

North Moab Recreation Area Connections

April 2013



UNDERSTANDING

RESOURCES

SOLUTIONS

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II.	ABSTRACT	1
III.	INTRODUCTION	2
IV.	METHODOLOGY	15
V.	CONSTITUENCIES	35
VI.	RECOMMENDATIONS	37
VII.	NEXT STEPS / IMPLEMENTATION	59
VIII.	CONNECTION TO WIDER TRANSPORTATION COMMUNITY	60
IX.	THE PUBLIC LANDS TRANSPORTATION LANDSCAPE	61
X.	CASE STUDY FOR FUTURE PUBLIC LANDS TRANSPORTATION SCHOLARS.....	62
XI.	PROFESSIONAL DEVELOPMENT	64
XII.	APPENDICES	

Appendix 1: NMRA Maps

Appendix 2: Moab Daily

Appendix 3: BLM campgrounds

Appendix 4: Existing Data Collected

Appendix 5: Project Interviewees

Appendix 6: Local Outreach Comments

Appendix 7: Bizz Johnson

Appendix 8: Hiawatha

Appendix 9: Arches City of Moab Shuttle

Appendix 10: Bicycle Friendly Community

Appendix 11: Moab City Walking & Bicycling Map

Appendix 12: ATS Sample Rides Map – to do

Appendix 13: Haleakala National Park

Appendix 14: Hotel Bike Program

Appendix 15: Recommendation #9

Appendix 16: Zion National Park

II. ABSTRACT

Over a ten-month period in 2011 and 2012, Public Lands Transportation Scholar Sommer Roefaro assisted the Bureau of Land Management in identifying ways to improve alternate transportation connections between Moab City and the North Moab Recreation Area. The scholar's responsibility was to generate a report to inform the community as to recommendations and barriers to realizing the full potential of the newly constructed bicycle pathways and Lion's Park Transit Hub. The scholar project will provide an initial framework for promoting the alternative transportation assets to function as an alternative transportation system and increase economic viability.

III. INTRODUCTION

This report includes recommendations to promote the developing Alternative Transportation System (ATS) in Moab Utah. The developing ATS aims at reducing congestion and dependence upon private vehicle use when visiting Grand County's public lands. The North Moab Recreation Area (NMRA) ATS vision serves as the basis of this document.

Background

Grand County, Utah is home to fewer than 10,000 residents and is most known for its largest city, Moab. Both Moab and Grand County are located on a geological province called the Colorado Plateau. The Moab area attracts 2.5 million annual visitors in search of spectacular views and recreational activities. One of the unusual aspects of Grand County is the wide range of recreational opportunities and activities it supports. The location of Moab is shown in Figure 1.

Ninety-four percent of the land in Grand County is Federal or State managed, with the Bureau of Land Management (BLM) Moab Field Office managing 1.8 million acres of public land. Moab serves as the main source of food and lodging, while the recreational use on BLM-administered lands supports hundreds of local jobs and much of the Moab business community. According to the 2012 study "*Headwaters Economic Report: The Value of Public Lands in Grand County*" travel and tourism-related industries supported 1,486 private wage and salary jobs, or 44 percent of total jobs, in Grand County in 2009.



Figure 1: Moab's Location

The limited availability of public transportation to Moab is a vital element when considering transportation connections within Moab City and public lands. Two nineteen-passenger planes per day service Moab; in addition, people may arrive by bus or train to Green River Utah (45 miles away), where no rental car or shuttle services are available. The lack of intercity and city public transportation results in most visitors arriving with and depending on private vehicles.

North Moab Recreation Area Overview

The NMRA consists of Arches National Park, Canyonlands National Park, Dead Horse Point State Park, and 15,000 acres of BLM land. The BLM lands in the NMRA support approximately 60 miles of single track mountain bike trails, numerous hiking trails and many view points along SR 313.

The NMRA ATS has approximately nine miles of a separated pathway parallel to US 191 known as the Moab Canyon Bike Path and a fourteen mile bicycle lane along SR 313 (a wide shoulder intended for bicycle use).

As of this report, the NMRA ATS is still evolving; most important to the scholar project is the construction of the Lion's Park Transit Hub and the Colorado Riverway Bike Path. The Colorado Riverway Bike Path parallels SR 128 and the Colorado River. The NMRA ATS also includes a newly constructed separated pathway connecting Moab City (at 500 West) to the Lion's Park Transit Hub and beyond.

The NMRA ATS includes numerous underpasses and a remarkable bridge over the Colorado River, creating an exclusive non-motorized experience, once on the Moab City connector bike path.

The NMRA Overview and NMRA ATS maps are shown in Figures 2 and 3 respectively on the following pages. The NMRA map shows many popular BLM land destinations excluding such "on the ground" details as single track bike trails and 4 WD roads. The NMRA map also gives distances between the Lion's Park Transit Hub and some bicycle destinations; the distances are defined by a "tick mark".

The NMRA ATS map shows the separated bicycle paths and provides more details of underpass locations and trail head names. As shown in the maps, the developing ATS is more than separated pathways. The pathways allow users to avoid the busy four-lane US 191 and the narrow shoulder-less SR 128, while providing access to public lands. The ATS provides more options to safely enjoy the scenery outside one's vehicle, provides the infrastructure needed to access public lands using active modes of travel, and has the potential to create more business opportunities in Grand County.

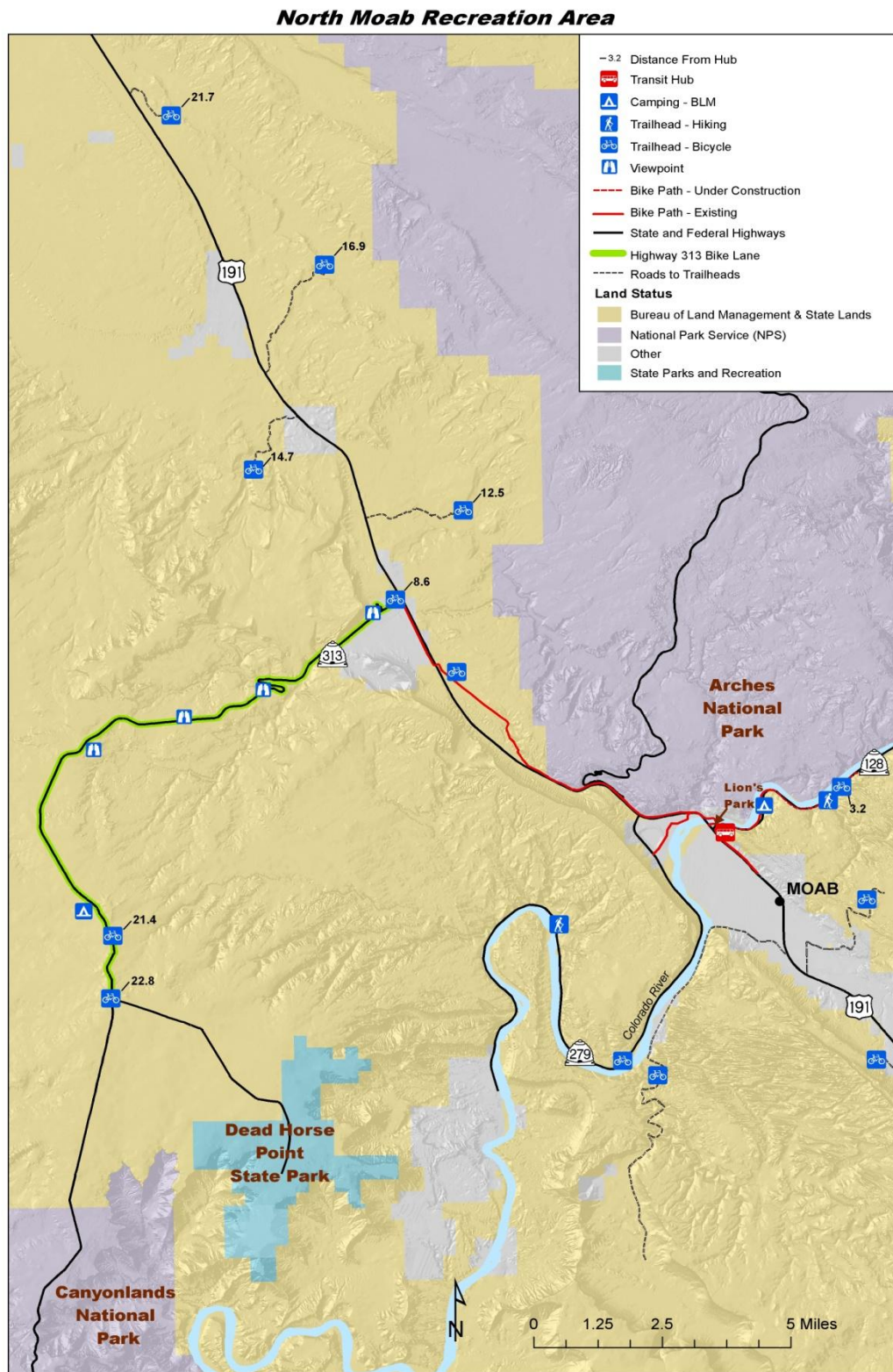


Figure 2: NMRA Overview

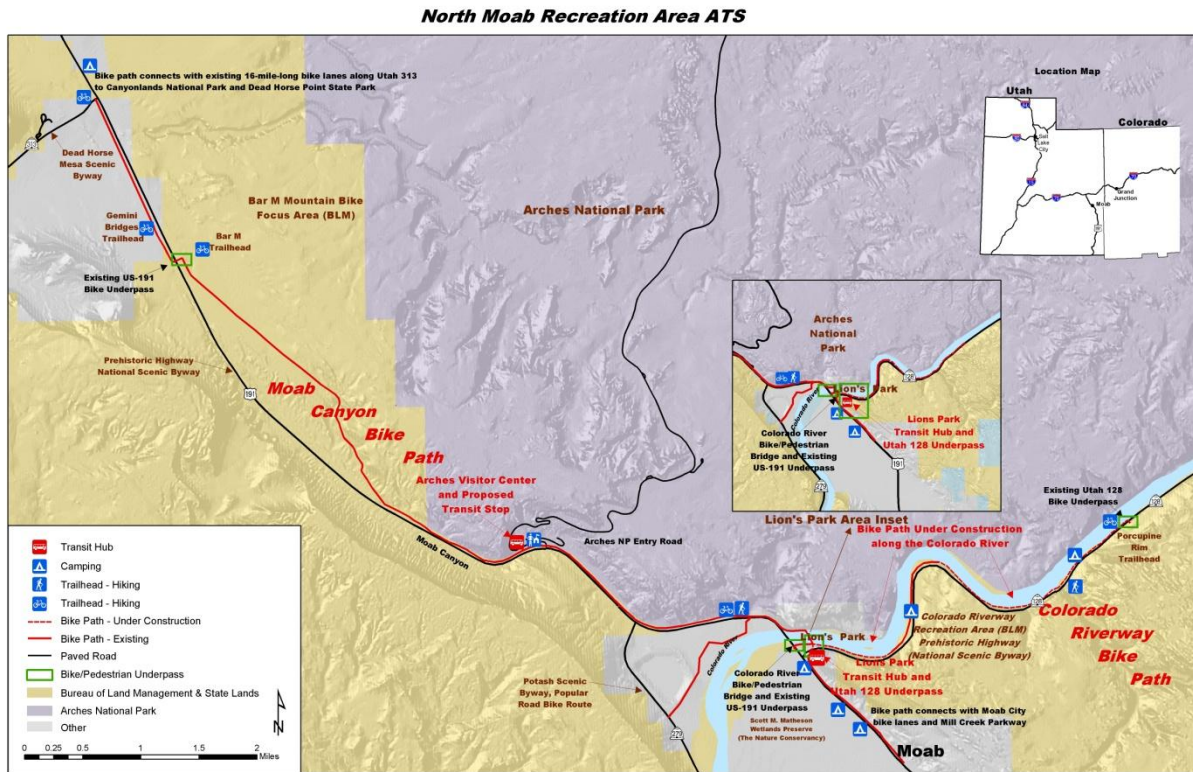


Figure 3: NMRA ATS Map

See Appendix 1: *NMRA Maps* for full version maps.

In addition to the separated pathways, there is the Lion's Park Trail Hub on the north side of SR 128 and Lion's Park Transit Hub on the south side of SR 128. The Trail Hub and Transit Hub are connected by an underpass for non-motorized users. As of this writing, the Transit Hub is in the construction stage and the Trail Hub is in the pre-construction stage. Understanding the Transit Hub and Trail Hub distinction is important when considering the intended vision of the area.

The Transit Hub is an area to park your bike or private vehicle to get on some form of public transit (a shared passenger transportation service available to the general public). The Transit Hub is for people that specifically want to use the "public transit" system.

The Trail Hub is where all the separated pathways come together. The Trail Hub is for people to arrive and park their private vehicles to enjoy being outside and utilizing the connecting pathways by bicycle, walking, reading of interpretive signs, etc. There will be a lower area designated for events that will include event parking. The Transit Hub has 43 parking spots and the Trail Hub has 93 parking spots.

North Moab Recreation Area History

In 1999, a coalition of public and private agencies created the North Moab Recreation Area's (NMRA) Alternative Transportation System (ATS) project in response to congestion and safety concerns due to growing visitation. The NMRA ATS aims to reduce the number of motorized trips by enabling and encouraging the use of alternative transportation modes via means that mutually benefit the visitors, the resources, and the local economy. The development of the ATS (separated pathways) has reduced conflicts and enhanced safety for both motorized and non-motorized users. See Figure 4 for a depiction of the reduced conflicts due to the construction of separated pathways.



Figure 4: Bicycling Highway 128 Before and After Bike Path Construction

The Moab Field Office's 2008 Resource Management Plan (RMP) had a profound effect on the success of the NMRA ATS. The BLM's RMP was signed into action in 2008, designating hiking, biking, and equestrian "Focus Areas". In addition to the Focus Areas, the RMP stipulates that 50 miles of new hiking trails may be developed and that 150 miles of new biking trails may be built. These focus areas have created more options for the beginner to advanced mountain bike rider. The Moab Field Office understood the importance of mountain biking both for recreation and economic opportunities in the area. Many visitors come to Moab specifically for biking and studies have shown mountain biking in Moab is a source of economic sustainability. The studies supporting mountain biking as an economic generator were referenced (reference number 48, 49, 50) on page 18, of the "*Headwaters Economic Report: The Value of Public Lands in Grand County*".

Recognizing the value of non-motorized trails, Grand County established the Grand County Trail Mix Committee (Trail Mix) in 2000 to serve as an advisory committee to the Grand County Council on non-motorized trail issues.

The RMP is an important step towards sustaining Moab as a world class mountain biking destination and the Grand County Trail Mix is vital the area's success. Grand County Trail Mix plays an integral role in developing and maintaining the trails in the NMRA. Federal Land

Management Agencies have limited economic and human resources and this unique collaboration has proven essential to making the NMRA and the NMRA ATS a success. Trail Mix represents the interests of non-motorized trail users, and although the bulk of users in these mountain bike designated areas are single track riders, non-motorized users such as horseback riders and hikers use the trails too. Figure 5 shows a Moab trail maintained by Trail Mix, in cooperation with the BLM.



Figure 5: Samples of well-maintained Moab Trails

The Lions Park Planning Group (LPPG) was created to assist with planning for development and management of both the Lions Park Trail Hub and the Transit Hub. The LPPG has been instrumental in obtaining grants and creating the future NMRA. The LPPG, includes Moab City, Grand County, the National Park Service, the Bureau of Land Management, The State of Utah Sovereign Lands, Trail Mix, the Moab Trail Alliance and the Lions Club.

Recreation and Transportation

Although recreation pursuits in Grand County are diverse, the primary focus of the scholar project is the paved bicycle pathways in the NMRA. An introduction to the area is helpful to understand the original scope of work and the proposed recommendations.

State Route 128

The Colorado River is accessible from SR 128. The section of the river referred to as “The Moab Daily” (see Appendix 2: *Moab Daily*), a 13 mile section of the Colorado River, is very popular and ideal for a short day adventure. The BLM maintains river access facilities along this stretch of the Colorado River. River guides using vans or buses and visitors using private vehicles will run shuttles from the “put in” access point to the “take out” access point. The road is also driven as a scenic byway for recreational drivers and used to access many popular BLM public lands for hiking and camping.

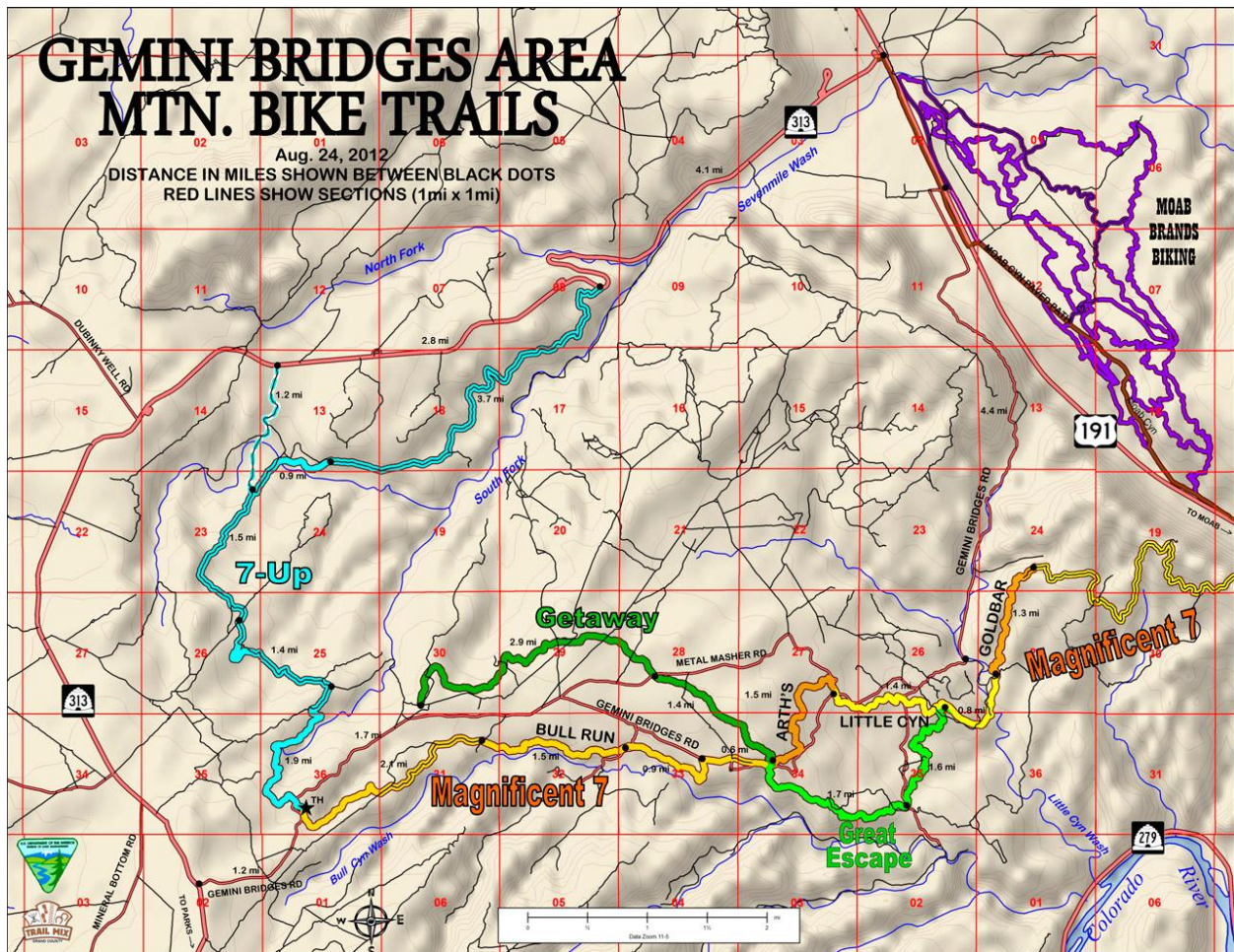
A very popular mountain bike adventure is to ride a trail known as the “Whole Enchilada”. This mountain bike adventure starts on Forest Service land, high in the La Sal Mountains and ends at the Colorado River via the Porcupine Rim trail. The Porcupine Rim trail ends (since the majority of use is downhill) at the BLM Granstaff Campground and in close proximity to the Negro Bill hiking trail. This is also the termination of the Colorado Riverway bike path. Generally speaking, the mountain bikers ride back to Moab from the end of the Porcupine Rim trail. Currently, motorized traffic and mountain bikers share the narrow and busy road (SR 128). Completion of the pathway will alleviate this conflict. The SR 128 pathway has the potential to serve as an ATS to the popular Negro Bill hiking trail and BLM campgrounds (Granstaff and Goose Island), along with inviting active modes of viewing the scenery. (See Appendix 3: *BLM Campgrounds*)

An integral part of the “Whole Enchilada” experience for many visitors are the local shuttle companies. Many people come to Moab for the “Whole Enchilada” and for many people the shuttle is part of the experience. In this context shuttle companies play a significant role to the Moab economy just as the public lands play a significant role in sustaining local businesses. Within the context of this project a shuttle refers to a two way trip: one direction by passenger van and one direction by foot, water vessel or bicycle. Shuttle companies are commonly used for recreation activities that start and end at different points. The Moab shuttle companies transport mountain bikers (and their bikes) to the top of the Whole Enchilada trail system, thereby eliminating the need for users to setup personal shuttles. The “Whole Enchilada” has been the primary mountain bike trail requiring a shuttle in the area for many years, however, with the addition of many new miles of single track and the NMRA ATS, opportunities (and the need) for shuttles are increasing.

US Route 191

The Moab Canyon bike path paralleling US 191, was completed in 2011. Mountain bike focus areas, Moab Brands Trails and the Magnificent 7 Trails (known as Mag 7) are both well suited for shuttle service. The Moab Brands and Mag 7 areas access the NMRA ATS creating a mostly downhill, safe and pleasant option for cyclist returning to the City of Moab. Figure 6 illustrates the connection of the Mag7 and Moab Brands Trail with US 191.

Other mountain bike areas such as Klonzo and Klondike Bluffs have been developed further north on US 191 however these trailheads are unreasonable distances (for most riders) for a one-way shuttle on the busy highways. Unlike the “Whole Enchiladas” the mountain bike focus areas (Moab Brands, Mag 7, Klonzo, and Klondike) are stacked loop systems. Stacked loop systems allow riders to combine different trails with the option (distance, grades, and skills) to design short or long mountain bike ride.



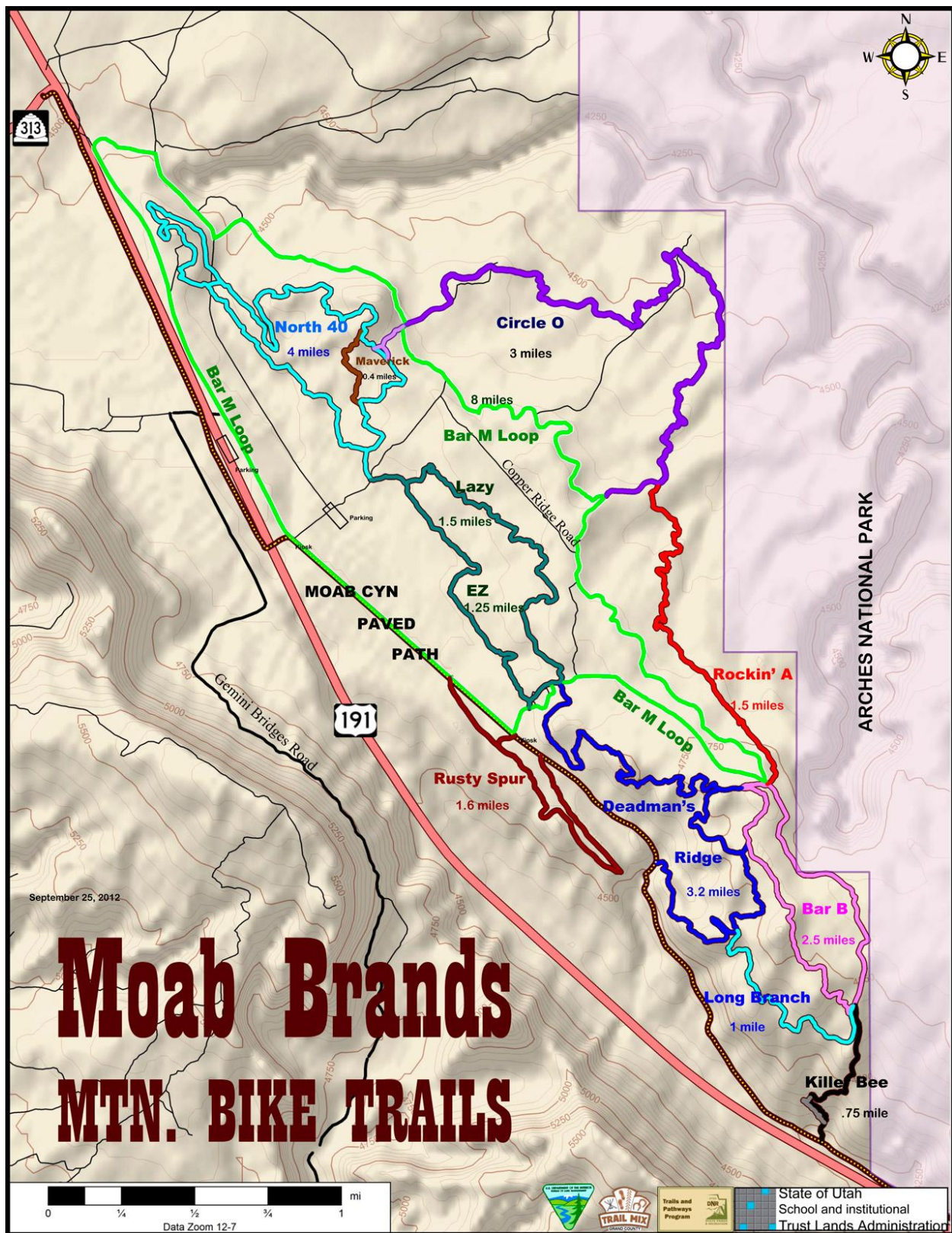


Figure 6: Mag 7 and Moab Brands Mountain Bike Focus Areas

State Route 313

The Mag 7 is a network of trails with many options. Mountain bikers can set up their own shuttles, use a local shuttle company or ride the area as a “stacked loop” system. The Mag 7 area accesses the NMRA ATS via Gemini Bridges Road. (See Figure 6)

The SR 313 has a bicycle lane (a wide shoulder) that cyclist can safely use to access view points, camping areas, Dead Horse State Park or Canyonlands National Park. SR 313 is gradual and mostly uphill, road biking is very popular on this road starting from Moab although there are many other starting points. To further illustrate the NMRA transportation and recreation overlay see Figure 7.

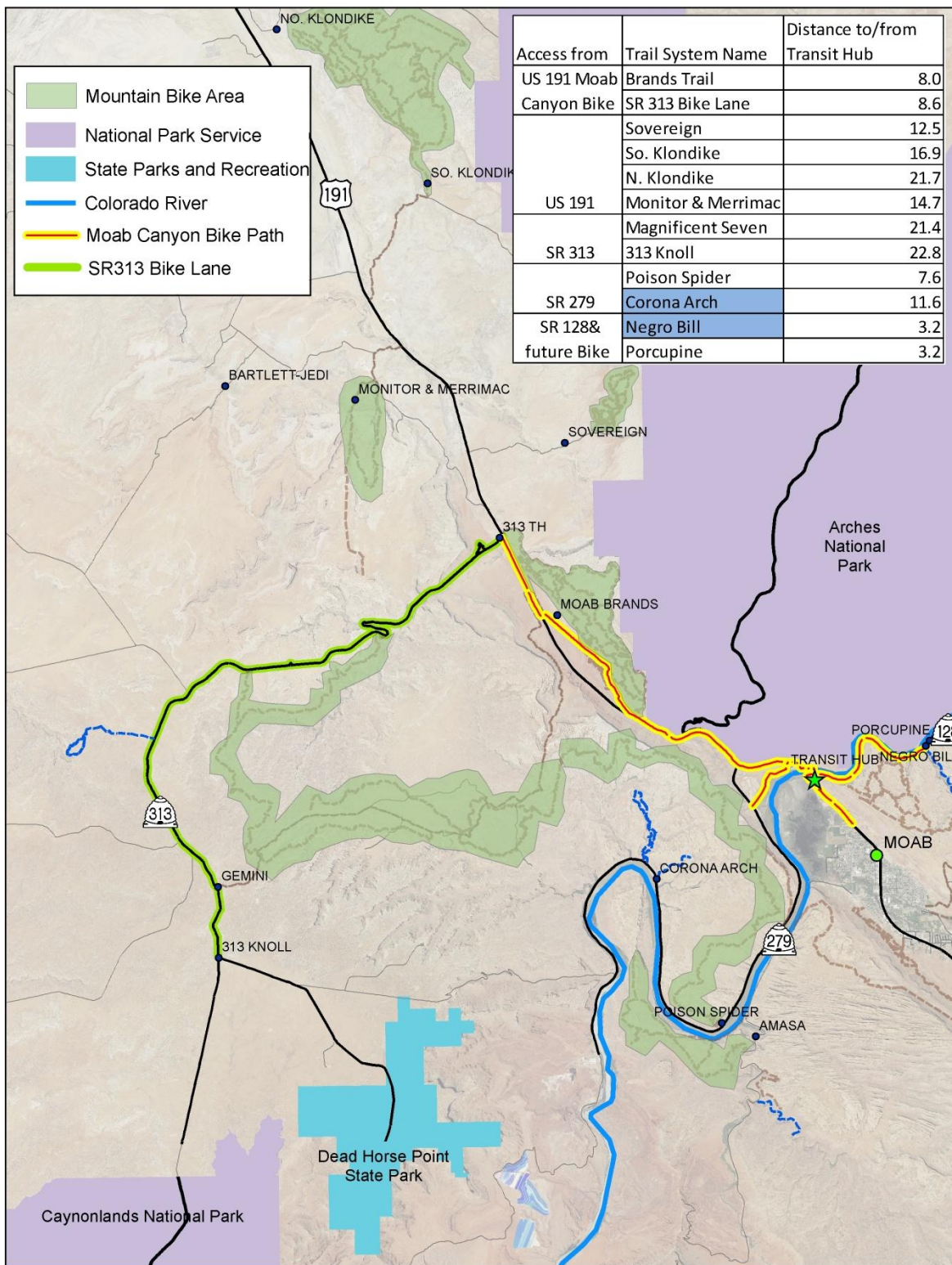


Figure 7: NMRA Transportation and Recreation Overlay

North Moab Recreation Area ATS Vision

To understand the vision of the North Moab Recreation Area the scholar had conversations with Russ von Koch (retired BLM Recreation Manager) and Kimberly Schappert (Moab Trails Alliance, or MTA). Both Mr. von Koch and Ms. Schappert were the visionaries for the NMRA ATS, and were integral in obtaining the funds for the NMRA ATS. They were also deeply involved in the planning process. The Paul S. Sarbanes Transit in Parks Program grant for the Colorado Riverway bike path was reviewed to further understand the vision for the area.

The separated pathways opened up a new opportunity for both visitors and businesses. This vision is to have businesses in Moab that have rolling stock available, such as 14 passenger vans, pool resources to create a “regular and reliable” shuttle service at the transit hub.

This envisioned service would include the pathways and the bicycle lane on SR 313. This new service would invite people desiring a downhill bicycle experience to arrange their own schedule. One such concept is to have shuttle service providers drop off cyclists at the Moab Brand Trails and the “Knoll” near SR 313. The Knoll is at the “Y” intersection of SR 313 with the entrance road into Canyonlands National Park. See Figure 3 NMRA Overview, -- the trailhead denoted by 22.8 miles from the Transit Hub.

Additionally, the NMRA ATS vision is closely linked with use of Arches National Park. If Arches were to offer shuttle services, then the envisioned NMRA ATS would be integrated. Either visitors could connect from town via bicycle to the Arches shuttle stop or Arches could be an additional stop as part of the Transit Hub’s regular service.

It is important to acknowledge the development of the NMRA ATS has addressed many safety issues for bicyclists and motorists sharing the road. The NMRA ATS provides for an active enjoyable alternative to scenic driving. The creation of the Moab Brands area provides for a destination when using the Moab Canyon bike path.

As the vision is understood, once the NMRA ATS infrastructure is on the ground, local businesses could play a vital role in enhancing ATS opportunities. An embedded element of the NMRA ATS vision outlined is to create a “branding” or marketing by the businesses. In other words, businesses could create an experience visitors will want before they know they want it. The alternative is to let the demand determine the service and allow usage patterns to emerge over time.

Scope of Work

A scope of work (SOW) was developed to outline the work to be performed by the Transportation Scholar. This SOW was broken out into specific tasks.

The main tasks for the Scholar Project:

1. Develop overall transit vision with concepts for serving recreation areas in the NMRA.
Alternative to Task #1: Assessing Moab City as a “collector” system to the NMRA ATS.
2. Conduct an assessment for utilizing private businesses’ vans and busses to provide a coordinated and scheduled service between the City of Moab and the NMRA destinations.
3. Examine, support, and develop wayfinding and ATS information for the wider NMRA.

Scope of Work Evolution

There are many variables affecting the viability of the transit vision. The Arches National Park pilot shuttle program is still undetermined. . The Transit Hub and Colorado Riverway bicycle path is under construction. The Trail Hub is in the early stages of construction. It was eventually realized that these developing variables were affecting the viability of creating an overall transit vision.

The Transit Hub and Trail Hub need to be more stable. In addition, there is a need for project champions within the community who are dedicated to addressing the NMRA ATS’ needs and uses prior to addressing public transit. Project champions are essential once the NMRA ATS is fully on the ground if a specific vision is to be realized. Therefore, effort was expended to generally increase alternative transportation usage and visibility, and bicycle commuting was deemed an appropriate first step. Increasing alternative transportation use will drive demand for a future transit system.

According to the 2006 Arches National Park Transportation Implementation Plan survey, 29% of visitors would bicycle between Moab and Arches if a safe route were available. Also, educating locals on the benefits of traffic calming, pedestrian friendly streets and creating a bicycle friendly community will make the City of Moab one step closer to accommodating public transportation.

As an alternative to main task #1, assessing Moab City as a “collector” system to the NMRA ATS was a primary focus of the scholar’s work.

IV. METHODOLOGY

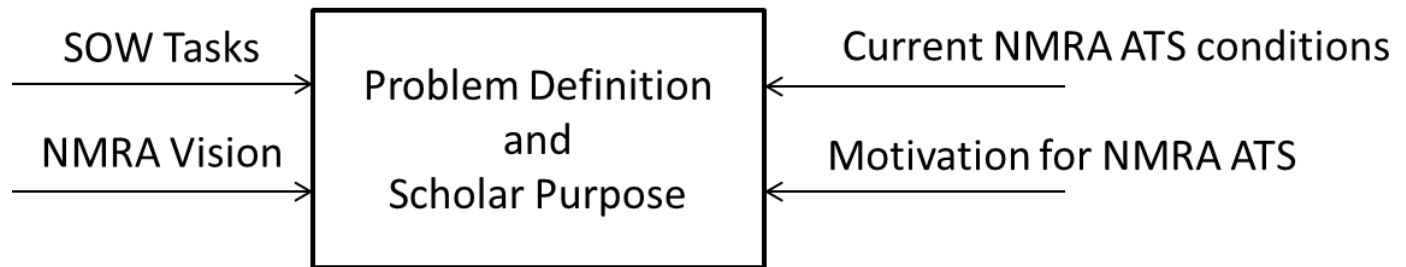
This section discusses the methodology (steps 1- 4b) used to inform the recommendations:

1. Problem Definition
2. Identify Goals
3. Existing Conditions
4. Needs Assessment
 - 4a. Data Collection
 - 4b. Assessment

1. Problem Definition

Transportation planning projects generally start with the recognition that a need or opportunity for a transportation solution exists. Creating a problem definition is one of the most critical elements of the transportation planning process. Without a proper understanding of the problem, it is impossible to develop a satisfying design solution for any product or system.

Creating a problem statement requires an understanding of the vision, reviewing the motivations and current conditions of the NMRA ATS and SOW tasks. A problem is simply the difference between what exists and what is wanted.



Problem Statement: The North Moab Recreation Area has existing Alternative Transportation infrastructure on the ground and under construction; however there is a need to establish a better ‘system’ to utilize these assets.

Purpose: The purpose of the Scholar is to identify the means to enable and encourage the public to use alternative modes of transportation to access popular recreation sites and experience the newly developed pathways in the NMRA.

2. Identify Goals

A clear understanding of the desired project goals ensures meaningful and appropriate solutions. It is important to emphasize that goal development is a “solution independent” approach.

Public transit to access public lands was integrated into the vision and SOW as a “solution” to address the needs of the NMRA; however, for a solution-independent approach, answering the question ‘what would the BLM like to accomplish from the transit system?’ was examined.



In answering this question, four goals were identified.

1. Bring new users to the ATS in the NMRA
2. Utilize the Transit Hub
3. Reduce the need to rely on private automobiles
4. Increase business opportunities in Moab

The goals were confirmed by BLM staff and were the driving force of the recommendations. The goals were based on the pre-determined solution in the SOW (transit as a solution); therefore these goals may need to be re-evaluated to guide future implementation efforts.

3. Existing Conditions

Existing conditions provide the framework for developing recommendations. The existing conditions in this report can be thought of as constraints, or the relevant information that cannot be changed.

Visitation and Seasons

See Figures 8 and 9 for a summary of the activities that are most prevalent for each month of the year as well as a summary of available visitation numbers at the Moab Information Center(MIC), the National Parks and the State Park. Visitation numbers were obtained from the MIC directly and the travel.utah.gov website.

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Arches NP	10,182	12,932	61,949	96,536	142,250	155,480	147,426	138,600	136,247	92,729	30,863	15,562
Canyonlands NP	3,778	6,448	27,781	52,940	77,154	51,267	49,955	63,815	63,613	57,486	13,544	5,988
Dead Horse Point State Park	1,739	2,357	9,340	16,923	23,352	25,641	22,779	26,014	27,121	19,186	5,663	2,304
Moab Information Center	1,480	2,537	15,198	25,455	28,718	25,765	23,361	20,050	22,105	18,459	5,310	2,460

Figure 8 : Area Visitation Numbers

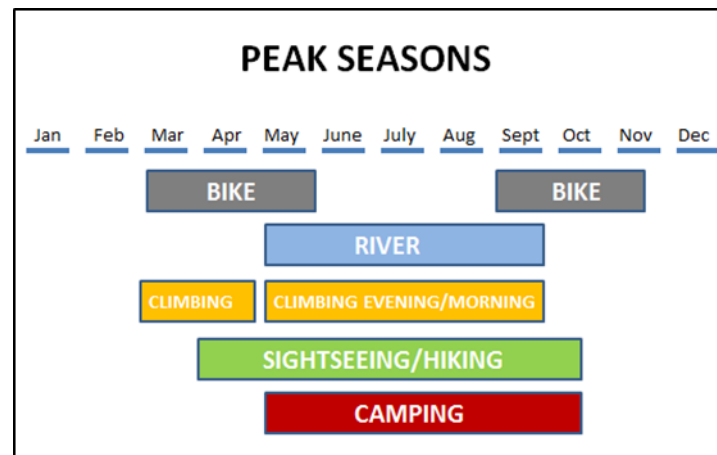


Figure 9: Activities per Season

The visitation numbers correspond with pleasant weather. Visitors are enjoying the river and driving through the National Parks in the summer months, while bicycling can be dangerous and is generally avoided during the hotter times of the year. The cooler months are more welcoming for bicyclists and less desirable for water activities.

Month	Average High	Average Low
January	41	17
February	51	24
March	61	32
April	72	40
May	82	48
June	93	56
July	98	63
August	96	60
September	87	51
October	73	39
November	56	27
December	44	20

Figure 10: Grand County's Average Weather Patterns

Main St. and US 191 Traffic

US 191 is also Moab City's Main Street. US 191 is a major barrier to pedestrian crossing, is heavily used by visitors to access businesses and is designated a North American Free Trade Agreement (NAFTA) major north-south trucking route for the western United States.

The 2011 Average Annual Daily Traffic (AADT) for the section of US 191 between 400 East (US 191 Milepost 124.484) and 500 West (US 191 Milepost 126.98) is close to 13,000; this is equivalent to 32,000 vehicles miles traveled per day. This section of Main St. (US 191) has four lanes, left turning lanes, and parking on both sides of the road. There are also many driveway access points off of Main Street for hotels, and other businesses with parking lots. There is also a walking district in the City of Moab, with retailers and restaurants. Additional AADT numbers for the US 191, SR 128, SR 313 are found in Appendix 4: *Existing Data Collected*. Traffic data for the City roads were not available. The walking district and US 191 mileposts are shown in Figure 13 as part of the Moab City Lodging map.

BLM Data

The results of a BLM administered National Visitor Use Monitoring (NVUM) Survey indicated hiking, biking and driving for pleasure were the top three activities of visitors to Grand County's public lands.

National Visitor Use Monitoring Survey 2006	
1,494,000	Visits to BLM land
18.30%	Main Activity Hiking
13.50%	Main Activity Bicycling
10.40%	Main Activity Driving for pleasure
2.40	person/vehicle
3.50	average length of stay in the area

Figure 11: NVUM Survey Results

BLM Post Use Data

For shuttle companies to drop customers off on BLM lands, a permit is required. At the end of the year shuttle companies submit information to the BLM; this is referred to as Post Use Data. The Post Use Data is a record of the number of customers dropped off at each trailhead. According to this information, some shuttle companies have very few customers dropped off in the NMRA, however other companies have as much as 40% of their use in the NMRA. The assessment is skewed because this analysis accounts for BLM lands and does not consider Forest Service land. Therefore, shuttle companies dropping customers off at the top of the Whole Enchiladas (which is Forest Service) are not considered as the total percentage of business.

Figure 12 provides a summary of the post use data for the shuttle companies; this does not included companies that offer guided services.

The percentages provided in Figure 12 are best explained by example. If Company Z had 1 out of 100 customers dropped off at the Moab Brands Trails in 2011, this equates to 1% of the company Z's total customers serviced.

Shuttle Service	Bar M	Gemini	Klondike	Total
Company A 2010	3.3%	3.7%	0.4%	7.4%
Company A 2011	5.2%	3.7%	0.0%	8.9%
Company B 2010	0.0%	0.0%	0.0%	0.0%
Company B 2011	0.0%	0.0%	0.0%	0.0%
Company C 2010	0.0%	2.3%	0.0%	0.0%
Company C 2011	0.0%	0.0%	0.0%	0.0%
Company D 2010	11.6%	7.8%	0.0%	19.4%
Company D 2011	6.7%	13.0%	0.0%	19.7%
Company E 2010	10.1%	17.2%	0.0%	27.4%
Company E 2011	4.4%	34.9%	0.0%	39.3%

Figure 12: BLM Post Use Data

The BLM Post Use Data confirmed that very little shuttle use occurs on BLM lands in the summer months. This is an indication that shuttle companies have availability during the summer months. It is important to note that Figure 12 is not an accurate representation of the percentage of shuttle company business in the NMRA; however it does indicate that shuttle companies are receiving requests to service the NMRA mountain bike focus areas.

Lodging Units

At the intersection of Center Street and Main Street (US 191) in the City of Moab is the Moab Information Center (MIC). The MIC's staff answers questions about the Moab area, providing information regarding hotels, restaurants, guides, outfitters, shuttles, and other services available to travelers. The MIC was used as the center point to create "buffers" to show 0.25, 0.5 and 1 mile radii.

Using the hotel and campground information available on the Travel Council website (Discovermoab.com), a GIS layer with coordinates and a field representing the number of lodging units was created using GIS software. According to this data:

- 533 lodging units and 20 tent sites are within .25 miles of the MIC
- 673 lodging units, 52 tent sites and 90 RV sites are within a .5 mile of the MIC
- 1068 lodging units, 52 tent sites and 90 RV sites are within 1 mile of the MIC

The Moab City Lodging Map shown in Figure 13 clarifies relative distances, lodging units and US 191 mile posts for reference.

Note: The background section of this report discusses relevant existing conditions.

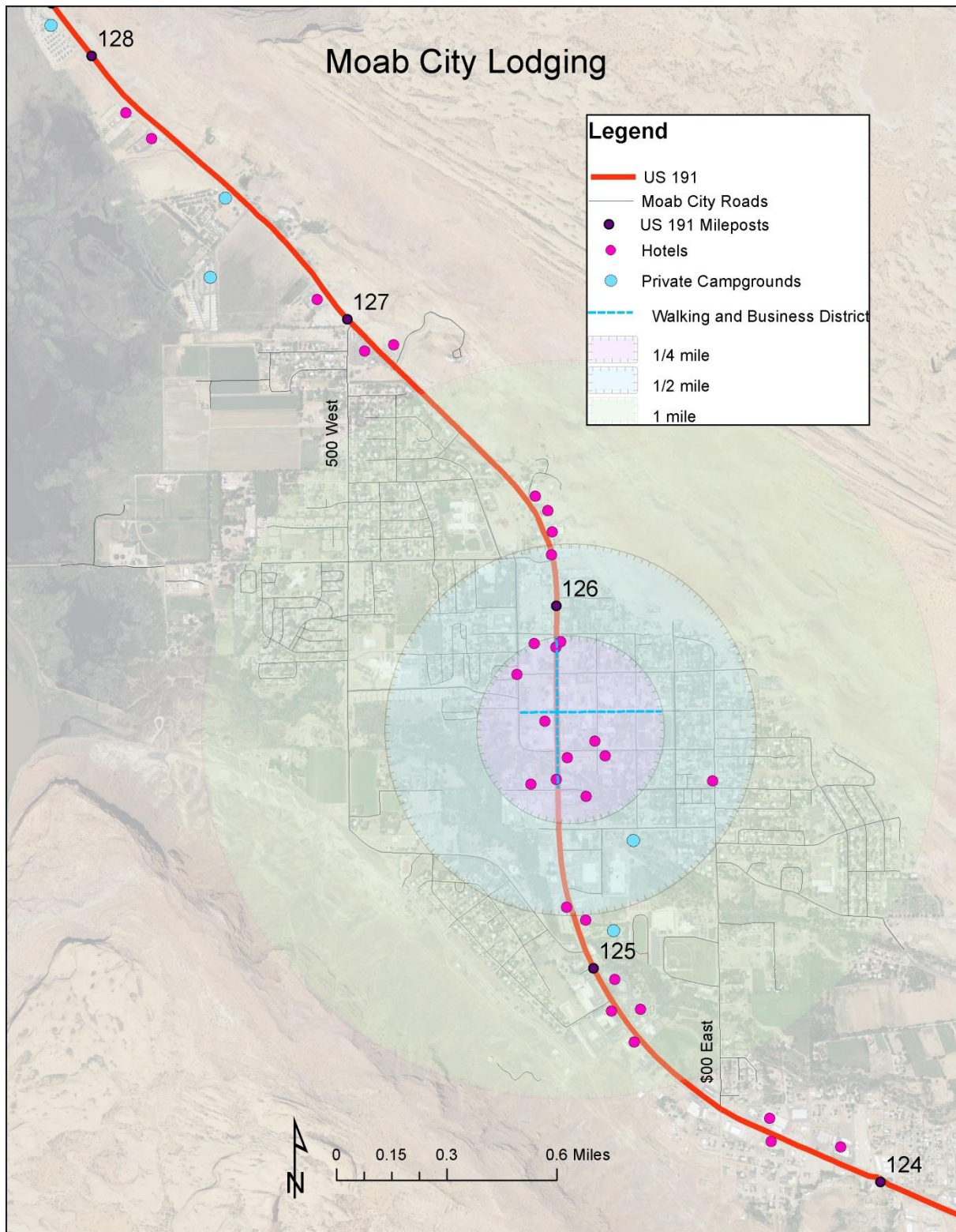


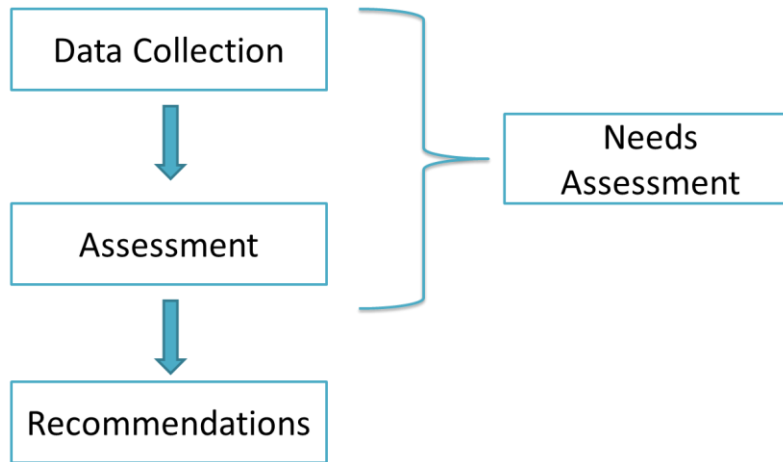
Figure 13: Moab City Lodging Map

4. Needs Assessment

The intent of the needs assessment was to identify guidelines for the scholar project.

A needs assessment is a process for determining and addressing needs or gaps between current conditions and desired conditions. The needs assessment serves as an effective means to clarify the issues and identify appropriate interventions or solutions.

This process is shown below:



4a. Data Collection

The pre-assessment stage is the data collection stage. The pre-assessment can be thought of as the foundation for the understanding the gap by defining the current conditions. The methods used were interviews, observations, reviewing relevant information sources and discussions with project stakeholders. Field observations and outreach to the local community were the main tools to inform scholar recommendations.

Interviews

The process of collecting data and understanding the community started with outreach to City/County representatives and locals involved in the Lion's Park Planning group. All persons contacted for this project are listed in Appendix 5: *Project Interviewees*. To keep comments anonymous, comments are unspecified and listed in Appendix 6: *Local Outreach Comments*. Also note that the list of persons contacted in Appendix 5: *Project Interviewees* are lumped together, although some were "interviewed" and others were contacted as part of the scholar project.

Locals Outreach

In an effort to better understand potential uses of the Transit Hub, those directly involved in the NMRA ATS were contacted. Below is a summary of the major findings from this local outreach effort.

The Scholar contacted individuals in the community and arranged for one-on-one meetings where background information about the project was provided to each interviewee. The purpose of the meetings was to gather local perspectives regarding potential uses (or needs) and concerns related to creating a regular shuttle service for visitors.

Three common themes regarding the best use of the Transit Hub were:

1. A good location to park and use the separated pathways.
2. A good location for businesses to meet clients
3. The hub could potentially compete with existing downtown Moab businesses.

Other astute comments worth considering when developing project recommendations were: ATS is more likely to succeed if locals use it, an ATS needs to be a collaborate effort in the community, and educating locals is the best approach to ensure a system's success.

The common themes of concerns were:

1. What is the experience that businesses are trying to sell?
2. Is there a market that would benefit from a regular service out of the transit hub?
3. The hub could potentially displace business from downtown Moab.

Appendix 6: *Local Outreach Comments* contains all comments from interviews without specifying the interviewee.

A list of other relevant information from one on one discussion is listed below:

- If public transit were made available, the Moab Information Center would consider removing parking near its building to accommodate a bus stop/pick up location.
- The City of Moab would provide funding for signs and maintain “bus stops” if the service were free or donation based.
- UDOT requires permits to have a “bus stop” on US 191. UDOT would support stops on Main St. if the locations did not cause a safety hazard.
- There are no funding sources to subsidize a public transit system.
- The NMRA ATS is relevant to the BLM because the pathways access BLM lands.

Businesses Outreach

The shuttle companies' services add to mountain biking possibilities and the feasibility of hosting events in Grand County. Below is a picture of three shuttle companies providing shuttle services during a bicycle event.



Source: <http://coyoteshuttle.com/>

To better understand the local businesses' level of interest in supporting a regular service, many local shuttle providers were contacted. It is important to note that those businesses offering only guided services were not contacted for this project. Some river outfitters were contacted because they have shuttle vans available during their off season.

The Scholar met with ten local businesses. Information about logistics, cost, marketing, seasonal demands and level of interests in establishing a service was gleaned from one on one discussion.

There were several important findings and insights from these interviews. The bike shuttle companies that do not have a store front have a symbiotic relationship with bike shops. Each shuttle company that does not have a store front is associated with a different bike shop in Moab.

Store front and bike shop affiliation is provided in Figure 14 below:

Business	Type of Service	Store Front
Coyote Shuttle	Bike/Hike/River	No (Chili Pepper Bike Shop)
Whole Enchiladas Shuttle	Bike	No (Uranium Bike Shop)
Porcupine Shuttle	Bike	No (Poison Spider Bike Shop)
Moab Cyclery	Bike	Yes
Uranium	Bike	Yes

Figure 14: Bike Shop Affiliation

Customers (passengers) typically meet the shuttle company at the affiliated bike shop. Customers may contact shuttle companies directly or be put on the passenger shuttle list through the bike shop. This is a win-win for both the bike shop and shuttle company. The bike shops are able to accommodate mountain bikers' service and retail needs, while the shuttle companies essentially have a store front and a mechanism for promoting their service. This is a really important finding. It is important to understand how this relationship exists today in order to define a regular transit service supported by bike shops and shuttle companies.

Each shuttle company's policies are similar; each requires a minimum of four passengers on each shuttle and they charge the same amount for their services. In this manner, the shuttle companies do not compete with one another. It is unknown how the price is determined; since the price for a shuttle is agreed upon, competition does not drive down profits. Each shuttle company has two daily departures during peak season to the Whole Enchilada trailhead. Other trailheads are serviced on a need basis and require pre-arrangement. The shuttle companies are essentially an on-demand, reliable and regular service for the Whole Enchilada. Financial risks are mitigated by knowing the minimum number of customers in advance.

The BLM Post Use Data confirmed that some shuttle companies have as much as 25-40% of their business involving BLM lands in the NMRA.

The shuttle companies offer custom shuttles to other popular trailheads in the Moab area including Magnificent Seven, and Moab Brands. The pre-arranged or custom shuttle to other trails can be thought of as paratransit. Paratransit is often a flexible passenger transportation that does not follow a fixed route or schedule. The shuttle companies require a minimum of four passengers and are willing to put groups together to meet this minimum. Prices to trailheads in the NMRA at the time of the interviews were \$10 to Moab Brands and \$20 to Magnificent Seven.

It is also interesting to note the friendly competition or alliance among shuttle companies. During the off season, shuttle companies will optimize their capacity by pooling their customers to create one group to meet the minimum for the day. In other words, shuttle companies help each other and do their best to be sustainable and to accommodate visitors.

In addition to the interviews, shuttle companies generously allowed the Scholar to ride the shuttle to further understand the experience. The shuttle companies provide a high level of service. First, the symbiotic relationship between bike shops and shuttle companies is efficient for everyone including customers. Leaving from the bike shop serves as a means of getting a map, rental bike, water and transportation in one location. In addition, some bike shops offer showers for a fee. The shuttle companies are willing to be flexible and accommodate a pick-up at a hotel or campground if needed, although the bike shop is preferred.

A few additional comments regarding shuttle company service are warranted. The passengers of the shuttle companies do cause parking pressure in the parking areas near each bike shop, since shuttle customers typically drive to the bike shop for their shuttle.

If regular service were instituted from the Transit Hub, all shuttle companies had a common concern of taking business from bike shops. Some shuttle businesses inquired about subsidies if a regular service were established; otherwise the Transit Hub service was viewed as a financial risk. Some businesses thought that it was too financially risky to have a driver and a van go to the Transit Hub without knowing the passenger count. Other businesses thought providing a service could further develop their businesses and create new customers. Other businesses found the idea of more business unappealing. This may imply that customer demand exceeds shuttle supply.

Shuttle companies were not asked directly about their level of interests, however the Scholar's personal perceived assessment based on the individual interviews or phone call are provided and defined below.

Level of Interest	Define Interest	Type of Service
None	Contacted and declined interview	1 taxi, 2 river
Low	Does not see a business case at this time	1 bike shuttle, 1 river
Medium	Would like to stay informed and open to ideas	3 bike shuttle, 1 river
High	See benefit to the business ;would like to be involved	1 taxi, 1 bike

Based on these interviews, it is recommended to approach shuttle companies with a proposal. The unknowns that need to be addressed before shuttle companies would be willing to consider service are: what is the bottom line and what are the best scenarios given operation cost and logistics.

Observations

Existing conditions were evaluated using qualitative field observations including: using the bicycle facilities, using online resources to plan activities in Grand County and asking deliberate ATS questions to front line staff. A list of observations used for the assessment summarized below.

Observations of Existing Conditions
<ul style="list-style-type: none"> The trailheads that are popular for hiking such as Negro Bill, Courthouse Wash and Corona Arch do not have bicycle parking/racks.
<ul style="list-style-type: none"> Many visitors come to town without bicycles and/or racks for carrying bicycles.
<ul style="list-style-type: none"> Bike shops carry mostly high end bikes that are rented at a daily rate ranging from \$45-60 per day. This likely reflects demand.
<ul style="list-style-type: none"> There are limited hybrid bikes available for rent. This likely reflects demand.

<ul style="list-style-type: none"> Detailed information (maps, itinerary suggestions) available for planning purposes focus on trails. This level of information is missing for NMRA ATS.
<ul style="list-style-type: none"> Maps are missing for the Moab Greenway (Mill Creek Parkway) and other bicycle facilities in City limits.
<ul style="list-style-type: none"> The NMRA ATS and Moab Greenway (Mill Parkway) are not well understood by front line staff.
<ul style="list-style-type: none"> Mountain bikers seeking “adventure” have their needs met by shuttle providers and bike shops.
<ul style="list-style-type: none"> The BLM campgrounds on SR 128 and SR 313 are heavily used by all types of users.
<ul style="list-style-type: none"> A majority of lodging is within a ½ mile of the MIC.
<ul style="list-style-type: none"> Bicycle carrying racks are available for rent from most bike shops for \$5-15.
<ul style="list-style-type: none"> US 191 in the City of Moab is where most transportation issues exist (safety, vehicle delay, noise).
<ul style="list-style-type: none"> The City has ample parking off Main St.
<ul style="list-style-type: none"> Main St. (US 191) is difficult to cross except at signal intersections. Pedestrians have been observed crossing mid-block.
<ul style="list-style-type: none"> Riding the Moab Canyon pathway may be an arduous uphill for some visitors. It took the Scholar 45 minutes up and 20 minutes down, from the Transit Hub.
<ul style="list-style-type: none"> Road biking from the “Knoll” back to the Transit Hub via SR 313 and Moab Canyon bike path took approximately 1.5-2 hours.
<ul style="list-style-type: none"> SR 313 has few signs. The signs designate the right lane as a bicycle lane (MUTCD Section 2B.21 Advance Intersection Lane Control Signs R3-8 Series). There are no Share the Road signs or bicycle lane markings.
<ul style="list-style-type: none"> Mountain Biking from Mag7 trailhead back to City of Moab (via Bull Run to Great Escape to Little Canyon to Gemini Bridges Road to Moab Canyon bike path) took 3 hours.
<ul style="list-style-type: none"> Locals at Moab City General Plan meeting want public transit available in town.
<ul style="list-style-type: none"> The NMRA pathways do not have resting options such as benches.
<ul style="list-style-type: none"> Bicyclists observed on US 191, opportunities for a safer and more pleasant experience is available on Moab City local streets.
<ul style="list-style-type: none"> Bicycle racks are prevalent within City Limits at most businesses.
<ul style="list-style-type: none"> Taxi services do not list rates on their websites.
<ul style="list-style-type: none"> Most shuttle companies’ websites list prices to trailheads. The prices are not easy to find on the websites.
<ul style="list-style-type: none"> Road biking is increasing in popularity. The bicycle pathways and SR 313 bicycle lane add to road bicycle use in the NMRA.

Research into similar services was part of the developing recommendations. This section is provided as references for further research as the operations for the Transit Hub are defined. The cost of the services researched is provided when possible.

BLM and ATS

The Volpe National Transportation Systems Center prepared “*The Bureau of Land Management Alternative Transportation Systems Inventory Report*” in May 2010. In this report, existing ATS serving the BLM was categorized, as defined below.

- Connections to regional transit: local or regional transit service with bus routes directly serving BLM sites or routes that pass in close proximity to BLM sites.
- Private shuttles and tour buses: private companies operating shuttle services for recreational visitors (including rafters, inner-tubers, fishers, hikers, and cyclists) on BLM lands and tour companies that offer bus or van tours to or through BLM lands.
- Nonmotorized infrastructure: sidewalks, bicycle lanes, and designated off-road bicycle and pedestrian paths that allow nonmotorized transport to BLM sites.

The Moab Field Office’s ATS falls into the private shuttles and non-motorized infrastructure categories. An interesting example that uses regional transit was researched as part of this project. This Bizz Johnson Trail (in California) may prove helpful if the Moab BLM were interested in allocating resources to assist in operations to service the NMRA ATS.

The BLM Eagle Lake Field Office in Susanville, California manages the Bizz Johnson Trail. The Bizz Johnson Trail is a 25.4 mile gravel and dirt recreational trail that connects directly to the towns of Susanville and Westwood, in northeastern California, along the Susan River in Lassen County.

To improve the public service for users of the Bizz Johnson trail, there is a shuttle service offered through the BLM during peak foliage. This service is made possible through a partnership with the local public bus service and land trust. A summary provided by Stan Bales, Outdoor Recreation Planner for the Eagle Lake Field Office, and sample schedules are provided in Appendix 7: *Bizz Johnson*.

The cost of Bizz Johnson service is \$3 for the public bus transportation and \$3 for the BLM to transport a bicycle.

Bicycle Programs on Federal Lands

The U.S. Federal Highway Administration report “*Exploring Bicycle Options for Federal Lands: Bike Sharing, Rentals and Employee Fleets*” explores ways to promote bicycling on federal lands. The report examines how Federal Land Management Agencies (FLMAs) are using bicycle programs to give employees and visitors more travel choices. One such successful bicycling program highlighted is Bright Angel Bicycle Rentals in Grand Canyon National Park, Arizona. The Bright Angel Bicycle Rentals is the first bike rental facility within the boundaries of Grand Canyon National Park and was used as the basis for recommending bicycle rental authorization at the Transit Hub (See Recommendation #9).

Bikes are rented on a first-come-first-serve basis. A shuttle is available with a bicycle rental. The cost depends on the duration and distance:

Adult: \$34 Child: \$22 (includes 2 hour bike rental, round trip shuttle ride and helmet)

Adult: \$37 Child: \$25 (includes 5 hour bike rental, one way trip shuttle ride and helmet)

Shuttle Reservation Systems

Located on the Idaho Montana border is the Route of the Hiawatha Rail-Trail. The Hiawatha Rail-Trail is a scenic section of abandoned rail-bed turned into a world class non-motorized trail. The Route of the Hiawatha has become a very popular adventure for locals and tourists. The trail is either a 30 mile round trip with 2000 feet of elevation change, or 17 miles of level and downhill dirt track with a shuttle bus ride to regain the 1000 foot elevation loss.

The cost of the shuttle ride is \$9 and the rental cost of a standard mountain bike is \$30. This was the one example where the provider offered a mechanism to reserve a shuttle and/or bicycle in advance through the use of a “cart” system on their website. An example for the Hiawatha website is provided in Appendix 8: *Hiawatha*. It is also a good example of outlining a shuttle schedule for visitors.

Currently, Moab shuttle companies do not offer reservation systems on-line. This may be due to cost, overhead or satisfaction with the current reservation system. If shuttle companies were interested in expanding their business, a reservation system would off-set financial risk associated with unknown number of passengers. Adding a shopping cart to a business’s website is one way in which a reservation system could be implemented. PayPal charges 30 cents per transaction and 2.9 percent of the total. Yahoo has a checkout feature that costs \$39 a month (<http://www.ecommerce-guide.com/article.php/3604511/How-to-Add-a-Shopping-Cart-to-Your-Site.htm>).

4b. Assessment

The Assessment stage is the evaluation of the collected data. This step identifies issues that need resolution to close the gap, in other words, what are the contributing factors or related barriers.

Questions to consider: Are resources available to address them? Is there a need/desire/opportunity to improve the existing system?

The assessment is divided by SOW task.

Task #1

The SOW task # 1 was to develop an overall transit vision with concepts for serving recreation areas in the NMRA. This concept could be achieved by private shuttle companies as discussed in the vision or by more traditional models of public transit. The term public transit can be misleading; public transit usually charges a set fare and is subsidized by some form of taxes. At this time, there are no funding sources for public transit in Moab, however this is a secondary concern. The primary concern is the need for a group of project champions. This group would be dedicated to developing a vision and a concept that can serve a transit need. If the transit service were to be owned and operated by private businesses and thus eliminating funding concerns, project champions with a defined transit need are still required. Essential to forming a transit vision is a dedicated group of citizens, government agencies or businesses working together to determine the goals and objectives of a transit system. The obvious barriers at this time are 1) gaining support from a diverse set of stakeholders, 2) educating the public about alternative transportation benefits, and 3) understanding the transit need. A systematic approach to formulating a plan is discussed in the recommendation section.

Through the data collection stage, it was clear that there are many transportation services available to visitors. Currently, there are many people in the community creating businesses based on transportation needs. These businesses are catering to the various needs of the visitor. A group of local stakeholders addressing public transportation is needed to differentiate between the available markets (i.e. locals, visitors, hikers, casual cyclist). There needs to be a compelling reason to take transit. For example, shuttle service is useful because often visitors have one vehicle or the cost of shuttling two private vehicles between trailheads is comparable to the cost of the shuttle. Shuttle services can also save time for the recreation user.

In 2011, as part of Arches National Park long-term transportation planning efforts, Arches National Park hired transportation consultants to investigate the feasibility of a shuttle service within Arches National Park to reduce traffic congestion and other impacts due to high visitation. As part of this study, a Moab shuttle feeder route was explored. The consultants developed a Draft Feasibility Study, and then received feedback from Arches National Park before producing the Final Feasibility Study. The Final Feasibility Study *Arches Alternative Transportation System and Congestion Management Study*” reflects final adjustments that were made to the

Arches shuttle system based on NPS feedback, including removal of the Moab shuttle segment in order to align shuttle costs with available funding. The Moab shuttle feeder was included in the Final Feasibility Study as “Shuttle System Adjustments” in the event that additional funding were identified by the park or through public-private partnerships with the City of Moab and/or local businesses and non-profit organizations.

The Final Feasibility Study discussion of a Moab shuttle feeder route discusses opportunities and constraints; this will serve as a good foundation for future planning efforts. See Appendix 9: *Arches City of Moab Shuttle* to read the applicable section of the Final Feasibility Study.

Task #2

Task #2 was to conduct an assessment for utilizing private businesses’ vans and busses to provide a coordinated and scheduled service between the City of Moab and the NMRA destinations. The uniqueness of Moab is the abundance of passenger vans and drivers; however shuttle companies currently do not understand if there is a value to creating a regular service in the NMRA. The vision’s concept is similar to the service already provided without the risk of running below minimum. Shuttles differ from public transit because they are hired buses that may or may not be shared by strangers depending on the arrangement. Perusing local bike and shuttle company websites showed little emphasis on the NMRA ATS and the bicycle pathways. Currently these websites, as well as those of the Travel Council, are not emphasizing the bicycle pathways as an “experience”. The constant construction of the many NMRA ATS components is likely the cause. The Transit Hub has been discussed in the newspaper and at Trail Mix meetings, yet seems to be elusive as to its role in the community. Once the use of the Transit Hub is better understood, the role of shuttle companies could in turn be better defined.

A formal survey was not conducted due to the short duration of the Scholar project, however, based on observations the needs of adventure seekers are met by shuttle companies. Adventure seekers will seek out shuttle companies and make arrangements for rentals prior to arriving in Moab. The adventure seeker will tend to be more comfortable with riding trails without a guide and will have the skills needed for the chosen trail. There is a probably a smaller subset of visitors coming to Moab wanting to have the Moab mountain biking experience but who are novice mountain bikers. As the new trails and bicycle pathways become better known, this subset will increase. The addition of trails to accommodate all skill levels and the bike paths are inviting to a new type of visitor. This will further diversify the recreation in Grand County. A ride such as Mag 7 back to town, as a one-way shuttle is a long distance effort. Mag 7 as a one-way ride is appropriate for people comfortable with the desert environment and experienced in mountain biking long distances. A one-way shuttle from the “Knoll” is mostly downhill; however, this bicycle ride does require a comfort level with sharing the road with vehicles traveling at speeds greater than 40 mph. The duration and length of an activity is an important consideration when creating a regular transit service from the Transit Hub. Users of a recreation based transit service need to have quality information to choose routes that match their comfort

levels and physical abilities. If a service were designed out of the Transit Hub, it may be more appropriate to create a two-way service or a service appropriate for the less adventurous, casual cyclist. Developing a service that differentiates from the current shuttle services has the potential to expand business in the community without taking business from those that exist currently. An opportunity to expand business and create a new experience is addressed in the Recommendations section.

Task #3

Task #3 was to examine, support, and develop wayfinding and ATS information for the wider NMRA. The alternative to task #1 was to assess Moab City as a “collector” system to the NMRA ATS. These two tasks are best addressed by education, awareness and promotion. It appears that one barrier to getting more people onto the bicycle pathways is the information available regarding NMRA ATS and bicycle rental diversity (time, cost and fleet). As mentioned previously, the NMRA ATS has been in flux for many years; this most likely has created a discrepancy in infrastructure and information availability. The need for better wayfinding and maps for navigation has slowly been recognized by the community as the NMRA ATS becomes better established and less volatile. During the time of the Scholar project, Trail Mix has added signs and mile markers to the NMRA ATS.

Through the observation process, sifting through the available information and discussions with locals, it was realized that an effort to further educate locals regarding transportation issues and design was the first step towards reducing vehicle use. Through means of promotion and education, a larger percentage of the local community will see potential benefits to alternate modes of transportation. As an astute interviewee said “if you want the visitors to do it, then you have to get the locals to do it”, in other words, the more the community is engaged in using alternative modes, the more likely visitors will be. If locals begin understanding how alternative modes fit together to make a better community, Grand County will be in a better position to accommodate public transportation.

The greater goal of the Transportation Scholar program is to identify means of alternative transportation to access public lands. The Moab Canyon bike path and (soon to be completed) Colorado Riverway bike path and Transit Hub offer a means to access public lands safely and enjoyably without needing an automobile. It would be great if that alternative mode journey started from Moab rather than by driving north to the Transit Hub. Obviously, starting the journey from town really depends on the mode and destination; however the better the transportation connections between Moab and the public lands, the more likely a car-free journey is possible. A car-free journey starting in Moab will ultimately reduce the number of vehicles circulating Main Street.

There is a lot of vehicle traffic in Moab on US 191 and it is unknown what percentage of vehicle traffic is local. Moab, like most U.S cities, is car-centric, although there is a great walking area

downtown, many bicycle facilities and single track within City limits. Moab is not alone --- according to the United States Census Bureau's 2009 Community Survey, 76 percent of Americans drive to work alone in their cars each day, while only 0.6 percent arrives by bicycle. One possible component of this statistic is not a lack of infrastructure but an attitude towards bicycling. Bicycling is seen as a form of exercise or recreation and less regarded as a legitimate form of transportation. Moab has many of the “pieces” to be bicycle friendly and a deliberate focus on bringing all the “pieces” together will potentially reduce vehicle use. The League of American Bicyclists define a bicycle friendly community as welcoming cyclists by providing safe accommodations for cycling and encouraging people to bike for transportation and recreation. This is accomplished through engineering, education, evaluation, enforcement and encouragement.

There is more to making a city bike friendly than creating pathways, and part of that is changing attitudes. Another part is understanding that bicyclists have the same needs as motor vehicle users. There must be good planning and end of trip facilities, such as parking. High levels of bicycle use correlates with “a strong advocacy coalition, clear identification of problems facing bicyclists, nourishment of political will, and development of policy solutions”, regardless of geography and other perceived challenges.

(www.des.ucdavis.edu/faculty/handy/Davis_bike_history.pdf).

Moab is well positioned to increase active modes of transportation as the first step towards further alternate modes. Moab’s bicycle facilities, low speed limits on local roads and small geographic area provides for safety and reasonable biking distances. Moab has two population transportation needs, the local community and the visitors. The primary focus of this project is the visitors to Grand County’s public lands; however, the notion of the interconnection of the local community and the visitors is discussed here briefly.

If locals are using active modes, then front line staff is better prepared to answer visitor questions, parking spaces are freed for the many visitors arriving in their private vehicles and there is the potential for visitors to mimic the behavior of the locals. Additionally, active modes help with the good air quality in Moab that attracts the many visitors. Fewer vehicles equal safer routes to school and safer pedestrian crossings on US 191.

As part of addressing task #3, the City of Moab and Grand County applied to the League of American Bicyclists to be designated a Bicycle Friendly Community (BFC). This effort was a combination of the Scholar and the City of Moab. The benefits of BFC are: community recognition, promotion of community amenities, technical assistance, benchmarking and inspiration to achieve more bicycle friendliness in the community. The application effort was a valuable education in itself and applicants receive feedback in the form of a short report. The report highlights the successful elements of the application as well as those where improvements are needed, and focuses on important next-steps towards creating a BFC. See Appendix 10: *Bicycle Friendly Community* for more information. Appendix 10: *Bicycle Friendly Community*

includes articles published in the Moab *Times Independent* on February 14th and March 21st, information regarding other communities designated BFC that are similar to Moab and a document titled Action Plan for Bicycle Friendly Communities. The document “Action Plan for Bicycle Friendly Communities” (found in Appendix 10: *Bicycle Friendly Community*) outlines benefits of increasing bicycle use and an action plan that communities can adopt to show support in building a BFC.

The Moab City Council approved a resolution for a Sustainable Moab on December 9, 2008; “2020 Vision: A Sustainable Moab Plan”. The plan focuses on Water Conservation, Water Reuse, Energy Efficiency and Sustainable Construction. Alternative transportation is not discussed in the 2020 Vision; however it could play a key role. Reviewing the Action Plan for Bicycle Friendly Communities in Appendix 10: *Bicycle Friendly Community* will be useful in setting goals if alternative transportation were to be added to Moab’s sustainability plan.

V. CONSTITUENCIES

The groups affected by the NMRA ATS use and implementation of transportation connections to the NMRA include:

- Bureau of Land Management
- Arches National Park
- Moab City
- Local Moab businesses
- Moab Trails Alliance
- Grand County
- Moab Travel Council
- Lion's Park Planning Group
- Moab Information Center
- Visitors to Public Lands

Each of these groups are impacted by the transportation solutions connecting Moab City and the NMRA. Visitors and the Moab community will be able to make informed choices about alternate modes and take advantage of the bicycle pathways in the NMRA. For the NMRA ATS to become fully utilized, promotion using the Moab Information Center (MIC), Moab Travel Council website and increasing interest in local businesses are vital to the ATS success. Also, if a City bus route were to be connected with the Transit Hub, strong support from the community is essential. Grand County and the City of Moab are important partners as they own and manage the land for Lion's Park.

The businesses and individuals that were interviewed or contacted as part of the Scholar project are provided in Appendix 5: *Project Interviewees*.

Partnerships and Funding

TRIPTAC has helped NMRA ATS become a reality. Grand County has received Transit in Parks (TRIP) program grants in 2007, 2008, 2010 and 2011 to build approximately 10 miles of paved pathways [accessing BLM lands] and to fund the construction of a Transit Hub located where the pathways converge.

Year	Facility	Facility Type	Amount
2007	Lion's Park Trail and Transit Hub	Bus	\$774,000
2008	Colorado Riverway Trail Phase 2	Bike/Pedestrian	\$3,000,000
2010	Colorado Riverway Trail Phase 3	Bike/Pedestrian	\$2,900,000
2011	Colorado Riverway Trail Phase 3	Bike/Pedestrian	\$2,500,000

Figure15: NMRA ATS Funding from Paul S Sarbanes Transit in Parks Program

For further information on the partnerships and funding that has been instrumental to the NMRA please review the Partner Case Study “North Moab Alternative Transportation Project“ lead by the Paul S. Sarbanes Transit in Parks Technical Assistance Center (TAC).

http://www.triptac.org/Documents/RepositoryDocuments/Moab_Case_Final.pdf

VI. RECOMMENDATIONS

The recommendations that follow are suggestions for reaching project goals. The recommendations are divided into two categories: short term implementation actions and strategic planning needs. The short term implementation actions discuss project recommendations based on the four goals identified, while strategic implementation discusses the planning needed to move towards the NMRA ATS's success.

The recommendations are focused on bicycle use and business opportunities involving bicyclists. There are many other activities available in Moab, but most require a two-way service except for river trips and bicycle trips. Other biking areas in the NMRA that are not directly connected to the NMRA ATS are stacked loop systems and most hiking trips start/end at the same trailhead. Recommendations for meeting the goals for the walking/hiking public and mountain bikers needing a return shuttle were not addressed. Two-way service is challenging and requires improved facilities and a greater understanding of recreation usage patterns. For example, if the Klondike mountain bike area were to be serviced by a shuttle, shade shelters and shuttle headways would need to be such that waiting for a return shuttle was reasonable. If a shuttle service is not competitive with the private automobile, it is much less likely to be used.

Short Term Implementation Actions

Today, the NMRA ATS is working as expected given the newness of the area and the current construction, increasing awareness will enable visitor use and encourage a scenic alternative to hiking or driving the scenic byways. To start building a better ATS system, the pathways and the connecting bicycle facilities in the City of Moab need improved programming and promotion.

Recommendations are ranked from easier to more difficult based on a color scheme. The criteria for the rankings were based on personal judgment of required resources, risk and level of coordination.

Green: achievable in the short term, low risk and low coordination effort (involve few players with similar perspectives)

Yellow: achievable in the short/medium term (1 year), low risk and medium coordination effort (involve few players with differ perspectives)

Orange: possible in the medium term (1 + year) but shuttle companies need to take a risk, need to create business case; solutions need be optimal for mitigating risk

Red: many unknowns; need to build the numbers and demand for service, should be addressed after ATS is constructed.

Each recommendation is provided in the spreadsheet below (Figure 16) with its corresponding color and a number to simplify discussion. The number does not indicate priorities. Each goal addressed by a given recommendation is represented by an “X”.

Recommendations to Achieve Goals						
#	Type of Solution	Concept Solutions	Bring New Users to ATS in NMRA	Utilize Transit Hub	Reduce the need to rely on private automobile	Increase business opportunities in Moab
1	Information	Create a City Bicycle Map.	X		X	X
2	Information	Establish a wayfinding route to guide bicyclist from the Moab City to the NMRA ATS.	X	X	X	
3	Information	Provide better information about the bicycle pathways providing distance, elevations, what can be explored by bicycle, sample rides with duration and family friendly appeal.	X			X
4	Information	Use the hub as recreation focused park and ride.		X	X	
5	Information	Train local frontline staff to better understand how to connect from Moab to the NMRA ATS.	X		X	
6	Promotion	Work with adventure centers to create packages focused on bikeways.	X			X
7	Promotion	Collaboration with hotels and bicycle shops to offer bikes as an amenity for alternative transportation.	X		X	X
8	On-demand Regular Service	Work with bike shops and shuttles to create a regular Brands Trails service mid-day similar to the “Whole Enchiladas” process.	X		X	X
8a	Regular Service	Create a regular service from the MIC to/ from SR 313 (possibly integrate with Arches).	X	X	X	X
9	Promotion	Create a special use permit to rent bicycles at the Transit Hub.	X	X		X

Figure 16: Recommendation to Achieve Project Goals

The recommendations in this section are opportunities to further build awareness and increase usability of the ATS, with focus on the NMRA and the City of Moab. It should be noted, due to the changing environment of the NMRA ATS and the lack of current data, that it will be difficult to quantify the impact of pursuing a recommendation.

Recommendation #1

Recommendation #1 is to create a bicycle map for the City of Moab.

Maps are often the first experience someone has with an area. Maps should be purposeful and the information on a map should be focused without a lot of extraneous information. For example, if a map's purpose is for road biking, mountain bike trails adjacent to the road network may not serve a purpose and cause the map to look busy. When creating a map, think about what information will be helpful to a new user of a system. Depending on the purpose of the map, items to consider are distances, road/trail surface, separated bicycle facilities or bicycle lanes (traffic volumes, speeds), elevation gain and directions to access trailheads. Maps are user guides and often serve as a decision tool. Creating a bicycle map of Moab City with the purpose of navigation within the City and to connect to the NMRA is a concrete indication of the City's support for bicycling and a good tool to promote bicycle use for transportation.

An example of a bicycle map was developed as part of the Scholar project. The map developed is a starting point and template. The Scholar-generated map is shown in Appendix 11: *Moab City Walking & Bicycling Map* and Figure 17 on the following page. The map provides information about the type of bicycle facilities, hotels locations relative to bicycle facilities and indicates intersections that are difficult for pedestrian use.

The map helps a bicyclist to choose the best route to a destination. The back of the map could include rules of the road, safety tips or NMRA ATS information.

Steps to Implement Recommendation #1

Distributing the map is the next step. The City of Moab has continued to develop a Moab City Walking & Bicycling Map. The original map is shown below and in Appendix 11: *Moab City Walking & Bicycling Map*. Availability of the map is important; distribution via the City website, the MIC, local bike shops, the Chamber of Commerce and the Travel Council website are ideal. The City bicycle maps should remain free to encourage active transportation use.

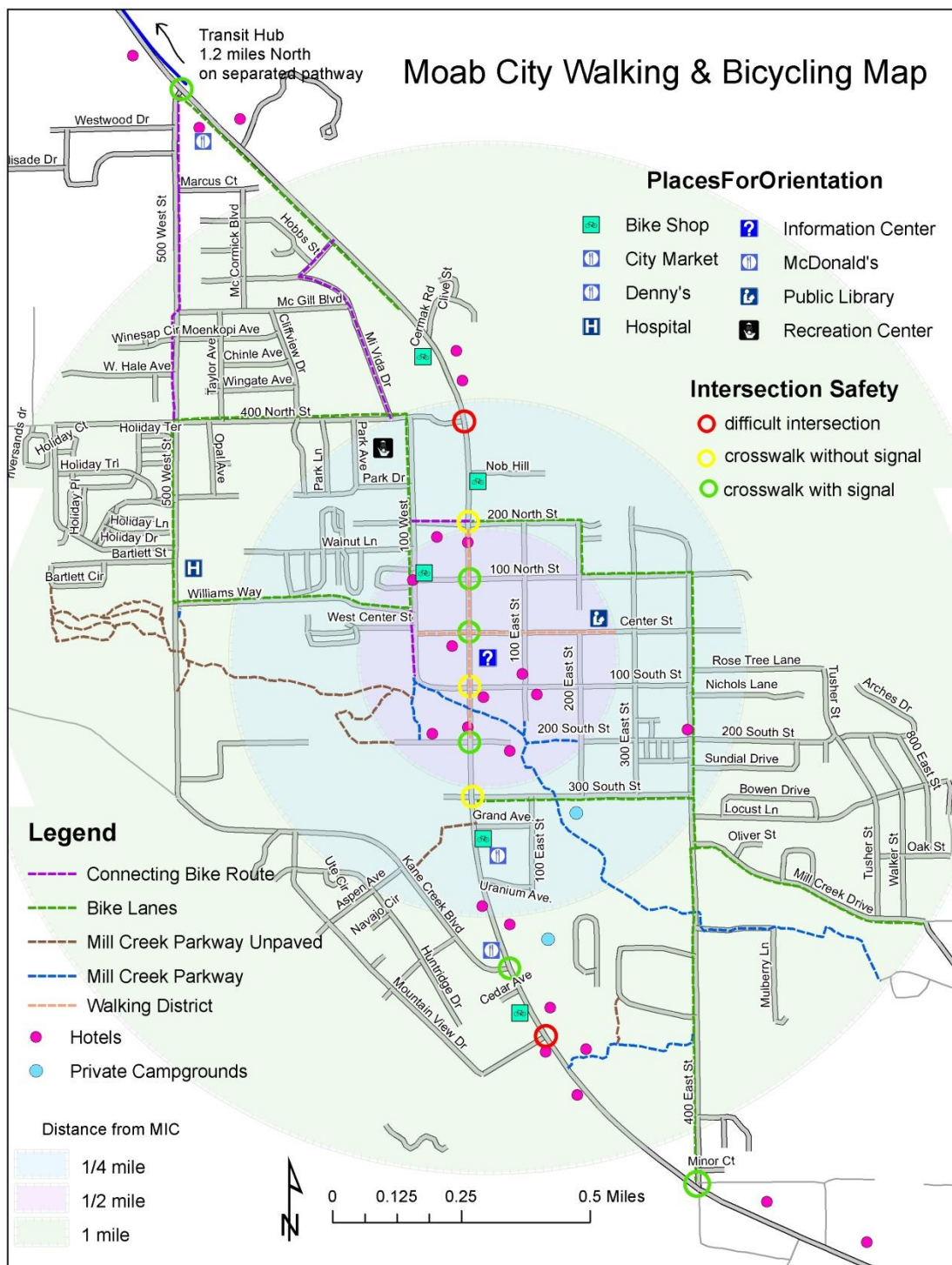


Figure 17 : Moab City Walking & Bicycling Map

Recommendation #2

Recommendation #2 is to develop a wayfinding system within the City limits to encourage safe and pleasant bicycle travel.

Wayfinding is best described as signs and maps to orient users from place to place. Bike route signs serve as a means of wayfinding. Wayfinding signs inform bicyclists which direction to travel to get to a specific destination; these signs improve connectivity and flow. The City of Moab could benefit from adding bicycle route signs along major bike routes throughout the City. This would encourage cyclists to bike off unsafe and congested Main St. while providing guidance to and from the City and the NMRA ATS.

There are many types of wayfinding signs. There is a standard bike route sign, or signs that include arrows directing the bicyclist; some signs include mileage and the number of minutes to the destination.

The bike signs also help with safety by increasing awareness for drivers to watch for bicyclists. For more information refer to Chapter 4 of the “ASSHTO Guide for the Development of Bicycle Facilities, 4th Edition”. Two examples from other cities are shown below.



Source: <http://greshamoregon.gov> accessed 4/21/13



Source: washcycle.typepad.com/home/signage accessed 4/21/13

Figure 18: Wayfinding Examples

Steps to Implement Recommendation #2

The City of Moab is supportive of wayfinding and is willing to install bicycle route signs. The next step is for City representatives to support a wayfinding project. Before the installation of bike route signs, the purpose and locations need to be identified.

Wayfinding design could be done by City staff. To reduce cost and utilize local knowledge, a group of community bicycle advocates should work with City staff to identify bike routes, the best locations, and decide which information to include on the bike signs.

The main purpose of wayfinding is to direct cyclists off US 191 and encourage bicycle use to access Lion's Park and the Transit Hub. Once wayfinding is established the City, the Bicycle Map should be updated to correspond with the bicycle route signs.

Recommendation #3

Recommendation #3 is to create a map specifically for the NMRA ATS. The ideal map would provide distance, elevations and ride recommendations (tours).

Creating a map of the NMRA ATS can serve as a tool for users to make informed decisions about their chosen activity. Currently the path information is available along the pathways; however a map including itinerary options for pre-planning is helpful for new users. A map was developed as a template and should be further developed with accurate information. The map developed was inspired by the Grand Canyon's Bright Angel Bicycle Map. The sample map is provided in Appendix 12: *ATS Sample Rides Map* and Figure 18 below. A map providing sample rides would be particularly useful to families concerned about safety and energy levels of the group. Also, providing maps with this level of information allows visitors to approximate the amount of time required to pursue the activity and rent a bicycle. This level of information is needed if a visitor is short on time and/or has the option to rent a bicycle for incremental durations of time (2 hours, 4 hours, 8 hours).

This map could be used to promote shuttle use and provide cost and pickup locations by adding the relevant information. A map of sample rides could help diversify and broaden the visitors coming to Moab for recreation. Finding ways to sustain and develop tourism and recreation that appeal to a wide variety of visitors and residents is paramount to long-term well-being and economic resilience according the 2012, study "*Headwaters Economic Report: The Value of Public Lands in Grand County*"

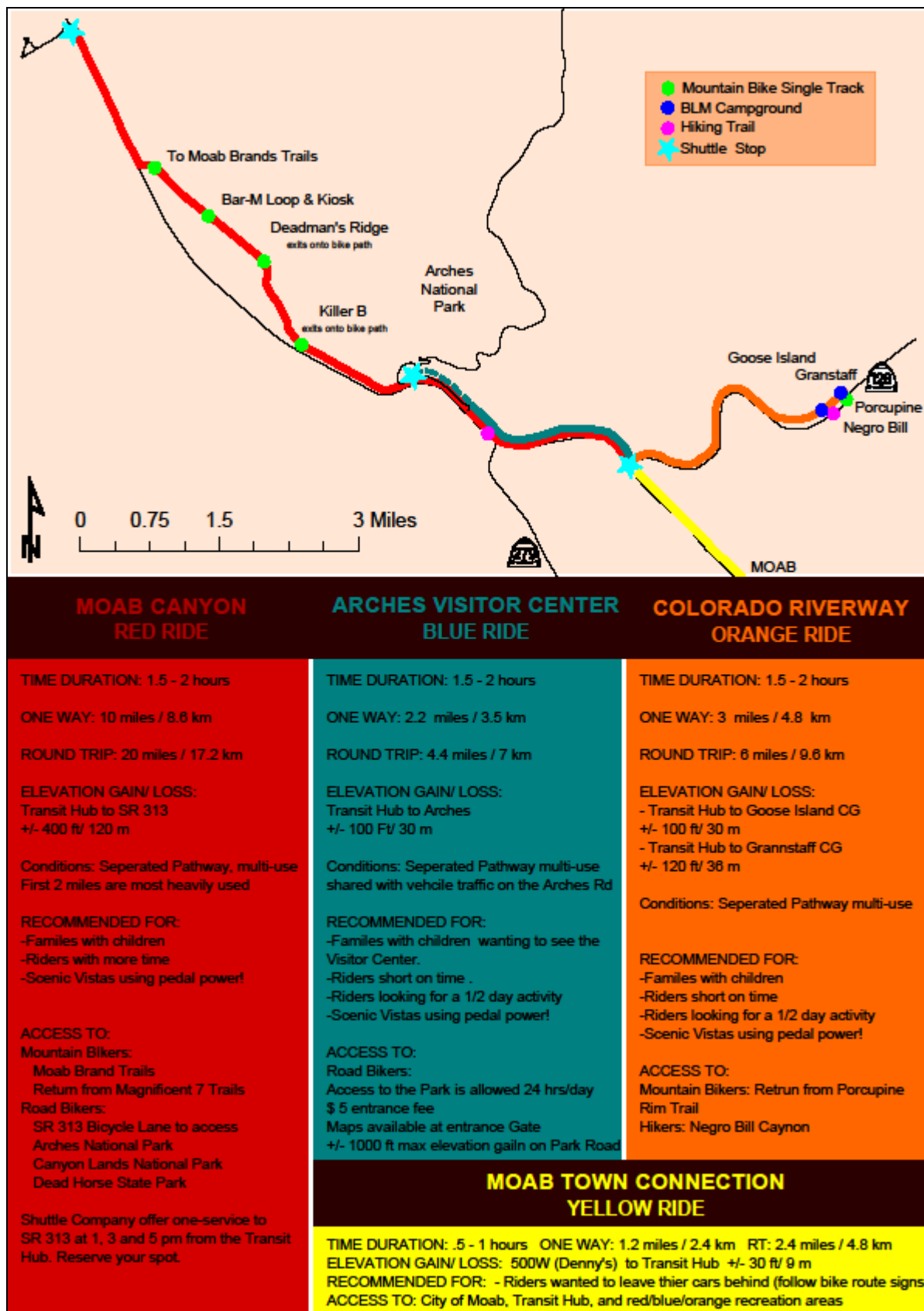


Figure 18: ATS Sample Rides Map

Steps to Implement Recommendation #3

The ATS Sample Rides map could be maintained and distributed similar to the mountain bike trail maps of the area. Currently the mountain bike trail maps are sold at bicycle shops and the revenue from the maps provide monies to Trail Mix. The development and printing of the maps are done by MTA. The money from the ATS Sample Rides Map could generate revenue for ATS promotion. If a similar model were chosen, MTA could take on this responsibility. The map needs to be updated with accurate information once a responsible party is identified.

Additional Steps to achieve Recommendation #3

The Travel Council website currently has an article about the Moab Canyon Trail on its website as shown in Figure 19 below; however including an overview map of the NMRA area (Figure 2 and 20) and the additional ATS maps (Figure 3 and 18) would illustrate how the ATS and bicycle lanes connect within the NMRA. This will be especially helpful to new visitors to the area and will promote the pathways.

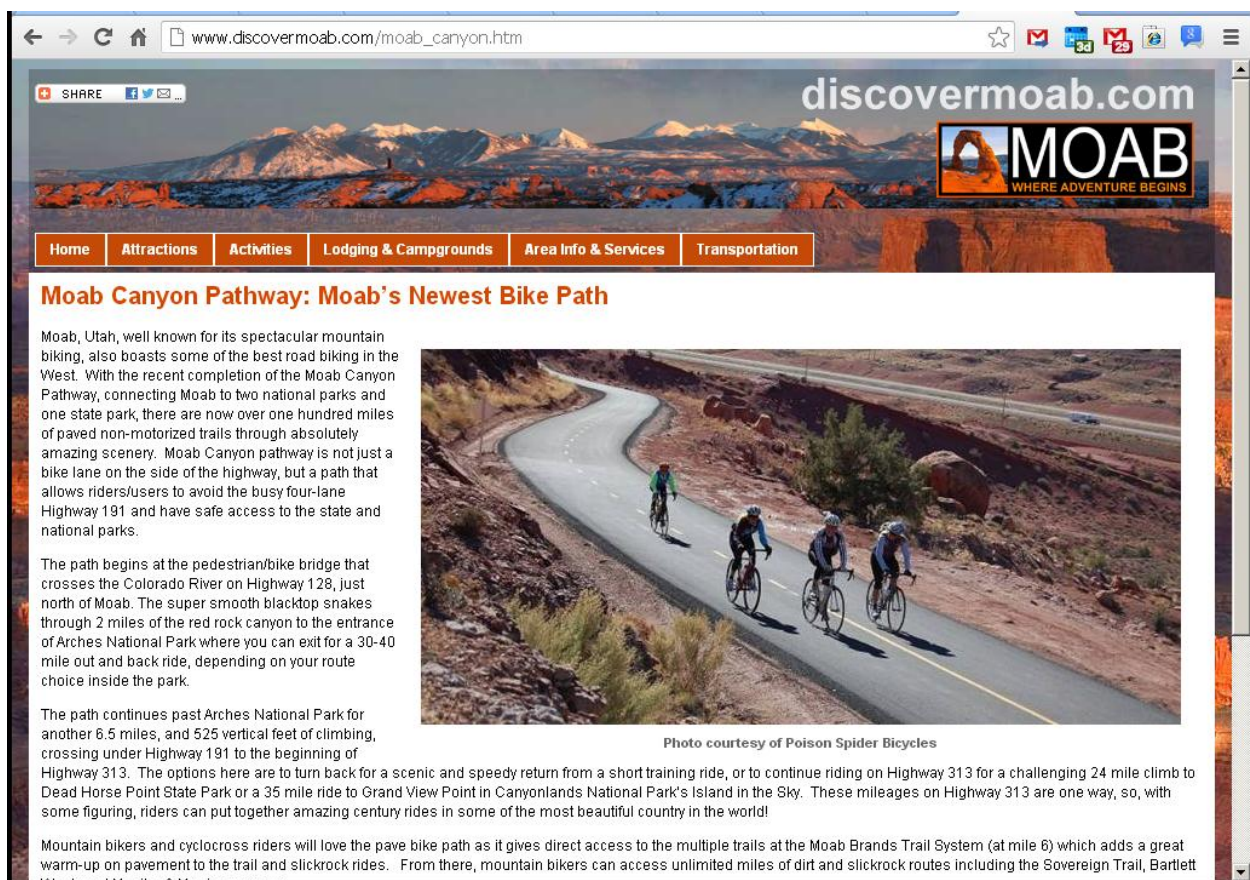


Figure 19: Current Promotion of the Moab Canyon Pathway

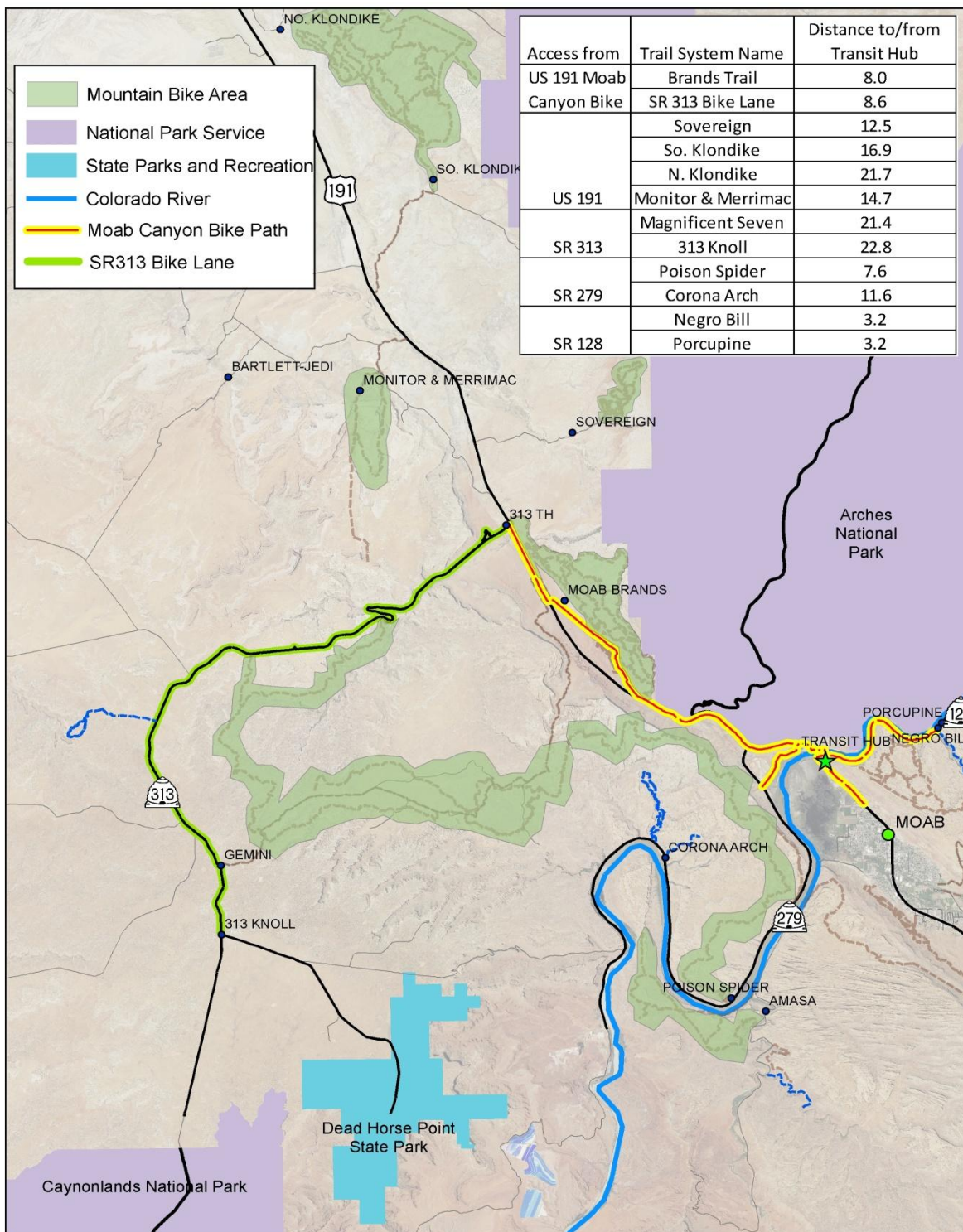


Figure 20: Map Showing the Connectivity Of Bicycle Facilities in NMRA

According to data provided by the Travel Council, its website had a total of 78,257 visits in July 2012 and 655,393 year to date. This is an excellent source for promoting the NMRA ATS.

Recommendation #4

Recommendation #4 is recreation focused park and ride.

Without a formal policy or a designated use defined for the Transit Hub, it will likely be used as a carpooling lot and a meeting place for shuttle companies to pick up passengers that do not need to come into the City.

Steps to Implement Recommendation #4

This recommendation is essentially a “do nothing alternative” and allows the uses at the Transit Hub to happen organically. The Transit Hub could have a display case with shuttle phone numbers and prices listed. The specific trailheads and cost information would need to be gathered from the taxi and shuttle companies. The LPPG has helped to develop the interpretive signage for Lion’s Park and could potentially develop/maintain this information at the Transit Hub. The information supplied at the Transit Hub needs to be approved by the City and clearly state why the information is provided.

Recommendation #5

Recommendation #5 is to offer training focused on alternative transportation connections for front line staff that interact with the visitors.

The availability of the Moab Bicycle City map (Figure 17) at hotels will create more awareness of the alternative transportation infrastructure in the City. The data collection stage found employees at hotels and the MIC were unable to provide a map of the area and did not have a good understanding of how to access the Mill Creek Parkway (Moab’s greenway). Training front line staff could improve the understanding of their guests in how to connect from the City of Moab to the NMRA ATS and Lion’s Park. The Bicycle City Map developed as part of this report includes the location of hotels to assist in this effort.

Steps to Implement Recommendation #5

The City and the Chamber of Commerce could jointly develop training for frontline staff. The training would focus on the best way to access the ATS given the location of the hotel. The map wayfinding and routes from hotels could be tied together and offered as part of this training.

Recommendation #6

Recommendation #6 is to collaborate with adventure centers to offer packages geared towards the NMRA ATS.

The websites for Adventure Centers or guided tours do not appear to offer packages focused on the Moab Canyon Trail. One such package or offering could be similar to the ride experience offered at Haleakala National Park. The experience at offered through commercial operators at Haleakala National Park starts with a stunning sunrise followed by an all downhill road bike ride. See Appendix 13: *Haleakala National Park*.

A similar experience could be offered by local businesses by dropping clients off at Dead Horse Point State Park or Canyonlands National Park for the spectacular views followed by a (guided or unguided) bicycle ride back down to the City of Moab.

Steps to Implement Recommendation #6

The appropriate entity to focus on this effort is unknown. The experience could be a service offered by shuttles and bike shops or offered as a guided tour (stopping at view points along SR 313 to discuss surroundings). One barrier may be the availability of bikes appropriate for riding long distance on pavement, assuming many of the people interested in this type of experience will arrive in Moab without a bicycle. Also, if Recommendation #6 were implemented, bicycle signage along SR 313 should be improved, including adding share the road signs.

Recommendation #7

Recommendation #7 is collaboration with hotels to offer alternative transportation options for their guests. The following discussion is focused on bicycles; however many hotels offer shuttle services to their hotel guest s(one in Moab and many throughout the United States). The topic of hotels offering shuttle services to their guests may be worth discussing with local hotels.

If hotels were to offer bicycles as an amenity. this could be a win-win for everyone. This would provide bicycles to the many visitors that arrive by vehicle and do not have bicycles. The bicycles could be used to travel from the hotel to the downtown walking district, in addition to riding the bicycle pathways. This amenity could be the most appealing for visitors staying in hotels North of 500 W or South of 400 E because the distance may be too great to walk. This offering could fill the gap between high end mountain bike availability and hybrid/comfort bike availability.

Bike shops and hotels could benefit from a reciprocal relationship. Bike shops would not need to store the bicycles or have increased overhead but could be the service providers for the hotel (building the bikes, performing routine repairs, and serving as experts to help hotels select the most appropriate fleet).

While locals feel that most lodging in Moab is typically full during peak seasons, this was not confirmed with lodging managers. This would initially leave one to believe that hotels may not need to offer superior amenities however, in an increasingly competitive market to attract tourists, hotel developers and operators are often seeking ways to differentiate themselves from

the competition. One way to differentiate is by incorporating environment-friendly initiatives as a way of serving guests who are conscious of their ecological footprint. A hotel offering bicycles as an alternative to vehicle use would be one way to differentiate them (especially in the slow season) and may be appealing to many visitors.

An article was published in the *Moab Sun News*, “Hotel renovations hit their stride in winter”. This article discussed the many upgrades to local hotels during the winter of 2012/2013. The article quoted the managing director of Quinstar, a firm that manages several of Moab’s largest hotels. The following two quotes are relevant:

“The goal of any expansion in Grand County’s tourism industry is to get more people coming in and keep people coming back, and that means adapting.”

“As Moab continues to evolve we need to grow with the people who are, and will be, coming to Moab. As a destination we need to keep up with the services that other areas compete with us for.”

Currently, there are only a handful of hotels in the United States that offer such an amenity. One such hotel is the Hilton Inn in Missoula Montana. Missoula is a bicycle friendly city and much smaller than other cities in the U.S. (Boston, New York City) that offer hotel bike programs. The service staff at the Hilton Inn in Missoula responded to my inquiries. A summary of the Hilton Inn staff responses are summarized in Appendix 14: *Hotel Bike Program*. The Appendix 14: *Hotel Bike Program* also lists other hotels that offer a bicycle program.

A hotel bicycle program appears to be rare and should not be confused with the bike sharing programs offered in various cities. If bicycles were offered to hotel guests exclusively, this program would differ from bicycle shops that rent bicycles to the general public.

Steps to Implement Recommendation #7

This recommendation would be best addressed by first engaging in discussion with hotel managers to further explore the concept. Items to consider include the hotel’s desire to take on this added amenity, the storage space needed, the added work load of front line staff and the availability of bike shop support. It is unclear who would lead this effort. There must be a business case for the offering. There are many private businesses in Moab with an entrepreneurial spirit. If this idea could capture a local entrepreneur’s imagination it may be possible.

Recommendations #8, 8a

Recommendations #8 and #8a are group together because Recommendation #8a is a natural variation or progression to Recommendation #8. Recommendation #8 is to create an on-demand service originating from bike shops where Recommendation #8a adds the MIC and Transit Hub as regular service stops.

The difference between Recommendation #8 and #8a is the type of service and the number of passenger pick-up locations. An on-demand regular service operates if there are enough passengers reserved to meet minimum occupancy requirements, where a regular service will depart on a fixed route without knowing the number of passengers.

During the peak mountain bike season, bicycle shuttle companies leave from the bike shops at two fixed times for the Whole Enchilada trail. For Recommendation #8, the bike shops and shuttle companies would promote a Moab Brands Trail departure at two fixed times in mid-afternoon and late after-noon, using the same process for the early morning Whole Enchiladas departures (as discussed in the Business Outreach section of this report). The Moab Brands Trails on-demand service will be limited to months that offer pleasant temperatures and adequate day light.

If Recommendation #8 became a success and the demand for the Moab Brands Trails service increased, then Recommendation #8a could be a natural variation of that. Recommendation #8a is shown in Figure 22 below. Recommendation #8 is regular service operating without reservations and expands the service by adding stops at the MIC and Transit Hub. Recommendation #8a increases the number of shuttle users, attracting walkers, joggers and other user groups that want to reach the Lion's Park area without using a vehicle.

Creating a regular service originating at the MIC or the Transit Hub and ending at SR 313 is a good first step towards transit service from the City of Moab to the public lands in the NMRA. The service originating from the MIC is beneficial because it would address the concern of the Transit Hub taking business out of the City of Moab. The MIC staff could address shuttle questions and the MIC location would increase shuttle visibility. The financial risks of starting a regular transit service are reduced because the service is centered on the NMRA ATS. The NMRA ATS allows for a diverse set of users and the service travels a minimal distance relative to the distances required to access the Knoll on SR 313 or the other mountain bike focus areas in the NMRA. A break-down of assumed cost and the proposed service is provided in Figures 21 and 22.

Operation Cost for 14 Passenger Vans		Cost per Trip
Cost of Fuel	\$ 4/gallon @ 14 mpg	\$6.29
Driver Cost	\$15/ hour	\$15.00
Cost of Vehicle Operations	\$ 0.56 / mile	\$12.32
		\$33.61

Figure 21: Recommendation 8a Assumed Cost

(Sources: http://www.fueleconomy.gov/feg/byclass/Vans__Passenger_Type2012.shtml
<http://www.bls.gov/ooh/transportation-and-material-moving/bus-drivers.htm>
<http://www.irs.gov/uac/2013-Standard-Mileage-Rates-Up-1-Cent-per-Mile-for-Business,-Medical-and-Moving>)

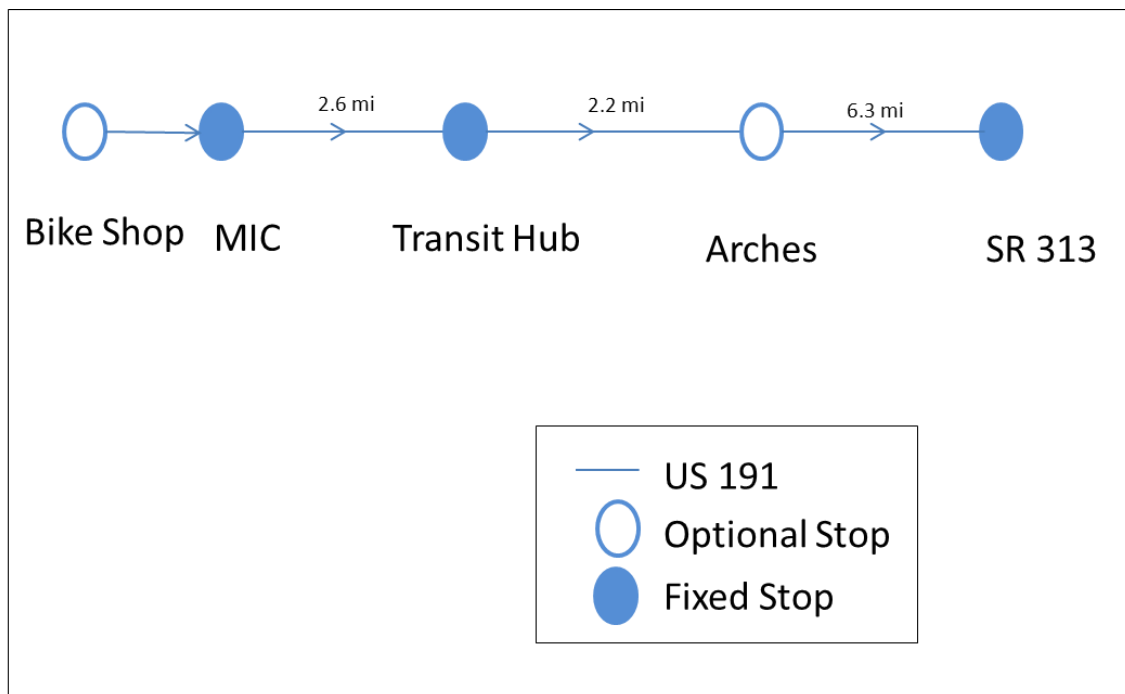


Figure 22: Recommendation #8a Route Information

Some factors to consider for recommendation 8a:

Assuming visitors are willing to walk or bicycle 0.5 mile to reach the MIC, this service caters to 673 lodging units, 52 tent sites and 90 RV sites. However, the distance between the MIC and the Transit Hub is 2.6 miles and even this short distance makes it difficult to influence visitors to use a regular transit service for accessing the Lion's Park area, unless there are parking restrictions (such as no RVs) or the visitor does not have a vehicle. Since, Recommendation #8a caters to a diverse set of users, passengers without a bicycle will likely desire to return to the MIC. To design Recommendation #8a as a user friendly service, a good understanding of visitor patterns at the Lion's Park area is needed. Regular transit service success depends on creating an experience and/or being competitive with the vehicle (cost and convenience). The cost of a regular service needs to be equitable to operator and to the passenger.

Also, transit services to access public lands are often tailored to user groups. Similar services researched cater to specific user groups, mostly cyclists and nonlocals. The needs and preferences of hikers, for example, may differ from casual cyclists. The needs and preferences of visitors who arrive with an RV or as part of organized tour may differ from those arriving in passenger cars. To be successful, a service is rarely one size fits all and should be tailored to specific target groups. For example, Recommendation #8a as a one-way service caters mainly to cyclists. Recommendation #8a (a two-way service) caters to walkers/joggers/hikers as well. It is best to meet the needs of some visitors with a transit service and expand the service to additional groups in the future. It is important to emphasize that Lion's Park and the Moab Brands Trails are a relatively short drive by private automobile; therefore the service needs to provide a desirable experience and offer conveniences.

Steps to Implement Recommendations #8 and #8a

Communication and defining a task force is essential to implementing all the recommendations, particularly #8 and #8a. Communicating with the appropriate businesses within the community would provide for greater understanding for all stakeholders; sharing information would improve reputations and influence.

Shuttle companies need to be approached about the goals of the NMRA ATS and discuss expanding their businesses to promote on-demand service from bike shops during the mid-day period. Mid-day shuttle service would not interfere with morning Whole Enchilada departures and may sustain business throughout the day. Providing a map of the Moab Brands Trail with ride durations and elevation profiles will enhance the comfort levels of visitors new to mountain biking or the Moab area.

An option for implementing Recommendation #8a is the use of permits. For example, allow those shuttle companies with permits to operate a regular service from the Transit Hub. Create a lottery system for applicants to apply for a Transit Hub permit. The number of permits available

and the terms of the permit would be defined by the agencies administering the permits. The first step towards achieving this permitting system is for the City, County and BLM to discuss long term management of the permitting system and define appropriate roles and responsibilities of each agency and transit hub operators.

The steps towards Recommendation #8a are unknown at this time. The service proposed for Recommendation #8a is quite different from how shuttle companies operate today. Their incentive for this transition is currently unknown. Also if a permitting system were developed, this is a new role for Grand County. The transition from the shuttle companies' standard operations to regular service will require a great deal of communication/coordination to determine the best methods to benefit stakeholders.

Recommendation #9

Recommendation #9 is to offer bicycle rentals at the Transit Hub for riding the paved pathways.

The Colorado Riverway bike path is not yet finished; however upon completion, visitors will want to experience the bike path. The Colorado Riverway bike path will parallel SR 128 and the Colorado River. Below are pictures of the current status:

As more visitors are attracted to NMRA ATS and Lion's Park area, there may be demand for hybrid bicycle rental. If this demand exists, offering rental bikes at the Transit Hub would further enhance the recreation opportunities for visitors and could potentially increase the users of the regular transit service (Recommendation #8a).



Figure 23: Colorado Riverway Bike Path Construction

The businesses in Moab have limited availability of hybrid style bicycles that are often used for riding paved separated pathways. There are many visitors who have not brought a personal bicycle to Moab that may want to use the pathways. Most bike shops offer high end mountain bikes for \$40-65 for a full day. The current style of bicycles available and the cost structure (full day rental) offered at most bicycle shops in Moab is a barrier to the casual cyclist wanting to experience the path.

The Bright Angel Bicycles operating within Grand Canyon National Park offers full day bicycle rentals for \$35 or half day rental for \$25. The bicycle rentals available at Teton National Park (through Doran's in Moose, Wyoming) are \$36 for a 24 hours and \$29 for a half day. Both Grand Canyon and Teton National Parks are similar to the NMRA ATS because they offer bicycle pathways as an option to experience the landscape as an alternative to motorized travel. Offering bicycles at the Transit Hub for smaller durations of time would accommodate more visitors. Providing bicycles at the Transit Hub will eliminate the need for visitors to transport bicycles on their vehicles to experience the bicycle pathways in the NMRA.

The main benefits of offering a bicycle rental service at the Transit Hub is to create new experiences for the visiting public, added convenience, and a short activity for the casual cyclist. The hybrid offering will not compete with local bike shops because the hybrid bicycle serves a different purpose than mountain bikes. The hybrid bicycle serves the purpose of experiencing the paved pathways and not necessarily the Moab Brands Trails. Shuttle services can benefit from Recommendation #9 because hybrid bicycle users may want a shuttle to SR 313 for a downhill experience, consequently adding to the ridership if Recommendation #8a were to exist.

An additional benefit of Recommendation #9 is a potential revenue source if Grand County charges a fee to vendors offer recreational equipment. This revenue could contribute to maintaining and operating the NMRA ATS.

Recommendation #9 was brought forward to the local stakeholders and is documented by a technical memorandum in Appendix 15: *Recommendation #9*. The technical memorandum summarizes Grand Canyon National Park's request for proposals (RFP) seeking applicants to propose a business plan to fill a temporary program for bicycle rentals. The technical memorandum provided in Appendix 15: *Recommendation #9* outlines the services provided by Bright Angel Bicycles. The RFP and benefits were discussed in a group meeting with County, City, BLM and MTA representatives. The group discussion revealed that further dialogue was needed to determine if authorizing uses was a necessary or desired component of Transit Hub operations.

Some factors to consider for Recommendation #9:

Once the NMRA ATS bicycle pathways are fully constructed, the demand for a diverse style of bicycle will increase. It is anticipated that this demand will increase if maps with itineraries are made available on the Travel Council website and offered at the MIC. See Appendix 12: *ATS Sample Rides Map* for examples and Recommendation #3. Offering bicycles at the Transit Hub may not be necessary as businesses evolve or begin to meet this new demand.

Steps to Implement Recommendations #9

The steps required are unknown at this time. For example, the RFP discussed in Recommendation #9 is one example of how bicycle rentals could be diversified to attract ATS users however; agency roles and Transit Hub uses need to be clearly understood.

Appropriate Questions: Who manages the contract for the RFP? Who enforces the stipulations in the contract? Who manages a program for the Transit Hub long term? Would the County Council and/or City Council need to approve the RFP? Are the benefits of authorizing uses at the Transit Hub clearly defined? The RFP process is desirable because it allow the risks and benefits to be identified clearly and allows the requester to define the criteria for the business.

Strategic Planning Needs

The Scholar's responsibility was to address opportunities and provide recommendations to further promote the NMRA ATS. As the Scholar project progressed, the ability to develop appropriate recommendations for the NMRA ATS was difficult due to a lack of unified understanding and clear goals for the operations of the Transit Hub. The strategic planning needs section is included in the project report to address the actions required prior to implementing recommendations.

The NMRA ATS vision has true value, and creating an unsubsidized regular transportation service in a community will require a great deal of support. Communication with local stakeholders will be necessary to get community 'buy in'. A transportation service using private businesses can only exist if local businesses agree to give support. It is further complicated because businesses need to understand what they are being asked to support. An understanding of the businesses' obligations and desires is required to determine the most appropriate use of the Transit Hub. To move the NMRA ATS vision forward, there is a need for a dedicated group to focus on using alternative transportation to access public lands to benefit visitors and local community.

Grand County, the City of Moab, the BLM, MTA and other project stakeholders have collaborated to develop an outstanding recreation experience in the NMRA. This success is very impressive, and the effort is quite apparent when visiting the NMRA. Opportunities and unique solutions thrive in Grand County, and the NMRA effort has been collaborative, innovative and passionate. However to tie all pieces of the NMRA ATS together is a new challenge, and a group dedicated to making the NMRA ATS a priority is needed continue the progress.

The objective stated in the Colorado Riverway FY2011 grant application is to have 500,000 people (20% of Moab's annual visitors) per year using the Transit Hub and non-motorized transportation infrastructure for at least part of a visit. The Moab area has demonstrated "build it and they will come" with great success. Grand County has reaped the benefits of its Travel Council promotion, including many popular recreation events and the cultivation of repeat visitation. The NMRA ATS pathways are amazing and soon to be more wonderful once completed. "Build it and they will come" works great for some recreation activities, but shaping the NMRA ATS to function as envisioned will require a deliberate effort. To make a vision a reality, there needs a solid course of action. An example of the possible course of action is provided below by steps 1-5.

1. Form ATS Coalition

The coalition needs to consist of public agencies private businesses and individuals committed to this project. There may be an existing group that is a natural fit within the community that is willing to broaden their goals or there may be a need to establish a new group dedicated to transportation planning initiatives. The importance of communication cannot be overemphasized.

The partnerships established for Zion National Park's shuttle success is a good example. The Zion National Park shuttle is considered a great success by many. The report "*Innovative Transportation Planning Partnerships to Enhance National Parks and Gateway Communities*" (NCHRP Project 08-36 Task 83) provides an overview of the partnerships and arrangements made prior to implementing the Zion shuttle service. The report discusses the role of the gateway community (Springdale, Utah), private businesses and the Zion National History Association in conjunction with federal/state agencies.

Beyond the need for transit and funding, the partnership between the Mayor of Springdale and the Superintendent of Zion National Park was paramount to begin developing a transportation system that served the gateway community and federal lands. Furthermore, a liaison committee composed of several town citizens representing the variety of viewpoints was formed as a source of active communication between the town and the park. See Appendix 16: *Zion National Park* for more information.

2. Define Vision

A vision is abstract, yet compelling, relevant and meaningful. The vision process should be inclusive of the ATS Coalition. The vision is generally what and how the NMRA ATS will function once the infrastructure exists. Think in terms of possibilities.

Define concepts towards the vision. There are many possible concepts one such concept is outlined in Recommendation #8a. Another concept is outlined in the Arches Final Feasibility Report.

3. Establish and document goals as a team. The goals are what a vision wants to achieve. The goals are a focused and tangible framework. Goals help with eliminating misunderstanding and/or confusion. The current goals identified in this report may need to be further developed once a coalition exists.

4. Create objectives for the NMRA ATS. Objectives provide a means to measure the movement towards the vision.

An example of an objective for Recommendation #8: One shuttle company offers a mid-day service to the Moab Brands Trails for the month of September.

5. Create an action plan for how to achieve the objectives. An action plan should be clear on what problem it solves, or opportunities it presents, and details what needs to be done and when.

An example of an action plan for the above objective: A BLM representative organizes a meeting with permitted shuttle companies. The meeting is held to inform the shuttle companies of the idea to establish a mid-day Moab Brands Trail service to further promote the NMRA ATS. If at least one shuttle company agrees, the service is implemented in September. After the service

is implemented the shuttle company and the BLM meet again to evaluate the success (i.e. number of shuttle users, the added benefit to the shuttle companies revenue, the add workload).

VII. NEXT STEPS

The next step is to define the role of the NMRA ATS within the current conditions after reviewing this document. Discuss the recommendations, feasibility and then prioritize the recommendations.

Create a group focused on the NMRA ATS. The group should consist of representatives from the City of Moab, BLM, Grand County, NPS, Moab Lodging Association, Chamber of Commerce, Grand County Travel Council, and local businesses. Involving interested citizen will promote diverse perspectives. If local businesses are important to NMRA ATS's success, it is essential to involve shuttle companies in the early discussions of NMRA ATS possibilities.

VIII. CONNECTION TO WIDER TRANSPORTATION COMMUNITY

A broad range of transportation issues exist in the greater Moab community. As with most gateway communities, the relationship of Moab and the public lands in the NMRA is interdependent, and transportation connections are vital to supporting this relationship. This report focuses on the opportunities to enhance the linkage between the NMRA and the City of Moab. Connectivity, accessibility and transit availability were the main considerations.

The connectivity from the perspective of bicycle use to access the NMRA ATS is challenged by the traffic congestion on Main St. (US 191). Main St. is not pleasant or safe for cyclists, particularly those uncomfortable biking in traffic. As a visitor to Moab, biking on Main St. to reach the NMRA ATS is the most obvious route. Improving connectivity via off Main St. bike routes (using wayfinding) and maps are discussed in this report as one solution to enhancing the Moab City's connection with the NMRA ATS. As bicycling is becoming recognized as a mode of transportation, cities are planning for improved bicycle networks to support and encourage bicycle commuting. The quality of the bicycling network could be more important than the number of bicycle facilities. A recent study shifts the focus from quantity of bicycle infrastructure to measuring the quality of bicycle infrastructure networks using network science concepts and measurement techniques from other transportation modes.¹

Accessibility between Moab City and the NMRA ATS is discussed in this report in terms of availability of shuttle services to access public lands. Accessibility is also discussed as the consideration of distance or time required to access public lands from Moab by different modes of transportation, including walking, cycling and public transportation. For example, there is a wide range in the skill and comfort level with bicycling and the added distance of traveling to/from Moab and the Transit Hub could be a real barrier. Also, discussed is how quality information can affect the functional availability and the desirability of accessibility options.

Design of a regular public transportation service serving public lands is quite different than serving the needs of visitors by a private business. This is also true outside the gateway communities and public lands setting. Private transportation services tend to operate during longer hours, offer door-to-door service, and provide nonstop services at a higher cost than public transportation. However public transportation is typically subsidized and required to meet strategic objectives and performance measures, thereby offering a higher level of service to visitors. The advantage of creating a public transportation service for public lands is the focus towards the visitor, and has the ability to offer services in high demand corridors. The challenge is providing a service competitive with the private automobile.

¹ <http://www.planning.org/divisions/transportation/papercompetition/2012/schoner.pdf>

IX. THE PUBLIC LANDS TRANSPORTATION LANDSCAPE

Transportation planning in a Federal Land Management Agency such as the BLM can be distinctly challenging as compared to other environments. The locations of BLM sites are often dispersed and rural, which causes incompatibilities with alternative transportation solutions. The lands managed by BLM in Moab are located 120 miles from a major urban area further causing additional barriers to ATS solutions. The dispersed lands and isolation from urban centers makes it difficult to create a regular transit service or allow for reasonable distances to access public lands via active modes. Visitors of BLM lands tend to have vehicles and in the case of Moab BLM, typical transportation issues such as parking capacity and congestion are not prevalent

The Moab community could benefit from creating a regional alternative transportation plan integrating the County, City and Federal Land Management Agencies; however this effort requires resources that are not necessarily readily available.

X. CASE STUDY FOR FUTURE PUBLIC LANDS TRANSPORTATION SCHOLARS

This section is intended so that future public lands scholars can learn from previous Public Lands Scholar's experiences and provide feedback for program improvement.

Description of My Experience

I arrived in Moab well equipped with my education and the Scholar training in Denver. The Scholar training is a week of contagious excitement. The week is spent meeting the other Scholars and learning about existing and successful transportation solutions for public lands with an emphasis on building partnerships and project champions. The week is also spent with supportive, knowledgeable and experienced professionals, further reinforcing this project as an opportunity to use transportation expertise and enthusiasm to help the BLM succeed in realizing its project goals.

I began by orientating myself with the NMRA and the City of Moab. After spending time discussing my project with BLM representatives, I started to understand the ambiguous nature of the project and realized interagency pre-planning efforts for the Transit Hub were mainly focused on construction/maintenance. The Transit Hub's purpose or need was still being developed within the community, mostly because the Hub was not yet constructed. The Scholar project was new to the community, to me and to the BLM so I redirected my focus. I focused my energy on using my knowledge to serve as a new perspective. I executed small steps that were achievable in a short time, were tangible and would ultimately serve as a natural progression towards realizing the full potential of the NMRA ATS.

What Didn't Work So Well

I assume each Federal Land Management Agency has its own culture and furthermore its own culture within each unit. For example, some agencies or units may be more collaborative addressing transportation issues than others. It is impossible to fully anticipate impediments to a project prior to arriving at the project unit; however there could be a "check" point instituted by the Scholar program to check-in with the FLMA regarding the project and to append the SOW if needed.

Another option is to set Scholar and FLMA role expectations by explicitly outlining this information in the grant application or SOW. For example, my scholar grant application specified agency representatives would expand local participation in the study through coordination with stakeholder representatives from Grand County, Moab City and MTA. The grant application also anticipated community stakeholders would work collaboratively to provide project guidance to the scholar. The Scope of Work outlined tasks such as determining the needs of transit. The task of determining need was described in the SOW as achieved by working with existing partner groups. The statements in the grant and SOW formed the basis for my understanding of roles for me and for the Moab Field Office. The actual form of participation

and the level of involvement anticipated from local stakeholders was not well understood or explicitly stated. The grant and SOW implied the importance of stakeholder participation as part of the Scholar project, but how or who would coordinate stakeholders and the role of the stakeholders was not explicitly stated. Perhaps in preparation for a Scholar's arrival, the applying agency could build awareness in advance by arranging for local participation.

For example, this project and likely most Scholar projects would benefit from the involvement of an advisory committee. An advisory committee could be available to inform and be informed as part a Scholar's process to achieve project goals. A committee could provide valuable information about challenges and potential solutions. Also, an advisory committee serves as a means for continued communication. Communication is an opportunity for stakeholder participation early in the planning process and would give relevant local residents a better understanding of the Scholar project to move the project forward once the Scholar's tenure ends.

What Worked Well

The BLM and the greater Moab community were available to answer questions, were supportive of my suggestions and demonstrated a willingness to openly discuss views and provide relevant information. This sense of welcoming by the community and the level of availability and willingness to be there when needed contributed greatly to the project's success. Some examples are provided below:

I made a map that was adopted by the City and will soon be published on the City website and made available to the public.

I applied for the Bicycle Friendly Community designation and was supported by the City and County Council in this effort. Grand County/Moab received a Silver level designation!

I met with shuttle companies to understand their businesses and level of interest in creating a service.

I reached out to local stakeholders involved in the planning of the Transit Hub and Lion's Park to understand perspectives and outline recommendations.

Although the project had its challenges, ultimately the ambiguity provided the freedom to be creative and provide important information to the local community to begin collaborating. My presence served as part of the natural progression by bringing agencies together to discuss Transit Hub policies/uses and think in terms of future possibilities.

XI. PROFESSIONAL DEVELOPMENT

The Public Lands Transportation Scholar program, and working with the BLM and the Moab community has been an amazing opportunity that I hope will guide my career path. The opportunity combined many passions: recreation use, alternative transportation planning, and public lands, while focusing on effective and appropriate solutions.

Furthermore, the transportation scholar program offers an invaluable opportunity to be an asset to Federal Land Management Agencies. In addition to my own education, the scholar training offered an important foundation to succeed during my project. The training introduced important background information on transportation related issues for public lands and provided guidance in partnering and building good relationships.

The Transportation Scholar program enabled me to diversify my knowledge of transportation in areas of transportation that are of greatest interest to me. My graduate study was transportation engineering; however this project gave me a chance to explore transportation planning and community involvement.

The program gave me the opportunity to work independently and collaboratively as transportation professional. The work as a Scholar was challenging at times because transportation did not have an apparent “fit” in addressing typical BLM concerns. The support of my mentor Laurie Miskimins, Todd Johnson (Arches Scholar) and the TRIPTAC team (Jamie Eidswick and Phil Shapiro) offered valuable support towards project development.

Thank you to the BLM staff for being helpful and giving me the freedom to make recommendations based on my best judgment. A special thanks to Rock Smith for providing me with a feedback loop, Katie Stevens for being the world’s best editor, ‘Genius’ Jean Carson for her GIS expertise and Jen Jones for helping me get the project started.

Not only did I work with wonderful people, I biked the pathways for “work” and I commuted to the office via single track. It has been fun!

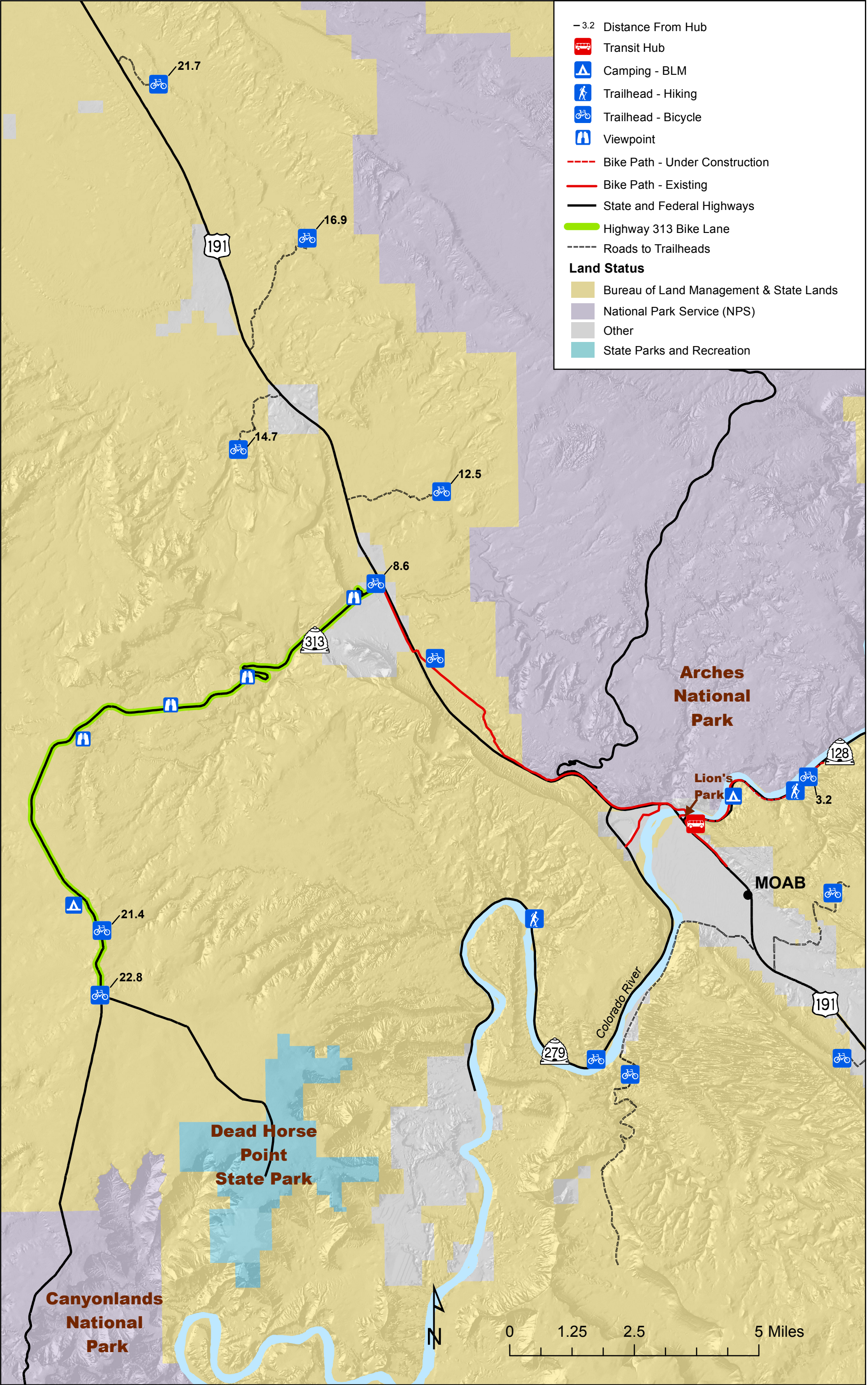


XII. APPENDICES

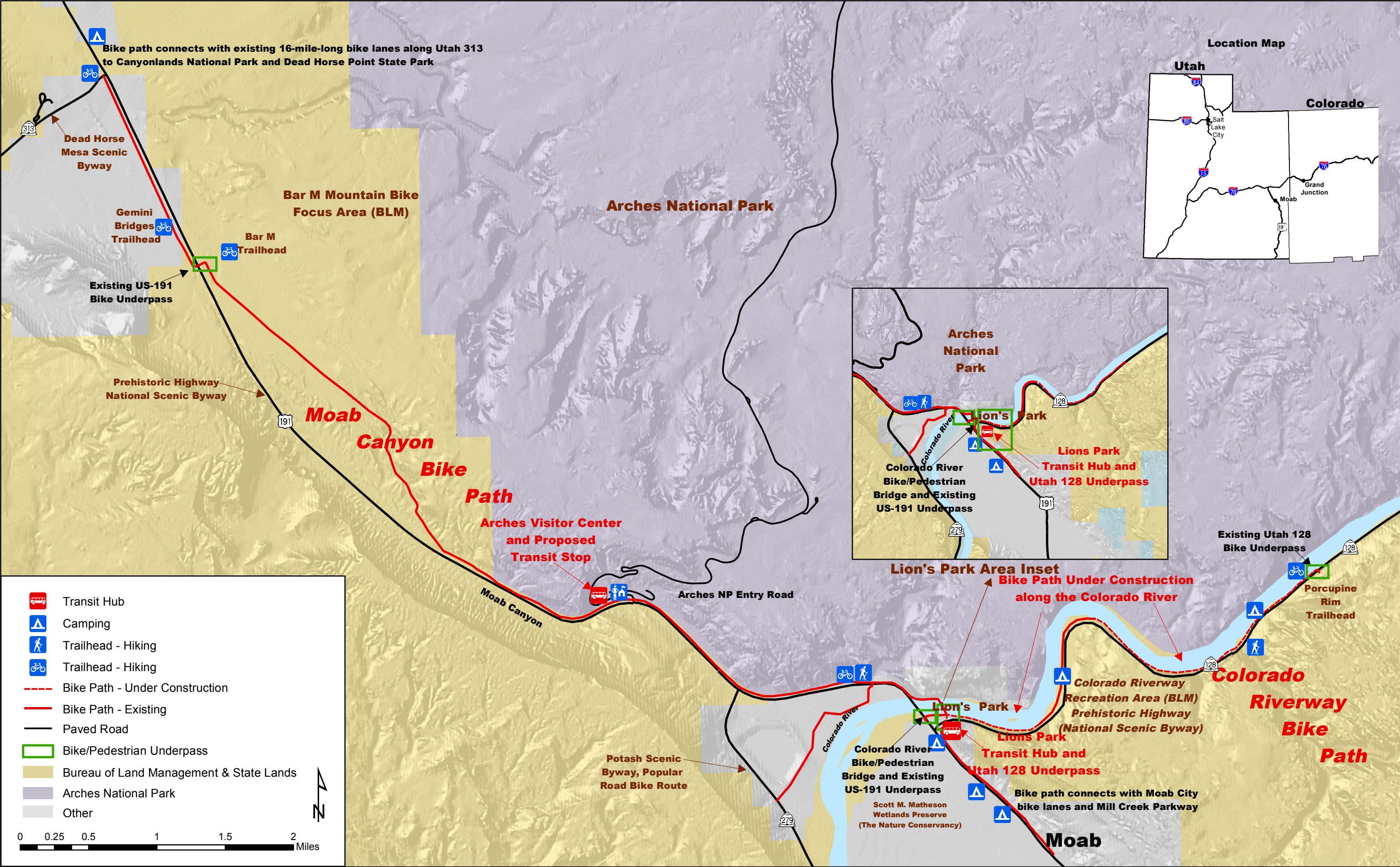
Appendix 1: NMRA Maps

North Moab Recreation Area Maps

North Moab Recreation Area



North Moab Recreation Area ATS



Appendix 2: Moab Daily

The Moab Daily is a 13 mile section of the Colorado River and is very popular and ideal for a day short adventure.

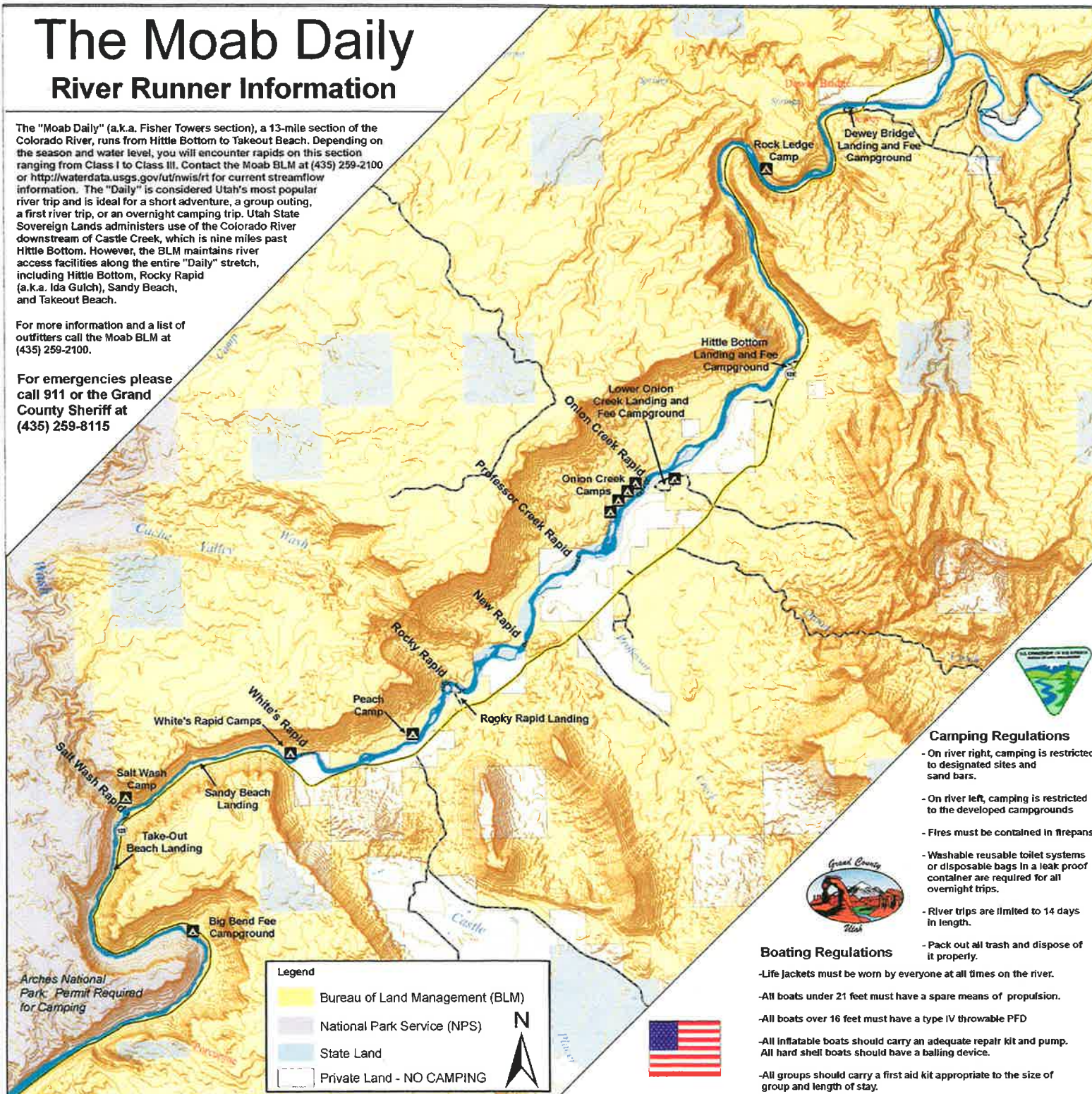
The Moab Daily

River Runner Information

The "Moab Daily" (a.k.a. Fisher Towers section), a 13-mile section of the Colorado River, runs from Hittle Bottom to Takeout Beach. Depending on the season and water level, you will encounter rapids on this section ranging from Class I to Class III. Contact the Moab BLM at (435) 259-2100 or <http://waterdata.usgs.gov/ut/nwis/rt> for current streamflow information. The "Daily" is considered Utah's most popular river trip and is ideal for a short adventure, a group outing, a first river trip, or an overnight camping trip. Utah State Sovereign Lands administers use of the Colorado River downstream of Castle Creek, which is nine miles past Hittle Bottom. However, the BLM maintains river access facilities along the entire "Daily" stretch, including Hittle Bottom, Rocky Rapid, (a.k.a. Ida Gulch), Sandy Beach, and Takeout Beach.

For more information and a list of outfitters call the Moab BLM at (435) 259-2100.

For emergencies please call 911 or the Grand County Sheriff at (435) 259-8115



Arches National Park Permit Required for Camping

Legend

- Bureau of Land Management (BLM)
- National Park Service (NPS)
- State Land
- Private Land - NO CAMPING

N
↑

Camping Regulations

- On river right, camping is restricted to designated sites and sand bars.
- On river left, camping is restricted to the developed campgrounds
- Fires must be contained in firepans.
- Washable reusable toilet systems or disposable bags in a leak proof container are required for all overnight trips.
- River trips are limited to 14 days in length.
- Pack out all trash and dispose of it properly.

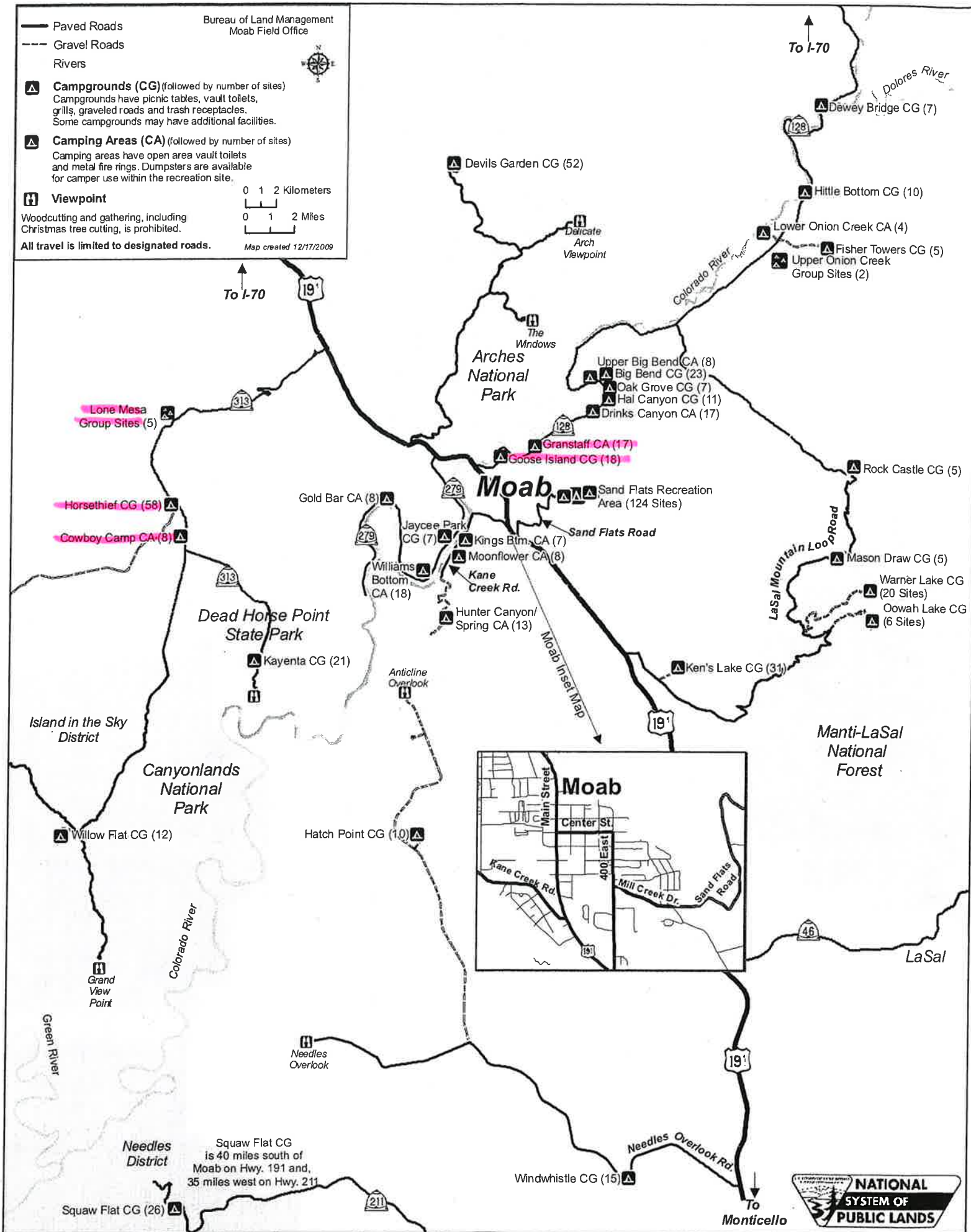
Boating Regulations

- Life Jackets must be worn by everyone at all times on the river.
- All boats under 21 feet must have a spare means of propulsion.
- All boats over 16 feet must have a type IV throwable PFD
- All inflatable boats should carry an adequate repair kit and pump. All hard shell boats should have a bailing device.
- All groups should carry a first aid kit appropriate to the size of group and length of stay.

Appendix 3: BLM Campgrounds

The BLM Campgrounds easily accessible from the NMRA ATS are highlighted.

Federal and State Campgrounds in the Moab Area



Appendix 4: Existing Data Collected

This appendix includes:

UDOT AADT Data for SR313, SR 128, US 191

NMRA BLM Counter Data

Data Collected from the Discover Moab Website

UDOT Data

ROUTE NAME	BEG. ACCUM. MILEAGE	END ACCUM. MILEAGE	LOCATION DESCRIPTION	AADT 2011	AADT 2010	AADT 2009
191	123.194	124.484	Millcreek Drive Right to East Moab	13,085	10,085	9,915
191	124.484	125.702	400 East Moab	14,695	14,935	14,725
191	125.702	126.981	Center Street Moab	11,025	9,395	9,320
191	126.981	128.180	500 West Moab	9,305	9,455	9,380
191	128.180	129.798	SR 128 Colorado River	8,480	8,130	8,585
191	129.798	130.262	SR 279	7,235	7,235	6,835
191	130.262	136.733	Arches National Monument Road	6,750	5,125	5,050
191	136.733	157.193	SR 313 to Dead Horse Point - I 70 Crescent	5,685	5,450	5,370

ROUTE NAME	BEG. ACCUM. MILEAGE	END ACCUM. MILEAGE	LOCATION DESCRIPTION	AADT 2011	AADT 2010	AADT 2009
0128	0.000	15.529	SR 191 North of Moab	835	865	875
0128	15.529	44.564	Road Right to Castle Valley – I70	380	785	790

ROUTE NAME	BEG. ACCUM. MILEAGE	END ACCUM. MILEAGE	LOCATION DESCRIPTION	AADT 2011	AADT 2010	AADT 2009
279	0.000	15.178	Potash Plant-SR 191 North of Moab	355	370	370

ROUTE NAME	BEG. ACCUM. MILEAGE	END ACCUM. MILEAGE	LOCATION DESCRIPTION	AADT 2011	AADT 2010	AADT 2009
313	0.000	7.960	Dead Horse Point	740	765	770
313	7.960	22.506	Road to Canyonlands National Park- SR 191	1,130	825	835

BLM Counter Data

Counters exist for vehicles at Bar M

Counter exist at Courthouse wash on bike path

Counters at Negro Bill, Corona Arches

	Most recent results (counts are annual, when available)		
Counter	dates	count	comments
Gemini	2006	38851	Mostly 2-way
Poison Spider	2009	36100	Mostly 2-way
Klondike	2009	31000	2-way; mostly bike
UT 313	2011	412450	UDOT counter; 2-way
UT 279	2011	129575	UDOT counter; 2-way; includes Intrepid
UT 128	2011	301125	UDOT counter; mix of 1-way and 2-way; includes Castle Valley
Negro Bill	7-1-11 to 7-1-12	39490	Hikers; 2-way
Corona	7-1-11 to 7-1-12	31000	Hikers; 2-way
Moab Canyon Bike Path	9-5-12 to 12-2-12	3600	unreliable

Type of Travel Council's website Data Collected

Type of Data Collected	Description
Total Hits	Visit - Is someone who comes to your Web site and looks around a bit. They may go to one page or they may go to 100 pages, but they're still only visiting once.*
Total Visits	Hit is how many physical resources were requested from the server by that visit. Pages are made up of many items (images, text, etc). Each of those is a hit, while a view is the page itself.*
Total Click-throughs to Moab Businesses	The visitor used a link on discovermoab.com to visit a Moab's business website.
Top 10 Pages Viewed	Top 10 pages viewed by visitors using discovermoab.com
Top 5 Links from External Pages	The external website used to generate a visit to discovermoab.com
Visit Duration	Time spent at discovermoab.com
Requests by Country	Top 3
Requests by Source	Marketing Source
Requests by State	Top 5
Requests by Interest	Top 3

Appendix 5: Project Interviewees

A list of persons contacted for this project.

Appendix Interviews

This persons listed were contacted as part of the project, interviewed to better understand the Transit Hub's use in the community or to gain relevant information.

Local Outreach

Interviewee/Contact	Affiliation
Kirstin Peterson	Rim Tours, City Council, MTA
Ashley Korenblat	Western Spirits, MTA
Chris Biard	Grand County Council
Audrey Graham	Grand County Council
David Olson	Community Development Director, LPPG
Rebecca Andrus	City Engineer, LPPG
Mariann Delay	Travel Council, LPPG
Donna Metziler	Moab City Manager
Krissi Braun	County Planner, LPPG
Cindy Hardgrave	CNHA, LPPG
Sharon Kienzle	MIC
Tom Harden	Moab Resident, Retiree from Zion NP Shuttle
Meghan Blackwelder	Dead Horse State Park
Russ Von Koch	BLM
Kimberly Schappert	MTA, LPPG
Rock Smith	BLM
Jennifer Jones	BLM
Kathryn Stevens	BLM
Sandy Freethey	Trail Mix

Business Outreach

Interviewee	Business	Type of Service	Store Front
Kristi Jensen	Coyote Shuttle	Bike/Hike/River	No (Chilli Pepper)
Kyle Mears	Whole Enchiladas Shuttle	Bike	No (Uranium)
Brian Nickel	Porcupine Shuttle	Bike	No (Poison Spider)
Tim Shaw	Moab Cyclery	Bike	Yes
Marshall Hammum	Uranium	Bike	Yes
Bob Jones	Tag A Long	River Outfitter	Yes
Denise Mears	Canyon Voyages	River Outfitter	Yes
Jim	Road Runner Shuttle	Bike/Hike	No (Rim Cyclery)
Brian Murray	Moab Luxury Coach	Taxi	Yes

Appendix 6: Local Outreach Comments

Contains comments from locals contacted for interviews.

APPENDIX : Local Outreach Summary

Appendix Local Outreach Comments contains all comments from interviews without specifying the interviewee. The comments are divided by general topics discussed.

Transit Hub Use

- A good place to send visitors to a central location
- Good meeting spot for clients/customers that are staying at Red Cliff and Sorrel Ranch to cut off their driving time
- Good park and ride option for outfitters
- Hub could reduce parking pressures at bike shops and Moab Adventure
- Transit Hub is a good option to take people from town to Arches route
- serving as a staging area and pickup location for bicycle and river companies
- three uses 1. coming from down from porcupine will leave a car at hub or get picked up 2. families riding the paved paths 3. Bar M access
- see shuttle companies using it
- a hybrid vision with a city route "feeder" service to Arches and NMRA trailheads
- people from tour buses will get out to stretch their legs

Concerns if the hub were used to accommodate a reliable public transportation service

- Most people will drive to the transit hub unless there is a city bus route. It can be a far distance to bike.
- Who sets the fare market value?
- How much would someone be willing to pay?
- Can't abandon market segments
- Not sure there is enough of an experience for Moab Canyon downhill, the experience is centered more on the trails than the paved paths
- would like to see downtown be the focal point
- getting locals to push the idea is a key component

- it is may be a constant battle to know who to keep informed
- thinks the presence of the NPS in the Moab community is missing

Guidance

- Additional funding to extend the Arches route would be something the County/City could wrapped their thoughts around.
- Do not want to push the users ability beyond what they can handle. Bar M or intersection of 191& 313 would be a good starting point.
- the system must meet people needs
- there needs to be a reason to get out of their cars
- how the travel council and private business sector (ie bike shops) incorporate the hub into advertising and a business model will influence the transit hub use
- a city route cannot happen solely by the city it needs to be a collaboration of NPS, BLM and city
- important to find other cases systems that have worked and present the information to those that may reject city route idea
- encourage the chamber of commerce to educate hotels, retailers, restaurants AND work with them
- the need to develop good visitor information such as maps

Do you think people would use a transit system?

- Europeans and visitors from urban areas are familiar with ATS modes.
- not sure the NMRA as a market yet
- drop off is not logical for hikers, strollers, walkers that is where city route could play a key role
- a brochure with a map, families using the paths may be a good promotion tool
- where is the demand and who wants to ride transit?
- How do you come to Moab and not need a car (park a car)?
- difficult to see it has more than a parking lot
- depends on how it was programmed
- if people knew to ask at the MIC

- the more informed the local community is about the transit system the more buy in (even if they do not agree with the transit system).
- success depends on how the locals present service to the visitor and answer questions?

fare/cost/business incentive

- The selling point would be for the "ride" experience not the convenience.
- regular schedule adds to the bottom line by building need to build the #s to a time of day
- what is the recreation experience that would benefit from transit (i.e. thru hikes)?
- good to approach companies with an idea such as go to X trailhead Y times per day
- make some scenerios for what makes the most sense and they will give you their opinion
- if 2-3 companies get on board so will the others
- determine the break even point for companies for them to keep the service
- need to define market
- make a list of hard and easy options
- how do visitors get transported in a way to meet thier needs
- will it take less time than parking car?
- how can transit meet the needs of the recreating public?
- How can visitors do what they do without driving?
- business will make money indirectly but if they will make money directly is unknown
- once the transit hub is there business will optimize to their benefit

Appendix 7: Bizz Johnson

Summary of the BLM role in shuttle service
and promotional flyers.

Summary:

"Ride the Bus/Bike and Hike the Bizz"

In Fiscal Year 2011, in October 2010 and from June through September , 2011 shuttles for bike riders and hikers were provided on two Saturdays a month to three trailheads along the 25 mile long Bizz Johnson National Recreation Trail improving access to the trail for trail users of all ages including young children, teens, families and adults. The twice monthly weekend bike shuttles were run in conjunction with regularly scheduled Saturday bus service that passed by two trailheads on the trail and one access road to the trail. The trail is a scenic rail trail recognized by the national Rails to Trails Conservancy as one of the most scenic rail trails in the United States (see the Rails to Trails Conservancy's Rail Trail Hall of Fame : <http://www.railstotrails.org/news/recurringfeatures/trailmonth/archives/0811.html>)

BLM partnered with Lassen Rural Bus, the local public bus service, and with Lassen Land and Trails Trust, a local non-profit trails and conservation group that provided publicity, online reservations and use of their restored historic Susanville Railroad Depot as the staging area for the bike shuttles. Lassen National Forest assisted BLM with an additional truck and trailer for the bike shuttles during three popular fall bike shuttles in October.

Interpretive talks about the trail's railroad logging history were provided by a BLM interpreter who rode on the bus with the bike riders. BLM volunteers used trucks and trailers to transport bikes.

Bike shuttle users were both local residents (36%) and visitors (74%) who drove from 1 to 6 hours to take advantage of the improved convenience and service that the bike shuttles provided. There was a total of 91 people who used the shuttle in FY 2011 (84 bike riders, 5 hikers and 2 kayakers who paddled 7 miles down the Susan River back to Susanville along the Bizz Johnson Trail). The shuttles continued into October 2011 (FY 2012) with 110 bike riders and hikers in October alone.

Fees were collected to help defray the cost of operating the BLM trucks that transported the bikes (\$3.00 per bike). Riders paid a separate fee to Lassen Rural Bus for bus service (\$3.00 per rider). Bike shuttle fees were deposited into the BLM's 1232 account. Authority to collect fees for the shuttle service are provided in the Federal Lands Recreation Enhancement Act (FLREA).

Summary prepared by Stan Bales, Outdoor Recreation Planner, Eagle Lake Field Office, 2950 Riverside Drive, Susanville, CA 96130 ; 530-252-5311; sbales@blm.gov



Ride the BusBike the Bizz

If you love to bike (or jog, or hike) the Bizz Johnson Trail, but hate to back-track or arrange vehicle shuttles, take the bus!



- Take the weekday commuter bus, Monday through Friday, that runs three times each day from Susanville to the trail access locations show in the table below.

- Ride the Bizz Johnson Trail from Susanville to Westwood and ride back on the bus.

- Take a once month Weekend Shuttle bus (bikes carried in separate truck and trailer)

From:	Distance to Susanville (miles) on:			Total Miles	Bus Cost/Person	
	Bizz Johnson Trail - Gravel	Paved Road	Dirt Road		Weekday Commuter	Weekend Charter
Devil's Corral	7			7.0	\$1.00	\$7.50
Fredonyer Pass	12		6	18.0	\$1.50	\$8.00
Mason Station	25.4			25.4	No Service	\$12.50
Westwood	25.4	4	6	30.0	\$1.50	\$12.50

Weekday Bus Schedules for 2008: with stops for 7, 18 and 30 miles rides

- Depart Susanville from bus stop on Main Street by Bank of America Parking Lot (Historic Uptown Susanville): 5:50 am 12:15 pm 5:30 pm

- Depart Westwood from Second and Birch Streets (Center of Town):

6:50 am 12:50 pm 6:30 pm

(Some weekday buses have bike racks- call Lassen Rural Bus, 530-252-7433, to confirm how many bikes the bus you want can haul. For large groups, use weekend shuttle.)

Weekend Bus Shuttles for 2008: with stops for 7, 18, 24.5 and 30 mile rides

- Depart from the Susanville Railroad Depot, 601 Richmond Road, Susanville, CA: (weekend bus fees are higher than mid-week because it is a charter, not a regularly scheduled bus)

Saturday, June 7th, 8:30 am (arrive by 8:15 to allow time to check in and load bikes)

Treat yourself to a scenic ride on the Bizz as you Celebrate National Trails Day, June 7th

Sunday October 5th, 8:30 and 11:00 am -following the annual "Rails to Trails Festival". On Saturday, enjoy the exciting Railroad Handcar Rides and enjoy food, music, and fun at the Depot.

Saturday, October 25th, 8:30 and 11:00 am -

Fall Colors Ride - enjoy the best time to view fall colors in the beautiful Susan River Canyon!

Reservations recommended. Arrive half an hour prior to departure for check in and bike loading.

For More Information Contact: - Lassen County Chamber of Commerce at the Susanville Depot Visitor Center: 530/257-4323; BLM 530/257-0456; Lassen Rural Bus 530/252-7433. To arrange your own shuttle with the local cab company, Susanville Express, call 530-257-5277 (can haul 4 bikes).



Bizz Johnson Trail Fall Color Rides

**Saturday October 17th, 2009
Ride the Bus – Bike the Bizz !**

Two buses. Meet at 8:00 am and 10:30 am, Susanville Railroad Depot, 601 Richmond Road. Call 530-257-3252 to reserve your seat on this very popular bus shuttle and bike ride. Bikes hauled in trucks and trailers. Fees charged to cover bus costs.

Bike the Bizz

Take the Bus, Bike the Bizz!

Lassen Land and Trails Trust has partnered with the Bureau of Land Management (BLM) and Lassen Rural Bus to provide the community with convenient access to the Bizz Johnson Trail! The BLM provides a truck and trailer to shuttle bikes from Susanville to three starting points along the trail. Lassen Rural Bus transports hikers and bike riders as part of its regularly scheduled service between Susanville and Westwood.

In addition to these special bike shuttles, Lassen Rural Bus runs regularly scheduled bus service between Susanville and Westwood. Each bus can accommodate several bikes. For more information, call Lassen Rural Bus at (530) 252-7433 during regular business hours.



Shuttles are planned for Aug. 6 and 20, Sept. 3 and 17, and Oct. 1, 15 and 29.

Reservations must be received by 3:00 pm the Friday before the ride. Regular bus fares apply; \$2.00 to Devil's Corral and \$3.00 to Westwood (please have exact change). The bike shuttle is an additional \$3.00.

Register Online

www.llttweb.org

or call 530-257-3252



LASSEN LAND & TRAILS TRUST

Appendix 8: Hiawatha

Includes sample of the Hiawatha website's shopping cart to reserve shuttle and outlines the shuttle schedule.


[THE TRAIL
MEDIA](#)
[BUY PASSES & RENTALS
CONTACT](#)
[VIEW CART](#)
[AREA INFORMATION](#)

BUY PASSES & RENTALS

[RESERVATIONS](#)
[GROUP RATES](#)
[SEASON PASS](#)

STEP 1: TICKETS

Price

No. Reserved

TRAIL PASS - ADULT

\$10.00

[More Info](#)

TRAIL PASS - CHILD 6-13 YRS

\$6.00

[More Info](#)

SHUTTLE TICKETS - ADULT

\$9.00

[More Info](#)


There is a shuttle that runs during the biking season to provide transportation for individuals and their bicycles between Roland and Pearson. The shuttle passes by the Moss Creek trailhead, and can stop at that location by request.

SHUTTLE TICKETS - CHILD 6-13 YRS

\$6.00

[More Info](#)

PICNIC LUNCH - TURKEY SANDWICH

\$8.95

[More Info](#)

PICNIC LUNCH - HAM SANDWICH

\$8.95

[More Info](#)

STEP 2: RENTALS

Price

No. Reserved

Bike racks are available free of charge, if needed, only when you rent bikes from us. To reserve a bike rental you can book online or call 208-744-1301 x 16. For information regarding bike racks, you can call 208-744-1301 x11 to discuss the type of vehicle and the

number of bikes you plan to carry. If we are unable to fit your vehicle with one of our bike racks, a special shuttle may be available for an additional fee. *Burley trailers do not fit on the rack and must be put inside the vehicle.

ADULT BIKE - COMFORT RIDE

\$36.00

More Info

ADULT BIKE - STANDARD MOUNTAIN
BIKE

\$30.00

More Info

CHILD BIKE - STANDARD MOUNTAIN BIKE

\$20.00

More Info

TAG-A-LONGS

\$20.00

More Info

BURLEY TRAILER

\$22.00

More Info

ADDITIONAL HELMETS

\$6.00

More Info

ADDITIONAL LIGHTS

\$5.00

More Info

STEP 3: RESERVATION DATE

RESERVATION DATE

ADD TO CART



THE TRAIL
MEDIA

BUY PASSES & RENTALS
CONTACT VIEW CART

AREA INFORMATION

TRAIL & SHUTTLE BUS INFORMATION

THE TRAIL

TRAIL MAPS

RULES

TRAIL

AMENITIES

SCHEDULE

FAQ

HISTORY

RIDE IDAHO

THANKS FOR A GREAT 2012 SEASON! TRAIL IS CURRENTLY CLOSED. PROJECTED REOPENING IS MAY 25, 2013.

The trail, trailheads, and facilities are open from 8:30 AM to 5 PM PDT. During the Peak Season from 8:30 AM to 5:30 PM PDT.

Early Season May 25 - June 23

Peak Season June 24 - September 2

Late Season September 3 - September 29

SHUTTLE SCHEDULE

Shuttle buses operate between the Pearson and Roland trailheads.

Most visitors start their ride at the East Portal trailhead which is the top elevation trailhead. From there, you will immediately bike through the 1.66 mile long St. Paul Pass Tunnel (also known as the Taft Tunnel) and exit at the West Portal. Roland trailhead is a short distance (1/4 mile) below the West Portal.

The distance from the East Portal trailhead to the bottom elevation trailhead, Pearson, is 15 miles. Slight downhill all the way. Shuttle buses transport you and your bike from Pearson back to the Roland trailhead. From Roland, you pedal back through the St. Paul Pass Tunnel to reach your vehicle at the East Portal parking area.

Seating is on a first-come, first-serve basis. **Departure times are listed below.**

Early Season - *Shuttles operate weekends/holidays only then 7 days a week starting June 10.

Day	Roland	Pearson
Daily*	11:00 AM	11:45 AM
Daily*	12:30 PM	1:15 PM
Daily*	2:00 PM	2:45 PM
Daily*	3:30 PM	4:15 PM

Peak Season - June 24 through September 2

Day	Roland	Pearson
Daily	11:00 AM	11:45 AM
Daily	12:30 PM	1:15 PM
Daily	2:00 PM	2:45 PM
Daily	3:30 PM	4:15 PM
Saturdays & Sundays Add	5:00 PM	5:45 PM

Late Season - September 3 through September 29

Day	Roland	Pearson
Daily thru Sept 8th	11:00 AM	11:45 AM
After Sept 8th Shuttles Operate	12:30 PM	1:15 PM
Friday, Sat, Sunday only	2:00 PM	2:45 PM
	3:30 PM	4:15 PM

THE TRAIL BUY PASSES &
RENTALS AREA INFO MEDIA
VIEW CART

CONTACT US

Office: (208) 744-1301 Lookout Pass Ski &
Fax: (208) 744-1227 Recreation Area
info@skilookout.com

FOLLOW US



Appendix 9: Arches City of Moab Shuttle

Final Feasibility Study for Arches National Park discussion of a Moab shuttle feeder route.

Addition of Moab Shuttle “Feeder” Route

The initial pilot shuttle system will operate from a large park-and-ride lot outside the park entrance. However, access to the shuttle could also be provided through a Moab “feeder” shuttle that would bring visitors from their hotels in the city to the park entrance. These types of town-park feeder shuttles exist in many National Park communities across the country. Inclusion of a Moab route in the system is desired by the park and the City of Moab, but was not possible due to funding availability. The Moab route is an optional addition to the Arches shuttle if funding becomes available in the future. The addition of a Moab shuttle would change the visitor access experience to the Arches shuttle system and could possibly offer an added incentive to ride the shuttle.

Initial design of a Moab shuttle route was completed as part of this feasibility study. A Moab shuttle would require further design refinement and collaboration with the Utah Department of Transportation regarding transit operations on U.S. highway 191 (e.g. information on actual locations, signing, striping, bus size(s), stop frequency, etc.) before commencing operations, but the following provides a basis for future work.

The preferred Moab shuttle route would travel down Main Street through the city to park entrance. The Main Street route was selected because it provides the shuttle with high visibility; the fastest, most direct route to the park; and access to key destinations such as the Moab Information Center (MIC) and Main Street businesses. Compared to other non-Main Street alternatives considered, a route down Main Street with minimal turns would also seem shorter and more efficient to most riders.

This convenient central routing could serve local residents and employees along the way, providing an additional amenity to the City of Moab. Similar “city/park” shuttles in other locations have provided either free or low-cost trips for local residents and employees making local trips outside of the park. The Moab shuttle can also potentially provide service to employees who live in Moab, who would be able to commute into the park without driving.

Main Street is also U.S. highway 191 and therefore a shuttle along Main Street will require coordination with the Utah Department of Transportation (UDOT). Permission from UDOT would be necessary to develop any on-highway shuttle stops. NPS and Moab city staff have discussed the feasibility of the Moab shuttle with UDOT and UDOT staff indicated openness to considering stops on U.S. highway 191. If UDOT did not approve shuttle stops on Main Street, this route could still be viable, but shuttle stops would have to be developed off-street in private lots. The off-street option was not initially favored by park staff or Moab stakeholders. The preferred route through Moab and potential stop locations are shown in figure 5.

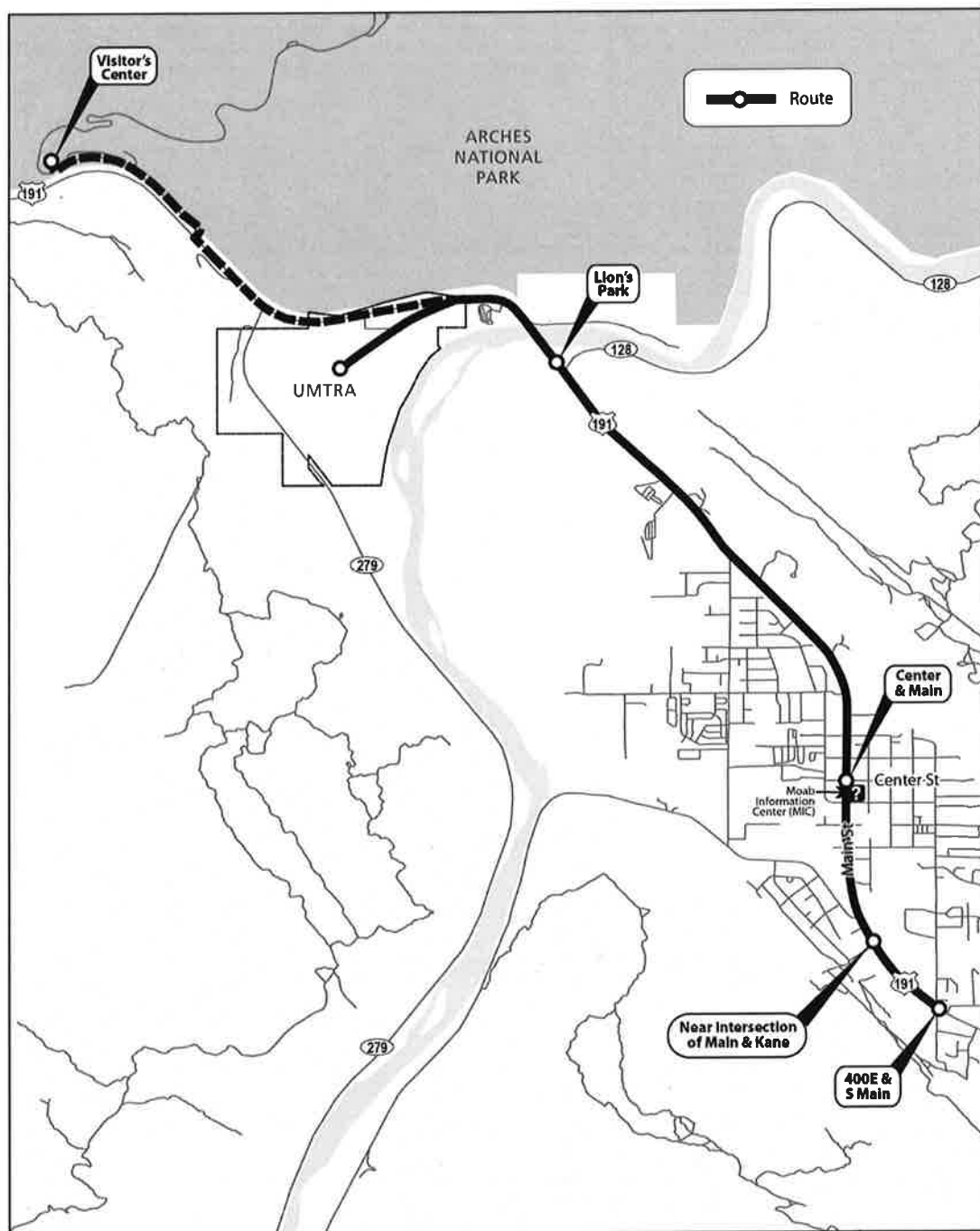


Figure 5 Moab Main Street Route & Potential Stops

Moab Shuttle Stop Locations

Stop locations were not finalized for the Moab shuttle route. The following are potential stops, refined from original proposals based on discussions at the November workshop.

South End of Moab: A shuttle stop located at the south end of Moab could serve shuttle passengers staying at the cluster of hotels and campgrounds located on South Main Street between 400E Street and Uranium Avenue. There are seven hotels and campgrounds clustered within half a mile of each other at this location. A shuttle stop located near Kane Creek Boulevard would allow all the visitors at these hotels and campgrounds to walk to the shuttle stop within 5-10 minutes.¹ Kane Creek Boulevard also has a crosswalk and signal which would allow for access to the shuttle stop from both sides of the street.

Those visitors staying at hotels and campgrounds located south of the City of Moab could use a park-and-ride lot at the south end of Main Street to access the shuttle. One potential location for a shuttle park-and-ride and/or operations and maintenance facility is in the vicinity of the intersection of 400E and Main Street. There was strong interest in capturing recreational vehicle (RV) drivers as riders of the shuttle route. One possibility that was discussed includes working with campground operators to shuttle their clients to the start of the south end of the Moab route. The school district's school bus maintenance facility is located on the corner of 400E and Red Devil Drive. Locating near this facility could present opportunities for shared vehicle storage and other co-benefits associated with joint-maintenance.

The location of a shuttle stop at the south end of Moab would require further study as well as coordination with UDOT, the City of Moab, and private property owners before finalizing a location.

Downtown Moab: There was strong support for a stop located at the MIC, at Center and Main Streets, right in the heart of downtown Moab. The MIC is an excellent source for visitor information and a shuttle stop here would be a great opportunity to extend the park experience into the City of Moab. It also offers a place to sell park entrance passes for shuttle riders. Passengers could walk directly to a stop at the MIC from the many hotels located downtown and this stop allows easy access to downtown restaurants and shops.² Pedestrian conditions are excellent in this section of Moab; Center Street has enhanced urban design, colored crosswalks, and pedestrian crossing signals that are highly conducive to easy and safe passenger access and boarding to the shuttle.

Ideally, a stop for the Arches-bound shuttle would be located at the curb on the eastern side of Main Street in front of the MIC, not requiring the shuttle to make any turns off of Main Street and allowing seamless access for visitors to/from the MIC entrance pavilion/plaza. The curb parking lane here is sufficiently wide enough to accommodate a shuttle stop, but would require removal of a few parking spaces. The return shuttle from Arches would ideally stop on the southwest corner of Main and Center Streets, potentially taking advantage of the large curb bulb-out at this location.

In addition, locating a shuttle stop at the MIC would provide an amenity to the City of Moab as there are a number of civic buildings on Center Street within a quarter mile walking distance from this stop including the Grand County Library, a Moab city playground, city offices, and the Center Street ballpark.

¹ Lodging sites in this cluster include: Silver Sage Inn, La Quinta Inn, Comfort Suites, Moab Valley Inn, Canyonlands Campground, Red Stone Inn, and Big Horn Lodge. These hotels have over 420 units (according to data from Moab's official tourism website: <http://www.discovermoab.com/hotels.htm> which does not include the campground).

² Eleven hotels, inns and lodges are located within a ¼ mile radius of this stop, including over 530 units (according to data from Moab's official tourism website: <http://www.discovermoab.com/hotels.htm>). Hotels and inns include River Canyon Lodge, Bowen Motel, Roadway Landmark Inn, Red Rock Lodge, Best Western Canyonlands, Kokopelli Lodge, Rustic Inn, Best Western Greenwell, Ramada, Virginian Inn, and Gonzo Inn.

It may be possible to provide limited parking for shuttle passengers directly at the MIC, however the benefits of these few spaces is unlikely to outweigh other beneficial uses of the MIC parking lot. Locating a shuttle stop at this location would require coordination with UDOT, the City of Moab, and the MIC.

North Moab: There are a number of hotels along Main Street/U.S. highway 191 north of Moab, suggesting potential demand for a shuttle stop. However, the street environment is dominated by car, truck, and freight traffic and is not conducive to pedestrian circulation. Hotels are also spaced far apart making it difficult to efficiently locate a shuttle stop. On-street shuttle stops are not recommended in this area. Visitors staying at lodging in this stretch would have to be served through a park-and-ride lot closer to the park entrance.³

Lions Park: A final potential shuttle stop would be at Lions Park where the City of Moab is constructing a multi-modal transit hub. The Lions Park site could serve as an excellent multi-modal transfer point for a park shuttle service. Its function as a park-and-ride lot may be limited by several factors including competing demand for parking space from other uses and parking management policies enacted by the City of Moab. Traffic operations associated with the site's proximity to two major highways would have to be studied to locate a shuttle stop here.

Park-and-ride lot or Visitor Center: The Moab route would connect to the main Arches shuttle either at a park-and-ride lot located outside the park, or at the Visitor Center, as discussed below.

Additional Considerations for Moab Shuttle Route

Locating stops near hotels and other attractions would allow people to access the shuttle on foot and reduces the need for park-and-ride facilities. Some smaller park-and-ride facilities would still be needed to allow access to visitors staying at hotels and motels that are not near a shuttle stop. In addition, locating shuttle stops downtown could induce demand for on-street parking, which is already perceived to be a major issue on Main Street. Providing some park-and-ride facilities and encouraging walk-only access to the downtown stop would avoid exacerbating these perceived parking issues.⁴ The location of these park-and-ride lots to serve the Moab route must be carefully considered. If a large park-and-ride lot is also being offered right outside the park entrance, it may decrease use of the Moab route.

Shuttle marketing efforts must include promotion of walking routes to shuttle stops and limited park-and-ride options. Shared parking opportunities should be explored with the City of Moab, especially at locations such as schools, churches, and the new Lions Park transit center (where there are lots that are potentially unused for parts of the week and/or year).

To provide the best possible experience for the riders who board a shuttle in Moab, passengers could continue into the park on the same shuttle without having to transfer at the park-and-ride lot. However, a Moab route that travels into Arches without passing through the park-and-ride lot introduces the issue of when and how visitors would pay their entrance fee. If the park opts to include a Moab route, this issue

³ These hotels have over 600 units combined according to data from Moab's official tourism website: <http://www.discovermoab.com/hotels.htm> which includes Adventure Inn, Days Inn, Hampton Inn, Inca Inn, Super 8, Riverside Inn, Motel 6, Holiday Inn, Aarchway Inn.

⁴ This is a common perception in small downtown environments like Moab, but sometimes does not reflect a true parking shortage, but merely a mismatch of supply and demand. Often all drivers are trying to access the most convenient on-street parking which is unregulated while off-street lots with ample spaces remain unoccupied within a block of the main street. Traffic surveys have not been done to verify parking supply and occupancy in Moab.

will have to be addressed, as well as how the Moab route would interline with the Arches shuttle. This is addressed below in the discussion of entrance fee payment.

ACCOMPANYING CONGESTION MANAGEMENT STRATEGIES

Congestion management strategies can enhance the benefits of the shuttle, making it a more attractive alternative to driving. This section describes the preferred congestion management strategies that were selected for implementation in conjunction with a shuttle in Arches. The congestion-management only alternative is described in Section 3 of this report.

Visitor Information

Marketing will be critical in the success of the Arches shuttle. Developing clear, compelling informational materials and then widely disseminating this information and actively educating park visitors is going to be the single best tool to increase use of the shuttle.

The first step is designing the materials and messaging. The shuttle will not necessarily “speak for itself” as an attractive way to visit the park. The language that is used and type of information that is offered will impact people’s likelihood to ride. The shuttle must be promoted as the best way to see the park for the targeted visitor segments. The “two-hour visitor” and the “guide-me” tourist were targeted for this pilot in part because these visitors actively seek advice on the best ways to see Arches.

In addition, visitors will have to be educated about the one-way nature of this route, emphasizing that sites should be visited while traveling northbound and that the only two direct ways out of the park are from Windows and Devil’s Garden.

Visitor itineraries should be developed to recommend the best ways to use the shuttle to see the park; a sample is shown in table 3. Simple shuttle brochures could be developed that include both the shuttle route map and suggested use of the shuttle.

Table 3 Potential Visitor Itineraries on Shuttle

Time Available	Itinerary Description	Visitor Group Targeted
2 hours	Use the northbound shuttle to see panoramic vistas at La Sal Viewpoint, visit Balanced Rock and explore the Windows. Return home from Windows on the southbound shuttle.	<ul style="list-style-type: none"> ▪ Big “2” (Two-hour visitor) ▪ “Guide-Me” Tourist
3-4 hours	Use the northbound shuttle to hike Park Avenue to Courthouse Towers, the shuttle will pick you up and take you to visit Balanced Rock and the Windows. Return home from Windows.	<ul style="list-style-type: none"> ▪ Big “2” (Two-hour visitor) ▪ “Guide-Me” Tourist
4-7 hours	Take the northbound shuttle to visit Windows, Delicate Arch, Devil’s Garden and more! You will have time to visit many of the parks great sites and take a hike or two. Remember to visit the sites you want to see on your way north, as you will get a direct trip home from Devil’s Garden at the end of your visit on the southbound shuttle.	<ul style="list-style-type: none"> ▪ Endurance All-Day Visitor ▪ “Guide-me” Tourist

Appendix 10: Bicycle Friendly Community

This appendix includes:

2 news articles about the City & County Council approving the BFC application.

Bicycle Friendly Community's with small populations and larger tourist base.

BFC Actions



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Moab city to seek 'bicycle friendly community' status

by Laura Haley
contributing writer

2 months ago | 1119 views | 0 | 5 | [Subscribe](#)

Moab is already known around the world as a bicycling destination, and that reputation could grow if the city is designated a "Bicycle Friendly Community" by the League of American Bicyclists.

Sommer Roefaro, a public lands transportation scholar with the Paul S. Sarbanes Transit in Parks Technical Assistance Center, has been in Moab studying transportation connections to public lands. The center is sponsored by the Federal Transit Administration of the U.S. Department of Transportation in partnership with a wide variety of other federal agencies. The scholar program is also available to many local and state governments.

As part of her work in Moab, Roefaro has been working with members of the Moab city staff, including Moab City Community Development Director David Olsen and Moab Planning Director Jeff Reinhart, to complete the lengthy application for bicycle friendly community status. The Moab City Council voted unanimously Tuesday night to give Roefaro permission to submit the application on behalf of the city.

Roefaro said bicycle friendly communities "welcome cyclists by providing safe accommodations and encouraging people to bike for transportation and recreation." She said the program also helps cities focus investments on bike programs, as well as creating more opportunities for cycling.

Roefaro said that about half of the communities that apply for the designation actually receive it. She said that there are currently more than 250 communities in the country that have received the designation, including Durango, Park City, and Salt Lake City. A wide range of cities are included on the list, with populations ranging from 1,051 people in University Heights, Iowa, to more than 8 million in New York City.

"Bicycle friendly communities are always on the short list of best places to live and work," Roefaro said during the Feb. 12 council meeting. The designation also shows the community's commitment to bicycling as a way to help decrease problems like traffic congestion and obesity, she said.

"It's a good way to ride out the recession," she said, regarding the money that can be saved by riding a bicycle instead of driving.

To be named a bicycle friendly community, cities and towns are judged by several categories that the League of American Bicyclists refers to as the "five E's" — engineering, education, encouragement, enforcement, and evaluation and planning. To be considered for an award "a community must demonstrate achievements in each of the five categories," according to the league's website.

Olsen said the hope is to submit the application on behalf of both Moab and Grand County.

"Trail Mix and [Moab Trails Alliance], the other organizations that really push trails, we felt that a county-wide application would earn more points," Olsen said. "It's better if we both work together on it."

Council member Kyle Bailey praised the concept.

"I think it would be a great thing," he said, after making the motion to apply for the status. "I feel we already are [a bicycle friendly community], so let's go for it."

Before submitting the application, Roefaro will present the information to the Grand County Council, which will also be asked to consider the proposal.

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County signs on with city to seek bike-friendly designation

by Steve Kadel

Staff Writer

a month ago | 422 views | 0 | 4 | [Subscribe](#)

Grand County has joined the city of Moab to co-sign an application to designate the area a Bicycle Friendly Community.

The Grand County Council voted unanimously last month to seek that title from the League of American Bicyclists. The Moab City Council approved the plan on Feb. 12.

Sommer Roefaro, a public lands transportation scholar with the Paul S. Sarbanes Transit in Parks Technical Assistance Center, has been working with the Bureau of Land Management the National Park Service and city and county officials to spearhead the local effort.

The league promotes bicycling for fun, fitness and as a way to reduce pollution.

Roefaro said the application process is "rigorous" and fewer than half of the cities that apply are accepted.

The designation could bring in extra tourism money, Roefaro added, because the city and county can tout themselves as bicycle friendly in marketing promotions.

Aspen, Colo.; Breckenridge, Colo.; and Jackson, Wyo., are all about the same size as Moab and have been rated as bicycle friendly, Roefaro said.

County council chairman Gene Ciarus said the county "would be wise" to apply along with the city, but he cautioned against promoting the area for just one recreational pursuit.

"I don't want us to be just a biking community," he said.

Applications are judged on five criteria. Those include having an infrastructure that supports bicycling, education programs to ensure safety, incentive and promotions to inspire people to ride, laws that make sure cyclists and motorists are accountable, and having a way to measure results and plan for the future.

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Bicycle Friendly Community

Jackson & Teton County, WY | Gold Level



Community Highlights: The 2008 iWalk-iBike-iBus to School event encouraged more than 500 kids to bike to school last October, the highest participation rate in the event's five year history. Teton County voters overwhelmingly approved \$6 million in an optional 1 cent sales tax for a pathway connection between Wilson and the Town of Jackson. Jackson has developed a Pathway Master Plan that outlines non-motorized modes-shift goals, total number of paths and a complete streets guide for Teton County, Wyoming. The local non-profit, non-motorized advocacy group Friends of Pathways partners with the Wyoming Department of Transportation to organize Bike to Work events during June, including a bike to work day, and partner with the Sheriff's Department to co-sponsor a Kids Bike Rodeo. Over the past seven years, the city has consistently parked more than 400 bicycles each Fourth of July during Music in the Hole, a free concert that attracts about 5,000 participants. Friends of Pathways also sponsors bicycle valet parking during Fourth of July, the valley's busiest day.

Most Significant Recent Accomplishment: Grand Teton National Park completed phase one of its 42 mile pathway system with an eight mile section between Moose Junction and Jenny Lake. Teton County approved or received grants for more than \$9 million in bicycle infrastructure to be constructed in the next 3 years.

Most Compelling Community Statistic: More than 45 miles of shared-use pathways in Teton County and Grand Teton National Park have been constructed since 1995.

Best Result of Designation: The Bicycle Friendly Community designation allows Jackson and Teton County to better promote Jackson Hole and Wyoming as a bicycling destination. Jackson's large, tourism-based economy relies heavily on recreational tourism. Being a bicycling friendly community provides an additional component to the region's ability to attract tourists. The area was also able to update the obsolete town bicycling ordinances last fall, and the Bicycle Friendly Community designation gave a framework for the legal language they used to make conditions better for cyclists.

Bicycle Friendly Community

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Level Awarded: **Gold**

BFC Since: **Sept. 2006**

Population: **8,647**

Square Miles: **2.8**

Contact: **Brian Schilling**
307-732-8573

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Bicycle Friendly Community

Breckenridge, CO | Gold Level



Community Highlights: From the paved pathways, to the mountain bike races, to the bike lanes, to the pump track, to the Freeride Park, to the miles of excellent singletrack, Breckenridge has demonstrated a long term commitment to providing resources for bicyclists of all types and abilities. In addition to the physical environment, bicycling education is offered in every school and classes are available for adults as well. Bicycling is clearly a part of the Town's cultural identity. It is the focus of the July 4th parade, integral to summer time tourism and events, imbedded in the Town's sustainability goals and part of encouraging a thriving walkable/bikeable community.

Most Significant Recent Accomplishment: The Town converted two main street parking spaces into on-street bike parking. A second significant recent project was the realignment of a mile long section of the Middle Flume mountain bike trail which corrected a previous alignment that had created erosion issues. In the third major investment the Town partnered with Summit County on the construction of the last section of the Swan Mountain Rec Path, which now seamlessly encircles Lake Dillon over 19 miles.

Most Compelling Community Statistic: Breckenridge boasts bike lanes on 95 percent of streets and over 100 miles of mountain biking trails - all nestled in the beautiful environment with the scenic backdrop of the Rocky Mountains.

Bicycle Friendly Community

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Level Awarded: **Gold**

BFC Since: **October 2009**

Population: **4,540**

Square Miles: **5.5**

Contact: **Chris Kulick**
970-453-3371

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Bicycle Friendly Communities

[Aspen, CO](#) | [Silver Level](#)



Recent bicycling investment: Aspen recently completed the design and construction of the East of Aspen Phase II Trail. This 1 mile, 1.5 million dollar project completed a critical, missing link between the east end of town and the downtown core. The construction provided a grade separated hard surface double track multi-use trail along Highway 82, which is part of the Top of the Rockies National Scenic and Historic Byway.

Bicycling highlights: The City of Aspen has been committed to improving pedestrian and bicycle access since 1985 when the City developed and approved the first Aspen Area Community Plan. This document laid the ground work the development of the entire trails and pedestrian system found today in Aspen. The City has worked closely with Pitkin County, Snowmass Village and other valley towns and municipalities on the development of a regional trails plan for shared use paths. The Rio Grande Trail runs from Glenwood to Carbondale up to Aspen providing safe biking to all areas in between.

The Open Space and Trails Board, formed in 2000 by Resolution of the City council, is the body responsible for recommending to Staff and City Council the bicycle and pedestrian projects for coming years. Annually, the Board reviews current trail projects, proposes new ones and develops a priority list which is then approved through a detailed budget process. Over the past three years the Board has and continues to focus on trail gaps, safety issues and connecting the city to the six valleys surrounding the town. The goal is to provide a safe, and when possible, a grade-separated trail for bicyclists and other users.

Bicycling education in 100% elementary schools and 100% middle schools

Signature cycling events: Aspen Cycling Festival (Ride for the Pass and Aspen Criterium), Komen Ride for the Cure, Women's Pro Stage Race During USA Pro Cycling Challenge, The USA Pro Cycling Challenge (host for the event in 2011 and 2012), Wapiyapi Bike Classic, Bike to Work Day

Some coming bicycling improvements: Aspen will design and construct mountain bike trails on Smuggler Mountain Open Space and Big Sky Open Space. The community further plans improvements to the Bob Helm Bridge and the Castle Creek Bridge. An extension of the Hunter Creek Trail and Safety Lighting along the Highway 82 trail corridor are also in the works.

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Level Awarded: [Silver](#)

BFC Since: [May 2012](#)

Population: [6,100](#)

Square Miles: [3.8](#)

Contact: [Brian Flynn](#)
970-429-2035

This BFC has agreed to share its application with aspiring communities. Please contact bfa@bikeleague.org for more information.

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Action Plan for Bicycle Friendly Communities

We, the undersigned Mayors and municipal elected officials, make decisions every day affecting the health and safety of our residents, the efficient conduct of commerce and delivery of government services, and the long term quality of life in our communities.

Cities across the globe are managing diverse issues such as pollution, congestion, traffic safety, accessibility, social inclusion, and economic growth. Increasing urbanization and sprawl is generating extra demand for quality public spaces and recreation opportunities. A renewed emphasis on security and the costs of dealing with the emerging epidemics of obesity and physical inactivity are stretching limited resources even further.

Solutions to these many challenges are equally diverse and complex. This Charter recognizes one policy initiative that addresses these challenges and contributes to many of the solutions necessary to improve the quality of life in cities: increasing the percentage of trips made by bicycle by making communities more bicycle-friendly.

We recognize that increasing bicycle use can:

Improve the environment by reducing the impact on residents of pollution and noise, limiting greenhouse gases, and improving the quality of public spaces.

Reduce congestion by shifting short trips (the majority of trips in cities) out of cars. This will also make cities more accessible for public transport, walking, essential car travel, emergency services, and deliveries.

Save lives by creating safer conditions for bicyclists and as a direct consequence improve the safety of all other road users. Research shows that increasing the number of bicyclists on the street improves bicycle safety.

Increase opportunities for residents of all ages to participate socially and economically in the community, regardless income or ability. Greater choice of travel modes also increases independence, especially among seniors and children.

Boost the economy by creating a community that is an attractive destination for new residents, tourists and businesses.

Enhance recreational opportunities, especially for children, and further contribute to the quality of life in the community.

Save city funds by increasing the efficient use of public space, reducing the need for costly new road infrastructure, preventing crashes, improving the health of the community, and increasing the use of public transport.

Enhance public safety and security by increasing the number of "eyes on the street" and providing more options for movement in the event of emergencies, natural disasters, and major public events.

Improve the health and well being of the population by promoting routine physical activity.

(Over)

Therefore we, the undersigned Mayors and municipal elected officials, are committed to taking the following steps to improve conditions for bicycling and thus to realizing the significant potential benefits of bicycling in our community. We hereby adopt the following **Action Plan for Bicycle Friendly Communities**:

1. Adopt a target level of bicycle use (e.g. percent of trips) and safety to be achieved within a specific timeframe, and improve data collection necessary to monitor progress.
2. Provide safe and convenient bicycle access to all parts of the community through a signed network of on- and off-street facilities, low-speed streets, and secure parking. Local cyclists should be involved in identifying maintenance needs and ongoing improvements.
3. Establish information programs to promote bicycling for all purposes, and to communicate the many benefits of bicycling to residents and businesses (e.g. with bicycle maps, public relations campaigns, neighborhood rides, a ride with the Mayor)
4. Make the City a model employer by encouraging bicycle use among its employees (e.g. by providing parking, showers and lockers, and establishing a city bicycle fleet).
5. Ensure all city policies, plans, codes, and programs are updated and implemented to take advantage of every opportunity to create a more bicycle-friendly community. Staff in all departments should be offered training to better enable them to complete this task.
6. Educate all road users to share the road and interact safely. Road design and education programs should combine to increase the confidence of bicyclists.
7. Enforce traffic laws to improve the safety and comfort of all road users, with a particular focus on behaviors and attitudes that cause motor vehicle/bicycle crashes.
8. Develop special programs to encourage bicycle use in communities where significant segments of the population do not drive (e.g. through Safe Routes to Schools programs) and where short trips are most common.
9. Promote intermodal travel between public transport and bicycles, e.g. by putting bike racks on buses, improving parking at transit, and improving access to rail and public transport vehicles.
10. Establish a citywide, multi-disciplinary committee for nonmotorized mobility to submit to the Mayor/Council a regular evaluation and action plan for completing the items in this Charter.

“We will promote safe and environmentally friendly cycling and walking by providing safe infrastructure and networks...” World Health Organization Charter on Transport, Environment and Health, 1999.

“The US Conference of Mayors calls on cities and communities to promote increased safe bicycle use for transportation and recreation...” US Conference of Mayors, 2003.

For the City of:

.....
Signature

.....
Name

Appendix 11: Moab City Walking & Bicycling Map

This appendix includes:

The map available currently for the City of Moab.

The scholar developed City of Moab map.

Map provided by the MIC, a bike shop and hotel when requesting a map of Moab's greenway.

Moab City Key Locations

- A - Star Hall
- B - Swanny City Park- Playground, Skate Park, Swimming Pool
- C - Moab Arts & Rec Center
- D - Post Office
- E - Chamber of Commerce
- F - Grand Center
- G - County Courthouse
- H - Hospital
- I - Moab Information Center
- J - Public Library
- K - Museum of Moab
- L - Moab City Offices
- M - Liquor Store
- N - Police Dept.
- O - Grocery Stores
- P - Movie Theatres
- Q - Moab Community School
- R - Workforce Services
- S - Grand County High School
- T - Grand County Middle School
- U - Helen M. Knight School

Swanny City Park
400 North 100 West

POOL, SKATE PARK, PLAYGROUNDS!
 *Car Show
 *Farmer's Market
 *Moab Arts Festival
 *4th of July Celebration
 *Electric Light Parade
 *Concerts & More!









Moab BMX Track
Track in Anonymous Park

Map Labels: William's Way, W. Center, Center, 100 E, 200 E, 300 E, 400 E, 100 South, 200 South, 300 South, 500 West, Kane Creek, McKay Pl., Huntridge Cir., Aspen Ave., Navajo, Huntridge, Apache, Birch, Mountain View, Dr. Allen Drive, David Ct., Dogwood Ave., Main St., Uranium, Cedar, Mill Creek Parkway, Bike & Foot Trails, Rose Tree, Nichols, Sundial, Bowen, Locust, Loweridge, Mill Creek Drive, Mill Creek, Mulberry, Pack Creek, Wababab, Dave's Corner Market, Grand, 100 East, 200 East, 300 East, 400 East, 100 West, 200 West, 300 West, 400 West, 500 West, 600 West, 700 West, 800 West, 900 West, 1000 West, 1100 West, 1200 West, 1300 West, 1400 West, 1500 West, 1600 West, 1700 West, 1800 West, 1900 West, 2000 West, 2100 West, 2200 West, 2300 West, 2400 West, 2500 West, 2600 West, 2700 West, 2800 West, 2900 West, 3000 West, 3100 West, 3200 West, 3300 West, 3400 West, 3500 West, 3600 West, 3700 West, 3800 West, 3900 West, 4000 West, 4100 West, 4200 West, 4300 West, 4400 West, 4500 West, 4600 West, 4700 West, 4800 West, 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Moab City Walking & Bicycling Map

Transit Hub
1.2 miles North
on separated pathway








PlacesForOrientation

- | | | | |
|---|-------------|---|--------------------|
|  | Bike Shop |  | Information Center |
|  | City Market |  | McDonald's |
|  | Denny's |  | Public Library |
|  | Hospital |  | Recreation Center |




Intersection Safety

-  difficult intersection
-  crosswalk without signal
-  crosswalk with signal

Legend

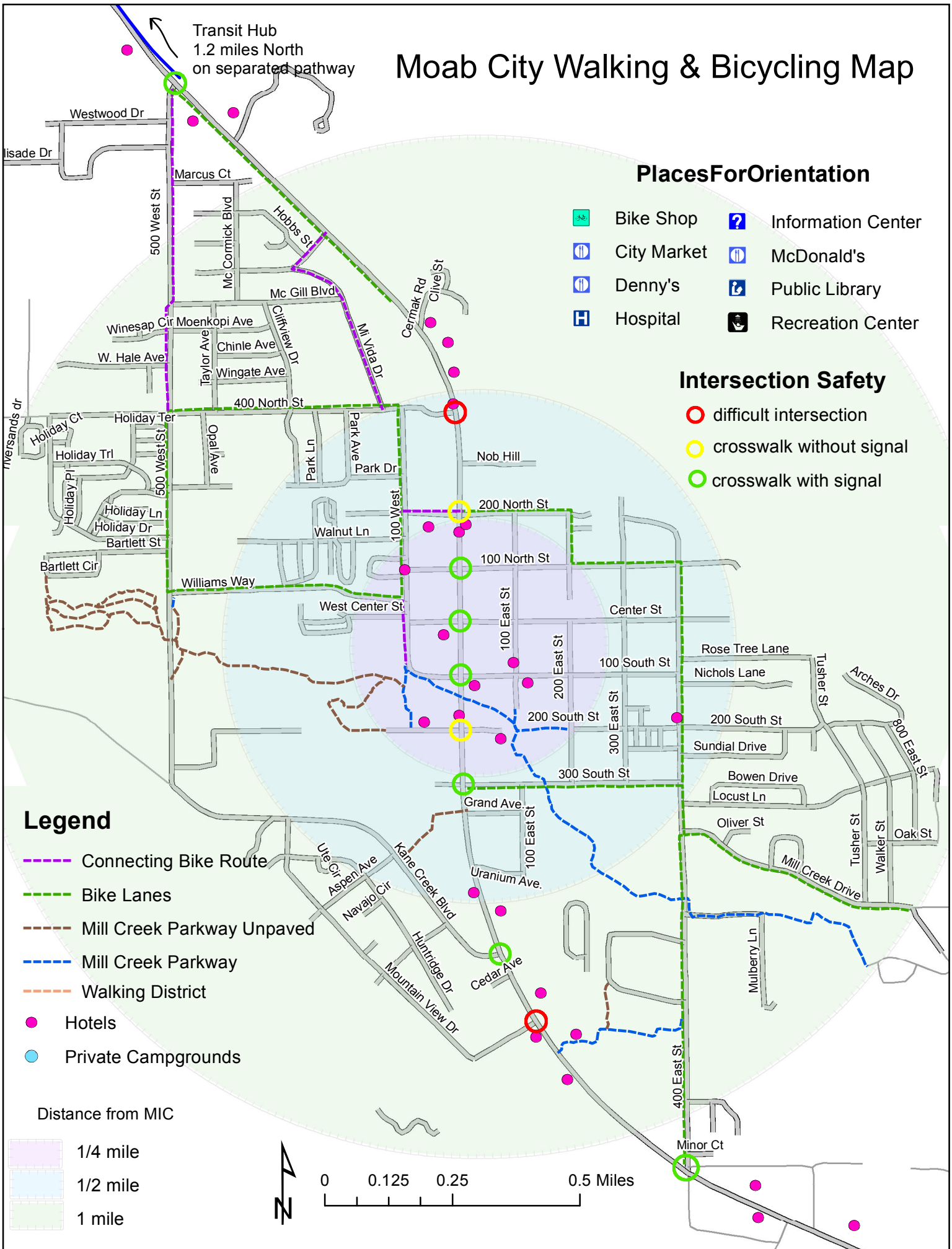
-  Connecting Bike Route
-  Bike Lanes
-  Mill Creek Parkway Unpaved
-  Mill Creek Parkway
-  Walking District
-  Hotels
-  Private Campgrounds

Distance from MIC

-  1/4 mile
-  1/2 mile
-  1 mile



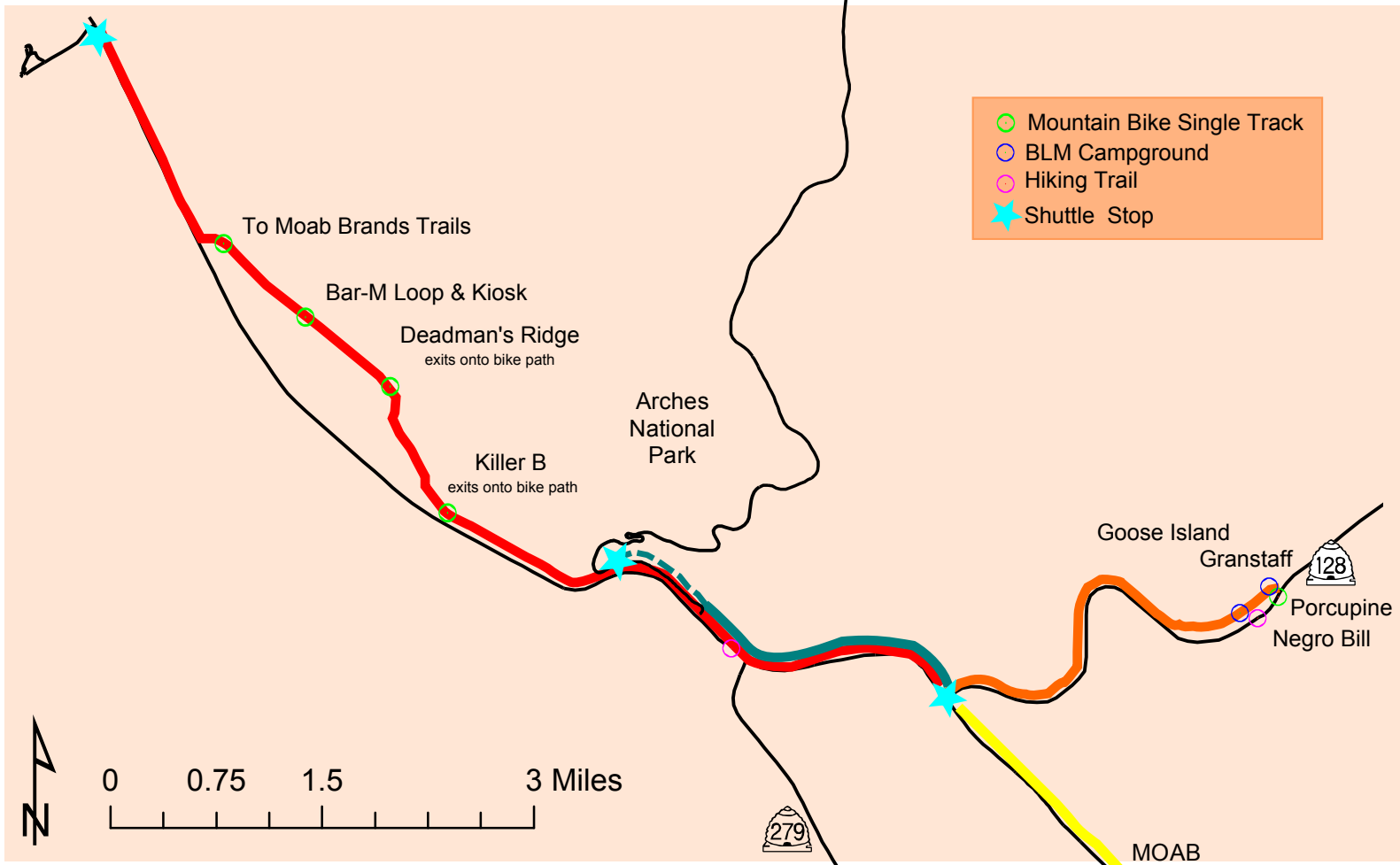
0 0.125 0.25 0.5 Miles



Appendix 12: ATS Sample Rides Map

This appendix includes:

A sample map that could be made into a brochure, published on the Travel Council website, sold at bicycle shops to encourage pathway use and provide adequate information for a cyclist to make informed decisions.



MOAB CANYON RED RIDE

TIME DURATION: 1.5 - 2 hours

ONE WAY: 10 miles / 8.6 km

ROUND TRIP: 20 miles / 17.2 km

ELEVATION GAIN/ LOSS:

Transit Hub to SR 313

+/- 400 ft/ 120 m

Conditions: Separated Pathway, multi-use
First 2 miles are most heavily used

RECOMMENDED FOR:

- Families with children
- Riders with more time
- Scenic Vistas using pedal power!

ACCESS TO:

Mountain Bikers:

Moab Brand Trails

Return from Magnificent 7 Trails

Road Bikers:

SR 313 Bicycle Lane to access

Arches National Park

Canyon Lands National Park

Dead Horse State Park

Shuttle Company offer one-service to
SR 313 at 1, 3 and 5 pm from the Transit
Hub. Reserve your spot.

ARCHES VISITOR CENTER BLUE RIDE

TIME DURATION: 1.5 - 2 hours

ONE WAY: 2.2 miles / 3.5 km

ROUND TRIP: 4.4 miles / 7 km

ELEVATION GAIN/ LOSS:

Transit Hub to Arches

+/- 100 Ft/ 30 m

Conditions: Separated Pathway multi-use
shared with vehicle traffic on the Arches Rd

RECOMMENDED FOR:

- Families with children wanting to see the Visitor Center.
- Riders short on time
- Riders looking for a 1/2 day activity
- Scenic Vistas using pedal power!

ACCESS TO:

Road Bikers:

Access to the Park is allowed 24 hrs/day

\$ 5 entrance fee

Maps available at entrance Gate

+/- 1000 ft max elevation gain on Park Road

COLORADO RIVERWAY ORANGE RIDE

TIME DURATION: 1.5 - 2 hours

ONE WAY: 3 miles / 4.8 km

ROUND TRIP: 6 miles / 9.6 km

ELEVATION GAIN/ LOSS:

- Transit Hub to Goose Island CG

+/- 100 ft/ 30 m

- Transit Hub to Grannstaff CG

+/- 120 ft/ 36 m

Conditions: Separated Pathway multi-use

RECOMMENDED FOR:

- Families with children
- Riders short on time
- Riders looking for a 1/2 day activity
- Scenic Vistas using pedal power!

ACCESS TO:

Mountain Bikers: Retrun from Porcupine

Rim Trail

Hikers: Negro Bill Caynon

MOAB TOWN CONNECTION YELLOW RIDE

TIME DURATION: .5 - 1 hours ONE WAY: 1.2 miles / 2.4 km RT: 2.4 miles / 4.8 km

ELEVATION GAIN/ LOSS: 500W (Denny's) to Transit Hub +/- 30 ft/ 9 m

RECOMMENDED FOR: - Riders wanted to leave thier cars behind (follow bike route signs)

ACCESS TO: City of Moab, Transit Hub, and red/blue/orange recreation areas

Appendix 13: Haleakala National Park

A summary of the downhill bicycle service from commercial businesses
at Haleakala National Park

Haleakala NP

There is no public transportation on Maui that will bring you into or near either district of Haleakalā National Park.

Most visitors arrive by car, some by bicycle, and a few by foot. Others choose to visit the park on an authorized commercial tour and arrive by motorcoach or minibus.

Research: There are guided tours and self-guided tours. Both types happen outside of the NP. The summit of the park is at 10,000 ft. and the entrance is at 6500 ft. A person can drive to the top with someone and bike from the summit or a person can bike up and down themselves but a person cannot bike down within park boundaries if with a commercial operator. Reviewing comments on yelp --- yes the self-pace aspect is favorable, appreciated and emphasized. It was difficult to fully gauge the experience without visuals but did not check out youtube.

Contacted NP service: An individual is allowed to bike from the summit either

- 1) A person can bike to top and bike down (sea level to 10000 ft)
- 2) Could go to top with friends/family and bike down

I have no idea how often either the above or below happen but my guess is the above is rare.

Commercial outfitters cannot drop people off to bike whether guided or self-guided within the Park. The shuttle companies that operate in either capacity (guided or shuttle) offer a sunrise experience followed by a downhill bike. The experience is from 6500 ft of elevation to sea level over 19-23 miles. The customers are provided with helmets, mountain bikes and wind/rain gear.

Contacted Maui Downhill (full guide service) and Bike Maui (self-guided). The cost of these services start at \$70, including equipment.

I watched some youtube videos to gauge the experience. It is difficult to understand the experience. People may do it because it is the thing "to do" while you visit Haleakala. In my opinion, a shuttle service on the bike paths and RT 313 could have the same potential if marketed and coordinated. It is my best guess that the experience from the top of Dead Horse (or the Knoll) down 313 would be equally scenic but much more strenuous.

Appendix 14: Hotel Bike Program

This appendix includes:

Correspondence with the a Hotel offering Bicycles

A PR article

Names of other hotels that offer bikes

The Holiday Inn Missoula Downtown Hotel Offers the First Free Bike Sharing Program in Missoula

Montana Hotel Provides Bikes for Guests Interested in Exploring Local Attractions

Missoula, MT ([PRWEB](#)) June 14, 2012 -- The [Holiday Inn Missoula Downtown hotel](#), located on 200 South Pattee, now provides bicycles for guests and community members to use for adventures around the city. The hotel has a half-dozen bikes that guests are encouraged to take on a spin, when they're finished the bikes are returned and wait at the hotel for the next adventurer.

"This is the first bike sharing program in Missoula," said Racquel Williams, Director of Sales and Marketing for the Holiday Inn Missoula Downtown. "There are so many fun locations that are perfect for biking in Missoula, we're hoping to start a trend for the city to be more bike-friendly."

To become more involved in the biking community and encourage healthy transportation, the staff of the Holiday Inn participated in the 21st Annual Bike Walk Bus Week Commuter Challenge. The hotel was graded based on the percentage of employees who participated in challenge activities and they won the challenge by taking alternative methods to getting around Missoula.

In celebration of the first bike sharing program in the area, the hotel is creating packages encouraging guests to get out and take advantage of it. The Bike and Brew Package lets you take out two cruiser bikes for four hours and sample three complimentary brews at four local Downtown Missoula Breweries. It also includes dinner in the hotel's restaurant, Brooks & Browns. To search for available dates for the Bike and Brew Package, visit the Holiday Inn's Hotel Packages page online.

To learn more about the Holiday Inn Missoula Downtown hotel visit www.holidayinnmissoula.com.

About the Holiday Inn Missoula Downtown Hotel:

The Holiday Inn Missoula Downtown Hotel offers tranquil accommodations in a location that's central to the area's best attractions, shops and businesses. Nearby are locations such as the HIP Strip, Art Museum of Missoula, Children's Museum, boutique shopping and the theater/club districts. Outdoor enthusiasts enjoy being adjacent to Riverfront Park with local hiking and biking trails and near Montana Snow bowl skiing. With Laidlaw Transit and the local bus station less than two miles from the property, Missoula business travelers can commute with ease. Details include 200 guest rooms and 8750 sq. ft. of meeting space with copy, fax and print services in a 24-hour business center. The smoke-free and pet friendly hotel houses the popular local restaurant Brooks & Browns and includes an indoor pool, fitness center, free airport shuttle and free Internet access. To learn more about the Holiday Inn Missoula Downtown hotel, visit <http://www.holidayinnmissoula.com/>.

###

**Contact Information****Racquel Williams**

Holiday Inn Missoula Downtown

406-532-2050

Online Web 2.0 VersionYou can read the online version of this press release [here](#).

Appendix 15: Recommendation #9

Technical Memorandum outlining Grand Canyon RFP for
Bicycle Rentals

Alternative Transportation Connections for the North Moab Recreation Area - Project Memorandum

Prepared for: Krissi Braun, Ruth Dillion, Grand County

David Olsen, Donna Metzler, City of Moab

Prepared by: Sommer Roefaro Transportation Scholar

Date: 12/13/2012

The purpose of this memo is to provide an example of bicycle rental service created in Grand Canyon Nation Park. This information is intended to support further consideration of a special use permit for the Transit Hub in Grand County and facilitate discussion.

Providing a bicycle rental service would address some of the Transportation Scholar project's goals:

- Encourage new users using the Alternative Transportation System (ATS) in the North Moab Recreation Area (NMRA)
- Utilize the Transit Hub
- Increase business opportunities

The concept of offering bicycle rentals out of the Transit Hub is to provide a comprehensive system that accommodates a range of bicyclists with varying skill levels. This concept is proposed to meet the needs of visitors arriving without bicycles wanting to enjoy the scenery along US 191 and SR 128 by active transportation. This is an opportunity to increase tourism and decrease vehicle use.

Why consider an authorization policy for the Transit Hub?

- Revenue to help maintain the Alternative Transportation System (ATS) Infrastructure.
- Opportunity to develop an evaluation criteria
 - Provide insight on how to best meet visitor's needs with regard to ATS.
- Create a level of service for the visitor and hub
 - Quality information for planning purpose including maps, cost, schedules.

Example: PROMOTING BICYCLE USE AS AN ALTERNATIVE TO SCENIC DRIVING

In March of 2010 Grand Canyon National Park released a request for proposal (RFP) asking applicants to propose their plan to fill a temporary program for bike rentals they had conceptualized.

Visitation 4.4 million (1/2 of Grand County's visitation)

Bright Angel Bicycles (BAB) won the bid; BAB is the first bicycle rental service within a National Park.

According to the BAB website, this was an opportunity to provide a unique, affordable, environmentally friendly way for people to experience the canyon.

Park Service Goal:

Provide visitors access to park sites without needing a personal vehicle and to improve visitor experience

Contract:

- Commercial use authorization (CUA) system
 - Concessioners operating under a CUA typically pay the park a fee or a percentage of revenue to operate inside the park.
 - BAB is required to submit monthly report
 - # of rentals (hourly, half-day, full)
 - Generated gross revenue
 - Areas where clients were most interested in biking
 - How the Park could improve biking opportunities
 - BAB is required to generate new fleet every 2 years
 - BAB must supply helmets
 - BAB must offer bicycles for a reasonable rate.

Business Model:

- BAB is responsible for all start up and operating costs.
- For profit private company.
- Start-up capital costs
 - \$60,000 85 bikes, a shuttle van and associated gear (helmets, locks and safety vests)
 - Average \$706 per bike
- Operating costs FOR 2010
 - \$140,000 (include wages for 6 employees who run the daily operations and 3 bike mechanics)
 - Average \$1647 per bike annually
- Park authorized BAB services to be bicycle rentals, and supporting bicycle tours and shuttles.
 - BAB cannot sell any gear or provide other services to supplement the business.

Operations Bike Rentals/Bike Shuttle:

- May - September 8 am to 6 pm.
- Hours are 10am to 4pm in March, April, October, and November if weather permits.

- Bikes are available on a first-come first-serve basis, but can be reserved in advance for large groups.

	Adults	Child * (17-)	Trailer
1 Hour	\$10.00	\$7.00	\$6.00
1/2 day (4 hours)	\$25.00	\$15.00	\$10.00
Full Day (8 hours)	\$35.00	\$25.00	\$12.00
Multi Day	\$40.00	\$30.00	\$15.00
24 Hours	\$45.00	\$35.00	\$15.00

- BAB's shuttle transports bicyclists to one of three points along Hermits Rest Road.
 - The shuttle runs hourly between 9am and 5pm.

	Adults	Child *
1 Way	\$6.00	\$4.00
Round Trip	\$9.00	\$6.00
<i>* Child Rate is for 17 Years Old and Under</i>		

- **Offers single location for bicycle rental aimed at recreational riders.**

Bicycle Terrain:

- Visitors can bike on all paved roads
- 5-miles of the multi-use greenway trail
- Visitors can enjoy park roads open only to shuttle bus traffic and bikes, which include the scenic Hermit Road and Yaki Point Road.
- **Length of pathways very similar to NMRA paved pathways.**

Liability:

- Park limits legal liability by using a third party to operate the bike rental service.
- Park requires the bike rental operator to create an operating plan that addresses safety and to carry appropriate insurance (General Liability, Workers Compensation and Land Transportation).

- Before riding, visitors sign a liability waiver.
- BAB gives a brief orientation to using the bicycle and informs visitors about where they can ride.
- BAB's orientation also includes Grand Canyon bike rules, etiquette and other safety information
- BAB staff conducts pre-ride safety inspections on all their bicycles.
- BAB employs three mechanics to regularly maintain and repair rental bikes.

Successes

- **Bike rental system encourages a wide variety of people to bike by offering children's bikes, trailers and bikes for people with disabilities.**
- The 7-speed bikes are relatively light weight and comfortable for longer distance riding.
- Grand Canyon's first in-park bike rental service has been extremely popular amongst all age groups.
- Aside from self-guided hikes, BAB touts its bike rentals as the least expensive activity for a family of four visiting the park.
- **Providing information such as ride duration, conditions and recommendations helps visitors choose a ride they will enjoy.**
- **Combining bike rentals with shuttle buses allows riders to tailor bike trips to meet their needs.**
 - people can take a shuttle up and bike downhill,
 - catch a shuttle at various points to shorten the length of their ride.
- **Park managers will use data collected during the first two years to determine how future bicycle rentals will be managed**
- The Park plans to create a 10-year long concession contract that combines bike rentals with food service and provides a permanent building with supporting utilities from which to operate the services.

Challenges

- **BAB had to use two 40-foot long bus parking spaces for their operations in 2010 and 2011 as there were no buildings available.**
- The temporary structures had no utilities, thus BAB used cell phones and wireless credit card machines to handle transactions.
- Cell service in the Park is not consistent, so at times there were delays in processing rental transactions.
 - A permanent structure is under construction that will house future bike rental facilities

References:

http://www.nps.gov/grca/parkmgmt/cua-bicycle_rental.htm

<http://www.wfl.fhwa.dot.gov/programs/td/publications/documents/bicycle-options.pdf>
<http://bikegrandcanyon.com/bike-rentals/rates/> (accessed December 2012)

Appendix 16: Zion National Park

This appendix outlines the partnerships developed for Zion's shuttle service within the Park and gateway community.

Innovative Transportation Planning Partnerships to Enhance National Parks and Gateway Communities

Requested by:

American Association of State Highway
and Transportation Officials (AASHTO)

Standing Committee on Planning

Prepared by:

Texas Transportation Institute
Cambridge Systematics, Inc.

October, 2009

The information contained in this report was prepared as part of NCHRP Project 08-36,
Task 83, National Cooperative Highway Research Program, Transportation Research Board.

Zion National Park Springdale, Utah

Overview

This case study describes the implementation and operation of a shuttle bus system in Zion National Park and the Town of Springdale, Utah, the gateway community adjacent to the park. The National Park Service took the lead in planning and implementing the shuttle bus system in response to traffic congestion on the main road in Zion Canyon. The Town of Springdale, the Utah Department of Transportation (UDOT), FHWA, the Zion National History Association, and local businesses actively participated in the process. These groups continue to work together in the ongoing operation of the shuttle bus system.



Zion National Park

Background

Zion National Park encompasses 229 square miles of cliff-and-canyon landscape in southwestern Utah. Zion Canyon, in the southeast corner of the park, is the main visitor destination. The canyon is accessible by a two-lane, dead-end road six miles long. Visitors access the park from the Town of Springdale and State Route 9 (SR 9).

Historically, the drive through the canyon was the main highlight of the park for most visitors. While the scenic drive and limited parking was able to accommodate the 1 million annual visitors during the early 1970s, concerns with traffic congestion arose during the 1980s and 1990s as annual visitor levels reached and exceeded 2 million. Consideration of transit options emerged during the park master planning process in the 1990s and the shuttle system was implemented in 2000.

Partners and Institutional Arrangements

Planning, funding, implementing, and operating the shuttle system in the park and the Town of Springdale are the result of the coordinated efforts of Zion National Park, the National Park System Denver Service Center, the Town of Springdale, the Utah Department of Transportation, FHWA, Zion National History Association, local businesses, and other groups. The roles of these different groups are highlighted below.

Zion Shuttle Bus System Partners

Zion National Park
National Park Service, Denver Service Center
Town of Springdale
Utah Department of Transportation
Federal Highway Administration
Zion National History Association
Local Businesses

- **Zion National Park.** Staff from Zion National Park took the lead in planning and implementing the park shuttle system. The need to address traffic congestion on the Canyon Road and parking areas was identified during the park master planning process. Different alternatives, including the shuttle system, were evaluated. The shuttle system was selected as the best option for meeting the needs of current and future visitation levels.
- **National Park Service Denver Service Center (DSC).** Representatives from the National Park Service DSC provided technical assistance during the planning process. Staff from the Center provide ongoing expertise in transportation and transit planning to the Zion National Park. For example, staff from The DSC served as project manager for the Zion Canyon Transportation System Technical Analysis study conducted in 2008.
- **Town of Springdale.** The Town of Springdale actively participated in planning and implementing the shuttle system and the Springdale Loop, including providing some of the local match for the federal Transportation Enhancement Program funding. The town continues to be actively involved in the ongoing operation of the system. Town representatives participated in the 2008 Transportation System Technical Analysis study.
- **Utah Department of Transportation (UDOT).** UDOT administers the federal Transportation Enhancement Program, which was used to fund the Springdale shuttle stops and the streetscape improvements. The Department assisted with designing, contracting, and constructing the shuttle bus stops and streetscape improvements in the SR 9 right-of-way.
- **Federal Highway Administration (FHWA).** Funding from FHWA, through the Transportation Enhancement Program was used to construct the bus stops and streetscape improvements on the Springdale Loop.
- **Zion National History Association (ZNHA).** Established in 1929, the ZNHA is a non-profit organization supporting education, research, publication, and other programs for the benefit of Zion National Park, Cedar Breaks National Monument, and Pipe Spring National Monument. The Association provides the parks with approximately \$600,000 in aid annually through membership contributions, sales from the ZNHA bookstores, and other sources. The ZNHA supported the shuttle project and contributed to the local match for the federal enhancement funds. The ZNHA provides information on the shuttle on its website, along with energy saving transportation tips.
- **Private Businesses.** Zion Canyon Theater, which is located adjacent to the park, was an early partner in the planning process. Different public/private arrangements were considered, including constructing a visitor center on the theater property. The ultimate project included using private funds to construct the town shuttle loop northern terminal, a camper store and restaurant, and tour bus parking area. These improvements directly connect to the park visitor center, providing a park and gateway community link. Other local businesses participated in the planning process and continue to be actively involved in supporting the shuttle system and the Springdale Loop.

Funding

Funding for the Zion shuttle system and related facilities came from a variety of sources. A mix of federal, state, local, private non-profit, and private funding supported the purchase of the vehicles, construction of the new parking area and transfer point, and development of the shuttle stop and streetscape improvements in Springdale.

Zion Shuttle Bus System Funding Sources

NPS Capital Funds
Park Entrance Fees
Federal Transit Programs
Federal Enhancement Program
Town of Springdale
Zion National History Association
Local Businesses

Zion National Park purchased the 30 propane-powered buses and the 21 trailers. The park also funded the transit stops in the park, the new parking area, and the transfer point. National Park Service capital funding was used for the vehicles and the other elements. The park uses a portion of the entrance fees to support the ongoing operation of the system.

The Town of Springdale obtained federal Transportation Enhancement Program funds through the UDOT for the bus shuttle stops and related streetscape improvements. The Town of Springdale and the ZNHA provided matching funds. The town provides ongoing funds for maintenance of these elements. The town funding comes from hotel/motel taxes, resort taxes, and sales taxes.

Implementation and Operation

The free shuttle bus system has been the only means of transportation for summer visitors to Zion Canyon since 2000. The shuttle includes two routes – one in the park and one in the town of Springdale. The park shuttle route operates from the Zion Canyon Visitor Center to the Temple of Sinawava at the end of the six-mile Canyon Scenic Drive. There are nine stops along the route at major scenic locations, trail heads, and at Zion Lodge. Overnight guests at the Zion Lodge are the only visitors allowed to use private vehicles on the roadway.

The Springdale Route includes stops at hotels, businesses, and activity centers along SR 9. The two routes connect at the Zion Canyon Visitors Center, allowing passengers to transfer. The bus stops and other streetscape improvements were designed to complement the communities' road and streetscape, which were constructed as part of the Work Progress Administration in the 1930s.

Service is provided on the two routes using a fleet of 30 propane-powered buses and 21 trailers. McDonald Transit operates this service, under contract to Zion National Park. The bus-trailer combination is used on the Canyon Route, while buses operate on the Springdale Loop. Bus operators monitor passengers in the trailer via a closed-circuit television camera. The buses are not air conditioned, but open windows and ceiling air vents keep the ride comfortable.

The operating season for the shuttle system has been extended over the years. When the system debuted in 2000, the operating season was May through early September. The 2009 operating season is April 4 through October 25, with the Canyon shuttle operating on weekends

during November. Riding the shuttle is optional in November, as private automobiles are allowed to access the Scenic Canyon Drive.

The operating hours vary slightly during the operating season, with extended service provided during the peak summer months. From May to September, the first bus on the Canyon Loop leaves the Visitor Center at 5:45 a.m. In the evening, the last bus leaves the Temple of Sinawava at 11:00 p.m. Operating hours on the Springdale Loop are from 7:00 a.m. to 11:00 p.m., with one express bus serving the Scenic Canyon Drive leaving Majestic View at 5:30 a.m.

Service on the Canyon Route operates on 6-to-10 minute headways from 9:00 a.m. to 8:00 p.m., with 10-to-15 minute headways from 5:45 a.m. to 9:00 a.m. and 8:00 p.m. to 9:00 p.m. Service from 9:00 p.m. to 10:30 p.m. is operated on 30-minute headways. Service on the Springdale Loop operates on 10-to-15 minute headways, except from 10:00 p.m. to 11:00 p.m. when buses operate every 30 minutes.

Ridership on the shuttles has increased since 2000. In 2001, some 2.13 million trips were made on the shuttles. In 2008, approximately 3 million trips were taken on the shuttle buses. It is estimated that visitors on the Canyon Loop average 3-to-4 trips a day on the shuttle. Formal and informal feedback from visitors has been positive. A 2006 visitor study and a 2008 on-board ridership survey indicate positive reactions from visitors.

Zion National Park, the DSC, the Town of Springdale, local businesses, and community groups continue to work together on ongoing concerns related to transportation in the park and community. These concerns relate primarily to continuing operating funding for the shuttle bus system, replacing the existing bus fleet, providing adequate parking, traffic congestion at the park entrance station, and deteriorating roadway pavement, and other infrastructure elements.

To help address these concerns, the park applied for and received federal funding through the ATPPL program and the U.S. Department of Transportation's Volpe National Transportation System Center to conduct a study evaluating the Zion transportation system. The study also focused on identifying recommendations to improve the system and supporting facilities.

The study, which was conducted in 2008, built on the existing partnerships among the park, the town, local businesses, the ZNHA, and other groups. The DSC provided overall management for the study, with the Volpe Center and consulting firms conducting the technical analysis and public and stakeholder involvement. Workshops with stakeholders and the general public were conducted at the beginning of the study. Workshops were also held to present the draft findings and recommendations and obtain additional comments and input to the draft report.

The study recommendations focus primarily on funding the ongoing operation of the shuttle bus system, providing adequate parking facilities, and enhancing wayfinding and communications. Recommendations for addressing park road and Springdale streetscape conditions, and enhancing pedestrian and bicycle connectivity, mobility, and safety are also included in the final report. Figure 3 illustrates the Zion and Springdale shuttle routes.



Figure 3. Zion Shuttle Bus Map

Texas Transportation Institute Graphic Based on National Park Service Information

Federal Lands Agency Reaction

The shuttle system has addressed the traffic and parking congestion along the Zion Scenic Canyon Drive during the peak summer months. Visitation levels at Zion National Park increased from approximately 2.4 million in 2000 to 2.7 million in 2008. The shuttle system has allowed the park to accommodate these increases in visitation. The shuttle system has been well received by visitors and enhances the visitor experience.

Other benefits have also been realized from the shuttle system. The park estimates that CO emissions on the Canyon Drive route have been reduced by 46 percent since the introduction of the shuttle system. Noise levels near Canyon Drive have been reduced by approximately nine decibels. Animals and birds have become more visible, and animals not readily seen for years – such as wild turkeys and cougars – have been sighted.

The use of the shuttle system does involve some challenges. From a resource management perspective, the shuttle may drop off 10 to 75 people at a time at stops in the Canyon as frequently as every three minutes. Managing this high volume of visitors during the peak season can be challenging. The buses are also heavier than automobiles, resulting in the need for repair of the Canyon Road.

As noted, funding for replacing the buses and trailers, which have been in operation for 10 years, is a priority for the park. A proposal to initiate replacement of the existing fleet was submitted in 2009 to the Transit in the Parks program administered by FTA. This proposal was selected for funding, thus helping begin the bus replacement process.

Community and Business Reaction

The response from the community and businesses to the shuttle system has generally been favorable. The shuttle system has had an impact on businesses, including a change in visitor shopping and eating patterns. It appears that visitors are spending the full day in the park, rather than returning to town for lunch. As a result, declines in lunch business and shopping over the noon-time have been noted. Visitor demands for dinner and shopping appear to have shifted to later in the evening. It does not appear that hotels have experienced any major changes with the shuttle operation.

Restaurants and other businesses have modified service hours and staffing levels to respond to these changes. Most businesses are open longer hours during the peak summer months when the shuttle system is in operation. Expectations concerning staffing levels for restaurants and other service businesses have shifted to later evening hours. The fact that hotels, restaurants, and other businesses experience repeat visitors over the years was noted as a positive impact of the shuttle system.

An ongoing concern for businesses relates to the availability of parking for visitors. The new parking lot constructed as part of the Visitors Center is often full by midmorning. An overflow parking lot constructed by Springdale outside the park is also well used. When these two lots are full, visitors look for other parking throughout the town. Some visitors leave their vehicles at the hotels where they are staying and take the Springdale Loop to the Visitors Center. As noted previously, parking was one of the issues examined in the 2009 transportation planning study.

The opportunities to participate in the various planning activities and ongoing discussion of issues appear to be well received by the business community. Representatives from the Chamber of Commerce and individual businesses noted the positive working relationship among the park, town, and other groups.

Success Factors, Lessons Learned, and Best Practice

The experience planning, implementing, and operating the Zion shuttle bus system provides a number of elements contributing to the understanding of success factors and best practice. The following highlight some of these factors.

- Zion Canyon provides an ideal setting for a shuttle bus system. The six-mile Scenic Canyon Drive is a dead end roadway – meaning visitors must return to Canyon Junction or to Springdale to continue their trip. The close proximity of Springdale to the park entrance also represents an ideal situation for the town shuttle route and linking the two routes at the Visitor Center.
- The park clearly articulated the goals and objectives for the shuttle bus system. Park management has provided strong ongoing support for the system.
- A strong working relationship was established with the park, the DSC, the Town of Springdale, UDOT, ZNHA, local businesses, and other groups. These groups continue to be involved in the discussion of issues and the identification of potential solutions. The 2008 study provides an example of the importance of this ongoing working relationship.
- A close working relationship was established with McDonald Transit, the operator of the shuttle system. This working relationship allows for a quick response to any concerns that may arise.
- All groups have been able to maximize resources by leveraging funding. The National Park Service funded the buses and infrastructure elements in the park. Federal enhancement program funds, provided through UDOT, were matched with town and ZNHA funding.
- All groups are focused on enhancing the experience of visitors, and encouraging repeat visitors. While the various groups have different missions, they do share a common goal of providing an enjoyable experience for visitors to the park and town.
- The business sector has been supportive of the system and has responded to changes in visitor patterns. Businesses have extended hours to accommodate visitors spending more time in the park.



Partnerships



PHILLIP BIMSTEIN, COLLABORATIVE RELATIONSHIPS



In 1993, Zion National Park issued a conceptual plan that advocated a shuttle system to relieve the auto traffic congestion in Zion Canyon. Traffic congestion on local and regional roads was impacting the gateway community of Springdale, Utah as well as the park. The community proposed extending the transportation system being developed by the National Park Service into the town of Springdale, Utah. Superintendent Don Falvey was receptive to the idea and began working in partnership with Springdale's newly-elected mayor, Phillip Bimstein, to develop an

award-winning transportation system that serves both the park and community. Phillip and Don assembled a 10-member committee to devise a transportation plan to meet the needs of both Springdale and Zion National Park.

Key to the success of the project were the personalities and collaborative relationship of Phillip and Don. The newly elected mayor's style and interest in working with the park complemented Don's desire to build a meaningful partnership with the community.

Phillip recognized that the park's and the town's interest overlapped. Both Phillip and Don believed in the preservation and protection of the park's resources and providing public access. They never lost sight of their goal to preserve the heritage, culture and character of the park and the community while providing a quality visitor experience.

Don Falvey, former Superintendent of Zion National Park, comments on Phillip Bimstein:

Sharing a common vision was the foundation for forming a strong partnership between the Town of Springdale and Zion National Park.

It began with Phillip's first visit to the park when, as a camper at the park's Watchman Campground, he was awed by the scenic grandeur of the towering sandstone canyon walls that surrounded him. He was so impressed that he decided to buy a home in Springdale and pursue his career as a music composer there.

His appreciation of Zion's spectacular natural environment led to his desire to help ensure its preservation. He was concerned with the impacts of large numbers of visitors who traveled through the town on their way to visit the park and with the increasing pressures for development in the town. When asked to run for mayor, he accepted the challenge.

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Relationships](#)[Resources](#)[How To](#)[Case Studies](#)[Recognition](#)[Site Map](#)[News](#)[Contact Us »](#)[Search »](#)

Phillip invested a lot of time getting to know the citizens of Springdale and their concerns and desires for how the town should be managed. He also became acquainted with the park, its resources and its issues. Recognizing the benefits of combining efforts, he established a liaison committee composed of several town citizens who represented the variety of viewpoints in the town. This committee formed the basis for active communication between the town and the park. This forum led to some innovative concepts that were incorporated in the transportation system that operates in the town and the park and became a model for other gateway communities and national parks.

As mayor, Phillip espoused a philosophy that preservation of natural resources had an economic value for Springdale. Through preservation of natural values, he argued, the town would gain from providing a unique experience for the visitors, which would in turn encourage them to stay in town, enjoy the variety of restaurants, motels and gift shops and, of course, spend money.

Phillip became an avid spokesperson on issues relating to preservation of the park and its surroundings. He made presentations at Congressional hearings supporting wilderness legislation and preventing aircraft overflights. He also made presentations at several sponsored training sessions while the transportation system was in the planning stages and appeared at other workshops and conferences describing his experiences in forming park-gateway community partnerships.

The partnership led to a lasting relationship beyond the transportation system. The town and the park have agreements for joint water and wastewater treatment facilities and for emergency response. (The town and the park each have one ambulance and coordinate their use to ensure a quick response). The town's volunteer fire department trains regularly with the park's rangers and each back-up the other. One of the park's fire engines is housed in the town's new fire station to facilitate a fast response time when needed.

The park and the town have a reputation of working together, especially in times of emergency. When a landslide blocked the Virgin River above the town and threatened to flood the park's campgrounds and the motels along the river in town, Phillip responded quickly, aiding in evacuation efforts and offering the use of the town's park as a temporary camping area for the displaced park visitors. Park staff and Springdale townspeople worked together in assisting three families whose homes were destroyed by an earthquake.

These examples illustrate the care and concern Phillip has for the town and the park. The synergy that has been developed continues even though Phillip's eight year tenure as mayor expired.

In his message to the citizens of Springdale as he left office, Phillip wrote, as only a music composer could, "For the past eight years, I heard us blend our themes in a wonderful collaborative composition. The music we make together is not always in the key of 'C'. Our styles are as varied and distinct as classical, jazz, gospel, rock, reggae, hip-hop, country, folk or bluegrass. However, each individual theme has validity and the capacity to enliven our minds and express our hearts. When we add our voices to this ongoing symphonic hoe-down, we compose our community together."

Phillip Bimstein comments on his participation in the partnership:

I moved to Springdale because of Zion National Park. Zion's powerful landscape strongly drew me and I felt I had to live there. As a composer, the beauty, inspiration, wide open space and natural quiet are very important to me. So when the opportunity came along to help preserve the park, I seized it. The partnership is a natural way to wed what I see as the parallel missions of both the park and the town: to preserve and protect our natural and community resources, and to make those resources available to our millions of visitors in a high quality, enhanced experience. Cultivating the partnership and designing the shuttle system was a superb way to accomplish that. It allows continuing visitation without degrading the experience.

I am very pleased with the partnership because it accomplishes so many good things for the park, the town and our visitors (see above). The shuttle system gets very high marks from visitors. It's wonderful to hear how much they enjoy the quiet, the wildlife, the ease of getting around, and the pleasure of being able to experience the park without having to drive and look for a parking space. It is satisfying to know the partnership creates a legacy of care for the future.

The greatest satisfaction comes from the friendships that developed between park personnel and town residents. For me that especially means the friendship I continue to have with the man who did the most to foster that partnership, former superintendent Don Falvey, and his wife Carole, who cultivated much of the social capital that made this partnership possible.

Seek and discover the ways in which your missions mesh, so you can focus on mutually desirable goals. Listen with respect to one another, like good musicians who take their turns between soloing and accompanying one another. Ensure that divergent themes and opposing views are heard and taken into account, by all sides. Don't be held back by occasional dissonances; while many different voices may not always blend harmoniously, they can still contribute to a productive dialogue and a valuable result. And find the Don and Carole Falveys of your community, who can foster the kinds of relationships which build partnership!