing and investment strategy outlined in this report is the preferred direction.
3. Initiate individual village concept design and phasing strategy.
4. Evaluate current capital improvement program against preferred village strategy for potential future cost savings.
5. Develop transition plan to relocate Hinds employees to Eagle Mountain
6. Create an assessment strategy and review committee for Townhome Pilot Program that includes union and employee participation.

DESIGN AND IMPLEMENTATION

Site Specific Design

Continue to develop:

- Village by Village test fits
- Refined Phasing Strategy

Preliminary Design

Begin design on new project components:

- Site plan and phasing strategy for each village
- Townhomes/Casita layout
- Amenity Package
- Validate Component Design from Previous Work
- Village Placemaking
- Hotel layout
- Single Family Homes
- Commercial Kitchens

Cost Estimates

Prepare refined cost estimates for:

- Each village as design progresses
- The decommissioning of villages as phasing strategy and village test fits progress.

COMMUNITY PLANNING CONCEPTUAL DESIGN
MWD Housing & Property Improvements Prpgram At The Desert Facilities

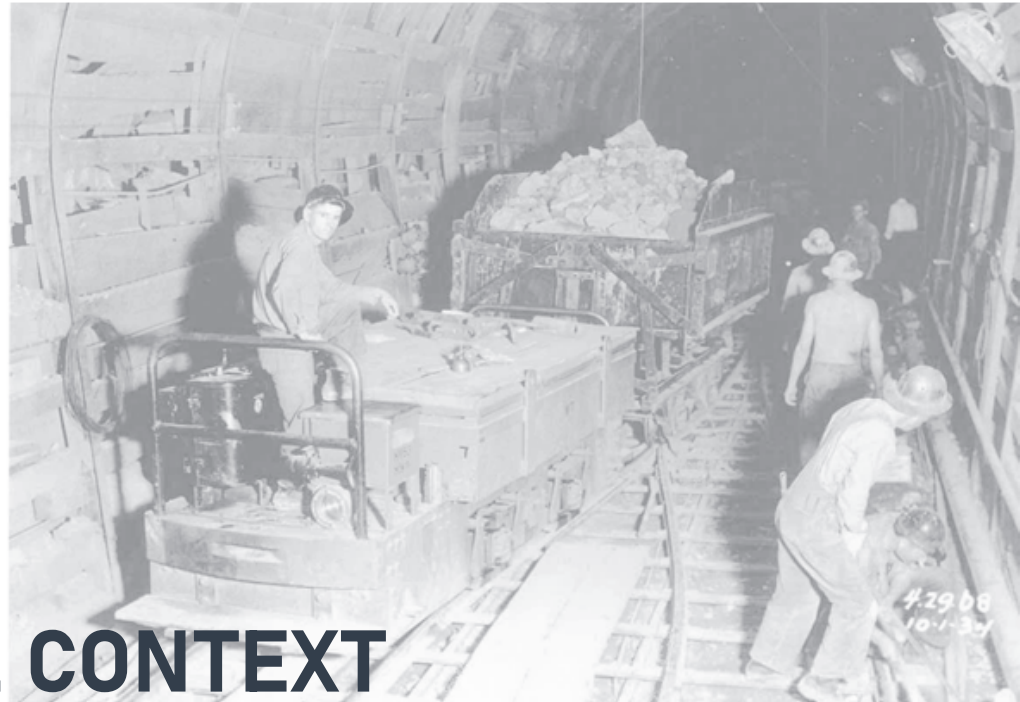
Appendix

■ VILLAGE ANALYSIS AND UNDERSTANDING	2
■ COMMUNITY OUTREACH	28
■ PROJECT PARAMETERS	64
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■ DETAILED PHASING STRATEGY FOR EACH VILLAGE	111
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■ DETAILED ROM COSTS	143



VILLAGE ANALYSIS AND UNDERSTANDING

- REGIONAL CONTEXT 3
- VILLAGE ANALYSIS 8



REGIONAL CONTEXT







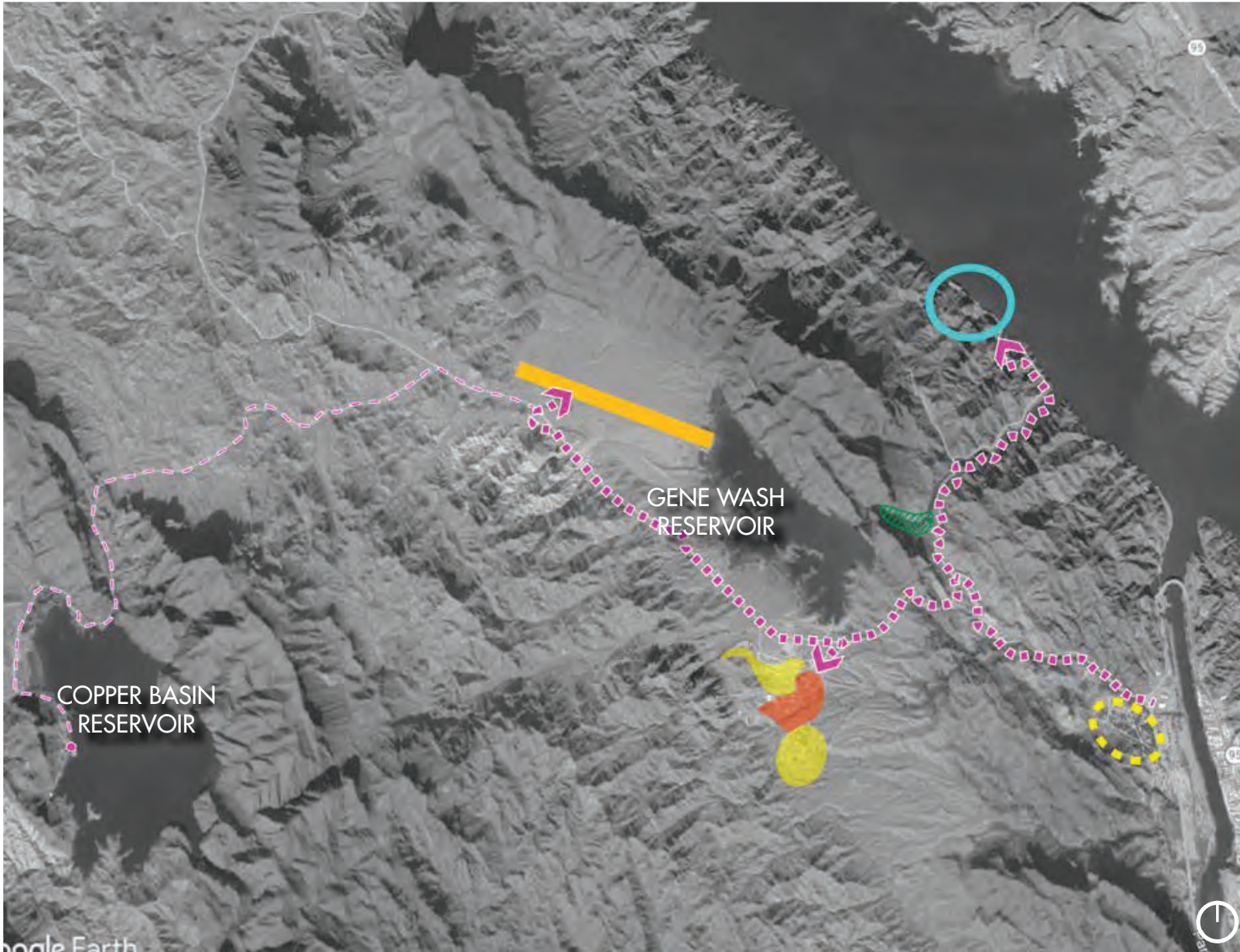




ARTIST'S SKETCH OF AQUEDUCT DIVERSION WORKS



VILLAGE ANALYSIS

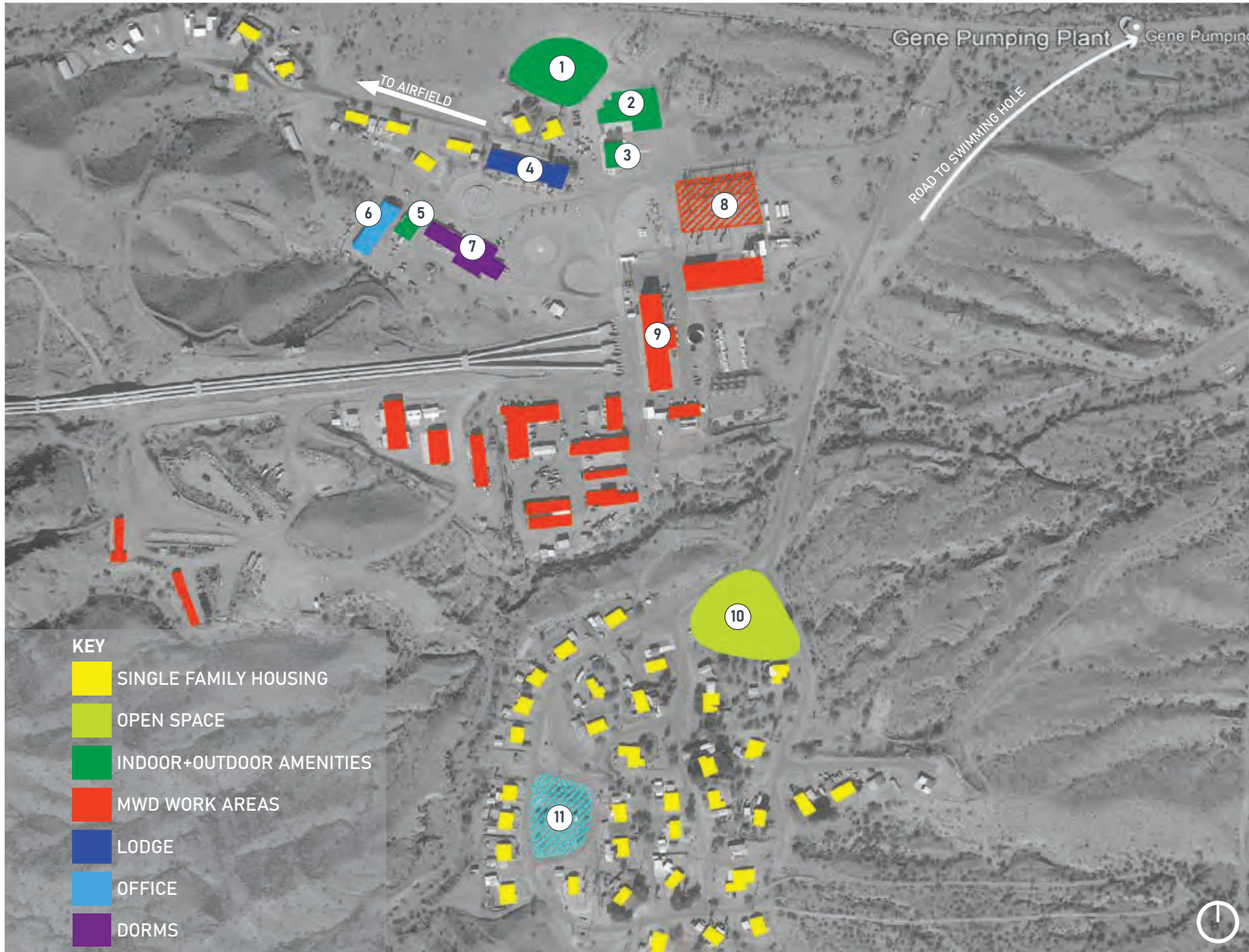


KEY OBSERVATIONS

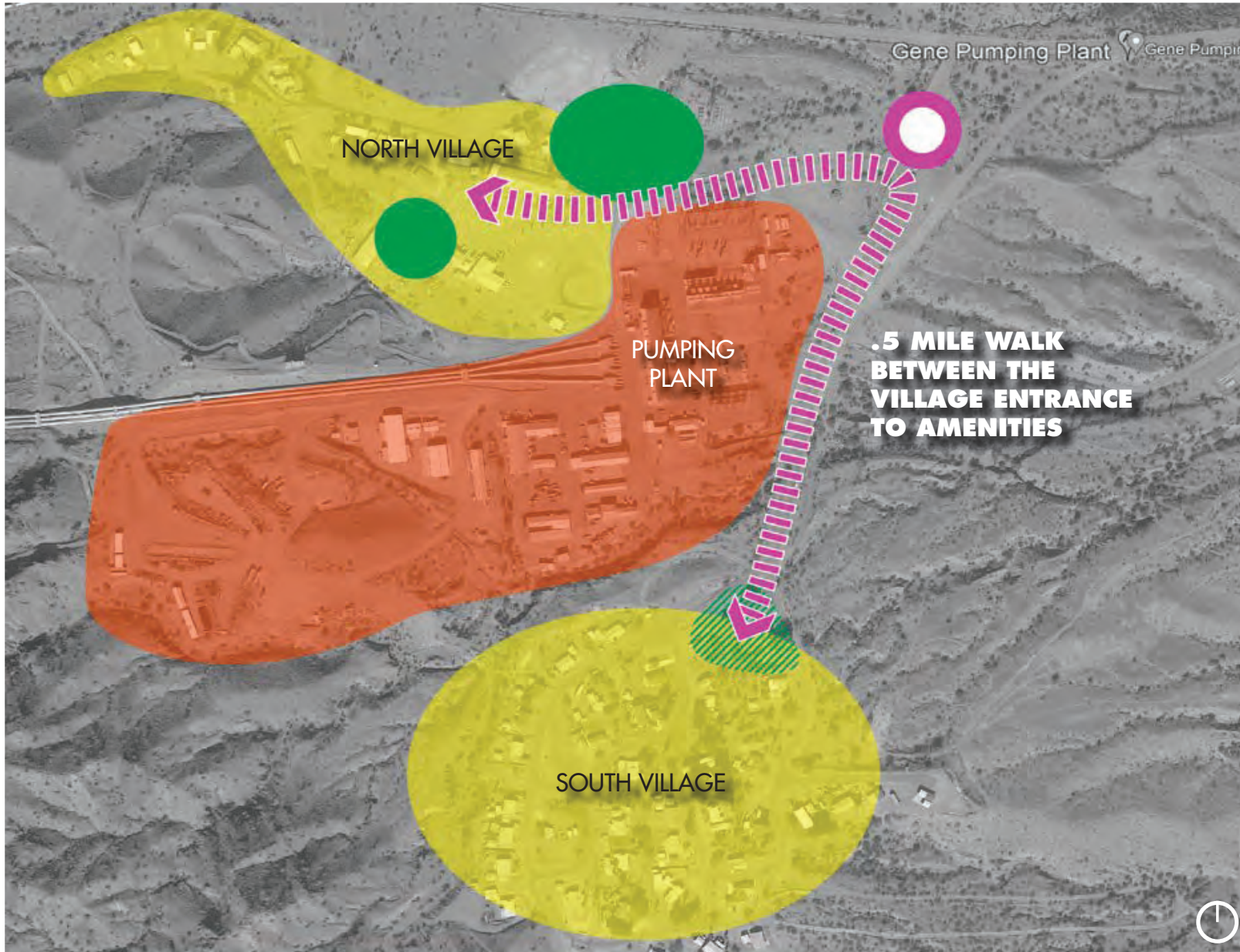
- Intake pump plant is about 3.2 miles away from Gene and staff in Intake lives in Gene Village during shift.
- Boating dock in Intake and Swimming Hole is a great asset as a recreational destination for residents.

KEY

- VILLAGE
- FORMER LOWER VILLAGE
- SWIMMING HOLE
- PUMP PLANT OPERATIONS
- INTAKE PLANT
- AIRPORT LANDING STRIP
- MAIN CIRCULATION
- ROUTE TO COPPER BASIN HOME



- ① BASEBALL FIELD
- ② POOL+TENNIS COURT
- ③ GYM+MUSEUM
- ④ LODGE+COMMUNITY ROOM
- ⑤ DINING HALL
- ⑥ OFFICES
- ⑦ DORMS
- ⑧ ELECTRIC SUB-STATION
- ⑨ PUMP PLANT
- ⑩ VILLAGE PARK
- ⑪ PARKING LOT/INFORMAL STORAGE



KEY OBSERVATIONS

- The two villages are separated by pump plant operations.
- All amenities are located in the northern village away from the majority of residents.
- The village park (#10) is located at the edge of the neighborhood and is surrounded by roads.
- Vacant land is informally used as storage of personal vehicles creating an eyesore for adjacent residences.
- Truck traffic is generally separated from villages.
- Temp trailers for transient workers are clustered in the north village.

KEY

- VILLAGE
- AMENITY
- OPEN SPACE
- PUMP PLANT OPERATIONS
- SECURITY CHECK POINT
- MAIN CIRCULATION



POPULATION

29 TOTAL EMPLOYEES

- 4 ON-CALL STAFF
- # PUMP PLANT OPERATORS
- # O&M
- # ADMIN
- # KITCHEN & HOSPITALITY
- # AVERAGE CONTRACT WORKERS

10 PERMANENT HOUSEHOLDS

- # YOUNG SCHOOL AGE CHILDREN
- # HIGH SCHOOL AGE CHILDREN

30 SHIFT RESIDENTS

Note: all #'s represent unknown quantities that are to be provided and/or verified by MWD.



HOUSING

42 TOTAL HOMES

- 27 OCCUPIED HOMES
- 2 STANDBY HOMES
- # TEMPORARY TRAILERS
- # DORM FACILITIES
- # LODGE FACILITIES
- 28 HOMES TO BE RENOVATED
- 5 HOMES TO BE DEMOLISHED
- 2 HOMES RECENTLY BUILT



AMENITIES

7 AMENITIES PROVIDED BY MWD

- REC ROOM
- POOL
- BASEBALL FIELD
- SWIMMING HOLE
- TENNIS COURT
- COMMUNITY ROOM
- DINING HALL





- KEY**
- SINGLE FAMILY HOUSING
 - OPEN SPACE
 - INDOOR+OUTDOOR AMENITIES
 - MWD WORK AREAS
 - LODGE
 - TEMPORARY MODULAR HOME

- ① GYM
- ② DINING HALL/ GAME ROOM
- ③ LODGE
- ④ ELECTRIC SUB-STATION
- ⑤ PUMP PLANT
- ⑥ CENTRAL LAWN
- ⑦ POOL
- ⑧ TENNIS COURT
- ⑨ RC TRACK - NO LONGER IN USE
- ⑩ O&M SHOP
- ⑪ MAIN GATE
- ⑫ MAINTENANCE OFFICE



KEY OBSERVATIONS

- O&M headquarters and maintenance facility is located next to the village causing lots of heavy service traffic and noise.
- Central basin blvd. is the main plant access and bisects residential areas.
- Amenities are clustered central to residences.
- Housing is dispersed in an unplanned fashion.
- There is some separation of residences from pump plant facilities.

KEY

- VILLAGE
- AMENITY
- OPEN SPACE
- PUMP PLANT OPERATIONS
- SECURITY CHECK POINT
- MAIN CIRCULATION



POPULATION

25 TOTAL EMPLOYEES

- 2 ON-CALL STAFF
- # PUMP PLANT OPERATORS
- # O&M - HEADQUARTERS
- # ADMIN
- # KITCHEN & HOSPITALITY
- # AVERAGE CONTRACT WORKERS

5 PERMANENT HOUSEHOLDS

- 2 YOUNG SCHOOL AGE CHILDREN
- 1 HIGH SCHOOL AGE CHILDREN

20 SHIFT RESIDENTS

Note: all #'s represent unknown quantities that are to be provided and/or verified by MWD.



HOUSING

27 TOTAL HOMES

- 20 OCCUPIED HOMES
- 2 STANDBY HOMES
- 2 TEMPORARY TRAILERS
- 15 DORM FACILITIES
- # LODGE FACILITIES
- 16 HOMES TO BE RENOVATED
- 7 HOMES TO BE DEMOLISHED
- 4 HOMES RECENTLY BUILT



AMENITIES

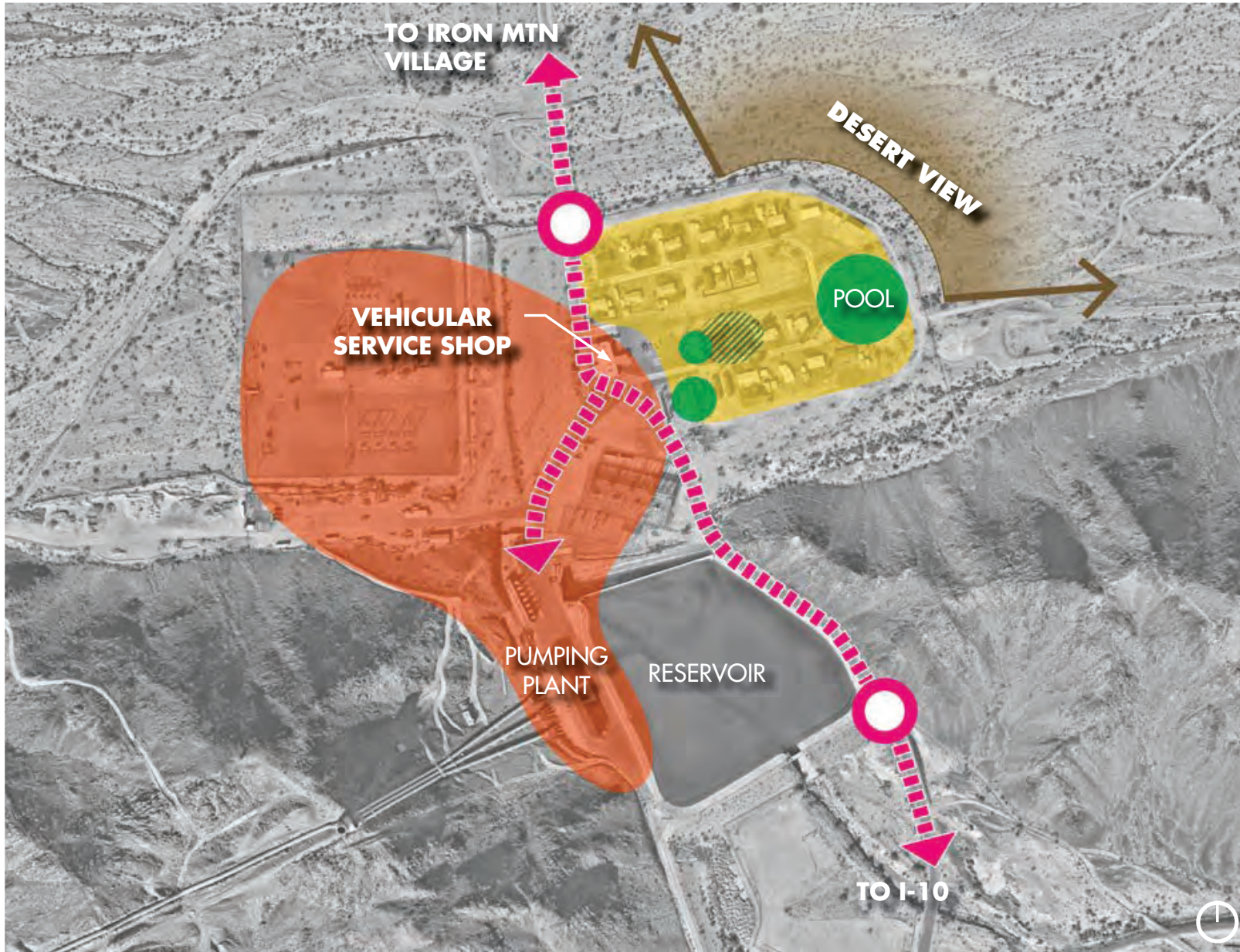
8 AMENITIES PROVIDED BY MWD

- GYM
- POOL
- CENTRAL LAWN
- FRISBEE GOLF
- PLAYGROUND
- TENNIS COURT
- GAME ROOM
- DINING HALL





- ① ELECTRIC SUB-STATION
- ② PUMP PLANT
- ③ UNDERGROUND AQUEDUCT
- ④ SHOP MAINTENANCE
- ⑤ DORMS
- ⑥ REC HALL+LODGE
- ⑦ CENTRAL LAWN+PLAYGROUND
- ⑧ TENNIS COURT
- ⑨ POOL
- ⑩ CIM OFFICE



KEY OBSERVATIONS

- The village and amenities are separated from pump plant and work area.
- Village has two secure entry locations.
- Housing layout lends itself to creating a stronger community feeling and should be considered for all future village layouts.
- The pool is located at the edge of the village creating an opportunity to celebrate desert views.
- Large asphalt area at maintenance area increases heat island effect.
- Distinct lack of trees in the village.
- CIM office location brings traffic and outsiders through village

KEY

- VILLAGE
- AMENITY
- OPEN SPACE
- PUMP PLANT OPERATIONS
- SECURITY CHECK POINT
- MAIN CIRCULATION



POPULATION

12 TOTAL EMPLOYEES

- 2 ON-CALL STAFF
- # PUMP PLANT OPERATORS - HQ
- # O&M
- # ADMIN
- # KITCHEN & HOSPITALITY
- # AVERAGE CONTRACT WORKERS

6 PERMANENT HOUSEHOLDS

- # YOUNG SCHOOL AGE CHILDREN
- # HIGH SCHOOL AGE CHILDREN

6 SHIFT RESIDENTS

Note: all #'s represent unknown quantities that are to be provided and/or verified by MWD.



HOUSING

17 TOTAL HOMES

- 12 OCCUPIED HOMES
- # STANDBY HOMES
- 0 TEMPORARY TRAILERS
- 10 DORM FACILITIES
- 0 LODGE FACILITIES
- 11 HOMES TO BE RENOVATED
- 1 HOMES TO BE DEMOLISHED
- 2 HOMES RECENTLY BUILT



AMENITIES

5 AMENITIES PROVIDED BY MWD

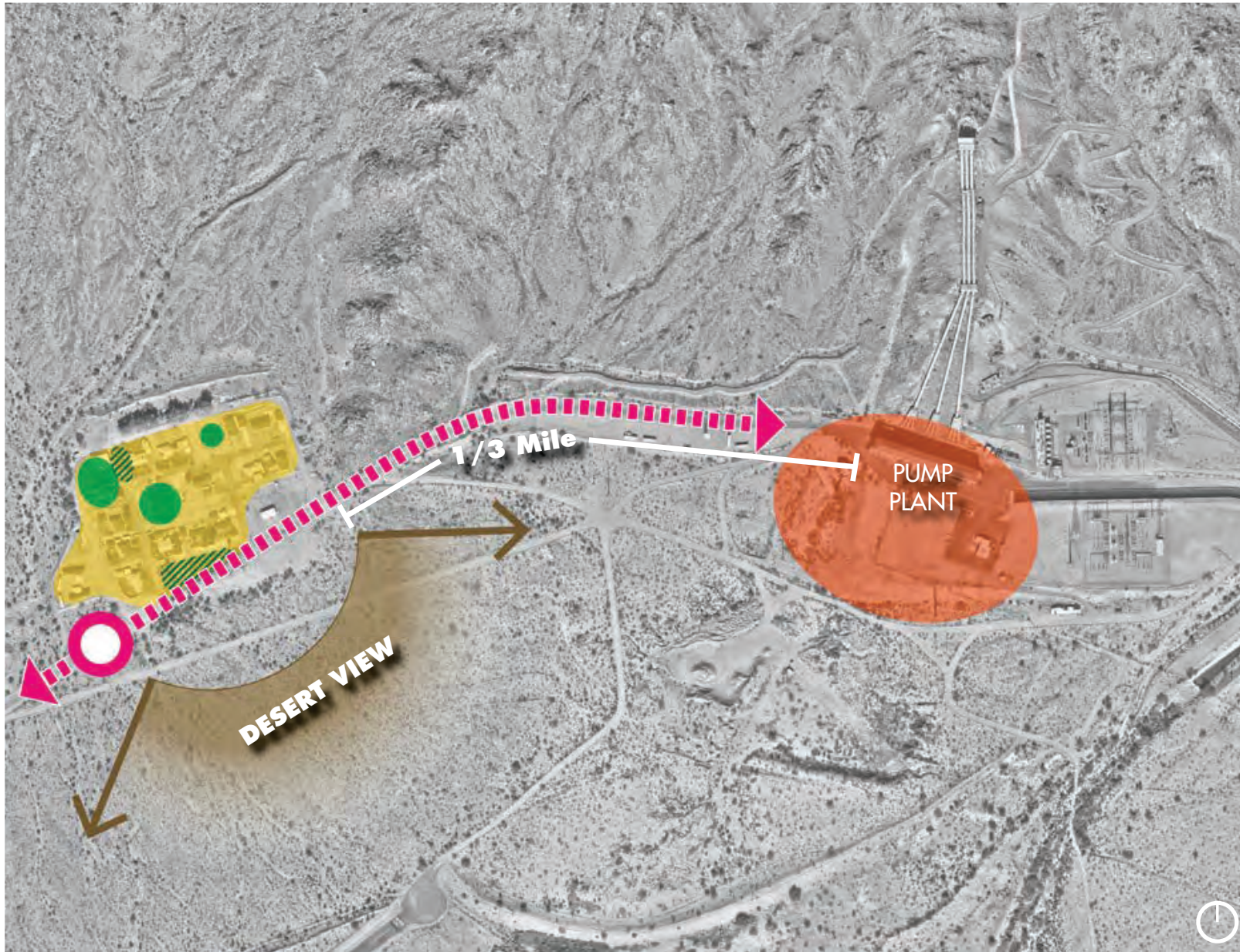
- DINING HALL
- POOL
- CENTRAL LAWN
- TENNIS COURT
- PLAYGROUND





- KEY**
- SINGLE FAMILY HOUSING
 - OPEN SPACE
 - INDOOR+OUTDOOR AMENITIES
 - MWD WORK AREAS
 - TEMPORARY TRAILERS

- ① REC HALL
- ② TENNIS COURT
- ③ POOL
- ④ PLAYGROUND
- ⑤ CENTRAL LAWN
- ⑥ CONSTRUCTION LAYDOWN AREA
- ⑦ PUMP PLANT
- ⑧ ELECTRIC SUB-STATION



KEY OBSERVATIONS

- The village and amenities are separated from pumping plant and work area, creating a sense of home.
- The village and houses have a desert view sitting at a higher elevation than the main service access road.
- There are existing trees located at the north side of the village. They are situated at the toe of the mountain slope, presumably planted as a wind block. Measures should be taken to preserve these and plant more for future generations.
- Open space is located at the edge of the village, offering views but is not central to all residences.
- Lack of non-resident facilities at or near the plant creates scheduling and use conflicts for the recreational amenities, and between permanent and temporary workers.
- Although the main access road runs adjacent to the village, residents privacy isn't disturbed by service vehicular traffic. This is likely because there are no other operational facilities located on site.

KEY

- VILLAGE
- AMENITY
- OPEN SPACE
- PUMP PLANT OPERATIONS
- SECURITY CHECK POINT
- MAIN CIRCULATION



POPULATION

12 TOTAL EMPLOYEES

- 2 ON-CALL STAFF
- # PUMP PLANT OPERATORS - HQ
- # O&M
- # ADMIN
- # KITCHEN & HOSPITALITY
- # AVERAGE CONTRACT WORKERS

5 PERMANENT HOUSEHOLDS

- 6 YOUNG SCHOOL AGE CHILDREN
- 0 HIGH SCHOOL AGE CHILDREN

7 SHIFT RESIDENTS

Note: all #'s represent unknown quantities that are to be provided and/or verified by MWD.



HOUSING

13 TOTAL HOMES

- 12 OCCUPIED HOMES
- # STANDBY HOMES
- 4 TEMPORARY TRAILERS
- 0 DORM FACILITIES
- 0 LODGE FACILITIES
- 8 HOMES TO BE RENOVATED
- 0 HOMES TO BE DEMOLISHED
- 3 HOMES RECENTLY BUILT

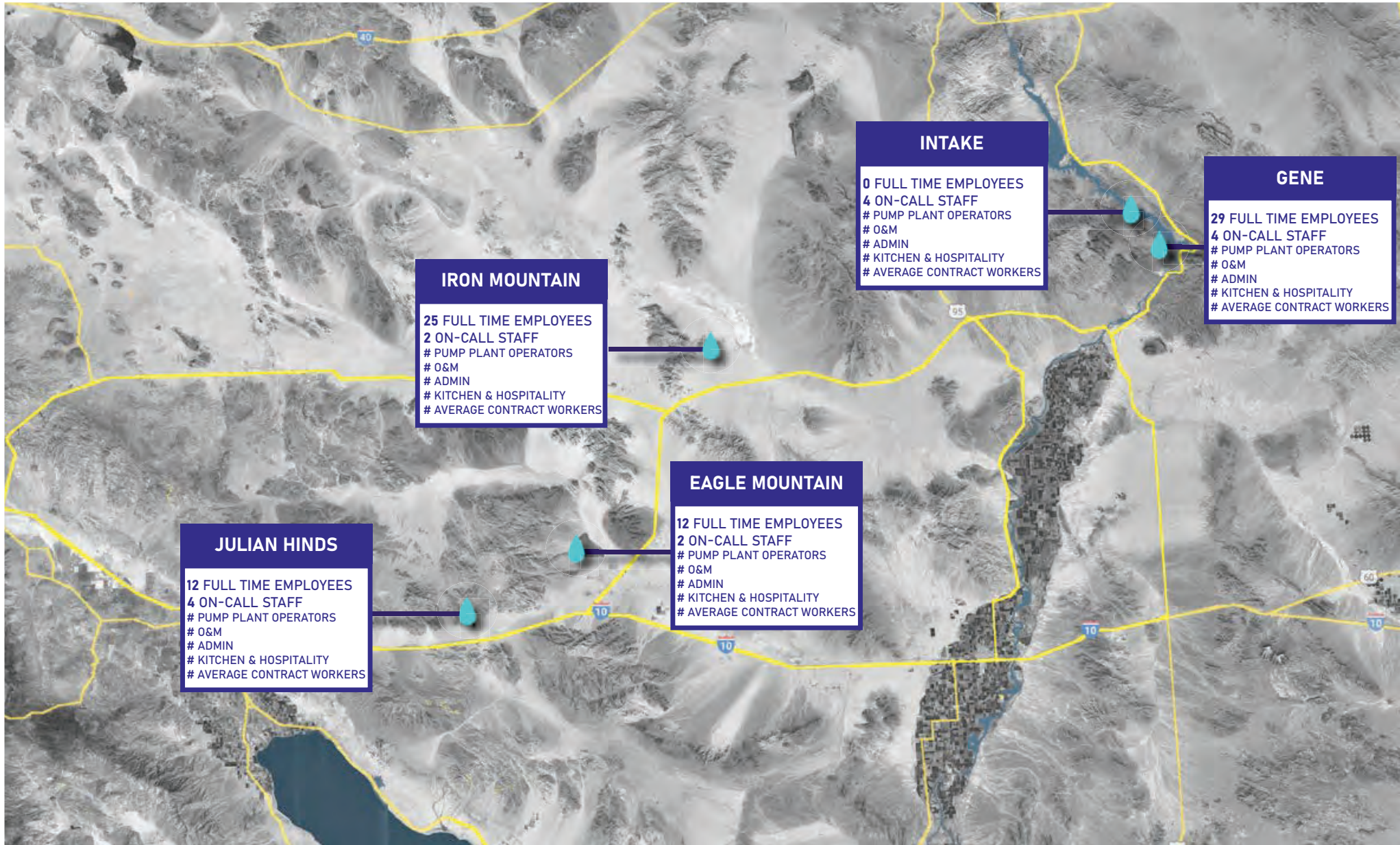


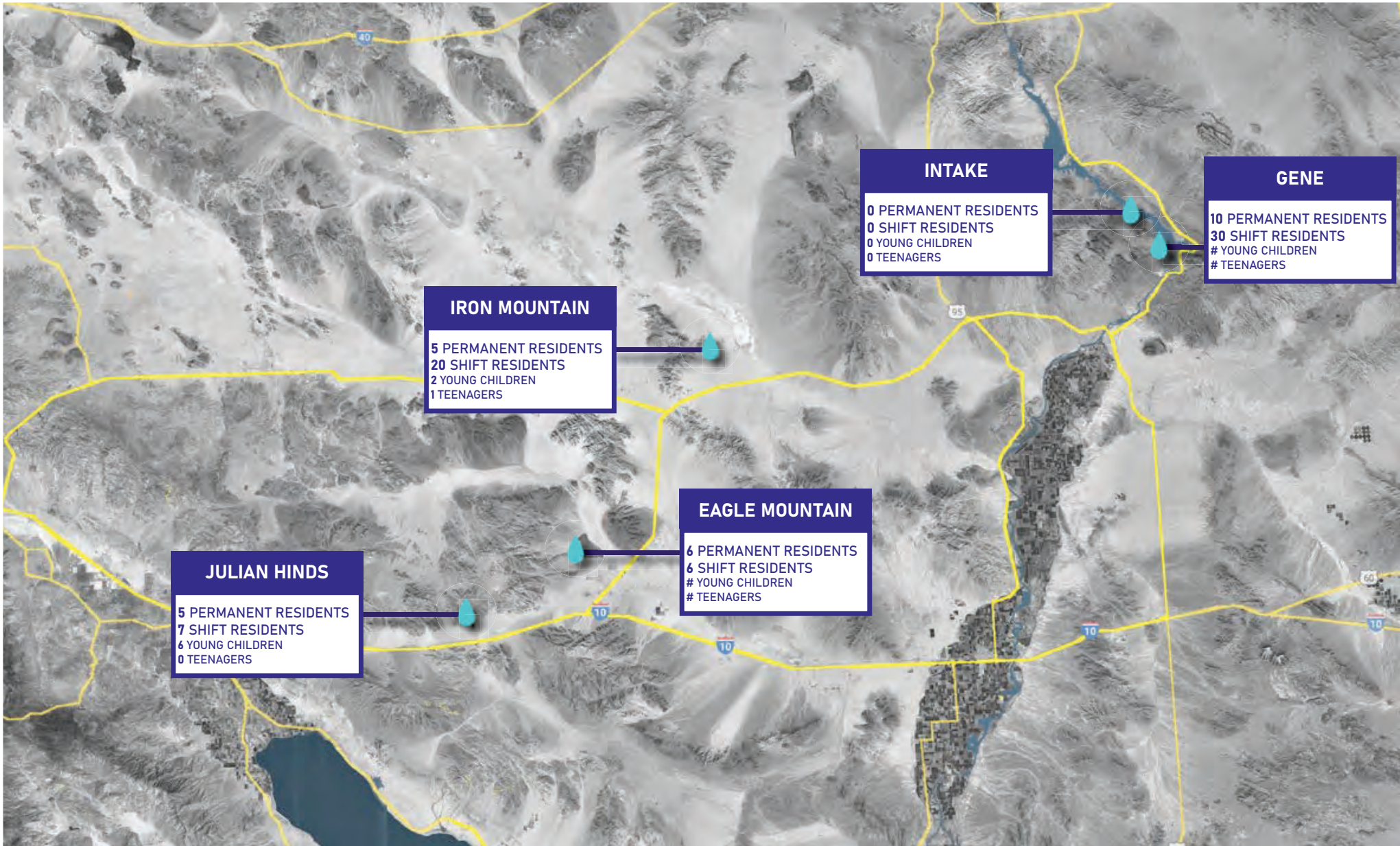
AMENITIES

5 AMENITIES PROVIDED BY MWD

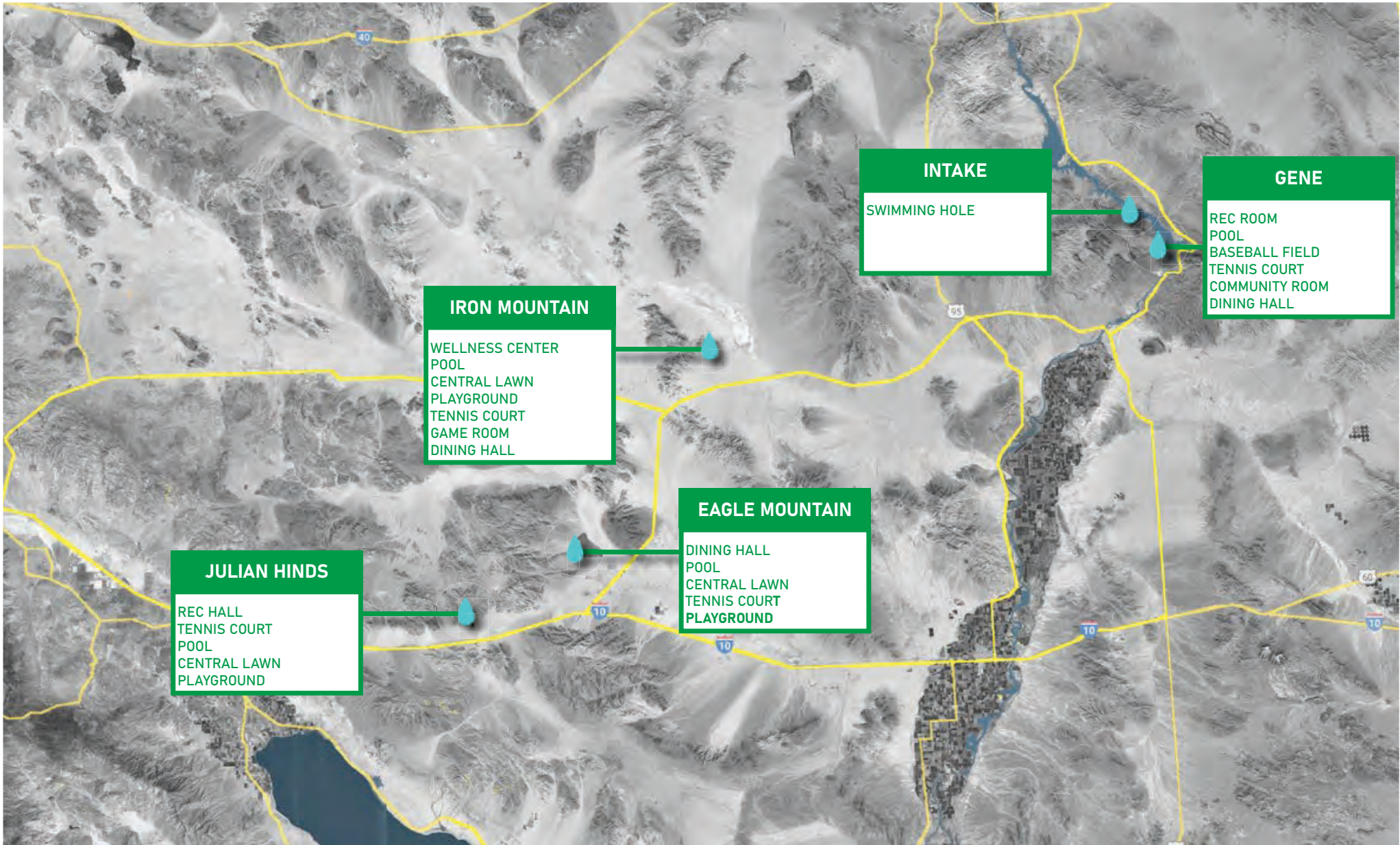
- REC HALL
- POOL
- CENTRAL LAWN
- TENNIS COURT
- PLAYGROUND

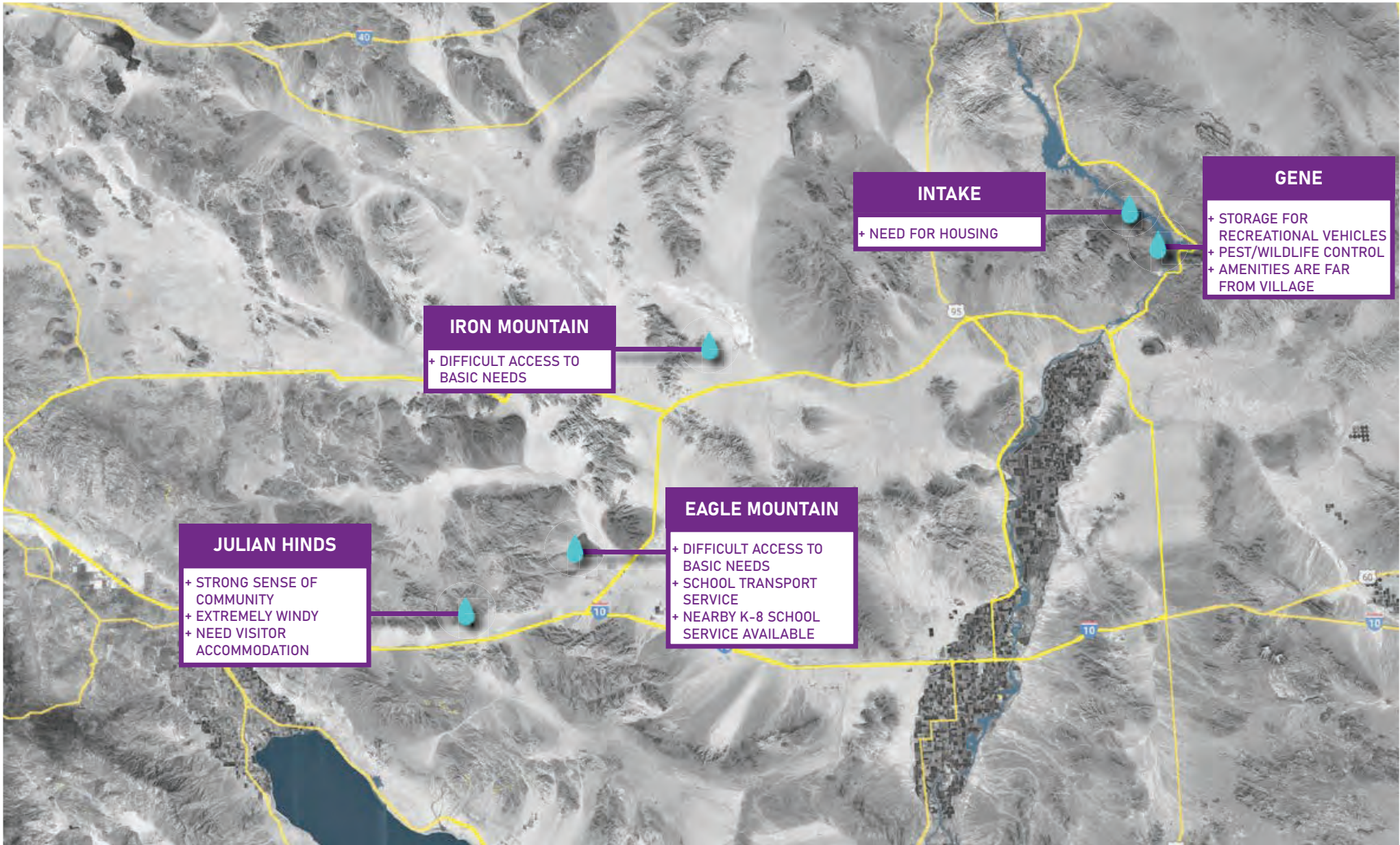














After a series of interviews with Metropolitan Water District staff, leadership, current residents and employees, and union representatives, we developed a greater level of understanding about the lifestyles of employees, as well as cultural aspects of working and living in the High Desert of Southern California. Community engagement and management feedback informed the following observations:

1. Due to its irregular layout and poor site conditions, the southern village of Gene offers the least sense of community and has the lowest percentage of permanent residents. This may also be due to its proximity to larger towns, such as Parker and Lake Havasu City.
2. Housing must be provided at the intake plant in order to meet the 15-minute response requirement.
3. In general, villages should be distanced from the plant and service facility in order to create a sense of separation and "going home" after a work shift.
4. The main access road should be separate from the villages so that service traffic does not disrupt the community.
5. New residential neighborhood typologies should be considered. These typologies may organize residences around common community amenities and open spaces, separates heavy equipment and visitor traffic from the residences, and provides separate resident and visitor amenities.
6. Multi-use indoor sports field is an option to create a multi-purpose, climate controlled amenity.
7. Condominiums with front doors, or even personal RV use would be considered, but needs to be coupled with salary, shift adjustment and amenity packages.
8. Planting trees with proper irrigation systems provide shade and overall beautification of village.
9. Optional landscape contracts for front yard and private spaces need to be provided. This might help to address the vacant homes that

- need to be maintained while residents are not living there.
- 10. Iron Mountain and Eagle Mountain villages have a stronger sense of community given their remoteness.
- 11. Many residents in the Iron Mountain, Eagle Mountain, and Julian Hinds villages acknowledge their choice to live in remote location for pay and benefits, but there is a strong desire for basic improvements expected for human habitation in a desert (working ac, proper gym, shade, landscape, work/life balance and separation).

The Metropolitan Water District villages along the Colorado River Aqueduct were established at a time when there were less options for living in the High Desert. The villages were more remote and access and personal transportation was less sophisticated. In the last 75 years, surrounding cities have developed, more amenities have become available in nearby towns, paved highways were built, and personal vehicles have become the norm. By analyzing community needs and issues,

our observations listed above help to establish guiding principles but also raises significant questions about the role of MWD villages moving forward:

- Are we creating villages intended to support permanent residents or are we creating 'Shift' accommodations?
- Is compensation part of the equation when considering housing typologies? Should we consider moving away from 'Equal housing' and towards appropriate tied to lifestyle and compensation package?
- Should we consider creating a consolidated western village with elevated amenities and employees are then expected to commute to pump plants? (Pump plants would have limited on-call accommodations)?
- Should we consider transitioning away from Gene as a permanent village given proximity to Lake Havasu and Parker?
- Would MWD consider partnering with a developer to build a future village?

COMMUNITY OUTREACH

- COMMUNITY INTERVIEW IN AUGUST, 2023 29
- ON-LINE SURVEY IN FEBRUARY, 2024 33

ENGAGEMENT AT A GLANCE



15+ HOURS OF COMMUNITY INTERVIEWS

130+ UNIQUE COMMENTS

10+ WRITTEN COMMENTS



4 COMMUNITY MEETINGS

40+

EMPLOYEES AND
RESIDENTS ENGAGED
(5 PUMPING PLANTS)



5 SITE WALKS

FACTS	COMMON THEMES	SPECIFIC THEMES	INTAKE	GENE	IRON MOUNTAIN	EAGLE	HINDS
EXISTING CONDITIONS	1. Number of units 2. Age of units	3. Density 4. Building type 5. Lot size 6. Parking	1. Number of units 2. Age of units	3. Density 4. Building type 5. Lot size 6. Parking	7. Density 8. Building type 9. Lot size 10. Parking	11. Density 12. Building type 13. Lot size 14. Parking	15. Density 16. Building type 17. Lot size 18. Parking
MANAGEMENT /PLANT OPERATIONS	1. Type of management 2. Hours of operation	3. Maintenance 4. Security 5. Insurance 6. Utilities	7. Type of management 8. Hours of operation	9. Maintenance 10. Security 11. Insurance 12. Utilities	13. Type of management 14. Hours of operation	15. Maintenance 16. Security 17. Insurance 18. Utilities	19. Type of management 20. Hours of operation
VILLAGE WIDE		21. Community events 22. Local businesses 23. Public art 24. Green spaces		25. Community events 26. Local businesses 27. Public art 28. Green spaces		29. Community events 30. Local businesses 31. Public art 32. Green spaces	
LIFE STYLE /CULTURE		33. Walkability 34. Safety 35. Amenities 36. Social spaces		37. Walkability 38. Safety 39. Amenities 40. Social spaces		41. Walkability 42. Safety 43. Amenities 44. Social spaces	
HOUSING	45. Single family detached 46. Townhomes	47. Duplexes 48. Triplexes 49. Fourplexes 50. Condos 51. Co-ops 52. Accessory dwelling units 53. Multi-family 54. Student housing 55. Affordable housing 56. Elder care 57. Senior housing 58. Assisted living 59. Retirement communities 60. Long-term care	61. Single family detached 62. Townhomes	63. Duplexes 64. Triplexes 65. Fourplexes 66. Condos 67. Co-ops 68. Accessory dwelling units 69. Multi-family 70. Student housing 71. Affordable housing 72. Elder care 73. Senior housing 74. Assisted living 75. Retirement communities 76. Long-term care	77. Single family detached 78. Townhomes	79. Duplexes 80. Triplexes 81. Fourplexes 82. Condos 83. Co-ops 84. Accessory dwelling units 85. Multi-family 86. Student housing 87. Affordable housing 88. Elder care 89. Senior housing 90. Assisted living 91. Retirement communities 92. Long-term care	93. Single family detached 94. Townhomes
AMENITIES	95. Parks 96. Trails 97. Public art 98. Community centers 99. Libraries 100. Senior centers 101. Daycare 102. Childcare 103. Health centers 104. Fitness centers 105. Community gardens 106. Farmers markets 107. Public markets 108. Public transit 109. Biking paths 110. Dog parks 111. Play areas 112. Sports fields 113. Community pools 114. Community centers 115. Libraries 116. Senior centers 117. Daycare 118. Childcare 119. Health centers 120. Fitness centers	121. Parks 122. Trails 123. Public art 124. Community centers 125. Libraries 126. Senior centers 127. Daycare 128. Childcare 129. Health centers 130. Fitness centers 131. Community gardens 132. Farmers markets 133. Public markets 134. Public transit 135. Biking paths 136. Dog parks 137. Play areas 138. Sports fields 139. Community pools 140. Community centers 141. Libraries 142. Senior centers 143. Daycare 144. Childcare 145. Health centers 146. Fitness centers	147. Parks 148. Trails 149. Public art 150. Community centers 151. Libraries 152. Senior centers 153. Daycare 154. Childcare 155. Health centers 156. Fitness centers 157. Community gardens 158. Farmers markets 159. Public markets 160. Public transit 161. Biking paths 162. Dog parks 163. Play areas 164. Sports fields 165. Community pools 166. Community centers 167. Libraries 168. Senior centers 169. Daycare 170. Childcare 171. Health centers 172. Fitness centers	173. Parks 174. Trails 175. Public art 176. Community centers 177. Libraries 178. Senior centers 179. Daycare 180. Childcare 181. Health centers 182. Fitness centers 183. Community gardens 184. Farmers markets 185. Public markets 186. Public transit 187. Biking paths 188. Dog parks 189. Play areas 190. Sports fields 191. Community pools 192. Community centers 193. Libraries 194. Senior centers 195. Daycare 196. Childcare 197. Health centers 198. Fitness centers	199. Parks 200. Trails 201. Public art 202. Community centers 203. Libraries 204. Senior centers 205. Daycare 206. Childcare 207. Health centers 208. Fitness centers 209. Community gardens 210. Farmers markets 211. Public markets 212. Public transit 213. Biking paths 214. Dog parks 215. Play areas 216. Sports fields 217. Community pools 218. Community centers 219. Libraries 220. Senior centers 221. Daycare 222. Childcare 223. Health centers 224. Fitness centers	225. Parks 226. Trails 227. Public art 228. Community centers 229. Libraries 230. Senior centers 231. Daycare 232. Childcare 233. Health centers 234. Fitness centers 235. Community gardens 236. Farmers markets 237. Public markets 238. Public transit 239. Biking paths 240. Dog parks 241. Play areas 242. Sports fields 243. Community pools 244. Community centers 245. Libraries 246. Senior centers 247. Daycare 248. Childcare 249. Health centers 250. Fitness centers	251. Parks 252. Trails 253. Public art 254. Community centers 255. Libraries 256. Senior centers 257. Daycare 258. Childcare 259. Health centers 260. Fitness centers 261. Community gardens 262. Farmers markets 263. Public markets 264. Public transit 265. Biking paths 266. Dog parks 267. Play areas 268. Sports fields 269. Community pools 270. Community centers 271. Libraries 272. Senior centers 273. Daycare 274. Childcare 275. Health centers 276. Fitness centers
PUBLIC SAFETY		277. Crime rates 278. Police presence 279. Fire department 280. Emergency services 281. Security cameras 282. Neighborhood watch 283. Public safety programs 284. Safety training 285. Emergency drills 286. Disaster preparedness 287. Evacuation routes 288. Hazardous materials 289. Environmental safety 290. Public health 291. Infectious diseases 292. Chronic diseases 293. Mental health 294. Substance use 295. Addictive substances 296. Tobacco use 297. Alcohol use 298. Prescription drugs 299. Over-the-counter drugs 300. Herbal supplements	301. Crime rates 302. Police presence 303. Fire department 304. Emergency services 305. Security cameras 306. Neighborhood watch 307. Public safety programs 308. Safety training 309. Emergency drills 310. Disaster preparedness 311. Evacuation routes 312. Hazardous materials 313. Environmental safety 314. Public health 315. Infectious diseases 316. Chronic diseases 317. Mental health 318. Substance use 319. Addictive substances 320. Tobacco use 321. Alcohol use 322. Prescription drugs 323. Over-the-counter drugs 324. Herbal supplements	325. Crime rates 326. Police presence 327. Fire department 328. Emergency services 329. Security cameras 330. Neighborhood watch 331. Public safety programs 332. Safety training 333. Emergency drills 334. Disaster preparedness 335. Evacuation routes 336. Hazardous materials 337. Environmental safety 338. Public health 339. Infectious diseases 340. Chronic diseases 341. Mental health 342. Substance use 343. Addictive substances 344. Tobacco use 345. Alcohol use 346. Prescription drugs 347. Over-the-counter drugs 348. Herbal supplements	349. Crime rates 350. Police presence 351. Fire department 352. Emergency services 353. Security cameras 354. Neighborhood watch 355. Public safety programs 356. Safety training 357. Emergency drills 358. Disaster preparedness 359. Evacuation routes 360. Hazardous materials 361. Environmental safety 362. Public health 363. Infectious diseases 364. Chronic diseases 365. Mental health 366. Substance use 367. Addictive substances 368. Tobacco use 369. Alcohol use 370. Prescription drugs 371. Over-the-counter drugs 372. Herbal supplements	373. Crime rates 374. Police presence 375. Fire department 376. Emergency services 377. Security cameras 378. Neighborhood watch 379. Public safety programs 380. Safety training 381. Emergency drills 382. Disaster preparedness 383. Evacuation routes 384. Hazardous materials 385. Environmental safety 386. Public health 387. Infectious diseases 388. Chronic diseases 389. Mental health 390. Substance use 391. Addictive substances 392. Tobacco use 393. Alcohol use 394. Prescription drugs 395. Over-the-counter drugs 396. Herbal supplements	397. Crime rates 398. Police presence 399. Fire department 400. Emergency services 401. Security cameras 402. Neighborhood watch 403. Public safety programs 404. Safety training 405. Emergency drills 406. Disaster preparedness 407. Evacuation routes 408. Hazardous materials 409. Environmental safety 410. Public health 411. Infectious diseases 412. Chronic diseases 413. Mental health 414. Substance use 415. Addictive substances 416. Tobacco use 417. Alcohol use 418. Prescription drugs 419. Over-the-counter drugs 420. Herbal supplements
SCHOOLING		421. School quality 422. School choice 423. Early childhood education 424. After-school programs 425. Career and technical education 426. Adult education 427. Lifelong learning 428. Public libraries 429. Community centers 430. Senior centers 431. Daycare 432. Childcare 433. Health centers 434. Fitness centers 435. Community gardens 436. Farmers markets 437. Public markets 438. Public transit 439. Biking paths 440. Dog parks 441. Play areas 442. Sports fields 443. Community pools 444. Community centers 445. Libraries 446. Senior centers 447. Daycare 448. Childcare 449. Health centers 450. Fitness centers	451. School quality 452. School choice 453. Early childhood education 454. After-school programs 455. Career and technical education 456. Adult education 457. Lifelong learning 458. Public libraries 459. Community centers 460. Senior centers 461. Daycare 462. Childcare 463. Health centers 464. Fitness centers 465. Community gardens 466. Farmers markets 467. Public markets 468. Public transit 469. Biking paths 470. Dog parks 471. Play areas 472. Sports fields 473. Community pools 474. Community centers 475. Libraries 476. Senior centers 477. Daycare 478. Childcare 479. Health centers 480. Fitness centers	481. School quality 482. School choice 483. Early childhood education 484. After-school programs 485. Career and technical education 486. Adult education 487. Lifelong learning 488. Public libraries 489. Community centers 490. Senior centers 491. Daycare 492. Childcare 493. Health centers 494. Fitness centers 495. Community gardens 496. Farmers markets 497. Public markets 498. Public transit 499. Biking paths 500. Dog parks 501. Play areas 502. Sports fields 503. Community pools 504. Community centers 505. Libraries 506. Senior centers 507. Daycare 508. Childcare 509. Health centers 510. Fitness centers	511. School quality 512. School choice 513. Early childhood education 514. After-school programs 515. Career and technical education 516. Adult education 517. Lifelong learning 518. Public libraries 519. Community centers 520. Senior centers 521. Daycare 522. Childcare 523. Health centers 524. Fitness centers 525. Community gardens 526. Farmers markets 527. Public markets 528. Public transit 529. Biking paths 530. Dog parks 531. Play areas 532. Sports fields 533. Community pools 534. Community centers 535. Libraries 536. Senior centers 537. Daycare 538. Childcare 539. Health centers 540. Fitness centers	541. School quality 542. School choice 543. Early childhood education 544. After-school programs 545. Career and technical education 546. Adult education 547. Lifelong learning 548. Public libraries 549. Community centers 550. Senior centers 551. Daycare 552. Childcare 553. Health centers 554. Fitness centers 555. Community gardens 556. Farmers markets 557. Public markets 558. Public transit 559. Biking paths 560. Dog parks 561. Play areas 562. Sports fields 563. Community pools 564. Community centers 565. Libraries 566. Senior centers 567. Daycare 568. Childcare 569. Health centers 570. Fitness centers	571. School quality 572. School choice 573. Early childhood education 574. After-school programs 575. Career and technical education 576. Adult education 577. Lifelong learning 578. Public libraries 579. Community centers 580. Senior centers 581. Daycare 582. Childcare 583. Health centers 584. Fitness centers 585. Community gardens 586. Farmers markets 587. Public markets 588. Public transit 589. Biking paths 590. Dog parks 591. Play areas 592. Sports fields 593. Community pools 594. Community centers 595. Libraries 596. Senior centers 597. Daycare 598. Childcare 599. Health centers 600. Fitness centers

KEY

- FACTS
- THEMES THROUGHOUT VILLAGE
- THEMES SPECIFIC TO VILLAGE

COMMON THEMES AMONG ALL VILLAGES

LIFESTYLE/CULTURE

- + LIVE/WORK IN THE VILLAGE
- + GREAT OPPORTUNITY FOR OUTDOOR ACTIVITIES
- + QUIET SMALL TOWN FEELING
- + HAVING THEIR OWN FRONT DOOR TO GO HOME TO AT THE END OF THE DAY IS IMPORTANT
- + COMARADERIE AMONGST PUMP PLANT EMPLOYEES AND SENSE OF PRIDE AND OWNERSHIP OVER PUMP PLANT
- + THE SENSE OF SECURITY LIVING IN A 'GATED' COMMUNITY IS HIGHLY VALUED

HOUSING

- + 3 BD/2 BA SINGLE FAMILY DETACHED HOME IS MOST DESIRED
- + REAR YARD WITH PRIVACY FENCING
- + WIDE DRIVEWAY WITH SHADE STRUCTURE FOR RV PARKING AND LARGE TRUCKS
- + COVERED PATIO SPACE IN OUTDOOR LIVING AREA
- + PRIVACY FENCING
- + LARGER GARAGES AND GREATER STORAGE SPACE

AMENITIES

- + UPGRADE POOL AND LARGE SHADE STRUCTURE
- + MULTI-PURPOSE RECREATIONAL FACILITY (SPORTS FIELD, BASKETBALL COURT, GYM, GAME ROOM, MEETING ROOM, ETC.)
- + CENTRAL GATHERING PLACE
- + SHADE TREES WITH OWN IRRIGATION SYSTEM
- + BETTER WI-FI/INTERNET SERVICE
- + RESIDENTS WOULD LIKE SEPARATION FROM OUTSIDERS IN ORDER TO HAVE GREATER OWNERSHIP OVER AMENITIES
- + PRIORITIZE INDOOR AMENITIES DUE TO EXTREME CONDITIONS

PUBLIC SAFETY

- + LIMITED EMERGENCY RESPONDER AND EMS TRAINING
- + LIMITED OR NO MEDICAL SERVICES NEARBY

EDUCATION

- + LIMITED ACCESS TO PRIMARY EDUCATION AND CHILDREN'S PROGRAMING MAKES IT DIFFICULT FOR FAMILIES TO LIVE REMOTE.
- + BUSSING SERVICES HAVE BEEN LIMITED.

UNIQUE THEMES

INTAKE

- + NEED HOUSING FOR REQUIRED ON-CALL STAFF TO RESPOND WITHIN 15 MINUTES
- + OPPORTUNITY FOR A RECREATION DESTINATION, SWIMMING HOLE, HAVASU LAKE, ETC.

GENE

- + AMENITIES ARE SEPARATED FROM THE MAIN VILLAGE
- + GYM FACILITY NEEDS TO BE MAINTAINED AND UPGRADED
- + WILD ANIMALS AND INSECTS ARE AN ISSUE
- + THE SWIMMING HOLE IS A BELOVED AMENITY. USING IT AS A CONSTRUCTION STAGING GROUND DIMINISHES IT'S SENSE OF PLACE AND MAKES EMPLOYEES FEEL LIKE THEY ARE STILL 'AT WORK'
- + MANY FOLKS CONSIDER THIS VILLAGE SHIFT HOUSING/VACATION HOUSING
- + EXISTING SOUTHERN VILLAGE HOUSING LAYOUT FEELS DISJOINTED

IRON MOUNTAIN

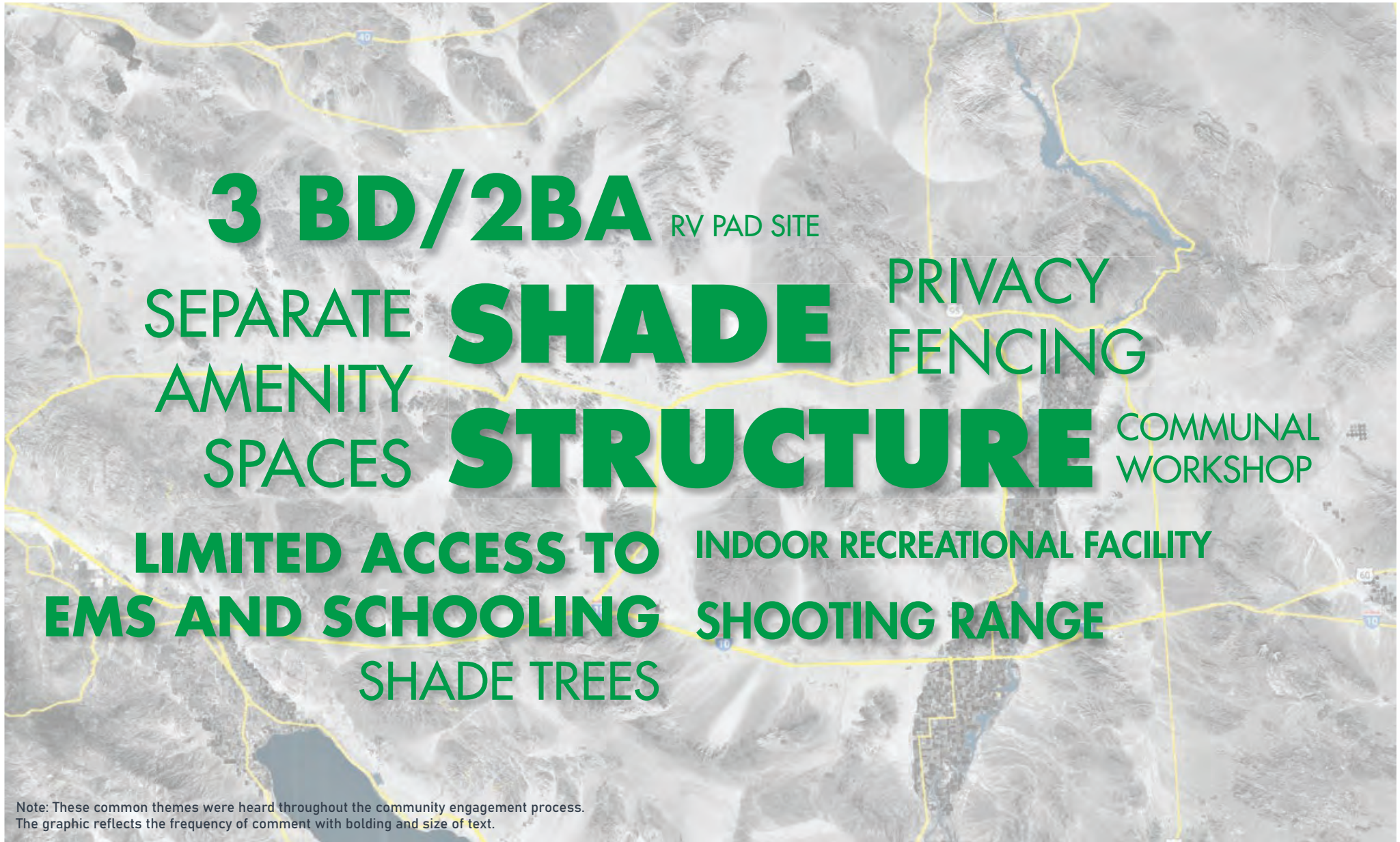
- + THE MOST REMOTE VILLAGE
- + LOGISTICS OF TRANSPORTING FOOD IS DIFFICULT, REQUIRES LARGE COOLERS AND ADDITIONAL TIME ON WAY TO WORK
- + CREATE ABILITY FOR EMPLOYEES TO PURCHASE FUEL ON-SITE
- + LONG COMMUTING TIMES FOR WORK AND SCHOOL
- + STAFFING SHORTAGE
- + THE GUN RANGE WAS THE CENTER OF THE SOCIAL COMMUNITY (IT'S THEIR BOWLING ALLEY)
- + POTENTIAL TO CREATE AN AMENITY LIKE THE SWIMMING HOLE AT GENE WITH WATER DUMPED INTO THE DESERT WHEN THEY FLUSH THE SAND TRAPS EACH WEEK.
- + EXTEND KITCHEN SERVICES DURING THE WEEKENDS

EAGLE MOUNTAIN

- + THERE ARE 2 SECURITY GATES, NORTH FROM IRON MOUNTAIN AND SOUTH FROM HINDS
- + ON-GOING ISSUES WITH WATER PRESSURE AND OTHER MAINTENANCE ISSUES
- + RESUME KITCHEN SERVICE
- + PROTECT THE CAMP BOUNDARY WITH LANDSCAPING AND TREES
- + SCHOOLING IS AVAILABLE WITHIN 10 MINUTES WITH A TRANSPORTATION SERVICE FOR K-8 STUDENTS

JULIAN HINDS

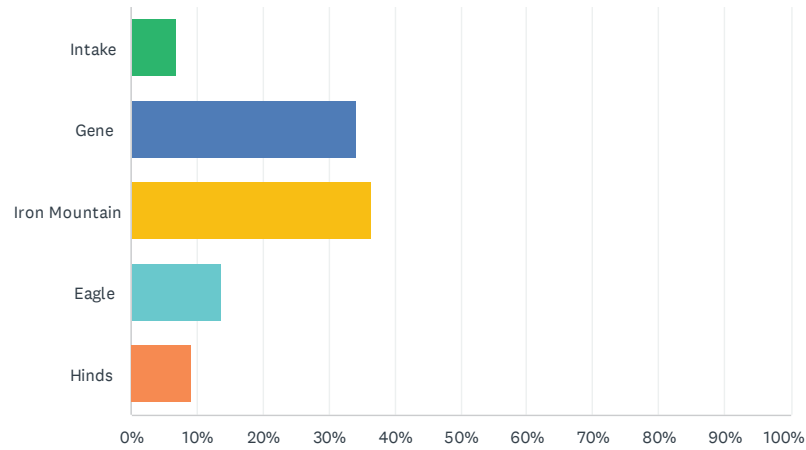
- + STRONG SENSE OF COMMUNITY
- + EXTREMELY WINDY IN WINTER SEASON
- + NEED FOR AN ACCOMMODATION FACILITY FOR GUEST AND VISITORS



Note: These common themes were heard throughout the community engagement process. The graphic reflects the frequency of comment with bolding and size of text.

Q1 Which village do you currently work/reside?

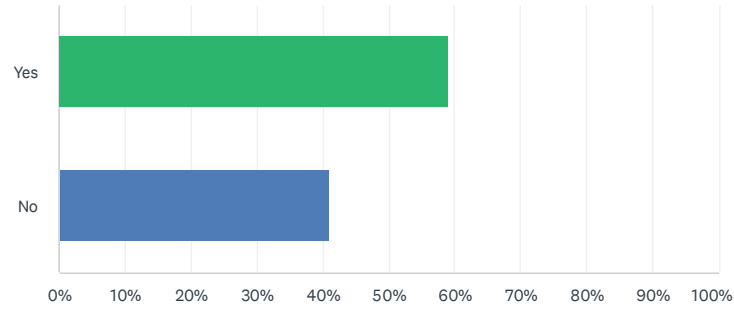
Answered: 44 Skipped: 3



ANSWER CHOICES	RESPONSES	
Intake	6.82%	3
Gene	34.09%	15
Iron Mountain	36.36%	16
Eagle	13.64%	6
Hinds	9.09%	4
TOTAL		44

Q2 Do you consider your current MWD provided housing as your primary residence? (You live on-site full-time year round)

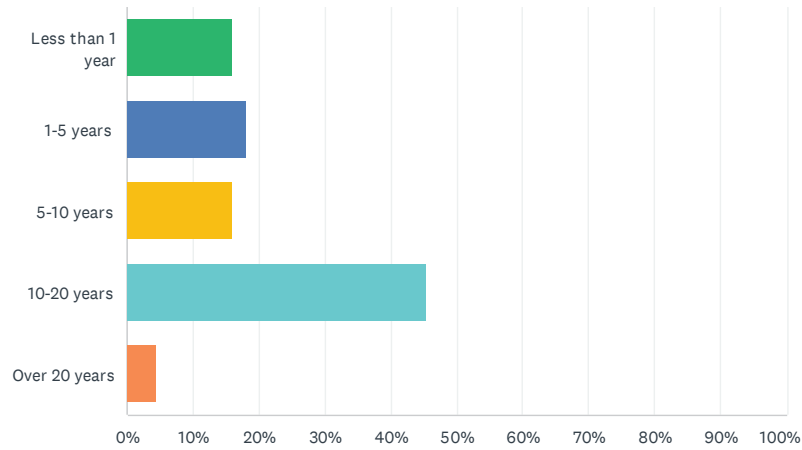
Answered: 44 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	59.09%	26
No	40.91%	18
Total Respondents: 44		

Q3 How long have you worked for MWD at a desert village

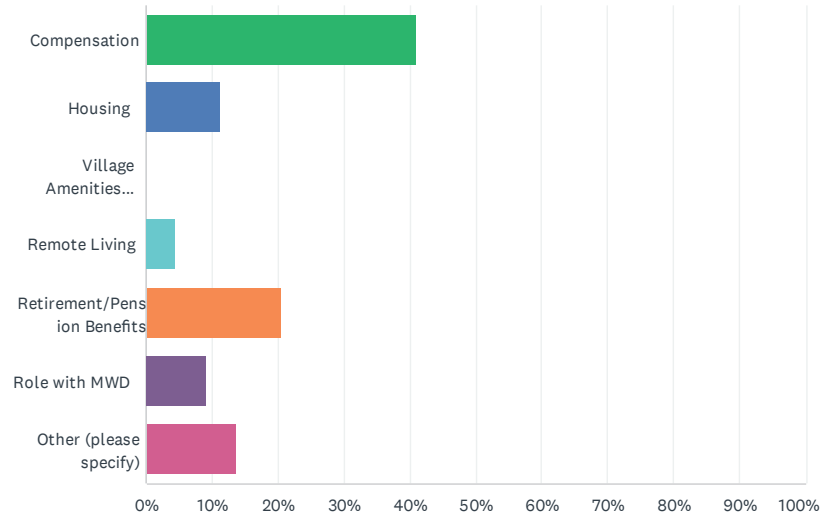
Answered: 44 Skipped: 3



ANSWER CHOICES	RESPONSES
Less than 1 year	15.91% 7
1-5 years	18.18% 8
5-10 years	15.91% 7
10-20 years	45.45% 20
Over 20 years	4.55% 2
TOTAL	44

Q4 When you began working for MWD, what benefit was the biggest factor in you accepting the position?

Answered: 44 Skipped: 3



ANSWER CHOICES	RESPONSES
Compensation	40.91% 18
Housing	11.36% 5
Village Amenities (Pool, fitness center, etc)	0.00% 0
Remote Living	4.55% 2
Retirement/Pension Benefits	20.45% 9
Role with MWD	9.09% 4
Other (please specify)	13.64% 6
TOTAL	44

#	OTHER (PLEASE SPECIFY)	DATE
1	Everything but remote living	1/24/2024 2:17 PM
2	compensation was good but housing and being able to bring my family was the deciding factor, otherwise I would not have chosen this location	1/24/2024 8:58 AM
3	Compensation was the biggest factor, but housing, amenities and retirement were biggies.	1/24/2024 7:48 AM
4	Apprenticeship program, housing was a bonus and unknow at the time I was hired.	1/24/2024 6:50 AM
5	Honestly the only thing i knew where the retirement, pension, and medical benefits. Honestly i didnt even know there was a career opportunity for me here since i have a culinary degree with	1/23/2024 1:22 PM

15+ years restaurant and casino experience.

9-2

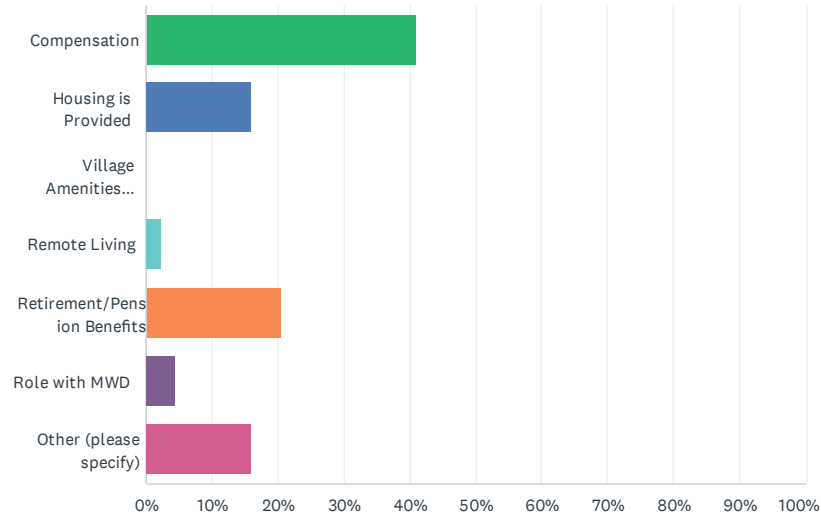
6

Compensation and schedule

1/18/2024 5:21 AM

Q5 What do you think is the most important factor in attracting future employees to MWD?

Answered: 44 Skipped: 3



ANSWER CHOICES	RESPONSES	
Compensation	40.91%	18
Housing is Provided	15.91%	7
Village Amenities (Pool, fitness center, etc)	0.00%	0
Remote Living	2.27%	1
Retirement/Pension Benefits	20.45%	9
Role with MWD	4.55%	2
Other (please specify)	15.91%	7
TOTAL		44

#	OTHER (PLEASE SPECIFY)	DATE
1	Everything but remote living/it is harsh in the desert etc	1/24/2024 2:17 PM
2	Compensation and provided housing	1/24/2024 8:58 AM
3	all the above	1/24/2024 7:48 AM
4	should be able to answer more than 1, compensation/retirement benefits is why I am here	1/24/2024 7:00 AM
5	the biggest expense a family has is there home if an employee with a family or is young could try to use the saving from housing to invest and help is family move up the class ladder.	1/23/2024 1:22 PM

6	Combination of housing, compensation and amenities	1/23/2024 10:14 AM
7	Compensation and housing	1/18/2024 5:21 AM

Questions 6-12 refer to the strategy of having villages at Iron and Eagle only
 Q6 The proposed housing strategy will attract and retain employees.

Answered: 43 Skipped: 4

2.4★
 average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	46.51% 20	11.63% 5	18.60% 8	2.33% 1	20.93% 9	43	2.40

Q7 The proposed layout will support a strong sense of community amongst employees.

Answered: 43 Skipped: 4

2.7★
average rating



	LEAST SENSE OF COMMUNITY	(NO LABEL)	(NO LABEL)	(NO LABEL)	STRONGEST SENSE OF COMMUNITY	TOTAL	WEIGHTED AVERAGE
☆	34.88%	18.60%	16.28%	4.65%	25.58%	43	2.67
	15	8	7	2	11		

Q8 The proposed strategy will support the long-term operations of the plants

Answered: 43 Skipped: 4

2.6★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	39.53% 17	9.30% 4	23.26% 10	4.65% 2	23.26% 10	43	2.63

The following refer to the strategy of having ^{9.2} villages at Iron and Eagle only
Q9 How acceptable is commuting to Hinds and Gene when not on a 15 minute stand-by?

Answered: 43 Skipped: 4

2.6★
 average rating



	NOT ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	39.53% 17	6.98% 3	23.26% 10	11.63% 5	18.60% 8	43	2.63

Q10 The proposed villages will support a safe and healthy live/work environment

Answered: 43 Skipped: 4

2.7★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	39.53% 17	6.98% 3	20.93% 9	6.98% 3	25.58% 11	43	2.72

Q11 How acceptable is the proposed housing strategy to you as a current employee?

Answered: 43 Skipped: 4

2.4★
average rating



	LEAST ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	MOST ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	46.51% 20	16.28% 7	11.63% 5	2.33% 1	23.26% 10	43	2.40

Q12 Please share any other comments about this option you have below:

Answered: 40 Skipped: 7

#	RESPONSES	DATE
1	z	1/25/2024 11:15 AM
2	.	1/24/2024 2:21 PM
3	I reside at Iron. This would not change my housing situation.	1/24/2024 12:32 PM
4	NA	1/24/2024 9:26 AM
5	.	1/24/2024 9:03 AM
6	I enjoy my house at Gene. I have very few issues with it. My primary residence is in Kingman AZ. I would not be in favor short term housing at Gene for standby only. If there was short term housing for all of my days on shift that would be more appealing.	1/24/2024 7:56 AM
7	I personally would not want to have to leave Eagle to travel to Hinds every day. Furthermore, I would absolutely not want to have to go to Hinds to an apartment or whatever when on standby and then go back to my regular house when standby is over. That's too much back and forth for me.	1/24/2024 7:56 AM
8	combining Hinds and eagle would work they are close enough together for it to work.	1/24/2024 7:44 AM
9	The requirement to force every one to commute is less safe, especially on rice road. I get to choose how I utilize my district house, in this scenario I have no choice.	1/24/2024 7:03 AM
10	good job	1/24/2024 6:54 AM
11	This option will make it even harder to staff the desert facilities	1/24/2024 6:38 AM
12	0	1/24/2024 6:32 AM
13	none	1/23/2024 3:07 PM
14	MWD has tried this approach before and failed.	1/23/2024 2:38 PM
15	I would not want to work at Eagle or Iron just to get a house.	1/23/2024 2:36 PM
16	na	1/23/2024 2:33 PM
17	Desert employees were much happier with the villages years ago, with a true trades team and maintenance staff.	1/23/2024 2:29 PM
18	this is the best suggestion since the 2 remote villages are the most difficult to recruit for and it fixes those issues since it is very remote.	1/23/2024 1:26 PM
19	THE COMMUTE FROM INDIO, CA TO HINDS IS THE SAME AS LAKE HAVASU CITY, AZ TO GENE(NOT INCLUDING THE RESTRICTED HOURS OF PARKER DAM)...WHY ARE THEY TREATED DIFFERENTLY?	1/23/2024 1:07 PM
20	I BELIEVE THAT THE VILLAGES THAT ARE MOST SECULED FROM CIVILIZATION SHOULD GET THE MOST FUNDING	1/23/2024 12:47 PM
21	No comment	1/23/2024 12:26 PM
22	Just bring current housing back to acceptable standards and compensate employees appropriately. Everyone has different needs and desires for village enhancements, we will never please everyone.	1/23/2024 12:20 PM
23	This is a bad move. There needs to be a village at each location. The housing does not need to be extravagant nor does MWD need to reinvent the wheel in doing so. Simple modular homes like the several that have been already installed at all locations would more than suffice. This a very reasonable and cost-effective option. Look at what has already been done	1/23/2024 12:18 PM

Village and Housing Options

9-2

and expand on it. Employees have a sense of pride of ownership of these Desert Pump Plants, and you will destroy that mentality if we can't live where we work in these remote jobs. The village is an extension of the pump plant, and the same pride of ownership applies.

24	Recruitment is the single biggest issue facing the Desert today. Private, single family homes are the largest recruitment magnets we currently possess. I understand they are expensive, but speaking for myself only, I would not have been able, or willing to relocate my family to the Desert without the availability of a private residence. Supply shortages in Lake Havasu City have dramatically increased the cost of housing over the last few years. It is more expensive with fewer amenities than many California cities.	1/23/2024 12:17 PM
25	Bad Idea to combine these villages	1/23/2024 12:09 PM
26	Commuting to and from Gene from iron would be time consuming. It's approximately 1.5 hours each way. Might be a good idea to provide temp housing (dorms, condos, etc.) for employees commuting to and from Gene from iron.	1/23/2024 10:17 AM
27	sdfds	1/23/2024 7:50 AM
28	Hinds instead of eagle due to closer proximity to town, decreased travel to groceries, shopping, medical facilities, etc.	1/18/2024 11:46 AM
29	No	1/18/2024 8:24 AM
30	Na	1/18/2024 7:46 AM
31	Na	1/18/2024 7:42 AM
32	Na	1/18/2024 7:39 AM
33	I believe the desert should have priority to fund allocation	1/18/2024 7:19 AM
34	Employees do not want to live in a hotel room, away from their families.	1/18/2024 6:43 AM
35	Just remodel the current houses and get rid of real property group	1/18/2024 5:25 AM
36	The money being spent on the this continued "survey" coupled with the continued "dragging of the feet" to "redeveloped" is only wasting money. NOTHING EVER gets cheaper, i.e. building material cost, labor etc.	1/18/2024 5:21 AM
37	Combining hinds and eagle isn't a terrible idea, but keep iron n gene village. Standby quarters at gene wouldn't work for me as I live to far away from gene. Not feasible to commute. Although I don't consider gene house as my primary resident. I am in the village while I am on shift. Even when I am on standby. Also I live at higher altitude, so when it's cold I will stay in the village when not on shift in the winter	1/17/2024 2:52 PM
38	People are not upset with their current housing, they are upset by the incompetence of current property management. If we had competent property management we would not be in the current situation we are in. Unfortunately until that changes everything will remain the way it is out here. Metropolitan is great at supplying water to 19 million people but cannot figure out how to manage housing for a hundred or so, it really is shameful. I realize that you are being paid to come up with a solution and have no concern for incompetent property management internally, so let's just keep trying the same thing and expecting different results.	1/12/2024 8:28 AM
39	test	1/9/2024 5:05 PM
40	ffgd	1/8/2024 12:32 PM

Questions 13-19 relate to the option of having a ⁹⁻²single village at Gene with standby housing at others

Q13 The proposed housing strategy will attract and retain employees.

Answered: 39 Skipped: 8

2.0★

average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	61.54% 24	2.56% 1	17.95% 7	7.69% 3	10.26% 4	39	2.03

Q14 The proposed layout will support a strong sense of community amongst employees.

Answered: 39 Skipped: 8

2.0★
average rating



	LEAST SENSE OF COMMUNITY	(NO LABEL)	(NO LABEL)	(NO LABEL)	STRONGEST SENSE OF COMMUNITY	TOTAL	WEIGHTED AVERAGE
☆	61.54% 24	5.13% 2	15.38% 6	5.13% 2	12.82% 5	39	2.03

Q15 The proposed strategy will support the long-term operations of the plants

Answered: 39 Skipped: 8

2.0★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	56.41% 22	7.69% 3	23.08% 9	2.56% 1	10.26% 4	39	2.03

Q16 How acceptable is commuting to Hines, Eagle, and Iron Mountain?

Answered: 39 Skipped: 8

1.9★
average rating



	NOT ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	64.10% 25	12.82% 5	10.26% 4	0.00% 0	12.82% 5	39	1.85

Q17 The proposed villages will support a safe and healthy live/work environment

Answered: 39 Skipped: 8

2.1 ★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	58.97% 23	0.00% 0	23.08% 9	5.13% 2	12.82% 5	39	2.13

Q18 How acceptable is the proposed housing strategy to you as a current employee?

Answered: 39 Skipped: 8

2.0★
average rating



	LEAST ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	MOST ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	64.10% 25	5.13% 2	15.38% 6	2.56% 1	12.82% 5	39	1.95

Q19 Please share any other comments about this option you have below:

Answered: 36 Skipped: 11

#	RESPONSES	DATE
1	z	1/25/2024 11:16 AM
2	.	1/24/2024 2:22 PM
3	Commuting is a large waste of time and money.	1/24/2024 12:35 PM
4	na	1/24/2024 9:27 AM
5	keep it the way it is please	1/24/2024 9:05 AM
6	I would absolutely put in for a transfer out of the desert asap if this were to happen. I live in the Inland Empire and uprooting my family is not an option. My wife has her own career. My son likes his school and friends. They like to visit me when I'm on shift at Eagle...but that's about it. Thanks but no thanks.	1/24/2024 8:01 AM
7	This option will work out far better for me	1/24/2024 7:56 AM
8	In a perfect world, where management held employees accountable for their work performance, it would be great. Moving employees around sounds great for operations but moving from plant to plant will not work with this company. Plus you lose sense of ownership when you work at one plant.	1/24/2024 7:47 AM
9	Non of these solution will solve anything. The few people that live in camp, will live in camp. I see most people going to where ever there home is outside work just like current. This still forces employees to live out of hotel like rooms during the work shift. I've done it at other plants and it is not desirable.	1/24/2024 7:24 AM
10	good job	1/24/2024 6:42 AM
11	This option will also make it even harder to staff the desert facilities	1/24/2024 6:39 AM
12	0	1/24/2024 6:33 AM
13	none	1/23/2024 3:08 PM
14	I hope you can still have a house at Gene if you work at Intake because it doesn't show an arrow between them.	1/23/2024 2:41 PM
15	MWD has tried this approach before and failed.	1/23/2024 2:38 PM
16	no work will get done	1/23/2024 2:34 PM
17	To much commuting.	1/23/2024 2:29 PM
18	EVERYONE WILL WANT A SINGLE FAMILY HOME WHETHER OR NOT THEY HAVE ANOTHER RESIDENCE. THEY ARE LYING IF THEY SAY OTHERWISE. PEOPLE WILL WANT WHAT EVERYONE ELSE GETS INCLUDING MYSELF. USING SOMEONES PERSONAL ADDRESS TO ASSIGN HOUSING IS DISCRIMINATION. GET OUT OF PEOPLES PERSONAL LIVES.	1/23/2024 1:36 PM
19	This plan might pose an issue simply due to the unknow weather conditions. What would happen if the roads get shut due to the rain or an accident. and there is an emergency in any of the plants.	1/23/2024 1:30 PM
20	YOU WOULD HAVE TO PAY THE PEOPLE THAT ARE BEING SENT TO COMMUTE TO THE DESERT A LOT OF MONEY FOR THIS TO WORK	1/23/2024 12:48 PM
21	These plants need ample (i.e. Daily) maintenance and care taking, to continue its storied reliability with all of its aging assets, losing 4 hours a day to drive time seems awfully inefficient for maintenance and unfair to the rate payers as they are paying for us to travel several hours everyday to respond to scheduled or worst unscheduled emergencies. The	1/23/2024 12:38 PM

Village and Housing Options

9-2

current villages offer some flexibility with this as some employees can be called into action with very little down time provided they are in the village. Many of our families reside in California so this idea takes us even farther away from them. And what does "Hotel Style" actually mean? This seems like it could negatively affect budgeting as hotel infers housekeeping, entertainment, laundry, and food service options. All of which bring with them labor needs and additional skillsets and assets; Refrigeration, commissary, inventory controls, menu management etc. Items that we fall short on as it is with our small hospitality sector.

22	This is challenging to answer because it is so dependent on the dynamics of the individual employee and their families. Some families are okay with a parent being away two weeks per month. Others are not (still others are single). Speaking only for myself, my wife and children would find this unacceptable as a long-term option and we would be searching for a job away from the Desert (though hopefully still with MWD). If commute time was 'on the clock' it would make the commutes more palatable but would also be a continual business cost.	1/23/2024 12:28 PM
23	This is a bad move. There needs to be a village at each location. The housing does not need to be extravagant nor does MWD need to reinvent the wheel in doing so. Simple modular homes like the several that have been already installed at all locations would more than suffice. This a very reasonable and cost-effective option. Look at what has already been done and expand on it. Employees have a sense of pride of ownership of these Desert Pump Plants, and you will destroy that mentality if we can't live where we work in these remote jobs. The village is an extension of the pump plant, and the same pride of ownership applies.	1/23/2024 12:18 PM
24	Bad Idea	1/23/2024 12:09 PM
25	Travel time from Gene would be too much in my opinion. Centralized villages make more sense	1/23/2024 10:19 AM
26	dsfds	1/23/2024 7:51 AM
27	Does nothing to help with employee retention down line of Gene pump plant	1/18/2024 11:47 AM
28	Na	1/18/2024 7:47 AM
29	Na	1/18/2024 7:40 AM
30	You would have to heavily compensate employees that work at desert plants for this to work.	1/18/2024 7:20 AM
31	This will create chaos at the plants. Recruitment will be even more difficult.	1/18/2024 6:46 AM
32	Abc	1/18/2024 5:22 AM
33	In a perfect world where all employees do their part. It may work. Just think you lose your sense of ownership to the plant you work at. Don't think it will work.	1/17/2024 2:54 PM
34	Not everyone wants to live at Gene or Havasu, myself included and if the goal is employee retention this seems off the mark.	1/12/2024 8:42 AM
35	test	1/9/2024 5:03 PM
36	sdfadsaf	1/8/2024 12:32 PM

qQ

9-2

Q20 The proposed housing strategy will attract and retain employees.

Answered: 35 Skipped: 12

1.9★

average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	62.86% 22	8.57% 3	11.43% 4	5.71% 2	11.43% 4	35	1.94

Questions 21-26 relate to the option of extended stay only at all plants.

Q21 The proposed layout will support a strong sense of community amongst employees.

Answered: 35 Skipped: 12

1.6★
average rating



	LEAST SENSE OF COMMUNITY	(NO LABEL)	(NO LABEL)	(NO LABEL)	STRONGEST SENSE OF COMMUNITY	TOTAL	WEIGHTED AVERAGE
☆	71.43% 25	8.57% 3	11.43% 4	2.86% 1	5.71% 2	35	1.63

Q22 The proposed strategy will support the long-term operations of the plants

Answered: 35 Skipped: 12

1.9★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	62.86% 22	8.57% 3	11.43% 4	5.71% 2	11.43% 4	35	1.94

Q23 How acceptable is commuting to all camps?

Answered: 35 Skipped: 12

1.8★
average rating



	NOT ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	65.71% 23	8.57% 3	11.43% 4	5.71% 2	8.57% 3	35	1.83

Q24 The proposed villages will support a safe and healthy live/work environment

Answered: 35 Skipped: 12

1.9★
average rating



	STRONGLY DISAGREE	(NO LABEL)	NEUTRAL	(NO LABEL)	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
☆	62.86% 22	5.71% 2	17.14% 6	5.71% 2	8.57% 3	35	1.91

Q25 How acceptable is the proposed housing strategy to you as a current employee?

Answered: 35 Skipped: 12

1.8★

average rating



	LEAST ACCEPTABLE	(NO LABEL)	NEUTRAL	(NO LABEL)	MOST ACCEPTABLE	TOTAL	WEIGHTED AVERAGE
☆	71.43% 25	2.86% 1	8.57% 3	8.57% 3	8.57% 3	35	1.80

Q26 Please share any other comments about this option you have below:

Answered: 32 Skipped: 15

#	RESPONSES	DATE
1	.	1/24/2024 2:23 PM
2	.	1/24/2024 12:37 PM
3	na	1/24/2024 9:30 AM
4	Separating families will make people want to leave more than what we are facing, There is a decent trade off right now. If I was not offered a position with a house were I was able to bring my family, I would not have accepted the position.	1/24/2024 9:13 AM
5	I could get by with a two bedroom home but don't like the condo idea. There's no room for my family when they come out during their vacations.	1/24/2024 8:04 AM
6	Eh do i need to explain. this may work for some people. The ones that don't want to spend time with their families.	1/24/2024 7:49 AM
7	One bedroom units so I cant even bring my kids? I also have to live out of a hotel room. Just fix the existing housing, its not that hard, and maybe don't defer maintenance for 30 years resulting in the problems we are dealing with now.	1/24/2024 7:30 AM
8	good job	1/24/2024 6:42 AM
9	Seriously....	1/24/2024 6:40 AM
10	0	1/24/2024 6:34 AM
11	none	1/23/2024 3:08 PM
12	I need my family with me.	1/23/2024 2:43 PM
13	Not a viable solution. No thought to employee. Will hurt recruitment.	1/23/2024 2:39 PM
14	na	1/23/2024 2:34 PM
15	One must be able to separate work/life with a feeling of ownership stimulating the sense of value and pride in your place.	1/23/2024 2:32 PM
16	IF YOU PAY SOMEONE ENOUGH, THEY WILL TRAVEL 2 HOURS TO AND FROM EVERY DAY. THIS SURVEY IS A JOKE. WHY DON'T YOU ASK WHAT CAN BE DONE IN 75 DAYS??	1/23/2024 1:46 PM
17	This one could work, issue is if an employee is family oriented and need to be near or close to their family.	1/23/2024 1:33 PM
18	This option would make it very challenging for employees who wish to live with their families. Would these units be temporarily assigned? Rotated through staff? Would they require additional maintenance staff to clean and maintain?	1/23/2024 12:51 PM
19	YOU WOULD HAVE TO PAY PEOPLE A LOT OF MONEY FOR THIS TO WORK	1/23/2024 12:49 PM
20	If you want employees who are invested in the success of the plants and the CRA as a whole it behooves the company to understand the current challenges and mitigate them, not compound them. Working and living remote is already a challenge so why increase the isolation?	1/23/2024 12:38 PM
21	This is a bad move. There needs to be a village at each location. The housing does not need to be extravagant nor does MWD need to reinvent the wheel in doing so. Simple modular homes like the several that have been already installed at all locations would more than suffice. This a very reasonable and cost-effective option. Look at what has already been done and expand on it. Employees have a sense of pride of ownership of these Desert Pump	1/23/2024 12:19 PM

Village and Housing Options

9-2

Plants, and you will destroy that mentality if we can't live where we work in these remote jobs. The village is an extension of the pump plant, and the same pride of ownership applies.

22	The as an apartment terrible idea. I lived in apartment building all my life and they are not ideal with very little privacy.	1/23/2024 12:11 PM
23	Won't be popular with current employees but I think this is the best option going forward.	1/23/2024 10:21 AM
24	What demographic is MWD seeking, and will these employees stay here long term ? Highly doubt	1/18/2024 11:49 AM
25	Na	1/18/2024 7:48 AM
26	Na	1/18/2024 7:42 AM
27	I would rather get a new job then do this.	1/18/2024 7:21 AM
28	This will only be an attractive design to people without families. Most people don't want to be away from family for eight days at a time, twice per month or more.	1/18/2024 6:50 AM
29	Abc	1/18/2024 5:22 AM
30	If you didn't have a hard time finding competent employees this would work	1/17/2024 2:56 PM
31	This might be a good fit for people who just want to come and work a shift and leave, however it might not appeal to all. I lived in extended stay hotels on the road working for 8 years and a house is more appealing than a hotel room.	1/12/2024 8:44 AM
32	test	1/9/2024 4:59 PM

PROJECT PARAMETERS

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PROJECT PARAMETERS

PROJECT PARAMETERS HAS BEEN ESTABLISHED BASED UPON OBSERVATIONS OF COMMUNITY NEEDS AFTER THE SITE VISITS AND COMMUNITY INTERVIEWS.

PARAMETERS GUIDE TO DEVELOPMENT OF GUIDING PRINCIPLES AND PROGRAMS THAT COULD CONCEPTUALLY WORK FOR COMMUNITY.



POTENTIAL HOUSING TYPOLOGIES

ACCORDING TO COMMUNITY FEEDBACK



SINGLE FAMILY HOUSING

SINGLE FAMILY DETACHED WITH 2 CAR GARAGE



+/- 1,350 sq. ft.



EXTENDED-STAY TOWNHOME

MULTI-FAMILY HOUSING WITH INDIVIDUAL FRONT DOOR, 1BD W/ KITCHEN SUITE



+/- 750 sq. ft.



GUEST HOTEL

MOTEL ROOM



+/- 350 sq. ft.

ALTERNATIVE EXTENDED-STAY HOUSING TYPES:



CASITA



RV SITES W/HOOKUPS
USE OF PERSONAL RV'S FOR HOUSING



POTENTIAL AMENITY TYPOLOGIES

ACCORDING TO COMMUNITY FEEDBACK



SWIMMING POOL
SHADED AND SCREENED



SHADED MODERN EQUIPMENT PLAYGROUND



ARCHERY RANGE



RESIDENT GAME ROOM
SEPARATE FROM DINING HALL



COMMUNITY MEETING ROOM



MULTI PURPOSE INDOOR RECREATIONAL FACILITY
BASKETBALL / SPORTS FIELDS / TRACK
FITNESS ROOM / ENTERTAINMENT ROOM, ETC.



RESIDENT FITNESS CENTER



GUEST GYM
WEIGHTS AND CARDIO



IMPROVED STREETScape AND BEAUTIFICATION
TREES (PROVIDE SHADE FOR YARDS AND HOMES)
WALKING PATHS
COMMUNITY OPEN SPACES



AUTOMOTIVE STORAGE
CAR PORTS AT HOUSES
COMMON COVERED VEHICLE STORAGE FACILITY
LARGE GARAGES (TO FIT TRUCKS)
TWO CAR GARAGE



COMMERCIAL KITCHEN / DINING FACILITY



SHARED COMMUNITY WORKSHOP
SHARED AUTOMOTIVE REPAIR GARAGE
WOODWORKING



POTENTIAL PROGRAMMATIC TYPOLOGIES

ACCORDING TO COMMUNITY FEEDBACK



ONE VILLAGE CONTRACT FOR COMMON SPACE AND PRIVATE YARD MAINTENANCE

INCLUDE BACKYARD IN MAINTENANCE PROGRAM
MAINTAIN VACANT HOMES OR YARDS WHEN PEOPLE ARE OFF SHIFT



STREETSCAPE AND PUBLIC SPACE BEAUTIFICATION

REALIGNMENT OF STREETS TO SEPARATE NEIGHBORHOOD FROM CONTRACTOR/WORK TRAFFIC
VIEWS TO DESERT LANDSCAPE PREFERRED



VILLAGE STORE WITH PERISHABLE STAPLES FOR PURCHASE (MILK, EGGS, BREAD, ETC.)

CAN BE COMBINED WITH KITCHEN ORDERS AND SIMILAR PRODUCTS







KITCHEN OPEN ON WEEKENDS



STARLINK TECHNOLOGY / BETTER INTERNET SERVICE

HOUSING TYPOLOGIES EXPLORED PRIOR TO PLANNING EFFORT (THROUGH JUNE 2023)

HOUSING TYPE		SINGLE FAMILY DETACHED			SINGLE FAMILY ATTACHED			REMODEL EXISTING HOUSES		TEMPORARY ACCOMMODATION	
		Current Design	Lower Cost Single	Courtyard Design	Manufactured Home	2-story Duplex	Duplex	Triplex/Quadplex	Full Remodel and Additions	Partial Remodel	Lodge/Hotel
EXAMPLE											
PRINCIPLE BUILDING	Living Area	± 1,350 sq.ft.	± 1,350 sq.ft.	± 1,350 sq.ft.	± 1,400 sq.ft.	± 1,350 sq.ft.	± 1,350 sq.ft.	± 1,350 sq.ft.	± 1,000 - 1,400 sq.ft.	± 1,000 - 1,400 sq.ft.	350-450 sq.ft. per room
	Number of Bedroom/Bathroom	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba	3 bd / 2 ba 2 bd / 2 ba	3 bd / 2 ba 2 bd / 2 ba	1 bd / 1 ba
VEHICLE STORAGE	Type	Attached	Attached	Detached 2-Car	Detached 2-Car	Attached	Attached	Attached	Attached / Detached	Attached / Detached	Detached Parking Lot
	Occupiable space	± 420 sq.ft. (19'x22')	± 420 sq.ft. (19'x22')	± 420 sq.ft. (19'x22')	± 50 sq.ft. (20'x25')	± 420 sq.ft. (19'x22')	± 420 sq.ft. (19'x22')	± 420 sq.ft. (19'x22')	± 300 (14'x22') - 440 (20'x22') sq.ft.	± 300 (14'x22') - 440 (20'x22') sq.ft.	-
	Number of vehicles	2	2	2	2	2	2	2	2	2	1 parking stall
COST PER UNIT		\$1,050,000	\$635,000	\$712,000	\$510,000 plus assumed \$35,000 foundation	\$621,000	\$609,000	not priced	\$740,000 to 800,000	\$350,000 to 380,000	\$670,000
COST OPINION DATE		April 2022	Dec 2020	Dec 2020	2018	Dec 2020	Dec 2020	Nov 2020	Dec 2019	Dec 2019	June 2023
COST MULTIPLIER (DGS CONSTRUCTION COST INDEX)		9654/8903	9654/6995	9654/6995	9654/6598	9654/6995	9654/6995	-	9654/6684	9654/6684	9654/9508
CURRENT COST PER UNIT (OCT 2023)		\$1,140,000	\$880,000	\$980,000	\$790,000	\$860,000	\$840,000	-	\$1,070,000 to 1,160,000	\$510,000 to \$550,000	\$680,000
CONSTRUCTION TYPE		Traditional stick frame or modular	Traditional stick frame	Traditional stick frame	Manufactured home	Traditional stick frame	Traditional stick frame	Traditional stick frame	Traditional stick frame or masonry	Traditional stick frame or masonry	Traditional stick frame
NOTES		<ul style="list-style-type: none"> costs are average among villages and account for remote locations assumes prevailing wage requirements and public bid cost is for building only, does not include sitework / landscaping / infrastructure 	<ul style="list-style-type: none"> Includes garage A/C, mudroom with shower and laundry, metal roof, covered patios, HVAC for 120F design temp 		<ul style="list-style-type: none"> Cost per MWD, based on units installed in 2018. Foundation work was performed by MWD personnel. 			<ul style="list-style-type: none"> Eliminated from consideration prior to cost estimation effort, as such a large building fit poorly on available lots in existing villages 	<ul style="list-style-type: none"> Incl. items listed for Partial Remodel, plus: <ul style="list-style-type: none"> Add Covered Patio (200 SF instead of 120 SF) Structural Retrofit Garage Expansion and A/C Carport 	<ul style="list-style-type: none"> Add Covered Patio (120 SF) Add bathroom Remodel interior; upgrade HVAC/ electrical Replace Roofing Add sun control Exterior refinishing 	<ul style="list-style-type: none"> Pricing includes Dining facility, Fitness room, and Community Room, and assumes 60 rooms share the cost of these amenities
PROS		<ul style="list-style-type: none"> Maintains current housing strategy Privacy Comfort 	<ul style="list-style-type: none"> Maintains current housing strategy Privacy 	<ul style="list-style-type: none"> Maintains current housing strategy Privacy 	<ul style="list-style-type: none"> Maintains current housing strategy Privacy Lower initial cost 	<ul style="list-style-type: none"> Some cost savings due to more compact development 	<ul style="list-style-type: none"> Some cost savings due to more compact development 	<ul style="list-style-type: none"> Some cost savings due to more compact development 	<ul style="list-style-type: none"> Maintains current housing strategy Privacy 	<ul style="list-style-type: none"> Maintains current housing strategy Privacy 	<ul style="list-style-type: none"> Minimal cost for housing accommodations
CONS		<ul style="list-style-type: none"> Initial Cost 	<ul style="list-style-type: none"> Maintenance of shingle roof 	<ul style="list-style-type: none"> Maintenance of shingle roof 	<ul style="list-style-type: none"> Very high maintenance cost (reports of early failure of interior and exterior finishes and cabinetry) Less comfortable (inferior insulation, no backyard access, small porch) 	<ul style="list-style-type: none"> Shared wall Maintenance of shingle roof 	<ul style="list-style-type: none"> Shared wall Maintenance of shingle roof 	<ul style="list-style-type: none"> Shared walls with multiple neighbors Does not fit well on available lots, especially when phasing is considered 	<ul style="list-style-type: none"> Poor value - new houses can be constructed for the cost of renovating existing Lack of standardization and equity among existing residences 	<ul style="list-style-type: none"> Lack of standardization and equity among existing residences 	<ul style="list-style-type: none"> Regular cleaning and maintenance Potentially long and difficult staffing transition from employees who rent houses to those who will stay in lodging

AMENITY TYPOLOGIES EXPLORED PRIOR TO PLANNING EFFORT (THROUGH JUNE 2023)										
AMENITY TYPE	CLUBHOUSES		KITCHENS		LODGES		SITE AMENITIES AND SITEWORK			
	Large	Small	Large	Small	Large	Small	Hinds	Eagle	Iron	Gene
EXAMPLE										
AREA	± 2,400 sq.ft.	± 1,900 sq.ft.	± 4,900 sq.ft.	± 4,300 sq.ft.	± 9,800 sq.ft.	± 7,000 sq.ft.	± 370,000 sq.ft.	± 780,000 sq.ft.	± 770,000 sq.ft.	± 960,000 sq.ft.
COST	\$1,830,000	\$1,460,000	\$4,770,000	\$4,230,000	\$6,990,000	\$5,210,000	\$9,840,000	\$13,730,000	\$17,530,000	\$19,630,000
COST OPINION DATE	April 2022									
COST MULTIPLIER (DGS CONSTRUCTION COST INDEX)	9654/8903									
CURRENT COST (OCT 2023)	\$1,980,000	\$1,580,000	\$5,170,000	\$4,590,000	\$7,580,000	\$5,650,000	\$10,670,000	\$14,890,000	\$19,010,000	\$21,290,000
COST PER SF	\$825	\$830	\$1,055	\$1,070	\$775	\$810	\$29	\$19	\$25	\$22
CONSTRUCTION TYPE	Traditional wood frame or modular	Traditional wood frame or modular	PEMB canopy with wood frame infill beneath	PEMB canopy with wood frame infill beneath	PEMB canopy with wood frame infill beneath	PEMB canopy with wood frame infill beneath	Steel framed and CMU site structures			
NOTES	<ul style="list-style-type: none"> Planned to serve the residents of 10-20 houses Common room 1,000 SF Fitness room 700 SF Misc office, storage, and utility rooms Large attached exterior shade canopy 	<ul style="list-style-type: none"> Planned to serve the residents of 30-35 houses Common room 800 SF Fitness room 550 SF Misc office, storage, and utility rooms Large attached exterior shade canopy 	<ul style="list-style-type: none"> Dining room 1,200 SF to accommodate 40 people and meeting room use (30 SF each) Kitchen 1,200 SF to accommodate production of boxed lunches as well as dining hall capacity Kitchen storage 700 SF (refrigerated, frozen, and dry) to accommodate one deliver per week Grab and go area for boxed lunches, ice, and drinks Misc office, storage, and utility rooms 	<ul style="list-style-type: none"> Dining room 1,400 SF to accommodate 50-60 people and meeting room use (30 SF each) Kitchen 800 SF to accommodate production of boxed lunches as well as dining hall capacity Kitchen storage 700 SF (refrigerated, frozen, and dry) to accommodate one deliver per week Grab and go area for boxed lunches, ice, and drinks Misc office, storage, and utility rooms 	<ul style="list-style-type: none"> 25 guest rooms (studio configuration, no kitchenette) Common area Lounge and Kitchenette 1,000 SF Small guest laundry On-site linen laundry 	<ul style="list-style-type: none"> 15 guest rooms (studio configuration, no kitchenette) Common area Lounge and Kitchenette 1,000 SF Small guest laundry On-site linen laundry 	<ul style="list-style-type: none"> Represents a complete overhaul of all exterior areas, including common areas and residence yards Road repaving Walking paths Playground Landscaping (village common areas and minimal landscaping at residence yards) Trash enclosures Parking lot PV shade structures Tennis/basketball sport court Renovation of existing pool, and new shade structure at pool New sitewide pedestrian lighting Community dog run Does NOT include replacement of existing sitewide utilities 			

Construction Types Research (preliminary / draft)

11/27/23 RNT Architects

Building Type:	Traditional (site-built)	Modular	3D Printed	Manufactured
Code Requirements	California Building Standards code and local codes, last updated 2022			HUD Code (US Dep't of Housing and Urban Development Code,) last updated 1994
Energy Efficiency and Comfort	Meets California Title 24 standards (approx R-21 wall insulation and R-38 attic insulation)			Meets HUD standards. If constructed to Energy Star ("upgraded") standards, it would have R-11 wall insulation and R-30 attic insulation, which is still far less robust than homes built to meet California Title 24.
Water Efficiency	Meets California water efficient fixture requirements			Less stringent water efficiency requirements.
Customization	Custom design can respond to climate and user needs			Choose from stock plans with limited customization
Durability	Expected to last over 50 years. Similar risks for site-built and modular housing are reflected in similar insurance policy premiums and market appreciation.		Highest durability; expected to last 100 years and at least one company offers a 50 year warranty. One company cites potential insurance savings. Exterior walls are concrete, which is very durable and fire resistant.	Expected to last 30-55 years per HUD. Higher risks of damage from burst pipes and wind are reflected in higher insurance policy premiums.
Occupant Health	Must comply with California code requirements for low emissions of toxic VOCs (volatile organic compounds) such as formaldehyde.		Must comply with California code requirements for low emissions of toxic VOCs (volatile organic compounds) such as formaldehyde. Additionally, construction is very resistant to mold and termites.	No limits on VOCs such as formaldehyde, which are commonly used in building materials
Occupant Safety	Basic safety considerations such as smoke detectors, fire sprinklers, and emergency egress windows are required. Engineered to withstand weather and earthquake events.			
Construction Site Safety	Higher risks of heat-related illness.	Controlled environment minimizes heat-related illness and accidents during factory construction. Risks related to crane placement of modules on-site.	Few workers required for construction of building shell, thereby minimizing heat-related illness and accidents.	Controlled environment minimizes heat-related illness and accidents during factory construction. Risks related to crane placement of modules on-site.
Predictability of Process	Risks of delay and decreased productivity due to rain days, heat index days, high winds, and challenges related to site remoteness and environmental conditions.	Risks reduced due to majority of construction accomplished under controlled conditions. Less reliance on subcontractor availability, as modular construction is typically accomplished in-house by full-time employees.	Potential time delay and financial risks of pioneering the permitting process for a construction method that may be new to the local jurisdictions (first permitted 3d printed homes were completed in California this year.) Companies in this space are startups and have only been around for a few years. 3D printing can be challenging in hot or cold weather and therefore may be subject to delays. MEP trades still must travel to the site for most 3d printed methods. However, this is a rapidly-evolving field, and at least one company is producing pre-printed modular panels that are being assembled on-site in Desert Hot Springs (expected to be completed 2023.)	Risks reduced due to majority of construction accomplished under controlled conditions. Less reliance on subcontractor availability, as modular construction is typically accomplished in-house by full-time employees.
Delivery Method	Design-bid-build or design-build (most flexible)	Design-build would be preferred, but bid can be accommodated.	Design-build is likely preferred, although conversations with manufacturers are needed for verification. It appears that 3d printing companies have their own in-house engineers and proprietary material properties.	Design-build would be preferred, but bid can be accommodated.
Speed and Disruption	Each phase of housing will likely take 6 to 8 months to complete, accounting for restrictions on work hours due to weather and proximity of occupied houses.	Off-site construction of the house can proceed simultaneously with on-site construction of the foundation, cutting total construction time (and related tenant disruption) by 20% or more.	House is typically constructed on-site, but is significantly less disruptive (less framing noise, fewer workers) than traditional construction. Speed is faster than site-built construction.	Off-site construction of the house can proceed simultaneously with on-site construction of the foundation, cutting total construction time (and related tenant disruption) by 20% or more.
Cost	Assumed baseline	Approx 3% savings	Unclear; manufacturers claim savings but do not specify a range	Potentially 10% savings but construction not comparable

VILLAGE ORGANIZATION STRATEGIES

- INITIAL VILLAGE STRATEGIES, DECEMBER 2023 73
- REFINED VILLAGE STRATEGIES, FEBRUARY, 2024 88
- FINAL VILLAGE STRATEGIES, MAY, 2024 100



INITIAL VILLAGE STRATEGIES

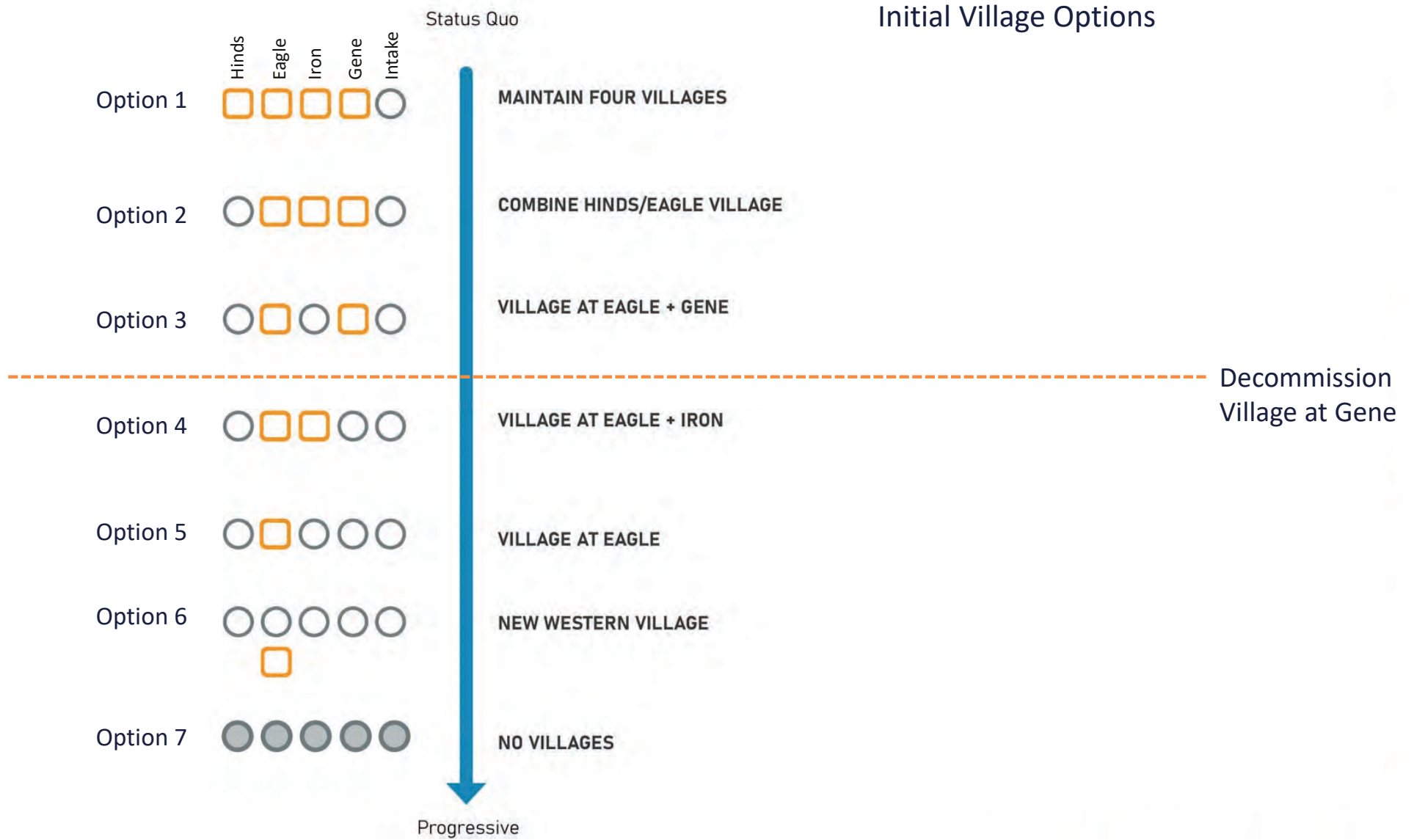
Purpose

This effort explores what the next 75 years of living & working will be in the remote villages and pumping plants, as Metropolitan considers a strategy to attract & retain current & future generations of Desert employees.

- Validate previous work, discover areas requiring refinement, or set a new direction for future desert villages
- Consider long term sustainability & resiliency of Desert villages

Guiding Principles

- Support the **long-term operation** of the critical CRA infrastructure
- Create a **financially resilient and socially sustainable 75-year** desert village strategy.
- Provide standard of living that **supports employee recruitment, retention, and satisfaction.**
- Create **safe and healthy** villages
- Provide a mix of housing types and amenities.



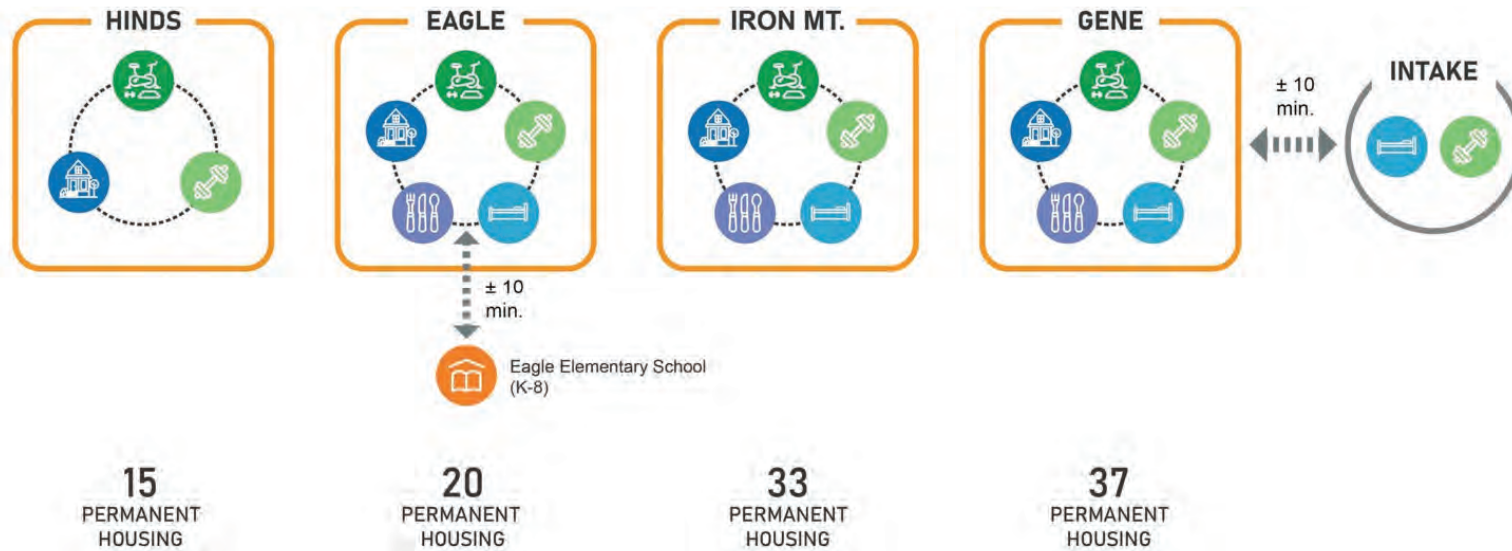
Scenario	Description	Relative Cost ¹
Scenario 1	Upgrade 4 Villages	Base
Scenario 2	Three Villages	Base plus 3%
Scenario 3	Two Villages	Base plus 3%
Scenario 4	Two Western Villages / Decommission Gene	Base less 22%
Scenario 5	One Western Village / Decommission Gene	Base less 21%
Scenario 6	One NEW Western Village	Base less 14%
Scenario 7	No Villages (hotel model)	Base less 24%

Note:

1. The components included in these scenarios have evolved, as these numbers don't match the final estimates.

SCENARIO 1: FOUR VILLAGES

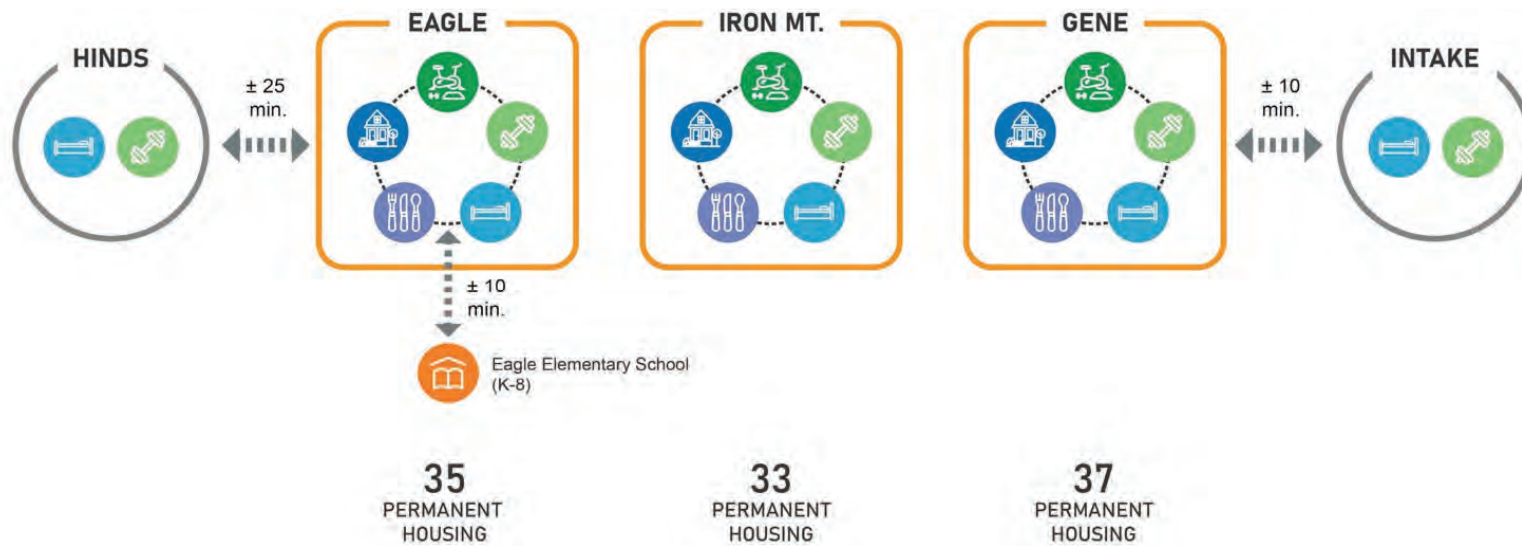
UPGRADE EXISTING VILLAGES



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
							Base	
4	1	105	4 +/- 50 units	3	4	5		3.5

SCENARIO 2: THREE VILLAGES

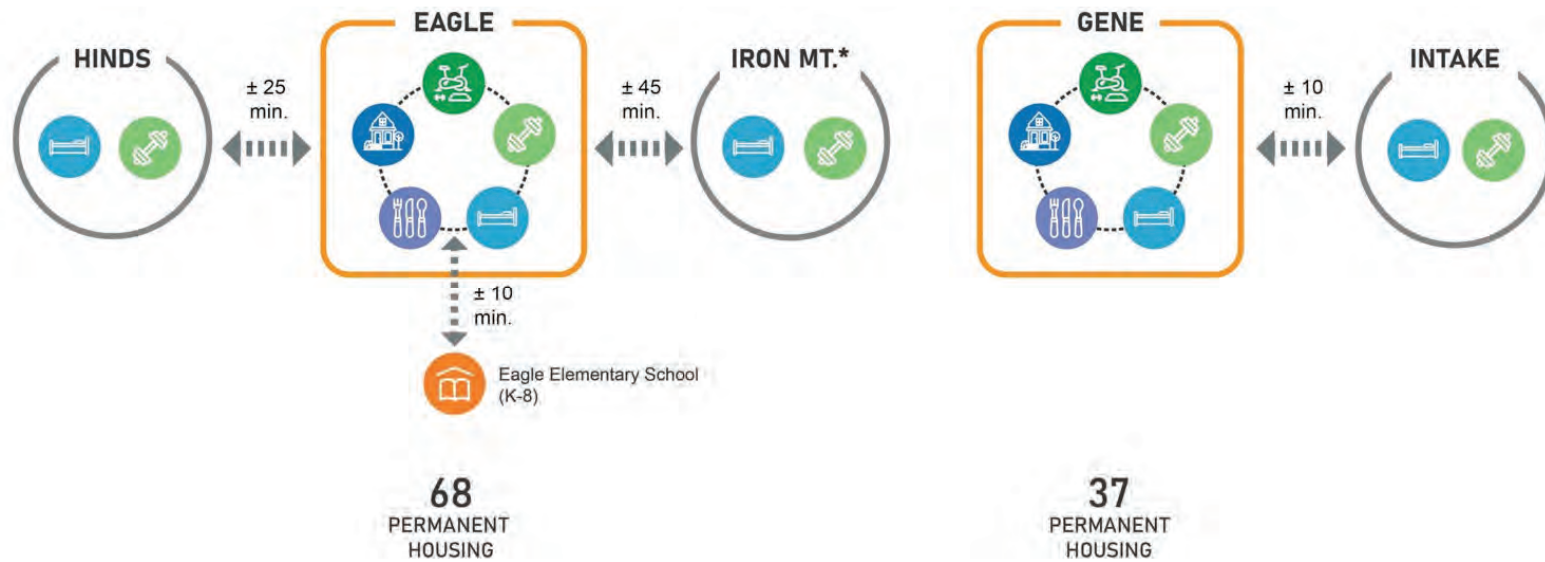
UPGRADE EXISTING VILLAGES (GENE AND IRON MT.) AND CONSOLIDATE HINDS AND EAGLE MT. INTO A SINGLE VILLAGE



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
 3	 2	 105	 5 +/- 52 units	 3	 3	 5	Base +3%	 3.2

SCENARIO 3: TWO VILLAGES

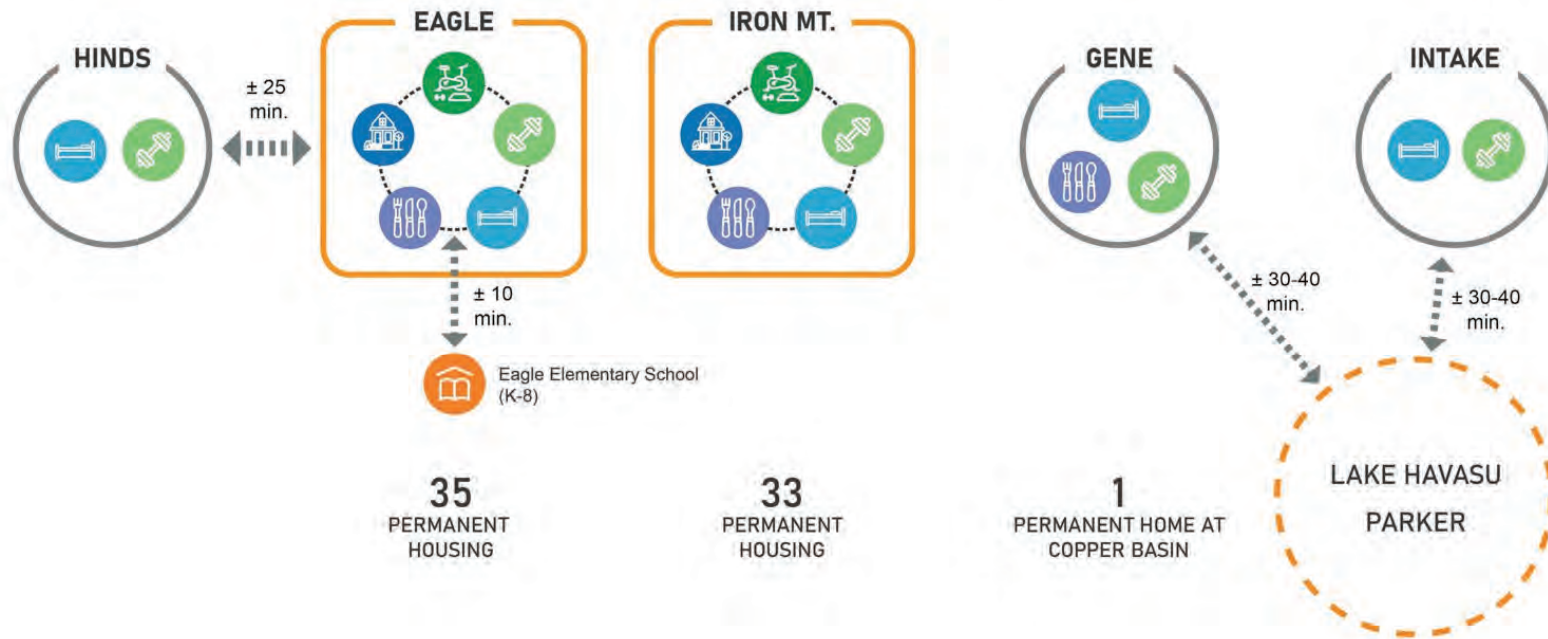
WEST VILLAGE AT EAGLE MT. AND EAST VILLAGE AT GENE



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
 2	 3	 105	 5 +/- 54 units	 2	 2	 5	Base +3%	 3.1

SCENARIO 4: TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE

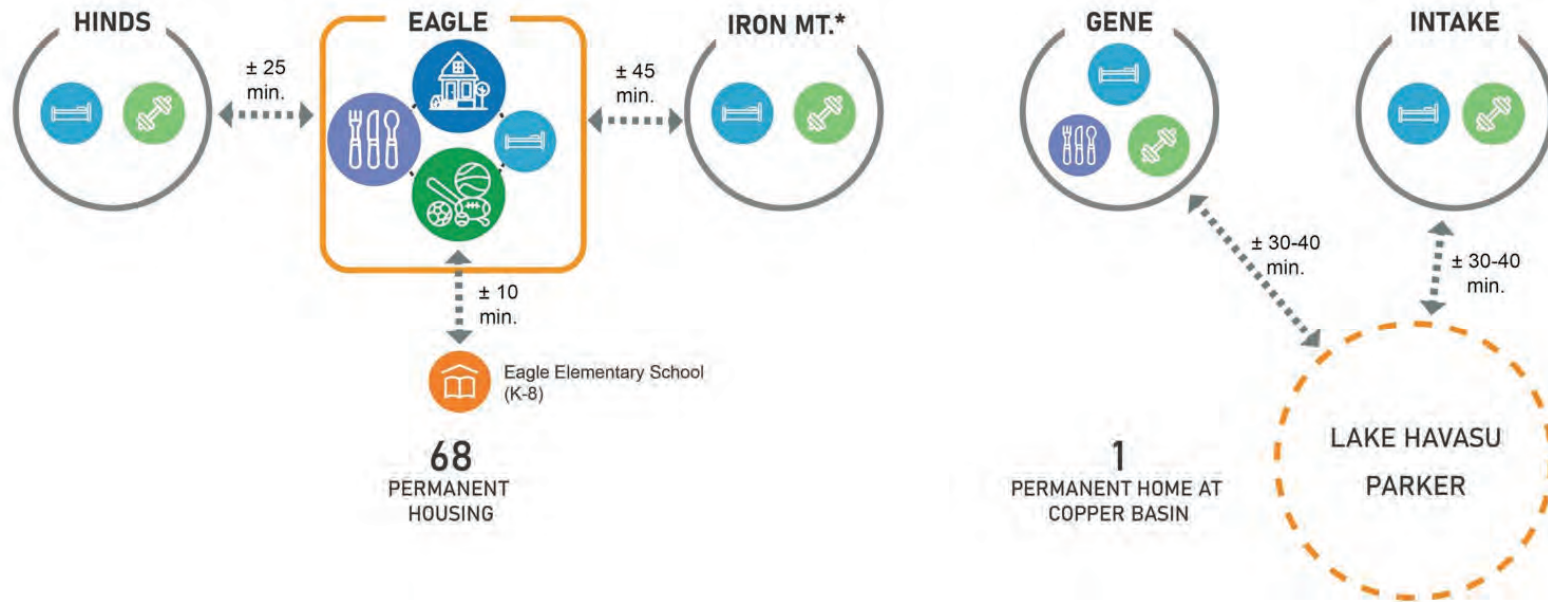
UPGRADE IRON MT. VILLAGE, CONSOLIDATE HINDS AND EAGLE MT., AND ELIMINATE PERMANENT HOUSING AT GENE



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
2	3	69	45 +/- 54 units	3	2	5	Base -22%	★★★★★ 3.4

SCENARIO 5: ONE WESTERN VILLAGE

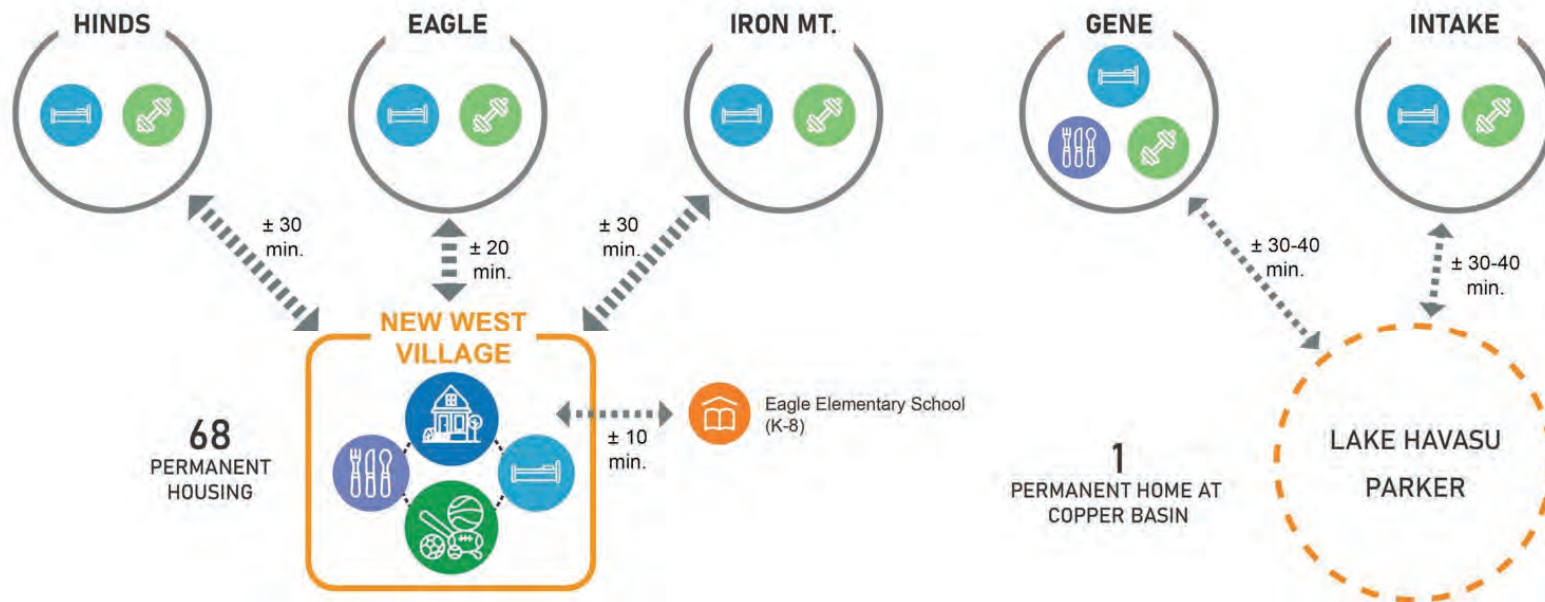
WEST DESERT VILLAGE AT EAGLE MT. AND ELIMINATE PERMANENT HOUSING AT ALL OTHER VILLAGES



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Upgraded Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
1	4	69	5 +/- 56 units	2	1	4	Base -21%	★★★★★ 3.5

SCENARIO 6: ONE NEW WESTERN VILLAGE

NEW WEST DESERT VILLAGE WITH CONSOLIDATED FOOD SERVICE AND ELIMINATE PERMANENT HOUSING AT GENE











































Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Upgraded Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
 1	 5	 69	 6 +/- 58 units	 2	 1	 5	Base -14%	 3.6

SCENARIO 7: NO VILLAGES

DISCONTINUE PERMANENT HOUSING AT DESERT VILLAGES



Main Villages	Satellite Camps	Permanent housing Units	Temporary/On-Call/ Guest Lodging	Kitchen/Dining	Village Amenity	Guest Amenity	Overall Relative Cost	Community Benefit
 0	 5	 0	 5 +/- 155 units	 4	 4	 1	Base -24%	 2.0

	SCENARIO 1 FOUR VILLAGES	SCENARIO 2 THREE VILLAGES	SCENARIO 3 TWO VILLAGES	SCENARIO 4 TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE	SCENARIO 5 ONE WESTERN VILLAGE	SCENARIO 6 ONE NEW WESTERN VILLAGE	SCENARIO 7 NO VILLAGES
 Main Village  Satellite Camps	     Hinds Iron Intake	   	   	   	   	      	   
 PERMANENT HOUSING	105	105	105	69	69	69	0
 TEMPORARY/ON-CALL /GUEST LODGES	4 Lodges with ± 50 units	5 Lodges with ± 52 units	5 Lodges with ± 54 units	5 Lodges with ± 54 units	5 Lodges with ± 56 units	6 Lodges with ± 58 units	5 Lodges with ± 155 units
 KITCHEN/DINING FACILITIES	3	3	2	3	2	2	4
 VILLAGE AMENITY PACKAGES	4	3	2	2	1	1	4
 GUEST AMENITY PACKAGES	5	5	5	5	4	5	1
 NEW INFRASTRUCTURE PACKAGE	0	1	2	1	2	2	0
OVERALL RELATIVE COST	Base	Base +3%	Base +3%	Base -22%	Base -21%	Base -14%	Base -24%





What is the right level of housing and community amenities that will attract and retain future workforce in remote desert locations?

Does the growth of Lake Havasu and Parker change our perspective of Gene as a remote desert camp?

Which scenarios most align with your vision for the future of Desert Villages?

Which scenarios should be considered for further study?

Civitas and RNT are available for more detailed follow-up conversations. Please contact Soon.

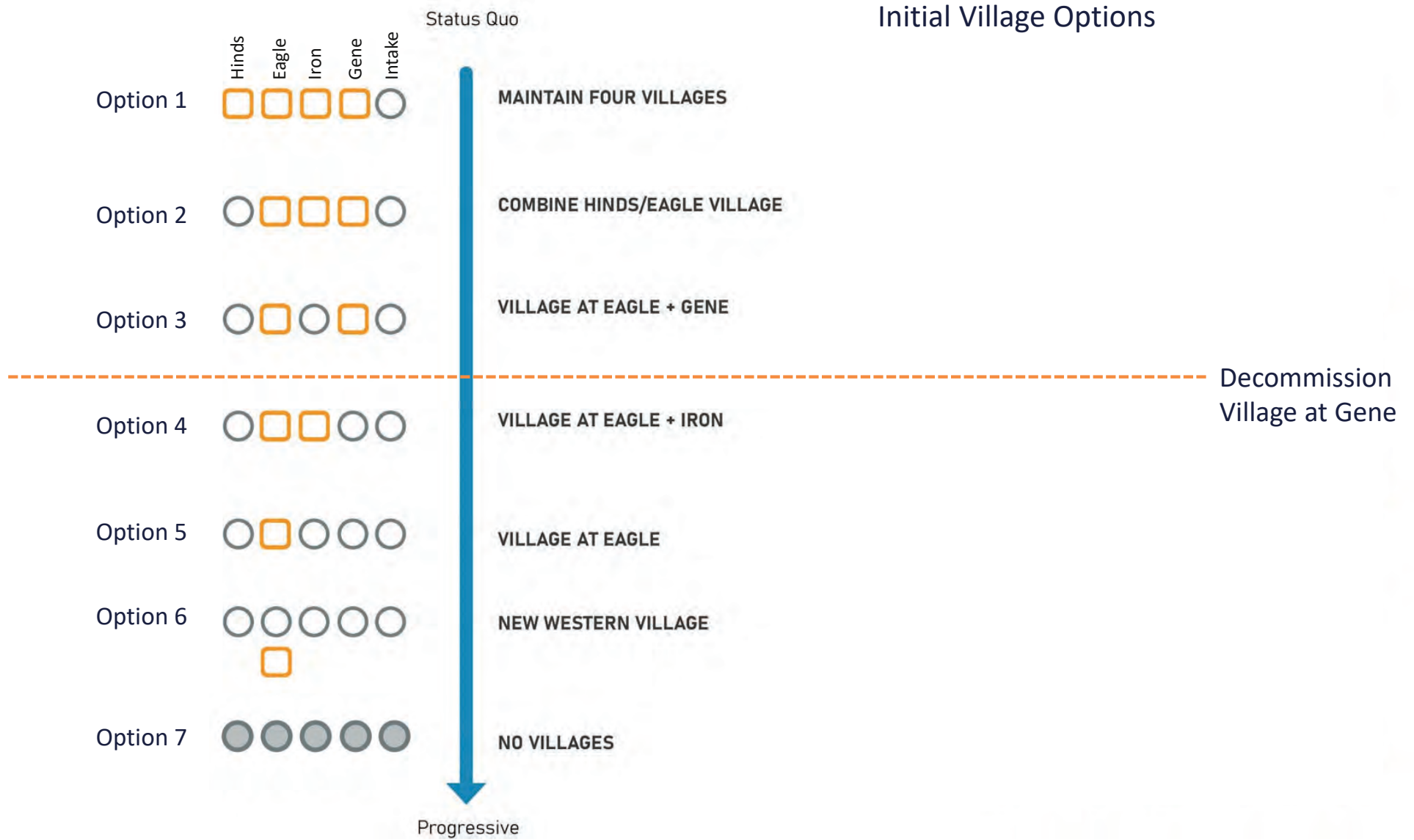
schoi@civitasinc.com



REFINED VILLAGE STRATEGIES

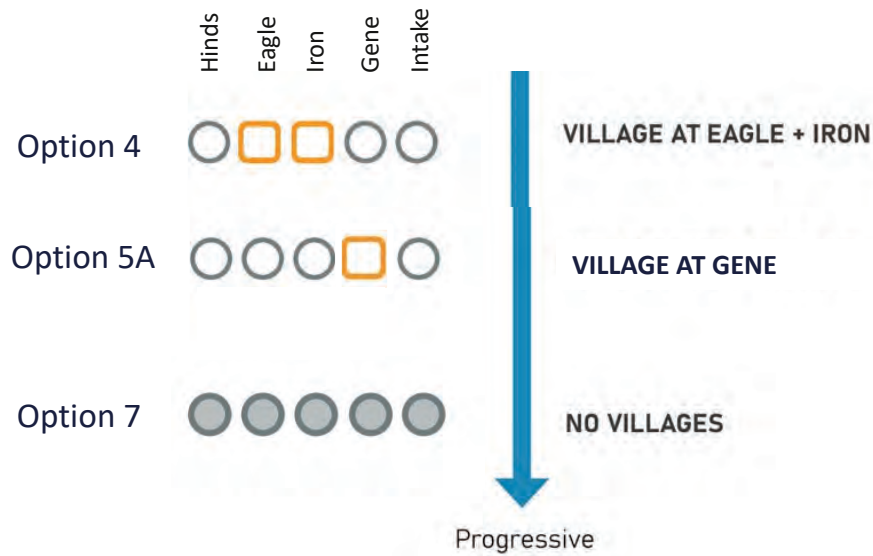
The options on the following slides conceptualize how the five MWD desert communities could be organized over the next 75 years.

Current employee housing and living situations are not impacted by these scenarios.

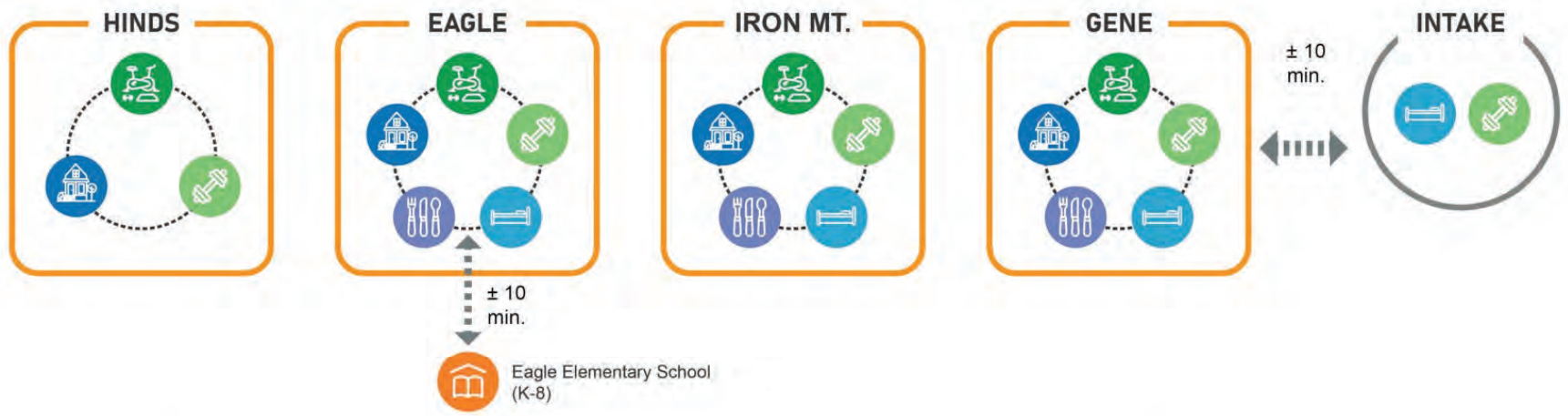


Preferred Village Options

After the MWD Executive Committee meeting in January 2024, 3 village options were selected for further studies. While option 4 is a recommended option from consultant, option 7 is also considered as a goal for the MWD.



BASELINE CONDITION
(existing conditions, plus stand-by lodge at intake)



15
SINGLE FAMILY HOMES

20
SINGLE FAMILY HOMES

33
SINGLE FAMILY HOMES

37
SINGLE FAMILY HOMES

Main Villages
4

Stand-by Satellite Camps
1

Single Family Homes
105

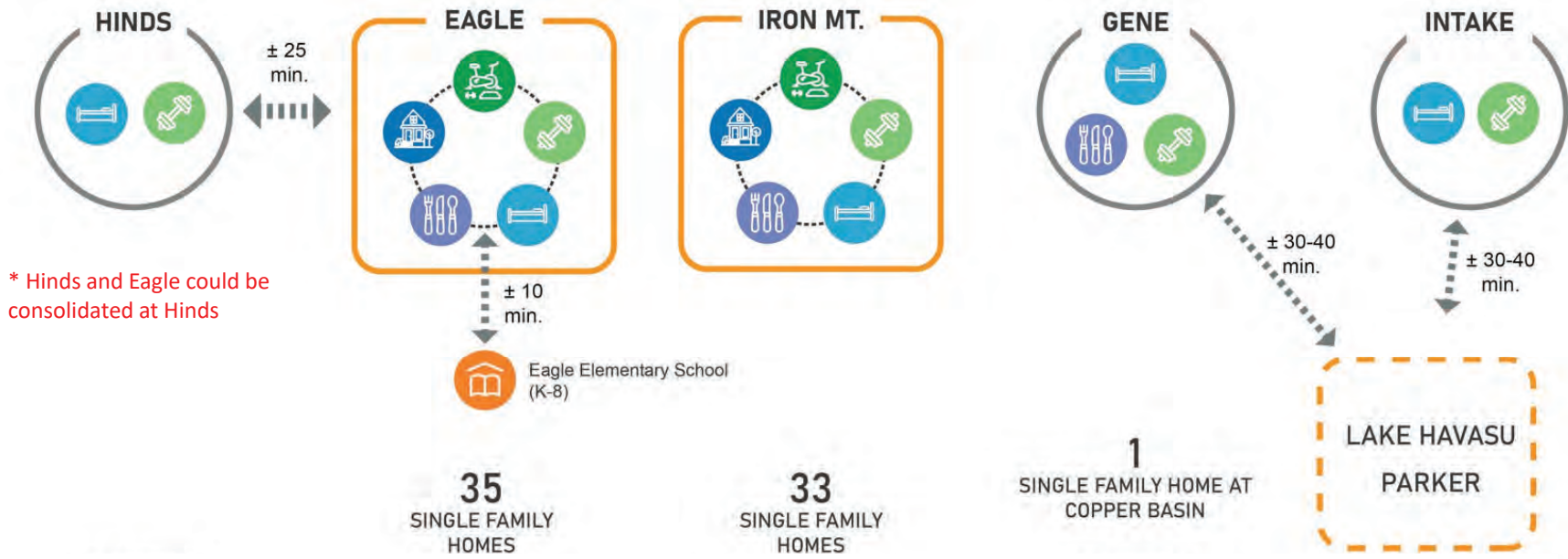
Short-term Guest / Stand-by Units
68 (+2)
(5 lodges)

Kitchen/Dining
3

Village Amenity
4

Guest Amenity
5

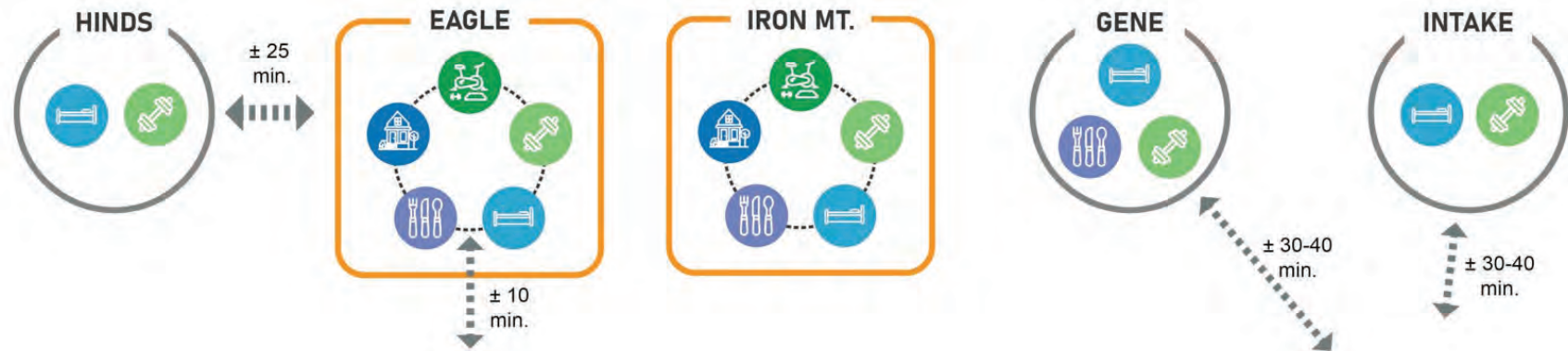
**OPTION 4: TWO WEST VILLAGES
@ EAGLE + IRON**



* Hinds and Eagle could be consolidated at Hinds

Main Villages	Stand-by Satellite Camps	Single Family Homes	Short-term Guest / Stand-by Units	Kitchen/Dining	Village Amenity	Guest Amenity
2	3	69	74 (5 lodges)	3	2	5

OPTION 4: TWO WEST VILLAGES @ EAGLE + IRON



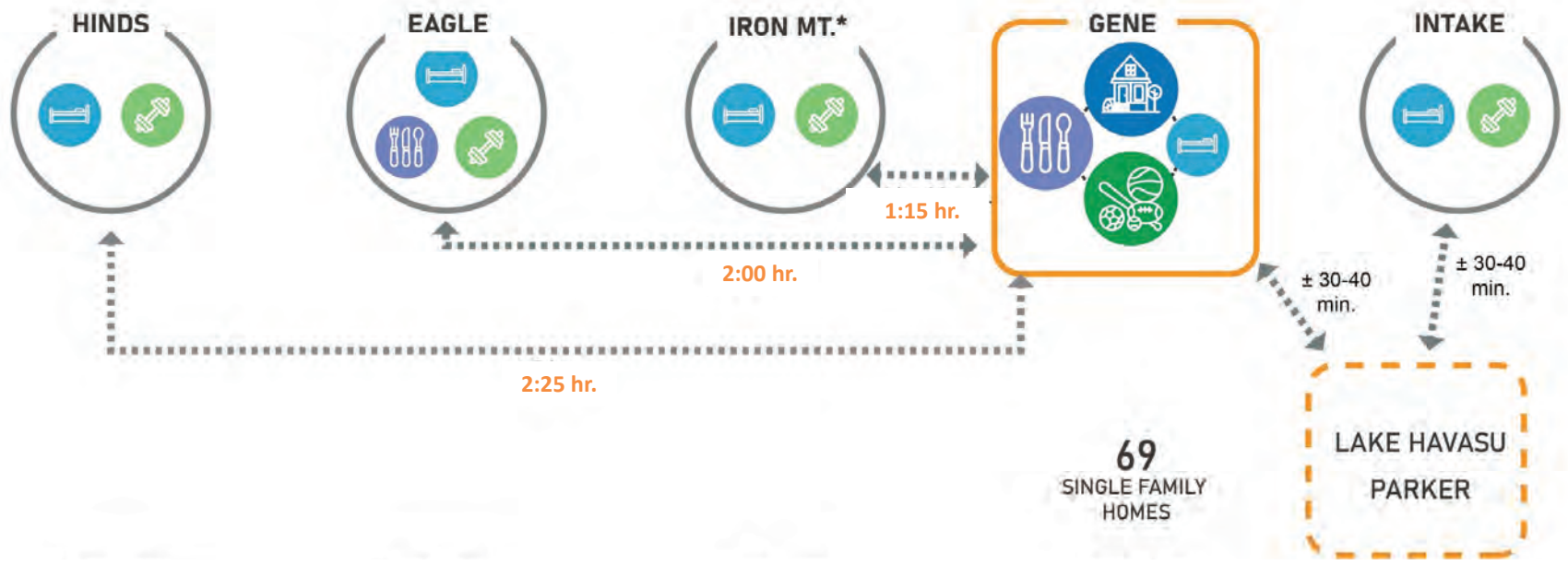
PROS

- Focus resources on two expanded amenity packages
- Economy of scale for construction and long-term maintenance
- Larger villages creates greater sense of community and safety
- O&M and Pump Maintenance employees remain at Iron and Eagle

Cons

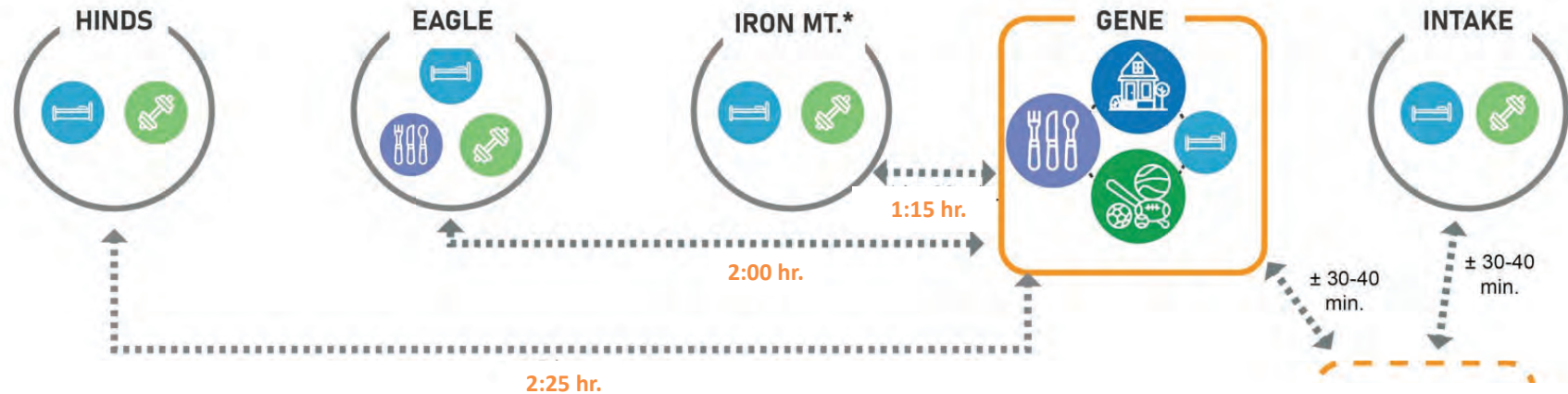
- Commute to Hinds and Gene pump plants.
- Families are still remote from services (schools, doctors, amenities)
- Acceptance if Gene no longer considered 'remote', employees live in nearby towns.

OPTION 5B: ONE EAST VILLAGE @ GENE



- Main Villages**: 1 (represented by an orange square icon)
- Stand-by Satellite Camps**: 4 (represented by a grey circle icon)
- Single Family Homes**: 69 (represented by a blue house icon)
- Short-term Guest / Stand-by Units**: 94 (5 lodges) (represented by a blue bed icon)
- Kitchen/Dining**: 2 (represented by a blue fork and knife icon)
- Upgraded Village Amenity**: 1 (represented by a green gear icon)
- Guest Amenity**: 5 (represented by a green dumbbell icon)

OPTION 5B: ONE EAST VILLAGE @ GENE



PROS

- Hired at Gene community, dispatched to remote sites for work shift.
- Focus resources on one upgraded amenity packages
- Economy of scale for construction and long-term maintenance
- Larger village creates greater sense of community and safety
- Families are closer to community services in Lake Havasu/Parker (grocery, schools, doctors, amenities)
- Consider modifying shifts to work with this model.
- RV sites could also be offered at camps.

Cons

- Requires long commute times between Gene and remote villages
- Requires duplicative housing units at remote desert villages (permanent house Gene, plus hotel unit at camps)

OPTION 7: FIVE EXTENDED STAY CAMPS



3 homes for rent

3 homes for rent

15 EXTENDED-STAY UNITS

20 EXTENDED-STAY UNITS 12

33 EXTENDED-STAY UNITS

37 EXTENDED-STAY UNITS

6 SHORT-TERM UNITS

Main Villages



0

Extended Stay Camps



5

Extended Stay Employee Units



105

Short-term Guest / Stand-by Units



68
(5 lodges)

Kitchen/Dining



4

Upgraded Village Amenity



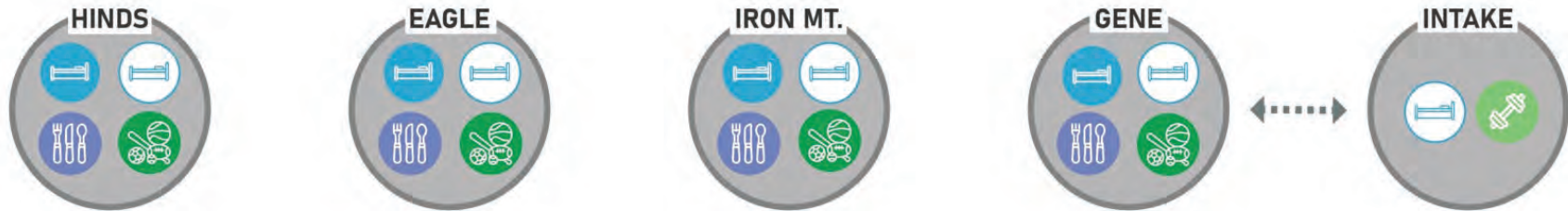
4

Guest Amenity



1

OPTION 7: FIVE EXTENDED STAY CAMPS



PROS

- Focus time and resources on MWD core mission
 - *MWD no longer operating as property manager of gated communities*
- One multifamily building typology could be replicated across all camps.
- Existing employees will be allowed to “opt-in” to new housing/compensation package
- Extended stay camps have upgraded amenity packages.
- Employee gets “extended stay housing” (*one bedroom condos, RV sites, or casita*)
- Concentrate landscape and placemaking budget in consolidated area
- Requires less property management
- Future generations are generally more accepting of smaller units that require less maintenance and upkeep.

Cons

- Unknown impact recruitment and retention strategy
- Likely will require full kitchen, dining facilities, and hospitality staff at all sites
- Requires strategic transition strategy to align with infrastructure capacity
- Could be less attractive to young employees with families just starting out

	BASELINE FOUR VILLAGES 	OPTION 4: TWO WEST VILLAGES EAGLE MT. AND IRON MT. 	OPTION 5B: ONE EAST VILLAGE GENE 	OPTION 7: FIVE EXTENDED STAY CAMPS
 SINGLE FAMILY HOUSING	105	69	69	0
 STAND-BY/GUEST UNITS	± 68 (+2) units	± 74 units	± 94 units	± 68 units
 EXTENDED STAY UNITS	0	0	0	± 105 units
 KITCHEN/DINING FACILITIES	3	3	2	4
 VILLAGE AMENITY PACKAGES	4	2	1	4
 GUEST AMENITY PACKAGES	5	5	4	1






FINAL VILLAGE STRATEGIES

* 10% housing increase across all villages and scenarios

SUMMARY

TOTAL COST PHASING

THREE DESERT VILLAGES: 100% extended-stay townhomes		YRS 1-5	YRS 6-8	YRS 9-12	YRS 13-15
 <p>105 extended-stay townhomes 12 vacation rentals 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens</p>	\$145M	\$81.9M	\$24.7M	\$28.2M	\$10.8M
 <p>54 single family homes 53 extended-stay townhomes 9 vacation rentals 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens</p>	\$189M	\$81.9M	\$39.3M	\$35.2M	\$33M
 <p>105 single family homes 24 extended-stay townhomes 64 guest hotels 3 upgraded amenity packages 2 guest amenity packages 3 kitchens 9 vacation rentals</p>	\$249M	\$81.9M	\$58.2M	\$51M	\$58.4M

THREE DESERT VILLAGES
 100% EXTENDED-STAY
 TOWNHOMES
 105 HOUSING UNITS















































TOTAL COST	COST PER VILLAGE				
\$ 145.6M	\$2.4M	\$44.6M	\$45.4M	\$45.3M	\$7.9M

SUMMARY OF HOUSING AND AMENITIES



Single Family Homes	0	-	-	-	-	-
Extended Stay Townhomes 750 sq. ft.	105	-	35	33	37	-
Vacation Rental	12	-	3	3	3	3
Guest Hotel 350 sq. ft.	64	3	17	25	15	4
Upgraded Amenities	3	-	1	1	1	-
Guest Amenity	2	1	-	-	-	1°
Kitchen	3	-	1	1	1	-

THREE DESERT VILLAGES 100% EXTENDED-STAY TOWNHOMES

105 HOUSING UNITS

	PHASE 1 YRS 1-5	PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
HINDS	 3  1	-	-	-
EAGLE	 8  17  2  8  1  1		 13  1	 6
IRON MT.	 8  25  2  8  1  1		 13  1	 4
GENE	 8  15  2  8  1  1		 13  1	 8
INTAKE	 4  3  1	-	-	-
TOTAL	 24  64  9  2  2  3	 24  1	 39  8  3	 18

THREE DESERT VILLAGES 100% EXTENDED-STAY TOWNHOMES
105 HOUSING UNITS

VILLAGE TOTAL	PHASE 1 YRS 1-5	PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
 <p>HINDS</p> <p>\$2.4M</p>	<p>\$2.4M</p> <p>3 GUEST HOTEL 1 GUEST AMENITY</p>	-	-	-
 <p>EAGLE</p> <p>\$44.6M</p>	<p>\$26.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 17 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	8 EXTENDED STAY TOWNHOMES	13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL	6 EXTENDED STAY TOWNHOMES
 <p>IRON MT.</p> <p>\$45.4M</p>	<p>\$28.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 25 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	8 EXTENDED STAY TOWNHOMES	13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL	4 EXTENDED STAY TOWNHOMES
 <p>GENE</p> <p>\$45.3M</p>	<p>\$16M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 15 GUEST HOTEL 1 KITCHEN</p>	8 EXTENDED STAY TOWNHOMES 1 UPGRADED AMENITY	13 EXTENDED STAY TOWNHOMES 1 VACATION RENTAL	8 EXTENDED STAY TOWNHOMES
 <p>INTAKE</p> <p>\$7.9M</p>	<p>\$7.9M</p> <p>4 GUEST HOTEL 1 GUEST AMENITY + CONFERENCE ROOM 3 VACATION RENTALS</p>	-	-	-
TOTAL \$145.6M	\$81.9M	\$24.7M	\$28.2M	\$10.8M

THREE DESERT VILLAGES
 50% TOWNHOMES/50% SINGLE
 FAMILY HOMES
 105 HOUSING UNITS



TOTAL COST	COST PER VILLAGE				
\$ 189.4M	\$2.4M	\$59.2M	\$59.1M	\$60.8M	\$7.9M

SUMMARY OF HOUSING AND AMENITIES

Single Family Homes	54	-	18	17	19	-
Extended Stay Condo 750 sq. ft.	53	-	17	16	18	-
Vacation Rental	9	-	2	2	2	3
Guest Hotel 350 sq. ft.	64	3	17	25	15	4
Upgraded Amenities	3	-	1	1	1	-
Guest Amenity	2	1	-	-	-	1
Kitchen	3	-	1	1	1	-

THREE DESERT VILLAGES 50% TOWNHOMES/50% SINGLE FAMILY HOMES
105 HOUSING UNITS

	PHASE 1 YRS 1-5			PHASE 2 YRS 6-8			PHASE 3 YRS 9-12		PHASE 4 YRS 13-15
HINDS 	3 guest hotel								
	1 guest amenity								
EAGLE 	8 townhome	17 guest hotel	2 vacation rental	6 home	9 townhome				6 home
	1 upgraded amenity	1 kitchen							
IRON MT. 	8 townhome	25 guest hotel	2 vacation rental	5 home	4 townhome				6 home
	1 upgraded amenity	1 kitchen							
GENE 	8 townhome	15 guest hotel	2 vacation rental	8 townhome	1 village amenity				10 home
	1 kitchen								
INTAKE 	4 guest hotel	3 vacation rental							
	1° guest amenity								
TOTAL	24 2	64 2°	9 3	11 21	1		21 6		22

THREE DESERT VILLAGES 50% TOWNHOMES/50% SINGLE FAMILY HOMES
105 HOUSING UNITS

VILLAGE TOTAL	PHASE 1 YRS 1-5	PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
 <p>HINDS</p> <p>\$2.4M</p>	<p>\$2.4M</p> <p>3 GUEST HOTEL 1 GUEST AMENITY</p>	-	-	-
 <p>EAGLE</p> <p>\$59.2M</p>	<p>\$26.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 17 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	<p>\$14.4M</p> <p>6 SINGLE FAMILY HOMES 9 EXTENDED STAY TOWNHOMES</p>	<p>\$9M</p> <p>6 SINGLE FAMILY HOMES</p>	<p>\$9M</p> <p>6 SINGLE FAMILY HOMES</p>
 <p>IRON MT.</p> <p>\$59M</p>	<p>\$28.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 25 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	<p>\$9.8M</p> <p>5 SINGLE FAMILY HOMES 4 EXTENDED STAY TOWNHOMES</p>	<p>\$11.4M</p> <p>6 SINGLE FAMILY HOMES 4 EXTENDED STAY TOWNHOMES</p>	<p>\$9M</p> <p>6 SINGLE FAMILY HOMES</p>
 <p>GENE</p> <p>\$60.8M</p>	<p>\$16M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 15 GUEST HOTEL 1 KITCHEN</p>	<p>\$15.1M</p> <p>8 EXTENDED STAY CONDOS 1 UPGRADED AMENITY</p>	<p>\$14.7M</p> <p>9 SINGLE FAMILY HOMES 2 EXTENDED STAY TOWNHOMES</p>	<p>\$15M</p> <p>10 SINGLE FAMILY HOMES</p>
 <p>INTAKE</p> <p>\$7.9M</p>	<p>\$7.9M</p> <p>4 GUEST HOTEL 1 GUEST AMENITY + CONFERENCE ROOM 3 VACATION RENTALS</p>	-	-	-
<p>TOTAL \$189.4M</p>	<p>\$81.9M</p>	<p>\$39.3M</p>	<p>\$35.2M</p>	<p>\$33M</p>

THREE DESERT VILLAGES
 100% SINGLE FAMILY HOMES
 105 HOUSING UNITS



TOTAL COST **COST PER VILLAGE**

\$249.5M

\$2.4M








\$79.2M

\$78.3M

\$81.7M

\$7.9M

SUMMARY OF HOUSING AND AMENITIES

 105 Single Family Homes	-	35	33	37	-
 24 Extended Stay Condo 750 sq. ft.	-	8	8	8	-
 9 Vacation Rental	-	2	2	2	3
 64 Guest Hotel 350 sq. ft.	3	17	25	15	4
 3 Upgraded Amenities	-	1	1	1	-
 2 Guest Amenity	1	-	-	-	1
 3 Kitchen	-	1	1	1	-

THREE DESERT VILLAGES 100% SINGLE FAMILY HOMES

105 HOUSING UNITS

	PHASE 1 YRS 1-5			PHASE 2 YRS 6-8		PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
HINDS 	3 guest hotel						
	1 guest amenity						
EAGLE 	8 townhome	17 guest hotel	2 vacation rental	10 home		10 home	15 home
	1 upgraded amenity	1 kitchen					
IRON MT. 	8 townhome	25 guest hotel	2 vacation rental	10 home		12 home	11 home
	1 upgraded amenity	1 kitchen					
GENE 	8 townhome	15 guest hotel	2 vacation rental	12 home	1 upgraded amenity	12 home	13 home
	1 kitchen						
INTAKE 	4 guest hotel	3 vacation rental					
	1° guest amenity						
TOTAL	24 2	64 2°	9 3	32 1		34	39

THREE DESERT VILLAGES 100% SINGLE FAMILY HOMES
105 HOUSING UNITS

VILLAGE TOTAL	PHASE 1 YRS 1-5	PHASE 2 YRS 6-8	PHASE 3 YRS 9-12	PHASE 4 YRS 13-15
 <p>HINDS \$2.4M</p>	<p>\$2.4M</p> <p>3 GUEST HOTEL 1 GUEST AMENITY</p>	-	-	-
 <p>EAGLE \$79.2M</p>	<p>\$26.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 17 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	10 SINGLE FAMILY HOMES	10 SINGLE FAMILY HOMES	15 SINGLE FAMILY HOMES
 <p>IRON MT. \$78.3M</p>	<p>\$28.8M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 25 GUEST HOTEL 1 UPGRADED AMENITY 1 KITCHEN</p>	10 SINGLE FAMILY HOMES	12 SINGLE FAMILY HOMES	11 SINGLE FAMILY HOMES
 <p>GENE \$81.7M</p>	<p>\$16M</p> <p>8 EXTENDED STAY TOWNHOMES 2 VACATION RENTALS 15 GUEST HOTEL 1 KITCHEN</p>	12 SINGLE FAMILY HOMES 1 UPGRADED AMENITY	12 SINGLE FAMILY HOMES	13 SINGLE FAMILY HOMES
 <p>INTAKE \$7.9M</p>	<p>\$7.9M</p> <p>4 GUEST HOTEL 1 GUEST AMENITY + CONFERENCE ROOM 3 VACATION RENTALS</p>	-	-	-
TOTAL \$249.5M	\$81.9M	\$58.2M	\$51M	\$58.4M

DETAILED PHASING STRATEGY FOR EACH VILLAGE

- CONCEPTUAL PHASING STRATEGY - IRON MOUNTAIN 112
- DETAILED VILLAGE PHASING STRATEGY 119



CONCEPTUAL PHASING STRATEGY IRON MOUNTAIN

CONTEXT:

- **Conceptual Phasing Strategy** - Iron Mountain Village
- **Future housing needs: 33 units** (based upon projected staffing = current needs plus 10%)
- **Future hotel needs: 25 units** (replace existing 17 guest hotel units plus an additional 8 units)
- Vacation rental home could be either new housing or existing homes to reuse.

LEGEND:


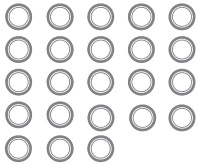

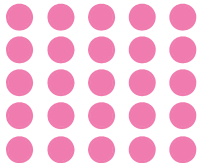



-  CURRENT HOMES
-  NEW CONSTRUCTION
-  PREVIOUSLY CONSTRUCTED

** The circle colors correspond to program elements on following slides.*

CONCEPTUAL PHASING STRATEGY FOR IRON MOUNTAIN

(As case study, similar logic can be applied to Eagle and Gene camps.)


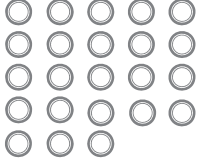



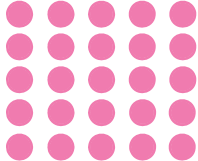




YR 1-5

	Permanent Home (SFD, 3BR/2BA)	23	
	Extended Stay Townhome (750 sf/unit)	8	
	Guest Hotel (350 sf/unit)	25	
	Vacation Rental (SFD, 3BR/1BA)		
	Village Amenity		
	Kitchen		

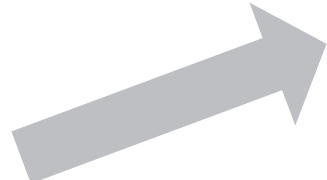
Build and Test Extended Stay Condos

Replace existing hotels

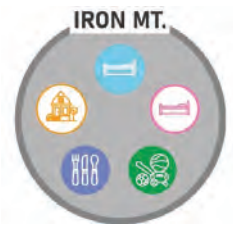
CASE STUDY FOR IRON MOUNTAIN

		YR 1-5
	Permanent Home (SFD, 3BR/2BA)	23 
	Extended Stay Townhome (750 sf/unit)	8 
	Guest Hotel (350 sf/unit)	25 
	Vacation Rental (SFD, 3BR/1BA)	
	Village Amenity	
	Kitchen	

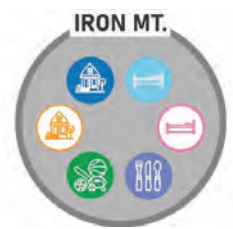
Assess community design strategy after year 5 & pivot if necessary



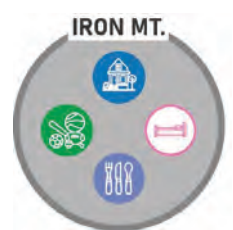
YR 6-15



ALL EXTENDED STAY TOWNHOME

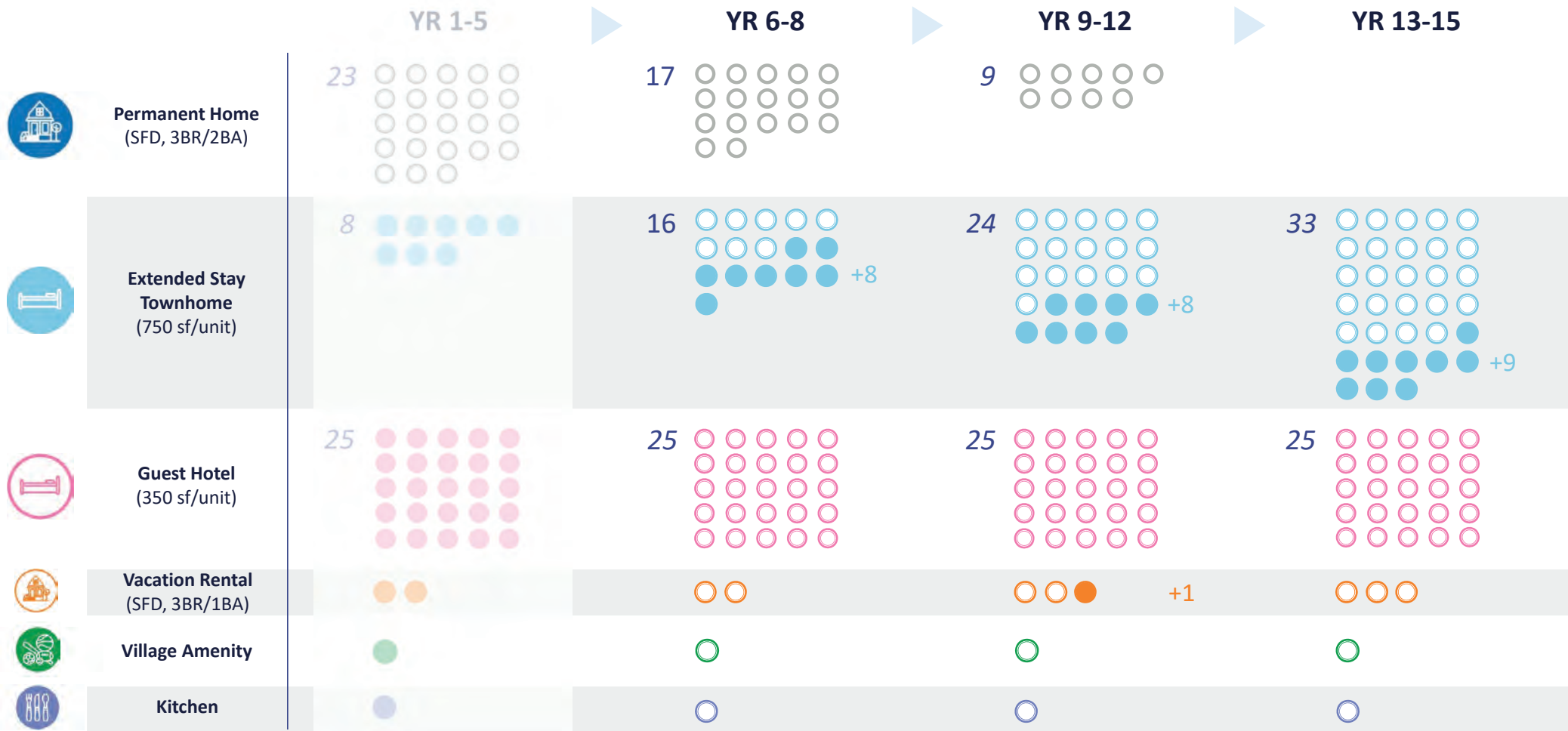


EXTENDED STAY TOWNHOME + SINGLE-FAMILY HOMES

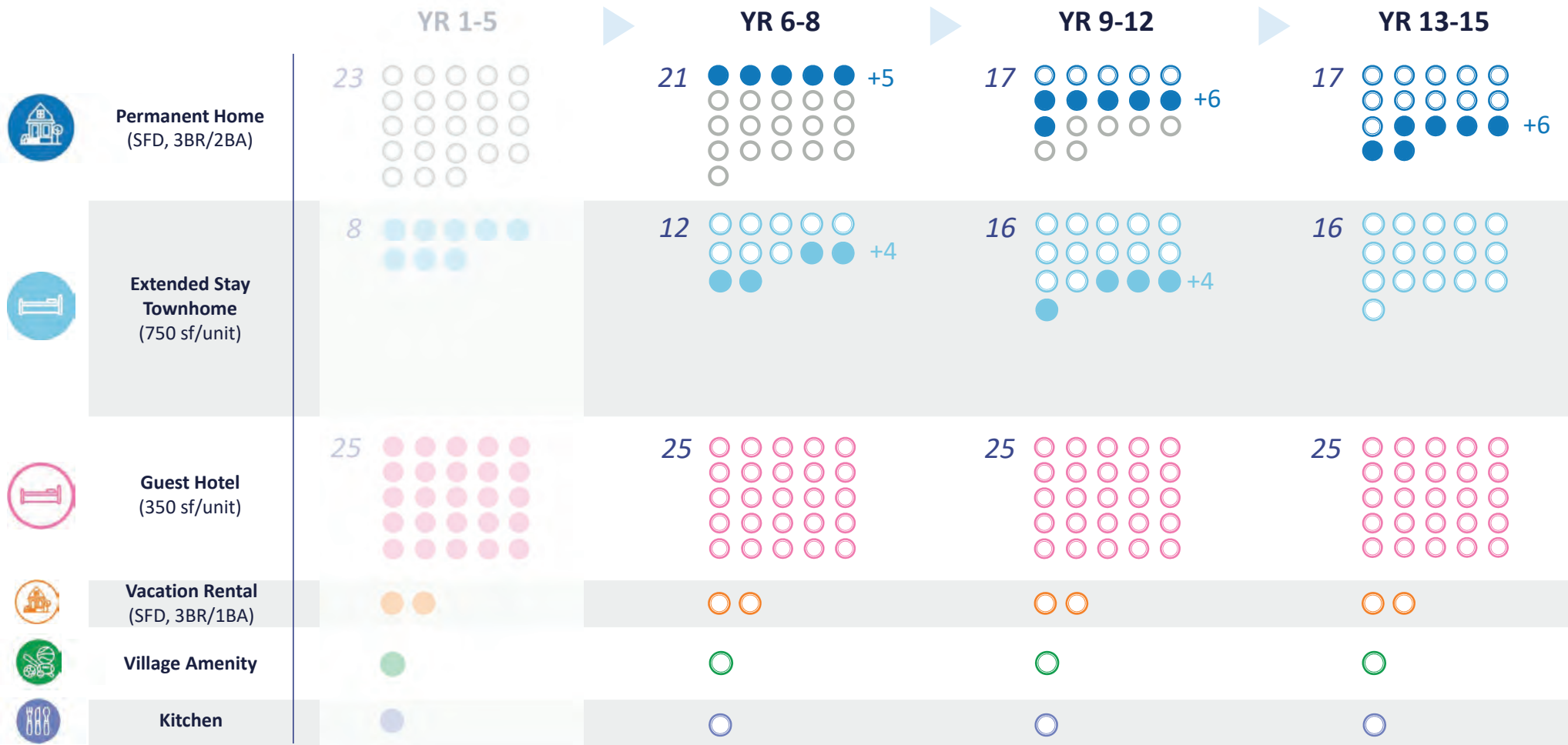


ALL SINGLE-FAMILY HOMES

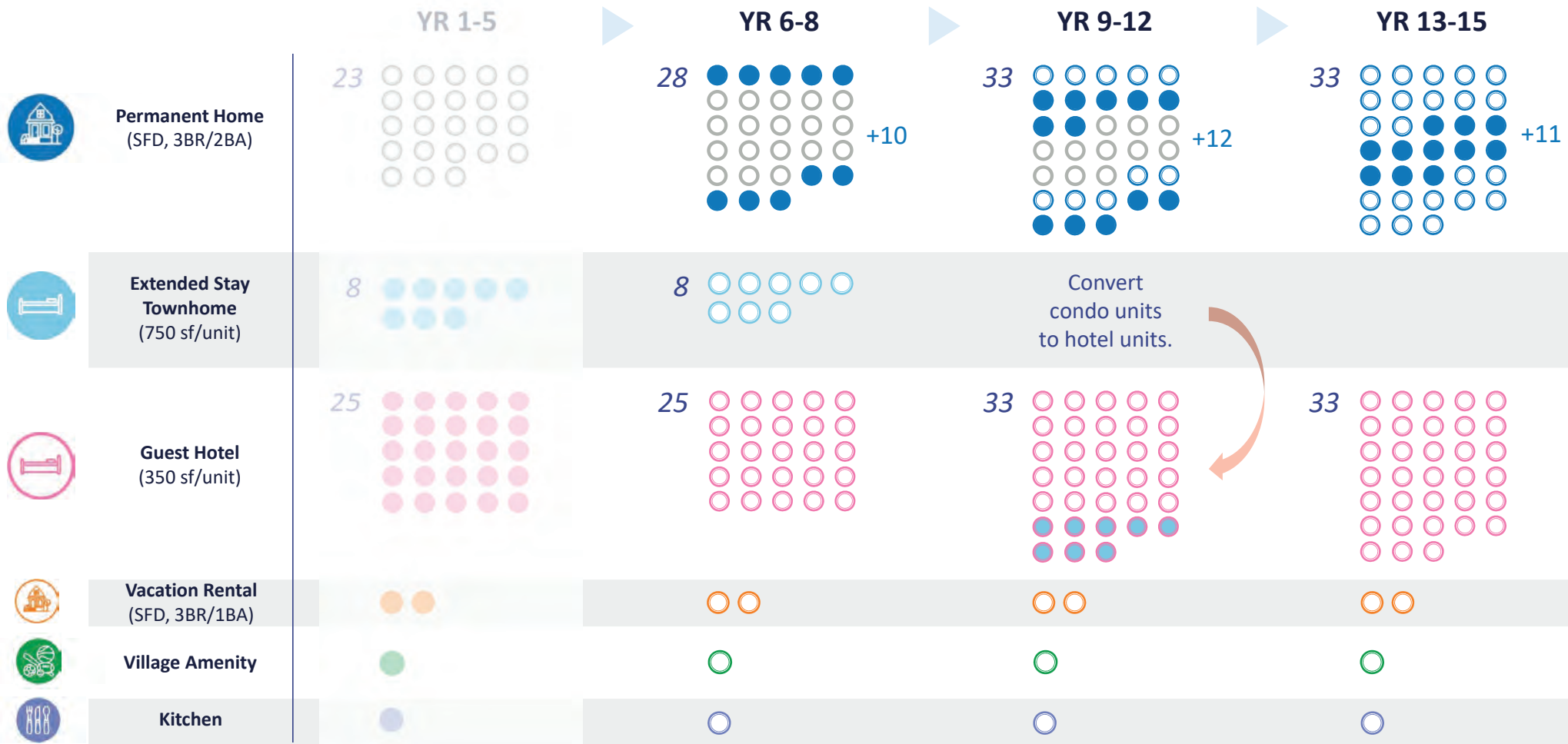
CASE STUDY FOR IRON MOUNTAIN: 100% EXTENDED STAY TOWNHOME



CASE STUDY FOR IRON MOUNTAIN: MIX EXTENDED STAY TOWNHOME (50%) + SINGLE FAMILY HOMES (50%)



CASE STUDY FOR IRON MOUNTAIN: 100% SINGLE FAMILY HOMES





Appendix: DETAILED VILLAGE PHASING STRAEGIES

THREE DESERT VILLAGES

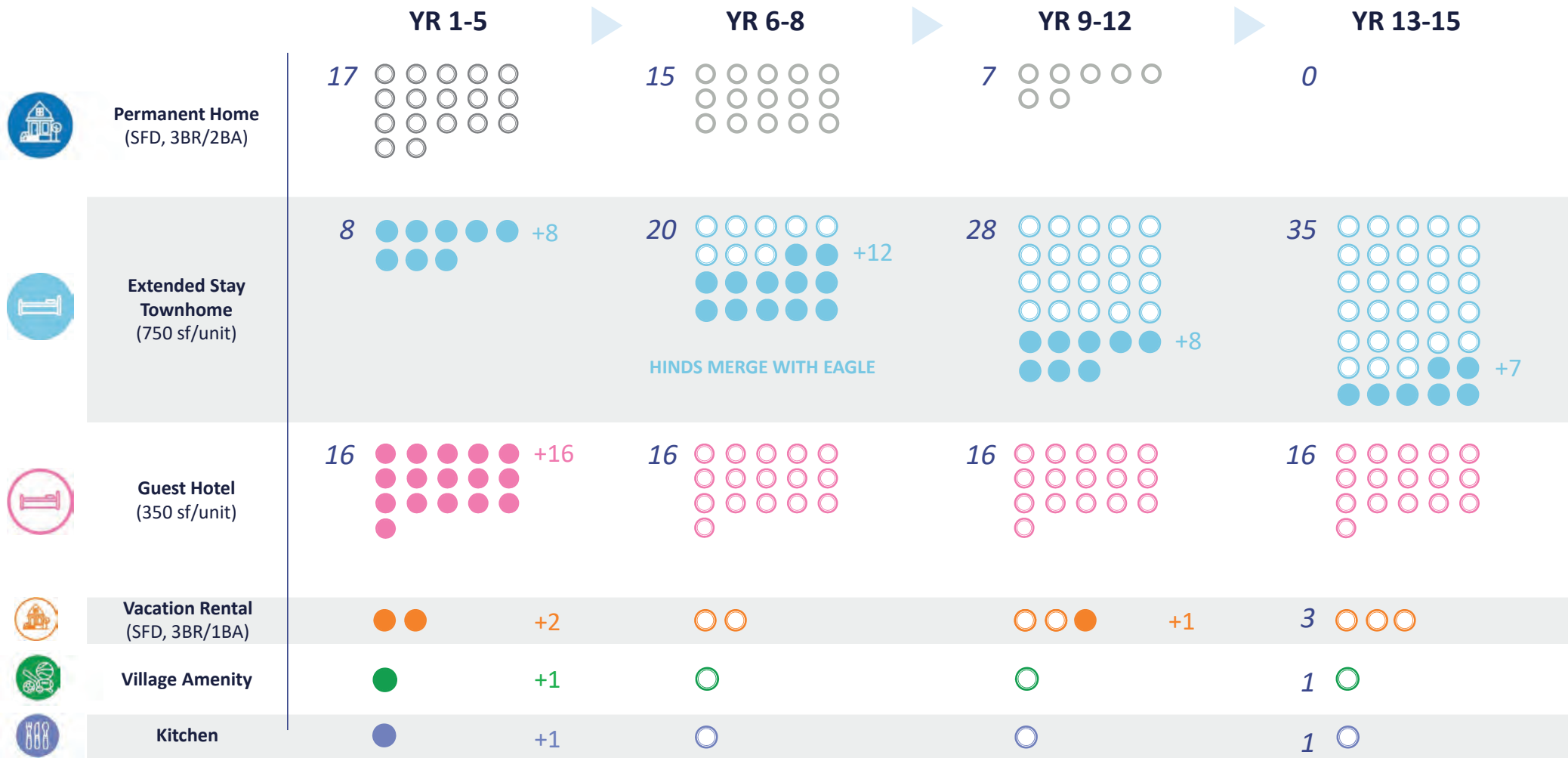
THREE DESERT VILLAGES
 100% EXTENDED-STAY
 TOWNHOMES
 105 HOUSING UNITS



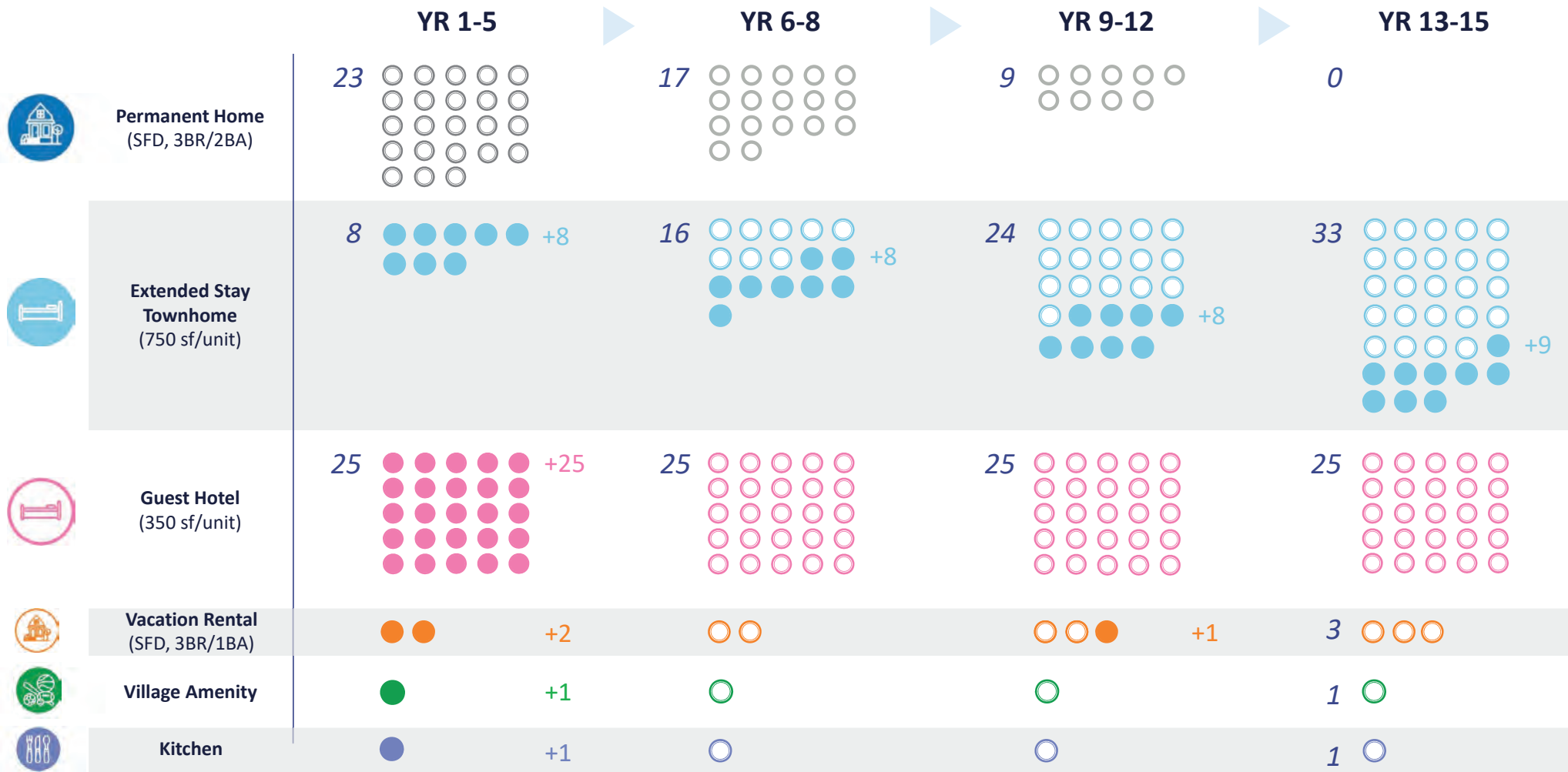
TOTAL COST	COST PER VILLAGE				
\$ 145.6M	\$2.4M	\$44.6M	\$45.4M	\$45.3M	\$7.9M

SUMMARY OF HOUSING AND AMENITIES					
	0	-	-	-	-
Single Family Homes					
	105	-	35	33	37
Extended Stay Townhomes 750 sq. ft.					
	12	-	3	3	3
Vacation Rental					
	64	3	17	25	4
Guest Hotel 350 sq. ft.					
	3	-	1	1	-
Upgraded Amenities					
	2	1	-	-	1°
Guest Amenity					
	3	-	1	1	-
Kitchen					

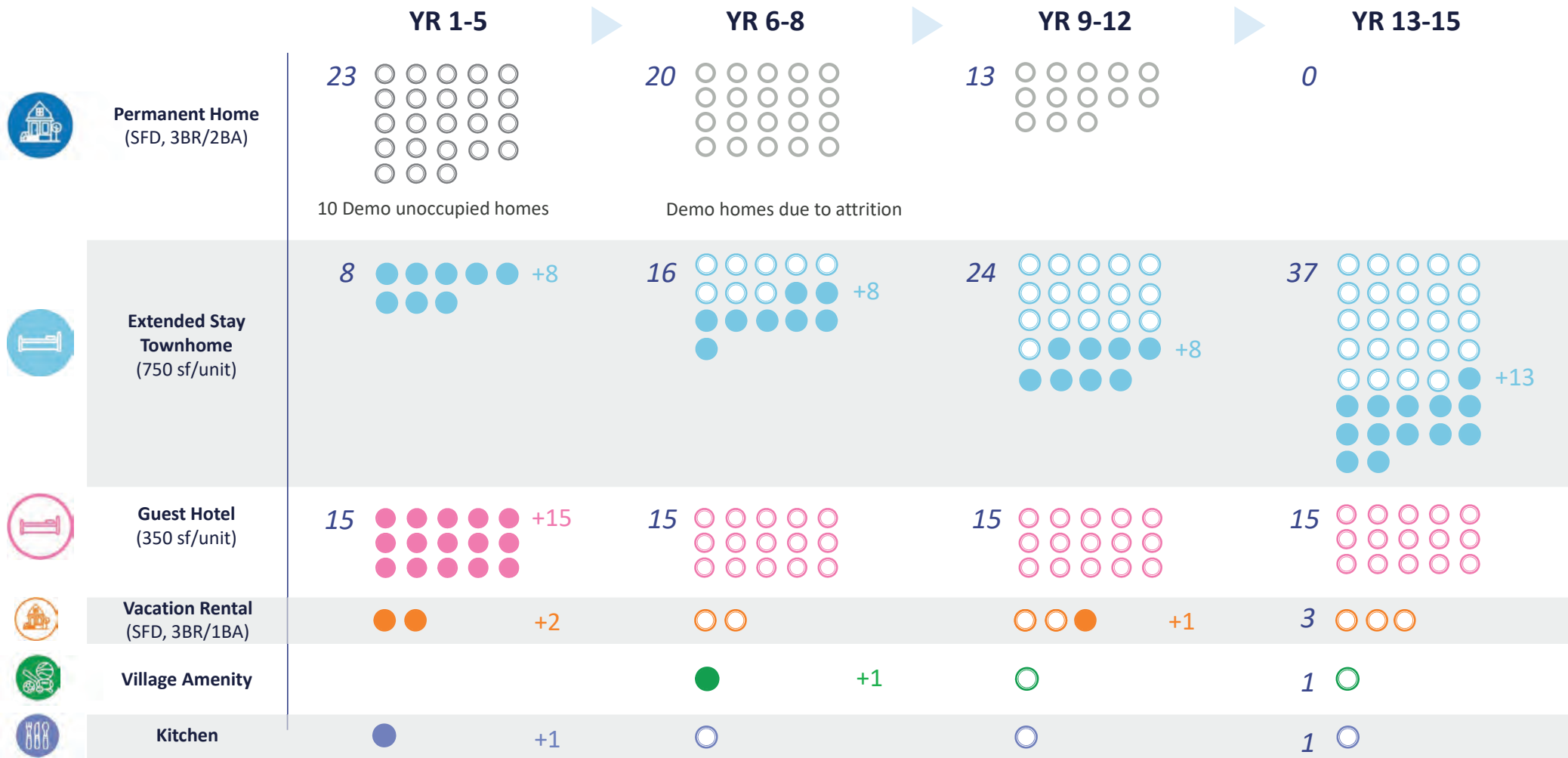
EAGLE MOUNTAIN VILLAGE (+HINDS): 100% EXTENDED STAY TOWNHOMES



IRON MOUNTAIN EXTENDED STAY CAMP: 100% EXTENDED STAY TOWNHOMES



GENE EXTENDED STAY CAMP: 100% EXTENDED STAY TOWNHOMES



THREE DESERT VILLAGES
 50% TOWNHOMES/50% SINGLE
 FAMILY HOMES
 105 HOUSING UNITS

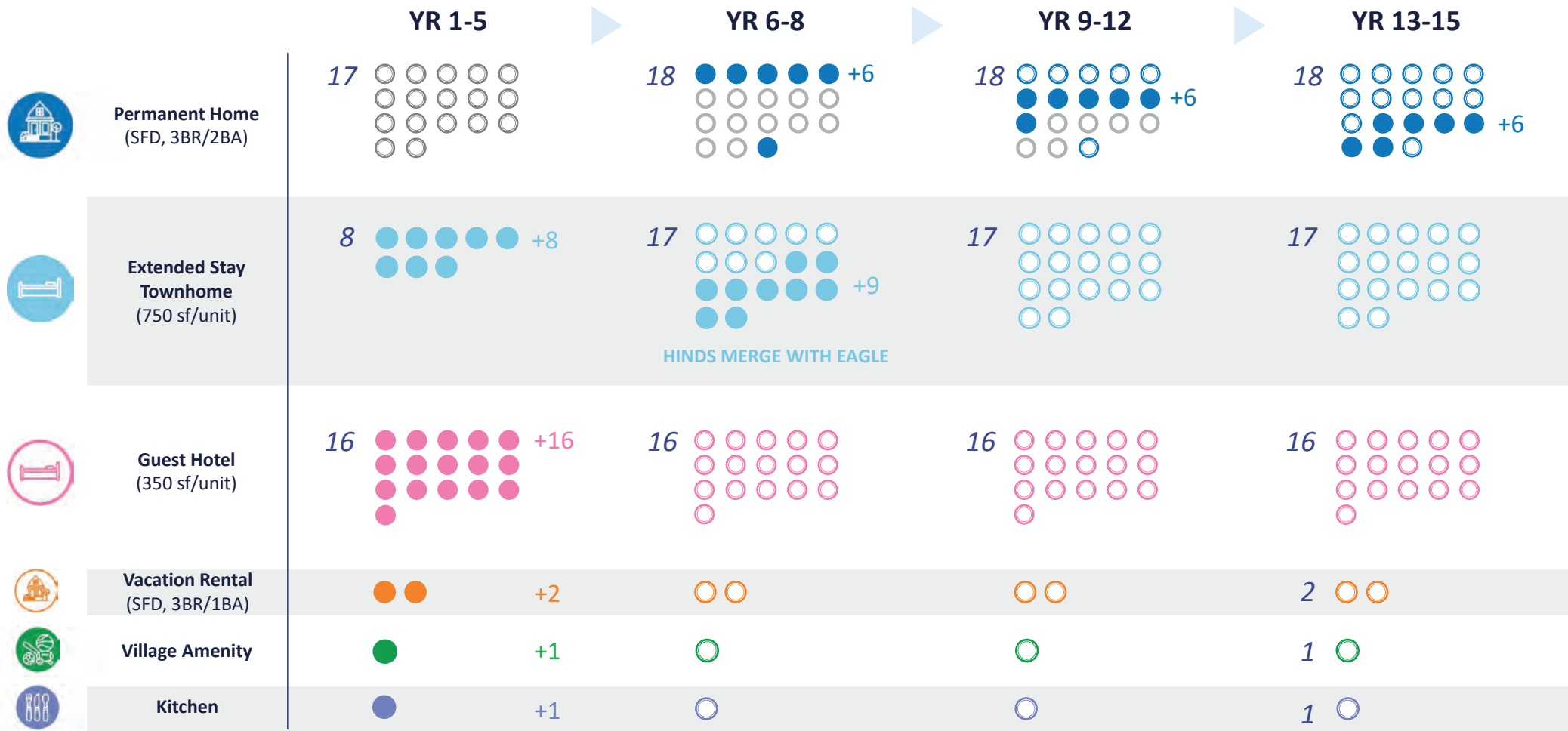


TOTAL COST	COST PER VILLAGE				
\$ 189.4M	\$2.4M	\$59.2M	\$59.1M	\$60.8M	\$7.9M

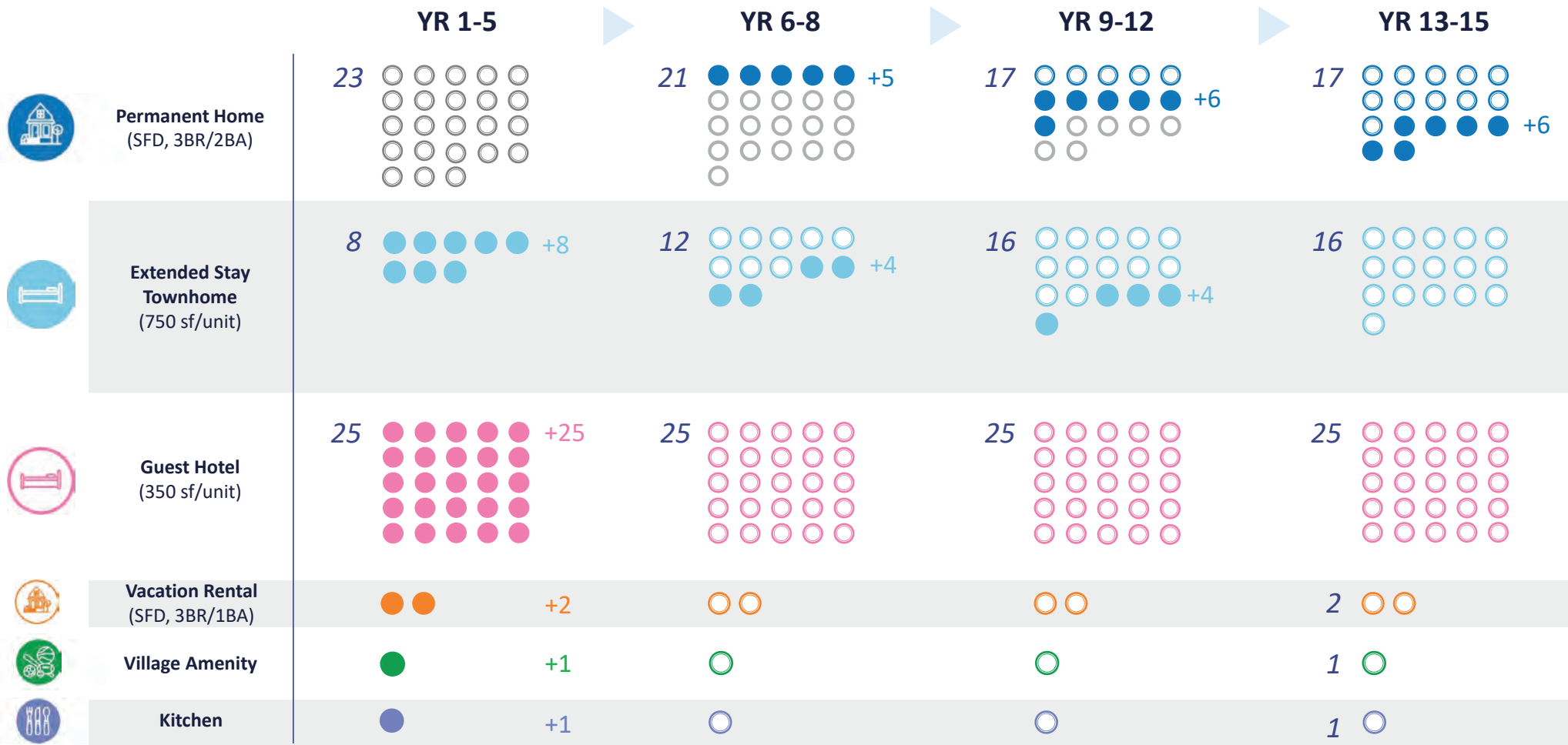
SUMMARY OF HOUSING AND AMENITIES

Single Family Homes	54	-	18	17	19	-
Extended Stay Condo 750 sq. ft.	53	-	17	16	18	-
Vacation Rental	9	-	2	2	2	3
Guest Hotel 350 sq. ft.	64	3	17	25	15	4
Upgraded Amenities	3	-	1	1	1	-
Guest Amenity	2	1	-	-	-	1
Kitchen	3	-	1	1	1	-

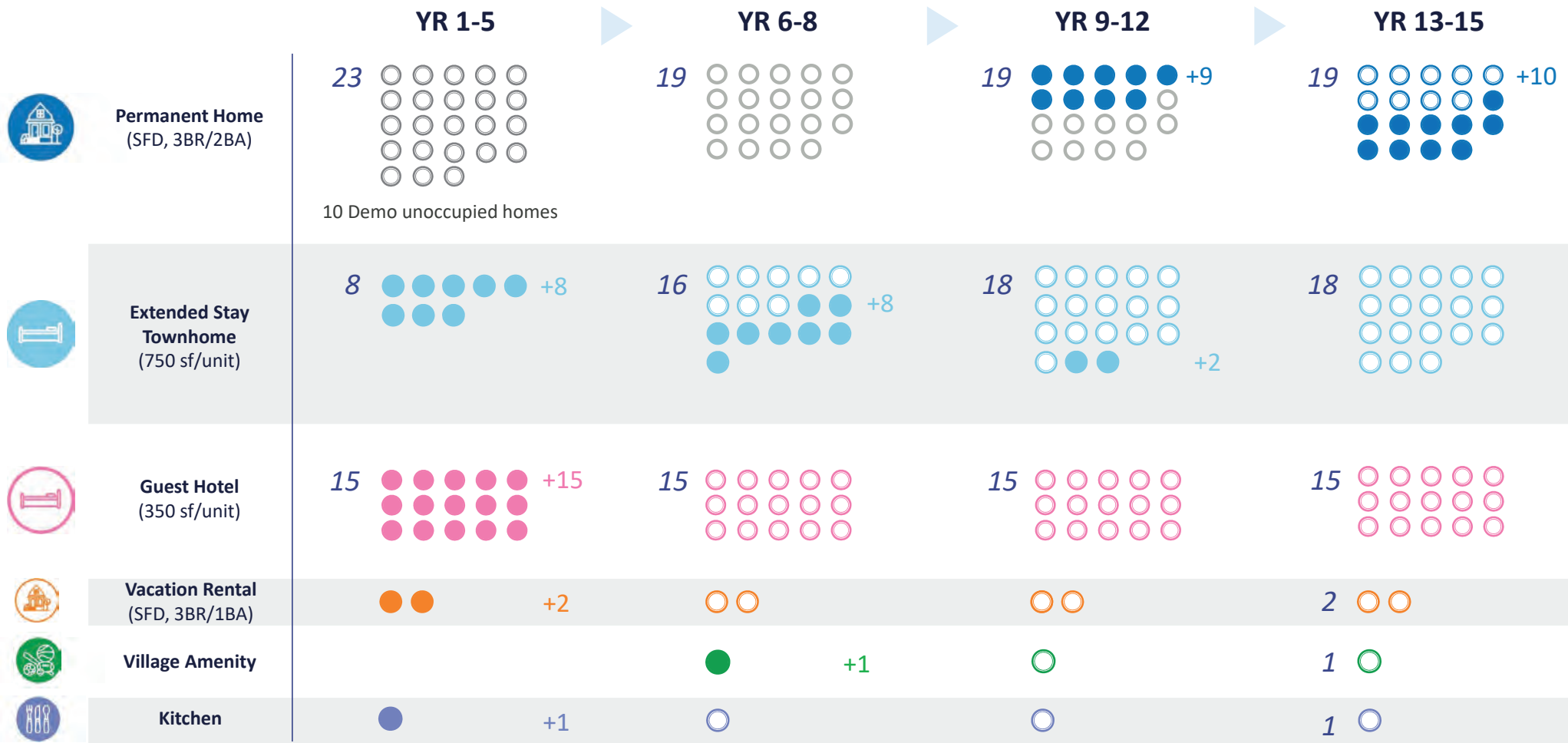
EAGLE MOUNTAIN VILLAGE (+HINDS): EXTENDED STAY TOWNHOME (50%) + SINGLE FAMILY HOMES (50%)



IRON MOUNTAIN VILLAGE: EXTENDED STAY CONDO (50%) + SINGLE FAMILY HOMES (50%)



GENE EXTENDED STAY CAMP: EXTENDED STAY CONDO (50%) + SINGLE FAMILY HOMES (50%)



THREE DESERT VILLAGES
100% SINGLE FAMILY HOMES
105 HOUSING UNITS

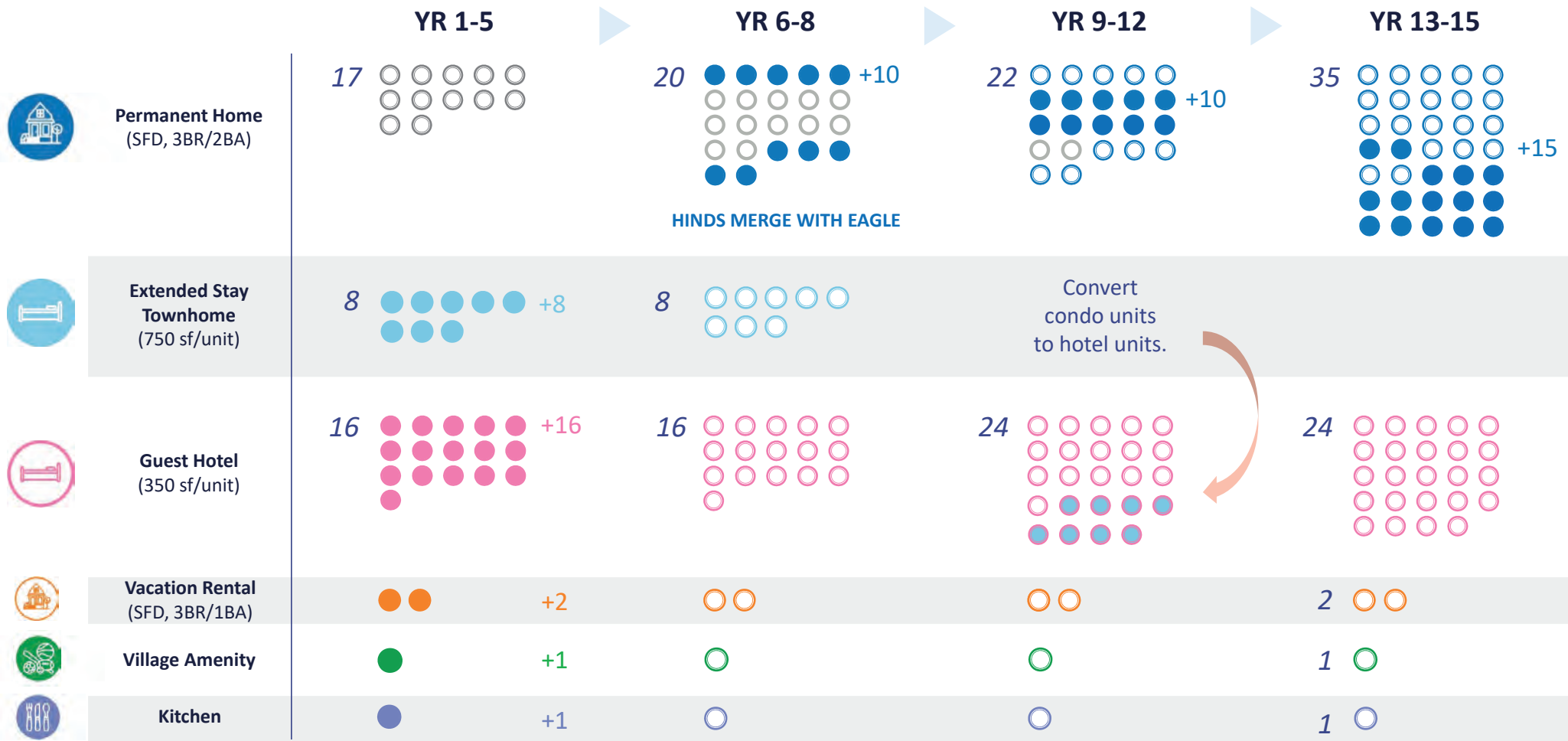


TOTAL COST	COST PER VILLAGE				
\$249.5M	\$2.4M	\$79.2M	\$78.3M	\$81.7M	\$7.9M

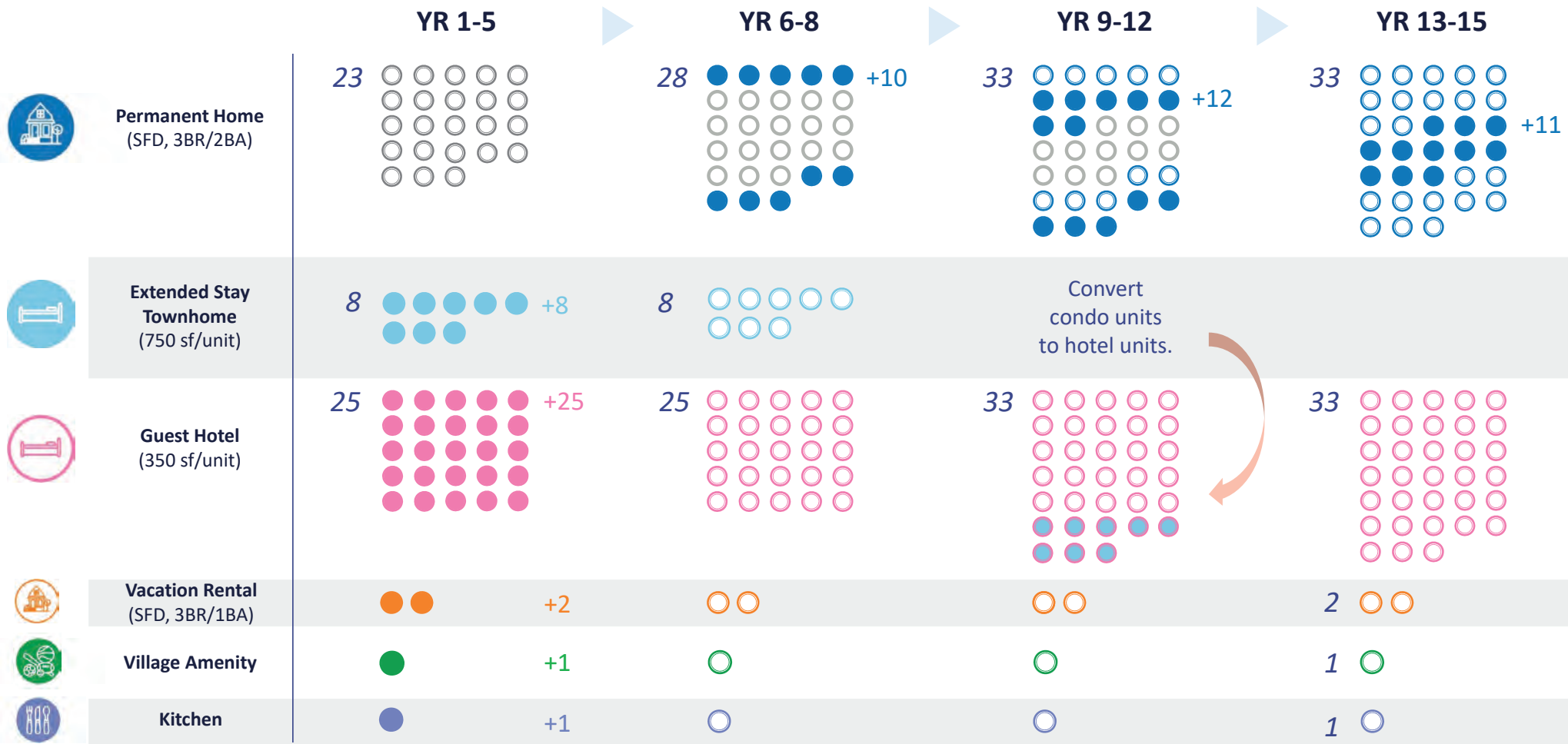
SUMMARY OF HOUSING AND AMENITIES

Single Family Homes	105	-	35	33	37	-
Extended Stay Condo 750 sq. ft.	24	-	8	8	8	-
Vacation Rental	9	-	2	2	2	3
Guest Hotel 350 sq. ft.	64	3	17	25	15	4
Upgraded Amenities	3	-	1	1	1	-
Guest Amenity	2	1	-	-	-	1
Kitchen	3	-	1	1	1	-

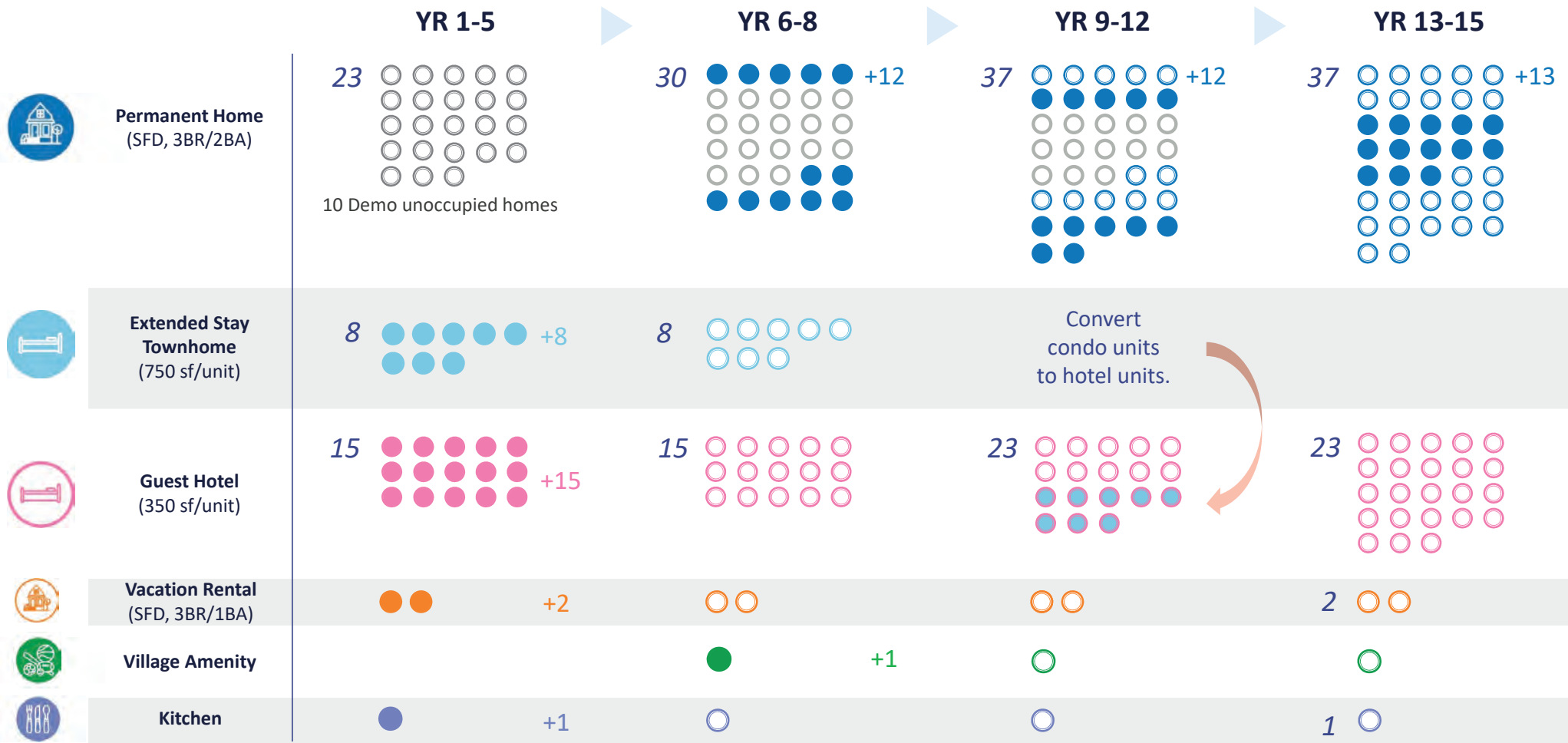
EAGLE MOUNTAIN VILLAGE (+HINDS): 100% SINGLE FAMILY HOMES



IRON MOUNTAIN VILLAGE: 100% SINGLE FAMILY HOMES



GENE EXTENDED STAY CAMP: 100% SINGLE FAMILY HOMES

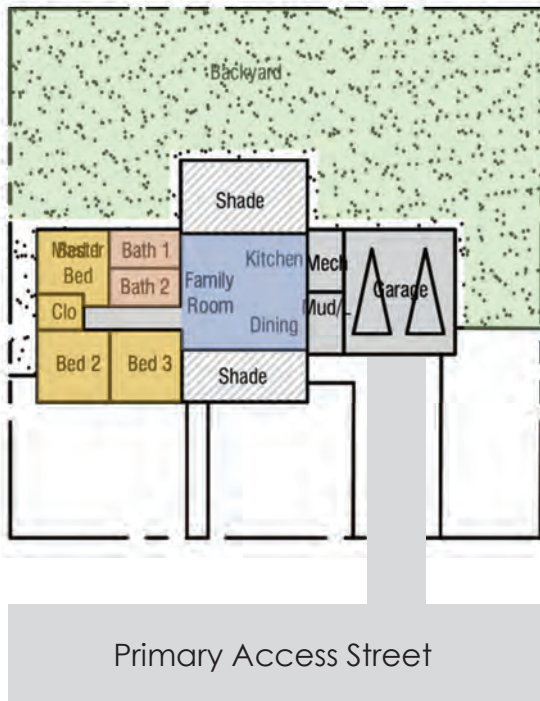


AMENITIES AND COSTS



PERMANENT HOMES

SINGLE-FAMILY DETACHED HOME



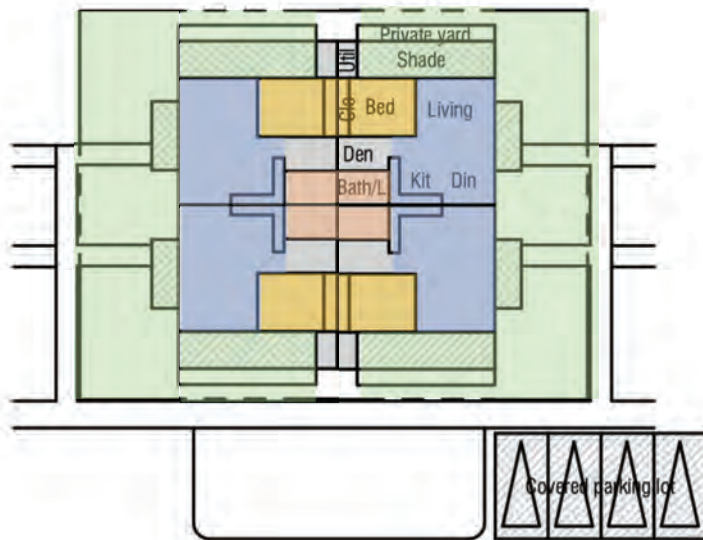
- **± \$ 1.5 M** per unit.
- **3 bd / 2 ba.**
- Attached 2 car garage.
- Covered patio.

- 2022 estimate based upon architectural drawings (1M)
- 2024 cost estimate (1.5M) based upon square footage costs of comparable construction types, landscape and utility runs to the house from the street



EXTENDED STAY TOWNHOME

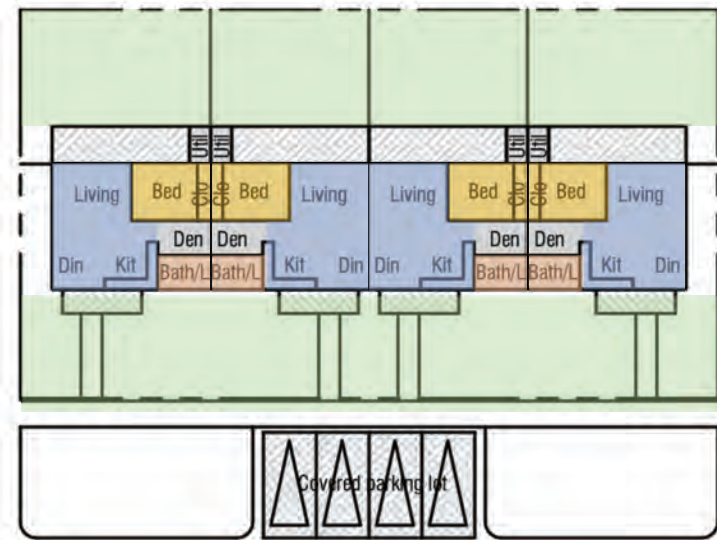
PINWHEEL TYPE



Primary Access Street

- ± **\$538,000** per unit.
- **1 bd / 1 ba.**
- Detached 1 car carport.

LINEAR TYPE

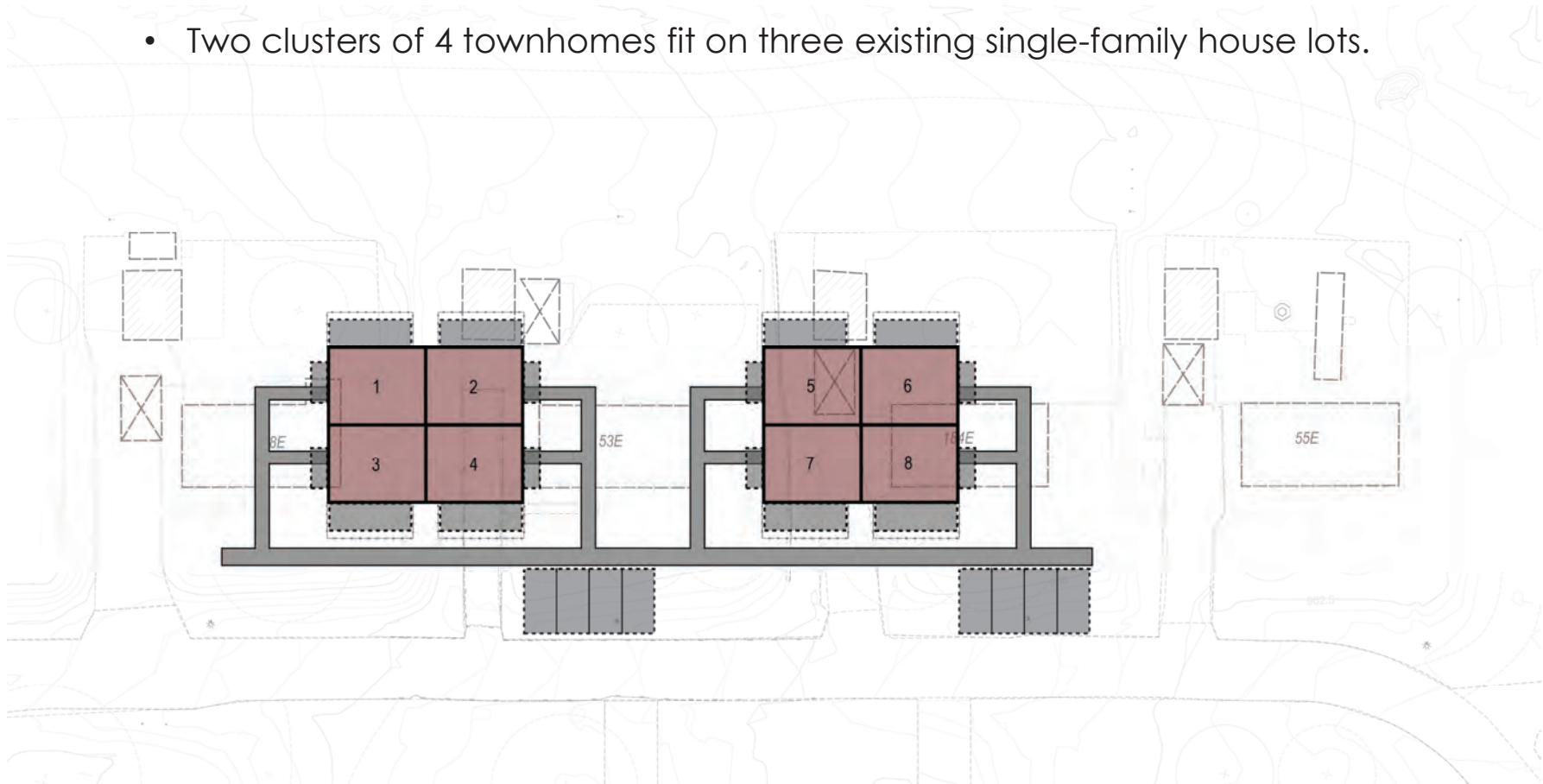


Primary Access Street

- ± **\$ 600,000** per unit.
- **1 bd / 1 ba.**
- Detached 1 car carport.

TOWNHOME TEST FIT IN EXISTING LOT

- Two clusters of 4 townhomes fit on three existing single-family house lots.





EXTENDED STAY CONDO

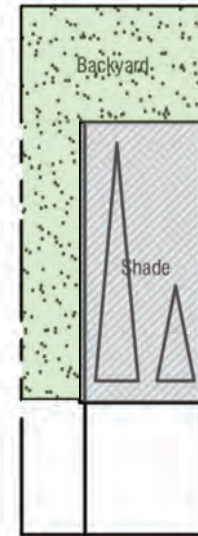
CASITA



Primary
Access Street

- ± \$ 633,000 per unit.
- 1 bd / 1 ba.
- Attached carport

RV PAD

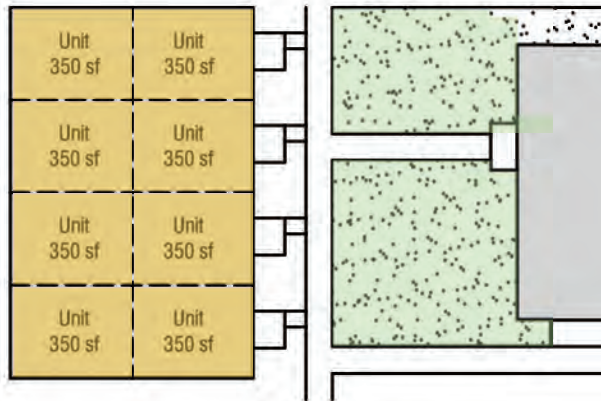


Primary
Access Street

- ± \$ 216,000 per unit.
- ± 2,000 SF RV PAD.
- Full hookups.



GUEST LODGE / HOTEL



- ± **\$ 250,000** per unit.
- ± **350 SF** per unit.
- Typical hotel unit layout without kitchenette.



GUEST AMENITY

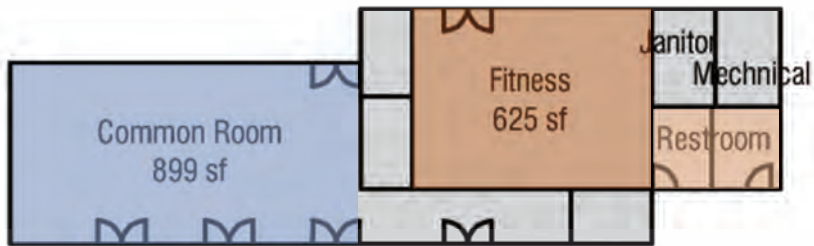


- ± **\$ 1.65 M** per facility.
- ± **2,000 SF** of building.
- Kitchenette, laundry, linen, office, small fitness, meeting room, janitorial, utility etc.



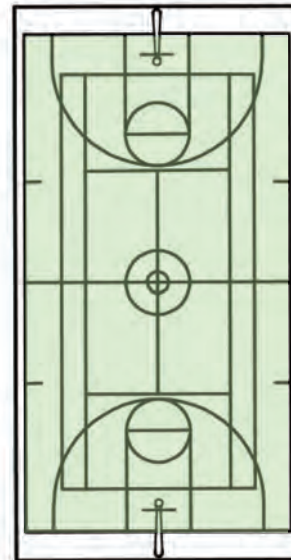
VILLAGE AMENITY: TOTAL COST = 4.4M

CLUB HOUSE



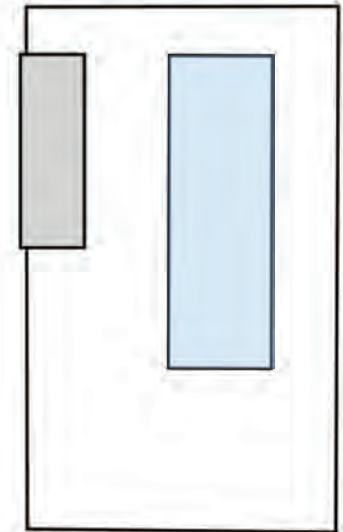
- ± \$ 2.1 M per facility.
- ± 2,500 SF of building.
- Fitness, common room, and utility etc.

OUTDOOR FENCED SPORT COURT



- ± \$ 465,000 per facility.
- Basketball and tennis court.

POOL W/ SHADE STRUCTURE

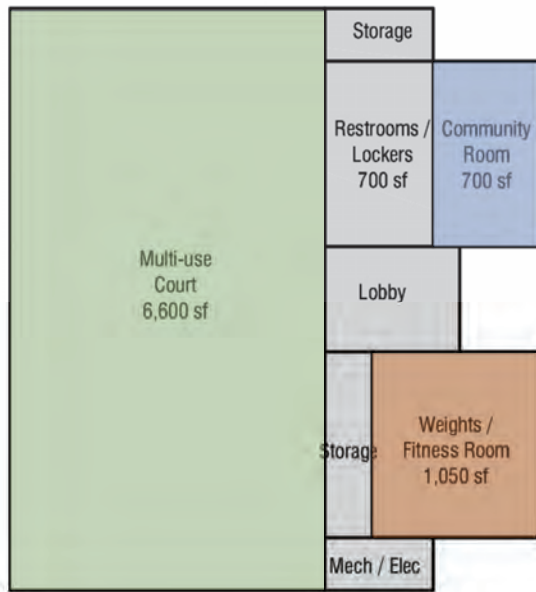


- ± \$ 1.8M per unit.



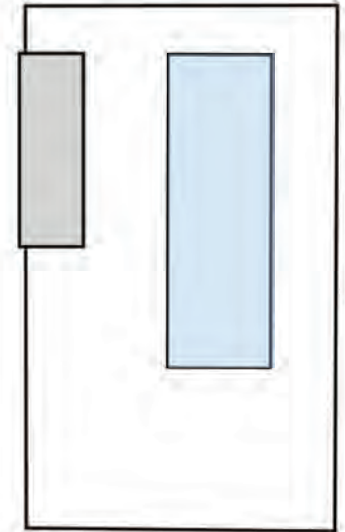
UPGRADED VILLAGE AMENITY: TOTAL COST 10.3M

MULTI-PURPOSE FITNESS COMPLEX



\$ 8.5 M per facility.
10,000 SF of building.
indoor soccer field, fitness,
and community room etc.

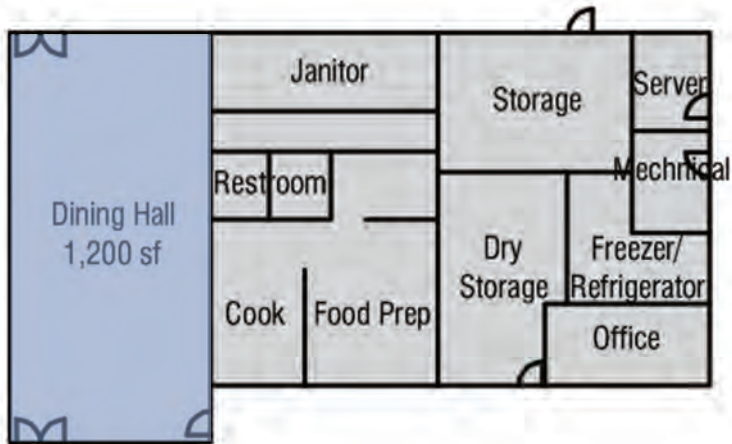
POOL W/ SHADE STRUCTURE



- **± \$ 1.8M** per unit.



KITCHEN / DINING



- ± **\$ 4.4 M** per facility.
- ± **4,000 SF** of building.

DETAILED ROM COSTS

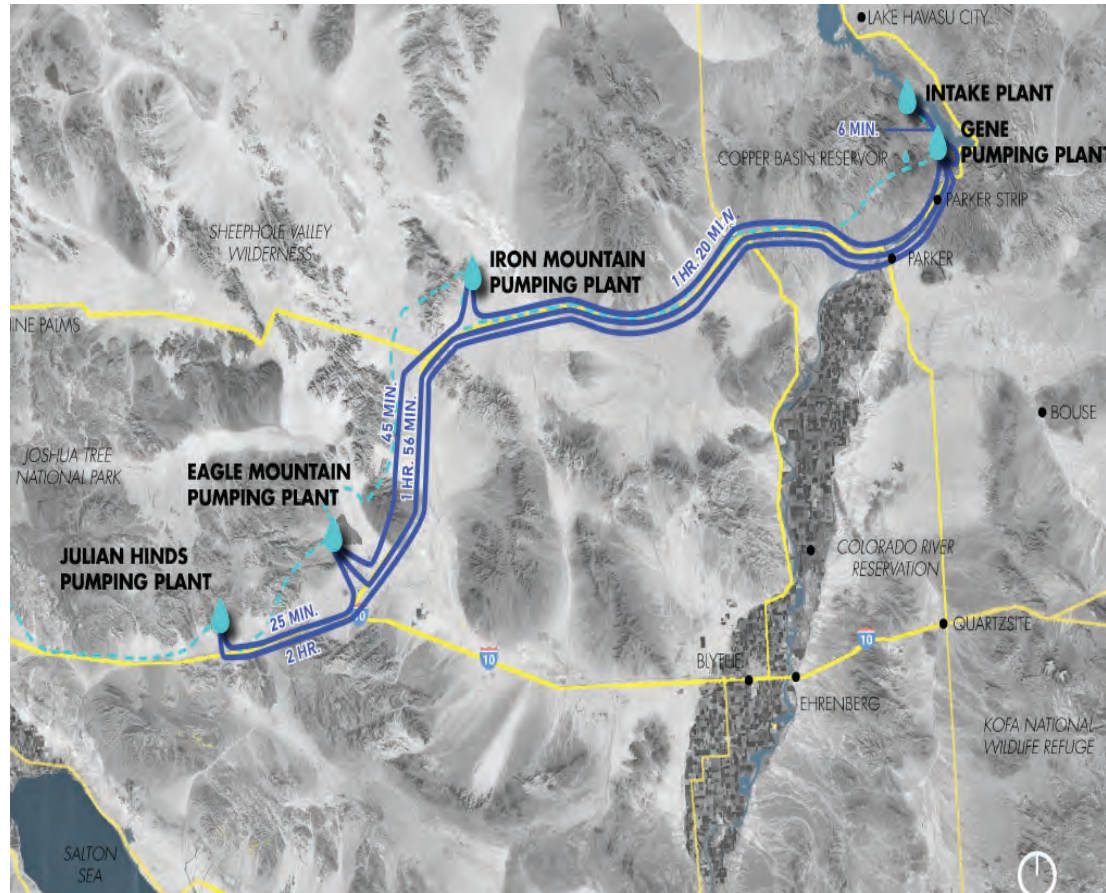
- ROUGH ORDER OF MAGNITUDE(ROM)
STATEMENT OF PROBABLE COST - REVISION 1, DECEMBER 2023 **144**
- ROUGH ORDER OF MAGNITUDE(ROM)
STATEMENT OF PROBABLE COST - REVISION 1, FEBRUARY 2024 **192**
- SITE COST FOR PHASED PROJECT **202**

MWD Community Planning Study

Rough Order of Magnitude (ROM) Statement of Probable Cost - Revision 1

December 28, 2023

23-01134.00



Prepared for RNT Architects



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INTRODUCTION

Basis of Estimate	<p>This Rough Order of Magnitude Statement of Probable Cost is based on the following information provided by RNT Architects on October 31, 2023 and discussions with the architect,</p> <ul style="list-style-type: none"> - Village Strategies for MWD housing and property improvements program at five existing desert facilities, based on the studies prepared by Civitas, dated October 26, 2023 - Summary of Village Strategies: Quantitative Measures prepared by Civitas, received on November 2, 2023 - Housing and Amenity cost models prepared by RNT, received on November 1, 2023 - RFI clarifications provided by RNT Architects on November 1, 2023 - Discussions with the design team
Estimate Format	A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.
Construction Schedule	A construction schedule to the above strategies is to be developed.
Method of Procurement	The estimate is based on the owner employing a Construction Manager who will prepare subcontractor bid packages and oversee the project
Bid Conditions	This estimate is based on competitive bid situations (minimum of 4 bidders) for all items of subcontracted work.
Basis For Quantities	Wherever possible, this estimate has been based upon the actual measurement of different items of work. For the remaining items, parametric measurements were used in conjunction with other projects of a similar nature.
Basis for Unit Costs	Unit costs as contained herein are based on current bid prices in Blythe, CA. Sub overheads and profit are included in each line item unit cost. Their overhead and profit covers each sub's cost for labor burden, materials, and equipment, sales taxes, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.
Sources for Pricing	This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design. These consultants have used pricing data from Cumming's database for construction, updated to reflect current conditions in Blythe, CA.
Key Exclusions	<p>The following items have been excluded from our estimate:</p> <ul style="list-style-type: none"> - Professional fees, inspections and testing - Plan check fees and building permit fees - Escalation - Land costs - Construction contingency costs - Accommodation and transport for construction crew to complete the job - Off-hours work - Work to the existing infrastructure - Move management / relocation costs - Owner supplied equipment and furniture - Hazardous materials remediation or removal

INTRODUCTION

Items Affecting Cost Estimate

Items which may change the estimated construction cost include, but are not limited to:

- Modifications to the scope of work included in this estimate.
- Unforeseen sub-surface conditions.
- Restrictive technical specifications or excessive contract conditions.
- Any specified item of material or product that cannot be obtained from 3 sources.
- Any other non-competitive bid situations.
- Bids delayed beyond the projected schedule.

Statement of Probable Cost

Cumming has no control over the cost of labor and materials, the general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions. This estimate is made on the basis of the experience, qualifications, and best judgement of a professional consultant familiar with the construction industry. Cumming, however, cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent cost estimates.

Cumming's staff of professional cost consultants has prepared this estimate in accordance with generally accepted principles and practices. This staff is available to discuss its contents with any interested party.

Pricing reflects probable construction costs obtainable in the project locality on the target dates specified and is a determination of fair market value for the construction of this project. The estimate is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all sub and general contractors with a range of 3 - 4 bidders for all items of work. Experience and research indicates that a fewer number of bidders may result in higher bids. Conversely, an increased number of bidders may result in more competitive bid day responses.

Recommendations

Cumming recommends that the Owner and the Architect carefully review this entire document to ensure it reflects their design intent. Requests for modifications of any apparent errors or omissions to this document must be made to Cumming within ten days of receipt of this estimate. Otherwise, it will be assumed that its contents have been reviewed and accepted. If the project is over budget or there are unresolved budget issues, alternate systems / schemes should be evaluated before proceeding into further design phases.

It is recommended that there are preparations of further cost estimates throughout design by Cumming to determine overall cost changes since the preparation of this preliminary estimate. These future estimates will have detailed breakdowns indicating materials by type, kind, and size, priced by their respective units of measure.

SUMMARY

Element		Total
Scenario 1 - Four Villages	\$\$\$	\$270,320,000
Scenario 2 - Three Villages	\$\$\$\$	\$288,517,600
Scenario 3 - Two Villages	\$\$\$\$\$	\$288,735,600
Scenario 4 - Two Desert Villages & De-Commission Gene Village	\$	\$237,255,000
Scenario 5 - One Western Village	\$\$\$\$\$	\$289,057,000
Scenario 5B - One Village at Gene	\$\$\$\$\$\$	\$297,977,000
Scenario 6 - One New Western Village	\$\$\$\$\$\$\$	\$328,927,000
Scenario 7 - No Villages	\$\$	\$254,144,000
Scenario 7B - No Villages	\$\$\$\$\$\$\$	\$329,994,000

SUMMARY MATRIX

	Scenario 1 - Four Villages	Scenario 2 - Three Villages	Scenario 3 - Two Villages	Scenario 4 - Two Desert Villages & De-Commission Gene Village	Scenario 5 - One Western Village	Scenario 5B - One Village at Gene	Scenario 6 - One New Western Village	Scenario 7 - No Villages	Scenario 7B - No Villages
Element	Total	Total	Total	Total	Total	Total	Total	Total	Total
01 Permanent Housing	\$136,500,000	\$136,500,000	\$136,500,000	\$58,500,000	\$88,400,000	\$89,700,000	\$88,400,000		
02 Temporary / On-Call / Guest Lodges	\$37,100,000	\$38,160,000	\$39,220,000	\$39,220,000	\$40,280,000	\$49,820,000	\$41,340,000	\$37,100,000	\$111,300,000
03 Kitchen / Dining Facilities	\$14,040,000	\$14,040,000	\$18,480,000	\$17,325,000	\$18,720,000	\$11,550,000	\$18,480,000	\$23,100,000	\$23,400,000
04 Village Amenity Packages	\$72,180,000	\$59,930,000	\$39,340,000	\$37,060,000	\$25,157,000	\$25,157,000	\$25,157,000	\$72,180,000	\$72,180,000
05 Guest Amenity Packages	\$10,500,000	\$10,800,000	\$11,100,000	\$11,100,000	\$8,850,000	\$14,100,000	\$11,400,000	\$300,000	\$600,000
06 Infrastructure Cost		\$29,087,600	\$44,095,600	\$74,050,000	\$107,650,000	\$107,650,000	\$144,150,000	\$121,464,000	\$122,514,000
Subtotal Cost	\$270,320,000	\$288,517,600	\$288,735,600	\$237,255,000	\$289,057,000	\$297,977,000	\$328,927,000	\$254,144,000	\$329,994,000
	\$ \$ \$	\$ \$ \$ \$	\$ \$ \$ \$ \$	\$	\$ \$ \$ \$ \$ \$	\$ \$ \$ \$ \$ \$ \$	\$ \$ \$ \$ \$ \$ \$ \$	\$ \$	\$ \$ \$ \$ \$ \$ \$ \$ \$

Scenario 1 - Four Villages

SUMMARY - SCENARIO 1 - FOUR VILLAGES

Element	Total
01 Permanent Housing	\$136,500,000
02 Temporary / On-Call / Guest Lodges	\$37,100,000
03 Kitchen / Dining Facilities	\$14,040,000
04 Village Amenity Packages	\$72,180,000
05 Guest Amenity Packages	\$10,500,000
06 Infrastructure Cost	
TOTAL ESTIMATED CONSTRUCTION COST	\$270,320,000

DETAIL ELEMENTS - SCENARIO 1 - FOUR VILLAGES

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Hinds 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	15	ea	\$1,300,000.00	\$19,500,000
Eagle Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	20	ea	\$1,300,000.00	\$26,000,000
Iron Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	33	ea	\$1,300,000.00	\$42,900,000
Gene 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	37	ea	\$1,300,000.00	\$48,100,000
Total - Permanent Housing				\$136,500,000
02 Temporary / On-Call / Guest Lodges				
Gene Guest lodges @ 350SF each unit, single-story	26	ea	\$530,000.00	\$13,780,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	25	ea	\$530,000.00	\$13,250,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$37,100,000
03 Kitchen / Dining Facilities				
Hinds Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Eagle Mountain Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Iron Mountain Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Total - Kitchen / Dining Facilities				\$14,040,000

DETAIL ELEMENTS - SCENARIO 1 - FOUR VILLAGES

Element	Quantity	Unit	Unit Cost	Total
04 Village Amenity Packages				
Hinds - Area: 370,000 SF	1	ea	\$12,250,000.00	\$12,250,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	226,775	sf		
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	590,825	sf		
Iron Mountain - Area: 770,000 SF	1	ea	\$20,590,000.00	\$20,590,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	474,025	sf		
Gene - Area: 960,000 SF	1	ea	\$22,870,000.00	\$22,870,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	635,675	sf		
Total - Village Amenity Packages				\$72,180,000
05 Guest Amenity Packages in the lodge				
Eagle Mountain: 17 Guest Lodges	1	ea	\$2,550,000.00	\$2,550,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 25 Guest Lodges	1	ea	\$3,750,000.00	\$3,750,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

DETAIL ELEMENTS - SCENARIO 1 - FOUR VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Gene: 26 Guest Lodges	1	ea	\$3,900,000.00	\$3,900,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages **\$10,500,000**

06 Infrastructure Cost

No scope / work anticipated

Total - Infrastructure Cost

Scenario 2 - Three Villages

SUMMARY - SCENARIO 2 - THREE VILLAGES

Element	Total
01 Permanent Housing	\$136,500,000
02 Temporary / On-Call / Guest Lodges	\$38,160,000
03 Kitchen / Dining Facilities	\$14,040,000
04 Village Amenity Packages	\$59,930,000
05 Guest Amenity Packages	\$10,800,000
06 Infrastructure Cost	\$29,087,600
TOTAL ESTIMATED CONSTRUCTION COST	\$288,517,600

DETAIL ELEMENTS - SCENARIO 2 - THREE VILLAGES

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Eagle Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	35	ea	\$1,300,000.00	\$45,500,000
Iron Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	33	ea	\$1,300,000.00	\$42,900,000
Gene 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	37	ea	\$1,300,000.00	\$48,100,000
Total - Permanent Housing				\$136,500,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	25	ea	\$530,000.00	\$13,250,000
Gene Guest lodges @ 350SF each unit, single-story	26	ea	\$530,000.00	\$13,780,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$38,160,000
03 Kitchen / Dining Facilities				
Eagle Mountain Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Iron Mountain Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Gene Commercial grade kitchen and dining service, small	4,000	sf	\$1,170.00	\$4,680,000
Total - Kitchen / Dining Facilities				\$14,040,000

DETAIL ELEMENTS - SCENARIO 2 - THREE VILLAGES

Element	Quantity	Unit	Unit Cost	Total
04 Village Amenity Packages				
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	470,825	sf		
Iron Mountain - Area: 770,000 SF	1	ea	\$20,590,000.00	\$20,590,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	477,150	sf		
Gene - Area: 960,000 SF	1	ea	\$22,870,000.00	\$22,870,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	634,800	sf		
Total - Village Amenity Packages			\$59,930,000	
05 Guest Amenity Packages in the lodge				
Hinds: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Eagle Mountain: 17 Guest Lodges	1	ea	\$2,550,000.00	\$2,550,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 25 Guest Lodges	1	ea	\$3,750,000.00	\$3,750,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

DETAIL ELEMENTS - SCENARIO 2 - THREE VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Gene: 26 Guest Lodges	1	ea	\$3,900,000.00	\$3,900,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$10,800,000
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06 Infrastructure Cost

Eagle Mountain				
New underground utilities	397,100	sf	\$15.00	\$5,956,500
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	397,100	sf	\$6.00	\$2,382,600
Earthwork, hardscape, landscape and misc. specialties	397,100	sf	\$35.00	\$13,898,500

Total - Infrastructure Cost				\$29,087,600
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Scenario 3 - Two Villages

SUMMARY - SCENARIO 3 - TWO VILLAGES

Element	Total
01 Permanent Housing	\$136,500,000
02 Temporary / On-Call / Guest Lodges	\$39,220,000
03 Kitchen / Dining Facilities	\$18,480,000
04 Village Amenity Packages	\$39,340,000
05 Guest Amenity Packages	\$11,100,000
06 Infrastructure Cost	\$44,095,600
TOTAL ESTIMATED CONSTRUCTION COST	\$288,735,600

DETAIL ELEMENTS - SCENARIO 3 - TWO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Eagle Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	68	ea	\$1,300,000.00	\$88,400,000
Gene 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	37	ea	\$1,300,000.00	\$48,100,000
Total - Permanent Housing				\$136,500,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	27	ea	\$530,000.00	\$14,310,000
Gene Guest lodges @ 350SF each unit, single-story	26	ea	\$530,000.00	\$13,780,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$39,220,000
03 Kitchen / Dining Facilities				
Eagle Mountain Commercial grade of kitchen and dining service, large	8,000	sf	\$1,155.00	\$9,240,000
Gene Commercial grade of kitchen and dining service, large	8,000	sf	\$1,155.00	\$9,240,000
Total - Kitchen / Dining Facilities				\$18,480,000
04 Village Amenity Packages				
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		

DETAIL ELEMENTS - SCENARIO 3 - TWO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Shade trees and landscaping	210,825	sf		
Gene - Area: 960,000 SF	1	ea	\$22,870,000.00	\$22,870,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	627,675	sf		
Total - Village Amenity Packages				\$39,340,000

05 Guest Amenity Packages in the lodge

Hinds: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Eagle Mountain: 17 Guest Lodges	1	ea	\$2,550,000.00	\$2,550,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 25 Guest Lodges	1	ea	\$4,050,000.00	\$4,050,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Gene: 26 Guest Lodges	1	ea	\$3,900,000.00	\$3,900,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Total - Guest Amenity Packages				\$11,100,000

DETAIL ELEMENTS - SCENARIO 3 - TWO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
06 Infrastructure Cost				
Eagle Mountain				
New underground utilities	665,100	sf	\$15.00	\$9,976,500
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	665,100	sf	\$6.00	\$3,990,600
Earthwork, hardscape, landscape and misc. specialties	665,100	sf	\$35.00	\$23,278,500
Total - Infrastructure Cost				\$44,095,600

Scenario 4 - Two Desert Villages & De-Commission Gene Village

SUMMARY - SCENARIO 4 - TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE

Element	Total
01 Permanent Housing	\$58,500,000
02 Temporary / On-Call / Guest Lodges	\$39,220,000
03 Kitchen / Dining Facilities	\$17,325,000
04 Village Amenity Packages	\$37,060,000
05 Guest Amenity Packages	\$11,100,000
06 Infrastructure Cost	\$74,050,000
TOTAL ESTIMATED CONSTRUCTION COST	\$237,255,000

DETAIL ELEMENTS - SCENARIO 4 - TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Eagle Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	12	ea	\$1,300,000.00	\$15,600,000
Iron Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	33	ea	\$1,300,000.00	\$42,900,000
Total - Permanent Housing				\$58,500,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	25	ea	\$530,000.00	\$13,250,000
Gene Guest lodges @ 350SF each unit, single-story	28	ea	\$530,000.00	\$14,840,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$39,220,000
03 Kitchen / Dining Facilities				
Eagle Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Iron Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Gene Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Total - Kitchen / Dining Facilities				\$17,325,000
04 Village Amenity Packages				
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		

DETAIL ELEMENTS - SCENARIO 4 - TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE

Element	Quantity	Unit	Unit Cost	Total
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	653,825	sf		
Iron Mountain - Area: 770,000 SF	1	ea	\$20,590,000.00	\$20,590,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	473,025	sf		

Total - Village Amenity Packages				\$37,060,000
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05 Guest Amenity Packages in the lodge

Hinds: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Eagle Mountain: 17 Guest Lodges	1	ea	\$2,550,000.00	\$2,550,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 25 Guest Lodges	1	ea	\$3,750,000.00	\$3,750,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Gene: 28 Guest Lodges	1	ea	\$4,200,000.00	\$4,200,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$11,100,000
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DETAIL ELEMENTS - SCENARIO 4 - TWO DESERT VILLAGES & DE-COMMISSION GENE VILLAGE

Element	Quantity	Unit	Unit Cost	Total
06 Infrastructure Cost				
Eagle Mountain				
New underground utilities	1,200,000	sf	\$15.00	\$18,000,000
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	1,200,000	sf	\$6.00	\$7,200,000
Earthwork, hardscape, landscape and misc. specialties	1,200,000	sf	\$35.00	\$42,000,000
Total - Infrastructure Cost				\$74,050,000

Scenario 5 - One Western Village

SUMMARY - SCENARIO 5 - ONE WESTERN VILLAGE

Element	Total
01 Permanent Housing	\$88,400,000
02 Temporary / On-Call / Guest Lodges	\$40,280,000
03 Kitchen / Dining Facilities	\$18,720,000
04 Village Amenity Packages	\$25,157,000
05 Guest Amenity Packages	\$8,850,000
06 Infrastructure Cost	\$107,650,000
TOTAL ESTIMATED CONSTRUCTION COST	\$289,057,000

DETAIL ELEMENTS - SCENARIO 5 - ONE WESTERN VILLAGE

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Eagle Mountain 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	68	ea	\$1,300,000.00	\$88,400,000
Total - Permanent Housing				\$88,400,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	27	ea	\$530,000.00	\$14,310,000
Gene Guest lodges @ 350SF each unit, single-story	28	ea	\$530,000.00	\$14,840,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$40,280,000
03 Kitchen / Dining Facilities				
Eagle Mountain Commercial grade of kitchen and dining service, large	8,000	sf	\$1,170.00	\$9,360,000
Gene Commercial grade of kitchen and dining service, large	8,000	sf	\$1,170.00	\$9,360,000
Total - Kitchen / Dining Facilities				\$18,720,000
04 Village Amenity Packages				
Eagle Mountain - Area: 780,000 SF	1	ea	\$25,157,000.00	\$25,157,000
Climate controlled indoor fitness complex	10,000	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	209,550	sf		
Total - Village Amenity Packages				\$25,157,000

DETAIL ELEMENTS - SCENARIO 5 - ONE WESTERN VILLAGE

Element	Quantity	Unit	Unit Cost	Total
05 Guest Amenity Packages in the lodge				
Hinds: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 27 Guest Lodges	1	ea	\$4,050,000.00	\$4,050,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Gene: 28 Guest Lodges	1	ea	\$4,200,000.00	\$4,200,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$8,850,000
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06 Infrastructure Cost

Eagle Mountain				
New underground utilities	1,800,000	sf	\$15.00	\$27,000,000
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	1,800,000	sf	\$6.00	\$10,800,000
Earthwork, hardscape, landscape and misc. specialties	1,800,000	sf	\$35.00	\$63,000,000

Total - Infrastructure Cost				\$107,650,000
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Scenario 5B - One Village at Gene

SUMMARY - SCENARIO 5B - ONE VILLAGE AT GENE

Element	Total
01 Permanent Housing	\$89,700,000
02 Temporary / On-Call / Guest Lodges	\$49,820,000
03 Kitchen / Dining Facilities	\$11,550,000
04 Village Amenity Packages	\$25,157,000
05 Guest Amenity Packages	\$14,100,000
06 Infrastructure Cost	\$107,650,000
TOTAL ESTIMATED CONSTRUCTION COST	\$297,977,000

DETAIL ELEMENTS - SCENARIO 5B - ONE VILLAGE AT GENE

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
Gene 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	69	ea	\$1,300,000.00	\$89,700,000
Total - Permanent Housing				\$89,700,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	8	ea	\$530,000.00	\$4,240,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	25	ea	\$530,000.00	\$13,250,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	33	ea	\$530,000.00	\$17,490,000
Gene Guest lodges @ 350SF each unit, single-story	26	ea	\$530,000.00	\$13,780,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$49,820,000
03 Kitchen / Dining Facilities				
Eagle Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Gene Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Total - Kitchen / Dining Facilities				\$11,550,000
04 Village Amenity Packages				
Gene - Area: 960,000 SF	1	ea	\$25,157,000.00	\$25,157,000
Climate controlled indoor fitness complex	10,000	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	378,275	sf		
Total - Village Amenity Packages				\$25,157,000

DETAIL ELEMENTS - SCENARIO 5B - ONE VILLAGE AT GENE

Element	Quantity	Unit	Unit Cost	Total
05 Guest Amenity Packages in the lodge				
Hinds: 8 Guest Lodges	1	ea	\$1,200,000.00	\$1,200,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Eagle Mountain: 25 Guest Lodges	1	ea	\$3,750,000.00	\$3,750,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 33 Guest Lodges	1	ea	\$4,950,000.00	\$4,950,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Gene: 26 Guest Lodges	1	ea	\$3,900,000.00	\$3,900,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$14,100,000
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06 Infrastructure Cost

Gene				
New underground utilities	1,800,000	sf	\$15.00	\$27,000,000
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	1,800,000	sf	\$6.00	\$10,800,000
Earthwork, hardscape, landscape and misc. specialties	1,800,000	sf	\$35.00	\$63,000,000

Total - Infrastructure Cost				\$107,650,000
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Scenario 6 - One New Western Village

SUMMARY - SCENARIO 6 - ONE NEW WESTERN VILLAGE

Element	Total
01 Permanent Housing	\$88,400,000
02 Temporary / On-Call / Guest Lodges	\$41,340,000
03 Kitchen / Dining Facilities	\$18,480,000
04 Village Amenity Packages	\$25,157,000
05 Guest Amenity Packages	\$11,400,000
06 Infrastructure Cost	\$144,150,000
TOTAL ESTIMATED CONSTRUCTION COST	\$328,927,000

DETAIL ELEMENTS - SCENARIO 6 - ONE NEW WESTERN VILLAGE

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
New West Village 3bed/2bath incl. 2 car garage, 1,350SF each unit, single-story	68	ea	\$1,300,000.00	\$88,400,000
Total - Permanent Housing				\$88,400,000
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	27	ea	\$530,000.00	\$14,310,000
Gene Guest lodges @ 350SF each unit, single-story	28	ea	\$530,000.00	\$14,840,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
New West Village Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$41,340,000
03 Kitchen / Dining Facilities				
New West Village Commercial grade of kitchen and dining service, large	8,000	sf	\$1,155.00	\$9,240,000
Gene Commercial grade of kitchen and dining service, large	8,000	sf	\$1,155.00	\$9,240,000
Total - Kitchen / Dining Facilities				\$18,480,000
04 Village Amenity Packages				
New West Village - Area: 1,056,000 SF	1	ea	\$25,157,000.00	\$25,157,000
Climate controlled indoor fitness complex	10,000	sf		
Outdoor shade structure in common area	1	ea		
Playground	2,500	sf		
Shade trees and landscaping	487,675	sf		
Total - Village Amenity Packages				\$25,157,000

DETAIL ELEMENTS - SCENARIO 6 - ONE NEW WESTERN VILLAGE

Element	Quantity	Unit	Unit Cost	Total
05 Guest Amenity Packages in the lodge				
Hinds: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Eagle Mountain: 17 Guest Lodges	1	ea	\$2,550,000.00	\$2,550,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Iron Mountain: 27 Guest Lodges	1	ea	\$4,050,000.00	\$4,050,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Gene: 28 Guest Lodges	1	ea	\$4,200,000.00	\$4,200,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		
Total - Guest Amenity Packages				\$11,400,000

06 Infrastructure Cost

New West Village				
New underground utilities	1,800,000	sf	\$30.00	\$54,000,000
New stormwater management, incl. UG detention	1,800,000	sf	\$5.00	\$9,000,000
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	1,800,000	sf	\$6.00	\$10,800,000
Environmental mitigation	1	ls	\$500,000.00	\$500,000
Earthwork, hardscape, landscape and misc specialties	1,800,000	sf	\$35.00	\$63,000,000
Total - Infrastructure Cost				\$144,150,000

Scenario 7 - No Villages

SUMMARY - SCENARIO 7 - NO VILLAGES

Element	Total
01 Permanent Housing	
02 Temporary / On-Call / Guest Lodges	\$37,100,000
03 Kitchen / Dining Facilities	\$23,100,000
04 Village Amenity Packages	\$72,180,000
05 Guest Amenity Packages	\$300,000
06 Infrastructure Cost	\$121,464,000
TOTAL ESTIMATED CONSTRUCTION COST	\$254,144,000

DETAIL ELEMENTS - SCENARIO 7 - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
No scope / work anticipated				
Total - Permanent Housing				
02 Temporary / On-Call / Guest Lodges				
Eagle Mountain Guest lodges @ 350SF each unit, single-story	17	ea	\$530,000.00	\$9,010,000
Iron Mountain Guest lodges @ 350SF each unit, single-story	25	ea	\$530,000.00	\$13,250,000
Gene Guest lodges @ 350SF each unit, single-story	26	ea	\$530,000.00	\$13,780,000
Intake Guest lodges @ 350SF each unit, single-story	2	ea	\$530,000.00	\$1,060,000
Total - Temporary / On-Call / Guest Lodges				\$37,100,000
03 Kitchen / Dining Facilities				
Hinds Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Eagle Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Iron Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Gene Commercial grade of kitchen and dining service, large	5,000	sf	\$1,155.00	\$5,775,000
Total - Kitchen / Dining Facilities				\$23,100,000
04 Village Amenity Packages				
Hinds - Area: 370,000 SF	1	ea	\$12,250,000.00	\$12,250,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	351,400	sf		

DETAIL ELEMENTS - SCENARIO 7 - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	755,450	sf		
Iron Mountain - Area: 770,000 SF	1	ea	\$20,590,000.00	\$20,590,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	742,650	sf		
Gene - Area: 960,000 SF	1	ea	\$22,870,000.00	\$22,870,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	932,300	sf		

Total - Village Amenity Packages				\$72,180,000
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05 Guest Amenity Packages in the lodge

Intake: 2 Guest Lodges	1	ea	\$300,000.00	\$300,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$300,000
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06 Infrastructure Cost

Hinds				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	88,000	sf	\$6.00	\$528,000
Earthwork, hardscape, landscape and misc. specialties, improvements	370,000	sf	\$15.00	\$5,550,000
Underground utility improvements	370,000	sf	\$10.00	\$3,700,000
Eagle Mountain				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	221,000	sf	\$6.00	\$1,326,000
Earthwork, hardscape, landscape and misc. specialties, improvements	780,000	sf	\$15.00	\$11,700,000
Underground utility improvements	780,000	sf	\$10.00	\$7,800,000
Iron Mountain				
New water treatment system including installation	1	ea	\$6,865,000.00	\$6,865,000
New septic system	309,000	sf	\$6.00	\$1,854,000
Earthwork, hardscape, landscape and misc. specialties, improvements	770,000	sf	\$15.00	\$11,550,000

DETAIL ELEMENTS - SCENARIO 7 - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Underground utility improvements	770,000	sf	\$10.00	\$7,700,000
Gene				
New water treatment system including installation	1	ea	\$6,865,000.00	\$6,865,000
New septic system	290,000	sf	\$6.00	\$1,740,000
Earthwork, hardscape, landscape and misc. specialties, improvements	960,000	sf	\$15.00	\$14,400,000
Underground utility improvements	960,000	sf	\$10.00	\$9,600,000
Intake				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	81,000	sf	\$6.00	\$486,000
Earthwork, hardscape, landscape and misc. specialties, improvements	370,000	sf	\$15.00	\$5,550,000
Underground utility improvements	370,000	sf	\$10.00	\$3,700,000
Total - Infrastructure Cost				\$121,464,000

Scenario 7B - No Villages

SUMMARY - SCENARIO 7B - NO VILLAGES

Element	Total
01 Permanent Housing	
02 Temporary / On-Call / Guest Lodges	\$111,300,000
03 Kitchen / Dining Facilities	\$23,400,000
04 Village Amenity Packages	\$72,180,000
05 Guest Amenity Packages	\$600,000
06 Infrastructure Cost	\$122,514,000
TOTAL ESTIMATED CONSTRUCTION COST	\$329,994,000

DETAIL ELEMENTS - SCENARIO 7B - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
01 Permanent Housing				
No scope / work anticipated				
Total - Permanent Housing				
02 Temporary / On-Call / Guest Lodges				
Hinds Guest lodges @ 750SF each unit, single-story	20	ea	\$1,060,000.00	\$21,200,000
Eagle Mountain Guest lodges @ 750SF each unit, single-story	33	ea	\$1,060,000.00	\$34,980,000
Iron Mountain Guest lodges @ 750SF each unit, single-story	38	ea	\$1,060,000.00	\$40,280,000
Gene Guest lodges @ 750SF each unit, single-story	10	ea	\$1,060,000.00	\$10,600,000
Intake Guest lodges @ 750SF each unit, single-story	4	ea	\$1,060,000.00	\$4,240,000
Total - Temporary / On-Call / Guest Lodges				\$111,300,000
03 Kitchen / Dining Facilities				
Hinds Commercial grade of kitchen and dining service, large	5,000	sf	\$1,170.00	\$5,850,000
Eagle Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,170.00	\$5,850,000
Iron Mountain Commercial grade of kitchen and dining service, large	5,000	sf	\$1,170.00	\$5,850,000
Gene Commercial grade of kitchen and dining service, large	5,000	sf	\$1,170.00	\$5,850,000
Total - Kitchen / Dining Facilities				\$23,400,000
04 Village Amenity Packages				
Hinds - Area: 370,000 SF	1	ea	\$12,250,000.00	\$12,250,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		

DETAIL ELEMENTS - SCENARIO 7B - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
Shade trees and landscaping	336,400	sf		
Eagle Mountain - Area: 780,000 SF	1	ea	\$16,470,000.00	\$16,470,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	736,650	sf		
Iron Mountain - Area: 770,000 SF	1	ea	\$20,590,000.00	\$20,590,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	722,900	sf		
Gene - Area: 960,000 SF	1	ea	\$22,870,000.00	\$22,870,000
Club house (incl. fitness center and game room)	2,000	sf		
Pool	5,000	sf		
Basketball / Tennis court	6,600	sf		
Shade trees and landscaping	933,900	sf		

Total - Village Amenity Packages				\$72,180,000
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05 Guest Amenity Packages in the lodge

Intake: 4 Guest Lodges	1	ea	\$600,000.00	\$600,000
Gym with weights and cardio room	1,500	sf		
Common dining area	500	sf		
Entertainment room / lounge	1,000	sf		
Meeting room	125	sf		

Total - Guest Amenity Packages				\$600,000
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06 Infrastructure Cost

Hinds				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	188,000	sf	\$6.00	\$1,128,000
Earthwork, hardscape, landscape and misc. specialties, improvements	370,000	sf	\$15.00	\$5,550,000
Underground utility improvements	370,000	sf	\$10.00	\$3,700,000
Eagle Mountain				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	301,000	sf	\$6.00	\$1,806,000
Earthwork, hardscape, landscape and misc. specialties, improvements	780,000	sf	\$15.00	\$11,700,000
Underground utility improvements	780,000	sf	\$10.00	\$7,800,000
Iron Mountain				
New water treatment system including installation	1	ea	\$6,865,000.00	\$6,865,000

DETAIL ELEMENTS - SCENARIO 7B - NO VILLAGES

Element	Quantity	Unit	Unit Cost	Total
New septic system	374,000	sf	\$6.00	\$2,244,000
Earthwork, hardscape, landscape and misc. specialties, improvements	770,000	sf	\$15.00	\$11,550,000
Underground utility improvements	770,000	sf	\$10.00	\$7,700,000
Gene				
New water treatment system including installation	1	ea	\$6,865,000.00	\$6,865,000
New septic system	210,000	sf	\$6.00	\$1,260,000
Earthwork, hardscape, landscape and misc. specialties, improvements	960,000	sf	\$15.00	\$14,400,000
Underground utility improvements	960,000	sf	\$10.00	\$9,600,000
Intake				
New water treatment system including installation	1	ea	\$6,850,000.00	\$6,850,000
New septic system	91,000	sf	\$6.00	\$546,000
Earthwork, hardscape, landscape and misc. specialties, improvements	370,000	sf	\$15.00	\$5,550,000
Underground utility improvements	370,000	sf	\$10.00	\$3,700,000
Total - Infrastructure Cost				\$122,514,000

MWD Community Planning Study

Rough Order of Magnitude (ROM) SOPC - Revision 1

February 29, 2024

**CUMMING
GROUP**

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INTRODUCTION

Basis of Estimate	This Rough Order of Magnitude Statement of Probable Cost is based on the MWD product typologies exhibit provided by RNT Architects on February 13, 2024 including: - Housing and Amenity cost models prepared by RNT, received on November 1, 2023 - Discussions with the design team
Estimate Format	A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.
Construction Schedule	A construction schedule to the above strategies is to be developed.
Method of Procurement	The estimate is based on the owner employing a Construction Manager who will prepare subcontractor bid packages and oversee the project
Bid Conditions	This estimate is based on competitive bid situations (minimum of 4 bidders) for all items of subcontracted work.
Basis For Quantities	Wherever possible, this estimate has been based upon the actual measurement of different items of work. For the remaining items, parametric measurements were used in conjunction with other projects of a similar nature.
Basis for Unit Costs	Unit costs as contained herein are based on current bid prices in Blythe, CA. Sub overheads and profit are included in each line item unit cost. Their overhead and profit covers each sub's cost for labor burden, materials, and equipment, sales taxes, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.
Sources for Pricing	This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design. These consultants have used pricing data from Cumming's database for construction, updated to reflect current conditions in Blythe, CA.
Key Exclusions	The following items have been excluded from our estimate: - Professional fees, inspections and testing - Plan check fees and building permit fees - Escalation - Land costs - Construction contingency costs - Accommodation and transport for construction crew to complete the job - Off-hours work - Work to the existing infrastructure - Move management / relocation costs - Owner supplied equipment and furniture - Hazardous materials remediation or removal

INTRODUCTION

Items Affecting Cost Estimate

Items which may change the estimated construction cost include, but are not limited to:

- Modifications to the scope of work included in this estimate.
- Unforeseen sub-surface conditions.
- Restrictive technical specifications or excessive contract conditions.
- Any specified item of material or product that cannot be obtained from 3 sources.
- Any other non-competitive bid situations.
- Bids delayed beyond the projected schedule.

Statement of Probable Cost

Cumming has no control over the cost of labor and materials, the general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions. This estimate is made on the basis of the experience, qualifications, and best judgement of a professional consultant familiar with the construction industry. Cumming, however, cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent cost estimates.

Cumming's staff of professional cost consultants has prepared this estimate in accordance with generally accepted principles and practices. This staff is available to discuss its contents with any interested party.

Pricing reflects probable construction costs obtainable in the project locality on the target dates specified and is a determination of fair market value for the construction of this project. The estimate is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all sub and general contractors with a range of 3 - 4 bidders for all items of work. Experience and research indicates that a fewer number of bidders may result in higher bids. Conversely, an increased number of bidders may result in more competitive bid day responses.

Recommendations

Cumming recommends that the Owner and the Architect carefully review this entire document to ensure it reflects their design intent. Requests for modifications of any apparent errors or omissions to this document must be made to Cumming within ten days of receipt of this estimate. Otherwise, it will be assumed that its contents have been reviewed and accepted. If the project is over budget or there are unresolved budget issues, alternate systems / schemes should be evaluated before proceeding into further design phases.

It is recommended that there are preparations of further cost estimates throughout design by Cumming to determine overall cost changes since the preparation of this preliminary estimate. These future estimates will have detailed breakdowns indicating materials by type, kind, and size, priced by their respective units of measure.

SUMMARY

Element	Area	Cost / SF	Total
Single Family Home	1,600	\$936.41	\$1,498,250
Linear 1B/1B Condo	750	\$704.87	\$528,650
Pinwheel 1B/1B Condo	750	\$643.27	\$482,450
Casita 1B/1B	750	\$844.20	\$633,150
RV Pad	2,000	\$108.20	\$216,400
Carport	800	\$825.00	\$80,000
Guest Amenity	2,000	\$825.00	\$1,650,000
Guest Room	350	\$715.00	\$250,250
Village Club House	2,500	\$830.00	\$2,075,000
Kitchen/Dining	4,000	\$1,100.00	\$4,400,000
Multi-Purpose Fitness Complex	10,000	\$850.00	\$8,500,000
Outdoor Fenced Sport Court	5,600	\$83.07	\$465,200
Pool with 200 SF Shade Structure	6,000	\$300.00	\$1,800,000

Village Product Typology Study

DETAIL ELEMENTS - VILLAGE PRODUCT TYPOLOGY STUDY

Element	Quantity	Unit	Unit Cost	Total
01 - Single Family Home	1,600	sf		
Base Building				
3bed/2bath incl. 2 car garage, 1,600SF each unit, single-story	1,600	sf	\$865.00	\$1,384,000
Exterior Improvements				
Covered patio	600	sf	\$80.00	\$48,000
Concrete driveway	600	sf	\$15.00	\$9,000
Concrete walkway	100	sf	\$15.00	\$1,500
Chain-link fence with privacy slats	250	lf	\$115.00	\$28,750
Utilities				
Wet Utilities				
Domestic water line, incl. trenching and backfill	50	lf	\$100.00	\$5,000
Sanitary sewer line, incl. trenching and backfill	50	lf	\$125.00	\$6,250
Storm drain line, incl. trenching and backfill	50	lf	\$135.00	\$6,750
Dry Utilities				
Electrical service and distribution	50	lf	\$180.00	\$9,000
Total - Single Family Home	1,600	sf	\$936.41	\$1,498,250
02 - Linear 1B/1B Condo	750	sf		
Base Building				
Linear 1bed/1bath condo, 750SF each unit, single-story	750	sf	\$625.00	\$468,750
Exterior Improvements				
Carport	200	sf	\$100.00	\$20,000
Covered patio	250	sf	\$80.00	\$20,000
Concrete walkway	250	sf	\$15.00	\$3,750
Chain-link fence with privacy slats	70	lf	\$115.00	\$8,050
Utilities				
Wet Utilities				
Domestic water line, incl. trenching and backfill	15	lf	\$100.00	\$1,500
Sanitary sewer line, incl. trenching and backfill	15	lf	\$125.00	\$1,875
Storm drain line, incl. trenching and backfill	15	lf	\$135.00	\$2,025
Dry Utilities				
Electrical service and distribution	15	lf	\$180.00	\$2,700
Total - Linear 1B/1B Condo	750	sf	\$704.87	\$528,650

DETAIL ELEMENTS - VILLAGE PRODUCT TYPOLOGY STUDY

Element	Quantity	Unit	Unit Cost	Total
03 - Pinwheel 1B/1B Condo	750	sf		
Base Building				
Pinwheel 1bed/1bath condo, 750SF each unit, single-story	750	sf	\$565.00	\$423,750
Exterior Improvements				
Carport	200	sf	\$100.00	\$20,000
Covered patio	250	sf	\$80.00	\$20,000
Concrete walkway	400	sf	\$15.00	\$6,000
Chain-link fence with privacy slats	40	lf	\$115.00	\$4,600
Utilities				
Wet Utilities				
Domestic water line, incl. trenching and backfill	15	lf	\$100.00	\$1,500
Sanitary sewer line, incl. trenching and backfill	15	lf	\$125.00	\$1,875
Storm drain line, incl. trenching and backfill	15	lf	\$135.00	\$2,025
Dry Utilities				
Electrical service and distribution	15	lf	\$180.00	\$2,700
Total - Pinwheel 1B/1B Condo	750	sf	\$643.27	\$482,450
04 - Casita 1B/1B	750	sf		
Base Building				
1bed/1bath condo, 750SF, single-story	750	sf	\$715.00	\$536,250
Exterior Improvements				
Carport	550	sf	\$100.00	\$55,000
Concrete walkway	250	sf	\$15.00	\$3,750
Chain-link fence with privacy slats	50	lf	\$115.00	\$5,750
Utilities				
Wet Utilities				
Domestic water line, incl. trenching and backfill	60	lf	\$100.00	\$6,000
Sanitary sewer line, incl. trenching and backfill	60	lf	\$125.00	\$7,500
Storm drain line, incl. trenching and backfill	60	lf	\$135.00	\$8,100
Dry Utilities				
Electrical service and distribution	60	lf	\$180.00	\$10,800
Total - Casita 1B/1B	750	sf	\$844.20	\$633,150

DETAIL ELEMENTS - VILLAGE PRODUCT TYPOLOGY STUDY

Element	Quantity	Unit	Unit Cost	Total
05 - RV Pad	2,000	sf		
RV pad with full hookups	2,000	sf	\$20.00	\$40,000
Shade structure for RV and/or passenger vehicle, 16' tall	1,300	sf	\$100.00	\$130,000
Concrete driveway	550	sf	\$15.00	\$8,250
Chain-link fence with privacy slats	50	lf	\$115.00	\$5,750
Utilities				
Wet Utilities				
Domestic water line, incl. trenching and backfill	60	lf	\$100.00	\$6,000
Sanitary sewer line, incl. trenching and backfill	60	lf	\$125.00	\$7,500
Storm drain line, incl. trenching and backfill	60	lf	\$135.00	\$8,100
Dry Utilities				
Electrical service and distribution	60	lf	\$180.00	\$10,800
Total - RV Pad	2,000	sf	\$108.20	\$216,400
06 - Carport	800	sf		
Steel carport, 20' x 40', for 4 cars with asphalt paving	800	sf	\$100.00	\$80,000
Total - Carport	800	sf	\$100.00	\$80,000
07 - Guest Amenity	2,000	sf		
Guest amenities including kitchenette, laundry, linen, janitorial, utility, office, restrooms, small fitness room and a meeting room, single story	2,000	sf	\$825.00	\$1,650,000
Total - Guest Amenity	2,000	sf	\$825.00	\$1,650,000
08 - Guest Room	350	sf		
Guest room with 50SF covered patio including bathroom, closet and bedroom, excluding kitchenette, single story	350	sf	\$715.00	\$250,250
Total - Guest Room	350	sf	\$715.00	\$250,250
09 - Village Club House	2,500	sf		
Village club house including common room, fitness, janitor, mechanical and restrooms, single story	2,500	sf	\$830.00	\$2,075,000
Total - Village Club House	2,500	sf	\$830.00	\$2,075,000

DETAIL ELEMENTS - VILLAGE PRODUCT TYPOLOGY STUDY

Element	Quantity	Unit	Unit Cost	Total
10 - Kitchen/Dining	4,000	sf		
Kitchen including dining, food prep, storage, freezer, server, chef's office, janitor and restrooms, single story	4,000	sf	\$1,100.00	\$4,400,000
Total - Kitchen/Dining	4,000	sf	\$1,100.00	\$4,400,000
11 - Multi-Purpose Fitness Complex	10,000	sf		
Multi-purpose fitness complex including multi use court, fitness room, community meeting rooms, lockers, restrooms, storage etc., single story	10,000	sf	\$850.00	\$8,500,000
Total - Multi-Purpose Fitness Complex	10,000	sf	\$850.00	\$8,500,000
12 - Outdoor Fenced Sport Court	5,600	sf		
Outdoor sports court (basketball / tennis / volleyball)	5,600	sf	\$50.00	\$280,000
Chain-link fence & gates, 12' H	312	lf	\$225.00	\$70,200
Shade structure	200	sf	\$125.00	\$25,000
Pole lighting	6	ea	\$15,000.00	\$90,000
Total - Outdoor Fenced Sport Court	5,600	sf	\$83.07	\$465,200
13 - Pool with 200 SF Shade Structure	6,000	sf		
Pool with 200SF shade structure	6,000	sf	\$300.00	\$1,800,000
Total - Pool with 20 SF Shade Structure	6,000	sf	\$300.00	\$1,800,000

MWD Village Improvements

RNT Architects

4/30/2024

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	
Julian Hinds					
Site Prep	253,932	0	0	0	
Site Improvements	2,183,154	0	0	0	
Mechanical Utilities	70,860	0	0	0	
Electrical Utilities	44,400	0	0	0	
Survey	50,000	0	0	0	
Julian Hinds Village Total	2,602,346	0	0	0	
Eagle Mountain					
Site Prep	404,046	151,100	270,350	151,100	
Site Improvements	4,459,219	280,620	802,080	260,460	
Mechanical Utilities	270,930	69,000	258,000	69,000	
Electrical Utilities	333,340	45,840	106,000	45,840	
Survey	181,411	6,000	20,000	6,000	
Eagle Mountain Village Total	5,648,946	552,560	1,456,430	532,400	
Iron Mountain					
Site Prep	1,427,821	163,900	291,150	163,900	
Site Improvements	5,071,542	246,160	801,800	123,480	
Mechanical Utilities	238,730	60,300	229,200	30,150	
Electrical Utilities	229,780	38,400	87,400	19,200	
Survey	266,509	6,000	20,000	3,000	
Iron Mountain Village Total	7,234,382	514,760	1,429,550	339,730	
Gene					
Site Prep	1,383,701	204,225	295,050	167,800	
Site Improvements	2,417,704	435,525	801,800	241,960	
Mechanical Utilities	180,730	88,450	60,300	60,300	
Electrical Utilities	50,160	50,600	87,400	38,400	
Survey	50,000	8,000	20,000	6,000	
Gene Village Total	4,082,295	786,800	1,264,550	514,460	
Intake (incl Gene/Intake vacation rentals)					
Site Prep	145,450	0	0	0	
Site Improvements	208,570	0	0	0	
Mechanical Utilities	34,450	0	0	0	
Electrical Utilities	23,700	0	0	0	
Survey	5,000	0	0	0	
Intake Village Total	417,170	0	0	0	
Total (all villages)	19,985,139	1,854,120	4,150,530	1,386,590	
Escalation 4/22 - 4/24	1.0882	1.0882	1.0882	1.0882	
Grand total	21,747,279	2,017,602	4,516,493	1,508,849	
					TOTAL SITEWORK (2024 dollars)
					29,790,223