Budget Narrative For NTIA Middle Mile Grant

AMENDED 06 April 2023 – CHANGES IN RED

Applicant Name: Omaha Tribe of Nebraska (Application ID: GRN-001447)

Applicant Type: Tribal

Proposed Period of Performance: 2 years

Total Project Costs: **$38,028,196.44**

Total Federal Grant Request: **$38,028,196.44**

Total Matching Funds (Cash): $0 – seeking Tribal waiver as prescribed in NOFO procedures

Total Matching Funds (In-Kind): $0 – seeking Tribal waiver as prescribed in NOFO procedures

Total Matching Funds (Cash + In-Kind): $0 – seeking Tribal waiver as prescribed in NOFO procedures

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs: 0% – seeking Tribal waiver as prescribed in NOFO procedures

1. Administrative and Legal Expenses - $799,000

Description	Total Time	Rate	Total cost
Post-NOFO Pre-Application Expenses	500	$100 per hour	$ 50,000
Grant Project Management Activities	3000	$100 per hour	$ 300,000
Grant Project Management Activities	1000	$250 per hour	$ 250,000
Grant Project Accounting Activities	400	$175 per hour	$ 70,000
Grant Project Legal Activities	120	$400 per hour	$ 48,000

Post-NOFO Pre-Application Expenses ($50,000): Direct hours of Quick Current-Nebraska LLC and its affiliates under a management contract with Quick Current LLC related to the preparation and submission of the initial application as well as the response to requests for additional information from the NTIA during the project cure period.

Grant project management activities ($300,000): 3,000 hours of staff time @ $100 per hour awarded to co-applicant Quick Current LLC, which is 100% owned by the Omaha Tribe of Nebraska. Funds will be used to cover the equivalent of 1.5 years fulltime salary for a grant manager, whose responsibilities will include completing reports, engineering and project oversight, conducting budget activities and other activities as required. This position will be Federally funded/not match funded as the Tribe will seek a waiver for providing matching funds due to its financial situation. This hourly rate is a fully loaded rate that includes benefits intended to comply in full with the labor standards requirements of the NOFO.

Grant project management activities ($250,000): 1000 hours of staff time @ $250 per hour awarded to co-applicant Quick Current LLC, which is 100% owned by the Omaha Tribe of Nebraska. Funds cover the equivalent of one-half year fulltime salary for executive oversight, whose responsibilities include working with accounting staff on audit requirements, working with legal personnel on legal requirements, and other activities as required to meet the reporting and compliance requirements of the grant program. This position will be Federally funded/not match funded as the Tribe will seek a waiver for providing matching funds due to its financial situation. This hourly rate is a fully loaded rate that includes benefits intended to comply in full with the labor standards requirements of the NOFO.

Grant project accounting activities ($70,000): 400 hours of staff time @ $175 per hour awarded to co-applicant Quick Current LLC, which is 100% owned by the Omaha Tribe of Nebraska. Funds will be used to cover 10% of a fulltime CFO job allocation for two years. This position will be responsible for supporting the grant manager in completion of the activities described above. This position will be Federally funded/not match funded as the Tribe will seek a waiver for providing matching funds due to its financial situation.

Grant project legal activities ($48,000): 120 hours of staff time at $400 per hour awarded to Quick Current LLC, which is 100% owned by the Omaha Tribe of Nebraska. Funds will be used to hire outside council to assist with a variety of legal activities including:

- Drawing up contracts for the three Tribally owned subsidiaries (Quick Current LLC, Quick Current–Nebraska LLC, and Quick Current–Iowa LLC) that will be contractors of this grant award along with Great Plains Communications LLC, an external company that will also be a contractor. These contracts include the arrangements between the Tribe and the contractors, and also between contractors themselves for coordination of service
- Obtaining the appropriate state licenses so that the Tribe and all contractors are able to access the necessary right-of-ways for completion of the proposed project.

2. Land, structures, rights-of-way, appraisals, etc. - $5,562,600

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
12' by 20 Utility building/hut	Each	$77,200	5	$386,000
Combined cable vault and aerial prefabricated splice points	Each	$40,000	30	$1,200,000
Data Center Building	Per square foot	$500	2000	$1,000,000
IRU Dark Fiber Lease	Per mile for 20yrs	$18,000	146.7	$2,640,600
Wholesale lit fiber	Per month	$14,000	24	$336,000

12' by 20' Utility building/hut ($386,000): 5 regen utility buildings @ $77,200 each. Pricing estimate includes costs for land acquisition, structure, and power. Fencing for units is included below in Section 7.

Combined cable vault and aerial prefabricated splice points ($1,200,000): 30 locations @ $40,000 per location. Will include accessible cable vaults and utility poles with three terminated fiber splice points at the appropriate elevated location of the pole. Splice points will serve as predesigned open-access interface points for potential last-mile providers seeking to utilize the middle mile backhaul provided by the proposed grant submission.

Data Center ($1,000,000): Tribe is providing its own land for construction of a Network Operations Center (NOC) in Council Bluffs, Iowa. NOC will provide a number of collocation racks for users of the proposed middle mile network who wish to collocate equipment at the Data Center to access various points of the network. Cost estimate also includes purchase of backup power, power supplies, and provision of parking for expected utility facilities.

IRU Dark Fiber Lease ($2,640,600): We identified 146.7 miles worth of segments of existing 12-count dark fiber that will be purchased @ $75 per mile per month for a term of 20 years, or $18,000 per mile, for diverse path redundancy and will allow for some services to be provided within the first few months of the start of the funding window. IRUs will be paid entirely up front based on the total-term per-mile rate specified above.

Wholesale lit fiber ($336,000): Identified four circuits of existing 100G 12-count lit service fiber that we will purchase wholesale @ $3,500 per circuit per month to provide resiliency and redundancy for the proposed network. Leases will be for 2 years (24 months) and will be paid entirely up front based on the monthly rate specified above.

3. Relocation expenses and payments - $0

The project as proposed does not require the inclusion of any relocation expenses or payments.

4. Architectural and engineering fees - $1,550,000

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
CAD	Per hour	$250	500	$ 125,000
NOC Architectural Plans	Per hour	$250	200	$ 50,000
Energy & Plant Engineering	Per hour	$250	2500	$ 625,000
Transport Engineering	Per hour	$250	3000	$ 750,000

CAD ($125,000): Cost of formal documentation of engineering and planning activities for the proposed project. Estimate based on fully-loaded cost of 500 hours of engineering staff work @ $250 per hour, and will include all benefits required to comply in full with the labor standards requirements in the NOFO.

Data Center Architectural Plans ($50,000): Cost for one architect working 200 hours @ $250 per hour to design the NOC, including node design and site plans as well as including the additional required specifications for collocation facilities and other necessary features.

Energy & Plant Engineering ($625,000): Design and documentation with electrical engineering best practices for DC power, power backup, and grounding requirements for all locations in which power is required, including utility huts, aerial splice points, and Data Center. Estimate is based on fully loaded cost of 2,500 hours of engineering staff time @ $250 per hour and will include all benefits required to comply in full with the labor standards requirements in the NOFO.

Transport Engineering ($750,000): Design and documentation of all fiber routes (lit and dark), fiber splicing, network equipment (switches, routers, etc.) including Layer 2 and Layer 3 engineering. Estimate is based on fully loaded cost of 3,000 hours of engineering staff time @ $250 per hour and will include all benefits required to comply in full with the labor standards requirements in the NOFO. This includes the required addition time to add customers to the network.

5. Other architectural and engineering fees - $120,000

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Network turn up & testing	Each	$12,000	10	$120,000

Network turn up & testing ($120,000): Overall turnup and testing of the network. Cost is for 3 technicians @ $75 per hours for 53.3 hours a month over 10 months (533 hours) based on standard, fully loaded industry rates for this type of role. Fully loaded rate includes benefits intended to comply in full with the labor standards requirements of the NOFO.

6. Project Inspection fees - $384,000

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Quality Control inspection fees	Each	$1,000	24	$ 24,000
Fiber testing	Each	$12,000	15	$ 180,000
Environmental Site Assessment (ESA) – Phase I & II	Each	$180,000	1	$ 180,000

Quality Control inspection fees ($24,000): Quality control inspection fees are required to assure compliance with local and Tribal regulations for the work being done on and across the Tribal lands. 24 inspections (one per month) will be conducted at an estimated cost of $1,000 per inspection over the period of performance.

Fiber testing ($180,000): End-to-end cable testing and troubleshooting after initial deployment. Cost is for 4 technicians @ $75 per hours for over 15 months (600 hours) based on standard, fully loaded industry rates for this type of role. Fully loaded rate includes benefits intended to comply in full with the labor standards requirements of the NOFO.

Environmental Site Assessment (ESA) – Phase I & II ($180,000): Outside agency retained under contract to prepare assessments. Budget includes vendor selection and management review to be performed by Quick Current-Nebraska LLC and its affiliates under a management contract with Quick Current LLC. Phase I ESA will yield initial report of any Recognized Environmental Conditions (RECs) that will feed into the work performed in the Phase II ESA.

7. Site work - $39,000

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Fencing	Each	$7,800	5	$39,000

Fencing ($39,000): 35 30’ X 30’ 6-foot chain link fencing with security wiring and two gates @ $7,800 per unit. Fencing will be required for all 5 Utility buildings.

8. Demolition and removal - $400,000

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Carter Lake Remediation of Land to allow construction	Each	$400,000	1	$400,000

Carter Lake Remediation of Land to allow construction ($400,000): This is the budgeted amount for remediation of the site based on potential Phase II ESA findings and is also inclusive of a Phase III ESA specifically focused on the impact of the remediation efforts. The need for remediation is assumed based on the history of the site.

9. Construction - $21,645,996.90

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Conduit	Per foot	$2.61	1,437,815	$3,752,697.15
Fiber	Per foot	$10.89	1,437,815	$15,657,805.35
Splicing	Each	$71.44	20,705	$1,479,165.20
Splice vaults	Each	$479.60	1577	$756,329.20

Conduit ($3,752,697.15): 1,437,815 feet of 2-3" (based on supply) conduit @ $2.61 per foot based on estimate from contractors Great Plains Communications LLC and Quick Connect-Nebraska LLC and Quick Connect-Iowa LLC. Used to protect deployed fiber from the elements. Quote is based on an average price given that the proposed project spans primarily rural and suburban terrains with a small amount of urban terrain. As a result, most of the conduit and fiber will be plowed.

Fiber ($15,657,805.35): 1,437,815 feet of 144-count (based on supply) fiber optic cable @ $10.89 per foot based on estimate from contractors Great Plains Communications LLC and Quick Connect-Nebraska LLC and Quick Connect-Iowa LLC. Quote is based on an average price given that the proposed project spans primarily rural and suburban terrains with a small amount of urban terrain. As a result, most of the conduit and fiber will be plowed.

Splicing ($1,479,165.20): 144 splices per 10,000 feet of fiber for a total of 20,705 splices @ $71.44 per splice.

Splice vaults ($756,329.20): Splice points at ~ every 1,000 feet (special circumstances necessitate additional splice points in some regions) for a total of 1,577 splice points @ $479.60 each. We anticipate last mile providers to desire to access the same dark fiber running through multiple splice points for their last mile services.

10. Equipment - $2,567,400

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Directional Boring drill	Each	$300,000	1	$300,000
Ride-on plow	Each	$400,000	1	$400,000
Pole truck	Each	$536,000	1	$536,000
Bucket truck	Each	$276,000	2	$552,000
Fiber testing equipment	Each	$11,000	3	$33,000
Fiber Fusion Splicing Tools	Each	$4,000	3	$12,000
Splicing tent and table	Each	$1,000	3	$3,000
Routers	Each	$240,000	2	$480,000
Network Switches	Each	$15,000	7	$105,000
100G 80km transceivers	Each	$5,000	26	$130,000
100G 10km transceivers	Each	$800	8	$6,400
10G transceivers	Each	$100	100	$10,000

Note that tribally owned contractor Quick Current-Nebraska LLC will be acquiring the majority of the heavy equipment as it staffs up its ability to build and maintain this tribally owned network.

Directional Boring drill ($300,000): 1 Ditch Witch JT10 Directional Bore equipped with fuel tanks and other necessary accoutrements for directional boring. Will be operated by teams of 3-4. Purpose built to minimize disturbance to the surface. The directional bore must be purchased (as opposed to leased) because they will be used both during the initial installation of directional bore fiber as well as to perform maintenance activities during and after the lifetime of the project.

Ride-on plow ($400,000): 1 Ditch Witch RT125 Quad Ride-On Trencher to be used for installation of underground conduit and fiber along the routes proposed in the grant application. To be operated by teams of 1-2. The ride-on plow may be leased as opposed to purchased because while it is necessary for the installation of plow based fiber, maintenance on said fiber can be performed with the directional bore, which we will purchase for the reason articulated above.

Pole truck ($536,000): One Altec DT80 Transmission Digger Derrick to be used for deployment of aerial splice points to provide predesigned open-access interface points for potential last-mile broadband providers seeking to utilize middle mile backhaul deployed by the proposed grant project. The Pole truck must be purchased (as opposed to leased) because they will be used both during the initial installation of aerial fiber as well as to perform maintenance activities during and after the lifetime of the project.

Bucket Truck ($552,000): Two Altec MT66-E76 bucket truck to be used for placing conduit and fiber optic cables and for deployment of pre-terminated aerial splice points for the purpose of providing open-access last mile interface points and for installing aerial fiber. Bucket trucks must be purchased (as opposed to leased) because they will be used both during the initial installation of aerial fiber as well as to perform maintenance activities during and after the lifetime of the project.

Fiber testing equipment ($33,000): 3 Optical Time Domain Reflectometers @ $11,000 each to be used for testing the integrity of the deployed fiber cable during building, certification, and maintenance phases of the proposed project. One OTDR will be deployed with each truck.

Fiber fusion splicing tools ($12,000): 3 fiber fusion splicing toolkits @ $4,000 each to be used for stripping, cleaning, cleaving, splicing, recoating, and other activities included in the fusion splicing process. One kit will be deployed with each truck.

Splicing tent and table ($3,000): 3 splicing tents and tables @ $1,000 each that will be used to provide a stable work surface and environment for fiber splicing activities. One tent and table set will be deployed with each truck.

Routers ($480,000): 2 Cisco ASR 9006 routers @ $240,000 each. Each router comes with RSP card, 36 port 10G card, and four 100G cards.

Switches ($105,000): 7 Ciena 5171 switch @ $15,000 each. Each switch comes with two 100G input/output ports and 36 10G or 1G add/drop ports.

100G 80km transceivers ($130,000): 26 100G Base-ZR4 SMF, 1295-1309nm, 80km, LC, DOM Transceivers @ $5,000 each.

100G 10km transceivers ($6,400): 26 100G Base SMF, 1295-1309nm, 10km, LC, DOM Transceivers @ $800 each.

10G transceivers ($10,000): 100 10G SFP(+) or 1G SFP 10k, LC, DOM Transceiver @ $100 each.

11. Miscellaneous - $0

At this time, we do not foresee any additional miscellaneous expenses for the project, but in the event that such expenses should occur, they will be sufficiently covered by the contingency budget described below.

12. SUBTOTAL (sum of lines 1-11) - $33,067,996.90

13. Contingencies - $4,960,199.54

To account for factors such as inflation, continued supply chain challenges, and the incurrence of any miscellaneous project related costs not previously foreseen during the planning and submission of this proposal, we have included a contingency equivalent to 15% of the project subtotal.

14. SUBTOTAL (sum of lines 12-13) - $38,028,196.44

15. Project (program) income - $0

We project that over the course of the two-year project, the middle mile network will not generate any income.

16. TOTAL PROJECT COSTS - $38,028,196.44

Fiscal Sustainable Statement

Once the network is deployed and put into operation we have already identified customers who will in turn offer retail broadband to approximately 13,000 households. The retail providers are also tribally owned companies and they believe they will achieve a take rate of over 50% - which we believe is conservative due to the fact that the majority of the unserved households currently have tribal affiliations. These service providers expect to gain significant revenue servicing their customers – and a fraction of their revenue between 10 and 20% will be used to pay for the middle mile services made available through this grant.

All of this is detailed in our attached financial model.

Importantly the network will also benefit many other providers, mainly through lease of dark fiber. These revenues will also support our sustainability.