North Auburn and Lonestar Road Broadband Project

Oasis Broadband

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Truckee, CA 96160

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8.0 Application Item 0

This project will not require any middle mile infrastructure to be built.

8.1 Application Item 1 – Project Summary (Distributed Publicly)

- *Company/Applicant's name.*

ExWire Inc, dba Oasis Broadband

- *CPCN/U-Number or WIR or pending CPCN/WIR application number.*

Our CPCN application has been submitted.

- C*ontact person.*

Eric Bergerson - (530) 883-1031 x105 - ericb@Oasisbroadband.net

- *Named project location (Community/County).*

The North Auburn/Lonestar Road Broadband Project is located in a mostly unincorporated area of Placer County to the north of Auburn and North Auburn and primarily west of Highway 49.

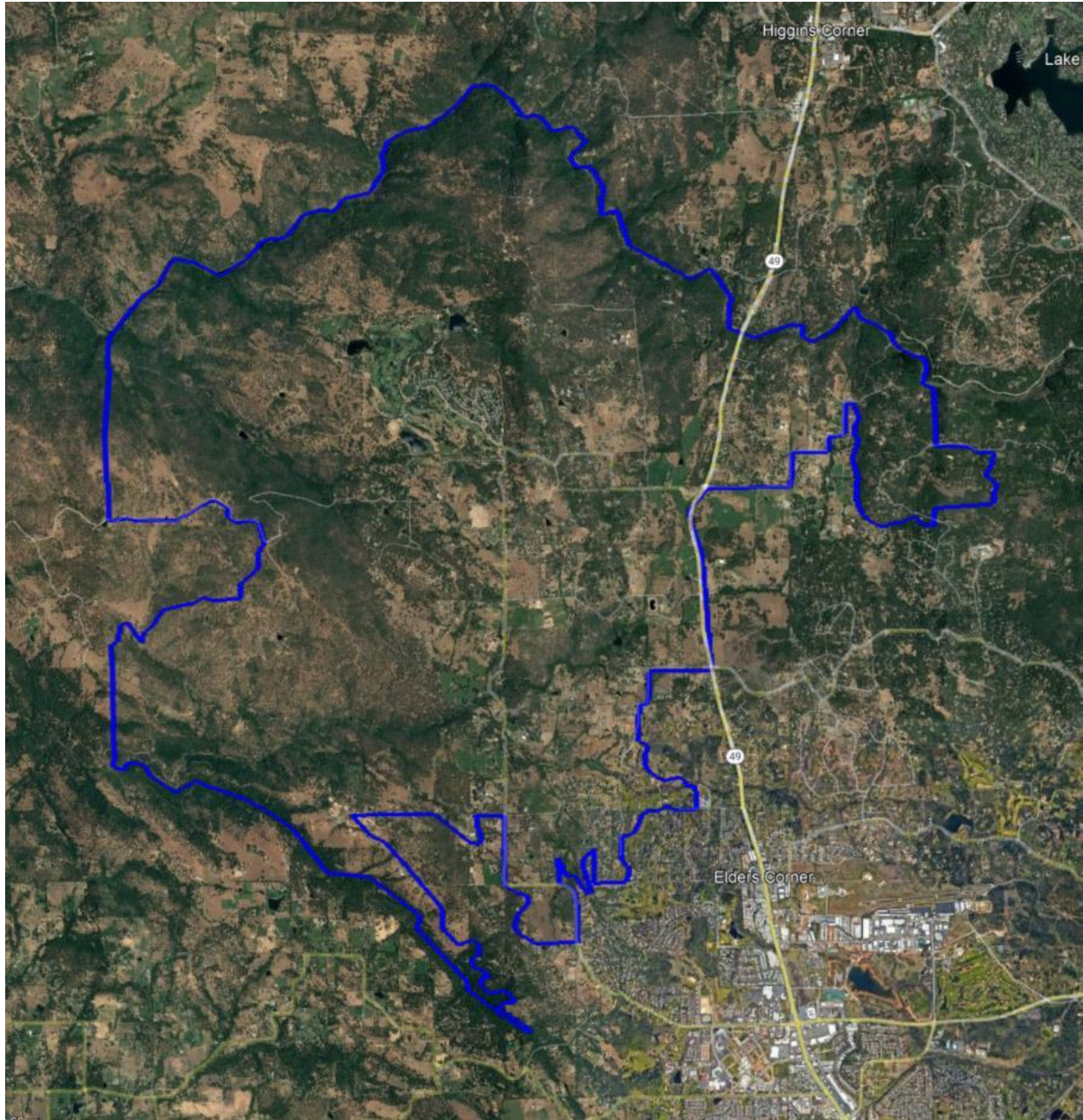- *Project type (Last-mile or Hybrid Last-mile/Middle-mile).*

Last Mile

- *Amount of CASF grant funding requested and project cost.*

$1,941,324 is the project cost and the amount of CASF funds we're requesting for this priority unserved area.

- *Map of the proposed project area.*

Provided below

- *The number of serviceable locations the proposed project will serve.*

We estimate that the North Auburn/Lonestar Road Broadband Project will be technically capable of serving approximately 95% of the 677 households and businesses in the grant area due to Tarana and new Cambium technology which have the ability to penetrate obstacles unlike most other fixed wireless technology which are limited to Line-Of-Sight (LOS) coverage.

- *If the project is requesting funding in an area with no internet connectivity, it must state the number of serviceable locations with no-internet connectivity and the number of other CASF-eligible serviceable locations.*

As indicated by the map image below, there are dozens of unserved and priority unserved households.
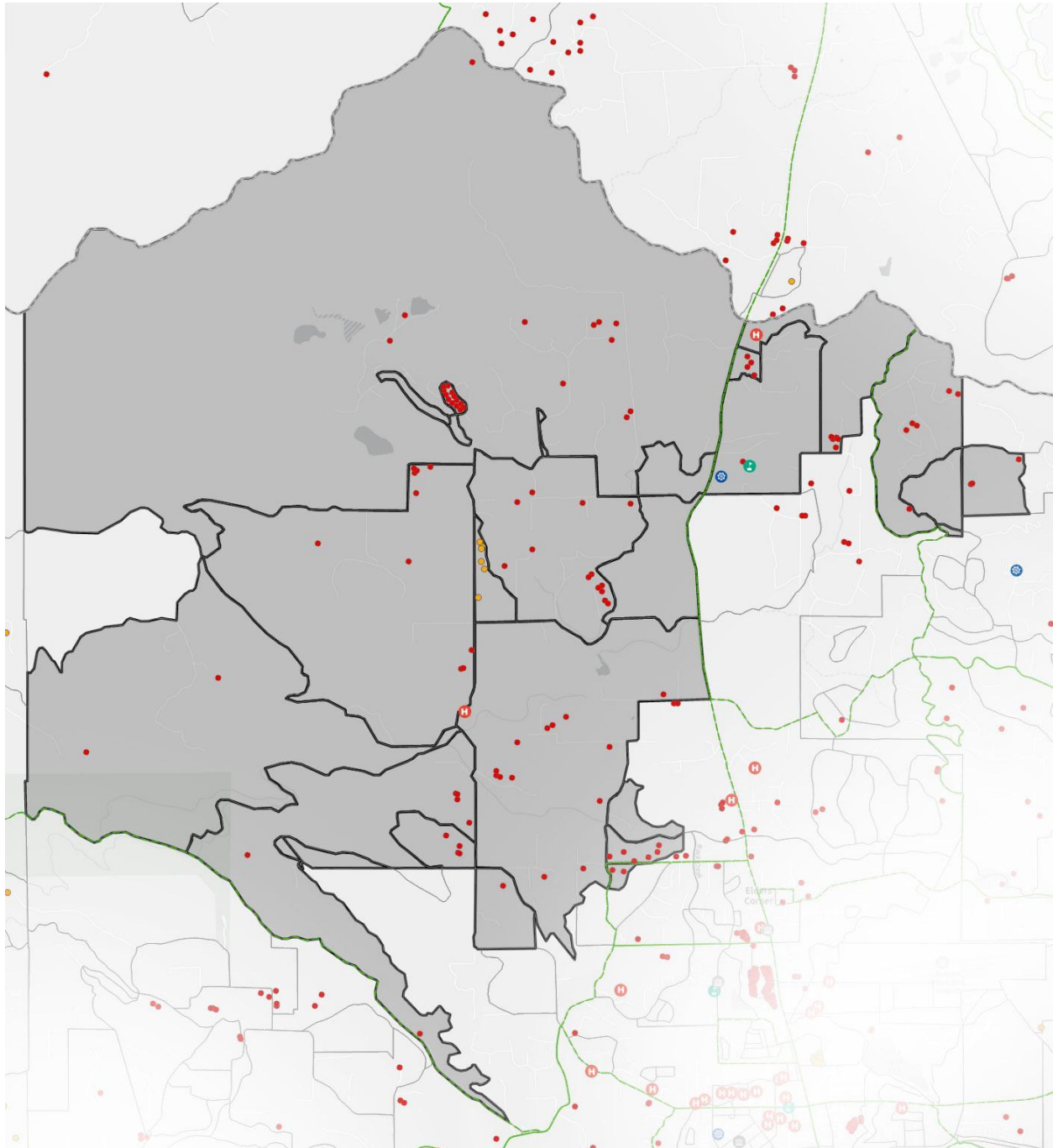
- *The maximum mbps download and upload speed currently offered to serviceable locations in the project area.*

Generally this area is served by traditional satellite and older fixed wireless. Speeds range from 5 to 25Mb/sec with the faster speeds generally coming from geosynchronous satellites, which has the latency problems associated with that technology. The area is heavily under and unserved according to the California Broadband map as well as the speed test data from the Placer County survey. As indicated by the map image, there are many unserved and priority unserved households.Some locations are listed as receiving 100 Mbps but the area is generally under and unserved according to the California Broadband map.

- *Median Household Income of the project area.*

The project area emcompasses a couple dozen census blocks and part or all of three census block groups. According to the CA broadband map, the aggregate median household income of the five census block groups contained fully or partially within the grant area is $117,251.

- *The number of businesses, anchor institutions and public safety locations in the project area that will receive new or improved service.*

There is little development in the area other than single family homes in unincorporated areas. Google shows a couple dozen businesses registered in the polygon. A data base pull showed 25 businesses in the area. There are undoubtedly more small home based businesses that are not registered with traditional commercial services.

The CA broadband map shows the following anchor institutions.

Schooltoolz - 12450 Grayson Road, Auburn, CA 95602
Lone Star FS, PCF STATION 184, Station 184 - 6150 Grass Valley Hwy, Auburn, CA 95603
WEDDLE FAMILY HOME - 5150 BELL RD, Auburn, CA 95603
RYAN FAMILY CARE HOME - 12285 RIO OSO ROAD, Auburn, CA 95602

- *A description of the major infrastructure to be deployed: miles of planned fiber, Central Offices used, number of remote terminals/fiber huts/wireless towers to be built, and if an IRU is used.*

There are two specific products that have dramatically changed the wireless landscape in the last year. Tarana Wireless has come up with technology that reassembles radio waves that have been dispersed during transmission by obstacles or other radio sources, It does this using proprietary software plus an onboard supercomputer. This has resulted in the effective elimination of the effects of radio interference allowing customers to get speeds of 500 Megabits per second on the current generation of equipment and up to one gigabit on the already-in-production next generation. This technology works in existing frequency bands and eliminates

the biggest challenge in congested areas - radio interference. The second incredible development has been the release of the 6 GHz frequency band by the FCC for the exclusive use of ISPs and telecommunications companies. The allocation of frequency is so large that from the very beginning end users will get 1 Gigabit per second to their home, which we are currently delivering on a test network with FCC permission. The FCC expects to release the equipment (two vendors make equipment currently for this band) from test mode to general use by the end of this year in time for use in grants. These two developments will dramatically shift our ability to provide cable-like speeds with cable-equivalent consistency to customers in the most remote locations in our region. This is the most exciting time to be a wireless Internet service provider in the last 20 years and the ability to exceed existing wireline speeds and reliability is nothing short of revolutionary. With the "to-the-home" capacities available today and the pace of technological development, we expect subsequent generations of this equipment to far outpace the demands of consumers for the foreseeable future — arguably several decades into the future. Wireless technology is now in a position to be considered a worthy alternative to fiber-based deployment on a speed and performance basis and superior to fiber from a cost/performance perspective. Beyond the low costs of wireless deployments and the future upgradability, wireless is superior when measuring the speed of deployment as well as the ease of repair and replacement after natural disasters, which given the frequent occurrence of violent winter storms and summer fires are system characteristics that must be factored into the entire value equation for every broadband solution.

For all of these reasons, there will be no community-wide fiber installed. The only fiber will be a circuit, which will be brought in to one or more of the wireless site locations. The only infrastructure installed will be wireless Access Points (APs) installed at high ground locations in geometrically advantageous locations. We intend to install these APs in towers but can also use trees where they're available.

- *Estimated breakdown of aerial and underground installation.*

The question appears to be for fiber to the home projects only.

- *Major equipment expenses (e.g., number of remote terminals, optical line terminals, fiber switches, fiber distribution hubs, etc.)*

There will be no fiber installed other than the main backhaul. Each wireless AP will consist of four Access Points - generally one Tarana Base Node (BN) and three additional Cambium Access Points mounted on a tower of 60-100 foot height. The towers, Tarana and Cambium Base Nodes, and thousands of customer premise equipment (CPEs) devices from both manufacturers will be the major expenses for the project. Ancillary equipment at each site like batteries, boxes, switches, surge protection etc. will make up the rest of the equipment budget.

- *Estimated construction timeline.*

It should be caveated that the schedule laid out below is under the assumption that we are able to make progress at a reasonable rate with landowner negotiations, and that there are no macro-surprises like the world descending into a global pandemic.

CASF Greenhorn Creek Canyon Broadband Project		Month(s) after grant awardal																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19-24	25-36	37-48	49-59	60
Grant Awardal	G																							
Community Outreach		O	O	O	O	O	O	O	O	O	O													
Negotiation with Property Owners		N	N	N	N	N	N	N	N	N														
Design		D	D	D	D	D	D	D	D	D	D	D												
Marketing Outreach			M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Permitting			P	P	P	P	P	P	P	P	P	P	P	P	P	P								
Build				B	B	B	B	B	B	B	B	B	B	B	B									
Test				T	T	T	T	T	T	T	T	T	T	T	T									
Launch				L																				
Install Customers					I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Final Customer Sign Up																								F

- *Description of proposed broadband project plan for which CASF funding is being requested, including the type of technology to be provided in the proposed service areas:*

We are intending to build a Fixed Wireless network that can service each home from multiple directions. We will use partially overlapping sectors providing most homes with multiple Access Point choices for a high connection success probability. This network will be fed by a fiber backhaul line into a main site.

- *Download speed capabilities of proposed facilities.*

500 Mbps upon deployment with 1 Gb/sec available shortly after with firmware/technology upgrades

- *Upload speed capabilities of proposed facilities.*

500 Mbps upon deployment with 1 Gb/sec available shortly after with firmware/technology upgrades

- *The project description will provide enough construction detail to enable a preliminary indication of the need for a California Environmental Quality Act (CEQA) review and if proposed project areas contains any environmentally sensitive areas. For example, when trenching is required, the applicant will state and describe the manner in which the site is to be restored, post-trenching.*

There will be no trenching or any other construction significant enough to trigger any CEQA accommodation. The most substantial construction that will be undertaken is erecting five or six monopole towers that will not be taller than 100' and will be located on private property in extremely rural areas which are out of view of Public Areas. Last year a tower was proposed

north of Truckee to service remote communities there and that tower was exempted from CEQA review because it wasn't higher than 100' and it was in an extremely rural area so consequently not visible from Public Areas. The towers for this project will be in a highly similar situation as the proposed Tuckee tower that was exempt from CEQA. We don't see any reason these towers would trigger CEQA if the north Truckee tower didn't.

- *Identification of the leveraging of existing available facilities (e.g., interconnection in lieu of overbuilding existing facilities of another provider).*

We will pull AT&T or VAST fiber to the most advantageous location eliminating the need for middle mile fiber.

- *A statement of whether the applicant is disputing the Broadband Map depiction of served status.*

We are not disputing the CA broadband map.

- *A statement of whether the applicant is seeking Ministerial Review and, if so, information that the application meets all requirements for Ministerial Review.*

We are seeking Ministerial Review for the following reasons which are explained in greater detail in the main grant writeup.

-We will offer an ACP enabled low income plan for $15/month.

-Our grant request is less than $25,000,000

-We believe that our project qualifies as CEQA-exempt.

-Our cost per passing is less than $4500.

- *An explanation of why any middle mile facilities in the proposed project are necessary for accessing the proposed last-mile infrastructure.*

This project does not propose any middle mile infrastructure.

- *A statement accepting the open access requirements for any middle mile facilities in the proposed project. Projects will interconnect with the statewide open-access middle mile network, where reasonable and feasible;18 if interconnection to the statewide middle mile network is not feasible or reasonable, a verifiable statement explaining why interconnection is not feasible or reasonable is also required.*

This project does not propose any middle mile infrastructure.