Agenda

GRAND COUNTY
Planning Commission

Tuesday, October 9, 2018
5:00 P.M. Regular Meeting
Grand County Courthouse
Council Chambers
125 E. Center St., Moab, Utah

Type of Meeting:	Regular Meeting	
Facilitator:	Gerrish Willis, Chair	
Attendees:	Planning Commissioners, interested citizens, and staff	
5:00 PM	Citizens to be heard	*Chair*
Public Meeting Action Item	Review of Sandstone Cliffs Subdivision, a 24.4-acre parcel zoned Rural Residential, located off Munsey Drive	*Staff*
Public Hearing Action Item	Assured Housing	*Staff*
~~**Discussion Item**~~	~~Use Table 3.1 – Consideration of eliminating overnight accommodations as principal uses in non-residential zone districts~~	~~*Gerrish Willis*~~
Public Meeting Action Item	Approval of September 11 and 25, 2018 Meeting Minutes	*Chair*
	Future Considerations	*Chair*
	Outdoor Lighting Ordinance	*Staff*
	County Council Update – Mary McGann	*Council Liaison*
	ADJOURN	

DEFINITIONS:

Public hearing = a hearing at which members of the public are provided a reasonable opportunity to comment on the subject of the hearing.

Public meeting**=** a meeting required to be open to the public pursuant to the requirements of Title 52, Chapter 4, Open and Public Meetings; the public may or may not be invited to participate.

Legislative act = action taken by the County Council or Planning Commission; amending ordinances, adopting general plan, Annexations, zoning and rezoning; a reasonable debatable action that could promote the general welfare of the community.

Administrative act = action taken by the Planning Commission, County Council or staff interpreting ordinances and regulations, conditional uses, approving subdivision, site plans, issuing building permits; an administrative decision must satisfy the requirements prescribed under state law or the County Land Use Code, whichever is stricter.

Agenda Summary

GRAND COUNTY PLANNING COMMISSION

October 9, 2018

TITLE:	Sandstone Cliffs Preliminary Plat Application Review
FISCAL IMPACT:	N/A
PRESENTER(S):	Kenny Gordon, Planning and Zoning Administrator

Prepared By:
KENNY GORDON
GRAND COUNTY
PLANNING & ZONING
ADMINISTRATOR

FOR OFFICE USE ONLY:

Attorney Review:

N/A

STATED MOTION :

Move to approve the preliminary plat application.

STAFF RECOMMENDATION:

See attached Staff Report. Staff recommends the planning commission approve the preliminary plat application with the following condition:

Applicant will continue to work with the county engineer on road and drainage designs.

BACKGROUND:

See staff report attached.

ATTACHMENT(S):

- Staff report
- Preliminary plat application materials
- Utility approvals

STAFF REPORT

COMMUNITY DEVELOPMENT DEPARTMENT
GRAND COUNTY

DATE: October 9, 2018

TO: Grand County Planning Commission

SUBJECT: Preliminary Plat

PROPERTY OWNER	Kevin Carroll
PROP. OWNER REP.	Scoot Flannery, Jones & DeMille Engineering
ENGINEER	Jones & DeMille / PEPG Consulting
PROPERTY ADDRESS	Munsey Drive
SIZE OF PROPERTY	24.4 Acres – 15 lots proposed
EXISTING ZONE	Rural Residential (RR)
EXISTING LAND USE	Vacant/Undeveloped Land

ADJACENT ZONING AND LAND USE

Rural Residential and Large Lot Residential

APPLICATION TYPE

Preliminary Plat – 15 lots

SUMMARY OF REQUEST

This application is submitted by Kevin Carroll. The subject property is located off Munsey Lane, zoned Rural Residential, and includes a total of 24.4 acres. The Applicant proposes division of the subject property into 15 residential lots. Surrounding properties are used for residential uses and zoned Rural Residential and Large Lot Residential.

SITE IMPROVEMENTS / ADDITIONS / CHANGES

The site has constrained lands, including drainages that the applicant has considered in the layout of the subdivision. The Applicant has requested a design exception for the intersection of Munsey Drive and the proposed Sandstone Cliffs Dr., which would serve as the subdivision entrance. GWSSA has provided a will-serve letter to the Applicant conditioned upon the Applicant constructing off-site water and sewer improvements.

APPLICATION PROCEDURE

☐ Administrative

☐ Legislative

☐ Public Hearing at ☐ Planning Commission ☐ County Council

☒ Public Meeting at ☒ Planning Commission ☐ County Council

ATTACHMENTS

☐ Approval Letters

☐ Site Plan

☐ Landscape Plan

☐ Vicinity Map

☐ Legal Notice

☐ Legal Description

☐ Public Comments

☐ Agency Comments

☐ Response to Standards

☐ Other:

STAFF RECOMMENDATION: ☐ Approve ☒ Approve with Conditions ☐ Deny ☐ Postpone

---

CONSIDERATIONS FOR APPROVAL, DENIAL, AND/OR POSTPONEMENT

The applicant is requesting a design exception to the Grand County Construction standards for the intersection of Munsey Drive and the proposed Sandstone Cliffs Rd, which would serve as the subdivision entrance. Construction standards establish a maximum grade of 12%; current conditions on Munsey Drive exceed this standard and improving Munsey Drive to meet County standards is impractical due to cost and impact to adjacent owners. The Grand County Engineer has approved the design exception. Subdividing the subject parcel will require dedication of the portion of Murphy Lane running through Lot 5 and an easement granted to GWSSA parallel to Murphy Lane running through Lot 5.

The Commission shall consider the physical arrangement of the subdivision, and determine the adequacy of street rights of way and alignment, adequate easements for proposed or future utility service and surface drainage. Is the proposed subdivision adequate to comply with the minimum requirements for the underlying zone district and for the type of sewage disposal proposed?

COMPATABILITY WITH GENERAL PLAN

GC Construction Standards I. Roads and Streets Table 2 & I.2 Street Dedications

COMPATABILITY WITH LAND USE CODE (ZONING)

The proposed preliminary plat meets all County standards.

LAND USE CODE REFERENCE SECTIONS

PROPERTY HISTORY

N/A

COMMUNITY DEVELOPMENT
ENGINEERING & PLANNING

PRELIMINARY PLAT APPLICATION

Grand County Courthouse: 125 E. Center St. Moab, UT 84532; Phone: (435)259-1343

FOR OFFICE USE ONLY
Date of Submittal: 4/19/18
Preliminary Plat Processing Fees: $550.00 for first five (5) lots x $125.00 per lot for each lot in excess of five lots
Submittal Received by: MK Fee Paid: 1,250.00 Fees Received by: _____

CONTACT INFORMATION

Property owner: Kevin Carroll
Address: 11850 S. Hwy 191, Ste A10
Phone: 435-260-1204 cell: 435-220-0342 fax: _____
Email address: caakevin@yahoo.com

Engineer: Jones & DeMille Engineering
Address: 16 East 300 South, Monticello UT. 84535
Phone: 800-748-5275 cell: 435-459-2349 fax: _____
Email address: _____

Property owner representative: _____
Address: _____
Phone: _____ cell: _____ fax: _____
Email address: _____

PROJECT INFORMATION

Project name: Sandstone Cliffs Subdivision
General location of the property: Munsey Drive Moab, UT. 84532
Size of the subject property: 24.4 *acres* Number of lots: 15
Surrounding land uses: Residential
Current Zoning: Rural Residential *district*

REQUIRED - Agency will review for ability to serve the lots and adequate existing and future easements or provide a letter with detailed requirements for the site.

Moab Valley Fire Department _____
Grand County Road Supervisor _____
Grand Water and Sewer Service Agency _____
Rocky Mountain Power _____
FEMA Floodplain Administrator _____ (provide site map)

SUPPORTING MATERIALS

Preliminary Plat applications shall contain, at a minimum, the following supporting materials through the approval process according to the following submittal schedule:

1. **APPLICATION SUBMISSION.** Two complete sets of all supporting materials shall be submitted with this application. These complete sets should include one large (24" x 36") set as well as one electronic copy. If the plans are not approved as submitted, two corrected large sets of plans, one small set of plans, and one electronic copy of plans shall be submitted that comply with the Zoning Administrator's approval. The preliminary plat shall be considered officially filed after application review fees which are established by resolution of the County Council have been paid and after it is examined and found to be in general compliance with the provisions of these regulations by the Zoning Administrator.
2. **PRIOR TO MEETING.** Revised sets of plans shall be submitted prior to the application being placed on a Planning Commission/County Council meeting, including an electronic file.
3. **POST MEETING.** If the revised sets of plans are not approved as submitted two corrected sets of plans shall be submitted that comply with the Planning Commission's approval.

☐ **Preliminary Plat.** A Preliminary Plat drawing will be required which shows accurate alignments, boundaries and monuments as certified by a land surveyor registered in Utah. Preliminary Plats shall be prepared at a scale no smaller than one (1) inch equals two hundred (200) feet. Plats of large areas may be prepared on multiple, serially numbered sheets with match lines and an index map. The vicinity and index maps shall appear on the first of the serially numbered sheets. The following data shall be included on the Preliminary Plat:

- **Boundary Lines and Bearings.** Boundary lines, bearings, and distances sufficient to locate the exact area proposed for subdivision. At least one (1) subdivision corner shall be referenced to a survey (abstract) corner. The area, in acres, of the subdivision shall also be shown.
- **Adjacent Subdivisions.** The name and location of a portion of adjoining subdivisions shall be drawn to the same scale and shown in dotted lines adjacent to the tract proposed for subdivisions in sufficient detail to show actually the existing lots, streets, alleys and other features that may influence the layout and development of the proposed subdivisions. Where adjacent land is not subdivided, the name of the owner of the adjacent tract shall be shown.
- **Intersecting Streets.** The angle of intersection of the centerline of all intersecting streets.
- **Proposed Streets, Alleys and Easements.** The names, location and widths of all streets, alleys and easements proposed for the subdivision, and all known rights-of-way and/or easements within or affecting the area to be subdivided.
- **Proposed Blocks, Lots and Parks.** The subdivision shall show all proposed streets and alleys, easements, blocks, lots, parks, etc., with principal dimensions.
- **Contours.** Existing topographic contours at 5 foot intervals and all easements or rights-of-way necessary for drainage within or without the boundaries of the addition.
- **Subdivision Title and Planner.** The title under which the proposed subdivision is to be recorded, the name of the owner and the name of the engineer or land planner who prepared the plat.
- **Dedicated Parks, Playgrounds and Other Public Uses.** Sites, if any, to be reserved or dedicated for parks, playgrounds or other public uses.
- **Scale, North Point**
    1. Scale, north point, date and other pertinent data
    2. The scale of the preliminary plat may be at one (1) inch equals 200 feet.
    3. Name, address and telephone number
    4. Property owner's name, address, and telephone number.
    5. Proposed layout of utilities
    6. A proposed preliminary layout of sanitary sewer and water lines to serve the subdivision.
- **Proposed Land Uses.** A designation of the proposed uses of land within the subdivision and any zoning amendments proposed to be requested.
- **Vicinity Map.** A vicinity map on a smaller scale showing the proposed subdivision and its relationship to the surrounding area and County limits.

☐ **Preliminary Master Plan.** If the proposed subdivision is a portion of a tract that is later to be subdivided, then a tentative master plan of the entire subdivision shall be submitted with the preliminary plat of the portion first to be

subdivided. The master subdivision plan shall conform in all respects to the requirements of the preliminary plat; except, it may be on a scale of not more than one (1) inch to 100 feet, or other staff-approved scale.

☐**Title Report.** A preliminary title report from a licensed title company listing or attorney listing the name of the property owner(s) and all liens, easements and judgments of record affecting the subject property, and of the preliminary plat.

☐**Drainage Plan.** A drainage plan prepared and stamped by a licensed engineer shall be submitted. The report shall contain a drainage map and a plan view of the overall storm water system. The grading, drainage, and erosion plan shall address the following issues: description of features and hydrological conditions; drainage basin and sub-basin; drainage facility design criteria; infrastructure design criteria; grading plan; and erosion control. Specifically, the report shall contain at a minimum the following information:

- The existing roadways, drainage ways, vegetation and hydrological conditions of a ten (10) year twenty-four (24) hour event and a one hundred (100) year twenty-four (24) hour event.
- The major basin descriptions referencing all major drainage reports such as FEMA, major drainage planning reports, or flood insurance maps and the basin characteristics and planned land uses.
- The sub-basin description showing the historical drainage pattern and off-site drainage patterns both upstream and downstream of the property
- A general discussion of how the proposed system conforms to existing drainage patterns and offsite upstream drainage will be collected to protect development
- The water quality evaluation showing the water quality shall not be degraded from existing storm water quality including how solids are collected and not allowed to be discharge into downstream waters and how oils and greases are separated from stormwater.
- Maintenance plan and procedure for storm water system; thorough narrative of all charts, graphs, tables or other information included in the report describing how it effects the proposed development.
- Infrastructure design criteria showing the piping is sized to handle the peak intensity of the ten (10) year storm event; all detention basins are sized to handle one hundred (100) year storm while discharging at a maximum ten (10) year twenty-four (24) hour historical rate; a ten (10) foot traffic lane in both directions is maintained at all locations within the development; and that the roadway and infrastructure will handle a one hundred (100) year storm event without flooding homes or damaging public property.
- Grading plan showing: soil map depicting unique soil features such as collapsible soil, rock features, etc.; a grading plan showing all cut and fill areas within development including: the identification of slopes; fill and cut depths; and rock features within ten (10) feet of post grade soil surface.
- The grading plan shall also show how the grades will allow water to run off of lot areas without ponding and creating flooding problems for homes.
- Erosion control shall show: how erosion will be controlled during construction; explain and design such that construction debris and silts will not be collected by storm water system; show and design for all cut and fill slopes will not be eroded and how these areas will be re-vegetated.

☐**Covenants, Conditions, Restrictions.** Draft of any protective covenants where the subdivider proposes to regulate land use or development standards in the subdivision.

☐**Application Fee.** The process / filing fee of $550.00 for first 5 lots then $125.00 per lot over 5 shall be paid in full.

APPLICANT CERTIFICATION

I certify under penalty of perjury that this application and all information submitted as a part of this application are true, complete and accurate to the best of my knowledge. I also certify that I am the owner of the subject property and that the authorized agent noted in this application has my consent to represent me with respect to this application. Should any of the information or representations submitted in connection with this application be incorrect or untrue, I understand that Grand County may rescind any approval, or take any other legal or appropriate action. I also acknowledge that I have reviewed the applicable sections of the Grand County Land Use Code and that items and checklists contained in this application are basic and minimum requirements only and that other requirements may be imposed that are unique to individual projects or uses. Additionally, I have reviewed and understand the section from the Consolidated Fee Schedule and hereby agree to comply with this resolution. I also agree to allow the Staff, Planning Commission, or County Council or appointed agent(s) of the County to enter the subject property to make any necessary inspections thereof.

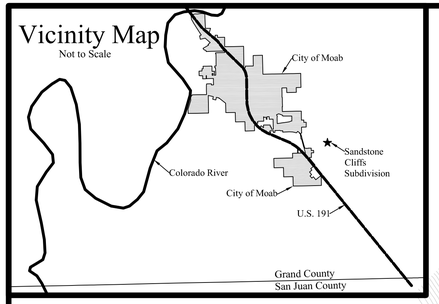
Property Owner's Signature: _____ Date: _____

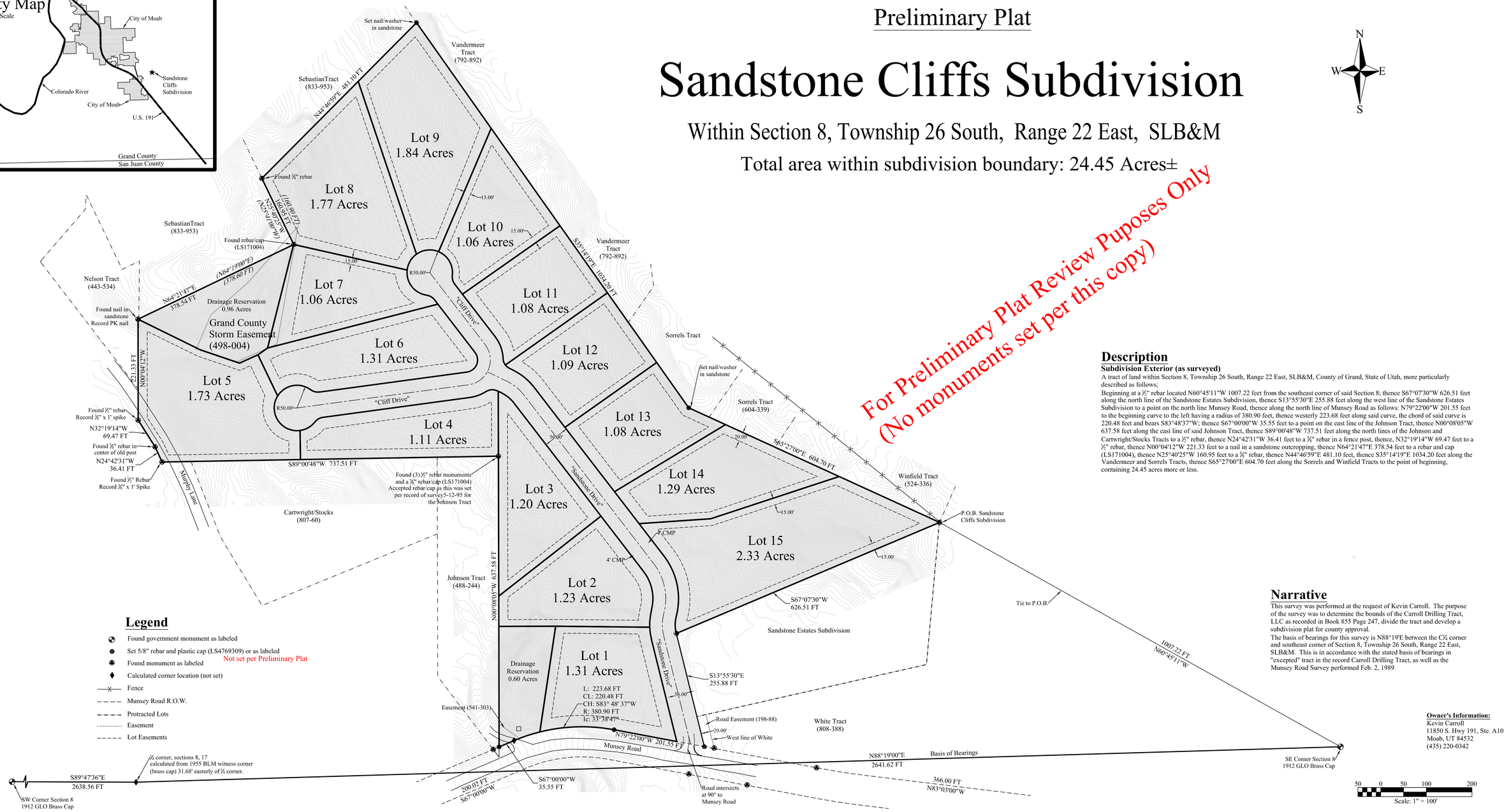
Preliminary Plat

Sandstone Cliffs Subdivision

Within Section 8, Township 26 South, Range 22 East, SLB&M

Total area within subdivision boundary: 24.45 Acres±





For Preliminary Plat Review Puposes Only
(No monuments set per this copy)

Description

Subdivision Exterior (as surveyed)

A tract of land within Section 8, Township 26 South, Range 22 East, SLB&M, County of Grand, State of Utah, more particularly described as follows;

Beginning at a ½" rebar located N60°45'11"W 1007.22 feet from the southeast corner of said Section 8; thence S67°07'30"W 626.51 feet along the north line of the Sandstone Estates Subdivision, thence S13°55'30"E 255.88 feet along the west line of the Sandstone Estates Subdivision to a point on the north line Munsey Road, thence along the north line of Munsey Road as follows: N79°22'00"W 201.55 feet to the beginning curve to the left having a radius of 380.90 feet, thence westerly 223.68 feet along said curve, the chord of said curve is 220.48 feet and bears S83°48'37"W; thence S67°00'00"W 35.55 feet to a point on the east line of the Johnson Tract, thence N00°08'05"W 637.58 feet along the east line of said Johnson Tract, thence S89°00'48"W 737.51 feet along the north lines of the Johnson and Cartwright/Stocks Tracts to a ½" rebar, thence N24°42'31"W 36.41 feet to a ½" rebar in a fence post, thence, N32°19'14"W 69.47 feet to a ½" rebar, thence N00°04'12"W 221.33 feet to a nail in a sandstone outcropping, thence N64°21'47"E 378.54 feet to a rebar and cap (LS171004), thence N25°40'25"W 160.95 feet to a ½" rebar, thence N44°46'59"E 481.10 feet, thence S35°14'19"E 1034.20 feet along the Vandermeer and Sorrels Tracts, thence S65°27'00"E 604.70 feet along the Sorrels and Winfield Tracts to the point of beginning, containing 24.45 acres more or less.

Narrative

This survey was performed at the request of Kevin Carroll. The purpose of the survey was to determine the bounds of the Carroll Drilling Tract, LLC as recorded in Book 855 Page 247, divide the tract and develop a subdivision plat for county approval.

The basis of bearings for this survey is N88°19'E between the C¼ corner and southeast corner of Section 8, Township 26 South, Range 22 East, SLB&M. This is in accordance with the stated basis of bearings in "excepted" tract in the record Carroll Drilling Tract, as well as the Munsey Road Survey performed Feb. 2, 1989

Owner's Information:
Kevin Carroll
11850 S. Hwy 191, Ste. A10
Moab, UT 84532
(435) 220-0342

Legend

- Found government monument as labeled
- Set 5/8" rebar and plastic cap (LS4769309) or as labeled
- Found monument as labeled — Not set per Preliminary Plat
- Calculated corner location (not set)
- Fence
- Munsey Road R.O.W.
- Protracted Lots
- Easement
- Lot Easements

Surveyor's Certificate

I Brad D. Bunker, Professional Utah Land Surveyor, Number 4769309, hold a license in accordance with Title 58, Chapter 22, Professional Engineers and Land Surveyors Licensing Act. This survey has been completed under my direction for the property described hereon in accordance with section 17-23-17. I hereby certify all descriptions and measurements are correct. Monuments will be set as noted hereon. I also certify that this record of survey has been prepared under my direction at the request of Kevin Carroll.

PROFESSIONAL LAND SURVEYOR — BRAD D. BUNKER 4769309-2201 — 3-19-18 — STATE OF UTAH

Brad D. Bunker 3-19-18
Brad D. Bunker Utah P.L.S. No.4769309 Date

County Recorder

State of Utah, County of San Juan, Recorded at the request of

_____ Date: _____

Time: _____ Book: _____ Page: _____ Fee: _____

_____
County Recorder

Acknowledgement

State of Utah, County of Grand, on the _____ Day of _____, 20____ personally appeared before me _____ and proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is (are) subscribed to this instrument, and acknowledged that he (she/they) executed the same freely and voluntarily for the purposes stated herein.

My commission expires _____20____ _____
Residing in _____County Notary Public

Grand County Council Approval

Approved by the Grand County Planning Commission this _____ Day of __ _____, 20____

Attest_____ _____
County Clerk Chairman, Grand County Council

Owners Dedication

Know all men by these presents that we, the undersigned owners of the above described tract of land, having caused the same to be subdivided into lots and streets hereafter to be known as the Sandstone Cliffs Subdivision, and do hereby dedicate for perpetual use of the public all parcels of land shown on this plat as intended for public use.

In witness whereof I have hereunto set my hand this _____day of _____, 20____

By: _____
Kevin Carroll, Carroll Drilling, LLC Owner

Preliminary Plat

Sandstone Cliffs Subdivision

Within Section 8, Township 26 South, Range 22 East, SLB&M

Bunker Engineering
965 S. South Creek Road, Monticello, UT 84535
P.O. Box 432, Monticello, UT 84535 (435) 459-9152

Date: 3-19-18	Drawn By: B.D. Bunker	Scale: 1" = 100'
Drawing Name: Survey Reference Number: BE802		Sheet: 1 of 1

GRAND COUNTY CORPORATION

October 1, 2018 **Tax Roll Master Record** 10:02:56AM

Parcel: 02-0008-0015 Serial #:26-22-8-3 6 5.2 Entry: 525227
Name: CARROLL DRILLING LLC
c/o Name:
Address 1: 11850 S HWY 191 STE A-10
Address 2:
City State Zip: MOAB UT 84532-0000
Mortgage Co:
Status: **Active** Year: **2018** District: **002 SPANISH VALLEY** **0.010532**

Property Address
MUNSEY DR 2005 E
MOAB 84532-0000
Acres: 24.51

Owners	Interest	Entry	Date of Filing	Comment
CARROLL DRILLING LLC		525227	06/23/2017	(0855/0247)

Property Information	2018 Values & Taxes				2017 Values & Taxes		
	Units/Acres	Market	Taxable	Taxes	Market	Taxable	Taxes
LV01 LAND VACANT	24.51	183,765	183,765	1,935.41	183,765	183,765	2,004.69
Totals:	24.51	183,765	183,765	1,935.41	183,765	183,765	2,004.69

****** SPECIAL NOTE ******
Tax Rates for 2018 have been set and approved. All levied taxes and values shown on this printout for the year 2018 should be correct.

2018 Taxes:	1,935.41	2017 Taxes: 2,004.69
Special Fees:	0.00	
Penalty:	0.00	**Review Date**
Abatements: (	0.00)	**03/04/2015**
Payments: (	0.00)	
Amount Due:	1,935.41	**NO BACK TAXES!**

DO NOT USE THIS TAXING DESCRIPTION FOR LEGAL PURPOSES OR OFFICIAL DOCUMENTS. For taxing purposes only. Consult property deeds for full legal description.

Taxing Description

LAND LEFT OVER DESC FOR ASSESSING ONLY: BEG AT PT WHICH BEARS S 89°381W 1374.09 FT FROM SE COR SEC 8 T26S R22E SLB&M & PROC N 79°22'W 232.01 FT ALONG THE N'LY BOUNDARY OF MUNSEY LN; TH ALONG THE ARC OF A 380.9 FT RADIUS CURVE TO THE LEFT (CURVE #4) OF MUNSEY LANE 223.7 FT; N 638.32 FT; S 89°15'W 735.78 FT; N 27°26'W 36.21 FT; N 32°29'W 61.55 FT; N 0°09'W 230.49 FT; N 64°19'E 368.47 FT; N 25°41'W 160.9 FT; N 44°39'E 480.3 FT; S 35°32'E 1035.24 FT; S 65°27'E 604.31 FT; S 67°01'W 625.97 FT; S 14°02'E 187.9 FT; N 77°06'E 18.23 FT ±; S14°02'E 84.36 FT ± TO BEG' & CONT 24.41 AC ± <<>> SUBJECT TO AN ESMNT :BEG AT A PT ON THE N'LY R.W OF MUNSEY RD; SAID PT BRS N 89°59'W 1846.7 FT FROM THE SE COR SEC 8 T26S R22E SLM & PROC TH WITH E LN OF JOHNSON N 50.0 FT; TH S 55°00'E 54.9 FT TO A PT ON N'LY R.W OF MUNSEY RD; TH WITH R/W ALNG THE ARC OF A 380.9 FT RAD CUR TO LEFT 20.4 FT (CHD BRG=S 68°32'W 20.3 FT) TH WITH SAID R/W S 67°00'W 28.3 FT TO POB & CONT 1115 SQ FT <<<>>>PARCEL - EAST OF MUNSY RD: BEG AT A PT WHICH BEARS S 88°15'W 399.3 FT FROM THE SE COR SEC 8 T26S R22E & PROC TH S 88°15'W 73.01 FT; TH N 31°54'45"E 136.25 FT; S 50°53'47"E 8.86 FT ; N 89°15'E 4.29 FT; S 5°37'W 108.8 FT TO POB & CONT 0.11 AC M-O-L (TOTAL TAXED ACRES; TOTAL AC 24.51 AC±)

COMMUNITY DEVELOPMENT
ENGINEERING & PLANNING

SKETCH PLAN APPLICATION

Grand County Courthouse: 125 E. Center St. Moab, UT 84532; Phone: (435)259-1343

FOR OFFICE USE ONLY
Date of Submittal: 1/8/18 Sketch Plan Processing Fees: **$550.00**
Submittal Received by: _____ Amount Paid: 550.00 Fees Received by: clerk 1/08/18

CONTACT INFORMATION

Property owner: Kevin Carroll
Address: 11850 South Highway 191, Suite A-10, Moab UT 84532
Phone: 435-260-1204 cell: 435-220-0342 fax: _____
Email address: caakevin@yahoo.com

Engineer (if applicable): Scoot Flannery - Jones & DeMille Engineering
Address: 16 East 300 South, Monticello UT 84535
Phone: 800-748-5275 cell: 435-459-2349 fax: _____
Email address: scoot@jonesanddemille.com

Property owner representative: Scoot Flannery
Address: _____
Phone: _____ cell: _____ fax: _____
Email address: _____

PROJECT INFORMATION

Project name: Sandstone Cliffs Subdivision
General location of the property: Munsey Drive, Moab Utah 84532
Size of the subject property: 24.4 *acres* Number of lots: 15
Surrounding land uses: Residential
Current Zoning: Rural Residential *district*

REQUIRED APPROVALS

Agency will review for ability to serve the lots and adequate existing and future easements.
Moab Valley Fire Department _____
Grand County Road Supervisor _____
Grand Water and Sewer Service Agency email attached
Rocky Mountain Power _____
FEMA Floodplain Adm _____ (Provide map)

Agenda Summary

GRAND COUNTY PLANNING COMMISSION

[Date]

TITLE:	Soliciting Public Comment on a Proposed Assured Housing Ordinance
FISCAL IMPACT:	N/A
PRESENTER(S):	Zacharia Levine, Community and Economic Development Director

Prepared By:
ZACHARIA LEVINE
GRAND COUNTY COMMUNITY & ECONOMIC DEVELOPMENT DIRECTOR

FOR OFFICE USE ONLY:

Attorney Review:

N/A

STATED MOTION :

Move to forward a (favorable/unfavorable) recommendation to the county council regarding a proposed assured housing ordinance (with the following amendments: _____)

STAFF RECOMMENDATION:

Staff recommends the planning commission forward a favorable recommendation with the understanding that:

a) Ongoing legal review will occur up to and through holding a public hearing at county council, and
b) The ordinance formatting and numbering will be updated to reflect that of the Grand County LUC.

BACKGROUND:

In November 2016, the planning commission forwarded a favorable recommendation to the county council for an assured housing ordinance that applied an affordable housing mitigation requirement to all residential and commercial developments above a given threshold. At the time, the county lacked some key pieces of information needed to justify adoption of the ordinance. The county council ordered staff to oversee the hiring of a consultant to gather additional information and conduct a series of economic analyses to improve the validity, accuracy, and appropriateness of an assured housing policy.

Two reports were produced by BAE Economics, a nationally renowned firm who has conducted similar analyses for communities ranging in size and typology from Truckee, CA to New York City, NY. The Phase 1 Report detailed a feasibility analysis to determine if various land use types could accommodate an affordable housing requirement while still allowing a developer to earn a reasonable yield on cost and return on cost. The Phase 2 Report detailed a nexus analysis for the "feasible" land use types identified in Phase 1 to verify the relationship between a new development and increased demand for affordable housing.

Using the findings of BAE's Phase 1 and Phase 2 reports, staff has been working with legal counsel to update the draft assured housing ordinance. Included in this packet is the most current version of the proposed assured housing ordinance, which would mandate an affordable housing requirement for new lodging related developments and certain classes of single family residences.

In addition to the overall concept of an assured housing policy, issues the planning commission may want to consider include:

- Excluding moderate-income housing units as a way to satisfy the assured housing requirement (Discussion provided during meeting.)
- Inclusion of certain single family residences as an applicable use type
- Inclusion of a sunset clause
- Others as deemed necessary by the planning commission and public

ATTACHMENT(S):

- Draft ordinance
- BAE Economics Phase 1 and 2 reports

DRAFT Assured Housing Ordinance

Grand County, UT

DRAFTED FOR DISCUSSION

WHEREAS, the purpose of this ordinance is to:

A. Encourage the development and availability of housing that is affordable to a broad range of households with varying income levels within the County;

B. Promote the County's goal to add affordable housing units to the County's housing stock in proportion to the overall increase in new jobs and housing units;

C. Offset the demand on housing that is created by new development, local economic conditions, and high external market demand;

D. Promote jobs-housing balance and reduce the demands placed on transportation infrastructure in the region;

E. Actualize the affordable housing goals and policies identified in the Grand County General Plan, which includes an Affordable Housing Plan;

WHEREAS, the County Council finds and determines:

A. The Moab Area, which includes the City of Moab, Town of Castle Valley, and unincorporated areas of Grand County, faces a serious housing problem that threatens its economic security, quality of life, and environment. The extreme lack of access to affordable housing has a direct impact upon the health, safety, and welfare of residents of the County. While no single housing program will solve all of the Area's needs, an assured housing policy has been identified as one solution among a broader set of solutions;

B. Population in the Moab Area has increased rapidly, reflecting overall trends in the State of Utah. Between 2000 and 2017, the population in Grand County rose from 9,225 to 10,292, equivalent to a 11.6 percent increase, and similar to the Utah growth rate of 12.6 percent[1]. This rapid population increase is expected to continue, driving demand for housing. The fastest growing demographic is the population over the age of 65, followed by young adults between the ages of 18 to 24;

C. More homeownership and rental housing will be needed to accommodate future growth. Between 2010 and 2017, the number of family and non-family households expanded, although non-family households experienced a somewhat higher rate of increase. This pace is expected to continue, which means more homeownership and rental housing will be needed;

D. Real estate prices have escalated across all residential product types. In 2017, the median sales price for a single-family home was $325,000, $352,000 for a townhouse, and $275,000 for a condominium. Between 2014 and 2017, the median price increased by 30 percent for townhomes, and 42 percent for single-family homes and condominiums;

[1] US Census Bureau 2010; ESRI 2017

E. Despite a high proportion of renter households (35 percent in Grand County[2]), there is a limited inventory of multifamily apartments. Higher density workforce housing products that could be more affordable to the workforce, such as apartments and condominiums, must compete with visitor accommodations, such as hotels and nightly rental units, for land. The economics of visitor accommodations allow them to pay more for land, making it difficult to build housing affordable to the workforce;

F. The area's rapidly appreciating home prices has made housing out-of-reach for many working families. Housing costs have increased rapidly, substantially outpacing increases in household incomes. In general, no homes sold in 2017 were affordable to households earning up to 80 percent of Area Median Income, which is equivalent to a family of four earning $54,150 annually. Households at 100 percent of median income ($67,700 for a family of four) had limited homeownership options. Rental housing may be priced such that it is more within reach of moderate-income households, although there is a shortage of units available for rent.

G. Tourism-related industries are the fastest growing employment sector in Grand County, accounting for approximately 43% of all employment[3]. Employment in accommodation and food services account for one out of every three jobs in Grand County. The next largest industries are retail and arts, entertainment, and recreation;

H. Jobs in tourism-related industries tend to be relatively low-paying, with some positions offering only seasonal or part-time employment with limited wage growth. The 2017 median household income in Grand County ($46,070) was lower than the statewide median of $62,902[4];

I. Because affordable housing is in short supply within the Moab Area, lower-income households may be forced to live in less than adequate housing, pay a disproportionate share of their incomes to live in adequate housing, or commute ever-increasing distances to their jobs from housing located outside the Moab Area. These circumstances harm the County's ability to provide high levels of service, attain goals articulated in the General Plan, and preserve a high quality of life for residents;

J. State and federal funds for the construction of new affordable housing are insufficient to fully address the current and projected shortages of affordable housing within the County. While the County has repeatedly amended its Land Use Code (LUC) to spur additional housing development, the private market has not provided adequate housing opportunities to extremely low-, very low-, low-, and moderate-income households;

K. A 2018 Feasibility Analysis report shows that accommodations-based developments can support paying a fee for workforce housing to offset the demands such development creates for affordable housing while still creating a reasonable rate of return for developers. The Council also finds that in certain limited circumstances, a developer may also meet the intent of this ordinance through other alternatives as further described below;

L. A 2018 Nexus Analysis report shows that accommodations-based developments do indeed create demand for additional affordable housing;

---

[2] Grand County Assured Housing Feasibility Study completed by BAE Urban Economics in 2018.
[3] Grand County Assured Housing Feasibility Study completed by BAE Urban Economics in 2018.
[4] The 2017 median household income data is taken from ESRI. This is different from the HUD Area Median Family Income (HAMFI), which is based on a four-person family household and was $56,700 in 2017. The median household income described here accounts for all households of all different sizes, including non-family households.

M. The need for an assured housing ordinance outweighs the potential impacts on the cost of market-rate housing. The County has determined that the community's best interests are served through the adoption of an assured housing ordinance;

WHEREAS, the Planning Commission is statutorily responsible for making recommendations to the County Council regarding textual amendments to the LUC;

WHEREAS, the Grand County Planning Commission held a public hearing on _____, 2018 to solicit public comment on a draft assured housing ordinance and recommended approval to the County Council; and,

WHEREAS, the Grand County Council held a public hearing on _____, 2018 to solicit public comment on a draft assured housing ordinance and voted to approve said ordinance;

NOW, THEREFORE BE IT RESOLVED, Section 6.15 of the Grand County LUC shall read:

Section 6.15 Assured Housing Standards

A. The standards of this Section shall apply to:
    1. Hotel, motel, condo, and any other Accommodations Development other than campgrounds, including conversions from residential to accommodations-based uses.
    2. Single family residential development that meets at least one of the following conditions:
        i. The combined square footage of all primary and secondary or accessory structures exceeds _____ sq. ft.
        ii. The combined assessed value of all land, primary, and secondary or accessory structures exceeds _____ dollars at the time a certificate of occupancy is granted.

B. As used in this Section, the following terms shall have the following meanings:
    1. Accommodations Development = the construction or conversion of any project that includes accommodations-based activities where travelers, guests, or temporary occupants may legally inhabit an area for 30 days or less as provided by Section 3.2.3 for which a development application or building permit application was received after _____, 2018.

    2. Affordable Rent = Annual rental housing costs, including rent, utilities, and HOA fees where applicable, that amount to 30 percent (30%) or less of a household's combined gross annual income.

    3. Affordable Ownership = Annual housing ownership costs, including mortgage, taxes, utilities, and HOA fees where applicable, that amount to 30 percent (30%) or less of a household's combined gross annual income.

    4. Alternative Compliance Proposal = A proposal to comply with the requirements of this Section in lieu of the construction of deed-restricted affordable housing units established in the Assured Housing Requirement, such as paying a fee in lieu, deed restricting and dedicating existing housing units, dedicating land, or other compliance option.

    5. Area Median Income (AMI) or Median Family Income (MFI) = Combined gross annual median household income as defined by the Department of Housing and Urban Development (HUD), which is based on household size.

Commented [ZL1]: This is placeholder text pending legal review. The BAE Economic Studies suggest that high-end, custom built SFRs have an essential nexus to affordable housing demand and that is feasible to impose a roughly proportional affordable housing requirement. Prior versions of this draft ordinance left out this class of land uses due to uncertainty about the figures that should fill in the blanks. BAE's studies used the following assumptions: 1 acre lot; 3,000 sq. ft. house; $800,000 sales price. Note that sales prices tend to exceed assessed values.

If included, do we need to add a definition of "single family residential development"?

The remainder of this draft assumes inclusion of the SFR Assured Housing Requirement. If it is not included, this draft should be updated accordingly.

Commented [ZL2]: We need to determine which benchmark will be used…ESRI or HUD. Speak with Matt at BAE about this.

6. Assured Housing Agreement = A written agreement between the County and a Developer.

7. Assured Housing Requirement = A statutory affordable housing requirement for a hotel, motel, condo, other accommodations-based development, including conversions from residential to accommodations-based uses, or single family residential development meeting the standards of Subsection (A)(2).

8. County = Grand County.

9. County Council = Grand County Council, or its designee.

10. County Engineer = Grand County Engineer of Record.

11. Deed Restriction = A contract entered into between Grand County and the owner or purchaser of real property identifying the conditions or occupancy and resale.

12. Department of Housing and Urban Development or HUD = The United States government department responsible for setting income limits and maximum housing costs for affordable housing programs.

13. Developer = Any person, firm, partnership, association, joint venture, corporation, or any entity or combination of entities, which seeks County approvals for all or part of a use regulated by this Section.

14. Extremely Low-Income Household (ELI) = A household whose combined gross annual income amounts to less than 30 percent (30%) of the area median income.

15. Household = One person living alone, two (2) or more individuals related to each other by blood, marriage, or another legally recognized relationship, or a maximum of three (3) unrelated individuals residing in the same residence whose combined income is considered for affordable housing eligibility.

16. Household Income = Combined gross annual income of all individuals who will be occupying the unit regardless of legal status. Adjustments to the gross annual income for business expenses can be made for persons who are self-employed.

17. Housing Fund = The dedicated fund within Grand County's budget that is to be used for any of the following: land or building acquisition, land development, redevelopment, renovation, public-private partnerships or other means to create or preserve deed-restricted affordable housing available to extremely low-,very low-, and low-income households.

18. Low-Income Household (LI) = A household whose combined gross annual income amounts to between 50 percent (50%) and 79.99 percent (79.99%) of area median income.

19. Very Low-Income Household (VLI) = A household whose combined gross annual income amounts to between 30 percent (30%) and 49.99 percent (49.99%) of the area median income.

C. Exemptions
    1. The following developments are exempt from the requirements of this section:
        i. The reconstruction of any structures that have been destroyed by fire, flood, earthquake or other act of nature provided that the reconstruction of the site does not increase the number of

residential units by more than six or increase the interior floor area of a non-residential structure by more than 4,999 square feet.

D. Assured Housing Requirements

1. The Developer shall be required to construct the number of deed-restricted, affordable housing units on the same parcel or an adjacent parcel that best aligns with their development type in accordance with the table below:

Assured Housing Requirement

Project Type	Income Category	AH Unit Mitigation*	Per _____	AH $ Mitigation*	Per _____
Hotel/Motel	Extremely Low-Income	5.43	60,000 sq. ft.	$15.57	Sq. Ft.
	Very Low-Income	6.36	60,000 sq. ft.	$15.57	Sq. Ft.
	Low-Income	10.87	60,000 sq. ft.	$15.57	Sq. Ft.
	Moderate	229.16	60,000 sq. ft.	$15.57	Sq. Ft.
Condo (w/STR)	Extremely Low-Income	4.07	100 condo units	$5.18	Sq. Ft.
	Very Low-Income	4.76	100 condo units	$5.18	Sq. Ft.
	Low-Income	8.14	100 condo units	$5.18	Sq. Ft.
	Moderate	171.61	100 condo units	$5.18	Sq. Ft.
Townhome (w/STR)	Extremely Low-Income	8.41	100 townhomes	$8.77	Sq. Ft.
	Very Low-Income	9.85	100 townhomes	$8.77	Sq. Ft.
	Low-Income	16.85	100 townhomes	$8.77	Sq. Ft.
	Moderate	355.07	100 townhomes	$8.77	Sq. Ft.
Large/high-end SFR	Extremely Low-Income	2.83	100 SFR homes	$1.62	Sq. Ft.
	Very Low-Income	3.31	100 SFR homes	$1.62	Sq. Ft.
	Low-Income	5.66	100 SFR homes	$1.62	Sq. Ft.

	Moderate	119.29	100 SFR homes	$1.62	Sq. Ft.

*When determining the assured requirement, the above rates will be used as conversion ratios. If a developer chooses to comply with the assured housing requirement by building deed restricted units or adding deed restrictions to existing units, fractional units shall be rounded up to the nearest whole number.

**Example: A developer submits an application for a 50 unit townhome development to be used for short-term rentals. In addition to other compliance alternatives offered by the assured housing ordinance, several hypothetical compliance alternatives are provided below.
Option 1. The developer chooses to build units deed restricted for occupancy by low-income households. The assured housing requirement equals 50*(16.85/100)=8.425 units. When rounded up to the next whole number, the assured housing requirement shall be 9 units.
Option 2. The developer chooses to build units deed restricted for occupancy by very low-income households. The assured housing requirement equals 50*(9.85/100)=4.925 units. When rounded up to the next whole number, the assured housing requirement shall be 5 units.
Option 3. The developer chooses to build units deed restricted for both low-income and very low-income households in equal proportions. The assured housing requirement equals 50*(16.85/100)*50%=4.2125 units deed restricted for low-income occupancy and 50*(9.85/100)*50%=2.4625 uints deed restricted for very low-income occupancy. When rounded up to the next whole number, the assured housing requirement shall be 5 units and 3 units respectively. Note the 50% factor is to reflect the 50-50 split between low- and very low-income unit restrictions.
Option 4. The developer chooses to utilize the fee in lieu option to meet the assured housing requirement. The assured housing requirement will be a function of the total square footage of all primary and accessory structures associated with the development at a rate of $8.77/sq. ft.

*When determining the assured requirement, the above rates will be used as conversion ratios. If a developer chooses to comply with the assured housing requirement by building deed restricted units or adding deed restrictions to existing units, fractional units shall be rounded up to the nearest whole number.

**Example: A developer submits an application for a 50 unit townhome development to be used for short-term rentals. In addition to other compliance alternatives offered by the assured housing ordinance, several hypothetical compliance alternatives are provided below.

Option 1. The developer chooses to build units deed restricted for occupancy by low-income households. The assured housing requirement equals 50*(16.85/100)=8.425 units. When rounded up to the next whole number, the assured housing requirement shall be 9 units.

Option 2. The developer chooses to build units deed restricted for occupancy by very low-income households. The assured housing requirement equals 50*(9.85/100)=4.925 units. When rounded up to the next whole number, the assured housing requirement shall be 5 units.

Option 3. The developer chooses to build units deed restricted for both low-income and very low-income households in equal proportions. The assured housing requirement equals 50*(16.85/100)*50%=4.2125 units deed restricted for low-income occupancy and 50*(9.85/100)*50%=2.4625 units deed restricted for very low-income occupancy. When rounded up to the next whole number, the assured housing requirement shall be 5 units and 3 units respectively. Note the 50% factor is to reflect the 50-50 split between low- and very low-income unit restrictions.

Option 4. The developer chooses to utilize the fee in lieu option to meet the assured housing requirement. The assured housing requirement will be a function of the total square footage of all primary and accessory structures associated with the development at a rate of $8.77/sq. ft.

2. The Assured Housing Requirement shall apply to the square footage of all buildings or total unit count constructed as part of the Accommodations Development and the total unit count of all single family residences.

3. If the Accommodations Development includes a combination of units restricted to residential housing for primary occupancy, be it ownership or rental, the Developer may elect to deed-restrict those residential units as such and remove the square footage associated with those units from the total square footage subject to the requirements of this Section.

E. Independent Feasibility and Nexus Analyses
   1. An applicant may submit an independent calculation of their Assured Housing Requirement based on an analysis of the maximum feasible and justifiable requirement associated with their development. The applicant may present an alternative Assured Housing Requirement in the form of affordable housing unit construction or dollar amount. If either of these independently figures is lower than the Assured Housing Requirement set forth in this section, the County shall consider applying the independently calculated requirement. The independent calculation shall be subject to the provisions of this section. Should the independent calculation not be accepted, then the applicable calculation from this section shall be applied. Any acceptance of an independent calculation shall be site- and use-specific, non-transferable, and be memorialized in an Assured Housing Agreement between the property owner and the County. Such Agreement shall be executed prior to the issuance of any building permit.

F. Redevelopment: Additions and Conversions of Use
   1. Redevelopment or remodeling in an existing use is exempt from the requirements of this Section, provided such activity does not increase the total square footage of an Accommodations Development or single family residence subject to the standards of this section. If an existing use is not currently subject to the standards of this section and an addition, remodel, or conversion of such use would result in a use subject to the standards of this section, then the full Assured Housing Requirement shall be applied to the resulting use. Only the uses and areas that existed prior to the redevelopment or remodeling shall be exempt from the requirements of this section. Any new area or unit or any change in use which creates additional square footage in association with accommodations-based activities shall be subject to this provisions of this section.

G. Final Assured Housing Requirement Calculations
   1. The final calculations for the fees associated with the Assured Housing Requirement shall be made prior to the issuance of land use approvals or building permits for the applicable project.

H. Alternative Methods of Meeting Assured Housing Requirements

The County Council may approve an Alternative Compliance Proposal that includes one or more of the following options in lieu of fees.

1. Payment of a fee in lieu as calculated using the conversion formula established in subsection (D)(1). [County Attorney's office will provide additional language as to required form and timing of this payment.]

2. Deed-restricted affordable housing units available to extremely low-, very low-, and low-income households in accordance with Section 6.14 may be constructed off-site, within the boundaries of the Spanish Valley zoning map, City of Moab, or Town of Castle Valley, provided such land, site or structure had not been previously deed-restricted as affordable housing. The number, size, and value of such units shall be reasonably close to the number, size, and value of units that could otherwise be constructed using fees associated with the Assured Housing Requirement.

3. Dedication of existing units deed-restricted for extremely low-, very low-, or low-income households provided such units have not been previously restricted to employee or affordable housing. Units shall be located within the boundaries of the Spanish Valley zoning map, City of Moab, or Town of Castle Valley unless otherwise approved by the County. Existing units must meet the minimum standards for physical condition as described in Exhibit A and be in move-in condition with appliances, windows, heating, plumbing, electrical systems, fixtures and equipment in good working condition. All units shall be inspected and shall meet applicable Grand County building codes and Utah state habitability standards, as applicable. A Developer shall bear the costs and expenses of any required upgrades to meet the above standards as well as any reports required to assess the suitability for occupancy and compliance with the standards of the proposed units.

4. Conveyance of land within boundaries of the Spanish Valley zoning map, City of Moab, or Town of Castle Valley to the County or its designee, provided such land has not been previously restricted to employee or affordable housing. The land value shall be reasonably close to the value the fees associated with the Assured Housing Requirements. Should the County Council later elect to sell the land, all proceeds from the sale of the land shall be placed in a dedicated Housing Fund.

I. Periodic Review of Assured Housing Ordinance
   1. The County Council shall review this Section at least biennially to ensure it is meeting the community and economic development needs of Grand County.

J. Enforcement
   1. Penalty for Violation
      i. It shall be a misdemeanor to violate any provision of this section. Without limiting the generality of the foregoing, it shall also be a misdemeanor for any person to sell or rent to another person an affordable housing unit under this section at a price or rent exceeding the maximum allowed under this section or to sell or rent an affordable unit to a household not qualified under this section. It shall further be a misdemeanor for any person to provide false or materially incomplete information to the County or its designee or to a seller or lessor of an affordable housing unit to obtain occupancy of housing for which the person is not eligible.

   2. Legal Action
      i. The County may institute any appropriate legal actions or proceedings necessary to ensure compliance with this section, including: (i) actions to revoke, deny or suspend any permit, including a land development permit, conditional use permit, building permit, certificate of occupancy, or discretionary approval; (ii) actions to recover from any violator of this section civil fines, restitution to prevent unjust enrichment from a violation of this section, and/or enforcement costs, including attorney fees; (iii) eviction or foreclosure; and (iv) any other appropriate action for injunctive relief or damages. Failure of any official or agency to fulfill the

requirements of this section shall not excuse any person, owner, household or other party from the requirements of this section.

Exhibit A
Minimum Standards for Physical Conditions of Affordable Housing Units

- Clean unit
- Carpets steam-cleaned two or three days prior to closing
- All scratches, holes, burned marks repaired in hardwood floors, linoleum, tile, and counter tops, etc.
- No broken or foggy windows
- All screens in windows (if screens were originally provided)
- All doors will be in working order with no holes
- All locks on doors will work
- All keys will be provided; e.g., door, mail box, garage
- All mechanical systems shall be in working order
- Walls paint ready
- Normal wear and tear on carpet; if carpet has holes, stains, etc., the carpet and padding shall be replaced or escrow funds at current market value per square foot for a comparable product shall be held at the time of closing to be used by the new buyer
- No leaks from plumbing fixtures
- Any safety hazard remedied prior to closing
- Satisfaction of radon issue if found at time of inspection
- All light fixtures shall be in working order
- All appliances that existed in the original Unit, remain and are in good working order and good condition

DEFINITIONS

- Clean Unit: All rooms will be cleaned as stated below:
- Kitchen:
    - Range - Inner and outer services will be cleaned.
    - Range hood and Exhaust Fan
    - Refrigerator and Freezer - Inner and outer surfaces of refrigerator and freezer will be clean. Freezer will be defrosted.
    - Cabinets and Countertops - Exterior and interior surfaces of cabinets and drawers will be clean. Door and drawer handles, if provided, shall be clean and in place.
    - Sink and Garbage Disposal - Sink and plumbing fixtures will be clean. Garbage disposal must be in working order.
    - Dishwasher - Must be in working order and inner and outer surfaces shall be clean.

- Blinds, Windows, Screens:
    - Mini-blinds, Venetian Blinds, Vertical Blinds, and Pull Shades - Will be clean.
    - Windows - All window surfaces, inside and outside of the window glass, shall be clean.
    - Screens - Screens will be clean and in place with no holes or tears.

- Closets: Closets, including floors, walls, hanger rod, shelves and doors, shall be clean.

- Light Fixtures: Light fixtures will be clean and shall have functioning bulbs/florescent tubes.

- Bathrooms:
    - Bathtub, Shower Walls, Sinks - Bathtubs, shower walls and sinks shall be clean.
    - Toilet and Water Closet - Water closets, toilet bowls and toilet seats will be clean. If the toilet seat is broken or peeling, the seat shall be replaced.
    - Tile - All tile and grout will be clean.
    - Mirrors and Medicine Cabinets - Mirrors and medicine cabinets shall be cleaned inside and out.
    - Shelves and/or Other Cabinetry - All other shelving or cabinetry shall be cleaned inside and out.

- Walls, Ceilings, Painted Doors and Baseboards: Painted surfaces must be cleaned with care to ensure the surface is clean without damaging the paint.

- Floors: Floor cleaning includes sweeping and mopping and could include stripping, waxing and buffing. Types of floor surfaces include bamboo and marmoleum.

- Interior Storage/Utility Rooms: Storage/utility rooms shall be cleaned. Properly cleaned storage/utility rooms will be free from odors, removable stains, grease marks or accumulations.
- Washer/Dryer- Must be in working order and inner and outer surfaces shall be clean

- Safety Hazard: Any item that provides a safety hazard shall be fixed. This would include, but is not limited to, exposed electrical wiring, satisfaction of any radon issue found, ventilation for gas hot water system, etc.

- Walls Paint-Ready: All holes shall be patched; all posters, pictures, etc., shall be removed from all walls; all nails, tacks, tape, etc., shall be removed from all walls; and all walls shall be clean and ready for the new buyer to paint. If wallpaper has been placed on the wall and in good condition, the wallpaper can remain; if the wallpaper is peeling off, the wallpaper must be removed.

- Windows: If a window is broken, including the locking mechanism, the window shall be replaced. If the window has a fog residue in the inside, it shall be replaced.

bae urban economics

Phase I Assured Housing Feasibility Analysis for the City of Moab and Grand County, Utah

March 2018

bae urban economics

March 2, 2018

Zacharia Levine
Community Development Director
Grand County
125 East Center Street
Moab, UT 84532

Amy Weiser
Community Services Director
City of Moab
217 East Center Street
Moab, UT 84532

Dear Mr. Levine and Ms. Weiser:

We are pleased to submit this draft of the Moab Area Assured Housing Feasibility Analysis.

We enjoyed completing this work, and it has been a pleasure working with you. We look forward to your comments on this draft. In the meantime, please let us know if you have any questions.

Sincerely,

Matt Kowta, MCP
Managing Principal

Jessica Hitchcock, MCP
Vice President

San Francisco
2600 10th St., Suite 300
Berkeley, CA 94710
510.547.9380

Sacramento
803 2nd St., Suite A
Davis, CA 95616
530.750.2195

Los Angeles
448 South Hill St., Suite 701
Los Angeles, CA 90013
213.471.2666

Washington DC
1400 I St. NW, Suite 350
Washington, DC 20005
202.588.8945

New York City
49 West 27th St., Suite 10W
New York, NY 10001
212.683.4486

www.bae1.com

Table of Contents

Table of Tables

Table of Figures

Executive Summary

The City of Moab and Grand County, Utah commissioned BAE Urban Economics to prepare an Economic Study for an Assured Housing Policy to encourage the development of affordable housing through inclusionary housing/in-lieu fee ordinances in their respective jurisdictions.

Moab is a prominent outdoor recreational destination with a strong tourism sector that generates important local economic activity, but which also drives real estate prices beyond the reach of the local workforce, making it difficult for businesses to attract workers. Inclusionary housing is a way to increase the affordable housing supply by requiring residential and commercial market rate developers to set-aside units for affordable housing or pay an in-lieu fee, with the set-aside or in-lieu fee percentages varying depending on the strength of the real estate market.

In Moab and Grand County, assured housing refers to housing policies that require market rate developments to also provide affordable housing, either in the form of affordable units constructed within the larger project (i.e., "inclusionary housing units") or through payment of assured housing "in-lieu" fees. The permitting jurisdiction would collect the latter from projects that otherwise would be required to provide affordable housing units, and then utilize the proceeds to financially assist the development of affordable housing in other projects developed by affordable housing developers. The terms "assured housing" and "inclusionary housing" will be used interchangeably in this report.

This analysis constitutes Phase I of a two-phase study. The purpose of this study is to evaluate the workforce housing issue, and to conduct a feasibility analysis that describes the economics for new residential and commercial development. The goal is to determine whether commercial and residential development are financially feasible under current market conditions ("baseline"), and if they are, how much room there is in the development budget to contribute towards an affordable housing requirement, while still maintaining development feasibility. Based on findings from Phase I, BAE, in consultation with the City and County, will complete a nexus analysis for the financially feasible prototypes as part of Phase II.

Recommendations for Structuring an Assured Housing Policy

- The City of Moab and Grand County should consider establishing assured housing requirements for the types of real estate products which are financially capable of incorporating assured housing units and/or payment of assured housing in-lieu/impact fees. This includes hotels, overnight rentals, and condominiums. It may also include luxury single-family homes.

- The City and County can structure a program whereby projects are charged a fee based on total square footage. For residential developments with more than twelve units, developers can elect to either pay the fee or build the inclusionary units on-site. In the case of projects requiring a fraction of an inclusionary unit, the program should provide for payment of a pro-rated in-lieu fee. A program that incorporates a combination of inclusionary requirements and in-lieu fees that are applicable to all projects will maximize the resources generated for assured housing. Other options can be made available, such as dedicating land for affordable housing, so long as the appraised value of the land is equivalent to or higher than the required fee. Some land dedication activity could benefit workforce housing organizations active in the area, as they report scarcity of buildable sites as a primary constraint to affordable housing production.

- The ordinance can also exempt certain uses, including affordable housing developments, projects built by non-profit, public-purpose, or government agencies. Examples are churches, schools, child-care facilities or publicly-owned buildings. This report also recommends creating a waiver for economic hardships, and mechanisms that require the policy to be analyzed periodically, and/or triggers to waive fees during economic down cycles.

- Although charging a fee increases the cost to build (an inclusionary policy reduces developer revenue), if the fee or inclusionary requirement is set at a reasonable level, it is possible to achieve the dual goals of generating revenue to support development of affordable units, without completely dampening the market for new construction. The fee levels discussed herein for specific land use types would still enable developers to achieve their minimum return on cost and yield on cost thresholds needed to undertake projects.

Considerations for Implementation

Should the City and/or County decide to proceed with adopting an assured housing policy that requires residential projects and non-residential projects to participate in provision of below market rate housing, either through in-kind provision of affordable units or through payment of in-lieu fees, the main body of this report discusses a number policy issues that should be considered, including:

- Some types of projects could or should be exempted from assured housing requirements - For example, if the objective is to encourage production of market rate housing types that are relatively affordable, such as rental apartments, or modest single-family starter homes, assured housing requirements could be reduced or removed for projects that provide these types of units. Exemptions could also be provided for non-residential projects that provide valuable public benefits, such as educational facilities, healthcare facilities, or childcare.

- Compliance options other than in-kind unit production or payment of fees, such as partnering with developers to build affordable units off-site, and/or allowing land donation at an equivalent value. Because the Moab Area is land constrained and local affordable housing developers face challenges in securing sites for projects, the option to dedicate land instead of paying a fee, should be further explored.

- Hardship waivers - It is recommended that an assured housing program provide for hardship waivers or reductions in requirements, in the case of projects that cannot feasibly comply with the requirements, to avoid economic takings claims; however, specific standards musts be adopted for how to demonstrate hardship or qualify for a reduction, to limit administrative burden on staff.

- Timing of Fee Calculation and Payment – Timing for payment of in-lieu fees can have a significant effect on project economics, with developers preferring to defer payment as long as possible, while the administering jurisdiction wants assurance that feels will be paid as early as possible, so that those resources can be made available to affordable housing developers.

- Phase-In of Requirements – Consideration should be given to a phase-in of assured housing requirements, with advance notice to the development community, to mitigate a "shock" to the economic system. A phase-in allows developers to adjust their bidding for development site purchases with knowledge of how the applicable requirements affect the residual land value that they can afford to pay for a site and achieve financial feasibility.

- Relationship Between Unit Requirements Versus Fee Requirements - The City and County should also be aware that the structure of the requirements themselves can also create incentives for builders subject to the requirements. If the program provides options for payment of fees versus in-kind provision of below market rate units, the City and County will want to be sensitive to the fact that unless the economic cost to the developer is comparable under either option, the program will create an incentive for developers to choose the one that is most financially advantageous. Many jurisdictions under-price their in-lieu fees, which results in little to no in-kind production of affordable units. Another consideration is that setting fees on a per market rate unit basis encourages construction of units that are as large as possible, while setting fees on a per square foot basis can make it relatively more attractive to build smaller market rate units.

- Policy Revisions – Fluctuations in prevailing economic conditions can affect the viability of assured housing programs over time. Program administration should be flexible to accommodate changes in economic cycles.

The following summarizes the major Phase I findings leading to the preceding recommendations:

Demographic and Economic Conditions

- Population in the City of Moab and Grand County has increased rapidly, reflecting overall trends in the State of Utah. Between 2000 and 2017, the population in Grand County rose from 9,225 to 10,292, equivalent to a 11.6 percent increase, and similar to the Utah growth rate of 12.6 percent.[1] This rapid population increase is expected to continue, driving demand for housing. The fastest growing demographic is the population over the age of 65, followed by young adults between the ages of 18 to 24. This may be indicative of a younger workforce attracted by new opportunities in the growing tourism economy.

- More homeownership and rental housing will be needed to accommodate future growth. Between 2010 and 2017, the number of family and non-family households expanded, although non-family households experienced a somewhat higher rate of increase. This pace is expected to continue, which means more homeownership and rental housing will be needed.

- Tourism-related industries are the fastest growing employment sector in Grand County. Employment in accommodation and food services accounted for one out of every three jobs in Grand County. The next largest industries were retail and arts, entertainment, and recreation.

- Jobs in tourism-related industries tend to be relatively low-paying, with some positions offering only seasonal or part-time employment with limited wage growth. The 2017 median household income in Grand County ($46,070) was lower than the statewide median of $62,902.[2]

Residential Market Analysis

- Real estate prices have escalated across all residential product types. In 2017, the median sales price for a single-family home was $325,000, $352,000 for a townhouse, and $275,000 for a condominium. Between 2014 and 2017, the median price increased by 30 percent for townhomes, and 42 percent for single-family homes and condominiums

- According to local real estate professionals, demand for housing is driven by strong competition among second homeowners, retirees, and local residents. Moab's proximity to rapidly growing urban centers like Salt Lake City and Denver, as well as other more

---

[1] Based on US Census data for 2010 and ESRI for 2017. For full disclosure on data sources, please refer to the Methodology section in this report.
[2] The 2017 median household income data is taken from ESRI. This is different from the HUD Area Median Family Income (HAMFI), which is based on a four-person family household and was $56,700 in 2017. The median household income described here accounts for all households of all different sizes, including non-family households.

saturated tourist markets such as Telluride, Aspen and Park City, has contributed to the area's growing popularity as a vacation and retirement destination. As Moab's tourism economy grows, the addition of new workers required to construct and staff the area's expanding tourism economy places further pressure on an already tight housing market, with the injection of buyers from wealthier urban centers driving home prices beyond the reach of Moab's workforce.

Figure ES-1: Single-Family Median Sales Price Trend, Grand County, 2014-2017

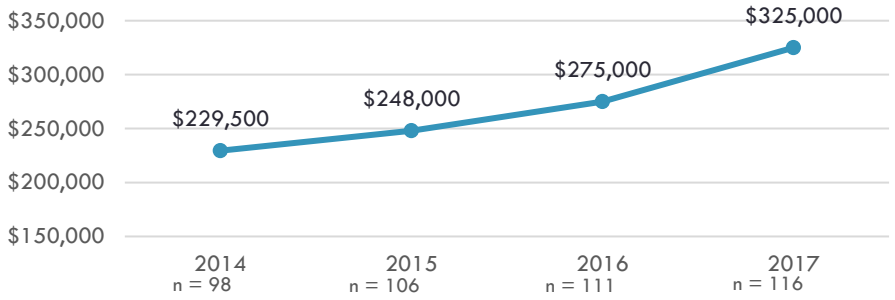


Figure ES-2: Townhome Median Sales Price Trend, Grand County, 2014-2017

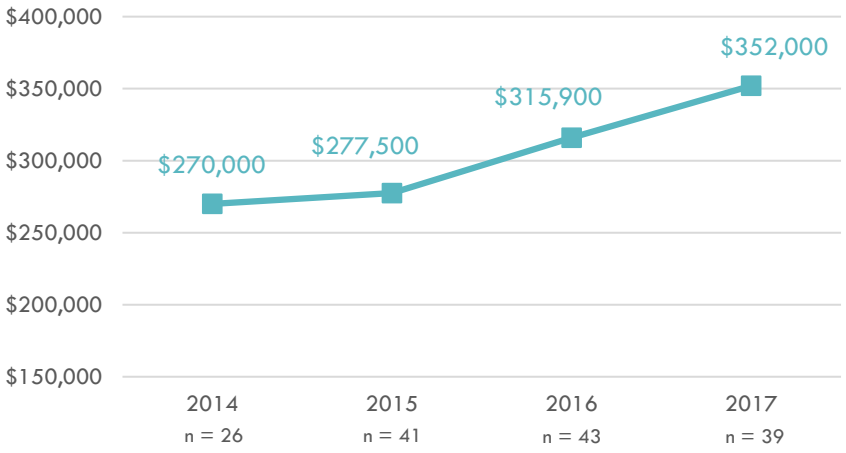
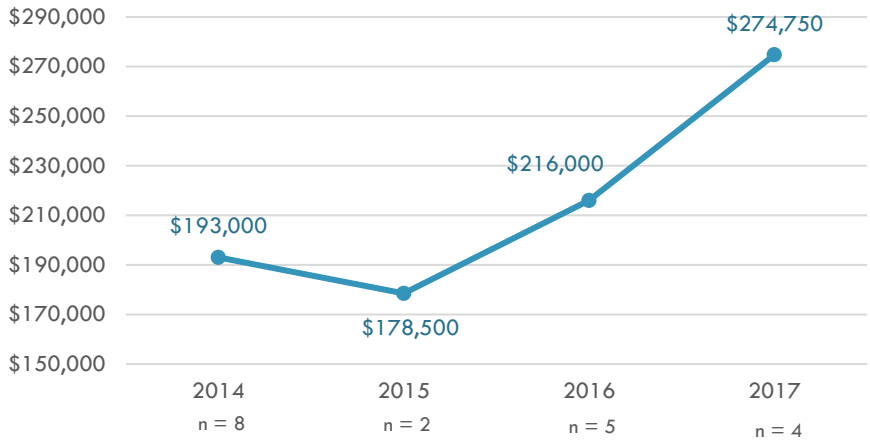


Figure ES-3: Condominium Sales Price Trend, Grand County, 2014-2017



Sources: UtahRealEstate.com, 2017; BAE, 2018.

- Despite a high proportion of renter households (35 percent in Grand County), there is a limited inventory of multifamily apartments. Higher density workforce housing products that could be more affordable to the workforce, such as apartments and condominiums, must compete with visitor accommodations, such as hotels and nightly rental units, for land. The economics of visitor accommodations allow them to pay more for land, making it difficult to build housing affordable to the workforce.

Workforce Housing Shortage

- The area's rapidly appreciating home prices has made housing out-of-reach for many working families. Housing costs have increased rapidly, substantially outpacing increases in household incomes. The table on the next page profiles different households in the Moab Area, shows how much they can afford to pay for housing, and compares this to the inventory of homes sold in 2017. In general, no homes sold in 2017 were affordable to households earning up to 80 percent of Area Median Income, which is equivalent to a family of four earning $54,150 annually. Households at 100 percent of median income ($67,700 for a family of four) had limited homeownership options, with only seven homes that sold in 2017 affordable to this group, and eight mobile homes sold at an affordable price. This highlights the severe shortage of homeownership units available for sale in the current market.

Figure ES-4: Housing Affordability for Selected Households in Grand County

Who? This shows an example of a prototypical household in the Moab Area, its household size		What is Their Income? What is the household's combined annual income, and what is the income as a percentage of the Area Median Income?	What Is Affordable? What home price is affordable, and how much can this household afford to pay monthly? (b)	Homes Available? Based on homes sold in Grand County in 2017
	Senior couple living on social security HH Size: 2 persons	**Income: $21,000** 50% AMI	Affordable Home Price $76,839 Affordable Monthly Payment $525	 **0% affordable**
	River rafting guide HH Size: 1 person	**Income: $23,450** 50% AMI	Affordable Home Price $85,767 Affordable Monthly Payment $586	 **0% affordable**
	Hotel desk clerk and waiter w/ two children HH Size: 4 persons	**Income: $39,370** 60% AMI	Affordable Home Price $144,018 Affordable Monthly Payment $984	 **0% affordable**
	Part-time retail and construction worker with one child HH Size: 3 persons	**Income: $45,025** 80% AMI	Affordable Home Price $164,802 Affordable Monthly Payment $1,126	 **0% affordable**
	Firefighter and elementary school teacher with two children HH Size: 4 persons	**Income: $64,670** 100% AMI	Affordable Home Price $236,664 Affordable Monthly Payment $1,617	 **7 units (6.6%) affordable**

Notes:
(a) Represents the median sale price for single-family, twin, condo, and townhomes sales in 2017.
(b) This assumes households pay 30 percent of their gross income for housing.

Sources: Grand County, 2017; Utah Department of Workforce Services, 2017; Insurance.com, 2017; Bankrate.com, 2017; UtahRealEstate.com, 2018; BAE, 2018.

- Rental housing is priced more reasonably, although there is a shortage of units available for rent. Very-low income households (50 percent of AMI) cannot afford market-rate units in newly built apartments. Moderate-income households (80 percent of AMI, equivalent to an individual earning $37,950 annually) can afford market-rate housing, but there is limited inventory. The Moab Area needs more housing for extremely low-, very low-, low- and moderate-income households, especially for workers that serve the area's tourism economy.

Commercial Market Analysis

- For this report, BAE analyzed three distinct commercial real estate products: hotels, office, and retail. Lodging is the strongest commercial product type in the Moab Area. According to STR, hotel room inventory increased by 23 percent between 2005 and 2017, with rooms shifting away from economy hotels towards mid-scale and upscale establishments. Among 11 mid-scale properties selected for analysis, average daily room rental rates improved by 32 percent from $123 per night in 2011 to $162 per night in 2016, even as room inventory increased substantially. At the same time, occupancy rates also rose from 66.5 percent in 2011 to 72.9 percent in 2016. Data from the City and County show there are four more visitor accommodation projects totaling 400 rooms either under construction or in the development pipeline.

- Hotel development has driven up prices for commercially zoned land and is crowding out other commercial uses, such as restaurants, who cannot afford to pay the same prices given their economic fundamentals. Also, hotel projects are directly affecting the ability of local workforce housing developers to undertake projects, due to competition for a limited pool of local construction labor.

- There is some limited demand for new office product, particularly from existing businesses looking to expand and from healthcare professionals. Rents for new office buildings range from $1.66 to $2.00 per square foot. Between 2010 and 2017, six new office buildings were constructed, many of which were built by end-users unable to find Class A space to lease. New office developments tended to be smaller buildings, no larger than 10,000 square feet, and some included additional space available for rent to other users.

- Retail rents are somewhat stronger than office, ranging from $2.00 to $2.50 per square foot for spaces in Downtown Moab. Despite strong rents in certain locations, there has been limited retail development. Local real estate professionals agree on the need for more restaurants and pent-up demand for space to accommodate tourist-related businesses; however, retail must compete with hotel projects for land, but cannot afford to pay the same prices, particularly in commercially zoned districts.

Feasibility Analysis: Purpose and Assumptions

- The purpose of this analysis is to establish which real estate product types are feasible under existing market conditions. A “feasible” project is one in which a developer is earning a reasonable profit commensurate with the risk related to its development. If projects are feasible and generate profit, there may be room in the development budget to support paying an in-lieu fee or incorporating an inclusionary housing requirement. In contrast, projects that not feasible do not meet the minimum profitability thresholds, which means that few projects are actually built and cannot support workforce requirements.

This analysis shows which commercial and residential product types are profitable, and how much of a fee or inclusionary housing requirement is supportable.

- The development prototypes model historic patterns of where projects have been built. For each land use, a typical project was identified from actual projects permitted by the City of Moab or Grand County between 2010 and 2017. For example, hotel developments have clustered within the City of Moab in commercially zoned districts, while the County has permitted multiple overnight rental projects in areas zoned Highway Commercial.

- Four residential uses were analyzed for feasibility: apartments, single-family homes, townhomes, and condominiums. Single-family homes are stand-alone, detached houses that are custom-built and often constructed one-at-a-time. Townhouses are a form of multi-unit housing built as a series of homes connected to other houses by common sidewalls. Apartments contain multiple dwelling units leased for rent. Condominiums can appear like apartments, but units are owned by individuals rather than a landlord. Condominium owners own the interior space of their unit and an undivided interest in communal areas.

- This analysis considers development feasibility of product types through the lens of developers and makes assumptions about whether products are rented or sold, but does not distinguish how products are occupied by the end-user (e.g. primary residence, secondary home, vacation rental, etc.). In crafting an assured housing policy, the City and County can make policy decisions related to use, but this distinction is not analyzed in this report. In general, apartments, office, retail, and hotels were analyzed as rental-income generating properties, while the remaining products were assumed for-sale.

- Residential development assumed single-family homes built in Grand County's Rural-Residential Zone, townhomes and condominiums in Grand County's Highway Commercial Zone, and apartments in the City of Moab's R-3 zone. Hotel, office, and retail projects were modeled assuming the City of Moab's C-3 zone. Each development program was created in conformance with regulations related to the underlying zoning (lot coverage, parking ratios, setbacks, building heights, etc.)

- BAE conducted extensive research on inputs for the financial feasibility analysis, including construction costs, acquisition costs, sales prices, and rents. For each prototype, BAE estimated per square foot hard costs based on a review of R.S. Means, a construction cost manual commonly used in the construction industry for cost estimation purposes. BAE also conducted ten interviews with local contractors, developers, and real estate brokers to further corroborate costs and feasibility thresholds (see table below).

- Real estate markets are cyclical, and the development costs, sales prices, and rents can vary across the business cycle. BAE ran a sensitivity analysis to test feasibility and level of supportable inclusionary and in-lieu fees under moderate and strong market scenarios. This allows the City and County to understand how feasibility may change when markets

fluctuate. For the moderate market, data for land, construction costs, rents, and sales prices were taken from 2014, which represented a mid-point in the recovery after the recession. Inputs for the strong market were taken from 2017.

- Two metrics were used to define development feasibility: yield on cost and return on cost. Yield on cost (YOC) measures Net Operating Income (NOI) compared to the total development cost, and highlights returns associated with rent generating properties. Return on total development cost (ROC) divides profit by total development cost and shows overall project profitability.

  Real estate products require varying returns, depending on the risk related to development in each localized market. Table ES-1 highlights the minimum YOC and ROC metrics that were used to define feasibility, based on interviews with six local developers.

Table ES-1: Feasibility Thresholds by Land Use

Minimum Feasibility Metrics (a)		
	Return on Cost (b)	Yield on Cost (c)
Residential		
Single-Family Homes	15%	N/A
Townhomes	20%	N/A
Condominiums	20%	N/A
Apartments	15%	5%
Commercial		
Office	15%	7%
Retail	15%	7%
Hotel	15%	8%

Notes:
(a) These feasibility metrics were established based on interviews with local developers active in the Moab market.
(b) Return on cost is profit divided by total development cost.
(c) Yield on cost is NOI divided by total development cost. This is only relevant for rent-producing properties. Projects have to meet both ROC and YOC metrics to be deemed feasible.

Source: BAE, 2018.

- For commercial projects that returned a "Yes" answer in the baseline evaluation, BAE tested what fee would be acceptable for the project to still meet the minimum return on cost and yield on cost metrics. The fee serves to reduce the developer's excess profit, while still enabling the developer to earn a reasonable return to compensate for the risk inherent in development. The in-lieu fee is represented as a cost per square foot.

- For residential properties feasible in the baseline scenarios, BAE ran two analyses. The first is the assessment described above, which highlights what fee level the projects can support, represented as a cost per square foot. A secondary analysis provides a policy option for developers to construct affordable units on-site (inclusionary housing), and evaluates what percentage set-aside developers could support, assuming homes were affordable to 80 percent AMI households.

Commercial Feasibility Analysis

- The table below summarizes the pro forma analyses for three commercial uses: office, retail, and hotels. The summary table highlights each prototypical project and key assumptions, including the project size, site area, number of stories, and FAR. Important financial metrics are displayed, including development costs, rent or sales assumptions, and feasibility indicators. For feasible projects, the lower half of the table shows what level of in-lieu fees were supportable while still maintaining sufficient profitability for developers.

- Under current market conditions, only hotels were feasible and could support paying a fee for workforce housing. The analysis shows hotels could pay a fee between $5 and $15 per square foot, depending on the market strength. In the revenue estimate, BAE estimates the potential revenue if hotels were charged an in-lieu fee of $8 per square foot.

Table ES-2: Summary of Proforma Analysis for Commercial Land Uses

	Office		Retail		Hotel	
						
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline (a)						
Location, Zoning	City of Moab, C-3		City of Moab, C-3		City of Moab, C-3	
Prototypical Building Size	10,000	10,000	10,000	10,000	60,000	60,000
Site Size (sf)	15,500	15,500	20,500	20,500	48,000	48,000
Total Number of Stories (Bldg)	2	2	1	1	3	3
Parking Type	Surface	Surface	Surface	Surface	Surface	Surface
FAR	0.65	0.65	0.49	0.49	1.25	1.25
Total Dev Cost/SF (inc. land)	*$ 213*	*$ 253*	*$ 233*	*$ 286*	*$ 246*	*$ 263*
Rent (psf or per hotel REVPAR)	$ 18.00	$ 24.00	$ 24.00	$ 30.00	$ 105.00	$ 122.50
Return On Cost - Baseline	-8.4%	12.0%	11.7%	24.0%	39.9%	63.4%
Yield on Cost - Baseline	5.5%	6.2%	6.7%	6.8%	9.1%	9.8%
Baseline Feasible? (b)	No	No	No	No	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5.00**	**$ 15.00**
New Fee for Prototype Project					$ 300,000	$ 900,000
Return On Cost with Fees					36.9%	54.1%
Yield on Cost with Fees					8.9%	9.2%
Feasible with Fee? (b)					Yes	Yes
New Res Fee, as % of Total Dev Costs					2.0%	5.4%

Notes:
a) See Appendix for detailed assumptions and proformas for each land use type.
b) Financial feasibility evaluated on 2 metrics

ROC =	15.0%		
YOC :	Retail:	Office:	Hotel:
	7.0%	7.0%	8.0%

Source: BAE, 2018.

- Office could not support paying a fee, in either moderate or strong markets, due to weak rents. Retail could not support a fee in moderate markets, although the product came close to achieving feasibility in the strong market. However, given the limited amount of retail permit activity observed between 2010 and 2017, and the need for more visitor-serving retail, BAE does not recommend charging a fee on retail or office development.

Residential Feasibility Analysis

- Of the four residential prototypes, townhomes and condominiums were the strongest residential product. Townhouses could support paying an in-lieu fee between $4 to $8 per square foot or an inclusionary requirement between six to eight percent. Condominiums could not support paying a fee in the moderate market, but could support an in-lieu fee of $5 in the strong market, which was equivalent to an inclusionary requirement of 8 percent.

Table ES-3: Summary of Proforma Analysis for Residential Land Uses

	Apartments		Condominiums Overnight Rentals		Townhomes Overnight Rentals		Single-Family Detached	
								
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline								
Location, Zoning	City of Moab, R-4		Grand County, HC		Grand County, HC		Grand County, RR	
Site Size (sf)	80,000	80,000	43,560	43,560	240,000	240,000	43,560	43,560
Total Number of Units	40	40	25	25	48	48	1	1
Average Unit Size	1,000	1,000	1,350	1,350	1,650	1,650	2,250	3,000
Number of Residential Floors	1	1	3	3	2	2	1	1
FAR	0.6	0.6	0.9	0.9	0.3	0.3	0.1	0.1
Parking Type	Surface		Surface		In Unit		In Unit	
Land Costs per Acre	$ 76,230	$ 119,790	$ 82,500	$ 119,790	$ 82,764	$ 130,680	$ 80,000	$ 120,000
Total Dev Cost/Unit (inc. land)	$ 171,403	$ 173,504	$ 231,757	$ 253,308	$ 253,129	$ 311,202	$ 388,761	$ 690,780
Total Dev Cost/SF (inc. land)	$ 149	$ 151	$ 149	$ 163	$ 153	$ 189	$ 173	$ 230
Sale Price/Sq. Ft.	N/A	N/A	$ 185	$ 245	$ 200	$ 250	$ 200	$ 267
Sale Price or Rent Per Unit	$ 1,200	$ 1,350	$ 249,750	$ 330,750	$ 330,000	$ 412,500	$ 450,000	$ 800,000
Return On Cost - Baseline	-13.2%	14.0%	2.4%	24.0%	23.9%	25.9%	15.8%	15.8%
Yield on Cost - Baseline	4.8%	5.7%	NA	NA	NA	NA	NA	NA
Baseline Feasible? (a)	No	No	No	Yes	Yes	Yes	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ -**	**$ -**	**$ 5.00**	**$ 4.00**	**$ 8.00**	**$ 1.00**	**$ 1.50**
New Fee per Unit	$ -	$ -	$ -	$ 6,750	$ 6,600	$ 13,200	$ 2,250	$ 4,500
Return On Cost with Fees				20.1%	20.5%	20.5%	15.1%	15.1%
Yield on Cost with Fees				N/A	N/A	N/A	N/A	N/A
Feasible with Fee? (a)				Yes	Yes	Yes	Yes	Yes
New Res Fee, as % of Total Dev Costs				*3.0%*	*2.5%*	*4.1%*	*0.6%*	*0.6%*

Note:

a) Feasibility is measured as follows:

Project must achieve at least:	20.0%	Return on Cost for Condominiums and Townhomes
	15.0%	Return on Cost for Single-Family Homes
Project must achieve at least:	5.0%	Yield on Cost for Apartments

Source: BAE, 2018.

- Apartments were not feasible under the baseline in either the moderate or strong market conditions, largely because rents were not high enough to offset the cost of land acquisition and new development. This suggests that despite the large and growing demand for rental housing, the market will likely under-deliver this product type due to low profit margins. In Appendix D of this report, BAE analyzed the impact of removing zoning regulations that limit density, and found that these measures improved baseline profitability and led to feasible apartment projects. The City and County may want to consider zoning changes allowing for higher densities for apartments, or provide other ways to incentivize the production of rental housing to keep pace with the current unmet and future demand.

- BAE modeled two types of single-family developments: one in which a contractor builds a custom home for a specific end-user who self-finances the construction. The second option assumes a speculatively built single-family house that is sold to a third-party via a real estate broker. The return on cost is higher for custom-built homes for end-users.

  Building permit data show robust construction of single-family homes between 2010 and 2017, which accounted for 52.4 percent of all housing units permitted (excluding accessory dwelling units). This suggests single-family may be able to support a nominal fee, considering many of these units are constructed for owner-users, for whom a Moab house satisfies lifestyle preferences rather than real estate investment objectives. The report tested the impact of charging fees ranging from $1 to $5 per square foot. Assuming a 2,250-square foot home, fees between $1 to $5 per square foot translated into 0.6 percent to 2.9 percent of total project costs. Depending on the structure of a future assured housing program, the City and County may wish to consider distinguishing treatment of single-family homes that are used as primary residences versus those that are used as second homes and/or vacation rental units. This would reflect the fact that use of homes as second homes and/or vacation rentals has different impacts on availability of, and demand for workforce housing and affordable housing as compared to homes used as primary residences.

  In summary, real estate products that were feasible under baseline conditions and can support paying fees were those reliant on “outside” money, either related to tourism (e.g., hotels, overnight rental townhomes and condominiums) or from retirees and second-homeowners from urban parts of Utah or nearby states who can afford to pay more for housing (e.g., newly built single-family homes). In the revenue estimate, BAE estimates the potential impact if townhouses, condominiums, and single-family homes were asked to contribute either in-lieu fees or build inclusionary units on-site.

Revenue Estimate

- For projects that were feasible under the baseline scenario, potentially feasible fee levels were applied to historic building permit data to estimate revenue that could be generated from an in-lieu fee program. Given the variation in feasibility due to fluctuations in economic conditions over time, the assumed fees were purposely set lower than the maximum supportable levels. A $1 per square foot fee was applied to single-family homes, $3 per square foot for condominiums, $6 per square foot for townhomes, and $8 per square foot for hotels. At these rates, development is still profitable, and meet the minimum profit and yield on cost metrics.

- This assumed fee structure could generate an estimated average annual revenue of $892,518 if applied in both the City of Moab and Grand County, based on projects that were permitted between 2010 and 2017. The City could be expected to generate more revenue from commercial development, while Grand County's revenue would come mostly from residential projects. The City's annual projected share is $502,651, and the County's share is estimated at $389,867.

Table ES-4: Annual Estimated Fee Revenue Based on Historic Permit Activity

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single - family Detached	$ 1.00	$ 31,898	$ 44,796	76,694
Townhomes / SFR Nightly Rentals	$ 6.00	$ 97,144	$ 124,336	221,480
Condominiums	$ 3.00	$ 3,095	$ 90,063	93,158
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 132,137**	**$ 259,195**	**$ 391,332**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office (b)	$ -	$ -	$ -	$ -
Hotel	$ 8.00	$ 370,514	$ 130,672	$ 501,186
Annual Revenue, Commercial Projects (a)		**$ 370,514**	**$ 130,672**	**$ 501,186**
Annual Revenue by Place		**$ 502,651**	**$ 389,867**	**$ 892,518**

Notes:
(a) The annual revenue is based the average annual square feet permitted between 2010 and 2017 in the City of Moab and Grand County. Revenue will vary year to year based on actual development activity.
(b) The building permit data did not contain square footage data was for newly constructed office projects. Each office project was estimated at 8,000 square feet based on the recently built office buildings profiled in this study.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

- This $892,518 average annual revenue may under- or overestimate actual revenue, depending on the point in the economic cycle of any given year. A sensitivity analysis was completed to show "low" and "high" estimate, using building permit data from 2010 and 2017. Given the variation in development activity, substantial revenue fluctuations are possible. The City and County together could generate as little as $100,000 in annual fees during an economic downturn, or as much as $1.7 million during a strong economy.

- BAE also analyzed the number of inclusionary units that would have been built, assuming a six to eight percent requirement, which is equivalent to the proposed in-lieu fees specified above. This conversion is explained in the main body of this report. Assuming a minimum project size of twelve units (eight percent is equivalent to one unit in a 12-unit project), there were 13 projects permitted between 2010 and 2017 that met this criterion, covering 317 housing units. Applying a six percent inclusionary requirement would have created 23 units of affordable housing, or approximately three affordable units per year.

- This low production rate highlights one of the limitations of implementing a "pure" inclusionary policy in Moab. A six to eight percent affordable housing set-aside only works for projects with at least 12 units. While there are some projects in the Moab area that would be big enough to accommodate on-site affordable units under an eight percent inclusionary requirement, the majority built are smaller in size. Unlike a fee, which can be applied to all projects regardless of size, an inclusionary policy works only for projects that meet a minimum unit threshold. To maximize the potential revenue and units created, the City and County should consider a combined in-lieu fee and inclusionary policy.

-

Introduction

The City of Moab and Grand County, Utah commissioned BAE Urban Economics to prepare an economic study for an Assured Housing Policy to encourage the development of affordable housing through inclusionary housing/in-lieu fee ordinances in their respective jurisdictions. This analysis constitutes Phase I of a two-phase study. The first phase is a market and feasibility analysis to determine how much excess profit new commercial and residential projects generate, what level of an inclusionary requirement or in-lieu fee could be supported, and how many units and/or the quantity of in-lieu fee revenues an Assured Hosing Policy could generate. Based on findings from Phase I, BAE, in consultation with the City and County, will complete a nexus analysis for the financially feasible prototypes as part of Phase II.

Report Organization

BAE begins Phase I with a market analysis, which assesses the demographic and economic conditions in the City of Moab and Grand County', and reviews existing real estate market conditions for various land use types within the City and County. Based on the market study findings, BAE then selected seven land use types as candidates for an Assured Housing Policy, in consultation with the City and County. The land use types analyzed include: hotels, retail, office, apartments, townhouses and condominiums zoned for overnight rentals, single-family residential. Utilizing data from the market analysis, proforma analysis is used to determine the baseline performance of these uses under moderate and strong market conditions. For feasible projects, the impacts of an inclusionary housing/in-lieu fee ordinance is analyzed to determine the supportable fee or inclusionary requirement. BAE also analyzes the potential impacts of a separate policy whereby inclusionary requirements would be applied to multifamily residential projects that receive a density bonus. The analysis concludes by applying the preliminary inclusionary requirements to residential projects, and the feasible fee calculated for commercial uses to estimate the potential inclusionary units and/or revenue that could be generated. Additional information is provided for other considerations related to structuring and implementing an inclusionary or impact fee for affordable housing.

Methodology

Data for the demographic analysis are taken from the U.S. Census Bureau's 2010 Decennial Census, the American Community Survey (ACS) 2011-2015 five-year estimates,[3] and ESRI, a private data vendor, for 2017 data and 2022 projections. Census, ACS and ESRI data presented throughout this section are based on the U.S. Census Bureau's county level geography for Grand County, and place level data for the City of Moab.

---

[3] Note that the American Community Survey includes multi-year data sets, such as the 2011-2015 data set, which presents data as an average of the survey results conducted over the year's included in the time period. By conducting sampling over a multi-year period, the American Community Survey can provide better statistical accuracy; however, the comprise is that the data do not represent a single point in time.

Data for the economic conditions section draw on many sources including the Bureau of Labor Statistics (BLS), National Parks Service (NPS), Utah Department of Workforce Services, and the Utah State Tax Commission.

The residential and commercial real estate market analyses are based on interviews with local real estate brokers, developers, property managers, and other supplemental data sources. These include the U.S. Census Bureau, and sales records from UtahRealEstate.com and other real estate listing websites such as Zillow.com, Moab Advertiser, Airbnb.com, and Vacasa.com. Other commercial resources include CoStar, a private data vendor that collects data on office and retail properties, and STR, which tracks hotel inventory and performance metrics.

The workforce housing needs section summarizes data from the 2009-2013 Comprehensive Housing Affordability Strategy (CHAS) dataset as reported in the *Moab Area Affordable Housing Plan* and expands on the area's workforce housing needs by using the findings from the demographic and economic trends section to profile five household compositions that represent typical Moab area households. BAE then used Grand County's 2017 HUD Defined Income Limits by household size to identify the housing income category to which each household belong used occupation, and wage data for Eastern Utah from the Utah Department of Workforce Services to calculate each household's annual income and compared these households' incomes to available for-sale and rental housing option presented in the residential real estate market section.

Inputs for the pro forma analysis draw from R.S. Means, a construction cost manual commonly used in the construction industry for cost estimation purposes, with a location factor applied to adjust for costs in the Moab area.[4] BAE conducted interviews with local contractors and developers to further corroborate costs and minimum required feasibility thresholds. The City and County also provided historic building permit data, which was used to estimate the number of inclusionary units and/or fees generated from an assured housing policy.

[4] The 2017 location factors for Utah areas with ZIP Codes beginning with 845 were 0.78 for residential construction and 0.85 for commercial construction. These adjustment factors for the Moab area are slightly lower than for other Utah locations, including areas near Salt Lake City, Ogden, Logan, and Provo, where the residential location adjustment factors range between 0.80 and 0.82, and the commercial adjustment factors range between 0.86 and .89.

Demographic and Economic Trends

This section describes existing conditions and changes in the number and characteristics of Grand County and City of Moab residents and households, as well as economic characteristics of the County and City, which will be used as background material to inform the financial feasibility analysis. This section updates and builds upon data presented in the *Moab Area Affordable Housing Plan's* Demographic and Housing Overview section, which was updated in 2016. As noted in the *Affordable Housing Plan*, data indicating full-time population and employment may underestimate true conditions within the City and County due to many factors including the area's seasonal resident population, seasonal employment, spikes in temporary visitors who fuel the tourism economy, and small sample sizes for intercensal counts.

The study area primarily consists of Grand County and the City of Moab, focusing on the urbanized areas in and around Moab. Recognizing that that residential units built in the Spanish Valley area south of Moab in San Juan County are effectively part of the Moab Area housing market, the study area includes Spanish Valley when analyzing housing market data. Figure 1 displays the Study Area boundaries.

Figure 1: Study Area

Sources: U.S. Census Bureau, TIGER/Line, 2017; ESRI, 2017; BAE, 2018.

Population and Household Trends and Projections

Following are trend and projection data that illustrate changes in the number and characteristics of Grand County and City of Moab residents and households. It should be noted that the City of Moab annexed approximately 484 acres during the seven-year study period, which contributes to some of the City's observed population and household growth.

Population

According to data presented in Table 1, the City of Moab is Grand County's main urban center. The City of Moab has a population of 5,584 persons, while 4,708 persons reside in the unincorporated County. Since 2010, the populations of the City of Moab and Grand County increased 10.7 and 12.7 percent, respectively, for annual average changes of 1.5 percent and 1.7 percent. While both jurisdictions' population increased rather rapidly, population growth is occurring in unincorporated Grand County at a slightly faster rate. Projections compiled by ESRI, shown in Table 2, estimate future growth will continue at a similar rate. The City of Moab's growth rate is expected to increase by an average annual rate of 1.2 percent between 2017 and 2022, which is slightly below the historic average. Grand County's annual population growth rate is expected to remain at 1.7 percent per year.

Table 1: Population Trends, 2010-2017

Population	2010	2017	% Change 2010-2017	Annual Avg. % Change
City of Moab	5,046	5,584	10.7%	1.5%
Grand County (a)	4,179	4,708	12.7%	1.7%
Utah	2,763,885	3,113,215	12.6%	1.7%

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, Summary File 1 DP-1, 2010; ESRI, 2017; BAE, 2018.

Table 2: Population Projections, 2017-2022

Population	2017	2022	% Change 2017-2022	Annual Avg. % Change
City of Moab	5,584	5,919	6.0%	1.2%
Grand County (a)	4,708	5,113	8.6%	1.7%
Utah	3,113,215	3,372,451	8.3%	1.6%

(a) Excludes the City of Moab.

Sources: ESRI, 2017; BAE, 2018.

Age

Data presented in Table 3 show that Moab's resident population is notably younger than that of unincorporated Grand County, but that the populations of both jurisdictions are aging. Between 2010 and 2017, Moab's median age increased from 37.3 years to 38.7 years, while the median age in unincorporated Grand County increased from 43.6 years to 45.5 years. Supporting this aging trend, both jurisdictions saw the number of residents in the upper age

brackets increase significantly, relative to the other age cohorts. This is particularly true In the City of Moab, where the proportion of residents between the ages of 55 and 64 years of age increased 23.2 percent, and the number of residents age 65 years and over increased 30.6 percent. In unincorporated Grand County, the population age 65 years and older saw the greatest increase, at seven percent. While this may seem like a minimal increase compared to the increase experienced for this age cohort by the City of Moab, it represents a dramatic proportional change. Residents age 65 years and over represented 14.2 percent of the unincorporated County's population in 2010, which increased to 20.2 percent by 2017. The aging of the area's population could generate increased demand for senior housing options, such as active adult communities, assisted living centers, or elder friendly housing near services such as public transportation, medical services, and retail amenities. In fact, the Housing Authority of Southeastern Utah (HASU) successfully applied for $5 million in federal Low-Income Housing Tax Credits to support construction of a 36-unit senior independent living complex adjacent to the Moab Regional Hospital and Canyonlands Care Center.

Table 3 shows that while residents between 18 and 24 years of age have historically represented a relatively small cohort in both the County and the City, this was the most rapidly growing age group other than the seniors 55 and over. This may be indicative of a younger workforce attracted by new opportunities in the growing tourism economy.

Table 3: Age Distribution Trends, 2010-2017

	2010		2017		% Change
	Number	Percent	Number	Percent	2010-2017
City of Moab					
Age Distribution					
Under 18	1,213	24.0%	1,261	22.6%	4.0%
18-24	407	8.1%	502	9.0%	23.3%
25-34	733	14.5%	753	13.5%	2.7%
35-44	669	13.3%	726	13.0%	8.5%
45-54	730	14.5%	699	12.5%	-4.2%
55-64	637	12.6%	785	14.1%	23.2%
65 years and over	657	13.0%	858	15.4%	30.6%
Total	**5,046**	**100.0%**	**5,584**	**100.0%**	**10.7%**
Median Age	**37.3**		**38.7**		
Grand County (a)					
Age Distribution					
Under 18	905	21.7%	944	20.1%	0.6%
18-24	248	5.9%	321	6.8%	3.8%
25-34	493	11.8%	497	10.6%	0.1%
35-44	509	12.2%	573	12.2%	1.7%
45-54	681	16.3%	604	12.8%	-1.7%
55-64	749	17.9%	817	17.4%	1.2%
65 years and over	594	14.2%	952	20.2%	7.0%
Total	**4,179**	**100.0%**	**4,708**	**100.0%**	**12.7%**
Median Age	**43.6**		**45.3**		

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, 2010 Summary File 1 DP-1, 2010; ESRI, 2017; BAE, 2018.

Households

Like the overall population trends experienced in the City of Moab and Grand County since 2010, data presented in Table 4 show that most Grand County households are located in Moab, although the total number of households in unincorporated Grand County is increasing faster than in the City. A primary reason for this is the greater availability of land for development in the County versus within the City limits. According to ESRI, the City of Moab had 2,308 households in 2017, compared to 1,989 households in Grand County. The number of households in both the City and County expanded rapidly between 2000 and 2017, and is expected to continue in the future, as shown in Table 5. The data point to strong housing demand throughout the area.

Table 4: Household Trends, 2010-2017

Area	2010	2017	% Change 2010-2017	Annual Avg. % Change
City of Moab				
Number of Households	2,109	2,308	9.4%	1.3%
Average Household Size	2.36	2.39		
Grand County (a)				
Number of Households	1,780	1,989	11.7%	1.6%
Avg. Household Size	2.31	2.33		

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, Summary File 1 DP-1, 2010; ESRI, 2017; BAE, 2018

Table 5: Household Projections, 2017-2022

Area	2017	2022	% Change 2017-2022	Annual Avg. % Change
City of Moab				
Number of Households	2,308	2,433	5.4%	1.1%
Average Household Size	2.39	2.40		
Grand County (a)				
Number of Households	1,989	2,154	8.3%	1.6%
Avg. Household Size	2.33	2.31		

(a) Excludes the City of Moab.

Sources: ESRI, 2017; BAE, 2018.

Average Household Size

Moab households are marginally larger than unincorporated Grand County households, with an average household size of 2.39 in the City of Moab, and an average household size of 2.33 in unincorporated Grand County. As shown in Table 5, ESRI projects average household sizes in the City and unincorporated County to remain relatively stable through 2022.

Household Composition

Table 6 shows family households[5] are the dominant household type in Moab and unincorporated Grand County; however, non-family households[6] are increasing at a faster rate than that of family households. ESRI reports that 57 percent of Moab households are families, and 43 percent of households are non-families, which includes single persons living alone and unrelated persons living together. The number of non-family households in both Moab and Grand County increased at a faster rate than family households.

[5] Family households consist of at least two members related by birth, marriage, or adoption.

[6] Non-family households may contain a single person living alone, or multiple unrelated persons who share a dwelling.

Table 7 shows that ESRI anticipates the future growth in non-family households will continue to outpace family households. Given the strong historic growth in this community, these trends indicate demand for an array of housing options to meet various household needs, including housing for families as well as non-family households.

Table 6: Household Composition Trends, 2010-2017

	2010		2017		% Change	Annual Avg.
City of Moab	Number	Percent	Number	Percent	**2010-2017**	**% Change**
Families	1,211	57.4%	1,316	57.0%	8.7%	1.2%
Non-Families	898	42.6%	992	43.0%	10.5%	1.4%
Grand County (a)						
Families	1,113	62.5%	1,216	61.1%	9.3%	1.3%
Non-Families	667	37.5%	773	38.9%	15.9%	2.1%

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, Summary File 1 DP-1, 2010; ESRI, 2017; BAE, 2018.

Table 7: Household Composition Projections, 2017-2022

	2017		2022		% Change	Annual Avg.
City of Moab	Number	Percent	Total	Percent	**2017-2022**	**% Change**
Families	1,316	57.0%	1,377	56.6%	4.6%	**0.9%**
Non-Families	992	43.0%	1,056	43.4%	6.5%	**1.3%**
Grand County (a)						
Families	1,216	61.1%	1,307	60.7%	7.5%	**1.5%**
Non-Families	773	38.9%	847	39.3%	9.6%	**1.8%**

(a) Excludes the City of Moab.

Sources: ESRI, 2017; BAE, 2018.

Number of Housing Units

Data presented in Table 8 show that there are approximately 2,619 housing units in the City of Moab as of 2017, which is a 4.1 percent increase over the 2,517 units in Moab in 2010. Housing construction occurred at a faster pace in unincorporated Grand County, increasing by 25.7 percent from 2,206 units in 2010, to 2,773 units as of 2017. This information highlights a major factor contributing to the Moab area's housing challenges. The growth in the number of housing units fell substantially behind the roughly ten percent growth in population and households over the same period, which can only be expected to increase competition for available housing units and increase rental and purchase prices. Additional information regarding housing construction is discussed further in the Residential Market Conditions section.

Table 8: Housing Units, 2010-2017

Area	2010	2017	% Change 2010-2017
City of Moab	2,517	2,619	4.1%
Grand County (a)	2,206	2,773	25.7%
Total	4,723	5,392	14.2%

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, 2010 Census; ESRI, 2017; BAE, 201

Households by Tenure

Moab and unincorporated Grand County households are notably more likely to be owners than renters; although, the proportions of renter households are increasing faster than owners. One contributor to the relatively low proportion of renters is that the area has a relatively small supply of rental apartments. Table 9 shows that 58.8 percent of Moab households are owners, which is 0.8 percentage points lower than in 2010 when owners accounted for 59.6 percent of all occupied housing units. This decrease in the proportion of owner households was offset by an increasing proportion of renter-occupied units, rising from 40.4 percent in 2010 to 41.2 percent in 2017. The increase in the proportion of renter households, and subsequent decrease in the proportion of owner households, is more pronounced in unincorporated Grand County, where the proportion of renter households increased by 3.8 percentage points, to 27.6 percent of households in 2017.

The growing trend towards renter households is likely influenced by several factors, including the area's expanding tourism economy and seasonal nature of employment, as well as housing sale prices above what many in the local workforce can afford. This indicates demand for rental housing for families and non-family households, as well as more affordable purchase options.

Table 9: Housing Units by Tenure, 2010-2017

	2010		2017		% Change
	Number	Percent	Number	Percent	2010-2017
City of Moab					
Household Tenure					
Owner-occupied	1,256	59.6%	1,356	58.8%	1.1%
Renter-occupied	853	40.4%	952	41.2%	1.6%
Total, Occupied Units	**2,109**	**100.0%**	**2,308**	**100.0%**	**1.3%**
Grand County (a)					
Household Tenure					
Owner-occupied	1,357	76.2%	1,440	72.4%	0.9%
Renter-occupied	423	23.8%	549	27.6%	3.8%
Total, Occupied Units	**1,780**	**100.0%**	**1,989**	**100.0%**	**1.6%**

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, 2010 Census, Summary File 1, Table DP-1 Qt_H1; ESRI, 2017; BAE, 2018.

Housing Unit Occupancy Status

According to data presented in Table 10, ESRI estimates the City of Moab has a residential vacancy rate of nearly 12 percent, while Grand County's vacancy rate is 28.3 percent. Even with the strong population and household growth, coupled with only a slight increase in the Moab and Grand County housing supply, these vacancy rates represent increases from 2010. As will be discussed in the sub-section that follows, only a small portion of each jurisdiction's vacant units are available for occupancy by full-time residents, which effectively pushes the vacancy rates much lower than the data initially suggest.

Table 10: Housing Units by Occupancy, 2010-2017

	2010		2017		% Change
	Number	Percent	Number	Percent	2010-2017
City of Moab					
Occupancy Status					
Occupied	2,109	89.1%	2,308	88.1%	1.3%
Vacant	257	10.9%	311	11.9%	2.8%
Total, All Units	**2,366**	**100.0%**	**2,619**	**100.0%**	**1.5%**
Grand County (a)					
Occupancy Status					
Occupied	1,780	72.7%	1,989	71.7%	1.6%
Vacant	670	27.3%	784	28.3%	2.3%
Total, All Units	**2,450**	**100.0%**	**2,773**	**100.0%**	**1.8%**

(a) Excludes the City of Moab.

Sources: U.S. Census Bureau, 2010 Census, Summary File 1, Table DP-1 Qt_H1; ESRI, 2017 BAE, 2018.

Vacancy Detail

Table 11 presents average vacancy status data from the ACS for the period between 2011 and 2015. Although this data set represents a multi-year average of sample data between 2011 and 2015, and is not directly comparable to data presented in Table 10, it is representative of conditions within the City of Moab and unincorporated Grand County.

Table 11 shows that only an average of 14.2 percent of Moab's vacant housing units (51 units) and 18.5 percent of unincorporated Grand County's vacant housing units (157 units) were available to rent between 2011 and 2015. Smaller numbers and proportions of vacant units were available for-sale. Considering only units available for-rent or for sale, the effective housing vacancy rates in Moab and Grand County were 3.1 percent and 10.1 percent, respectively. Meanwhile, over 53 percent of Moab's vacant units were held for seasonal/vacation use, while about 45 percent of Grand County's units were used similarly.

These data likely reflect the effect of the tourist economy on the local housing market, and the resulting scarcity of housing available for locals, particularly the local workforce, to rent or purchase.

Table 11; Vacancy Status, 2011-2015

	City of Moab		Grand County (a)	
	Number	Percent	Number	Percent
Total Units	2,374		2,621	
Vacancy Status				
For Rent	51	14.2%	157	18.5%
Rented - Not Occupied	0	0.0%	50	5.9%
For Sale Only	22	6.1%	59	7.0%
Sold - Not Occupied	0	0.0%	0	0.0%
Seasonal/Recreational Use	191	53.2%	381	45.0%
For Migrant Workers	0	0.0%	25	3.0%
Other Vacant	95	26.5%	175	20.7%
Total, All Vacant Units	**359**	**100%**	**847**	**100.0%**
Vacancy Rate (b)		**3.1%**		**10.1%**

Notes:
American Community Survey data represents an estimated five year average.
(a) Excludes the City of Moab.
(b) Represents the vacancy rate based on units actaully available for rent.

Sources: U.S. Census Bureau, 2011-2015 American Community Survey, Tables B25004 and B25002, 2017; BAE, 2018.

Household Income

Table 12 reports median household income and income distribution in the City of Moab and Grand County, based on ESRI estimates for 2017. Both the City of Moab and Grand County have household incomes that are significantly below the $62,902 statewide median household income. Unincorporated Grand County households have an annual median income of $46,070, which is 73.2 percent of the statewide median, while City of Moab households have an annual median income of $42,200, which is 67.1 percent of the statewide median.

Table 12: Household Income Characteristics, 2017

Annual Household Income	City of Moab Number	City of Moab Percent	Grand County (a) Number	Grand County (a) Percent
Less than $15,000	314	13.6%	287	14.4%
$15,000 to $24,999	287	12.4%	220	11.1%
$25,000 to $34,999	333	14.4%	226	11.4%
$35,000 to $49,999	388	16.8%	355	17.8%
$50,000 to $74,999	483	20.9%	389	19.6%
$75,000 to $99,999	235	10.2%	203	10.2%
$100,000 to $149,999	164	7.1%	221	11.1%
$150,000 and above	103	4.5%	89	4.5%
Total Households	**2,308**	**100%**	**1,989**	**100%**
Median Household Income	**$42,200**		**$46,070**	
% of Statewide ($62,902)	67.1%		73.2%	

Note:
(a) Excludes the City of Moab.

Sources: ESRI, 2017; BAE, 2018.

Corresponding to the below average household incomes, Table 12 shows that more than half of Moab (57 percent) and Grand County (55 percent) households have incomes less than $50,000 annually. Approximately 30 percent of Moab and Grand County households have annual incomes between $50,000 and $99,999, while the remaining households have income of $100,000 or more. Grand County tends to have more households with annual incomes of $100,000 or more compared to the City of Moab (almost 16 percent versus about 12 percent of households); however, neither area has very large concentrations of upper income households, which is common in many other tourist-destination communities.

The resident income distribution indicates a primary need for low to moderately priced housing, especially for local residents. Additional analysis of housing affordability is provided later in this report.

Economic Conditions

The following section summarizes key economic conditions in Moab and Grand County.

Employment by Industry

Table 13 reports jobs by major industry sector for Grand County, based on Quarterly Census of Employment and Wage (QCEW) data provided by the Utah Department of Workforce Services and the U.S. Bureau of Labor Statistics (BLS). Data presented in the table show that industries commonly associated with the tourism industry dominate local employment. For example, Accommodation and Food Services jobs account for the largest proportion of countywide employment, at 33.3 percent (1,718 jobs), while Retail Trade accounts for the second largest category of job at 15.5 percent, or 798 jobs. In absolute terms, the Accommodation and Food Service industry generated more new jobs than any other area industry, adding 341 new

employees between 2011 and 2016, followed by the Arts, Entertainment and Recreation industry with 108 new jobs during the same period. It should be noted that most positions within these tourism-related industries tend to be relatively low-paying, part-time and/or seasonal positions with limited opportunity for wage growth. Other notable Grand County employment sectors include Local Government and Healthcare and Social Assistance, which account for 7.9 percent (408 jobs) and 7.0 percent (361 jobs) of countywide employment, respectively.

Although not to the same extent as the difference between growth in the number of households and growth in the number of local housing units, these data show that the Grand County housing stock is also failing to keep pace with the increase in local employment. If they persist over the long-term, situations such as this create the related problems of increasing housing costs, because demand does not keep up with supply, and employers facing difficulty in expanding their operations, due to insufficient housing to accommodate a growing workforce.

Table 13: Employment Trends by Major Industry, 2011-2016

	2011		2016		
Grand County (a)	Jobs	% of Total	Jobs	% of Total	**% Change 2011-2016**
Mining	115	2.6%	91	1.8%	-4.6%
Utilities	27	0.6%	26	0.5%	-0.8%
Construction	217	4.9%	281	5.5%	5.3%
Manufacturing (b)	25	0.6%	46	0.9%	13.0%
Wholesale Trade	69	1.6%	78	1.5%	2.5%
Retail Trade (c)	738	16.6%	798	15.5%	1.6%
Transportation and Warehousing (d)	52	1.2%	94	1.8%	12.6%
Information	31	0.7%	45	0.9%	7.7%
Finance and Insurance	67	1.5%	59	1.1%	-2.5%
Real Estate and Rental and Leasing	84	1.9%	128	2.5%	8.8%
Professional Scientific & Technical Services	129	2.9%	110	2.1%	-3.1%
Admin., Support, Waste Mgmt, Remediation	86	1.9%	117	2.3%	6.3%
Education Services	45	1.0%	68	1.3%	8.6%
Healthcare and Social Assistance	265	6.0%	361	7.0%	6.4%
Arts, Entertainment, and Recreation	236	5.3%	344	6.7%	7.8%
Accommodation and Food Services	1,377	31.1%	1,718	33.3%	4.5%
Other Services (except Public Admin.)	82	1.8%	72	1.4%	-2.6%
Local Government	404	9.1%	408	7.9%	0.2%
State Government	136	3.1%	77	1.5%	-10.8%
Federal Government	249	5.6%	232	4.5%	-1.4%
Total, All Industries (a)	**4,434**	**100%**	**5,153**	**100%**	**3.1%**

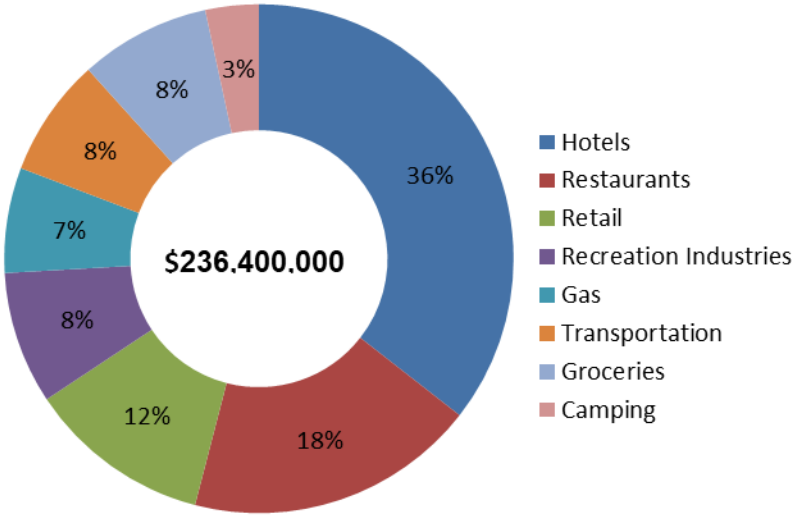
Note:
Represents non-farm employment.
(a) Represents entirity of Grand County, including the City of Moab.
(b) Includes NAICS codes 31-33.
(c) Includes NAICS codes 44 & 45.
(d) Includes NAICS codes 48 & 49.

Sources: Utah Department of Workforce Services, 2017; BAE, 2018.

National Parks Visitor Spending

The Moab area tourism industry is driven by outdoor recreation opportunities provided by the area's proximity to recreational areas such as Arches and Canyonlands National Parks, Dead Horse Point State Park, and the Manti-La Sal National Forest. As one of the only gateway communities to these parks, the Moab area benefits from the influx of direct visitor spending on goods such as hotels, recreational opportunities, groceries, and gasoline. According to the National Park Service, visitors to Arches and Canyonlands National Parks spent a total of $236.4 million in gateway communities in 2016. Figure 2 shows that hotel spending accounted for the largest proportion of visitor spending, at 36 percent ($84 million), followed by restaurant spending (18 percent; $43.7 million), and retail spending (12 percent; $27.5 percent). Unsurprisingly, the prominence of visitor spending in these categories corresponds with the County's employment in the Accommodation and Food Service and Retail sectors discussed previously. National Park visitor trends and impacts are further discussed in the Hotel subsection of the Commercial Real Estate Market Conditions section.

Figure 2: Arches and Canyonlands National Park Visitor Spending, 2016



Note:
(a) Represents visitor spending in gateway communities. Gateway communities are the areas directly surrounding National Parks Service sites where visitors typically stay and spend money while visiting national park sites.

Sources: National Park Service, 2016 NPS Visitor Spending Effects Report, 2017; BAE. 2018.

Tourism Tax Revenue

Table 14 further highlights the growing role tourism plays in supporting the local economy, by summarizing the various tourism-related tax revenues the City of Moab and Grand County collect. In total, the City of Moab collected $5.3 million in tourism-related tax revenue, which represents a 13 percent increase over the previous years' collection of nearly $4.7 million. Grand County collected a total of $5.7 million in tourism-related tax revenue, which represents

a 15 percent increase over the previous years' collection of $5 million. The strong growth in tourism-related tax revenue further underscores the importance of tourist activity to the local economy.

The City of Moab and Grand County collect a Transient Room Tax (TRT), of 4.25 percent of nightly room revenues for lodging stays of less than 30 days at hotels, motels, inns, trailer courts, campgrounds, tourist homes, and similar nightly accommodations. According to the Utah State Tax Commission, the City of Moab received $1.2 million in TRT revenue in 2017, which is an 18 percent increase over 2016. Grand County received $5 million in TRT revenue in 2017, which is a 16 percent increase over 2016.

The City of Moab's Resort Communities tax is a 1.1 percent sales tax assessed on retail, services for the repair, or lease/rental of tangible personal property, sums paid to common carriers or telecommunications providers for transportation services and intrastate telecommunications, meals sold, admission fees (e.g., movie tickets, golf, swimming pools), laundry and dry cleaning, transient public accommodations, and everything else subject to sales and use tax. The City of Moab received $4.05 million in Resort Community Tax revenues in 2017, which is an 11 percent increase over 2016.

Grand County's Short-Term Leasing Tax refers to a three percent tax on short-term leases or rental of motor vehicles for 30 days or less. Grand County collected $145,162 in Short-Term Leasing Tax revenue in 2017, which is a 20 percent increase over 2016.

Utah counties may adopt a Restaurant Tax on the sale of food prepared for immediate consumption to support tourism, recreation, cultural, convention, or airport facilities within their jurisdiction. Grand County's adopted Restaurant Tax rate is one percent. Grand County collected $576,901 in Restaurant Tax Revenue in 2017, a six percent increase over 2016.

Table 14: Tourism Tax Revenue, 2016-2017

	Tax Rate	2016	2017	% Change
City of Moab				
Transient Room Tax (a)	5.75%	$1,051,795	$1,237,864	18%
Resort Communities Tax	1.60%	$3,637,991	$4,054,287	11%
Total Tourism Tax Revenue		**$4,689,787**	**$5,292,151**	**13%**
Grand County				
Transient Room Tax	4.25%	$4,316,850	$5,019,806	16%
Short-Term Leasing Tax	3.00%	$120,710	$145,162	20%
Restaurant Tax	1.00%	$546,798	$576,901	6%
Total Tourism Tax Revenue		**$4,984,358**	**$5,741,868**	**15%**

Note:
(a) Includes the following TRT rates:

Countywide TRT	4.25%
Municipal TRT	1.00%
Additional TRT	0.50%
Total TRT Rate	5.75%

Sources: Utah State Tax Commission, 2017; BAE, 2018.

Residential Real Estate Market Conditions

The following section summarizes current residential real estate market conditions within the City of Moab and Grand County. The analysis draws on data from several sources, including interviews with local real estate brokers, developers, and property managers, as well as other supplemental data sources. These include data regarding the existing housing stock published by the U.S. Census Bureau, home sales records from UtahRealEstate.com, and other real estate listing websites such as Zillow.com, Moab Advertiser, Airbnb.com, and Vacasa.com.

Housing Stock Characteristics

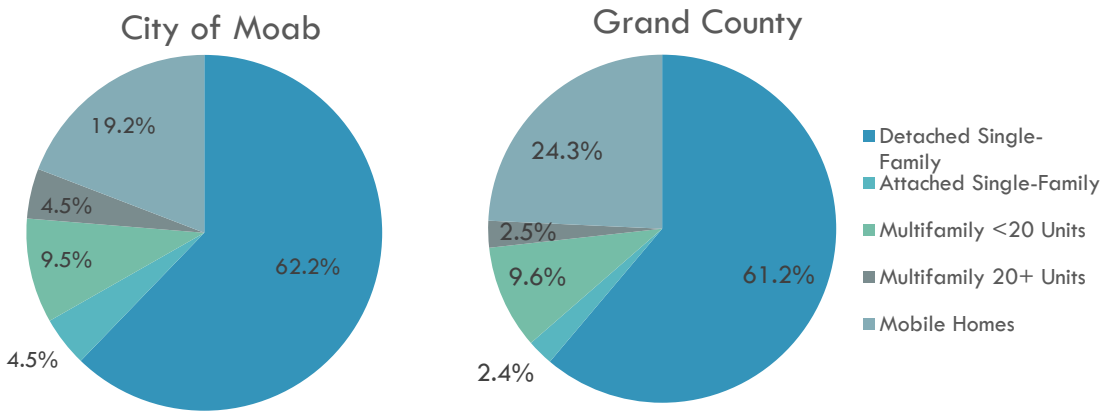
Grand County and the City of Moab's housing stock is heavily weighted towards detached single-family units. As shown in Figure 3, ACS data indicate that detached single-family units constituted an average of 62.2 percent of the City of Moab's housing stock between 2011 and 2015, and 61.2 percent of Grand County's housing stock during the same time period. Attached single-family units[7] account for a relatively small proportion of the City and County's housing stock, at 4.5 percent and 2.4 percent respectively.

Mobile homes represented the second largest product type, accounting for 19.2 percent of Moab's, and 24.3 percent of Grand County's housing stock. According to local real estate professionals, much of the areas' mobile home stock constitutes remnants from the uranium boom when mobile homes were used as temporary housing for miners. While these units represent slightly more affordable housing opportunities, the quality of much of the areas' mobile homes has deteriorated with age.

Multifamily units account for 14.1 percent of housing in the City of Moab, and 21.1 percent in Grand County. In both the City and the County, the majority of multifamily housing is located in smaller complexes with fewer than 20 units.

[7] Attached single-family units include semi-detaches (semi-attached, side-by-side), row houses, duplexes, quadruplexes and townhomes that are separated from other units by a ground-to roof wall, have a separate heating system, have individual meters for public utilities, and have no other units located above or below.

Figure 3: Housing Stock Characteristics, 2011-2015



Sources: U.S. Census Bureau, 2011-2015 America Community Survey, Table B25024, 2016; BAE, 2018.

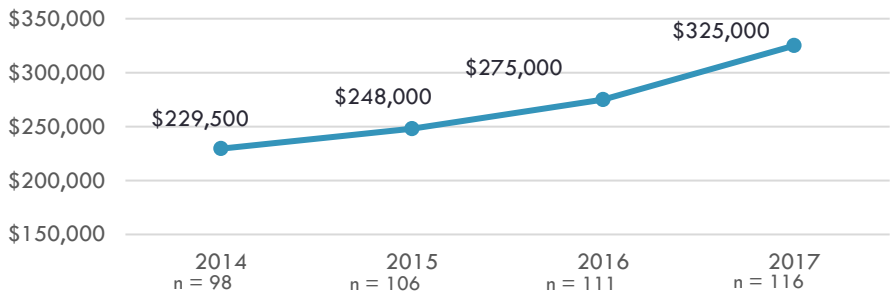
For-Sale Residential

This section summarizes existing market conditions within single-family, townhome, and condominium market segments, and will be used to inform the financial feasibility analysis.

Single-Family Homes

Single-family homes accounted for approximately 73 percent of Grand County home sales in 2017. The median price for a single-family home in Grand County increased dramatically since 2014 when the area's housing market began its recovery from the lows of the recession. Data provided by UtahRealEstate.com show that between 2014 and 2017, the median sale price for a single-family home in Grand County increased 42 percent, not accounting for inflation, from $229,500 in 2014, to $325,000 in 2017. The most dramatic annual sale price increase occurred between 2016 and 2017, when the median single-family sale price increased 18 percent. This indicates that single-family home sale prices are accelerating at a faster rate than previously experienced.

Figure 4: Median Single-Family Sale Price Trend, Grand County, 2014-2017



Sources: UtahRealEstate.com, 2017; BAE, 2018.

According to local real estate professionals, demand for single-family units is driven by strong competition among local residents, second homeowners, and retirees. Moab's proximity to rapidly growing urban centers like Salt Lake City and Denver, as well as other more saturated tourist markets such as Telluride, Aspen and Park City, has contributed to the area's growing popularity as a vacation and retirement destination. Whereas some out-of-town buyers purchase homes in the Moab area for personal vacation use, others purchase single-family homes as investment properties to be used as nightly rentals. For more information on nightly rentals, refer to the Nightly Rental subsection of the Rental section. As Moab's tourism economy grows, the addition of new workers required to construct and staff the area's expanding tourist accommodations and services places further pressure on an already tight housing market, with the injection of buyers from wealthier urban centers driving home prices beyond the reach of Moab's workforce. One real estate broker noted that, whereas, between 2009 and 2013, many single-family home loans were financed through the United States Department of Agriculture (USDA) Rural Development Guaranteed Housing Loan Program, only two single-family homes sold in 2017 were within the maximum loan limit applicable to the USDA loan program.

Table 15 summarizes examples of single-family homes constructed since the year 2000 and sold between 2015 and 2017, which will inform the prototypes and assumptions used in the financial feasibility section of this study. Overall, newer Moab area single-family homes tend to range from three to four bedrooms, with at least two bathrooms. Homes selling for under $300,000 tend to have under 2,000 square feet, with larger luxury units, such as the 2,480-square foot home at 2245 S. Salida Del Sol, selling for much more, at $489,900. Real estate brokers indicate that the most competitive market segment is $300,000 and under, and that units that sell for more than $300,000 are usually investment purchases for use as nightly rentals.

Table 15: Single-Family Sales Comparables for Homes Built Since 2000

Image	Address	Unit Type	Size (sf)	Sale Price	$/sf	Year Sold
	**285 N. Riversands Drive**	3 BR / 2 BTH	1,067	$220,000	$206	n.a.
	**4503 Pueblo Verde Drive**	3 BR / 2 BTH	1,325	$227,000	$171	2015
	**476 Doc Allen Drive**	3 BR / 2 BTH	1,451	$230,000	$159	2016
	**1023 Pack Creek Drive**	3 BR / 2 BTH	1,286	$201,000	$156	2015
	**3407 Tierra Norte Drive**	4 BR / 2 BTH	1,437	$270,000	$188	2015
	**792 Blue Heron Court**	3 BR / 2 BTH	1,702	$299,000	$176	n.a.
	**531 Winesap Circle**	3 BR / 2 BTH	1,928	$280,101	$145	2015
	**2245 S. Salida Del Sol**	3 BR / 3 BTH	2,480	$489,900	$198	2017

Note:
Represents sales in and around Moab and Spanish Valley between 2015 and 2017.

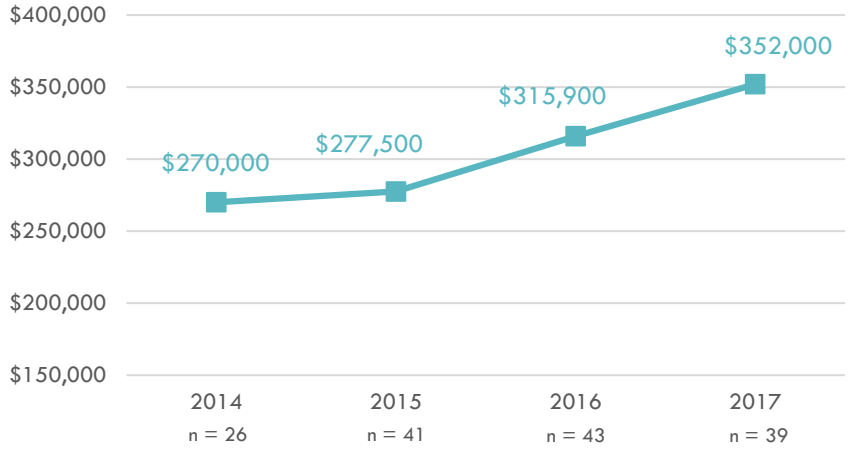
Sources: Zillow, 2017; Moab Realty, 2017; BAE, 2017.

Townhomes

According to UtahRealEstate.com, townhomes accounted for 25 percent of Grand County home sales in 2017. There were 39 townhome sales in Grand County in 2017, which was

down slightly from 43 sales in 2016, and 41 sales in 2015, but above the reported 26 sales in 2014. As shown in Figure 5, the median sale price for a townhome increased $82,000, or 30 percent, from the 2014 median price of $270,000. Similar to single-family homes, sale prices for townhomes increased rapidly in recent years, increasing 14 percent between 2015 and 2016, and 11 percent between 2016 and 2017.

Figure 5: Median Townhome Sale Price Trends, Grand County, 2014-2017



Sources: UtahRealEstate.com, 2017; BAE, 2018.

Local real estate professionals indicate that approximately 80 percent of Moab area townhomes are bought by second homeowners. These second homeowners tend to be young professionals and retirees from elsewhere in Utah and Colorado, with one real estate broker reporting that the majority of second homeowners utilize their home as vacation homes, rather than nightly rentals. Although the underlying zoning allows townhome complexes to be used as nightly rentals, two complexes, Mill Creek Pueblos and Orchard Villas, prohibit nightly rentals. As a result, units in these two complexes tend to sell for around $100,000 less than units in complexes where nightly rentals are allowed, indicating that the ability to generate a return by engaging in nightly rentals commands a premium in the Moab area market.

Table 16 summarizes examples of townhome sales between 2015 and 2017 for units constructed since the year 2000, which will inform the prototypes and assumptions used in the financial feasibility section of this report. As noted in the table, information was not available regarding the specific year individual units sold within the 2015-2017 time frame. While all sales presented in the table are in the Rim Village complex, they are generally representative of townhome sales countywide.

Townhomes in the Moab area tend to be around 1,500 square foot, one- to two-story attached units, above a one- or two-car garage. Local real estate brokers indicate having garage space is particularly desirable as storage for Jeeps, trailers, off-road vehicles, and other outdoor

equipment. Generally, townhomes are marketed as vacation and income properties rather than housing options for the local workforce, with resales often sold fully furnished.

Table 16: Townhome Sales Comparables for Homes Built Since 2000

Image	Address	Unit Type	Size (sf)	Sale Price	$/sf	Year Sold
	**3686 S. Spanish Valley Drive, J-4** (a)	3 BR / 2 BTH	1,573	$275,000	$175	n.a.
	**3764 Prickly Pear Circle, 2A-1** (a)	3 BR / 2.5 BTH	1,562	$279,000	$179	n.a.
	**3686 S. Spanish Valley Drive, X-4** (a)	3 BR / 1.5 BTH	1,551	$293,900	$189	n.a.
	**3764 S. Prickly Pear, 5A-8**	3 BR / 2.5 BTH	1,478	$309,000	$209	n.a.
	**3686 S. Spanish Valley Drive, X-4** (a)	3 BR / 2 BTH	1,551	$315,000	$203	n.a.

Notes:
Represents sales in and around Moab between 2015 and 2017.
(a) Sale price includes unit furnishings.

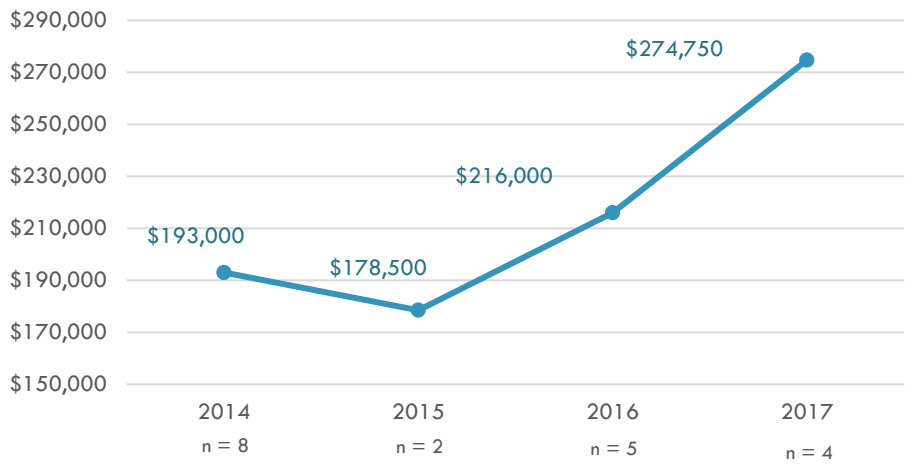
Sources: Moab Realty, 2017; BAE, 2017.

Condominiums

With few condominium complexes (e.g., Red Cliff Condominiums) in the County, condominiums comprise a relatively small portion of Grand County residential sales. There were only 19 sales in the four years between 2014 and 2017, with a total of four condominium sales accounting for three percent of all homes sold in Grand County in 2017. Despite a small dip between 2014 and 2015, the median sale price for condominiums increased 42 percent, from $193,000 in 2014, to $274,750 in 2017. The greatest increases occurred between 2015

and 2016, when the median price rose 21 percent, and between 2016 and 2017 when the median price rose an additional 27 percent.

Figure 6: Condominium Sale Price Trends, Grand County, 2014-2017



Sources: UtahRealEstate.com, 2017; BAE, 2018.

According to local experts, the demographic of condominium buyers is similar to that of townhome buyers, with the market driven by second homeowners. The Red Cliff Condominium complex is configured more like a traditional multifamily complex, with each three-story building consisting on 12 one-story units. Generally, the units have three-bedrooms and two-bathrooms, range from around 1,200 to 1,400 square feet, and have at least one dedicated uncovered parking space. Local real estate professionals indicate that condominium units are more likely than townhomes to be used as nightly rentals, though they generally command a lower sale price than townhomes, as indicated in Figure 6. Completion of the new Sage Creek condominium complex is anticipated to further drive condominium prices, with one broker reporting listing prices around $435,000. According to the project's marketing material, the roughly 1,600 square foot units will feature 3 bedrooms, 2.5 bathrooms, and high-end finishes.

Rental Residential

This section summarizes the existing market rate rental market, and is used to inform the financial feasibility analysis. Generally, the Moab area rental markets consist of four product types: apartments, long-term rentals of apartments and single-family homes, long-term vacation rentals, and nightly rentals. Apartments and long-term rentals are generally rented to the local workforce, while long-term vacation rentals and nightly rentals are geared towards tourists.

Apartment Rentals

As shown in Figure 3, multifamily units, such as apartment complexes, make up a relatively small portion of the Moab area housing stock, with most units located in older complexes with less than 20 units. Table 17 summarizes unit characteristics and asking rents for the area's oldest market rate apartment complex, the Grand Hotel Apartments, and newest complex, Hoodoo Village apartments, to illustrate the area's apartment market.

As shown in the table, a studio apartment can range from 425 to 450 square feet, with asking rents around $675 per month. A one-bedroom, one-bathroom apartment unit can range from 430 to 600 square feet, with asking rents ranging from $625 to $700 per month. A two-bedroom, one-bathroom unit can range from 750 to 950 square feet, with older units renting for around $825 per month, and newer units renting for around $1,300 per month.

Complexes located closer to downtown Moab, such as the Grand Hotel Apartments, usually lack amenities and dedicated parking, and must rely on on-street parking, while newer complexes have uncovered onsite parking and limited amenities, such as laundry.

Table 17: Comparable Market Rate Apartment Properties, Grand County

Name/Address	Unit Type	Num.	Size (sf) Low	Size (sf) High	Rent Low	Rent High	$/sf Low	$/sf High	Parking	Amenities
Grand Hotel Apartments	Studio	2	425	450	n.a.	$675	$1.50	$1.59	On-Street	
5 and 7 North Main Street	1 BD / 1 BTH	5	430	600	$625	$700	$1.17	$1.46	Parking	
Moab, UT 84530	2 BD / 1 BTH	1	n.a	750	n.a.	$825	n.a.	$1.10		
	**Total/Avg.** (a)	**8**	**526**		**$700**		**$1.36**			
	Occupancy rate	99%								
	Year Built	1907								
Hoodoo Village Apartments	Studio	12	450	500	$800	$850	$1.70	$1.78	Onsite	Laundry
261 Walnut	2 BD / 1 BTH	6	n.a.	950	n.a.	$1,300	n.a.	$1.37	Parking	
Moab, UT 84530	**Total/Avg.** (a)	**18**	**633**		**$983**		**$1.62**			
	Occupancy rate	99%								
	Year Built	2017								

Sources: Resolutions Property Management, 2017; BAE, 2017.

Both of the example complexes report extremely high occupancy rates of 99 percent, with property managers and real estate professionals reporting strong demand for apartment rental housing coming from the local workforce under 30 years of age. Most renters tend to work seasonally in the recreation or hospitality industry, though some are also emergency medical service (EMS) workers or young professionals or families saving to buy a home. Tenants prefer flexible month-to-month leases in order to accommodate seasonal work, and most units are rented by couples or multiple singles living as one household. Although many renters are employed seasonally, most try to remain in their units during the off-season between November and February because of the tight rental market. In fact, property managers report that many local employers now require proof of housing before they will hire

new employees; which has, in turn, limited their ability to hire staff and thereby grow their businesses. Some employers have started to address this issue by renting units for their staff, or providing other housing opportunities. While this practice is the exception rather than the rule, it illustrates the extent to which employers recognize workforce housing availability as critical to their business success.

Despite the seemingly high demand for rental housing, very few market rate apartment complexes have been constructed or are planned, even though apartments are allowed in all commercially-zoned areas and many residential zones within the City and the County. Real estate professionals interviewed for this analysis cite competition from product types with higher returns, such as hotels and overnight rentals, as one reason for the lack of new apartment construction. Strong demand for these uses drives land costs beyond what is supportable by local apartment rents, which are limited by the area's below average incomes.

Unfurnished Rentals

For this analysis, unfurnished rentals refer to unfurnished single-family or mobile/manufactured homes rented to the local workforce as their primary dwelling units. Given the dearth of apartment rentals, local property managers indicate unfurnished rentals comprise the majority of rental housing in the Moab area. Table 18 summarizes unit characteristics and asking rents for a sampling of unfurnished rentals available in the Moab area in November of 2017. As shown in the table, most unfurnished rental units have characteristics of the typical single-family unit discussed in the Single-Family Home subsection of the For-Sale Residential section. Rents tend to range from $875 per month for a 2-bedroom, 1-bathroom unit, to $1,500 for a 3-bedroom, 2-bathroom unit. Typically, rental rates include most utilities, such as water, sewer, trash, and gas.

Renter demographics range widely, from young couples, to families, to single individuals living together as roommates. Property managers noted that in the absence of adequate rental supply, unsanctioned sub-leasing, whereby a leased tenant rents individual rooms to unleased tenants, has become common place. Anecdotally, these rooms can rent for between $400 and $500 per month. As mentioned previously, businesses also rent unfurnished properties for employees. This is particularly common among the construction and trade industries, which have a difficult time recruiting workers due to the lack of available housing.

Table 18: Unfurnished Rental Properties, Grand County

Image	Name/Address	Unit Type	Size (sf)	Rent	$/sf	Rent Includes
	**1220 Van Buren Court** Moab, Utah	4 BR / 2 BTH	1,510	$1,400	$0.93	Water, Sewer, Trash
	**398 Loveridge Drive** Moab, Utah	3 BR / 2 BTH	1,140	$1,500	$1.32	None
	**147 N. 100 W.** Moab, Utah	3 BR / 1 BTH	1,100	$800	$0.73	All utilities
	**226 E. 100 N.** Moab, Utah	2 BR / 1 BTH	1,000	$875	$0.88	Water, Sewer, Gas
	**198 Walnut Lane** Moab, Utah	3 BR / 2 BTH	1,800	$1,500	$0.83	Water, Sewer, Gas

Sources: Zillow, 2017; Moab Property Management, 2017; Moab Ad-Vertiser, 2017; Grand County, BAE, 2017.

Furnished Rentals

Furnished rental refers to fully stocked, single-family homes rented to tourists for an extended vacation, usually monthly. Table 19 summarizes unit characteristics and asking rents for a sampling of furnished rentals available in the Moab area in November of 2017. Rental rates typically range depending on the length of stay. Smaller two-bedroom 1.5 to-2-bathroom units can rent anywhere from $1,250 to $1,400 per month, while larger 3-bedroom, 2-bathroom units can rent between $1,500 and $2,700 per month. This generally includes all utilities such as water, sewer, gas, electricity and trash collection. Furnished rentals tend to be better maintained than unfurnished rentals, and often have been updated. Renters of fully furnished units are typically those who can take extended vacations, such as retirees, or out-of-town families with children.

Table 19: Furnished Rental Properties, Grand County

Image	Name/Address	Unit Type	Size (sf)	Rent		$/sf		Rent Includes
				Low	High	Low	High	
	**542 W Hale** Moab, Utah	2 BR / 2 BTH	n.a.	$1,250 -	$1,400	n.a.	n.a.	Fully Furnished Water, Sewer, Gas, Electric, Trash
	**125 Birch** Moab, Utah	2 BR / 1.5 BTH	1,050		$1,250		$1.19	Fully Furnished Water, Sewer, Gas, Electric, Trash
	**496 Doc Allen Drive** Moab, Utah	3 BR / 2 BTH	1,450	$1,750 -	$2,700	$1.21 -	$1.86	Fully Furnished Water, Sewer, Gas, Electric, Trash
	**48 Wildflower** Spanish Valley, Utah	3 BR / 2 BTH	n.a.	$1,500 -	$2,300	n.a.	n.a.	Fully Furnished Water, Sewer, Gas, Electric, Trash

Sources: Zillow, 2017; Moab Property Management, 2017; Moab Ad-Vertiser, 2017; BAE, 2017.

Nightly Rentals

Nightly rentals are residential units that are available to rent on a nightly basis, much like a hotel room. These units are targeted towards tourists, and not Moab area residents. Table 19 summarizes unit characteristics and asking rents for a sampling of nightly rentals available in the Moab area in November of 2017. As displayed in the table, nightly rentals come in a variety of housing types, including condominiums, townhome, single-family homes, and accessory dwelling units. Nightly rental rates can vary widely depending on the time of year, number of renters, and length of stay. With example prices ranging from $86 to $618 per night, nightly rentals can offer competitive lodging prices compared to local hotels, particularly when the cost is split among multiple people. A survey of nightly rentals listed on Airbnb.com and Vacasa.com showed that most nightly rentals are located in townhome complexes. Nightly rentals are typically managed either by individual property owners or a property management company. Due to the presence of many different independent operators in the Moab market, comprehensive occupancy statistics for nightly rental units are not available. As discussed later in the hotel market conditions section of this report, data from STR, a lodging industry data provider, indicate that in 2016, the average annual occupancy rate for conventional visitor lodging (i.e., hotels and motels) was 72.9 percent. This is indicative of strong demand for available overnight accommodations.

Table 20: Nightly Rental Properties, Grand County

Image	Name/Address	Unit Type	Rent Low	Rent High
	**La Dolce Vita Villa's**	2 BR / 2 BTH	$86 -	$446
	**Rim Village**	3 BR / 2 BTH	$89 -	$394
	**Red Cliff**	3 BR / 2 BTH	$89 -	$409
	**Moab Spring Ranch**	2 BR / 2.5 BTH	$137	$598
	**Coyote Run**	3+ BR / 3.5 BT	$132 -	$618
	**Downtown Bungalow**	3 BR / 3 BTH		$145
	**Moab Digs**	1 BR / 1 BTH		$110

Sources: AirBnB.com, 2017;Vacasa.com, 2017; BAE, 2017.

Workforce Housing Needs

The combination of low household incomes and strong competition among locals and external market demand for housing, combined with limited increases in the supply of housing, contributes to high housing costs that make living in the Moab area difficult or out of reach for much of the local workforce. According to the *Moab Area Affordable Housing Plan*, employers across all industries struggle to attract workers, especially for essential positions, such as teachers, nurses, law enforcement officers, public officials, and others, with candidates citing the large gap between wages and housing costs as the primary impediment. Additionally, local employers struggle to retain existing employees, as many leave the area to seek jobs in other, more affordable communities. With approximately 43 percent of Grand County employment concentrated in relatively low paying tourism-related industries, and more than 437 new hotel rooms planned across five development projects as of January 2017, attainable housing for the local workforce will be key to growing the local economy. This section summarizes key data points highlighting the area's workforce housing needs.

Housing Cost Burden

Table 21 presents data on housing cost burdens for Grand County owner and renter households, as reported in the *Moab Area Affordable Housing Plan*. The data are from the 2009-2013 Comprehensive Housing Affordability Strategy (CHAS) data set, which is a special tabulation of the 2009-2013 ACS 5-Year Estimates. The CHAS data set uses U.S. Department of Housing and Urban Development (HUD) defined income categories to classify households by income level, after adjusting for household size. These categories are based on the HUD Adjusted Median Family Income (HAMFI), which is calculated using 2009-2015 5-Year median family income estimates,[8] supplemented with 2013 1-year estimates. The HUD income categories are calculated as a percentage of the HAMFI. The extremely low-income category includes households with incomes less than, or equal to, 30 percent of the HAMFI, while the very low-income category includes households with incomes greater than 30 percent, and up to 50 percent, of the HAMFI. The low-income category includes households with incomes greater than 50 percent, and up to 80 percent of the HAMFI, while the moderate-income category includes households with incomes greater than 80 percent, and up to 120 percent of the HAMFI. The above moderate category subsequently includes households with incomes greater than 120 percent of the HAMFI. HUD estimates monthly housing cost burdens as a share of a household's monthly income. Households are considered to have an excessive housing cost burden when housing costs exceed 30 percent of the monthly gross household income. Households are considered to have a severe housing cost burden when monthly housing costs exceed 50 percent of monthly gross household income. For renter households, housing costs include rental payments, plus utility charges. For owner households, cost

[8] Excludes one-person households and multi-person households comprised of unrelated individuals, based on the Census definition of a family, which includes a householder with one or more persons living in the same household who re unrelated to the householder by birth, marriage, or adoption.

burden calculations include principle, interest, property taxes, and insurance (PITI), but do not include utility charges.

According to the *Moab Area Affordable Housing Plan,* 1,000 Grand County households earning less than 80 percent of AMI were cost excessively burdened between 2009 and 2013. At least 400 of these households were severely cost burdened. CHAS data presented in Table 21 show that renter households were disproportionately cost burdened, compared to owner households. Across all income categories, larger proportions of renter households had excessive or extreme cost burdens as compared to owner households in the same income category.

Table 21: Cost Burdened Households by Tenure and Income, Grand County

	Renter	Owner
Households Spending 30% or More of Monthly Income on Housing (by Income Level)		
>50% to <=80% AMI	43.6%	41.2%
>30% to <=50% AMI	78.1%	45.5%
<=30% AMI	73.3%	64.4%
Households Spending 50% or More of Monthly Income on Housing (by Income Level)		
>50% to <=80% AMI	5.5%	0.8%
>30% to <=50% AMI	37.5%	22.7%
<=30% AMI	61.7%	44.4%

Sources: Moab Area Affordable Housing Plan, 2016; U.S. Department of Housing and Urban Development, Comprehensive Housing Affordability Strategy, 2009-2013; BAE, 2018.

Workforce Housing Affordability

To put the data presented in Table 21 into perspective, BAE used the findings from the Demographic and Economic Trends section to profile five household compositions that represent typical Moab area households, and compared these households' incomes to available for-sale and rental housing options.

The first household profiled consists of a senior couple living on social security payments. The second household consists of a single person under the age of 30 working as a river rafting guide. The third household consists of a young couple, with one person employed as a hotel desk clerk, and the other as a local waiter or waitress with two children. The fourth household consists of a construction worker and part-time retail sales person with one child. The final household consists of a firefighter and elementary school teacher with two children. Using occupation and wage data for Eastern Utah from the Utah Department of Workforce Services, BAE calculated the average household income for each of the five households. BAE then used

Grand County's 2017 HUD Defined Income Limits by household size, presented in Table 22, to identify the housing income category to which each household belongs.

Table 22: HUD Defined Income Limits, Grand County, Utah, 2017

	Income Limits/Household Size				
Income Category	1 Person	2 Person	3 Person	4 Person	5 Person
Extremely Low-Income (30%)	$14,250	$16,250	$20,420	**$24,600**	$28,780
Very Low-Income (50%)	$23,700	$27,100	$30,500	**$33,850**	$39,300
Low-Income (60%) (a)	$28,440	$32,520	$36,600	**$40,620**	$47,160
Moderate (80%)	$37,950	$43,350	$48,750	**$54,150**	$58,500
Median-Income (100%) (a)	$47,400	$54,200	$61,000	**$67,700**	$78,600
Above Median (120%) (a)	$56,880	$65,040	$73,200	**$81,240**	$94,320

Note:
(a) Calculated by BAE by applying a multiplier to the very low-income limits (50%). Note this calculation does not account for adjustments made by HUD.

Sources: Housing Authority of South Eastern Utah, 2017; BAE, 2018.

As shown in Table 23, a senior couple living on social security has an annual household income around $21,000, which is considered a very low-income (50 percent of AMI) household in Grand County. A single river rafting guide living alone has an annual household income of around $23,450, which is also considered a very low-income household. A hotel desk clerk and waiter with two children have an annual household income of around $39,370, which is considered a low-income household (60 percent of AMI). A part time retail sales person and construction worker with one child have an annual household income around $45,025, which is considered a moderate-income household (80 percent of AMI). A firefighter and elementary school teacher with two children have an annual household income around $64,670, which is considered a median-income household (100 percent of AMI).

It should be noted that these households were selected in part to represent an increasing gradation of incomes, so that other households that are not represented can generally compare their incomes to these profiles and identify what percentage of the housing units sold in 2017 would have been accessible to them. For example, a single teacher living in Moab earned an average of $46,000 per year (100 percent of AMI) in 2016, and this is comparable to the retail/construction household, whose income was $45,025. A single teacher could trace the affordable sales prices and rents of this household profile to approximate what he/she could afford to pay to purchase or rent a home.

Table 23: Workforce Household Profile

Who This shows an example of a prototypical household in the Moab Area, its household size		Annual Income	Income Category
	Senior couple living on social security HH Size: 2 persons	$21,000	Very Low Income 50% AMI
	River rafting guide HH Size: 1 person	$23,450	Very Low Income 50% AMI
	Hotel desk clerk, waiter, and two children HH Size: 4 persons	$39,370	Low Income 60% AMI
	Part-time retail sales clerk, construction worker, and one child HH Size: 3 persons	$45,025	Moderate Income 80% AMI
	Firefighter and elementary school teacher with two children HH Size: 4 persons	$64,670	Median 100% AMI

Sources: Grand County, 2017; Utah Department of Worforce Services, 2017; BAE, 2018.

For-Sale Housing Affordability

BAE calculated the amount of money each household could spend each month on housing related costs, assuming these five households can comfortably spend up to 30 percent of their gross household incomes on housing-related costs without incurring excess housing cost burden. BAE then used 2017 home sales data from UtahRealEstate.com and mortgage assumptions based on standard industry loan terms for first-time home buyers obtaining a low-down payment conventional loan, to determine the proportion of a typical Moab area home these prototypical households could afford, and the number of homes available within their price range in 2017. The results, presented in Table 24, show that the maximum affordable home price for the senior couple is $76,839, while the maximum affordable home price for the river rafting guide is $85,767. The maximum affordable home price for the hotel desk clerk and waiter is $144,018, and the maximum affordable home price for the

construction worker and part-time retail sales person with one child is $164,655. The maximum affordable sale price for the firefighter and teacher with one child is $236,664.

Table 24: Affordable For-Sale Housing Prices, Grand County, 2017

Household Profile	Annual House-Hold Income
Senior Couple	$21,000
River Rafting Guide	$23,450
Hotel Desk Clerk and Waiter w/ 2 Children	$39,370
Construction & Part-Time Sales Clerk w/ 1 Child	$45,025
Firefighter and Teacher w/ 2 Children	$64,670

	Amount Avail. for Housing (a)	Principal & Interest	Property Insurance	Property Taxes	Mortgage Insurance	Total Monthly Payment	Down-Payment	Affordable Home Price
Senior Couple	$525	$365	$22	$86	$53	$525	$2,689	**$76,839**
River Rafting Guide	$586	$407	$24	$96	$59	$586	$3,002	**$85,767**
Hotel Desk Clerk and Waiter	$984	$684	$41	$161	$98	$984	$5,041	**$144,018**
Construction & Part-Time Sales Clerk w/ 1 Child	$1,126	$782	$47	$184	$113	$1,126	$5,768	**$164,802**
Firefighter and Teacher w/ 1 Child	$1,617	$1,123	$67	$265	$162	$1,617	$8,283	**$236,664**

Ownership Cost Assumptions (b)		
% of Income for Housing Costs	30%	of gross annual income
Down payment	3.50%	of home value
Annual interest rate	4.25%	fixed
Loan term	30	years
Upfront mortgage insurance	0.00%	of home value
Annual mortgage insurance	0.85%	of mortgage
Annual property tax rate	1.34%	of home value
Annual hazard insurance	0.34%	of home value

Notes:
(a) Represents 30 percent of monthly household income.
(b) Based on a low downpayment conventional loan.

Sources: Grand County, 2017; Insurance.com, 2017; Bankrate.com, 2017; BAE, 2018.

As shown in Table 25, none of the units sold were affordable to the senior couple, river rafting guide, the hotel clerk / waiter family, and the construction worker / retail clerk family. The firefighter and elementary school teacher with one child had a finite selection of housing to choose from, with seven units, or 6.6 percent of home sold within their affordability range.

Table 25: Housing Affordability for Selected Households in Grand County, Utah

Who? This shows an example of a prototypical household in the Moab Area, its household size	What is Their Income? What is the household's combined annual income, and what is the income as a percentage of the Area Median Income?	What Is Affordable? What home price is affordable, and how much can this household afford to pay monthly? (b)	Homes Available? Based on homes sold in Grand County in 2017
 Senior couple living on social security HH Size: 2 persons	**Income: $21,000** 50% AMI	Affordable Home Price $76,839 Affordable Monthly Payment $525	 **0% affordable**
 River rafting guide HH Size: 1 person	**Income: $23,450** 50% AMI	Affordable Home Price $85,767 Affordable Monthly Payment $586	 **0% affordable**
 Hotel desk clerk and waiter w/ two children HH Size: 4 persons	**Income: $39,370** 60% AMI	Affordable Home Price $144,018 Affordable Monthly Payment $984	 **0% affordable**
 Part-time retail and construction worker with one child HH Size: 3 persons	**Income: $45,025** 80% AMI	Affordable Home Price $164,802 Affordable Monthly Payment $1,126	 **0% affordable**
 Firefighter and elementary school teacher with two children HH Size: 4 persons	**Income: $64,670** 100% AMI	Affordable Home Price $236,664 Affordable Monthly Payment $1,617	 **7 units (6.6%) affordable**

Notes:
(a) Represents the median sale price for single-family, twin, condo, and townhomes sales in 2017.
(b) This assumes households pay 30 percent of their gross income for housing.

Sources: Grand County, 2017; Utah Department of Workforce Services, 2017; Insurance.com, 2017; Bankrate.com, 2017; UtahRealEstate.com, 2018; BAE, 2018.

Table 26: Sale Price Distribution for Homes Sales in 2017, By Number of Bedrooms

List Price Range	Number of Units Sold 1 BRs	2 BRs	3 BRs	4+ BRs	Total	% Total
Single-Family Residences (a)						
Less than $200,000	0	0	2	0	2	**1.9%**
$200,000-$249,999	0	2	8	0	10	**9.4%**
$250,000-$299,999	0	2	26	8	36	**34.0%**
$300,000-$349,999	0	0	23	4	27	**25.5%**
$400,000-$499,999	0	3	5	7	15	**14.2%**
$500,000-$599,999	0	0	5	5	10	**9.4%**
$600,000-$699,999	0	1	1	1	3	**2.8%**
$700,000-$799,999	0	0	1	0	1	**0.9%**
$800,000-$899,999	0	0	0	0	0	**0.0%**
$900,000-$999,999	0	0	0	0	0	**0.0%**
$1,000,000+	0	0	0	2	2	**1.9%**
Total	**0**	**8**	**71**	**27**	**106**	**100%**
% Total	**0.0%**	**7.5%**	**67.0%**	**25.5%**	**100.0%**	
Median Sale Price	**n.a.**	**$373,200**	**$339,100**	**$373,500**	**$349,000**	

Note:
(a) Represents 2017 single-family, twin, condo, and townhome sales in Grand County (excluding Castle Valley).

Sources: UtahRealEstate.com, 2018; BAE, 2018.

Mobile homes present another opportunity for the local workforce to purchase homes in the Moab area; however, as shown in Table 27, most of the area's work force cannot even afford to purchase those more affordable units. Based on 2017 mobile home sale data provided by UtahRealEstate.com, summarized in Table 28, none of the mobile homes sold were affordable to the senior couple, river rafting guide, or the hotel clerk / waiter household. Only one unit sold was affordable to the construction worker / retail clerk household. The firefighter and elementary school teacher could afford eight of the 17 mobile homes sold.

Table 27: Who Can Afford to Buy a Manufactured Home in Grand County?

Who? This shows an example of a prototypical household in the Moab Area and its annual household income		What Is Affordable? What home price is affordable, and how much can this household afford to pay monthly? (b)	How Much Home? What percent of a typical home can they afford? (b) 2017 Median Sale Price $240,000(a)	Homes Available? Based on homes sold in Grand County in 2017
	Senior couple living on social security **Income: $21,000**	Affordable Home Price: $76,839 Affordable Monthly Payment $525	32%	**0% affordable**
	River rafting guide **Income: $23,450**	Affordable Home Price: $85,767 Affordable Monthly Payment $586	36%	**0% affordable**
	Hotel desk clerk and waiter w/ two children **Income: $39,370**	Affordable Home Price: $144,018 Affordable Monthly Payment $984	60%	**0% affordable**
	Part-time retail and construction worker with one child **Income: $45,025**	Affordable Home Price: $164,802 Affordable Monthly Payment $1,126	69%	**1 unit (5.9%) affordable**
	Firefighter and elementary school teacher with two children **Income: $64,670**	Affordable Home Price: $236,664 Affordable Monthly Payment $1,617	99%	**8 units (47.0%) affordable**

Note:
(a) Represents the median sale price for mobile home sales, including land, in 2017.
(b) This assumes households pay 30 percent of their gross income for housing.

Sources: Grand County, 2017; Utah Department of Workforce Services, 2017; Insurance.com, 2017; Bankrate.com, 2017; UtahRealEstate.com, 2018; BAE, 2018.

Table 28: Sale Price Distribution for Mobile Home Sales in 2017, by Number of Bedrooms

List Price Range	Number of Units Sold 1 BRs	2 BRs	3 BRs	4+ BRs	Total	% Total
Mobile Homes						
Less than $150,000	0	1	0	0	1	**5.9%**
$150,000-$174,999	0	0	0	0	0	**0.0%**
$175,000-$199,999	0	0	2	0	2	**11.8%**
$200,000-$224,999	0	0	3	1	4	**23.5%**
$225,000-$249,999	0	0	2	2	4	**23.5%**
$250,000-$274,999	0	0	0	1	1	**5.9%**
$275,000-$299,999	0	0	0	1	1	**5.9%**
$300,000-$324,999	0	0	1	0	1	**5.9%**
$325,000-$349,999	0	0	2	0	2	**11.8%**
$350,000-$375,000	0	0	1	0	1	**5.9%**
Total	**0**	**1**	**11**	**5**	**17**	**100%**
% Total	**0.0%**	**5.9%**	**64.7%**	**29.4%**	**100.0%**	
Median Sale Price	**n.a.**	**$149,000**	**$235,200**	**$240,000**	**$240,000**	

Note:
(a) Represents 2017 mobile home sales in Grand County (excluding Castle Valley).

Sources: UtahRealEstate.com, 2018; BAE, 2018.

Rental Housing Affordability

Using the rental data presented in Table 17, in the Residential Real Estate section, as a representation of the general range of Moab area apartment rental rates, BAE calculated the most affordable apartment housing option for each of the prototypical households, excluding utility costs. In instances where none of the area's apartment units are affordable, BAE presents the proportion of the most affordable unit(s) available to the subject household.

Rental housing is priced more reasonably, although there is a shortage of units available for rent. The results presented in Table 29 show that none of the available apartment units are affordable to the senior couple living on social security. At best, this household could afford 67 percent of a studio apartment rent, and 65 to 72 percent of a 1-bedroom apartment rent in an older apartment complex like the Grand Hotel. The river rafting guide fares slightly better, being able to afford 76 percent of a studio rent and 73 to 82 percent of a one-bedroom apartment rent in the Grand Hotel. Very-low income households (50 percent of AMI) cannot afford any market-rate studios at the Hoodoo Village, a newly built apartment complex. Households that were above-moderate income (80 percent of AMI) can afford market-rate housing, but there is limited inventory available. The Moab Area needs more housing for extremely low-, very low-, and low-income households, especially for workers that serve the area's tourism economy.

Table 29: Who Can Afford to Rent an Apartment in Grand County?

Who? This shows an example of a prototypical household in the Moab Area and its annual household income		What Is Affordable? How much can this household afford to pay for housing costs monthly?	How Much Apartment? What percent of a market rate apartment can they afford (See Table 17) (a)
	Senior couple living on social security **Income: $21,000**	Affordable Monthly Rent $525	67% of a Studio in the Grand Hotel (b) 65%-72% of a 1-Bedroom in the Grand Hotel (b)
	River rafting guide **Income: $23,450**	Affordable Monthly Rent $586	76% of a Studio in the Grand Hotel (b) 73%-82% of a 1-Bedroom in the Grand Hotel (b)
	Hotel desk clerk and waiter **Income: $39,370**	Affordable Monthly Rent $984	100% of apartment units in the Grand Hotel, and a studio in Hoodoo Village
	Part-time retail and construction worker with one child **Income: $45,025**	Affordable Monthly Rent $1,126	100% of apartment units in the Grand Hotel, and a studio in Hoodoo Village
	Firefighter and elementary school teacher with two children **Income: $64,670**	Affordable Monthly Rent $1,617	100% All apartment units in the Grand Hotel and Hoodoo Village

Notes:
(a) Represents the proportion on an apartment unit the household could afford, excluding utility costs.
The utility allowance is based on 2017 figures provided by the Housing Authority of South Eastern Utah for apartment units.

(b) The Grand Hotel is an older apartment complex within the City of Moab that represents one of the more affordable apartment options in the area. Please refer to Table 17 for more details.

Sources: Grand County, 2017; Utah Department of Workforce Services, 2017; Housing Authority of Southeastern Utah, 2017; BAE, 2018.

Visually comparing the prototypical households' monthly housing allowances to the sample of available unfurnished single-family rental properties listed in Table 18 reveals that these households would have similar difficulty affording single-family rental properties. As with the apartments, the senior couple and river rafting guide would only be able to afford to rent a

single-family home if they shared the cost with at least one housemate. The hotel desk clerk and waiter, a single-teacher, and the part-time retail clerk and construction worker could afford two of the sample units, while the firefighter and elementary school teacher could afford four of the five sample units.

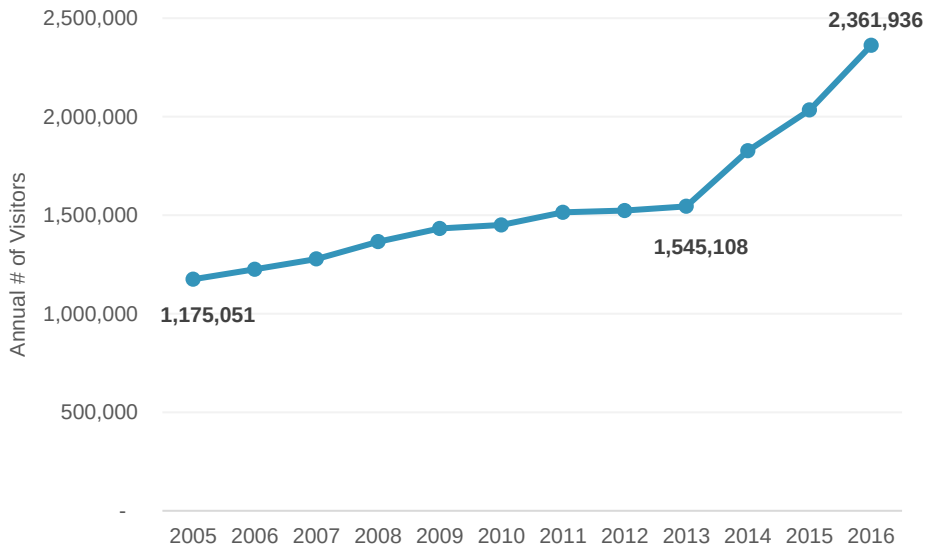
Initial takeaways from this analysis are that the Moab area needs more housing opportunities for smaller extremely low-, very-, and low-income households, such as seniors, and hospitality and recreation workers that service the area's tourism economy. Providing appropriate housing for these households, such as apartments and smaller for-sale products such as condominiums reserved for area residents rather than second homeowners, could free up single-family rental properties currently serving this demographic, and make more single-family rentals available for very low- to moderate-income family households. In light of competition for single-family homes from outside markets (e.g., second homebuyers and visitors seeking nightly rentals), efforts should also focus on maintaining and preserving the existing single-family rental stock available to the area's workforce.

Commercial Real Estate Market Conditions

Hotels

The Moab Area is known for its iconic landscapes and abundant outdoor recreational opportunities that support a vibrant tourism economy. The area is home to Arches and Canyonlands National Parks, Dead Horse Point State Park, and the Manti-La Sal National Forest. According to the National Park Service, visitation to Arches and Canyonlands soared in the last decade. Between 2005 and 2016, visitation doubled, from 1.18 million in 2005 to 2.36 million in 2016, which translates into an average annual increase of 6.6 percent per year. It is worth noting that visitation continued to increase through the Great Recession, even as tourism fell in other parts of the country. Since 2013, visitation has increased at a rapid pace, highlighting the area's attraction as an "Adventure Capital".

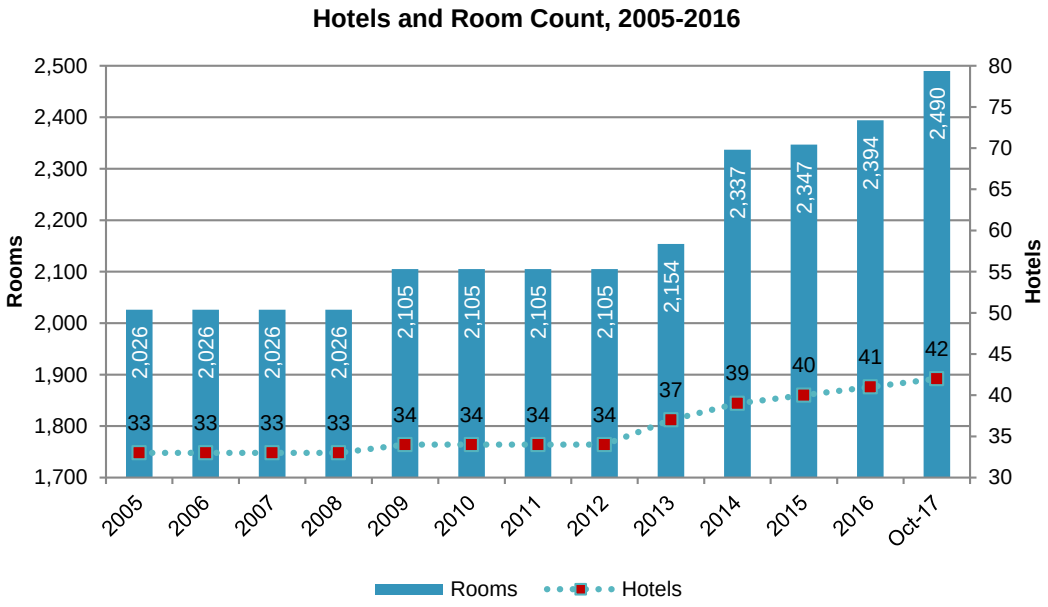
Figure 7: Annual Visitation to Arches and Canyonlands National Park, 2005-2016



Sources: National Park Service, Summary of Visitor Use By Month and Year (1979-Last Calendar Year), 2018; BAE, 2018.

The increase in visitation has fueled rapid growth in the hotel and lodging sector. According to STR, a private data vendor that tracks hotel performance, there were 42 lodging establishments totaling 2,490 rooms in Grand County as of October 2017, with most located within the City of Moab. Between 2005 and 2017, the number of rooms increased from 2,026 to 2,490, representing a 22.9 percent increase in room inventory. As shown in the table on the following page, the increase in hotel supply mirrors the steady climb in visitation to the area.

Figure 8: Hotels and Rooms Tracked by STR, Grand County, 2005-2017



Sources: STR, 2017; Grand County, 2017; City of Moab, 2017; BAE, 2018.

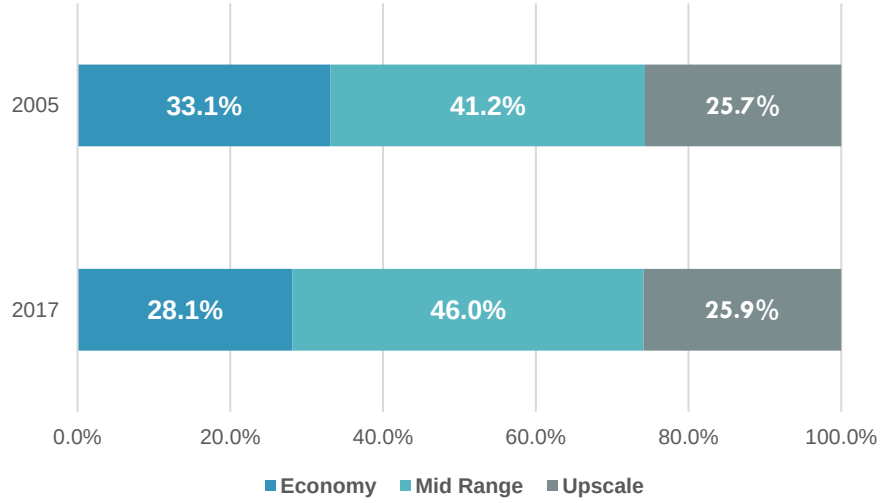
In addition to the expansion in room supply, there was a notable level of transaction activity involving Moab Area hotel properties. Table 30 shows the year that hotels became affiliated with their current brand or chain. This captures instances in which the hotel was sold to a new operator or when hotels switched brands. Since 2010, an average of one hotel per year changed its affiliation, with most new operators being national brands such as Best Western or Quality Suites. This suggests in response to rising visitation, national brands were not only entering the market by building new hotels, but also by acquiring existing facilities.

Table 30: Hotels that Changed Affiliation, 2005-2017

	Number		Share of Total	
Year	Rooms	Hotels	Rooms	Hotels
2005	50	1	2.5%	3.0%
2006	0	0	0.0%	0.0%
2007	0	0	0.0%	0.0%
2008	0	0	0.0%	0.0%
2009	0	0	0.0%	0.0%
2010	80	1	3.8%	2.9%
2011	75	1	3.6%	2.9%
2012	75	1	3.6%	2.9%
2013	66	1	3.1%	2.9%
2014	81	1	3.5%	2.8%
2015	0	0	0.0%	0.0%
2016	0	0	0.0%	0.0%
2017	97	2	27.1%	50.0%
Total Change	**524**	**8**	**22.0%**	**21.6%**

Note:
This table shows the year in which properties changed affiliations and became associated with their current brand or chain.
Sources: STR, 2017; BAE, 2018.

Figure 9: Hotels by Class, Grand County, 2005 and 2017



Sources: STR, 2017; BAE, 2018.

Between 2005 and 2017, inventory in the Moab area has shifted away from economy hotels to midscale and upscale establishments. In 2005, one-third of hotel rooms were in economy hotels, which includes brands such as Super 8, Days Inn, and Motel 6. In 2017, the share of rooms in economy hotels had dropped, with a greater proportion concentrated in mid-range and upscale establishments, which typically have more amenities and charge higher rates.

Analysis of Selected Midscale and Upper Midscale Hotels

BAE reviewed aggregated data for 11 selected hotels representing mid-range properties, most of which were newly constructed or renovated after 2000. This class reflects brands that expanded the most in recent years, and chains likely to enter the Moab area. Examples include Homewood Suites and the Holiday Inn Express. Appendix A shows a participation list of the hotels selected for this analysis.

As shown in Table 31, between 2011 and 2016, inventory among this selected group of mid-range hotels increased from 234,153 to 328,897 room nights per year, equivalent to a 40.5 percent increase, which was a significant expansion in supply. This was owing to a combination of new hotels in this category that opened (Comfort Suites, the Fairfield Inn, and Homewood Suites), and hotels that added rooms (Best Western).

Between 2011 and 2016, room demand, which refers to the number of rooms sold, outpaced the increase in supply. Room demand rose from 155,806 to 239,838, equal to a 53.9 percent increase, which was faster than the supply growth of 40.5 percent. This is notable because when room demand outpaces supply growth, this can indicate pent-up demand for mid-scale product, a robust tourism economy with strong annual growth that expands the

demand pool, or a combination. New hotels that entered the market did not have trouble filling rooms, and there was sufficient market demand to absorb the new inventory.

Table 31: Hotel Market Overview, Moab Area, 2011 – September 2017

Historic Overview (2011-2016)

Year	Occupancy Rate	Average Daily Rate	RevPAR (a)	Room Demand (b)	Room Supply
2011	66.5%	$123	$82	155,806	234,153
2012	69.1%	$128	$89	161,891	234,330
2013	68.0%	$134	$91	164,246	241,690
2014	69.2%	$144	$99	192,294	278,059
2015	69.9%	$153	$107	221,786	317,154
2016	72.9%	$162	$118	239,838	328,897

Current Market Overview (October 2016 - September 2017)

Month	Occupancy Rate	Average Daily Rate	RevPAR (a)	Room Demand (b)	Room Supply
Oct-16	84.9%	$179	$152	25,409	29,915
Nov-17	65.1%	$102	$66	18,845	28,950
Dec-16	37.6%	$79	$30	11,249	29,915
Jan-17	25.2%	$76	$19	7,532	29,915
Feb-17	45.1%	$86	$39	12,175	27,020
Mar-17	72.9%	$156	$114	21,801	29,915
Apr-17	85.5%	$204	$174	24,765	28,950
May-17	92.0%	$209	$192	27,533	29,915
Jun-17	92.0%	$197	$181	26,631	28,950
Jul-17	87.6%	$186	$162	26,196	29,915
Aug-17	86.9%	$181	$158	25,994	29,915
Sep-17	93.9%	$209	$196	27,192	28,950

Daily Averages (c)

Day of Week	Occupancy Rate	Average Daily Rate	RevPAR (a)
Sunday	66.2%	$160	$106
Monday	67.4%	$159	$107
Tuesday	68.2%	$159	$109
Wednesday	69.0%	$159	$110
Thursday	70.2%	$162	$114
Friday	77.8%	$167	$130
Saturday	78.7%	$167	$131
Total	**71.1%**	**$162**	**$115**

Notes:
(a) RevPAR, or Revenue per Available Room, is calculated by dividing total room revenue by the total room supply for a given period. Occupancy Rate multiplied by the Average Daily Rate (ADR) will closely approximate RevPAR.
(b) Room Demand represents the number of rooms sold over the course of a given time period, excluding complimentary rooms.
(c) Daily Averages calculated over the last three years, from October 2014 to Septenber 2017.

Sources: STR, 2017; BAE, 2018.

Remarkably, average nightly rates and occupancy also improved between 2011 and 2016, which is noteworthy given the sizeable increase in room supply. Between 2011 and 2016, mid-range hotels increased their rates from an average of $123 per night in 2011 to $162 per night in 2017, equivalent to a 31.8 percent increase. At the same time, occupancy rates

improved, rising from 66.5 percent in 2011 to 72.9 percent in 2016. In general, hotel occupancy rates exceeding 70 percent is an indicator of a strong lodging market. This suggests that the Moab Area could continue to attract and absorb more midscale hotels. In fact, a review of building permit data shows that there are seven more hotels either under construction (Hyatt Place, the Hilton Hoodoo, and Mainstay Suites) or in the development pipeline.

Lodging Outlook

Based on interviews with brokers active in the market, lodging is the strongest commercial product type in the Moab Area. Brokers frequently receive calls from national hotel chains seeking available sites. Many operators are willing to pay a premium for land, with the current going price at $30 to $40 per square foot for land in properly zoned commercial areas within the Moab city limits. In fact, speculative hotel developments are driving up land costs and crowding out other commercial uses, such as restaurants, which cannot afford to pay the same prices given their economic fundamentals. Based on the current economic trajectory, brokers expect local hotel demand to remain strong, buoyed by a strong tourism economy driven by overall growth in Utah and Colorado.

Retail

Retail activity within Grand County is concentrated within Downtown Moab and along the Highway 191 commercial corridor. Downtown Moab, clustered around Main and Center Streets, represents the area's historic shopping district and offers an array of shops in single- and two-story attached structures. Moving away from the downtown core, retail consists of single-story, free-standing buildings or shopping centers accessible by surface parking lots.

Costar, a private data vendor, tracks 58 retail properties in the Moab area, which contained 380,000 square feet of retail, with almost all located within the City of Moab. An overwhelming majority (87.9 percent) of retail spaces were small, free-standing buildings of less than 10,000 square feet. The City also has a few shopping centers anchored by grocery and discount stores (e.g., City Market, Walker Drug Company, Shopko).

Table 32: Retail Inventory, Grand County, Q1 2018

	Number of Buildings		Total Square Feet	
Year	**#**	**%**	**#**	**%**
0 to 4,999 square feet	31	53.4%	77,138	20.3%
5,000 to 9,999 square feet	20	34.5%	137,360	36.2%
10,0000 to 19,999 square feet	3	5.2%	38,858	10.2%
20,000 square feet or more	4	6.9%	126,337	33.3%
Total	**58**	**100.0%**	**379,693**	**100.0%**

Sources: Costar; BAE, 2018.

Retail Rents

There was limited inventory available for lease in the Moab Area as of Q4 2017. According to brokers interviewed for this study, rents in Downtown Moab and area strip retail centers with

strong anchors commanded the highest rents, ranging between $2.00 and $2.50 per square foot, modified gross. There is one active listing north of downtown near a cluster of hotels for a new, 18,000 square-foot retail development. The current asking rent is $2.00 per square foot, triple-net, and the spaces will be divisible as small as 1,225 square feet.

Table 33: Active Retail Listings, Grand County, Q4 2017

Image	Address	Property Type	GFA (sf)	Rent/SF/Month Low	Rent/SF/Month High	Lease Type	Year Built
	**1863 N. 191 Hwy**	Retail	18,000		$2.00	NNN	Under construction

Sources: ListSource, 2017; CoStar, 2017; BAE, 2018.

Retail Outlook

Despite the strong rents within certain areas, Grand County has seen limited retail development. Building permit data provided by Grand County and the City of Moab show that between 2010 and 2017, there were only four building permits issued for retail or restaurant projects in the Moab area, of which three were additions to existing restaurants.

Brokers indicate that the reason newer retail space has not been built is because of high land costs and limited available land. There was agreement among those interviewed that the Moab Area needs more eating and drinking establishments to accommodate the influx of tourists. As one broker noted, the significant increase in hotel development has not been accompanied by a commensurate increase in restaurants, which has resulted in long wait times at existing establishments. Unfortunately, older retail spaces do not have the infrastructure for restaurants, and with limited vacant land, retail must compete with hotels for developable land. Despite these challenges, interviews suggested pent-up demand for additional retail product, especially for businesses built around tourism.

Office

Office buildings in the Moab area are scattered, and consist mostly of small, older, single-user buildings. Costar tracks 12 office properties in the Moab area totaling 50,205 square feet. Eleven of the 12 office buildings contain less than 10,000 square feet. BAE supplemented the Costar data with additional research, drawing on the local commercial brokers with knowledge of newer office buildings.

Table 34: Office Inventory, Grand County, Q1 2018

	Number of Buildings		Total Square Feet	
Year	**#**	**%**	**#**	**%**
0 to 4,999 square feet	9	75.0%	23,496	46.8%
5,000 to 9,999 square feet	2	16.7%	14,709	29.3%
10,0000 to 19,999 square feet	1	8.3%	12,000	23.9%
20,000 square feet or more	0	0.0%	0	0.0%
Total	**12**	**100.0%**	**50,205**	**100.0%**

Sources: Costar; BAE, 2018.

Office Rents

Table 35 below highlights two office buildings built after 2016. Both are Class A, two-story properties built by owner occupants who were unable to identify suitable leasable space and decided to build their own building for owner occupancy. In addition, given the limited office inventory, speculative office space was built on separate floors, which are leased to other businesses. These are shared workspaces, where freelancers or businesses rent private offices but share common facilities like conference rooms and reception areas.

Table 35: Office Inventory, Leased and Currently Listed Properties, Grand County, Q4 2017

Name/Address Stories/Year Built	Total Size (sf) Space for Lease (sf) Occupancy Rate # Available	Asking Rent ($/sf/mo) Lease Type	Details
Newly Constructed Leased Office Properties			
Moab Realty Office Building 301 S. 400 E / Built 2017 	9,000 total sf 6,000 sf owner occupied 3,000 sf first floor co-working space with individual offices rented on a monthly basis 90% occupied	$1.66/sf/mo Full service	Newly constructed Class A office Second floor is owner occupied by the building owner. The first floor contains 8 offices, rented on a monthly basis. Leased area includes eight offices, conference room, and reception area.
Larson & Company Building 285 S. 400 East / Built 2016 	8,000 total sf (estimate) 4,000 sf owner occupied 4,000 sf second floor co-working space with individual offices rented on a monthly basis 2 co-working offices available 78% occupied	$750/mo - 200 sf office $500/mo - 140 sf office Full service	Newly constructed Class A office First floor is owner occupied. Second floor contains 9 offices, rented on a monthly basis. Rent includes wifi, ability to use conference room and shared facilities and equipment.
Currently Listed Office Properties for Lease			
1030 Bowling Alley Lane 	550 sf available	$1.00/sf/mo NNN	
420 Kane Creek Blvd. 	3,000 sf available	$0.57-$1.43/sf/mo	Office/flex space

Sources: ListSource, 2017; CoStar, 2017; Moab Ad-Viser, 2017; BAE, 2018.

The rent for the Class A office space ranges from $1.66 to $2.00 per square foot in the highlighted buildings. This was consistent with assessments from local brokers, who estimated rents for Class A office within Downtown Moab range from $1.50 to $2.00 per square foot, full service. These co-working spaces are leased to management companies, engineering firms, and lenders, many of whom cannot find Class A product elsewhere in the market. The occupancy rates were 78 percent and 90 percent for each building.

Office Outlook

Professional services, such as finance, insurance, and real estate (FIRE), along with scientific and technical services, traditionally lead demand for office space. According to employment data presented earlier in this report (see Table 13), these sectors supported 297 jobs in Grand County in 2016 (5.8 percent of total jobs). Still, FIRE and other technical jobs increased moderately since 2011 (280 jobs), which suggests that there may be potential for a limited amount of new office development.

Brokers confirmed this assessment, stating that although there is not substantial demand for new office space, some pent-up demand exists, particularly among existing businesses looking to expand, and from healthcare professionals. Building permit data show there were six newly constructed offices built between 2010 and 2017, averaging about one new building per year. The majority were built by existing businesses, echoing the finding that businesses seeking to expand often cannot find Class A space to lease and opt instead to build their own spaces.

Moreover, brokers cited the same challenge faced in the retail market, in that office developers must compete with hotels for developable land. Moab Realty and the Larson Building, (two relatively newly built office buildings) were built because the businesses already controlled the land. Brokers cited difficulty finding Class A office space for clients, many of whom are healthcare professionals or directly involved in management or sale of real estate. One broker estimated that the current market could likely absorb a limited amount of new office development (approximately 15,000 square feet).

Financial Feasibility Assessment

The feasibility assessment uses static pro forma financial feasibility models to provide a snapshot the economics of developing seven development prototypes, including office, retail, hotels, overnight rentals (townhomes and condominiums), apartments, and single-family homes. The purpose is to determine whether these products are financially feasible under current market conditions ("baseline") and if they are, how much room there is in the development budget to contribute towards an affordable housing requirement, while still maintaining development feasibility.

Development Prototypes

The development prototypes model patterns of where projects have historically been built. BAE reviewed building department data for projects permitted within the City of Moab and Grand County between 2010 and 2017 and selected a "prototypical project" for each land use based on projects that were most frequently built. For example, hotel developments have clustered within the City of Moab in commercially zoned districts, with many averaging between 80 to 100 rooms. Also, the County has permitted multiple overnight rental projects in areas zoned Highway Commercial, so these prototypes were modeled in the feasibility analysis.

Four residential uses were analyzed: apartments, single-family homes, and townhomes and condominiums permitted for overnight rentals.[9] Single-family homes are stand-alone, detached houses that are custom-built and often constructed one-at-a-time. Townhouses are a form of multi-unit housing built as a series of homes connected to other houses by common sidewalls. Apartments contain multiple dwelling units leased for rent. Condominiums can appear like apartments, but units are owned by individuals rather than a landlord. Condominium owners own the interior space of their unit and an undivided interest in communal areas.

This analysis considers development feasibility of product types through the lens of developers and makes assumptions about whether products are rented or sold, but does not distinguish how products are occupied by the end-user (e.g. primary residence, secondary home, vacation rental, long-term lease, etc.). In crafting an assured housing policy, the City and County can make policy decisions related to use, but this distinction is not analyzed in this report. In

[9] It should be noted that each residential prototype may be eligible for overnight rental, with eligibility defined by the regulations in the underlying zoning district. There is a difference between prototype (e.g. condominium, apartment) and use (e.g. short-term rental or secondary residence), and this analysis does not take a position on use. Rather, the feasibility analysis models historic building permit patterns, and identifies in which zones high levels of permit activity are observed. In reviewing the building permit, there was a notable level of permit activity related to townhouses and condominiums built in Grand County's Highway Commercial Zone, which permits overnight rentals. Therefore, this prototype was modeled for the feasibility analysis. At the same time, the apartments were modeled assuming development within the City of Moab's R-3 zone, where overnight rentals are prohibited.

general, apartments, office, retail, and hotels were analyzed as rental-income generating properties, while the remaining products were assumed for-sale.

The residential prototypes assumed single-family homes built in Grand County's Rural-Residential Zone, townhomes and condominiums in Grand County's Highway Commercial Zone, and apartments in the City of Moab's R-3 zone. Hotel, office, and retail projects were modeled assuming the City of Moab's C-3 zone.

To develop the footprint for each prototype, BAE reviewed the zoning code for each district and identified key regulations that affect the development footprint, including lot coverage, maximum dwelling units per acre, parking ratios, setbacks, open space requirements, building heights, etc. A basic schematic design was developed for each prototype, assuming adherence to the regulations in the underlying zoning district. An important assumption was made to retain surface parking because this is significantly more cost effective than structured or underground parking. Surface parking also reflects the predominant development pattern observed in most projects.

Assumptions

BAE conducted extensive research on inputs for the financial feasibility analysis, including acquisition and construction costs, sales prices, and rents. A summary of the research informing each key assumption is described below.

- **Land Costs** – For each land use, BAE reviewed available list prices for vacant land that sold between 2015 and 2017, and interviewed brokers and developers of commercial and residential projects currently active in the Moab area.
- **Construction Costs (hard costs, soft costs, and financing costs)** – For each prototype, BAE estimated per square foot hard costs based on a review of R.S. Means, a construction cost manual commonly used in the construction industry for cost estimation purposes, with a location factor applied to adjust for costs in the Moab area. BAE also conducted ten interviews with local contractors, developers, and real estate brokers to further corroborate costs. Soft costs and financing costs were estimated based on industry standards and current interest rates.
- **Residential Sales Prices** – BAE set residential sales price assumptions based on review of prices for single-family homes, condominiums, and townhomes built after 2000. Newer homes tend to sell for a premium compared to older houses, providing a better indicator of the prices that can be achieved for new construction that would be subject to assured housing requirements.
- **Residential and Commercial Rents** – BAE used rents for comparable new residential, office, and retail developments built recently in the Moab area.
- **Hotel Rates** – Average daily rates were set based on STR's performance report for select mid- to upper-scale hotels.
- **Cap Rates** – BAE compiled national and regional cap rates and researched variations by market area through developer interviews.

Sensitivity Analysis

Real estate markets are cyclical, and the development costs, sales prices, and rents can vary across the business cycle. For each prototype, BAE conducted a sensitivity analysis to capture conditions under moderate and strong market scenarios. This allows the City and County to understand how feasibility may change when market conditions fluctuate. For the moderate market, data for land prices, construction costs, rents, and sales prices were taken from 2014, which represented a mid-point in the recovery after the recession. Inputs for the strong market were taken from 2017.

Feasibility Thresholds

The following two metrics were used to define development feasibility:

- Return on Total Development Cost (ROC) – This metric divides profit by total development cost, to judge overall project feasibility. It can be considered as a simple profit margin, irrespective of how a project is financed between debt and equity. In other words, ROC is useful because it allows comparison across all real estate project types (whether income-producing or for-sale units), irrespective of individual choices to leverage equity through use of debt. It is also useful because, as a simple project margin calculation, it can be easily compared to other non-leveraged non-real estate short-term investments such as one-year corporate bonds (which are generally paying 6 to 10 percent at present). Real estate development has higher risk inherent to the investment activity, so the ROC on real estate projects should be higher than these other investment options.

- Yield on Cost (YOC) – This metric evaluates the annual stabilized Net Operating Income (NOI) compared to total development costs for rental projects only (not relevant in for-sale unit projects because these do not generate ongoing operating investment income). For the feasibility testing, each product type was assigned a minimum YOC threshold. As applicable, a project would need to meet both ROC and YOC thresholds to be considered feasible.

Real estate products require varying returns, depending on the risk of the product in each localized market. The table below highlights the minimum YOC and ROC metrics that define feasibility, based on industry standards and interviews with six local developers. It should be noted that the return and yield metrics varied from one developer to the next, and the thresholds identified for this analysis take into account the range of responses received. It is possible for developers to accept a lower return; however, the thresholds highlighted below represent somewhat conservative estimates for determining feasibility.

Table 36: Feasibility Thresholds by Land Use

Minimum Feasibility Metrics (a)		
Residential	**Return on Cost (b)**	**Yield on Cost (c)**
Single-Family Homes	15%	N/A
Townhomes	20%	N/A
Condominiums	20%	N/A
Apartments	15%	5%
Commercial		
Office	15%	7%
Retail	15%	7%
Hotel	15%	8%

Notes:
(a) These feasibility metrics were established based on interviews with local developers active in the Moab market.
(b) Return on cost is profit divided by total development cost.
(c) Yield on cost is NOI divided by total development cost. This is only relevant for rent-producing properties. Projects have to meet both ROC and YOC metrics to be deemed feasible.

Source: BAE, 2018.

Relationship Between In-Lieu Fee and Inclusionary Housing Requirement

For commercial projects that returned a "Yes" answer in the baseline evaluation, BAE tested what fee would be acceptable for the project to still meet the minimum return on cost and yield on cost metrics. The in-lieu fee is represented as a cost per square foot. The fee serves to reduce the developer's excess profit, while still enabling him or her a reasonable return to compensate for the risk inherent in development. In other words, the fees that were tested still enable developers to achieve the profit thresholds in the above table.

For residential properties feasible in the baseline scenarios, BAE ran two analyses. The first is the assessment described above, which highlights what fee level the projects can support, represented on a cost per square foot basis. A secondary analysis provides a policy option for developers to construct affordable units on-site (inclusionary housing), and evaluates what percentage set-aside developers could support, assuming homes were affordable to 80 percent AMI households. For detailed pro formas showing the in-lieu and inclusionary housing analyses, please refer to Appendix B and C, respectively.

It should be noted that the projects modeled in this analysis represent speculative developments. There is a universe of projects with outlier conditions, such as instances where owners acquired properties and have held them for a long time. These projects may be feasible due to significantly lower land costs. Built-to-suit projects with end users are another example, and are difficult to model because feasibility is based on the underlying performance of a company and its access to capital, which varies by sector and by firm. Therefore, while these projects may be feasible, these situations are not reflected in the following pro formas, which capture speculative projects introduced by developers seeking to earn a profit or return on investment.

Commercial Financial Feasibility

The table below summarizes the pro forma analysis for three commercial uses: office, retail, and hotels. Under current market conditions, only hotels can support paying a fee for workforce housing. Hotels were feasible under both moderate and strong market conditions, which correspond to average daily room rental rates of $150 to $175 per night. The pro forma analysis shows that hotels can support a fee of between $5 and $15 per square foot, depending on the strength of the market. For a prototypical 80-room hotel (60,000 square feet), this translates into a per-project supportable fee of $300,000 to $900,000. This is equivalent to between two to five percent of total development costs.

Table 37: Summary of Proforma Analysis for Commercial Land Uses

	Office		Retail		Hotel	
						
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline (a)						
Location, Zoning	City of Moab, C-3		City of Moab, C-3		City of Moab, C-3	
Prototypical Building Size	10,000	10,000	10,000	10,000	60,000	60,000
Site Size (sf)	15,500	15,500	20,500	20,500	48,000	48,000
Total Number of Stories (Bldg)	2	2	1	1	3	3
Parking Type	Surface	Surface	Surface	Surface	Surface	Surface
FAR	0.65	0.65	0.49	0.49	1.25	1.25
Total Dev Cost/SF (inc. land)	*$ 213*	*$ 253*	*$ 233*	*$ 286*	*$ 246*	*$ 263*
Rent (psf or per hotel REVPAR)	$ 18.00	$ 24.00	$ 24.00	$ 30.00	$ 105.00	$ 122.50
Return On Cost - Baseline	-8.4%	12.0%	11.7%	24.0%	39.9%	63.4%
Yield on Cost - Baseline	5.5%	6.2%	6.7%	6.8%	9.1%	9.8%
Baseline Feasible? (b)	No	No	No	No	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5.00**	**$ 15.00**
New Fee for Prototype Project					$ 300,000	$ 900,000
Return On Cost with Fees					36.9%	54.1%
Yield on Cost with Fees					8.9%	9.2%
Feasible with Fee? (b)					Yes	Yes
New Res Fee, as % of Total Dev Costs					2.0%	5.4%

Notes:
a) See Appendix for detailed assumptions and proformas for each land use type.
b) Financial feasibility evaluated on 2 metrics

ROC =	15.0%		
YOC :	Retail:	Office:	Hotel:
	7.0%	7.0%	8.0%

Source: BAE, 2018.

Rents for office and retail space were not high enough to offset the cost of new construction. Retail in strong markets, like those in downtown Moab, came close to achieving baseline feasibility, but fell short of meeting the minimum seven percent yield on cost established for this product type. Retail properties in prime downtown corridors with higher rents could theoretically reach baseline feasibility. However, given the limited office and retail

development in recent years in both the City of Moab and Grand County (see Table 41 on building permit trends), charging a fee for these uses may discourage projects and make designing financially feasible projects even more difficult. BAE does not recommend charging a fee on retail or office development.

Residential Financial Feasibility

The table below summarizes the proforma analysis for the four residential uses. The development programs assumed single-family homes built in Grand County's Rural-Residential Zone, townhomes and condominiums in Grand County's Highway Commercial Zone, and apartments in the City of Moab's R-3 zone.

Of the four residential prototypes, here is a summary of the findings:

- **Townhomes and condominiums were the strongest residential product.** Townhouses could support paying an in-lieu fee between $4 to $8 per square foot or an inclusionary requirement between six to eight percent in the moderate and strong markets.

- **Condominiums could not support paying a fee in the moderate market but were feasible in the strong market**, where an in-lieu fee of $5 was acceptable. This was equivalent to an inclusionary requirement of 8 percent.

- **Apartments were not feasible under the baseline in either the moderate or strong market conditions**, largely because rents were not high enough to offset the cost of land acquisition and new development. This suggests that despite the large and growing demand for rental housing, the market will likely under-deliver this product type, unless incentives are provided to entice development. Appendix D provides a supplemental analysis that shows rental apartments could be feasible if the City or County allowed greater density for apartment projects.

- **Single-family homes could support paying a small fee.** BAE tested the impact of charging fees ranging from $1 to $5 per square foot. Assuming a 2,250-square foot home, fees between $1 to $5 per square foot translated into 0.6 percent to 2.9 percent of total project costs.

- **In summary, real estate products that were feasible under baseline conditions and can support paying fees were those reliant on "outside" money**, either related to tourism (e.g., hotels, overnight rental townhomes and condominiums) or from retirees and second-homeowners from urban parts of Utah or nearby states who can afford to pay more for housing (e.g., newly built single-family homes).

Table 38: Summary of Proforma Analysis for Residential Land Uses

	Apartments		Condominiums Overnight Rentals		Townhomes Overnight Rentals		Single-Family Detached	
								
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline								
Location, Zoning	City of Moab, R-4		Grand County, HC		Grand County, HC		Grand County, RR	
Site Size (sf)	80,000	80,000	43,560	43,560	240,000	240,000	43,560	43,560
Total Number of Units	40	40	25	25	48	48	1	1
Average Unit Size	1,000	1,000	1,350	1,350	1,650	1,650	2,250	3,000
Number of Residential Floors	1	1	3	3	2	2	1	1
FAR	0.6	0.6	0.9	0.9	0.3	0.3	0.1	0.1
Parking Type	Surface		Surface		In Unit		In Unit	
Land Costs per Acre	$ 76,230	$ 119,790	$ 82,500	$ 119,790	$ 82,764	$ 130,680	$ 80,000	$ 120,000
Total Dev Cost/Unit (inc. land)	$ 171,403	$ 173,504	$ 231,757	$ 253,308	$ 253,129	$ 311,202	$ 388,761	$ 690,780
Total Dev Cost/SF (inc. land)	$ 149	$ 151	$ 149	$ 163	$ 153	$ 189	$ 173	$ 230
Sale Price/Sq. Ft.	N/A	N/A	$ 185	$ 245	$ 200	$ 250	$ 200	$ 267
Sale Price or Rent Per Unit	$ 1,200	$ 1,350	$ 249,750	$ 330,750	$ 330,000	$ 412,500	$ 450,000	$ 800,000
Return On Cost - Baseline	-13.2%	14.0%	2.4%	24.0%	23.9%	25.9%	15.8%	15.8%
Yield on Cost - Baseline	4.8%	5.7%	NA	NA	NA	NA	NA	NA
Baseline Feasible? (a)	No	No	No	Yes	Yes	Yes	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ -**	**$ -**	**$ 5.00**	**$ 4.00**	**$ 8.00**	**$ 1.00**	**$ 1.50**
New Fee per Unit	$ -	$ -	$ -	$ 6,750	$ 6,600	$ 13,200	$ 2,250	$ 4,500
Return On Cost with Fees				20.1%	20.5%	20.5%	15.1%	15.1%
Yield on Cost with Fees				N/A	N/A	N/A	N/A	N/A
Feasible with Fee? (a)				Yes	Yes	Yes	Yes	Yes
New Res Fee, as % of Total Dev Costs				*3.0%*	*2.5%*	*4.1%*	*0.6%*	*0.6%*

Note:

a) Feasibility is measured as follows:

Project must achieve at least:	20.0%	Return on Cost for Condominiums and Townhomes
	15.0%	Return on Cost for Single-Family Homes
Project must achieve at least:	5.0%	Yield on Cost for Apartments

Source: BAE, 2018.

Overnight Rental Townhouse Feasibility

Townhouses eligible for overnight rentals were feasible in both the moderate and strong market scenarios, generating returns between 23 and 25 percent in the baseline scenarios. Strong demand for overnight rentals has led to rising sales prices in recent years, with demand driven by out-of-town households seeking second homes that can also be rented for investment income. According to brokers interviewed, the price for a prototypical three-bedroom townhouse has risen from approximately $200 per square foot in 2014 (mid $300,000s) to $250 per square foot in 2017, with new townhouses currently selling in the low $400,000 range.

Brokers estimate that 80 percent of overnight rentals are sold to households outside of the Moab area as second homes. This product is attractive because they can be rented when not in use, generating revenue to pay the mortgage. Purchasers have been willing to pay a premium for this product, especially since overnight rentals are prohibited by zoning in other parts of the County. The pro forma analysis shows that townhouses eligible for overnight rentals can afford to pay between $4 and $8 per square foot in assured housing fees and still earn a 20 percent return on cost, which was deemed necessary for this product type.

Rather than charging a fee on new development, the City and County are also considering an inclusionary housing policy whereby developers would be required to build workforce units on-site. A separate pro forma analysis was completed to "translate" the in-lieu fee into an inclusionary requirement, assuming homes were affordable to households earning up to 80% of Area Median Income, based on a family of four. As shown in the pro forma analysis in Appendix C, a six percent inclusionary housing requirement approximates the impact of a $4 to $8 residential assured housing fee.

Overnight Rental Condominium Feasibility

Condominiums eligible for overnight rentals were feasible in the strong market scenario, but not in the moderate market. Although condominiums have a smaller footprint than townhomes, feasibility is largely driven by price. In 2014, two-bedroom condominiums were selling for between $200,000 and $250,000. At this price, the return on cost was six percent, below the 20 percent needed for feasibility for this product type. The price for a two-bedroom condominium has risen since 2014, to $325,000 in 2017. At this level, condominiums were feasible and could afford to pay up to $7 per square foot in assured housing fees. This equates to an eight percent inclusionary housing requirement in the strong market scenario.[10]

Single-Family Home Feasibility

Single-family detached homes are a unique product because they can be built speculatively by developers or by households for personal use. There are two prototypes usually constructed: "starter homes" targeted to first-time homebuyers with lower grade finishes, and custom homes with higher-end finishes, selling at higher prices.

The pro forma analysis models two different types of single-family construction. The first is a speculatively-built house that a contractor/developer builds and sells through a real estate broker, who charges a commission on the sale. The second is a custom home built for an end user, where the customer self-finances the construction, and there is no broker intermediary. Both assume development within Grand County's Rural Residential Zone, which has a minimum one-acre lot size. Unlike townhouses, which benefit from economies of scale during construction, the range of costs can vary significantly for single-family homes depending on the level of custom finishes. Contractors quoted costs between $135 and $400 per square foot,

[10] Condominiums can support a higher inclusionary requirement than the townhomes because the spread between the market sales price and affordable sales price is significantly smaller than for townhomes.

depending on the level of finishes and size of the home. Based on current market prices, a new single-family home could cost between $400,000 and $700,000 to develop.

The pro forma analysis suggests that the profit margins are slimmer for speculatively built single-family homes sold to third parties by real estate brokers, because the profit is distributed between the builder and broker, reducing the builder's margin. However, when a contractor builds a house for a specific end-user, there is no broker intermediary; the builder keeps the profit, and this model leads to returns on cost exceeding the minimum threshold of 15 percent.

As shown in Appendix B-7, a contractor can build a 2,250 square foot home for $390,000, all-in including land acquisition. If a contractor charges his customer $450,000 for the home, this is equivalent to a 15.8 percent return on cost. This profit margin holds for a more expensive, custom-built home as well. Selling the same home via a real estate broker would result in a somewhat lower return on cost of 12.0 percent. Still, some builders who were interviewed were willing to accept a 12.0 percent ROC.

The building permit data show a substantial level of single-family, new construction activity. The summary table below highlights that between 2010 and November 2017, there were 449 new construction permits issued for single family homes in the City of Moab and Grand County, which accounted for 52.4 percent of all housing units permitted.

Table 39: Single Family Homes Permitted, Moab and Grand County, 2010-2017

Residential Building Permits Issued (2010 - 2017) (a)				
	City of Moab	Grand County	Total Units	% of Total
Single-Family Homes	165	182	**347**	**40.5%**
Single-Family Nightly Rentals	4	98	**102**	**11.9%**
Townhomes	66	8	**74**	**8.6%**
Condominiums	15	160	**175**	**20.4%**
Apartments	72	87	**159**	**18.6%**
Total	**322**	**535**	**857**	**100.0%**

Notes:
(a) Does not include accessory dwelling units, affordable housing units, additions, or manufactured homes.
(b) Includes new single-family homes identified as use for short-term rentals.

Sources: Grand County, 2017; City of Moab, 2017; BAE, 2018.

The robust activity in single-family home construction suggests that this product may be able to support a nominal fee. Another way to analyze feasibility is to consider the impact of potential fees on total development costs. The table below highlights the impact of charging assured housing fees between $1 and $5 per square foot, as a percent of total development costs. Assuming a 2,250-square foot home, this translates into costs equivalent to 0.6 to 2.9 percent of total project costs.

Table 40: Single-Family Impact Fee Matrix as Percent of Total Development Cost

	Total Project Cost ($/SF)	Average Size (SF)	Fee Per SF, as % of Total Costs				
			$ 1.00	$ 2.00	$ 3.00	$ 4.00	$ 5.00
Starter Home	$ 179	2,250	0.6%	1.2%	1.7%	2.3%	2.9%
Custom Home	$ 238	3,000	0.4%	0.9%	1.3%	1.7%	2.2%

Source: BAE, 2018.

Although charging a fee on single-family homes increases the cost to build, if the fee is set at a reasonable level, this can be akin to rising costs related to other factors, such as an increase in the price for lumber or rising labor costs. Over time, projects can "absorb" these costs, so long as they do not create an undue burden on development and render projects infeasible. If fees are set at a supportable level, it is possible to achieve the dual goals of generating some revenue for workforce housing, without completely dampening the market for single-family home construction.

Apartments

Apartment rental projects are not feasible in the baseline scenario, in either the moderate or strong market conditions. Like condominiums, apartments in the moderate market (with average asking rents of $1,200 per unit) do not generate sufficient revenue or net operating income to achieve a positive return on cost. In the strong market scenario, with average rents at $1,350, projects are close to achieving baseline feasibility, but fall short of the minimum 15 percent return on cost established for this product type, although the yield on cost meets the minimum five percent threshold.

The pro forma analysis suggests this product type would not be able to support any assured housing fees. Moreover, given the shortage of new construction activity for apartments (see Building Permit analysis in the following chapter), and the large demand for workforce housing, it is unadvisable to charge a new fee on residential product types targeted to workforce households, such as apartments intended for long-term rental, which the City and County aim to encourage.

Revenue Estimate

This chapter steps through the analysis of historic building permit trends for residential and commercial construction within the City of Moab and Grand County, which forms the basis for the revenue estimate related to potential residential and commercial assured housing fees. In addition, this chapter explores how to structure an inclusionary housing policy, pursuant to which affordable housing units would be set-aside on-site for households earning up to 80 percent of Area Median Income.

Step 1: Compile Building Permit Data by Use

Building department data was provided for residential and commercial projects permitted in the City of Moab and Grand County between 2010 and November 2017.[11] This period represents an economic span encompassing relatively slow construction (as affected by the Great Recession), followed by a recovery and a" boom" period in recent years. This span across low, moderate, and high construction levels provides a representative time frame across an entire business cycle. However, it should be noted that this average may under- or overestimate actual construction in future years, depending on the point in the economic cycle.

Table 41: Estimated Annual Average Residential Construction, City of Moab and Grand County, 2010-2017

	City of Moab	Grand County	Total	Annual Average Units
Residential Units (a)				
Single - family Detached	165	182	347	43
Townhomes / SFR Nightly Rentals	70	106	176	22
Condominiums	15	160	175	22
Apartments	72	87	159	20
Total Units (2010-2017)	**322**	**535**	**857**	**1,714**
Commercial Projects (a)				
Retail	-	-	-	-
Office	4	3	7	14
Hotel	12	5	17	34
Total Projects (2010-2017)	**16**	**8**	**24**	**48**

Notes:
(a) This analysis captures new construction permitted in the City of Moab and Grand County between 2010 and November 2017.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

[11] Adjustments were made to the original data set to account for inconsistencies between project descriptions and other fields. The County also provided additional clarification for projects permitted for short-term rentals.

Step 2: Estimate Annual Average Net New Construction

For this step, the total new square footage permitted between 2010 and 2017 was divided by eight, to estimate annual average new construction. Between 2010 and 2017, the City of Moab and Grand County each added over 100,000 square feet of residential and commercial development, with Grand County slightly outpacing the City of Moab. While the City's development was split fairly evenly between residential and commercial projects, development in Grand County was skewed mostly towards residential projects, which accounted for 83.5 percent of total square feet permitted.

Table 42: Total Square Feet of New Construction, Residential and Commercial Projects, City of Moab and Grand County, 2010-2017

	Total Square Feet		Annual Average SF	
	City of Moab	Grand County	City of Moab	Grand County
Residential Projects (a)				
Single - family Detached	31,898	44,796	3,987	5,599
Townhomes / SFR Nightly Rentals	16,191	20,723	2,024	2,590
Condominiums	1,032	30,021	129	3,753
Apartments	2,567	2,325	321	291
Total Residential	**51,687**	**97,865**	**6,461**	**12,233**
Commercial Projects				
Retail	-	-	-	-
Office (b)	4,000	3,000	500	375
Hotel	46,314	16,334	5,789	2,042
Total Commercial	**50,314**	**19,334**	**6,289**	**2,417**
Total by Jursidiction	**102,001**	**117,199**	**12,750**	**14,650**
% Residential	*50.7%*	*83.5%*		
% Commercial	*49.3%*	*16.5%*		

Notes:
(a) This analysis captures new construction permitted in the City of Moab and Grand County between 2010 and November 2017.
(b) The building permit data did not contain square footage data for new office projects. Each office development was estimated at 8,000 square feet based on new buildings profiled in this study.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Step 3: Convert Annual Average Square Feet to Revenue

The supportable fees shown in the pro forma analyses were applied to the average annual residential and commercial development area to arrive at an estimate for annual revenue. Given the variation in feasible fees between moderate and strong markets, the proposed fees were purposely set lower than the maximum potentially feasible under strong market conditions. In many cases, the selected fees represented a midpoint between the moderate and strong market scenarios. A nominal fee, representing 0.5 percent of total development costs, was applied to single-family homes. As shown on the table on the following page, a $1 fee was applied to single-family home development, $3 for condominiums, $6 for townhomes, and $8 for hotels.

Application of these fees to the historic average annual square feet generates the revenue estimates shown below, in Table 42. Based on the stated assumptions, charging fees for residential uses could generate approximately $900,000 annually for the City and County. Revenue from hotel development would produce average annual revenue of $500,000. The City of Moab is would collect an average of $500,000 annually, driven mostly by fees collected from hotel development. Grand County would collect an average of $400,000 annually, with a somewhat more even split between revenue from residential and commercial projects.

Table 43: Annual Estimated Fee Revenue from Residential and Commercial Construction

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single - family Detached	$ 1.00	$ 31,898	$ 44,796	76,694
Townhomes / SFR Nightly Rentals	$ 6.00	$ 97,144	$ 124,336	221,480
Condominiums	$ 3.00	$ 3,095	$ 90,063	93,158
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 132,137**	**$ 259,195**	**$ 391,332**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office (b)	$ -	$ -	$ -	$ -
Hotel	$ 8.00	$ 370,514	$ 130,672	$ 501,186
Annual Revenue, Commercial Projects (a)		**$ 370,514**	**$ 130,672**	**$ 501,186**
Annual Revenue by Place		**$ 502,651**	**$ 389,867**	**$ 892,518**

Notes:
(a) The annual revenue is based the average annual square feet permitted between 2010 and 2017 in the City of Moab and Grand County. Revenue will vary year to year based on actual development activity.
(b) The building permit data did not contain square footage data was for newly constructed office projects. Each office project was estimated at 8,000 square feet based on the recently built office buildings profiled in this study.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Sensitivity Analysis for Business Cycle

The following tables model revenue in a weak market (2010) and a strong market (2016) to highlight changes in potential revenue during the peaks and troughs of an economic cycle.

While the above estimate shows an annualized income of approximately $900,000, the following tables show the potential for substantial fluctuations depending on the market cycle. Assuming a weak market mirrors the development activity from 2010, the City and County would generate only $100,000 in fees during an economic downturn. In contrast, if the economy is strong, with development activity at 2016 levels, the City and County could collect up to $1.7 million during a peak year.

Table 44: Estimated Fee Revenue, Weak Market, 2010

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single - family Detached	$ 1.00	$ 1,250	$ 17,835	19,085
Townhomes / SFR Nightly Rentals	$ 6.00	$ -	$ 84,702	84,702
Condominiums	$ 3.00	$ -	$ -	-
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 1,250**	**$ 102,537**	**$ 103,787**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office	$ -	$ -	$ -	$ -
Hotel	$ 8.00	$ -	$ -	$ -
Annual Revenue, Commercial Projects (a)		**$ -**	**$ -**	**$ -**
Annual Revenue by Place		**$ 1,250**	**$ 102,537**	**$ 103,787**

Note:
(a) The annual revenue is based the annual square feet permitted in 2010.
Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Table 45: Estimated Fee Revenue, Strong Market, 2016

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single - family Detached	$ 1.00	$ 51,358	$ 63,926	115,284
Townhomes / SFR Nightly Rentals	$ 6.00	$ 165,978	$ 232,656	398,634
Condominiums	$ 3.00	$ -	$ 237,378	237,378
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 217,336**	**$ 533,960**	**$ 751,296**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office	$ -	$ -	$ -	$ -
Hotel	$ 8.00	$ 407,368	$ 532,560	$ 939,928
Annual Revenue, Commercial Projects (a)		**$ 407,368**	**$ 532,560**	**$ 939,928**
Annual Revenue by Place		**$ 624,704**	**$ 1,066,520**	**$ 1,691,224**

Note:
(a) The annual revenue is based the annual square feet permitted in 2016.
Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Step 4: Compare Inclusionary Policy to Fee Structure

The City and County are also considering an inclusionary housing policy, whereby units could be set-aside for affordable housing in lieu of charging fees on new development. This option would only be available for multifamily projects, such as townhomes, condominiums, single-family subdivisions, and other development projects (e.g., mixed-use projects) that include sufficient market rate residential units to trigger the need to provide at least one whole inclusionary housing unit. Otherwise, it is assumed that in-lieu fees would be paid to satisfy assured housing obligations.

The pro forma analysis shows that townhomes and condominium projects could accommodate a six to eight percent inclusionary housing requirement and remain feasible. To craft a policy with a six to eight percent set-aside requires establishing a minimum project threshold. Six percent is equivalent to one unit in a 16-unit development. Eight percent is equivalent to one unit in a 12-unit project.

BAE reviewed building permit data to isolate projects with a minimum project size of at least 12 units. Between 2010 and 2017, only 13 projects met this criterion, spanning a variety of projects that included single-family PUDs, townhomes, and condominiums. In total, there were 317 housing units produced in these larger-scale projects. Applying a six percent inclusionary requirement would have created 23 units of affordable housing, or approximately three affordable units per year.

Table 46: Annual Estimated Inclusionary Units and Revenue from Residential and Commercial Construction

	City of Moab		
Projects with > 12 Units	*# of Projects*	*Total Units*	*Affordable Units (b)*
Single-Family PUDs	3	41	3
Townhomes	1	44	3
Condominiums	-	-	-
Subtotal	**4**	**85**	**6**

	Grand County		
Projects with > 12 Units	*# of Projects*	*Total Units*	*Affordable Units (b)*
Single-Family PUDs	3	76	6
Townhomes	-	-	-
Condominiums	6	156	11
Subtotal	**9**	**232**	**17**
Total	**13**	**317**	**23**

Note:
(a) This table shows the number of multi-family projects permitted between 2010 and November 2017 with a minimum project size of at least 12 units. Because the pro forma analysis showed that projects could support an inclusionary housing requirement of between six to eight percent, this set a minimum project threshold of twelve units (100/8 = 12.5).
(b) This calculates the number of affordable units that would have been required for permits issued between 2010 and November 2017.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

This low production rate highlights one of the limitations of implementing a "pure" inclusionary policy in Moab. A six to eight percent affordable housing set-aside would only work for projects with at least 12 units. While there are some large-scale projects in the Moab Area, the majority of projects built are smaller in size. For example, it is difficult to apply a six percent inclusionary requirement to a five-unit project, (0.06 x 5 = 0.3) because fractional units cannot be built. And requiring for one unit in a five-unit building is essentially equivalent to a 20 percent affordable set-aside, which results in a negative return on cost and renders the project infeasible. Unlike a fee, which can be applied to all projects regardless of size, an inclusionary

policy works only for projects that meet a minimum unit threshold, which varies depending on the feasibility test.

However, it is possible to combine an in-lieu fee option with an inclusionary policy. The City and County can structure a program whereby projects are charged a fee based on total square footage. For residential developments with more than twelve units, developers can elect to either pay the fee or build the inclusionary units on-site. Other options can be made available, such as dedicating land for affordable housing, so long as the appraised value of the land is equivalent to or higher than the required fee. Some land dedication activity could benefit workforce housing organizations that work in the area, as they report scarcity of buildable sites as a primary constraint to affordable housing production.

This would allow the City or County to charge an in-lieu fee for projects smaller than 12 units (assuming the six to eight percent inclusionary requirement) and for obligations for a fraction of an inclusionary unit for larger projects. Combining in-lieu fee provisions with inclusionary provisions can also help avoid the unintended consequence of developers choosing to undertake projects just below the threshold for inclusionary unit requirements, to avoid having to incur the expense of providing workforce units.

Considerations for Implementation

In addition to the combined fee and inclusionary structure proposed above, this section suggests other considerations related to implementation.

Exemptions for Targeted Project Types

This study assumed that certain categories of land use would be exempted from fees, including apartments, retail, and office, which were not feasible under current market conditions. In addition, other land uses, such as those built and owned primarily by non-profit, or other public-purpose organizations, could also be exempted, when the use of the buildings provides important public benefits that the City and County wish to encourage. These could include institutional uses such as churches, public schools, private schools, and public/private higher educational uses), as well as child care facilities and other social services, and public agency owned buildings (including city, state, and federal).

Many jurisdictions exempt 100 percent affordable housing projects inclusionary requirements and/or in-lieu fees. Some cities also exempt buildings smaller than a certain size threshold. For example, some communities exempt smaller projects (e.g., residential projects fewer than five units, or commercial projects less than 5,000 square feet) from inclusionary housing requirements on the theory that smaller projects lack economies of scale to be able to absorb additional costs to comply. A few jurisdictions earmark other exemptions to achieve policy goals to encourage the development of certain project types (e.g., apartments) that help to increase the supply of market rate, but relatively affordable housing types. If the City and/or County adopt assured housing policies, the will be an opportunity to consider structuring requirements to create incentives to produce certain types of development and/or to make

other types less attractive, depending on the overall policy objectives. For example, if the objective is to encourage production of market rate housing types that are relatively affordable, such as rental apartments, or modest single-family starter homes, assured housing requirements could be reduced or removed for projects that provide these types of units.

Waivers or Reductions of Requirements

Some jurisdictions waive or reduce inclusionary requirements or fees in exchange for other mechanisms to mitigate for affordable housing impacts, including building affordable units on-site, partnering with developers to build affordable units off-site, and/or allowing land donation at an equivalent value. Because the Moab Area is land constrained, and affordable housing developers indicate they face difficulty in securing sites to build their projects, the option to dedicate land instead of paying a fee, should be further explored.

Most jurisdictions also allow for a waiver request if: a) economic hardship can be demonstrated; or b) fewer affordable housing job impacts can be demonstrated, which is related to the nexus analysis in Phase 2. It is recommended that these options be allowed as part of an assured housing program, with specific standards described for how to demonstrate hardship or qualify for a reduction, to minimize administrative burden on staff.

Timing of Fee Calculation and Payment

Many jurisdictions charge in-lieu fees prior to or upon issuance of the building permit. Some cities split up the payments, allowing for partial payment later (at Certificate of Occupancy), while some allow for payments to be spread even farther apart over time, allowing for essentially a payment plan.

Based on best practices from other communities, it is recommended that the payment fee be split, at most, into two equal installments – at the time of building permit issuance and at the time of Certificate of Occupancy. This recommendation is made due to the overarching immediate need to create a permanent source of funding for affordable housing, as well as potential collection challenges if payments were spread beyond the issuance of a Certificate of Occupancy.

Phase-In of Requirements

A key component in adopting a fee or inclusionary policy will be the phase-in schedule. Most notably, many jurisdictions when first adopting a policy like this, set a future date for its implementation, and define how to treat current "pipeline" projects that would have been started without knowledge of this fee. A phase-in structure also helps to mitigate a "shock" to the economic system for some projects with smaller project margins. A phase-in allows developers to adjust their bidding development site purchases with knowledge of how the applicable requirements affect the residual land value that they can afford to pay for a site and achieve financial feasibility.

For these reasons, one recommendation is to consider a phase-in schedule for initial implementation. The fee schedule or inclusionary requirement could be phased in over a two-year period, for example, where the requirement is set at half of the full fee for the first year of applicability, rising to the full 100 percent on projects seeking building permits twelve months later.

Units Versus Fees

The City and County should also be aware that the structure of the requirements themselves can also create incentives for builders subject to the requirements. For example, jurisdictions often set in-lieu fees at levels that are far below the cost to build onsite affordable units, creating a strong incentive for project sponsors to pay fees rather than building affordable units. Additionally, when inclusionary requirements or in-lieu fees are fixed on a "per unit" basis, rather than varying by the size of the market rate units, this creates an incentive for builders to maximize the size of their market rate units, so that they can spread the cost of compliance over a greater quantity of saleable square footage, making market rate housing units less attainable to middle-income households. This report recommends tying the fee to square feet instead of units.

Policy Revisions

During economic downturns, some jurisdictions have either created special deferral programs or lowered fees across the board. Some places have built-in mechanisms that require the fees or inclusionary policy to be re-analyzed at defined time intervals. These approaches demonstrate that the requirements can be customized to adapt to downturns in the economic cycle.

Summary

Although charging a fee increases the cost to build (an inclusionary policy reduces revenue), if the fee or inclusionary requirement is set at a reasonable level, it is possible to achieve the dual goals of generating revenue to support development of affordable units, without completely dampening the market for new construction. The fee levels analyzed for this report would still enable developers to achieve their minimum return on cost and yield on cost thresholds needed to undertake projects.

Appendix A

Appendix 47: STR Selected Hotels

Name of Establishment	City & State	Zip Code	Class	Open Date	Rooms
Quality Inn Moab Slickrock Area	Moab, UT	84532	Midscale Class	Apr 1997	61
La Quinta Inns & Suites Moab	Moab, UT	84532	Midscale Class	May 2001	100
Quality Suites Moab	Moab, UT	84532	Midscale Class	Apr 1992	75
Holiday Inn Express & Suites Moab	Moab, UT	84532	Upper Midscale Class	Jun 2003	119
Comfort Suites Moab	Moab, UT	84532	Upper Midscale Class	Jun 2014	94
Fairfield Inn & Suites Moab	Moab, UT	84532	Upper Midscale Class	Oct 2014	89
Hampton Inn Moab	Moab, UT	84532	Upper Midscale Class	May 2009	79
Best Western Plus Greenwell Inn	Moab, UT	84532	Upper Midscale Class	Jun 1969	75
Best Western Plus Canyonlands Inn	Moab, UT	84532	Upper Midscale Class	Mar 1992	80
Aarchway Inn	Moab, UT	84532	Upper Upscale Class	Jun 1997	97
Homewood Suites Moab	Moab, UT	84532	Upscale Class	Sep 2016	96
			Total	11	965

Sources: STR, 2017; BAE, 2018.

Appendix B: Proforma Analysis

Appendix 48: Office Development Pro Forma

Assumes two-story office development within the City of Moab in C-3 zone

Development Assuptions		Moderate Market Baseline	Strong Market Baseline
Gross Building Area (sf)		10,000	10,000
Efficiency Ratio		100%	100%
Net Leaseable Area		10,000	10,000
Parking Ratio (spaces per square foot)		3 per 1,000	3 per 1,000
Number of Parking Spaces		30	30
Total Surface Spaces		30	30
Total Structured Parking Spaces		-	-
Total Parking Area (sf)	350	10,500	10,500
Total Number of Stories (Bldg)		2	2
Total Number of Stories (Parking)		1	1
Built FAR (ratio to 1.0)		0.65	0.65
Site Size (sf)		15,500	15,500
Site Size (acres)		0.36	0.36
Rents			
Asking Rent/SF/Year (a)		$ 18.00	$ 24.00
Development Costs			
Site Work		$ 5	$ 5
Hard Costs (b)		$ 110	$ 110
Tenant Improvements (c)		$ 15	$ 15
Parking Costs (per space surface)		$ 3,500	$ 3,500
Parking Costs (per space structured)		$ 20,000	$ 20,000
Soft Costs exc Fees (as % of hard)		20.0%	20.0%
Impact Fees			
Sewer Impact Fee (d)		$ 381	$ 381
Water Impact Fee (d)		$ 5,528	$ 5,528
Proposed Commercial Fee per sq. ft.		$ -	$ -
Financing Costs			
Loan to Cost Ratio		70.0%	70.0%
Interest Rate		6.0%	6.0%
Loan Fees		1.5%	1.5%
Construction Period (months)		18	18
Average Outstanding Balance		60.0%	60.0%
Operations			
Vacancy		10.0%	10.0%
Op Ex (% of Gross Rent) (a)		25%	25%
Cap Rate (e)		6.0%	5.5%

Development Costs	Moderate Market Baseline	Strong Market Baseline
Land	$ 310,000	$ 697,500
Land per Site sf	$ 20.00	$ 45.00
Construction Costs		
Site Work	$ 77,500	$ 77,500
Hard Costs	$ 1,100,000	$ 1,100,000
Hard Costs - Parking	$ 105,000	$ 105,000
Tenant Improvements	$ 150,000	$ 150,000
Soft Costs	$ 286,500	$ 286,500
Water Sewer Impact Fees	$ 5,909	$ 5,909
Proposed Commercial Linkage Fee	$ -	$ -
Subtotal Costs Before Financing	$ 1,724,909	$ 1,724,909
Financing Costs		
Points	$ 18,112	$ 18,112
Construction Period Interest	$ 76,920	$ 91,567
Subtotal Financing Costs	$ 95,031	$ 109,679
Total Development Costs	**$ 2,129,940**	**$ 2,532,088**
Total Development Cost per SF (excl land)	*$ 182*	*$ 183*
Total Development Cost per SF (inc. land)	*$ 213*	*$ 253*
Commerical Linkage Fee as % of TDC	*0.0%*	*0.0%*
Valuation		
Operations		
Gross Income	$ 180,000	$ 240,000
Less: Vacancy	$ (18,000)	$ (24,000)
Less: Op Expenses	$ (45,000)	$ (60,000)
Net Operating Income (NOI)	$ 117,000	$ 156,000
Value at Stabilization	$ 1,950,000	$ 2,836,364
Yield on Cost		
Value at Stabilization	$ 1,950,000	$ 2,836,364
Less: Total Development Costs	$ 2,129,940	$ 2,532,088
Profit	$ (179,940)	$ 304,276
Return on Cost	**-8.4%**	**12.0%**
Yield on Cost (NOI/TDC)	**5.5%**	**6.2%**
Project Feasible? (f)	No	No

Notes:
a) Assumes full-service lease
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
c) Estimates for tenant improvements were provided by developers active in the Moab Area building this product type.
d) Based on Sewer Impact Fees of $ 381 per project
and Water Impact Fee with 1.5" meter $ 5,528 per project
e) Cap rates were estimated based on interviews with brokers for recently sold properties.
f) Feasibility assumes a Return on Cost of 15%
and a minimum Yield on Cost of 7%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 49: Retail Development Pro Forma

Assumes single-story retail development within the City of Moab in C-3 zone

Development Assuptions		Moderate Market Baseline	Strong Market Baseline
Gross Building Area (sf)		10,000	10,000
Efficiency Ratio		100%	100%
Net Leaseable Area		10,000	10,000
Parking Ratio (spaces per square foot)		3 per 1,000	3 per 1,000
Number of Parking Spaces		30	30
Total Surface Spaces		30	30
Total Structured Parking Spaces		-	-
Total Parking Area (sf)	350	10,500	10,500
Total Number of Stories (Bldg)		1	1
Total Number of Stories (Parking)		1	1
Built FAR (ratio to 1.0)		0.49	0.49
Site Size (sf)		20,500	20,500
Site Size (acres)		0.47	0.47
Rents			
Asking Rent/SF/Year (a)		$ 24.00	$ 30.00
Development Costs			
Site Work		$ 5	$ 5
Hard Costs (b)		$ 110	$ 110
Tenant Improvements (c)		$ 20	$ 20
Parking Costs (per space surface)		$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%
Impact Fees			
Sewer Impact Fee (d)		$ 235	$ 235
Water Impact Fee (d)		$ 5,528	$ 5,528
Proposed Commercial Fee per sq. ft.		$ -	$ -
Financing Costs			
Loan to Cost Ratio		70.0%	70.0%
Interest Rate		6.0%	6.0%
Loan Fees		1.5%	1.5%
Construction Period (months)		18	18
Average Outstanding Balance		60.0%	60.0%
Operations			
Vacancy		10.0%	10.0%
Op Ex (% of Gross Rent) (a)		25%	25%
Cap Rate (e)		6.0%	5.5%

Development Costs	Moderate Market Baseline	Strong Market Baseline
Land	$ 410,000	$ 922,500
Land per Site sf	$ 20.00	$ 45.00
Construction Costs		
Site Work	$ 102,500	$ 102,500
Hard Costs	$ 1,100,000	$ 1,100,000
Hard Costs - Parking	$ 105,000	$ 105,000
Tenant Improvements	$ 200,000	$ 200,000
Soft Costs	$ 301,500	$ 301,500
Water Sewer Impact Fees	$ 5,763	$ 5,763
Commercial Linkage Fee	$ -	$ -
Subtotal Costs Before Financing	$ 1,814,763	$ 1,814,763
Financing Costs		
Points	$ 19,055	$ 19,055
Construction Period Interest	$ 84,096	$ 103,469
Subtotal Financing Costs	$ 103,151	$ 122,524
Total Development Costs	**$ 2,327,914**	**$ 2,859,787**
Total Development Cost per SF (excl land)	*$ 192*	*$ 194*
Total Development Cost per SF (inc. land)	*$ 233*	*$ 286*
Commerical Linkage Fee as % of TDC	*0.0%*	*0.0%*
Valuation		
Operations		
Gross Income	$ 240,000	$ 300,000
Less: Vacancy	$ (24,000)	$ (30,000)
Less: Op Expenses	$ (60,000)	$ (75,000)
Net Operating Income (NOI)	$ 156,000	$ 195,000
Value at Stabilization	$ 2,600,000	$ 3,545,455
Yield on Cost		
Value at Stabilization	$ 2,600,000	$ 3,545,455
Less: Total Development Costs	$ 2,327,914	$ 2,859,787
Profit	$ 272,086	$ 685,668
Return on Cost	**11.7%**	**24.0%**
Yield on Cost (NOI/TDC)	**6.7%**	**6.8%**
Project Feasible? (f)	No	No

Notes:

a) Assumes full-service lease

b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.

c) Estimates for tenant improvements were provided by developers active in the Moab Area building this product type.

d) Based on Sewer Impact Fees of $ 235 per project
and Water Impact Fee with 1.5" meter $ 5,528 per project

e) Cap rates were estimated based on interviews with brokers for recently sold properties.

f) Feasibility assumes a Return on Cost of 15%
and a minimum Yield on Cost of 7%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 50: Hotel Development Pro Forma

Assumes three-story hotel within the City of Moab in C-3 zone

Development Assuptions		Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Gross Building Area (sf)		60,000	60,000	60,000	60,000
Number of Hotel Rooms	750	80	80	80	80
Parking Ratio (a)		See (a)	See (a)	See (a)	See (a)
Number of Parking Spaces		80	80	80	80
Total Surface Spaces		80	80	80	80
Total Structured Parking Spaces		-	-	-	-
Total Parking Area (sf)	350	28,000	28,000	28,000	28,000
Total Number of Stories (Bldg)		3	3	3	3
Total Number of Stories (Parking)		1	1	1	1
Built FAR (ratio to 1.0)		1.3	1.3	1.3	1.3
Site Size (sf)		48,000	48,000	48,000	48,000
Site Size (acres)		1.10	1.10	1.10	1.10
Rents					
Average Daily Rate (b)		$ 150	$ 150	$ 175	$ 175
Occupancy Rate		70%	70%	70%	70%
RevPAR		$ 105	$ 105	$ 123	$ 123
Other Revenue per Available Room Night		$ 10	$ 10	$ 10	$ 10
Development Costs					
Site Work		$ 5.0	$ 5.0	$ 5.0	$ 5.0
Hard Costs (c)		$ 140	$ 140	$ 140	$ 140
Tenant Improvements/FFEs (per room) (d)		$ 20,000	$ 20,000	$ 20,000	$ 20,000
Parking Costs (per space) (surface)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Parking Costs (per space) (structured)		$ 20,000	$ 20,000	$ 20,000	$ 20,000
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee (e)		$ 95,520	$ 95,520	$ 95,520	$ 95,520
Water Impact Fee (e)		$ 18,320	$ 18,320	$ 18,320	$ 18,320
Proposed Commercial Fee per sq. ft.		$ -	$ 5.00	$ -	$ 15.00
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Operations					
Op Ex (% of revenue per available room)		60%	60%	60%	60%
Cap Rate (f)		6.5%	6.5%	6.0%	6.0%

Development Costs	Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Land	$ 1,200,000	$ 1,200,000	$ 2,160,000	$ 2,160,000
Land per Site sf	$ 25.00	$ 25.00	$ 45.00	$ 45.00
Construction Costs				
Site Work	$ 240,000	$ 240,000	$ 240,000	$ 240,000
Hard Costs	$ 8,400,000	$ 8,400,000	$ 8,400,000	$ 8,400,000
Hard Costs - Parking	$ 280,000	$ 280,000	$ 280,000	$ 280,000
Tenant Improvements/FFEs	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
Soft Costs	$ 2,104,000	$ 2,104,000	$ 2,104,000	$ 2,104,000
Water Sewer Impact Fees	$ 113,840	$ 113,840	$ 113,840	$ 113,840
Commercial Linkage Fee	$ -	$ 300,000	$ -	$ 900,000
Subtotal Costs Before Financing	$ 12,737,840	$ 13,037,840	$ 12,737,840	$ 13,637,840
Financing Costs				
Points	$ 133,747	$ 136,897	$ 133,747	$ 143,197
Construction Period Interest	$ 702,467	$ 717,587	$ 750,851	$ 796,211
Subtotal Financing Costs	$ 836,214	$ 854,484	$ 884,598	$ 939,408
Total Development Costs	**$ 14,774,054**	**$ 15,092,324**	**$ 15,782,438**	**$ 16,737,248**
Total Development Cost per SF (excl land)	*$ 226*	*$ 232*	*$ 227*	*$ 243*
Total Development Cost per SF (inc. land)	*$ 246*	*$ 252*	*$ 263*	*$ 279*
Commerical Linkage Fee as % of TDC	*0.0%*	*2.0%*	*0.0%*	*5.4%*
Valuation				
Operations				
Revenue - Hotel Rooms	$ 3,066,000	$ 3,066,000	$ 3,577,000	$ 3,577,000
Revenue - Other	$ 292,000	$ 292,000	$ 292,000	$ 292,000
Less: Op Expenses	$ (2,014,800)	$ (2,014,800)	$ (2,321,400)	$ (2,321,400)
Net Operating Income (NOI)	$ 1,343,200	$ 1,343,200	$ 1,547,600	$ 1,547,600
Value at Stabilization	$ 20,664,615	$ 20,664,615	$ 25,793,333	$ 25,793,333
Yield on Cost				
Value at Stabilization	$ 20,664,615	$ 20,664,615	$ 25,793,333	$ 25,793,333
Less: Total Development Costs	$ 14,774,054	$ 15,092,324	$ 15,782,438	$ 16,737,248
Profit	$ 5,890,561	$ 5,572,291	$ 10,010,895	$ 9,056,085
Return on Cost	**39.9%**	**36.9%**	**63.4%**	**54.1%**
Yield on Cost (NOI/TDC)	**9.1%**	**8.9%**	**9.8%**	**9.2%**
Project Feasible? (g)	Yes	Yes	Yes	Yes

Notes:

a) The parking requirement for a hotel/motel is one parking space per guestroom.

b) Average daily rates were derived from STR based on 2016 average rooms rates for mid- and upper-mid range hotels currently operating in Moab, Utah.

c) Hard costs were based on interviews with local developers and data from RS Means with a location factor applied to reflect construction costs in Moab.

d) Furniture, fixtures, and equipment costs were estimated for mid- and upper-range hotels, which are associated with higher grade finishes.

e) Based on Sewer Impact Fees of $ 1,194 per unit
and Water Impact Fees of $ 229 per room

f) Cap rates were estimated based on data provided by brokers.

g) Feasibility is based on a Return on Cost of 15%
and a minimum Yield on Cost of 8%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 51: Apartment Development Pro Forma

Assumes multifamily rental within the City of Moab in R-3 zone

Development Assuptions		Moderate Market Baseline	Strong Market Baseline
Site Size (sf) (a)		80,000	80,000
Less: Setbacks		(12,722)	(12,722)
Less: Additional Open Space (% lot)	25%	(7,278)	(7,278)
Building Footprint (sf)		60,000	60,000
Number of Units		40	40
Average Unit Size (mix of studios, 1s, 2s)		1,000	1,000
Net Residential Space (sf)		40,000	40,000
Common Area	15.0%	6,000	6,000
Total Residential Space (sf)		46,000	46,000
Parking Ratio (spaces per unit)		1.5	1.5
Number of Parking Spaces		60	60
Total Parking Area (sf)	350	21,000	21,000
Number of Residential Floors		1	1
Total Number of Stories		1	1
FAR		0.6	0.6
Dwelling Units/Acre		21.8	21.8
Rents			
Average Rent per Unit		$ 1,200	$ 1,350
Development Costs			
Site Work		$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (b)		$ 100	$ 100
Parking Costs (per space)		$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%
Impact Fees			
Sewer Impact Fee per Unit (c)		$ 1,525	$ 1,525
Water Impact Fee per Project (c)		$ 10,946	$ 10,946
Proposed Residential Fee per sq. ft.		$ -	$ -
Financing Costs			
Loan to Cost Ratio		70.0%	70.0%
Interest Rate		6.0%	6.0%
Loan Fees		1.5%	1.5%
Construction Period (months)		24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%
Operations			
Vacancy		5.0%	5.0%
OpEx per unit		$ 5,500	$ 5,500
Cap Rate (d)		5.5%	5.0%

Development Costs	Moderate Market Baseline	Strong Market Baseline
Land	$ 140,000	$ 220,000
Land per Residential Unit	$ 3,500	$ 5,500
Land per Acre	$ 76,230	$ 119,790
Construction Costs		
Site Work	$ 400,000	$ 400,000
Hard Costs - Residential	$ 4,600,000	$ 4,600,000
Hard Costs - Parking	$ 210,000	$ 210,000
Soft Costs	$ 1,042,000	$ 1,042,000
Water/Sewer Impact Fees	$ 71,946	$ 71,946
Proposed Residential Linkage Fee	$ -	$ -
Subtotal Const Costs Before Financing	$ 6,323,946	$ 6,323,946
Financing Costs		
Points	$ 66,401	$ 66,401
Construction Period Interest	$ 325,783	$ 329,815
Subtotal Financing Costs	$ 392,184	$ 396,216
Total Development Costs	**$ 6,856,130**	**$ 6,940,162**
Total Development Cost per SF (excl land)	*$ 146*	*$ 146*
Total Development Cost per SF (inc. land)	*$ 149*	*$ 151*
Proposed Residential Fee as % of TDC	*0.0%*	*0.0%*
Valuation		
Operations		
Gross Income	$ 576,000	$ 648,000
Less: Vacancy	$ (28,800)	$ (32,400)
Less: Op Expenses	$ (220,000)	$ (220,000)
Net Operating Income (NOI)	$ 327,200	$ 395,600
Value at Stabilization	$ 5,949,091	$ 7,912,000
Return on Cost		
Value at Stabilization	$ 5,949,091	$ 7,912,000
Less: Total Development Costs	$ 6,856,130	$ 6,940,162
Profit	$ (907,039)	$ 971,838
% Return on Cost	**-13.2%**	**14.0%**
Yield on Cost (NOI/TDC)	**4.8%**	**5.7%**
Feasible? (e)	No	No

Notes:
a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab municipal code.
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
c) Sewer impact fees for multi-family apartments in Moab are: $ 1,525 per unit
and Water Impact Fee with a 2" meter $ 10,946 per project
d) Cap rates were estimated based on interviews with brokers.
e) Project feasibility assumes a minimum return on cost of 15%
and a minimum yield on cost of 5%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 52: Condominium Development Pro Forma

Assumes condominiums permitted for overnight rentals within Grand County's Highway Commercial Zone

Development Assuptions		Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Site Size (sf) (a)		43,560	43,560	43,560	43,560
Less: Setbacks		(14,240)	(14,240)	(14,240)	(14,240)
Developed Footprint (sf)		14,008	14,008	14,008	14,008
Number of Units		25	25	25	25
Average Unit Size (mix of 1s, 2s, 3s)		1,350	1,350	1,350	1,350
Net Residential Space (sf)		33,750	33,750	33,750	33,750
Common Area	15.0%	5,063	5,063	5,063	5,063
Total Residential Space (sf)		38,813	38,813	38,813	38,813
Parking Ratio (spaces per unit)		1.75	1.75	1.75	1.75
Number of Parking Spaces		44	44	44	43.75
Total Parking Garage (sf)	350	15,313	15,313	15,313	15,313
Number of Residential Floors		3	3	3	3
Total Number of Stories		1	1	1	1
FAR		0.9	0.9	0.9	0.9
Dwelling Units/Acre		25.0	25.0	25.0	25.0
Sales Price					
Average Sales Price PSF		$ 185	$ 185	$ 245	$ 245
Average Sales Price Per Unit		$ 249,750	$ 249,750	$ 330,750	$ 330,750
Development Costs					
Site Work		$ 5.00	$ 5.00	$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (b)		$ 105	$ 105	$ 115	$ 115
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee per Unit (c)		$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Project (c)		$ 10,946	$ 10,946	$ 10,946	$ 10,946
Proposed Residential Fee per sq. ft.		$ -	$ -	$ -	$ 5.00
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Sales Assumptions					
Marketing Costs		5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Land	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Land per Residential Unit	$ 3,300	$ 3,300	$ 5,000	$ 5,000
Land per Acre	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Construction Costs				
Site Work	$ 217,800	$ 217,800	$ 217,800	$ 217,800
Hard Costs - Residential	$ 4,075,313	$ 4,075,313	$ 4,463,438	$ 4,463,438
Hard Costs - Parking	$ 153,125	$ 153,125	$ 153,125	$ 153,125
Soft Costs	$ 889,248	$ 889,248	$ 966,873	$ 966,873
Water/Sewer Impact Fees	$ 44,171	$ 44,171	$ 44,171	$ 44,171
Proposed Residential Linkage Fee	$ -	$ -	$ -	$ 194,063
Subtotal Const Costs Before Financing	$ 5,379,656	$ 5,379,656	$ 5,845,406	$ 6,039,469
Financing Costs				
Points	$ 56,486	$ 56,486	$ 61,377	$ 63,414
Construction Period Interest	$ 275,293	$ 275,293	$ 300,908	$ 310,689
Subtotal Financing Costs	$ 331,779	$ 331,779	$ 362,285	$ 374,104
Total Development Costs	**$ 5,793,935**	**$ 5,793,935**	**$ 6,332,691**	**$ 6,538,572**
Total Development Cost per SF (excl land)	*$ 147*	*$ 147*	*$ 160*	*$ 165*
Total Development Cost per SF (inc. land)	*$ 149*	*$ 149*	*$ 163*	*$ 168*
Proposed Residential Fee as % of TDC	*0.0%*	*0.0%*	*0.0%*	*3.0%*
Valuation				
Sales				
Sales	$ 6,243,750	$ 6,243,750	$ 8,268,750	$ 8,268,750
Less: Marketing Costs	$ (312,188)	$ (312,188)	$ (413,438)	$ (413,438)
Net Sales Revenue	$ 5,931,563	$ 5,931,563	$ 7,855,313	$ 7,855,313
Return on Cost				
Net Sales Revenue	$ 5,931,563	$ 5,931,563	$ 7,855,313	$ 7,855,313
Less: Total Development Costs	$ 5,793,935	$ 5,793,935	$ 6,332,691	$ 6,538,572
Profit	$ 137,627	$ 137,627	$ 1,522,621	$ 1,316,740
% Return on Cost	**2.4%**	**2.4%**	**24.0%**	**20.1%**
Feasible? (d)	**No**	**No**	**Yes**	**Yes**

Notes:

a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab municipal code.

b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.

c) Sewer impact fees in Grand County are $ 1,329 per unit
and water impact fees with a 2" meter are $ 10,946 per project

d) Project feasibility assumes a minimum return on cost of 20% based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 53: Townhouse Development Pro Forma

Assumes overnight rental project in Grand County in the Highway Commercial zone

Development Assuptions		Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Site Size (sf)		240,000	240,000	240,000	240,000
Lot Size per Unit (a)		5,000	5,000	5,000	5,000
Total Units		48	48	48	48
Average Townhouse Size (sf)		1,650	1,650	1,650	1,650
Total Residential Space (sf)		79,200	79,200	79,200	79,200
Number of Residential Floors		2	2	2	2
FAR		0.3	0.3	0.3	0.3
Parking Ratio (spaces per unit) (parking in unit)		2.0	2.0	2.0	2.0
Number of Parking Spaces		96	96	96	96
Sales Price					
Average Sales Price PSF		$ 200	$ 200	$ 250	$ 250
Average Sales Price Per Unit		$ 330,000	$ 330,000	$ 412,500	$ 412,500
Development Costs					
Site Work		$ 5	$ 5	$ 5	$ 5
Hard Costs - Res (wood frame) (b)		$ 100	$ 100	$ 125	$ 125
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20%	20%	20%	20%
Impact Fees					
Sewer Impact Fee per Unit (c)		$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Unit (c)		$ 813	$ 813	$ 813	$ 813
Proposed Residential Fee per sq. ft.		$ -	$ 4.00	$ -	$ 8.00
Proposed Residential Fee per unit		$ -	$ 6,600	$ -	$ 13,200
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Sales Assumptions					
Marketing Costs		5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Land	$ 456,000	$ 456,000	$ 720,000	$ 720,000
Land per Residential Unit	$ 9,500	$ 9,500	$ 15,000	$ 15,000
Land per Acre	$ 82,764	$ 82,764	$ 130,680	$ 130,680
Construction Costs				
Site Work	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000
Hard Costs - Residential	$ 7,920,000	$ 7,920,000	$ 9,900,000	$ 9,900,000
Hard Costs - Parking (in unit)	$ -	$ -	$ -	$ -
Soft Costs	$ 1,778,400	$ 1,778,400	$ 2,164,500	$ 2,164,500
Water/Sewer Impact Fees	$ 102,816	$ 102,816	$ 102,816	$ 102,816
Proposed Residential Linkage Fee	$ -	$ 316,800	$ -	$ 633,600
Subtotal Const Costs Before Financing	$ 11,001,216	$ 11,318,016	$ 13,367,316	$ 14,000,916
Financing Costs				
Points	$ 115,513	$ 118,839	$ 140,357	$ 147,010
Construction Period Interest	$ 577,444	$ 593,410	$ 710,001	$ 741,934
Subtotal Financing Costs	$ 692,956	$ 712,250	$ 850,358	$ 888,944
Total Development Costs	**$ 12,150,172**	**$ 12,486,266**	**$ 14,937,674**	**$ 15,609,860**
Total Development Cost per SF (excl land)	*$ 148*	*$ 152*	*$ 180*	*$ 188*
Total Development Cost per SF (inc. land)	*$ 153*	*$ 158*	*$ 189*	*$ 197*
Proposed Residential Fee as % of TDC	*0.0%*	*2.5%*	*0.0%*	*4.1%*
Valuation				
Sales				
Sales	$ 15,840,000	$ 15,840,000	$ 19,800,000	$ 19,800,000
Less: Marketing Costs	$ (792,000)	$ (792,000)	$ (990,000)	$ (990,000)
Net Sales Revenue	$ 15,048,000	$ 15,048,000	$ 18,810,000	$ 18,810,000
Return on Cost				
Net Sales Revenue	$ 15,048,000	$ 15,048,000	$ 18,810,000	$ 18,810,000
Less: Total Development Costs	$ 12,150,172	$ 12,486,266	$ 14,937,674	$ 15,609,860
Profit	$ 2,897,828	$ 2,561,734	$ 3,872,326	$ 3,200,140
% Return on Cost	**23.9%**	**20.5%**	**25.9%**	**20.5%**
Feasible? (d)	**Yes**	**Yes**	**Yes**	**Yes**

Notes:
a) Highway Commercial does not have a minimum lot size, so this represents an average lot size for townhomes.
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area. Interviews were also conducted with local contractors. Hard costs range from $100 to $125 per square foot, depending on the level of finishes. For this analysis, the lower end of the range was used to model the moderate scenario, and the high end was applied to the strong market scenario.
c) Sewer impact fees are: $ 1,525 per unit
and Water Impact Fees with a 3/4" meter are: $ 813 per unit
d) Project feasibility assumes a minimum return on cost of 20% based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 54: Single-Family Home Development Pro Forma

Assumes single-family residential in Grand County in RR zone

Development Assuptions (a)	Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Site Size (sf)	43,560	43,560	43,560	43,560
Minimum Lot Size	43,560	43,560	43,560	43,560
Total Lots	1	1	1	1
Average SFR Size (sf)	2,250	2,250	3,000	3,000
Total Residential Space (sf)	2,250	2,250	3,000	3,000
Number of Residential Floors	1	1	1	1
FAR	0.1	0.1	0.1	0.1
Parking Ratio (spaces per unit) (parking in unit)	2.0	2.0	2.0	2.0
Number of Parking Spaces	2	2	2	2
Sales Price				
Average Sales Price PSF	$ 200	$ 200	$ 267	$ 267
Average Sales Price Per Unit	$ 450,000	$ 450,000	$ 800,000	$ 800,000
Development Costs				
Site Work	$ 1.00	$ 1.00	$ 1.00	$ 1.00
Hard Costs (b)	$ 100	$ 100	$ 160	$ 160
Parking Costs (garage)	$ 18,000	$ 18,000	$ 18,000	$ 18,000
Soft Costs exc Fees (as % of hard)	7.0%	7.0%	5.0%	5.0%
Impact Fees				
Sewer Impact Fee per Unit (c)	$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Unit (c)	$ 813	$ 813	$ 813	$ 813
Proposed Residential Fee per sq. ft.	$ -	$ 1.00	$ -	$ 1.50
Proposed Residential Fee per unit	$ -	$ 2,250	$ -	$ 4,500
Financing Costs				
Loan to Cost Ratio	70.0%	70.0%	70.0%	70.0%
Interest Rate	6.0%	6.0%	6.0%	6.0%
Loan Fees	1.5%	1.5%	1.5%	1.5%
Construction Period (months)	12	12	12	12
Avg. Outstanding Balance During Construction	60.0%	60.0%	60.0%	60.0%
Sales Assumptions				
Marketing Costs	5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market with Fee	Strong Market Baseline	Strong Market with Fee
Land	$ 80,000	$ 80,000	$ 120,000	$ 120,000
Land per Residential Unit	$ 80,000	$ 80,000	$ 120,000	$ 120,000
Land per Acre	$ 80,000	$ 80,000.00	$ 120,000	$ 120,000
Construction Costs				
Site Work	$ 43,560	$ 43,560	$ 43,560	$ 43,560
Hard Costs - Residential	$ 225,000	$ 225,000	$ 480,000	$ 480,000
Hard Costs - Parking (garage)	$ 18,000	$ 18,000	$ 18,000	$ 18,000
Soft Costs	$ 20,059	$ 20,059	$ 27,078	$ 27,078
Water/Sewer Impact Fees	$ 2,142	$ 2,142	$ 2,142	$ 2,142
Proposed Residential Linkage Fee	$ -	$ 2,250	$ -	$ 4,500
Subtotal Const Costs Before Financing	$ 308,761	$ 311,011	$ 570,780	$ 575,280
Financing Costs				
Points	$ 3,242	$ 3,266	$ 5,993	$ 6,040
Construction Period Interest	$ 9,797	$ 9,853	$ 17,408	$ 17,521
Subtotal Financing Costs	$ 13,039	$ 13,119	$ 23,401	$ 23,561
Total Development Costs	**$ 401,800**	**$ 404,130**	**$ 714,181**	**$ 718,841**
Total Development Cost per SF (excl land)	*$ 143*	*$ 144*	*$ 198*	*$ 200*
Total Development Cost per SF (inc. land)	*$ 179*	*$ 180*	*$ 238*	*$ 240*
Proposed Residential Fee as % of TDC	*0.0%*	*0.6%*	*0.0%*	*0.6%*
Valuation For Speculatively Built Home Sold Via Broker				
Sales				
Sales	$ 450,000	$ 450,000	$ 800,000	$ 800,000
Less: Marketing Costs	$ (22,500)	$ (22,500)	$ (40,000)	$ (40,000)
Net Sales Revenue	$ 427,500	$ 427,500	$ 760,000	$ 760,000
Less: Total Development Costs	$ 401,800	$ 404,130	$ 714,181	$ 718,841
Profit	$ 48,200	$ 45,870	$ 85,819	$ 81,159
% Return on Cost, Spec w/ Broker Fee (a)	**12.0%**	**11.4%**	**12.0%**	**11.3%**
Feasible? (d)	**No**	**No**	**No**	**No**
Valuation For Custom Home Built for End User				
Sales				
Sales	$ 450,000	$ 450,000	$ 800,000	$ 800,000
Less: Marketing Costs	$ -	$ -	$ -	$ -
Net Sales Revenue	$ 450,000	$ 450,000	$ 800,000	$ 800,000
Less: Total Development Costs (e)	$ 388,761	$ 391,011	$ 690,780	$ 695,280
Profit	$ 61,239	$ 58,989	$ 109,220	$ 104,720
% Return on Cost, Custom to End User (a)	**15.8%**	**15.1%**	**15.8%**	**15.1%**
Feasible? (d)	**Yes**	**Yes**	**Yes**	**Yes**

Notes:

a) This pro forma models two different types of single-family construction. The first is a speculatively built house that a contractor/developer builds and sells through a real estate broker, who charges a commission on the sale. The second is a custom home built for an end user, where the customer self-finances the construction, and there is no broker intermediary.

b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area. Interviews were also conducted with local contractors. Hard costs range, depending on the level of finishes. For this analysis, the lower end of the range was used to model the moderate scenario, and the high end was applied to the strong market scenario.

c) Sewer impact fees are: $ 1,525 per unit
and Water Impact Fees with a 3/4" meter are: $ 813 per unit

d) Project feasibility assumes a minimum return on cost of 15% based on interviews with developers active in the Moab Area.

e) Total development costs are slightly lower for custom-built homes because the end user is paying directly for construction, so the builder does not need to pay for financing costs.

Source: BAE, 2018.

Appendix C: Inclusionary Housing Proformas

Appendix 55: Inclusionary Housing Townhouse Development in Grand County

Assumes townhouses permitted for overnight rentals in Grand County in the Highway Commercial zone

Development Assuptions		Moderate Market Baseline	Moderate Market w/ Inc. Units	Strong Market Baseline	Strong Market w/ Inc. Units
Site Size (sf)		240,000	240,000	240,000	240,000
Lot Size per Unit (a)		5,000	5,000	5,000	5,000
Total Units		48	48	48	48
Average Townhouse Size (sf)		1,650	1,650	1,650	1,650
Total Residential Space (sf)		79,200	79,200	79,200	79,200
Number of Residential Floors		2	2	2	2
FAR		0.3	0.3	0.3	0.3
Parking Ratio (spaces per unit) (parking in unit)		2.0	2.0	2.0	2.0
Number of Parking Spaces		96	96	96	96
Sales Price					
Average Sales Price PSF		$ 200	$ 200	$ 250	$ 250
Average Sales Price Per Unit		$ 330,000	$ 330,000	$ 412,500	$ 412,500
Average Sales Price PSF (80% AMI)		$ 121	$ 121	$ 121	$ 121
Average Sales Price Per Unit (80% AMI)		$ 200,000	$ 200,000	$ 200,000	$ 200,000
Affordable Units	6%	0	3	0	3
Development Costs					
Site Work		$ 5	$ 5	$ 5	$ 5
Hard Costs - Res (wood frame) (b)		$ 100	$ 100	$ 125	$ 125
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20%	20%	20%	20%
Impact Fees					
Sewer Impact Fee per Unit (c)		$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Unit (c)		$ 813	$ 813	$ 813	$ 813
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Sales Assumptions					
Marketing Costs		5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market w/ Inc. Units	Strong Market Baseline	Strong Market w/ Inc. Units
Land	$ 456,000	$ 456,000	$ 720,000	$ 720,000
Land per Residential Unit	$ 9,500	$ 9,500	$ 15,000	$ 15,000
Land per Acre	$ 82,764	$ 82,764	$ 130,680	$ 130,680
Construction Costs				
Site Work	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,200,000
Hard Costs - Residential	$ 7,920,000	$ 7,920,000	$ 9,900,000	$ 9,900,000
Hard Costs - Parking (in unit)	$ -	$ -	$ -	$ -
Soft Costs	$ 1,778,400	$ 1,778,400	$ 2,164,500	$ 2,164,500
Water/Sewer Impact Fees	$ 102,816	$ 102,816	$ 102,816	$ 102,816
Subtotal Const Costs Before Financing	$ 11,001,216	$ 11,001,216	$ 13,367,316	$ 13,367,316
Financing Costs				
Points	$ 115,513	$ 115,513	$ 140,357	$ 140,357
Construction Period Interest	$ 577,444	$ 577,444	$ 710,001	$ 710,001
Subtotal Financing Costs	$ 692,956	$ 692,956	$ 850,358	$ 850,358
Total Development Costs	**$ 12,150,172**	**$ 12,150,172**	**$ 14,937,674**	**$ 14,937,674**
Total Development Cost per SF (excl land)	*$ 148*	*$ 148*	*$ 180*	*$ 180*
Total Development Cost per SF (inc. land)	*$ 153*	*$ 153*	*$ 189*	*$ 189*
Valuation				
Sales				
Sales (Market Rate Units)	$ 15,840,000	$ 14,850,000	$ 19,800,000	$ 18,562,500
Sales (Affordable Units)	$ -	$ 600,000	$ -	$ 600,000
Less: Marketing Costs	$ (792,000)	$ (772,500)	$ (990,000)	$ (958,125)
Net Sales Revenue	$ 15,048,000	$ 14,677,500	$ 18,810,000	$ 18,204,375
Return on Cost				
Net Sales Revenue	$ 15,048,000	$ 14,677,500	$ 18,810,000	$ 18,204,375
Less: Total Development Costs	$ 12,150,172	$ 12,150,172	$ 14,937,674	$ 14,937,674
Profit	$ 2,897,828	$ 2,527,328	$ 3,872,326	$ 3,266,701
% Return on Cost	**23.9%**	**20.8%**	**25.9%**	**21.9%**
Feasible? (d)	**Yes**	**Yes**	**Yes**	**Yes**

Notes:
a) Highway Commercial does not have a minimum lot size, so this represents an average lot size for townhomes.
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area. Interviews were also conducted with local contractors. Hard costs range from $100 to $125 per square foot, depending on the level of finishes. For this analysis, the lower end of the range was used to model the moderate scenario, and the high end was applied to the strong market scenario.
c) Sewer impact fees are: $ 1,525 per unit
and Water Impact Fees with a 3/4" meter are: $ 813 per unit
d) Project feasibility assumes a minimum return on cost of 20% based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 56: Inclusionary Housing Condominium Development in Grand County

Assumes condominiums permitted for overnight rentals within Grand County's Highway Commercial Zone

Development Assuptions		Moderate Market Baseline	Moderate Market w/ Inc. Units	Strong Market Baseline	Strong Market w/ Inc. Units
Site Size (sf) (a)		43,560	43,560	43,560	43,560
Less: Setbacks		(14,240)	(14,240)	(14,240)	(14,240)
Developed Footprint (sf)		14,008	14,008	14,008	14,008
Number of Units		25	25	25	25
Average Unit Size (mix of 1s, 2s, 3s)		1,350	1,350	1,350	1,350
Net Residential Space (sf)		33,750	33,750	33,750	33,750
Common Area	15.0%	5,063	5,063	5,063	5,063
Total Residential Space (sf)		38,813	38,813	38,813	38,813
Parking Ratio (spaces per unit)		1.75	1.75	1.75	1.75
Number of Parking Spaces		44	44	44	44
Total Parking Garage (sf)	350	15,313	15,313	15,313	15,313
Number of Residential Floors		3	3	3	3
Total Number of Stories		1	1	1	1
FAR		0.9	0.9	0.9	0.9
Dwelling Units/Acre		25.0	25.0	25.0	25.0
Sales Price					
Average Sales Price PSF		$ 185	$ 185	$ 245	$ 245
Average Sales Price Per Unit		$ 249,750	$ 249,750	$ 330,750	$ 330,750
Average Sales Price PSF (80% AMI)		$ 148	$ 148	$ 148	$ 148
Average Sales Price Per Unit (80% AMI)		$ 200,000	$ 200,000	$ 200,000	$ 200,000
Affordable Units	8%	-	-	-	2
Development Costs					
Site Work		$ 5.00	$ 5.00	$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (b)		$ 105	$ 105	$ 115	$ 115
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee per Unit (c)		$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Project (c)		$ 10,946	$ 10,946	$ 10,946	$ 10,946
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Sales Assumptions					
Marketing Costs		5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market w/ Inc. Units	Strong Market Baseline	Strong Market w/ Inc. Units
Land	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Land per Residential Unit	$ 3,300	$ 3,300	$ 5,000	$ 5,000
Land per Acre	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Construction Costs				
Site Work	$ 217,800	$ 217,800	$ 217,800	$ 217,800
Hard Costs - Residential	$ 4,075,313	$ 4,075,313	$ 4,463,438	$ 4,463,438
Hard Costs - Parking	$ 153,125	$ 153,125	$ 153,125	$ 153,125
Soft Costs	$ 889,248	$ 889,248	$ 966,873	$ 966,873
Water/Sewer Impact Fees	$ 44,171	$ 44,171	$ 44,171	$ 44,171
Subtotal Const Costs Before Financing	$ 5,379,656	$ 5,379,656	$ 5,845,406	$ 5,845,406
Financing Costs				
Points	$ 56,486	$ 56,486	$ 61,377	$ 61,377
Construction Period Interest	$ 275,293	$ 275,293	$ 300,908	$ 300,908
Subtotal Financing Costs	$ 331,779	$ 331,779	$ 362,285	$ 362,285
Total Development Costs	**$ 5,793,935**	**$ 5,793,935**	**$ 6,332,691**	**$ 6,332,691**
Total Development Cost per SF (excl land)	*$ 147*	*$ 147*	*$ 160*	*$ 160*
Total Development Cost per SF (inc. land)	*$ 149*	*$ 149*	*$ 163*	*$ 163*
Valuation				
Sales				
Sales (Market Rate Units)	$ 6,243,750	$ 6,243,750	$ 8,268,750	$ 7,607,250
Sales (Affordable Units)	$ -	$ -	$ -	$ 400,000
Less: Marketing Costs	$ (312,188)	$ (312,188)	$ (413,438)	$ (400,363)
Net Sales Revenue	$ 5,931,563	$ 5,931,563	$ 7,855,313	$ 7,606,888
Return on Cost				
Net Sales Revenue	$ 5,931,563	$ 5,931,563	$ 7,855,313	$ 7,606,888
Less: Total Development Costs	$ 5,793,935	$ 5,793,935	$ 6,332,691	$ 6,332,691
Profit	$ 137,627	$ 137,627	$ 1,522,621	$ 1,274,196
% Return on Cost	**2.4%**	**2.4%**	**24.0%**	**20.1%**
Feasible? (d)	**No**	**No**	**Yes**	**Yes**

Notes:
a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab municipal code.
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
c) Sewer impact fees in Grand County are $ 1,329 per unit
and water impact fees with a 2" meter are $ 10,946 per project
d) Project feasibility assumes a minimum return on cost of 20% based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix D: Density Bonus Analysis

Purpose

The City and County requested a separate policy analysis where inclusionary requirements would only be applied in cases where projects received a density bonus. Recognizing that inclusionary requirements and in-lieu fees translate to increased costs, some jurisdictions couple these requirements with regulatory incentives, in the form of density bonuses, and/or relaxation of development standards (such as parking requirements, open space requirements, and height limits).

This chapter studies the impact of adjusting zoning to increase density for two development types:

1. Condominiums: The purpose of this exercise is to assess whether providing incentives to build denser housing allows condominiums to accommodate more on-site units. The feasibility analysis in the main report showed that condominiums were not feasible in the moderate market, but could accept an eight percent inclusionary requirement in a strong market.[12] This supplemental study tests how much higher the inclusionary set-aside can go if the City and County relaxes development standards to permit greater density.

2. Apartments: Another goal of this supplemental analysis is to show whether increasing density would allow apartments to become financially feasible. Based on the financial analysis, apartments were not feasible in either the moderate or strong market because rents were not strong enough to offset the high cost of new construction and land acquisition. Building permit data confirm that few apartments were constructed between 2010 and 2017, despite a significant increase in demand from non-family households. The market analysis shows a substantial need for workforce rentals, but developers are not building apartments, either because they can make higher returns on other product types (e.g. hotels or townhouses), or because the margins for apartment rentals are too thin.

   At the outset of this study, this exercise was commissioned to test if apartments could support an inclusionary housing requirement. However, given the lack of feasibility in the baseline condition, the purpose has evolved to assess whether relaxing development standards and increasing density would allow apartments to become feasible. If apartments are feasible with greater density, this may engender a discussion whether the City and County are willing to increase density for apartments to entice developers to build rental units.

[12] This assumes set-asides affordable to households earning up to 80 percent of Area Median Income.

Assumptions

BAE modeled apartment buildings in both the City of Moab and Grand County, assuming R-3 Multi-Family Residential zoning in the City of Moab and Multi-Family Residential District (MFR) in Grand County. Condominiums were modeled only for Grand County, assuming a Highway Commercial Zone. All projects assumed one-acre lots.

Each jurisdiction's zoning code contained different provisions that limited project density. The following adjustments were made to each zone to simulate a density bonus:

- **Apartments in the City of Moab R-3 Zone** - The R-3 zone has a 2,000-square foot minimum lot size per residential unit. This requirement effectively limits the density to 21 dwelling units per acre (43,560 sf per acre / 2,000 sf). The density bonus analysis removes this minimum lot size requirement.

- **Grand County's Multi-Family Residential District (MFR)** restricts maximum density to eight units per acre, although there are provisions to augment density if developers provide an affordable housing set-aside. The density bonus scenario removes the maximum density provision. In addition, open space requirements were reduced in the density bonus scenarios to maximize the development footprint and project density.

- **Condominiums in Grand County's Highway Commercial**: Grand County's Highway Commercial (HC) Zone has a maximum building height of 35'. This provision does not inhibit feasibility because condominiums were feasible in the strong market. For this analysis, BAE increased the building height to 65' to determine whether increasing density would allow condominiums to be feasible in the moderate market, and to test what inclusionary requirements would achievable in the strong market.

- This analysis assumes adjustments to increase density allows the project to retain surface parking, which is significantly more affordable than structured or underground parking.

There are many levers within the City and County's zoning code that can be adjusted to increase density. This includes lifting minimum lot size, increasing building heights, and/or reducing open space and setback requirements. The purpose of this study is not to prescribe how density should be increased. Rather, the aim is to show what profit margins could be achieved if greater density were permitted. It is up to the local jurisdictions to determine how to adjust land use regulations to enable higher density development.

Proforma Analysis and Findings

Apartments in Moab

The baseline pro forma showed that apartments were infeasible under the moderate and strong market scenarios, although they were close to feasible in the strong market. As a result, no inclusionary requirement or in-lieu fee was recommended for this product type.

In the density bonus scenario, where the minimum lot size was waived, permitting densities to increase from 21 units per acre to 35 units per acre, apartments were not feasible in the moderate market, but were feasible in the strong market. As shown in Appendix D-1, in the strong market, apartments with the density bonus resulted in a return on cost of 20.7 percent and a yield on cost of 6.0 percent, which met the minimum 15 percent and 5 percent minimum thresholds, respectively. The project was able accommodate a small, two-unit, inclusionary requirement (equivalent to five percent), assuming affordable rents were set at 50 percent of AMI. Therefore, waiving the minimum lot size allowed the project to support a small inclusionary requirement.

Apartments in Grand County

As shown in Appendix D-2, the baseline pro formas showed apartments were infeasible in both the moderate and strong markets, owing largely to the eight-dwelling unit per acre cap. Given the high cost of land, acquisition costs could not be distributed across more units, rendering apartments infeasible under the baseline.

With the removal of the density cap, projects under the density bonus scenarios were able to increase from eight to 32-units per acre, slightly lower than the density achieved for apartments in the City of Moab, because Grand County has higher parking ratios. Similar to apartments in Moab, apartments in Grand County were not feasible in the moderate market, but were feasible in the strong market. The density bonus in the strong market resulted in a 17.3 percent return on cost and 5.9 percent yield on cost, somewhat exceeding the minimum 15 percent and 5 percent minimum thresholds, respectively. However, the project was not able to accommodate any inclusionary provision, given the slim margin. Therefore, waiving the density cap allowed the project to become feasible in the strong market, but did not provide sufficient benefits to allow the project to adopt any inclusionary provision.

Condominiums in Grand County

The baseline proforma showed that condominiums in Grand County were not feasible in the moderate market, but were feasible in the strong market and could accept up to an eight percent inclusionary requirement.

In the density bonus scenario, shown in Appendix D-3, where the maximum height was increased from 35 feet to 65 feet, condominiums were still not feasible in the moderate market, but were feasible in the strong market. With the density bonus, condominiums in a strong market could support an inclusionary requirement up to ten percent, assuming sales prices were affordable to 80 percent of AMI households or $200,000 per unit. It should be noted that the pro forma is highly sensitive to changes in price. As shown in Appendix D-3, the

market-rate sales price in the moderate market was approximately $250,000, which was not sufficient to reach the minimum return on cost. However, average sales price of $330,000 allowed the project to accommodate two affordable units in the baseline and four affordable units in the density-bonus scenario. Given the potential variation in this product type related to market cycles, it is recommended that the County maintain a flexible inclusionary policy, so that it does not discourage development during economic downturns.

Appendix 57: Multi-Family Rental Density Bonus Analysis, City of Moab

Assumes multifamily rental within the City of Moab in R-3 zone

Development Assuptions		Moderate Market Baseline	Moderate w/o Min Lot Size (a)	Strong Market Baseline	Strong Market w/o Min Lot Size (a)
Site Size (sf) (a)		43,560	43,560	43,560	43,560
Less: Setbacks (b)		(8,763)	(8,763)	(8,763)	(8,763)
Less: Additional Open Space (% lot size)	25%	(2,127)	(2,127)	(2,127)	(2,127)
Building Footprint (sf)		21,645	14,295	21,645	21,645
Total Parking Area (sf)	350	11,025	18,375	11,025	11,025
Number of Units		21	35	21	35
Number of Affordable Units	5%	-	-	-	2
Average Unit Size (mix of studios, 1s, 2s)		1,000	1,000	1,000	1,000
Net Residential Space (sf)		21,000	35,000	21,000	35,000
Common Area	15.0%	3,150	5,250	3,150	5,250
Total Residential Space (sf)		24,150	40,250	24,150	40,250
Parking Ratio (spaces per unit)		1.5	1.5	1.5	1.5
Number of Parking Spaces		32	53	32	31.50
Number of Residential Floors		2	3	2	2
FAR		0.6	0.9	0.6	0.9
Dwelling Units/Acre		21	35	21	35
Rents					
Average Rent per Unit		$ 1,200	$ 1,200	$ 1,350	$ 1,350
Affordable Rent per Unit (c)		$ -	$ -	$ -	$ 700
Development Costs					
Site Work		$ 5.00	$ 5.00	$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (d)		$ 100	$ 100	$ 100	$ 100
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee per Unit (e)		$ 1,525	$ 1,525	$ 1,525	$ 1,525
Water Impact Fee per Project (e)		$ 10,946	$ 10,946	$ 10,946	$ 10,946
Proposed Residential Fee per sq. ft.		$ -	$ -	$ -	
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Operations					
Vacancy		5.0%	5.0%	5.0%	5.0%
OpEx per unit		$ 5,500	$ 5,500	$ 5,500	$ 5,500
Cap Rate (f)		5.5%	5.5%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate w/o Min Lot Size (a)	Strong Market Baseline	Strong Market w/o Min Lot Size (a)
Land	$ 76,230	$ 76,230	$ 119,790	$ 119,790
Land per Residential Unit	$ 3,630	$ 2,178	$ 5,704	$ 3,423
Land per Acre	$ 76,230	$ 76,230	$ 119,790	$ 119,790
Construction Costs				
Site Work	$ 217,800	$ 217,800	$ 217,800	$ 217,800
Hard Costs - Residential	$ 2,415,000	$ 4,025,000	$ 2,415,000	$ 4,025,000
Hard Costs - Parking	$ 110,250	$ 183,750	$ 110,250	$ 110,250
Soft Costs	$ 548,610	$ 885,310	$ 548,610	$ 870,610
Water/Sewer Impact Fees	$ 42,971	$ 64,321	$ 42,971	$ 64,321
Proposed Residential Linkage Fee	$ -	$ -	$ -	$ -
Subtotal Const Costs Before Financing	$ 3,334,631	$ 5,376,181	$ 3,334,631	$ 5,287,981
Financing Costs				
Points	$ 35,014	$ 56,450	$ 35,014	$ 55,524
Construction Period Interest	$ 171,907	$ 274,802	$ 174,103	$ 272,552
Subtotal Financing Costs	$ 206,921	$ 331,251	$ 209,116	$ 328,075
Total Development Costs	**$ 3,617,782**	**$ 5,783,662**	**$ 3,663,537**	**$ 5,735,846**
Total Development Cost per SF (excl land)	*$ 147*	*$ 142*	*$ 147*	*$ 140*
Total Development Cost per SF (inc. land)	*$ 150*	*$ 144*	*$ 152*	*$ 143*
Proposed Residential Fee as % of TDC	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Valuation				
Operations				
Gross Income (Market Rate)	$ 302,400	$ 504,000	$ 340,200	$ 534,600
Gross Income (Affordable)	$ -	$ -	$ -	$ 16,800
Less: Vacancy	$ (15,120)	$ (25,200)	$ (17,010)	$ (27,570)
Less: Op Expenses	$ (115,500)	$ (192,500)	$ (115,500)	$ (192,500)
Net Operating Income (NOI)	$ 171,780	$ 286,300	$ 207,690	$ 331,330
Value at Stabilization	$ 3,123,273	$ 5,205,455	$ 4,153,800	$ 6,626,600
Return on Cost				
Value at Stabilization	$ 3,123,273	$ 5,205,455	$ 4,153,800	$ 6,626,600
Less: Total Development Costs	$ 3,617,782	$ 5,783,662	$ 3,663,537	$ 5,735,846
Profit	$ (494,509)	$ (578,208)	$ 490,263	$ 890,754
% Return on Cost	**-13.7%**	**-10.0%**	**13.4%**	**15.5%**
Yield on Cost (NOI/TDC)	**4.7%**	**5.0%**	**5.7%**	**5.8%**
Feasible? (g)	No	No	No	Yes

Notes:
a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab municipal code.
b) The minimum setbacks are 15' for the front setback, 7' for the side setbacks, and 12' for the rear setback in the R-3 zone.
c) Affordable rent assumes 50% AMI rent for a 2-bedroom unit for a household of three.
d) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
e) Sewer impact fees for multi-family apartments in Moab are: $ 1,525 per unit
and Water Impact Fee with a 2" meter $ 10,946 per project
f) Cap rates were estimated based on interviews with brokers.
g) Project feasibility assumes a minimum return on cost of 15%
and a minimum yield on cost of 5%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 58: Multi-Family Rental Density Bonus Analysis, Grand County

Assumes multifamily rental within the City of Moab in R-3 zone

Development Assuptions		Moderate Market Baseline	Moderate w/o Min Lot Size (a)	Strong Market Baseline	Strong Market w/o Min Lot Size (a)
Site Size (sf) (a)		43,560	43,560	43,560	43,560
Less: Setbacks (b)		(8,763)	(8,763)	(8,763)	(8,763)
Less: Additional Open Space (% lot size)	25%	(2,127)	(2,127)	(2,127)	(2,127)
Building Footprint (sf)		21,645	14,295	21,645	21,645
Total Parking Area (sf)	350	11,025	18,375	11,025	11,025
Number of Units		21	35	21	35
Number of Affordable Units	5%	-	-	-	2
Average Unit Size (mix of studios, 1s, 2s)		1,000	1,000	1,000	1,000
Net Residential Space (sf)		21,000	35,000	21,000	35,000
Common Area	15.0%	3,150	5,250	3,150	5,250
Total Residential Space (sf)		24,150	40,250	24,150	40,250
Parking Ratio (spaces per unit)		1.5	1.5	1.5	1.5
Number of Parking Spaces		32	53	32	31.50
Number of Residential Floors		2	3	2	2
FAR		0.6	0.9	0.6	0.9
Dwelling Units/Acre		21	35	21	35
Rents					
Average Rent per Unit		$ 1,200	$ 1,200	$ 1,350	$ 1,350
Affordable Rent per Unit (c)		$ -	$ -	$ -	$ 700
Development Costs					
Site Work		$ 5.00	$ 5.00	$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (d)		$ 100	$ 100	$ 100	$ 100
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee per Unit (e)		$ 1,525	$ 1,525	$ 1,525	$ 1,525
Water Impact Fee per Project (e)		$ 10,946	$ 10,946	$ 10,946	$ 10,946
Proposed Residential Fee per sq. ft.		$ -	$ -	$ -	
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Operations					
Vacancy		5.0%	5.0%	5.0%	5.0%
OpEx per unit		$ 5,500	$ 5,500	$ 5,500	$ 5,500
Cap Rate (f)		5.5%	5.5%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate w/o Min Lot Size (a)	Strong Market Baseline	Strong Market w/o Min Lot Size (a)
Land	$ 76,230	$ 76,230	$ 119,790	$ 119,790
Land per Residential Unit	$ 3,630	$ 2,178	$ 5,704	$ 3,423
Land per Acre	$ 76,230	$ 76,230	$ 119,790	$ 119,790
Construction Costs				
Site Work	$ 217,800	$ 217,800	$ 217,800	$ 217,800
Hard Costs - Residential	$ 2,415,000	$ 4,025,000	$ 2,415,000	$ 4,025,000
Hard Costs - Parking	$ 110,250	$ 183,750	$ 110,250	$ 110,250
Soft Costs	$ 548,610	$ 885,310	$ 548,610	$ 870,610
Water/Sewer Impact Fees	$ 42,971	$ 64,321	$ 42,971	$ 64,321
Proposed Residential Linkage Fee	$ -	$ -	$ -	$ -
Subtotal Const Costs Before Financing	$ 3,334,631	$ 5,376,181	$ 3,334,631	$ 5,287,981
Financing Costs				
Points	$ 35,014	$ 56,450	$ 35,014	$ 55,524
Construction Period Interest	$ 171,907	$ 274,802	$ 174,103	$ 272,552
Subtotal Financing Costs	$ 206,921	$ 331,251	$ 209,116	$ 328,075
Total Development Costs	**$ 3,617,782**	**$ 5,783,662**	**$ 3,663,537**	**$ 5,735,846**
Total Development Cost per SF (excl land)	*$ 147*	*$ 142*	*$ 147*	*$ 140*
Total Development Cost per SF (inc. land)	*$ 150*	*$ 144*	*$ 152*	*$ 143*
Proposed Residential Fee as % of TDC	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Valuation				
Operations				
Gross Income (Market Rate)	$ 302,400	$ 504,000	$ 340,200	$ 534,600
Gross Income (Affordable)	$ -	$ -	$ -	$ 16,800
Less: Vacancy	$ (15,120)	$ (25,200)	$ (17,010)	$ (27,570)
Less: Op Expenses	$ (115,500)	$ (192,500)	$ (115,500)	$ (192,500)
Net Operating Income (NOI)	$ 171,780	$ 286,300	$ 207,690	$ 331,330
Value at Stabilization	$ 3,123,273	$ 5,205,455	$ 4,153,800	$ 6,626,600
Return on Cost				
Value at Stabilization	$ 3,123,273	$ 5,205,455	$ 4,153,800	$ 6,626,600
Less: Total Development Costs	$ 3,617,782	$ 5,783,662	$ 3,663,537	$ 5,735,846
Profit	$ (494,509)	$ (578,208)	$ 490,263	$ 890,754
% Return on Cost	**-13.7%**	**-10.0%**	**13.4%**	**15.5%**
Yield on Cost (NOI/TDC)	**4.7%**	**5.0%**	**5.7%**	**5.8%**
Feasible? (g)	No	No	No	Yes

Notes:
a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab municipal code.
b) The minimum setbacks are 15' for the front setback, 7' for the side setbacks, and 12' for the rear setback in the R-3 zone.
c) Affordable rent assumes 50% AMI rent for a 2-bedroom unit for a household of three.
d) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
e) Sewer impact fees for multi-family apartments in Moab are: $ 1,525 per unit
and Water Impact Fee with a 2" meter $ 10,946 per project
f) Cap rates were estimated based on interviews with brokers.
g) Project feasibility assumes a minimum return on cost of 15%
and a minimum yield on cost of 5%
based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

Appendix 59: Condominiums with Density Bonus, Grand County

Assumes condominiums permitted for overnight rentals within Grand County's Highway Commercial Zone

Development Assuptions		Moderate Market Baseline	Moderate Market w/ 65' Height	Strong Market Baseline	Strong Market w/ 65' Height
Site Size (sf) (a)		43,560	43,560	43,560	43,560
Less: Setbacks		(14,240)	(14,240)	(14,240)	(14,240)
Developed Footprint (sf)		14,008	9,108	14,008	9,108
Number of Units (a)		25	33	25	33
Number of Affordable Units		-	-	2	4
Inclusionary Requirement		0%	0%	8%	10%
Average Unit Size (mix of 1s, 2s, 3s)		1,350	1,350	1,350	1,350
Net Residential Space (sf)		33,750	44,550	33,750	44,550
Common Area	15.0%	5,063	6,683	5,063	6,683
Total Residential Space (sf)		38,813	51,233	38,813	51,233
Parking Ratio (spaces per unit)		1.75	1.75	1.75	1.75
Number of Parking Spaces		44	58	44	58
Total Parking Garage (sf)	350	15,313	20,213	15,313	20,212.50
Number of Residential Floors		3	6	3	6
Total Number of Stories		1	1	1	1
FAR		0.9	1.2	0.9	1.2
Dwelling Units/Acre		25.0	33.0	25.0	33.0
Sales Price					
Average Sales Price PSF		$ 185	$ 185	$ 245	$ 245
Average Sales Price Per Unit		$ 249,750	$ 249,750	$ 330,750	$ 330,750
Average Sales Price PSF (80% AMI)		$ 148	$ 148	$ 148	$ 148
Average Sales Price Per Unit (80% AMI)		$ 200,000	$ 200,000	$ 200,000	$ 200,000
Development Costs					
Site Work		$ 5.00	$ 5.00	$ 5.00	$ 5.00
Hard Costs - Res (wood frame) (b)		$ 105	$ 105	$ 115	$ 115
Parking Costs (per space)		$ 3,500	$ 3,500	$ 3,500	$ 3,500
Soft Costs exc Fees (as % of hard)		20.0%	20.0%	20.0%	20.0%
Impact Fees					
Sewer Impact Fee per Unit (c)		$ 1,329	$ 1,329	$ 1,329	$ 1,329
Water Impact Fee per Project (c)		$ 10,946	$ 10,946	$ 10,946	$ 10,946
Financing Costs					
Loan to Cost Ratio		70.0%	70.0%	70.0%	70.0%
Interest Rate		6.0%	6.0%	6.0%	6.0%
Loan Fees		1.5%	1.5%	1.5%	1.5%
Construction Period (months)		24	24	24	24
Avg. Outstanding Balance During Construction		60.0%	60.0%	60.0%	60.0%
Sales Assumptions					
Marketing Costs		5.0%	5.0%	5.0%	5.0%

Development Costs	Moderate Market Baseline	Moderate Market w/ 65' Height	Strong Market Baseline	Strong Market w/ 65' Height
Land	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Land per Residential Unit	$ 3,300	$ 2,500	$ 5,000	$ 3,788
Land per Acre	$ 82,500	$ 82,500	$ 125,000	$ 125,000
Construction Costs				
Site Work	$ 217,800	$ 217,800	$ 217,800	$ 217,800
Hard Costs - Residential	$ 4,075,313	$ 5,379,413	$ 4,463,438	$ 5,891,738
Hard Costs - Parking	$ 153,125	$ 202,125	$ 153,125	$ 202,125
Soft Costs	$ 889,248	$ 1,159,868	$ 966,873	$ 1,262,333
Water/Sewer Impact Fees	$ 44,171	$ 54,803	$ 44,171	$ 54,803
Subtotal Const Costs Before Financing	$ 5,379,656	$ 7,014,008	$ 5,845,406	$ 7,628,798
Financing Costs				
Points	$ 56,486	$ 73,647	$ 61,377	$ 80,102
Construction Period Interest	$ 275,293	$ 357,664	$ 300,908	$ 390,791
Subtotal Financing Costs	$ 331,779	$ 431,311	$ 362,285	$ 470,894
Total Development Costs	**$ 5,793,935**	**$ 7,527,819**	**$ 6,332,691**	**$ 8,224,692**
Total Development Cost per SF (excl land)	*$ 147*	*$ 145*	*$ 160*	*$ 158*
Total Development Cost per SF (inc. land)	*$ 149*	*$ 147*	*$ 163*	*$ 161*
Valuation				
Sales				
Sales (Market Rate Units)	$ 6,243,750	$ 8,241,750	$ 7,607,250	$ 9,591,750
Sales (Affordable Units)	$ -	$ -	$ 400,000	$ 800,000
Less: Marketing Costs	$ (312,188)	$ (412,088)	$ (400,363)	$ (519,588)
Net Sales Revenue	$ 5,931,563	$ 7,829,663	$ 7,606,888	$ 9,872,163
Return on Cost				
Net Sales Revenue	$ 5,931,563	$ 7,829,663	$ 7,606,888	$ 9,872,163
Less: Total Development Costs	$ 5,793,935	$ 7,527,819	$ 6,332,691	$ 8,224,692
Profit	$ 137,627	$ 301,843	$ 1,274,196	$ 1,647,471
% Return on Cost	**2.4%**	**4.0%**	**20.1%**	**20.0%**
Feasible? (d)	**No**	**No**	**Yes**	**Yes**

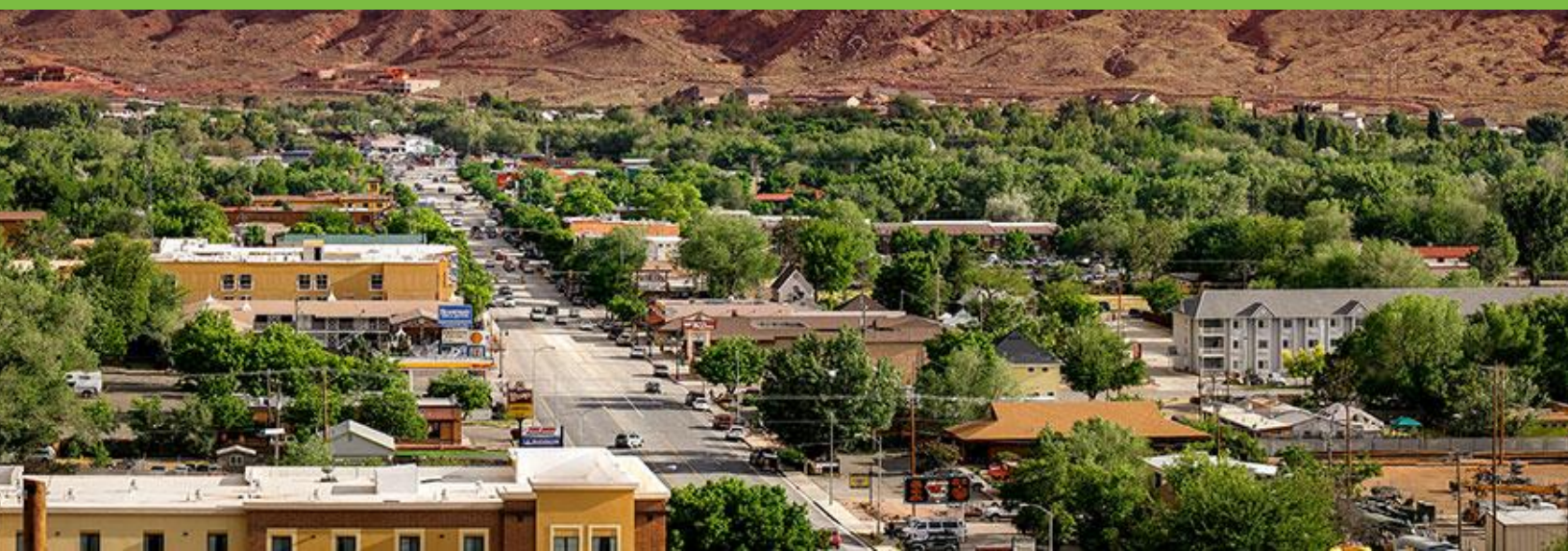
Notes:
a) Assumes minimum lot size of 2,000 square foot per dwelling unit, per City of Moab's R-3 zone. The density bonus scenarios removes this requirement.
b) Hard costs were based on data from RS Means with a location factor applied to reflect construction costs in the Moab Area.
c) Sewer impact fees in Grand County are $ 1,329 per unit
and water impact fees with a 2" meter are $ 10,946 per project
d) Project feasibility assumes a minimum return on cost of 20% based on interviews with developers active in the Moab Area.

Source: BAE, 2018.

bae urban economics

Phase II: Assured Housing Nexus Fee Analysis for the City of Moab and Grand County, Utah

May 2018



bae urban economics

May 25, 2018

Zacharia Levine
Community Development Director
Grand County
125 East Center Street
Moab, UT 84532

Dear Mr. Levine:

We are pleased to submit this Moab Area Assured Housing Feasibility Analysis Phase II Nexus Study. We enjoyed completing this work, and it has been a pleasure working with you. I look forward to the joint City/County meeting on June 19th and recapping the Phase I work and presenting the results of this Phase II work. In the meantime, please let me know if you have any questions on the attached.

Sincerely,

Matt Kowta, MCP
Managing Principal

Raymond Kennedy, MA
Director of Research

San Francisco
2600 10th St., Suite 300
Berkeley, CA 94710
510.547.9380

Sacramento
803 2nd St., Suite A
Davis, CA 95616
530.750.2195

Los Angeles
448 South Hill St., Suite 701
Los Angeles, CA 90013
213.471.2666

Washington DC
1400 I St. NW, Suite 350
Washington, DC 20005
202.588.8945

New York City
215 Park Ave. S, 6th Floor
New York, NY 10003
212.683.4486

www.bae1.com

TABLE OF CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

This report represents the second phase of the Moab Area Assured Housing Feasibility Analysis. The Phase I Study included the following:

- Description of general demographic and economic conditions
- Review of residential and commercial real estate market conditions
- Assessment of workforce housing needs
- Analysis of financial feasibility of applying affordable housing impact fees to various commercial and residential real estate products under varying market conditions
- Estimate of revenue potentially generated by an assured housing fee

Building on the Phase I analysis, this phase of the study examines in more detail the level of development "in-lieu" fees in support of affordable housing in Moab and Grand County that would be financially feasible and justifiable as being linked to, or having a nexus with, the impacts of a particular type of development. The maximum justifiable fees are based on the nexus analysis conducted as part of this Phase II Study, and represent the maximum fee based on the demand for additional affordable housing driven by new commercial and residential development. However, as indicated in the analysis here and in Phase I, applying a fee to some commercial and residential development might result in projects which would no longer generate high enough returns to be financially feasible, and for projects where a fee might be feasible, it is possible that the maximum feasible fee would be lower than the maximum justifiable fee as determined by the nexus analysis.

The Phase I analysis indicated that in-lieu fees for affordable housing were financially feasible for condominiums under a strong market scenario, and for townhomes and single-family homes under both moderate and strong market scenarios. Fees were also considered for hotels, retail, and office, with fees determined to be financially feasible for hotels only.

Using the same benchmarks for developer return, this Phase II analysis calculates a maximum financially feasible fee for each of the six land uses and scenarios where a fee was deemed feasible. This Phase II report also includes a nexus analysis, to assess the maximum justifiable fee based on the impacts for each of the scenarios for which a fee was financially feasible. Finally, the maximum financially feasible fee is compared with the maximum justifiable fee per the nexus analysis, since the lower of the two fees represents the upper limit of what can be reasonably charged, representing a fee level that is both within the range justified by the nexus findings and also not so high as to render projects financially infeasible.

Impact Fee Analysis

A comparison of the maximum justifiable fee per the nexus analysis to the maximum financially feasible fees for the two hotel scenarios shows that the maximum fee justifiable via the nexus analysis is considerably lower than the maximum financially feasible fee for either

market scenario. This is an indicator that a fee in the range of the maximum justifiable fee could be considered for implementation by the City and County.

Table ES-1: Summary of Commercial Impact Fee Analysis

	Fee per Square Foot	
	Hotel Moderate	Hotel Strong
Maximum Financially Feasible Fee	$30.86	$54.14
Maximum Justifiable Fee	$15.57	$15.57

Source: BAE, 2018.

A comparison of the maximum justifiable fee per the nexus analysis to the maximum financially feasible fees for the various residential scenarios shows that the nexus fee is higher than the financially feasible fee for any of the market scenarios, especially for the single-family homes. As a result, if the City and the County choose to implement a residential in-lieu fee, the level of appropriate fees might be constrained by market conditions. When this is the case, the revenue generated by a fee that is set at a level that is less than the justifiable amount means that the funds collected would need to be leveraged with other sources of subsidy to achieve the necessary level of housing mitigation.

Table ES-2: Summary of Residential Impact Fee Analysis

	Fee per Square Foot				
	Condominium Strong	Townhome Moderate	Townhome Strong	Single-Family Moderate	Single-Family Strong
Maximum Financially Feasible Fee	$5.18	$4.64	$8.77	$1.13	$1.62
Maximum Justifiable Fee	$10.19	$7.58	$9.29	$7.43	$5.31

Source: BAE, 2018.

Potential In-Lieu Fee Generation

For projects where a linkage fee was feasible, the maximum potentially feasible fee levels were applied to historic building permit data to estimate revenue that could potentially be generated from an in-lieu fee program. To partially take into account the variation in feasibility due to fluctuations in economic conditions over time, the assumed fees were rounded down to the nearest dollar, and were based on the moderate market scenario, with the exception of condominiums, where the fee for the strong market was used since a fee was deemed not feasible under the moderate market scenario.

This assumed fee structure could generate an estimated average annual revenue of approximately $1.3 million if applied in both the City of Moab and Grand County, assuming the same rate of development as between 2010 and 2017.[1] The City could be expected to generate substantially more revenue from hotel development than from residential development, while slightly more than half of Grand County's revenue would come from residential projects. The City's annual projected share is slightly less than $800,000, and the County's share is estimated at about $523,000. These average annual revenue estimates may under- or overstate actual revenue in any given year, depending on the overall economic cycle.

Table ES-3: Annual Estimated Fee Revenue Based on Historic Permit Activity

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single-Family Detached	$ 1.00	$ 31,898	$ 44,796	76,694
Townhomes / SFR Nightly Rentals	$ 4.00	$ 64,763	$ 82,891	147,653
Condominiums	$ 5.00	$ 5,159	$ 150,105	155,264
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 101,819**	**$ 277,791**	**$ 379,611**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office (b)	$ -	$ -	$ -	$ -
Hotel	$ 15.00	$ 694,714	$ 245,010	$ 939,724
Annual Revenue, Commercial Projects (a)		**$ 694,714**	**$ 245,010**	**$ 939,724**
Annual Revenue by Place		**$ 796,533**	**$ 522,801**	**$ 1,319,334**

Notes:
(a) The annual revenue is based the average annual square feet permitted between 2010 and 2017 in the City of Moab and Grand County. Revenue will vary year to year based on actual development activity.
(b) The building permit data did not contain square footage data for newly constructed office projects. Each office project was estimated at 8,000 square feet based on the recently built office buildings profiled in the Phase I study.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Considerations for Implementation

Market Conditions

Changes in the economy, locally or nationally, could impact both the financial feasibility and the justifiable nexus fees for the different development types. Changes in economic conditions that could influence feasibility of different fee levels would include interest rates for

[1] These calculations assume that all assured housing obligations are met by payment of fees, rather than construction of inclusionary housing units.

development and for mortgages, changes in rents, home sale prices, land costs, operating expenses, acceptable rates of return for developers, and other factors.

Fees per Unit versus Fees per Square Foot

When inclusionary requirements or in-lieu fees are fixed on a "per unit" basis, rather than varying by the size of the market rate units, this creates an incentive for builders to maximize the size of their market rate units, so that they can spread the cost of compliance over a greater quantity of saleable square footage, making market rate housing units less attainable to middle-income households. This report recommends tying the fee to square feet instead of per unit.

Phase-In of Requirements

When first adopting a policy like this, some jurisdictions set a future date for its implementation, and define how to treat current "pipeline" projects that would have been started without knowledge of this fee. A phase-in allows developers to adjust their bidding for development sites with the knowledge of how the applicable requirements affect the residual land value that they can afford to pay for a site and achieve financial feasibility. For these reasons, one possibility is to consider a phase-in schedule for initial implementation. In the case of Moab, we understand that discussion of possible assured housing requirements has occurred at least over the last two years, in which case a phase-in may not be necessary.

Policy Flexibility

During economic downturns, some jurisdictions have either created special deferral programs or lowered fees across the board. Some places have built-in mechanisms that require the fees or inclusionary policy to be re-analyzed at defined time intervals or when there are substantial changes in economic indicators such as interest rates or development costs. These approaches demonstrate that the requirements can be customized to adapt to changes in economic conditions. Because there are many constantly changing variables that influence affordable housing needs, costs of providing affordable housing units, and feasibility for market rate development, best practices dictate that analysis underpinning affordable housing requirements should be updated on a periodic basis, to determine if changes to policy or program parameters are appropriate.

Another important component of policy flexibility is to offer builders a range of options to comply with assured housing requirements. Every development project has a unique set of financial circumstances, and while a given project may not be able to afford to pay adopted in-lieu fees, there may be other options that would be feasible, such as providing on-site affordable units, dedicating land that could be utilized by others to construct affordable housing, or potentially complying with a reduced affordable housing requirement if a reduction could be justified, based on a finding of reduced affordable housing need or a lack of financial feasibility to meet the full requirements. An important caveat is to avoid making any of the options inherently more economically attractive than others, to avoid encouraging builders to

all select the same compliance option. For example, when in-lieu fees are set at levels that are substantially below the actual cost to subsidize affordable housing units, developers will rarely build affordable units onsite. As previously noted, when this is the case, perhaps due to market-based limitations on in-lieu fees, the City and County might have to leverage other sources of financing to support affordable housing.

Finally, the program should acknowledge that there may be unforeseen circumstances that could prevent a unique project from being able to feasibly comply with standard program requirements. In such cases, the program should provide for a process to modify the requirements to enable compliance.

Summary

The analysis here and in the Phase I report of this Assured Housing Feasibility Study indicates that although charging an affordable housing nexus fee increases the cost to build, the fee can be set at a reasonable level for some land uses by estimating a maximum financially feasible fee as well as a maximum justifiable fee, and ensuring that the fee is does not exceed the lower of these two thresholds. In establishing a policy for such a fee, the City and County could build in some flexibility by monitoring market conditions on an ongoing basis and providing for updates to the fee calculations if conditions change significantly. Assuming current development trends continue, a nexus fee could bring in over $1 million annually to assist in the production of affordable housing units.

INTRODUCTION

This report represents the second phase of the Moab Area Assured Housing Feasibility Analysis. The Phase I Study included the following:

- Description of general demographic and economic conditions
- Review of residential and commercial real estate market conditions
- Assessment of workforce housing needs
- Analysis of financial feasibility of applying affordable housing impact fees to various commercial and residential real estate products under varying market conditions
- Estimate of revenue potentially generated by an assured housing fee

Building off the Phase I analysis, this phase of the study examines in more detail the level of development "in-lieu" fees in support of affordable housing in Moab and Grand County that would be financially feasible and justifiable as being linked to, or having a nexus with, the impacts of a particular type of development. The maximum justifiable fees are based on the nexus analysis below, and thus represent the maximum fee based on the demand for additional affordable housing driven by new commercial and residential development. However, as indicated in the analysis here and in Phase I, applying a fee to some commercial and residential development might result in projects which would no longer generate high enough returns to be financially feasible, and for projects where a fee might be feasible, it is possible the maximum financially feasible fee would be lower than the maximum justifiable fee as determined by the nexus analysis.

These are referred to as "in-lieu" fees because they are meant to compensate for, or substitute for, construction of below market rate housing units that builders/developers otherwise would have been required to construct as part of their projects, to comply with assured housing policies.

The Phase I study explored in detail the financial feasibility of fees for different types of development to determine whether a fee would lower developer financial returns below certain benchmark levels. BAE ran a sensitivity analysis under moderate and strong market scenarios for each development type, allowing the City and County to understand how feasibility may change when market conditions fluctuate. For the moderate market, data for land, construction costs, rents, and sales prices were taken from 2014, which represented a mid-point in the recovery after the recession. Inputs for the strong market were taken from 2017.

The residential uses evaluated included apartments, condominiums, townhomes, and single-family homes. The analysis indicated that in-lieu fees for affordable housing were financially feasible for condominiums under the strong market scenario, and for townhomes and single-family homes under both the moderate and strong market scenarios. Fees were also

considered for hotels, retail, and office, with fees determined to be financially feasible for hotels only.

Using the same benchmarks for developer return, this Phase II analysis calculates a maximum financially feasible fee for each of the six land uses and scenarios where a fee was deemed feasible. This Phase II report also includes a nexus analysis, to assess the maximum justifiable fee based on the impacts for each of the scenarios for which a fee was financially feasible. Finally, the maximum financially feasible fee is compared with the maximum justifiable fee per the nexus analysis, since the lower of the two fees represents the upper limit of what can be reasonably charged, representing a fee level that is both within the range justified by the nexus findings and also not so high as to render projects financially infeasible.

Finally, this Phase II study discusses considerations for implementation, building on the same discussion presented in the Phase I study.

COMMERCIAL LINKAGE FEE ANALYSIS

This report chapter focuses on the potential jobs-housing linkage fees that could be considered for non-residential development that the Phase I analysis deemed capable of supporting some level of assured housing requirements; specifically, hotel uses.

Overview of Methodology

The commercial fee analysis conducted for this report is based on the premise that new commercial land uses generate new employment for workers that will increase demand for local housing, and have a range of household incomes that influences their ability to pay for housing. Due to higher housing costs in Moab and Grand County, new workers with extremely low, very low, low, or moderate household incomes will be unable to afford most market-rate housing without incurring excessive cost burdens. This situation – the increment of growth in new worker households facing the lack of affordable housing options - is considered the impact of new commercial development. The commercial fee would mitigate these impacts by generating revenue to support the construction of housing affordable to the new lower-income worker households. The analysis completed as part of Phase I indicates that fees would not be feasible for retail or office development, so this Phase II analysis focuses on hotels, where pro forma analysis indicated that some level of a fee was financially feasible.

This section provides an overview of the steps taken to determine the maximum justifiable hotel fee, based on the relationship ("nexus") between new hotel space and the number of households of workers supported by that new development that would face affordable housing challenges.

Step 1: Define Land Uses

The Phase I Analysis assessed the financial feasibility of linkage fees for three commercial land use categories: office, retail, and hotels. Feasibility was tested for both moderate and strong market scenarios as defined above in the Introduction.

Step 2: Test Financial Feasibility of Linkage Fee for Defined Land Uses

This step was completed in Phase I; commercial linkage fees were found to be feasible only for hotels under either the moderate or strong market scenario. However, the maximum fee that would still allow a project to meet the financial feasibility criteria regarding return on cost and yield on cost for the two hotel scenarios was not calculated. The table below shows the maximum feasible fee given those benchmarks.

Table 1: Summary of Proforma Analysis for Commercial Land Uses

	Office		Retail		Hotel	
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline (a)						
Location, Zoning	City of Moab, C-3		City of Moab, C-3		City of Moab, C-3	
Prototypical Building Size	10,000	10,000	10,000	10,000	60,000	60,000
Site Size (sf)	15,500	15,500	20,500	20,500	48,000	48,000
Total Number of Stories (Bldg)	2	2	1	1	3	3
Parking Type	Surface	Surface	Surface	Surface	Surface	Surface
FAR	0.65	0.65	0.49	0.49	1.25	1.25
Total Dev Cost/SF (inc. land)	*$ 213*	*$ 253*	*$ 233*	*$ 286*	*$ 246*	*$ 263*
Rent (psf or per hotel REVPAR)	$ 18.00	$ 24.00	$ 24.00	$ 30.00	$ 105.00	$ 122.50
Return On Cost - Baseline	-8.4%	12.0%	11.7%	24.0%	39.9%	63.4%
Yield on Cost - Baseline	5.5%	6.2%	6.7%	6.8%	9.1%	9.8%
Baseline Feasible? (b)	No	No	No	No	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30.86**	**$ 54.14**
New Fee for Prototype Project					$ 1,851,856	$ 3,248,415
Return On Cost with Fees					23.5%	34.1%
Yield on Cost with Fees					8.0%	8.0%
Feasible with Fee? (b)					Yes	Yes
New Commercial Fee, as % of Total Dev Costs					11.1%	16.9%

Notes:
a) See Phase I Report Appendix for detailed assumptions and proformas for each land use type.
b) Financial feasibility evaluated on 2 metrics:

ROC =	15.0%		
YOC:	Retail:	Office:	Hotel:
	7.0%	7.0%	8.0%

Source: BAE, 2018.

Step 3: Determine Employment Density

For the purposes of the following analysis leading to the maximum fee calculations, a hotel totaling 60,000 square feet is assumed, matching the prototypical size used in the Phase I analysis.

Hotel employment density can vary widely, depending on the type of hotel and the services offered. As noted in Phase I, the lodging market in Moab has trended toward a higher proportion of midscale and upscale hotels, which typically offer a higher level of amenities and thus require higher staffing levels. The market analysis focused on the midscale to upper midscale hotel inventory, and the assumed prototype reflects revenues associated with this type of hotel; the nexus analysis thus assumes an employment density associated with these classes of hotels. BAE reviewed several studies to estimate average hotel employment density, which is usually presented as employees per room; most recently, BAE completed a study in Napa County, California, which has an economy with a strong tourism basis like Moab, and used employment density factors by hotel type as provided to BAE by Cushman &

Wakefield.[2] Assuming the prototype hotel would be a full-service hotel and using the median density for the range provided, the following table shows the calculations of employment density for the Moab prototype based on those factors. While various studies show a wide variation in the assumed employment density, the estimate here of 1,425 square feet per employee is in the general middle range of other sources.

Table 2: Employment Density Estimate

Hotel Type	Workers per Room			Prototype Number of Rooms	Estimated Number of Workers	Hotel Sq. Ft.	Sq. Ft. per Worker
	Low	High	Avg.				
B&Bs/Small Inns	0.20	0.50	0.35				
Limited/Select Service	0.23	0.30	0.27				
Full Service	0.30	0.75	0.53	80	42	60,000	1,425
Luxury Hotels & Resorts	0.50	1.00	0.75				

Note:
Square feet per employee rounded to the nearest 25 square feet.

Sources: Cushman & Wakefield, 2018; BAE, 2018.

Step 4: Estimate Worker Households by Income Level

Many households in Moab and Grand County include more than one worker, so this study groups the employees generated by the prototype hotel into households, to estimate the total number of worker households generated.

Economists sometimes estimate household income for workers by simply multiplying worker earnings by industry by the average number of workers per worker household. This methodology relies on the unsatisfactory assumption that on average workers make the same amount of money as other workers in their household. Given the diversity of household composition, this assumption is not appropriate. For example, a household may have a teacher and a doctor, with significantly different individual earnings.

To address this issue, this analysis makes use of a detailed and rich data set published by the U.S. Census known as the Public Use Microdata Sample (PUMS). Derived from a five percent sample of all households per the American Community Survey, and available for certain defined areas of 100,000 or more of population (known as "PUMAs" or Public Use Microdata Areas), this data source allows one to cross-tabulate variables such as industry of employment

[2] Cushman & Wakefield provided the data directly to BAE. The figures provided are based on Cushman & Wakefield's specialized practice area analyzing the lodging market nationwide. Furthermore, applying their density estimate to the prototype hotel considered here resulted in an assumption of 1,425 square feet per employee based on converting the median of their assumed range of employees per room (0.3 to 0.75) for a full service hotel to square feet per employee. This number is generally consistent with sources BAE has used for other reports. In other employment density studies we have reviewed, the numbers range from 800 square feet per employee up to around 1,700 square feet per employee and from 0.3 workers per room to 1.2 workers per room.

and household income. The analysis here uses the most recent available data, from the 2012 through 2016 five-year period. Since Grand County does not meet the 100,000 minimum population threshold required for a PUMA, it is grouped with several other nearby Utah counties to create a PUMA. The counties included are Carbon, Daggett, Duchesne, Emery, Grand, San Juan, Uintah, and Wasatch. By relying on data from this grouping of counties, it is assumed that employment and household patterns in Grand County are similar to those in the group of counties as a whole.

The hotel land use is tied to one particular industry, the hotel industry, which is classified under the North American Industry Classification System (NAICS) as sector 721, Accommodation, which is part of the larger Accommodation and Food Services sector (NAICS 72). In 2016, there were a total of 1,718 private sector jobs in NAICS 72 in Grand County, as discussed the Phase I report, of which 768 were in Accommodation.

BAE queried the PUMS data set for this PUMA to identify the number of hotel worker households by HUD income category, using average household size for each income category to construct a distribution of households by income category. Table 3 below presents the distribution of households by HUD income level for the hotel industry for the PUMA, as applied to the 60,000 square-foot hotel prototype in Grand County. As shown below, there are an estimated approximately 24.4 worker households for the prototype hotel size of 60,000 square feet. The estimated number of extremely low-, very low-, low-, and moderate-income worker households for a prototype 60,000 square foot hotel is 12.8 households.

Table 3: New Hotel Worker Households by HUD Income Category

			Estimated Jobs by Percent of AMI (a)				
NAICS Code	Industry	Total Jobs (b)	Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
721	Hotel/Motel	42.00	1.33	2.25	8.40	7.30	22.72
	Total Jobs	**42.00**	**1.33**	**2.25**	**8.40**	**7.30**	**22.72**
	Workers per Households	1.72	1.22	1.43	1.44	1.69	1.95
	Number of Households (c)	**24.42**	**1.09**	**1.57**	**5.82**	**4.32**	**11.63**

Notes:
(a) Based on 2016 HUD Income Limits. Percent distribution shown in Table 10 below.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by new workers in a 60,000-square foot prototype hotel. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

Step 5: Calculate Financing Gap per Affordable Unit

The cost to house a lower-income household is the difference between the cost to develop an affordable unit and the amount of the permanent loan that the developer can borrow to finance the unit. Using data on recent housing developments gathered in Phase I, this analysis determines the average cost to build an apartment rental unit in the City. The supportable permanent loan amounts (by AMI income band) as identified in Step 4 are deducted from the average per-unit development cost to determine the financing gap for units serving households at each income level up to 120 percent of AMI.

The next step in the nexus analysis is to calculate the cost to house the extremely low-, very low-, low-, and moderate-income households calculated in the previous step by determining the per unit "financing gap" that housing developers encounter when securing a permanent loan for their projects. In other words, the cost to house a lower-income household is the difference between the cost to develop the unit and the amount of the permanent loan that the developer can borrow to finance the unit. The nexus analysis here derives cost and market rent information from the pro-forma analysis completed in Phase I for apartments under the moderate market scenario, as the lower rents and costs provide a more conservative estimate of impacts.

Affordable housing developers secure a permanent loan based on their net operating income (NOI) per unit. NOI is equal to rental income less operating expenses and vacancy. Households can afford monthly rents ranging from $418 for extremely low-income households to $1,737 for moderate-income households (see Table 4). These rents are based on household income limits for three-person households in two-bedroom units and assuming households can affordably spend 30 percent of their income on rent and utilities.

BAE used conventional financing assumptions to determine the supportable loan amount per unit for each income level. Standard deductions are taken for operating expenses and vacancies to determine NOI. As shown in Table 5, the supportable loan amount ranges from $0 per unit for extremely low-income units (i.e., operating expenses exceed NOI, leaving no NOI to support debt payments) to $167,924 for units serving moderate-income households.

Table 4: Affordability of Market-Rate Rental Housing in Moab

	3 Person Household (2 Bedrooms)
Average Market-Rate Rent (a)	$1,350
Utility Costs (b)	$93
Maximum Affordable Monthly Rent	
Extremely Low Income (up to 30% AMI)	
Household Income (c)	$20,420
Max. Affordable Monthly Rent (d)	$418
Amount Above (Below) Market Rate Rent	($933)
Very Low Income (31-50% AMI)	
Household Income (c)	$30,500
Max. Affordable Monthly Rent (d)	$669.50
Amount Above (Below) Market Rate Rent	($681)
Low Income (51-80% AMI)	
Household Income (c)	$48,750
Max. Affordable Monthly Rent (d)	$1,125.75
Amount Above (Below) Market Rate Rent	($224)
Moderate Income (81-120% AMI)	
Household Income (c)	$73,200
Max. Affordable Monthly Rent (d)	$1,737
Amount Above (Below) Market Rate Rent	$387

Notes:
(a) From Phase I analysis.
(b) Based on the Southeastern Utah Housing Authority utility allowance schedule for gas heating, cooking, and water heating and electricity for general lighting and air conditioning. Analysis assumes water, sewer, and trash collection are included in the monthly rent.
(c) 2017 household income limits published by HUD for Grand County.
(d) Assumes 30 percent of income spent on rent and utilities.

Sources: HUD; Southeastern Utah Housing Authority; BAE, 2018.

The financing gap per affordable unit is equal to the total development cost less the supportable loan amount per unit. Based on the supportable loan amount as calculated above, the financing gap per affordable unit ranges from $172,000 for extremely low-income units to only $4,076 for moderate-income units (also shown in Table 5).[3]

It should be noted that no other affordable housing subsidy was assumed in this analysis, because this calculation is intended to show the actual impact of the new employment-generating commercial land uses; it is not necessarily the way funds generated by a commercial fee would be spent on new affordable housing. Instead, in many affordable housing projects, multiple funding sources would be utilized in combination, enabling limited public resources from federal, state, and local sources to be combined most effectively. For some affordable housing projects serving low income households, non-cash subsidies such as Low Income Housing Tax Credits (LIHTCs) would also be used.

[3] These gap estimates are conservative in that they are based on the upper income limit of each income range.

Table 5: Financing Gap Analysis

	Income Group			
	Extremely Low	**Very Low**	**Low**	**Moderate**
Household Income Limit (a)	$20,420	$30,500	$48,750	$73,200
Maximum Affordable Monthly Rent per Unit (b)	$418	$670	$1,126	$1,737
Monthly Operating Expenses (c)	$458	$458	$458	$458
Vacancy (d)	5%	5%	5%	5%
Net Operating Income per Unit (e)	-$62	$178	$611	$1,192
Operating Subsidy from Other Sources (f)	$62	$0	$0	$0
Monthly Supportable Debt Service per Unit (g)	$0	$142	$489	$953
Loan Amount (h)	$0	$25,036	$86,107	$167,924
Financing Gap per Affordable Unit (i)	**$172,000**	**$146,964**	**$85,893**	**$4,076**
Assumptions				
Total Affordable Unit Development Costs (j)	$172,000			
Financing Terms				
Debt Coverage Ratio	1.25			
Interest Rate	5.50%			
Term of Loan (years)	30			

Notes:
(a) Based on a 3-person household, HUD, 2017.
(b) 30% of income to rent and utilities.
(c) Based on proforma analysis from Phase I.
(d) Standard required assumption for financing applications.
(e) Affordable Monthly Rent less Operating Expenses & Vacancy.
(f) Operating subsidy is necessary for units with negative NOI.
(g) Net Operating Income plus Operating Subsidy, divided by Debt Coverage Ratio.
(h) Based on financing terms assumptions.
(i) Total Development Costs less Loan Amount.
(j) Based on proforma analysis from Phase I.

Sources: HUD, 2017; Southeastern Utah Housing Authority; BAE, 2018.

Step 6: Calculate the Maximum Justifiable Fee per the Nexus Analysis

The final step in calculating the maximum justifiable impact fee is to apply the financing gap per affordable unit for each income level (from Step 5) to the total housing need by income level (from Step 4) for the hotel land use. This is expressed as the "maximum justifiable fee" because it is directly derived from the nexus analysis described above (i.e., new commercial development generating new jobs combined into new worker households distributed by income band, and the cost to provide new affordable rental housing units to these same households). This fee is estimated at $15.57 per square foot, as shown in Table 6.

Table 6: Maximum Justifiable Hotel Impact Fee

Affordable Housing Need per Prototype	Hotel
Extremely Low Income (up to 30% AMI)	1.09
Very Low Income (31-50% AMI)	1.57
Low Income (51-80% AMI)	5.82
Moderate Income (81-120% AMI)	4.32
Total Affordable Housing Need	12.79
Financing Gap (a)	
Extremely Low Income Units	$186,632
Very Low Income Units	$230,316
Low Income Units	$499,490
Moderate Income Units	$17,616
Total Financing Gap	**$934,054**
Maximum Impact Fee per Sq. Ft.	**$15.57**
Assumptions	
Building Size	60,000
Financing Gap	
Extremely Low Income Units	$172,000
Very Low Income Units	$146,964
Low Income Units	$85,893
Moderate Income Units	$4,076

Note:
(a) The financing gap is calculated by multiplying the number of worker households at each income level by the financing gap per unit at each affordability level.

Source: BAE, 2018.

Step 7: Comparison of Nexus and Financially Feasible Fees

A comparison of the maximum justifiable fee per the nexus analysis to the maximum financially feasible fees for the two hotel scenarios shows that the maximum fee justifiable via the nexus analysis is considerably lower than the maximum financially feasible fee for either market scenario. This is an indicator that a fee in the range of the maximum justifiable fee could be considered for implementation by the City and County.

Table 7: Summary of Commercial Impact Fee Analysis

	Fee per Square Foot	
	Hotel Moderate	Hotel Strong
Maximum Financially Feasible Fee	$30.86	$54.14
Maximum Justifiable Fee	$15.57	$15.57

Source: BAE, 2018, based on sources as described in previous tables.

RESIDENTIAL LINKAGE FEE ANALYSIS

This section of report calculates the maximum potential affordable housing linkage or "in-lieu" fee for residential developments. Analysis included in this section can also be used to identify the maximum justifiable inclusionary or "assured housing" set-aside that could justifiably be required of new residential developments instead of paying an in-lieu fee.

Overview of Methodology

This section provides an overview of the steps used to determine the maximum fee for market-rate residential units. Each step is discussed in more detail in the following sections. The maximum residential fee calculation is based on the premise that new households in Moab and Grand County will spend at least some of their disposable income locally, thereby supporting employment for new workers, a portion of which will be in need of affordable housing. The intent of the market-rate residential fee is to generate revenue that will support the construction of affordable housing for these new lower-income worker households.

While these housing unit types have the potential to be used for short-term rentals by visitors or as second homes where permitted by zoning, this nexus analysis is based on modelling these housing units assuming occupancy by full-time residents, since the actual uses for these hypothetical units are unknown.

Step 1: Define Housing Types and Identify Housing Prices and Development Costs

The Phase I study identified four residential land uses to determine the maximum legal fee for each residential product type. The residential product types analyzed were rental apartments, condominiums, townhomes, and single-family detached houses. This analysis included determining market rate rentals and sale prices as well as development costs for these residential development types.

Step 2: Test Financial Feasibility of Linkage Fee for Defined Land Uses

Using the information on rents, prices, and development costs developed in Phase I, residential linkage fees were found to be financially feasible for condominiums, townhomes, and single-family detached houses. For condominiums, fees were only feasible under strong market conditions, while they were feasible for townhomes and single-family detached houses under both moderate and strong market conditions. However, the maximum fee that would still allow a project to meet the financial feasibility criteria regarding return on cost and yield on cost was not calculated for land use types where a fee was feasible. The following table below shows the maximum feasible fee given those benchmarks.

Table 8: Summary of Proforma Analysis for Residential Land Uses

	Condominiums Overnight Rentals		Townhomes Overnight Rentals		Single-Family Detached	
	Moderate	**Strong**	**Moderate**	**Strong**	**Moderate**	**Strong**
Assumptions for Baseline						
Location, Zoning	Grand County, HC		Grand County, HC		Grand County, RR	
Site Size (sf)	43,560	43,560	240,000	240,000	43,560	43,560
Total Number of Units	25	25	48	48	1	1
Average Unit Size	1,350	1,350	1,650	1,650	2,250	3,000
Number of Residential Floors	3	3	2	2	1	1
FAR	0.9	0.9	0.3	0.3	0.1	0.1
Parking Type						
Land Costs per Acre	$ 82,500	$ 119,790	$ 82,764	$ 130,680	$ 80,000	$ 120,000
Total Dev Cost/Unit (inc. land)	$ 231,757	$ 253,308	$ 253,129	$ 311,202	$ 388,761	$ 690,780
Total Dev Cost/SF (inc. land)	$ 149	$ 163	$ 153	$ 189	$ 173	$ 230
Sale Price/Sq. Ft.	$ 185	$ 245	$ 200	$ 250	$ 200	$ 267
Sale Price or Rent Per Unit	$ 249,750	$ 330,750	$ 330,000	$ 412,500	$ 450,000	$ 800,000
Return On Cost - Baseline	2.4%	24.0%	23.9%	25.9%	15.8%	15.8%
Yield on Cost - Baseline	NA	NA	NA	NA	NA	NA
Baseline Feasible? (a)	No	Yes	Yes	Yes	Yes	Yes
New Fee/Sq. Ft. (a)	**$ -**	**$ 5.18**	**$ 4.64**	**$ 8.77**	**$ 1.13**	**$ 1.62**
New Fee per Unit	$ -	$ 6,996	$ 7,654	$ 14,474	$ 2,541	$ 4,853
Return On Cost with Fees		20.0%	20.0%	20.0%	15.0%	15.0%
Yield on Cost with Fees		N/A	N/A	N/A	N/A	N/A
Feasible with Fee? (a)		Yes	Yes	Yes	Yes	Yes
New Res Fee, as % of Total Dev Costs		*3.1%*	*2.9%*	*4.4%*	*0.7%*	*0.7%*

Notes:

Apartments were shown not to support a fee in the Phase I study and are not shown here.
a) Feasibility is measured as follows:

Project must achieve at least:	20.0%	Return on Cost for Condominiums and Townhomes
	15.0%	Return on Cost for Apartments and Single-Family Homes

Source: BAE, 2018.

Step 3: Estimate the Incomes of Households in New Market Rate Housing

Based on the sale prices identified in Step 2, this report estimated the household incomes of occupants in new residential units in Moab where a linkage fee was financially feasible. Using the threshold of 30 percent of income to housing costs, the table shows the annual household income levels required to support a mortgage for each of the projects where a linkage fee is feasible. As shown, the annual incomes range from approximately $100,000 for condominiums under the strong market scenario and townhomes under the moderate market scenario upwards to more than $240,000 for a single-family home in the strong market scenario.

Table 9: Income Requirements for Housing Prototypes

Housing Profile	Annual House-Hold Income
Condo-Strong	$99,957
Townhouse: Moderate	$99,730
Townhouse: Strong	$124,663
Single-Family: Moderate	$135,996
Single-Family: Strong	$241,771

	Amount Avail. for Housing (a)	Principal & Interest	Property Insurance	Property Taxes	Mortgage Insurance	Total Monthly Payment	Down-Payment	Affordable Home Price
Condo-Strong	$2,499	$1,570	$94	$303	$532	$2,499	$11,576	**$330,750**
Townhouse: Moderate	$2,493	$1,567	$93	$303	$531	$2,493	$11,550	**$330,000**
Townhouse: Strong	$3,117	$1,958	$117	$378	$663	$3,117	$14,438	**$412,500**
Single-Family:Moderate	$3,400	$2,136	$127	$413	$724	$3,400	$15,750	**$450,000**
Single-Family:Strong	$6,044	$3,798	$226	$733	$1,287	$6,044	$28,000	**$800,000**

Ownership Cost Assumptions (b)		
% of Income for Housing Costs	30%	of gross annual income
Down payment	3.50%	of home value
Annual interest rate	4.25%	fixed
Loan term	30	years
Upfront mortgage insurance	0.00%	of home value
Annual mortgage insurance	2.00%	of mortgage
Annual property tax rate	1.10%	of home value
Annual hazard insurance	0.34%	of home value

Notes:
(a) Represents 30 percent of monthly household income.
(b) Based on a low down payment conventional loan.

Sources: Grand County, 2017; Insurance.com, 2017; Bankrate.com, 2017; BAE, 2018.

Step 4: Analyze Projected Spending Patterns for Households in New Market-Rate Units

New households boost spending within an economy. As these new households spend money on retail goods, food, and health, personal, professional, and educational services, they support job growth in these and other sectors.

To estimate the effect of new household spending on employment generation, this Phase II nexus study uses IMPLAN ("Impact analysis for Planning"), a widely-accepted and utilized software model. At the heart of the model is an input-output dollar flow table. For a specified region, the input-output table accounts for all dollar flows between different sectors of the economy. Using this information, IMPLAN models the way income injected into one sector is spent and re-spent in other sectors of the economy, generating waves of economic activity, or so-called "economic multiplier" effects. Appendix A contains a more detailed overview of IMPLAN.

The IMPLAN model is also able to estimate the number of *direct*, *indirect*, and *induced* jobs generated by a given economic "event." Once the economic events have been entered into the model, IMPLAN reports the following types of impacts:

- Direct Impacts. Direct impacts refer to the set of producer or consumer expenditures applied to the predictive model for impact analysis. It is the amount of spending available to flow through the local economy. IMPLAN then displays how the local economy will then respond to these initial changes. The direct impacts may equal the amount of spending input into the model, depending on a variety of factors.
- Indirect Impacts. The indirect impacts refer to the impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to income and taxes. For capital projects this would include payments for construction inputs such as wood, steel, office supplies, and any other non-labor payments that a construction firm would purchase in the building process. Since IMPLAN is only used for the housing analysis for this report to assess the impacts of new resident household expenditures, there are no indirect impacts to assess as there are no industry expenditures as inputs to the model.
- Induced Impacts. The induced impacts refer to an economy's response to an initial change (direct impact) that occurs through re-spending of income according to household spending patterns. When households earn income, they spend part of that income on goods and services, such as food and healthcare. IMPLAN models households' disposable income spending patterns and distributes them through the local economy.

For the purpose of this analysis, the economic "event" is the household spending by occupants of new residential units in Grand County. By IMPLAN definition these expenditures are *direct* impacts, and the resulting spending generates *induced* impacts. For instance, the household expenditures generate jobs for cashiers and baggers at grocery stores patronized by the new households. The process initiated by household expenditures continues as these workers and the businesses they work for spend money in subsequent transactions, supporting employment at places other than the initial point of sale, such as wholesalers supplying retail stores, or truck drivers delivering goods to those stores. In turn, these businesses and workers spend money to generate additional activity in the local economy of Moab and Grand County. These are all part of the *induced* impacts linked to the household expenditures.

Table 9 above shows the income levels typically required to support the purchase of each of the housing prototypes under consideration. After adjustment for FICA taxes, IMPLAN uses these income levels to estimate expenditures within income categories encompassing each of the income levels. Since the income of an individual household does not generate enough expenditures to be recognized by the regional IMPLAN model, the total income analyzed is as

assumed for 1,000 households at that level; IMPLAN scales the expenditures in a linear manner. The results are then ultimately divided by 1,000 to show the estimated impact of a single household.

Step 5: Estimate New Worker Households by Household Income

The analysis uses a data set published by the U.S. Census (the Public Use Microdata Sample or PUMS) to estimate the household income distribution among the worker households derived from Step 4.

Worker households[4] often have more than one employed person. As discussed previously in the non-residential nexus analysis section, this analysis makes use of a detailed and rich data set published by the U.S. Census known as the Public Use Microdata Sample (PUMS) from the 2012 to 2016 period for Carbon, Daggett, Duchesne, Emery, Grand, San Juan, Uintah, and Wasatch Counties to estimate household income distributions for worker households by major industry group. The results are shown in Table 10. The income limits used were from 2016, in order to match the source data.

[4] A worker household is defined as a household with one or more employed persons. They may be wage and salary workers, or self-employed/sole proprietors.

Table 10: Income Level by Industry, Working Persons by 2016 Household Income Limits

FOR HOUSING ANALYSIS		Estimated Household Income as a Percent of AMI					
NAICS Code	Industry	Extremely Low	Very Low	Low	Moderate	Above Moderate	Total
Private Sector							
11, 21	Agriculture & Natural Resources	3.7%	1.6%	6.9%	16.6%	71.1%	100.0%
23	Construction	6.0%	4.9%	20.9%	27.1%	41.1%	100.0%
31-33	Manufacturing	5.1%	5.0%	8.2%	22.1%	59.6%	100.0%
42	Wholesale Trade	8.5%	2.0%	9.9%	16.8%	62.8%	100.0%
44-45	Retail Trade	8.0%	4.8%	15.7%	23.9%	47.6%	100.0%
48-49, 22	Transportation, Warehousing, & Utilities	1.5%	1.1%	12.7%	22.9%	61.8%	100.0%
51	Information	6.0%	12.1%	8.9%	19.4%	53.6%	100.0%
52-53	Finance, Insurance, & Real Estate	5.9%	3.8%	12.7%	26.2%	51.3%	100.0%
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	7.4%	1.6%	9.7%	21.5%	59.9%	100.0%
56	Admin, Support, & Waste Mgmt Srvcs	21.4%	0.7%	18.5%	26.2%	33.2%	100.0%
61	Educational Services	1.6%	6.2%	17.4%	24.2%	50.6%	100.0%
62	Health Care & Social Assistance	2.3%	4.4%	13.6%	24.6%	55.0%	100.0%
71-72	Leisure & Hospitality	7.6%	11.1%	15.6%	18.9%	46.8%	100.0%
81	Other Services Except Public Admin	4.5%	5.9%	25.0%	23.5%	41.1%	100.0%
All Government Employment		3.0%	2.7%	11.9%	22.3%	60.1%	100.0%

FOR HOTEL ANALYSIS		Estimated Household Income as a Percent of AMI (a)					
NAICS Code	Land Use	Extremely Low	Very Low	Low	Moderate	Above Moderate	Total
Private Sector Only							
721	Hotel/Motel	3.2%	5.3%	20.0%	17.4%	54.1%	100.0%

Notes:
Based on a cross tabulation of Public Use Microdata Samples (PUMS) from the 2012-2016 American Community Survey. These incomes were compared to household income limits published by HUD to determine the percentage of households falling into each income category. The analysis controlled for household size, to address the varying HUD income limits for each household size.

Sources: Census, American Community Survey Public-Use Microdata Sample (PUMS) 2012-2016; HUD; BAE, 2018.

Housing need is based on the number of households rather than the number of jobs. As such, jobs are translated into households by dividing the number of jobs by the average number of workers per worker household for each income category. Applying this factor to the IMPLAN output for each housing type, the following table summarizes estimate jobs supported per 100 units of housing. Detail on the calculations can be found in Appendix B.

As shown in the next table (Table 11), the total number of Grand County worker households supported by a 100-unit development ranges from 30 to 40 households; the affordable housing need,[5] based on households earning up to and including moderate incomes, ranges from 17 to 23 units per 100 new housing units.

[5] The affordable housing need is based on the number of rental housing units demanded by worker households estimated to have a gap between the cost to build and the financing supported by rents.

Table 11: Summary of Worker Households Supported by New Market-Rate Units

Based on 100 Units			Worker Households by Percent of AMI (a)				
Housing Type	Total House-holds	Total Affordable Housing Need	Extremely Low	Very Low	Low	Moderate	Above Moderate
Condominium - Strong Market	33.2	18.9	2.9	2.2	6.1	7.7	14.3
Townhome - Moderate Market	30.2	17.2	2.6	2.0	5.6	7.0	13.0
Townhome - Strong Market	37.0	21.0	3.2	2.5	6.8	8.5	15.9
Single Family Detached - Moderate Market	40.3	22.9	3.5	2.7	7.4	9.3	17.4
Single Family Detached - Strong Market	38.5	21.9	3.3	2.6	7.1	8.9	16.6

Notes:
Estimates based on 100 units of housing for each type. See Appendix B for detail on calculations.
(a) Based on 2016 HUD Income Limits.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

In addition to providing information necessary to calculate affordable housing in-lieu fees, the figures shown in Table 11 provide data that quantify the nexus between new market rate housing units and potential assured housing policies that would require new market rate housing developments to incorporate housing units to meet demand for affordable housing that is generated by the new market rate units. For example, the nexus analysis indicates that for every 100 new condominiums (strong market) there would be a need for 18.9 additional affordable housing units, including 2.9 extremely low-income housing units, 2.2 very low-income housing units, 6.1 low-income housing units, and 7.7 moderate-income units.

Step 6: Calculate Financing Gap per Affordable Unit

This step determines the per unit "financing gap" that housing developers encounter when securing a permanent loan for their projects. This step has been completed as Step 5 in the commercial fee analysis and is described in the preceding chapter of this report.

To summarize, the financing gap per affordable unit ranges from $172,000 for extremely low-income units to only $4,076 for moderate-income units. For convenient reference purposes, the table showing these calculations is repeated here as Table 12.

Table 12: Financing Gap Analysis

	Income Group			
	Extremely Low	**Very Low**	**Low**	**Moderate**
Household Income Limit (a)	$20,420	$30,500	$48,750	$73,200
Maximum Affordable Monthly Rent per Unit (b)	$418	$670	$1,126	$1,737
Monthly Operating Expenses (c)	$458	$458	$458	$458
Vacancy (d)	5%	5%	5%	5%
Net Operating Income per Unit (e)	-$62	$178	$611	$1,192
Operating Subsidy from Other Sources (f)	$62	$0	$0	$0
Monthly Supportable Debt Service per Unit (g)	$0	$142	$489	$953
Loan Amount (h)	$0	$25,036	$86,107	$167,924
Financing Gap per Affordable Unit (i)	**$172,000**	**$146,964**	**$85,893**	**$4,076**
Assumptions				
Total Affordable Unit Development Costs (j)	$172,000			
Financing Terms				
Debt Coverage Ratio	1.25			
Interest Rate	5.50%			
Term of Loan (years)	30			

Notes:
(a) Based on a 3-person household, HUD, 2017.
(b) 30% of income to rent and utilities.
(c) Based on proforma analysis from Phase I.
(d) Standard required assumption for financing applications.
(e) Affordable Monthly Rent less Operating Expenses & Vacancy.
(f) Operating subsidy is necessary for units with negative NOI.
(g) Net Operating Income plus Operating Subsidy, divided by Debt Coverage Ratio.
(h) Based on financing terms assumptions.
(i) Total Development Costs less Loan Amount.
(j) Based on proforma analysis from Phase I.

Sources: HUD, 2017; Southeastern Utah Housing Authority; BAE, 2018.

Step 7: Calculate the Maximum Justifiable Fee per the Nexus Analysis

The final step in calculating the impact fee is to apply the financing gap per unit for each income level (from Step 6) to the total housing need by income level from new market-rate units (from Step 5).

The results of the calculations are shown in Table 13. Per this nexus analysis, the maximum justifiable fees range from $5.31 per square foot for single-family detached homes in a strong market scenario to $10.19 per square foot for condominiums in a strong market scenario.

Table 13: Maximum Justifiable Fee per Residential Unit

Worker Households by Income Level	Condominium Strong	Townhome Moderate	Townhome Strong	Single-Family Moderate	Single-Family Strong
Extremely Low Income (up to 30% AMI)	2.9	2.6	3.2	3.5	3.3
Very Low Income (31-50% AMI)	2.2	2.0	2.5	2.7	2.6
Low Income (51-80% AMI)	6.1	5.6	6.8	7.4	7.1
Moderate Income (81-120% AMI)	7.7	7.0	8.5	9.3	8.9
Subtotal - Affordable Housing Need (Units)	***18.9***	***17.2***	***21.0***	***22.9***	***21.9***
Above Moderate Income (over 120% AMI)	14.3	13.0	15.9	17.4	16.6
Total Housing Need	**33.2**	**30.2**	**37.0**	**40.3**	**38.5**
Financing Gap (a)					
Extremely Low Income Units	$492,760	$448,054	$545,290	$594,862	$569,233
Very Low Income Units	$327,280	$297,587	$366,587	$399,913	$377,941
Low Income Units	$524,732	$477,125	$586,455	$639,770	$610,361
Moderate Income Units	$31,269	$28,432	$34,765	$37,925	$36,250
Total Financing Gap per 100 Units	**$1,376,040**	**$1,251,199**	**$1,533,097**	**$1,672,469**	**$1,593,785**
Maximum Impact Fee per Unit	**$13,760**	**$12,512**	**$15,331**	**$16,725**	**$15,938**
Unit Size (b)	1,350	1,650	1,650	2,250	3,000
Maximum Impact Fee per Square Foot	**$10.19**	**$7.58**	**$9.29**	**$7.43**	**$5.31**

Notes:
(a) The financing gap is calculated by multiplying the number of employee households at each income level by the financing gap per unit (from Step 7) at each affordability level.
(b) Per the Phase I analysis, based on an assumed average unit size of 1,000 sq. ft.

Source: BAE, 2018.

Step 8: Comparison of Nexus and Financially Feasible Fees

A comparison of the maximum justifiable fee per the nexus analysis to the maximum financially feasible fees for the various residential scenarios shows that the nexus fee is higher than the financially feasible fee for any of the market scenarios, especially for the single-family homes. As a result, if the City and the County choose to implement a residential in-lieu fee, the level of appropriate fees might be constrained by market conditions as indicated by the maximum financially justifiable fee levels shown in Table 14.

Table 14: Summary of Residential Impact Fee Analysis

	Fee per Square Foot				
	Condominium Strong	Townhome Moderate	Townhome Strong	Single-Family Moderate	Single-Family Strong
Maximum Financially Feasible Fee	$5.18	$4.64	$8.77	$1.13	$1.62
Maximum Justifiable Fee	$10.19	$7.58	$9.29	$7.43	$5.31

Source: BAE, 2018, based on sources as described in previous tables.

CONSIDERATIONS FOR IMPLEMENTATION

Following is a more detailed discussion of some key factors to take into account in implementation of affordable housing impact fees for Moab and Grand County, including issues discussed previously in Phase I.

Maximum Justifiable Fees vs. Maximum Financially Feasible Fees

As noted in the Introduction, the maximum justifiable fees have been derived from the nexus analysis, and thus represent the maximum fee based on the demand for additional affordable housing driven by new commercial and residential development. However, as indicated in the analysis here and in Phase I, applying a fee to some commercial and residential development might result in projects which would no longer generate high enough returns to be financially feasible, and for projects where a fee might be feasible, the maximum feasible fee might be lower than the maximum justifiable fee as determined by the nexus analysis.

As shown in the analysis, for residential uses, the maximum financially feasible fees were lower than the maximum justifiable fees from the nexus analysis, indicating that the City and County should consider setting fees at or below the maximum financially feasible fees. This is unlike the hotel/commercial fees, where the maximum financially feasible fees are higher than the maximum justifiable fees.

It should be noted that when setting the in-lieu fee at a level that is less than the maximum justifiable fee, the funds collected would be lower than necessary to subsidize the needed amount of affordable housing, meaning that the fee proceeds would need to be leveraged with other sources of subsidy to produce the desired level of affordable units.

Market Conditions

Changes in the economy, locally or nationally, could impact both the financial feasibility and the justifiable nexus fees for the different development types. The analysis here presents two scenarios, categorized as moderate market conditions and strong market conditions. Changes in economic conditions that could influence feasibility of different fee levels would include interest rates for development and for mortgages, changes in rents, home sale prices, land costs, operating expenses, acceptable rates of return for developers, and other factors.

While these factors are interdependent, the following illustrative example shows a simple sensitivity analysis for a change in just the interest rate for a developer loan for affordable rental housing. The financing gap analysis above shows the per unit subsidy required to support a loan at a 5.5 percent interest rate based on rents affordable to extremely low- to moderate-income households, with a per unit financing gap ranging from $4,076 for moderate income units to $172,000 for extremely low-income units. A one percent increase in interest

rates to 6.5 percent leads to a higher financing gap, as shown below in Table 15, to $21,153 for moderate income units to $172,000 for extremely low income units.[6] The higher interest rate leads to an increase of approximately 14 percent in the maximum justifiable nexus fees, since the cost of providing affordable units has increased (see Table 16 below).[7]

Table 15: Financing Gap Analysis – Comparative Interest Rates

	Income Group			
	Extremely Low	**Very Low**	**Low**	**Moderate**
Household Income Limit (a)	$20,420	$30,500	$48,750	$73,200
Maximum Affordable Monthly Rent per Unit (b)	$418	$670	$1,126	$1,737
Monthly Operating Expenses (c)	$458	$458	$458	$458
Vacancy (d)	5%	5%	5%	5%
Net Operating Income per Unit (e)	-$62	$178	$611	$1,192
Operating Subsidy from Other Sources (f)	$62	$0	$0	$0
Monthly Supportable Debt Service per Unit (g)	$0	$142	$489	$953
Loan Amount (h)	$0	$22,490	$77,350	$150,847
Financing Gap per Affordable Unit @ 6.5% Interest Rate (i)	**$172,000**	**$149,510**	**$94,650**	**$21,153**
Financing Gap per Affordable Unit @ 5.5% Interest Rate (i)	**$172,000**	**$146,964**	**$85,893**	**$4,076**
Assumptions				
Total Affordable Unit Development Costs (j)	$172,000			
Financing Terms				
Debt Coverage Ratio	1.25			
Interest Rate	6.50%			
Term of Loan (years)	30			

Notes:
(a) Based on a 3-person household, HUD, 2017.
(b) 30% of income to rent and utilities.
(c) Based on proforma analysis from Phase I.
(d) Standard required assumption for financing applications.
(e) Affordable Monthly Rent less Operating Expenses & Vacancy.
(f) Operating subsidy is necessary for units with negative NOI.
(g) Net Operating Income plus Operating Subsidy, divided by Debt Coverage Ratio.
(h) Based on financing terms assumptions.
(i) Total Development Costs less Loan Amount.
(j) Based on proforma analysis from Phase I.

Sources: HUD, 2017; Southeastern Utah Housing Authority; BAE, 2018.

In fact, the Phase I analysis presented two scenarios, for a moderate market based on conditions in 2014 and a strong market scenario based on 2017 conditions. Generally, the

[6] The financing gap for the extremely low income units is the same as the subsidy required in both cases is the entire cost of building the unit.
[7] The hypothetical interest rate change here does not change the maximum financially feasible fee. In real world conditions, interest costs for market rate development might also rise, but for the sake of simplicity that possibility is not considered in this hypothetical scenario.

moderate market scenarios present a lower fee. To be more conservative, the City and County could choose the fee levels associated with the moderate market scenario, making it less likely that the fee structure would need to be adjusted as often to account for changing market conditions. However, when economic conditions reflect the strong market scenario, those conditions result in higher per unit costs and make it more expensive for the City and County to use in-lieu fees to subsidize an affordable development. As discussed in further detail below, it is recommended that the technical analysis underpinning assured housing policies and establishment of jobs-housing linkage fees and affordable housing in-lieu fees be updated on a periodic basis, to account for changing conditions.

Table 16: Impact Fee Analysis – Comparative Interest Rates

	Fee per Square Foot	
	Hotel Moderate	Hotel Strong
Maximum Financially Feasible Fee	$30.86	$54.14
Maximum Justifiable Fee @ 5.5% Interest	$15.57	$15.57
Maximum Justifiable Fee @ 6.5% Interest	$17.71	$17.71

	Fee per Square Foot				
	Condominium Strong	Townhome Moderate	Townhome Strong	Single-Family Moderate	Single-Family Strong
Maximum Financially Feasible Fee	$5.18	$4.64	$8.77	$1.13	$1.62
Maximum Justifiable Fee @ 5.5% Interest	$10.19	$7.58	$9.29	$7.43	$5.31
Maximum Justifiable Fee @ 6.5% Interest	$11.60	$8.63	$10.58	$8.46	$6.05

Source: BAE, 2018, based on sources as described in previous tables.

Phase-In of Requirements

As discussed in the Phase I study, when adopting a fee or inclusionary policy, some communities do so with a phase-in schedule. For instance, when first adopting a policy like this, some jurisdictions set a future date for its implementation, and define how to treat current "pipeline" projects that would have been started without knowledge of this fee. A phase-in allows developers to adjust their bidding for development sites with the knowledge of how the applicable requirements affect the residual land value that they can afford to pay for a site and achieve financial feasibility. In the case of Moab, we understand that there have been

public discussions about establishing assured housing requirements for the last couple of years, in which case a phase-in feature may not be as important.

Fees per Unit versus Fees per Square Foot

When inclusionary requirements or in-lieu fees are fixed on a "per unit" basis, rather than varying by the size of the market rate units, this creates an incentive for builders to maximize the size of their market rate units, so that they can spread the cost of compliance over a greater quantity of saleable square footage, making market rate housing units less attainable to middle-income households. This report recommends tying the fee to square feet instead of units.

Policy Flexibility

During economic downturns, some jurisdictions have either created special deferral programs or lowered fees across the board. Some places have built-in mechanisms that require the fees or inclusionary policy to be re-analyzed at defined time intervals or when there are substantial changes in economic indicators such as interest rates or development costs. These approaches demonstrate that the requirements can be customized to adapt to changes in economic conditions. Because there are many constantly changing variables that influence affordable housing needs, costs of providing affordable housing units, and feasibility for market rate development, best practices dictate that analysis underpinning affordable housing requirements should be updated on a periodic basis, to determine if changes to policy or program parameters are appropriate.

Another important component of policy flexibility is to offer builders a range of options to comply with assured housing requirements. Every development project has a unique set of financial circumstances, and while a given project may not be able to afford to pay adopted in-lieu fees, there may be other options that would be feasible, such as providing on-site affordable units, dedicating land that could be utilized by others to construct affordable housing, or potentially complying with a reduced affordable housing requirement if a reduction could be justified, based on a finding of reduced affordable housing need or a lack of financial feasibility to meet the full requirements. An important caveat is to avoid making any of the options inherently more economically attractive than others, to avoid encouraging builders to all select the same compliance option. For example, when in-lieu fees are set at levels that are substantially below the actual cost to subsidize affordable housing units, developers will rarely build affordable units onsite. To achieve better economic parity between payment of in-lieu fees and production of below market rate units onsite, if an in-lieu fee is set at less than the full rate justifiable by the nexus analysis, then the City and County should also consider reducing the assured housing inclusionary percentages commensurately. As previously noted, when requirements are set below the maximum justifiable levels identified in the nexus analysis, the City and County might have to leverage other sources of financing to support development of affordable housing in quantities sufficient to mitigate the impacts.

Finally, the feasibility analysis and the nexus analysis conducted for prototype development projects in this study cannot

Revenue Estimate

For projects where a linkage fee was feasible, the maximum potentially feasible fee levels were applied to historic building permit data to estimate revenue that could potentially be generated from an in-lieu fee program. To partially take into account the variation in feasibility due to fluctuations in economic conditions over time, the assumed fees were rounded down to the nearest dollar, and were based on the moderate market scenario, with the exception of condominiums, where the fee for the strong market was used since a fee was deemed not feasible under the moderate market scenario.

This assumed fee structure could generate an estimated average annual revenue of approximately $1.3 million if applied in both the City of Moab and Grand County, assuming the same rate of development as between 2010 and 2017.[8] The City could be expected to generate substantially more revenue from hotel development than from residential development, while slightly more than half of Grand County's revenue would come from residential projects. The City's annual projected share is slightly less than $800,000, and the County's share is estimated at about $523,000. These average annual revenue estimates may under- or overstate actual revenue in any given year, depending on the overall economic cycle.

Table 17: Annual Estimated Fee Revenue Based on Historic Permit Activity

	Proposed Fee	City of Moab	Grand County	Est. Annual Revenue
Residential Projects				
Single-Family Detached	$ 1.00	$ 31,898	$ 44,796	76,694
Townhomes / SFR Nightly Rentals	$ 4.00	$ 64,763	$ 82,891	147,653
Condominiums	$ 5.00	$ 5,159	$ 150,105	155,264
Apartments	$ -	$ -	$ -	$ -
Annual Revenue, Residential Projects (a)		**$ 101,819**	**$ 277,791**	**$ 379,611**
Commercial Projects				
Retail	$ -	$ -	$ -	$ -
Office (b)	$ -	$ -	$ -	$ -
Hotel	$ 15.00	$ 694,714	$ 245,010	$ 939,724
Annual Revenue, Commercial Projects (a)		**$ 694,714**	**$ 245,010**	**$ 939,724**
Annual Revenue by Place		**$ 796,533**	**$ 522,801**	**$ 1,319,334**

Notes:
(a) The annual revenue is based the average annual square feet permitted between 2010 and 2017 in the City of Moab and Grand County. Revenue will vary year to year based on actual development activity.

[8] These calculations assume that all assured housing obligations are met by payment of fees, rather than construction of inclusionary housing units.

(b) The building permit data did not contain square footage data for newly constructed office projects. Each office project was estimated at 8,000 square feet based on the recently built office buildings profiled in the Phase I study.

Sources: City of Moab, 2017; Grand County, 2017; BAE, 2018.

Summary

The analysis here and in the Phase I study of this Assured Housing Study indicates that although charging an affordable housing nexus fee increases the cost to build, the fee can be set at a reasonable level for some land uses by estimating a maximum financially feasible fee as well as a maximum justifiable fee, and ensuring that the fee is below the lower of these two thresholds. In establishing a policy for such a fee, the City and County could build in some flexibility by considering a gradual phase-in, and monitoring market conditions on an ongoing basis. Assuming current development trends continue, a nexus fee could bring in over $1 million annually to assist in the production of affordable housing units.

APPENDICES

Appendix A: Overview of IMPLAN

This appendix provides additional clarification of the workings of the IMPLAN input-output model. It provides a step-by-step account of how IMPLAN estimates economic impacts using new residential development as an illustrative example. Definitions of key *italicized* terms are provided in footnotes for the benefit of the reader. This section begins with an overview of the data that IMPLAN uses internally, and moves forward through the process of how the model estimates the impacts of new commercial and housing projects.

What is IMPLAN?

IMPLAN is an input-output model that estimates the total economic implications of new economic activity within a specified geography. The model uses national industry data and county-level economic data to generate a series of multipliers, which in turn estimate the total economic implications of economic activity.

At the heart of the model is a national input-output dollar flow table called the Social Accounting Matrix (SAM). Unlike other static input-output models, which just measure the purchasing relationships between industry and household sectors, SAM also measures the economic relationships between government, industry, and household sectors, allowing IMPLAN to model transfer payments such as unemployment insurance. Thus, for the specified region, the input-output table accounts for all the dollar flows between the different sectors within the economy.

National Industry Data. The model uses national production functions for 536 sectors to determine how an industry spends its operating receipts to produce its commodities. The model also uses a national matrix to determine the *byproducts*[9] that each industry generates. To analyze the impacts of household spending, the model treats households as an "industry" to determining their expenditure patterns. IMPLAN couples the national production functions with a variety of county-level economic data to determine the impacts for our example.

County-Level Economic Data. In order to estimate the county-level impacts, IMPLAN combines national industry production functions with county-level economic data. IMPLAN collects data from a variety of economic data sources to generate average output, employment, and productivity for each of the industries in a given county. It also collects data on average prices for all of the goods sold in the local economy. In this analysis, IMPLAN uses economic data for Grand County. IMPLAN gathers data on the types and amount of output that each industry generates within the region. In addition, the IMPLAN model uses county-level data on the prices of goods and household expenditures to determine the consumption functions of

[9] The byproducts refer to any secondary commodities that the industry creates.

regional households and local government, taking into account the availability of each commodity within the specified geography.

Multipliers. IMPLAN combines this data to generate a series of SAM-type multipliers for the local economy. The multiplier measures the amount of total economic activity that results from an industry (or household) spending an additional dollar in the local economy. Based on these multipliers, IMPLAN generates a series of tables to show the economic event's *direct*, *indirect*, and *induced* impacts to gross receipts, or output, within each of the model's 536 sectors. These outputs are described below:

- Direct Impacts. Direct impacts refer to the dollar value of economic activity available to circulate through the economy. In the case of new residential development, the direct impacts are equal to the new households' discretionary spending. The direct impacts do not include household savings and payments to federal, state, and local taxes, as these payments do not circulate through the economy.

  It should be noted that impacts from retail expenditures differ significantly between the total economic value of retail and the amount available to circulate through the local economy. The nature of retail expenditures accounts for this difference. The model assumes that only the retail markup impacts the local economy, particularly for industries heavily populated with national firms such as gas stations and grocery stores. Since local stores buy goods from wholesalers and manufacturers outside of the area, and corporate profits also leave the local economy, only the retail markup will be available for distribution within the local economy. To the extent that retailers' headquarters are located within the county or region, the model allocates their portions of the impacts to the local economy.

- Indirect Impacts. The indirect impacts refer to the inter-industry impacts of the input-output analysis. Since IMPLAN is only used for the housing analysis for this report to assess the impacts of new resident household expenditures, there are no indirect impacts to assess as there are no industry expenditures as inputs to the model.

- Induced Impacts. The induced impacts refer to the impacts of household spending by the employees generated by the direct and indirect impacts. In other words, induced impacts result from the household spending of employees of business establishments that the new households patronize (direct) and their suppliers (indirect). The model accounts for local commute patterns in the geography. For example, if 20 percent of construction workers who work in the region live outside of the region, the model will allocate 80 percent of labor's disposable income into the model to generate induced impacts. The model excludes payments to federal and state taxes and savings based on the geography's average local tax and savings rates. Thus, only the disposable incomes from local workers are included in the model.

Specifying the "Event" and Running the Model

Once the model is built for the specified geographies, it is time to specify the "event" that the model will analyze and run the model.

Specifying the "Event." The "event" refers to the total economic value of industry output that we are interested in analyzing. In the case of the ongoing economic impacts of a new residential development, the "event" would be the total household incomes of the households that buy or rent the homes.

Running the Model. Once the event is specified, IMPLAN runs the event through the model to generate the results. IMPLAN applies the local data on average output per worker and compensation per worker to determine the direct impacts. It then applies the value of the event to the national production functions and runs a number of iterations of this value through the production functions for the local economy to determine the indirect and induced impacts. For each iteration, the model removes expenditures to government, savings, and for goods bought outside of the local economy so that the results only include those dollars that impact the local economy.

Summarizing the Impacts

Once the model is run, IMPLAN generates a series of output tables to show the direct, indirect, and induced impacts within each of the model's 536 sectors. IMPLAN generates these tables for three types of impacts: output, employment, and value added. This nexus study is concerned with the employment impacts.

- *Output* refers to the total economic value of the project in the local economy.
- *Employment* shows the number of employees needed to support the economic activity in the local economy. It should be noted that for annual impacts of ongoing operations, the employment figure shown represents the amount of employment needed to support that activity for a year. Furthermore, IMPLAN reports the number of jobs based on average output per employee for a given industry within the geography. This is not the same as the number of full-time positions.
- *Value Added* shows the total income that the event generates in the local economy. This income includes:
    - *Employee Compensation* – total payroll costs, including benefits
    - *Proprietary Income* – payments received by self-employed individuals as income
    - *Other Property Type Income* – payments for rents, royalties, and dividends
    - *Indirect Business Taxes* – excise taxes, property taxes, fees, and sales taxes paid by businesses. These taxes occur during the normal operation of businesses, but do not include taxes on profits or income.

Appendix B: Detailed Calculation of Employment Supported by New Market-Rate Housing

Appendix B - 1: Induced Employment Generation from Household Expenditures

NAICS Code	Industry	Number of Jobs per 100 Housing Units (a) Condominium Strong	Townhome Moderate	Townhome Strong	Single-Family Moderate	Single-Family Strong
11, 21	Natural Resources	0.07	0.06	0.08	0.09	0.08
23	Construction	0.74	0.68	0.85	0.92	0.87
31-33	Manufacturing	0.04	0.03	0.04	0.04	0.04
42	Wholesale Trade	1.00	0.91	1.11	1.21	1.11
44-45	Retail Trade	9.46	8.60	10.42	11.37	11.02
48-49, 22	Transportation, Warehousing, & Utilities	1.39	1.27	1.60	1.75	1.86
51	Information	0.64	0.58	0.68	0.74	0.63
52	Finance & Insurance	1.54	1.40	1.63	1.77	1.22
53	Real Estate & Rental & Leasing	4.93	4.49	4.71	5.14	4.75
54-55	Professional & Technical Services; Management of Companies & Enterprises	3.17	2.88	3.57	3.89	3.95
56	Administrative & Waste Services	2.05	1.87	2.29	2.50	2.74
61	Educational Services	1.19	1.08	1.63	1.78	3.21
62	Health Care & Social Assistance	10.87	9.89	12.37	13.50	12.33
71-72	Arts, Entertainment & Recreation; Accommodation & Food Services	11.67	10.61	13.22	14.42	13.33
81	Other Services, except Public Administration	6.98	6.35	7.87	8.59	7.54
0	Government	0.65	0.59	0.78	0.85	0.78
	Total Jobs	**56.42**	**51.30**	**62.85**	**68.56**	**65.45**

Note:
(a) Job generation is output of the IMPLAN model, and shows induced employment generated by household spending per 100 new housing units.

Sources: IMPLAN; BAE, 2018.

Appendix B - 2: Employment Generation by Income Level from New Condominium Housing by Income Level, per 100 Units (Strong Market)

NAICS Code	Industry	Total Jobs (b)	Estimated Jobs by Percent of AMI (a) Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
11, 21	Agriculture & Natural Resources	0.07	0.00	0.00	0.00	0.01	0.05
23	Construction	0.74	0.04	0.04	0.16	0.20	0.31
31-33	Manufacturing	0.04	0.00	0.00	0.00	0.01	0.02
42	Wholesale Trade	1.00	0.09	0.02	0.10	0.17	0.63
44-45	Retail Trade	9.46	0.76	0.45	1.49	2.26	4.50
48-49, 22	Transportation, Warehousing, & Utilities	1.39	0.02	0.02	0.18	0.32	0.86
51	Information	0.64	0.04	0.08	0.06	0.12	0.34
52-53	Finance, Insurance, & Real Estate	6.47	0.38	0.24	0.82	1.70	3.32
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	3.17	0.23	0.05	0.31	0.68	1.90
56	Admin, Support, & Waste Mgmt Srvcs	2.05	0.44	0.01	0.38	0.54	0.68
61	Educational Services	1.19	0.02	0.07	0.21	0.29	0.60
62	Health Care & Social Assistance	10.87	0.25	0.48	1.48	2.68	5.99
71-72	Leisure & Hospitality	11.67	0.89	1.29	1.82	2.20	5.47
81	Other Services Except Public Admin	6.98	0.32	0.41	1.75	1.64	2.87
All Government Employment		0.65	0.02	0.02	0.08	0.15	0.39
	Total Jobs	**56.42**	**3.51**	**3.19**	**8.82**	**12.96**	**27.93**
	Workers per Households (c)	1.70	1.22	1.43	1.44	1.69	1.95
	Number of Households	**33.17**	**2.86**	**2.23**	**6.11**	**7.67**	**14.30**

Notes:
(a) Based on 2016 HUD Income Limits.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by household spending. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

Appendix B - 3: Employment Generation by Income Level from New Townhome Housing by Income Level, per 100 Units (Moderate Market)

			Estimated Jobs by Percent of AMI (a)				
NAICS Code	Industry	Total Jobs (b)	Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
11, 21	Agriculture & Natural Resources	0.06	0.00	0.00	0.00	0.01	0.05
23	Construction	0.68	0.04	0.03	0.14	0.18	0.28
31-33	Manufacturing	0.03	0.00	0.00	0.00	0.01	0.02
42	Wholesale Trade	0.91	0.08	0.02	0.09	0.15	0.57
44-45	Retail Trade	8.60	0.69	0.41	1.35	2.05	4.09
48-49, 22	Transportation, Warehousing, & Utilities	1.27	0.02	0.01	0.16	0.29	0.78
51	Information	0.58	0.03	0.07	0.05	0.11	0.31
52-53	Finance, Insurance, & Real Estate	5.89	0.35	0.22	0.75	1.54	3.02
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	2.88	0.21	0.05	0.28	0.62	1.72
56	Admin, Support, & Waste Mgmt Srvcs	1.87	0.40	0.01	0.34	0.49	0.62
61	Educational Services	1.08	0.02	0.07	0.19	0.26	0.55
62	Health Care & Social Assistance	9.89	0.23	0.44	1.34	2.44	5.44
71-72	Leisure & Hospitality	10.61	0.81	1.17	1.66	2.00	4.97
81	Other Services Except Public Admin	6.35	0.29	0.38	1.59	1.49	2.61
All Government Employment		0.59	0.02	0.02	0.07	0.13	0.36
	Total Jobs	**51.30**	**3.19**	**2.90**	**8.02**	**11.79**	**25.40**
	Workers per Households (c)	1.70	1.22	1.43	1.44	1.69	1.95
	Number of Households	**30.16**	**2.60**	**2.02**	**5.55**	**6.98**	**13.00**

Notes:
(a) Based on 2016 HUD Income Limits.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by household spending. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

Appendix B - 4: Employment Generation by Income Level from New Townhome Housing by Income Level, per 100 Units (Strong Market)

NAICS Code	Industry	Total Jobs (b)	Estimated Jobs by Percent of AMI (a) Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
11, 21	Agriculture & Natural Resources	0.08	0.00	0.00	0.01	0.01	0.06
23	Construction	0.85	0.05	0.04	0.18	0.23	0.35
31-33	Manufacturing	0.04	0.00	0.00	0.00	0.01	0.02
42	Wholesale Trade	1.11	0.09	0.02	0.11	0.19	0.70
44-45	Retail Trade	10.42	0.84	0.50	1.64	2.49	4.96
48-49, 22	Transportation, Warehousing, & Utilities	1.60	0.02	0.02	0.20	0.37	0.99
51	Information	0.68	0.04	0.08	0.06	0.13	0.36
52-53	Finance, Insurance, & Real Estate	6.33	0.38	0.24	0.80	1.66	3.25
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	3.57	0.26	0.06	0.34	0.77	2.14
56	Admin, Support, & Waste Mgmt Srvcs	2.29	0.49	0.02	0.42	0.60	0.76
61	Educational Services	1.63	0.03	0.10	0.28	0.39	0.83
62	Health Care & Social Assistance	12.37	0.28	0.55	1.68	3.05	6.81
71-72	Leisure & Hospitality	13.22	1.01	1.46	2.06	2.49	6.19
81	Other Services Except Public Admin	7.87	0.36	0.47	1.97	1.85	3.23
All Government Employment		0.78	0.02	0.02	0.09	0.17	0.47
	Total Jobs	**62.85**	**3.88**	**3.58**	**9.86**	**14.41**	**31.12**
	Workers per Households (c)	1.70	1.22	1.43	1.44	1.69	1.95
	Number of Households	**36.96**	**3.17**	**2.49**	**6.83**	**8.53**	**15.93**

Notes:
(a) Based on 2016 HUD Income Limits.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by household spending. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

Appendix B - 5: Employment Generation by Income Level from New Single Family Detached Housing by Income Level, per 100 Units (Moderate Market)

			Estimated Jobs by Percent of AMI (a)				
NAICS Code	Industry	Total Jobs (b)	Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
11, 21	Agriculture & Natural Resources	0.09	0.00	0.00	0.01	0.01	0.06
23	Construction	0.92	0.06	0.05	0.19	0.25	0.38
31-33	Manufacturing	0.04	0.00	0.00	0.00	0.01	0.03
42	Wholesale Trade	1.21	0.10	0.02	0.12	0.20	0.76
44-45	Retail Trade	11.37	0.91	0.54	1.79	2.71	5.41
48-49, 22	Transportation, Warehousing, & Utilities	1.75	0.03	0.02	0.22	0.40	1.08
51	Information	0.74	0.04	0.09	0.07	0.14	0.39
52-53	Finance, Insurance, & Real Estate	6.91	0.41	0.26	0.88	1.81	3.55
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	3.89	0.29	0.06	0.38	0.84	2.33
56	Admin, Support, & Waste Mgmt Srvcs	2.50	0.53	0.02	0.46	0.66	0.83
61	Educational Services	1.78	0.03	0.11	0.31	0.43	0.90
62	Health Care & Social Assistance	13.50	0.31	0.60	1.83	3.33	7.43
71-72	Leisure & Hospitality	14.42	1.10	1.60	2.25	2.72	6.75
81	Other Services Except Public Admin	8.59	0.39	0.51	2.15	2.01	3.53
All Government Employment		0.85	0.03	0.02	0.10	0.19	0.51
	Total Jobs	**68.56**	**4.23**	**3.90**	**10.76**	**15.72**	**33.95**
	Workers per Households (c)	1.70	1.22	1.43	1.44	1.69	1.95
	Number of Households	**40.32**	**3.46**	**2.72**	**7.45**	**9.30**	**17.38**

Notes:
(a) Based on 2016 HUD Income Limits.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by household spending. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

Appendix B - 6: Employment Generation by Income Level from New Single Family Detached Housing by Income Level, per 100 Units (Strong Market)

			Estimated Jobs by Percent of AMI (a)				
NAICS Code	Industry	Total Jobs (b)	Extremely Low	Very Low	Low	Moderate	Above Moderate
Private Sector							
11, 21	Agriculture & Natural Resources	0.08	0.00	0.00	0.01	0.01	0.06
23	Construction	0.87	0.05	0.04	0.18	0.24	0.36
31-33	Manufacturing	0.04	0.00	0.00	0.00	0.01	0.02
42	Wholesale Trade	1.11	0.09	0.02	0.11	0.19	0.70
44-45	Retail Trade	11.02	0.88	0.53	1.73	2.63	5.24
48-49, 22	Transportation, Warehousing, & Utilities	1.86	0.03	0.02	0.24	0.43	1.15
51	Information	0.63	0.04	0.08	0.06	0.12	0.34
52-53	Finance, Insurance, & Real Estate	5.97	0.35	0.23	0.76	1.57	3.07
54-55	Professional, Scientific, & Technical Services, & Mgmt of Companies	3.95	0.29	0.06	0.38	0.85	2.37
56	Admin, Support, & Waste Mgmt Srvcs	2.74	0.58	0.02	0.50	0.72	0.91
61	Educational Services	3.21	0.05	0.20	0.56	0.78	1.62
62	Health Care & Social Assistance	12.33	0.28	0.55	1.67	3.04	6.79
71-72	Leisure & Hospitality	13.33	1.02	1.48	2.08	2.51	6.24
81	Other Services Except Public Admin	7.54	0.34	0.45	1.89	1.77	3.10
All Government Employment		0.78	0.02	0.02	0.09	0.17	0.47
	Total Jobs	**65.45**	**4.05**	**3.69**	**10.26**	**15.03**	**32.43**
	Workers per Households (c)	1.70	1.22	1.43	1.44	1.69	1.95
	Number of Households	**38.48**	**3.31**	**2.57**	**7.11**	**8.89**	**16.60**

Notes:
(a) Based on 2016 HUD Income Limits.
(b) Job estimates are the output of the IMPLAN model, and shows employment generated by household spending. Columns to right may not sum to Total Jobs due to independent rounding.
(c) Average number of workers per worker household calculated based on American Community Survey PUMS Analysis, 2012-2016.

Sources: American Community Survey, 2012-2016, including the Public User Microdata Sample; HUD; IMPLAN; BAE, 2018.

DRAFT
Grand County Planning Commission

September 11, 2018

A regular meeting of the Grand County Planning Commission convened on the above date at the Grand County Courthouse, 125 E. Center St., Moab, UT 84532

Members Present: Chair Gerrish Willis, Vice Chair Robert O'Brien, Christine "Cricket" Green, Emily Campbell, and Kevin Walker
Members Absent: Abby Scott, and Rachel Nelson
Staff Present: Kenny Gordon, Kaitlin Myers, JD McClanahan, and Zacharia Levine
Council Liaison: Mary McGann

Meeting was called to order at 5:05 PM by Gerrish Willis.

Citizens to be heard: Randy Day, public awareness of the advisory opinion of the State of Utah.

Discussion: Review and consideration of comments submitted in relation to the HDH Overlay proposal. At a recent planning commission meeting, commissioners requested examples of language and documentation related to verifying and enforcing employment requirements included in the proposed HDH overlay. Staff created the draft document by drawing from deed restriction regulations and procedures used in dozens of other gateway and tourism communities throughout the western US.

Gerrish expressed concern about section 6.14.050.C2b of the current draft HDH Overlay District, regarding vegetation and a definition of "significant trees." Zacharia made reference to existing Grand County Land Use Code 6.4, and was going to add reference to such. 6.14.050.C2c Emily and Cricket expressed interest in clarification of "solar access." Zacharia said that he would research and discuss "solar access" with legal counsel, also that some of that language may have been from prior versions with regard to greater heights. 6.14.050D Gerrish expressed concern about weavers provided to developments. Zacharia stated that the intent gives the Council ability to negotiate. 6.14.030.A(2) Emily possible clarification language added to section. Emily also requested language be added regarding "homemakers." Zacharia said that he would research and discuss "homemakers" with legal counsel. 6.14.060 Reword second sentence.

A proposed ordinance amending Section 6.5.3 Exempt Signs, which aligns County standards for political signs with those in Moab City.

The purpose of the amendment is to (1) make Grand County Land Use Code and Moab City Code consistent for political/election signs; and (2) adjust Grand County Land Use Code in response to the switch to all mail-in ballots (voting takes place over a three week period, so signs need to go up earlier).

Approval of Minutes: Motion to approve the August 28th, 2018 meeting minutes with corrections by Gerrish Willis. For: Emily Campbell, Cricket Green, Kevin Walker. Against: Robert O'Brien. The August 28th, 2018 meeting minutes were approved with corrections.

Future Considerations:

Community Development Department Update:

County Council Liaison report::

Adjournment: Motion to adjourn by meeting by Gerrish Willis, seconded by Cricket Green, all were unanimous. Adjourned at 7:05 pm.

DRAFT

Grand County Planning Commission

September 25, 2018

A regular meeting of the Grand County Planning Commission convened on the above date at the Grand County Courthouse, 125 E. Center St., Moab, UT 84532

Members Present: Chair Gerrish Willis, Vice Chair Robert O'Brien, Christine "Cricket" Green, Kevin Walker, Abby Scott, and Rachel Nelson (Emily Campbell via conference call)
Members Absent:
Staff Present: Kenny Gordon, Kaitlin Myers, JD McClanahan, and Zacharia Levine
Council Liaison: Mary McGann

Meeting was called to order at 5:00 PM by Gerrish Willis.

Citizens to be heard: N/A

Amending Section 9.5 Final Plat Procedures; the purpose of the amendment is to align Grand County's Land Use Code with Utah State Code with respect to providing a final plat approval and allowing developers the option of bonding for infrastructure or having infrastructure completed and accepted by County prior to recordation.

Legal review has been provided and the draft reflects accepted and recommended changes.

The Chair opened the public hearing.

The Chair entertained a motion.

Robert O'Brien moves to Amend Grand County Land Use Code Section 9.5 Final Plat procedures as presented. Seconded by Abby Scott.

With no further discussion the Chair called for a vote. Gerrish Willis,Robert O'Brien, Cricket Green, Kevin Walker, and Abby Scott voted in favor of the motion, two (2) were absent during vote, Rachel Nelson and Emily Campbell. Motion carries.

High Density Housing (HDH) Overlay; review and consider feedback provided to the planning commission via oral and written comments related to the proposed HDH overlay. Staff recommends the planning commission move to forward a favorable recommendation of the HDH Overlay to the Grand County Council.

The Chair opened the public hearing.

Judy Carmichael, expressed being in favor of the HDH proposal. Michael Liss, presented neighborhood centers plan and stated that density along Hwy. 191 made no sense. Laura Creekmore, expressed being in favor of the HDH proposal, and experiencing difficulty finding housing for herself. Verd Byrnes, expressed being in favor of the HDH proposal and making a forward progression with this issue. Tyson Day, expressed being in favor, but had some reservations about deed restrictions, overall supportive. Chris Kauffman and Adrea Lund, General support, wished to see seven (7) parcels along Spanish Valley Drive removed from HDH15 to HDH5. Linda Diaham, local realtor expressing concern about current situation. Terri Morris, concern about defining statements in proposal. Work might need to be done to prevent overnight rentals and concerns about water availability. Joanne Savoie, expressed being against proposal. Courtney Kizer, expressed concerns with current housing situation, expressed support. Traci Hariss concerned about area off Lemon Lane. Terill Johnston, expressed being in favor of the HDH proposal. Glenn Lunt, non-resident, generally in support of proposal.

The Chair closed the public hearing.

The Chair requested that all ex-parte communication be divulged. Abby Scott, Robert O'Brien, Gerrish Willis, Rachel Nelson, Cricket Green, and Kevin Walker shared with commission all ex-parte communications.

The Chair entertained the following motions.

Move to…

1. Remove from 6.14.010 Purpose B "over a reasonable duration of time"

Kevin Walker moves to amend language. Seconded by Robert O'Brien. 7 Yes - 0 No. Motion carries.

2. Add additional way to meet "active employment" requirement to 6.14.030(A)

Emily Campbell moves to add of primary caregiver. "(6) A person who is legally responsible for a minor child who resides primarily with them and who is primarily responsible for the child's safety and wellbeing for at least 60 hours per business week in their home must document they or the child has resided in Grand County continuously for at least five (5) years or the entirety of their lives." Seconded by Abby Scott.

a. Emily's definition for primary caregiver
b. Amendment to end after "home"

Kevin Walker moves to amend language in Emily's definition. Seconded by Rachel Nelson. 3 Yes – 4 No. Motion failed.

c. Back to original (a)

6 Yes – 1 No. Motion carries.

3. Phase the adoption of the HDH Proposal

Kevin Walker moves to phase the adoption of the HDH proposal. Seconded by Rachel Nelson. 1 Yes - 6 No. Motion failed.

4. Adopt the removal of the seven (7) parcels near the intersection of Plateau Cir. and Spanish Valley Dr. from HDH15 to HDH5

Robert O'Brien moves to remove the seven (7) parcels near the intersection of Plateau Cir. and Spanish Valley Dr. from the HDH15 to HDH5. Seconded by Kevin Walker. 3 Yes - 4 No. Motion failed.

5. Eliminate east side of Rim Rock Rd. from HDH5, which eliminates both sides of Rim Rock from HDH Proposal

Kevin Walker moves to eliminate east side of Rim Rock Rd. from HDH5, which eliminates both sides of Rim Rock from HDH Proposal. Seconded by Robert O'Brien. 3 Yes - 4 No. Motion failed.

6. Adopt HDH Overlay Proposal as amended

Robert O'Brien moves to adopt HDH Overlay Proposal as amended. Seconded by Abby Scott. 6 Yes - 1 No. Motion carries.

Amending Section 6.5.3 Exempt Signs, Political Signs; staff recommends the Commission do one of the following:

1) Select "Proposal 1," and further, eliminate the time restriction altogether.
2) Delay action on this item, seek legal review, and evaluate Sec. 6.5 in light of recent case law and best practices. See attached materials for reference. Note that Staff is concurrently working on an ordinance that would address sign illumination.

The Chair opened the public hearing.

The Chair entertained a motion.

Emily Campbell moves to Amend Grand County Land Use Code Section 6.5.3 Exempt Signs in the following manner, Exempt signs shall include the following signs:

A. Temporary (45 days or less) civic, political, cultural and public service posters;

Seconded by Robert O'Brien.

With no further discussion the Chair called for a vote. Gerrish Willis, Chair Robert O'Brien, Cricket Green, Kevin Walker, Abby Scott, Rachel Nelson and Emily Campbell voted in favor of the motion. Motion carries.

Approval of Minutes: Postponed to future meeting.

Future Considerations:

Community Development Department Update:

County Council Liaison report::

Adjournment: Motion to adjourn meeting by Kevin Walker, seconded by Cricket Green, all were unanimous. Adjourned at 8:05 pm.

Agenda Summary

GRAND COUNTY PLANNING COMMISSION

October 9, 2018

TITLE:	Discussion/Future Consideration of Outdoor Lighting Ordinace
FISCAL IMPACT:	N/A
PRESENTER(S):	Zacharia Levine, Community and Economic Development Director

Prepared By:
ZACHARIA LEVINE
GRAND COUNTY
COMMUNITY & ECONOMIC DEVELOPMENT DIRECTOR

FOR OFFICE USE ONLY:

Attorney Review:

N/A

STATED MOTION :

N/A – Discussion Only

STAFF RECOMMENDATION:

N/A – Discussion Only

BACKGROUND:

The Moab Dark Skies Working Group has been working on a draft ordinance that would update the County's outdoor lighting and sign illumination standards. Multiple reasons for the proposed update are noted in the purpose/preamble section of the draft ordinance. Staff is presenting the draft ordinance for discussion purposes only. Additional context and ideas for next steps will be provided during the presentation.

ATTACHMENT(S):

Draft Outdoor Lighting Ordinance

Section 6.6 – Outdoor Lighting

6.6 Outdoor Lighting

Commented [ZL1]: Add annotated bibliography of relevant sources of material.
Add public buildings/lighting to the code where needed.

6.6.1 Purpose

The purposes of this chapter are to:

A. Encourage outdoor lighting practices that will minimize light pollution, glare, light trespass and sky glow to curtail the degradation of the night time visual environment;

B. Prevent lighting nuisances on properties located in and adjacent to Grand County;

C. Promote energy conservation;

D. Improve night-time safety, utility, security, and productivity;

E. Develop an attractive nighttime appearance in the County;

F. Minimize lighting health risks arising from inappropriate quantities and qualities of lighting;

G. Prevent unnecessary or inappropriate outdoor lighting;

H. Minimize nighttime impacts on nocturnal wildlife;

I. Facilitate the economic development potential of astro-tourism, and the enhancement of the visitor experience in the Moab Area;

J. Maintain the rural atmosphere of the County; and

K. Encourage quality outdoor lighting through the use of efficient bulbs and light sources, fully shielded light fixtures, and limits on the location and uses of outdoor lighting.

6.6.2 Scope and Applicability

A. All lighting should be purpose driven.

B. All exterior outdoor lighting installed after the effective date of this section in all zones in the County shall conform to the requirements established by this section. This section does not apply to indoor lighting.

C. All existing outdoor lighting that does not meet the requirements of this chapter and is not exempted by this chapter shall be considered a nonconforming use or part of a nonconforming structure subject to an amortization schedule outlined in section ____ of this LUC.

6.6.3 Definitions

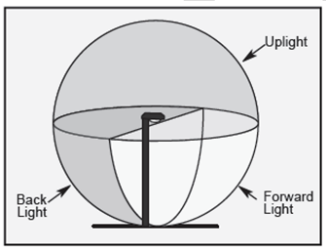
For the purpose of this section, certain words, phrases and terms shall have the meaning assigned to them by this section.

“Accent or Architectural Lighting” means lighting of building surfaces, landscape features, statues, and similar items for the purpose of decoration, ornamentation, creation of visual hierarchy, sense of liveliness, or other purpose unrelated to safety, business operation, or essential lighting function.

“Backlight” means all the light emanating behind a luminaire.

“B.U.G. Rating” means backlight, up-light, and glare rating, which exists on a scale of zero to five (0 to 5) and describes the light output of a luminaire.

Insert custom drawn image to avoid copyright issue.

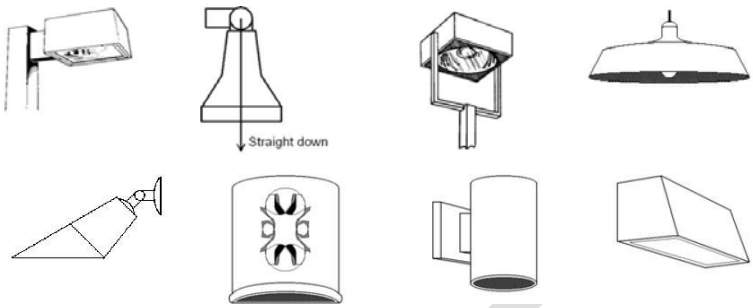


“Correlated Color Temperature” (CCT) is a specification of the color appearance of the light emitted by a lamp, relating its color to the color of light from a reference source when heated to a particular temperature, measured in degrees Kelvin (K). The CCT rating for a lamp is a general "warmth" or "coolness" measure of its appearance. Lamps with a CCT rating below 3,000 K are usually considered "warm" sources, while those with a CCT above 3,000 K are usually considered "cool" in appearance.

“Direct Illumination” means illumination resulting from light emitted directly from a bulb, luminary, or reflector. This does not include light reflected from other surfaces such as the ground or building faces.

“Floodlight” means a fixture or bulb designed to "flood" an area with light. A specific form of bulb or fixture designed to direct its output in a specific direction. Such bulbs are often designated by the manufacturer and are commonly used in residential outdoor lighting.

“Fully Shielded Fixture” means an outdoor light fixture constructed and mounted so that the installed fixture emits no light above the horizontal plane. Where a light manufacturer provides a BUG rating, the uplight rating (U) must equal zero (0). Fully shielded light fixtures must be shielded in and of themselves. Surrounding structures, like canopies, are not to be considered when determining if the fixture is fully shielded. Fully shielded fixtures must be appropriately mounted so that the shielding prevents light from escaping above the horizontal and all light is directed downward.



Examples of fully shielded light fixtures.

"Glare" means the visual sensation caused by excessive brightness and which causes annoyance, discomfort, or a disability loss in visual performance or visibility.

"Internally Illuminated" as it relates to signs, means any sign which has a light source entirely enclosed within the sign and not directly visible to the eye.

"Light Pollution" means any adverse effect of manmade light. Often used to denote "sky glow" from developed areas, but also includes glare, light trespass, visual clutter and other adverse effects of lighting.

"Light Source" means the part of a lighting fixture that produces light, e.g. the bulb, lamp, or chips on board.

"Light Trespass" means any light that falls beyond the legal boundaries of the property it is intended to illuminate.

"Lumen" means a unit of luminous flux equal to the light emitted by a uniform point source of one candle intensity. Lumens refers to the amount of light emitted by a bulb (more lumens equals brighter light).

Include a table like this as an example of common lumen to wattage relations

Commented [AN2]: Very important to include something like this for clarity to general public.

Commented [ZL3R2]: Crystal White will provide a graphic like this.

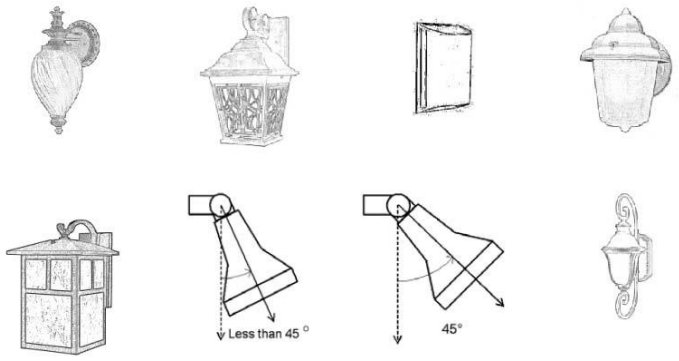
"Manufacturer's Catalog Cuts" means a publication or other printed material of a bulb or lighting manufacturer offering visual and technical information about a lighting fixture or bulb.

"Net Acre" means a gross acre excluding: public rights-of-way, lands with natural slopes greater than 30 percent, jurisdictional wetlands, lands in the 100 year floodplain, public drinking water supply water sources (recharge areas for the aquifer in the Glen Canyon Formation), lands affected by immitigable geo-hazards, riparian habitats, archeological sites, and required open space.

Commented [ZL4]: See County's "Constrained Lands" definition.

"Outdoor Light Fixture" means a complete lighting unit consisting of a lamp(s) and ballast(s) (when applicable), together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to the power supply. Also known as a luminaire, or simply as a fixture.

"Partially Shielded Light Fixture" means an outdoor light fixture means an outdoor light fixture constructed and mounted so that the installed fixture emits most of its light above the horizontal plane. Where a light manufacturer provides a BUG rating, the uplight (U) and backlight (B) ratings are greater than zero (0). Light emitted at or above the horizontal plane (sideways or upwards) shall arise solely from incidental decorative elements or strongly colored or diffusing materials such as colored glass or plastic. Fixtures using spot or flood lamps are considered partially shielded if the lamps are aimed no higher than 45 degrees above the vertical plane beneath the fixture.



Examples of partially shielded lighting fixtures

“Recreational Lighting” means lighting used to illuminate sports fields, ball courts, playgrounds, or similar outdoor recreational facilities.

“Skyglow” means the brightening of the nighttime sky resulting from the scattering and reflection of artificial light by moisture and dust particles in the atmosphere. Skyglow is caused by light directed or reflected upwards or sideways and reduces one’s ability to view the nighttime sky.

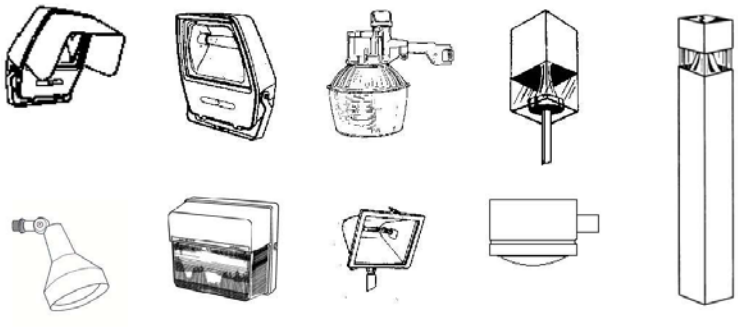
“Spotlight” means a fixture or bulb designed to light a small area very brightly. See definition of Floodlight.

"Total" means the sum of shielded and unshielded light.

"Total outdoor light output" means the total amount of light measured in lumens from all bulbs installed in outdoor lighting fixtures. For bulb types that vary in light output as they age (such as fluorescent and high intensity discharge (HID) bulbs), the initial lumen output as defined by the manufacturer shall be the lumen value used.

“Tower” means any monopole, antenna, or the like that exceeds eighteen feet (18') in height.

“Unshielded Fixture” means a fixture that has no shielding at all that would otherwise specifically prevent light emission above the horizontal.



Examples of unshielded light fixtures.

"Uplight" means all the light emanating above the horizontal plane of a luminaire.

6.6.4 Fully Shielded Fixture Requirements

A. Unless specifically exempted by this section, all outdoor lighting shall use fully shielded fixtures and shall be installed so light is directed downward with no light emitted above the horizontal plane of the fixture. Where a light manufacturer provides a BUG rating, the uplight rating (U) must equal zero (0).

B. In order to qualify as a "fully shielded" fixture, a light fixture must have the top and sides made of completely opaque material such that light only escapes through the bottom of the fixture. Fixtures with translucent or transparent sides, or sides with perforations or slits, do not qualify as fully shielded. Any glass or diffuser on the bottom of the fixture must be flush with the fixture (no drop lenses). Merely placing a light fixture under an eave, canopy, patio cover, or other similar cover does not qualify as fully shielded.

C. Fixtures must not be placed at a location, angle, or height that directs illumination outside the property boundaries where the light fixtures are located.

D. All residential and commercial luminaires shall be fully shielded within twenty-five (25) feet of adjacent residential property lines.

E. Exemptions to Fully Shielded Fixture Requirements:

    a. All lights exempted by this section shall be included in the calculation for total light output.

    b. Fixtures having a total light output less than one thousand (1,000) lumens are exempted from the fully shielded requirement provided the following criteria are met:

        i. The fixture has a top that is completely opaque such that no light is directed upwards.

ii. The fixture has sides that completely cover the light source and are made of opaque or semi-opaque material. Fixtures with opaque sides may have incidental decorative perforations that emit small amounts of light. Semi-opaque material such as dark tinted glass or translucent plastic may be used if the light source is not discernable behind the material. Completely transparent materials, such as clear or lightly tinted colored glass, are not allowed.

iii. The light source must not be visible from any point outside the property on which the fixture is located.

b. Spotlights controlled by motion sensors having a light output less than one thousand (1,000) lumens per lamp are exempted from the fully shielded requirement provided:

i. The fixture is a spotlight or other type of directed light that shall be directed straight down; and

ii. The fixture must not be placed in such a manner that results in illumination being directed outside the property boundaries where the light fixtures are located.

iii. Lights controlled by motion sensors shall not be triggered by movement or activity located off the property on which the light is located.

c. Pathway lights less than eighteen inches (18") in height are exempted from the fully shielded fixture requirement, if the total light output from each pathway light is less than three hundred (300) lumens.

d. Temporary exterior lighting intended as holiday or seasonal decorations displayed between November 15 and the following January 15, provided that individual lamps do not exceed 70 lumens and neither cause light trespass nor interfere with the reasonable use and enjoyment of any other property.

e. Traffic control signals and devices.

f. Temporary emergency lighting in use by law enforcement or government agencies or at their direction.

g. The lighting of federal or state flags, provided that the light is a top-down and narrow beam aimed and shielded to illuminate only the flag.

h. An applicant requesting approval for lighting that does not conform to these standards shall follow the procedures and findings requirements set forth in Section 9.14 Variances.

6.6.5 Total Light Output

A. Commercial. Total outdoor light output shall not exceed fifty thousand (50,000) lumens per net acre. Streetlights used for illumination of public rights-of-way are excluded from this calculation.

a. In non-residential zone districts, partially and unshielded lighting on a property shall not exceed 5,000 lumens per net acre, and shall be included in the total outdoor light output calculation

B. Residential. Total outdoor light output shall not exceed ten thousand (10,000) lumens of lighting per net acre. Parcels smaller than one-half (1/2) acre shall be permitted five thousand (5,000) lumens of lighting regardless of parcel size. Total outdoor light output of any apartment development shall not exceed twenty thousand (20,000) lumens of lighting per net acre.

a. In residential zones, partially and unshielded lighting on a property shall not exceed 1,000 lumens per lot, and shall be included in the total outdoor light output calculation.

6.6.6 Lighting Hours

A. Commercial establishments shall turn off all outdoor lighting, except that listed below, by twelve o'clock (12:00) midnight:

a. Businesses open to the public after twelve o'clock (12:00) midnight may leave all outdoor lighting on until close of business.

b. Lighting to illuminate the entrance to the commercial establishments.

c. Parking lot and pathway lighting required for the safety of guests or customers.

B. Recreational lighting (residential and commercial) shall be turned off by ten o'clock (10:00) P.M. except to conclude a specific sporting event that is underway.

6.6.7 Lighting Color

All exterior lighting shall utilize light sources with correlated color temperature not to exceed 3,000 Kelvin (K).

[Insert color spectrum image]

Commented [ZL5]: Crystal White to provide.

6.6.8 Specialized Outdoor Lighting Conditions and Standards

A. Gas station canopies may be illuminated provided all light fixtures are mounted on the undersurface of the canopy and all light fixtures are fully shielded. Merely placing the fixtures on the underside of the canopy does not qualify as fully shielding the light fixture.

B. Roadway and street lights are prohibited unless recommended by the County engineer or required by UDOT to provide for the safety of the public. All streetlights shall utilize lamp types that are fully shielded luminaires that minimize sky glow, light trespass, and other unintended impacts of artificial lighting. All streetlights shall utilize the lowest illuminance levels acceptable to the County engineer and UDOT.

Commented [ZL6]: Draft language: "Where a light manufacturer provides a BUG rating, the backlight rating (B) must equal ## or less, uplight rating (U) must equal zero (0), and glare rating (G) must equal ## or less."

C. Parking lots may not utilize spot or flood lighting whether mounted on a post or exterior building wall. The overall height of any light post used to illuminate parking lots in commercial zones shall not exceed fourteen feet (14'). All post mounted parking lot lights shall be set back from property lines a distance equal to two and one-half (2.5) times the height of the pole unless an internal or external shield prevents the fixture being visible from outside the property boundaries. The overall height of any light post used to illuminate parking lots in residential zones shall not exceed eight feet (8'). All parking lot lighting shall use fully shielded downward directed fixtures. Internal or external shields shall prevent the fixture being visible from outside the parking lots.

D. Outdoor recreation areas or athletic fields at publicly owned facilities may use illumination to light the surface of play and viewing stands and for the safety of the public. The following standards shall apply to outdoor recreation area or athletic field lighting:

1. The recreational lighting does not exceed illuminance levels for class IV sports lighting set by the Illuminating Engineering Society of North America.
2. The recreational lighting provides illuminance for the surface of play and viewing stands, and not for any other areas or applications.
3. Off-site impacts of the lighting will be limited to the greatest practical extent possible
4. The lighting for areas or applications outside the surface of play and viewing stands shall conform to all provisions in this chapter.
5. The recreational or athletic facility shall extinguish lighting exempted by this section no later than 11:00pm or one hour after the end of play, whichever is earlier.
6. The recreational lighting shall have timers that automatically extinguish lighting to ensure lights are not left on after the curfew or when the facilities are not in use.

E. Outdoor amphitheaters may use illumination to light the performance area of the amphitheater and for the safety of the public. The following standards apply to all amphitheater lighting:

a. Lighting used to illuminate the performance area must be either directed spotlighting or fully shielded lighting. If directed spotlighting, the light source must be located and designed such that it is not visible beyond the property boundaries.
b. Lighting used to illuminate the performance area may only be turned on during performances or rehearsals.
c. Lighting used to illuminate the seating areas, pathways, and other areas of the amphitheater must meet all standards of this chapter.

F. Signs shall comply with the standards of Section 6.5:

a. Signs may be unlighted, lighted externally, lighted internally, or backlit. All sign lighting must be designed, directed, and shielded in such a manner that the light source is not visible beyond the property boundaries where the sign is located. Lighting for signs must be directed such that only the sign face is illuminated. All lighted signs must have

Commented [ZL7]: Check need for max height, and what it should be.

Query the lighting audit database.

Commented [ZL8]: Same comment as above.

Commented [ZL9]: This section will all go into 6.5.5D Sign Illumination, but it is included in this draft due to its relationship to lighting and dark skies.

Update the RC sign illumination language (2.11.4 F) to refer to 6.5.5D (no exceptions)

stationary and constant lighting. All sign lighting is included in the calculation of total light output for a property.

i. Standards for Externally Illuminated Signs:

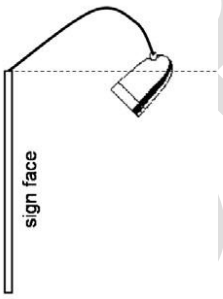
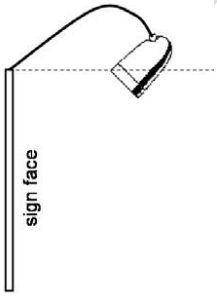
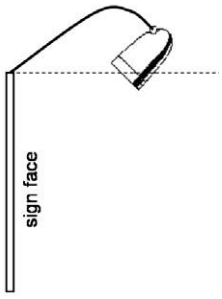
1. Lighting for externally illuminated signs must be aimed and shielded so that light is directed only onto the sign face and does not trespass onto adjacent streets, roads or properties or into the night sky.

2. Lighting for externally illuminated signs must be mounted at the top of the sign (or within 2 feet of the top of a wall mounted sign), except for freestanding monument style signs which may be illuminated by ground mounted lighting.

3. Lighting shall consist of no more than four (4) individual fixtures (or lamps) per sign face and produce a maximum of 40,000 lumens per fixture.

4. All sign lighting shall be included in the calculation of total light output.

Permitted and Prohibited External Sign Lighting Configurations

Allowed		Not Allowed
		
Fully Shielded	Fully Shielded	Unshielded

ii. Standards for Internally Illuminated Signs:

1. Only sign text areas and logos may be illuminated on an internally illuminated sign.

2. Internally illuminated signs shall use semi-opaque materials for sign text and logos such that the light emanating from the sign is diffused.

Transparent or clear materials are not allowed for sign text and logos. Non-text portions of the sign (e.g., background and graphics other than the logo) shall be made of completely opaque material.

iii. Standards for Backlit Signs:

1. The light source shall not be visible.

2. Backlit signs shall only allow indirect illumination to emanate from the sign. For example, signs that create a "halo" effect around sign copy are allowed.

iv. Standards for Illuminated Window Signs

1. Businesses may display a maximum of two (2) illuminated window signs positioned to be primarily visible outside the business structure.

2. Illuminated window signs shall not exceed four (4) square feet in area.

3. Illuminated window signs shall not be illuminated when the business is closed.

6.6.8 Application and Review Procedures

Commented [ZL10]: In Horseshoe Bay, TX, lighting plans are only required for developments resulting in >25,000 lumens. In Flagstaff, AZ, lighting plans are only required for non-residential developments (due to staffing limitations).

Could incorporate net acre component as lighting plan threshold.

A. Lighting Plan

All sign permit applications, subdivision applications, site plan applications, building permit applications, and other development review applications within any zone district shall include a lighting plan that shows evidence that the proposed lighting fixtures and light sources comply with this code. Lighting plans shall include the following:

1. Plans or drawings indicating the proposed location of lighting fixtures, height of lighting fixtures on the premises, and type of illumination devices, lamps, supports, shielding and reflectors used and installation and electrical details.

2. Illustrations, such as contained in a manufacturer's catalog cuts, of all proposed lighting fixtures. For commercial uses, photometric diagrams of proposed lighting fixtures are also required. In the event photometric diagrams are not available, the applicant must provide sufficient information regarding the light fixture, bulb wattage, and shielding mechanisms for the planning commission to be able to determine compliance with the provisions of this chapter.

3. A table showing the total amount of proposed exterior lights, by fixture type, wattage, lumens, and lamp type.

B. Approval Procedure:

1. The lighting plan for all new development shall be submitted for approval concurrent with the associated application process.

2. A certificate of occupancy shall not be issued until such time as the property is subject to a post installation nighttime inspection by the Grand County Building Official.

6.6.9 Amortization of Nonconforming Outdoor Lighting

A. The County shall require the termination of use of any and all nonconforming outdoor lighting fixtures, structures, lamps, bulbs or other devices that emit or generate light which are not otherwise exempted by this chapter, pursuant to the amortization schedule contained in this section.

B. All outdoor lighting legally existing and installed prior to the effective date of this chapter and which is not exempted shall be considered nonconforming and shall be brought into compliance by the property owner as follows:

a. Immediate abatement as a condition for approval upon application for a building permit, sign permit, conditional use permit, new (nonrenewal) business license, site plan review or similar County permit or review when said site improvements, construction, reconstruction, expansion, alteration or modification of existing sites, structures, or uses individually or cumulatively equal or exceed one thousand five hundred (1,500) square feet, or 50(?)% of existing such improvements, whichever is less. Projects less than one thousand five hundred (1,500) square feet in size will not be subject to immediate abatement. However, they will count towards a cumulative total of projects on the same property. When the cumulative total equals or exceeds one thousand five hundred (1,500) square feet abatement shall be immediate.

b. All damaged or inoperative nonconforming lighting shall be replaced or repaired only with lighting equipment and fixtures compliant with this chapter.

c. All outdoor lighting not previously scheduled for amortization or otherwise exempted shall be brought into conformance with this chapter within five (5) years from the effective date of this chapter.

C. The County shall perform two (2) audits of all outdoor lighting in the County, one two (2) years and the other four (4) years after the effective date hereof. These audits will identify all lighting that does not conform to the standards of this chapter. The results of these audits will be made available to the public.