



Budget Narrative

Applicant Name: State of Wisconsin Department of Administration

EasyGrants Number: 174

Organization Type (from Question 1D on BTOP application): State Government Agency

Proposed Period of Performance: Initial application assumed January 2010 approval and called for implementation through October 2010; delayed approval date may cause extension until Spring 2011 based on weather conditions in fall 2010

Total Project Costs: \$28,722,959

Total Federal Grant Request: \$22, 978,367

Total Matching Funds (Cash): \$5,744,592

Total Matching Funds (In-Kind): \$0

Total Matching Funds (Cash + In-Kind): \$5,744,592

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs: 20%

1. Administrative and legal expenses

- List breakout of position(s), time commitment(s) such as hours or level-of-effort, and salary information/rates with a detailed explanation, and additional information as needed.

No administrative or legal expenses are included in the State of Wisconsin DOA application.

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.

- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.



2. Land, structure, rights-of-way, appraisals, etc.

- **Provide description of estimated costs, proposed activities, and additional information as needed.**

No land, structure, rights-of-way, appraisals, etc. are included in the State of Wisconsin DOA application.

- **Provide description, calculation, and basis of evaluation for Cash Matching Funds.**
- **Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.**

3. Relocation expenses and payment

- **Provide explanation for the relocation, description of the person involved in the relocation, method used to calculate costs, and additional information as needed.**

No relocation expenses and payment are included in the State of Wisconsin DOA application.

- **Provide description, calculation, and basis of evaluation for Cash Matching Funds.**
- **Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.**

4. Architectural and engineering fees

- **Provide description of estimated fees, explanation of proposed services, and additional information as needed.**

No architectural and engineering fees are included in the State of Wisconsin DOA application.

- **Provide description, calculation, and basis of evaluation for Cash Matching Funds.**



- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

5. Other architectural and engineering fees

- Provide description of estimated fees, explanation of proposed services, and additional information as needed.

No other architectural and engineering fees are included in the State of Wisconsin DOA application.

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.
- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

6. Project inspection fees

- Provide description of estimated fees, explanation of proposed services, and additional information as needed.

No project inspection fees are included in the State of Wisconsin DOA application.

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.
- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

7. Site work

- Provide description of estimated fees, explanation of proposed services, and additional information as needed.

The State of Wisconsin DOA application includes firm cost estimates for 467 sites in the network. As the “On-Site” costs were received from the participating telecommunication provider responsible for the site and then separated into following categories:

On-Premise Equipment (CPE);



On-Premise Labor (Install);

On-Site Engineering (desk and field engineering); and

On-Site Miscellaneous (cables, connectors, jumpers, shipping, etc).

The difference between these costs (e.g. equipment or engineering) is that they pertain specifically to the one of the 467 customer premises. These categories can be found in the Detail of Project Costs tab under the Service Area or Common Network Facilities of the Infra Budget Package document.

- On-Premise Equipment

The deployment of fiber with higher speed capacity naturally drives customer premise equipment to keep pace. Existing CPE was purchased to handle 1.5 Mbps through put, not 20 Mbps – and certainly not 100 Mbps. Upgrading the CPE is a necessary component of a fiber based service, otherwise the increase in bandwidth is ineffective.

The On-Premise equipment total covers 272 routers of varying sizes for a total of \$816,000.

- On-Premise Labor

On-Premise labor accounts for the Installation of physical items including but not limited to cabinets, fiber panels, bulkheads, and innerduct. The work will be completed by the local telecommunications carrier or their subcontractors. The total cost for this work equals \$439,200. This total was arrived at by totaling the actual quoted expenses provided by each participating telecommunications carrier then dividing that number by 467 sites to arrive at the unit cost of \$490.47 per site.

- On-Premise Engineering

The category referred to as On-Premise engineering includes preparatory work (desk engineering) preparing the service providers equipment configuration on-site time (field engineering) completing the installation of the customer edge device. This work will be completed by telecommunications carrier staff or their subcontracted engineering firms. The rate total of \$232,240 was arrived at by multiplying each of the 467 sites by 4 hours of desk engineering at \$80/hr plus 4 hours of field engineering at \$80/hr $((4*80)+(4*80)*467 = \$232,240$.



- On-Premise Other

The On-Premise Other category includes miscellaneous equipment such as cables, connectors, fiber optic jumpers and other miscellaneous items such as shipping. These costs will be incurred by the telecommunications carrier providing service to this site.

To arrive at our sum, the miscellaneous pieces and parts submitted by each of the participating telecommunications carriers was added to arrive at \$448,346.34. That sum was divided by total sites (467) to arrive at our unit cost of \$960.06.

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.

The total for “on-site” work is \$1,937,786.28 which was derived by adding On-Premise Labor (\$439,200), On-Premise Engineering (\$232,240), On-Premise Other (\$448,346.34) and the Customer Premise Equipment-Other (\$816,300). This total can be found on line 7 of the Adjusted SF-424C form.

20% of the “On-Site” total of \$1,937,786.28 equals \$387,357.26

- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

No In-Kind matching funds are requested.

8. Demolition and removal

- Provide description of estimated fees, explanation of proposed services, and additional information as needed.

No demolition and removal fees are included in the State of Wisconsin DOA application.

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.

- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

9. Construction



- Provide description of estimated fees, explanation of proposed services, state whether the work is being completed by the applicant or an outside contractor, and additional information as needed.

The State of Wisconsin DOA application includes the following work completed between the customer's premise and the termination point for the fiber service at the BCN aggregation router. The expenses associated with constructing path or circuits were collected from each of the telecommunications carriers participating in the project and can be found on the Detail of Project Costs tab under Outside Plant of the Infra Budget Package document.

The expenses were put into the following categories:

- Outside Plant – Construction Equipment

This category includes the expenses associated with heavy machinery needed to bury conduit by either boring or trenching. This includes but is not limited to backhoes, trenchers, boring equipment, ditch witches, etc. Also included in the expense is the cost of the staff that operates the machinery.

The total cost for this category of \$3,280,261.20 was arrived at by summing each individual telecommunications carrier's expense for an individual site. The total was then divided by 467 sites to arrive at a unit cost of \$7,024.11. Some of this work is subcontracted to vendors who specialize in burying conduit.

- Outside Plant – Installation Labor

The Labor Category includes all other installation personnel expenses (excluding staff identified in "Construction Equipment").

The total of \$3,018,259.60 was arrived at by totaling the individual quotes submitted by the telecommunications carriers participating in the project. The total was then divided by 467 sites to arrive at a unit price of \$6,463.08. Some of this work will be subcontracted from the telecommunications carrier to a vendor who specializes in burying conduit.

- Outside Plant – Materials

This category includes conduit, manholes, and miscellaneous materials, but was not received directly as part of the cost quotes.

After consulting with our Professional Engineers, it was determined that 30% of a fiber project is materials cost. The individual site cost for each of the 467 sites in the proposal were multiplied by 30% to arrive at a total of



\$2,976,266.24. That cost was then divided by 467 sites to arrive at the unit cost of \$6,373.16.

- Outside Plant – Fiber Cable

This category was derived using a conservatively low price of \$.55/foot for fiber, then multiplying by the number of feet in an individual site build. Each site was then totaled to arrive at \$591,994.96. That number was then divided by 467 sites to arrive at a unit price of \$1,267.66

- Outside Plant – Splicing

This category includes the labor associated specifically with splicing fiber. The total as arrived at by adding the cost quotes submitted by the participating telecommunications carriers for each individual site. That total is \$1,189,420.42. To arrive at our unit price, the splicing total was divided by 467 sites to arrive at a unit price of \$2,546.94.

- Outside Plant – Pro-Rated Middle Mile

This category included any expense required for upgrade to a service provider's infrastructure between a serving central office and the nearest BadgerNet Aggregation Node. These expenses mostly include increased optical interfaces or equipment upgrades to handle the additional capacity.

This category was derived directly from cost proposals submitted by participating telecommunications carriers and totals \$3,993,315.75. That number was then divided by our site total of 467 to arrive at our unit price of \$8,551.00

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.

The construction total of \$15,635,786, which can be found on line 9 of the SF-424C tab of the Infra Budget Package document, was multiplied by 20% to arrive at the Cash Matching Funds value of \$3,125,104. This value can be found in cell 14C of same document.

- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

No In-Kind matching funds are requested.

10. Equipment



- Provide list of equipment with description, number of units, unit cost, state whether it is being purchased or leased, and additional information as needed.

- The tables below are copied from the 174_MM Infra Budget document (Detail of Project Costs tab). These are the hardware numbers only and do not contain any installation or engineering labor. The premise and CO equipment columns were populated directly from firm price quotes received from the telecommunications carriers providing service in the BadgerNet network. The tables below identify Cisco equipment types (with only line item exception, Fujitsu) unit pricing, number of units and price totals.

		Unit Cost	No. of Units	Total Cost
Switching: Customer Premise Equipment	Cisco WS-G5486=	\$429.85	145	\$62,328.90
	Cisco WS-C2960-24TC-L	\$1,074.33	2	\$2,148.66
	Cisco WS-C3560-24TS-S	\$1,287.85	4	\$5,151.42
	Cisco GLC-ZX-SM=	\$1,717.85	29	\$49,817.65
	Cisco WS-C3750G-12S-SD	\$3,867.85	72	\$278,485.49
	Cisco WS-X6724-SFP	\$6,450.00	47	\$303,150.00
	Cisco WS-X6704-10GE=	\$9,600.00	58	\$556,800.00
	Cisco WS-X6748-SFP	\$10,750.00	25	\$268,750.00
	Cisco WS-X6708-10G-3C=	\$20,637.00	44	\$908,028.00
	Cisco WS-X6716-10G-3CXL=	\$29,591.22	39	\$1,154,057.58
	Fujitsu Flashwave 4100es	\$18,715.90	24	\$449,181.70
Routing: Serving CO Equipment	Cisco WS-G5486=	\$429.85	117	\$50,292.45
	Cisco WS-C3560-24TS-S	\$1,287.85	79	\$101,740.15
	Cisco GLC-ZX-SM=	\$1,717.85	15	\$25,767.75
	Cisco WS-C3750G-12S-S	\$4,667.85	46	\$214,721.10
	Cisco WS-X6724-SFP	\$8,750.00	35	\$306,250.00
	Cisco WS-X4448-GB-SFP	\$9,392.85	33	\$309,964.05
	Cisco WS-X6704-10GE=	\$16,600.00	37	\$614,200.00
	Cisco WS-X6708-10G-3C=	\$26,325.00	8	\$210,600.00
	Cisco WS-X6716-10G-3C=	\$34,139.63	61	\$2,082,517.43
	Cisco 7600 10Gb	\$62,945.94	34	\$2,140,161.96
	Fujitsu Flashwave 4100es	\$22,122.14	24	\$530,931.36
Total				\$10,625,046

- Provide description, calculation, and basis of evaluation for Cash Matching Funds.



The hardware total of \$10,625,046 was multiplied by 20% to arrive at the Cash Matching Funds value of \$2,125,009

- Provide description, calculation, and basis of evaluation for In-Kind Matching Funds.

No In-Kind matching funds are requested.

11. Miscellaneous

- Provide additional information as needed.

The Miscellaneous category for the State of Wisconsin DOA application includes:

- Professional Services: Other

This category includes the preparation of bid packages, review of bids, and selection of contractors. The total cost for this category is \$186,655.38, which is the result of multiplying the unit cost of \$1,848.17 by 101 sites that required bids. For 101 of the 467 sites (22%) the providers will bid out the work needed to actually install fiber to the school or library. The providers are already working on bid specifications and the bid will be let within 30 days notice of the grant award. It is expected that contractors will be selected and site work will begin shortly thereafter. The providers have extensive experience working with companies that will install the fiber and these companies have already been alerted of this possible project. The costs included in this part of the budget are based on past contracts for exactly the same type of work.

- Testing: Testing Network and CPE

This category includes the final engineering, fiber testing and verification of full connectivity to the BCN network. The unit cost for this work is \$840.40. When multiplied by the number of sites to be tested, 417, the category total is \$347,944.80

- Provide description, calculation, and basis of evaluation of Cash Matching Funds.

The category total of \$534,610 is multiplied by 20% to arrive at the Cash Matching Funds amount of \$106,922.

- Provide description, calculation, and basis of evaluation of In-Kind Matching Funds.



No In-Kind matching funds are requested.

Addendum

- If indirect costs (i.e., indirect, overhead, general and administrative, facilities and administration, etc.) and/or fringe benefits are included in the budget, please provide a copy of your existing Negotiated Indirect Cost Recovery Agreement (NICRA), if available. If the NICRA is applied accordingly in the budget, there is no need to justify the costs. If a NICRA is not available or is not consistent with the rates/calculations in the budget, please provide an explanation of how the amounts were calculated. Please clearly list the manner in which indirect costs are calculated in the budget.