BTOP Comprehensive Community Infrastructure
Detailed Budget

Please complete the General Budget Overview and Detailed Project Costs worksheets.

Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this upload.

Applicants are required to provide this upload as an Excel file, and not to convert it to a PDF prior to upload. Applicants should not alter the layout of the provided templates, except to insert additional line-items as needed in the Detailed Project Costs worksheet.

Important Update - 3/19/2010: This template has been updated with the addition of a new column in the Detailed Project Costs worksheet. The new column, titled "Cash Match Percentage" allows Applicants to specify the percentage of the line item cost the will be provided by the cash match. This column is only relevant if "Cash Match" is selected in column C (the "Match" column). If "Cash Match" is selected in column C, Applicants should specify a percentage in the Cash Match Percentage field--100% means that the line item will be paid for entirely from the cash match, 0% means that it is paid for entirely from the federal request, any other amount will allocate the costs between the federal request and the cash match.

Note that *it is not required for Applicants to use this updated template*. Applicants that submit their detailed budget using the previously available template will not be penalized. In the previous version of this template, selecting "Cash Match" in column C indicates that 100% of the line item cost will be paid from the cash match.

General Budget Overview

Budget	Federal Funding Request	Matching Funds (Cash)	Matching Funds (In-Kind)	Budget TOTAL	Last Mile Allocation	Middle Mile Allocation	Allocated TOTAL
Network & Access Equipment (switching, routing, transport, access)	$6,803,034			**$6,803,034**		$6,803,034.40	**$6,803,034**
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)	$38,391,486		$4,746,000	**$43,137,486**		$43,137,486.00	**$43,137,486**
Buildings and Land – (new construction, improvements, renovations, lease)	$2,691,000		$710,000	**$3,401,000**		$3,401,000.00	**$3,401,000**
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)	$103,900			**$103,900**		$103,900.00	**$103,900**
Billing and Operational Support Systems (IT systems, software, etc.)	$200,000			**$200,000**		$200,000.00	**$200,000**
Operating Equipment (vehicles, office equipment, other)	$50,000			**$50,000**		$50,000.00	**$50,000**
Engineering/Professional Services (engineering design, project management, consulting, etc.)	$28,605,626	$28,221,197		**$56,826,823**		$56,826,823.00	**$56,826,823**
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)	$15,000			**$15,000**		$15,000.00	**$15,000**
Site Preparation	$360,000			**$360,000**		$360,000.00	**$360,000**
Other	$757,080			**$757,080**		$757,080.00	**$757,080**
TOTAL BROADBAND SYSTEM:	**$77,977,126**	**$28,221,197**	**$5,456,000**	**$111,654,323**	**$0**	**$111,654,323**	**$111,654,323**
Cost Share Percentage:	**69.84%**	**25.28%**	**4.89%**				

DETAIL OF PROJECT COSTS

PLEASE COMPLETE THE TABLE BELOW FOR THE DIFFERENT CATEGORIES OF EQUIPMENT THAT WILL BE REQUIRED FOR COMPLETING THE PROJECT. EACH CATEGORY SHOULD BE BROKEN DOWN TO THE APPROPRIATE LEVEL FOR IDENTIFYING UNIT COST

		Match (Cash/In-kind)	Cash Match Percentage	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness	General Budget Overview Total	Check:
NETWORK & ACCESS EQUIPMENT						**$6,803,035**	**$0**	**$6,803,035**	**$6,803,035**			$6,803,034	$0
Switching	Distribution /trunk switch			$4,000.00	2	$8,000		$8,000.00	$8,000	10. Equipment	1x10gigE trunk capable switch and spare with 10 gig uplink capable slot		
Switching	10Gbase-ZR XEN Pak			$22,110.00	2	$44,220		$44,220.00	$44,220	10. Equipment	1x10 gig (80km range) fiber port for trunk link and spare receives from long range XFP		
Switching	HP switches			$500.00	14	$7,000		$7,000.00	$7,000	10. Equipment	Required for end site multiple handoffs.		
Routing	CAI-Router for Community Colleges, Main Campus=3560			$13,608.00	3	$40,824		$40,824.00	$40,824	10. Equipment	CPE Termination Equipment to Provide GIGE Service, High Bandwidth Site		
Routing	CAI-Router for Libraries/CC Satellite Campuses=3400			$2,100.00	11	$23,100		$23,100.00	$23,100	10. Equipment	CPE Termination Equipment to Provide GIGE Service, Slow Speed Bandwidth Site		
Routing	CAI-Router for Community Colleges, Main Campus-3560 Hamlet Route			$13,608.00	2	$27,216		$27,216.00	$27,216	10. Equipment	CPE Termination Equipment to Provide GIGE Service, High Bandwidth Site		
Routing	CAI-Router for Community Colleges Main Sites-3560			$13,608.00	2	$27,216		$27,216.00	$27,216	10. Equipment	CPE Termination Equipment to Provide GIGE Service, High Bandwidth Site		
Routing	CAI-Router for Libraries, CC Satellite Sites,3400			$2,100.00	16	$33,600		$33,600.00	$33,600	10. Equipment	CPE Termination Equipment to Provide GIGE Service, Slow Speed Bandwidth Site		
Routing	CAI-Router for Main Site Community Colleges			$13,608.00	7	$95,256		$95,256.00	$95,256	10. Equipment	CPE Termination Equipment to Provide GIGE Service		
Routing	CAI-Router for Libraries, LEA's, CC Satellite Campuses			$2,100.00	13	$27,300		$27,300.00	$27,300	10. Equipment	CPE Termination Equipment to Provide GIGE Service		
Routing	CAI-Router for Main Community College sites			$13,608.00	9	$122,472		$122,472.00	$122,472	10. Equipment	CPE Termination Equipment to Provide GIGE Service, High Bandwidth Site		
Routing	CAI-Router for Libraries, LEA's, and CC sites			$2,100.00	31	$65,100		$65,100.00	$65,100	10. Equipment	CPE Termination Equipment to Provide GIGE Service, Slow Speed Bandwidth Site		
Routing	Cisco 7609			$154,120.00	2	$308,240		$308,240.00	$308,240	10. Equipment	t (Layer 3+) traffic over entire network. Includes service cards for GE and 10GE.		
Transport	Backbone-Common Elements to make Charlotte-Myer's, NC existing DWDM system 4-degree ROADM			$74,000.00	1	$74,000		$74,000.00	$74,000	10. Equipment	Optical Backbone Transport Equipment, connecting to existing NCREN backbone		
Transport	Backbone-Common Elements for new Polkton, NC DWDM Node at South Piedmont CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Lumberton, NC DWDM Node at UNC-Pembroke Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Whiteville, NC DWDM Node at Southeast CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements to make Wilmington, NC existing DWDM system 3-degree ROADM			$37,000.00	1	$37,000		$37,000.00	$37,000	10. Equipment	Optical Backbone Transport Equipment, connecting to existing NCREN backbone		
Transport	Backbone-Common Elements for new Hamlet, NC DWDM node at Richmond CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Sanford, NC DWDM node at Central CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	CAI-Common elements for NCRC Site to serve Rowan Cabarrus CC			$125,000.00	1	$125,000		$125,000.00	$125,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements to make Rocky Mount, NC existing DWDM system 3-degree ROADM			$37,000.00	1	$37,000		$37,000.00	$37,000	10. Equipment	Optical Backbone Transport Equipment, connecting to existing NCREN backbone		
Transport	Backbone-Common Elements for new Williamston, NC DWDM Node at Martin CC			$125,000.00	1	$125,000		$125,000.00	$125,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Elizabeth City, NC DWDM Node at Elizabeth City State University			$125,000.00	1	$125,000		$125,000.00	$125,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Ahoskie, NC DWDM Node at Roanoke-Chowan CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Weldon, NC DWDM Node at Halifax CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Kitty Hawk, NC DWDM Node			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Roanoke Island, NC DWDM Node			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Columbia, NC DWDM Node			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements to make Franklin County DWDM Node			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements to make Hickory, NC existing DWDM system 3-degree ROADM			$37,000.00	1	$37,000		$37,000.00	$37,000	10. Equipment	Optical Backbone Transport Equipment, connecting to existing NCREN backbone		
Transport	Backbone-Common Elements for new Boone, NC DWDM Node at Appalachian State University			$125,000.00	1	$125,000		$125,000.00	$125,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Sparta, NC DWDM Node at Wilkes CC-Alleghaney Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Dodson, NC DWDM Node at Surry CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Reidsville, NC DWDM Node at Rockingham CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Rodsoro, NC DWDM Node at Piedmont CC Campus			$80,000.00	1	$80,000		$80,000.00	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements for new Henderson, NC DWDM Node			$125,000.00	1	$125,000		$125,000.00	$125,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	OSN 15454 - AVL			$118,512.50	1	$118,513		$118,512.50	$118,513	10. Equipment	ONS 15454 nodes with all cards. Includes all 4 sites and 1 node in Asheville to support the ring topology		
Transport	OSN 15454 - MH			$71,608.75	1	$71,609		$71,608.75	$71,609	10. Equipment	ONS 15454 nodes with all cards. Includes all 4 sites and 1 node in Asheville to support the ring topology		
Transport	OSN 15454 - Burnsville			$71,608.75	1	$71,609		$71,608.75	$71,609	10. Equipment	ONS 15454 nodes with all cards. Includes all 4 sites and 1 node in Asheville to support the ring topology		
Transport	OSN 15454 - Nebo			$82,480.00	1	$82,480		$82,480.00	$82,480	10. Equipment	ONS 15454 nodes with all cards. Includes all 4 sites and 1 node in Asheville to support the ring topology		
Transport	OSN 15454 - HVL			$73,230.00	1	$73,230		$73,230.00	$73,230	10. Equipment	ONS 15454 nodes with all cards. Includes all 4 sites and 1 node in Asheville to support the ring topology		
Transport	Spare 15454 equipment			$106,942.50	1	$106,943		$106,942.50	$106,943	10. Equipment	spare parts required for managing service levels		
Transport	Crossponder			$40,225.00	10	$402,250		$402,250.00	$402,250	10. Equipment	10GE distribution swtch to support protected 10GE trunks on ring.w stp handoffs.		
Transport	Spare Crossponder equipment			$37,930.00	1	$37,930		$37,930.00	$37,930	10. Equipment	spare parts required for managing service levels		
Transport	MultiRate Transponders			$40,225.00	2	$80,450		$80,450.00	$80,450	10. Equipment	2 transponders and spare. Used for single 10GigE to handoff by Long Range XFP to Distribution switch		
Transport	Spare Transponder			$37,930.00	1	$37,930		$37,930.00	$37,930	10. Equipment	spare required for managing service levels		
Transport	Channelized SFPs			$3,800.00	16	$60,800		$60,800.00	$60,800	10. Equipment	DWDM SFP cost - Intended for use in the 7609 to provide DWDM over local loops.		
Transport	Backbone-Common Elements for new Burnsville, NC Regeneration Site			$80,000.00	1	$80,000		$80,000	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone-Common Elements to convert DWDM Node in Asheville to 3 Degree			$40,000.00	1	$40,000		$40,000	$40,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	Backbone Common Elements required to incorporate BTOP round 2 transport on Eastern Ring in Rocky Mount			$42,000.00	1	$42,000		$42,000.00	$42,000	10. Equipment	Required modifications to existing DWDM system to support newnodes		
Transport	Backbone Common Elements required to incorporate BTOP round 2 transport at Western Ring in Charlotte			$42,000.00	1	$42,000		$42,000.00	$42,000	10. Equipment	Required modifications to existing DWDM system to support newnodes		
Transport	Backbone Common Elements required to incorporate BTOP round 2 transport at Central Ring in Raleigh, Level3			$113,400.00	1	$113,400		$113,400.00	$113,400	10. Equipment	Required modifications to existing DWDM system to support newnodes		
Transport	Spares			$126,000.00	1	$126,000		$126,000.00	$126,000	10. Equipment	System Spares for newtypes of hardware in system		
Transport	NewDWDM Node in Robbinsville			$80,000.00	1	$80,000		$80,000	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Transport	NewDWDM Node in Robbinsville			$80,000.00	1	$80,000		$80,000	$80,000	10. Equipment	Optical Backbone Transport Node, 80-125 km spacing, key areas		
Access	CAI Site Access SFP			$1,680.00	23	$38,640		$38,640.00	$38,640	10. Equipment	Client side optics for use in CPE		
Access	Crossponders for Ring Access at DWDM nodes, common 10G ring			$32,000.00	5	$160,000		$160,000.00	$160,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	15454 Optics for connection to fiber, Wimington-Charlotte			$2,520.00	23	$57,960		$57,960.00	$57,960	10. Equipment	Client side optics for use in DWDM node		
Access	CAI Site Access SFP-Hamlet-Raleigh Route			$1,680.00	6	$10,080		$10,080.00	$10,080	10. Equipment	Client side optics for use in CPE		
Access	Crossponders for Ring Access at DWDM nodes, common 10G ring, Hamlet-Charlotte Route			$32,000.00	4	$128,000		$128,000.00	$128,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	15454 Optics for connection to fiber, Hamlet-Charlotte Route			$2,520.00	6	$15,120		$15,120.00	$15,120	10. Equipment	Client side optics for use in DWDM node		
Access	CAI Site Access SFP			$1,680.00	31	$52,080		$52,080.00	$52,080	10. Equipment	Client side optics for use in CPE		
Access	Crossponders for Ring Access at DWDM nodes, common 10G ring			$32,000.00	9	$288,000		$288,000.00	$288,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	15454 Optics for connection to fiber			$2,520.00	31	$78,120		$78,120.00	$78,120	10. Equipment	Client side optics for use in DWDM node		
Access	CAI Site Access SFP			$1,680.00	39	$65,520		$65,520.00	$65,520	10. Equipment	Client side optics for use in CPE		
Access	Crossponders for Ring Access at DWDM nodes, common 10G ring-Northeast			$32,000.00	11	$352,000		$352,000.00	$352,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	15454 Optics for connection to fiber			$2,520.00	39	$98,280		$98,280.00	$98,280	10. Equipment	Client side optics for use in DWDM node		
Access	CAI Site Access SFP			$1,680.00	52	$87,360		$87,360.00	$87,360	10. Equipment	Client side optics for use in CPE		
Access	Crossponders for Ring Access at DWDM nodes, common 10G ring			$32,000.00	8	$256,000		$256,000.00	$256,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	15454 Optics for connection to fiber			$2,520.00	52	$131,040		$131,040.00	$131,040	10. Equipment	Client side optics for use in DWDM node		
Access	Crossponders			$32,000.00	1	$32,000		$32,000	$32,000	10. Equipment	Optical Interface for use in DWDM node to tie in to network		
Access	CAI Site Access SFP			$1,680.00	10	$16,800		$16,800	$16,800	10. Equipment	Client side optics for attachment to CPE and DWDM system		
Other	Backbone-Installation of Equipment by MCNC staff			$5,000.00	7	$35,000		$35,000.00	$35,000	10. Equipment	MCNC Core Node Installation Fee		
Other	CAI-Installation of Equipment by MCNC			$1,500.00	30	$45,000		$45,000.00	$45,000	10. Equipment	MCNC CPE Node Installation Fee		
Other	Backbone-Installation of Equipment by MCNC staff			$5,000.00	7	$35,000		$35,000.00	$35,000	10. Equipment	MCNC Core Node Installation Fee		
Other	CAI-Installation of Equipment by MCNC			$1,500.00	39	$58,500		$58,500.00	$58,500	10. Equipment	MCNC CPE Node Installation Fee		
Other	CAI-Installation of Equipment by MCNC			$1,500.00	52	$78,000		$78,000.00	$78,000	10. Equipment	MCNC CPE Node Installation Fee		
Other	Backbone-Installation of Equipment by MCNC staff			$5,000.00	7	$35,000		$35,000.00	$35,000	10. Equipment	MCNC Core Node Installation Fee		
Other	CAI-Installation of Equipment by MCNC			$1,500.00	25	$37,500		$37,500.00	$37,500	10. Equipment	MCNC CPE Node Installation Fee		
Other	XENpak expansion card			$2,000.00	2	$4,000		$4,000.00	$4,000	10. Equipment	1 expansion card for 10gige ports and spare		
Other	Cisco 15216 Mux Demux			$10,674.00	2	$21,348		$21,348.00	$21,348	10. Equipment	required to support DWDM channels		

						$0			$0			$43,137,486	($0)
OUTSIDE PLANT						**$43,137,486**	**$0**	**$43,137,486**	**$43,137,486**				
Cables	Backbone-SMF 28 Armoured Cable			$0.86	1349948	$1,160,955		$1,160,955	$1,160,955	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Splice Cases			$375.00	87	$32,625		$32,625	$32,625	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Hamlet-Raleigh-SMF 28 Armoured Cable			$0.86	629043	$540,977		$540,977	$540,977	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Hamlet-Raleigh-Splice Cases			$375.00	34	$12,750		$12,750	$12,750	9. Construction	Components to build buried fiber optic system		
Cables	CAI-SMF 28 Armoured Cable			$0.70	238265	$166,786		$166,786	$166,786	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	CAI-Splice Cases			$375.00	62	$23,250		$23,250	$23,250	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	Backbone-Primary-NE-SMF 28 Armoured Cable			$0.86	1589328	$1,366,822		$1,366,822	$1,366,822	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Primary-NE-Splice Cases			$375.00	106	$39,750		$39,750	$39,750	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Secondary-Coastal Route-SMF 28 Armoured Cable			$0.86	1146605	$986,080		$986,080	$986,080	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Secondary-Coastal Route-NE-Splice Cases			$375.00	92	$34,500		$34,500	$34,500	9. Construction	Components to build buried fiber optic system		
Cables	Franklin County-SMF 28 Armoured Cable			$0.86	621562	$534,543		$534,543	$534,543	9. Construction	Components to build buried fiber optic system		
Cables	Franklin County-NE-Splice Cases			$375.00	34	$12,750		$12,750	$12,750	9. Construction	Components to build buried fiber optic system		
Cables	Williamston-Beaufort-SMF 28 Armoured Cable			$0.86	120859	$103,939		$103,939	$103,939	9. Construction	Components to build buried fiber optic system		
Cables	Williamston-Beaufort-NE-Splice Cases			$375.00	8	$3,000		$3,000	$3,000	9. Construction	Components to build buried fiber optic system		
Cables	CAI-SMF 28 Armoured Cable			$0.70	230784	$161,549		$161,549	$161,549	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	CAI-Splice Cases			$375.00	84	$31,500		$31,500	$31,500	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	Fiber builds			$91,007.93	103.48	$9,417,501		$9,417,500.60	$9,417,501	9. Construction	transport medium to serve remote western NC		
Cables	Backbone-SMF 28 Armoured Cable			$0.86	1297032	$1,115,448		$1,115,448	$1,115,448	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Splice Cases			$375.00	80	$30,000		$30,000	$30,000	9. Construction	Components to build buried fiber optic system		
Cables	CAI-SMF 28 Armoured Cable			$0.70	145607	$101,925		$101,925	$101,925	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	CAI-Splice Cases			$375.00	69	$25,875		$25,875	$25,875	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	CAI-SMF 28 Armoured Cable			$0.70	258984	$181,289		$181,288.80	$181,289	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	CAI-Splice Cases			$375.00	94	$35,250		$35,250.00	$35,250	9. Construction	Components to build buried fiber optic system to CAI's		
Cables	Backbone-Graham-SMF 28 Armoured Cable			$0.86	109349	$94,040		$94,040	$94,040	9. Construction	Components to build buried fiber optic system		
Cables	Backbone-Graham-Splice Cases			$375.00	8	$3,000		$3,000	$3,000	9. Construction	Components to build buried fiber optic system		
Conduits	Backbone-Quantity (2) 1 1/4 Conduits			1.31	1238484	$1,622,414		$1,622,414	$1,622,414	9. Construction	Components to build buried fiber optic system		
Conduits	Backbone--Hamlet-Raleigh-Quantity (2) 1 1/4 Conduits			1.31	577104	$756,006		$756,006	$756,006	9. Construction	Components to build buried fiber optic system		
Conduits	CAI-Quantity (2) 1 1/4 Conduits			0.66	218592	$144,271		$144,271	$144,271	9. Construction	Components to build buried fiber optic system to CAI's		
Conduits	Backbone-Primary-NE-Quantity (2) 1 1/4 Conduits			1.31	1320819	$1,730,273		$1,730,273	$1,730,273	9. Construction	Components to build buried fiber optic system		
Conduits	Backbone-Secondary-Coastal Route-Quantity (2) 1 1/4 Conduits			1.31	622667	$815,694		$815,694	$815,694	9. Construction	Components to build buried fiber optic system		
Conduits	Franklin County-Quantity (2) 1 1/4 Conduits			1.31	570240	$747,014		$747,014	$747,014	9. Construction	Components to build buried fiber optic system		
Conduits	CAI-Quantity (1) 1 1/4 Conduits			0.66	211728	$139,740		$139,740	$139,740	9. Construction	Components to build buried fiber optic system to CAI's		
Conduits	Conduit Purchase from Patterson and Wilder			1500000	1	$1,500,000		$1,500,000	$1,500,000	9. Construction	Components to build buried fiber optic system		
Conduits	Conduit Donation from Patterson and Wilder	In-kind Match		4746000	1	$4,746,000		$4,746,000	$4,746,000	9. Construction	Components to build buried fiber optic system		
Conduits	Backbone-Primary-Graham-Quantity (2) 1 1/4 Conduits			1.31	100320	$131,419		$131,419	$131,419	9. Construction	Components to build buried fiber optic system		
Conduits	Backbone-Quantity (2) 1 1/4 Conduits			1.31	1189938	$1,558,819		$1,558,819	$1,558,819	9. Construction	Components to build buried fiber optic system		
Conduits	CAI-Quantity (2) 1 1/4 Conduits			0.66	133584	$88,165		$88,165	$88,165	9. Construction	Components to build buried fiber optic system to CAI's		
Conduits	CAI-Quantity (2) 1 1/4 Conduits			0.66	237600	$156,816		$156,816.00	$156,816	9. Construction	Components to build buried fiber optic system to CAI's		
Ducts	Backbone-Handholds			750	619	$464,250		$464,250	$464,250	9. Construction	Components to build buried fiber optic system		
Ducts	Backbone-Hamlet-Raleigh-Handholds			750	289	$216,750		$216,750	$216,750	9. Construction	Components to build buried fiber optic system		
Ducts	CAI-Handholds			750	115	$86,250		$86,250	$86,250	9. Construction	Components to build buried fiber optic system to CAI's		
Ducts	Backbone-Handholds			750	595	$446,250		$446,250	$446,250	9. Construction	Components to build buried fiber optic system		
Ducts	CAI-Handholds			750	79	$59,250		$59,250	$59,250	9. Construction	Components to build buried fiber optic system to CAI's		
Ducts	Backbone-Primary-NE-Handholds			750	660	$495,000		$495,000	$495,000	9. Construction	Components to build buried fiber optic system		
Ducts	Franklin County-Handholds			750	285	$213,750		$213,750	$213,750	9. Construction	Components to build buried fiber optic system		
Ducts	CAI-Handholds			750	110	$82,500		$82,500	$82,500	9. Construction	Components to build buried fiber optic system to CAI's		
Ducts	Backbone-Secondary-Coast Route-Bridge Attachment Duct			40.64	55909	$2,272,142		$2,272,142	$2,272,142	9. Construction	Components to build buried fiber optic system		
Ducts	CAI-Handholds			750	138	$103,500		$103,500.00	$103,500	9. Construction	Components to build buried fiber optic system to CAI's		
Ducts	Backbone-Graham Handhold			750	50	$37,500		$37,500	$37,500	9. Construction	Components to build buried fiber optic system		
Poles	RR Crossing Application			10000	1	$10,000		10000	$10,000	9. Construction	for permission to cross railroad tracks		
Poles	Pole Attachments - Mtn Elec			23	1531	$35,213		35213	$35,213	9. Construction	for permission to attach fiber to existing poles		
Poles	Pole Attachments - Progress			18	660	$11,880		11880	$11,880	9. Construction	for permission to attach fiber to existing poles		
Towers						$0			$0				
Repeaters						$0			$0				
Other	IRU acquisition from AGL Networks, Metro-fiber in downtown Charlotte, 12 fibers			749550	1	$749,550		$749,550	$749,550	9. Construction	IRU acquisition to avoid buildling of existing network plant. Purchase from willing provider allows serving k		
Other	IRU acquisition from City of Monroe to Kannapolis to serve Rowan-Cabarrus CC and North Carolina Research Campus			600000	1	$600,000		$600,000	$600,000	9. Construction	IRU acquisition to avoid buildling of existing network plant. Purchase from willing provider allows serving k		
Other	Backbone-20 year IRU with Blue Ridge Electric for 90 miles of fiber from Lenoir to Boone to Sparta, 24 fibers.			3672000	1	$3,672,000		$3,672,000	$3,672,000	9. Construction	IRU acquisition to avoid buildling of existing network plant. Purchase from willing provider allows serving k		
Other	Easements			6	312240	$1,873,440		1873440	$1,873,440	9. Construction	for permission to cross private land		
Other	Local Pole Attach. Applications			10	100	$1,000		1000	$1,000	9. Construction	for permission to attach fiber to existing poles		
Other	Rideouts			$0.50	14410	$7,205		7205	$7,205	6. Inspection fees	onsight management of the build process		
Other	Blue Ridge Electric IRU of 16.5 miles of 24 fibers from Boone to Banner Elk to tie in with ERC			1,069,200	1	$1,069,200		$1,069,200	$1,069,200	9. Construction	IRU acquisition to avoid buildling of existing network plant. Purchase from willing provider allows serving k		
Other	25 Year IRU With Balsam for 73.9 Miles of Fiber to Robbinsville from Webster			278121	1	$278,121		$278,121	$278,121	9. Construction	IRU acquisition to avoid buildling of existing network plant. Purchase from willing provider allows serving k		
						$0			$0				

		Match (Cash/In-kind)	Cash Match Percentage	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness		
BUILDINGS						**$3,401,000**	**$0**	**$3,401,000**	**$3,401,000**			$3,401,000	$0
New Construction						$0			$0				
Pre-Fab Huts	Backbone-Hut, South Piedmont CC, Polkton, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, UNC-Pembroke, Lumberton, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Southeast Community College, Whiteville, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, UNC-Wilmington, Wilmington, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Fayetteville State University, Fayetteville, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Richmond Community College, Hamlet , NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Central Carolina Community College, Sanford , NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Wilkes CC Alleghaney Center, Sparta, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Surry CC, Dobson, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Rockingham CC, Reidsville, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Piedmont CC, Appalachian State University			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Piedmont CC, Roxboro			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, TBD, Henderson			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Golden Leaf Foundation, Rocky Mount, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Martin CC, Williamston, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Elizabeth City State University, Elizabeth City, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Roanoke-Chowan CC, Ahoskie, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Halifax CC, Weldon, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Henderson, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Franklin County			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut,Roanoke Island, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Columbia, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Backbone-Hut, Kitty Hawk, NC			85000	1	$85,000		$85,000	$85,000	2. Land, structures	Controlled Environment for placement at amplification sites		
Pre-Fab Huts	Environ. Control. Optcl Encl.			100000	2	$200,000		200000	$200,000	2. Land, structures	huts for required signal regeneration		
Improvements &						$0			$0				
Other	ECOE (Hut) land acquisition			$100,000.00	2	$200,000		$200,000.00	$200,000	2. Land, structures	land that ECOE (hut) will reside on		
Other	DC Distribution			4000	8	$32,000		$32,000	$32,000	2. Land, structures	DC Distribution System to Power POP Elements		
Other	Land Acquisition, Polkton, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition, Lumberton, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition,Whiteville, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition, Wilmington, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition, Fayetteville, NC, 1 Acre			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition, Hamlet, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land Acquisition, Sanford, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	DC Distribution			4000	7	$28,000		$28,000	$28,000	2. Land, structures	DC Distribution System to Power POP Elements		
Other	Land, Sparta, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Dobson, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Reidsville, NC, 1 Acre	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Boone, NC 1 Acre	In-kind Match		50000	1	$50,000		$50,000	$50,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Roxboro, NC 1 Acre	In-kind Match		50000	1	$50,000		$50,000	$50,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Henderson, NC 1 Acre	In-kind Match		50000	1	$50,000		$50,000	$50,000	2. Land, structures	Land for placement of prefab hut		
Other	DC Distribution			4000	9	$36,000		$36,000	$36,000	2. Land, structures	DC Distribution System to Power POP Elements		
Other	Land, Golden Leaf Foundation, Rocky Mount, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Martin Community College, Williamston, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Elizabeth City State University, Elizabeth City, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Roanoke-Chowan CC, Ahoskie, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Halifax Community College, Weldon, NC	In-kind Match		40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Henderson, NC			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Franklin, NC			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Kitty Hawk, NC			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Roanoke Island, NC			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
Other	Land, Columbia, NC			40000	1	$40,000		$40,000	$40,000	2. Land, structures	Land for placement of prefab hut		
						$0			$0			$103,900	$0
CUSTOMER PREMISE EQUIPMENT						**$103,900**	**$0**	**$103,900**	**$103,900**				
Modems						$0			$0				
Set Top Boxes						$0			$0				
Inside Writing						$0			$0				
Other	Managed Media Converter			350	8	$2,800		2800	$2,800	10. Equipment	Managed SFP media converters		
Other	Cisco DWDM SFP			3800	8	$30,400		30400	$30,400	10. Equipment	DWDM SFPs for use in SFP media converters		
Other	CAI UPS			700	10	$7,000		$7,000	$7,000	10. Equipment	UPS to provide conditioned power to CAI subscribers		
Other	CAI UPS			700	19	$13,300		$13,300	$13,300	10. Equipment	UPS to provide conditioned power to CAI subscribers		
Other	CAI UPS			700	20	$14,000		$14,000	$14,000	10. Equipment	UPS to provide conditioned power to CAI subscribers		
Other	CAI UPS			700	52	$36,400		$36,400.00	$36,400	10. Equipment	UPS to provide conditioned power to CAI subscribers		
						$0			$0			$200,000	$0
BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS						**$200,000**	**$0**	**$200,000**	**$200,000**				
Billing Support						$0			$0				
						$0			$0				
						$0			$0				
Customer Care	Mapping Software and other Misc. Software for Support			200000	1	$200,000		$200,000.00	$200,000	11. Misc.	Need professional mapping software for administration of route management.		
						$0			$0				
						$0			$0				
Other Support						$0			$0				
						$0			$0				
						$0			$0				

		Match (Cash/In-kind)	Cash Match Percentage	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness		
OPERATING EQUIPMENT						**$50,000**	**$0**	**$50,000**	**$50,000**			$50,000	$0
Vehicles	Staff Truck for Deployment			$25,000.00	1	$25,000		$25,000	$25,000	10. Equipment	Required vehicle for support staff in field during construction		
Vehicles	Staff Truck for Deployment			$25,000.00	1	$25,000		$25,000	$25,000	10. Equipment	Required vehicle for support staff in field during construction		
Office Equipment /						$0			$0				
Other						$0			$0				
						$0			$0				
						$0			$0			$56,826,823	($0)
PROFESSIONAL SERVICES						**$56,826,823**	**$0**	**$56,826,823**	**$56,826,823**				
Engineering	Backbone-Route Engineering			$672,991.00	1	$672,991		$672,991	$672,991	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	Backbone-Hamlet-Raleigh Route Engineering			$317,407.00	1	$317,407		$317,407	$317,407	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	CAI-Route Engineering and Drawings			$59,566.00	1	$59,566		$59,566	$59,566	4. Architectural and engr.	Professional Engineering for CAI lateral fiber routes		
Engineering	Backbone-Route Engineering			$654,466.00	1	$654,466		$654,466	$654,466	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	CAI-Route Engineering and Drawings			$36,402.00	1	$36,402		$36,402	$36,402	4. Architectural and engr.	Professional Engineering for CAI lateral fiber routes		
Engineering	Backbone-Primary-NE-Route Engineering			$792,331.00	1	$792,331		$792,331	$792,331	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	Franklin County-Route Engineering			$313,632.00	1	$313,632		$313,632	$313,632	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	Beaufort County-Route Engineering			$60,984.00	1	$60,984		$60,984	$60,984	4. Architectural and engr.	Professional Engineering for CAI lateral fiber routes		
Engineering	Backbone-Coastal Route- Route Engineering			$571,623.94	1	$571,624		$571,624	$571,624	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Engineering	CAI-Route Engineering			$54,674.40	1	$54,674		$54,674	$54,674	4. Architectural and engr.	Professional Engineering for CAI lateral fiber routes		
Engineering	CAI-Route Engineering and Drawings			$64,746.00	1	$64,746		$64,746.00	$64,746	4. Architectural and engr.	Professional Engineering for CAI Lateral Fiber Routes		
Engineering	Graham-Engineering			$45,000.00	1	$45,000		$45,000	$45,000	4. Architectural and engr.	Professional Engineering for backbone fiber routes		
Project	Backbone-Project Management and Quality Control			668047	1	$668,047		$668,047	$668,047	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Backbone-Hamlet-Raleigh Project Management and Quality Control			311636	1	$311,636		$311,636	$311,636	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	CAI-Project Management and Quality Control			111255	1	$111,255		$111,255	$111,255	4. Architectural and engr.	Professional Project Management and Quality Control for CAI		
Project	Backbone-Project Management and Quality Control			642567	1	$642,567		$642,567	$642,567	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	CAI-Route Project Management and Quality Control			66629	1	$66,629		$66,629	$66,629	4. Architectural and engr.	Professional Project Management and Quality Control for CAI		
Project	Backbone-Primary-NE-Project Management and Quality Control			712428	1	$712,428		$712,428	$712,428	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Backbone-Coastal Route-Project Management and Quality Control			340326	1	$340,326		$340,326	$340,326	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Franklin County-Project Management and Quality Control			307929	1	$307,929		$307,929	$307,929	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Beaufort County-Project Management and Quality Control			59875	1	$59,875		$59,875	$59,875	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	CAI-Project Management and Quality Control			57696	1	$57,696		$57,696	$57,696	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Direct Engineering Oversight			40000	6	$240,000		240000	$240,000	4. Architectural and engr.	required fiber build and network oversight		
Project	Direct Engineering Oversight			56000	3	$168,000		168000	$168,000	4. Architectural and engr.	required fiber build and network oversight		
Project	Direct Engineering Oversight			22500	3	$67,500		67500	$67,500	4. Architectural and engr.	required fiber build and network oversight		
Project	Environmental Assessment			50000	1	$50,000		50000	$50,000	4. Architectural and engr.	required fiber build and network oversight		
Project	CAI-Route Project Management and Quality Control			114598	1	$114,598		$114,598.00	$114,598	4. Architectural and engr.	Professional Project Management and Quality Control		
Project	Graham-Project Management and QC			85,000	1	$85,000		$85,000	$85,000	4. Architectural and engr.	Professional Project Management and Quality Control		
Consulting	Environmental Assessment-Charlotte-Wilmington			100000	1	$100,000		$100,000	$100,000	4. Architectural and engr.	Analysis of Environmental Impact		
Consulting	Environmental Assessment-Hamlet-Raleigh			536	1	$536		$536	$536	4. Architectural and engr.	Analysis of Environmental Impact		
Consulting	Environmental Assessment-Hamlet-Raleigh	Cash Match		99464	1	$99,464		$99,464	$99,464	4. Architectural and engr.	Analysis of Environmental Impact		
Consulting	Environmental Assessment	Cash Match		34808	1	$34,808		$34,808	$34,808	4. Architectural and engr.	Analysis of Environmental Impact		
Consulting	Environmental Assessment			65192	1	$65,192		$65,192	$65,192	4. Architectural and engr.	Analysis of Environmental Impact		
Consulting	Environment Assessment			100000	1	$100,000		$100,000	$100,000	4. Architectural and engr.	Analysis of Environmental Impact		
Other	Backbone-Fiber Installation Costs, Labor			0.93	1349948	$1,255,452		$1,255,452	$1,255,452	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Conduit Installation Costs, Labor-non Mecklenburg County			5.71	1172483	$6,694,878		$6,694,878	$6,694,878	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Conduit Installation Costs, Labor- Mecklenburg County			13.25	66001	$874,513		$874,513	$874,513	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Handhold Installation Costs, Labor			286	619	$177,034		$177,034	$177,034	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Splicing Costs per location for 48 fibers, Labor			1035	87	$90,045		$90,045	$90,045	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Hamlet-Raleigh Fiber Installation Costs, Labor			0.93	629043	$585,010		$585,010	$585,010	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Hamlet-Raleigh Conduit Installation Costs, Labor			5.71	577104	$3,295,264		$3,295,264	$3,295,264	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Hamlet-Raleigh Handhold Installation Costs, Labor			286	289	$82,654		$82,654	$82,654	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Hamlet-Raleigh Splicing Costs per location for 48 fibers, Labor			1035	34	$35,190		$35,190	$35,190	9. Construction	Backbone Fiber optic plant construction costs		
Other	CAI-Fiber Installation Costs, Labor			0.93	238265	$221,586		$221,586	$221,586	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Conduit Installation Costs, Labor			5.71	218592	$1,248,160		$1,248,160	$1,248,160	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Handhold Installation Costs, Labor			286	115	$32,890		$32,890	$32,890	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Splicing Costs, Labor			62	700	$43,400		$43,400	$43,400	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Backbone-Fiber Installation Costs, Labor			0.93	1297032	$1,206,240		$1,206,240	$1,206,240	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Conduit Installation Costs, Labor	Cash Match		5.71	1189938	$6,794,546		$6,794,546	$6,794,546	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Handhold Installation Costs, Labor	Cash Match		286	595	$170,170		$170,170	$170,170	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Splicing Costs per location for 48 fibers, Labor			80	1035	$82,800		$82,800	$82,800	9. Construction	Backbone Fiber optic plant construction costs		
Other	CAI-Fiber Installation Costs, Labor	Cash Match		0.93	145607	$135,415		$135,415	$135,415	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Conduit Installation Costs, Labor			5.71	133584	$762,765		$762,765	$762,765	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Handhold Installation Costs, Labor			286	79	$22,594		$22,594	$22,594	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Splicing Costs, Labor			700	69	$48,300		$48,300	$48,300	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Backbone-Primary-NE-Fiber Installation Costs, Labor	Cash Match		0.93	1589328	$1,478,075		$1,478,075	$1,478,075	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Primary-NE-Conduit Installation Costs, Labor	Cash Match		5.71	1320819	$7,541,876		$7,541,876	$7,541,876	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Primary-NE-Handhold Installation Costs, Labor	Cash Match		286	660	$188,760		$188,760	$188,760	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Primary-NE-Splicing Costs per location for 48 fibers, Labor	Cash Match		1035	106	$109,710		$109,710	$109,710	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Secondary-Coastal Route-Fiber Installation Costs, Labor	Cash Match		0.93	1146605	$1,066,343		$1,066,343	$1,066,343	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Secondary-Coastal Route-Conduit Installation Costs, Labor	Cash Match		5.71	622667	$3,555,429		$3,555,429	$3,555,429	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Secondary-Coastal Route--Handhold Installation Costs, Labor	Cash Match		286	329	$94,094		$94,094	$94,094	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Secondary-Coastal Route Splicing Costs per location for 48 fibers, Labor	Cash Match		1035	92	$95,220		$95,220	$95,220	9. Construction	Backbone Fiber optic plant construction costs		
Other	Backbone-Secondary-Coastal Route Bridge Attachment, Labor	Cash Match		22.75	55909	$1,271,930		$1,271,930	$1,271,930	9. Construction	Backbone Fiber optic plant construction costs		
Other	Franklin County Fiber Installation Costs, Labor	Cash Match		0.93	621562	$578,053		$578,053	$578,053	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Franklin County-Conduit Installation Costs, Labor	Cash Match		5.71	570240	$3,256,070		$3,256,070	$3,256,070	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Franklin County-Handhold Installation Costs, Labor	Cash Match		286	285	$81,510		$81,510	$81,510	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Franklin County-Splicing Costs per location for 48 fibers, Labor	Cash Match		1035	34	$35,190		$35,190	$35,190	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Beaufort County-Fiber Installation Costs, Labor	Cash Match		0.93	120859	$112,399		$112,399	$112,399	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Beaufort-Splicing Costs per location for 48 fibers, Labor	Cash Match		1035	8	$8,280		$8,280	$8,280	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Fiber Installation Costs, Labor	Cash Match		0.93	230784	$214,629		$214,629	$214,629	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Conduit Installation Costs, Labor	Cash Match		5.71	211728	$1,208,967		$1,208,967	$1,208,967	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Handhold Installation Costs, Labor	Cash Match		286	110	$31,460		$31,460	$31,460	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Splicing Costs, Labor	Cash Match		700	84	$58,800		$58,800	$58,800	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Fiber Installation Costs, Labor			0.93	258984	$240,855		$240,855.12	$240,855	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Conduit Installation Costs, Labor			5.71	237600	$1,356,696		$1,356,696.00	$1,356,696	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Handhold Installation Costs, Labor			286	138	$39,468		$39,468.00	$39,468	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	CAI-Splicing Costs, Labor			700	94	$65,800		$65,800.00	$65,800	9. Construction	CAI Lateral Fiber optic plant construction costs		
Other	Graham Fiber Installation Costs, Labor			0.93	109349	$101,695		$101,695	$101,695	9. Construction	Backbone Fiber optic plant construction costs		
Other	Graham-Conduit Installation Costs, Labor			21	100320	$2,106,720		$2,106,720	$2,106,720	9. Construction	Backbone Fiber optic plant construction costs		

Other	Graham-Handheld Installation Costs, Labor			286	50	$14,300		$14,300	$14,300	9. Construction	Backbone Fiber optic plant construction costs		
Other	Graham-Splicing Costs per location for 48 fibers, Labor			1035	8	$8,280		$8,280	$8,280	9. Construction	Backbone Fiber optic plant construction costs		
						$0			$0			$15,000	$0
TESTING						**$15,000**	**$0**	**$15,000**	**$15,000**				
Network	DWDM Handheld JDSU			$6,000.00	1	$6,000		6000	$6,000	10. Equipment	spectrum analyzer required for DWDM testing		
Network	GE Test Equipment			$5,000.00	1	$5,000		5000	$5,000	10. Equipment	equipment test GE links		
Network	OSA/10GE flex			$4,000.00	1	$4,000		4000	$4,000	10. Equipment	module for test equipment		
IT System						$0			$0				
						$0			$0				
						$0			$0				
User Devices						$0			$0				
						$0			$0				
						$0			$0				
Test Generators						$0			$0				
						$0			$0				
						$0			$0				
Lab						$0			$0				
						$0			$0				
						$0			$0				
Servers/Computer						$0			$0				
						$0			$0				
						$0			$0				

		Match (Cash/In-kind)	Cash Match Percentage	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness		
OTHER UPFRONT COSTS						**$1,117,080**	**$0**	**$1,117,080**	**$1,117,080**			$1,117,080	$0
Site						$0			$0				
Site	Railroad Permits			8000	26	$208,000		$208,000	$208,000	9. Construction	Required RR Permit Applications		
Site	Railroad Permits			8000	6	$48,000		$48,000	$48,000	9. Construction	Required RR Permit Applications		
Site	Railroad Permits-Primary NE Route			8000	13	$104,000		$104,000	$104,000	9. Construction	Required RR Permit Applications		
Other	Pre-award costs ERC			75	280	$21,000		21000	$21,000	1. Admin and Legal	hours by 4 staff members		
Other	Pre-award costs ERD			125	240	$30,000		30000	$30,000	1. Admin and Legal	hours by 2 staff members		
Other	Legal			60000	1	$60,000		$60,000	$60,000	1. Admin and Legal	Projected costs to draft construction contract, IRU, RFPs, Lambda agreements, etc		
Other	Pre-award costs MCNC			314080	1	$314,080		$314,080	$314,080	1. Admin and Legal	Complication and scope of project-estimate based on actuals 75% complete		
Other	Pre-award costs Kenan Institute			185000	1	$185,000		$185,000	$185,000	1. Admin and Legal	Complication and scope of project-estimate based on actuals 75% complete		
Other	3 Yrs A133 Fees			4500	3	$13,500		$13,500	$13,500	1. Admin and Legal	External audit firm estimate		
Other	Award specific legal fees			120000	1	$120,000		$120,000	$120,000	1. Admin and Legal	External legal counsel estimate		
Other	A133 Audit			4500	3	$13,500		13500	$13,500	1. Admin and Legal	required audit		
						$0			$0			$111,654,323	($0)
					PROJECT TOTAL:	**$111,654,323**	**$0**	**$111,654,323**	**$111,654,323**				

SF-424C Cross-check Totals	
1. Admin and Legal	$757,080
2. Land, structures	$3,401,000
3. Relocation expenses	$0
4. Architectural and engr.	$8,047,309
5. Other archit. and engr.	$0
6. Inspection fees	$7,205
7. Site work	$0
8. Demolition/removal	$0
9. Construction	$92,269,794
10. Equipment	$6,971,935
11. Misc.	$200,000

Matching Contribution Cross-check Totals	
Federal Funding Request	$77,977,126
Cash Match Contribution	$28,221,197
In-kind Match Contribution	$5,456,000

Approach to allocating Last Mile and Middle Mile costs:

Comprehensive Community Infrastructure
Key Metrics Dashboard

Please refer to the CCI Grant Guidelines for instructions on completing this form.

Applicant Profile	
Applicant Name	MCNC
Title	North Carolina Rural Broadband Initiative (NCRBI)
Easygrants ID	4218
Headquarters	Research Triangle Park, North Carolina
Size (2009 Data) of Applicant Entity	• Current Year Revenues: FY 2009 Revenues: $ 15,734,825 • Employees: FY 2009 Employees: 52
Technology Type	Wireline- Fiberoptic Cable
Key Partners	The Golden LEAF Foundation, North Carolina Community College System, North Carolina State Librarian Mary Boone, North Carolina Department of Crime Control and Public Safety (Letter from the Secretary), University of North Carolina (UNC) System President Erskine Bowles, ERC Broadband, [redacted]

Project Economics			
Budget Information		**Project Financials**	
Project Budget	$111,654,323	Project Revenues (Yr 8)	$9,900,131
Federal Contribution (%)	69.84%	Net Income and Margin (Yr 8)	$ 188,435 (+1.9%)
Cash Match Amount (%)	25.28%	EBITDA and Margin (Yr 8)	$6,062,003 (+61.2%)
In Kind Match Amount (%)	4.89%	Rate of Return (w/o BTOP Funds)	0.0% **
Middle Mile/Last Mile Budget Allocation		Rate of Return (w/ BTOP Funds)	0.0% **
Middle Mile Percentage (%)	100%	**Cost Efficiency**	
Last Mile Percentage (%)	0%	Cost per Mile (MM)	$61,973
Rural Last Mile Percentage	0%	Cost per Household (LM)	n/a

** A generally accepted IRR Formula could not calculate an internal rate of return as the initial investment exceeds the resulting free cash flow streams by too much. Two IRR processes were tried and both produced the error result. The maximum investment given these free cash flows that produced a calculable IRR result is $41M, well below this proposal's $111M. The detailed calculations are available in the supplemental materials to verify methodology.

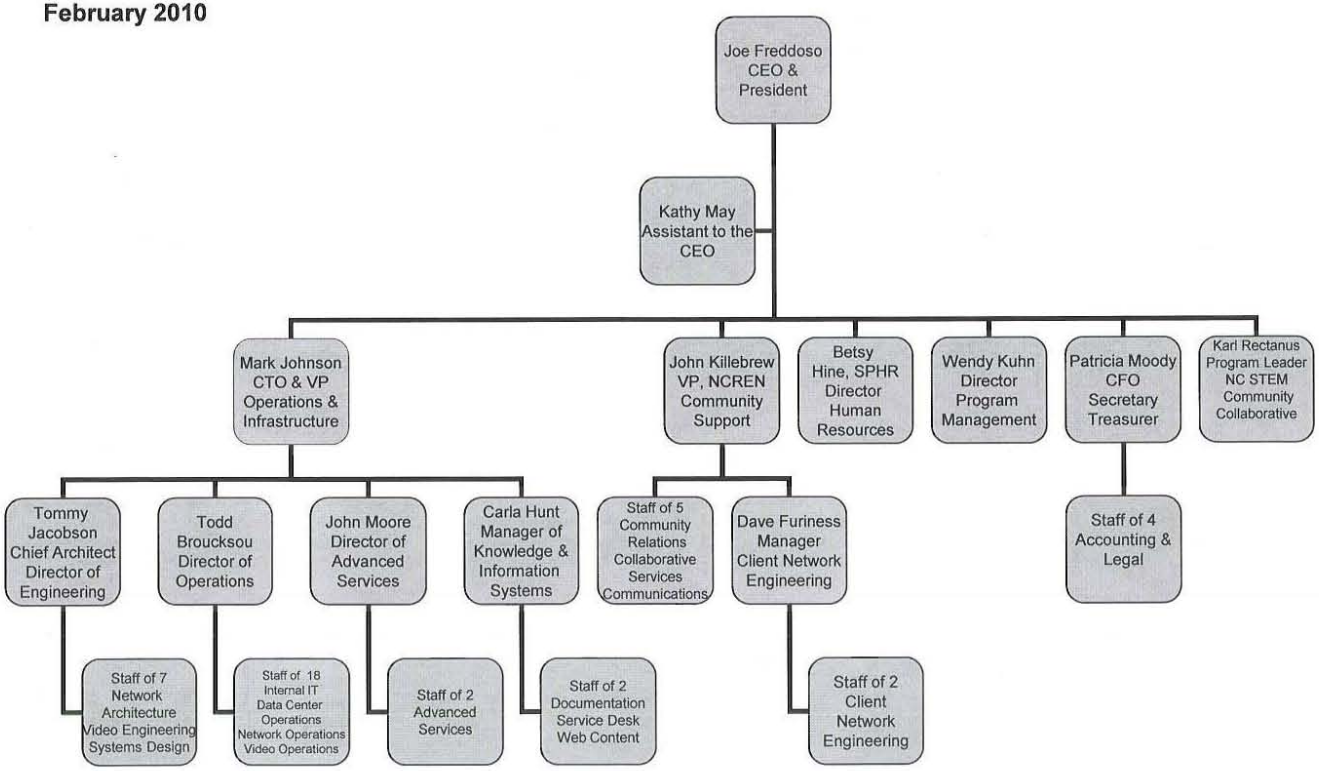
Market Territory	
Geographic Area(s)	The proposed funded geographic area is comprised by 69 of North Carolina's 100 counties, which encompass 32,597 square miles or 67% of NC's total square miles. Specifically, this geographic area includes Alleghany, Anson, Ashe, Avery, Beaufort, Bertie, Brunswick, Buncombe, Cabarrus, Caldwell, Camden, Carteret, Caswell, Chatham, Chowan, Cleveland, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gaston, Gates, Graham, Granville, Halifax, Harnett, Haywood, Henderson, Hertford, Hyde, Jackson, Lee, Lincoln, Madison, Martin, McDowell, Mecklenburg, Mitchell, Moore, Nash, New Hanover, Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Stokes, Surry, Swain, Transylvania, Tyrrell, Union, Vance, Wake, Warren, Washington, Watauga, Wilson, and Yancey counties.
Middle Mile Network Composition	
Total Proposed Network Miles (MM only)	• Total Miles: 1802 • Backbone Miles: **1558** • Lateral Miles: **184**
New Construction Network Miles (MM only)	• Total Miles: **1448** • Backbone Miles: **1271** • Lateral Miles: **177**
Existing Applicant Network Miles Utilized (MM only)	• Total Miles: **60 (**MCNC is not treating these 60 miles as match) • Backbone Miles: **60** • Lateral Miles: **0**
Leased Network Miles Utilized (MM only)	• Total Miles: **294** • Backbone Miles: **287** • Lateral Miles: **7**
Underserved/Unserved	• Percentage of Backbone Miles in Underserved/Unserved Areas: **Approximately 65%** • Percentage of Lateral Miles in Underserved/Unserved Areas: **Approximately 48%**
Existing Customer Base	
Existing Residential/Individual Customers within PFSA	**0**
Existing Business Customers within PFSA	**45** (ERC Broadband)
Existing Community Anchor Institution Customers within PFSA	• Total CAI's: **132 [113 (MCNC) + 19 (ERC Broadband)]** • Community Colleges: **18 [16 (MCNC) + 2 (ERC Broadband)]** • Public Safety Entities: **4 [0 (MCNC) + 4 (ERC Broadband)]**
Existing Third Party Service Provider Customers within PFSA	**5**

Comprehensive Community Infrastructure
Key Metrics Dashboard

Potential Customer Base	
Market Potential Households (within PFSA)	• Total HH's: **2,320,485** • Located in Underserved/Unserved Areas: **Approximately 34%**
Market Potential Businesses (within PFSA)	• Total Businesses: **159,914** • Located in Underserved/Unserved Areas: **Approximately 30%**
Market Potential Community Anchor Institutions (within PFSA)	• Total CAI's: **4,066** • Located in Underserved/Unserved Areas: **Approximately 44%** • Community Colleges: **61** • Public Safety Entities: **1,887**
Market Potential Third Party Service Providers (within PFSA)	• Total Third Party Service Providers in PFSA: **65** • Expressing Commitment or Letter of Interest: **7 (2 new to PFSA)**
Funded Network Coverage	
Households Connected to Network (via BTOP Funds by end of Year 3)	• Total Households Connected: **0** • Located in Underserved/Unserved Areas: **0**
Businesses Connected to Network (via BTOP Funds by end of Year 3)	• Total Businesses Connected: **0** • Located in Underserved/Unserved Areas: **0**
Community Anchor Institutions Directly Connected (via BTOP Funds by end of Year 3)	• Total Directly Connected CAI's: **112** • Located in Underserved/Unserved Areas: **Approximately 52%** • Community Colleges: **45** • Public Safety Entities: **9** (derived from sub-recipient ERC-B's forecasts)
Projected Subscribers by Year Five	**Directly Served by Applicant** • Community Anchor Institutions: **128** • Households: **0** • Businesses: **0** • Third Party Service Providers: **16** **Served by Proposed Network Via Third Party Service Provider** • Community Anchor Institutions: **1,387** • Households: **406,296** • Businesses: **14,624**

Other	
Proposed MM Network Capacity	• Backbone: All backbone routes constructed will have two 1.25-inch conduits placed with a minimum of 48 strands of SMF-28 fiber. The optical system deployed throughout the footprint will have a minimum capacity of 40 lambdas, with current systems deployed on the NCREN backbone having roadmaps of 100G per lambda. • Laterals: All lateral routes will have a minimum of 12 strands of SMF-28 fiber installed in a single 1.25-inch conduit. Initially, lateral connections will be provisioned using 1Gbps Ethernet.
Proposed LM Network Speed	• Highest offered speed tier: **N/A** • Estimated Average speed for highest speed tier: **N/A**
Total Points of Interconnection	• Total Pol's: **Approximately 2100** • Pol's in Underserved/Unserved Areas: **Approximately 61%** • Environmentally-controlled, non-passive Pols: **204** • Percentage of POIs located in Middle Mile Service Areas: **100%** [Per wording in the 3/19/10 CCI Guidance document]
Jobs Created	• **Direct Job-years: 14** • **Indirect Job-years: 724.71** • **Induced Job-years: 415.52**
Required Time for Project Completion (Number of Required Quarters to Fully Build-out and Test Network and Make Ready for Commercial Service)	**Three years (12 quarters)**

MCNC
Organization Chart
February 2010



Overall Track Record

MCNC is an independent, non-profit organization that provides advanced communications technologies and support services that enable access to 21st century learning applications, thus improving teaching, learning, research and collaboration in North Carolina's education community. For a quarter century, MCNC has operated the North Carolina Research and Education Network (NCREN). While adapting to broader demands, MCNC is proactive to the special and leading-edge needs of North Carolina's education institutions. MCNC's projects include NCREN3, WinstonNet, NCNI Ring Upgrade Projects, APEC Fiber in Gas Pipeline Project, NCNI Fiber Expansion Projects, Charlotte Ring, quipASU Backup, Greensboro Metro Fiber Project, Greensboro Metro Fiber Project, Core Router Upgrade, and Remote Computing Application and Delivery Service Pilot (RCADS).

MCNC, through its operation of NCREN and in partnership with the State of North Carolina Office of Information Technology Services (ITS), already serves Community Colleges, Universities, K12 School districts and County Public Health and Safety agencies.

MCNC recently was awarded a grant by the U.S. Department of Commerce's National Telecommunications and Information Administration's (NTIA) Broadband Technologies Opportunities Program (BTOP) as part of the American Recovery and Reinvestment Act of 2009 (ARRA). The purpose of the grant will be to fund the engineering and construction of approximately 480 miles of new fiber in rural southeastern and western North Carolina to expand the optical footprint of the NCREN backbone. As a result of this award, this project has the potential to create more than 230 new jobs in North Carolina.

MCNC is committed to completing projects on time and on budget; to providing connectivity and broadband Internet access statewide; to building out communication networks to rural, unserved, and underserved schools; to supplying seamless learning opportunities to all students; and to maintaining and enhancing network services to every citizen in the state.

A new strategic plan provides the framework for MCNC's work for the next five years. Among MCNC's many completed and ongoing projects, the three below are examples of MCNC's past, present and future capabilities:

- **Completed Project: The North Carolina School Connectivity Initiative**
  Charged with adapting North Carolina's classrooms to develop a North Carolina workforce poised to meet the challenges of a global economy, the N.C. School Connectivity Initiative provides local school districts with connectivity and equitable access to technology and broadband Internet access; builds out communication networks to rural and underperforming schools; supplies seamless learning opportunities to all students; and maintains and enhances network services to every school in the state. This is an essential program in North Carolina and will continue to have a tremendous impact on student achievement and economic development for years to come.

- **<u>Ongoing Project</u>: NC STEM Community Collaborative**
  Recognizing that community collaboration is the lever to ensure sustainable innovation in science, technology, engineering, and math (STEM), the NC STEM Community Collaborative promotes collaborations among "ready to launch" and "emerging" communities throughout North Carolina to ensure that all N.C. students have the opportunity to engage in rigorous, sustainable STEM education, which can provide them with good choices in life and bolster the economic strength of their communities.

  <u>Innovative Project</u>: Collaborative Services Working Group
  The Collaborative Services Working Group (CSWG) was formed in 2005 in response to a need by MCNC's customer base. The group encompasses K-12 schools, community colleges, public universities, and independent colleges and universities and has come to epitomize what can be achieved when a variety of K-20 educational technology professionals come together to seek ways to improve student outcomes through the use of technology. The CSWG and associated task forces and affinity groups include more than 140 professionals developing services and innovations in areas including video conferencing, Web conferencing, digital media asset licensing, federated identity management, learning management system (LMS) infrastructure, shared services, and classroom capture infrastructure.

Joseph A. Freddoso — President & Chief Executive Officer

Project Summary:

Joseph A. Freddoso is president and chief executive officer of MCNC, working with the MCNC Board of Directors, MCNC Advisory Committee, and MCNC staff to meet the organization's mission of employing advanced Internet Protocol networking technologies and systems to continuously improve learning, research and collaboration throughout North Carolina's K-20 education community. He provides the necessary leadership to devise and implement plans to fulfill this strategic direction in a manner that positively impacts all North Carolina's students and meets the fiscal goals defined by the MCNC Board of Directors. He also was instrumental in the completion of the N.C. School Connectivity Initiative successfully connecting all 115 public school districts on the North Carolina Research and Education Network (NCREN).

Professional Experience:

MCNC, Research Triangle Park, NC — President/CEO, 2007 – Present

- In this role, works with the MCNC Board of Directors (BOD), the MCNC Advisory Committee (MAC) and MCNC staff to meet the organization's mission of employing advanced Internet Protocol (IP) networking technologies and systems to continuously improve learning, research and collaboration throughout North Carolina's K-20 education community
- Responsible for coordination with the BOD to define the overall strategic direction for MCNC
- Leads the MAC and the MCNC staff to devise and implement plans to fulfill this strategic direction in a manner that positively impacts all of North Carolina's students and meets the fiscal goals defined by the MCNC BOD

Cisco Systems, San Jose, CA; RTP, NC — Senior Director, Community Relations, 2000–2007

- Lead global internal employee communications and human resource program communications
- Structure and implement an integrated public policy/public relations and corporate social responsibility regional plan Municipal/State and North Carolina Federal Delegation government interface on issues key to Cisco's presence in the region and other business issues
- Local/State business community interface in North Carolina
- Lead executive presenter of Cisco corporate strategy and direction to Cisco customers participating in executive briefing. Rated as one of Cisco's best corporate overview presenters
- Assist in development of relationships with local universities

1999 Special Olympics World Games, Raleigh, NC — President/CEO, 1998–2000

Led the organization of 37,000 volunteers; 100 staff persons and 45 board of directors that produced the most critically acclaimed and financially successful Special Olympics Work Games in the events 30 year history.

Education:

- MS Sports Administration, St. Thomas University, Miami, Florida, May 1984
- BA Psychology, BA Management, Marietta College, Marietta, Ohio, May 1983
  Valedictorian of Graduating Class

Relevant Volunteer Activities:

- Past Chairman of the Board, North Carolina Technology Association

John T. Killebrew, Jr. **Vice President, NCREN Community Support**

Project Summary:

John T. Killebrew, Jr. has 39 Years of experience in telecommunications/information systems and currently manages customer advocacy, communications, and client network engineering groups at MCNC. During his tenure at MCNC, he also directed technical, business, and service resources in the promotion and operation of the North Carolina Research and Education Network (NCREN). Currently, his focus is on business/customer support and vendor support for several MCNC projects including NCREN3, WinstonNet, NCNI Ring Upgrade Projects, APEC Fiber in Gas Pipeline Project, NCNI Fiber Expansion Projects, Charlotte Ring, quipASU Backup, Greensboro Metro Fiber Project, and The North Carolina School Connectivity Initiative.

Professional Experience:

MCNC, Research Triangle Park, NC **VP NCREN Community Support, 2008-Present**

- Leads/manages customer advocacy, communications, and client network engineering groups

MCNC, Research Triangle Park, NC **Director-NCREN, 2000 –2008**

- Directs technical, business, and service resources in the promotion and operation of networking services for the education and research community in North Carolina

BellSouth, Raleigh, N.C. **Specialists Sales Manager/Systems Manager, 1990–2000**

- Led/managed the design and promotion of emerging technologies such as Frame Relay, Video Conferencing, Disaster Recovery, and ATM.
- Led/managed sales engineers in state government and higher education segments, including the design, proposed sale, and implementation of statewide broadband ATM (the North Carolina Information Highway) to North Carolina State Government.

Southern Bell, Raleigh, N.C. **1970- 1990**

Various management and non-management titles in sales and network operations (private line voice, data, facsimile, and video technical operations).

Education:

- BS, CIS/BA, N.C. Wesleyan College, 1987
  Earned overall GPA 3.9. Graduated "Summa Cum Laude".

Relevant Professional Affiliations:

- StateNets: Steering Committee and former Chair;
- Wake County Government: IT Advisory Committee and former Chair.
- Internet2: Former External Relations Advisory Council

Patricia L. Moody **Chief Financial Officer**

Project Summary:

MCNC's Chief Financial Officer Patricia Moody is rated one of the top CFOs in the Triangle area and continues to be a vital participant in the expansion of the North Carolina Research and Education Network (NCREN) to all 115 North Carolina local K-12 public school districts. She provides fiscal oversight and direction, budget preparation, reporting OMB compliance, audit compliance, and internal controls of all MCNC/NCREN projects including: Cash Management, Cost Accounting, Fixed Assets, Internal Controls, General Accounting, Cost Reductions, Purchasing, Credit/Collections, Budgeting, Government Accounting, Strategic Planning, Supervision, Process Improvements, Payroll, and Customer Service.

Professional Experience:

MCNC, Research Triangle Park, NC **Chief Financial Officer 1999 - Present**

- After four months of work as a consultant, was offered the Controllership of the then $29 million, multi-company, not for profit, government contracting and university services organization.
- Implementation of a new financial software package within an expedited time frame; cost savings via reduced audit costs and headcount reductions (took the accounting/purchasing group from 11.5 employees to 6) through organization, simplification, and improved bookkeeping disciplines.
- Maintained compliance with all federal contracting requirements with no audit necessitated rate changes; reduced month end closing from over three weeks to three business days.
- Successfully protested a $285k sales and use tax audit.
- Accounted for spin-offs, a company split, and the sale of certain divisional operations, and which resulted in the current Chief Financial Officer capacity of the smaller remaining company.

1976 – 1998

- Prior to employment with MCNC, worked in financial capacities from Accounts Payable Clerk in 1976 to positions escalating in responsibility of General Accountant, Manager of General Accounting, Cost Accountant, Manager of Cost Accounting, Manager of Operations Accounting and Field Control and in two Controllerships. This incorporated into my training the knowledge gained from comparative experiences with private and public for profit companies, ranging from small to Fortune 100. Included in this time frame was an additional four years of experience working with a federal government contractor as its Cost Accounting Manager.

Education:

- BS, Business Administration, Major in Accounting, Purdue University, 1976

Relevant Professional Affiliation:

- Institute of Management Accountants

Edward T. "Tommy" Jacobson — Director, Engineering Chief Architect

Project Summary:

Tommy Jacobson manages all engineering aspects of NCREN including layer 1, 2 and 3 network deliveries, systems engineering and architecture, video network engineering, network management and facility engineering. His current focus is on project management, architecture/design/equipment and technical support for MCNC's projects including NCREN3, WinstonNet, NCNI Ring Upgrade Projects, APEC Fiber in Gas Pipeline Project, NCNI Fiber Expansion Projects, Charlotte Ring, quipASU Backup, Greensboro Metro Fiber Project, The N.C. School Connectivity Initiative, S.E. Dark Fiber Acquisition, Diverse Piedmont N.C. Fiber Acquisition, Light Piedmont N.C. Fiber Ring and Core Router Upgrade.

Professional Experience:

MCNC, RTP, NC — **Director of Engineering/Chief Architect, 2008-Present**

- Promoted to Director of Engineering while maintaining role of Chief Architect for NCREN
- Manages groups of individuals focused on all engineering aspects of the NCREN including, layer-1, 2, and 3 network delivery, systems engineering and architecture, video network engineering, network management, and facility engineering. Provides oversight and engineering of network operating budget totaling $23M annually. Member of the North Carolina Business and Education Technology Alliance for the Lieutenant Governor, commissioned to address equity in technology delivery for all 2400+ K-12 schools in the state, resulting in a $22M direct appropriation from the General Assembly to connect all public education schools to a common statewide infrastructure, while leveraging the federal e-rate program.

MCNC, Research Triangle Park, NC — **Chief Architect, 2003-2008**

- Promoted to Chief Architect to oversee enhancement and advancement of NCREN data network
- Designed, developed budgets, and project managed NCREN3 expansion which moved the statewide network from a hub and spoke design to resilient ring service delivery architecture.
- Designed, project managed WDM implementations in Raleigh and Charlotte totaling 20 nodes. Negotiator for NCREN service delivery contracts to telecom providers and equipment vendors.

MCNC, RTP, NC — **Manager, NCREN Network Operations, 1996- 2003**

- Oversaw day-to-day operations of the NCREN Data Network from a design, implementation, and management standpoint. Lead engineer for implementation of new network topologies, video over IP deployment, and route engineering of oc48, oc12, oc3, DS3, and ATM network links.
- Managed 4 full time and 2 student positions that support all aspects of network operations from deployment, installations, problem resolution, and helpdesk functions. Member of NC Networking Initiative Engineering team that provides high speed networking research and implementation for the three Research Triangle area universities.

MCNC, Research Triangle Park, NC — **Network Engineer, 1996**
MCNC, Research Triangle Park, NC — **Data Network Analyst II, 1995-1996**
MCNC Research Triangle Park, NC — **Data Network Analyst I, NCREN, 1994-1995**
MCNC Research Triangle Park, NC — **Network Operator, NCREN, 1993-1994**

Education:

- Bachelor of Science in Electrical Engineering , North Carolina State University, 1994

Wendy L. Kuhn — Director, Program Management

Project Summary:

Wendy L. Kuhn is director of program management for MCNC and provided valuable input into drafting statements of work governing the relationship between the State's Office of Information Technology Services and MCNC as well as facilitated their completion for the North Carolina School Connectivity Initiative. She developed a rubric for the MCNC Advisory Structure to incorporate the broad K-20 community in concert with MCNC's two vice presidents, managed the development of the MCNC service desk strategy, and was instrumental in program management oversight and implementation of MCNC's overall strategic plan.

Professional Experience:

MCNC, Research Triangle Park, NC — **Director, Program Management, 2007-present**

- Facilitate the relationship between MCNC and the State and oversee project management aspects of the relationship.

NC Office of Information Technology Services (ITS)

Director, Business Relationship Management, 2006-2007

- Established a division responsible for aligning IT with the business of state government; directed and led a team of Business Account Managers; led an initiative to implement Service Level Management at ITS; Managed the relationship between the state government and ITS.

Director, Customer and Public Relationship Management, 2002-2006

- Established and managed an Office for Customer and Public Relationship Management within the state's Office of Information Technology Services. Responsible for more than 30 staff and a budget of more than $2 million. Significant responsibility for the implementation of IT Infrastructure Library (ITIL) within the agency with ownership of at least incident, problem, and service level management processes. Managed a customer support center that responds to more than 6,000 calls per month. Responsible for all customer communications and notifications.

Special Assistant to the State Chief Information Officer, 2001-2002

- In a newly established position, acted as Chief of Staff to the state's CIO to assist in defining and implementing his agenda through researching policy, developing the agency's legislative agenda, responding to national surveys, responding to media, and writing speeches; staffed and led committee efforts for strategic planning of statewide telecommunications initiatives to increase the efficiency of the state's networking capabilities (NC Net); co-authored the strategic direction for NC enterprise information technology solutions.

Education and Certifications:

- ITIL Version 3 Expert Certification, 2008; Manager's Certificate in Information Technology Service Management, EXIN, 2006; ITIL Fundamentals certification, 2004
- Master of Arts in Economics, North Carolina State University, 2000
- Master of Public Administration, Advanced Management Techniques, Columbia University, School of International and Public Affairs, 1989
- Bachelor of Arts, American Culture, General Honors, Vassar College, 1985

S. Mark Johnson **Chief Technology Officer & Vice President, Operations & Infrastructure**

Project Summary:

S. Mark Johnson is responsible for operations, engineering, development, and technical direction for North Carolina Research and Education Network (NCREN) as well as coordination with MCNC Advisory Council on overall technical direction for the organization. His focus is on business, design, and oversight for almost every MCNC project including NCREN3, WinstonNet, NCNI Ring Upgrade Projects, APEC Fiber in Gas Pipeline Project, NCNI Fiber Expansion Projects, Charlotte Ring, quipASU Backup, The North Carolina School Connectivity Initiative, S.E. Dark Fiber Acquisition, Diverse Piedmont N.C. Fiber Acquisition, and Light Piedmont N.C. Fiber Ring.

Professional Experience:

MCNC, Research Triangle Park, NC **1996-Present**

VP for Operations and Infrastructure/Chief Technology Officer 2008-Present

- Responsible for operations, engineering, development, and technical direction for The North Carolina Research and Education Network (NCREN).
- Responsible for coordination with MCNC Advisory Council on overall technical direction for the organization.
- Led development of MCNC strategic planning process
- Led technical architecture of NCREN through a thousand-fold increase and capacity and transition from a research project to highly available, critical infrastructure service for education
- Developed and co-led a multi-institutional team with Indiana University and the University of Maryland to support the Internet2 Hybrid Optical and Packet Infrastructure (HOPI) project.
- Developed concept for, proposed and was selected to operate the NLR Experiments Support Services Team
- Led a multi-institutional team including North Carolina State University, Duke, University of North Carolina at Chapel Hill, MCNC, and Cisco to implement the first Internet2 gigapop

NC Government State Information Processing Services (SIPS) **Technologist, 1992-1996**

- Developed technical strategy, architecture, and pricing for broadband data service offerings in collaboration with commercial service providers
- Developed the first NC State Government web presence

Education:

- B.S. Information and Computer Science, Georgia Institute of Technology 1982

Relevant Professional Affiliations:

- Past Chairman of the Board, The Quilt, Inc overseeing transition to independent 501c3 organization
- Member Internet2 Applications Middleware and Services Advisory Council
- Member IEEE

Ray Suitte **Manager, Network Engineering**

Project Summary:

Ray Suitte is a manager of network engineering for NCREN and coordinates, troubleshoots and performs installations, maintenance, upgrades, and connectivity-related activities with technical staff from many North Carolina Institutions. His current focus is on provisioning and operations on several MCNC projects including NCREN3, WinstonNet, NCNI Ring Upgrade Projects, APEC Fiber in Gas Pipeline Project, Charlotte Ring, quipASU Backup, North Carolina School Connectivity Initiative, Light Piedmont N.C. Fiber Ring, and Core Router Upgrade.

Professional Experience:

MCNC – RTP, NC **Manager of Network Engineering, 2004-Present**

- Promoted to Manager of Network Operations Center (NOC) compromised of 6 engineers that services NCREN customers 24 hours a day, 7 days a week, 365 days a year. Responsibilities include engineering traffic flow to and from the NCREN network. Managed, scheduled, and executed the connection of all 115 local education agencies in the state of North Carolina within 12 months. Implemented NCREN new core network design which included Cisco's CRS and 7600 routers. Expanded the number of nodes on the Raleigh and Charlotte optical rings while simultaneously connecting the two rings to increase connectivity, capacity and quality between two key points of presence (POP). Communicated with customers about upgrades, outages, and scheduled maintenance to align required work with the least amount of disruption and impact to customer systems. In addition to state agencies within North Carolina, our customers include the 17 member University of North Carolina system, community college system, 40+ private colleges and universities and all 115 public school districts.

MCNC– RTP, NC **Network Analyst, 1998 - 2004**

- Primary Engineer for NCREN's optical network including implementations in Raleigh and Charlotte, NC utilizing Cisco's 15454 optical gear. Technical lead for router configuration and core network components. Handled day-to-day operations of the Network Systems Operations Center (NSOC). Informed customers of key information related to outages, anticipated duration, network impact, and problem resolution summary and close out. Trained and mentored new employees.

MCNC – RTP, NC **Data Network Analyst, 1995 - 1998**

- Member of the North Carolina Research and Education Network NOC team that monitored and performed troubleshooting, and equipment installation on the NCREN data network. Equipment included oc48, oc12, oc3, DS3, and ATM network links.

Education:

- B.S. Electrical Engineering, University of North Carolina at Charlotte, 1995

John H. Moore — Director, Advanced Services Development

Project Summary:

John H. Moore is director and principal engineer for the Advanced Services Development Team providing the forward-looking direction for MCNC in new network, data center and IP video services. He also provides vital leadership on the development and implementation of MCNC's strategic plan and internal development process for new services. His innovative approaches and oversight currently have him involved in the Federated ID Management Pilot (FIM) and Remote Computing Application and Delivery Service Pilot (RCADS).

Professional Experience:

MCNC – RTP, NC — **Director/Principal Engineer, 2006-present**

- Currently directing the Advanced Services Development team that provides forward-looking direction for MCNC in the development of new network, data center and IP video services.
- Initiated strategic planning effort and formalized internal development process. Organized technical architecture team.
- Managed the on-going development of innovative services including Federated Identity Management, cloud computing and dedicated network bandwidth for research use.
- Led the networking development for a multi-institution NSF seed-funded Grid research project.
- Built national footprint GMPLS-controlled optical testbed; collaborated similar efforts in Japan.

Centaur Labs – Raleigh, NC — **Director/Technical Director, 2000-2006**

- Created and directed the development of a networking technology test lab and contract engineering organization at North Carolina State University serving the U.S. research and education community. Developed partnerships with network equipment companies, national R&E networking organizations and local research faculty to fund lab activities.
- Managed the primary test lab for the Internet2 national IP backbone. Evaluated new technologies for use on the backbone such as IPv6, MPLS, Layer 2 VPNs and Imulticast in both a lab environment and on the national network. Evaluated backbone routers for a major upgrade in 2002. Performed numerous end-to-end performance evaluations.
- Lead Engineer providing technical support for researchers using National Lambda Rail, a national-footprint research facility supporting large eScience projects as well as network research. Developed and managed the process of getting research projects on NLR from inception to initial deployment. Participated in outreach activities to explain the NLR value proposition to the U.S. research community.
- Provided engineering support for the Hybrid Optical Packet Infrastructure (HOPI), a research testbed to develop proof-of-concept designs for the next generation Internet2 backbone, as well as for general network control-plane research. Developed initial support center proposal.

Education

- B.S. Electrical Engineering, Case Western Reserve University, 1985

Relevant Professional Affiliations:

- IEEE Communications Society and Computer Society (Member)

Relevant Volunteer Activities:

- Vice-chair, Internet2 Network Technical Advisory Committee

David Furiness **Manager, Network Consulting**

Project Summary:

As manager of Client Network Engineering, David Furiness provides the engineering consultancy services to work with Local Education Agencies (LEA) to design, implement, and support network and security infrastructure. The CNE group provides network design services, general technical guidance, advice, recommended practices, product assessment, recommendations, and assistance resolving complex LEA network problems. Network assessments are performed to measure, analyze and document the network functionality and performance of the LEA network.

Professional Experience:

MCNC, Research Triangle Park, NC **Manager Network Consulting, 2008–Present**

- Direct engineering consultancy services group to work with North Carolina school districts and Community Colleges to design, implement and support their network and security infrastructure. The group provides network design services, general technical guidance and advice, recommended practices, product assessment and recommendations, and assistance resolving complex LEA network problems.

America Connect, Inc, Raleigh, NC **VP of Engineering and Operations, 2004–2007**

- As part of the senior management team with the founders of an early stage (pre-WiMAX) wireless broadband service provider, focused on tier 2-4 markets in the United States.

MCNC – Research Triangle Park, NC **Independent Contractor, 2003**

- Evaluated and project managed potential investments in rural fiber network projects. Provided project management support for the deployment of a prototype Cisco DWDM GigE metropolitan area network (prototype for NCREN3).

Interpath Communications, Inc. **Dir. Network Engineering and Operations, 1998-2002**

- Directed design, implementation, and operations of Interpath's high-availability network infrastructure, which supported both network-based services (fiber, wholesale capacity, and ISP services) and data center application hosting services. Functional groups within network engineering and operations included outside plant, wide area networking, data center LAN services, voice services, and data center operations.
- Expanded network footprint from Eastern North Carolina to the Southeast through construction, acquisition, and partnerships. Responsible for annual budgets of approximately $30 million.
- Negotiated and managed joint-construction contracts with AT&T Local Services and other local providers resulting in the construction and acquisition of over 100 route miles of metropolitan fiber cable systems in tier 2 markets in North Carolina.
- Directed effort to design, deploy and support core routing, switching, and security infrastructure in Research Triangle Park Data Center.
- Managed effort to deploy and support Nortel DMS-500 (integrated DMS 100/250 platform) for local and long distance voice services. Negotiated carrier interconnection agreements. Managed voice services delivery and switch translations functional groups.

Education:

- BS Electrical Engineering, Cornell University, Ithaca, New York, 1981

Steven R. Thorpe, MS — Senior Development Systems Analyst

Project Summary:

Steven R. Thorpe is senior systems programmer and analyst at MCNC who implemented Shibboleth technologies to realize a Federated ID Management system for multiple-institution, single-sign-on to Web-based resources. He also serves as technical lead for the piloted Remote Computing and Application Delivery Service (RCADS) for K-12 environments and helped develop a variety of Linux and Irix based C/C++ libraries and applications for MCNC's Jumpstart project, which created a Just-In-Time (JIT) signaling protocol and architecture for a wavelength division multiplexing optical burst switching network. This XML enabled, multi-threaded software resulted in a JIT control plane between the U.S. Naval Research Lab and the National Security Agency in Washington, D.C. – the first of its kind.

Professional Experience:

MCNC, RTP, NC — **Senior Systems Programmer Analyst, 2004-Present**

- Software technical lead and systems administration support.
- Developed Java and XML-based middleware with US and Japan researchers to automate inter-operability among diverse software stacks, enabling the world's first inter-domain coordination of resource managers for in-advance reservation of network bandwidth and compute resources between and among these two countries.
- Designed and implemented a Java-based resource selection API to choose optimum CPU resources for on-demand numerical simulations on a distributed compute grid.
- Implemented and supported the Pilot EPA Science Portal, to provide web access to resources for air quality simulations, data visualization, and collaboration tools.
- Integrated technologies including TomCat web application server, Globus Toolkit for compute job management, Grid Security Infrastructure (GSI) for authentication and authorization, MyProxy server as a credential repository, SimpleCA for granting certificates.

MCNC, Research Triangle Park, NC — **Systems Programmer Analyst, 2000-2004**

- Developed and integrated networking related software throughout the software stack, including web-based applications, user-space applications, and kernel-space systems programming. System administrator for multiple Linux machines. Responsible for web and ftp servers, IPtables configuration, management of CVS repository, periodic Linux release upgrades, scripts for automated patch management, etc.
- Maintained and enhanced C++ code for Isearch Plus, a proprietary Internet search engine used by the U.S. Patent Office and the National Journal web sites.
- Ensured 24 x 7 availability of 44 CPUs, including two clusters. This environment enabled research and development activities of a 30-user team.
- Supported CNIDR's computational grid's middleware infrastructure using Globus, Condor, Web Services and other related Java and C/C++ based technologies.

Education:

- MS, Computer Science, University at Albany, 1988
- BS, Computer Science (1st Major), Business Admin (2nd Major), University at Albany, 1987

Carla S. Hunt **Manager, Knowledge & Information Systems**

Project Summary:

Carla S. Hunt is manager of knowledge and information systems and responsible for developing and provisioning the MCNC knowledge capture and dissemination infrastructure. This infrastructure includes (not limited to) the MCNC Web presence, Confluence and/or other Wiki systems, professional and education social networking tools, technology forums, interfaces with performance management, ticketing, project management, CRM tools, and contract management. She maintains the corporate information base, reporting on performance and quality of service, and also the service desk function.

Professional Experience:

MCNC – RTP, NC **Manager, Knowledge and Information Systems, 2006–Present**

- Responsible for developing and provisioning the MCNC knowledge capture and dissemination infrastructure, including, but not limited to, MCNC web presence, confluence and/or other wiki systems, professional and education social networking tools, technology forums, interfaces with performance management, ticketing, project management, CRM tools, and contract management.
- Maintains the corporate information base, reporting on performance and quality of service.
- Responsible for the service desk function.

MCNC – RTP, NC **Chief of Staff, Operations and Infrastructure**

- Position created during a re-organization of MCNC, effective January 28, 2008. Provides coordination and facilitation in the areas of budgets, contracts, vendors, career development and operational support systems ensuring alignment with strategic goals and objectives. Successfully led a team of five cross-functional and departmental employees to implement company-wide knowledge base, collaboration tools and integrated project management system.

MCNC – RTP, NC **Senior Solutions Architect**

- Managed the services scaling project at MCNC, comprised of first-line operational managers, which was assembled by executive leadership and tasked with crafting a plan to re-organize and scale operations and infrastructure to deliver services to a rapidly expanding customer base. MCNC estimates that it will triple its customer base in the next 3 to 5 years.
- Managed the expansion and modification of the Network Diagnostic Tool (NDT) to accurately test bandwidth for hundreds of hosts across various networks to the North Carolina Research and Education Network (NCREN), resulting in a part of the Internet2 Network Performance Toolkit, automatically repeating bandwidth tests, analyzing results, graph and display information for each host. Presented results to an audience of approximately 200 technologists at a National research and education conference held at Fermilab in Batavia, IL, July 15-19, 2007.

Education and Certifications:

- Master of Science: Information Sciences, North Carolina Central University, 2005
- B.S. Computer Science, University of North Carolina at Wilmington, 1999
- Cisco Certified Network Associate, 2001-2004
- ITIL V3 Certification, 2009

Todd S. Broucksou — Director, Operations

Project Summary:

Todd S. Broucksou is the technical lead for system and network design, engineering, upgrades for 5000 sq. ft. Data Center. He recently turned around a re-occurring million-dollar-a-year financial loss in Data Center Services to a break-even enterprise within one year.

Professional Experience:

MCNC, Research Triangle Park, NC — **Director of Operations, 2006–Present**

- Responsible for the operation of a multi-million dollar network, video, service desk and systems budgets.
- Establishes policies & procedures for network, video and systems staff.
- Technical lead for system and network design, engineering, upgrades for 5000 sq. ft. Data Center.

Lake County Board of Commissioners, Tavares FL

Information Systems Director, 2004-2006

- Established policies & procedures for County Information Services and IT staff.
- Technical lead for Unix systems and Network design, engineering, upgrades, providing engineering support to other divisions where required.
- Major projects included redesign of entire campus network.

MCNC, Research Triangle Park, NC — **Manager of Information Services, 2001–2004**

- Managed general computing and network systems for the corporate infrastructure, systems services and Internet network and system facilities.
- Established policies & procedures for Corporate Information Services and IT staff.
- Technical lead for system and network design, engineering, upgrades, providing engineering support to other divisions where required.
- Major projects included redesign of entire corporate network and IT systems.

MCNC, Research Triangle Park, NC — **Systems Manager of netPROvisions, 2000**

- Managed general computing, hosting systems and Internet facilities
- Engineered and implemented updated network engineering for netPROvisions
- Designed and implemented System upgrades for CNIDR software development team

AT&T Solutions, Durham, NC — **Technical Staff Member, 1999-2000**

- Team Lead on AT&T Solutions\Merrill Lynch - Performance Management Team that provided proactive Local & Wide Area Network analysis directly to the client, of problematic segments & devices prior to critical failure of the Merrill Lynch worldwide network.

Education:

- Electrical & Computer Engineering, West Virginia University, Morgantown, WV 1990-92
- Electronic Technologies Program, Community College of the Air Force, 1982-86
- Industrial Technology Electronics, Hocking Technical College, Nelsonville, OH 1982
- Aviation Technologies Program, Ohio University, Athens, OH 1980-82

Betsy Hine, SPHR **Director, Human Resources**

Project Summary:

Betsy Hine provides overall Human Resources expertise of all MCNC/NCREN projects including: Employee Relations, Training and Development, Compensation Planning/Administration, Affirmative Action, Benefits Planning/Administration, Staff Planning and Management, Human Resources Information Systems, Performance Management, Policy and Procedures Development, Organization Development, Recruitment, and Change Management.

Professional Experience:

MCNC, Research Triangle Park, N.C. **Human Resources Director, 1996 – present**

- Hired to revamp the Human Resources Department for then multi-company, not for profit, government contracting and university services organization by reorganizing the department to be a partner with various groups of the organization by providing guidance in human resources.
- Responsible for recommending strategic policy in areas of human resource management for executive approval.
- Manages compensation planning and administration, benefits planning and administration, recruitment, affirmative action, employee relations, training and organizational development.

Business Telecom Inc. (BTI), Raleigh, N.C. **Human Relations Manager, 1996**

- Managed all areas of human resources including compensation, benefits, recruitment, employee relations, and organizational development.

Pilling Weck Inc., (Currently Teleflex) Research Triangle Park, N.C. **1978 – 1995**

Human Resources Manager	**1989 - 1995**
Compensation and Benefits Supervisor	**1984 - 1989**
Personnel Administrator	**1982 - 1984**
Personnel Coordinator	**1978 - 1982**

Education and Certifications:

- B. S., Business Education, East Carolina University
- Center for Creative Leadership, Leadership Development Program for Human Resources Managers

Relevant Professional Affiliations:

- SHRM
- Triangle Society for Human Resources Management
- Triangle Industrial Liaison Group

Susan M. Capps **Paralegal**

Project Summary:

Susan M. Capps is MCNC's paralegal who provides legal drafting/review of contracts and agreements for all MCNC/NCREN projects. Her work includes contract drafting and negotiation, agreement compliance, tracking milestones and deadlines, administrative support to management, preparation of network user agreements, and assisting with corporate governance. She also has provided legal drafting/review of agreements for recent projects including Charlotte Ring, quipASU Backup, Greensboro Metro Fiber Project, The N.C. School Connectivity Initiative, S.E. Dark Fiber and the Diverse Piedmont N.C. Fiber acquisitions.

Professional Experience:

MCNC, Research Triangle Park, NC **Paralegal, 2003 – current**

- Assists with contract drafting and negotiations regarding long term fiber acquisitions, including the NCREN funding plan in 2004 for the refresh and upbuild of the advanced communications network serving the University of North Carolina system.
- Assists with annual contract renewals and negotiations for network services to the K20 education user community throughout the State of North Carolina.
- Assists with vendor services agreements, including Master Services Agreement with a large worldwide provider in 2007 for software and services for the network, with periodic schedules adding additional services.
- Assists with corporate governance including preparation of minutes for various boards, committees and advisory groups of the company, documenting areas of technology focus and fiber acquisitions to maintain the leading-edge needs of the North Carolina education community.

Paralegal **1980 - 2003**

North Carolina certified paralegal with over 20 years of legal experience in law firm and corporate environments. Focused self-starter accustomed to fast-paced, deadline-oriented projects.

Prior to employment with MCNC, worked as a senior paralegal for various law firms in North Carolina, including twelve years with one of the three largest law firms in the state. Duties included detailed corporate asset searches, reviewed and developed real estate packages for communication tower sites and maintained litigation databases.

Education and Certifications:

- AA in Applied Sciences (paralegalism), Central Piedmont Community College, Charlotte, NC 1980
- North Carolina Certified Paralegal

Hunter Goosmann

Education and Research Consortium of the Western Carolinas, Inc. (ERC Broadband)

LEADERSHIP PROFILE

Proven leader and focused business professional with broad technical knowledge and extensive experience across the software development life cycle. Strengths include:

Management and Governance	Wide-area Networking
Customer Support and Service Delivery	Technical Entrepreneurism
Strategic Planning / Vision	Web Development and E-commerce
Risk-Based Testing / Quality Assurance	Employee Development & Team Building

EXECUTIVE SUMMARY

Leadership: As General Manager for ERC Broadband, I have crafted a vision and strategy for partnering a community-focused broadband network and data center with both non-profit and commercial businesses to support growth in Western North Carolina. This strategy has led not only to business success but also to documented economic development success, both through recruitment and grass roots business growth. This role has extended to community leadership and placement on multiple, regional Boards of Directors to further advocate for technology implementation and interconnecting networks.

Project Management / Program Management: As both a Project and Program Manager, I have directed the creation and rollout of IT process methodology as well as led complex international test efforts. Efforts including implementing test methodology led to 25% reduction in production defects.

Service Delivery: I have led complex customer service issues to resolution directing worldwide staff and reporting to executive management. Efforts contributed to 30% reduction in critical escalations. Data collected used to set Sales, Service, and Marketing direction. At ERC Broadband focusing on service management has expanded the relationships with our largest customers securing business cash flow and expanded operations.

SELECTED EXPERIENCE

ERC Broadband *(Education and Research Consortium)*, Asheville, NC
General Manager, Nov 2004 – present

Storage Technology Corporation, Louisville, CO
Critical Situations Manager (Customer Support Escalation Manager), Aug 2003 – Oct 2004

Alignment Software, Inc., Superior, CO
QA/Customer Support Manager, Dec 2001 –June 2003

Level 3 Communications, Broomfield, CO
Project Manager / Program Manager (Test Subject Matter Expert), Sept 2000 – June 2001
System Test Manager, May 1999 - Sept 2000

EDUCATION

- Project Management Practitioner - University of Colorado at Denver Graduate School of Business, August 2000
- Masters Degree in Business Administration, University of Miami, Coral Gables, FL, 1988
- Bachelor of Arts Degree in German, University of Tennessee, Knoxville, TN 1986

BTOP Comprehensive Community Infrastructure
Community Anchor Institution and Network Points of Interest Detail Template

Please complete the Anchor Institution Details worksheet by providing information on all Community Anchor Institutions that will be directly connected by the proposed network. Ad as necessary. All Community Anchor Institutions should be given a type from the specified lis Community Anchor Institution is considered a minority-serving institution if it is a post-secondary educational institution with enrollment of minority students exceeding 50% of its total enrollment. T "Project Role" column only requires a word or two, or a short phrase, not a detailed explanat detailed explanation of the role of project partners and community anchor institutions shoul provided in the essay portions of the application.

Please complete the Points of Interest worksheet by providing information on all points of interconnection (passive, non-environmentally controlled points of interconnection, *e.g.* spli points, may be excluded), collocation facilities, central offices, head ends, and other centraliz facilities, network access points to last mile service providers, Internet peering points, and to For each point of interest you may provide either a street address or geocoordinates or both must provide detail on what the point of interest is, whether it is already existing or would be created by the proposed project. Where more than one facility type applies, select the large facility type. For example, if a central office houses a point of interconnection, select central as the facility type, or if a cell site is located on a tower, select tower as the facility type. The Interconnection Available at the Facility field should be Yes if interconnection to the propose network is available at that location, otherwise No. The brief description field is optional, bu be used to convey a better understanding of what the facility is. You may use the space prov the bottom of the table to provide additional notes, if desired.

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BTOP CCI Community Anchor Institutions Detai

Title: **North Carolina Rural Broadband Initiative (NCRBI)**
Easy Grants ID: **4218**

Facility Name	Organization	Address Line 1	City
Beaufort County Community College	Beaufort County Community College	5337 Hwy 264 East	Washington
Blue Ridge Community College Flat Rock Campus	Blue Ridge Community College Flat Rock Campus	180 West Campus Drive	Flat Rock
Blue Ridge Community College Transylvania Center	Blue Ridge Community College Transylvania Center	45 Oak Park Drive	Brevard
Brunswick Community College	Brunswick Community College	50 College Road	Bolivia
Brunswick Community College Leland Center	Brunswick Community College Leland Center	2050 Enterprise Drive	Leland
Caldwell Community College	Caldwell Community College	506 Community College Drive	Boone
Cape Fear Community College	Cape Fear Community College	411 N Front St	Wilmington
Central Carolina Community College	Central Carolina Community College	1105 Kelly Drive	Sanford
Central Piedmont Community College Central Campus	Central Piedmont Community College Central Campus	1201 Elizabeth Avenue	Charlotte
Central Piedmont Community College North Campus	Central Piedmont Community College North Campus	11930 Verhoeff Drive	Huntersville
Cleveland Community College	Cleveland Community College	137 South Post Street	Shelby
Coastal Carolina Community College	Coastal Carolina Community College	444 Western Blvd	Jacksonville
College of the Albemarle	College of the Albemarle	1208 N Road St	Elizabeth City
Craven Community College	Craven Community College	800 College Court	New Bern
Craven Community College Havelock-Cherry Point Campus	Craven Community College Havelock-Cherry Point Campus	305 Cunningham Blvd	Havelock
Edgecombe Community College Rocky Mount Campus	Edgecombe Community College Rocky Mount Campus	255 Tarboro Street	Rocky Mount
Edgecombe Community College Tarboro Campus	Edgecombe Community College Tarboro Campus	2009 W. Wilson Street	Tarboro
Fayetteville Technical Community College	Fayetteville Technical Community College	2201 Hull Road	Fayetteville

Facility Name	Organization	Address Line 1	City
Gaston Community College Lincoln Campus	Gaston Community College Lincoln Campus	511 S. Aspen Street	Lincolnton
Halifax Community College Main	Halifax Community College Main	100 College Drive	Weldon
Haywood Community College	Haywood Community College	112 Industrial Park Drive	Waynesville
Isothermal Community College	Isothermal Community College	286 Icc Loop Road	Spindale
Isothermal Community College Polk Campus	Isothermal Community College Polk Campus	1255 West Mills St.	Columbus
Martin Community College Main	Martin Community College Main	1161 Kehukee Park Road	Williamston
Rockingham Community College	Rockingham Community College	Highway 65	Wentworth
Nash Community College Main	Nash Community College Main	522 North Old Carriage Road	Rocky Mount
Piedmont Community College Main	Piedmont Community College Main	331 Piedmont Drive	Yanceyville
Piedmont Community College Person County Campus	Piedmont Community College Person County Campus	1715 College Drive	Roxboro
Pitt Community College	Pitt Community College	1986 Pitt Tech Road	Winterville
Richmond Community College	Richmond Community College	1042 West Hamlet Avenue	Hamlet
Roanoke-Chowan Community College	Roanoke-Chowan Community College	109 Community College Road	Ahoskie
Sandhills Community College	Sandhills Community College	3395 Airport Road	Pinehurst
South Piedmont Community College L.L. Polk Campus	South Piedmont Community College L.L. Polk Campus	680 US HWY 74 West	Polkton
South Piedmont Community College Old Charlotte Highway Campus	South Piedmont Community College Old Charlotte Highway Campus	4209 Old Charlotte Highway	Monroe
Southeastern Community College	Southeastern Community College	4564 Chadbourn Highway	Whiteville
Surry Community College	Surry Community College	630 South Main Street	Dobson
Tri-County Community College	Tri-County Community College	145 Moose Branch Road	Robbinsville
Vance-Granville Community College Main Campus	Vance-Granville Community College Main Campus	200 Community College Road	Henderson
Vance-Granville Community College Warren County Campus	Vance-Granville Community College Warren County Campus	210 West Ridgeway Street	Warrenton

Facility Name	Organization	Address Line 1	City
Wake Technical Community College	Wake Technical Community College	9101 Fayetteville Road	Raleigh
Wilkes Community College Alleghany Center	Wilkes Community College Alleghany Center	115 Atwood Street	Sparta
Wilson Community College	Wilson Community College	902 Herring Avenue	Wilson
Alleghany County (030)	Alleghany County (030)	85 Peachtree Street	Sparta
Anson County (040)	Anson County (040)	320 Camden Rd	Wadesboro
Ashe County (050)	Ashe County (050)	320 South Street	Jefferson
Avery County (060)	Avery County (060)	76 Old Montezuma Road	Newland
Bertie County (080)	Bertie County (080)	222 County Farm Road	Windsor
Camden County (150)	Camden County (150)	174 NC Highway 343 N	Camden
Caswell County (170)	Caswell County (170)	353 County Home Road	Yanceyville
Cleveland County (230)	Cleveland County (230)	130 S Post Rd	Shelby
Columbus County (240)	Columbus County (240)	817 Washington St	Whiteville
Craven County (250)	Craven County (250)	2300 Old Cherry Point Road	New Bern
Currituck County (270)	Currituck County (270)	4203 Caratoke Hwy	Barco
Dare County (280)	Dare County (280)	3020 South Wrightsville Avenue	Nags Head
Edenton/Chowan (210)	Edenton/Chowan (210)	600 Woodard Street	Edenton
Edgecombe County (330)	Edgecombe County (330)	412 Pearl Street	Tarboro
Elizabeth City-Pasquotank (700)	Elizabeth City-Pasquotank (700)	1401 Parkview Drive	Elizabeth City
Gates County (370)	Gates County (370)	205 Main Street	Gatesville
Graham County (380)	Graham County (380)	301 Sweetwater Rd	Robbinsville
Granville County (390)	Granville County (390)	101 Delacroix St	Oxford
Haywood County (440)	Haywood County (440)	3215 Broad Street	Clyde
Henderson County (450)	Henderson County (450)	414 4th St	Hendersonville
Hertford County (460)	Hertford County (460)	701 N. Martin Street	Winton
Hyde County (480)	Hyde County (480)	20392 Us 264	Swan Quarter
Jackson County (500)	Jackson County (500)	398 Hospital Road	Sylva
Lee County (530)	Lee County (530)	106 Gordon St.	Sanford
Lincoln County (550)	Lincoln County (550)	1 Timken Dr	Lincolnton
Martin County (580)	Martin County (580)	300 N. Watts Street	Williamston
Mecklenburg County (600)	Mecklenburg County (600)	701 E Martin Luther King Jr	Charlotte
Mount Airy City (862)	Mount Airy City (862)	1011 N. South St.	Mount Airy
Northampton County (660)	Northampton County (660)	701 N. Church St.	Jackson
Onslow County (670)	Onslow County (670)	200 Broadhurst Rd.	Jacksonville
Perquimans County (720)	Perquimans County (720)	305 Edenton Rd St.	Hertford
Person County (730)	Person County (730)	1010 Ridge Road	Roxboro
Pitt County (740)	Pitt County (740)	1100 South Elm Street	Greenville
Polk County (750)	Polk County (750)	125 E Mills St.	Columbus
Richmond County (770)	Richmond County (770)	118 Vance St	Hamlet
Roanoke Rapids City (421)	Roanoke Rapids City (421)	1013 Roanoke Ave	Roanoke Rapids
Rockingham County (790)	Rockingham County (790)	920 Johnson St	Reidsville
Rutherford County (810)	Rutherford County (810)	382 W Main St	Forest City
Scotland County (830)	Scotland County (830)	322 S Main St.	Laurinburg
Stokes County (850)	Stokes County (850)	501 N. Main St.	Danbury

Facility Name	Organization	Address Line 1	City
Surry County (860)	Surry County (860)	4059 Siloam Rd.	Dobson
Swain County (870)	Swain County (870)	280 School Drive	Bryson City
Transylvania County (880)	Transylvania County (880)	225 Rosenwald Ln	Brevard
Tyrrell County (890)	Tyrrell County (890)	902 Main St	Columbia
Union County (900)	Union County (900)	721 Brewer Dr	Monroe
Vance County (910)	Vance County (910)	1724 Graham Ave	Henderson
Warren County (930)	Warren County (930)	427 West Franklin Street	Warrenton
Washington County (940)	Washington County (940)	802 Washington Street	Plymouth
Watauga County (950)	Watauga County (950)	175 Pioneer Avenue	Boone
Weldon City (422)	Weldon City (422)	301 Mulberry Street	Weldon
Whiteville City (241)	Whiteville City (241)	107 W Walter St	Whiteville
Wilson County (980)	Wilson County (980)	117 Tarboro Street Northeast	Wilson
Yancey County (995)	Yancey County (995)	100 Bald Creek School Rd	Burnsville
Ahoskie Public Library	Ahoskie Public Library	210 E Church St	Ahoskie
Alleghany County Library	Alleghany County Library	122 N Main St	Sparta
Berea Branch Library	Berea Branch Library	1211 US Hwy 158	Oxford
Braswell Memorial Public Librar	Braswell Memorial Public Library	727 N Grace St	Rocky Mount
Canton Branch	Canton Branch	11 Pennsylvania Ave	Canton
Carver Branch Library	Carver Branch Library	618 W 14Th Ave.	Greenville
Charles R. Jonas Lib	Charles R. Jonas Lib	306 W Main St	Lincolnton
Cherryville Br. Lib	Cherryville Br. Lib	605 E Main St	Cherryville
Cleveland County Memorial Libr	Cleveland County Memorial Libr	104 Howie Dr	Shelby
Currituck County Library	Currituck County Library	4261 Caratoke Hwy	Barco
Danbury Library	Danbury Library	1007 Main St	Danbury
Dobson Community Library	Dobson Community Library	305 S Main St	Dobson
Edgecombe Co Memorial Library	Edgecombe Co Memorial Library	909 North Main Street	Tarboro
Edwards Memorial Pub Lib	Edwards Memorial Pub Lib	414 Hasty Street	Marshville
Elm City	Elm City	117 Southeast Railroad Street	Elm City
Etowah Branch Library	Etowah Branch Library	101 Brickyard Rd	Etowah
Gates Co. Library	Gates Co. Library	115 Court St	Gatesville
Gonn Memorial Lib	Gonn Memorial Lib	30 Falls Ave	Granite Falls
Green River Public Library	Green River Public Library	50 Green River Drive	Flat Rock
H. Leslie Perry Memorial Library	H. Leslie Perry Memorial Library	134 Rose Ave	Henderson
Hampton B. Allen Library	Hampton B. Allen Library	120 S Greene St	Wadesboro
Havelock Craven Co. Pub	Havelock Craven Co. Pub	301 Cunningham Blvd	Havelock
Haywood County P. Lib	Haywood County P. Lib	678 South Haywood St	Waynesville
Henderson County Pub. Lib - Ma	Henderson County Pub. Lib - Ma	301 N Washington St	Hendersonville
Hertford Co. Library	Hertford Co. Library	704 North King Street	Winton
Jones Memorial Library	Jones Memorial Library	127 West South Main Street	Littleton
Law Library	Law Library	316 Princess Street	Wilmington
Lowgap Public Library	Lowgap Public Library	5210 W Pine St	Low Gap
Marshville Branch Library	Marshville Branch Library	118 E Union St	Marshville
Martin Memorial Library	Martin Memorial Library	200 N Smithwick St	Williamston
Mount Airy Public Library	Mount Airy Public Library	145 Rockford St	Mount Airy
New Hanover County Public Libr	New Hanover County Public Libr	201 Chestnut St	Wilmington

Facility Name	Organization	Address Line 1	City
Newport Public Library	Newport Public Library	210 Howard Blvd	Newport
North County Regional	North County Regional	16500 Holly Crest Lane	Huntersville
Northampton County Memorial	Northampton County Memorial	207 W. Jefferson Street	Jackson
Pasquotank-Camden	Pasquotank-Camden	100 E Colonial Ave	Elizabeth City
Person County Pub. Lib.	Person County Pub. Lib.	319 S Main St	Roxboro
Polk County Public Library	Polk County Public Library	51 Walker St	Columbus
Richard H. Thornton Library	Richard H. Thornton Library	210 Main St	Oxford
Robersonville Public Library	Robersonville Public Library	119 S Main St	Robersonville
Rube McCray Memorial Library	Rube McCray Memorial Library	301 Flemington Drive	Lake Waccamaw
Saluda Public Library	Saluda Public Library	44 W Main St	Saluda
Sheppard Memorial Library	Sheppard Memorial Library	530 South Evans St	Greenville
Spruce Pine Public Library	Spruce Pine Public Library	304 Walnut Ave	Spruce Pine
Swansboro Branch Library	Swansboro Branch Library	1460 W Corbett Ave	Swansboro
Transylvania County Library	Transylvania County Library	212 South Gaston Street	Brevard
Tyrrell County Library	Tyrrell County Library	414 Main St	Columbia
Union County Pub. Lib.	Union County Pub. Lib.	316 E Windsor St	Monroe
Union West Pub. Lib.	Union West Pub. Lib.	123 Unionville-Indian Trail Road	Indian Trail
Vanceboro Craven Co Pub	Vanceboro Craven Co Pub	7931 Main Street	Vanceboro
Watauga County Public	Watauga County Public	140 Queen St	Boone
Weldon Memorial Library	Weldon Memorial Library	6 W 1St St	Weldon
Wilson Co. Public Library	Wilson Co. Public Library	249 Nash St W	Wilson
Yancey County Library	Yancey County Library	18 Town Square	Burnsville
Golden Leaf Foundation	Golden Leaf Foundation	301 North Winstead Avenue	Rocky Mount
North Carolina Research Campu	North Carolina Research Campus	200 West Avenue	Kannapolis
Appalachian State University	Appalachian State University	287 Rivers Street	Boone
Coastal Studies Institute	Coastal Studies Institute	217 Budleigh Street	Manteo
Elizabeth City State University	Elizabeth City State University	1704 Weeksville Rd.	Elizabeth City
Fayetteville State University	Fayetteville State University	1200 Murchison Rd.	Fayetteville
University of North Carolina Cha	University of North Carolina Cha	9201 University City Blvd	Charlotte
University of North Carolina Pen	University of North Carolina Pen	1 University Drive	Pembroke
AFR1-Asheville Fire Department	AFR1-Asheville Fire Department	100 Court Plaza	Asheville
AFR2-Asheville Fire Department	AFR2-Asheville Fire Department	315 Livingston St	Asheville
AFR3-Asheville Fire Department	AFR3-Asheville Fire Department	50 Oregon Avenue	Asheville
AFR4-Asheville Fire Department	AFR4-Asheville Fire Department	9 Miller Rd	Asheville
AFR5-Asheville Fire Department	AFR5-Asheville Fire Department	1074 Hendersonville Rd	Asheville
AFR6-Asheville Fire Department	AFR6-Asheville Fire Department	970 Haywood Rd	Asheville
AFR7-Asheville Fire Department	AFR7-Asheville Fire Department	37 E Larchmont Av	Asheville
AFR8-Asheville Fire Department	AFR8-Asheville Fire Department	904 Tunnel Rd	Asheville
AFR9-Asheville Fire Department	AFR9-Asheville Fire Department	749 Fairview Rd	Asheville
AFR10-Asheville Fire Departmer	AFR10-Asheville Fire Departmen	1903 Old Haywood Rd	Asheville
AFR11-Asheville Fire Departmer	AFR11-Asheville Fire Departmen	7 Rocky Ridge	Asheville
AFR12-Asheville Fire Departmer	AFR12-Asheville Fire Departmen	1243 Sand Hill Rd	Asheville
Avery High School	Avery High School	401 High School Rd	Newland
Avery Middle School	Avery Middle School	102 Old Montezuma Rd	Newland
Crossnore Elementary School	Crossnore Elementary School	1000 Walt Clark Rd	Crossnore

Facility Name	Organization	Address Line 1	City
Crossnore Academy	Crossnore Academy	129 Allen Circle	Crossnore
Newland Elementary School	Newland Elementary School	750 Linville Street	Newland
Cannon Memorial Hospital	Cannon Memorial Hospital	434 Hospital Drive	Linville
Blue Ridge Regional Hospital	Blue Ridge Regional Hospital	125 Hospital Drive	Spruce Pine
Mayland Tech-Avery Campus	Mayland Tech-Avery Campus	785 Cranberry St	Newland
Mayland Tech-Mitchell Campus	Mayland Tech-Mitchell Campus	200 Mayland Drive	Spruce Pine
Asheville Buncombe Technical C	Asheville Buncombe Technical C	4646 US 25/70	Marshall

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Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Beaufort County Community College	NC	27889	Community College	
Blue Ridge Community College Flat Rock Campus	NC	28731-7756	Community College	
Blue Ridge Community College Transylvania Center	NC	28712	Community College	
Brunswick Community College	NC	28422	Community College	
Brunswick Community College Leland Center	NC	28451-8804	Community College	
Caldwell Community College	NC	28607	Community College	
Cape Fear Community College	NC	28401	Community College	
Central Carolina Community College	NC	27330	Community College	
Central Piedmont Community College Central Campus	NC	28204	Community College	
Central Piedmont Community College North Campus	NC	28078	Community College	
Cleveland Community College	NC	28152-6205	Community College	
Coastal Carolina Community College	NC	28546-6816	Community College	
College of the Albemarle	NC	27906	Community College	
Craven Community College	NC	28560	Community College	
Craven Community College Havelock-Cherry Point Campus	NC	28532	Community College	
Edgecombe Community College Rocky Mount Campus	NC	27801	Community College	
Edgecombe Community College Tarboro Campus	NC	27886	Community College	Historically Black College or U
Fayetteville Technical Community College	NC	28303-4761	Community College	Historically Black College or U

Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Gaston Community College Lincoln Campus	NC	28034	Community College	
Halifax Community College Main	NC	27890	Community College	Historically Black College or U
Haywood Community College	NC	28786	Community College	
Isothermal Community College	NC	28160	Community College	
Isothermal Community College Polk Campus	NC	28722	Community College	
Martin Community College Main	NC	27892	Community College	Historically Black College or U
Rockingham Community College	NC	27375	Community College	
Nash Community College Main	NC	27804	Community College	
Piedmont Community College Main	NC	27379	Community College	
Piedmont Community College Person County Campus	NC	27573	Community College	
Pitt Community College	NC	28590	Community College	
Richmond Community College	NC	28345	Community College	
Roanoke-Chowan Community College	NC	27910	Community College	Historically Black College or U
Sandhills Community College	NC	28374	Community College	
South Piedmont Community College L.L. Polk Campus	NC	28135	Community College	
South Piedmont Community College Old Charlotte Highway Campus	NC	28110-7333	Community College	
Southeastern Community College	NC	28472-5422	Community College	
Surry Community College	NC	27017	Community College	
Tri-County Community College	NC	28771	Community College	
Vance-Granville Community College Main Campus	NC	27536	Community College	
Vance-Granville Community College Warren County Campus	NC	27589	Community College	

Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Wake Technical Community College	NC	27603	Community College	
Wilkes Community College Alleghany Center	NC	28675	Community College	
Wilson Community College	NC	27893-3310	Community College	
Alleghany County (030)	NC	28675	School (k-12)	
Anson County (040)	NC	28170-2632	School (k-12)	
Ashe County (050)	NC	28640	School (k-12)	
Avery County (060)	NC	28657	School (k-12)	
Bertie County (080)	NC	27983	School (k-12)	
Camden County (150)	NC	27921	School (k-12)	
Caswell County (170)	NC	27379	School (k-12)	
Cleveland County (230)	NC	28152	School (k-12)	
Columbus County (240)	NC	28472	School (k-12)	
Craven County (250)	NC	28562	School (k-12)	
Currituck County (270)	NC	27917	School (k-12)	
Dare County (280)	NC	27959	School (k-12)	
Edenton/Chowan (210)	NC	27932	School (k-12)	
Edgecombe County (330)	NC	27886	School (k-12)	
Elizabeth City-Pasquotank (700)	NC	27709	School (k-12)	
Gates County (370)	NC	27938	School (k-12)	
Graham County (380)	NC	28771	School (k-12)	
Granville County (390)	NC	27565	School (k-12)	
Haywood County (440)	NC	28721	School (k-12)	
Henderson County (450)	NC	28739	School (k-12)	
Hertford County (460)	NC	27986	School (k-12)	
Hyde County (480)	NC	27885	School (k-12)	
Jackson County (500)	NC	28779	School (k-12)	
Lee County (530)	NC	27330	School (k-12)	
Lincoln County (550)	NC	28080	School (k-12)	
Martin County (580)	NC	27892	School (k-12)	
Mecklenburg County (600)	NC	28202	School (k-12)	
Mount Airy City (862)	NC	27030	School (k-12)	
Northampton County (660)	NC	27845	School (k-12)	
Onslow County (670)	NC	28540	School (k-12)	
Perquimans County (720)	NC	27944	School (k-12)	
Person County (730)	NC	27573	School (k-12)	
Pitt County (740)	NC	27858	School (k-12)	
Polk County (750)	NC	28722	School (k-12)	
Richmond County (770)	NC	28345	School (k-12)	
Roanoke Rapids City (421)	NC	27870	School (k-12)	
Rockingham County (790)	NC	27320	School (k-12)	
Rutherford County (810)	NC	28043	School (k-12)	
Scotland County (830)	NC	28352	School (k-12)	
Stokes County (850)	NC	27016	School (k-12)	

Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Surry County (860)	NC	27017	School (k-12)	
Swain County (870)	NC	28713	School (k-12)	
Transylvania County (880)	NC	28712	School (k-12)	
Tyrrell County (890)	NC	27925	School (k-12)	
Union County (900)	NC	28112	School (k-12)	
Vance County (910)	NC	27536	School (k-12)	
Warren County (930)	NC	27589	School (k-12)	
Washington County (940)	NC	27962	School (k-12)	
Watauga County (950)	NC	28607	School (k-12)	
Weldon City (422)	NC	27890	School (k-12)	
Whiteville City (241)	NC	28472	School (k-12)	
Wilson County (980)	NC	27893	School (k-12)	
Yancey County (995)	NC	28714	School (k-12)	
Ahoskie Public Library	NC	27910	Library	
Alleghany County Library	NC	28675	Library	
Berea Branch Library	NC	27565	Library	
Braswell Memorial Public Librar	NC	27804	Library	
Canton Branch	NC	28716	Library	
Carver Branch Library	NC	27834	Library	
Charles R. Jonas Lib	NC	28092	Library	
Cherryville Br. Lib	NC	28021	Library	
Cleveland County Memorial Libr	NC	28151	Library	
Currituck County Library	NC	27917	Library	
Danbury Library	NC	27016	Library	
Dobson Community Library	NC	27017	Library	
Edgecombe Co Memorial Library	NC	27886	Library	
Edwards Memorial Pub Lib	NC	28103	Library	
Elm City	NC	27822	Library	
Etowah Branch Library	NC	28729	Library	
Gates Co. Library	NC	27983	Library	
Gonn Memorial Lib	NC	28630	Library	
Green River Public Library	NC	28731	Library	
H. Leslie Perry Memorial Library	NC	27536	Library	
Hampton B. Allen Library	NC	28170	Library	
Havelock Craven Co. Pub	NC	28532-1942	Library	
Haywood County P. Lib	NC	28786	Library	
Henderson County Pub. Lib - Ma	NC	28739	Library	
Hertford Co. Library	NC	27986	Library	
Jones Memorial Library	NC	27850	Library	
Law Library	NC	28401-4062	Library	
Lowgap Public Library	NC	27024	Library	
Marshville Branch Library	NC	28103	Library	
Martin Memorial Library	NC	27892	Library	
Mount Airy Public Library	NC	27030	Library	
New Hanover County Public Libr	NC	28401	Library	

Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Newport Public Library	NC	28570	Library	
North County Regional	NC	28078	Library	
Northampton County Memorial	NC	27834	Library	
Pasquotank-Camden	NC	27909	Library	
Person County Pub. Lib.	NC	27573	Library	
Polk County Public Library	NC	28722	Library	
Richard H. Thornton Library	NC	27565	Library	
Robersonville Public Library	NC	27871	Library	
Rube McCray Memorial Library	NC	28450	Library	
Saluda Public Library	NC	28773	Library	
Sheppard Memorial Library	NC	27858	Library	
Spruce Pine Public Library	NC	28777	Library	
Swansboro Branch Library	NC	28584	Library	
Transylvania County Library	NC	28712	Library	
Tyrrell County Library	NC	27925	Library	
Union County Pub. Lib.	NC	28112	Library	
Union West Pub. Lib.	NC	28079	Library	
Vanceboro Craven Co Pub	NC	28586	Library	
Watauga County Public	NC	28607	Library	
Weldon Memorial Library	NC	27890	Library	
Wilson Co. Public Library	NC	27893	Library	
Yancey County Library	NC	28714	Library	
Golden Leaf Foundation	NC	27804	Strategic	
North Carolina Research Campu	NC	28081	Strategic	
Appalachian State University	NC	28608	University	
Coastal Studies Institute	NC	27594	University	
Elizabeth City State University	NC	27909	University	Historically Black College or U
Fayetteville State University	NC	28301	University	
University of North Carolina Cha	NC	28223	University	
University of North Carolina Pen	NC	28372	University	
AFR1-Asheville Fire Department	NC	28801	Public Safety Entity	
AFR2-Asheville Fire Department	NC	28801	Public Safety Entity	
AFR3-Asheville Fire Department	NC	28806	Public Safety Entity	
AFR4-Asheville Fire Department	NC	28803	Public Safety Entity	
AFR5-Asheville Fire Department	NC	28803	Public Safety Entity	
AFR6-Asheville Fire Department	NC	28806	Public Safety Entity	
AFR7-Asheville Fire Department	NC	28804	Public Safety Entity	
AFR8-Asheville Fire Department	NC	28805	Public Safety Entity	
AFR9-Asheville Fire Department	NC	28803	Public Safety Entity	
AFR10-Asheville Fire Departmer	NC	28806	Public Safety Entity	
AFR11-Asheville Fire Departmer	NC	28806	Public Safety Entity	
AFR12-Asheville Fire Departmer	NC	28806	Public Safety Entity	
Avery High School	NC	28657	School (k-12)	
Avery Middle School	NC	28657	School (k-12)	
Crossnore Elementary School	NC	28616	School (k-12)	

Facility Name	State	Zip	Facility Type	Minority Serving Institution Type
Crossnore Academy	NC	28616	School (k-12)	
Newland Elementary School	NC	28657	School (k-12)	
Cannon Memorial Hospital	NC	28646	Healthcare	
Blue Ridge Regional Hospital	NC	28777	Healthcare	
Mayland Tech-Avery Campus	NC	28657	Community College	
Mayland Tech-Mitchell Campus	NC	28777	Community College	
Asheville Buncombe Technical C	NC	28753	Community College	

Facility Name	Project Role
Beaufort County Community College	Customer
Blue Ridge Community College Flat Rock Campus	Customer
Blue Ridge Community College Transylvania Center	Customer
Brunswick Community College	Customer
Brunswick Community College Leland Center	Customer
Caldwell Community College	Customer
Cape Fear Community College	Customer
Central Carolina Community College	Customer
Central Piedmont Community College Central Campus	Customer
Central Piedmont Community College North Campus	Customer
Cleveland Community College	Customer
Coastal Carolina Community College	Customer
College of the Albemarle	Customer
Craven Community College	Customer
Craven Community College Havelock-Cherry Point Campus	Customer
Edgecombe Community College Rocky Mount Campus	Customer
Edgecombe Community College Tarboro Campus	Customer
Fayetteville Technical Community College	Customer

Facility Name	Project Role
Gaston Community College Lincoln Campus	Customer
Halifax Community College Main	Customer
Haywood Community College	Customer
Isothermal Community College	Customer
Isothermal Community College Polk Campus	Customer
Martin Community College Main	Customer
Rockingham Community College	Customer
Nash Community College Main	Customer
Piedmont Community College Main	Customer
Piedmont Community College Person County Campus	Customer
Pitt Community College	Customer
Richmond Community College	Customer
Roanoke-Chowan Community College	Customer
Sandhills Community College	Customer
South Piedmont Community College L.L. Polk Campus	Customer
South Piedmont Community College Old Charlotte Highway Campus	Customer
Southeastern Community College	Customer
Surry Community College	Customer
Tri-County Community College	Customer
Vance-Granville Community College Main Campus	Customer
Vance-Granville Community College Warren County Campus	Customer

Facility Name	Project Role
Wake Technical Community College	Customer
Wilkes Community College Alleghany Center	Customer
Wilson Community College	Customer
Alleghany County (030)	Customer
Anson County (040)	Customer
Ashe County (050)	Customer
Avery County (060)	Customer
Bertie County (080)	Customer
Camden County (150)	Customer
Caswell County (170)	Customer
Cleveland County (230)	Customer
Columbus County (240)	Customer
Craven County (250)	Customer
Currituck County (270)	Customer
Dare County (280)	Customer
Edenton/Chowan (210)	Customer
Edgecombe County (330)	Customer
Elizabeth City-Pasquotank (700)	Customer
Gates County (370)	Customer
Graham County (380)	Customer
Granville County (390)	Customer
Haywood County (440)	Customer
Henderson County (450)	Customer
Hertford County (460)	Customer
Hyde County (480)	Customer
Jackson County (500)	Customer
Lee County (530)	Customer
Lincoln County (550)	Customer
Martin County (580)	Customer
Mecklenburg County (600)	Customer
Mount Airy City (862)	Customer
Northampton County (660)	Customer
Onslow County (670)	Customer
Perquimans County (720)	Customer
Person County (730)	Customer
Pitt County (740)	Customer
Polk County (750)	Customer
Richmond County (770)	Customer
Roanoke Rapids City (421)	Customer
Rockingham County (790)	Customer
Rutherford County (810)	Customer
Scotland County (830)	Customer
Stokes County (850)	Customer

Facility Name	Project Role
Surry County (860)	Customer
Swain County (870)	Customer
Transylvania County (880)	Customer
Tyrrell County (890)	Customer
Union County (900)	Customer
Vance County (910)	Customer
Warren County (930)	Customer
Washington County (940)	Customer
Watauga County (950)	Customer
Weldon City (422)	Customer
Whiteville City (241)	Customer
Wilson County (980)	Customer
Yancey County (995)	Customer
Ahoskie Public Library	Customer
Alleghany County Library	Customer
Berea Branch Library	Customer
Braswell Memorial Public Librar	Customer
Canton Branch	Customer
Carver Branch Library	Customer
Charles R. Jonas Lib	Customer
Cherryville Br. Lib	Customer
Cleveland County Memorial Libr	Customer
Currituck County Library	Customer
Danbury Library	Customer
Dobson Community Library	Customer
Edgecombe Co Memorial Library	Customer
Edwards Memorial Pub Lib	Customer
Elm City	Customer
Etowah Branch Library	Customer
Gates Co. Library	Customer
Gonn Memorial Lib	Customer
Green River Public Library	Customer
H. Leslie Perry Memorial Library	Customer
Hampton B. Allen Library	Customer
Havelock Craven Co. Pub	Customer
Haywood County P. Lib	Customer
Henderson County Pub. Lib - Ma	Customer
Hertford Co. Library	Customer
Jones Memorial Library	Customer
Law Library	Customer
Lowgap Public Library	Customer
Marshville Branch Library	Customer
Martin Memorial Library	Customer
Mount Airy Public Library	Customer
New Hanover County Public Libr	Customer

Facility Name	Project Role
Newport Public Library	Customer
North County Regional	Customer
Northampton County Memorial	Customer
Pasquotank-Camden	Customer
Person County Pub. Lib.	Customer
Polk County Public Library	Customer
Richard H. Thornton Library	Customer
Robersonville Public Library	Customer
Rube McCray Memorial Library	Customer
Saluda Public Library	Customer
Sheppard Memorial Library	Customer
Spruce Pine Public Library	Customer
Swansboro Branch Library	Customer
Transylvania County Library	Customer
Tyrrell County Library	Customer
Union County Pub. Lib.	Customer
Union West Pub. Lib.	Customer
Vanceboro Craven Co Pub	Customer
Watauga County Public	Customer
Weldon Memorial Library	Customer
Wilson Co. Public Library	Customer
Yancey County Library	Customer
Golden Leaf Foundation	Customer
North Carolina Research Campu	Customer
Appalachian State University	Customer
Coastal Studies Institute	Customer
Elizabeth City State University	Customer
Fayetteville State University	Customer
University of North Carolina Cha	Customer
University of North Carolina Pen	Customer
AFR1-Asheville Fire Department	Customer
AFR2-Asheville Fire Department	Customer
AFR3-Asheville Fire Department	Customer
AFR4-Asheville Fire Department	Customer
AFR5-Asheville Fire Department	Customer
AFR6-Asheville Fire Department	Customer
AFR7-Asheville Fire Department	Customer
AFR8-Asheville Fire Department	Customer
AFR9-Asheville Fire Department	Customer
AFR10-Asheville Fire Departmer	Customer
AFR11-Asheville Fire Departmer	Customer
AFR12-Asheville Fire Departmer	Customer
Avery High School	Customer
Avery Middle School	Customer
Crossnore Elementary School	Customer

Facility Name	Project Role
Crossnore Academy	Customer
Newland Elementary School	Customer
Cannon Memorial Hospital	Customer
Blue Ridge Regional Hospital	Customer
Mayland Tech-Avery Campus	Customer
Mayland Tech-Mitchell Campus	Customer
Asheville Buncombe Technical C	Customer

BTOP CCI Network Points of Interest De

Title: **North Carolina Rural Broadband Initiative (NCRBI)**
Easy Grants ID: **4218**

Facility Type	Address Line 1	City	State
Point of Interconnection	One University Heights Robinson H	Asheville	NC
Point of Interconnection	200 Mayland Drive	Spruce Pine	NC
Point of Interconnection	287 Rivers Street	Boone	NC
Point of Interconnection	115 Atwood Street	Sparta	NC
Point of Interconnection	630 South Main Street	Dobson	NC
Point of Interconnection	Reidsville	Reidsville	NC
Point of Interconnection	1715 College Drive	Roxboro	NC
Point of Interconnection	100 College Drive	Weldon	NC
Point of Interconnection	109 Community College Road	Ahoskie	NC
Point of Interconnection	1704 Weeksville Road	Elizabeth City	NC
Point of Interconnection	3020 South Wrightsville Avenue	Nags Head	NC
Point of Interconnection	217 Budleigh St	Manteo	NC
Point of Interconnection	902 Main St	Columbia	NC
Point of Interconnection	1161 Kehukee Park Road	Williamston	NC
Point of Interconnection	301 North Winstead Avenue	Rocky Mount	NC
Point of Interconnection	Cullowhee	Cullowhee	NC
Point of Interconnection	145 Moose Branch Road	Robbinsville	NC
Collocation Facility	125 N Myers Street	Charlotte	NC
Point of Interconnection	680 Highway 74 West	Polkton	NC
Point of Interconnection	1042 West Hamlet Avenue	Hamlet	NC
Point of Interconnection	1105 Kelly Drive	Sanford	NC
Collocation Facility	116 North West Street	Raleigh	NC
Point of Interconnection	1 University Drive	Pembroke	NC
Point of Interconnection	4564 Chadbourn Highway	Whiteville	NC
Point of Interconnection	601 S. College Street	Wilmington	NC
Collocation Facility	5301 Departure Drive	Raleigh	NC
Point of Interconnection			
Point of Interconnection	219 Nuway Circle	Lenoir	NC
Point of Interconnection			
Point of Interconnection	151 Patton Avenue	Asheveille	NC
Point of Interconnection		Henderson	NC
Point of Interconnection			
Point of Interconnection	200 West Avenue	Kannapolis	NC
Point of Interconnection		Sylva	NC
Point of Interconnection			

Facility Type	Address Line 1	City	State
Point of Interconnection Connection to Service Provider Connection to Service Provider	250 9th Street Lane	Hickory	NC
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			
Point of Interconnection			

		Additional Notes	

tail Template

Facility Type	Zip	Longitude	Latitude	Interconnection Available at this Location
Point of Interconnection	28804			yes
Point of Interconnection	28777			yes
Point of Interconnection	28608			yes
Point of Interconnection	28675			yes
Point of Interconnection	27017			yes
Point of Interconnection	27320			yes
Point of Interconnection	27573			yes
Point of Interconnection	27890			yes
Point of Interconnection	27910			yes
Point of Interconnection	27909			yes
Point of Interconnection	27959			yes
Point of Interconnection	27594			yes
Point of Interconnection	27925			yes
Point of Interconnection	27892			yes
Point of Interconnection	27804			yes
Point of Interconnection	28723			yes
Point of Interconnection	28771			yes
Collocation Facility	28202			yes
Point of Interconnection	28135			yes
Point of Interconnection	28345			yes
Point of Interconnection	27330			yes
Collocation Facility	27603			yes
Point of Interconnection	28372			yes
Point of Interconnection	28472-5422			yes
Point of Interconnection	28403			yes
Collocation Facility	27616			yes
Point of Interconnection		-82.56217	35.736202	yes
Point of Interconnection	28645	-81.538956	35.913979	yes
Point of Interconnection		-82.092117	35.912273	yes
Point of Interconnection		-82.557899	35.594128	yes
Point of Interconnection	27537	-78.378098	36.332207	yes
Point of Interconnection		-78.455467	36.11538	yes
Point of Interconnection	28081			yes
Point of Interconnection	28779			yes
Point of Interconnection		-80.549511	34.985428	yes

Facility Type	Zip	Longitude	Latitude	Interconnection Available at this Location
Point of Interconnection		-80.84285	35.410694	yes
Connection to Service Provider		-78.515516	36.016211	yes
Connection to Service Provider	28601			
Point of Interconnection		**-76.695487**	36.047878	Yes
Point of Interconnection		-75.762153	36.087701	Yes
Point of Interconnection		-75.629765	35.895236	Yes
Point of Interconnection		-75.615085	35.898696	Yes
Point of Interconnection		-75.714152	35.885183	Yes
Point of Interconnection		-76.007646	35.900304	Yes
Point of Interconnection		-76.25495	35.916423	Yes
Point of Interconnection		-77.95083	**34.251992**	Yes

Facility Type	Status in Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
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Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Collocation Facility	Existing - Leased from Third Party
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Collocation Facility	Existing - Leased from Third Party
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Collocation Facility	Existing - Leased from Third Party
Point of Interconnection	Existing - Leased from Third Party
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network

Facility Type	Status in Proposed Network
Point of Interconnection	New for Proposed Network
Connection to Service Provider	New for Proposed Network
Connection to Service Provider	Existing - Leased from Third Party
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network
Point of Interconnection	New for Proposed Network

BTOP Comprehensive Community Infrastructure
Pro Forma Financial Projections

Please complete the Income Statement, Balance Sheet, Cash Flows, and NPV-IRR Table worksheets. Key assumptions used to formulate these financial projections should be listed in the Key Assumptions worksheet. Please note that these are **project-specific** projections, in contrast to the historical financial information which is provided at the organizational level.

Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this attachment.

Applicants are required to provide this attachment as an Excel file, and not to convert it to a PDF when submitting a copy of their application on an appropriate electronic medium, such as a DVD, CD-ROM, or flash drive. Applicants may make adjustments to the format of the templates as necessary to provide the most effective presentation of the data for their specific project, but should not remove major headings (*e.g.* Revenues and Expenses on the Income Statement) or provide less detailed information than would be required to complete the provided templates.

Income Statement

	Forecast Period							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Revenues								
Broadband Offerings								
Wholesale Data Lambdas	$ -	$ -	$ 90,000	$ 120,000	$ 130,000	$ 160,000	$ 160,000	$ 160,000
Wholesale Data	$ -	$ -	$ 18,000	$ 20,700	$ 26,910	$ 30,947	$ 35,588	$ 40,927
Retail Data	$ -	$ -	$ 6,000	$ 6,000	$ 6,300	$ 6,300	$ 6,600	$ 6,600
IRU/Lease	$ -	$ 3,375	$ 6,750	$ 6,750	$ 6,750	$ 92,994	$ 92,994	$ 92,994
Collocation	$ -	$ -	$ 15,600	$ 17,160	$ 18,876	$ 20,764	$ 22,840	$ 25,124
Ethernet Transport over Middle Mile Fiber	$ -	$ -	$ 2,138,400	$ 2,419,200	$ 2,592,000	$ 2,894,400	$ 3,024,000	$ 3,196,800
Other Network Driven Revenues								
Network Access Service Revenues	$ -	$ 11,391	$ 468,441	$ 600,375	$ 672,375	$ 722,775	$ 744,375	$ 773,175
CPE Revenues	$ -	$ -	$ 469,880	$ 531,581	$ 569,551	$ 635,999	$ 664,476	$ 702,446
Installation Revenues	$ -	$ 500	$ 4,250	$ 3,000	$ 1,750	$ 1,000	$ 750	$ 750
Grant Revenues	$ 548,214	$ 258,687	$ 3,425,518	$ 4,100,124	$ 4,041,926	$ 3,529,465	$ 3,441,835	$ 3,422,979
Cash Match Revenues	$ 198,408	$ 93,623	$ 1,239,751	$ 1,483,902	$ 1,462,839	$ 1,277,371	$ 1,245,657	$ 1,238,832
In-kind Match Revenues (non-cash)	$ 38,358	$ 18,100	$ 239,681	$ 286,883	$ 282,810	$ 246,954	$ 240,823	$ 239,503
Total Revenues	$ 784,980	$ 385,677	$ 8,122,270	$ 9,595,676	$ 9,812,089	$ 9,618,969	$ 9,679,939	$ 9,900,131
Expenses								
Labor	$ -	$ 265,437	$ 673,376	$ 820,672	$ 845,292	$ 870,651	$ 896,771	$ 923,674
Benefits	$ -	$ 116,584	$ 298,471	$ 364,109	$ 375,032	$ 386,283	$ 397,872	$ 409,808
Training/recruitment	$ -	$ 4,200	$ 14,496	$ 14,835	$ 15,280	$ 15,738	$ 16,210	$ 16,697
Materials/supplies	$ -	$ 1,200	$ 7,200	$ 7,344	$ 7,564	$ 7,791	$ 8,025	$ 8,266
Equipment maintenance support agreement	$ -	$ 35,675	$ 275,675	$ 275,675	$ 275,675	$ 275,675	$ 278,175	$ 278,175
Equipment maintenance support agreement	$ -	$ -	$ 38,800	$ 43,600	$ 46,400	$ 52,000	$ 54,400	$ 57,600
Fiber cuts repair costs	$ -	$ 20,000	$ 65,000	$ 65,800	$ 66,216	$ 66,640	$ 70,361	$ 71,084
Fiber management fee-backbone	$ 15,000	$ 57,600	$ 313,600	$ 314,527	$ 315,463	$ 316,409	$ 324,095	$ 325,060
Fiber management fee-Blue Ridge Electric I	$ -	$ 13,350	$ 31,950	$ 31,950	$ 31,950	$ 31,950	$ 34,650	$ 34,650
Fiber management fee-City of Monroe IRU	$ -	$ -	$ 12,500	$ 12,500	$ 12,500	$ 12,500	$ 13,125	$ 13,125
Fiber management fee-AGL Networks Charl	$ -	$ -	$ 14,000	$ 14,000	$ 14,000	$ 14,000	$ 14,700	$ 14,700
Fiber management fee-Balsam West	$ -	$ -	$ 29,000	$ 29,000	$ 29,000	$ 29,000	$ 29,000	$ 29,000
Fiber management fee-laterals	$ -	$ -	$ 31,800	$ 31,800	$ 31,800	$ 31,800	$ 34,365	$ 34,365
Colocation	$ -	$ 4,900	$ 4,972	$ 5,082	$ 5,196	$ 5,312	$ 5,433	$ 5,557
Leased line savings	$ -	$ (100,800)	$ (639,864)	$ (639,864)	$ (639,864)	$ (639,864)	$ (639,864)	$ (639,864)
Shelter (hut) costs	$ -	$ 2,600	$ 2,600	$ 12,680	$ 2,600	$ 2,600	$ 12,680	$ 2,600
Pole Fees	$ 24,047	$ 48,093	$ 48,093	$ 50,498	$ 50,498	$ 50,498	$ 53,023	$ 53,023
Travel	$ 3,500	$ 3,102	$ 22,103	$ 21,360	$ 22,111	$ 22,898	$ 23,724	$ 24,592
Telephone	$ -	$ -	$ 2,640	$ 2,693	$ 2,774	$ 2,857	$ 2,942	$ 3,031
Utilities	$ -	$ 6,400	$ 134,400	$ 140,700	$ 147,315	$ 154,261	$ 161,554	$ 169,211
Insurance	$ -	$ 1,690	$ 158,858	$ 162,184	$ 168,260	$ 174,586	$ 181,174	$ 188,036
Internet	$ -	$ -	$ 114,976	$ 127,738	$ 135,298	$ 150,418	$ 156,898	$ 165,538
Leased circuits	$ -	$ 4,200	$ 22,824	$ 23,269	$ 23,931	$ 24,613	$ 25,315	$ 26,039
Fiber Relocations Accrual	$ -	$ -	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 110,000
Pre-award/legal costs	$ 739,080	$ 9,000	$ 9,000	$ -	$ -	$ -	$ -	$ -
Direct Labor Overhead	$ -	$ 281,626	$ 787,867	$ 969,679	$ 998,769	$ 1,028,733	$ 1,059,595	$ 1,091,382
Corporate G&A	$ 20,603	$ 81,739	$ 382,988	$ 398,704	$ 389,956	$ 400,869	$ 412,664	$ 422,779
Total	$ 802,230	$ 856,596	$ 2,967,325	$ 3,410,535	$ 3,483,016	$ 3,598,219	$ 3,736,888	$ 3,838,128
EBITDA	$ (17,250)	$ (470,919)	$ 5,154,945	$ 6,185,141	$ 6,329,072	$ 6,020,750	$ 5,943,051	$ 6,062,003
Depreciation/amortization	$ 45,900	$ 361,411	$ 4,895,949	$ 5,870,909	$ 5,787,576	$ 5,053,791	$ 4,928,315	$ 4,901,315
Depreciation on Equipment Refresh	$ -	$ -	$ -	$ -	$ 83,333	$ 817,118	$ 942,594	$ 969,594
Earnings Before Interest and Taxes	$ (63,150)	$ (832,330)	$ 258,996	$ 314,232	$ 458,164	$ 149,842	$ 72,143	$ 191,095
Interest Expense	$ -	$ 8,050	$ 17,745	$ 12,215	$ 2,520	$ 15,523	$ 18,183	$ 2,660
Income Before Taxes	$ (63,150)	$ (840,380)	$ 241,251	$ 302,017	$ 455,644	$ 134,319	$ 53,960	$ 188,435
Property Tax	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Income Taxes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Income	**$ (63,150)**	**$ (840,380)**	**$ 241,251**	**$ 302,017**	**$ 455,644**	**$ 134,319**	**$ 53,960**	**$ 188,435**

Balance Sheet

	Forecast Period							
Assets	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**
Current Assets								
Cash	$ 4,498,158	$ 7,750	$ 1,720	$ 3,737	$ 508,714	$ 5,797	$ 924	$ 1,035,952
Accounts Receivable	$ 15,266	$ 3,217,321	$ 3,724,767	$ 4,024,513	$ 4,565,179	$ 4,751,624	$ 4,998,817	$ 4,998,817
Total Current Assets	$ 4,513,424	$ 3,225,071	$ 3,726,487	$ 4,028,250	$ 5,073,892	$ 4,757,422	$ 4,999,740	$ 6,034,769
Non-Current Assets								
Plant in Service	$ 43,465,199	$ 98,800,686	$ 110,897,243	$ 110,897,243	$ 110,897,243	$ 113,348,597	$ 113,725,025	$ 113,806,025
Less: Accumulated Depreciation	$ (45,900)	$ (407,311)	$ (5,303,260)	$ (11,174,169)	$ (17,045,078)	$ (22,915,987)	$ (28,786,895)	$ (34,657,804)
Net Plant	$ 43,419,299	$ 98,393,376	$ 105,593,983	$ 99,723,074	$ 93,852,165	$ 90,432,611	$ 84,938,130	$ 79,148,222
Total Non-Current Assets	$ 43,419,299	$ 98,393,376	$ 105,593,983	$ 99,723,074	$ 93,852,165	$ 90,432,611	$ 84,938,130	$ 79,148,222
Total Assets	$ 47,932,724	$ 101,618,446	$ 109,320,470	$ 103,751,324	$ 98,926,058	$ 95,190,032	$ 89,937,870	$ 85,182,991

Liabilities and Owners' Equity	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**
Liabilities								
Current Liabilities								
LOC	$ -	$ 460,000	$ 554,000	$ 144,000	$ -	$ 887,000	$ 152,000	$ -
Deferred Revenue	$ 47,995,874	$ 102,061,976	$ 109,318,749	$ 103,747,586	$ 98,500,676	$ 93,633,332	$ 88,952,209	$ 84,050,895
Provision for Future Fiber Relocations	$ -	$ -	$ 110,000	$ 220,000	$ 330,000	$ 440,000	$ 550,000	$ 660,000
Total Current Liabilities	$ 47,995,874	$ 102,521,976	$ 109,982,749	$ 104,111,586	$ 98,830,676	$ 94,960,332	$ 89,654,209	$ 84,710,895
Long-Term Liabilities								
Long Term Notes Payable	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Long Term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Long-Term Liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Liabilities	$ 47,995,874	$ 102,521,976	$ 109,982,749	$ 104,111,586	$ 98,830,676	$ 94,960,332	$ 89,654,209	$ 84,710,895
Owner's Equity								
Net Assets	$ (63,150)	$ (903,530)	$ (662,279)	$ (360,262)	$ 95,381	$ 229,701	$ 283,661	$ 472,096
Total Equity	$ (63,150)	$ (903,530)	$ (662,279)	$ (360,262)	$ 95,381	$ 229,701	$ 283,661	$ 472,096
Total Liabilities and Owner's Equity	$ 47,932,724	$ 101,618,446	$ 109,320,470	$ 103,751,324	$ 98,926,058	$ 95,190,032	$ 89,937,870	$ 85,182,991

Statement of Cash Flows

	Forecast Period							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Beginning Cash	**$ -**	**$ 4,498,158**	**$ 7,750**	**$ 1,720**	**$ 3,737**	**$ 508,714**	**$ 5,797**	**$ 924**
CASH FLOWS FROM OPERATING ACTIVITIES:								
Net Income	(63,150)	(840,380)	241,251	302,017	455,644	134,319	53,960	188,435
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities								
Add: Depreciation	45,900	361,411	4,895,949	5,870,909	5,870,909	5,870,909	5,870,909	5,870,909
Changes in Current Assets and Liabilities:								
Accounts Receivable	(15,266)	(3,202,054)	(507,446)	(299,746)	(540,666)	(186,446)	(247,192)	-
Non-cash Deferred Revenue	4,746,000	510,000	200,000	-	-	-	-	-
Deferred Revenue	43,249,874	53,556,102	7,056,773	(5,571,163)	(5,246,910)	(4,867,345)	(4,681,122)	(4,901,315)
Provision for Future Fiber Relocations	-	-	110,000	110,000	110,000	110,000	110,000	110,000
Net Cash Provided (Used) by Operations	**$ 47,963,358**	**$ 50,385,079**	**$ 11,996,527**	**$ 412,017**	**$ 648,977**	**$ 1,061,437**	**$ 1,106,554**	**$ 1,268,029**
CASH FLOWS FROM INVESTING ACTIVITIES:								
Capital Expenditures	(38,719,199)	(54,825,487)	(11,896,557)	-	-	(2,451,354)	(376,428)	(81,000)
Non-cash Capital Expenditures (in-kind)	(4,746,000)	(510,000)	(200,000)	-	-	-	-	-
Net Cash Used by Investing Activities	**$ (43,465,199)**	**$ (55,335,487)**	**$ (12,096,557)**	**$ -**	**$ -**	**$ (2,451,354)**	**$ (376,428)**	**$ (81,000)**
CASH FLOWS FROM FINANCING ACTIVITIES:								
Line of Credit	-	460,000	94,000	-	-	887,000	-	-
Principal Payments	-	-	-	(410,000)	(144,000)	-	(735,000)	(152,000)
Net Cash Used by Financing Activities	**$ -**	**$ 460,000**	**$ 94,000**	**$ (410,000)**	**$ (144,000)**	**$ 887,000**	**$ (735,000)**	**$ (152,000)**
Net Increase (Decrease) in Cash	**$ 4,498,158**	**$ (4,490,408)**	**$ (6,030)**	**$ 2,017**	**$ 504,977**	**$ (502,917)**	**$ (4,874)**	**$ 1,035,029**
Ending Cash	**$ 4,498,158**	**$ 7,750**	**$ 1,720**	**$ 3,737**	**$ 508,714**	**$ 5,797**	**$ 924**	**$ 1,035,952**

NPV/IRR Table

	Net Present Value	Internal Rate of Return	
Without BTOP Funding	-$81,430,604.00	0.00%	*
With BTOP Funding	$8,065,818.00	0.00%	*

* NOTE: A generally accepted IRR formula could not calculate an internal rate of return as the initial investment exceeds the resulting free cash flow streams by too much. Two IRR processes were tried, both produced the error result. The maximum investment given these free cash flows that produced a calculateable IRR result is $41M, well below this proposals $111M The detailed calculations are available in the supplemental materials to verify methodology.

Revenue Assumptions

Factor	Specific Metric Used in Analysis	Rationale (Cite Basis)
Revenue Assumptions		
Wholesale Data Lambdas	$10k per Gigabit Ethernet	Pricing set to produce breakeven for service
Wholesale Data	ERC transport $18,000/annual	Pricing set to produce breakeven for service
Retail Data	ERC commercial or non-profits access at $100/mth/site	Pricing set to produce breakeven for service
IRU/Lease	$135k for 20 year IRU	Estimated expectation of IRU capability for one customer
Collocation	Build enables one new collocation customer for ERC at $1300/mth	Standard rack pricing for ERC
Ethernet Transport over MM Fiber	Based on $18,000 per year for middle mile transport	Pricing set to produce breakeven for service
Network Access Service Revenues	see following chart	Pricing set to produce breakeven for service
CPE Revenues	$4,746.26 per year per CAI	Pricing set to produce breakeven for service
Installation Revenues	Installation of CPE/monitoring equip at $250/site	$250/site as standard install set to produce breakeven
Grant Revenues	Fed % of project times depreciation and pre-award costs	Pricing set equal to cost over life of the assets
Cash Match Revenues	Cash match % of project times depreciation and pre-award costs	Pricing set equal to cost over life of the assets
In-kind Match Revenues	In-kind match % of project times depreciation on pre-award costs	Pricing set equal to cost over life of the assets

	New Revenues							
Network Access Service Revenues	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8
Northeast:								
# of Com Coll's Passed			9	9	9	9	9	9
Projected Take Rate %	0%	0%	100%	100%	100%	100%	100%	100%
# of Com Coll Projected	-	-	9	9	9	9	9	9
Price per Com Coll			9147	9147	9147	9147	9147	9147
Total New CC Revenues	-	-	82,323	82,323	82,323	82,323	82,323	82,323
# of Libraries Passed			47	47	47	47	47	47
Projected Take Rate %	0%	0%	11%	21%	21%	21%	21%	21%
# of Libraries Projected	-	-	5	10	10	10	10	10
Price per Library			3600	3600	3600	3600	3600	3600
Total New Library Revenues	-	-	18,000	36,000	36,000	36,000	36,000	36,000
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed			415	415	415	415	415	415
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety			3600	3600	3600	3600	3600	3600
Total new Safety Revenues	-	-	-	-	-	-	-	-
# of new other CAI Passed			290	290	290	290	290	290
Projected Take Rate %	0%	0%	7%	7%	7%	7%	7%	7%
# of new other CAI Projected	-	-	21	21	21	21	21	21
Price per other CAI			0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Northeast	-	-	100,323	118,323	118,323	118,323	118,323	118,323
Total Northeast Projected # of New CAIs	-	-	35	40	40	40	40	40
Northcentral:								
# of Com Coll's Passed			12	12	12	12	12	12
Projected Take Rate %	0%	0%	58%	50%	50%	50%	50%	50%
# of Com Coll Projected	-	-	7	6	6	6	6	6
Price per Com Coll			6208	6208	6208	6208	6208	6208
Total New CC Revenues	-	-	43,456	37,248	37,248	37,248	37,248	37,248
# of Libraries Passed			45	45	45	45	45	45
Projected Take Rate %	0%	0%	2%	7%	11%	16%	20%	27%
# of Libraries Projected	-	-	1	3	5	7	9	12
Price per Library			3600	3600	3600	3600	3600	3600
Total New Library Revenues	-	-	3,600	10,800	18,000	25,200	32,400	43,200
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed			321	321	321	321	321	321
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety			3600	3600	3600	3600	3600	3600
Total new Safety Revenues	-	-	-	-	-	-	-	-
# of new other CAI Passed			319	319	319	319	319	319
Projected Take Rate %	0%	0%	4%	4%	4%	4%	4%	4%
# of new other CAI Projected	-	-	12	12	12	12	12	12
Price per other CAI			0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Northcentral	-	-	47,056	48,048	55,248	62,448	69,648	80,448
Total Northcentral Projected # of New CAIs	-	-	20	21	23	25	27	30
Northwest ERC:								

# of Com Coll's Passed	3	3	3	3	3	3	3	3
Projected Take Rate %	0%	0%	33%	67%	100%	100%	100%	100%
# of Com Coll Projected	-	-	1	2	3	3	3	3
Price per Com Coll	21600	21600	21600	21600	21600	21600	21600	21600
Total New CC Revenues	-	-	21,600	43,200	64,800	64,800	64,800	64,800
# of K12s Passed	3	3	3	3	3	3	3	3
Projected Take Rate %	0%	0%	33%	100%	100%	100%	100%	100%
# of K12s Projected	-	-	1	3	3	3	3	3
Price per K12 Coll	21600	21600	21600	21600	21600	21600	21600	21600
Total New K12 Revenues	-	-	21,600	64,800	64,800	64,800	64,800	64,800
# of Libraries Passed	1	1	1	1	1	1	1	1
Projected Take Rate %	0%	100%	100%	100%	100%	100%	100%	100%
# of Libraries Projected	-	1	1	1	1	1	1	1
Price per Library	1200	1200	1200	1200	1200	1200	1200	1200
Total New Library Revenues	-	1,200	1,200	1,200	1,200	1,200	1,200	1,200
# of other Community Support Passed	0	2	3	4	5	5	5	5
Projected Take Rate %	0%	50%	67%	75%	100%	100%	100%	100%
# of Other Community Supppt Projected	-	1	2	3	5	5	5	5
Price per Other Community Support	1800	1800	1800	1800	1800	1800	1800	1800
Total New Other Community Support Revenues	-	1,800	3,600	5,400	9,000	9,000	9,000	9,000
# of Govemment Passed	0	2	2	2	2	2	2	2
Projected Take Rate %	0%	50%	100%	100%	100%	100%	100%	100%
# of Govemment Projected	-	1	2	2	2	2	2	2
Price per Governement	6000	6000	6000	6000	6000	6000	6000	6000
Total Government Revenues	-	6,000	12,000	12,000	12,000	12,000	12,000	12,000
# of Health Care Passed	3	3	3	3	3	3	3	3
Projected Take Rate %	0%	0%	33%	67%	100%	100%	100%	100%
# of Health Care Projected	-	-	1	2	3	3	3	3
Price per Health Care	0	0	21600	21600	21600	21600	21600	21600
Total New Health Care Revenues	-	-	21,600	43,200	64,800	64,800	64,800	64,800
# of new Safety Passed	12	12	12	12	12	12	12	12
Projected Take Rate %	0%	50%	75%	100%	100%	100%	100%	100%
# of new Safety Projected	-	6	9	12	12	12	12	12
Price per Safety	398.54	398.54	398.54	398.54	398.54	398.54	398.54	398.54
Total new Safety Revenues	-	2,391	3,587	4,782	4,782	4,782	4,782	4,782
# of new other CAI Passed	0	12	12	12	12	12	12	12
Projected Take Rate %	0%	8%	17%	42%	50%	50%	50%	50%
# of new other CAI Projected	-	1	2	5	6	6	6	6
Price per other CAI	0	0	0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Northwest ERC	-	11,391	85,187	174,582	221,382	221,382	221,382	221,382
Total Northwest ERC Projected # of New CAIs	-	-	-	-	-	-	-	-

Northwest MCNC:								
# of Com Coll's Passed			1	1	1	1	1	1
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Com Coll Projected	-	-	-	-	-	-	-	-
Price per Com Coll			9147	9147	9147	9147	9147	9147
Total New CC Revenues	-	-	-	-	-	-	-	-
# of Libraries Passed			12	12	12	12	12	12
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Libraries Projected	-	-	-	-	-	-	-	-
Price per Library			3600	3600	3600	3600	3600	3600
Total New Library Revenues	-	-	-	-	-	-	-	-
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed			84	84	84	84	84	84
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety			3600	3600	3600	3600	3600	3600
Total new Safety Revenues	-	-	-	-	-	-	-	-
# of new other CAI Passed			59	59	59	59	59	59
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new other CAI Projected	-	-	-	-	-	-	-	-
Price per other CAI			0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Northwest MCNC	-	-	-	-	-	-	-	-
Total Northwest MCNC Projected # of New CAIs	-	-	-	-	-	-	-	-

Southcentral:								
# of Com Coll's Passed			21	21	21	21	21	21
Projected Take Rate %	0%	0%	52%	52%	52%	52%	52%	52%
# of Com Coll Projected	-	-	11	11	11	11	11	11
Price per Com Coll			9147	9147	9147	9147	9147	9147
Total New CC Revenues	-	-	100,617	100,617	100,617	100,617	100,617	100,617
# of Libraries Passed			93	93	93	93	93	93
Projected Take Rate %	0%	0%	1%	2%	3%	8%	8%	9%
# of Libraries Projected	-	-	1	2	3	7	7	8
Price per Library			3600	3600	3600	3600	3600	3600
Total New Library Revenues	-	-	3,600	7,200	10,800	25,200	25,200	28,800
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed			674	674	674	674	674	674
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety			3600	3600	3600	3600	3600	3600

Total new Safety Revenues	-	-	-	-	-	-	-	-	-
# of new other CAI Passed			774	774	774	774	774	774	774
Projected Take Rate %	0%	0%	1%	2%	2%	2%	2%	2%	2%
# of new other CAI Projected	-	-	11	12	12	12	12	12	12
Price per other CAI			0	0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-	-
Total Southcentral	-	-	104,217	107,817	111,417	125,817	125,817	129,417	
Total Southcentral Projected # of New CAIs	-	-	23	25	26	30	30	31	

Round 1:								
# of Com Coll's Passed			18	18	18	18	18	18
Projected Take Rate %	0%	0%	78%	83%	83%	83%	83%	83%
# of Com Coll Projected	-	-	14	15	15	15	15	15
Price per Com Coll			9147	9147	9147	9147	9147	9147
Total New CC Revenues	-	-	128,058	137,205	137,205	137,205	137,205	137,205
# of Libraries Passed			65	65	65	65	65	65
Projected Take Rate %	0%	0%	2%	6%	12%	25%	31%	37%
# of Libraries Projected	-	-	1	4	8	16	20	24
Price per Library			3600	3600	3600	3600	3600	3600
Total New Library Revenues	-	-	3,600	14,400	28,800	57,600	72,000	86,400
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed			384	384	384	384	384	384
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety			3600	3600	3600	3600	3600	3600
Total new Safety Revenues	-	-	-	-	-	-	-	-
# of new other CAI Passed			546	546	546	546	546	546
Projected Take Rate %	0%	0%	2%	2%	2%	2%	2%	2%
# of new other CAI Projected	-	-	12	12	12	12	12	12
Price per other CAI			0	0	0	0	0	0
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Round 1	-	-	131,658	151,605	166,005	194,805	209,205	223,605
Total Round 1 Projected # of New CAIs	-	-	27	31	35	43	47	51

Graham:								
# of Com Coll's Passed			1	1	1	1	1	1
Projected Take Rate %	0%	0%	100%	100%	100%	100%	100%	100%
# of Com Coll Projected	-	-	1	1	1	1	1	1
Price per Com Coll			9147	9147	9147	9147	9147	9147
Total New CC Revenues	-	-	9,147	9,147	9,147	9,147	9,147	9,147
# of Libraries Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Libraries Projected	-	-	-	-	-	-	-	-
Price per Library								
Total New Library Revenues	-	-	-	-	-	-	-	-
# of Museums Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Museums Projected	-	-	-	-	-	-	-	-
Price per Museum								
Total New Museum Revenues	-	-	-	-	-	-	-	-
# of Health Care Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of Health Care Projected	-	-	-	-	-	-	-	-
Price per Health Care								
Total New Health Care Revenues	-	-	-	-	-	-	-	-
# of new Safety Passed								
Projected Take Rate %	0%	0%	0%	0%	0%	0%	0%	0%
# of new Safety Projected	-	-	-	-	-	-	-	-
Price per Safety								
Total new Safety Revenues	-	-	-	-	-	-	-	-
# of new other CAI Passed			1	1	1	1	1	1
Projected Take Rate %	0%	0%	100%	200%	300%	300%	300%	300%
# of new other CAI Projected	-	-	1	2	3	3	3	3
Price per other CAI								
Total new other CAI Revenues	-	-	-	-	-	-	-	-
Total Graham	-	-	9,147	9,147	9,147	9,147	9,147	9,147
Total Graham Projected # of New CAIs	-	-	2	3	4	4	4	4

Expense Assumptions

Factor	Specific Metric Used in Analysis			Rationale (Cite Basis)			
Network Expenses							
Labor:	Company	Title	Year	Salary	Quantity	Total Gross	Non-leave %
	MCNC	Outside Plant	4	45,000	3	135,000	87%
	ERC	Outside Plant	2	45,000	1	45,000	87%
	MCNC	NOC Engineer	2	60,000	1	60,000	87%
	MCNC	NOC Engineer	3	60,000	1	60,000	87%
	MCNC	Help Desk	2	45,000	1	45,000	87%
	MCNC	Help Desk	3	45,000	1	45,000	87%
	MCNC	Knowledge Info Systems Member	2	75,000	1	75,000	87%
	MCNC	Sr Engineer	3	100,000	1	100,000	87%
	MCNC	CAI Advocate	3	95,000	1	95,000	87%
	MCNC	Sales Associate	2	80,000	1	80,000	87%
Labor was derived by taking the gross wages * the non-leave % times an inflation factor of 2% in year 2 and 3% in subseqent years	MCNC	Network Mngmnt Tech	3	50,000	1	50,000	87%
	MCNC	NOC Mgmnt	3	80,000	1	80,000	87%
Fringe	MCNC 44.6% of labor, ERC 40% of labor			MCNC used the FY10 provisional rate. The methodology used to derive the rate has been audited by the DCAA in prior years. ERC rate based on historical actuals.			
Training/recruitment	NOC network certification requirements			historical cost, factored for inflation			
Materials/supplies	small cabling, jumpers, etc			historical cost, factored for inflation			

Equipment maintenance support agreements-backbone	Annual hardware maintenance and support contracts	per vendor stated cost for components
Equipment maintenance support agreements-CPE	Annual hardware maintenance and support contracts for	per vendor stated cost for CPE
Fiber cuts repair costs	region per year at having an averge cost to repair of $7500 per incident	consultation with industry experts, factored for inflation
Fiber management fee-backbone	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
Fiber management fe[redacted]	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
Fiber management fee[redacted]	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
[redacted]	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
Fiber management fe[redacted]	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
Fiber management fee-laterals	Based on stated agreements from actual provider for $175 - $300 per route mile per year	provider agreement
Colocation	MCNC will pay ERC $3600/yr, ERC to pay	past historical cost for similar area
Leased line savings	Existing short term circuit expense that build will eliminate	actual cost
Shelter (hut) costs	Mowing and other misc	rate based on quotes and experience team
Pole Fees	$15 - $35/pole based on provider/location	LOI at $23 and existing pricing
Travel	Estimate mileage and meals for outside plant and NOC staff to support new build and CAIs	historical cost, factored for inflation
Telephone	Communication capability for outside plant and NOC staff	historical cost, factored for inflation
Utilities	Hut utilities ~$500/site/month	historical cost, factored for inflation
Insurance	.11 - .17 per $100 of build	per insurance broker, current rate for off site, IRU, & fiber
Internet	Based on current rates and subscriber estimates for service	historical cost, factored for inflation
Leased circuits	Out of band management circuits for support of new infrastructure estimated at $100/site/month	historical cost, factored for inflation
Fiber Relocations Accrual	Based on recommendations from industry experts to allow for one incident every other year	industry expert provided
Pre-award/legal costs	MCNC pre-award $314k, A133 audit $13.5k and legal $120k. Kenan Institute pre-award $185k. ERC pre-award $51k, legal $60k, A133 audit $13.5k	Based on actuals incurred + estimates of unbooked as yet known expenses for pre-awards, quote from external audit for for A133 cost, and estimate from external counsel for anticipated contracts
Direct Labor Overhead	54.83270% of labor and benefits	Used FY10 MCNC provisional rate. The intent of this rate is to cover those costs, not economically feasible to identify to a final cost objective, that includes primarily the direct labor supervision, facilities related costs, & internal systems. The methodology used to derive the rate has been audited by the DCAA in prior years.
Corporate G&A	MCNC: Rate times "Modified Total Direct Costs" (MTDC). Yr 1 Rate = 18.38%, Yr 2 = 17.49%, Yr 3 = 17.25%, Yr 4 = 16.15%, Yr 5 = 15.39%, Yr 6 = 15.39%, Yr 7 = 15.38%, Yr 8 = 15.38%. ERC at $20,603/yr	The FY10 MCNC provisional rate was projected over the next 9 years and factored in the BTOP1 award expected expansion plus a round2 award expansion needs award of a Senior Financial Analyst and an Admin Assist over a project new base including both BTOP 1 & 2. The intent of this rate is to cover those G&A costs, not economically feasible to identify to a final cost ojective, that includes, the MCNC president, legal, human resources, finance/accounting, and purchasing. The methodology used to derive the rate has bee audited by the DCAA in prior years. MCNC's modifiers (G&A not applied) are equipment depreciation, subcontracts, and leased lines. ERC's rate is based on past history.
Depreciation & Amortization		
Depreciation/amortization	Straightline - Non DWDM equip 3 yrs, DWDM equip 6 yrs, fiber construction 25 yrs, IRUs = life of agreement	Board approved depreciation methodology-this line basis of grant and matching revenues
Depreciation on Equipment Refresh	Straightline - Non DWDM equip 3 yrs, DWDM equip 6 yrs, fiber construction 25 yrs, IRUs = life of agreement	Board approved depreciation methodology-this line not included in basis of grant and matching revenues
Interest Expenses		
Debt Instrument A	LOC = LIBOR + 2%	Current LOC rate
Taxes		
Federal Tax Rate	Exempt as 501(c)(3)	Exempt as 501(c)(3)
Other Tax Rates	Exempt as 501(c)(3)	Exempt as 501(c)(3)

BTOP Comprehensive Community Infrastructure
Service Offerings and Competitor Data Template

Please complete the complete the following worksheets--either of the Last Mile or Middle
Service Offerings worksheets may be omitted if the applicant is not proposing to provide se
that type.

For both the Last Mile and Middle Mile Service Offerings worksheets, the service offerings s
include all relevant tiers and markets (*e.g.* residential, business, wholesale). Applicants shc
sure to include details on any services that would be offered at discounted rates to particul
classes of customers (*e.g.* community anchor institutions or third party service providers).

In the Last Mile Service Offerings worksheet, applicants are required to provide estimated a
end user speeds. Average speeds should be the average sustained actual, non-burst speed
end user would receive during a peak hour. For purposes of calculating these speeds, appli
should utilize their subscriber projections for year eight of the project, and develop subscril
utilization projections that are consistent with any additional services the applicant plans tc
For wireless broadband services, this speed should be an average of the speeds available ac
entire cell. Beyond these general guidelines, due to the multiplicity of technical solutions t
be proposed, the applicants may use discretion to determine the most reasonable manner
to estimate actual speeds on their network. Applicants should explain the underlying assur
used to calculate the average speeds in the space provided.

In the Competitor Data worksheet, applicants are required to provide data on both last mil
middle mile service providers, regardless of whether the applicant proposes to offer both la
and middle mile services. In the column titled Service Areas Where Service Offered, applica
should list all of the Last Mile and Middle Mile Service Areas within their Proposed Funded
area in which the listed services area available. Please ensure that the Service Area names
consistent with those provided within the application and the Service Areas upload. If the a
availability of the listed services is limited (*e.g.* the service is only available within part of th
Mile or Middle Mile Service Area), note this in the Other Comments column.

In contrast to several other upload templates in this application, the data provided via this
will NOT be subject to automated processing. These template worksheets are provided to
demonstrate the level of data required and to provide a suggested format. Applicants are f
modify the template layouts in order to provide the most effective presentation of the data
their specific project. Applicants should, however, ensure that they provide at least as muc
as these templates require. To the extent that you modify these templates please ensure t
print layouts are adjusted so that rows do no break across pages in a manner that will be di
understand. A PDF of this file will be automatically generated upon upload to Easygrants, a
print settings will be used to format the PDF file.

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Proposed Last Mile Service Offerings

Name of Service Tier	Advertised Speeds		Estimated Average Speeds		Average Latency	Pricing Plan ($ per month)	Other Comments/Description/Features or Limitations
	Downstream Mbps	Upstream Mbps	Downstream Mbps	Upstream Mbps	@ End User CPE miliseconds		

Explanation of Average Speed Calculations:

Proposed Middle Mile Service Offerings

Name of Service Offering	Distance Band or Point to Point	Minimum Peak Load Network Bandwidth Capacity (Mbps)	Monthly/Yearly Pricing ($)	Other Comments/Description/ Features or Limitations
Internet Service for CAIs	Pt to Pt	10Mbps-10Gbps via Ethernet	$15/Mbps/mo.	
Lambda Transport Service for CAIs	Pt to Pt	100Mbps - 2.5Gbps wave service	$26,000 first year, $10,000 yearly thereafter	1Gbps Ethernet; OC48 SONET; Fiber Channel
Lambda Transport Service for CAIs	Pt to Pt	10Gbps wave service	$60,000 first year, $10,000 yearly thereafter	1X10Gbps, 8X1Gbps Ethernet; 4XOC48 SONET
Ethernet Transport MM over fiber for CAIs	Pt to Pt	No particular minimums	$1,500.00/month for each subscriber location	1Gbps Ethernet
Lambda Transport Service for third party providers	Pt to Pt	2.5Gbps wave service	$26,000 first year, $10,000 yearly thereafter	1Gbps Ethernet; OC48 SONET; Fiber Channel
Lambda Transport Service for third party providers	Pt to Pt	10Gbps wave service	$60,000 first year, $10,000 yearly thereafter	1X10Gbps, 8X1Gbps Ethernet; 4XOC48 SONET
Dark Fiber Service for third party providers	Pt to Pt	No particular minimums	$750/fiber mile/25 yr IRU first year, $250/yr/route mile thereafter	

Competitor Data

Competitor Data - Last Mile Service Providers

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Aloft Communications-(Residential)	Yancey	Wireless (Fixed & Mobile)	Low			
			Medium			
			High	1 Mbps	$ 59.95	Install determined upon inspection of location. Standard installation is 1 exterior device through 1 exterior wall to 1 or
Aloft Communications (Buisness)	Yancey	Wireless (Fixed and Mobil)	L	1.5 Mbps	$ 79.95	
			M	2 Mbps	$ 269.95	Install determined upon inspection of location. Standard installation is 1 exterior device through 1 exterior wall to 1 or
			H	3 Mbps	$ 609.95	
Always Online - residential -always-online.com 252.634.1885	Craven	DSL	Low	768	$ 24.95	no install; since they're a reseller, phone service w/ centurylink required ~ 30.00 for basic phone; discount for military & teachers contact: christine 03.01.10
			Medium	3 Mbps	$ 39.95	notes same as above
			High	10 Mbps	$ 64.95	notes same as above
AND Wireless	McDowell	Wireless	M	1.5 Mbps	$ 44.95	59.00 install includes $235 2.4 gig radio
			H	2Mbps	$ 55.95	
Appstate.net (now Charlotte Internet, who acquired appstate.net) - (Residential)	Watauga	Wireless	Low	256		no committed rates, redistributes w/in bldg from dedicated copper provided by at&t
			Medium	512		no committed rates, redistributes w/in bldg from dedicated copper provided by at&t
			High	1.5		no committed rates, redistributes w/in bldg from dedicated copper provided by at&t
Appstate.net (now Charlotte Internet, who acquired appstate.net) - (Residential)	Watauga	DSL	Low	1.5 Mbps	$ 35.95	install $199.00; modem 49.95;
			Medium	3 Mbps	$ 45.95	install $199.00; modem 49.95;
			High	6 Mbps	$ 55.95	install $199.00; modem 49.95; 6 moth term required; now "Charlotte Internet"

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Appstate.net (now Charlotte Internet, who acquired appstate.net) - (Business)	Watauga	DSL	Low	1.5	$ 79.95	min 6 mos.; modem - 49.95 (customer can provide modem); bundled w/ hosting; (separately 9.95/mo); name appears to be "Charlotte Internet"
			Medium	6 Mbps	$ 149.95	min 6 mos.; modem - 49.95 (customer can provide modem); bundled w/ hosting (separately 9.95/mo) name appears to be "Charlotte Internet"
			High	12 Mbps	$ 299.95	min 6 mos.; modem - 49.95 (customer can provide modem); bundled w/ hosting (separately 9.95/mo); name appears to be "Charlotte Internet"
AT&T (residential)	Avery, Brunswick, Buncombe, Cabarrus, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Haywood, Henderson, Iredell, Jackson, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Nash, New Hanover, Onslow, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Wake, Watauga	DSL	Low	768 Kbps	19.95	flate rate; $50 install
			Medium	3 Mbps	24.95/37.95	discount rate/regular rate
			High	6 Mbps	24.95/42.95	discount/regular
AT&T (business)	A Avery, Brunswick, Buncombe, Cabarrus, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Haywood, Henderson, Iredell, Jackson, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Nash, New Hanover, Onslow, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Wake, Watauga	DSL	L	768 Kbps	39.95/49.95	discount/regular
			M	3 Mbps	49.95/89.95	discount/regular
			H	6 Mbps	59.95/99.95	discount/regular
Belhaven	Beaufort, Hyde	Cable	L	64k	19.95	Install fee for new customers must rent ($5/month or buy modem ($70);
			M	3 Mbps	39.95	
			H	8Mbps	89.95	
Blast.com	Chatham	Wireless	Low	1 - 4 Mbps	$ 45.00	100 - 300 install includes gear: 2.4 ghz; 2 hrs setup. Additional hours @ 20/hr
			Medium			
			High	1 - 4 Mbps	$ 45.00	500 - 600 install includes gea: 900 mhz; 2 hrs setup. Additional hours @ 20/hr
BREMC.net	Watagua	DSL for 768 Kbps and 3 Mbps; all other fiberoptics/Residential and Business	L	768 Kbps	29.95	Installation $75.00 Capacity to run 100 Mbps and 1000 Mbps but no price available
			M	3 Mbps fiberoptics	39.95	
			H	15 Mbps	59.95	

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Broadlink Wireless Co. (Residential)	Moore, Richmond	Wireless	Low	4 Mbps	$ 39.95	1 yr; 169.95 Install; $20 fuel for new clients
			Medium			
			High	4 Mbps	$ 59.95	1 yr; 169.95 Install; $20 fuel for new clients; onsite support
Carolina Mountain Cable	Haywood,	Cable	Low	512	$ 29.99	no install
			Medium	3 M	$ 39.99	no install
			High	8 M	$ 79.99	no install
Carolina Online	Granville, Vance	Dial UP	L	56k	$19.95	
CenturyLink (residential)	Alleghany, Ashe, Beaufort, Bertie, Caldwell, Carteret, Caswell, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gates, Granville, Harnett, Hyde , Halifax, Hertford, Lee, Martin, Moore, Nash Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Richmond, Scotland, Stokes, Surry, Tyrrell Vance, Wake, Warren, Washington, Wilson	DSL	L	768 Kbps	29.95	Installation Fee ?
			M	1.5 Mbps	34.95	
			H	10 Mbps	54.95	
CenturyLink (business)	Alleghany, Ashe, Beaufort, Bertie, Caldwell, Carteret, Caswell, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gates, Granville, Harnett, Hyde , Halifax, Hertford, Lee, Martin, Moore, Nash Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Richmond, Scotland, Stokes, Surry, Tyrrell Vance, Wake, Warren, Washington, Wilson	DSL	L	768 Kbps	29.95	1 yr contract
			M	1.5 Mbps	39.95	1 yr contract
			H	10 Mbps	84.95	1 yr contract
Charter (residential	Avery, Brunswick, Buncombe, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Harnett, Haywood, Henderson, Iredell, Jackson, Lee, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Moore,Nash, New Hanover, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Watauga, Wilson	Broadband	L	1.0 Mbps	19.99	1 yr contract
			M	16 Mbps	39.99	1 yr contract
			H	25 Mbps	54.99	
Charter (Buisness)	Avery, Brunswick, Buncombe, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Harnett, Haywood, Henderson, Iredell, Jackson, Lee, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Moore,Nash, New Hanover, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Watauga, Wilson	Broadband	L	8Mbps	74.99	
			M	16Mbps	104.99	$99 installation fee
			H	20Mbps	204.00	
Cherokee Cablevision (residential	Jackson, Swain	Cable	L	1Mbps	$34.95	
			M			
			H	10Mpbs	$44.95	
Cherokee Cablevision (business)	Jackson, Swain	Cable	L			
			M			
			H	20Mbps	$199	

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Clearwire (residential)	Mecklenburg, Wake	Wireless	Low	1.5	$ 30.00	35.00 activation; free w/ 2 yr contract; can go month-to-month; modem $80 purchase or $5 lease; $10 for static IP
			Medium			
			High	6 Mbps	$ 40.00	35.00 activation; free w/ 2 yr contract; can go month-to-month; modem $80 purchase or $5 lease; $10 for static IP
Clearwire (business)	Mecklenburg	Wireless	High	28 Mbps	$ 50.00	2 years required; includes static IP; 4 email accounts
Comcast (residential)	Caswell	cable, internet, phone (triple play)	Low	1 Mbps/ 384 Kbps	$ 24.95	installation fee $100
			Medium	12 Mbps/ 2 Mbps	$ 42.95	installation fee $100
			High	16 Mbps/ 2Mbps	$ 42.95	installation fee $100
Comcast (business)	Caswell	cable, internet, phone	Low	6Mbps/1 Mbps	$ 59.95	install: free w/ 3 yr agreement/ $125 with 2 yr & $250 with 1 yr agreement
			Medium	22 Mbps/5 Mbps	$ 99.95	install: free w/ 3 yr agreement/ $125 with 2 yr & $250 with 1 yr agreement
			High	50 Mbps/10 Mbps	$ 189.95	install: free w/ 3 yr agreement/ $125 with 2 yr & $250 with 1 yr agreement
Communication Specialist (business)	New Hanover	Wireless	Low			
			Medium			
			High	3 M	99.95 - 129.95	Tier pricing not given; pricing based on location, quantity, [illegible]
Comporium comporium.com (business)	Transylvania	T1	Low			variable rates
			Medium			
			High			variable rates
Country CV (residential and business)	McDowell, Mitchell, Yancey		Low	512	$ 29.95	41.63 install (includes tax); $12.95 monthly charge if customer does not have cable; 74.35 modem if purchasing from Country CV
			Medium	3 Mbps	$ 39.95	
			High	5 Mbps	$ 49.95	
Country CV (residential and Buisness)	McDowell, Mitchell, Yancey		L	512	$ 29.95	
			M	3 Mbps	$ 39.95	41.63 install (includes tax); $12.95 monthly charge if customer does not have cable; 74.35 modem if purchasing from Country CV
			H	5 Mbps	$ 49.95	
Dirt Road	Rutherford	radio signals	L	512 Kbps	29.95	Required: 1 yr contract + $125 one time installation fee
			M	1.0 Mbps	49.95	Business 2.0 Mpbs 79.95
			H	1.5 Mbps	59.95	
Dirt Road (residential)	Rutherford	Wireless	Low	512 K	$ 29.95	1yr; $125 install
			Medium	768 K	$ 39.95	1yr; $125 install
			High	1.5 Mbps	$ 59.95	1yr; $125 install
Dockpoint.com (business and residential)	Harnett	DSL	L	512 Kbps	29.99/39.99	w/ 1 yr contract/w/o; 9.95 install
			M	1.5 Mbps	39.99/49.99	w/ 1 yr contract/w/o
			H	5 Mbps	59.99/69.99	w/ 1 yr contract/w/o

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Electronic Service Company (residential)	Richmond, Scotland, Person	Wireless	Low	1.5Mbps down and 512kbps up	residential $32.95 monthly; business $52.95 monthly	129.95 install
			Medium			129.95 install
			High	3.5Mbps down and 1Mbps up		129.95 install; residential $32.95 monthly; business $52.95 monthly
Electronic Solutions. Inc	Richmond, Scotland, Person	DSL	Low	256 K	$ 34.00	99 install; 1 yr; Embarq DLS
			Medium	1.5 Mbps	$ 44.00	99 install; 1 yr; Embarq DLS phone line required
			High	5 Mbps	$ 64.00	99 install; 1 yr; Embarq DLS phone line required
Electronic Solutions. Inc	Person - Hyco	Wireless	Low	600 K	$ 49.00	$99 install; 2 yr contract
			Medium	600 K	$ 49.00	$299 install; 1 yr contract
			High (business)	1.5	$ 99.00	$99 install; 2 yr contract
Electronic Solutions. Inc	Person-Roxboro	Wireless	Low	256	$ 34.00	$299 install; 1 yr contract
			Medium	600 K	$ 39.00	$299 install; 1yr contract
			High (business)	1.5 Mbps	$ 44.00	$299 install; 1 yr contract
Ellerbe TC (residential)	Richmond - Ellerbe	DSL	L	256 Kbps	29.95	no installation fee
			H	1.0 Mbps	49.95	
Ellerbe TC (business)	Richmond- Ellerbe	DSL	L	256 Kbps	44.95	no installation fee
			H	1.0 Mbps	69.95	
High Country Wireless	Mitchell	DSL	H	10mb	29.95(projected price)	Reseller of Verizon Wireless Services
Inteliport (residential)	Chowan, Pasquotank, Perquimmons, Washington	DSL	L	256 Kbps	28.95	$5 more per month if customer does not elect direct draft; no installation fee
			M	512 Kbps	35.95	
			H	1.5 Mbps	44.95	
Inteliport (buisness)	Chowan, Pasquotank, Perquimmons, Washington	DSL				
			Flat Rate	1.5Mbs	49.95	
MAIN	Buncombe, Madison, Mitchell, Yancey	Wireless	Residential	up to 1mb	$35	$99 Installation fee 15gb monthly transfer rate
			Commercial Silver	up to 1mb	$45	99 Installation fee 20 GB monthly transfer rate
			Commercial Gold	up to 4mb	$75	99 Installation fee 25gb monthly transfer rate
Mediacom	Bertie, Camden, Chowan; Currituck; Henderson; Martin; Northampton; Perquimans; Tyrrell; Washington	Fiber	Plus	10mb	$99.95-1 year 69.95 3year	$129.95 insliation fee
			Advanced	15mb	$179.95- 1 year $139.95- 3 year	
Morris BB	Ashe; Jackson; McDowell	Cable/DSL/Fiber	Intro	up to 3mb	$29.95	
			Residential	up to 8mb	$45.95	
			Online Max	up to 20mb	$59.95	
NCISP Aginet	Currituck; Dare	Fiber	Residential DSL 1.5mb	1.5mb	$46.95	$100 setup fee $93.93 Early Termination Fee
			Residential DSL 3mb	3mb	$66.95	$110 Setup Fee $133.90 Early Termination Fee
			Residential DSL 5.0	5mb	$76.95	$120 Setup Fee $153.90 Early Termination Fee
NC Rural Int. Dev. Enterp. (Greenlight Project)	Granville; Vance	Fiber	10mbs Tier	10mbs	$34.95	
			40mbs Tier	40mbs	$99.95	
			100mbs Tier	100mbs	$299.95	

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
NC Wireless (residential)	Caldwell; Lincoln	Wireless DSL	L	512k	$44.95	$200 install
			M	760k	$59.95	$200 install
			H	1536k	$99.95	$200 install
NC Wireless (business)	Caldwell; Lincoln	Wireless DSL	L	512k	$49.95	$200 install
			M	1024k	$79.95	$200 install
			H	2048k	$139.95	$100 install
NewEraCom	Buncombe, Polk, Henderson, Rutherford	Fixed Wireless		1.5mb	No pricing information	
					No pricing information	
				30mb	No pricing information	
Northlands (residential)	Henderson; Jackson; Polk; Rutherford; Transylvania	Cable	L	2mbps	43.99	
			H	6mbps	$39.99	special offer when expired returns to 46.99
Northlands (business)	Henderson; Jackson; Polk; Rutherford, Transylvania	Cable	L	7mbps	$139.99	
			M	7mbps	$139.99	
Pineville CLEC (residential)	Mecklenburg	DSL	L	768Kbs	19.95	
						$30.00 instilation fee
			H	5Mbps	54.95	
Pineville CLEC (Buisness)	Mecklenburg		L	1.5Mbps	64.99	do not provide 10, 100 or 1000 Mbps services ;
			H	7Mbps	219.95	
Pineville TC (residential)	Mecklenburg	DSL	L	768 k	$19.95	
			M	1.5m	$34.95	
			H	5m	$54.95	
Pineville TC (business)	Mecklenburg	DSL	L	1.5m	$64.85	
			M	3m	$129.95	
			H	7m	$219.95	
QRO Wireless	Harnett	Wireless	L	512k	$39.95	$99 install
			H	768k	$49.95	$99 install
Randolph TC (residential)	Chatham, Moore	DSL	L	256k	$29.95	wire maintenance $4.95
			M	512k	$39.95	wire maintenance $4.95
			H	60n	$69.95	wire maintenance $4.95
Randolph TC (business)	Chatham, Moore	DSL	L	256k	$39.95	wire maintenance $6.95
			M	512k	$49.95	wire maintenance $6.95
			H	60n	$129.95	wire maintenance $6.95
Rapid Comm (business)	Graham; Swain	Cable	L		$19.95	
			M		$39.95	
Rapid Comm (business)	Graham; Swain	Cable	L		$19.95	
			M		$39.95	
Sky Catcher (residential)	Rutherford	Wireless	L	512k	$29.95	$125 set up
			M	768k	$39.95	$125 set up
			H	1.5m	$59.95	$125 set up
Sky Catcher (business)	Rutherford	Wireless	Business	2.0m	$79.95	$125 set up
Skyline	Alleghany; Ashe; Avery; Watauga	Dial up and broadband	L	56k	$19.95	
			M	1.5m	$44.95	
			H	3m	$54.95	
Skyline (residential and business)	Alleghany, Ashe, Avery, Watagua	High speed Broadband	L	1.5 Mbps	44.95/54.95	1 yr contract; Will not run long distance fiber
			M	3 Mbps	54.95/89.95	1 yr contract
			H	6 Mbps	109.95- Business only	
SkyeNet	Dare; Hyde	Wireless	L	512k	$30	speed depends on location
			H	2mbps	$30	speed depends on location
Star TMC (residential)	Columbus	DSL	Low	256 K	$ 29.95	
			Medium	1.5 Mbps	$ 39.95	
			High	3 M	$ 59.95	
Star TMC (business)	Columbus	DSL	Low	256 K	$ 54.95	
			Medium	1.5 Mbps	$ 67.95	3 M =84.95; non profit plans: 1.5 - 39.95; 3 M - 59.95
			High	6 Mbps	$ 124.95	
Suddenlink (residential)	Beaufort, Edgecombe, Martin, Nash, Pitt, Halifax	Cable	Low	1.5 M	26.95	29.95 install, 40.00 modem
			Medium	10 M	29.95 for 6 mos	29.95 install 44.95 at month 7; 40.00 modem
			High	20 M	75.00	29.95 install, 100.00 modem

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Suddenlink (business)	Beaufort, Edgecombe, Martin, Nash, Pitt, Halifax	Fiber	Low	4 m	69.95	Service agreement for install & modem: 3 yr/$10; 2 yr/$60; 1 yr/$175.
			Medium	8 m	129.95	Service agreement for install & modem: 3 yr/$10; 2 yr/$60; 1 yr/$175.
			High	10 m	199.95	Service agreement for install & modem: 3 yr/$10; 2 yr/$60; 1 yr/$175.
Surry TMC (residential)	Stokes, Surry	DSL	Low	3	34.95	No charge for modem ; no install charges, no contract
			Medium			
			High	6	44.90	
Surry TMC (business)	Stokes, Surry	DSL	Low	3	34.95	No charge for modem ; no install charges, no contract; contact: Leah 3363741400: business pricing same as residential
			Medium			
			High	6	44.90	
TDS	Buncombe; Columbus; Henderson; Polk; Robeson	Dial up and DSL	L	56k	$21.95	
			M	1.5m	$14.95	
			H	10 m	$34.95	
Telemedia	Brunswick	Cable				
			H	6m	$46.95	$10 charge for non-cable subscribers
Tri County (residential and business)	Beaufort, Hyde, Washington	DSL	Low	256 Kbs	$ 29.95	install 149.95; current promotion - 49.95; router - 79.95; 4port router = 99.95
			Medium	768 Kbs	$ 59.95	install 149.95; current promotion - 49.95; router - 79.95; 4port router = 99.95
			High	3 Mbps (not avail in all areas)	$ 89.95	install 149.95; current promotion - 49.95; router - 79.95
Tri County (residential and business)	Beaufort, Hyde, Washington	Wireless	Low			
			Medium			
			High	1.5 Mbps	$ 39.95	99.95 install; router 99.95; contact: tanya
Time Warner Cable (residential)	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes, Surry, Union, Vance, Wake, Warren	Hybrid Fiber/Coax	Low	768 Kbps	regular: 54.95; bundled: 19.95/12 mos	19.95 install
			Medium	1.5 Mbps	regular: 54.95; bundled: 37.95	19.95 install
			High	10 Mbps	regular: 54.95; bundled: 39.90/6 mos	19.95 install

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations
Time Warner Cable (business)	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes, Surry, Union, Vance, Wake, Warren	Hybrid Fiber/Coax	Low	5 M x 384 K	79.95	99 install; current free thru march + gift card; 3 year term;
			Medium	2 M x 2 M	195.95	99 install; current free thru march + gift card; 3 year term;
			High	10 M	424.95	99 install; current free thru march + gift card; 3 year term;
TW TC business	Mecklenburg	ethernet	Low	2 M	500 -600	$250 install rates vary w/in charlotte and other services areas such as Statesvile, particulary if they must purchase access from Lec. Start with dedicated T1 and above.
			Medium			
			High	10 M	$1,600	
VanceNet	Franklin; Granville; Vance; Warren	Dial up	L	56k	$14.95	
Velocity Broadband (residential)	Moore	Wireless	L	1.5m	$49.95	$199.95 install fee
			H	3m	$74.95	$199.95 install fee
Velocity Broadband (buisness)	Moore	Wireless	L	1.5m	$89.95	$199.95 install fee
			H	3m	$179	$199.95 install fee
Verizon (residential)	Buncombe, Currituck, Granville, Jackson, Madison, McDowell, Mitchell, Swain, Union, Wake, Yancey	Phone line	L	D/L 1Mbps, U/L 384 Kbps	29.99/month	regular is $34.99/ $19.99 with phone and agreement
			M	D/L 3Mbps, U/L 768 Kbps	$39.99/month	regular is $44.99/month; $29.99 per month with phone
			H	D/L 7.1Mbps, U/L 768 Kbps	$49.99/month	regular is $54.99 with phone is $39.99/month
Verizon (business)	Buncombe, Currituck, Granville, Jackson, Madison, McDowell, Mitchell, Swain, Union, Wake,		I	1Mbps	29.99/month	
			H	15/5 Mbps	64.99/month	
WFL Cable (residential)	Anson	Cable				refused to provide info
			H			
WFL Cable (business)	Anson	Cable				refused to provide info
			H			
Windjammer (residential and busines)	Edgecombe, Halifax, Nash	Cable	L	768kbps	$24.99	$29.99 installation
			M	2mbps	$34.99	$29.99 installation
			H	5mbps	$39	Current promotaion of free installation and $29.99 for high for 12 months
Windstream	Cabarrus, Chatham, Gaston,Harnett, Lee, Mecklenburg; Moore, Polk; Richmond; Scotland; Stokes; Union. Wake	Broadband (Telephone)	L	3m	$39.99	
			M	6m	$44.99	
			H	12m	$49.99	

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Downstream Speed	Monthly Pricing	Other Comments/Description/Features or Limitations

Competitor Data - Middle Mile Service Providers

Service Provider	Service Areas Where Service Available	Technology Platform	Service Tiers	Distance Band or Point-to-Point	Minimum Peak Load Network Bandwidth Capacity	Pricing	Other Comments/Description/Features or Limitations
AT&T	Avery, Brunswick, Buncombe, Cabarrus, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Haywood, Henderson, Iredell, Jackson, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Nash, New Hanover, Onslow, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland,	IP	Internet Low	No	10Mbps	$3000/month	Up to $3600/month, no install
			Internet High	No	100Mpbs	Individual Case Basis	
AT&T	Avery, Brunswick, Buncombe, Cabarrus, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Haywood, Henderson, Iredell, Jackson, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Nash, New Hanover, Onslow, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Wake, Watauga	Lambda	Up to 2.5G	Yes	1000Mbps	$4,200	State MetroE pricing
			Up to 10G	Yes	10000Mpbs	Individual Case Basis	
DukeNet	New Hanover, Mecklenburg, Robeson, Buncombe, Jackson, Rutherford,	IP	Internet Low	No	no		
			Internet High	No	100Mpbs	$35/M/month	Prior pricing at e-Polk Only
DukeNet	New Hanover, Mecklenburg, Robeson, Buncombe, Jackson, Rutherford	lambda	Up to 2.5G	Yes	1000Mbps	$19k per month	Plus variable NRC
			Up to 10G	Yes	10000Mpbs	Individual Case Basis	
DukeNet	New Hanover, Mecklenburg, Robeson, Buncombe, Jackson, Rutherford	Fiber	Dark fiber	No	Unlimited	Individual Case Basis	very limited
CenturyLink (formerly Embarq)	Alleghany, Ashe, Beaufort, Bertie, Caldwell, Carteret, Caswell, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gates, Granville, Harnett, Hyde, Halifax, Hertford, Lee, Martin, Moore, Nash Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Richmond, Scotland, Stokes, Surry, Tyrrell Vance, Wake, Warren, Washington, Wilson	IP	Internet Low	No	10Mbps	$1706/month	36 month term no install
			Internet-High	No	100Mbps	$2010/month	36 month term no install

CenturyLink (formerly Embarq)	Alleghany, Ashe, Beaufort, Bertie, Caldwell, Carteret, Caswell, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gates, Granville, Harnett, Hyde, Halifax, Hertford, Lee, Martin, Moore, Nash Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Richmond, Scotland, Stokes, Surry, Tyrrell Vance, Wake, Warren, Washington, Wilson	Lambda	Up to 2.5G	Yes	1000Mbps	$6085/month	State MetroE pricing
CenturyLink (formerly Embarq)	Alleghany, Ashe, Beaufort, Bertie, Caldwell, Carteret, Caswell, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Edgecombe, Franklin, Gates, Granville, Harnett, Hyde, Halifax, Hertford, Lee, Martin, Moore, Nash Northampton, Onslow, Pasquotank, Perquimans, Person, Pitt, Richmond, Scotland, Stokes, Surry, Tyrrell Vance, Wake, Warren, Washington, Wilson	Fiber/WDM	Up to 10G	Yes	10000Mpbs	Individual Case Basis	
Charter	Avery, Brunswick, Buncombe, Caldwell, Caswell, Chatham, Cleveland, Columbus, Franklin, Gaston, Harnett, Haywood, Henderson, Iredell, Jackson, Lee, Lincoln, Madison, McDowell, Mecklenburg, Mitchell, Moore,Nash, New Hanover, Polk, Richmond, Robeson, Rockingham, Rutherford, Scotland, Transylvania, Watauga, Wilson						No response to request for information
Skyline	Alleghany, Ashe, Avery, Watauga						No information available; individual case basis only
Star TMC (Telephone Membership Corp.)	Columbus	Fiber	Low		5 M	$980.00	Install applies if fiber needs to be buried. Non-recurring contract fees = 12-35 mo: 550-750; 36-59 mo: 550; 60-84 mo (no price given); has 10gbp for company use but has not had a custotmer request it; thus no pricing at this time. I need ot confirm non-recurring fees. Does not sell dark fiber. A subsidiary (interstar) might have pricing
			Medium		25 M	$2,115.00	
			High		1 G	$4,195.00	
Suddenlink	Beaufort, Edgecombe, Martin, Nash, Pitt, Halifax	IP	Internet Low		10Mbps	$700 /mo	3 year term plus NRC
			Internet High		100Mbps	$2000/m0	3 year term plus NRC
Suddenlink	Beaufort, Edgecombe, Martin, Nash, Pitt, Halifax	Fiber/WDM	Up to 2.5G	Yes	1000Mbps	$3000/month	3 year term plus NRC
			Up to 10G	Yes	10000Mbps	Individual Case Basis	Special arrangement only
Suddenlink	Beaufort, Edgecombe, Martin, Nash, Pitt, Halifax	Fiber	Dark fiber	Yes	Unlimited	Individual Case Basis	Limited, case by case pricing
	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham,		Internet Low	No	10Mbps	$1399/month	
			Internet High	No		$7899/month	

Time Warner	Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes, Surry, Union, Vance, Wake, Warren	IP					
Time Warner Cable	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes	FiberWDM	Up to 2.5G	Yes	1000Mbps	Individual Case Basis	Plus $3000 one time charge
			Up to 10G	Yes	10000Mbps	Individual Case Basis	Plus $3000 one time charge

Time Warner Cable	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes, Surry, Union, Vance, Wake, Warren	Fiber	Dark fiber	Yes	Unlimited	Individual Case Basis	
Time Warner Telecom	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson,	IP	Internet Low	No	10Mbps	$1000/month	Variable NRC based on cost
			Internet High	No	100 Mbps	$10000/month	Variable NRC based on cost
Time Warner Telecom	Beaufort, Bertie, Brunswick, Cabarrus, Carteret, Chatham, Cleveland, Columbus, Craven, Franklin, Gaston, Granville, Harnett, Hertford, Iredell, Martin, Mecklenburg, New Hanover, Moore, Northampton, Pasquotank, Pitt, Richmond, Robeson, Rockingham, Scotland, Stokes, Surry, Union, Vance, Wake, Warren	Lambda	up to 2.5G	Yes	1000Mpbs	Individual Case Basis	
			Up to 10G	Yes	10000Mbps	Individual Case Basis	
Verizon	Buncombe, Currituck, Granville, Jackson, Madison, McDowell, Mitchell, Swain, Union, Wake, Yancey	IP	Internet low	No	10Mbps	$3857/month	
			Internet High	No	100mbps	12,500/month	
Verizon	Buncombe, Currituck, Granville, Jackson, Madison, McDowell, Mitchell, Swain, Union, Wake, Yancey	Lambda	up to 2.5G	Yes	1000Mpbs	Individual Case Basis	
			Up to 10G	Yes	10000Mbps	Individual Case Basis	

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
[b.] a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:
[a.] a. bid/offer/application
b. initial award
c. post-award

3. Report Type:
[a.] a. initial filing
b. material change
For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:
[x] **Prime** [ ] **Subawardee**
Tier _____, *if known*:
MCNC
3021 E. Cornwallis Road
P.O. Box 12889
Research Triangle Park, NC 27709
Congressional District, *if known*: 4th

5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:
U.S. Dept. of Commerce, NTIA (BTOP)

7. Federal Program Name/Description:
Broadband Technology Opportunities Program (BTOP)
CFDA Number, *if applicable*: 11.557

8. Federal Action Number, *if known*:
unknown

9. Award Amount, *if known*:
$ unknown

10. a. Name and Address of Lobbying Registrant
(*if individual, last name, first name, MI*):
none

b. Individuals Performing Services (*including address if different from No. 10a*)
(*last name, first name, MI*):
n/a

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: Joseph Freddoso
Print Name: Joseph A. Freddoso
Title: President and CEO of MCNC
Telephone No.: 919-248-8400 Date: 05/12/2010

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Standard Form LLL (Rev. 7-97)

Broadband Technology Opportunities Program

Waiver Request

EGID: 4218	Project Category: Comprehensive Community Infrastructure
Applicant Name: MCNC	Date: 03/24/2010
Project Title: North Carolina Rural Broadband Initiative	
Contact Name: Patricia L. Moody	
Email Address: pmoody@mcnc.org	Phone No.: 919-248-1820

Type of Waiver Requested *(check one)*:

___	Matching (pursuant to NOFA Section V.C.2.)
___	Last Mile Coverage (pursuant to NOFA Section V.C.3.c.ii.)
_X_	Sale or Lease of Assets (pursuant to NOFA Section IX.C.2.b)
___	Buy American (pursuant to NOFA Section X.Q)
___	General Provision (pursuant to NOFA Section X.N)

Summary of Waiver Request

(In the space below please provide a detailed explanation of the waiver request, including all information requested in the corresponding NOFA Section and Grant Guidance.)

The strategy MCNC is employing with the North Carolina Rural Broadband Initiative (NCRBI) is to deploy fiber directly to key Community Anchor Institutions in these lightly populated counties including most importantly to community colleges (main and satellite campuses), libraries with public access computing centers, and K-12 schools. By promoting robust use of emerging web based applications and services in these Community Anchor Institutions, MCNC hopes to build demand for home broadband service in these regions. As this demand for more robust home and business broadband builds, indefeasible rights of use (IRUs) and sales to wholesale and last mile commercial providers will become more attractive. This demand increase is anticipated in the 3rd to 7th year after completion of the build.

A recent White House Economic Council study on broadband describes this strategy. The study, published in December 2009 states: "Middle-mile infrastructure is essential for bringing broadband to communities that were previously isolated or had only rudimentary connections. By lowering the cost of last-mile connections, investments in the middle mile allow Internet service providers to enter the market and build connections to homes and business."

Upon a successful award, MCNC anticipates entering into the following agreements:

All Regions

Post award ownership of excess dark fibers in all regions, defined as fibers in the sheath not allocated via IRU, lease or provided to MCNC as part of the NCRBI application, will be shared equally by the Golden LEAF Foundation (GLF) and MCNC. These organizations, both 501(c)(3) non-profit organizations with education and economic development missions and both possessing endowments, will adhere to open interconnect provisions of the BTOP NOFA and will make these fibers available for sale or IRU at or below $1100 per strand mile to users. GLF obtained these fiber rights as a condition of providing $24M in cash match to the NCRBI. GLF and MCNC will share equally the proceeds from the fiber sale or IRU agreements. MCNC will receive all annual maintenance revenue from these agreements. It is anticipated that in excess of 16,000 strand miles of newly constructed fiber (12 strands over 1300 miles) will be available for IRUs or sale if the NCRBI is funded. MCNC, the applicant, is seeking a waiver pursuant to section IX.C.2.b of the NOFA, Sale or Lease of Assets. This waiver is necessary to assure consumer and small business deployment of broadband services in the majority of the build areas. Following Texas, North Carolina possesses the second largest rural population in the United States. The NCRBI is traversing mostly low population density counties in the state's northeastern, north central, northwestern and south central regions.

Northwestern Region

a) A fiber swap agreement with the Education and Research Consortium of the Western Carolinas (ERC) whereby MCNC would agree to exchange 8 fibers on 16.5 miles of existing network which MCNC is receiving by IRU from Blue Ridge Electric Membership Corporation in the route from Tynecastle to Boone in Avery and Watauga Counties to ERC and in return receive from ERC 8 fibers on 99.5 miles of existing network owned by ERC. The parties' intentions regarding this fiber swap are detailed in the letter of intent included with MCNC's application.

b) In [redacted] whereby MCNC would receive from [redacted] in exchange for [redacted] receiving third party IRU lease agreements for [redacted] of fiber or [redacted] miles with [redacted] strands. [redacted] operates a network whose ownership group includes [redacted] The build through [redacted] County will allow [redacted] to offer wholesale services to last mile operators in the region and to serve several Community Anchor Institutions with direct fiber and this purchase will be funded for [redacted] The parties' intentions are detailed in the letter of intent included with MCNC's application.

c) A capital purchase of an exclusive and irrevocable right to use certain fibers, including an indefeasible right of use (IRU) with [redacted] whereby MCNC would receive from [redacted] in exchange for [redacted] receiving third party IRU lease agreements for up to [redacted] strands on [redacted] (depending on the route options determined by the parties for Zayo). The total strand miles leased by [redacted] will be approximately [redacted] The parties' intentions regarding this fiber swap are detailed in the letter of intent included with MCNC's application.

South Central Region

a) With [redacted] whereby in exchange for [redacted] MCNC would lease to [redacted] strand miles of fiber in the south central region on the following routes of existing network to be constructed: Charlotte to Monroe ([redacted] miles); Monroe to Laurinburg [redacted] miles); Laurinburg to Rockingham [redacted] miles); and the last [redacted] miles of fiber spanning the Cape Fear River in Wilmington. The parties' intentions are detailed in the letter of intent included with MCNC's application.

b) The south central region's [redacted] has committed [redacted] in match toward IRU acquisition of fiber to directly serve [redacted] in Charlotte on the new south central route tying in to metropolitan Charlotte. The parties' intentions are detailed in the letter of intent included with MCNC's application. The contribution will yield a lease of [redacted] strands covering [redacted] strand miles.

Northeastern and North Central Regions

An agreement with [redacted] whereby MCNC and [redacted] would negotiate in good faith to reach an agreement for lease of capacity in several NCRBI segments in the northeast and north central portion of the application. An incumbent service provider, [redacted] has provided [redacted] in exchange for short term leases on various segments up to a maximum of [redacted] strands of fiber over [redacted] of NCRBI builds. These leases represent approximately [redacted] strand miles of fiber. The proposed NCRBI network will enable [redacted] to extend enhanced speed and triple play broadband services into these lightly populated and economically distressed regions. The parties' intentions are detailed in the letter of intent included with MCNC's application.

Attached Documents

(If applicable, indicate all attached supporting documentation)

Please refer to the Letters of Intent included in the Uploads section of MCNC's application under Government and Key Partnerships.

BTOP Comprehensive Community Infrastructure
Subscriber Estimates Template

Please complete the complete the Subscriber Estimates worksheet.

All applicants should indicate their 8-year subscriber forecasts with a breakdown by type of subscri (residential/individual, businesses, community anchor institutions, third party service providers) ar offerings. The names of the service offerings should match those provided in the Service Offering Competitor Data upload, enabling reviewers to easily cross-reference between the two documents Year 0 column should be used to denote any existing customers within the Proposed Funded Servi In addition, applicants that project that they will have third party service provider customers shoul a line for parties "Served by Third Party Service Providers," showing an estimate of how many residential/individual, community anchor institution, and business customers will be served by tho providers, as demonstrated in the example below. At the bottom of the table, applicants should p customer totals across all service offerings, with and without customers indirectly served through party service provider (if applicable). Applicants should also include a brief discussion of their met for deriving these estimates.

In contrast to several other upload templates in this application, the data provided via this templat be subject to automated processing. Applicants are permitted to modify the template layout in or provide the most effective presentation of the data for their specific project, but such modificatior generally discouraged. Applicants should, in any case, ensure that they provide at least as much d provided template requires. To the extent that you modify these templates please ensure that the layouts are adjusted so that rows do not break across pages in a manner that will be difficult to un A PDF of this file will be automatically generated upon upload to Easygrants, and the print settings used to format the PDF file.

EXAMPLE

Name of Service Offering	Customer Type	Year 0	Cumulative/ Net Add	Qtr 1
Mega-Metro E - 100 Mbps	Community Anchor Inst.	0	Cumulative	0
			Net Add	0
	Business	0	Cumulative	0
			Net Add	0
	Third Party Service Provider	0	Cumulative	0
			Net Add	0
Served by Third Party Service Providers	Indirect - Res./Ind.	0	Cumulative	0
			Net Add	0
	Indirect - Business	0	Cumulative	0
			Net Add	0
	Indirect - Com. Anchor Inst.	0	Cumulative	0
			Net Add	0

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Year 1			Year 2			
Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
0	0	0	5	10	17	26
0	0	0	5	5	7	9
0	0	0	12	27	52	82
0	0	0	12	15	25	30
0	0	0	1	2	4	6
0	0	0	1	1	2	2
0	0	0	1000	3000	5000	10000
0	0	0	1000	2000	2000	5000
0	0	0	2	8	18	30
0	0	0	2	6	10	12
0	0	0	0	2	3	5
0	0	0	0	2	1	2

Broadband Subscriber Estimates

Name of Service Offering	Customer Type	Year 0	Cumulative/ Net Add	Year 1	
				Qtr 1	Qtr 2
Internet Service	Community Anchor Inst.	113	Cumulative	113	113
			Net Add	0	0
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	2	Cumulative	2	2
			Net Add	0	0
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	Cumulative	4	4
			Net Add	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	0	Cumulative	0	0
			Net Add	0	0
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	0	Cumulative	0	0
			Net Add	0	0
Lambda Transport Service at 10Gbps	Third Party Service Provider	0	Cumulative	0	0
			Net Add	0	0
Dark Fibers	Third Party Service Provider	0	Cumulative	0	0
			Net Add	0	0
Served by Third Party Service Providers	Residential/Individual	0	Total *	30706	61413
	Business	45	Total *	1178	2355
	Community Anchor Inst.	19	Total *	166	332
Cumulative Totals (excluding Indirect)	Residential/Individual	0	Total	0	0
	Business	0	Total	0	0
	Community Anchor Inst.	119	Total	119	119
	Third Party Service Provider	0	Total	0	0
Cumulative Totals (including Indirect)	Residential/Individual	0	Total *	30706	61413
	Business	45	Total *	1178	2355
	Community Anchor Inst.	138	Total *	285	451

* totals include estimates from [redacted] and ERC-B.
Estimates for all other 3rd party service providers were done by MCNC.

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type			Year 2		
		Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
Internet Service	Community Anchor Inst.	113	113	113	113	113
		0	0	0	0	0
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	2	2	2	2	3
		0	0	0	0	1
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	0	0	0	0	0
		0	0	0	0	0
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Lambda Transport Service at 10Gbps	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	92119	122826	145763	170762	196762
	Business	3535	4711	5647	6582	7517
	Community Anchor Inst.	498	662	740	818	896
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	119	119	119	119	120
	Third Party Service Provider	0	0	0	0	0
Cumulative Totals (including Indirect)	Residential/Individual	92119	122826	145763	170762	196762
	Business	3535	4711	5647	6582	7517
	Community Anchor Inst.	617	781	859	937	1016

* totals include estimates from [redacted] and ERC-B.
Estimates for all other 3rd party service providers were done by

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type		Year 3			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Internet Service	Community Anchor Inst.	113	150	177	204	220
		0	37	64	91	107
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	3	3	5	7	9
		1	2	4	6	8
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	0	37	64	91	107
		0	37	64	91	107
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	0	0	0	1	3
		0	0	0	1	3
Lambda Transport Service at 10Gbps	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	214573	237518	260518	283659	306352
	Business	8454	9032	9610	10188	10766
	Community Anchor Inst.	972	1050	1128	1206	1273
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	120	195	251	307	341
	Third Party Service Provider	0	0	0	1	7
Cumulative Totals (including Indirect)	Residential/Individual	214573	237518	260518	283659	306352
	Business	8454	9032	9610	10188	10766
	Community Anchor Inst.	1092	1245	1379	1513	1614

* totals include estimates from [redacted] and ERC-B.
Estimates for all other 3rd party service providers were done by

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type	Year 4				
		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
Internet Service	Community Anchor Inst.	223	225	228	233	235
		110	112	115	120	122
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	9	9	9	9	10
		8	8	8	8	9
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	110	112	115	120	122
		110	112	115	120	122
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	3	3	3	3	3
		3	3	3	3	3
Lambda Transport Service at 10Gbps	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	318845	331345	343844	356324	368817
	Business	11248	11730	12212	12695	13177
	Community Anchor Inst.	1289	1305	1320	1335	1348
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	347	351	357	367	372
	Third Party Service Provider	8	9	10	11	12
Cumulative Totals (including Indirect)	Residential/Individual	318845	331345	343844	356324	368817
	Business	11248	11730	12212	12695	13177
	Community Anchor Inst.	1636	1656	1677	1702	1720

* totals include estimates from [redacted] and ERC-B.
Estimates for all other 3rd party service providers were done by

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type	Year 5			Year 6	
		Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Internet Service	Community Anchor Inst.	237	239	241	245	248
		124	126	128	132	135
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	11	12	13	13	14
		10	11	12	12	13
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	124	126	128	132	135
		124	126	128	132	135
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	3	4	4	4	4
		3	4	4	4	4
Lambda Transport Service at 10Gbps	Third Party Service Provider	0	2	2	2	2
		0	2	2	2	2
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	381310	393802	406296	423723	441148
	Business	13659	14141	14624	15080	15536
	Community Anchor Inst.	1361	1374	1387	1389	1392
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	377	382	387	395	402
	Third Party Service Provider	13	14	16	16	16
Cumulative Totals (including Indirect)	Residential/Individual	381310	393802	406296	423723	441148
	Business	13659	14141	14624	15080	15536
	Community Anchor Inst.	1738	1756	1774	1784	1794

* totals include estimates from [redacted] and ERC-B.
Estimates for all other 3rd party service providers were done by

Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type			Year 7		
		Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
Internet Service	Community Anchor Inst.	252	255	256	258	260
		139	142	143	145	147
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	14	15	15	15	15
		13	14	14	14	14
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	139	142	143	145	147
		139	142	143	145	147
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	4	4	4	4	4
		4	4	4	4	4
Lambda Transport Service at 10Gbps	Third Party Service Provider	2	2	2	2	2
		2	2	2	2	2
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	458641	476006	493433	510929	528422
	Business	15993	16448	16904	17360	17816
	Community Anchor Inst.	1395	1397	1400	1403	1406
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	410	417	419	423	427
	Third Party Service Provider	16	16	16	16	16
Cumulative Totals (including Indirect)	Residential/Individual	458641	476006	493433	510929	528422
	Business	15993	16448	16904	17360	17816
	Community Anchor Inst.	1805	1814	1819	1826	1833

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Table of Customer Types

Residential/Individual
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Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
Indirect - Business
Indirect - Com. Anchor Inst.

Broadband Subscriber Estimates

Name of Service Offering	Customer Type		Year 8			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Internet Service	Community Anchor Inst.	261	263	265	267	269
		148	150	152	154	156
Lambda Transport Service at 2.5Gbps	Community Anchor Inst.	15	15	15	15	15
		14	14	14	14	14
Lambda Transport Service at 10Gbps	Community Anchor Inst.	4	4	4	4	4
		0	0	0	0	0
Ethernet Transport over MM fiber	Community Anchor Inst.	148	150	152	154	156
		148	150	152	154	156
Lambda Transport Service at 2.5Gbps	Third Party Service Provider	4	4	4	4	4
		4	4	4	4	4
Lambda Transport Service at 10Gbps	Third Party Service Provider	2	2	2	2	2
		2	2	2	2	2
Dark Fibers	Third Party Service Provider	0	0	0	0	0
		0	0	0	0	0
Served by Third Party Service Providers	Residential/Individual	545716	563143	581636	599128	615425
	Business	18272	18727	19184	19640	20095
	Community Anchor Inst.	1408	1413	1418	1423	1428
Cumulative Totals (excluding Indirect)	Residential/Individual	0	0	0	0	0
	Business	0	0	0	0	0
	Community Anchor Inst.	429	433	437	441	445
	Third Party Service Provider	16	16	16	16	16
Cumulative Totals (including Indirect)	Residential/Individual	545716	563143	581636	599128	615425
	Business	18272	18727	19184	19640	20095
	Community Anchor Inst.	1837	1846	1855	1864	1873

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Table of Customer Types

Residential/Individual
Business
Community Anchor Inst.
Third Party Service Provider
Indirect - Res./Ind.
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Indirect - Com. Anchor Inst.

Explanation of Methodology:
For all MCNC Community Anchor Institutions, our data analysis team used longitude and latitude coordinates to map every community anchor institution. Those within reasonable distance to our fiber backbone (within 6 miles in most cases) were forecasted to be connected. We projected to begin the connections after the completion of the fiber backbone for that region based on our work schedule timeline. Then, we determined the rate we could implement based upon our staff and other workload, and used that along with the subscriber forecast to determine when we would add the locations.

The community anchor institutions are forecasted to buy both Internet service and Ethernet Transport MM over Fiber service. In addition, several of the CAIs wil also buy Lambda Transport at 2.5Gbps and 10Gbps. Thus the forecasted services from this page for directly served CAIs is higher than the physical location counts reflected in the Key Metrics Dashboard. For the purposes of this forecast, the ERC-B subrecipient forecast was included in the third party service totals. However that was a difficult judgement call - since ERC-B is such a close partner and is a subrecipient, we felt they could easily have been categorized as part of direct connected or as third party.

For the locations served by third party service providers, we contacted each SP, overviewed project, provided the forms and instructions, and asked them to complete their estimates quickly enough to be included in our application. [redacted] a very large third party service provider refused to complete the subscriber estimates. In cases where we were unable to obtain reliable provider estimates, we developed estimates for third party service providers by using assumed growth percentages in each of the named categories. These growth percentages reflect relatively slow growth, and are thus very conservative in nature...which we feel is appropriate given that 67 of the 69 counties are rural and that most have very low per-capita incomes and high unemployment. If the economy recovers, the rate of growth of these servcies could be as much as 25% higher than shown.

Explanation of Methodology:
For all MCNC Community Anchor Institutions, our data analysis team used longi
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We projected to begin the connections after the completion of the fiber backbo
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