AGENDA

TUSAYAN TOWN COUNCIL REGULAR MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Wednesday, June 19, 2013 at 6:00pm
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Tusayan Town Council and to the general public that the Tusayan Town council will hold a meeting open to the public on Wednesday, June 19, 2013 at the Tusayan Town Hall Building. If authorized by a majority vote of the Tusayan Town Council, an executive session may be held immediately after the vote and will not be open to the public. The Council may vote to go into executive session pursuant to A.R.S. § 38-431.03.A.3 for legal advice concerning any matter on the agenda, including those items set forth in the consent and regular agenda sections. The Town Council may change, in its discussion, the order in which any agenda items are discussed during the course of the meeting.

Persons with a disability may request a reasonable accommodation by contacting the Town Manager at (928) 638-9909 as soon as possible.

As a reminder, if you are carrying a cell phone, electronic pager, computer, two-way radio, or other sound device, we ask that you silence it at this time to minimize disruption of today's meeting.

TOWN COUNCIL REGULAR MEETING AGENDA

1. **CALL TO ORDER AND PLEDGE OF ALLEGIANCE**

2. **ROLL CALL**

MAYOR GREG BRYAN	**COUNCILMEMBER BILL FITZGERALD**
VICE MAYOR AL MONTOYA	**COUNCILMEMBER JOHN RUETER**
	COUNCILMEMBER CRAIG SANDERSON

   - *One or two Council Members may attend by telephone*

3. **CALL TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA**

   Members of the public may address the Council on items not on the printed agenda. The Council may not discuss, consider or act upon any matter raised during public comment. Comments will be limited to three minutes per person.

   Members of the audience who wish to speak to the Council on an item listed as Public Hearing should complete a Request to Speak Card and turn it into the Town Clerk. Speakers will be limited to three minutes each.

4. **CEREMONIAL AND/OR INFORMATIONAL MATTERS**

   A. **Presentation on the preliminary findings of the Tusayan Drainage Study**

   B. **Presentation from NI Solutions on the Tusayan Internet Improvement Project**

   C. **Presentation from Arizona Public Service (APS)**

5. CONSENT AGENDA

ITEMS ON THE CONSENT AGENDA ARE ROUTINE IN NATURE AND WILL BE ACTED ON WITH ONE MOTION AND ONE VOTE. PUBLIC HEARING ITEMS ARE DESIGNATED WITH AN ASTERISK (*). MEMBERS OF THE COUNCIL OR STAFF MAY ASK THE MAYOR TO REMOVE ANY ITEM FROM THE CONSENT AGENDA TO BE DISCUSSED AND ACTED UPON SEPARATELY.

A. Minutes of the Town Council Budget Workshop on 5/14/13, Special Meetings on 11/27/13, 1/7/13, 5/22/13, Regular Meeting on 5/29/13, and Municipal Code Workshop on 6/11/13

B. Accounts Payable Billings

6. COMMITTEE REPORTS

7. ACTION ITEMS

A. Consideration, discussion, and possible approval of an intergovernmental agreement (IGA) with Tusayan Fire District for funding of supplemental staff

B. Consideration, discussion, and possible action on financial participation in the North Central Arizona Water Feasibility Study

8. DISCUSSION ITEMS

None

9. TOWN MANAGER'S REPORT

10. FUTURE AGENDA ITEMS

11. COUNCIL MEMBERS' REPORTS

12. MAYOR'S REPORT

13. MOTION TO ADJOURN

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at the General Store in Tusayan, Arizona on this _____ day of June, 2013, at _____pm in accordance with the statement filed by the Tusayan Town Council.

_____
Signature of person posting the agenda

ITEM NO. 4B

Broadband Network Strategic Plan

Town of Tusayan,

Arizona

June 2013

Table of Contents

***Appendices A & B shall be provided with Hard Copies of Report

EXECUTIVE SUMMARY

Nestled in Kaibab National Forest lies a town on the southern rim of a canyon so magnificent and alluring in its entire splendor, that it was simply named "Grand Canyon" and deemed a natural wonder of the world. The Town of Tusayan, despite being the gateway to the Grand Canyon and a destination to millions of tourists, is faced with the lack of a proper telecommunications infrastructure.

The Town, having witnessed the failed commitments and lack of initiatives by telecommunications providers to bring high-speed connectivity to the area has taken a proactive approach to find a solution to meet their bandwidth needs. To alleviate the problem of capacity constraints and bottlenecks which create a real gap between the expectations and the reality of Internet use, the Town has contracted with NI Solutions, Inc. (NIS) a telecommunication consulting firm to provide a *Broadband Network Strategic Plan*.

The primary objective of the plan is to define and evaluate the potential for the Town to develop a broadband communications network, utilizing a hybrid fiber optic and wireless network capable of offering customers cost-effective, high speed data services with full interactive capabilities. The specific intent of the study is to provide the Town with a clear direction and an educated decision path leading to the optimal business level strategy needed to support current and future telecommunications requirements of all its residents.

Based on the needs assessment of the town, financial feasibility, and partnership evaluation, NIS recommends the Town take a multi-pronged approach to dealing with their telecom initiatives. First, the Town must address their immediate needs as Tusayan continues to feel the effects of marginalized bandwidth. Currently, the local businesses purchase a combined 30 Megabits (Mb) of bandwidth from Commnet Wireless, a subsidiary of Atlantic Tele-Networks, for a staggering price of two hundred and twenty five dollars per megabit per month ($225/Mb). The service is delivered via a

microwave solution. As part of the needs assessment, NIS reached out to Commnet to ascertain whether they could increase the capacity and reliability of their system and lower the Town's cost for bandwidth.

A Conference call took place with Commnet to address the issues and NIS requested a quote for services. Commnet stated "We are in the process of performing an analysis of Tusayan needs and the analysis will be completed within a two month timeframe." Commnet's goal was to provide a phased approach.

Phase 1: Current 30 MB

Phase 2: 50 MB Connection (no pricing provided/no timeframe)

Phase 3: 100 MB Connection (no pricing provided/no timeframe)

NIS emphasized the urgency of Commnet providing a written price quote and informed Commnet that other providers have offered quotes.

NIS also conducted a meeting with Niles Radio to request a price quote for providing bandwidth to the town of Tusayan. Niles Radio stated they could provide either a 50 MB or 100 MB connection to the town and service could be dropped off at the Airport Tower. The Town Manager had a meeting with the Airport Manager to find out whether they would entertain the possibility of Niles Radio placing their microwave equipment on the airport existing tower. The Grand Canyon Nation Park Airport would prefer if the Town installs their electronics equipment on their tower rather than Niles Radio. The Town Manager discussed the situation with Niles Radio and Niles Radio has agreed to the Town owning the equipment. NIS needs additional information on the proposed microwave feed to the Town and has asked for clarification from Niles Radio.

NIS also met with APS to discuss the possibility of partnering with the Town to jointly install a fiber optic cable on their existing power lines. APS stated that they are not ready to provide fiber optic connectivity on their existing transmission lines.

However, APS has no issues with a third party or the town attaching fiber optics to their distribution line. In addition, APS will not replace their static wire on their 69 KV line with an optical ground wire (OPGW). APS power lines are old and may require extensive Make Ready work. In order to review options with APS, the town will need to partner with providers such as AT&T and Century Link to make it a cost effective solution.

SHORT TERM PLAN

NIS began the process of locating alternative microwave solutions providers for the Town to meet their immediate needs. NIS contacted providers in the surrounding area including Flagstaff, Phoenix, and the Navajo Nation for potential solutions.

NIS recommends the Town commence with a microwave solution which will meet their short term needs and allow a suitable time period to accomplish their long term goals. After reviewing all of the Town's short term solutions, NIS recommends, as a starting point, to start contract negotiations with Niles Radio, based out of Flagstaff, Arizona to obtain 100 Mb circuit. The circuit provided shall be point to point dedicated internet access (DIA). Please refer to Table 1 for details. A cost/benefit analysis should be conducted to ascertain the difference in cost savings from moving to a new provider.

Table 1

Provider	Circuit Size	Price per Mb	Price per Month	Yearly Costs
Commnet Wireless	30 Mb	$225	$6,750.00	$81,000.00
Niles Radio	50 Mb	$72	$3,600.00	$43,200.00
Niles Radio	100 Mb	$54	$5,400.00	$64,800.00

Level of Town's Involvement

Currently, the Town's only involvement is to find ways to bring high speed internet services to all their constituents. The town negotiated with one of the providers, Commnet Wireless to provide additional bandwidth to the hospitality industry. Commnet provides the microwave backhaul[1] and a third party, Last Mile Research, manages the internet traffic on behalf of Commnet. Mr. Mike Pogue is the founder and President of Last Mile Research. Last Mile research primarily supports digital media solutions for the hospitality industry.

- Option A: the Town replaces the current bandwidth provider with Niles Radio and negotiates with a third party to manage traffic.
- Option B: the Town replaces the current bandwidth provider with Niles Radio and manages traffic internally.

NIS recommends negotiating with Last Mile Research and other potential providers to see if they are willing to provide services to all residents with the bandwidth being provided by the Town. If providers are not willing to manage services then the Town can provide services as recommended in Option #B. Taking control of internal Tusayan traffic will provide the autonomy the Town requires to reduce costs and turn broadband into a successful business operation which benefits the community.

[1] Backhaul - In telecommunications, backhaul refers to a leased line network configuration in which traffic is transported to a point that is geographically beyond and then transported back (hauled back) to the destination site due to the lack of a direct path between the originating and destination sites. The term evolved into a more generic meaning and often refers to transmitting from a remote site or network to a central or main site. It implies a high-capacity line; for example, to backhaul from a wireless mesh network to the wired network means aggregating all the traffic on the wireless mesh over one or more high-speed lines to a private network or the Internet.

LONG TERM VISION

This plan offers a strategic overview of the direction the Town of Tusayan will take in the development and deployment of broadband data service applications. The plan is to build a fiber optic network from Williams to the Town of Tusayan.

This new venture will be more challenging primarily due to the fact that the Town will be venturing into new and unchartered waters. This is true not only in the sense that this is the Town's initial entry into these markets but there are also many new challenges facing both the technology and the industry.

The telecommunications industry has an established operational history. Successful entry into those markets requires effective implementation of existing strategies coupled with the application of innovative approaches. This presents both challenges and opportunities; however, the potential rewards far outweigh the calculated risks.

What options or possibilities can be utilized for the Town to eliminate any future issues is to construct a fiber optic network to provide greater benefit to the Town and its residents. Developing the right partnerships and management approach shall be the key to success. The first task at hand is to determine the level of involvement the Town will provide. Levels of involvement can range from simply owning/maintaining the fiber optic infrastructure and provide wholesale services or providing full retail broadband services to businesses and/or residential customers via a Fiber to the business/home.

In our experience, the best method for success is the conglomeration of all the sectors of society including anchor institutions such as local and regional government, public safety, hospitals, parks and educational institutions. Coupling the needs of the critical anchor institutions with the needs of corporations and citizens will maximize the social and economic benefits derived from having the proper infrastructure. Investments of communities that create economic opportunities by retaining and

growing local companies while enhancing their global competitiveness is key to success; developing a digital infrastructure that crosses sector boundaries enables communities to create sustainable economic development strategies. By focusing on "trans-sector" approaches, the Town will be able to increase the available investment pool and anchor tenants for financial viability and commercialization.

Developing public/private partnerships is crucial for the long term viability of the Town and it broadband initiatives. One of the key elements of the analysis will be to determine which options will be the most advantageous to the Town and provide the greatest return on investment. To that extent, NIS will take into consideration all the financial, political, and operational aspects involved in a developing and sustaining a successful telecommunications network.

This plan analyzed and reviewed the environment in which the Town operates. This analysis includes a summary of both internal and external factors and influences. Special focus was placed on the environment and specific opportunities and challenges. Goals and objectives are also outlined followed by a summary of organizational strategies and tactics.

It should be noted that this plan is strategic in focus rather than tactical in nature. As the Town moves forward, tactical initiatives will evolve to meet the needs of the market. The overall strategic focus will not change but operational plans will continually evolve. This dynamic process will eventually result in the need for detailed marketing, technical and operational plans.

STRATEGIC INITIATIVES

The strategic goals of the Town of Tusayan are to:

1. Provide reliable, high quality, low cost broadband services to residential, commercial, and industrial customers.
2. Significantly impact the tourism industry by providing high speed internet access to all visitors.
3. Partner with area service providers to optimize market development and maximize network capacity.

TACTICAL INITIATIVES

The tactical initiatives of the Town of Tusayan are to:

1. Design and build a fiber optic network to provide the Town's residential, commercial and industrial customers with a state-of-the-art telecommunications infrastructure.

2. Develop and deploy service offerings to include dedicated high-speed bandwidth capacity and dark fiber sales and/or lease.

3. Identify, analyze, and develop revenue opportunities based on network connectivity and utilization.

NEEDS ASSESSMENT

A part of the *Tusayan Broadband Network Strategic Plan* is to conduct a needs assessment. The primary focus of the needs assessment is to answer the following questions:

1. What are the Town's needs?
2. Who are the current players?
3. What is a realistic timeframe for implementation?

To address the first question, a needs assessment questionnaire was sent to the various community anchor institutions including the National Parks Service, the National Forest Service, the Grand Canyon National Park Airport, the Grand Canyon School District, and the North Country Healthcare Clinic. Refer to Attachment A for returned questionnaires. The general consensus from all organizations indicated a high level of interest in acquiring additional bandwidth for present and future needs. Some organizations required a higher level of bandwidth immediately. Mr. Bill Smith, IT Manager for the North Country Community Health Organization stated "Although we have a 100 MB connection here in Flagstaff, we do not have enough bandwidth for effective tele-health/telemedicine opportunities in Tusayan. Current capacity for the clinic is at 512 Kbps which is not sufficient for diagnostic-quality imaging."

With respect to the internet providers that serve the area, please refer to Table 2 on the following page for a complete listing. Other than CenturyLink, most of the Town's providers are wireless entities in the region. Satellite is available almost everywhere but the high cost and bandwidth capabilities are low. CenturyLink can provide T-1 and perhaps DSL services within the Tusayan area, but neither are priced competitively nor meet the needs of the Town. Wireless options are available in the area and offer Motorola canopy solutions for internet access, while some are capable of speeds up to 20 Mbps, the majority are only offering up to 2 Mbps of service. The wireless providers offer limited access coupled with little reliability. The best solution for high speed internet in Tusayan would be a direct license frequency point to point connection to a tier II internet provider until such time that funds are available for a fiber interconnection to a point of presence. Interconnection can be obtained in Williams, AZ. This would provide the most reliable solution for the Town's need.

Table 2

Name	Type of Service	Link to Contact
CenturyLink	Tethered / Copper	http://www.centurylink.com
EarthLink	Wireless	http://www.earthlink.net/access/index.faces
CommSpeed	Wireless	http://www.commspeed.net
eSedona Wireless	Wireless	http://www.esedona.net
Dishnet	Wireless	http://www.dish.com
Swift Wireless Internet	Wireless	http://www.swiftwireless.net
HughesNet	Wireless	http://www.hughesnetwebservices.com/
Localnet	Wireless	http://www.localnet.com
Corecomm	Wireless	http://www.core.com
NPG Cable	Wireless	http://www.npgcable.net
Hopi Telecommunications	Wireless	http://www.hopitelecom.net

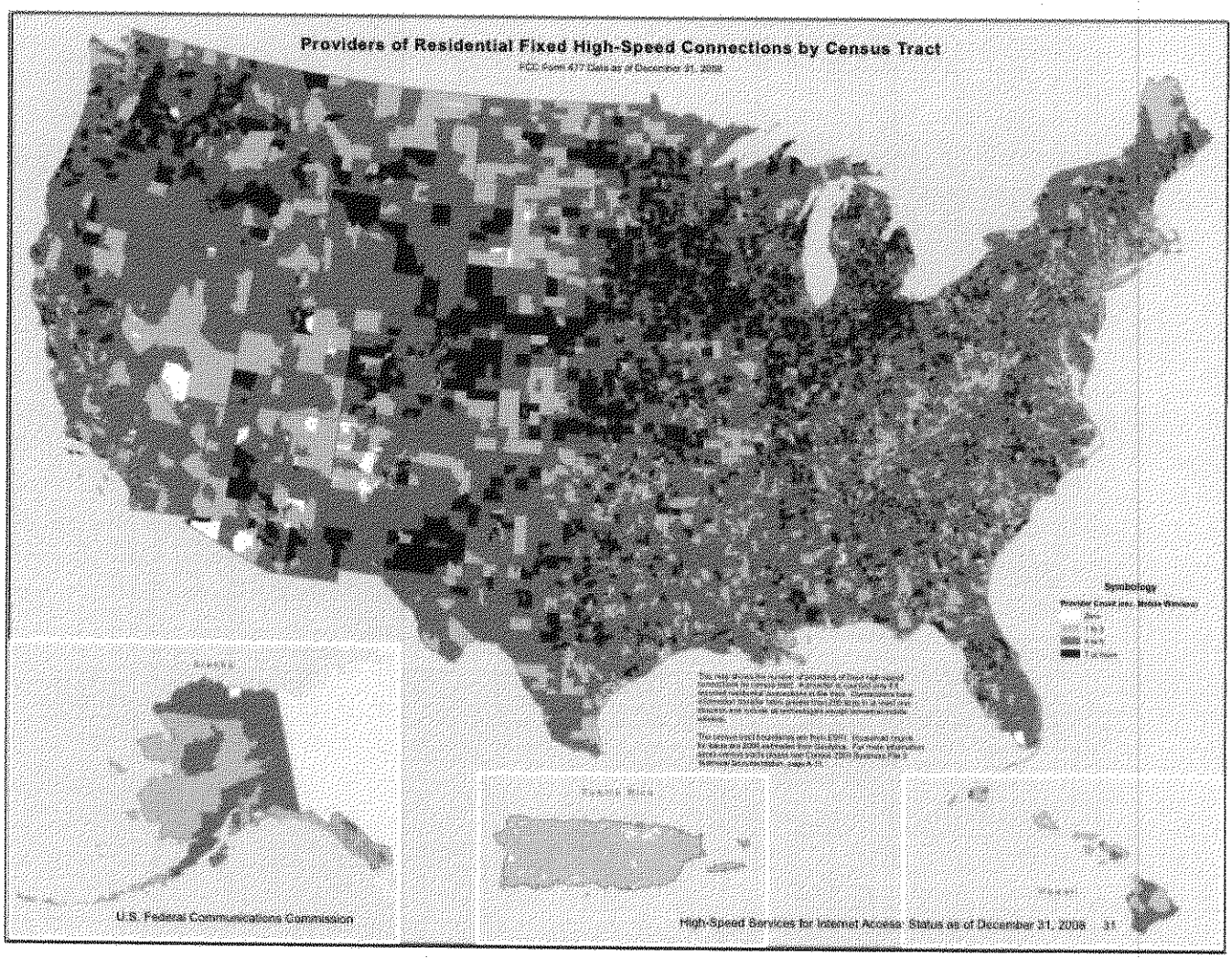
Regarding scheduling inputs for an implementation plan, the Town may choose to commence at any time with the recommended short term solution; however, NIS recommends reviewing existing contracts. Negotiations for a fiber backbone may take anywhere from six months to several years depending on the entities involved. The physical construction of the outside plant infrastructure as well as the virtual network infrastructure will take another year to complete assuming right of way and permitting are in place. Negotiations with a point of presence (POP) or Data Hotel[2] will also take additional time when agreeing on a suitable price for wholesale bandwidth. As bandwidth will be the single largest recurring expense, connection to a POP can equate

[2] Data Hotel - an artificial demarcation point or interface point between two or more telecommunications entities

to paying a nominal price for bandwidth ($5.00 to $10.00 per megabit) compared to paying $50 to $225 per megabit. The bandwidth price will be even more crucial as demand for faster bandwidth increases.

COMPETITIVE TECHNOLOGIES ASSESSMENT

Emerging Competitive Broadband Technologies



Wireless Technologies:

WiFi

WiFi provides an amazing amount of wireless bandwidth, which can support voice, video and data applications. Common uses for WiFi include high-speed wireless Internet accesss, wireless VoIP phone calls, wireless gaming, wireless video surveillance and wireless network connectivity for a wide variety of consumer electronics such as televisions, DVD players, and digital cameras.

There are more than 250,000 public Internet WiFi hotspots where users can get free or fee-based wireless Internet access. This does not include the nearly 10 million residential and business wireless access points and wireless routers that are attached to a DSL or cable modem broadband connection. Turning on a laptop in an airport, bus station, shopping mall, apartment complex, residential neighborhood, franchise restaurant, truck stop or hotel and you are almost guaranteed to find a WiFi Internet access point that will provide users with wireless high-speed Internet access.

WiFi Advantages

Wireless Internet Allows LANs to be deployed without cabling for client devices, typically reducing the costs of network deployment and expansion. Spaces where cables cannot be run, such as outdoor areas and historical buildings, can host wireless LANs. Getting a laptop without a built in WiFi has become an exception.

WiFi chipset pricing continues to come down, making it a very economical networking tool and driving inclusion of WiFi in an ever-widening array of devices. WiFi products are widely available in the market. Different competitive brands of access points and client network interfaces are inter-operable at a basic level of service. Products designated as WiFi CERTIFIED by the WiFi Alliance are inter-operable.

WiFi is a global set of standards. Unlike cellular carriers, the same WiFi device works in different countries around the world. It is widely available in more than 350,000 public hot spots and tens of millions of homes, corporate and university campuses worldwide.

Disadvantages of Wi-Fi

Spectrum assignments and operational limitations are not consistent worldwide. WiFi networks have limited range. A typical WiFi home router using 802.11b or 802.11g with a stock antenna might have a range of 150 ft indoors and 300 ft outdoors. Range also varies with frequency band. WiFi in the 2.4 GHz frequency block has slightly better range than WiFi in the 5 GHz frequency block. Wi-Fi can be a problem in high-density areas such as large apartment complexes or office buildings with many WiFi access points as other devices such as microwave ovens, cordless phones, baby monitors, security cameras, and Bluetooth devices also use the 2.4 GHz band

Wireless Mesh Networking

Wireless Mesh Networking is a method to route data and voice between wireless nodes or wireless Wi-Fi access points. It allows for continuous connections and reconfiguration around broken or blocked paths by "hopping" from node to node until the destination is reached. A mesh network whose nodes are all connected to each other is a fully connected network. Wireless mesh networks differ from other networks in that the component parts can all connect to each other via multiple hops, and they generally are not mobile. Wireless mesh networking is a network that is implemented over a series of outdoor Wi-Fi access points that that all meshed together into a single, unified wireless network.

Whereas the Internet is mostly a wire-based, co-operative electronic communication infrastructure similar to the international postal agreement, in that messages are mutually delivered and relayed within their separate domains free of charge (i.e. if you relay my messages within your domain I'll relay yours within mine), Mesh is a wireless co-operative communication infrastructure between a massive amount of individual wireless transceivers (i.e. a wireless mesh) that have Ethernet type capabilities.

This type of infrastructure can be decentralized (with no central server) for less scalable applications or centrally controlled for highly scalable applications (with a central server). Both are relatively inexpensive and very reliable and resilient, as each node[3] needs to transmit only as far as the next node. Nodes act as repeaters to transmit data from nearby nodes to peers that are too far away to reach resulting in a network that can span large distances, especially over rough or difficult terrain.

Wireless mesh networks are also extremely reliable, as each node is connected to several other nodes. If one node drops out of the network, due to hardware failure or any other reason, its neighboring nodes simply finds another route. Extra capacity can be installed by simply adding more nodes. Mesh networks may involve either fixed or mobile devices. These solutions are for communications in difficult environments such as high speed mobile video applications on public transport.

The new generation of wireless mesh networks consist of three Radios with Multi-radio Wireless Backhaul. Third-generation mesh networking products add at least two physical radios for the backhaul. One backhaul radio is used to create a link to its upstream (nearer the wired source or "root") node. Another backhaul radio creates a link downstream to the next neighbor node. Unlike second-generation solution, these two radios may make use of different channels.

[3] Node - A connecting point at which several lines come together or any computer that is hooked up to a computer network.

This increases the performance of the network in three ways:

- Each node may be sending and receiving simultaneously to its upstream and downstream neighbors, unlike first-or second-generation nodes, which must continually "turn around" between sending and receiving upstream and downstream.

- Because each link is managed independently, the available channels may be re-used across the network. This expands the available spectrum, increasing performance of the network 50 times or more compared to first- and second-generation solutions.

- Radio is a shared medium. Nearby radios not part of the mesh network are constantly competing for air space. In first and second generation technologies, the backhaul channel is effectively "locked" once selected. They have only one backhaul radio on each node and if the channel has to be changed it affects all nodes. In contrast, third generation mesh nodes have two backhaul radios.

Wi-MAX Wireless Internet Access

Wi-MAX is defined as Worldwide Interoperability for Microwave Access by the Wi-MAX Forum to promote conformance and interoperability of the IEEE 802.16 standard, officially known as WirelessMAN. Wi-MAX aims to provide wireless data over long distances, in a variety of different ways, from point to point links to full mobile cellular type access. In practical terms this enables a user, for example, to browse the Internet on a laptop computer without physically connecting the laptop to a wall jack. The Forum describes Wi-MAX as "a standards-based technology enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL."

Wi-MAX Uses

The bandwidth and reach of Wi-MAX make it suitable for the following potential applications:

- Connecting Wi-Fi hotspots with each other and to other parts of the Internet.
- Providing a wireless alternative to cable and DSL for last mile broadband access.
- Providing high-speed data and telecommunications services.

LTE: Long Term Evolution

LTE is part of the Global System for Mobile Communications (GSM). The overall objective for LTE is to provide an extremely high performance radio-access technology that offers full vehicular speed mobility.

LTE assumes a full Internet Protocol (IP) network architecture and is designed to support voice in the packet domain. It incorporates top-of-the-line radio techniques to achieve performance levels beyond what will be practical with Wi-Fi. However, in the same way that third generation (3G) coexists with second generation (2G) systems in integrated networks, LTE systems will coexist with 3G and 2G systems.

LTE capabilities include:

- Downlink peak data rates up to 326 Mbps with 20 MHz bandwidth
- Uplink peak data rates up to 86.4 Mbps with 20 MHz bandwidth

All Radio and Microwave delivery methods have issues with atmospheric conditions. The technology to deliver bandwidth via microwave is reduced based upon the atmospheric conditions and hence is not consistent enough to be able to guarantee a fixed Dedicated Internet Access (DIA) rate under all conditions.

FIBER OPTIC TECHNOLOGY

Fiber Optic Technology

Fiber optics systems have found many uses in a variety of industries, but nowhere has it had such a profound effect as it has in telecommunications. Originally considered to be a prohibitively expensive technology in search of practical applications, it has now transformed the very communication infrastructure. It has achieved this because of two simple advantages it has over copper:

(1) The ability to transmit data at higher transmission rates and with low losses

(2) The ability to do this at lower error rates.

Over the last few years fiber optic technology has advanced at a tremendous rate driven by the need for higher bandwidth on long distance backhaul. Fiber optic technology is far from being plateaued. The next step will be coherent transmission systems that will improve the quality of fiber optic data transmission.

If all you want to do is surf web pages, download a few songs, send and receive some photographs, or watch streaming video at current picture quality levels, then the bandwidth provided by today's cable modems and DSL services is probably good enough for you. But the world is moving toward vastly higher bandwidth applications.

Companies like Netflix, Amazon and Wal-Mart are offering feature-length movies for download. More people are looking to upload their own home movies into emails or web pages. Consumer electronics companies are coming out with devices that connect televisions to the Internet. High-definition video is fast becoming the state-of-the-art, and one high definition movie takes up as much bandwidth as 35,000 web pages.

In the meantime, a growing number of companies are offering "software as service – meaning you subscribe to applications on the net rather than install them on

your own computer. These "cloud computing" applications are now available for word processing, emailing, automated remote file backup, and a host of business and personal services. All of these applications – and many others we haven't even dreamed of yet – are going to require much greater bandwidth than what is generally available today, even from "broadband" providers.

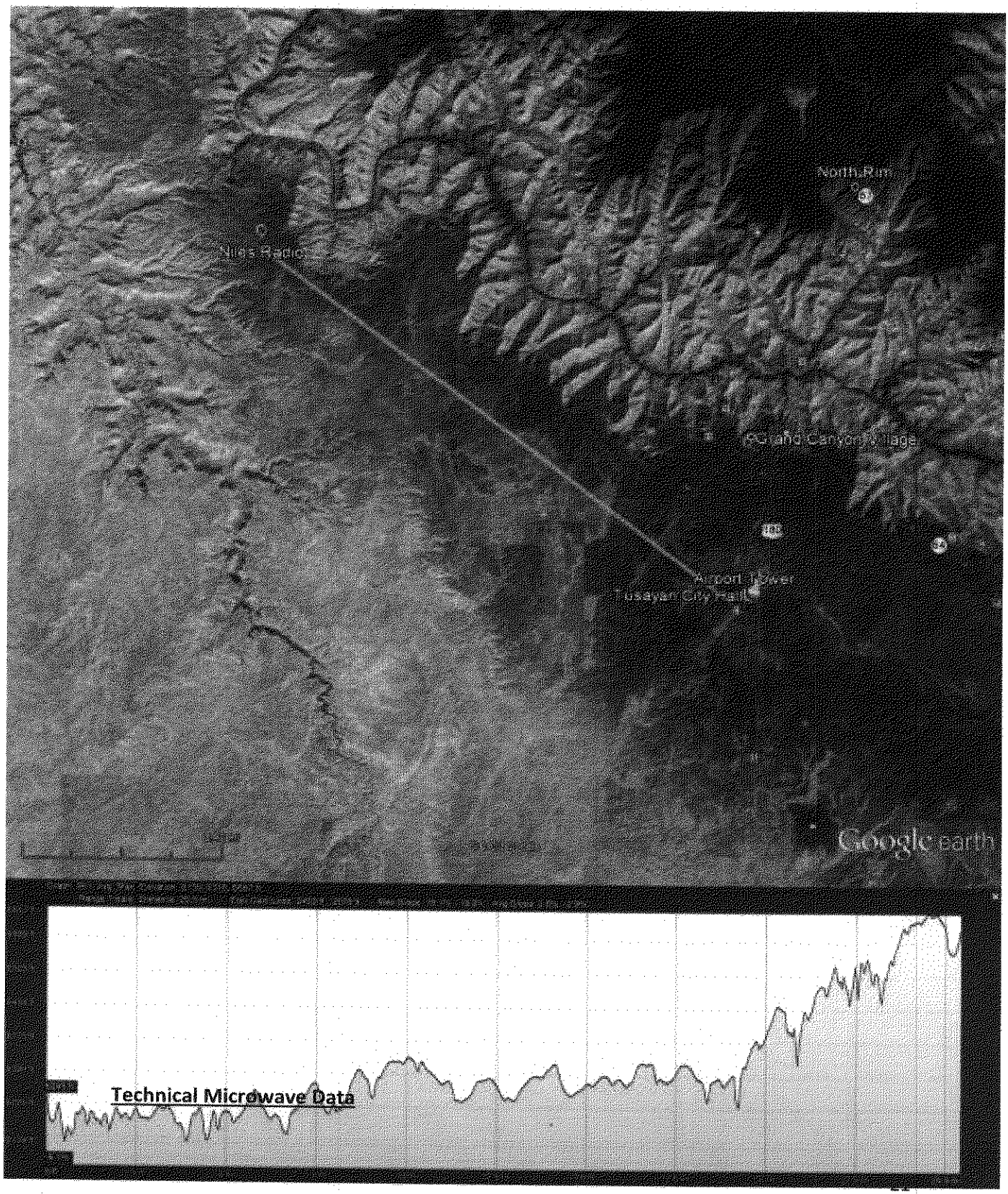
Fiber to the Node (Home, Curb, Street)

There are already more than a thousand telecom network operators and service providers across North America that have upgraded to FTTH. The vast majority of these are local incumbent telephone companies that are looking to transform themselves from voice and DSL providers into 21st century broadband companies that can deliver ultra-high speed internet and robust video services, as well as be able to deliver other high-bandwidth digital applications and services to homes and businesses in the years ahead.

Communities across the Americas are discovering that their future economic development and quality of life is becoming ever more dependent on the speed of the networks that their citizens can access. Gigabit-enabled networks are now possible and are beginning to appear in some communities, with expectations that these superfast, all-fiber services will become standard within a few short years. But how can civic, business and political leaders begin the process of bringing these services to their own communities?

Conceptual Design

The following represents the short term microwave solution design:



Summary	
Link Type	Line-of-Sight
Equipment Type	PTP11800 with ODU-B
Maximum Confirmed Obstruction	0 feet
Link Distance	25.551 miles
Free Space Path Loss	145.71 dB
User IP Throughput Expectation Aggregate	Aggregate 360.12 Mbps (473.22Mbps Max Available)
RF Frequency Band	11 GHz (10700 to 11700 MHz)
RF Channel Bandwidth	40 MHz

Link Configuration	
Link Type	1+0
T/R Spacing	490 MHz
Bandwidth	40 MHz
Modulation Mode	Adaptive
Maximum Service Mod Mode	256QAM 0.80 (236.61Mbps)
Maximum Traffic Mod Mode	64QAM 0.87 (180.06Mbps)
Minimum Mod Mode	32QAM 0.92 (150.47Mbps)
Polarization	Vertical
ATPC	Enabled
Hi	Topocoba REV
Lo	ADOT GC Airport

Installation Notes for Topocoba REV	
Coordinates	36:10:19.0N 112:30:21.0W
Site Elevation	6250 feet AMSL
Polarization	Vertical
Antenna Type	6ft HP Antenna 85010089005 Direct
Antenna Beamwidth	1.10°
Antenna Height	100.0 feet AGL
Bearing to ADOT GC Airport	125.36° from True North
Antenna Tilt angle	0.1°
Hardware Platform	PTP11800 with ODU-B
Link Name	Topocoba REV to ADOT GC Airport
Site Name	Topocoba REV
RFU Platform	ODU-B
Antenna Gain	43.82 dBi
RF Feeder Loss	0.0 dB
Maximum Transmit Power	20.0 dBm
EIRP	63.8 dBm
Automatic Transmitter Power Control	Enabled
BNC Target Voltage	3.08 to 3.72 Volts
Predicted Receive Power	-39 dBm ± 5 dB while aligning
Predicted Operational Receive Power	-39 dBm ± 5 dB
Maximum Link Loss	146.11 dB ± 5.00 dB

Installation Notes for ADOT GC Airport	
Coordinates	35:57:24.8N 112:08:02.8W
Site Elevation	6682 feet AMSL

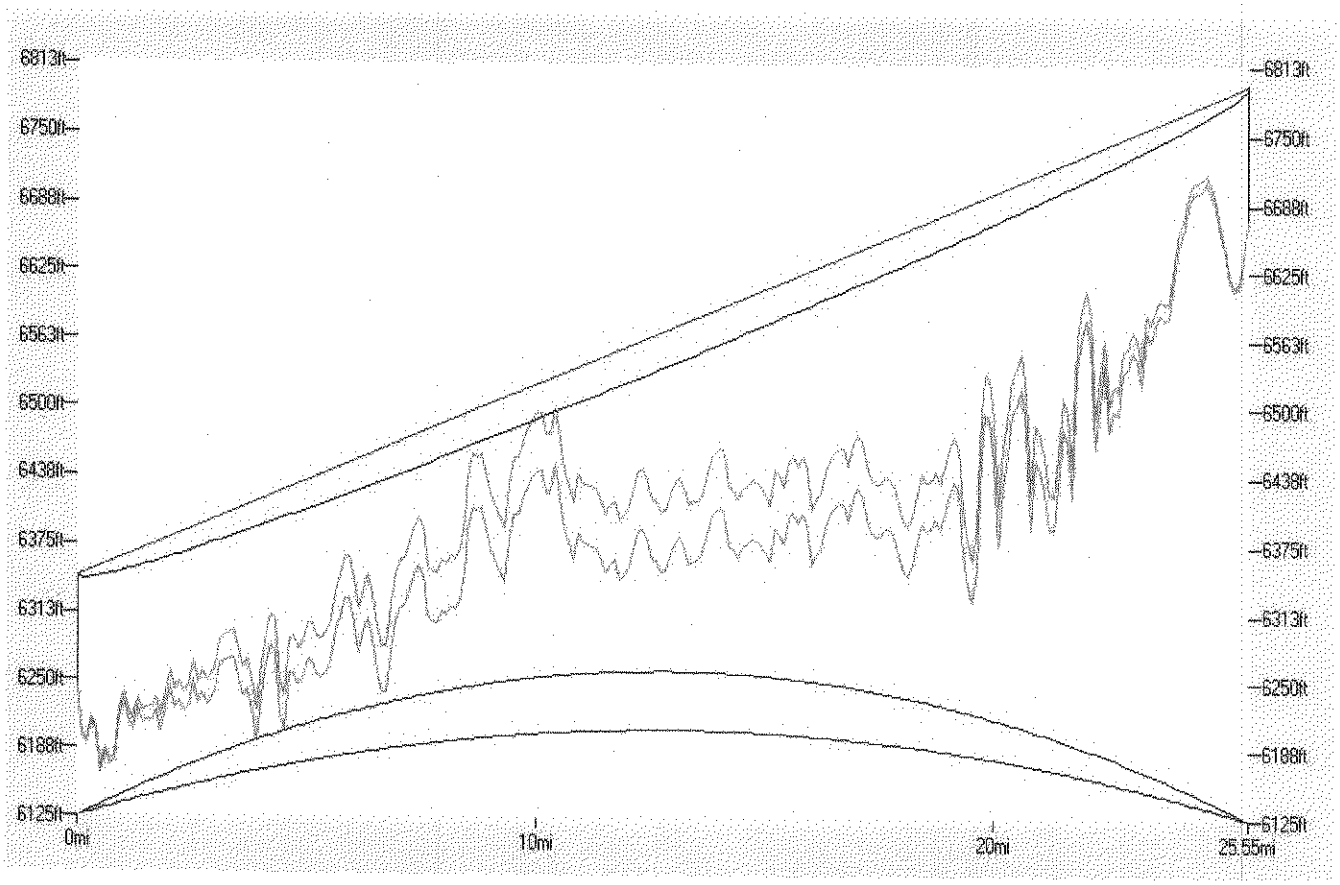
Polarization	Vertical
Antenna Type	6ft HP Antenna 85010089005 –Direct
Antenna Beamwidth	1.10°
Antenna Height	120.0 feet AGL
Bearing to Topocoba REV	305.58° from True North
Antenna Tilt angle	-0.3°
Hardware Platform	PTP11800 with ODU-B
Link Name	Topocoba REV to ADOT GC Airport
Site Name	ADOT GC Airport
RFU Platform	ODU-B
Antenna Gain	43.33 dBi
RF Feeder Loss	0.0 dB
Radio License Band	11 GHz
Radio License Region	FCC
Radio License Bandwidth	40 MHz
Radio License Mod Mode	Adaptive
Radio License Max Mod Mode	64QAM 0.87
Radio License Min Mod Mode	32QAM 0.92
Radio License Tx Freq	10730.0 MHz
Radio License Rx Freq	11220.0 MHz
Maximum Transmit Power	20.0 dBm
EIRP	63.3 dBm
Automatic Transmitter Power Control	Enabled
BNC Target Voltage	3.14 to 3.78 Volts
Predicted Receive Power	-38 dBm ± 5 dB while aligning
Predicted Operational Receive Power	-38 dBm ± 5 dB
Maximum Link Loss	146.11 dB ± 5.00 dB

Topocoba REV Performance *	
Mean IP Throughput Predicted	180.06 Mbps
Mean IP Throughput Required	180.00 Mbps
Minimum IP Throughput Required	150.00 Mbps
Minimum IP Throughput Availability Predicted	99.9996% (unavailable for 2.2 min/yr)
Interference Expected	-97.98 dBm/ 40 MHz

ADOT GC Airport Performance *	
Mean IP Throughput Required	180.06 Mbps
Mean IP Throughput Predicted	180.00 Mbps
Minimum IP Throughput Required	150.00 Mbps
Minimum IP Throughput Availability Predicted	99.9996% (unavailable for 2.0 min/yr)
Interference Expected	-97.98 dBm/ 40 MHz
* Multipath availability calculated using ITU-R	

Lowest Mode Availability Data	
dN/dH not to exceed foir 1% of time	-210.29 N units/km
Area roughness 110X110km	352 m
Geoclimactic factor	4.358e-005
Fade Occurance Factor (P0)	8.32e-004
Path Inclination	3.35mr
0.01% Rain Rate	26.99 mm/hr
Rain Availability	99.99958%
Rain Unavailability	2.2 mins / year
Annual 1 Way Availability	99.99999%
Annual 2 Way Availability	99.99998%
Annual 2 Way Unavailability	5 secs / year
Annual 2 way Availability Including Rain	99.99956%
Annual 2 way Unavailability Including Rain	2.3 minutes / year

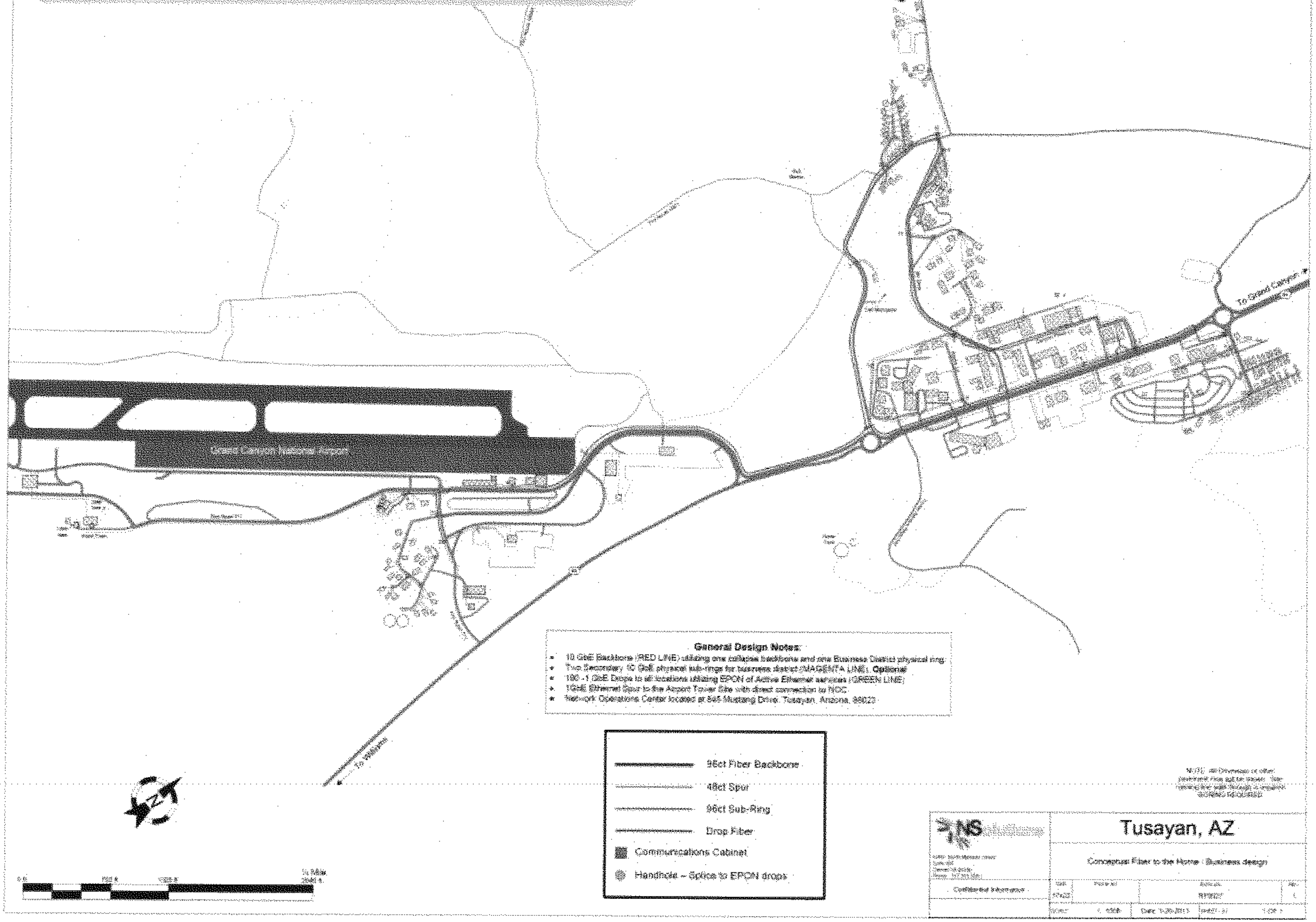
Regulatory Conditions	
Regulation	FCC
Max EIRP	63.82 dBm
Output Power	20.00 dBm



Fiber to the home Conceptual Design

NIS recommends the Town implement a fiber to the home (FTTH) solution with interconnection to a point of presence as their long term goal. The FTTH solution will resolve any bandwidth deficiencies for decades. Please refer to the following page for details.

Tusayan Arizona Conceptual FTTH Fiber Design



Cost Estimates

Fiber to the Home / Electronics Cost Estimates

Tusayan Active Ethernet Fiber to the Premise Estimated HW Costs				
Product Type	Description	Qty	Sale Price Each	Extended
ELECTRONICS HARDWARE				
				$174,166.00
SERVICE / Maintenance and Support	Based upon Typical support and Maintenance costs at 15% of HW Costs			$26,124.90
	Estimated Total			$200,290.90
	Electronics (plus 10% for Contingencies)			$220,319.99
Fiber Optic Construction	Fiber Construction (Backbone)			$515,132.58
	Fiber Optic (Lateral to Interconnection Point in Williams)			$2,783,000.00
	Total Estimated Costs			**$ 3,518,452.57**

Financial Feasibility Analysis

An economic analysis was conducted to determine the financial basis for constructing a broadband telecommunications system to provide a high speed data network for the Town of Tusayan. Included in this analysis are financial models to provide high-speed data and Internet Access. Annual costs and revenues were projected for a fifteen (15) year period of full service operation. These projections, along with the estimated capital costs, were used to compute the net present value, payback period, and year-end cash available resulting from the project.

The financial analysis and report uses certain assumptions to create the overall analysis. In addition to specific Town data, like numbers of retail and business customers, there were other project cost assumptions. These included non-recurring costs such as initial construction and equipment costs as well as recurring costs like ongoing maintenance costs. Listed below are the assumptions made:

Financial Model Assumptions

1. Assumes fiber construction at $50,000 per mile
2. Bandwidth (100 Mb)
3. Hiring of one Network Engineer / Technician starting at 40k plus 3% annual raise
4. Assumes the Town will own the microwave equipment
5. No Pole attachment charges
6. No Right of Way or Permitting Costs

Fiber Counts

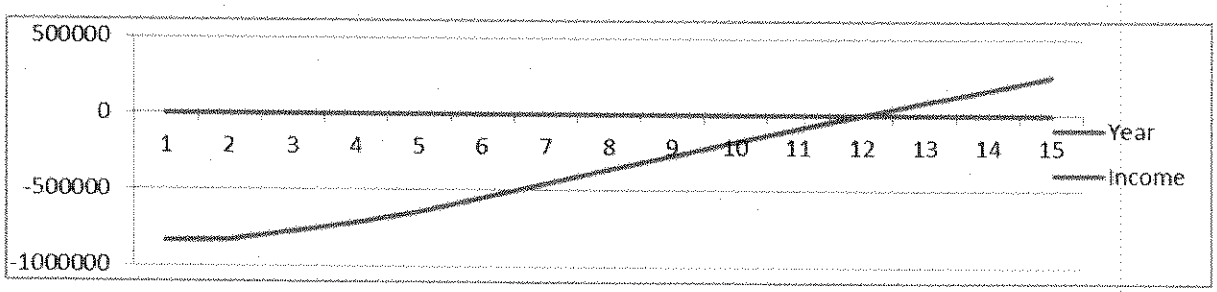
Backbone Total: 10.3 miles

1. Total 96ct Armored direct buried cable 22,746 FEET – 4.3 miles
2. 48ct Direct buried armored Distribution fiber - 31,652 feet – 6 miles
3. 6ct Direct buried Drop Cable – 48,950 feet – 9.3 miles: Drop routes will be change based upon the Topography when constructed the length has been upped to reflect this.

Lateral to Williams: 57 Miles

Base Model

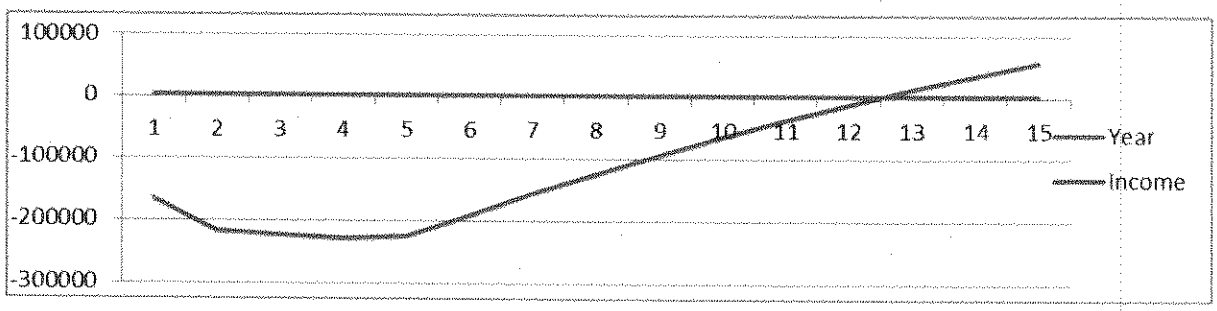
1. Take Rate Assumptions
    a. Residential 1st Yr - 15%; 2nd Yr – 25%; 3rd- 5th Yr – 35%; after 5 yrs – 45%
    b. Businesses 1st Yr - 15%; 2nd Yr – 25%; 3rd – 5th Yr – 35%; after 5 yrs – 45%
    c. Institutions purchasing 10 MB @ $100/MB
        i. 1st Year – 2
        ii. 2nd Year – 3
        iii. 3rd & 4th Year – 4
        iv. 5th Year and after – 5
2. Assumed pricing
    a. Residential ($69.95/ Month)
    b. Business ($129.95 / Month)
    c. Institutions ($1,000 for 10 MB Dedicated Internet Access)
3. No Loan
4. No Depreciation calculated
5. 75K for electronics upgrade added after year 10
6. Internal Rate of Return (IRR) at the end of 15 years **3%**
7. Net Present Value (NPV) at the end of 15 years **$-93,372**
8. Cash Flow at the end of 15 years **$252,564**



Base Model with loan

1. (PMT) Payment for a loan based on constant payments and a constant interest rate.
2. Annual Interest Rate: 5%
3. PMT includes principal and interest but no taxes, reserve payments, or fees sometimes associated with loans.

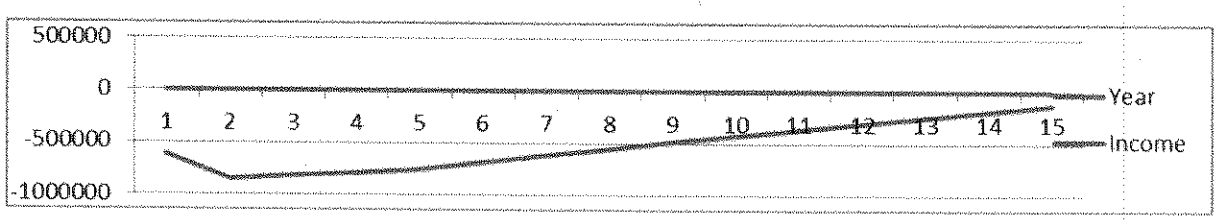
4. Take Rates (same as Base Model)
5. Pricing (same as Base Model)
6. Fiber Optic Plant (Amortized 30 yrs)
7. Electronics (Amortized 10 yrs)
8. Internal Rate of Return (IRR) at the end of 15 years **3%**
9. Net Present Value (NPV) at the end of 15 years **$-36,921**
10. Cash Flow at the end of 15 years **$57,379**



Base Model plus Lateral to Interconnection in Williams

Same as base model with Loan except for the following changes

1. Bandwidth Purchase at Interconnection Point (1 GB @ $5.00/MB)
2. Additional 57 miles of fiber optics construction @ 50K per mile
3. Additional Sale of 500 MB @ $35/MB to Providers (AT&T, Century Link, APS, etc...)
4. Internal Rate of Return (IRR) at the end of 15 years: -2%
5. Net Present Value (NPV) at the end of 15 years $-342,008
6. Cash Flow at the end of 15 years $-134,494

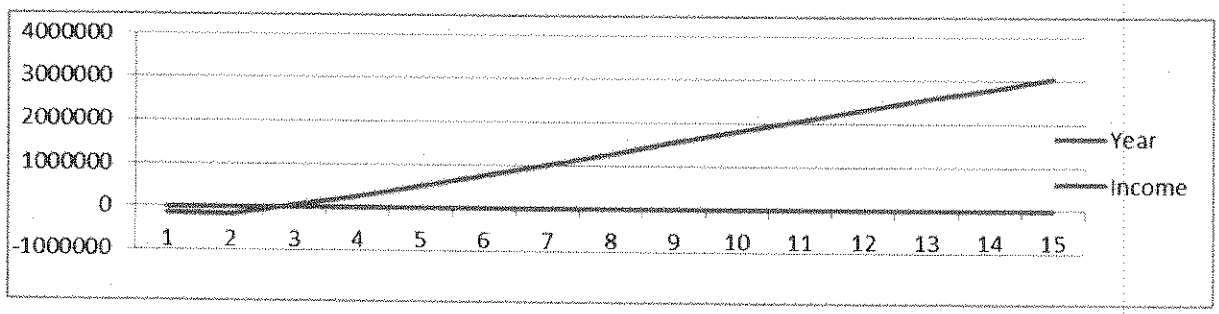


(Cost Sharing Model) Base Model plus Lateral to Interconnection in Williams

Same as previous model but with Cost Sharing:

Town of Tusayan	20%
APS	30%
Providers (AT&T, CenturyLink, Etc...)	30%
Grant Funds	20%

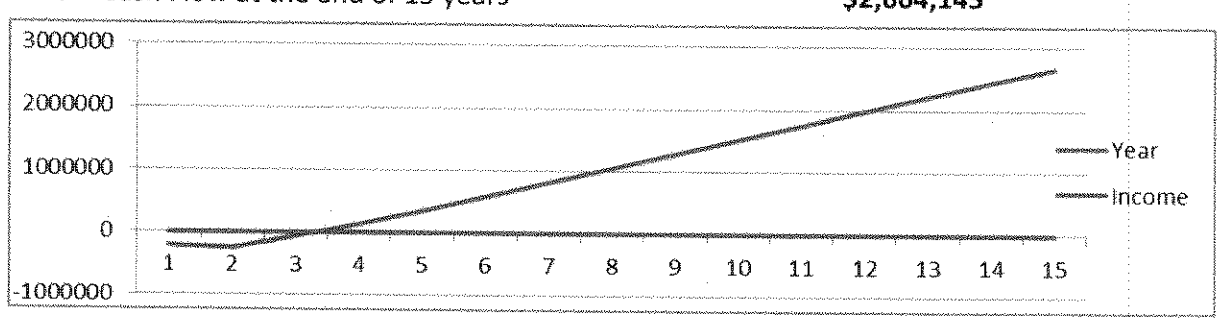
1. Internal Rate of Return (IRR) at the end of 15 years **79%**
2. Net Present Value (NPV) at the end of 15 years **$1,944,540**
3. Cash Flow at the end of 15 years **$3,063,951**



(Cost Sharing Model 2) Base Model plus Lateral to Interconnection in Williams

Town of Tusayan	30%
APS	50%
Grant Funds	20%

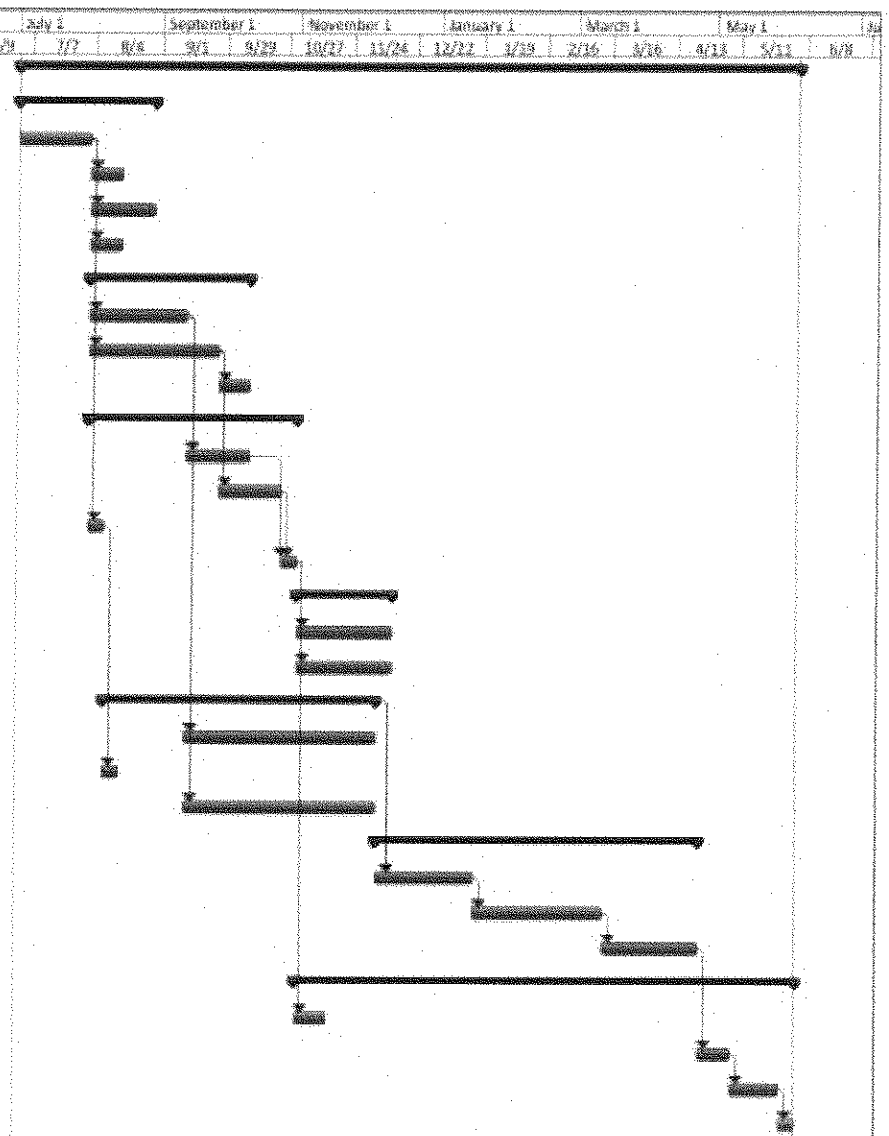
1. Internal Rate of Return (IRR) at the end of 15 years **56%**
2. Net Present Value (NPV) at the end of 15 years **$1,658,721**
3. Cash Flow at the end of 15 years **$2,664,145**



It must be stressed that quantifying the financial feasibility of an operational network providing retail telecommunications services is certainly a challenge given the complexities and dynamics of the marketplace. The utilization of accurate market condition assumptions and business plan strategies, supported by market research, can increase the accuracy and reliability of a detailed financial analysis. Nevertheless, and absent detailed market research data, the attached financial analysis uses certain assumptions and parameters to calculate the overall projected value of the telecommunications project. Refer to Appendix B for Models.

Implementation Plan

ID	Task Name	Duration	Start	Finish
1	**Tusayan Fiber to the Home (FTTH) Implementation Plan**	**243 days**	**Mon 7/1/13**	**Wed 6/4/14**
2	**Project Start Up**	**43 days**	**Mon 7/1/13**	**Wed 8/28/13**
3	Budgeting & Funding	23 days	Mon 7/1/13	Wed 7/31/13
4	Legal Review	10 days	Thu 8/1/13	Wed 8/14/13
5	Marketing & Sales Development	20 days	Thu 8/1/13	Wed 8/28/13
6	Connectivity (Contracts, BW, Existing Commitments)	10 days	Thu 8/1/13	Wed 8/14/13
7	**Engineering**	**50 days**	**Thu 8/1/13**	**Wed 10/9/13**
8	Detailed Engineering Design	30 days	Thu 8/1/13	Wed 9/11/13
9	Detailed Network Engineering Design	40 days	Thu 8/1/13	Wed 9/25/13
10	Detailed Bandwidth Provisioning Design for 3rd Parties	10 days	Thu 9/26/13	Wed 10/9/13
11	**Bidding Process**	**55 days**	**Thu 8/1/13**	**Wed 10/30/13**
12	Construction RFP	20 days	Thu 9/12/13	Wed 10/9/13
13	Electronics RFP	20 days	Thu 9/26/13	Wed 10/23/13
14	Quote for Bandwidth Connectivity	5 days	Thu 8/1/13	Wed 8/7/13
15	Bid Review and Selection	5 days	Thu 10/24/13	Wed 10/30/13
16	**Procurement**	**30 days**	**Thu 10/31/13**	**Wed 12/11/13**
17	Fiber Optic Hardware	30 days	Thu 10/31/13	Wed 12/11/13
18	Electronics	30 days	Thu 10/31/13	Wed 12/11/13
19	**Permitting**	**85 days**	**Thu 8/8/13**	**Wed 12/4/13**
20	Right of Way (ROW)	60 days	Thu 9/12/13	Wed 12/4/13
21	Tower Co-Location Agreement	5 days	Thu 8/8/13	Wed 8/14/13
22	Permitting	60 days	Thu 9/12/13	Wed 12/4/13
23	**Construction**	**160 days**	**Thu 12/5/13**	**Wed 6/4/14**
24	Backbone Fiber	30 days	Thu 12/5/13	Wed 1/15/14
25	Distribution Fiber	40 days	Thu 1/16/14	Wed 3/12/14
26	Fiber Drop	30 days	Thu 3/13/14	Wed 4/23/14
27	**Electronics**	**155 days**	**Thu 10/31/13**	**Wed 6/4/14**
28	Internet Provisioning & Cross Connect	10 days	Thu 10/31/13	Wed 11/13/13
29	Electronics Installation	10 days	Thu 4/24/14	Wed 5/7/14
30	Network Configuration & Testing	15 days	Thu 5/8/14	Wed 5/28/14
31	Network Turn Up	5 days	Thu 5/29/14	Wed 6/4/14



Project: Tusayan Implementation
Date: Tue 5/21/13

Task	Project Summary	Inactive Milestone	Manual Summary Rollup	Deadline			
Split	External Tasks	Inactive Summary	Manual Summary	Progress			
Milestone	External Milestone	Manual Task	Start-only				
Summary	Inactive Task	Duration-only	Finish-only				

Grants

NIS recommends the Town apply for obtaining funding through various State grants. NIS recommends partnering with the local intuitions such as the National Forest Service, the Grand Canyon National Park Airport, the Grand Canyon School District, and the North Country Healthcare Clinic to obtain funding via the sources listed below:

1. FCC Rural Tele-health Initiatives
2. Homeland Security Grants
3. State Technology Grants
4. E-Rate Funding for Schools
5. Rural Utility Services Grants

Conclusion

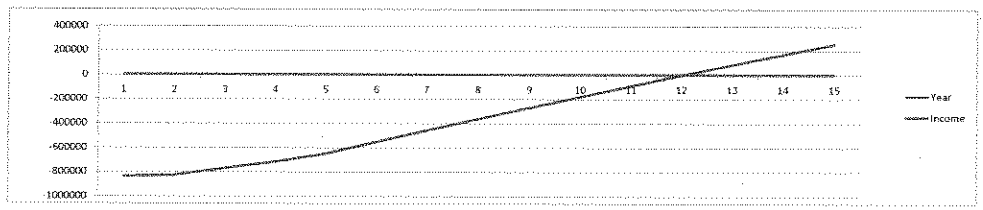
NIS recommends the Town initiate the following steps to resolve their bandwidth issues.

1. Proceed with detailed design and building fiber to the home in the town
2. Implement short term microwave solution
3. Sign a contract with Niles radio for bandwidth
4. Design your microwave network and integration with the FTTH
5. Find a partner to provide local services or the town may choose to become a provider
6. Work on long term solution by building a fiber optic backbone with APS and other potential providers

Tusayan Financial Model - Fiber Backbone with MW Transport from Niles Radio (05/20/2013)

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bandwidth Take Rate	**Rate**	15%	25%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Residences		47	78	109	109	109	140	140	140	140	140	140	140	140	140	140
Business		7	11	15	15	15	20	20	20	20	20	20	20	20	20	20
Institutions		2	3	4	4	5	5	5	5	5	5	5	5	5	5	5
Transport Income	**Price**															
Residences ($69.95)	$69.95	39,158	65,263	91,369	91,369	91,369	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474
Business ($129.95)	$129.95	10,292	17,153	24,015	24,015	24,015	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876
Institutions (TBD)		24,000	36,000	48,000	48,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
	subtotal income	73,450	118,417	163,383	163,383	175,383	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350
Up Front Costs																
Fiber Construction (Backbone)		515,133														
Electronic equipment costs		220,320														
Engineering @ 10% of Construction & Electronics		73,545														
Recurring Costs																
Microwave (50 Mb First Two years; 100 Mb after)		64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800
Network Engineer / Technician		40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	60,504
	subtotal costs	913,798	106,000	107,236	108,509	109,820	111,171	112,562	113,995	115,471	116,991	118,557	120,169	121,830	123,541	125,304
	net	($840,348)	$12,417	$56,147	$54,874	$65,563	$97,179	$95,788	$94,355	$92,879	$91,359	$89,793	$88,181	$86,520	$84,809	$83,047
	cumulative	($840,348)	($827,931)	($771,784)	($716,909)	($651,346)	($554,167)	($458,379)	($364,024)	($271,144)	($179,785)	($89,992)	($1,811)	$84,709	$169,518	$252,564

IRR 3%
NPV ($93,371.66)

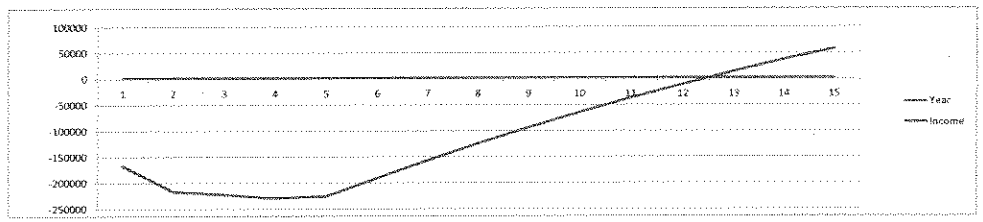


Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Income	($640,348)	($827,931)	($771,784)	($716,909)	($651,346)	($554,167)	($458,379)	($364,024)	($271,144)	($179,785)	($89,992)	($1,811)	$84,709	$169,518	$252,564

Tusayan Financial Model - Fiber Backbone with MW Transport from Niles Radio

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Bandwidth Take Rate	**Rate**	15%	25%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Residences		47	78	109	109	109	140	140	140	140	140	140	140	140	140	140
Business		7	11	15	15	15	20	20	20	20	20	20	20	20	20	20
Institutions		2	3	4	4	5	5	5	5	5	5	5	5	5	5	5
Transport Income	**Price**															
Residences ($69.95)	$69.95	39,158	65,263	91,369	91,369	91,369	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474
Business ($129.95)	$129.95	10,292	17,153	24,015	24,015	24,015	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876
Institutions (TBD)		24,000	36,000	48,000	48,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
	subtotal income	73,450	118,417	163,383	163,383	175,383	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350	208,350
Up Front Costs																
Annualized Fiber Optics		$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11	$33,510.11
Annualized Electronics		$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45	$28,532.45
Engineering	$	73,545.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Recurring Costs																
Microwave (50 Mb First Two years; 100 Mb after)		64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800	64,800
Network Engineer / Technician		40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	60,504
	subtotal costs	240,388	168,043	169,279	170,552	171,863	173,214	174,605	176,038	177,513	179,033	180,599	182,212	183,873	185,584	187,346
	net	($166,938)	($49,626)	($5,895)	($7,168)	$3,521	$35,137	$33,745	$32,313	$30,837	$29,317	$27,751	$26,138	$24,477	$22,766	$21,004
	cumulative	($166,938)	($216,563)	($222,458)	($229,627)	($226,106)	($190,969)	($157,224)	($124,911)	($94,075)	($64,758)	($37,007)	($10,869)	$13,608	$36,375	$57,379

IRR 3%
NPV ($36,920.96)



Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Income	($166,938)	($216,563)	($222,458)	($229,627)	($226,106)	($190,969)	($157,224)	($124,911)	($94,075)	($64,758)	($37,007)	($10,869)	$13,608	$36,375	$57,379

Notes

Annualized Fiber Optics	$ 515,132.58	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)	($33,510.11)
Annualized Electronics	$ 220,319.99	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)	($28,532.45)
Engineering	$ 73,545.00	$ 73,545.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	$ 808,997.57														

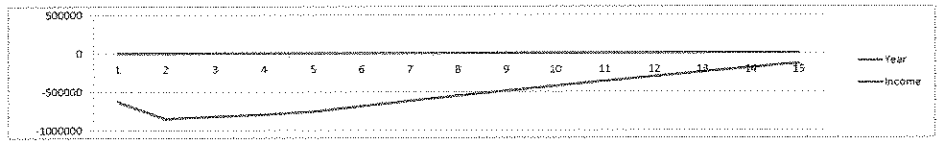
Tusayan Financial Model (Backbone & Lateral)

			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bandwidth Take Rate		**Rate**	15%	25%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Residences			47	78	109	109	109	140	140	140	140	140	140	140	140	140	140
Business			7	11	15	15	15	20	20	20	20	20	20	20	20	20	20
Institutions			2	3	4	4	5	5	5	5	5	5	5	5	5	5	5
Transport income																	
Residences ($69.95)	$	69.95	39,158	65,263	91,369	91,369	91,369	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474
Business	$	129.95	10,292	17,153	24,015	24,015	24,015	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876
Institutions			24,000	36,000	48,000	48,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Other Providers (APS, Cellular Providers, etc)					210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000
		subtotal income	73,450	118,417	373,383	373,383	385,383	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350
Costs																	
Up Front Costs																	
Fiber Construction (Backbone)			33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510	33,510
Fiber Optic Lateral to Interconnection Point in Williams			181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038	181,038
Electronic equipment costs			28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532	28,532
Engineering			351,845	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Costs																	
Dedicated Internet Access (1GB)			60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Technician			40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	60,504
		subtotal costs	694,926	344,281	345,517	346,790	348,101	349,452	350,843	352,276	353,752	355,272	356,837	358,450	360,111	361,822	363,584
		net	($621,476)	($225,864)	$27,867	$26,594	$37,282	$68,898	$67,507	$66,074	$64,599	$63,079	$61,513	$59,900	$58,239	$56,528	$54,766
		cumulative	($621,476)	($847,340)	($819,473)	($792,879)	($755,597)	($686,699)	($619,191)	($553,117)	($488,518)	($425,440)	($363,927)	($304,027)	($245,788)	($189,260)	($134,494)

Notes

Fiber Construction (Backbone)	$	515,132.58
Fiber Optic Lateral to Interconnection Point in Williams	$	2,783,000.00
Electronics	$	220,319.99
Engineering	$	351,845.26
Total	$	3,869,945.83

IRR -2%
NPV ($342,008.49)



Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Income	($621,476)	($847,340)	($819,473)	($792,879)	($755,597)	($686,699)	($619,191)	($553,117)	($488,518)	($425,440)	($363,927)	($304,027)	($245,788)	($189,260)	($134,494)

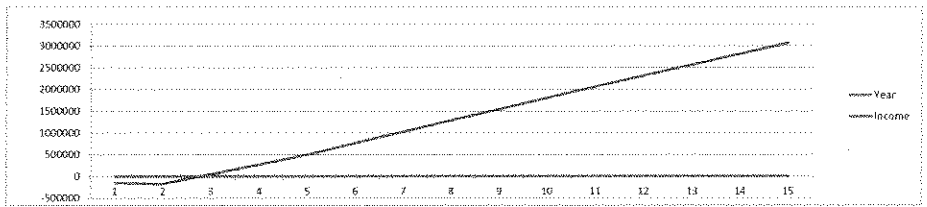
Tusayan Financial Model (Cost Sharing Model)

			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bandwidth Take Rate		**Rate**	15%	25%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Residences			47	78	109	109	109	140	140	140	140	140	140	140	140	140	140
Business			7	11	15	15	15	20	20	20	20	20	20	20	20	20	20
Institutions			2	3	4	4	5	5	5	5	5	5	5	5	5	5	5
Transport Income																	
Residences ($69.95)	$	69.95	39,158	65,263	91,369	91,369	91,369	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474
Business	$	129.95	10,292	17,153	24,015	24,015	24,015	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876
Institutions			24,000	36,000	48,000	48,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Other Providers (APS, Cellular Providers, etc)					210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000
		subtotal income	73,450	118,417	373,383	373,383	385,383	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350
Costs																	
Up Front Costs																	
Fiber Construction (Backbone)			6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702	6,702
Fiber Optic Lateral to Interconnection Point in Williams			36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208	36,208
Electronic equipment costs			5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706	5,706
Engineering			70,369	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Costs																	
Dedicated Internet Access (1GB)			60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Technician			40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	60,504
		subtotal costs	218,985	149,816	151,052	152,325	153,636	154,987	156,378	157,811	159,287	160,807	162,373	163,985	165,647	167,357	169,120
		net	($145,535)	($31,399)	$222,331	$221,058	$231,747	$263,363	$261,972	$260,539	$259,063	$257,543	$255,977	$254,365	$252,704	$250,993	$249,230
		cumulative	($145,535)	($176,935)	$45,397	$266,455	$498,202	$761,565	$1,023,537	$1,284,076	$1,543,139	$1,800,682	$2,056,660	$2,311,024	$2,563,728	$2,814,721	$3,063,951

Notes

Fiber Construction (Backbone)	$	515,132.58
Fiber Optic Lateral to Interconnection Point in Williams	$	2,783,000.00
Electronics	$	220,319.99
Engineering	$	351,845.26
Total	$	3,870,297.82

IRR	79%
NPV	$1,944,539.75



Year			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Income			($145,535)	($176,935)	$45,397	$266,455	$498,202	$761,565	$1,023,537	$1,284,076	$1,543,139	$1,800,682	$2,056,660	$2,311,024	$2,563,728	$2,814,721	$3,063,951

Cost Sharing	**%**	**Backbone**	**Lateral to Interconnection**	**Electronics**	**Engineering**	**Total UpFront Costs**
Town of Tusayan	20%	$ 103,026.52	$ 556,600.00	$ 44,064.00	$ 70,369.05	$ 774,059.56
APS	30%	$ 154,539.77	$ 834,900.00	$ 66,096.00	$ 105,553.58	$ 1,161,089.35
Providers (AT&T, CenturyLink, Etc...)	30%	$ 154,539.77	$ 834,900.00	$ 66,096.00	$ 105,553.58	$ 1,161,089.35
Grant Funds	20%	$ 103,026.52	$ 556,600.00	$ 44,064.00	$ 70,369.05	$ 774,059.56
	100%					$ 3,870,297.82

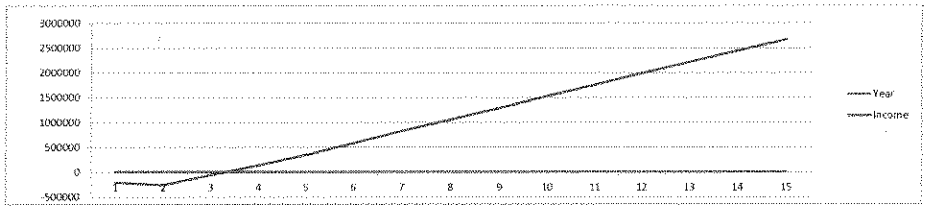
Tusayan Financial Model (Cost Sharing Model)

			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Bandwidth Take Rate		**Rate**	15%	25%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Residences			47	78	109	109	109	140	140	140	140	140	140	140	140	140	140
Business			7	11	15	15	15	20	20	20	20	20	20	20	20	20	20
Institutions			2	3	4	4	5	5	5	5	5	5	5	5	5	5	5
Transport Income																	
Residences ($69.95)	$	69.95	39,158	65,263	91,369	91,369	91,369	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474	117,474
Business	$	129.95	10,292	17,153	24,015	24,015	24,015	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876	30,876
Institutions			24,000	36,000	48,000	48,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Other Providers (APS, Cellular Providers, etc)					210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000
		subtotal income	73,450	118,417	373,383	373,383	385,383	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350	418,350
Costs																	
Up Front Costs																	
Fiber Construction (Backbone)			10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053	10,053
Fiber Optic Lateral to Interconnection Point in Williams			54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311	54,311
Electronic equipment costs			8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560	8,560
Engineering			105,554	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Costs																	
Dedicated Internet Access (1GB)			60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Technician			40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757	55,369	57,030	58,741	60,504
		subtotal costs	278,478	174,124	175,360	176,633	177,945	179,295	180,686	182,119	183,595	185,115	186,681	188,294	189,955	191,666	193,428
		net	($205,028)	($55,707)	$198,023	$196,750	$207,439	$239,055	$237,664	$236,231	$234,755	$233,235	$231,669	$230,057	$228,396	$226,685	$224,922
		cumulative	($205,028)	($260,735)	($62,712)	$134,038	$341,477	$580,532	$818,196	$1,054,427	$1,289,182	$1,522,417	$1,754,086	$1,984,143	$2,212,538	$2,439,223	$2,664,145

Notes

Fiber Construction (Backbone)	$	515,132.58
Fiber Optic Lateral to Interconnection Point in Williams	$	2,783,000.00
Electronics	$	220,319.99
Engineering	$	351,845.26
Total	$	3,870,297.82

IRR	**56%**
NPV	**$1,658,721.22**



Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Income	($205,028)	($260,735)	($62,712)	$134,038	$341,477	$580,532	$818,196	$1,054,427	$1,289,182	$1,522,417	$1,754,086	$1,984,143	$2,212,538	$2,439,223	$2,664,145

Cost Sharing	**%**	**Backbone**	**Lateral to Interconnection**	**Electronics**	**Engineering**	**Total UpFront Costs**
Town of Tusayan	30%	$ 154,539.77	$ 834,900.00	$ 66,096.00	$ 105,553.58	$ 1,161,089.35
APS	50%	$ 257,566.29	$ 1,391,500.00	$ 110,160.00	$ 175,922.63	$ 1,935,148.91
Providers (AT&T, CenturyLink, Etc...)	0%	$ -	$ -	$ -	$ -	$ -
Grant Funds	20%	$ 103,026.52	$ 556,600.00	$ 44,064.00	$ 70,369.05	$ 774,059.56
	100%					$ 3,870,297.82

ITEM NO. 5A

TUSAYAN TOWN COUNCIL WORKSHOP

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Tuesday, May 14, 2013 at 5:00pm
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Mayor Bryan called the meeting to order at 5:06pm and the Pledge of Allegiance was recited.

2. ROLL CALL

Upon roll call, the following were present:

MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA
COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER
COUNCILMEMBER CRAIG SANDERSON – arrived at 5:16pm

Also present were:

Tami Ryall, Interim Town Manager
Irina Ermakova, Town Bookkeeper
Melissa Malone, Town Clerk

3. BUDGET WORKSHOP AND DISCUSSION FOR FISCAL YEAR (FY) 2013/2014

Manager Ryall covered the following topics which were still to be decided by the Council:

- Tusayan Fire District (TFD) budget subsidy request
  - Manager Ryall introduced a draft Intergovernmental Agreement (IGA) between the Town of Tusayan and the TFD to subsidized 2 positions with the TFD with a term of 2 years with a provision for 3 renewals upon mutual agreement between the Town and the District.
  - Former Mayor Pete Shearer spoke in favor of the subsidy.
  - The Council discussed the draft IGA, funding, and conditions of a subsidy including input from Fire Chief Robbie Evans, TFD Board Member John Vail, and members of the TFD.
  - The Council decided to add $109,000 to the budget to cover a subsidy for TFD.
  - Chief Robbie Evans thanked the Council for funding the 2 positions and noted that the fire truck the Town funded has arrived. He stated the truck will be ready for photos with the TFD and the Town Council soon.

- Tusayan Community Partners' Park priority allocations
    - Manager Ryall presented her report on the park budget recommending the Council move forward with fencing for the Sports Court this fiscal year. The Council directed her to proceed.
    - Manager Ryall covered Tot Lot estimated costs and recommended the Council request the Grand Canyon School District complete the prep-work this fiscal year. Former Mayor Pete Shearer, currently on the School Board, stated that his impression is that the School Board would be in favor of proceeding. The Council directed Ms. Ryall to proceed.
    - Additional Funding – Manager Ryall recommended increasing the Capital Improvement Program funding amount for the next 2 fiscal years to $175,000 each year to make $350,000 available for possible ball field construction. The Council decided to increase the amount to $225,000 in FY 2013/2014 and place $125,000 in FY 2014/2015.
    - Ramada – Manager Ryall recommended deferment of the Ramada until later phases. The Council agreed with the recommendation.
- Timing of transition to improved permit fee structure
    - Manager Ryall discussed her report on the timing of the new permitting fee structure. She recommended adding $100,000 to the contingency budget to cover possible expenditures regarding permitting since the study has not yet been performed. The Council agreed with Ms. Ryall's recommendation.
- Mayor Bryan requested the Tentative Budget Packet be sent to the Council as soon as available to allow study prior to the meeting on May 29, 2013.

4. MOTION TO ADJOURN

Vice Mayor Montoya made a motion to adjourn the meeting at 6:23pm. Councilmember Rueter seconded the motion and it passed on unanimous vote.

ATTEST: _____ **Greg Bryan, Mayor** **Date**

_____
Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) **ss.**
Coconino County)

I, Melissa A. Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on May 14, 2013. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 15th day of May, 2013.

_____
TOWN CLERK

TUSAYAN TOWN COUNCIL SPECIAL MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Tuesday, November 27, 2012 at 8:00am
ZUNI ROOM at GRAND CANYON SQUIRE INN
74 State Route 64, Tusayan, Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Mayor Bryan called the meeting to order at 8:10am and the Pledge of Allegiance was recited.

2. ROLL CALL

MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA
COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER
COUNCILMEMBER CRAIG SANDERSON

3. REVIEW OF APPLICATIONS FOR THE POSITION OF TOWN MANAGER

Vice Mayor Montoya made a motion to take the Council into executive session at 8:11am to hold Town Manager applicant interviews. The motion was seconded by Councilmember Rueter and it passed on unanimous vote.

The Council interviewed by phone applicants for the Town Manager position.

Councilmember Rueter made a motion to return the Council to open session at 3:27pm. The motion was seconded by Councilmember Sanderson and it passed on unanimous vote.

The Mayor stated that the Council will hold in-person interviews with final candidates after receiving the results of background checks.

4. MOTION TO ADJOURN

Vice Mayor Montoya made a motion to adjourn the meeting at 3:28pm. Councilmember Rueter seconded the motion and it passed on unanimous vote.

Greg Bryan, Mayor **Date**

ATTEST:

Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) ss.
Coconino County)

I, Melissa Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on November 27, 2012. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 13th day of June, 2013.

_____
Town Clerk

TUSAYAN TOWN COUNCIL SPECIAL MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Monday, January 7, 2013 at 8:00am
TUSAYAN TOWN HALL
845 Mustang Drive, Tusayan, Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Mayor Bryan called the meeting to order at 8:10am and the Pledge of Allegiance was recited.

2. ROLL CALL

MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA
COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER
COUNCILMEMBER CRAIG SANDERSON

3. INTERVIEWS OF FINALISTS FOR THE POSITION OF TOWN MANAGER

Vice Mayor Montoya made a motion to take the Council into executive session at 8:12am to hold Town Manager applicant interviews. The motion was seconded by Councilmember Rueter and it passed on unanimous vote.

The Council interviewed two finalists for the Town Manager position.

Councilmember Rueter made a motion to return the Council to open session at 1:30pm. The motion was seconded by Councilmember Sanderson and it passed on unanimous vote.

4. MOTION TO ADJOURN

Councilmember Fitzgerald made a motion to adjourn the meeting at 1:31pm. Vice Mayor Montoya seconded the motion and it passed on unanimous vote.

Greg Bryan, Mayor **Date**

ATTEST:

Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) ss.
Coconino County)

I, Melissa Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on January 7, 2013. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 13th day of June, 2013.

_____
Town Clerk

TUSAYAN TOWN COUNCIL SPECIAL MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Wednesday, May 22, 2013 at 5:00pm
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. **CALL TO ORDER AND PLEDGE OF ALLEGIANCE**

   Mayor Bryan called the meeting to order at 5:01pm and the Pledge of Allegiance was recited.

2. **ROLL CALL**

   MAYOR GREG BRYAN
   VICE MAYOR AL MONTOYA
   COUNCILMEMBER BILL FITZGERALD
   COUNCILMEMBER JOHN RUETER
   COUNCILMEMBER CRAIG SANDERSON

   Also present (via phone) was Bill Sims, Tusayan Town Attorney

3. **DISCUSSION AND CONSIDERATION OF EMPLOYMENT OF PERSONS TO SERVE AS THE TOWN MANAGER AND CONSULTATION WITH THE TOWN ATTORNEY CONCERNING CONTRACT TERMS IN CONNECTION WITH SUCH POSSIBLE EMPLOYMENT**

   Vice Mayor Montoya made a motion to take the Council into executive session at 5:06pm. The motion was seconded by Councilmember Rueter and it passed on unanimous vote.

   The Council discussed possible employment of a Town Manager candidate and an employment contract with the Town Attorney.

   Councilmember Rueter made a motion to return the Council to open session at 5:20pm. The motion was seconded by Councilmember Sanderson and it passed on unanimous vote.

   Vice Mayor Montoya made a motion to enter into an employment agreement with Town Manager candidate Will Wright. The motion was seconded by Councilmember Fitzgerald and it passed on unanimous vote.

4. **MOTION TO ADJOURN**

   Councilmember Sanderson made a motion to adjourn the meeting at 5:23pm. Vice Mayor Montoya seconded the motion and it passed on unanimous vote.

Greg Bryan, Mayor Date

ATTEST:

Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) ss.
Coconino County)

I, Melissa Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on May 22, 2013. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 31st day of May, 2013.

Town Clerk

TUSAYAN TOWN COUNCIL REGULAR MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Wednesday, May 29, 2013 at 6:00pm
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Mayor Bryan called the meeting to order at 6:04pm and the Pledge of Allegiance was recited.

2. ROLL CALL

MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA
COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER – via phone, lost at 6:10pm
COUNCILMEMBER CRAIG SANDERSON

Also present were:

Tami Ryall, Interim Town Manager
Irina Ermakova, Town Bookkeeper
Melissa Malone, Town Clerk

3. CALL TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

Tusayan Fire District Chief Robbie Evans announced that Flagstaff Medical Center will be at the Fire District office on June 5, 2013 for free health screenings for everyone.

4. CEREMONIAL AND/OR INFORMATIONAL MATTERS

None

5. CONSENT AGENDA

Mayor Bryan requested the Accounts Payable Billings be removed from the Consent Agenda to correct an error.

A. Minutes of Town Council Special Meetings on 5/1/13 and 5/7/13 and Regular Meeting on 5/15/13

Vice Mayor Montoya made a motion to approve the Minutes. Councilmember Fitzgerald seconded the motion and it passed on unanimous vote.

B. Accounts Payable Billings

Mayor Bryan stated that a check (#1808) listed to pay to Mayor Bryan should be removed as the check should be a reimbursement to Will Wright.
Councilmember Sanderson made a motion to approve the Accounts Payable

Billings with the deletion of check #1808. Vice Mayor Montoya seconded the motion and it passed on unanimous vote.

6. COMMITTEE REPORTS

None

The Council moved to Item 8.

8. DISCUSSION ITEMS

A. Update and discussion of National Forest Fire Restrictions

Manager Ryall referenced the Ordinance passed by the Council in 2010 requiring the Town to follow restrictions enacted by the National Forest and she introduced Chief Robbie Evans to discuss the current fire restrictions. He discussed the extreme dry conditions, winds, and the fact that there has already been a brush fire in Tusayan this season.

Chief Evans also stated that the fire truck the Town funded will be available for photos soon. Manager Ryall asked the Chief to bring the truck to the Town Council meeting on June 19th.

7. ACTION ITEMS

A. Consideration, discussion, and possible adoption of Preliminary Budget for Fiscal Year (FY) 2013-2014

Manager Ryall presented an overview of the Preliminary Budget for FY 2013-2014. She stated there were some minor changes to the budget since the last meeting:

- Increased the revenue forecast from permit fees to $50,000
- Made adjustments to the Court and Prosecutor to more closely track with the Intergovernmental Agreements
- Added some new account numbers and annotations

Mayor Bryan noted that if the Preliminary Budget is passed tonight, the total expenditure amount may not change.

Vice Mayor Montoya made a motion to adopt the Preliminary Budget for FY 2013-2014 and set the expenditure limit of $2,534,000. Councilmember Sanderson seconded the motion and it passed on unanimous vote.

B. Consideration, discussion, and possible action authorizing the Town Manager to proceed with a Permit Fee Analysis

Manager Ryall introduced the agreement, which was distributed with the Agenda Packet. Mayor Bryan requested an amendment to the agreement specifying the timeline for the study.

Councilmember Sanderson made a motion to authorize the Town Manager to proceed with the agreement, not to exceed $35,000, with an added timeline. Vice Mayor Montoya seconded the motion and it passed on unanimous vote.

9. TOWN MANAGER'S REPORT

Manager Ryall discussed the following:

- Fencing for the park is proceeding on track
- The purchase of an Automatic Defibrillator approximately $1,700
- There are promotional items examples on the Council desks
- The League of Arizona Cities and Towns conference will be August 27-29 at El Conquistador in Tucson
- The General Plan is nearing completion

10. FUTURE AGENDA ITEMS

New Items include:

- Rezoning and Conditional Use Permit for Fireside Ridge will tentatively come before the Planning and Zoning Commission on June 18th
- Presentation from Arizona Public Service on June 19th
- Intergovernmental Agreement with the Tusayan Fire Department on June 19th
- Possible action on joining a health insurance pool for employees on June 19th
- Staff will post and distribute notice of meetings cancelled for June 5th & the month of July except July 24th

11. COUNCIL MEMBERS' REPORTS

None

12. MAYOR'S REPORT

- Mayor Bryan reported that an offer of permanent employment was extended to Will Wright and he has accepted with a start date of July 1, 2013. Manager Ryall has been asked to stay for crossover for 1 week.
- He also discussed a possible option of joining with another town to form a group for health benefits for employees.
- Mayor Bryan introduced a rendering of the playground equipment for the Tot Lot at the Community Park that the Grand Canyon Squire Inn is purchasing. He asked the Council for help in involving the Community in installing the equipment.
- Transaction Privilege Tax reform efforts are still in progress with the League of Arizona Cities and Towns.

13. MOTION TO ADJOURN

Councilmember Sanderson made a motion to adjourn the meeting at 7:20pm. Councilmember Fitzgerald seconded the motion and it passed on unanimous vote.

Greg Bryan, Mayor Date

ATTEST:

Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) ss.
Coconino County)

I, Melissa Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on May 29, 2013. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 12th day of June, 2013.

Town Clerk

TUSAYAN TOWN COUNCIL WORKSHOP

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03
Tuesday, June 11, 2013 at 5:00pm
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

TOWN COUNCIL SUMMARIZED MINUTES

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

Mayor Bryan called the meeting to order at 5:01pm and the Pledge of Allegiance was recited.

2. ROLL CALL

Upon roll call, the following were present:

MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA
COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER – excused
COUNCILMEMBER CRAIG SANDERSON – excused

Also present were: Tami Ryall, Interim Town Manager
Melissa Malone, Town Clerk

3. DISCUSSION OF THE STILO DEVELOPMENT PROJECT

Vice Mayor Montoya made a motion to take the Council into executive session to discuss the Stilo Development Project with the Town Attorney. Mayor Bryan seconded the motion and it passed on unanimous vote.

At 5:02pm the Council entered executive session and Town Attorney Bill Sims joined the meeting via phone.

Vice Mayor Montoya made a motion to take the Council back into open session. Councilmember Fitzgerald seconded the motion and it passed on unanimous vote. At 5:47pm the Council exited the executive session and the Town Attorney left the meeting.

4. DISCUSSION OF DRAFT LANGUAGE FOR THE TUSAYAN MUNICIPAL CODE

A. Chapter 8 – Transaction Privilege Tax

Manager Tami Ryall stated a change in Chapter for the workshop. Instead of covering Offenses and Business Regulations, she covered Transaction Privilege Tax. To facilitate the discussion, she handed out the Model City Tax Code which the Council adopted in 2010.

Mayor Bryan asked Manager Ryall to find out why the lodging tax is higher than restaurant and bar tax. Vice Mayor Montoya requested further

information on tax on groceries, including what would be required to eliminate tax on groceries.

5. MOTION TO ADJOURN

Vice Mayor Montoya made a motion to adjourn the meeting at 6:06pm. Councilmember Fitzgerald seconded the motion and it passed on unanimous vote.

ATTEST: _____ **Greg Bryan, Mayor** **Date**

_____
Melissa A. Malone, Town Clerk

CERTIFICATION

State of Arizona)
) **ss.**
Coconino County)

I, Melissa A. Malone, do hereby certify that I am the Town Clerk of the Town of Tusayan, County of Coconino, State of Arizona, and that the above minutes are a true and correct summary of the meeting of the Council of the Town of Tusayan held on June 11, 2013. I further certify that the meeting was duly called and held, and that a quorum was present.

DATED this 12th day of June, 2013.

_____
TOWN CLERK

ITEM NO. 7A

INTERGOVERNMENTAL AGREEMENT
BETWEEN
TOWN OF TUSAYAN AND
TUSAYAN FIRE DISTRICT

This intergovernmental agreement ("Agreement") is entered into _____, between the Town of Tusayan ("TOWN") an Arizona municipal corporation and the Tusayan Fire District ("DISTRICT"), a political subdivision of the State of Arizona, created pursuant to A.R.S. § 48-261. The Town of Tusayan and the Tusayan Fire District may be referred to as a Party, or collectively, as parties in this Agreement.

RECITALS

A. The DISTRICT operates, manages, and maintains fire and emergency medical services.
B. The TOWN, an Arizona municipal corporation, seeks to obtain fire and emergency medical services of the residents within its incorporated boundary.
C. The TOWN desires to partner with the DISTRICT in the provision of those services by providing funding for an administrative assistant position and a firefighter / EMT position ("SUPPLEMENTAL STAFF") to augment DISTRICT staffing levels and increase the service level provided to residents and visitors to the TOWN.
D. The TOWN agrees to compensate the DISTRICT for the cost of the SUPPLEMENTAL STAFF as outlined in this Agreement.
E. The District is authorized to enter into agreements to provide fire protection and emergency medical services to the Town pursuant to A.R.S. § 48-805.

NOW, THEREFORE, pursuant to A.R.S. § 11-952, authorizing agreements for services among two or more public agencies, and in consideration of the mutual covenants contained in this Agreement, the parties agree as follows:

1. Duration and Termination of Agreement.

   This Agreement shall become effective upon execution by the parties. The term of this agreement shall be for two fiscal budget years, FY 2013-2014 and FY 2014-2015. This agreement may be renewed for an additional three one year terms by mutual agreement of the TOWN and the DISTRICT. The DISTRICT shall have the right to terminate this Agreement upon written notice thereof to the TOWN in the event the TOWN fails to make payment due to the DISTRICT under this Agreement within thirty (30) calendar days after receiving written notice from the DISTRICT that such payment is due.

2. Method of Payment.

   The DISTRICT shall provide the TOWN with a written invoice monthly for the costs associated with the SUPPLEMENTAL STAFF in the prior month. This invoice shall be based on actual costs and include a detailed monthly service report and any backup documentation requested for review by the TOWN. All records including invoices, employee time sheets, and accounting logs shall be retained in compliance with A.R.S. § 35-214.

   The TOWN shall make payment in full within thirty (30) days after receiving a written invoice from the DISTRICT.

3. Compensation.

The DISTRICT will be solely responsible for hiring and supervising the SUPPLEMENTAL STAFF. The Town agrees to provide funding of up to _____("Town Funds") to the DISTRICT for the fiscal year beginning July 1, 2013. To determine the amount of Town Funds to be provided to the DISTRICT for the fiscal year beginning July 1, 2014, by December 31, 2013 the DISTRICT will present to the TOWN at a regular Town Council meeting information on any changes in net assessed value for the DISTRICT and information on the anticipated property tax rates and levy. The amount of Town Funds to be provided to the District may be reduced by the amount of any increase in the property taxes levied by the DISTRICT.

4. Indemnification. To the extent permitted by law, each party (as "Indemnitor") agrees to indemnify, defend, and hold harmless the other party (as "Indemnitee") from and against any and all claims, losses, liability, costs, or expenses (including reasonable attorney's fees) (collectively referred to as "Claims") arising out of bodily injury of any person (including death) or property damage, but only to the extent that such claims which result in vicarious/derivative liability to the Indemnitee, are caused by the act, omission, negligence, misconduct, or other fault of the Indemnitor, its officers, officials, agents, employees, or volunteers.

5. The Parties hereto agree that this IGA does not require the DISTRICT to provide service outside the boundaries of the DISTRICT.

6. Dispute Resolution.

6.1 Mediation. If a dispute arises out of or relates to this Agreement, and if the dispute cannot be settled through negotiation, the parties agree first to try in good faith to resolve the dispute by mediation before resorting to litigation or some other dispute resolution procedure. Unless the parties agree otherwise, the mediator(s) shall be selected from panels of mediators trained under the auspices of the Alternative Dispute Resolution Program of the Coconino County Superior Court. Each party agrees to bear its own costs in mediation. The parties will not be obligated to mediate if any indispensable party is unwilling to join the mediation.

6.2 Legal Action. This mediation provision is not intended to constitute a waiver of a party's right to initiate legal action if a dispute is not resolved through good faith negotiation or mediation, or if a party seeks provisional relief under the Arizona Rules of Civil Procedure. The parties agree that mediation under this Section 5 shall not toll the Notice of Claim requirements of A.R.S. § 12-821.01.

6.3 Litigation and Attorney Fees. In the event any action at law or in equity is instituted between the parties in connection with this Agreement, the prevailing party in the action will be entitled to its costs including reasonable attorneys' fees and court costs from the non-prevailing party.

7. Notices.

Unless otherwise specified in this Agreement, any notice or other communication required or permitted to be given shall be in writing and sent to the address given below for the party to be notified:

If to DISTRICT:

Tusayan Fire District Board
C/O Robert Evans, Fire Chief
Tusayan Fire District
PO Box 3625
Grand Canyon, AZ 86023

If to TOWN:

Tusayan Town Manager
Town of Tusayan
PO Box 709
Grand Canyon, AZ 86023

8. General Provisions.

8.1 Authorization to Contract. Each party represents and warrants that it has full power and authority to enter into this Agreement and perform its obligations under this Agreement and has taken all required acts or actions necessary to authorize the same.

8.2 Integration; Modification. Each party acknowledges and agrees that it has not relied upon any statements, representations, agreements or warranties, except as expressed in this Agreement, and that this Agreement constitutes the parties' entire agreement with respect to the matters addressed in this document. All prior or contemporaneous agreements and understandings, oral, or written, with respect to such matters are superseded and merged in this Agreement. This Agreement may be modified or amended only by written agreement signed by or for both parties, and any modification or amendment will become effective on the date so specified.

8.3 Cancellation for Conflict of Interest. Pursuant to A.R.S. § 38-511, either the TOWN or DISTRICT may cancel this Agreement without penalty or further obligation if any person significantly involved in initiating, securing, drafting or creating this Agreement on behalf of a party is, at any time while the Agreement is in effect, an employee or agent of the other party of the Agreement in any capacity or as a consultant to the other party of the Agreement with respect to the subject matter of this Agreement.

8.4 Waiver. No failure to enforce any condition or covenant of this Agreement will imply or constitute a waiver of the right of a party to insist upon performance of the condition or covenant, or of any other provision of this Agreement, nor will any waiver by either party of any breach of any one or more conditions or covenants of this Agreement constitute a waiver of any succeeding or other breach under this Agreement.

8.5 Non-Discrimination. The parties shall comply with the provisions of the Arizona Executive Order 2009-09 which is incorporated by reference as if fully set forth in this Agreement.

8.6 Compliance with Immigration Laws and Regulations. Pursuant to the provisions of A.R.S. § 41-4401, each Party warrants to the other Party that the warranting Party and its subcontractors, if any, are in compliance with all Federal Immigration laws and regulations that relate to their employees and with the E-Verify Program under A.R.S. § 23-214(A). The Parties acknowledge that a breach of this warranty by a Party or any of its subcontractors is a material breach of this Agreement subject to penalties up to and including termination of this Agreement. Each Party retains the right to inspect the papers of any employee of the other Party or any subcontractor who works on this Agreement to ensure compliance with this warranty.

8.7 Compliance with All Laws. Both Parties will comply with all applicable Federal, State, County and Town laws, regulations and policies.

Town of Tusayan

_____
Mayor

Attest:

_____
TOWN Clerk

Attorney's Approval:
Approved, pursuant to A.R.S. § 11-952(D), as being in proper form and with the powers and with the powers and authority granted under the laws of this State.

_____
TOWN Attorney

Tusayan Fire District

_____
Chairperson

Attest:

_____

Attorney's Approval:
Approved, pursuant to A.R.S. § 11-952(D), as being in proper form and with the powers and with the powers and authority granted under the laws of this State.

_____
Attorney for the DISTRICT

ITEM NO. 7B

June 13, 2013

Memo To: Tusayan Town Council

From: Mayor Greg Bryan

Re: CPWAC Feasibility Study and Fees

Last April, we had representatives from the Coconino Plateau Water Advisory Council make a presentation to the Council regarding their mission and goals. Part of that presentation was about CPWAC and what they do to educate about water conservation, opportunities for recycling and other water related programs. After their visit the Council did vote to join CPWAC with dues of $5,000 per year starting July, 2013, but to wait and see about participating in the Feasibility Study as noted below.

Included in the presentation was an explanation about the North Central Arizona Water Feasibility Study that has been underway for a number of years, to study a project to bring a water pipeline from Lake Powell to Flagstaff and serve a number of entities. The overall project is in conjunction with the Bureau of Reclamation and is projected to cost around $15M with 41% covered by Federal grants through the Bureau and 59% covered by other entities in cash or in-kind services. To date there has been a couple of grants utilized, some in-kind services and minimal other entity cash contributions. Currently there is no funding from the Federal Government for 2014 and the Study is at risk of being tabled until other funding is found.

The Bureau has indicated that if the other entities can come up with $300,000 in contributions they will be able to continue the study through 2014 and look for additional funding. A commitment by letter needs to be made by late June or early July, with funds due in October. Using a formula based upon forecasted water usage by entity, the $300,000 has been split up between entities that have indicated an interest in continuing the study and future use of the potential water. Tusayan's share at this time is forecasted at $32,254.44 to keep the study going.

Part of the overall study includes research into design and cost of having a lateral line come from Cameron to Grand Canyon National Park and Tusayan. If NPS and Tusayan decide we want to be part of the full study our share will be around $406,862 based upon today's forecasted costs. This would include the $32,254 being asked for now. The NPS will have a share cost now of $59,955.34 and $756,285 for the full study. Both our shares include costs associated with the central line from Page to Cameron as we would have a benefit from its creation. While we can decide to stay in now and pay the $32,254, we could decide later to not continue our participation and walk away. The study will take several more years to be completed, will require obtaining additional Federal funding to be completed and then will require both Congressional action to fund the construction and getting the 7 State Water Compact to allow us to have water, if the pipeline was built. So nothing is guaranteed.

It becomes pretty clear that if NPS decides to not participate, we would have a $1M+ cost to try to fund ourselves versus $406,862. We have tried to meet with the Superintendent and discuss their thoughts

and plans, but have not been able to do so as of this time. He has said they want the study to proceed but are still looking for ways to fund their share. We will continue to seek clarity with them.

The Council needs to make a decision as to whether we want to stay in at a cost of $32,254 due in October or decline to continue as part of the Feasibility Study. Once we are out, I doubt we will be able to step back in as a partner. If we decide to stay in and pay the amount due now, we will need to provide a letter of commitment by the end of June.

Alternative 7 - Cost breakdown for Northern Arizona Feasibility Study (Funding of $300,000)

3-Jun-13

BREAKDOWN BY SEGMENT						
Segment		Cost	Benefited Entities	Quantity(Ac. Ft.)	Percentage	Cost Share
1	Cameron to Lake Powell	$4,904,000	Navajo 25%	8438	37.04%	$454,166
	Local share	Variable %	Hopi 25%	4048	17.77%	$217,879
			Flagstaff 70%	8027	35.24%	$1,209,724
			Williams 50%		0.00%	$0
			Grand Canyon 50%		0.00%	$0
			Tusayan 50%		0.00%	$0
			Coconino Co. Sub.(flag)			
			50%	1625	7.13%	$174,928
			Page		0.00%	$0
			Coconino co. Sub.(Parks)			
			50%	640	2.81%	$68,895
				22778	100.00%	$2,125,591
2	Moen to Kyko	$1,374,000	Hopi			$343,500
		25%				
		$343,500				
3	Cameron to Flagstaff	$1,734,000	Flagstaff	8027	77.99%	$797,911
		59%	Williams		0.00%	$0
		$1,023,060	Coconino Co. Sub.(flag)	1625	15.79%	$161,531
			Coconino co. Sub.(Parks)	640	6.22%	$63,618
				10292	100.00%	$1,023,060
4	Flagstaff to Williams	$0	Williams		0.00%	$0
		59%	Coconino co. Sub.(Parks)	640	100.00%	$0
		$0		640	100.00%	$0
5	Cameron to GC	$1,785,000	Grand Canyon	0	0.00%	$0
		59%	Tusayan	0	0.00%	$0
		$1,053,150		0	0.00%	$0
6	Red Gap	$2,000,000	Flagstaff	12000	100.00%	$1,180,000
		59%				
		$1,180,000				
7	Williams Wells		Williams		100.00%	$0
		59%				
		$0				
	Total	$11,797,000				
		$5,725,301				

SUMMARY									
Cost Totals	Segment 1	2	3	4	5	6	7	Totals	%
Navajo	$454,166							$454,166	9.72%
Hopi	$217,879	$343,500						$561,379	12.02%
Flagstaff	$1,209,724		$797,911			$1,180,000		$3,187,635	68.23%
Williams	$0		$0	$0			$0	$0	0.00%
Grand Can.	$0				$0			$0	0.00%
Tusayan	$0				$0			$0	0.00%
Coconino Co. Sub.(flag)	$174,928		$161,531					$336,458	7.20%
Page	$0							$0	0.00%
Coconino co. Sub.(Parks)	$68,895		$63,618	$0				$132,513	2.84%
						Non-Federal Cost Share		$4,672,151	100%

Cost Share Table for $300,000 Needed to Continue Study					
	Totals	Credits	Revised Totals	%	Share
Navajo	$454,166	$69,000	$385,166	13%	$39,927.31
Hopi	$561,379		$561,379	19%	$58,194.01
Flagstaff	$3,187,635	$1,662,452	$1,525,183	53%	$158,104.45
Williams	$0		$0	0%	$0.00
Grand Can.	$0		$0	0%	$0.00
Tusayan	$0		$0	0%	$0.00
Coconino Co. Sub.(flag)	$336,458	$46,695	$289,763	10%	$30,037.59
Page	$0		$0	0%	$0.00
Coconino Co. Sub.(Parks)	$132,513		$132,513	5%	$13,736.64
	$4,672,151		$2,894,004	100%	$300,000

Alternative 7 - Cost breakdown for Northern Arizona Feasibility Study (Funding of $300,000)

3-Jun-13

BREAKDOWN BY SEGMENT

Segment		Cost	Benefited Entities	Quantity(Ac. Ft.)	Percentage	Cost Share
1	Cameron to Lake Powell	$4,904,000	Navajo 25%	8438	31.15%	$381,959
	Local share	Variable %	Hopi 25%	4048	14.95%	$183,239
			Flagstaff 70%	8027	29.64%	$1,017,394
			Williams 50%		0.00%	$0
			Grand Canyon 50%	790	2.92%	$71,521
			Tusayan 50%	425	1.57%	$38,477
			Coconino Co. Sub.(flag)			
			50%	1625	6.00%	$147,116
			Page *	3091	11.41%	$65,033
			Coconino co. Sub.(Parks)			
			50%	640	2.36%	$57,941
				27084	100.00%	$1,962,680
2	Moen to Kyko	$1,374,000	Hopi			$343,500
		25%				
		$343,500				
3	Cameron to Flagstaff	$1,734,000	Flagstaff	8027	77.99%	$797,911
		59%	Williams		0.00%	$0
		$1,023,060	Coconino Co. Sub.(flag)	1625	15.79%	$161,531
			Coconino co. Sub.(Parks)	640	6.22%	$63,618
				10292	100.00%	$1,023,060
4	Flagstaff to Williams	$0	Williams		0.00%	$0
		59%	Coconino co. Sub.(Parks)	640	100.00%	$0
		$0		640	100.00%	$0
5	Cameron to GC	$1,785,000	Grand Canyon	790	65.02%	$684,764
		59%	Tusayan	425	34.98%	$368,386
		$1,053,150		1215	100.00%	$1,053,150
6	Red Gap	$2,000,000	Flagstaff	12000	100.00%	$1,180,000
		59%				
		$1,180,000				
7	Williams Wells		Williams		100.00%	$0
		59%				
		$0				
		$11,797,000				
	Total	$5,562,390				

SUMMARY

Cost Totals	Segment 1	2	3	4	5	6	7	Totals	%
Navajo	$381,959							$381,959	6.87%
Hopi	$183,239	$343,500						$526,739	9.47%
Flagstaff	$1,017,394		$797,911			$1,180,000		$2,995,305	53.85%
Williams	$0		$0	$0			$0	$0	0.00%
Grand Can.	$71,521				$684,764			$756,285	13.60%
Tusayan	$38,477				$368,386			$406,862	7.31%
Coconino Co. Sub.(flag)	$147,116		$161,531					$308,647	5.55%
Page	$65,033							$65,033	1.17%
Coconino co. Sub.(Parks)	$57,941		$63,618	$0				$121,559	2.19%
							Non-Federal Cost Share	$5,562,390	100%

Cost Share Table for $300,000 Needed to Continue Study

	Totals	Credits	Revised Totals	%	Share
Navajo	$381,959	$69,000	$312,959	8%	$24,810.17
Hopi	$526,739		$526,739	14%	$41,757.82
Flagstaff	$2,995,305	$1,662,452	$1,332,853	35%	$105,663.41
Williams	$0		$0	0%	$0.00
Grand Can.	$756,285		$756,285	20%	$59,955.34
Tusayan	$406,862		$406,862	11%	$32,254.44
Coconino Co. Sub.(flag)	$308,647	$46,695	$261,952	7%	$20,766.54
Page	$65,033		$65,033	2%	$5,155.56
Coconino co. Sub.(Parks)	$121,559		$121,559	3%	$9,636.73
	$5,562,389		$3,784,242	100%	$300,000

Since the previous 2 charts may be difficult to read, the following 6 pages are provided as an enlarged view of the same information.

Alternative 7 - Cost breakdown for Northern Arizona Feasibility Study (Funding of $300,000)

3-Jun-13

BREAKDOWN BY SEGMENT						
Segment		Cost	Benefited Entities	Quantity(Ac. Ft.)	Percentage	Cost Share
1	Cameron to Lake Powell	$4,904,000	Navajo 25%	8438	31.15%	$381,959
	Local share	Variable %	Hopi 25%	4048	14.95%	$183,239
			Flagstaff 70%	8027	29.64%	$1,017,394
			Williams 50%		0.00%	$0
			Grand Canyon 50%	790	2.92%	$71,521
			Tusayan 50%	425	1.57%	$38,477
			Coconino Co. Sub.(flag) 50%	1625	6.00%	$147,116
			Page *	3091	11.41%	$65,033
			Coconino co. Sub.(Parks) 50%	640	2.36%	$57,941
				27084	100.00%	$1,962,680
2	Moen to Kyko	$1,374,000	Hopi			$343,500
		25%				
		$343,500				
3	Cameron to Flagstaff	$1,734,000	Flagstaff	8027	77.99%	$797,911
		59%	Williams		0.00%	$0
		$1,023,060	Coconino Co. Sub.(flag)	1625	15.79%	$161,531
			Coconino co. Sub.(Parks)	640	6.22%	$63,618
				10292	100.00%	$1,023,060
4	Flagstaff to Williams	$0	Williams		0.00%	$0
		59%	Coconino co. Sub.(Parks)	640	100.00%	$0
		$0		640	100.00%	$0
5	Cameron to GC	$1,785,000	Grand Canyon	790	65.02%	$684,764
		59%	Tusayan	425	34.98%	$368,386
		$1,053,150		1215	100.00%	$1,053,150

6	Red Gap	$2,000,000 59% $1,180,000	Flagstaff	12000	100.00%	$1,180,000

7	Williams Wells	 59% $0	Williams		100.00%	$0
	Total	$11,797,000 $5,562,390				

SUMMARY									
Cost Totals	Segment 1	2	3	4	5	6	7	Totals	%
Navajo	$381,959							$381,959	6.87%
Hopi	$183,239	$343,500						$526,739	9.47%
Flagstaff	$1,017,394		$797,911			$1,180,000		$2,995,305	53.85%
Williams	$0		$0	$0			$0	$0	0.00%
Grand Can.	$71,521				$684,764			$756,285	13.60%
Tusayan	$38,477				$368,386			$406,862	7.31%
Coconino Co. Sub.(flag)	$147,116		$161,531					$308,647	5.55%
Page	$65,033							$65,033	1.17%
Coconino co. Sub.(Parks)	$57,941		$63,618	$0				$121,559	2.19%
						Non-Federal Cost Share		$5,562,390	100%

Cost Share Table for $300,000 Needed to Continue Study					
	Totals	Credits	Revised Totals	%	Share
Navajo	$381,959	$69,000	$312,959	8%	$24,810.17
Hopi	$526,739		$526,739	14%	$41,757.82
Flagstaff	$2,995,305	$1,662,452	$1,332,853	35%	$105,663.41
Williams	$0		$0	0%	$0.00
Grand Can.	$756,285		$756,285	20%	$59,955.34
Tusayan	$406,862		$406,862	11%	$32,254.44
Coconino Co. Sub.(flag)	$308,647	$46,695	$261,952	7%	$20,766.54
Page	$65,033		$65,033	2%	$5,155.56
Coconino co. Sub.(Parks)	$121,559		$121,559	3%	$9,636.73
	$5,562,389		$3,784,242	100%	$300,000

Alternative 7 - Cost breakdown for Northern Arizona Feasibility Study (Funding of $300,000)

3-Jun-13

BREAKDOWN BY SEGMENT						
Segment		Cost	Benefited Entities	Quantity(Ac. Ft.)	Percentage	Cost Share
1	Cameron to Lake Powell	$4,904,000	Navajo 25%	8438	37.04%	$454,166
	Local share	Variable %	Hopi 25%	4048	17.77%	$217,879
			Flagstaff 70%	8027	35.24%	$1,209,724
			Williams 50%		0.00%	$0
			Grand Canyon 50%		0.00%	$0
			Tusayan 50%		0.00%	$0
			Coconino Co. Sub.(flag) 50%	1625	7.13%	$174,928
			Page *		0.00%	$0
			Coconino co. Sub.(Parks) 50%	640	2.81%	$68,895
				22778	100.00%	$2,125,591
2	Moen to Kyko	$1,374,000	Hopi			$343,500
		25%				
		$343,500				
3	Cameron to Flagstaff	$1,734,000	Flagstaff	8027	77.99%	$797,911
		59%	Williams		0.00%	$0
		$1,023,060	Coconino Co. Sub.(flag)	1625	15.79%	$161,531
			Coconino co. Sub.(Parks)	640	6.22%	$63,618
				10292	100.00%	$1,023,060
4	Flagstaff to Williams	$0	Williams		0.00%	$0
		59%	Coconino co. Sub.(Parks)	640	100.00%	$0
		$0		640	100.00%	$0
5	Cameron to GC	$1,785,000	Grand Canyon	0	0.00%	$0
		59%	Tusayan	0	0.00%	$0
		$1,053,150		0	0.00%	$0

6	Red Gap	$2,000,000 59% $1,180,000	Flagstaff	12000	100.00%	$1,180,000

7	Williams Wells	 59% $0	Williams		100.00%	$0
	Total	$11,797,000 $5,725,301				

SUMMARY									
Cost Totals	Segment 1	2	3	4	5	6	7	Totals	%
Navajo	$454,166							$454,166	9.72%
Hopi	$217,879	$343,500						$561,379	12.02%
Flagstaff	$1,209,724		$797,911			$1,180,000		$3,187,635	68.23%
Williams	$0		$0	$0			$0	$0	0.00%
Grand Can.	$0				$0			$0	0.00%
Tusayan	$0				$0			$0	0.00%
Coconino Co. Sub.(flag)	$174,928		$161,531					$336,458	7.20%
Page	$0							$0	0.00%
Coconino co. Sub.(Parks)	$68,895		$63,618	$0				$132,513	2.84%
						Non-Federal Cost Share		$4,672,151	100%

Cost Share Table for $300,000 Needed to Continue Study					
	Totals	Credits	Revised Totals	%	Share
Navajo	$454,166	$69,000	$385,166	13%	$39,927.31
Hopi	$561,379		$561,379	19%	$58,194.01
Flagstaff	$3,187,635	$1,662,452	$1,525,183	53%	$158,104.45
Williams	$0		$0	0%	$0.00
Grand Can.	$0		$0	0%	$0.00
Tusayan	$0		$0	0%	$0.00
Coconino Co. Sub.(flag)	$336,458	$46,695	$289,763	10%	$30,037.59
Page	$0		$0	0%	$0.00
Coconino Co. Sub.(Parks)	$132,513		$132,513	5%	$13,736.64
	$4,672,151		$2,894,004	100%	$300,000