



DUGWAY PROVING GROUND 2013 HOUSING MARKET ANALYSIS FINAL REPORT

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Prepared for:
Headquarters, Department of the Army and
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EXECUTIVE SUMMARY

INTRODUCTION (SECTION I)

Purpose

The purpose of this Housing Market Analysis (HMA) is to 1) assess the suitability and affordability of the current and projected private sector rental market for personnel assigned to Dugway Proving Ground (DPG) in Tooele County, Utah, and 2) determine if the private sector rental market can accommodate the current and projected military housing requirements. A summary of the findings is presented in Exhibit i-1.

Exhibit i-1.
Military Housing Requirements for Dugway Proving Ground, 2013-2018

Year	2013	2014	2015	2016	2017	2018
Total Military Personnel¹	168	40	40	40	40	40
Total Military Families	91	22	22	22	22	22
Military On-Post Occupancy in 2013; Floor Requirement in 2018	51	22	22	22	22	22
Military Community Housing Demand ³	40	0	0	0	0	0
Military Family Homeowners	0	0	0	0	0	0
Military Family Renters	0	0	0	0	0	0
Community Housing Shortfall	0	0	0	0	0	0
Initial Housing Requirement	51	22	22	22	22	22
Military Community Adjustment	0	0	0	0	0	0
Total Military Family Housing Requirement	51	22	22	22	22	22
Military Family Housing Inventory ⁴	342	226	226	226	226	226
Deficit/(Surplus) of Military Family Housing	(291)	(204)	(204)	(204)	(204)	(204)
Total Unaccompanied Military Personnel	64	14	14	14	14	14
Military In On-Post Housing	58	14	14	14	14	14
Military Community Housing Demand	0	0	0	0	0	0
Unaccompanied Military Homeowners	0	0	0	0	0	0
Unaccompanied Military Renters	0	0	0	0	0	0
Community Housing Shortfall	0	0	0	0	0	0
Total Unaccompanied Military Housing Requirement	58	14	14	14	14	14

¹Per ASIP data, the military population will decrease in 2014 to the 2018 level. Total personnel includes voluntarily separated and dual-military households which are not shown separately in this analysis.

²On-post occupancy varies from total families because of different data sources and timing. On-post occupancy is based upon data reported by the DPG Housing Office and total families is based upon ASIP data.

³Using standard HMA methodology the military community housing demand is 40 units. However, no military personnel live in private-sector housing. Therefore the analysis for the current year assumes military personnel will not generate demand for owner- or renter-occupied community housing.

⁴Inventory includes all units including those that may be marked for demolition in the year and those that may be occupied by non-military personnel.

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Study Analytical Framework

The HMA assesses the housing demand over a five-year period, from 2013 through 2018. The HMA was developed using guidance from the U.S. Department of Defense (DOD) and the Department of the Army. Key points of this guidance are:

- The analysis is divided between accompanied and unaccompanied personnel and military, DOD civilian, and contractor personnel.
- The suitability of private sector housing is based upon affordability, location relative to the installation, unit and building features and amenities, and the physical condition of housing.
- The demand for on-post housing is not based solely upon the suitability and affordability of private sector housing but also floor requirements. The floor requirement for accompanied personnel is the greatest of the following four requirements:
 1. On-post community: Housing for ten percent of families within each grade with a minimum of one unit for any grade in which there is a family.
 2. Key and essential personnel: Housing for all key and essential personnel for the installation.
 3. Historic housing: Housing that is on or eligible to be listed on the National Register of Historic Places.
 4. Quality of life: Housing for personnel whose compensation falls below 50 percent of the Area Median Income.
- For unaccompanied personnel, the floor requirement is equal to all military personnel as all military personnel are considered key and essential.
- Data from the Army Stationing Installation Plan serve as the official source of personnel strength in 2013 and 2018.

Exhibit i-2. Current and Projected Population, Dugway Proving Ground

Year	Officers	Military Population			DOD Civilian Population	Contractor Population	Total Population
		Warrant Officers	Enlisted	Subtotal			
Current Year (FY2013)	23	10	135	168	748	134	1,050
Projected Year (FY2018)	12	0	28	40	748	134	922

Source: Headquarters, Department of the Army 2012.

HOUSING MARKET AREA DEFINITION AND CHARACTERISTICS (SECTION II)

The housing market area includes the majority of Tooele County, including the communities of Tooele City, Grantsville, Stansbury Park, and portions of Rush Valley. The housing market area includes predominantly rural communities, and the majority of rental housing is more than 50 miles from the main entrance of the installation. This housing market area definition varies from the standard 20-mile definition to reflect local conditions and preferences. The Office of the Assistant Chief of Staff for Installation Management (OACSIM) approved the market area deviation; the garrison and the Headquarters of the Installation Management Command concurred.

HOUSING MARKET STOCK CHARACTERISTICS (SECTION III)

The total population in the market area is currently estimated to be 61,498 persons in 20,133 households. This is expected to increase to 67,412 persons in 21,591 households in 2018. The majority of current households are homeowners (77 percent). This percentage is not projected to change in 2018. The housing stock is fairly new, with 53 percent of the units built within the last 25 years. Generally, the rental housing stock is older than the owner-occupied housing stock.

The median price of units sold in 2012 was \$135,900. The rental price for three-bedroom units ranges from \$800 to \$1,295 and the median price is \$1,000.

MILITARY HOUSING DEMAND (SECTION IV)

A typical HMA does not take into account the housing requirements of Department of Defense civilian employees or contract employees. However, the contractor with approval from the OACSIM has included the non-military personnel in portions of the analysis. The current total personnel at Dugway Proving Ground is 1,051 persons. The majority are DOD civilian families. The total number of personnel is projected to decrease to 923 in 2018 primarily due to the loss of a military unit, which will decrease the total military population to 40 from 168.

**Exhibit i-3.
Current and Projected Personnel By Accompaniment Status, DPG**

2013

	Families (Accompanied)	Couples	Voluntarily Separated	Unaccompanied	Total Personnel
Military	91	0	13	64	168
DOD	393	20	45	290	748
Contractor	70	4	9	52	135
Total	554	24	67	406	1,051

2018

	Families (Accompanied)	Couples	Voluntarily Separated	Unaccompanied	Total Personnel
Military	22	0	4	14	40
DOD	393	20	45	290	748
Contractor	71	3	10	51	135
Total	486	23	59	355	923

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012;
Applied Real Estate Analysis

For accompanied personnel, the initial military housing requirement is the sum of the floor requirement and the shortfall in the number of private sector units. The initial housing requirement is then compared to the military community requirement.¹ The total military housing requirement is then set at the greater of the initial housing requirement and the military community requirement. The total military housing requirement is summarized in Exhibit i-4.

**Exhibit i-4.
2018 Total Family Housing Requirement, DPG**

	Families	Key and Essential	Historic Units	Quality of Life	Floor Requirement	Private- Sector Shortfall	Initial Housing Requirement	Military Community Requirement (10%)	Total Military Housing Requirement
Military	22	22	0	0	22	0	22	10	22
DoD	393	7	0	0	7	77	84	48	87
Contractor	71	0	0	0	0	10	10	19	21
Total	486	29	0	0	29	87	116	77	130

Source: Applied Real Estate Analysis, Inc.

¹ The military community requirement states that the number of units must be equal to 10 percent of all the families in a given pay grade, with at least one unit for each pay grade with a family.

The total housing requirement for unaccompanied personnel is the sum of the floor requirement and the projected housing shortfall. The total projected unaccompanied housing requirement is 11 units for military personnel and 170 DOD civilian and contractor personnel.

SUPPLY-DEMAND BALANCE (SECTION V)

All military personnel are key and essential and required to live on the installation and therefore will not generate private market demand in 2018. The data and analysis indicates that the private sector cannot fully accommodate the demand from DOD and contractor personnel. This is in part because certain DOD personnel are required to live on the installation due to the key and essential functions of their positions. It is also due in part to the limited supply of adequate housing in the market area.

SUMMARY OF FINDINGS (SECTION VI)

The total demand for on-post housing for military personnel is projected at 22 family housing units and 14 unaccompanied housing units for 2018. Exhibit i-5 summarizes total housing requirement by accompaniment status and bedroom.

Exhibit i-5.
2018 Total Housing Requirement by Accompaniment Status and Bedroom, DPG

Accompaniment Status	One Bedroom		Two Bedrooms		Three Bedrooms		Four Bedrooms and Larger		Total	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
<i>Accompanied Personnel</i>	0	0%	43	100%	52	69%	35	31%	130	41%
Military	0	0%	4	9%	11	15%	7	6%	22	7%
DOD	0	0%	33	77%	33	44%	21	19%	87	28%
Contractor	0	0%	6	14%	8	11%	7	6%	21	7%
<i>Unaccompanied Personnel</i>	84	100%	0	0%	23	31%	77	69%	184	59%
Military	14	17%	0	0%	0	0%	0	0%	14	4%
DOD	55	65%	0	0%	20	27%	71	63%	146	46%
Contractor	15	18%	0	0%	3	4%	6	5%	24	8%
Total units	84	100%	43	100%	75	100%	112	100%	314	100%

Source: Applied Real Estate Analysis, Inc.

SECTION I. INTRODUCTION

The purpose of this Housing Market Analysis (HMA) is to 1) assess the suitability and affordability of the current and projected private sector rental market for personnel assigned to Dugway Proving Ground (DPG) in Tooele County, Utah, and 2) determine if the private sector rental market can accommodate the current and projected military housing requirements. The results from this analysis are used by the Department of the Army to make recommendations on future installation housing requirements to the U.S. Department of Defense (DOD) and the U.S. Congress. Current Headquarters, Department of the Army guidance establishes a four-year interval for conducting the analysis. The most recent HMA for DPG was submitted in 2003, and an update was submitted in 2010.

STUDY ANALYTICAL FRAMEWORK

The HMA assesses the housing demand at the installation over a five-year period. For this study, the current year is 2013 and the projected year is 2018.

Analysis Guidance

The HMA was developed using guidance from the Department of Defense and the Department of the Army. The key points of this guidance are:

- 1) The HMA is to determine the suitability and availability of current and projected private sector housing. Housing suitability is determined based upon its affordability, location, features, and physical condition.
 - a) **Affordability.** DOD considers a housing unit affordable if the rent, utilities, and renter's insurance do not exceed the maximum acceptable housing cost (MAHC). MAHC is currently equal to the Basic Allowance for Housing (BAH).
 - b) **Location.** The housing must be located within a reasonable commute of the installation. DOD guidance indicates that in the United States, a reasonable commute is 20 miles or approximately one hour away during peak travel times. Although the market area is generally expected to be consistent with the market area used for the Basic Housing Allowance, adjustments can be made to satisfy local needs.
 - c) **Features.** The housing must have amenities and designs that are consistent with other housing in the market area.

- d) **Physical Condition.** The housing must be well maintained, have a private entrance, as well as a full bathroom and kitchen that are used exclusively by the tenants. There must also be an adequate number of bedrooms and access to utility systems and services.
- 2) Military personnel who own their homes are considered suitably housed.
 - 3) The analysis of personnel competing for housing in the community is divided between accompanied personnel (adjusted for personnel married to other service members) and unaccompanied personnel who are required to live in military housing (not including those who are voluntarily separated).
 - 4) The demand for on-post housing is not based solely upon the suitability and affordability of private sector housing. The analysis also must take into account floor requirements for the installation. The floor requirement is based upon four requirements for accompanied personnel:
 - a) On-post community: Ten percent of families within each grade. There must be at least one unit for any grade in which there is a family.
 - b) Key and essential personnel: Housing for all key and essential personnel for the installation.
 - c) Historic housing: Housing that is on or eligible to be listed on the National Register of Historic Places.
 - d) Quality of life: Housing for personnel whose compensation falls below 50 percent of the Area Median Income.

The projected demand is then set at the greatest of the above four requirements for accompanied personnel by pay grade. For unaccompanied personnel, the floor requirement is normally equal to the number of E-1 through E-5 personnel. However, because all military personnel at Dugway Proving Ground are considered “key and essential,” the requirement is set at all unaccompanied personnel for military.

- 5) For current and projected personnel strength levels, the official source of data is the Army Stationing Installation Plan (ASIP). ASIP data for DPG states that for 2013, there are a total of 1,050 installation personnel, which includes 168 military personnel, 758 civilians, and 134 other personnel. Data for 2018 states that there will be 922 total personnel, including 40 military, 748 civilian, and 134 other personnel.
- 6) The analysis includes an assessment of socioeconomic trends over the five-year analysis period and the impact of the trends on housing supply and demand. Socioeconomic trends incorporated into the analysis include employment, population, household size, and residential development activity.

- 7) The supply of suitable housing must be segmented by bedroom size and costs for each pay grade.
- 8) Bedroom requirements are based upon the following assumptions: the military, DOD, or civilian personnel will share a bedroom with their spouse and each additional authorized family member will have their own bedroom.
- 9) The dynamic projection process includes the following major assumptions:
 - a) The on-base housing inventory is hypothetically adjusted over the five-year period so that it is equal to the floor requirement.
 - b) There is only market competition for housing that becomes available for rent during the year, including existing units where the tenant terminates their lease, new units that are added to the rental housing inventory through owner-occupied units becoming rental units, and new construction. The estimates of market conditions are based upon historical trends as well as interviews with local real estate professionals.
- 10) The shortfall or surplus in adequate private sector housing is determined based upon the difference between the personnel members' share of adequate quality housing and the personnel rental housing requirement.
- 11) The on-post housing requirement is then estimated by summing the floor requirement and the community housing shortfall. If this sum is not equal to or greater than 10 percent of the number of accompanied personnel in each pay grade, the requirement is adjusted so that it is equal to 10 percent of the number of accompanied personnel in each pay grade, with a minimum of one unit per pay grade with one or more accompanied personnel households.

KEY ASSUMPTIONS AND PRIMARY DATA SOURCES

The HMA uses the most reliable data available to assess the ability of the private real estate market to meet the housing demand of Dugway Proving Ground personnel. The nature of the HMA requires the use of assumptions regarding real estate market trends, economic changes, and population trends as the analysis involves projections of socioeconomic conditions in five years. Key assumptions and primary data sources used in the analysis are listed in the following paragraphs. A list of data sources is provided as an appendix.

- 1) The number of current (2013) and projected (2018) personnel is based upon data from the Army Stationing installation Plan (ASIP) from Headquarters, Department of the Army. A summary of the data is provided in Exhibit I-1.

**Exhibit I-1.
Current and Projected Population, Dugway Proving Ground**

Year	Military			Subtotal	DOD Civilian	Contractor	Total Population
	Officers	Warrant Officers	Enlisted				
Current Year (FY2013)	23	10	135	168	748	134	1,050
Projected Year (FY2018)	12	0	28	40	748	134	922

Source: Headquarters, Department of the Army 2012.

Dugway Proving Ground is unique in that the majority of the personnel at the installation are non-military. This includes Department of Defense civilian personnel and contractor personnel. The extremely remote location of the installation often necessitates that both military and non-military personnel live on the installation or in close proximity to the installation. These non-military personnel perform essential functions at the installation and therefore they are considered in the HMA. Any requirements for military personnel were also applied to the non-military personnel. To determine the requirements by pay grade for civilian personnel, the Department of the Army guidance for civilian housing assignments was utilized. Based upon this data, civilian personnel were categorized as shown in Exhibit I-2. If the civilian pay grade was equal to more than one military pay grade, the lowest military pay grade was used in the analysis.

Exhibit I-2.
Civilian Pay Grade Assumptions for Housing Assignment

Civilian Pay Grade	Equivalent Military Pay Grade
General Schedule (GS) Positions	
GS-15	O-6
GS-14	O-5 and W-5
GS-13	O-5 and W-5
GS-12	O-4 and W-4
GS-11	O-3 and W-3
GS-10	O-3 and W-3
GS-9	O-2, W-1, and W-2
GS-8	O-2, W-1, and W-2
GS-7	O-1
GS-6	E-7 thru E-9
GS-5	E-5 thru E-6
GS-4	E-4
GS-3	E-1
GS-2	E-2
GS-1	E-3
Non-Appropriated Fund (NAF) Positions	
NAF-5	O-5
NAF-4	O-3
NAF-3	O-2, W-1, and W-2
NAF-2	E-4
NAF-1	E-1 thru E-3
Federal Wage System (FWS) Positions	
WG-15	O-1
WG-14	O-1
WG-13	O-1
WG-12	O-1
WG-11	E-5 and E-6
WG-10	E-5 and E-6
WG-9	E-5 and E-6
WG-8	E-4 , E-1 thru E-3
WG-7	E-4 , E-1 thru E-3
WG-6	E-4 , E-1 thru E-3
WG-5	E-4 , E-1 thru E-3
WG-4	E-4 , E-1 thru E-3
WG-3	E-4 , E-1 thru E-3
WG-2	E-4 , E-1 thru E-3
WG-1	E-4 , E-1 thru E-3

Source: Army Regulations 420-1, Army Facilities Management
dated 24 August 2012.

- 2) The accompaniment status and household size of all personnel was based upon data from the Dugway Proving Ground Housing Office (December 2012). The total number of the personnel from the Housing Office varies from the ASIP data because of different timeframe. The proportion of personnel by pay grade, accompaniment status, and household size from the Housing Office was applied to the ASIP numbers for the current and projected years in order to estimate the number of military personnel that are enlisted, warrant officers, or officers.
- 3) Characteristics of contractor personnel (i.e., accompaniment status, household size, and pay grade) were not available for any contractor personnel. Therefore, the characteristics of DOD civilian personnel in on-post housing were used as a proxy.
- 4) The historical and current population and housing characteristics were obtain or derived from the 2000 and 2010 Decennial U.S. Census and the 2011 American Community Survey 5-Year, 3-Year, and 1-Year estimates. A variety of data sources were used because of the reliability and availability of data at the appropriate geographic level. The 2010 Decennial U.S. Census was the preferred source because it provides the most current source of information.
- 5) Estimates of 2018 economic conditions are based upon projections from the Utah Governor's Office of Planning and Budget.
- 6) Population and household projections are based upon estimates prepared by Utah's Population Estimates Committee.
- 7) Estimates of 2018 housing market conditions are based upon a variety of both quantitative and qualitative data sources including the Office of Planning and Budget, the Utah Population Estimates Committee, historical real estate activity, and qualitative information obtained from local real estate professionals. The analysis assumes that the real estate market will respond rationally to increases or decreases in demand. However, this does not always occur. Although real estate markets are cyclical (a large increase in residential units is almost always followed by a limited or zero increase in residential units), the length of the cycle in months or years is impacted by multiple factors, including local and national economic conditions.
- 8) There are a limited number of advertised rental housing units in the housing market. Therefore, data from public sources such as the Tooele Transcript Bulletin were supplemented with information from the Wasatch Front Multiple Listings Service and "for-rent" signs on properties.

SECTION II.

HOUSING MARKET AREA DEFINITION AND CHARACTERISTICS

This section provides an overview of the housing market area for Dugway Proving Ground. The section includes the definition of the housing market area as well as current and projected socioeconomic characteristics.

Dugway Proving Ground is located in a remote area of northwestern Utah near the Nevada border. The installation constitutes a substantial portion of Tooele County and is situated in the Great Salt Lake Desert in Skull Valley, so named because of its position between the Onaqui and Simpson mountain ranges.

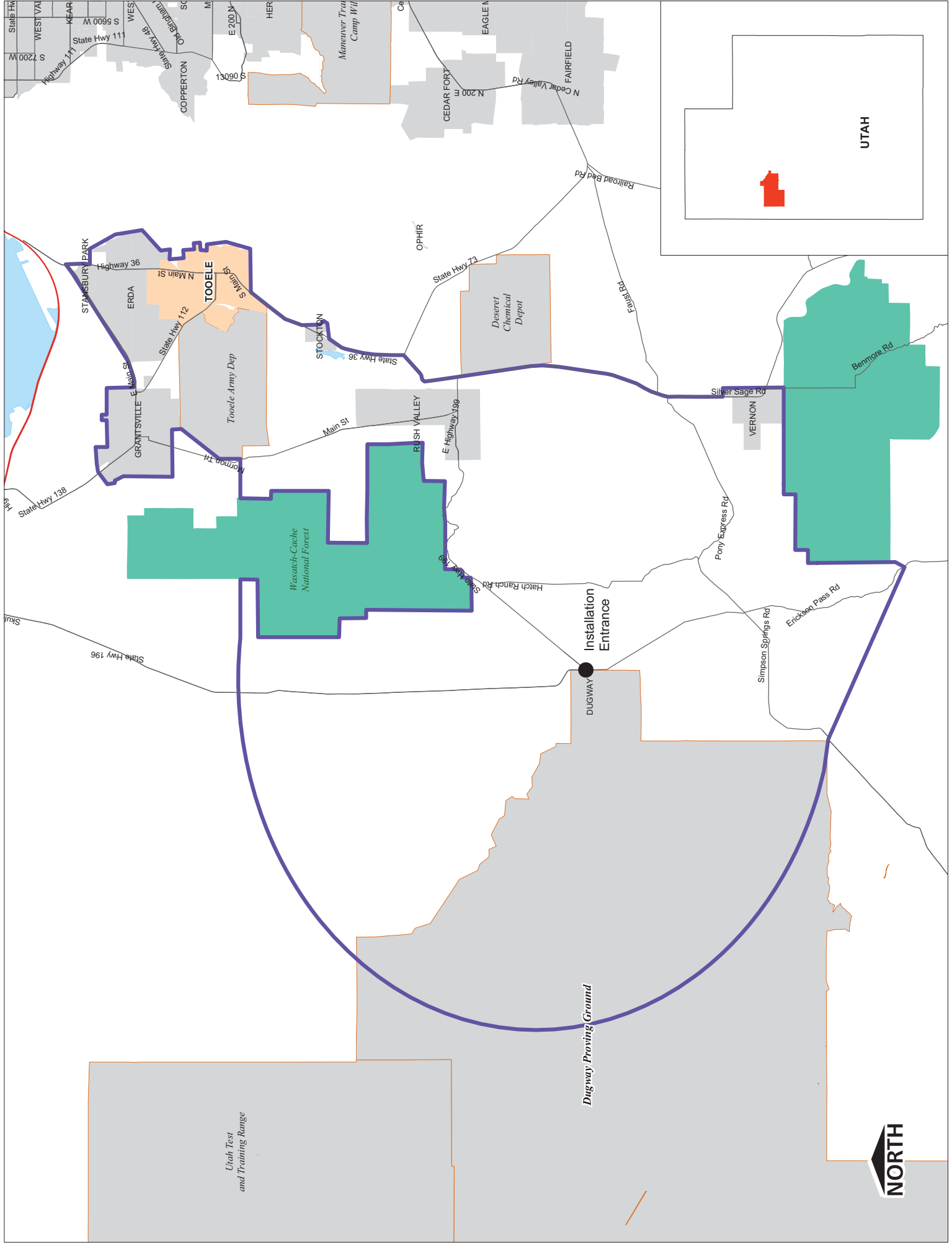
The standard Department of the Army definition for a “housing market area” in the United States is an area “within a 20-mile commute of the installation’s principal work areas.”¹ Using this standard definition, there is only one eligible community: Vernon, which has a population of approximately 240 people.

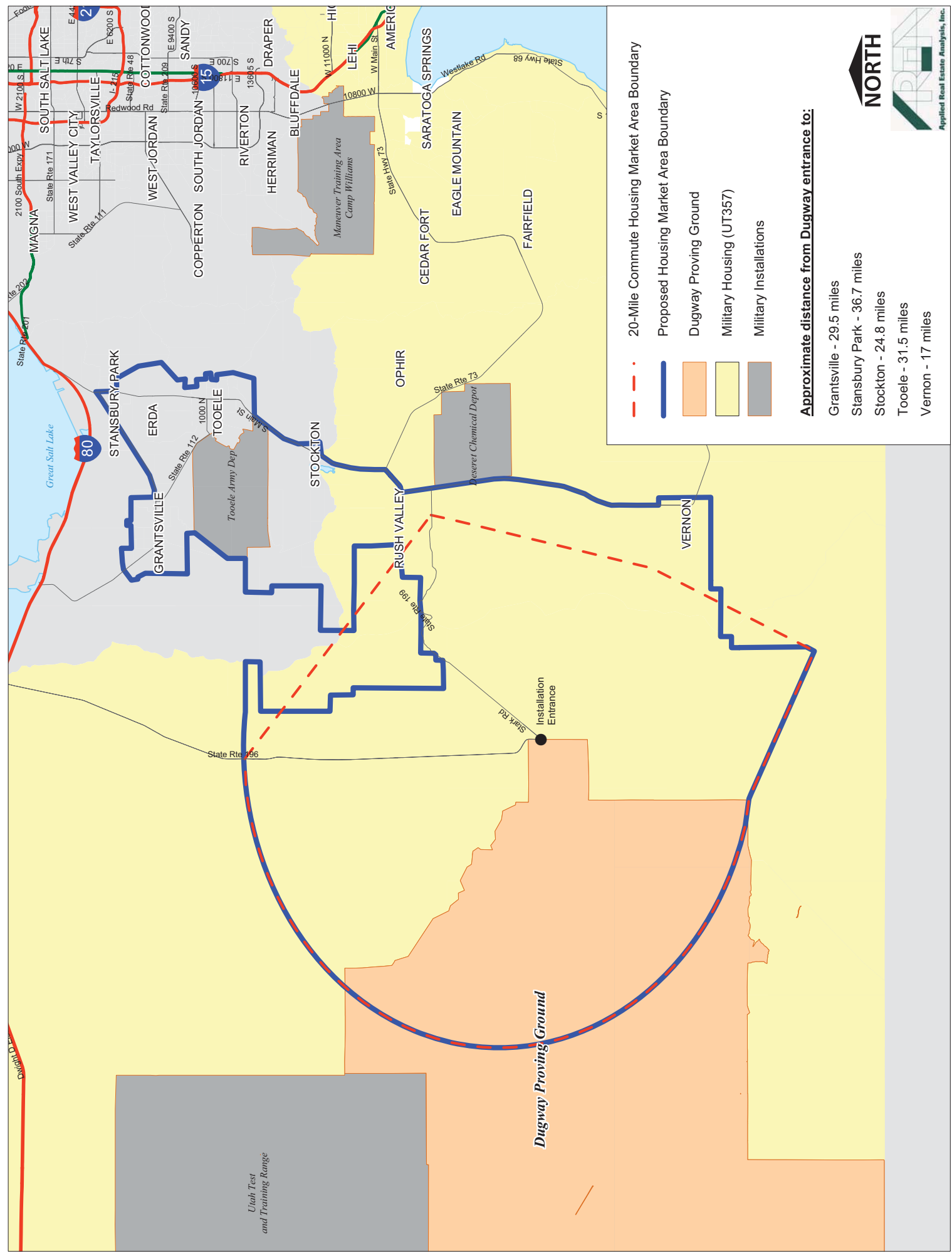
This Housing Market Analysis employs an alternative methodology for defining the housing market area. The office of the Assistant Chief of Staff for Installation Management (OACSIM) approved this market area deviation; the garrison and the Headquarters of the installation Management Command (IMCOM) concurred. This alternative methodology is in line with general real estate principals where the market area centers on “a major employment node, a transportation corridor, or a desirable neighborhood or natural amenity. Physical barriers, either natural or manmade, or political considerations, such as a county line or school district boundary, usually determine the borders. ... Community image or perceived status can also be important in determining where consumers will look for alternative housing choices.”² Using this alternative methodology, the market area is expanded to include the city of Tooele and neighboring communities, as these are the closest communities with rental housing.

Exhibit II-1 presents the HMA market area and the installation’s location within the state of Utah. This is followed by Exhibit II-2 which presents the HMA market area (solid blue line) along with the standard 20-mile market area (dotted red line) along with names of the closest communities and their approximate distance to the installation gate.

¹ Memo on Army Housing Market Analysis (HMA) Policy, 18 May 2011, U.S. Department of the Army; Department of Defense (DOD) Instruction Housing Manual 4165.63M, 28 October 2010.

² *Real Estate Market Analysis: Methods and Case Studies*. Deborah L. Brett and Adrienne Schmitz. 2009.





Reaching Tooele City, Grantsville, Stansbury Park, and neighboring communities from the installation is a challenging task. There are two routes: via the Mountain Pass (State Highway 196) or Skull Valley (State Highway 199). Both routes require driving on undivided highways through open ranges with cattle and other animals that often cross the road. Once drivers leave the installation, the nearest gas station is approximately 35 miles away via either route. The Mountain Pass route requires drivers to travel through Johnsons' Pass, which is a winding highway through the Onaqui Mountains.

The installation entrance gate is approximately 80 miles (driving) from downtown Salt Lake City, the state capital, and approximately 70 miles (driving) from the nearest suburb of Salt Lake City. The nearest community is Vernon, Utah, which is 17 miles southeast of the installation, with a population of approximately 240 people.

SOCIOECONOMIC CHARACTERISTICS

Census Tracts

Information on the market area population is based primarily on the 2010 U.S. Census and the 2011 American Community Survey 5-Year Estimates. The U.S. Census tracts are not coterminous with the market area. However, given the rural nature of the installation, the tracts do serve as good estimates for the purpose of understanding the socioeconomic characteristics of the market area. The census tracts include:

- 1306: Utah Test and Training Range and the western portion of Dugway Proving Ground
- 1307.01: Erda
- 1307.02: Erda, northern Tooele, and Stansbury Park
- 1307.03: The area directly south of I-80
- 1308: Grantsville
- 1309, 1310.01, 1310.02, 1311, and 1312: Tooele

The above tracts represent the majority of Tooele County. Some of the information presented in the following tables is only available countywide. These tables are identified with "Tooele County." It should also be noted that due to changes in Census tract boundaries in 2000 and 2010, the physical size of the census tracts included in the analysis varies.

Population

The market area has undergone significant growth over the past 20 years. In 1990, there were approximately 26,600 individuals in approximately 8,600 households. In 2011, the market area population had increased 111 percent, to almost 56,200 individuals. In contrast, during this same time period, the population in the state of Utah increased only 64 percent, and the national population increased just 25 percent. The majority of the market area's growth was concentrated in unincorporated communities immediately adjacent to the city of Tooele, including Stansbury Park.

EXHIBIT II-3. POPULATION TRENDS 1990–2011

	Market Area	Utah	United States
2011			
Total Population	56,166	2,817,222	311,591,919
Number of Households	18,019	884,253	114,991,725
2000			
Total Population	40,735	2,233,169	281,421,906
Number of Households	12,677	701,933	105,539,122
1990			
Total Population	26,601	1,722,850	250,132,000
Number of Households	8,581	537,273	93,347,000
Change 1990 to 2011			
Total Population	111%	64%	25%
Number of Households	110%	65%	23%
Change 2000 to 2011			
Total Population	38%	26%	11%
Number of Households	42%	26%	9%
Change 1990 to 2000			
Total Population	53%	30%	13%
Number of Households	48%	31%	13%

Sources: 2011 ACS 5-Year Estimates; 2011 ACS 1-Year Estimates; 2000 Census Summary File; 1990 Census Summary File; and Applied Real Estate Analysis, Inc.

The significant increase in the market area's population is due in large part to the Tooele City–area's proximity to Salt Lake City. Downtown Salt Lake City is less than one hour (via the Interstate) from downtown Tooele City, and land and home prices are lower in the Tooele area, making the area a more affordable option in comparison to Salt Lake City. Growth was also fueled by the 2006 opening of a Walmart Distribution Center in Grantsville. The center employs an estimated 700 people, making it the county's largest private sector employer.

Household Size

The average household size is 3.09, and the average family size is slightly larger, at 3.53.

EXHIBIT II-4. MARKET AREA HOUSEHOLD SIZE

Size	Number	Percent
1-person	3,080	17%
2-person	5,184	29%
3-person	3,347	19%
4-person	2,969	16%
5-person	1,924	11%
6-person	882	5%
7-or-more person	633	4%
Total	18,019	100%

Sources: 2011 ACS 5-Year Estimates and Applied Real Estate Analysis, Inc.

Age

The market area has a relatively young population, with approximately 85 percent of the population under the age of 54. This is similar to the age distribution in 2000.

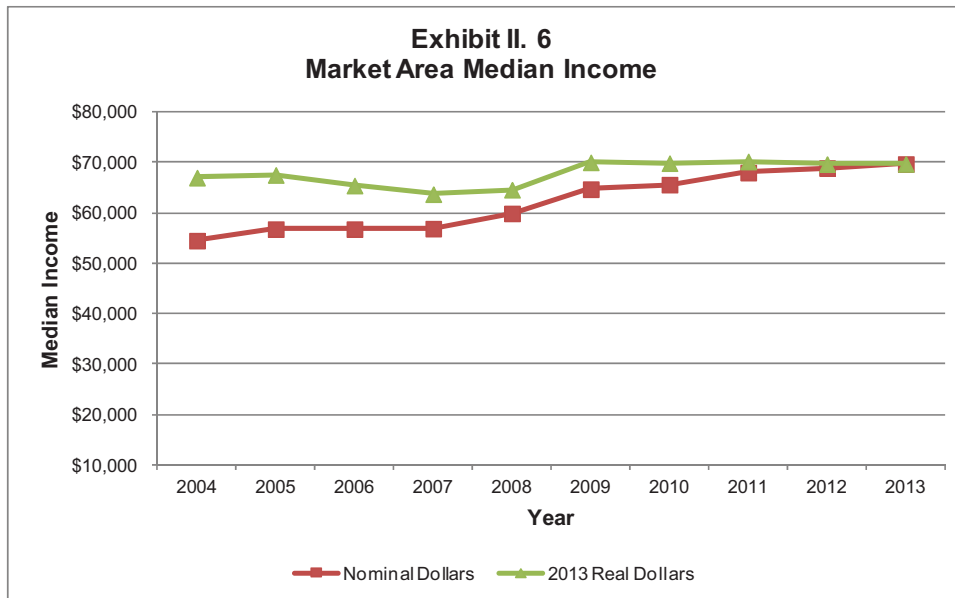
EXHIBIT II-5. AGE DISTRIBUTION

Age	Market Area		Utah		United States	
	Number	Percent	Number	Percent	Number	Percent
0–19	21,975	39%	942,404	35%	83,092,458	27%
20–54	26,215	46%	1,297,471	48%	148,394,908	48%
55–64	4,790	8%	232,351	9%	35,507,586	12%
65 and above	3,977	7%	243,153	9%	39,608,820	13%
Total	56,957	100%	2,715,379	100%	306,603,772	100%

Sources: 2011 ACS 5-Year Estimates; and Applied Real Estate Analysis

Income

The median income for the market area is \$69,700 (according to the 2011 ACS 5-Year Estimate), which is 9 percent higher than the median income for Utah and 20 percent higher than the median income for the U.S. The median income from 2004 to 2013 is presented in Exhibit II-6, below.



Employment

The state of Utah has historically grown economically more rapidly than the rest of the United States. This continued during the most recent recession, with the state unemployment rate remaining around 2 percent below the national unemployment rate. In 2013, Utah is estimated to see a 3.5 percent increase in employment, while the national increase is anticipated to be less than 2 percent. The largest employment increases are expected in the construction sector (9.4 percent) and the professional and business services sector (5.4 percent).³

As of 2011, there were an estimated 22,452 jobs in Tooele County, 22 percent of which were with the government (state, local, or federal).⁴ Tooele County has a relatively stable economy benefiting from its proximity to Salt Lake City as well as the presence of the DOD, which is the county's second-largest employer. Other major area employers operate hazardous waste disposal facilities and conduct mineral extraction operations. The top 25 employers in the county are listed in Exhibit II-7.

³ "Economic Outlook 2013." Utah Governor's Office of Management and Budget. 2013.

⁴ CA25N Total full-time and part-time employment by NAICS industry. U.S. Bureau of Economic Analysis. Updated November 26, 2012.

EXHIBIT II-7.
TOOELE COUNTY LARGEST EMPLOYERS, 2011

Ranking	Employment Range	Company	Industry
1	1,000–1995	Tooele School District	Public Education
2	1,000–1995	Department of Defense	Federal Government
3	1,000–1995	Walmart	Warehouse Clubs/Supercenters
4	500–995	EG and G Defense Materials	Hazardous Waste Disposal
5	250–495	US Magnesium	Primary Metals Manufacturing
6	250–495	Tooele County	Local Government
7	250–495	Envirocare of Utah	Hazardous Waste Disposal
8	250–495	Detroit Diesel Remanufacturing	Machinery Manufacturing
9	250–495	Mountain West Medical Center	Healthcare
10	250–495	Tooele City	Local Government
11	100–245	ATI Titanium	Primary Metal Manufacturing
12	100–245	State of Utah	State Government
13	100–245	Jacobs Technology	Testing Laboratory
14	100–245	Miller Motorsports Park	Automotive Racetrack
15	100–245	US Pipeline	Specialty Trade Contractor
16	100–245	Clean Harbors	Hazardous Waste Disposal
17	100–245	Morton International	Food Manufacturing
18	100–245	Macey's	Grocery Store
19	100–245	McDonald's	Fast Food Restaurant
20	100–245	Home Depot	Home Improvement Center
21	100–245	C Martin Company	Facilities Support Services
22	100–245	U.S. Postal Service	Federal Government
23	50–95	Cargill	Spice/Extract Manufacturing
24	50–95	Excelsior Academy	Elementary/Secondary Schools
25	50–95	Battelle Memorial Institute	Scientific/Research

Source: Utah Department of Workforce Services.

There are four major changes in the employment environment that are occurring and will continue into 2015. URS Corporation, which runs the Deseret Chemical Depot in Tooele County, completed waste disposal in 2012. As operations come to a close, the estimated 1,500 employees of the depot will be reassigned to a facility in Pueblo, Colorado (an estimated 375), offered retirement, or laid off, with operations scheduled to fully end in 2014. The second major change in the employment landscape is the completion of the Mona-Oquirrh Transmission Corridor Project in southeastern Tooele County. Rocky Mountain Power began construction on the line in 2010, and construction activity is scheduled to be complete in 2013. A large number of construction workers were brought into the area, and the majority are believed to be renters as opposed to owners as the project had a short timeline. Once construction is complete, these workers will leave the market area. There will be a smaller influx of permanent employees in 2013 who will be responsible for operation and maintenance of the transmission line. Another potential change to the employment landscape is the possible relocation of a Utah state prison to the county. As of the beginning of 2013, a

final decision had not been made regarding the location of the prison. The final change to the employment landscape is the anticipated Kiewit Mine Project, which will involve the reopening of a mine in the southern portion of the county. Historical unemployment rates are listed in Exhibit II-8.

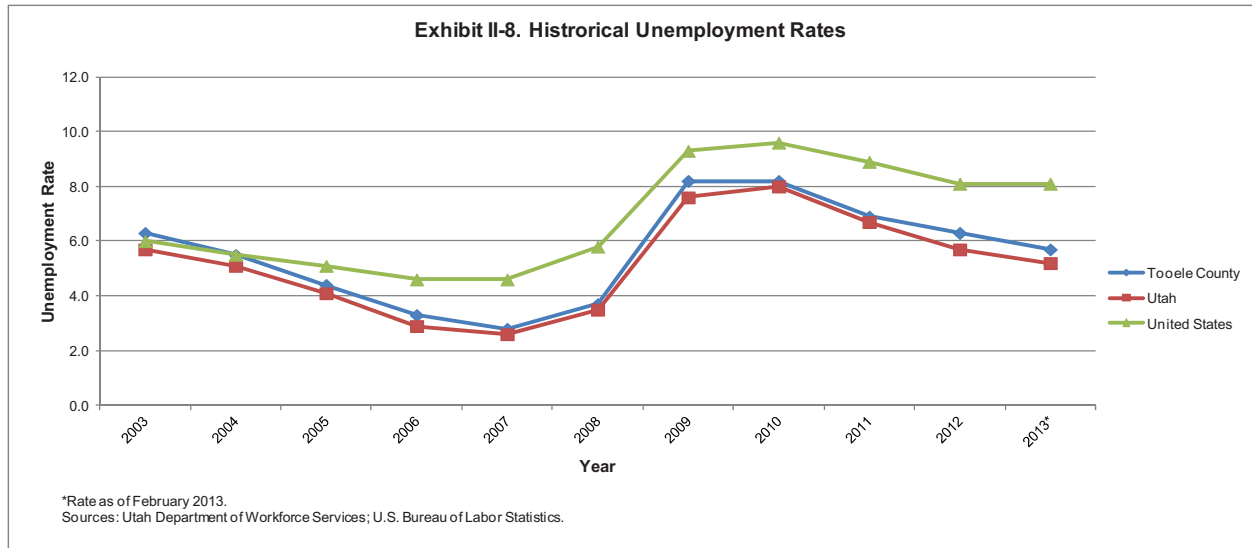


Exhibit II-9 provides trends in employment and average annual earnings per job for the United States, Utah, and Tooele County. During this time period, Tooele County experienced growth in total employment that was consistently twice the growth that occurred nationally and at a state level. As of 2011, the most recent year for which data are available, the average annual job growth rate in Tooele County was 1.4 percent. In contrast, the rates in Utah and the U.S. were half that, at 0.7 and 0.5 percent, respectively.

**EXHIBIT II-9.
EMPLOYMENT AND EARNINGS, 2001–2011**

	2001	2003	2005	2007	2009	2011
United States						
Total employment	165,510,200	166,019,500	172,551,400	179,899,700	174,225,700	175,834,700
Average annual change		0.2%	2.0%	2.1%	-1.6%	0.5%
Average earnings per job	\$ 54,212	\$ 55,391	\$ 55,940	\$ 55,647	\$ 54,398	\$ 55,495
Average annual change		1.1%	0.5%	-0.3%	-1.1%	1.0%
Utah						
Total employment	1,379,705	1,400,938	1,516,532	1,674,854	1,634,986	1,657,786
Average annual change		0.8%	4.1%	5.2%	-1.2%	0.7%
Average earnings per job	\$ 45,548	\$ 45,529	\$ 45,615	\$ 45,675	\$ 45,358	\$ 45,889
Average annual change		0.0%	0.1%	0.1%	-0.3%	0.6%
Tooele County						
Total employment	16,056	17,134	19,558	21,684	21,861	22,452
Average annual change		3.4%	7.1%	5.4%	0.4%	1.4%
Average earnings per job	\$ 44,168	\$ 45,029	\$ 45,617	\$ 43,883	\$ 45,104	\$ 46,405
Average annual change		1.0%	0.7%	-1.9%	1.4%	1.4%

Note: Earnings adjusted to constant February 2013 dollars.
Source: U.S. Bureau of Economic Analysis.

The Utah State Governor's office has developed projections for employment based upon U.S. Census data as well as local data sources. Projections for employment through 2060 are presented below, in Exhibit II-10.

**EXHIBIT II-10.
EMPLOYMENT PROJECTIONS THROUGH 2060**

	1990	2000	2010	2020	2030	2040	2050	2060
Tooele County								
Total employment	13,067	15,549	22,001	29,056	37,260	46,106	56,046	66,774
Average annual change	1.9%	4.1%	3.2%	2.8%	2.4%	2.2%	1.9%	
Utah								
Total employment	924,960	1,362,010	1,611,077	1,953,373	2,265,786	2,567,169	2,893,813	3,244,343
Average annual change	4.7%	1.8%	2.1%	1.6%	1.3%	1.3%	1.2%	
United States								
Total employment	138,330,900	165,370,800	173,752,400	195,050,389	211,815,496	228,221,476	247,301,341	268,853,189
Average annual change	2.0%	0.5%	1.2%	0.9%	0.8%	0.8%	0.9%	

Source: Governor's Office of Planning and Budget, Preliminary 2012 Baseline Projections.

SECTION III.

HOUSING MARKET STOCK CHARACTERISTICS

This section provides an overview of the housing stock in the housing market area. Data are presented on both private sector and publically assisted housing and owner- and renter-occupied housing. Data presented for 2011 are estimates, and data presented for 2013 and 2018 are projections utilizing several data sources. The data sources include:

- Utah Governor's Office of Planning and Budget 2012 Baseline Projections
- Utah's Population Estimates Committee
- 2010 and 2000 U.S. Census
- 2011 American Community Survey 3-year estimates

A variety of data sources were used because of the reliability of the data and availability at the appropriate geographic level. The preferred data source was the 2010 U.S. Census because it provides the most recent picture of the housing market.

HOUSING OCCUPANCY

From 2000 to 2010, the market area saw a substantial growth in the number of housing units in response to increased demand from a rising market area population. During this time, the number of occupied housing units increased 42 percent, to approximately 17,971 units. The majority of the increase occurred in the owner-occupied housing stock, which was 13,873 in 2010 and represented 77 percent of the occupied units. The number of occupied rental housing units was 4,098 (23 percent).

According to the 2010 Census, the vacancy rate for the housing market area is 7.6 percent. A more reliable and current source of vacancy data is the U.S. Department of Housing and Urban Development Aggregated United States Postal Service Administrative Data ("USPS Vacancy Data"). According to the USPS Vacancy Data, as of December 31, 2012, the overall residential vacancy rate was 3 percent, with 604 vacant units. One challenge with the USPS vacancy data is that it is not available by owner-occupied and renter-occupied units. Nonetheless, a 3 percent vacancy rate is more in line with information reported by local real estate professionals, who estimated the rental vacancy rate at no more than 5 percent.

The growth in the population and housing stock is anticipated to continue, albeit at a significantly reduced rate through 2018. The projected number of housing units in 2018 is 21,591. Projections for the housing stock through 2018 are presented below, in Exhibit III-1.

**EXHIBIT III-1.
OCCUPANCY 2000–2018
DUGWAY PROVING GROUND HOUSING MARKET AREA**

	2000	2010	2013	2018
Total population	40,735	58,218	61,498	67,412
Total housing units	13,812	19,455	20,133	21,591
Occupied housing units	12,677	17,971	19,099	20,935
Owner-occupied	9,933	13,873	14,744	16,161
Renter-occupied	2,744	4,098	4,355	4,774
Vacant housing units	1,135	1,484	1,034	656
For sale	296	377	263	167
Sold or rented, not occupied	105	112	78	49
For rent	429	308	215	136
Other (1)	305	687	479	304

(1) Includes seasonal/recreational housing, housing for migratory workers, and housing vacant for other uncoded reasons.

Sources: 2000 U.S. Census; 2010 U.S. Census; 2011 ACS 5-Year and 3-Year Estimates; Utah Governor's Office of Planning and Budget, Preliminary 2012 Baseline Projections; Utah's Population Estimates Committee; and Applied Real Estate Analysis, Inc.

YEAR BUILT

The housing stock in the market area is fairly new, with 53 percent of the units built in 1990 or later. The renter-occupied housing stock is generally older than the owner-occupied housing stock. Thirty-nine percent of the rental housing stock was built in 1990 or later, in contrast to the owner-occupied stock, in which 59 percent of the housing was built in 1990 or later.

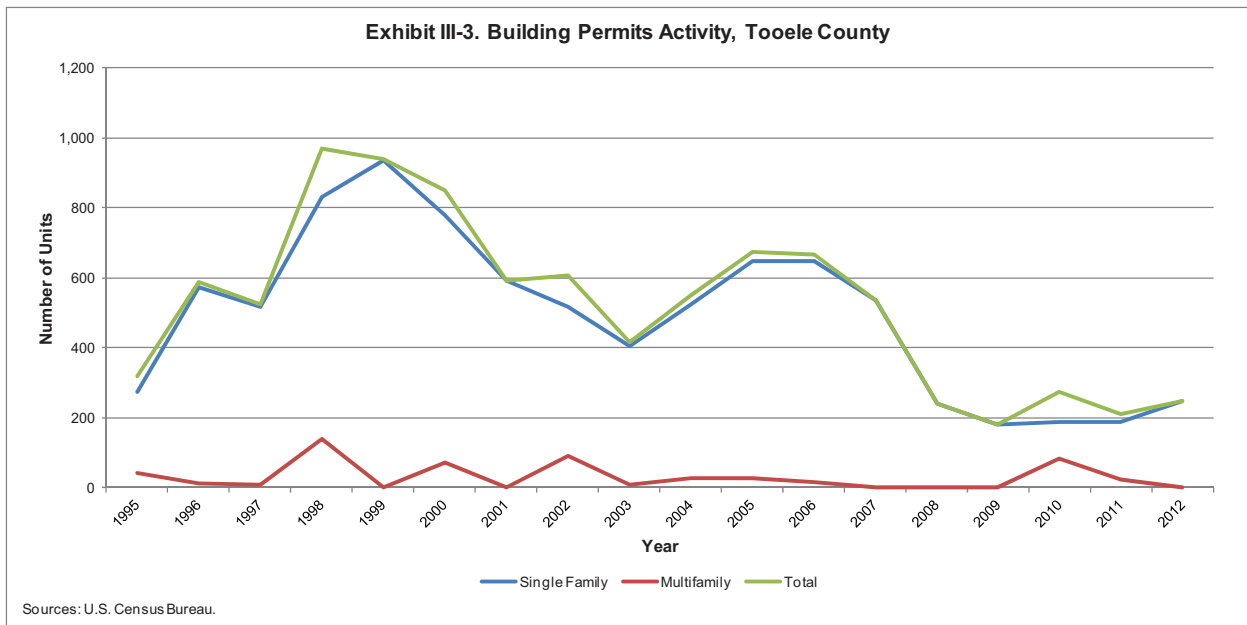
EXHIBIT III-2.
OWNER-OCCUPIED AND RENTER-OCCUPIED HOUSING BY YEAR STRUCTURE
DUGWAY PROVING GROUND

Year Built	Owner Occupied		Renter Occupied		All	
	Number	Percent	Number	Percent	Number	Percent
2005 or later	2,315	17%	291	6%	2,606	14%
2000 to 2004	2,672	20%	608	13%	3,280	18%
1990 to 1999	2,986	22%	904	20%	3,890	21%
1980 to 1989	977	7%	358	8%	1,335	7%
1970 to 1979	1,493	11%	652	14%	2,145	12%
1960 to 1969	1,098	8%	369	8%	1,467	8%
1950 to 1959	741	5%	587	13%	1,328	7%
1940 to 1949	561	4%	184	4%	745	4%
1939 or earlier	669	5%	640	14%	1,309	7%
Total	13,512	100%	4,593	100%	18,105	100%

Source: 2011 ACS 3-Year Estimates.

CONSTRUCTION ACTIVITY AND BUILDING PERMITS

The market area, similar to the state and national markets, saw accelerated housing construction during the housing boom from 2005 through 2007. Unlike in other portions of the country and even the state of Utah, the most recent housing boom was not the peak of housing activity in the market area over the past 20 years. In the late 1990s, housing prices in Salt Lake City and County and Davis County (north of Salt Lake County) increased over 50 percent. The lower home purchase prices in Tooele County led households to relocate to the market area as it became more affordable relative to the Salt Lake City metropolitan area.



During the five-year period from 1995 to 2000, 4,187 building permits were issued in the market area. This represents 44 percent of all the permits issued from 1995 through 2012. During the most recent national housing boom, the number of permits issued peaked in 2005, at 675 units. In 2012, 247 building permits were issued, all of which were for single-family homes.

HOUSING STRUCTURE

Historically, the majority of the housing stock in the market area has included single-family homes, both attached and detached. This is common in rural areas where land is plentiful. According to staff with the Tooele County Planning Department, developing multifamily housing in the market area is difficult because there is limited water and sewer infrastructure. The majority of the land in the county is in unincorporated areas that use septic systems and wells. Stansbury Park is the only unincorporated area of the market area with water and sewer infrastructure.

In 2000, single-family homes represented 79 percent of the housing stock. By 2010, they represented 85 percent. As of 2011, 1,835 units (less than 10 percent) were located in multifamily structures. Slightly more than half the 1,835 multifamily units are located in buildings with two to four units. The multifamily housing that does exist in the community is concentrated primarily in Tooele City, with some additional units in Grantsville.

EXHIBIT III-4.
HOUSING SUPPLY BY BUILDING TYPE, 2000–2018
DUGWAY PROVING GROUND HOUSING MARKET AREA

	2000		2011 (2)		2013		2018	
	#	%	#	%	#	%	#	%
Total housing units	13,812	100%	19,898	100%	20,133	100%	21,591	100%
Single-family attached and detached units	10,975	79%	17,141	86%	17,343	86%	18,600	86%
Multifamily units	1,461	11%	1,668	8%	1,688	8%	1,810	8%
2 to 4 units	926		801	4%	810	4%	869	4%
5 or more units	535		867	4%	877	4%	941	4%
Other (1)	1,376	10%	1,089	5%	1,101	5%	1,181	5%

(1) "Other" includes mobile homes, RVs, boats, and all other housing types.

(2) Estimated.

Sources: 2000 U.S. Census; 2010 U.S. Census; 2011 ACS 5-Year and 3-Year Estimates; Utah Governor's Office of Planning and Budget, Preliminary 2012 Baseline Projections; Utah's Population Estimates Committee; and Applied Real Estate Analysis, Inc.

Projections for the housing stock by housing structure were developed for 2013 and 2018 based upon historical trends in residential construction, interviews with local real estate professionals, and state projections. Historical activity in real estate is not always a predictor of future activity. Although markets are cyclical, significant periods of development are almost always followed by reduced development activity. The lengths of the cycles are impacted by a variety of factors, including local and national economic conditions and changes in the population.

Given national and local economic conditions and because the market area had peak residential development activity in the late 1990s and in 2005 and 2006, housing construction activity is estimated to occur at a slower pace through 2018 (1 percent) than occurred from 2000 to 2011 (4 percent). The average annual growth of the housing supply by building structure is presented in Exhibit III-5.

EXHIBIT III-5.
AVERAGE ANNUAL GROWTH IN HOUSING SUPPLY BY BUILDING TYPE, 2000–2018
DUGWAY PROVING GROUND HOUSING MARKET AREA

	2000 to 2011	2011 to 2013	2013 to 2018
Total housing units	4%	1%	1%
Single-family attached and detached units	6%	1%	1%
Multifamily units	1%	1%	1%
2 to 4 units	-1%	1%	1%
5 or more units	6%	1%	1%
Other (1)	-2%	1%	1%

(1) “Other” includes mobile homes, RVs, boats, and all other housing types.

Sources: 2000 U.S. Census; 2010 U.S. Census; 2011 ACS 5-Year and 3-Year Estimates; Utah Governor’s Office of Planning and Budget, Preliminary 2012 Baseline Projections; Utah’s Population Estimates Committee; and Applied Real Estate Analysis, Inc.

UNIT SIZES

The renter-occupied housing stock in the market area is comprised of predominantly two- and three-bedroom units, which represent 70 percent of the rental housing stock.

EXHIBIT III-6.
OWNER-OCCUPIED AND RENTER-OCCUPIED HOUSING SUPPLY BY BEDROOM
DUGWAY PROVING GROUND HOUSING MARKET AREA

Unit Size	Owner Occupied		Renter Occupied		All	
	Number	Percent	Number	Percent	Number	Percent
Studios	0	0%	31	1%	31	0%
1 bedroom	196	1%	457	10%	653	4%
2 bedrooms	1,857	14%	1,434	31%	3,291	18%
3 bedrooms	4,846	36%	1,801	39%	6,647	37%
4 bedrooms	3,710	27%	418	9%	4,128	23%
5 or more bedrooms	2,903	21%	452	10%	3,355	19%
All sizes	13,512	100%	4,593	100%	18,105	100%

Source: 2011 ACS 3-Year Estimates.

**EXHIBIT III-7.
PROJECTED HOUSING SUPPLY BY BEDROOM AND TENURE
DUGWAY PROVING GROUND HOUSING MARKET AREA**

Unit Size	2011	2013	2018
Studios			
Owner-occupied	0	0	0
Renter-occupied	28	29	32
Vacant	100	67	43
Vacant for rent	21	14	9
1 bedroom			
Owner-occupied	206	214	234
Renter-occupied	417	433	475
Vacant	131	88	56
Vacant for rent	27	18	12
2 bedrooms			
Owner-occupied	1,948	2,026	2,221
Renter-occupied	1,307	1,360	1,490
Vacant	584	393	250
Vacant for rent	121	82	52
3 bedrooms			
Owner-occupied	5,084	5,288	5,796
Renter-occupied	1,642	1,708	1,872
Vacant	358	241	153
Vacant for rent	74	50	32
4 bedrooms			
Owner-occupied	3,892	4,048	4,437
Renter-occupied	381	396	434
Vacant	133	89	57
Vacant for rent	28	19	12
5 or more bedrooms			
Owner-occupied	3,046	3,168	3,472
Renter-occupied	412	429	470
Vacant	229	155	98
Vacant for rent	48	32	20
All sizes			
Owner-occupied	14,177	14,744	16,161
Renter-occupied	4,188	4,355	4,774
Vacant	1,534	1,034	656
Vacant for rent	318	215	136

Sources: 2010 U.S. Census; 2011 ACS 5-Year and 3-Year Estimates; Utah Governor's Office of Planning and Budget, Preliminary 2012 Baseline Projections; Utah's Population Estimates Committee; Applied Real Estate Analysis, Inc.

As discussed in Chapter II, URS Corporation began reducing the number of employees in the area in 2011. Rocky Mountain Power is also reducing its employees in the area, although most employees were only temporarily assigned to the area for construction of the transmission line. The anticipated overall impact of these employment changes during the analysis period (2013 through 2018) is a reduction in the vacancy rate, because while some households will leave the area, new households will enter the area, and most of these will live in existing owner-occupied housing or build new owner-occupied housing units. Therefore, the overall vacancy rate is estimated at 5 percent in 2013 and expected to reduce to 3 percent in 2018.

HOUSING MARKET HOUSING QUALITY

The quality of housing in a given market area is one of the key criteria used by DOD to determine the acceptability of housing for military households. For a unit to be considered acceptable, it must be well maintained, structurally sound, and have:

- Room patterns, floor areas, and amenities that are consistent with housing in the market area
- A private entrance
- At least one full bathroom
- A kitchen with connections for a range and refrigerator and adequate food preparation space. The kitchen must be for the sole use of the unit occupants.
- An adequate number of bedrooms
- A cooling system and a permanently installed heating system if required due to climate conditions
- Adequate utility systems and services¹

Researchers often use U.S. Census data on the presence of complete plumbing facilities, complete kitchen facilities, and telephone service as evidence of the quality of housing in a community. Using these indicators, 97 percent of the housing in the market area is of a suitable quality. The age of a unit is also used as a proxy to indicate quality. Newer units are more likely to have superior conditions and less evidence of “wear and tear.” The large number of rental units that are 30 years of age or less implies that the housing in the market area is of a suitable quality. However, it is important to note that an older unit that is well maintained or recently renovated may be superior to a newer unit.

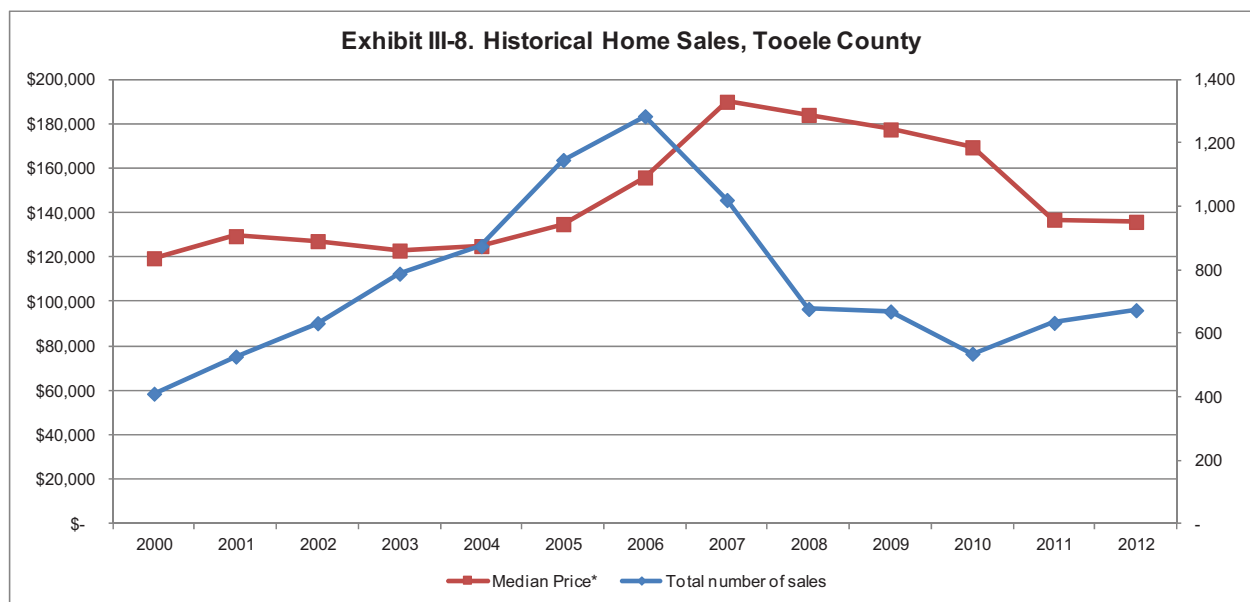
Neither the Census nor any other data source collects information on other quality factors, including the level of maintenance. As a result, real estate professionals with knowledge of the local area must be relied upon to provide a qualitative assessment of housing quality. Realtors and property managers interviewed for the study indicated that the quality of rental housing in the market area varies dramatically. The level of maintenance varies in part because many of the landlords have less than five units. Price can normally serve as an indicator of the quality of a given unit: units that are of an inferior quality are generally at the lower end of the rental range. Interviewees also indicated that the quality of the housing is impacted by the tight rental market. Landlords

¹ Department of Defense Manual Number 4165.63-M, issued October 28, 2010.

have minimal incentive to maintain high-quality units because the number of available rental units is low.

FOR-SALE HOUSING MARKET

After increases in prices and number of sales during the late 1990s, the local housing market saw limited changes in median prices from 2000 to 2004. During this time, the median sales price increased 4.6 percent, from \$119,500 to \$125,000, an annual average increase of 1.15 percent. Then from 2004 through 2007, the median price rose 52 percent, to \$189,900, an annual average increase of 17 percent. Median sales prices steadily decreased from 2007 to 2010, and from 2011 through 2012 they remained relatively level, at \$136,900 and \$135,900, respectively. Median homes sales from 2000 to 2012 are presented below in Exhibit III-8.



RENTAL HOUSING MARKET

There is not a large rental housing supply in the housing market area. Based upon reviews of rental housing listings, conversations with local real estate professionals, and a driving survey of the housing market area, the majority of rental housing that does exist is owned by “mom-and-pop” landlords with one or two units. Many of these units are located in condominium buildings in Tooele City and Stansbury Park purchased during active real estate markets. The limited demand for new housing forced homeowners to turn the properties into rental units when their own housing needs changed. There are very few private-market, professionally managed multifamily rental complexes in the market area.

A survey of available rental housing was conducted for this Housing Market Analysis from November 2012 through March 2013. Real estate professionals in the area stated that most units that are available for rent are advertised with signs in front yards or on www.ksl.com. Sources of information included the following:

- www.myhometownproperties.com
- www.mynewplace.com
- www.craigslist.org
- www.millwood.com
- www.emg-apts.com
- www.ksl.com
- www.transcriptbulletin.com
- “For rent” signs on properties

A total of 93 rental listings were found for units ranging in size from studios to five-plus bedrooms. Based upon narrative descriptions and photos provided by the landlords, the quality of units varies. A summary of the survey findings is presented in Exhibit III-9.

EXHIBIT III-9.
RENTAL HOUSING MARKET SURVEY, TOOELE COUNTY

Bedroom Size	Count	Rent			
		Average	Median	Minimum	Maximum
0	1	\$650	\$650	\$650	\$650
1	10	\$587	\$625	\$399	\$725
2	26	\$751	\$760	\$575	\$1,100
3	21	\$1,019	\$1,000	\$800	\$1,295
4	26	\$1,214	\$1,188	\$950	\$1,600
5+	9	\$1,322	\$1,250	\$1,185	\$1,595

Source: Applied Real Estate Analysis, Inc.

In addition to reviewing listings, local real estate professionals were asked to provide their understanding of rental housing trends in the market area for this HMA. Identified trends included:

- There are almost no studio units in the market area. Many of the units that do exist may not be legal units. The majority of the legal studio units are found in a former hotel in downtown Tooele City. The units at this property are in poor condition, and monthly rent ranges from \$450 to \$600.
- Two-bedroom units that are under \$850 are normally not in good condition.
- Units, regardless of size, that fall within the \$900 to \$1,200 range tend to remain available for a very short amount of time.
- The current rental housing market is tight. One real estate professional noted that for a recently advertised unit, he received five applications and 25 calls within one week.

Utility Costs

Monthly utility costs were estimated using data from the Tooele County Housing Authority (TCHA) Utility Allowance Schedule as of January 1, 2012. The ranges are presented below. The exact amount within the range depends upon the fuel for the utility (e.g., natural gas, electric, bottle gas, or oil), building type (e.g., rowhouse or single-family detached), and age of the building.

- Studio units: \$83–\$199
- One-bedroom units: \$102–\$262
- Two-bedroom units: \$132–\$323
- Three-bedroom units: \$164–\$406
- Four-bedroom units \$203–\$471
- Five-bedroom units \$224–\$536

CURRENT RENTAL HOUSING SUPPLY BY COST AND BEDROOM SIZE

Given the limited supply of rental housing in the housing market area, to conduct the analysis of supply by bedroom and occupancy this HMA utilizes qualitative information from local real estate professionals to supplement the sample of 93 rental housing units. The following tables provide estimates of the distribution of rental housing units by occupancy, vacancy, and estimated costs.

EXHIBIT III-10.**ESTIMATED HOUSING COSTS FOR RENTER-OCCUPIED HOUSING UNITS IN TOOELE COUNTY, 2013**

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	13	173	163	0	0	0	349
\$501–600	17	43	231	0	0	0	291
\$601–700	0	87	272	0	0	0	359
\$701–800	0	130	381	81	0	0	592
\$801–900	0	0	209	137	0	0	346
\$901–1,000	0	0	54	488	0	0	542
\$1,001–1,100	0	0	54	427	91	0	572
\$1,101–1,200	0	0	0	244	137	95	476
\$1,201–1,300	0	0	0	325	122	190	637
\$1,301–1,400	0	0	0	0	15	48	63
\$1,401–1,500	0	0	0	0	15	48	63
\$1,501–1,600	0	0	0	0	15	48	63
\$1,601–1,700	0	0	0	0	0	0	0
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	0	0	0
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	30	433	1,364	1,702	395	429	4,353

Source: Applied Real Estate Analysis, Inc.

The current estimated rental housing vacancy rate is 4.7 percent. The estimated natural vacancy rate for the market area is between 6 and 7 percent. Therefore, there are currently no naturally vacant units in the market area.

EXHIBIT III-11.**ESTIMATED HOUSING COSTS FOR VACANT RENTAL-HOUSING UNITS IN TOOELE COUNTY, 2013**

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
	0	7	0	0	0	0	7
\$501–600	0	2	16	0	0	0	18
\$601–700	14	4	19	0	0	0	37
\$701–800	0	5	28	2	0	0	35
\$801–900	0	0	13	14	0	0	27
\$901–1,000	0	0	0	14	1	0	15
\$1,001–1,100	0	0	6	2	4	0	12
\$1,101–1,200	0	0	0	7	6	7	20
\$1,201–1,300	0	0	0	10	6	14	30
\$1,301–1,400	0	0	0	0	1	4	5
\$1,401–1,500	0	0	0	0	1	4	5
\$1,501–1,600	0	0	0	0	1	4	5
\$1,601–1,700	0	0	0	0	0	0	0
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	0	0	0
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	14	18	82	49	20	33	216

Source: Applied Real Estate Analysis, Inc.

DOD guidance requires that unsuitable housing must be excluded from the supply analysis. It is estimated that approximately nine percent of the current rental housing stock with one or more bedrooms is unsuitable due to poor quality. It is assumed that most of the unsuitable housing is in the lower rent range of each bedroom size. All studio units are considered unsuitable for military families. Based upon these assumptions, there are an estimated 484 unsuitable rental housing units in the market area.

EXHIBIT III-12.
UNSUITABLE RENTAL HOUSING IN TOOELE COUNTY, 2013

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	13	27	24	0	0	0	64
\$501–600	17	7	37	0	0	0	61
\$601–700	14	9	29	0	0	0	52
\$701–800	0	14	41	12	0	0	67
\$801–900	0	0	11	15	0	0	26
\$901–1,000	0	0	3	50	0	0	53
\$1,001–1,100	0	0	0	43	14	0	57
\$1,101–1,200	0	0	0	13	14	10	37
\$1,201–1,300	0	0	0	17	13	20	50
\$1,301–1,400	0	0	0	0	2	5	7
\$1,401–1,500	0	0	0	0	1	5	6
\$1,501–1,600	0	0	0	0	1	3	4
\$1,601–1,700	0	0	0	0	0	0	0
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	0	0	0
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	44	57	145	150	45	43	484

Source: Applied Real Estate Analysis, Inc.

The suitable rental supply is calculated by summing the total number of occupied rental units and the total number of vacant rental units, and then subtracting the total number of unsuitable rental housing units. There are currently an estimated 4,085 suitable rental housing units in the market area. The total estimated suitable rental housing supply for 2013 is presented in Exhibit III-13.

EXHIBIT III-13.
SUITABLE RENTAL HOUSING IN TOOELE COUNTY, 2013

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	0	153	139	0	0	0	292
\$501–600	0	38	210	0	0	0	248
\$601–700	0	82	262	0	0	0	344
\$701–800	0	121	368	71	0	0	560
\$801–900	0	0	211	136	0	0	347
\$901–1,000	0	0	51	452	1	0	504
\$1,001–1,100	0	0	60	386	81	0	527
\$1,101–1,200	0	0	0	238	129	92	459
\$1,201–1,300	0	0	0	318	115	184	617
\$1,301–1,400	0	0	0	0	14	47	61
\$1,401–1,500	0	0	0	0	15	47	62
\$1,501–1,600	0	0	0	0	15	49	64
\$1,601–1,700	0	0	0	0	0	0	0
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	0	0	0
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	0	394	1,301	1,601	370	419	4,085

Source: Applied Real Estate Analysis, Inc.

PROJECTED RENTAL HOUSING SUPPLY BY COST AND BEDROOM SIZE

The projected supply of rental housing in 2018 was developed using the same methodology developed for the 2013 supply analysis. The projected number of suitable housing units is projected to decrease to 3,981 units.

EXHIBIT III-14.

PROJECTED HOUSING COSTS FOR RENTER-OCCUPIED HOUSING UNITS IN TOOELE COUNTY, 2018

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More		All
\$500 or less	4	48	447	0	0	0	0	499
\$501–600	10	143	134	0	0	0	0	287
\$601–700	3	81	0	0	0	0	0	84
\$701–800	6	95	0	0	0	0	0	101
\$801–900	0	38	104	19	0	0	0	161
\$901–1,000	0	38	104	19	0	0	0	161
\$1,001–1,100	0	0	229	150	0	0	0	379
\$1,101–1,200	0	0	60	535	0	0	0	595
\$1,201–1,300	0	0	60	468	100	0	0	628
\$1,301–1,400	0	0	0	267	150	104	0	521
\$1,401–1,500	0	0	0	357	134	209	0	700
\$1,501–1,600	0	0	0	0	17	52	0	69
\$1,601–1,700	0	0	0	0	17	52	0	69
\$1,701–1,800	0	0	0	0	4	9	0	13
\$1,801–1,900	0	0	0	0	13	42	0	55
\$1,901–2,000	0	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0	0
All	23	443	1,138	1,815	435	468	0	4,322

Source: Applied Real Estate Analysis, Inc.

**EXHIBIT III-15.
PROJECTED HOUSING COSTS FOR VACANT RENTAL-HOUSING UNITS IN TOOELE COUNTY, 2018**

Rent Range	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	0	1	0	0	0	0	1
\$501–600	0	3	0	0	0	0	3
\$601–700	0	1	10	0	0	0	11
\$701–800	9	2	12	0	0	0	23
\$801–900	0	3	8	0	0	0	11
\$901–1,000	0	0	16	11	0	0	27
\$1,001–1,100	0	0	2	3	0	0	5
\$1,101–1,200	0	0	0	6	0	0	6
\$1,201–1,300	0	0	4	3	3	0	10
\$1,301–1,400	0	0	0	3	3	5	11
\$1,401–1,500	0	0	0	6	4	9	19
\$1,501–1,600	0	0	0	0	0	2	2
\$1,601–1,700	0	0	0	0	0	2	2
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	0	2	2
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	9	10	52	32	10	20	133

Source: Applied Real Estate Analysis, Inc.

EXHIBIT III-16.**PROJECTED UNSUITABLE RENTAL HOUSING IN TOOELE COUNTY, 2018**

	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	4	7	67	0	0	0	78
\$501–600	10	22	20	0	0	0	52
\$601–700	3	12	2	0	0	0	17
\$701–800	15	10	2	0	0	0	27
\$801–900	0	4	11	3	0	0	18
\$901–1,000	0	4	12	5	0	0	21
\$1,001–1,100	0	0	12	15	0	0	27
\$1,101–1,200	0	0	3	54	0	0	57
\$1,201–1,300	0	0	0	47	15	0	62
\$1,301–1,400	0	0	0	14	15	16	45
\$1,401–1,500	0	0	0	18	14	22	54
\$1,501–1,600	0	0	0	0	2	5	7
\$1,601–1,700	0	0	0	0	1	5	6
\$1,701–1,800	0	0	0	0	0	0	0
\$1,801–1,900	0	0	0	0	1	2	3
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
All	32	59	129	156	48	50	474

EXHIBIT III-17.**PROJECTED SUITABLE RENTAL HOUSING IN TOOELE COUNTY, 2018**

	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Five Bedrooms or More	All
\$500 or less	0	42	380	0	0	0	422
\$501–600	0	124	114	0	0	0	238
\$601–700	0	70	8	0	0	0	78
\$701–800	0	87	10	0	0	0	97
\$801–900	0	37	101	16	0	0	154
\$901–1,000	0	34	108	25	0	0	167
\$1,001–1,100	0	0	219	138	0	0	357
\$1,101–1,200	0	0	57	487	0	0	544
\$1,201–1,300	0	0	64	424	88	0	576
\$1,301–1,400	0	0	0	256	138	93	487
\$1,401–1,500	0	0	0	345	124	196	665
\$1,501–1,600	0	0	0	0	15	49	64
\$1,601–1,700	0	0	0	0	16	49	65
\$1,701–1,800	0	0	0	0	4	9	13
\$1,801–1,900	0	0	0	0	12	42	54
\$1,901–2,000	0	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0	0
AllAll	0	394	1,061	1,691	397	438	3,981

PUBLICALLY ASSISTED AND AFFORDABLE HOUSING

There are an estimated 897 publically assisted housing units in the market area. Fifty-nine percent of these units are located in Tooele City, 23 percent are located in Grantsville, 14 percent are located in Stansbury Park, and 4 percent in Wendover. The sources of the subsidies include public housing and project-based vouchers from the U.S. Department of Housing and Urban Development, Low-Income Housing Tax Credits (LIHTCs) from the Utah Housing Corporation (the state housing finance agency), and loans and grants from the U.S. Department of Agriculture-Rural Development.

EXHIBIT III-10. SUBSIDIZED RENTAL HOUSING, TOOELE COUNTY

Apartment Community	Address	Subsidy	Units
Briarwood Apartments	145 Gardenia Way, Wendover, Utah	Rural Development	32
Canyon Cove Senior Housing	178 E. Vine Street, Tooele, Utah	Project-Based Section 8	21
Clark Street Apartments	334 East Clark Street, Grantsville, Utah	Low-Income Housing Tax Credit	24
Five-Plex	132 East Utah Avenue, Tooele, Utah	Public Housing	5
Grantsville Apartment	278 W. Main, Grantsville, Utah	Rural Development	20
Lake View Apartments	742 N. 100 East, Tooele, Utah	Low-Income Housing Tax Credit	76
Landmark Apartments	350 W. 400 North, Tooele, Utah	Project-Based Section 8	52
Old Mill at Stansbury	160 E. Hilary Lane, Stansbury Park, Utah	Low-Income Housing Tax Credit	128
Oquirrh View Apartment	552 N. 270 East, Tooele, Utah	Rural Development	16
Orchard Park	Country Haven Lane, Grantsville, Utah	Low-Income Housing Tax Credit	63
Remington Park Retirement	495 Utah Avenue, Tooele, Utah	Rural Development	72
Somerset Gardens	143 N. 400 West, Tooele, Utah	Rural Development	28
Valley Meadows	582 N. Shay Lane, Tooele, Utah	Low-Income Housing Tax Credit	40
Westwood Mesa	780 W. 770 South, Tooele, Utah	Low-Income Housing Tax Credit	22
Willow Creek	236 W. Plum Street, Grantsville, Utah	Rural Development	83
Broadway-Heritage Apartments	100 North Broadway, Tooele, Utah	Low-Income Housing Tax Credit	56
CROWN scattered sites	Various, Tooele, Utah	Low-Income Housing Tax Credit	11
Gateway Apartments	232 W. Fenwick Lane, Tooele, Utah	Low-Income Housing Tax Credit	130
South Willow Apartments	211 S Hale Street. Grantsville, Utah	Rural Development	18

Sources: Tooele County Housing Authority; Utah Housing Corporation; U.S. Department of Housing and Urban Development; U.S. Department of Agriculture-Rural Development.

Subsidized housing units have limits on the maximum income of households as well as limits on rents. Units subsidized with an LIHTC have limits on the maximum gross rent (market rent plus tenant-paid utilities), which are set by the Utah Housing Corporation. The 2013 rent limits are listed in Exhibit III-11.

EXHIBIT III-11.
LIHTC MAXIMUM GROSS RENTS, 2013

Unit Size	50% of AMI Tax Credits	60% of AMI Tax Credits
Studio	\$610	\$732
1 bedroom	\$653	\$784
2 bedrooms	\$785	\$942
3 bedrooms	\$906	\$1,087
4 bedrooms	\$1,011	\$1,213
5 bedrooms	\$1,116	\$1,339

Source: Utah Housing Corporation.

Additional housing subsidies are available from the Tooele County Housing Authority through its Housing Choice Voucher (HCV) program. Households with an HCV apply a portion of their income—no more than 40 percent—toward the gross rent for a unit in the private market. The difference between the gross rent and the household’s contribution is funded by the HCV. The maximum gross rent cannot exceed the current payment standards established by TCHA. For 2013, these payment standards are:

- Studio: \$593
- One bedroom: \$626
- Two bedroom: \$834
- Three bedroom: \$1,077
- Four bedroom: \$1,366

Eligibility for the publically assisted/affordable units, HCVs, and Rural Development units is dependent upon household income. In most cases, the household’s income cannot exceed 60 percent of the area median income (AMI). For Rural Development multifamily rental housing programs, the household income cannot be above the moderate level. The 2013 income limits are presented in Exhibit III-12.

EXHIBIT III-12.
2013 INCOME LIMITS FOR TOOELE COUNTY

Income Group	Household Size							
	1	2	3	4	5	6	7	8
30% of AMI (Extremely low income)	\$ 14,650	\$ 16,750	\$ 18,850	\$ 20,900	\$ 22,600	\$ 24,250	\$ 25,950	\$ 27,600
50% of AMI (Very low income)	\$ 24,400	\$ 27,900	\$ 31,400	\$ 34,850	\$ 37,650	\$ 40,450	\$ 43,250	\$ 46,050
60% of AMI	\$ 29,280	\$ 33,480	\$ 37,680	\$ 41,820	\$ 45,180	\$ 48,540	\$ 51,900	\$ 55,260
80% of AMI (Low income)	\$ 39,050	\$ 44,600	\$ 50,200	\$ 55,750	\$ 60,250	\$ 64,700	\$ 69,150	\$ 73,600
Moderate income	\$44,550	\$50,100	\$55,700	\$61,250	\$65,750	\$70,200	\$74,650	\$79,100

Sources: U.S. Department of Housing and Urban Development; Utah Housing Corporation; U.S. Department of Agriculture-Rural Development.

Some military personnel and contractors are eligible for the publically assisted units based upon their income and household size. Most of the developments are fully occupied and in some cases, have wait lists. There is only one new assisted development planned as of March 2013, the Broadway-Heritage Apartments. Broadway-Heritage Apartments was awarded LIHTCs in 2012 for a 56-unit development in Tooele. The availability of public housing and HCVs is dependent upon federal funding budgeted for the programs. As a result of the Budget Control Act of 2011 and the American Taxpayer Relief Act of 2012, operating funds for the public housing program is estimated to fall to 76–92 percent of the 2013 budget; administrative funds for the HCV program are estimated to fall to 65.5–81 percent of the 2013 budget; and subsidies for HCV holders are expected to fall to 92.4–98.8 of the 2013 budget.² Consequently, the amount of subsidized housing (publically assisted units and HCVs) will most likely decrease from 2013 to 2018.

² National Association of Housing and Redevelopment Officials.

SECTION IV.

MILITARY HOUSING DEMAND

The demand for military housing at DPG (DPG) is analyzed in this section along with the demand for housing by DOD civilian and contractor personnel. The analysis begins with narrative on the total number of military and civilian personnel at the installation, occupancy of existing on-post housing, floor requirements for DPG, and the demand for off-post community rental housing, as well as the affordability and adequacy of the housing.

ELIGIBLE PERSONNEL

Current Personnel

A typical HMA does not take into account the housing requirements of Department of Defense civilian employees or contract employees. However, the contractor with approval from the Office of the Assistance Chief of Staff for Installation Management (OACSIM) has included the non-military personnel in portions of the analysis. DPG is somewhat unusual in that a large number of the personnel at the installation are nonmilitary. The current (2013) number of personnel at the installation is 1,050. This includes 168 military personnel (16 percent), 748 civilian personnel (71 percent), and 134 contractor personnel (13 percent). Voluntarily Separated personnel were estimated based upon data from the Garrison Housing Office.

Data on the number of current personnel and projected personnel were obtained from the Army Stationing and Installation Plan (ASIP) on October 19, 2013. The DPG Housing Office provided data on the characteristics of the personnel, including accompaniment rates, pay grade, and number of dependents on December 13, 2013. Data on contractor personnel including, accompaniment rates, pay grade, and number of dependents were estimated using the characteristics of DOD civilian personnel as well as data provided by the DPG Housing Office. Although contractors may have a higher level of pay than DOD civilian personnel, the DOD personnel characteristics serve as an acceptable proxy. Total current military personnel are listed below, in Exhibit IV-1, followed by DOD civilian personnel (Exhibit IV-2) and contractor personnel (Exhibit IV-3).

The personnel groups are defined as follows:

- Families: Accompanied personnel
- Couples: Both spouses are members of the military (or DOD or contractor personnel)

- Voluntarily Separated: Married personnel who do not have family members living with them
- Unaccompanied personnel: Unmarried personnel without dependents

Exhibit IV-1.
2013 Military Personnel By Accompaniment Status, DPG

Pay Grade	Military Families	Military Couples	Voluntarily Separated	Unaccompanied	Permanent Party Personnel
Officers					
O7 and above	0	0	0	0	0
O6	1	0	0	0	1
O5	2	0	0	1	3
O4	1	0	0	2	3
O3	4	0	0	1	5
O2	6	0	0	5	11
O1	0	0	0	0	0
Subtotal Officers	14	0	0	9	23
Warrants					
W5	2	0	0	1	3
W4	2	0	0	1	3
W3	2	0	0	1	3
W2	0	0	0	0	1
W1	0	0	1	0	1
Subtotal Warrants	6	0	1	3	10
Enlisted					
E9	1	0	0	0	1
E8	0	0	0	1	1
E7	3	0	0	0	3
E6	12	0	1	5	18
E5	22	0	3	13	38
E4	25	0	5	21	51
E3	5	0	3	9	17
E2	3	0	0	0	3
E1	0	0	0	3	3
Subtotal Enlisted	71	0	12	52	135
Total Military	91	0	13	64	168

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-2.
2013 DOD Personnel by Accompaniment Status, DPG**

Pay Grade	DOD Families	DOD Couples	Voluntarily Separated	Unaccompanied	Total DOD Personnel
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	5	5
WG-12	0	0	0	0	0
WG-11	5	0	0	5	10
WG-10	5	0	0	0	5
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	5	5
WG-4	5	0	0	0	5
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	15	0	0	15	30
NAF Positions					
NAF-5	0	0	0	10	10
NAF-4	16	0	0	5	21
NAF-3	10	0	0	5	15
NAF-2	16	0	5	15	36
NAF-1	15	0	0	0	15
Subtotal NAF Positions	57	0	5	35	97
GS Positions					
GS-15	5	0	0	0	5
GS-14	10	0	0	0	10
GS-13	15	0	10	56	81
GS-12	66	5	5	36	112
GS-11	51	0	5	31	87
GS-10	5	0	0	5	10
GS-9	15	0	5	31	51
GS-8	0	0	0	0	0
GS-7	36	0	5	25	66
GS-6	56	10	5	16	87
GS-5	41	5	5	30	81
GS-4	21	0	0	10	31
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	321	20	40	240	621
Total DOD Personnel	393	20	45	290	748

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-3.
2013 Contractor Personnel by Accompaniment Status, DPG

Pay Grade Equivalent	Contractor Families	Contractor Couples	Voluntarily Separated	Unaccompanied	Total Contractor Personnel
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	1	1
WG-12	0	0	0	0	0
WG-11	1	0	0	1	2
WG-10	1	0	0	0	1
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	1	1
WG-4	1	0	0	0	1
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Equivalent	3	0	0	3	6
NAF Equivalent					
NAF-5	0	0	0	2	2
NAF-4	3	0	0	1	4
NAF-3	2	0	0	1	3
NAF-2	2	0	1	3	6
NAF-1	3	0	0	0	3
Subtotal NAF Equivalent	10	0	1	7	18
GS Equivalent					
GS-15	1	0	0	0	1
GS-14	2	0	0	0	2
GS-13	3	0	2	10	15
GS-12	12	1	1	6	20
GS-11	9	0	1	5	15
GS-10	1	0	0	1	2
GS-9	3	0	1	5	9
GS-8	0	0	0	0	0
GS-7	6	0	1	5	12
GS-6	10	2	1	2	15
GS-5	7	1	1	6	15
GS-4	3	0	0	2	5
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Equivalent	57	4	8	42	111
Total Contractor Personnel	70	4	9	52	135

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Bedroom Requirement of Accompanied Personnel

Exhibits IV-4 through IV-6 provide the bedroom requirements of accompanied personnel. DOD guidance indicates that officers with ranks of O-6 and above are entitled to four bedrooms. Soldiers in the ranks of O-5, O-4, W-5, W-4, E-9, E-8, and E-7 are entitled to three bedrooms. All other personnel are assigned one bedroom for the sponsor and their spouse or co-sponsor and one bedroom for each authorized family member. The 91 accompanied military personnel require primarily three-bedroom units (38). This is followed by four bedrooms and larger (32) and two bedrooms (21).

Exhibit IV-4.
2013 Military Personnel By Bedroom Requirement, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	1	1
O5	0	2	0	2
O4	0	1	0	1
O3	0	1	3	4
O2	0	4	2	6
O1	0	0	0	0
Subtotal Officers	0	8	6	14
Warrants				
W5	0	1	1	2
W4	0	1	1	2
W3	0	1	1	2
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	3	3	6
Enlisted				
E9	0	1	0	1
E8	0	0	0	0
E7	0	1	2	3
E6	4	3	5	12
E5	5	10	7	22
E4	8	9	8	25
E3	3	2	0	5
E2	1	1	1	3
E1	0	0	0	0
Subtotal Enlisted	21	27	23	71
Total Military	21	38	32	91

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Similar to the military personnel, DOD civilian personnel require primarily three-bedroom units (170 units). The second-most-prevalent unit type is two bedrooms (122), followed by one-bedroom units (101).

**Exhibit IV-5.
2013 DOD Personnel by Bedroom Requirement, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	5	0	5
WG-10	0	5	0	5
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	5	0	5
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	15	0	15
NAF Positions				
NAF-5	0	0	0	0
NAF-4	10	6	0	16
NAF-3	5	5	0	10
NAF-2	8	0	8	16
NAF-1	9	4	2	15
Subtotal NAF Positions	32	15	10	57
GS Positions				
GS-15	0	0	5	5
GS-14	0	8	2	10
GS-13	0	0	15	15
GS-12	0	44	22	66
GS-11	25	9	17	51
GS-10	0	5	0	5
GS-9	8	7	0	15
GS-8	0	0	0	0
GS-7	12	12	12	36
GS-6	19	19	18	56
GS-5	16	25	0	41
GS-4	10	11	0	21
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	90	140	91	321
Total DOD Personnel	122	170	101	393

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Contractor personnel primarily require three-bedroom units (32), then two-bedroom units (21), and one-bedroom units (17).

Exhibit IV-6.
2013 Contractor Personnel by Bedroom Requirement, DPG

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	3	0	3
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	1	0	2
NAF-2	1	0	1	2
NAF-1	2	1	0	3
Subtotal NAF Equivalent	6	3	1	10
GS Equivalent				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	3	3
GS-12	0	8	4	12
GS-11	4	2	3	9
GS-10	0	1	0	1
GS-9	2	1	0	3
GS-8	0	0	0	0
GS-7	2	2	2	6
GS-6	3	4	3	10
GS-5	3	4	0	7
GS-4	1	2	0	3
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	15	26	16	57
Total Contractor	21	32	17	70

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Bedroom Requirement of Unaccompanied Personnel

The bedroom requirements of unaccompanied personnel are presented in the following tables. The majority of personnel require one-bedroom units.

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers					
O7 and above	0	0	0	0	0
O6	0	0	0	0	0
O5	0	0	1	0	1
O4	0	0	2	0	2
O3	1	0	0	0	1
O2	5	0	0	0	5
O1	0	0	0	0	0
Subtotal Officers	6	0	3	0	9
Warrants					
W5	0	0	1	0	1
W4	0	0	1	0	1
W3	1	0	0	0	1
W2	0	0	0	0	0
W2	0	0	0	0	0
Subtotal Warrants	1	0	2	0	3
Enlisted					
E9	0	0	0	0	0
E8	0	0	1	0	1
E7	0	0	0	0	0
E6	5	0	0	0	5
E5	13	0	0	0	13
E4	21	0	0	0	21
E3	9	0	0	0	9
E2	0	0	0	0	0
E1	3	0	0	0	3
Subtotal Enlisted	51	0	1	0	52
Total Military	58	0	6	0	64

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

**Exhibit IV-8.
2013 Unaccompanied DOD Personnel by Grade and Bedroom Requirements**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	5	0	0	0	5
WG-12	0	0	0	0	0
WG-11	5	0	0	0	5
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	5	0	0	0	5
WG-4	0	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	15	0	0	0	15
NAF Positions					
NAF-5	0	0	10	0	10
NAF-4	5	0	0	0	5
NAF-3	5	0	0	0	5
NAF-2	15	0	0	0	15
NAF-1	0	0	0	0	0
Subtotal NAF Positions	25	0	10	0	35
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	56	0	56
GS-12	0	0	36	0	36
GS-11	31	0	0	0	31
GS-10	5	0	0	0	5
GS-9	31	0	0	0	31
GS-8	0	0	0	0	0
GS-7	25	0	0	0	25
GS-6	16	0	0	0	16
GS-5	30	0	0	0	30
GS-4	10	0	0	0	10
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	148	0	92	0	240
Total DOD	188	0	102	0	290

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

Exhibit IV-9.
2013 Unaccompanied Contractor Personnel by Grade and Bedroom Requirements

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	1	0	0	0	1
WG-12	0	0	0	0	0
WG-11	1	0	0	0	1
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	1	0	0	0	1
WG-4	0	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	3	0	0	0	3
NAF Positions					
NAF-5	0	0	2	0	2
NAF-4	1	0	0	0	1
NAF-3	1	0	0	0	1
NAF-2	3	0	0	0	3
NAF-1	0	0	0	0	0
Subtotal NAF Positions	5	0	2	0	7
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	10	0	10
GS-12	0	0	6	0	6
GS-11	5	0	0	0	5
GS-10	1	0	0	0	1
GS-9	5	0	0	0	5
GS-8	0	0	0	0	0
GS-7	5	0	0	0	5
GS-6	2	0	0	0	2
GS-5	6	0	0	0	6
GS-4	2	0	0	0	2
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	26	0	16	0	42
Total DOD	34	0	18	0	52

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

Projected Personnel

Based upon ASIP data, the total number of personnel is expected to decrease to 922 military, DOD, and contractor personnel by 2018. The majority of the decrease occurs among military personnel, who are expected to decrease from 168 in 2013 to 40 in 2018. The projected accompaniment status as well as the bedroom requirements of personnel is presented in the following exhibits.

Exhibit IV-10.
2018 Military Personnel By Accompaniment Status, DPG

Pay Grade	Military Families	Military Couples	Voluntarily Separated	Unaccompanied	Permanent Party Personnel
Officers					
O7 and above	0	0	0	0	0
O6	1	0	0	0	1
O5	1	0	0	0	1
O4	1	0	0	0	1
O3	2	0	0	1	3
O2	3	0	1	2	6
O1	0	0	0	0	0
Subtotal Officers	8	0	1	3	12
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W1	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	1	0	0	0	1
E6	3	0	0	1	4
E5	4	0	1	2	7
E4	5	0	1	4	10
E3	1	0	1	2	4
E2	0	0	0	1	1
E1	0	0	0	1	1
Subtotal Enlisted	14	0	3	11	28
Total Military	22	0	4	14	40

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-11.
2018 DOD Personnel by Accompaniment Status, DPG

Pay Grade	DOD Families	DOD Couples	Voluntarily Separated	Unaccompanied	Total DOD Personnel
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	5	5
WG-12	0	0	0	0	0
WG-11	5	0	0	5	10
WG-10	5	0	0	0	5
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	5	5
WG-4	5	0	0	0	5
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	15	0	0	15	30
NAF Positions					
NAF-5	0	0	0	10	10
NAF-4	15	0	0	5	20
NAF-3	10	0	0	5	15
NAF-2	16	0	5	15	36
NAF-1	15	0	0	0	15
Subtotal NAF Positions	56	0	5	35	96
GS Positions					
GS-15	5	0	0	0	5
GS-14	10	0	0	0	10
GS-13	16	0	10	56	82
GS-12	66	5	5	36	112
GS-11	51	0	5	31	87
GS-10	5	0	0	5	10
GS-9	15	0	5	31	51
GS-8	0	0	0	0	0
GS-7	36	0	5	25	66
GS-6	56	10	5	16	87
GS-5	41	5	5	30	81
GS-4	21	0	0	10	31
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	322	20	40	240	622
Total DOD Personnel	393	20	45	290	748

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-12.
2018 Contractor Personnel by Accompaniment Status, DPG**

Pay Grade Equivalent	Contractor Families	Contractor Couples	Voluntarily Separated	Unaccompanied	Total Contractor Personnel
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	1	1
WG-12	0	0	0	0	0
WG-11	1	0	0	1	2
WG-10	1	0	0	0	1
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	1	1
WG-4	1	0	0	0	1
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Equivalent	3	0	0	3	6
NAF Equivalent					
NAF-5	0	0	0	2	2
NAF-4	3	0	0	1	4
NAF-3	2	0	0	1	3
NAF-2	3	0	1	2	6
NAF-1	3	0	0	0	3
Subtotal NAF Equivalent	11	0	1	6	18
GS Equivalent					
GS-15	1	0	0	0	1
GS-14	2	0	0	0	2
GS-13	3	0	2	10	15
GS-12	12	1	1	6	20
GS-11	9	0	1	5	15
GS-10	1	0	0	1	2
GS-9	3	0	1	5	9
GS-8	0	0	0	0	0
GS-7	6	0	1	5	12
GS-6	10	1	2	2	15
GS-5	7	1	1	6	15
GS-4	3	0	0	2	5
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Equivalent	57	3	9	42	111
Total DOD Personnel	71	3	10	51	135

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Projected Bedroom Requirement of Accompanied Personnel

Exhibit IV-13.
2018 Military Personnel By Bedroom Requirement, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	1	1
O5	0	1	0	1
O4	0	1	0	1
O3	0	1	1	2
O2	0	2	1	3
O1	0	0	0	0
Subtotal Officers	0	5	3	8
Warrants				
W5	0	0	0	0
W4	0	0	0	0
W3	0	0	0	0
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	0	0	0
Enlisted				
E9	0	0	0	0
E8	0	0	0	0
E7	0	1	0	1
E6	1	1	1	3
E5	1	2	1	4
E4	2	1	2	5
E3	0	1	0	1
E2	0	0	0	0
E1	0	0	0	0
Subtotal Enlisted	4	6	4	14
Total Military	4	11	7	22

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-14.
2018 DOD Personnel by Bedroom Requirement, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	5	0	5
WG-10	0	5	0	5
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	5	0	5
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	15	0	15
NAF Positions				
NAF-5	0	0	0	0
NAF-4	10	5	0	15
NAF-3	5	5	0	10
NAF-2	8	0	8	16
NAF-1	9	4	2	15
Subtotal NAF Positions	32	14	10	56
GS Positions				
GS-15	0	0	5	5
GS-14	0	8	2	10
GS-13	0	0	16	16
GS-12	0	51	15	66
GS-11	26	8	17	51
GS-10	0	5	0	5
GS-9	8	7	0	15
GS-8	0	0	0	0
GS-7	12	12	12	36
GS-6	19	18	19	56
GS-5	16	25	0	41
GS-4	11	10	0	21
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	92	144	86	322
Total DOD Personnel	124	173	96	393

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-15.
2018 Contractor Personnel by Bedroom Requirement, DPG

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	3	0	3
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	1	0	2
NAF-2	2	0	1	3
NAF-1	2	1	0	3
Subtotal NAF Equivalent	7	3	1	11
GS Equivalent				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	3	3
GS-12	0	8	4	12
GS-11	5	2	3	9
GS-10	0	1	0	1
GS-9	2	2	0	3
GS-8	0	0	0	0
GS-7	2	2	2	6
GS-6	3	3	3	10
GS-5	3	4	0	7
GS-4	2	2	0	3
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	16	25	16	57
Total Contractor Personnel	23	31	17	71

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Projected Bedroom Requirement of Unaccompanied Personnel

Exhibit IV-16.

2018 Unaccompanied Military Personnel by Grade and Bedroom Requirements

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers					
O7 and above	0	0	0	0	0
O6	0	0	0	0	0
O5	0	0	0	0	0
O4	0	0	0	0	0
O3	1	0	0	0	1
O2	2	0	0	0	2
O1	0	0	0	0	0
Subtotal Officers	3	0	0	0	3
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W2	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	0	0	0	0	0
E6	1	0	0	0	1
E5	2	0	0	0	2
E4	4	0	0	0	4
E3	2	0	0	0	2
E2	1	0	0	0	1
E1	1	0	0	0	1
Subtotal Enlisted	11	0	0	0	11
Total Military	14	0	0	0	14

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

**Exhibit IV-17.
2018 Unaccompanied DOD Personnel by Grade and Bedroom Requirements**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	5	0	0	0	5
WG-12	0	0	0	0	0
WG-11	5	0	0	0	5
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	5	0	0	0	5
WG-4	0	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS	15	0	0	0	15
NAF Positions					
NAF-5	0	0	10	0	10
NAF-4	5	0	0	0	5
NAF-3	5	0	0	0	5
NAF-2	15	0	0	0	15
NAF-1	0	0	0	0	0
Subtotal NAF	25	0	10	0	35
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	56	0	56
GS-12	0	0	36	0	36
GS-11	31	0	0	0	31
GS-10	5	0	0	0	5
GS-9	31	0	0	0	31
GS-8	0	0	0	0	0
GS-7	25	0	0	0	25
GS-6	16	0	0	0	16
GS-5	30	0	0	0	30
GS-4	10	0	0	0	10
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	148	0	92	0	240
Total DOD	188	0	102	0	290

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

Exhibit IV-18.**2018 Unaccompanied Contractor Personnel by Grade and Bedroom Requirements**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	1	0	0	0	1
WG-12	0	0	0	0	0
WG-11	1	0	0	0	1
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	1	0	0	0	1
WG-4	0	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions Equivalent	3	0	0	0	3
NAF Positions Equivalent					
NAF-5	0	0	2	0	2
NAF-4	1	0	0	0	1
NAF-3	1	0	0	0	1
NAF-2	2	0	0	0	2
NAF-1	0	0	0	0	0
Subtotal NAF Positions Equivalent	4	0	2	0	6
GS Positions Equivalent					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	10	0	10
GS-12	0	0	6	0	6
GS-11	5	0	0	0	5
GS-10	1	0	0	0	1
GS-9	5	0	0	0	5
GS-8	0	0	0	0	0
GS-7	5	0	0	0	5
GS-6	2	0	0	0	2
GS-5	6	0	0	0	6
GS-4	2	0	0	0	2
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions Equivalent	26	0	16	0	42
Total Contractors	33	0	18	0	51

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

ON-POST HOUSING OCCUPANCY

The DPG Housing Office reports that as of 2012, there are 175 occupied family housing units. Forty percent are occupied by military personnel and sixty percent of the family housing units are occupied by DOD civilian and contractor personnel. These occupancy rates were used to develop the occupancy estimates by pay grade in 2013, shown in Exhibit IV-19. There are 159 occupied unaccompanied housing units, 64 percent of which are occupied by DOD civilian and contractor personnel (Exhibit IV-20).

Exhibit IV-19.					
2013 Military Family Housing Occupancy					
Pay Grade	Three Bedroom	Four Bedroom	Five Bedroom	Six Bedroom	Total
Officers					
O7 and above	0	0	0	0	0
O6	0	1	0	0	1
O5	1	0	0	0	1
O4	1	0	0	0	1
O3	1	1	1	0	3
O2	3	0	2	0	5
O1	0	0	0	0	0
Subtotal Officers	6	2	3	0	11
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W2	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	1	0	1	0	2
E6	3	2	1	0	6
E5	10	3	3	1	17
E4	9	2	1	0	12
E3	2	0	0	0	2
E2	1	0	0	0	1
E1	0	0	0	0	0
Subtotal Enlisted	26	7	6	1	40
Total Military	32	9	9	1	51

Sources: DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-19.
2013 Military Family Housing Occupancy (Continued)

Pay Grade	Three Bedroom	Four Bedroom	Five Bedroom	Six Bedroom	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	1	0	0	0	1
WG-10	1	0	0	0	1
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	0	0
WG-4	1	0	0	0	1
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	3	0	0	0	3
NAF Positions					
NAF-5	0	0	0	0	0
NAF-4	3	0	0	0	3
NAF-3	2	0	0	0	2
NAF-2	0	3	0	0	3
NAF-1	3	0	0	0	3
Subtotal NAF Positions	8	3	0	0	11
GS Positions					
GS-15	0	1	0	0	1
GS-14	2	0	0	0	2
GS-13	0	3	0	0	3
GS-12	12	1	0	0	13
GS-11	9	0	1	0	10
GS-10	0	0	0	0	0
GS-9	3	0	0	0	3
GS-8	0	0	0	0	0
GS-7	6	0	1	0	7
GS-6	8	3	0	0	11
GS-5	9	0	0	0	9
GS-4	4	0	0	0	4
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	53	8	2	0	63
Total DOD	64	11	2	0	77

Sources: DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-19.
2013 Military Family Housing Occupancy (Continued)

Pay Grade	Three Bedroom	Four Bedroom	Five Bedroom	Six Bedroom	Total
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	1	0	0	0	1
WG-10	1	0	0	0	1
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	0	0
WG-4	1	0	0	0	1
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Equivalent	3	0	0	0	3
NAF Equivalent					
NAF-5	0	0	0	0	0
NAF-4	1	0	0	0	1
NAF-3	1	0	0	0	1
NAF-2	0	1	0	0	1
NAF-1	1	0	0	0	1
Subtotal NAF Equivalent	3	1	0	0	4
GS Equivalent					
GS-15	0	1	0	0	1
GS-14	0	0	0	0	0
GS-13	0	0	2	0	2
GS-12	1	1	0	0	2
GS-11	2	0	1	1	4
GS-10	1	0	0	0	1
GS-9	1	0	0	0	1
GS-8	0	0	0	0	0
GS-7	2	0	0	0	2
GS-6	3	1	0	0	4
GS-5	3	0	0	0	3
GS-4	1	0	0	0	1
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Equivalent	14	3	3	1	21
Total Contractor Personnel	20	4	3	1	28

Sources: DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-20.

2013 Unaccompanied Personnel Housing Occupancy

Pay Grade	One Bedroom	Two Bedrooms	Total
Officers			
O7 and above	0	0	0
O6	0	0	0
O5	1	0	1
O4	0	1	1
O3	0	1	1
O2	0	3	3
O1	0	1	1
Subtotal Officers	1	6	7
Warrants			
W5	0	0	0
W4	0	0	0
W3	0	0	0
W2	0	0	0
W2	0	0	0
Subtotal Warrants	0	0	0
Enlisted			
E9	0	0	0
E8	0	1	1
E7	0	0	0
E6	5	1	6
E5	10	2	12
E4	21	0	21
E3	9	0	9
E2	0	0	0
E1	2	0	2
Subtotal Enlisted	47	4	51
Total Military	48	10	58
FWS Positions			
WG-15	0	0	0
WG-14	0	0	0
WG-13	0	1	1
WG-12	0	0	0
WG-11	0	1	1
WG-10	0	0	0
WG-9	0	0	0
WG-8	0	0	0
WG-7	0	0	0
WG-6	0	0	0
WG-5	0	1	1
WG-4	0	0	0
WG-3	0	0	0
WG-2	0	0	0
WG-1	0	0	0
Subtotal FWS Positions	0	3	3
NAF Positions			
NAF-5	0	2	2
NAF-4	0	1	1
NAF-3	0	1	1
NAF-2	0	4	4
NAF-1	0	0	0
Subtotal NAF Positions	0	8	8
GS Positions			
GS-15	0	0	0
GS-14	0	0	0
GS-13	4	9	13
GS-12	2	7	9
GS-11	0	7	7
GS-10	0	1	1
GS-9	3	4	7
GS-8	0	0	0
GS-7	2	4	6
GS-6	2	4	6
GS-5	1	7	8
GS-4	1	1	2
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal GS Positions	15	44	59
Total DOD	15	55	70
Total Contractors	8	23	31
Total	71	88	159

Sources: DPG Housing Office, 2012; Applied Real Estate Analysis.

FLOOR REQUIREMENTS: ACCOMPANIED PERSONNEL

DOD Manual Number 4165.63-M and related memoranda provide guidance on the minimum amount of on-post housing for installations. The minimum requirement, or “floor requirement,” is defined as the greatest of the following four criteria for each pay grade.

1. Military on-post community. Ten percent of military families in each pay grade, with a minimum of one on-post housing unit for any pay grade with at least one family. Unaccompanied junior enlisted personnel are to be housed on-post.
2. Key and essential personnel. All key and essential personnel.
3. Historic housing. Family housing on-post that is listed (or eligible to be listed on) the National Register of Historic Places.
4. Quality of life. Military members whose annual regular military compensation falls below 50 percent of the Area Median Family Income.

Each of these four criteria is presented in the following exhibits.

Military On-Post Community

The military on-post community is initially zero. After all the other criteria are reviewed, if there is not at least one on-post housing unit for each pay grade with a family, this requirement is adjusted.

Key and Essential Personnel

Per the DPG Installation Command, all military personnel are considered key and essential due to the nature of the activities that occur at the installation. In addition, there are seven key and essential DOD civilian positions. There are no key and essential contractor personnel. Accompanied key and essential personnel by pay grade and bedroom requirement are presented in Exhibits IV-21 and IV-22.

Exhibit IV-21.
2018 Key and Essential Requirement-Military, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	1	1
O5	0	1	0	1
O4	0	1	0	1
O3	0	1	1	2
O2	0	2	1	3
O1	0	0	0	0
Subtotal Officers	0	5	3	8
Warrants				
W5	0	0	0	0
W4	0	0	0	0
W3	0	0	0	0
W2	0	0	0	0
W2	0	0	0	0
Subtotal Warrants	0	0	0	0
Enlisted				
E9	0	0	0	0
E8	0	0	0	0
E7	0	1	0	1
E6	1	1	1	3
E5	1	2	1	4
E4	2	1	2	5
E3	0	1	0	1
E2	0	0	0	0
E1	0	0	0	0
Subtotal Enlisted	4	6	4	14
Total Military	4	11	7	22

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-22. 2018
Key and Essential Requirement-DOD Personnel, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	0	0	0
NAF Positions				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Positions	0	0	0	0
GS Positions				
GS-15	0	0	1	1
GS-14	0	1	0	1
GS-13	0	0	0	0
GS-12	0	2	0	2
GS-11	0	1	0	1
GS-10	0	1	0	1
GS-9	0	0	1	1
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	0	0	0	0
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	0	5	2	7
Total DOD	0	5	2	7

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Historic Housing Requirements

There are no historic housing units on the installation.

Quality of Life Requirements

The fourth requirement, quality of life, compares the compensation of accompanied military personnel to the compensation of other families in the area. In addition to their base pay, military personnel receive a basic allowance for housing (BAH) and a basic allowance for subsistence (BAS). Neither the BAH nor the BAS are counted as income for the purpose of assessing taxes. This results in a tax advantage for military personnel. Therefore, the total regular military compensation of military personnel is the sum of the base pay, BAH, BAS, and the tax advantage.

If the regular military compensation of any accompanied personnel is below 50 percent of the median family income for the market area, then the military personnel are entitled to an on-post family housing unit. DPG is located in the Tooele County, Utah, U.S. Department of Housing and Urban Development Metropolitan Fair Market Rent Area (Tooele County, UT HMFA). The 2013 median family income for the HMFA was \$69,700, resulting in a quality of life threshold of \$34,850. As shown in Exhibit IV-26, there are no military personnel whose regular military compensation falls below the quality of life threshold, as the lowest compensation level is \$37,031.

Exhibit IV-23.
2013 Regular Military Annual Compensation DPG

Pay Grade	Basic Pay	Local BAH	BAS	Estimated Tax Advantage(1)	Regular Military Compensation
Officers					
O7 and above	\$130,328	\$20,916	\$ 2,911	\$10,302	\$164,457
O6	\$107,394	\$20,736	\$ 2,911	\$ 9,636	\$140,677
O5	\$ 91,444	\$20,520	\$ 2,911	\$ 9,189	\$124,064
O4	\$ 80,301	\$19,152	\$ 2,911	\$ 7,206	\$109,570
O3	\$ 69,949	\$17,172	\$ 2,911	\$ 5,617	\$ 95,649
O2	\$ 53,719	\$14,040	\$ 2,911	\$ 5,259	\$ 75,929
O1	\$ 42,684	\$12,888	\$ 2,911	\$ 4,669	\$ 63,152
Warrants					
W5	\$ 99,055	\$18,828	\$ 2,911	\$ 7,586	\$128,380
W4	\$ 73,102	\$17,964	\$ 2,911	\$ 5,620	\$ 99,597
W3	\$ 64,660	\$17,244	\$ 2,911	\$ 4,423	\$ 89,237
W2	\$ 56,718	\$15,696	\$ 2,911	\$ 4,265	\$ 79,589
W1	\$ 51,940	\$14,112	\$ 2,911	\$ 4,190	\$ 73,153
Enlisted					
E9	\$ 73,620	\$17,784	\$ 3,903	\$ 5,786	\$101,093
E8	\$ 60,241	\$16,452	\$ 3,903	\$ 4,502	\$ 85,098
E7	\$ 49,934	\$15,192	\$ 3,903	\$ 4,314	\$ 73,343
E6	\$ 40,564	\$14,076	\$ 3,903	\$ 4,858	\$ 63,402
E5	\$ 34,920	\$12,744	\$ 3,903	\$ 4,792	\$ 56,358
E4	\$ 28,265	\$12,024	\$ 3,903	\$ 3,908	\$ 48,100
E3	\$ 23,991	\$12,024	\$ 3,903	\$ 3,323	\$ 43,241
E2	\$ 20,398	\$12,024	\$ 3,903	\$ 2,994	\$ 39,319
E1	\$ 18,194	\$12,024	\$ 3,903	\$ 2,910	\$ 37,031

(1) Tax advantage estimated based upon national data on military personnel.

Sources: U.S. Department of Defense, Travel Management Office; U.S. Department of Defense, Selected Military Compensation Tables "Green Book."

The initial floor requirement for each pay grade is set at the greatest of the following three criteria: key and essential personnel, historical housing units, and quality of life. The majority of the floor requirement is based upon key and essential as well as quality of life. The initial floor requirement for all accompanied personnel is 29 units.

Exhibit IV-24.
2018 Military Personnel Accompanied Floor Requirements by Criterion, DPG

Pay Grade	Accompanied Personnel	Key and Essential	Historic Units	Quality of Life	On-Post Community
Officers					
O7 and above	0	0	0	0	0
O6	1	1	0	0	0
O5	1	1	0	0	0
O4	1	1	0	0	0
O3	2	2	0	0	0
O2	3	3	0	0	0
O1	0	0	0	0	0
Subtotal Officers	8	8	0	0	0
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W1	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	1	1	0	0	0
E6	3	3	0	0	0
E5	4	4	0	0	0
E4	5	5	0	0	0
E3	1	1	0	0	0
E2	0	0	0	0	0
E1	0	0	0	0	0
Subtotal Enlisted	14	14	0	0	0
Total Military	22	22	0	0	0

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-25.**2018 DOD Personnel Accompanied Floor Requirements by Criterion, DPG**

Pay Grade	Accompanied Personnel	Key and Essential	Historic Units	Quality of Life	On-Post Community
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	5	0	0	0	0
WG-10	5	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	0	0
WG-4	5	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	15	0	0	0	0
NAF Positions					
NAF-5	0	0	0	0	0
NAF-4	15	0	0	0	0
NAF-3	10	0	0	0	0
NAF-2	16	0	0	0	0
NAF-1	15	0	0	0	0
Subtotal NAF Positions	56	0	0	0	0
GS Positions					
GS-15	5	1	0	0	0
GS-14	10	1	0	0	0
GS-13	16	0	0	0	0
GS-12	66	2	0	0	0
GS-11	51	1	0	0	0
GS-10	5	1	0	0	0
GS-9	15	1	0	0	0
GS-8	0	0	0	0	0
GS-7	36	0	0	0	0
GS-6	56	0	0	0	0
GS-5	41	0	0	0	0
GS-4	21	0	0	0	0
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	322	7	0	0	0
Total DOD Personnel	393	7	0	0	0

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-26.**2018 Contractor Personnel Accompanied Floor Requirements by Criterion, DPG**

Pay Grade Equivalent	Accompanied Personnel	Key and Essential	Historic Units	Quality of Life	On-Post Community
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	1	0	0	0	0
WG-10	1	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	0	0
WG-4	1	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Equivalent	3	0	0	0	0
NAF Equivalent					
NAF-5	0	0	0	0	0
NAF-4	3	0	0	0	0
NAF-3	2	0	0	0	0
NAF-2	3	0	0	0	0
NAF-1	3	0	0	0	0
Subtotal NAF Equivalent	11	0	0	0	0
GS Equivalent					
GS-15	1	0	0	0	0
GS-14	2	0	0	0	0
GS-13	3	0	0	0	0
GS-12	12	0	0	0	0
GS-11	9	0	0	0	0
GS-10	1	0	0	0	0
GS-9	3	0	0	0	0
GS-8	0	0	0	0	0
GS-7	6	0	0	0	0
GS-6	9	0	0	0	0
GS-5	7	0	0	0	0
GS-4	3	0	0	0	0
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Equivalent	56	0	0	0	0
Total Contractor Personnel	70	0	0	0	0

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

The initial floor requirement by grade and bedroom is presented in Exhibits IV-27 for accompanied military personnel and in Exhibit IV-28 for accompanied DOD personnel. There is no initial floor requirement for contractor personnel.

Exhibit IV-27.
2018 Military Personnel Accompanied Floor Requirements by Bedroom, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	1	1
O5	0	1	0	1
O4	0	1	0	1
O3	0	1	1	2
O2	0	2	1	3
O1	0	0	0	0
Subtotal Officers	0	5	3	8
Warrants				
W5	0	0	0	0
W4	0	0	0	0
W3	0	0	0	0
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	0	0	0
Enlisted				
E9	0	0	0	0
E8	0	0	0	0
E7	0	1	0	1
E6	1	1	1	3
E5	1	2	1	4
E4	2	1	2	5
E3	0	1	0	1
E2	0	0	0	0
E1	0	0	0	0
Subtotal Enlisted	4	6	4	14
Total Military	4	11	7	22

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-28.
2018 DOD Personnel Accompanied Floor Requirements by Bedroom, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	0	0	0
NAF Positions				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Positions	0	0	0	0
GS Positions				
GS-15	0	0	1	1
GS-14	0	1	0	1
GS-13	0	0	0	0
GS-12	0	2	0	2
GS-11	1	0	0	1
GS-10	0	1	0	1
GS-9	1	0	0	1
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	0	0	0	0
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	2	4	1	7
Total DOD Personnel	2	4	1	7

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

FLOOR REQUIREMENTS: UNACCOMPANIED PERSONNEL

Because all unaccompanied military personnel are key and essential, the floor requirement for unaccompanied military personnel is equal to all unaccompanied personnel. In addition, all unaccompanied E-1 through E-5 personnel are entitled to live in on-post unaccompanied housing. The floor housing requirement for unaccompanied military personnel is 14 units.

Exhibit IV-29.
2018 Unaccompanied Military Personnel Floor Requirements by Bedroom

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers					
O7 and above	0	0	0	0	0
O6	0	0	0	0	0
O5	0	0	0	0	0
O4	0	0	0	0	0
O3	1	0	0	0	1
O2	2	0	0	0	2
O1	0	0	0	0	0
Subtotal Officers	3	0	0	0	3
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W2	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	0	0	0	0	0
E6	1	0	0	0	1
E5	2	0	0	0	2
E4	4	0	0	0	4
E3	2	0	0	0	2
E2	1	0	0	0	1
E1	1	0	0	0	1
Subtotal Enlisted	11	0	0	0	11
Total Military	14	0	0	0	14

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

There are seven unaccompanied DOD civilian personnel who are key and essential and therefore require housing on-post. There are no key and essential contractor personnel.

**Exhibit IV-30.
2018 Unaccompanied DOD Personnel Floor Requirements by Bedroom**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	0	0	0	0
WG-4	0	0	0	0	0
WG-3	0	0	0	0	0
WG-2	0	0	0	0	0
WG-1	0	0	0	0	0
Subtotal FWS Positions	0	0	0	0	0
NAF Positions					
NAF-5	0	0	0	0	0
NAF-4	0	0	0	0	0
NAF-3	0	0	0	0	0
NAF-2	0	0	0	0	0
NAF-1	0	0	0	0	0
Subtotal NAF Positions	0	0	0	0	0
GS Positions					
GS-15	1	0	0	0	1
GS-14	1	0	0	0	1
GS-13	0	0	0	0	0
GS-12	2	0	0	0	2
GS-11	1	0	0	0	1
GS-10	1	0	0	0	1
GS-9	1	0	0	0	1
GS-8	0	0	0	0	0
GS-7	0	0	0	0	0
GS-6	0	0	0	0	0
GS-5	0	0	0	0	0
GS-4	0	0	0	0	0
GS-3	0	0	0	0	0
GS-2	0	0	0	0	0
GS-1	0	0	0	0	0
Subtotal GS Positions	7	0	0	0	7
Total DOD	7	0	0	0	7

Sources: DA Pam 420-1-1, Dated 2 April 2009; Applied Real Estate Analysis, Inc.

OFF-POST COMMUNITY HOUSING DEMAND: ACCOMPANIED PERSONNEL

A key component of the HMA is determining the current demand for off-post housing as well as the projected demand. For the current demand (2013), the number of personnel in on-post family housing is compared to the total number of personnel. Standard HMA procedures state that if the total number of personnel exceeds the number in on-post housing, there is demand for off-post housing. Using this methodology, the total off-post housing demand in 2013 for military personnel is 40 units. However, per the DPG Housing Office, all military personnel live on the installation. Therefore while Exhibit IV-31 presents the estimated off-post demand using standard HMA methodology, the remaining analysis assumes that no military personnel live in off-post housing for the current year (2013). The estimated demand for off-post housing for DOD personnel is 316 and 42 for contractor personnel.

Exhibit IV-31.
2013 Accompanied Military Personnel Off-Post Housing Demand, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	0	0
O5	0	1	0	1
O4	0	0	0	0
O3	0	0	1	1
O2	0	1	0	1
O1	0	0	0	0
Subtotal Officers	0	2	1	3
Warrants				
W5	0	1	1	2
W4	0	1	1	2
W3	0	1	1	2
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	3	3	6
Enlisted				
E9	0	1	0	1
E8	0	0	0	0
E7	0	0	1	1
E6	4	0	2	6
E5	5	0	0	5
E4	8	0	5	13
E3	3	0	0	3
E2	1	0	1	2
E1	0	0	0	0
Subtotal Enlisted	21	1	9	31
Total Military	21	6	13	40

Sources: Applied Real Estate Analysis, Inc.

Exhibit IV-32.
2013 Accompanied DOD Personnel Off-Post Housing Demand, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	4	0	4
WG-10	0	4	0	4
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	4	0	4
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	12	0	12
NAF Positions				
NAF-5	0	0	0	0
NAF-4	10	3	0	13
NAF-3	5	3	0	8
NAF-2	8	0	5	13
NAF-1	9	1	2	12
Subtotal NAF Positions	32	7	7	46
GS Positions				
GS-15	0	0	4	4
GS-14	0	6	2	8
GS-13	0	0	12	12
GS-12	0	32	21	53
GS-11	25	0	16	41
GS-10	0	5	0	5
GS-9	8	4	0	12
GS-8	0	0	0	0
GS-7	12	6	11	29
GS-6	19	11	15	45
GS-5	16	16	0	32
GS-4	10	7	0	17
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	90	87	81	258
Total DOD Personnel	122	106	88	316

Sources: Applied Real Estate Analysis, Inc.

Exhibit IV-33.**2013 Accompanied Contractor Personnel Off-Post Housing Demand, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	0	0	2
NAF-3	1	0	0	1
NAF-2	1	0	0	1
NAF-1	2	0	0	2
Subtotal NAF Equivalent	6	0	0	6
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	2	0	2
GS-13	0	0	1	1
GS-12	0	7	3	10
GS-11	4	0	1	5
GS-10	0	0	0	0
GS-9	2	0	0	2
GS-8	0	0	0	0
GS-7	2	0	2	4
GS-6	3	1	2	6
GS-5	3	1	0	4
GS-4	1	1	0	2
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	15	12	9	36
Total Contractor Personnel	21	12	9	42

Sources: Applied Real Estate Analysis, Inc.

For the projected demand (2018), the projected total personnel are compared to the floor requirement. Again, if the total number of personnel exceeds the floor requirement, there is a projected demand for off-post housing.

Exhibit IV-34.
2018 Accompanied Military Personnel Off-Post Housing Demand, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	0	0
O5	0	0	0	0
O4	0	0	0	0
O3	0	0	0	0
O2	0	0	0	0
O1	0	0	0	0
Subtotal Officers	0	0	0	0
Warrants				
W5	0	0	0	0
W4	0	0	0	0
W3	0	0	0	0
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	0	0	0
Enlisted				
E9	0	0	0	0
E8	0	0	0	0
E7	0	0	0	0
E6	1	0	0	1
E5	1	0	0	1
E4	2	0	0	2
E3	0	0	0	0
E2	0	0	0	0
E1	0	0	0	0
Subtotal Enlisted	4	0	0	4
Total Military	4	0	0	4

Sources: Applied Real Estate Analysis, Inc.

Exhibit IV-35.
2018 Accompanied DOD Personnel Off-Post Housing Demand, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	5	0	5
WG-10	0	5	0	5
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	5	0	5
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	15	0	15
NAF Positions				
NAF-5	0	0	0	0
NAF-4	10	5	0	15
NAF-3	5	5	0	10
NAF-2	8	0	8	16
NAF-1	9	4	2	15
Subtotal NAF Positions	32	14	10	56
GS Positions				
GS-15	0	0	4	4
GS-14	0	7	2	9
GS-13	0	0	16	16
GS-12	0	49	15	64
GS-11	26	8	17	51
GS-10	0	4	0	4
GS-9	8	7	0	15
GS-8	0	0	0	0
GS-7	12	12	12	36
GS-6	19	18	19	56
GS-5	16	25	0	41
GS-4	11	10	0	21
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	92	140	85	317
Total DOD Personnel	124	169	95	388

Sources: Applied Real Estate Analysis, Inc.

Exhibit IV-36.
2018 Accompanied Contractor Personnel Off-Post Housing Demand, DPG

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	3	0	3
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	1	0	2
NAF-2	2	0	1	3
NAF-1	2	1	0	3
Subtotal NAF Equivalent	7	3	1	11
GS Equivalent				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	3	3
GS-12	0	8	4	12
GS-11	5	2	3	9
GS-10	0	1	0	1
GS-9	2	2	0	3
GS-8	0	0	0	0
GS-7	2	2	2	6
GS-6	3	3	3	10
GS-5	3	4	0	7
GS-4	2	2	0	3
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	16	25	16	57
Total Contractor Personnel	23	31	17	71

Sources: Applied Real Estate Analysis, Inc.

Homeownership

According to the Dugway Garrison Housing Office, no military personnel are homeowners. Data on the rate of homeownership for DOD and contractor personnel were not available. For this analysis, it is assumed that the rate of homeownership for the DOD and contractor personnel is similar to the rate of homeownership for the county. To estimate the numbers of homeowners by pay grade, the HMA assumes that the majority of personnel for whom 30 percent of their income was equal to or greater than the median costs of homeownership (\$926 for 2013 and \$1,055 for 2018) would purchase a home.

The following major assumptions were used to analyze homeownership affordability in 2013 and 2018.

- Housing costs are assumed to increase approximately 2 percent per year.
- Military personnel will obtain a home purchase loan from the Department of Veterans Affairs (VA loan), which will allow them to put down a low down payment (10 percent). Non-military personnel will be required to have a down payment of 20 percent, which is the standard in the current financing environment.
- Based upon data from Freddie Mac, loan interest rates will increase at a rate of approximately 2 percent per year over the preceding year (e.g., 3.4 percent in 2013 to 3.5 percent in 2014).
- Mortgage loans are assumed to be 30-year fixed-rate loans.
- Property taxes vary, depending upon the community in which the home is located. The property tax rate for 2013 is estimated to be 1.485 percent of the assessed value. The assessed value is 50 percent of the market value. This rate is the average of the property tax rates for homes located in Tooele City, Stansbury Park, and Grantsville, the more populous communities in the market area.
- Utilities are based upon costs for a single-family three-bedroom home with electricity as the predominant fuel. The projected 2018 price is based upon CPI data on the rate of change in prices for utilities.
- Homeowner's insurance is estimated using data from the Insurance Information Institute. The annual increase in the insurance premium is based upon current rates of inflation.
- The amount allocated for maintenance on the home assumes that 1 percent of the home's value will be applied toward general maintenance on an annual basis.
- The average Military Housing Allowance is the weighted average for military personnel for the respective years.

- The average gross monthly income is the weighted average of gross income for non-military personnel. The 2018 amount assumes that salaries increase with historical inflation rates.
- The affordability gap assumes that non-military personnel will apply no more than 30 percent of their income toward rent.

The homeownership affordability analysis is presented on the following page in Exhibit IV-37.

Exhibit IV-37.
2013 Homeownership Affordability Analysis, DPG

	2013	2018
Military Personnel		
Homeownership Costs		
Purchase Costs		
Median purchase price	\$ 135,900	\$ 150,045
Down payment of 10%	\$ 13,590	\$ 15,005
Purchase loan amount	\$ 122,310	\$ 135,040
Loan interest rate	3.4%	3.8%
Monthly Costs		
Principal and interest payment	\$ 542	\$ 629
Utilities	\$ 130	\$ 147
Insurance	\$49	\$52
Property taxes	\$92	\$ 102
Maintenance	\$ 113	\$ 125
Total monthly costs	\$ 926	\$ 1,055
Affordability Analysis		
Average Military Housing Allowance	\$ 1,118	\$ 1,294
Affordability gap	\$(192)	\$(239)
Monthly cost as a percentage of allowance	83%	82%
DOD and Contractor Personnel		
Homeownership Costs		
Purchase Costs		
Median purchase price	\$ 135,900	\$ 150,045
Down payment of 20%	\$ 27,180	\$ 30,009
Purchase loan amount	\$ 108,720	\$ 120,036
Loan interest rate	3.4%	3.8%
Monthly Costs		
Principal and interest payment	\$ 482	\$ 559
Utilities	\$ 130	\$ 147
Insurance	\$49	\$52
Property taxes	\$92	\$ 102
Maintenance	\$ 113	\$ 125
Total monthly costs	\$ 866	\$ 985
Affordability Analysis		
Average gross monthly income	\$ 4,619	\$ 5,206
Affordability gap	\$(520)	\$(576)
Monthly cost as a percentage of income	19%	19%

Sources: Freddie Mac; U.S. Bureau of Labor Statistics; Wasatch Front Regional Multiple Listing Service; Department of Defense, Travel Management Office; Insurance Information Institute; Tooele County Housing Authority; Tooele County Assessor's Office; Applied Real Estate Analysis, Inc.

Housing in Tooele County is relatively affordable. As a result, the average military personnel at DPG would have to apply 83 percent of their BAH in 2013 toward homeownership and 82 percent in 2018. Generally, DOD considers housing affordable if between 85 and 100 percent of the BAH is applied to housing. For DOD civilian and contractor personnel who generally have a higher level of compensation, housing is even more affordable. Based upon the weighted average gross monthly income, these personnel would apply approximately 19 percent of their income toward housing. The real estate industry generally considers housing affordable if no more than 30 percent of income is applied to total housing costs.

Based upon homeownership affordability analysis, Census data, and interviews with local real estate industry professionals, the estimated number of non-military personnel from DPG who are homeowners is 301 in 2013 (Exhibits IV-38 and IV-39). It is projected to increase to 345 in 2018 (Exhibits IV-40 and IV-41).

**Exhibit IV-38.
2013 DOD Personnel Accompanied Homeowners, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	4	0	4
WG-10	0	4	0	4
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	3	0	3
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	11	0	11
NAF Positions				
NAF-5	0	0	0	0
NAF-4	8	3	0	11
NAF-3	4	3	0	7
NAF-2	4	0	4	8
NAF-1	5	1	1	7
Subtotal NAF Positions	21	7	5	33
GS Positions				
GS-15	0	0	4	4
GS-14	0	6	2	8
GS-13	0	0	12	12
GS-12	0	32	18	50
GS-11	20	0	14	34
GS-10	0	4	0	4
GS-9	6	4	0	10
GS-8	0	0	0	0
GS-7	10	6	10	26
GS-6	15	11	14	40
GS-5	8	13	0	21
GS-4	5	6	0	11
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	64	82	74	220
Total DOD Personnel	85	100	79	264

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-39.
2013 Contractor Personnel Accompanied Homeowners, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	0	0	2
NAF-3	1	0	0	1
NAF-2	1	0	0	1
NAF-1	1	0	0	1
Subtotal NAF Equivalent	5	0	0	5
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	2	0	2
GS-13	0	0	1	1
GS-12	0	6	3	9
GS-11	3	0	1	4
GS-10	0	0	0	0
GS-9	2	0	0	2
GS-8	0	0	0	0
GS-7	2	0	2	4
GS-6	2	1	2	5
GS-5	2	1	0	3
GS-4	1	1	0	2
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	12	11	9	32
Total Contractor Personnel	17	11	9	37

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-40.
2018 DOD Personnel Accompanied Homeowners, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	4	0	4
WG-10	0	4	0	4
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	3	0	3
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	11	0	11
NAF Positions				
NAF-5	0	0	0	0
NAF-4	8	4	0	12
NAF-3	4	4	0	8
NAF-2	4	0	4	8
NAF-1	5	2	1	8
Subtotal NAF Positions	21	10	5	36
GS Positions				
GS-15	0	0	4	4
GS-14	0	6	2	8
GS-13	0	0	13	13
GS-12	0	41	12	53
GS-11	21	6	14	41
GS-10	0	4	0	4
GS-9	6	6	0	12
GS-8	0	0	0	0
GS-7	10	10	10	30
GS-6	15	14	15	44
GS-5	8	13	0	21
GS-4	6	5	0	11
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	66	105	70	241
Total DOD Personnel	87	126	75	288

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-41.
2018 Contractor Personnel Accompanied Homeowners, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	3	0	3
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	1	0	2
NAF-2	1	0	1	2
NAF-1	1	1	0	2
Subtotal NAF Equivalent	5	3	1	9
GS Equivalent				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	2	2
GS-12	0	6	3	9
GS-11	4	2	2	8
GS-10	0	1	0	1
GS-9	2	2	0	4
GS-8	0	0	0	0
GS-7	2	2	2	6
GS-6	2	2	2	6
GS-5	2	2	0	4
GS-4	1	1	0	2
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	13	20	12	45
Total Contractor Personnel	18	26	13	57

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012;
Applied Real Estate Analysis, Inc.

The non-military accompanied personnel who rent homes was then estimated based upon the total community housing demand and the number of accompanied personnel who own homes, using standard HMA methodology. There are an estimated 57 accompanied DOD and contractor renters in 2013, and the number of renters is projected to be 112 in 2018.

**Exhibit IV-42.
2013 DOD Personnel Accompanied Renters, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	1	0	1
NAF Positions				
NAF-5	0	0	0	0
NAF-4	2	0	0	2
NAF-3	1	0	0	1
NAF-2	4	0	1	5
NAF-1	4	0	1	5
Subtotal NAF Positions	11	0	2	13
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	3	3
GS-11	5	0	2	7
GS-10	0	1	0	1
GS-9	2	0	0	2
GS-8	0	0	0	0
GS-7	2	0	1	3
GS-6	4	0	1	5
GS-5	8	3	0	11
GS-4	5	1	0	6
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	26	5	7	38
Total DOD Personnel	37	6	9	52

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-43.
2013 Contractor Personnel Accompanied Renters, DPG

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	1	0	0	1
Subtotal NAF Equivalent	1	0	0	1
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	1	0	1
GS-11	1	0	0	1
GS-10	0	0	0	0
GS-9	0	0	0	0
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	1	0	0	1
GS-5	1	0	0	1
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	3	1	0	4
Total Contractor Personnel	4	1	0	5

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-44.
2018 DOD Personnel Accompanied Renters, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	2	0	2
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	4	0	4
NAF Positions				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	1	0	2
NAF-2	4	0	4	8
NAF-1	4	1	1	6
Subtotal NAF Positions	11	3	5	19
GS Positions				
GS-15	0	0	0	0
GS-14	0	1	0	1
GS-13	0	0	3	3
GS-12	0	8	3	11
GS-11	5	0	3	8
GS-10	0	0	0	0
GS-9	2	1	0	3
GS-8	0	0	0	0
GS-7	2	2	2	6
GS-6	4	4	4	12
GS-5	8	12	0	20
GS-4	5	5	0	10
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	26	33	15	74
Total DOD Personnel	37	40	20	97

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

**Exhibit IV-45.
2018 Contractor Personnel Accompanied Renters, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	1	0	0	1
NAF-1	1	0	0	1
Subtotal NAF Equivalent	2	0	0	2
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	1	1
GS-12	0	2	1	3
GS-11	1	0	1	2
GS-10	0	0	0	0
GS-9	0	0	0	0
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	1	1	1	3
GS-5	1	1	0	2
GS-4	1	1	0	2
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	4	5	4	13
Total Contractor Personnel	6	5	4	15

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012;
Applied Real Estate Analysis, Inc.

OFF-POST COMMUNITY HOUSING DEMAND: UNACCOMPANIED PERSONNEL

The total number of off-post community housing for unaccompanied personnel is determined by subtracting the unaccompanied personnel from the floor requirement. For military personnel, this demand is zero for both 2013 and 2018. For non-military personnel, the off-post housing demand for 2013 is estimated to be 264. The demand is projected to increase to 326 in 2018.

Exhibit IV-46.
2013 Unaccompanied DOD Personnel Off-Post Housing Demand, DPG

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	5	0	0	5
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	5	0	0	5
NAF Positions				
NAF-5	0	0	10	10
NAF-4	5	0	0	5
NAF-3	5	0	0	5
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Positions	10	0	10	20
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	56	56
GS-12	0	0	36	36
GS-11	31	0	0	31
GS-10	5	0	0	5
GS-9	31	0	0	31
GS-8	0	0	0	0
GS-7	25	0	0	25
GS-6	16	0	0	16
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	108	0	92	200
Total DOD Personnel	123	0	102	225

Sources: Applied Real Estate Analysis, Inc.

**Exhibit IV-47.
2013 Unaccompanied Contractor Personnel Off-Post Housing Demand, DPG**

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	1	0	0	1
NAF Equivalent				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	2	0	2	4
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	10	10
GS-12	0	0	6	6
GS-11	5	0	0	5
GS-10	1	0	0	1
GS-9	5	0	0	5
GS-8	0	0	0	0
GS-7	5	0	0	5
GS-6	2	0	0	2
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	18	0	16	34
Total Contractor Personnel	21	0	18	39

Sources: Applied Real Estate Analysis, Inc.

**Exhibit IV-48.
2018 Unaccompanied DOD Personnel Off-Post Housing Demand, DPG**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	5	0	0	5
WG-12	0	0	0	0
WG-11	5	0	0	5
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	5	0	0	5
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	15	0	0	15
NAF Positions				
NAF-5	0	0	10	10
NAF-4	5	0	0	5
NAF-3	5	0	0	5
NAF-2	15	0	0	15
NAF-1	0	0	0	0
Subtotal NAF Positions	25	0	10	35
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	56	56
GS-12	0	0	36	36
GS-11	30	0	0	30
GS-10	4	0	0	4
GS-9	30	0	0	30
GS-8	0	0	0	0
GS-7	25	0	0	25
GS-6	16	0	0	16
GS-5	30	0	0	30
GS-4	10	0	0	10
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	145	0	92	237
Total DOD Personnel	185	0	102	287

Sources: Applied Real Estate Analysis, Inc.

Exhibit IV-49.**2018 Unaccompanied Contractor Personnel Off-Post Housing Demand, DPG**

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	1	0	0	1
NAF Equivalent				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	2	0	2	4
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	10	10
GS-12	0	0	6	6
GS-11	5	0	0	5
GS-10	1	0	0	1
GS-9	5	0	0	5
GS-8	0	0	0	0
GS-7	5	0	0	5
GS-6	2	0	0	2
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	18	0	16	34
Total Contractor Personnel	21	0	18	39

Sources: Applied Real Estate Analysis, Inc.

The number of unaccompanied non-military personnel who own homes is currently estimated at 214. This is anticipated to increase slightly in 2018 to 249.

Exhibit IV-50.

2013 Unaccompanied DOD Personnel Homeowners, DPG

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	4	0	0	4
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	4	0	0	4
NAF Positions				
NAF-5	0	0	8	8
NAF-4	4	0	0	4
NAF-3	4	0	0	4
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Positions	8	0	8	16
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	45	45
GS-12	0	0	29	29
GS-11	25	0	0	25
GS-10	4	0	0	4
GS-9	25	0	0	25
GS-8	0	0	0	0
GS-7	20	0	0	20
GS-6	13	0	0	13
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	87	0	74	161
Total DOD Personnel	99	0	82	181

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-51.
2013 Unaccompanied Contractor Personnel Homeowners, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	1	0	0	1
NAF Equivalent				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	2	0	2	4
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	8	8
GS-12	0	0	5	5
GS-11	4	0	0	4
GS-10	1	0	0	1
GS-9	4	0	0	4
GS-8	0	0	0	0
GS-7	4	0	0	4
GS-6	2	0	0	2
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	15	0	13	28
Total Contractor Personnel	18	0	15	33

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-52.
2018 Unaccompanied DOD Personnel Homeowners, DPG

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	4	0	0	4
WG-12	0	0	0	0
WG-11	4	0	0	4
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	3	0	0	3
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	11	0	0	11
NAF Positions				
NAF-5	0	0	8	8
NAF-4	4	0	0	4
NAF-3	4	0	0	4
NAF-2	8	0	0	8
NAF-1	0	0	0	0
Subtotal NAF Positions	16	0	8	24
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	45	45
GS-12	0	0	29	29
GS-11	25	0	0	25
GS-10	4	0	0	4
GS-9	25	0	0	25
GS-8	0	0	0	0
GS-7	20	0	0	20
GS-6	13	0	0	13
GS-5	15	0	0	15
GS-4	5	0	0	5
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	107	0	74	181
Total DOD Personnel	134	0	82	216

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-53.
2018 Unaccompanied Contractor Personnel Homeowners, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	1	0	0	1
NAF Equivalent				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	2	0	2	4
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	8	8
GS-12	0	0	5	5
GS-11	4	0	0	4
GS-10	1	0	0	1
GS-9	4	0	0	4
GS-8	0	0	0	0
GS-7	4	0	0	4
GS-6	2	0	0	2
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	15	0	13	28
Total Contractor Personnel	18	0	15	33

Source: Applied Real Estate Analysis, Inc.

Unaccompanied renters are estimated using the same methodology applied to accompanied renters.

Exhibit IV-54.
2013 DOD Personnel Unaccompanied Renters, DPG

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	1	0	0	1
NAF Positions				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Positions	2	0	2	4
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	11	11
GS-12	0	0	7	7
GS-11	6	0	0	6
GS-10	1	0	0	1
GS-9	6	0	0	6
GS-8	0	0	0	0
GS-7	5	0	0	5
GS-6	3	0	0	3
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	21	0	18	39
Total DOD Personnel	24	0	20	44

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-55.
2013 Contractor Personnel Unaccompanied Renters, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	0	0	0	0
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	2	2
GS-12	0	0	1	1
GS-11	1	0	0	1
GS-10	0	0	0	0
GS-9	1	0	0	1
GS-8	0	0	0	0
GS-7	1	0	0	1
GS-6	0	0	0	0
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	3	0	3	6
Total Contractor Personnel	3	0	3	6

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012; Applied Real Estate Analysis, Inc.

Exhibit IV-56.
2018 DOD Personnel Unaccompanied Renters, DPG

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	1	0	0	1
WG-12	0	0	0	0
WG-11	1	0	0	1
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	2	0	0	2
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	4	0	0	4
NAF Positions				
NAF-5	0	0	2	2
NAF-4	1	0	0	1
NAF-3	1	0	0	1
NAF-2	7	0	0	7
NAF-1	0	0	0	0
Subtotal NAF Positions	9	0	2	11
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	11	11
GS-12	0	0	7	7
GS-11	5	0	0	5
GS-10	0	0	0	0
GS-9	5	0	0	5
GS-8	0	0	0	0
GS-7	5	0	0	5
GS-6	3	0	0	3
GS-5	15	0	0	15
GS-4	5	0	0	5
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	38	0	18	56
Total DOD Personnel	51	0	20	71

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012;
 Applied Real Estate Analysis, Inc.

**Exhibit IV-57.
2018 Contractor Personnel Unaccompanied Renters, DPG**

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	0	0	0	0
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	2	2
GS-12	0	0	1	1
GS-11	1	0	0	1
GS-10	0	0	0	0
GS-9	1	0	0	1
GS-8	0	0	0	0
GS-7	1	0	0	1
GS-6	0	0	0	0
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	3	0	3	6
Total Contractor Personnel	3	0	3	6

Sources: Headquarters, Department of the Army 2012; DPG Housing Office, 2012;
Applied Real Estate Analysis, Inc.

AFFORDABILITY AND ADEQUACY OF COMMUNITY HOUSING

The Department of Defense uses four criteria to determine whether housing is acceptable for military personnel. The housing must be affordable, in an acceptable location, have an acceptable physical condition and include appropriate amenities, and it must have the appropriate number of bedrooms for the household. The affordability of a unit is determined based upon the Maximum Acceptable Housing Cost (MAHC). The MAHC includes rent, utilities, and renter's insurance. If military personnel apply between 85 and 100 percent of their MAHC to housing, the housing is considered affordable and acceptable. The MAHC is equal to the BAH, which varies dependent upon the personnel's pay grade and whether they have dependents. The 2013 BAH is listed in Exhibit IV-58.

Exhibit IV-58.

2013 Maximum Acceptable Housing Cost, DPG

Pay Grade	BAH without Dependents	BAH with Dependents
Officers		
O7 and above	\$1,467	\$1,743
O6	\$1,437	\$1,728
O5	\$1,338	\$1,710
O4	\$1,278	\$1,596
O3	\$1,131	\$1,431
O2	\$1,041	\$1,170
O1	\$ 942	\$1,074
Warrants		
W5	\$1,290	\$1,569
W4	\$1,194	\$1,497
W3	\$1,122	\$1,437
W2	\$1,083	\$1,308
W1	\$ 978	\$1,176
Enlisted		
E9	\$1,119	\$1,482
E8	\$1,086	\$1,371
E7	\$1,005	\$1,266
E6	\$ 951	\$1,173
E5	\$ 900	\$1,062
E4	\$ 819	\$1,002
E3	\$ 819	\$1,002
E2	\$ 819	\$1,002
E1	\$ 819	\$1,002

Source: U.S. Department of Defense, Travel Management Office.

The estimated renters (all personnel) by cost band are presented in the following exhibits.

Rental Cost for Accompanied Personnel

Exhibit IV-59.
2013 Accompanied Military, DOD, and Contractor Renters by Cost, DPG

Rental Cost	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
\$500 or less	0	0	0	0	0	0
\$501-600	0	0	5	0	1	6
\$601-700	0	0	4	0	1	5
\$701-800	0	0	5	1	0	6
\$801-900	0	0	9	4	0	13
\$901-1,000	0	0	5	0	1	6
\$1,001-1,100	0	0	2	0	1	3
\$1,101-1,200	0	0	1	0	0	1
\$1,201-1,300	0	0	2	0	0	2
\$1,301-1,400	0	0	0	1	0	1
\$1,401-1,500	0	0	0	0	0	0
\$1,501-1,600	0	0	6	0	2	8
\$1,601-1,700	0	0	2	0	0	2
\$1,701-1,800	0	0	0	0	0	0
\$1,801-1,900	0	0	0	1	3	4
\$1,901-2,000	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	0	0
All	0	0	41	7	9	57

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-60.**2018 Accompanied Military, DOD, and Contractor Renters by Cost, DPG**

Rental Cost	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
\$500 or less	0	0	0	0	0	0
\$501-600	0	0	0	0	0	0
\$601-700	0	0	5	1	1	7
\$701-800	0	0	5	0	4	9
\$801-900	0	0	6	6	0	12
\$901-1,000	0	0	9	15	0	24
\$1,001-1,100	0	0	5	5	5	15
\$1,101-1,200	0	0	2	2	2	6
\$1,201-1,300	0	0	1	1	0	2
\$1,301-1,400	0	0	0	0	0	0
\$1,401-1,500	0	0	2	1	0	3
\$1,501-1,600	0	0	0	2	0	2
\$1,601-1,700	0	0	0	0	0	0
\$1,701-1,800	0	0	6	0	4	10
\$1,801-1,900	0	0	0	0	0	0
\$1,901-2,000	0	0	2	1	0	3
\$2,001 and above	0	0	0	11	8	19
All	0	0	43	45	24	112

Source: Applied Real Estate Analysis.

Rental Cost for Unaccompanied Personnel**Exhibit IV-61.****2013 Unaccompanied Military, DOD, and Contractor Renters by Cost, DPG**

Rental Cost	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
\$500 or less	0	0	0	0	0	0
\$501-600	0	0	0	0	0	0
\$601-700	0	0	0	0	0	0
\$701-800	0	0	0	0	0	0
\$801-900	0	0	0	0	0	0
\$901-1,000	0	0	3	0	0	3
\$1,001-1,100	0	0	6	0	0	6
\$1,101-1,200	0	0	1	0	0	1
\$1,201-1,300	0	0	7	0	0	7
\$1,301-1,400	0	0	1	0	0	1
\$1,401-1,500	0	0	0	0	0	0
\$1,501-1,600	0	0	8	0	0	8
\$1,601-1,700	0	0	1	0	0	1
\$1,701-1,800	0	0	0	0	0	0
\$1,801-1,900	0	0	0	0	8	8
\$1,901-2,000	0	0	0	0	0	0
\$2,001 and above	0	0	0	0	15	15
All	0	0	27	0	23	50

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-62.
2018 Unaccompanied Military, DOD, and Contractor Renters by Cost, DPG

Rental Cost	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
\$500 or less	0	0	0	0	0	0
\$501-600	0	0	0	0	0	0
\$601-700	0	0	0	0	0	0
\$701-800	0	0	0	0	0	0
\$801-900	0	0	0	0	0	0
\$901-1,000	0	0	0	0	0	0
\$1,001-1,100	0	3	0	0	0	3
\$1,101-1,200	0	6	0	0	0	6
\$1,201-1,300	0	1	0	0	0	1
\$1,301-1,400	0	0	0	0	0	0
\$1,401-1,500	0	6	0	0	0	6
\$1,501-1,600	0	0	0	0	0	0
\$1,601-1,700	0	0	0	0	0	0
\$1,701-1,800	0	7	0	0	0	7
\$1,801-1,900	0	0	0	0	0	0
\$1,901-2,000	0	1	0	0	0	1
\$2,001 and above	0	2	0	23	0	25
All	0	26	0	23	0	49

Source: Applied Real Estate Analysis, Inc.

COMMUNITY SHORTFALL

Based upon the preceding analysis as well as conversations with local real estate professionals, AREA estimated the expected suitable rentals for non-military personnel. Military personnel are not included in this portion of the analysis as they did not compete in the market place in 2013 and will not be competing in the marketplace in 2018. The expected suitable rental housing estimates are based upon the availability, affordability, and quality of rental units in the market. It is anticipated that the non-military personnel will be able to capture a substantial number of the available rental units.

Accompanied Personnel

In 2013, there are an estimated 174 suitable rental units in the market area for DOD and contractor personnel. The number of suitable rental units is expected to decrease to 161 in 2018. This is due primarily to the limited supply of rental housing units in the market area, which is not anticipated to increase between 2013 and 2018.

Exhibit IV-63.**2013 Expected Suitable Rental Housing for Accompanied DOD Personnel, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	1	1
WG-13	0	0	1	1
WG-12	0	0	1	1
WG-11	0	0	1	1
WG-10	0	0	1	1
WG-9	0	4	4	8
WG-8	0	2	1	3
WG-7	0	3	0	3
WG-6	0	3	0	3
WG-5	0	6	0	6
WG-4	2	3	0	5
WG-3	4	2	0	6
WG-2	1	0	0	1
WG-1	0	0	0	0
Subtotal FWS Positions	7	23	10	40
NAF Positions				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	2	2	4
NAF-2	1	0	0	1
NAF-1	4	0	0	4
Subtotal NAF Positions	5	2	2	9
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	0	0
GS-11	0	0	1	1
GS-10	0	0	0	0
GS-9	0	4	4	8
GS-8	0	2	3	5
GS-7	0	3	0	3
GS-6	1	4	0	5
GS-5	2	3	0	5
GS-4	4	2	0	6
GS-3	1	0	0	1
GS-2	1	0	0	1
GS-1	4	0	0	4
Subtotal GS Positions	13	18	8	39
Total DOD Personnel	25	43	20	88

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-64.**2013 Expected Suitable Rental Housing for Accompanied Contractor Personnel, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	1	1
WG-13	0	0	1	1
WG-12	0	0	1	1
WG-11	0	0	1	1
WG-10	0	0	1	1
WG-9	0	4	4	8
WG-8	0	2	1	3
WG-7	0	3	0	3
WG-6	0	3	0	3
WG-5	0	6	0	6
WG-4	2	3	0	5
WG-3	4	2	0	6
WG-2	1	0	0	1
WG-1	0	0	0	0
Subtotal FWS Equivalent	7	23	10	40
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	2	2	4
NAF-2	1	0	0	1
NAF-1	3	0	0	3
Subtotal NAF Equivalent	4	2	2	8
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	0	0
GS-11	0	0	1	1
GS-10	0	0	0	0
GS-9	0	4	3	7
GS-8	0	2	3	5
GS-7	0	3	0	3
GS-6	1	4	0	5
GS-5	2	3	0	5
GS-4	4	2	0	6
GS-3	1	0	0	1
GS-2	1	0	0	1
GS-1	4	0	0	4
Subtotal GS Equivalent	13	18	7	38
Total Contractor Personnel	24	43	19	86

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-65.
2018 Expected Suitable Rental Housing for Accompanied DOD Personnel, DPG

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	1	1
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	1	1
WG-11	0	0	2	2
WG-10	0	4	4	8
WG-9	0	2	2	4
WG-8	0	2	2	4
WG-7	1	5	1	7
WG-6	1	6	0	7
WG-5	1	2	0	3
WG-4	1	1	0	2
WG-3	1	0	0	1
WG-2	0	0	0	0
WG-1	2	0	0	2
Subtotal FWS Positions	7	22	13	42
NAF Positions				
NAF-5	0	0	0	0
NAF-4	0	0	1	1
NAF-3	0	5	1	6
NAF-2	0	0	0	0
NAF-1	2	0	0	2
Subtotal NAF Positions	2	5	2	9
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	0	0
GS-11	0	0	0	0
GS-10	0	0	2	2
GS-9	0	4	4	8
GS-8	0	2	2	4
GS-7	1	6	0	7
GS-6	1	2	0	3
GS-5	1	1	0	2
GS-4	1	0	0	1
GS-3	0	0	0	0
GS-2	2	0	0	2
GS-1	2	0	0	2
Subtotal GS Positions	8	15	8	31
Total DOD Personnel	17	42	23	82

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-66.**2018 Expected Suitable Rental Housing for Accompanied Contractor Personnel, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	1	1
WG-11	0	0	2	2
WG-10	0	3	4	7
WG-9	0	2	2	4
WG-8	0	2	2	4
WG-7		5	1	6
WG-6	1	6	0	7
WG-5	1	2	0	3
WG-4	1	1	0	2
WG-3	1	0	0	1
WG-2	0	0	0	0
WG-1	2	0	0	2
Subtotal FWS Equivalent	6	21	12	39
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	1	1
NAF-3	0	5	1	6
NAF-2	0	0	0	0
NAF-1	2	0	0	2
Subtotal NAF Equivalent	2	5	2	9
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	0	0
GS-11	0	0	0	0
GS-10	0	0	2	2
GS-9	0	4	4	8
GS-8	0	2	2	4
GS-7	1	6	0	7
GS-6	1	2	0	3
GS-5	1	1	0	2
GS-4	1	0	0	1
GS-3	0	0	0	0
GS-2	2	0	0	2
GS-1	2	0	0	2
Subtotal GS Equivalent	8	15	8	31
Total Contractor Personnel	16	41	22	79

Source: Applied Real Estate Analysis, Inc.

The total amount of acceptable housing as defined by the DOD includes all owner-occupied units as well as any units that are suitable for military personnel. For 2013, 475 non-military accompanied personnel are considered acceptably housed. This is expected to increase to 506 in 2018.

Exhibit IV-67.				
2013 Total Acceptable Housing for Accompanied DOD Personnel, DPG				
Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	1	1
WG-13	0	0	1	1
WG-12	0	0	1	1
WG-11	0	4	1	5
WG-10	0	4	1	5
WG-9	0	4	4	8
WG-8	0	2	1	3
WG-7	0	3	0	3
WG-6	0	3	0	3
WG-5	0	6	0	6
WG-4	2	6	0	8
WG-3	4	2	0	6
WG-2	1	0	0	1
WG-1	0	0	0	0
Subtotal FWS Positions	7	34	10	51
NAF Positions				
NAF-5	0	0	0	0
NAF-4	8	3	0	11
NAF-3	4	5	2	11
NAF-2	5	0	4	9
NAF-1	9	1	1	11
Subtotal NAF Positions	26	9	7	42
GS Positions				
GS-15	0	0	4	4
GS-14	0	6	2	8
GS-13	0	0	12	12
GS-12	0	32	18	50
GS-11	20	0	15	35
GS-10	0	4	0	4
GS-9	6	8	4	18
GS-8	0	2	3	5
GS-7	10	9	10	29
GS-6	16	15	14	45
GS-5	10	16	0	26
GS-4	9	8	0	17
GS-3	1	0	0	1
GS-2	1	0	0	1
GS-1	4	0	0	4
Subtotal GS Positions	77	100	82	259
Total DOD Personnel	110	143	99	352

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-68.**2013 Total Acceptable Housing for Accompanied Contractor Personnel, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	1	1
WG-13	0	0	1	1
WG-12	0	0	1	1
WG-11	0	0	1	1
WG-10	0	0	1	1
WG-9	0	4	4	8
WG-8	0	2	1	3
WG-7	0	3	0	3
WG-6	0	3	0	3
WG-5	0	6	0	6
WG-4	2	3	0	5
WG-3	4	2	0	6
WG-2	1	0	0	1
WG-1	0	0	0	0
Subtotal FWS Equivalent	7	23	10	40
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	0	0	2
NAF-3	1	2	2	5
NAF-2	2	0	0	2
NAF-1	4	0	0	4
Subtotal NAF Equivalent	9	2	2	13
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	2	0	2
GS-13	0	0	1	1
GS-12	0	6	3	9
GS-11	3	0	2	5
GS-10	0	0	0	0
GS-9	2	4	3	9
GS-8	0	2	3	5
GS-7	2	3	2	7
GS-6	3	5	2	10
GS-5	4	4	0	8
GS-4	5	3	0	8
GS-3	1	0	0	1
GS-2	1	0	0	1
GS-1	4	0	0	4
Subtotal GS Equivalent	25	29	16	70
Total Contractor Personnel	41	54	28	123

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-69.**2018 Total Acceptable Housing for Accompanied DOD Personnel, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	1	1
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	1	1
WG-11	0	4	2	6
WG-10	0	8	4	12
WG-9	0	2	2	4
WG-8	0	2	2	4
WG-7	1	5	1	7
WG-6	1	6	0	7
WG-5	1	2	0	3
WG-4	1	4	0	5
WG-3	1	0	0	1
WG-2	0	0	0	0
WG-1	2	0	0	2
Subtotal FWS Positions	7	33	13	53
NAF Positions				
NAF-5	0	0	0	0
NAF-4	8	4	1	13
NAF-3	4	9	1	14
NAF-2	4	0	4	8
NAF-1	7	2	1	10
Subtotal NAF Positions	23	15	7	45
GS Positions				
GS-15	0	0	4	4
GS-14	0	6	2	8
GS-13	0	0	13	13
GS-12	0	41	12	53
GS-11	21	6	14	41
GS-10	0	4	2	6
GS-9	6	10	4	20
GS-8	0	2	2	4
GS-7	11	16	10	37
GS-6	16	16	15	47
GS-5	9	14	0	23
GS-4	7	5	0	12
GS-3	0	0	0	0
GS-2	2	0	0	2
GS-1	2	0	0	2
Subtotal GS Positions	74	120	78	272
Total DOD Personnel	104	168	98	370

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-70.
2018 Total Acceptable Housing for Accompanied Contractor Personnel, DPG

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	1	1
WG-11	0	1	2	3
WG-10	0	4	4	8
WG-9	0	2	2	4
WG-8	0	2	2	4
WG-7	0	5	1	6
WG-6	1	6	0	7
WG-5	1	2	0	3
WG-4	1	2	0	3
WG-3	1	0	0	1
WG-2	0	0	0	0
WG-1	2	0	0	2
Subtotal FWS Equivalent	6	24	12	42
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	2	1	1	4
NAF-3	1	6	1	8
NAF-2	1	0	1	2
NAF-1	3	1	0	4
Subtotal NAF Equivalent	7	8	3	18
GS Equivalent				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	2	2
GS-12	0	6	3	9
GS-11	4	2	2	8
GS-10	0	1	2	3
GS-9	2	6	4	12
GS-8	0	2	2	4
GS-7	3	8	2	13
GS-6	3	4	2	9
GS-5	3	3	0	6
GS-4	2	1	0	3
GS-3	0	0	0	0
GS-2	2	0	0	2
GS-1	2	0	0	2
Subtotal GS Equivalent	21	35	20	76
Total Contractor Personnel	34	67	35	136

Source: Applied Real Estate Analysis, Inc.

The community-housing shortfall for accompanied personnel can now be calculated by comparing the off-post community housing requirement with the acceptable community housing. The estimated community housing shortfall for 2013 is 36. This is estimated to increase to 87 in 2018.

Exhibit IV-71.**2013 Community Housing Shortfall for Accompanied DOD Personnel, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	0	0	0
NAF Positions				
NAF-5	0	0	0	0
NAF-4	2	0	0	2
NAF-3	1	0	0	1
NAF-2	3	0	1	4
NAF-1	0	0	1	1
Subtotal NAF Positions	6	0	2	8
GS Positions				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	0	3	3
GS-11	5	0	1	6
GS-10	0	1	0	1
GS-9	2	0	0	2
GS-8	0	0	0	0
GS-7	2	0	1	3
GS-6	3	0	1	4
GS-5	6	0	0	6
GS-4	1	0	0	1
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	19	1	6	26
Total DOD Personnel	25	1	8	34

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-72.**2013 Community Housing Shortfall for Accompanied Contractor Personnel, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	0	0	0	0
NAF-1	0	0	0	0
Subtotal NAF Equivalent	0	0	0	0
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	0	0
GS-12	0	1	0	1
GS-11	1	0	0	1
GS-10	0	0	0	0
GS-9	0	0	0	0
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	0	0	0	0
GS-5	0	0	0	0
GS-4	0	0	0	0
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	1	1	0	2
Total Contractor Personnel	1	1	0	2

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-73.**2018 Community Housing Shortfall for Accompanied DOD Personnel, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	1	0	1
NAF Positions				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	0	0	1
NAF-2	4	0	4	8
NAF-1	2	0	1	3
Subtotal NAF Positions	9	1	5	15
GS Positions				
GS-15	0	0	0	0
GS-14	0	1	0	1
GS-13	0	0	3	3
GS-12	0	8	3	11
GS-11	5	2	3	10
GS-10	0	0	0	0
GS-9	2	0	0	2
GS-8	0	0	0	0
GS-7	1	0	2	3
GS-6	3	2	4	9
GS-5	7	11	0	18
GS-4	4	0	0	4
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	22	24	15	61
Total DOD Personnel	31	26	20	77

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-74.**2018 Community Housing Shortfall for Accompanied Contractor Personnel, DPG**

Pay Grade Equivalent	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	0	0	0
WG-10	0	0	0	0
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	0	0	0
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Equivalent	0	0	0	0
NAF Equivalent				
NAF-5	0	0	0	0
NAF-4	0	0	0	0
NAF-3	0	0	0	0
NAF-2	1	0	0	1
NAF-1	0	0	0	0
Subtotal NAF Equivalent	1	0	0	1
GS Equivalent				
GS-15	0	0	0	0
GS-14	0	0	0	0
GS-13	0	0	1	1
GS-12	0	2	1	3
GS-11	1	0	1	2
GS-10	0	0	0	0
GS-9	0	0	0	0
GS-8	0	0	0	0
GS-7	0	0	0	0
GS-6	0	0	1	1
GS-5	0	1	0	1
GS-4	0	1	0	1
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Equivalent	1	4	4	9
Total Contractor Personnel	2	4	4	10

Source: Applied Real Estate Analysis, Inc.

Unaccompanied Personnel

The expected suitable rentals for unaccompanied personnel are presented in the following exhibits. There are an estimated 123 suitable rental units for unaccompanied non-military personnel in 2013. This is estimated to decrease to 99 in 2018.

Exhibit IV-75.**2013 Expected Suitable Rental Housing for Unaccompanied DOD Personnel, DPG**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	1	1
WG-9	0	0	1	0	1
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	1	0	0	1
WG-4	0	3	0	0	3
WG-3	2	6	0	0	8
WG-2	1	2	0	0	3
WG-1	2	2	0	0	4
Subtotal FWS Positions	5	14	1	1	21
NAF Positions					
NAF-5	0	0	0	0	0
NAF-4	0	0	0	0	0
NAF-3	0	0	1	0	1
NAF-2	1	2	0	0	3
NAF-1	2	5	0	0	7
Subtotal NAF Positions	3	7	1	0	11
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	0	0	0
GS-12	0	0	0	0	0
GS-11	0	0	0	0	0
GS-10	0	0	0	0	0
GS-9	0	0	0	1	1
GS-8	0	0	0	0	0
GS-7	0	0	1	0	1
GS-6	0	0	0	0	0
GS-5	0	3	0	0	3
GS-4	3	5	0	0	8
GS-3	1	2	0	0	3
GS-2	1	2	0	0	3
GS-1	7	5	0	0	12
Subtotal GS Positions	12	17	1	1	30
Total DOD Personnel	20	38	3	2	62

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-76.

2013 Expected Suitable Rental Housing for Unaccompanied Contractor Personnel, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	1	1
WG-9	0	0	1	0	1
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	1	0	0	1
WG-4	0	3	0	0	3
WG-3	2	6	0	0	8
WG-2	1	2	0	0	3
WG-1	2	2	0	0	4
Subtotal FWS Equivalent	5	14	1	1	21
NAF Equivalent					
NAF-5	0	0	0	0	0
NAF-4	0	0	0	0	0
NAF-3	0	0	1	0	1
NAF-2	1	2	0	0	3
NAF-1	2	5	0	0	7
Subtotal NAF Equivalent	3	7	1	0	11
GS Equivalent					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	0	0	0
GS-12	0	0	0	0	0
GS-11	0	0	0	0	0
GS-10	0	0	0	0	0
GS-9	0	0	0	1	1
GS-8	0	0	0	0	0
GS-7	0	0	1	0	1
GS-6	0	0	0	0	0
GS-5	0	3	0	0	3
GS-4	3	5	0	0	8
GS-3	1	2	0	0	3
GS-2	1	2	0	0	3
GS-1	6	5	0	0	11
Subtotal GS Equivalent	11	17	1	1	29
Total Contractor Personnel	19	38	3	2	61

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-77.**2018 Expected Suitable Rental Housing for Unaccompanied DOD Personnel, DPG**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	1	0	1
WG-6	0	1	1	0	2
WG-5	0	2	0	0	2
WG-4	1	2	0	0	3
WG-3	1	2	0	0	3
WG-2	2	0	0	0	2
WG-1	2	4	0	0	6
Subtotal FWS Positions	6	11	2	0	19
NAF Positions					
NAF-5	0	0	0	0	0
NAF-4	0	0	0	0	0
NAF-3	0	0	0	0	0
NAF-2	2	0	0	0	2
NAF-1	2	4	0	0	6
Subtotal NAF Positions	4	4	0	0	8
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	0	0	0
GS-12	0	0	0	0	0
GS-11	0	0	0	0	0
GS-10	0	0	0	0	0
GS-9	0	0	0	0	0
GS-8	0	0	0	0	0
GS-7	0	1	0	0	1
GS-6	0	2	0	0	2
GS-5	1	2	0	0	3
GS-4	1	2	0	0	3
GS-3	2	0	0	0	2
GS-2	3	3	0	0	6
GS-1	3	3	0	0	6
Subtotal GS Positions	10	13	0	0	23
Total DOD Personnel	20	28	2	0	50

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-78.

2018 Expected Suitable Rental Housing for Unaccompanied Contractor Personnel, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	0	0	0	0	0
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	1	0	1
WG-6	0	1	1	0	2
WG-5	0	2	0	0	2
WG-4	1	2	0	0	3
WG-3	1	2	0	0	3
WG-2	2	0	0	0	2
WG-1	2	4	0	0	6
Subtotal FWS Equivalent	6	11	2	0	19
NAF Equivalent					
NAF-5	0	0	0	0	0
NAF-4	0	0	0	0	0
NAF-3	0	0	0	0	0
NAF-2	2	0	0	0	2
NAF-1	2	4	0	0	6
Subtotal NAF Equivalent	4	4	0	0	8
GS Equivalent					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	0	0	0
GS-12	0	0	0	0	0
GS-11	0	0	0	0	0
GS-10	0	0	0	0	0
GS-9	0	0	0	0	0
GS-8	0	0	0	0	0
GS-7	0	1	0	0	1
GS-6	0	2	0	0	2
GS-5	1	2	0	0	3
GS-4	1	2	0	0	3
GS-3	2	0	0	0	2
GS-2	2	3	0	0	5
GS-1	3	3	0	0	6
Subtotal GS Equivalent	9	13	0	0	22
Total Contractor Personnel	19	28	2	0	49

Source: Applied Real Estate Analysis, Inc.

The total acceptable off-post housing for unaccompanied personnel is calculated using the same methodology as for accompanied personnel. There are an estimated 362 acceptable units for unaccompanied personnel in 2013. This is expected to increase to 388 in 2018.

Exhibit IV-79.**2013 Total Acceptable Housing for Unaccompanied DOD Personnel, DPG**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	4	0	0	4	8
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	1	1
WG-9	0	0	1	0	1
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	1	0	0	1
WG-4	0	3	0	0	3
WG-3	2	6	0	0	8
WG-2	1	2	0	0	3
WG-1	2	2	0	0	4
Subtotal FWS Positions	9	14	1	5	29
NAF Positions					
NAF-5	0	0	8	8	16
NAF-4	4	0	0	4	8
NAF-3	4	0	1	4	9
NAF-2	1	2	0	0	3
NAF-1	2	5	0	0	7
Subtotal NAF Positions	11	7	9	16	43
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	45	45	90
GS-12	0	0	29	29	58
GS-11	25	0	0	25	50
GS-10	4	0	0	4	8
GS-9	25	0	0	26	51
GS-8	0	0	0	0	0
GS-7	20	0	1	20	41
GS-6	13	0	0	13	26
GS-5	0	3	0	0	3
GS-4	3	5	0	0	8
GS-3	1	2	0	0	3
GS-2	1	2	0	0	3
GS-1	7	5	0	0	12
Subtotal GS Positions	99	17	75	162	191
Total DOD Personnel	119	38	85	183	263

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-80.
2013 Total Acceptable Housing for Unaccompanied Contractor Personnel, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	1	0	0	1	2
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	1	1
WG-9	0	0	1	0	1
WG-8	0	0	0	0	0
WG-7	0	0	0	0	0
WG-6	0	0	0	0	0
WG-5	0	1	0	0	1
WG-4	0	3	0	0	3
WG-3	2	6	0	0	8
WG-2	1	2	0	0	3
WG-1	2	2	0	0	4
Subtotal FWS Equivalent	6	14	1	2	23
NAF Equivalent					
NAF-5	0	0	2	2	4
NAF-4	1	0	0	1	2
NAF-3	1	0	1	1	3
NAF-2	1	2	0	0	3
NAF-1	2	5	0	0	7
Subtotal NAF Equivalent	5	7	3	4	19
GS Equivalent					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	8	8	16
GS-12	0	0	5	5	10
GS-11	4	0	0	4	8
GS-10	1	0	0	1	2
GS-9	4	0	0	5	9
GS-8	0	0	0	0	0
GS-7	4	0	1	4	9
GS-6	2	0	0	2	4
GS-5	0	3	0	0	3
GS-4	3	5	0	0	8
GS-3	1	2	0	0	3
GS-2	1	2	0	0	3
GS-1	6	5	0	0	11
Subtotal GS Equivalent	26	17	14	29	57
Total Contractor Personnel	37	38	18	35	99

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-81.**2018 Total Acceptable Housing for Unaccompanied DOD Personnel, DPG**

Pay Grade	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	4	0	0	4	8
WG-12	0	0	0	0	0
WG-11	4	0	0	4	8
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	1	0	1
WG-6	0	1	1	0	2
WG-5	3	2	0	3	8
WG-4	1	2	0	0	3
WG-3	1	2	0	0	3
WG-2	2	0	0	0	2
WG-1	2	4	0	0	6
Subtotal FWS Positions	17	11	2	11	41
NAF Positions					
NAF-5	0	0	8	8	16
NAF-4	4	0	0	4	8
NAF-3	4	0	0	4	8
NAF-2	10	0	0	8	18
NAF-1	2	4	0	0	6
Subtotal NAF Positions	20	4	8	24	56
GS Positions					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	45	45	90
GS-12	0	0	29	29	58
GS-11	25	0	0	25	50
GS-10	4	0	0	4	8
GS-9	25	0	0	25	50
GS-8	0	0	0	0	0
GS-7	20	1	0	20	41
GS-6	13	2	0	13	28
GS-5	16	2	0	15	33
GS-4	6	2	0	5	13
GS-3	2	0	0	0	2
GS-2	3	3	0	0	6
GS-1	3	3	0	0	6
Subtotal GS Positions	117	13	74	181	204
Total DOD Personnel	154	28	84	216	301

Source: Applied Real Estate Analysis, Inc.

Exhibit IV-82.

2018 Total Acceptable Housing for Unaccompanied Contractor Personnel, DPG

Pay Grade Equivalent	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Equivalent					
WG-15	0	0	0	0	0
WG-14	0	0	0	0	0
WG-13	1	0	0	1	2
WG-12	0	0	0	0	0
WG-11	0	0	0	0	0
WG-10	0	0	0	0	0
WG-9	0	0	0	0	0
WG-8	0	0	0	0	0
WG-7	0	0	1	0	1
WG-6	0	1	1	0	2
WG-5	0	2	0	0	2
WG-4	1	2	0	0	3
WG-3	1	2	0	0	3
WG-2	2	0	0	0	2
WG-1	2	4	0	0	6
Subtotal FWS Equivalent	7	11	2	1	21
NAF Equivalent					
NAF-5	0	0	2	2	4
NAF-4	1	0	0	1	2
NAF-3	1	0	0	1	2
NAF-2	2	0	0	0	2
NAF-1	2	4	0	0	6
Subtotal NAF Equivalent	6	4	2	4	16
GS Equivalent					
GS-15	0	0	0	0	0
GS-14	0	0	0	0	0
GS-13	0	0	8	8	16
GS-12	0	0	5	5	10
GS-11	4	0	0	4	8
GS-10	1	0	0	1	2
GS-9	4	0	0	4	8
GS-8	0	0	0	0	0
GS-7	4	1	0	4	9
GS-6	2	2	0	2	6
GS-5	1	2	0	0	3
GS-4	1	2	0	0	3
GS-3	2	0	0	0	2
GS-2	2	3	0	0	5
GS-1	3	3	0	0	6
Subtotal GS Equivalent	24	13	13	28	50
Total Contractor Personnel	37	28	17	33	87

Source: Applied Real Estate Analysis, Inc.

SECTION V.

SUPPLY-DEMAND BALANCE

The analysis from the preceding sections is consolidated into this section and presents the current and projected requirements for on-post housing for accompanied and unaccompanied personnel. The initial projected accompanied housing requirement is the sum of the floor requirement and the community housing shortfall. This sum is then compared to personnel in each grade times 10 percent. The requirement is then adjusted if the personnel in each grade times 10 percent (military community requirement) is more than the initial housing requirement. The projected total accompanied housing requirement 130 units including 22 units for military personnel, 87 units for DOD personnel, and 21 units for contractor personnel. The projected unaccompanied housing requirement 184 units including for 14 units for military personnel, 146 for DOD personnel, and 24 units for contractor personnel.

Exhibits V-1 through V-9 provided the total accompanied and unaccompanied family housing requirements.

Exhibit V-1.
2018 Total Military Family Housing Requirement, DPG

Pay Grade	Key and		Historic Quality of	Floor	Private-	Initial Housing	Military	
	Families	Essential					Units	Life
Officers			Life	Requirement	Sector	Requirement	(10%)	Housing
					Shortfall		Requirement	Requirement
O7 and above	0	0	0	0	0	0	0	0
O6	1	1	0	0	1	0	1	1
O5	1	1	0	0	1	0	1	1
O4	1	1	0	0	1	0	1	1
O3	2	2	0	0	2	0	2	2
O2	3	3	0	0	3	0	3	3
O1	0	0	0	0	0	0	0	0
Subtotal Officers	8	8	0	0	8	0	8	8
Warrants								
W5	0	0	0	0	0	0	0	0
W4	0	0	0	0	0	0	0	0
W3	0	0	0	0	0	0	0	0
W2	0	0	0	0	0	0	0	0
W1	0	0	0	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0	0	0	0
Enlisted								
E9	0	0	0	0	0	0	0	0
E8	0	0	0	0	0	0	0	0
E7	1	1	0	0	1	0	1	1
E6	3	3	0	0	3	0	3	3
E5	4	4	0	0	4	0	4	4
E4	5	5	0	0	5	0	5	5
E3	1	1	0	0	1	0	1	1
E2	0	0	0	0	0	0	0	0
E1	0	0	0	0	0	0	0	0
Subtotal Enlisted	14	14	0	0	14	0	14	14
Total Military	22	22	0	0	22	0	22	22

Source: Applied Real Estate Analysis, Inc.

Exhibit V-2.
2018 Total DOD Personnel Family Housing Requirement, DPG

Pay Grade	Families	Key and Essential	Historic Quality of Units	Life	Floor Requirement	Private-Sector Shortfall	Initial Housing Requirement	Community Requirement (10%)	Total Housing Requirement
FWS Positions									
WG-15	0	0	0	0	0	0	0	0	0
WG-14	0	0	0	0	0	0	0	0	0
WG-13	0	0	0	0	0	0	0	0	0
WG-12	5	0	0	0	0	0	1	1	0
WG-11	5	0	0	0	0	0	0	1	1
WG-10	0	0	0	0	0	0	0	0	0
WG-9	0	0	0	0	0	0	0	0	0
WG-8	0	0	0	0	0	0	0	0	0
WG-7	0	0	0	0	0	0	0	0	0
WG-6	0	0	0	0	0	0	0	0	0
WG-5	5	0	0	0	0	0	0	1	1
WG-4	0	0	0	0	0	0	0	0	0
WG-3	0	0	0	0	0	0	0	0	0
WG-2	0	0	0	0	0	0	0	0	0
WG-1	0	0	0	0	0	0	0	0	0
Subtotal FWS	15	0	0	0	0	1	1	3	3
NAF Positions									
NAF-5	0	0	0	0	0	0	0	0	0
NAF-4	15	0	0	0	0	3	3	2	3
NAF-3	10	0	0	0	0	1	1	1	1
NAF-2	16	0	0	0	0	8	8	2	8
NAF-1	15	0	0	0	0	3	3	2	3
Positions	56	0	0	0	0	15	15	7	15
GS Positions									
GS-15	5	1	0	0	1	0	1	1	1
GS-14	10	1	0	0	1	1	2	1	2
GS-13	16	0	0	0	0	3	3	2	3
GS-12	66	2	0	0	2	11	13	7	13
GS-11	51	1	0	0	1	10	11	6	11
GS-10	5	1	0	0	1	0	1	1	1
GS-9	15	1	0	0	1	2	3	2	3
GS-8	0	0	0	0	0	0	0	0	0
GS-7	36	0	0	0	0	3	3	4	4
GS-6	56	0	0	0	0	9	9	6	9
GS-5	41	0	0	0	0	18	18	5	18
GS-4	21	0	0	0	0	4	4	3	4
GS-3	0	0	0	0	0	0	0	0	0
GS-2	0	0	0	0	0	0	0	0	0
GS-1	0	0	0	0	0	0	0	0	0
Subtotal GS	322	7	0	0	7	61	68	38	69
Positions	322	7	0	0	7	61	68	38	69
Total DOD Personnel	393	7	0	0	7	77	84	48	87

Source: Applied Real Estate Analysis, Inc.

Exhibit V-3.

2018 Total Contractor Personnel Family Housing Requirement, DPG

Pay Grade	Families	Essential Units	Key and Historic Quality of Life	Requirement	Floor Requirement	Private-Sector	Initial Housing Requirement	Community Requirement	Total Housing
FWS Equivalent									
WG-15	0	0	0	0	0	0	0	0	0
WG-14	0	0	0	0	0	0	0	0	0
WG-13	0	0	0	0	0	0	0	0	0
WG-12	0	0	0	0	0	0	0	0	0
WG-11	1	0	0	0	0	0	0	1	1
WG-10	1	0	0	0	0	0	0	1	1
WG-9	0	0	0	0	0	0	0	0	0
WG-8	0	0	0	0	0	0	0	0	0
WG-7	0	0	0	0	0	0	0	0	0
WG-6	0	0	0	0	0	0	0	0	0
WG-5	0	0	0	0	0	0	0	0	0
WG-4	1	0	0	0	0	0	0	1	1
WG-3	0	0	0	0	0	0	0	0	0
WG-2	0	0	0	0	0	0	0	0	0
WG-1	0	0	0	0	0	0	0	0	0
Subtotal FWS Equivalent	3	0	0	0	0	0	0	3	3
NAF Equivalent									
NAF-5	0	0	0	0	0	0	0	0	0
NAF-4	3	0	0	0	0	0	0	1	1
NAF-3	2	0	0	0	0	0	0	1	1
NAF-2	3	0	0	0	0	1	1	1	1
NAF-1	3	0	0	0	0	0	0	1	1
Equivalent	11	0	0	0	0	1	1	4	4
GS Equivalent									
GS-15	1	0	0	0	0	0	0	1	1
GS-14	2	0	0	0	0	0	0	1	1
GS-13	3	0	0	0	0	1	1	1	1
GS-12	12	0	0	0	0	3	3	2	3
GS-11	9	0	0	0	0	2	2	1	2
GS-10	1	0	0	0	0	0	0	1	1
GS-9	3	0	0	0	0	0	0	1	1
GS-8	0	0	0	0	0	0	0	0	0
GS-7	6	0	0	0	0	0	0	1	1
GS-6	10	0	0	0	0	1	1	1	1
GS-5	7	0	0	0	0	1	1	1	1
GS-4	3	0	0	0	0	1	1	1	1
GS-3	0	0	0	0	0	0	0	0	0
GS-2	0	0	0	0	0	0	0	0	0
GS-1	0	0	0	0	0	0	0	0	0
Subtotal GS Equivalent	57	0	0	0	0	9	9	12	14
Total Contractor Personnel	71	0	0	0	0	10	10	19	21

Source: Applied Real Estate Analysis, Inc.

**Exhibit V-4.
2018 Total Military Family Housing Requirement by Bedroom, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
Officers				
O7 and above	0	0	0	0
O6	0	0	1	1
O5	0	1	0	1
O4	0	1	0	1
O3	0	1	1	2
O2	0	2	1	3
O1	0	0	0	0
Subtotal Officers	0	5	3	8
Warrants				
W5	0	0	0	0
W4	0	0	0	0
W3	0	0	0	0
W2	0	0	0	0
W1	0	0	0	0
Subtotal Warrants	0	0	0	0
Enlisted				
E9	0	0	0	0
E8	0	0	0	0
E7	0	1	0	1
E6	1	1	1	3
E5	1	2	1	4
E4	2	1	2	5
E3	0	0	0	0
E2	0	0	0	0
E1	0	0	0	0
Subtotal Enlisted	4	6	4	14
Total Military	4	11	7	22

Source: Applied Real Estate Analysis, Inc.

**Exhibit V-5.
2018 Total DOD Personnel Family Housing Requirement by Bedroom, DPG**

Pay Grade	Two Bedrooms	Three Bedrooms	Four Bedrooms and Larger	Total
FWS Positions				
WG-15	0	0	0	0
WG-14	0	0	0	0
WG-13	0	0	0	0
WG-12	0	0	0	0
WG-11	0	1	0	1
WG-10	0	1	0	1
WG-9	0	0	0	0
WG-8	0	0	0	0
WG-7	0	0	0	0
WG-6	0	0	0	0
WG-5	0	0	0	0
WG-4	0	1	0	1
WG-3	0	0	0	0
WG-2	0	0	0	0
WG-1	0	0	0	0
Subtotal FWS Positions	0	3	0	3
NAF Positions				
NAF-5	0	0	0	0
NAF-4	2	1	0	3
NAF-3	1	0	0	1
NAF-2	4	0	4	8
NAF-1	2	0	1	3
Subtotal NAF Positions	9	1	5	15
GS Positions				
GS-15	0	0	1	1
GS-14	0	2	0	2
GS-13	0	0	3	3
GS-12	0	10	3	13
GS-11	6	2	3	11
GS-10	0	1	0	1
GS-9	3	0	0	3
GS-8	0	0	0	0
GS-7	1	1	2	4
GS-6	3	2	4	9
GS-5	7	11	0	18
GS-4	4	0	0	4
GS-3	0	0	0	0
GS-2	0	0	0	0
GS-1	0	0	0	0
Subtotal GS Positions	24	29	16	69
Total DOD Personnel	33	33	21	87

Source: Applied Real Estate Analysis, Inc.

Exhibit V-6.

2018 Total Contractor Personnel Family Housing Requirement by Bedroom, DPG

Pay Grade	Two		Three		Four Bedrooms and Larger		Total
	Bedrooms	Bedrooms	Bedrooms	Bedrooms	and Larger	and Larger	
FWS Equivalent							
WG-15	0	0	0	0	0	0	0
WG-14	0	0	0	0	0	0	0
WG-13	0	0	0	0	0	0	0
WG-12	0	0	0	0	0	0	0
WG-11	0	1	0	0	0	0	1
WG-10	1	0	0	0	0	0	1
WG-9	0	0	0	0	0	0	0
WG-8	0	0	0	0	0	0	0
WG-7	0	0	0	0	0	0	0
WG-6	0	0	0	0	0	0	0
WG-5	0	0	0	0	0	0	0
WG-4	0	0	0	0	1	0	1
WG-3	0	0	0	0	0	0	0
WG-2	0	0	0	0	0	0	0
WG-1	0	0	0	0	0	0	0
Subtotal FWS Equivalent	1	1	1	1	1	1	3
NAF Equivalent							
NAF-5	0	0	0	0	0	0	0
NAF-4	1	0	0	0	0	0	1
NAF-3	0	1	0	0	0	0	1
NAF-2	1	0	0	0	0	0	1
NAF-1	0	0	0	0	1	0	1
Subtotal NAF Equivalent	2	1	1	1	1	1	4
GS Equivalent							
GS-15	1	0	0	0	0	0	1
GS-14	0	1	1	0	0	0	1
GS-13	0	0	0	0	1	0	1
GS-12	0	2	2	1	1	3	3
GS-11	1	0	0	0	1	0	2
GS-10	1	0	0	0	0	0	1
GS-9	0	1	0	0	0	0	1
GS-8	0	0	0	0	0	0	0
GS-7	0	0	0	0	1	0	1
GS-6	0	0	0	0	1	0	1
GS-5	0	0	1	0	0	0	1
GS-4	0	0	1	0	0	0	1
GS-3	0	0	0	0	0	0	0
GS-2	0	0	0	0	0	0	0
GS-1	0	0	0	0	0	0	0
Subtotal GS Equivalent	3	3	6	6	5	5	14
Total Contractor Personnel	6	6	8	8	7	7	21

Source: Applied Real Estate Analysis, Inc.

Exhibit V-7.
2018 Total Unaccompanied Military Housing Requirement by Bedroom, DPG

Pay Grade	One Bedroom		Four Bedrooms and Larger		Total
	Bedroom	Two Bedrooms	Bedrooms	and Larger	
Officers					
O7 and above	0	0	0	0	0
O6	0	0	0	0	0
O5	0	0	0	0	0
O4	1	0	0	0	1
O3	2	0	0	0	2
O2	0	0	0	0	0
O1	3	0	0	0	3
Subtotal Officers	3	0	0	0	3
Warrants					
W5	0	0	0	0	0
W4	0	0	0	0	0
W3	0	0	0	0	0
W2	0	0	0	0	0
W1	0	0	0	0	0
Subtotal Warrants	0	0	0	0	0
Enlisted					
E9	0	0	0	0	0
E8	0	0	0	0	0
E7	0	0	0	0	0
E6	1	0	0	0	1
E5	2	0	0	0	2
E4	4	0	0	0	4
E3	2	0	0	0	2
E2	1	0	0	0	1
E1	11	0	0	0	11
Subtotal Enlisted	11	0	0	0	11
Total Military	14	0	0	0	14

Source: Applied Real Estate Analysis, Inc.

Exhibit V-8.
2018 Total Unaccompanied DOD Personnel Housing Requirement by Bedroom,
DPG

Pay Grade FWS Positions	One Bedroom			Four Bedrooms and Larger		Total
	One Bedroom	Two Bedrooms	Bedrooms and Larger	Four Bedrooms and Larger	Total	
WG-15	0	0	0	0	0	0
WG-14	0	0	0	0	0	0
WG-13	1	0	0	1	1	2
WG-12	0	0	0	0	0	0
WG-11	1	0	1	1	2	2
WG-10	0	0	0	0	0	0
WG-9	0	0	0	0	0	0
WG-8	0	0	0	0	0	0
WG-7	0	0	0	0	0	0
WG-6	0	0	0	0	0	0
WG-5	2	0	2	2	4	4
WG-4	0	0	0	0	0	0
WG-3	0	0	0	0	0	0
WG-2	0	0	0	0	0	0
WG-1	0	0	0	0	0	0
Subtotal FWS Positions	4	0	0	4	8	8
NAF Positions						
NAF-5	0	0	0	2	2	4
NAF-4	1	0	0	1	2	2
NAF-3	1	0	0	1	2	2
NAF-2	5	0	0	7	12	12
NAF-1	0	0	0	0	0	0
Subtotal NAF Positions	7	0	0	11	20	20
GS Positions						
GS-15	1	0	0	0	1	1
GS-14	1	0	0	0	1	1
GS-13	0	0	0	11	22	22
GS-12	2	0	0	7	16	16
GS-11	6	0	0	5	11	11
GS-10	1	0	0	0	1	1
GS-9	6	0	0	5	11	11
GS-8	0	0	0	0	0	0
GS-7	5	0	0	5	10	10
GS-6	3	0	0	3	6	6
GS-5	14	0	0	15	29	29
GS-4	4	0	0	5	9	9
GS-3	0	0	0	0	0	0
GS-2	0	0	0	0	0	0
GS-1	0	0	0	0	0	0
Subtotal GS Positions	43	0	0	56	117	117
Total DOD Personnel	55	0	0	71	146	146

Source: Applied Real Estate Analysis, Inc.

**Exhibit V-9.
2018 Total Unaccompanied Contractor Personnel Housing Requirement by
Bedroom, DPG**

Pay Grade	One			Four		
	Bedroom	Two Bedrooms	Bedrooms	Bedrooms	Bedrooms	Total
FWS Equivalent						
WG-15	0	0	0	0	0	0
WG-14	0	0	0	0	0	0
WG-13	0	0	0	0	0	0
WG-12	0	0	0	0	0	0
WG-11	1	0	0	0	0	1
WG-10	0	0	0	0	0	0
WG-9	0	0	0	0	0	0
WG-8	0	0	0	0	0	0
WG-7	0	0	0	0	0	0
WG-6	0	0	0	0	0	0
WG-5	1	0	0	0	0	1
WG-4	0	0	0	0	0	0
WG-3	0	0	0	0	0	0
WG-2	0	0	0	0	0	0
WG-1	0	0	0	0	0	0
Subtotal FWS Equivalent	2	0	0	0	0	2
NAF Equivalent						
NAF-5	0	0	0	0	0	0
NAF-4	0	0	0	0	0	0
NAF-3	0	0	0	0	0	0
NAF-2	2	0	0	0	0	2
NAF-1	0	0	0	0	0	0
Subtotal NAF Equivalent	2	0	0	0	0	2
GS Equivalent						
GS-15	0	0	0	0	0	0
GS-14	0	0	0	0	0	0
GS-13	0	0	0	2	4	4
GS-12	0	0	0	1	2	2
GS-11	1	0	0	1	2	2
GS-10	0	0	0	0	0	0
GS-9	1	0	0	1	2	2
GS-8	0	0	0	0	0	0
GS-7	1	0	0	1	2	2
GS-6	0	0	0	0	0	0
GS-5	6	0	0	0	6	6
GS-4	2	0	0	0	2	2
GS-3	0	0	0	0	0	0
GS-2	0	0	0	0	0	0
GS-1	0	0	0	0	0	0
Subtotal GS Equivalent	11	0	0	6	20	20
Total Contractor Personnel	15	0	0	6	24	24

Source: Applied Real Estate Analysis, Inc.

SECTION VI.

SUMMARY OF FINDINGS

HOUSING MARKET AREA

Dugway Proving Ground is located in Tooele County in northwestern Utah. The installation is located in a remote area with limited housing within a 20-mile radius. All military personnel live on the installation. The majority of DOD civilian and contractor personnel assigned to the installation live in the communities of Tooele City, Grantsville, Erda, and Stansbury Park (collectively the “greater Tooele community”), which are located northeast of the installation. These communities are approximately 65 miles and 1 hour and 30 minutes from the installation gate via Skull Valley (State Highway 199) or 40 miles and 45 minutes via the Mountain Pass (State Highway 196). Both the Skull Valley and Mountain Pass routes to the installation from the greater Tooele community area present a number of logistical challenges, including limited refueling options and undivided highways through open ranges with cattle and other animals that often cross the road. There is also limited highway lighting along both routes.

The housing market area is defined to include lands within a 20-mile radius of the installation as well as Rush Valley and the greater Toole community.

POPULATION AND HOUSEHOLD PROJECTIONS

The current population of the market area is 61,498 persons. The population is estimated to increase to 67,412 persons over the five-year period, with an average annual growth of 1.9 percent.

HOUSING SUPPLY ESTIMATES AND PROJECTIONS

Currently, there are an estimated 20,133 housing units in the market area, of which 95 percent are occupied. The market area has a high rate of homeownership (77 percent). The relatively low cost of purchasing or developing a residential unit has kept the market area homeownership rate consistently above the national average. The median purchase price of a three-bedroom unit is \$135,900, and this price is projected to increase to \$150,045 in 2018. By 2018, the total number of residential units is expected to increase to 21,591, of which 20,935 are projected to be occupied. The homeownership rate is projected to remain around 77 percent in 2018. Over the five-year analysis period, the increase in supply is expected to be limited, in large part

because of low increases in demand resulting from changes in local employment conditions.

The median costs for rental units in the market area are \$625 (one bedroom), \$760 (two bedrooms), \$1,000 (three bedrooms), \$1,188 (four bedrooms), and \$1,250 (five bedrooms and larger). Units within the \$900 to \$1,200 range—regardless of size—remain vacant for short periods of time.

HOUSING DEMAND ESTIMATES AND PROJECTIONS

Total Personnel

The current authorized personnel for Dugway Proving Ground is 1,050, of which 16 percent (168) are military, 71 percent (748) DOD civilians, and 13 percent (134) are civilian contractors. Total personnel are projected to decrease to 922 due to the decrease in military personnel to 40 in 2018.

Accompanied Personnel

Of the total personnel assigned to Dugway Proving Ground, 134 families require housing on the installation. The total number of families requiring off-post housing is projected to be 461 in 2018. The projected floor requirement is 29 units. All military personnel are key and essential personnel who must live on the installation. Therefore, there are no military homeowners or off-base renters projected for 2018.

Unaccompanied Personnel

The current total number of unaccompanied personnel is 406. The total number living in private sector housing is 264. Of these 264, 214 are homeowners and 50 are renters. The total number of unaccompanied personnel is anticipated to decrease to 355 in 2018. Approximately 326 are projected to seek private sector housing in 2018 including 77 renters.

PROJECTED ON-POST HOUSING REQUIREMENTS

In 2018, the projected number of on-post housing units for needed for accompanied military personnel is 22 units. In addition, 87 accompanied DOD civilian personnel and 21 accompanied contractor personnel are projected to need on-base housing. The projected number of units required on-post for unaccompanied military personnel is 11 units. There are an estimate 170 DOD civilian and contractor personnel who are projected to need on-base housing. The housing requirement by accompaniment status and bedroom size is summarized in Exhibit VI-1.

Exhibit VI-1.
2018 Total Housing Requirement by Accompaniment Status and Bedroom, DPG

Accompaniment Status	One Bedroom		Two Bedrooms		Three Bedrooms		Four Bedrooms and Larger		Total	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
<i>Accompanied Personnel</i>	0	0%	43	100%	52	69%	35	31%	130	41%
Military	0	0%	4	9%	11	15%	7	6%	22	7%
DOD	0	0%	33	77%	33	44%	21	19%	87	28%
Contractor	0	0%	6	14%	8	11%	7	6%	21	7%
<i>Unaccompanied Personnel</i>	84	100%	0	0%	23	31%	77	69%	184	59%
Military	14	17%	0	0%	0	0%	0	0%	14	4%
DOD	55	65%	0	0%	20	27%	71	63%	146	46%
Contractor	15	18%	0	0%	3	4%	6	5%	24	8%
Total units	84	100%	43	100%	75	100%	112	100%	314	100%

Source: Applied Real Estate Analysis, Inc.

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