

ATTACHMENT C: PROJECT SCOPE OF WORK AND DELIVERABLES
FIBER AND FIBER-HYBRID PROJECTS

Summary:

Project Budget and Cost Share (see attached from application)

Project Plans and Network Design (see attached Plans, stamped by a Professional Engineer)

Map of Project's Geographic Area (see attached from application)

Project Timeline (see attached)

Project Reimbursement Milestones and Deliverables:

- MILESTONE 1 - Initial disbursement upon award.
 - 10% grant award disbursement
 - 10% match percentage provided
 - Deliverables:
 - Signed subgrantee agreement
 - Preliminary Engineering plans.
 - Construction-Ready Network Design Documents: The final fiber route maps, schematics, and construction specifications.
 - Cybersecurity and SCRM plans
 - Audit from the previous fiscal year
 - Project budget and timeline
 - Letter of Credit/Performance Bond
- MILESTONE 2 - NEPA and historical compliance are complete, and permits have been received
 - 10% grant award disbursement
 - 10% match provided
 - Deliverables:
 - NTIA ESAPTT completion and validation
 - List of Permits: A list of all necessary regulatory approvals and permits required for construction (e.g., pole attachments, utility easements, road crossings).
 - Environmental Clearances (NEPA/NHPA): Proof of completion of all necessary National Environmental Policy Act and National Historic Preservation Act reviews.
 - Certification by PE: A certification letter or the stamp itself, explicitly confirming the design meets all applicable codes, standards, and sound engineering practices.
- MILESTONE 3 - 25% Support infrastructure completed
 - 5% grant award disbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of 25% of the support infrastructure and/or on-site inspection of 25% of the support infrastructure built.

- Date and Time Stamping: The photo must show a visible, unalterable date and time stamp to prove that 25% of the infrastructure was installed during the eligible project period.
- Unique Identifier: The photo must clearly display or reference the unique ID of the infrastructure asset being installed (e.g., Pole ID, Handhole/Pedestal Number) so it can be matched to the As-Built/GIS map.
- Clarity and Context: The photo must be high-resolution and clearly show the installation's context (e.g., surrounding environment, adjacent infrastructure) and the specific item being installed.
- Evidence: Photos of the starting point of the run or the specific site for a FDC, hand-hole, transition point or make-ready hardware.
- On-site verification of easement markers or right-of-way boundaries at key access points for build.
- Documentation of existing utility poles (attachment space availability) before any make-ready work begins.
- Identification and tagging of sensitive areas (e.g., wetlands, historical features) to document compliance with NEPA/NHPA clearances.
- Construction-in-Progress (Digging & Placement) of build.
- Installation of underground conduit evidence: Photos of open trenches with conduit visible before backfilling.
- Photos of conduit and vault placement before the trench is closed.
- Evidence of Best Management Practices (BMPs), such as erosion control or traffic safety measures, is being deployed.
- Evidence of agreement to lease middle mile fiber for specific project.
- MILESTONE 4 - 50% Support infrastructure completed
 - 5% grant award disbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of 50% of the support infrastructure and/or on-site inspection of 50% of the support infrastructure built.
 - Date and Time Stamping: The photo must show a visible, unalterable date and time stamp to prove that 50% of the infrastructure was installed during the eligible project period.
 - Unique Identifier: The photo must clearly display or reference the unique ID of the infrastructure asset being installed (e.g., Pole ID, Handhole/Pedestal Number) so it can be matched to the As-Built/GIS map.
 - Clarity and Context: The photo must be high-resolution and clearly show the installation's context (e.g., surrounding environment, adjacent infrastructure) and the specific item being installed.
 - Evidence: Photos of the starting point of the run or the specific site for a FDC, handhole, transition point or make ready hardware.
 - On-site verification of easement markers or right-of-way boundaries at key access points.
 - Documentation of existing utility poles (attachment space availability) before any make-ready work begins.
 - Identification and tagging of sensitive areas (e.g., wetlands, historical features) to document compliance with NEPA/NHPA clearances.
 - Construction-in-Progress (Digging & Placement)

- Installation of underground conduit evidence: Photos of open trenches with conduit visible before backfilling.
 - Photos of conduit and vault placement before the trench is closed.
 - Evidence of Best Management Practices (BMPs), such as erosion control or traffic safety measures, is being deployed.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 5 - 75% Support infrastructure completed
 - 5% grant award disbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of 75% of the support infrastructure and/or on-site inspection of 75% of the support infrastructure built.
 - Date and Time Stamping: The photo must show a visible, unalterable date and time stamp to prove that 75% of the infrastructure was installed during the eligible project period.
 - Unique Identifier: The photo must clearly display or reference the unique ID of the infrastructure asset being installed (e.g., Pole ID, Handhole/Pedestal Number) so it can be matched to the As-Built/GIS map.
 - Clarity and Context: The photo must be high-resolution and clearly show the installation's context (e.g., surrounding environment, adjacent infrastructure) and the specific item being installed.
 - Evidence: Photos of the starting point of the run or the specific site for a FDC, handhole, transition point or make ready hardware.
 - On-site verification of easement markers or right-of-way boundaries at key access points.
 - Documentation of existing utility poles (attachment space availability) before any make-ready work begins.
 - Identification and tagging of sensitive areas (e.g., wetlands, historical features) to document compliance with NEPA/NHPA clearances.
 - Construction-in-Progress (Digging & Placement)
 - Installation of underground conduit evidence: Photos of open trenches with conduit visible before backfilling.
 - Photos of conduit and vault placement before the trench is closed.
 - Evidence of Best Management Practices (BMPs), such as erosion control or traffic safety measures, is being deployed.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 6 - 100% Support infrastructure completed
 - 15% grant award disbursement
 - 15% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of 100% of the support infrastructure and/or on-site inspection of 100% of the support infrastructure built.
 - Date and Time Stamping: The photo must show a visible, unalterable date and time stamp to prove that 100% of the infrastructure was installed during the eligible project period.
 - Unique Identifier: The photo must clearly display or reference the unique ID of the infrastructure asset being installed (e.g., Pole ID, Handhole/Pedestal Number) so it can be matched to the As-Built/GIS map.

- Clarity and Context: The photo must be high-resolution and clearly show the installation's context (e.g., surrounding environment, adjacent infrastructure) and the specific item being installed.
 - Evidence: Photos of the starting point of the run or the specific site for a FDC, handhole, transition point or make ready hardware.
 - On-site verification of easement markers or right-of-way boundaries at key access points.
 - Documentation of existing utility poles (attachment space availability) before any make-ready work begins.
 - Identification and tagging of sensitive areas (e.g., wetlands, historical features) to document compliance with NEPA/NHPA clearances.
 - Construction-in-Progress (Digging & Placement)
 - Installation of underground conduit evidence: Photos of open trenches with conduit visible before backfilling.
 - Photos of conduit and vault placement before the trench is closed.
 - Evidence of Best Management Practices (BMPs), such as erosion control or traffic safety measures, is being deployed.
 - Evidence of agreement to lease middle mile fiber for specific project

- MILESTONE 7 - 25% network infrastructure is built
 - 5% grant award disbursement
 - 5% match provided
 - Deliverables:
 - Network diagrams
 - Current network diagrams show that 25% of the network has been installed.
 - Deployment Evidence
 - Fiber deployment
 - Certification that 25% of the fiber cable has been physically pulled or blown into the corresponding conduit/innerduct or strung aerially for the defined project segment.
 - Submission of reel cut sheets or deployment records confirming cable lengths used align with design plans and inventory.
 - Splicing activity
 - Documentation and photos of 25% of all major (feeder or distribution) splices completed and secured within closures/cabinets.
 - Submission of Splice Sheets detailing the fiber color codes spliced together and the unique ID of the closure, ensuring alignment with the Logical Network Diagram.
 - Certification that all network equipment installed for the project adheres to BABA requirements.
 - Activation Evidence
 - If network is active in this phase then speed test verification that the network can serve subscribers is required.

- MILESTONE 8 - 50% network infrastructure is built
 - 5% grant award disbursement
 - 5% match provided
 - Deliverables:

- 20% grant award disbursement
- 20% match provided
- Deliverables:
 - As-is plant maps
 - Dated and complete plant maps. Showing the full scale of project locations.
 - Network diagrams
 - Buried Fiber
 - Dated and complete, showing all 100% fiber routes and handhole/pedestal placements for underground deployment.
 - Aerial Fiber
 - Dated and showing all aerial fiber routes and FST locations.
 - Evidence of fiber deployment
 - Certification that 100% of the fiber cable has been physically pulled or blown into the corresponding conduit/innerduct or strung aerially for the defined project segment.
 - Submission of reel cut sheets or deployment records confirming cable lengths used align with design plans and inventory.
 - Evidence of splicing activity
 - Documentation and photos of 100% of all major (feeder or distribution) splices completed and secured within closures/cabinets.
 - Submission of Splice Sheets detailing the fiber color codes spliced together and the unique ID of the closure, ensuring alignment with the Logical Network Diagram.
 - Certification that all network equipment installed for the project adheres to BABA requirements.
 - Speed test evidence that the locations portrayed on the network diagrams are active and that any location can be served.
- MILESTONE 11 - Project closeout completed
 - 15% grant award disbursement
 - 15% match provided
 - Deliverables:
 - Final project report
 - Final As-Built Maps (GIS Data): Submission of the complete, validated, high-accuracy GIS file (e.g., shapefiles or geodatabase) showing 100% of the physical network assets as actually constructed.
 - Final Network Schematics: Submission of the completed logical network diagrams showing all final splices, fiber assignments, and equipment connectivity.
 - Speed test verification
 - Speed and Service Testing: Documentation of actual speed tests conducted at the NTIA guidance-stipulated sample of funded locations, verifying that the installed network delivers the minimum required symmetric speeds (e.g., 100/100 Mbps or 1 Gbps), under 100ms latency.
 - Certification that 100% of project BSLs have been passed.
 - Proof of Service Activation: Submission of documentation (e.g., service agreements or internal records) proving that X% (often 100%) of the funded locations are passed and a significant portion are connected and receiving service.

- 100% Construction Completion Attestation: A formal certification by an officer (e.g., CEO, CFO) that all physical infrastructure (fiber, electronics, shelters, etc.) are installed for 100% of the funded service locations.
- Site Visit
 - Confirmation that the number and type of key assets (cabinets, closures, handholes, poles) match the final As-Built plans.
 - Verification of proper labeling and grounding/bonding of all active and passive equipment.
 - Checking that restoration activities (backfilling, paving, reseeding) meet local permit standards and are complete.
 - On-site inspection of a sample of customer premise connections to verify the service drop is properly terminated and the ONT/NID is installed at the funded location.
 - Visual check for adherence to safety standards (e.g., proper height of aerial fiber, secure installation of ground equipment).

ATTACHMENT C: PROJECT SCOPE OF WORK AND DELIVERABLES
TERRESTRIAL NON-FIBER PROJECTS

Summary:

Project Budget and Cost Share (see attached from application)

Project Plans and Network Design (see attached Plans, stamped by a Professional Engineer)

Map of Project's Geographic Area (see attached from application)

Project Timeline (see attached)

Project Reimbursement Milestones and Deliverables:

- **MILESTONE 1 - Initial Disbursement**
 - 10% grant disbursement
 - 10% match provided
 - Deliverables:
 - Signed subgrantee agreement
 - Preliminary engineering plans.
 - Construction-Ready Network Design Documents: The tower locations with transport fiber route maps, schematics, and construction specifications.
 - Cybersecurity and SCRM plans
 - Audit from the previous fiscal year
 - Project budget and timeline
 - Letter of Credit/Performance Bond
- **MILESTONE 2 - NEPA, Historical and permitting compliance complete.**
 - 10% grant disbursement
 - 10% match provided
 - Deliverables:
 - List of Permits: A list of all necessary regulatory approvals and permits required for construction (e.g., pole attachments, utility easements, road crossings).
 - Evidence that all permitting is in hand: Photo or other documentation.
 - Environmental Clearances (NEPA/NHPA): Proof of completion of all necessary National Environmental Policy Act and National Historic Preservation Act reviews. Receive NEPA decision document approval.
 - Certification by PE: A certification letter or the stamp itself, explicitly confirming the design meets all applicable codes, standards, and sound engineering practices.
- **MILESTONE 3 - 25% Support infrastructure completed**
 - 5% grant disbursement
 - 5% match provided.

- Deliverables:
 - GIS-stamped and dated photographic evidence of all support infrastructure and/or on-site inspection of:
 - Photos of clearing vegetation, grading the land, and constructing the access road for heavy equipment.
 - Mapping out power and fiber (backhaul) runs.
 - Tower foundation site determined.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 4 - 50% Support infrastructure completed
 - 5% grant disbursement
 - 5% match provided.
 - Deliverables:
 - GIS-stamped and dated photographic evidence of all support infrastructure and/or on-site inspection of:
 - Excavation of foundation pit complete.
 - Final base pit and footings in place.
 - Trench for power and/or fiber complete.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 5 - 75% Support infrastructure completed
 - 5% grant disbursement
 - 5% match provided.
 - Deliverables:
 - GIS-stamped and dated photographic evidence of all support infrastructure and/or on-site inspection:
 - Foundation Completion: Photos of the finished concrete pad or foundation base with unique site ID visible, taken after curing and before final grounding/fencing.
 - Grounding and Bonding: Clear photos verifying the installation of the grounding ring.
 - Shelter or cabinet completed with grounding.
 - All conduits in place for power and transmission cables.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 6 - 100% Support infrastructure completed
 - 15% grant disbursement
 - 15% match provided.
 - Deliverable:
 - GIS-stamped and dated photographic evidence of support infrastructure and/or on-site inspection
 - Tower Erection: Photos showing the tower is fully erected at the precise, approved GIS coordinates (Latitude/Longitude).
 - Evidence that commercial power is installed and active to include photographic evidence, dated and time-stamped.

- Grounding and Bonding: Clear photos verifying the installation of the grounding ring and the grounding/bonding to the tower structure and equipment shelter.
 - Photographic evidence of back-haul installed to include all fiber build elements or microwave shot elements in place.
 - Certification that 100% of the fiber cable has been physically pulled or blown into the corresponding conduit/innerduct or strung aerially for the defined project segment or microwave shot transmission antenna and receiver in place.
 - All shelters, fiber huts, cable vaults and any support structures completed.
 - As-is plant maps and network diagrams
 - Final GIS Tower/Site Data: Submission of GIS files detailing the exact final coordinates of every new or upgraded tower, micro-cell site, and equipment cabinet.
 - Evidence of agreement to lease middle mile fiber for specific project
- MILESTONE 7 - 25% Network infrastructure completed
 - 5% grant reimbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of network infrastructure installed:
 - Power and fiber/hybrid cables placed on the tower.
 - Hangers and hoisting grips installed to secure cables to the tower.
 - Weatherproof entry ports (boots) are installed where cables enter the equipment shelter.
- MILESTONE 8 - 50% Network infrastructure completed
 - 5% grant reimbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of network infrastructure.
 - Mounting brackets and equipment installed on tower and/or support equipment installed in shelter.
- MILESTONE 9 - 75% Network infrastructure completed
 - 5% grant reimbursement
 - 5% match provided
 - Deliverables:
 - GIS-stamped and dated photographic evidence of network infrastructure.
 - Evidence of grounding for equipment completed to include racks, brackets, stands or any support structure.
 - Evidence of power ran to equipment.
- MILESTONE 10 - 100% Network infrastructure completed
 - 20% grant reimbursement

- 20% match provided
- Deliverables:
 - GIS-stamped and dated photographic evidence of network infrastructure
 - Radio and Antenna Placement: Photos showing the final placement and aiming of antennas (e.g., sector panels) and the corresponding radios/base station equipment (e.g., BBU/RRH).
 - Shelter/Cabinet Installation: Photos of the installed equipment shelter or cabinet, verifying that the unique asset ID is labeled, and power/backhaul connections are terminated.
 - Power Activation: Documentation (e.g., meter installation receipts, photos of the running power source) verifying the site has commercial power and the active equipment has been successfully powered up.
 - Sector Coverage Mapping: Submission of propagation model maps based on the as-built antenna heights, power settings, and terrain, showing the final guaranteed coverage area that meets the minimum required service speed.
 - Backhaul Route Mapping: If the wireless project included new fiber or microwave backhaul, the map must include the GIS trace of the constructed backhaul route to connect the site to the core network.
- MILESTONE 11 - Project closeout completed
 - 15% grant reimbursement
 - 15% match provided
 - Deliverables:
 - Final project report
 - As-Built GIS Final Acceptance: Formal approval of the final, high-accuracy As-Built GIS maps by the granting authority, confirming that all constructed assets match the funded project scope.
 - Final Performance Report: Submission of the comprehensive report summarizing the achievement of all goals and objectives stated in the grant application (e.g., number of locations served, speeds achieved).
 - Speed test verification
 - Data must be collected and submitted in adherence to the NTIA guidelines.
 - Capacity Certification: Technical specifications confirming the network design has the aggregate capacity to support the required symmetric speeds (e.g., 100/100 Mbps) simultaneously for all homes within the sector's coverage area.
 - Certification that 100% of project BSLs have been passed
 - Location Service Verification: Mapping of all Broadband Serviceable Locations (BSLs) that are confirmed to fall within the certified coverage area and receive the target speeds.
 - Site visit
 - As-Built GIS Confirmation: The auditor will verify that the physical location of the tower/asset matches the final GIS coordinates provided in the As-Built map within the required accuracy tolerance.

- GIS-Stamping Cross-Reference: On-site verification that the coordinates embedded in the initial installation photos match the final As-Built coordinates and the physical location.
- Equipment Compliance: Visual inspection of antennas and radios to confirm the Make, Model, and Serial Numbers match the submitted final inventory list.
- Grounding/Bonding: Visual inspection to confirm the tower and active equipment shelters are properly grounded and bonded according to safety and engineering standards.
- Antenna Aiming/Height Validation: On-site verification that antenna heights and sector aiming/azimuths conform to the propagation model submitted in the final design.
- Site Restoration: Verification that all ground disturbance areas (trenching, shelters) have been fully restored to original or permitted condition.
- Live Throughput Testing: The auditor (or provider, witnessed by the auditor) will conduct live speed tests from a representative sample of subscriber locations within the funded coverage area.
- Coverage Boundary Check: The auditor may test signal strength near the edge of the claimed service boundary to validate the accuracy of the propagation maps submitted.

ATTACHMENT F: PROJECT SCOPE OF WORK AND DELIVERABLES
LOW-EARTH ORBIT SATELLITE PROJECTS

Summary:

Project Budget and Cost Share (see attached from application)

Project Plans and Network Design (see attached Plans, stamped by a Professional Engineer)

Map of Project's Geographic Area (see attached from application)

Project Timeline (see attached)

Project Reimbursement Milestones and Deliverables:

- MILESTONE 1 - Certification of Service Availability
 - 50% grant award disbursement
 - 50% match provided
 - Deliverables
 - Signed affidavit, including statement of service availability to any BSL in the project area within 10 business days

- Additional evidentiary proof as requested, including but not limited to speed and latency test data
- MILESTONE 2 - Subscriber milestones
 - Grant award disbursed proportionally according to the number of new subscribers, as described below.
 - Match provided equivalent to the percent of the grant award disbursed
 - Deliverables
 - Signed affidavit, including statement of service availability to any BSL in the project area within 10 business days
 - Speed and latency test data demonstrating speeds and latency meeting or exceeding the minimum requirements for each newly subscribed BSL.
 - Detailed proof of delivery for the necessary customer premise equipment to each newly subscribed BSL

LEO projects will receive 50% of their grant reimbursement upon certification that service is available to 100% of the BSLs in the project area. To receive this initial 50% disbursement, the Subgrantee must provide UBC with an affidavit signed by an officer of the company which includes a statement that Subgrantee can initiate broadband service that meets the requirements of the Grant Agreement within ten (10) business days of a request to any BSL in the Project Areas with no charges or delays attributable to extension on the service, in addition to meeting all other requirements of the Grant Agreement, service-related or otherwise. UBC reserves the right to request additional evidentiary proof that the network is complete and operational. Examples may include, but are not limited to, speed and latency test data collected in accordance with NTIA guidance.

Following the initial 50% disbursement, the Subgrantee may receive quarterly reimbursements based on subscriber milestones. Subgrantee must submit the following to UBC to verify the new subscribers for the quarter:

1. An affidavit signed by an officer of the company which includes a statement that Subgrantee can initiate broadband service that meets the requirements of the Grant Agreement within ten (10) business days of a request to any BSL in all Project Areas described in Exhibit A, with no charges or delays attributable to extension on the service, in addition to meeting all other requirements of the Grant Agreement, service-related or otherwise
2. Speed and latency test data collected in accordance with NTIA guidance demonstrating speeds and latency meeting or exceeding minimum requirements outlined in the Grant Agreement for each newly subscribed BSL in the Project Area for the quarter, detailing the exact eligible location; and
3. Detailed proof that the necessary equipment for receiving broadband service at each newly subscribed BSL was delivered to the newly subscribed BSL (i.e., Shipping Tracking number, installer invoice)

The amount received in each quarterly reimbursement will be based on the following calculation:

50% of the total grant award divided by 40% of the eligible BSLs in the project area, multiplied by the number of newly subscribed eligible BSLs during the quarter

$$\frac{50\% \text{ total grant award}}{40\% \text{ of eligible BSLs}} \times \text{number of newly subscribed eligible BSLs}$$

Once the Subgrantee reaches a 40% subscription rate for the eligible BSLs, the Subgrantee may request a final disbursement of the remaining grant amount according to the regular quarterly disbursement cadence. To receive this final disbursement, the Subgrantee must submit the same documentation to UBC as required for all quarterly disbursements.

Regardless of whether the Subgrantee has received the full grant disbursement, no grant disbursements shall be made after ten (10) years from the date the Subgrantee demonstrates all Project Areas are complete and operational, and capacity is available for all eligible BSLs in all Project Areas.