





# C O N T R A C T   A M E N D M E N T

<b>Agency Tracking #</b> 31701-03036	<b>Edison ID</b> 2904	<b>Contract #</b> FA-09-25220-00	<b>Amendment #</b> 3
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<b>Contractor</b> AT&T Corporation	<b>Contractor Federal Employer Identification or Social Security #</b> <input type="checkbox"/> C- or <input checked="" type="checkbox"/> V- 13-4924710
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**Amendment Purpose/ Effects**  
Expands services within the scope of the contract, as provided for in Contract Sections E.18 and E.24.

<b>Contract Begin Date</b> July 1,2008	<b>Contract End Date</b> June 30,2018	<b>Subrecipient or Vendor</b> <input type="checkbox"/> Subrecipient <input checked="" type="checkbox"/> Vendor	<b>CFDA #(s)</b>
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FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2009			\$7,000,023.00	\$471,567.00	\$7,471,590.00
2010			\$14,500,000.00	\$12,900,000.00	\$27,400,000.00
2011			\$16,500,000.00	\$15,280,000.00	\$31,780,000.00
2012			\$16,500,000.00	\$21,836,800.00	\$38,336,800.00
2013			\$17,500,000.00	\$30,252,576.00	\$47,752,576.00
2014			\$18,500,000.00	\$49,354,095.00	\$67,854,095.00
2015			\$19,000,000.00	63,593,329.00	\$82,593,329.00
2016			\$19,500,000.00	\$74,433,039.00	\$93,933,039.00
2017			\$21,500,000.00	\$86,928,481.00	\$108,428,481.00
2018			\$16,500,000.00	\$81,422,611.00	\$97,922,611.00
<b>TOTAL:</b>			\$167,000,023.00	\$436,472,498.00	\$603,472,521.00

**American Recovery and Reinvestment Act (ARRA) Funding -**  YES  NO

<b>— COMPLETE FOR AMENDMENTS —</b>			<b>Agency Contact &amp; Telephone #</b> Vickie Stanfill 615-253-5529
<b>END DATE AMENDED?</b>	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
<b>FY</b>	<b>Base Contract &amp; Prior Amendments</b>	<b>THIS Amendment ONLY</b>	<b>Agency Budget Officer Approval</b> (there is a balance in the appropriation from which this obligation is required to be paid that is not otherwise encumbered to pay obligations previously incurred)  
2009	\$7,471,590.00		
2010	\$27,400,000.00		
2011	\$31,780,000.00		
2012	\$38,336,800.00		
2013	\$47,752,576.00		

<b>2014</b>	<b>\$67,854,095.00</b>			
<b>2015</b>	<b>\$82,593,329.00</b>			
<b>2016</b>	<b>\$93,933,039.00</b>			
<b>2017</b>	<b>\$108,428,481.00</b>			
<b>2018</b>	<b>\$99,922,610.00</b>		<b>Speed Code</b>	<b>Account Code</b>
<b>TOTAL:</b>	<b>\$603,472,521.00</b>	<b>\$0.00</b>		
— OCR USE —			<p><b>Procurement Process Summary (non-competitive, FA- or ED-type only)</b></p> <p>Interdepartmental allocations changed distributing dollars to other category for eligible entities that are billed directly by the contractor.</p> <p>The contract amendment was negotiated aggressively with the contractor, AT&amp;T and each amended line item compared with contracts of similar size, scope and functionality.</p>	
<b>FA0925220-03</b>				

**AMENDMENT THREE  
TO FA-09-25220-00 / 2904**

This Contract Amendment is made and entered by and between the State of Tennessee, Department of Finance and Administration, hereinafter referred to as the "State" and AT&T Corporation, hereinafter referred to as the "Contractor." It is mutually understood and agreed by and between said, undersigned contracting parties that the subject Contract is hereby amended as follows:

1. The text of the preamble section "Contractor Place of Incorporation or Organization" is deleted in its entirety and replaced with the following:  

Contractor Place of Incorporation or Organization: New York
2. The following is added as Contract Section E.25:  

E.25. Contractor Name. All references to "AT&T Corporation" shall be deleted and replaced with "AT&T Corp."
3. Contract Attachment B is deleted in its entirety and replaced with the new Contract Attachment B attached hereto.
4. Contract Attachment T attached hereto is added as a new Contract Attachment.

The revisions set forth herein shall be effective June 5, 2010. All other terms and conditions not expressly amended herein shall remain in full force and effect.

**IN WITNESS WHEREOF,**

**AT&T CORPORATION**

Xavier D. Williams  
CONTRACTOR SIGNATURE

4/28/2010

DATE

Xavier Williams - Sr. VP - Government, Education & Medical Markets  
PRINTED NAME AND TITLE OF CONTRACTOR SIGNATORY (above)

**DEPARTMENT OF FINANCE AND ADMINISTRATION:**

M. D. Goetz, Jr.  
M. D. GOETZ, JR., COMMISSIONER<sup>MOA</sup>

5-3-10

DATE

**Attachment B – NetTN Catalog of Service Offerings**

<b>In the tables that follow the time periods for the various contract “Years” shall be:</b>	
Year 1	From July 1, 2008 through June 30, 2009
Year 2	From July 1, 2009 through June 30, 2010
Year 3	From July 1, 2010 through June 30, 2011
Year 4	From July 1, 2011 through June 30, 2012
Year 5	From July 1, 2012 through June 30, 2013
Year 6	From July 1, 2013 through June 30, 2014
Year 7	From July 1, 2014 through June 30, 2015
Year 8	From July 1, 2015 through June 30, 2016
Year 9	From July 1, 2016 through June 30, 2017
Year 10	From July 1, 2017 through June 30, 2018

## NetTN Catalog of Service Offerings

<i>Description</i>	<i>Detail</i>	<i>Unit</i>	<i>Year 1 Unit Cost</i>	<i>Year 2 Unit Cost</i>	<i>Year 3 Unit Cost</i>	<i>Year 4 Unit Cost</i>	<i>Year 5 Unit Cost</i>	<i>Year 6 Unit Cost</i>	<i>Year 7 Unit Cost</i>	<i>Year 8 Unit Cost</i>	<i>Year 9 Unit Cost</i>	<i>Year 10 Unit Cost</i>	
<b>End Site WAN Circuit with Internet access.</b>	DSL (1.5 x 256k)	/month	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	\$279.45	
	DSL (3M x 384k)	/month	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	\$310.50	
	DSL (6M x 384k)	/month	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	\$345.01	
	384kbps	/month	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	\$475.00	
	1.544 Mbps	/month	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	
	3 Mbps	/month	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99
	4.5 Mbps	/month	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99
	6 Mbps	/month	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99
	7.5 Mbps	/month	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99
	9 Mbps	/month	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99	\$2,524.99
	10.5 Mbps	/month	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99
	16 Mbps	/month	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73
	25 Mbps	/month	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29
	DS3 – 45 Mbps	/month	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54
	Metro Ethernet 2 Mbps	/month	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49
	Metro Ethernet 4 Mbps	/month	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00
	Metro Ethernet 8 Mbps	/month	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00
Metro Ethernet 10 Mbps	/month	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	
Metro Ethernet 20 Mbps	/month	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	
Metro Ethernet 50	/month	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	

Mbps												
Metro Ethernet 100 Mbps	/month	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00
Metro Ethernet 200 Mbps	/month	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00
Metro Ethernet 300 Mbps	/month	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00
Metro Ethernet 450 Mbps	/month	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00
Metro Ethernet 600 Mbps	/month	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00
Metro Ethernet 750 Mbps	/month	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00
Metro Ethernet 900 Mbps	/month	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00
Metro Ethernet 1 Gbps	/month	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00
Monday – Sunday 24 X 7 Coverage	/month	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$0.00

**Explanation:** This section is used for ordering data circuits to the End Site locations. The cost per month includes the local loop, long haul circuits, all associated end site and network hardware, appropriate LAN Interfaces with minimum (2) 10/100 Mbps ports, Internet Access, NetTN security, network management and operation support, includes 7 a.m. - 6 p.m. local time coverage Monday - Saturday.

<b>Description</b>	<b>Detail</b>	<b>Unit</b>	<b>Year 1 Unit Cost</b>	<b>Year 2 Unit Cost</b>	<b>Year 3 Unit Cost</b>	<b>Year 4 Unit Cost</b>	<b>Year 5 Unit Cost</b>	<b>Year 6 Unit Cost</b>	<b>Year 7 Unit Cost</b>	<b>Year 8 Unit Cost</b>	<b>Year 9 Unit Cost</b>	<b>Year 10 Unit Cost</b>	
<b>End Site WAN Circuit with Internet access for K-12</b>	1.544 Mbps	/month	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	
	3 Mbps	/month	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	
	4.5 Mbps	/month	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	
	6 Mbps	/month	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	
	7.5 Mbps	/month	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	
	10.5 Mbps	/month	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99
	16 Mbps	/month	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73	\$3,363.73
	25 Mbps	/month	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29	\$3,868.29
	DS3 – 45 Mbps	/month	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54	\$4,448.54
	Metro Ethernet 2 Mbps	/month	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49	\$787.49
	Metro Ethernet 4 Mbps	/month	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00	\$900.00
	Metro Ethernet 8 Mbps	/month	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00	\$1,150.00
	Metro Ethernet 10 Mbps	/month	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00	\$1,495.00
	Metro Ethernet 20 Mbps	/month	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00	\$2,150.00
	Metro Ethernet 50 Mbps	/month	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00	\$2,495.00
	Metro Ethernet 100 Mbps	/month	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00	\$2,795.00
	Metro Ethernet 200 Mbps	/month	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00	\$4,891.00
Metro Ethernet 300 Mbps	/month	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	\$7,826.00	

	Metro Ethernet 450 Mbps	/month	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00	\$9,500.00
	Metro Ethernet 600 Mbps	/month	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00	\$11,000.00
	Metro Ethernet 750 Mbps	/month	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00
	Metro Ethernet 900 Mbps	/month	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00
	Metro Ethernet 1 Gbps	/month	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00	\$15,500.00
	Incremental 50Mbps upgrade to existing 50Mbps circuit	/month	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
	Monday – Sunday 24 X 7 Coverage	/month	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
<b>K12 WAN Circuit Managed point to point without Internet access-Note 1</b>	1.544 Mbps	/month		\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00	\$525.00
	3 Mbps	/month		\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99	\$924.99
	4.5 Mbps	/month		\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99	\$1,324.99
	6 Mbps	/month		\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99	\$1,724.99
	7.5 Mbps	/month		\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99	\$2,124.99
	10.5 Mbps	/month		\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99	\$2,924.99
	Metro Ethernet 10 Mbps	/month		\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00
	Metro Ethernet 100 Mbps	/month	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00	\$1,187.00
	Metro Ethernet 1 Gbps	/month	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00	\$2,037.00

**Explanation:** This section is used for ordering data circuits to the End Site locations. The cost per month includes the local loop, long haul circuits, all associated end site and network hardware, appropriate LAN Interfaces with minimum (2) 10/100 Mbps ports, Internet Access, email services, DNS services/management, site connectivity, NetTN security, network management and operation support, includes 7 a.m. - 6 p.m. local time coverage Monday - Friday.

Note1: This section is used for ordering data circuits to the End Site locations. The cost per month includes the local loop, all associated end site and network hardware, appropriate LAN Interfaces with minimum (2) 10/100 Mbps ports, site connectivity, network management and operation support, includes 7 a.m. - 6 p.m. local time coverage Monday - Friday. This pricing is contingent upon a design ratio of 8:1 Metro Ethernet connections ("Spoke" sites) to a Metro Ethernet Hub site. All configurations must be approved by the State and the Contractor on an individual case basis. "Spoke" sites receive NetTN SLAs A.14, A.15, and A.16 only.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1 Unit Cost</u>	<u>Year 2 Unit Cost</u>	<u>Year 3 Unit Cost</u>	<u>Year 4 Unit Cost</u>	<u>Year 5 Unit Cost</u>	<u>Year 6 Unit Cost</u>	<u>Year 7 Unit Cost</u>	<u>Year 8 Unit Cost</u>	<u>Year 9 Unit Cost</u>	<u>Year 10 Unit Cost</u>
End Site WAN Circuit without Internet access.	DSL (1.5 x 256k)	/month	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50	\$251.50
	384kbps	/month	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50	\$427.50
	1.544 Mbps	/month	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00
	3 Mbps	/month	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74	\$878.74
	4.5 Mbps	/month	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49	\$1,192.49
	6 Mbps	/month	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49	\$1,552.49
	7.5 Mbps	/month	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49	\$1,912.49
	9 Mbps	/month	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49	\$2,272.49
	16 Mbps	/month	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36	\$3,027.36
	DS3 – 45 Mbps	/month	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68
	Metro Ethernet 2 Mbps	/month	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74	\$708.74
	Metro Ethernet 4 Mbps	/month	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00	\$810.00
	Metro Ethernet 8 Mbps	/month	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00	\$1,035.00
	Metro Ethernet 10 Mbps	/month	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50	\$1,345.50
Metro Ethernet 20 Mbps	/month	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	\$1,935.00	

Metro Ethernet 50 Mbps	/month	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50	\$2,245.50
Metro Ethernet 100 Mbps	/month	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50	\$2,515.50
Metro Ethernet 600 Mbps	/month	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00
Metro Ethernet 1 Gbps	/month	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00	\$14,250.00
Monday – Sunday 24 X 7 Coverage	/month	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00

**Explanation:** This section is used for ordering data circuits to the End Site locations. The cost per month includes the local loop, long haul circuits, all associated end site and network hardware, appropriate LAN Interfaces with minimum (2) 10/100 Mbps ports, NetTN security, network management and operation support, includes 7 a.m. - 6 p.m. local time coverage Monday - Saturday.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Higher Education Research WAN Circuit</b>	Metro Ethernet 750 Mbps	/month	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00	\$9,000.00
	Metro Ethernet 1 Gbps	/month	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00	\$12,000.00
	Wavelength 1.25Gbps	/month	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
	Wavelength 2.5Gbps	/month	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00	\$18,000.00
	Wavelength OC3	/month	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39	\$8,538.39
	Wavelength OC12	/month	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18	\$14,942.18
	Wavelength OC48	/month	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00	\$19,000.00
	Wavelength OC192	/month	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00
	Wavelength 10 Gbps	/month	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00	\$22,250.00

**Explanation:** This section is used for ordering data circuits to the End Site locations. The cost per month includes the local loop, long haul circuits, all associated end site and network hardware, appropriate LAN Interface, Internet Access, NetTN security, network management and operation support, includes 24 X 7 coverage.

			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
SONET	OC12	/month	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00
	OC48	/month	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00	\$840.00
	OC192	/month	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00
	Local Channel per quarter mile	/month	\$245.00	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24
	Interoffice Channel per air mile	/month	\$125.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Customer node	/month	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00	\$1,750.00
	Per Local Channel	/month		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Interoffice Channel Fixed – OC3 capacity	/month		\$25.58	\$25.58	\$25.58	\$25.58	\$25.58	\$25.58	\$25.58	\$25.58	\$25.58
	Interoffice Channel Fixed – OC12 capacity	/month		\$61.20	\$61.20	\$61.20	\$61.20	\$61.20	\$61.20	\$61.20	\$61.20	\$61.20
	Interoffice Channel per quarter mile –OC3	/month	\$125.00	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20
	Interoffice Channel per quarter mile –OC12	/month		\$20.70	\$20.70	\$20.70	\$20.70	\$20.70	\$20.70	\$20.70	\$20.70	\$20.70
	Customer Node OC-3 capacity	/month		\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26
	Customer Node OC-12 capacity	/month		\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69
	Central office node –OC3 Capacity	/month		\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26	\$741.26
	Central office node –OC12 Capacity	/month		\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69	\$1,410.69
	Customer Channel Interface- per DS1	/month		\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64
	Customer Channel Interface- per DS3	/month		\$103.46	\$103.46	\$103.46	\$103.46	\$103.46	\$103.46	\$103.46	\$103.46	\$103.46
	Customer Channel Interface – per 10Mbps	/month		\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95
	Customer Channel Interface – per Flex DS1	/month		\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80
	CO Channel Interface- per DS1	/month		\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64	\$17.64
	CO Channel Interface- per DS3	/month		\$63.54	\$63.54	\$63.54	\$63.54	\$63.54	\$63.54	\$63.54	\$63.54	\$63.54
	CO Channel Interface – per 10Mbps	/month		\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95	\$125.95
	CO Channel Interface – per Flex DS1	/month		\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80	\$17.80
	CO Channel Interface – per 28 DS1 Channel System (DS3) per node	/month		\$394.44	\$394.44	\$394.44	\$394.44	\$394.44	\$394.44	\$394.44	\$394.44	\$394.44
	CO Channel Interface – per DS1 on 28 DS1 Channel System (DS3) per node	/month		\$5.40	\$5.40	\$5.40	\$5.40	\$5.40	\$5.40	\$5.40	\$5.40	\$5.40

**Explanation:** This section is used for ordering SONET ring based technology with 100% survivability.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1 Unit Cost</u>	<u>Year 2 Unit Cost</u>	<u>Year 3 Unit Cost</u>	<u>Year 4 Unit Cost</u>	<u>Year 5 Unit Cost</u>	<u>Year 6 Unit Cost</u>	<u>Year 7 Unit Cost</u>	<u>Year 8 Unit Cost</u>	<u>Year 9 Unit Cost</u>	<u>Year 10 Unit Cost</u>
<b>End Site WAN Circuit with Internet Access over SONET</b>	3 Mbps	/month	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49	\$832.49
	DS3 – 45 Mbps	/month	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68	\$4,003.68
	Metro Ethernet 100 Mbps	/month	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49	\$5,336.49
	Metro Ethernet 1 Gbps	/month	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62	\$19,121.62

**Explanation:** These services are available to customers installing SONET or who have existing SONET services. The Sonet Ring is ordered separately. The SONET provides the transport portion of the WAN data circuit. All NetTN Service Level Agreements apply for the WAN Circuit riding the SONET.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1 Unit Cost</u>	<u>Year 2 Unit Cost</u>	<u>Year 3 Unit Cost</u>	<u>Year 4 Unit Cost</u>	<u>Year 5 Unit Cost</u>	<u>Year 6 Unit Cost</u>	<u>Year 7 Unit Cost</u>	<u>Year 8 Unit Cost</u>	<u>Year 9 Unit Cost</u>	<u>Year 10 Unit Cost</u>
<b>End Site WAN Circuit without Internet Access over SONET</b>	Metro Ethernet 100 Mbps	/month	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00	\$2,400.00
	Metro Ethernet 600 Mbps	/month	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46	\$9,221.46
	Metro Ethernet 1 Gbps	/month	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45	\$17,209.45

**Explanation:** These services are available to customers installing SONET or who have existing SONET services. The Sonet Ring is ordered separately. The SONET provides the transport portion of the WAN data circuit. All NetTN Service Level Agreements apply for the WAN Circuit riding the SONET.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
TDOT ITS SmartWay	TDOT ITS T1's Point-to-Point	/month	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00	\$205.00
	TDOT ITS 9.6 Synchronet per end point	/month	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35	\$76.35

**Explanation:** This section is for ordering T1's and 9.6 Synchronet circuits for Tennessee's Department of Transportation ITS SmartWay System. ITS stands for Intelligent Transportation Systems, a system of advanced communications technologies designed to improve transportation safety and mobility. TDOT Smartway is Tennessee's intelligent transportation system. Circuits will terminate at 6603 Centennial Boulevard, Nashville, TN on SONET. The SONET ring is ordered separately.

<b>Description</b>	<b>Detail</b>	<b>Unit</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
			<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>	<b>Unit Cost</b>
<b>Point to Point/Ethernet/Wavelength</b>	DS1 - 5 miles or less	/mileage	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
	DS1 – 6 miles and over Interoffice mileage – Note 1	/mileage	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50	\$10.50
	DS1 – 6 miles and over Local channels – Note 1	/month	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91	\$88.91
	Flat Rate DS1 IntraLATA/InterLATA – Note 2	/month	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00	\$680.00
	Intralata DS3	/mileage	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00	\$700.00
	Interlata DS3	/mileage	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00	\$95.00
	Interstate DS1	/mileage	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00	\$75.00
	Interstate DS3	/mileage	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00
	Metro Ethernet 2 Mbps Basic IntraLATA/IntraState –Note 3	/month	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00	\$350.00
	Metro Ethernet 2 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$389.64	\$389.64	\$389.64	\$389.64	\$389.64	\$389.64	\$389.64	\$389.64	\$389.64
	Metro Ethernet 4 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$421.26	\$421.26	\$421.26	\$421.26	\$421.26	\$421.26	\$421.26	\$421.26	\$421.26
	Metro Ethernet 8 Mbps Basic IntraLATA/IntraState -Note 3	/month	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00	\$425.00
	Metro Ethernet 8 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$456.96	\$456.96	\$456.96	\$456.96	\$456.96	\$456.96	\$456.96	\$456.96	\$456.96
	Metro Ethernet 10 Mbps Basic IntraLATA/IntraState - note 3	/month	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33	\$446.33
	Metro Ethernet 10 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$495.72	\$495.72	\$495.72	\$495.72	\$495.72	\$495.72	\$495.72	\$495.72	\$495.72
	Metro Ethernet 10 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$660.96	\$660.96	\$660.96	\$660.96	\$660.96	\$660.96	\$660.96	\$660.96	\$660.96
	Metro Ethernet 20 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$624.24	\$624.24	\$624.24	\$624.24	\$624.24	\$624.24	\$624.24	\$624.24	\$624.24
Metro Ethernet 20 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$746.64	\$746.64	\$746.64	\$746.64	\$746.64	\$746.64	\$746.64	\$746.64	\$746.64	
Metro Ethernet 50 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$820.08	\$820.08	\$820.08	\$820.08	\$820.08	\$820.08	\$820.08	\$820.08	\$820.08	

Metro Ethernet 50 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$905.76	\$905.76	\$905.76	\$905.76	\$905.76	\$905.76	\$905.76	\$905.76	\$905.76	\$905.76
Metro Ethernet 100 Mbps Basic IntraLATA/IntraState -Note 3	/month	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00	\$975.00
Metro Ethernet 100 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$991.44	\$991.44	\$991.44	\$991.44	\$991.44	\$991.44	\$991.44	\$991.44	\$991.44	\$991.44
Metro Ethernet 100 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28	\$1,187.28
Metro Ethernet 250 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36	\$1,242.36
Metro Ethernet 250 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96	\$1,425.96
Metro Ethernet 500 Mbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28	\$1,646.28
Metro Ethernet 500 Mbps Premium Burst IntraLATA/IntraState –Note 5	/month		\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64	\$1,817.64
Metro Ethernet 1Gbps Basic IntraLATA/IntraState –Note 3	/month		\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40	\$1,652.40
Metro Ethernet 1Gbps Premium Fixed IntraLATA/IntraState –Note 4	/month		\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32	\$2,362.32
Wavelength 1.25 Gbps IntraLATA/IntraState	/month	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00	\$2,070.00
Wavelength 2.5 Gbps IntraLATA/IntraState	/month	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00
Wavelength 10 Gbps IntraLATA/IntraState	/month	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75	\$4,787.75
<b>Metro Ethernet Premium 2- 9 Mbps additional mileage charge – Note 6</b>												
From 10 to 25 miles per connection	/month	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50	\$178.50
From 26 to 35 miles per connection	/month	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35	\$298.35
From 36 to 50 miles per connection	/month	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75	\$471.75
<b>Metro Premium Ethernet 10- 99 Mbps additional mileage charge – Note 6</b>												
From 10 to 25 miles per connection	/month	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70	\$188.70
From 26 to 35 miles per connection	/month	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20	\$316.20
From 36 to 50 miles per connection	/month	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70	\$494.70
<b>Metro Ethernet Premium 100- 499 Mbps additional mileage charge – Note 6</b>												

From 10 to 25 miles per connection	/month	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60	\$234.60
From 26 to 35 miles per connection	/month	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80	\$397.80
From 36 to 50 miles per connection	/month	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10	\$617.10
<b>Metro Ethernet Premium 500-1000 Mbps and Basic Ethernet 1Gbps additional mileage charge – Note 6</b>											
From 10 to 25 miles per connection	/month	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60	\$285.60
From 26 to 35 miles per connection	/month	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30	\$474.30
From 36 to 50 miles per Connection	/month	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60	\$744.60
<b>Premium Ethernet optional Features</b>											
Priority Plus – NOTE 7	/month	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08	\$55.08
Q-Forwarding – NOTE 8	/month	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84	\$42.84
Q-Forwarding- Service Establishment Charge	/incident	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00	\$510.00
Metro Ethernet Reporting Charge per connection-Note 9	month	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90	\$4.90
Metro Ethernet Web Interface Charge –Note 9	month	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36	\$18.36
Metro Ethernet Web Interface Charge – 1x charge	Per/Acct	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50	\$76.50
Metro Ethernet Reporting Security Card -Note 10	Per/Acct	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00
Metro Ethernet Reporting Service Establishment – 1x charge – Note 10	Per/Acct	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00

**Explanation:** This section is for ordering additional circuits. The TNII Association partner ordering this service is responsible for the management and maintenance of the required equipment to support this service.

Note 1 – DS1 circuits that are a total of 6 miles or more require 2 Local Channels and Interoffice Channel Mileage for the distance between Central Offices for the two end site locations. For example:

Site 1 – Franklin, TN – LOCAL CHANNEL (\$88.91)

Site 2 - Brentwood, TN – LOCAL CHANNEL (\$88.91)

Interoffice Mileage from Franklin Central Office to Brentwood Central Office is 8.6 miles. \$10.50 x 9 miles = \$94.50

Total monthly service cost - \$272.32

DS1 mileages are rounded up to the next whole number; e.g. 8.1 up to 8.9 miles are rounded up to 9 miles.

Note 2 – Existing circuits will be transferred from other contracts to the NetTN Contract and will receive \$680.00 Monthly Rate upon transition. Orders for additional circuits must be approved by AT&T on availability basis.

Note 3- Basic Ethernet provides full-duplex transmission of port connections. This service arrangement provides best effort, high speed connection for customer premise to another premise with Basic metro Ethernet.

Note 4 – Premium Fixed Ethernet provides the Committed Bandwidth speed.

Note 5 – Premium Burst Ethernet provides the ability to burst above the committed bandwidth rate when excess bandwidth is available.

Note 6 – Metro Ethernet Additional Mileage applies to all Ethernet 1Gbps and/or Premium connections that are 10 miles or more from the serving Metro-E central office. Mileage does not apply to Basic Ethernet services except for 1Gbps.

Note 7 – Metro Ethernet Priority Plus dedicates 25% of the circuit bandwidth as high-priority traffic e.g. VoIP. This is statically assigned and cannot be dynamically reallocated when the high-priority traffic volume is less than 25% of the total traffic in use at a particular time.

Note 8 – Metro Ethernet Q-Forwarding – This feature provides the ability to stack Virtual Local Area Networks (VLANs) onto one Metro Ethernet Premium connection port utilizing IEEE 802.1Q protocol and transporting multiple customer LAN traffic to a single location.

Note 9 – Metro Ethernet Reporting (MER) is a tariff service that provides alarm surveillance, performance reporting and SLA reporting for Metro Ethernet network components. It is only available to customers who subscribe to premium service.

Note 10 - ME Security Card – MER offers a web-enabled GUI. To access reports, the customer logs into the MER server. Log-ins, passwords and secure ID cards are provided to the customer.

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>(AVPN) AT&amp;T Virtual Private Network Port Only</b>	LD Domestic AVPN Flat Rate 1.544Mbps/ Port/FR,ATM	/month	\$312.69	\$312.69	\$312.69	\$312.69	\$312.69	\$312.69	\$312.69	\$312.69	\$312.69
	LD Domestic AVPN Flat Rate 10Mbps/ Port/Ethernet or ATM	/month	\$978.54	\$978.54	\$978.54	\$978.54	\$978.54	\$978.54	\$978.54	\$978.54	\$978.54
	LD Domestic AVPN Flat Rate 15Mbps/ Port/FR,ATM	/month	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05	\$1,135.05
	LD Domestic AVPN Flat Rate 20Mbps/ Port/FR,ATM	/month	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58	\$1,447.58
	LD Domestic AVPN Flat Rate 25Mbps/ Port/FR,ATM	/month	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12	\$1,791.12
	LD Domestic AVPN Flat Rate 30Mbps/ Port/FR,ATM	/month	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24	\$2,083.24
	LD Domestic AVPN Flat Rate 45Mbps/ Port/FR,ATM	/month	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88	\$2,625.88
	LD Domestic AVPN Flat Rate 100Mbps/Port/Ethernet or ATM	/month	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62	\$5,580.62
	CoS Pkg Multimedia Std/1.544Mbps	/month	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16	\$39.16
	CoS Pkg Multimedia Std/10Mbps	/month	\$122.29	\$122.29	\$122.29	\$122.29	\$122.29	\$122.29	\$122.29	\$122.29	\$122.29
	CoS Pkg Multimedia Std/15Mbps	/month	\$141.88	\$141.88	\$141.88	\$141.88	\$141.88	\$141.88	\$141.88	\$141.88	\$141.88
	CoS Pkg Multimedia Std/20Mbps	/month	\$180.94	\$180.94	\$180.94	\$180.94	\$180.94	\$180.94	\$180.94	\$180.94	\$180.94
	CoS Pkg Multimedia Std/25Mbps	/month	\$223.89	\$223.89	\$223.89	\$223.89	\$223.89	\$223.89	\$223.89	\$223.89	\$223.89
	CoS Pkg Multimedia Std/30Mbps	/month	\$260.40	\$260.40	\$260.40	\$260.40	\$260.40	\$260.40	\$260.40	\$260.40	\$260.40
	CoS Pkg Multimedia Std/45Mbps	/month	\$328.23	\$328.23	\$328.23	\$328.23	\$328.23	\$328.23	\$328.23	\$328.23	\$328.23
CoS Pkg Multimedia Std/100Mbps	/month	\$697.58	\$697.58	\$697.58	\$697.58	\$697.58	\$697.58	\$697.58	\$697.58	\$697.58	

Explanation: This section for ordering port access to AT&T's Virtual Private Network for global reach. The AVPN access circuits are ordered separately. The CoS package allows traffic prioritization, the term "Multimedia Standard CoS" refers to specific set of prioritization profiles which will be selected at time of order.

Year 1   Year 2   Year 3   Year 4   Year 5   Year 6   Year 7   Year 8   Year 9   Year 10

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>AVPN Local Access</b>	AVPN 1.544 Mbps Circuit and mileage – 0 up to 10 miles fixed rate	/month	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18	\$259.18
	AVPN 1.544 Mbps Circuit and mileage – 11 miles up to 20 miles fixed rate	/month		\$320.44	\$320.44	\$320.44	\$320.44	\$320.44	\$320.44	\$320.44	\$320.44	\$320.44
	AVPN 1.544 Mbps Circuit and mileage – 21 miles up to 50 miles fixed rate	/month		\$457.78	\$457.78	\$457.78	\$457.78	\$457.78	\$457.78	\$457.78	\$457.78	\$457.78
	AVPN 1.544 Mbps Circuit – 51 and over miles -Note 1	/month		\$346.80	\$346.80	\$346.80	\$346.80	\$346.80	\$346.80	\$346.80	\$346.80	\$346.80
	Additional per mile charge for AVPN 1.544 Mbps Circuit - 51 miles and over – Note 1	/per mile		\$4.51	\$4.51	\$4.51	\$4.51	\$4.51	\$4.51	\$4.51	\$4.51	\$4.51
	AVPN DS3 Access	/month	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14	\$2,144.14
	AVPN 100 Mbps Ethernet Access	/month	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73	\$4,926.73

Explanation: This section is for ordering local access circuits within AT&T LEC network to AT&T's Virtual Private Network for NetTN global reach outside the State of Tennessee. AVPN DS3 and 100 Mbps Ethernet Access Circuits greater than 10 miles or outside AT&T LEC network are priced on a case-by-case basis and must be approved by the State and the Contractor. The Mileage is rounded up to the next whole number; e.g. 10.1 up to 10.9 miles are rounded up to 11 miles. AVPN port is ordered separately.

Note 1 – The additional per mile and per month charges apply to AVPN 1.544 Mbps circuits >=51 miles. For instance: circuit that is 60 miles is charged \$346.80 per month plus 60 miles times \$4.51 (\$270.60) for a total circuit cost of \$617.40 per month.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Point to Point – OIR – Note 2</b>	Wavelength 1.25 Gbps Transparent Transport Optical Network Protected - IntraLATA	/month	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40	\$3,638.40
	Wavelength 2.5 Gbps Transparent Transport Optical Network Protected - IntraLATA	/month	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40	\$6,494.40
	Wavelength 10 Gbps Transparent Transport Optical Network Protected - IntraLATA	/month	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40	\$12,226.40
	Primary System Single Bay	/month	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70	\$4,574.70
	Wavelength WAN 10 Gbps Transparent Optical Network Protected - IntraLATA	/month		\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16
	Wavelength LAN 10 Gbps Transparent Optical Network	/month		\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16
	Optical Signal Amplification	/month		\$918.00	\$918.00	\$918.00	\$918.00	\$918.00	\$918.00	\$918.00	\$918.00	\$918.00
	WaveLength Channel Per Gigabit Ethernet At 1Gbps Wavelength Transport Protected	/month		\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66
	Per Fibre Connection, Channel Wavelength Transport Optical Network	/month		\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66
	Per Enterprise System Connection – SBCON Channel Wavelength Protected	/month		\$977.82	\$977.82	\$977.82	\$977.82	\$977.82	\$977.82	\$977.82	\$977.82	\$977.82
	Per OC-3 Wavelength protected	/month		\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16	\$1,459.16
	Per OC-12 Wavelength Protected	/month		\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40	\$1,907.40
	Per OC-48 Wavelength protected	/month		\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86	\$3,442.86
	Per OC-192 Wavelength protected	/month		\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16	\$6,485.16
	Per Fibre Channel 100			\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66	\$1,716.66

<b>Channelized DS3 - OIR</b>	Wavelength Protected	/month										
	Per Fibre Channel 200 Wavelength Protected	/month	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53	\$3,099.53
	Per Fast Ethernet 100 Wavelength Protected	/month	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16	\$944.16
	Dedicated Ring Expansion System	/month	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00	\$1,224.00
	Central Office DS1 Channel Interface per DS1 Interface	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Channelized DS3 (Note 1) – per DS3-Note 1	/month	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18	\$1,233.18
<b>SmartRing Service-OIR- Note 2</b>	Customer Node OC-192	/month	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00
	Central Office Node – OC192	/month	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00	\$5,750.00
	Per Local Channel	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Local Channel per quarter mile	/month	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24	\$55.24
	Interoffice Channel Fixed – OC192	/month	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36	\$324.36
	Interoffice Channel per quarter mile –OC192	/month	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12	\$20.12
	Alternate Central Office Local Channel	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Alternate Central Office Local Channel per Quarter mile	/month	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91	\$119.91
	Customer Channel Interface – per Fractional 1000 Mbps-single mode	/month	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35
	Customer Channel Interface – per 1000 Mbps-ME backbone, per node	/month	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35
	Customer Channel Interface – per 1000 Mbps-600Mbps, per node	/month	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88
	CO Channel Interface – per 1000	/month	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35

	Mbps ME Backbone											
	CO Channel Interface – per 1000 Mbps-600Mbps, per node	/month	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88
	CO Channel Interface – per Fractional 1000 Mbps 1000 Mbps per node	/month	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35	\$382.35
	CO Channel Interface – per Fractional 1000 Mbps 600 Mbps per node	/month	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44	\$357.44
	CO Channel Interface – per Fractional 1000 Mbps 600 MbpsME Backbone 600 Mbps per node	/month	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88	\$287.88
OIR Diversity Circuit – Note 3	100Mbps TNTower to Chattanooga NetTN NAP	/month	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00	\$18,235.00

**Explanation:** This section is for ordering OIR Data Center point to point circuits. This service is subject to NetTN Service Level Agreements A.4. OIR is responsible for the management and maintenance of the required equipment to support this service.

Note 1 - Service includes the DS3 Channel system at the CO, the Local channel up to 1 mile, 28 DS1 interfaces at the CO and a DS3 Interface at the customer site. Customer is responsible for end-site equipment to terminate this service.

Note 2 – Wavelength and SmartRing services to provide necessary bandwidth and route diversity between the 2 OIR data centers per NetTN contract Attachment E, Section.4.

Note 3 – NetTN Solution to replace the TNII diversity circuit under the TNII contract.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Broadband Internet Services - DSL</b>	DSL (1.5 X 256k)	/month	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00
	DSL (3M x 384k)	/month	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30	\$64.30
	DSL (6M x 384k)	/month	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31	\$84.31

**Explanation:** This section is used for ordering DSL connections to the Internet only. NetTN Service Level Agreements do not apply. The customer will be responsible for obtaining a VPN account for access to State resources.

<i>Description</i>	<i>Detail</i>	<i>Unit</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>	<i>Year 6</i>	<i>Year 7</i>	<i>Year 8</i>	<i>Year 9</i>	<i>Year 10</i>
			<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>	<i>Unit Cost</i>
<b>Broadband Internet Services Cable</b>	384kbps x 4Mbps	/month	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00	\$145.00

**Explanation:** This section is used for ordering cable connections to the Internet only. NetTN Service Level Agreements do not apply. The customer will be responsible for obtaining a VPN account for access to State resources.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u> <u>Unit Cost</u>	<u>Year 2</u> <u>Unit Cost</u>	<u>Year 3</u> <u>Unit Cost</u>	<u>Year 4</u> <u>Unit Cost</u>	<u>Year 5</u> <u>Unit Cost</u>	<u>Year 6</u> <u>Unit Cost</u>	<u>Year 7</u> <u>Unit Cost</u>	<u>Year 8</u> <u>Unit Cost</u>	<u>Year 9</u> <u>Unit Cost</u>	<u>Year 10</u> <u>Unit Cost</u>
<b>Remote Access User</b>	Analog up to 56kbps, per account	/month	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95	\$10.95
	Interstate 800 services for RA access	/minute	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03
	3G/4G Wireless Air Card User, per Account, with static IP addresses	/month	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78	\$40.78
	SSL VPN Server implementation/installation-2000 users	/1x install	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00	\$8,464.00
	SSL monthly fee w/ browser for web applications-1000 users	/month	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00	\$3,875.00
	SSL monthly fee w/ browser for web applications-2000 users	/month	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00	\$6,629.00
	Multi-factor Hard Token	per user/mth	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81	\$7.81
	Multi-factor server license & token with 3-yr battery	/annually per user	\$62.12	\$62.12	\$62.12	\$60.12	\$60.12	\$60.12	\$60.12	\$60.12	\$60.12	\$60.12
Multi-factor server license maintenance	/annually per user	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	\$3.36	

**Explanation:** This section is for dial-up and broadband remote access, SSL and multi-factor authentication for an individual.

Description	Detail	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost
Video Conferencing Services.	Dial Out – 384 Kbps ISDN	/30min	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20
	Multipoint Audio Service	/30min	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03	\$3.03
	H.323 Directory Listing Service	/incident	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	384 Kbps Video Multipoint Service Per Half Hour	/30min	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20	\$16.20
	768 Kbps Video Multipoint Service Per Half Hour	/30min	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00
	1.544Mbps Video Multipoint Service Per Half Hour	/30 min	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80	\$37.80
	Unlimited Video Usage – Note 1	/month	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60	\$1,560.60
	Video Bridge Subscription to Video Control Panel – Note 1	/month	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20	\$520.20
	Unlimited Video Bridge 3 Year Maintenance – Note 1	/month	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88	\$2,317.88
	Video Bridge Call Launch Fee Note 2	/per call	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11	\$286.11

**Explanation:** This section is for ordering video conferencing service. There are no other costs associated with point to point H.323 QoS connections. When requiring multipoint services, half hour usage options are based on available connection bandwidth. This cost includes any scheduling or management functions for H.323-based multipoint services.

Note 1 – This service is for ordering unlimited video service utilizing a dedicated MCU with a web-scheduler within the NetTN network. Read-only access will be provided to NetTN Partners for management and trouble shooting fault management tickets. This is Basic service only, providing 384 up to 1.544Mbps speeds, no encryption. AT&T will provide maintenance, management, monitoring and help-desk support. All applicable NetTN SLAs apply. All three components are required, unlimited video usage, video bridge subscription to video control panel and unlimited video Bridge 3 yr maintenance.

Note 2 – This is an optional component for having AT&T manually schedule the conference instead of using web-scheduler.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
Direct Internet Access	DS1 – (1.544)	/month	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00
	3 Mbps	/month	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00	\$1,040.00
	6 Mbps	/month	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00	\$1,810.00
	9 Mbps	/month	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00	\$2,145.00
	12 Mbps	/month	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00	\$2,872.00
	15 Mbps	/month	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00	\$3,285.00
	21 Mbps	/month	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00	\$3,950.00
	27 Mbps	/month	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00	\$5,280.00
	DS3	/month	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00	\$7,050.00
	Metro Ethernet 10Mbps	/month	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00	\$1,720.00
	Metro Ethernet 20Mbps	/month	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00	\$3,240.00
	Metro Ethernet 50Mbps	/month	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00	\$5,700.00
	Metro Ethernet 100Mbps	/month	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00	\$6,500.00
	Metro Ethernet 150Mbps	/month	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00
	Metro Ethernet 200Mbps	/month	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00	\$14,500.00
	Metro Ethernet 250Mbps	/month	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00
	Metro Ethernet 500Mbps	/month	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00	\$27,000.00
	Metro Ethernet 1Gbps	/month	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00
	OC 3	/month	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00	\$10,200.00
	OC 12	/month	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00	\$38,520.00
OC 48	/month	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	\$65,000.00	

**Explanation:** This section is used for ordering Internet access that is not part of the NetTN infrastructure. The NetTN end site ordering this service is responsible for the management and maintenance of the required equipment to support this service. The DIA Service will not connect to any NetTN equipment that is on site for the delivery of any other service. Direct Internet Access is direct access from the end site to the Internet POP.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>OIR Direct Internet Access</b>	Metro Ethernet 250Mbps	/month	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00	\$16,400.00
	Metro Ethernet 1Gbps	/month	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00
	Alternate ISP ME 1 Gbps	/month		\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00

**Explanation:** This section is used for ordering Internet access that is not part of the NetTN infrastructure. OIR is responsible for the management and maintenance of the required equipment to support this service. This Service will not connect to any NetTN equipment that is on site for the delivery of any other service. Direct Internet Access is direct access from the end site to the Internet POP. This service is subject to SLA A.3.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Internet/Intranet</b>	Name Space Management, per zone	/month	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
	Email, per account (100 Mbps storage)	/month	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
	Content Filtering per user	/month	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
	K-12 Content Filtering per user	/month	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25

**Explanation:** This section is for ordering Internet/Intranet services. Further detail of these service offerings is provided in their respective RFP response sections.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
Internet 2	Metro E 100Mbps Connection	/month	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00
	Metro E 1 Gbps Connection	/month	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00	\$3,550.00

**Explanation:** This section is used for ordering access to Internet 2 peering connection. The first 3 Metro E 100mbps connections will be no charge for the life of the NetTN Contract. Any additional circuits will be charged at contracted rates.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Primary Rate ISDN Services</b>	Access Line & Interfaces-Voice/Data-each	/month	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00	\$534.00
	B-Channels-Voice/Data-each	/month	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92
	Primary Rate Installation	/incident	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Telephone Numbers (per number)	/month	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19
	E911 (Surcharges) – Note 1	/month	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00

**Explanation:** This service is used for local transport only. No customer provided equipment is included. It will not connect to the NetTN backbone. NetTN Service Level Agreements do not apply. Primary Rate ISDN (PRI) Voice/Data option provides two-way voice and/or data transmission and includes the functionality of hunting and calling line identification (i.e. PBX Trunk Aggregation).

Note 1 – The E911 surcharge rate allows collection of E911 surcharges at the county established rate. The State of Tennessee will not pay for any charges that are not driven down to a billing number (circuit, telephone number of unique billing number).

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Primary Rate ISDN Services over SONET</b>	Access Line & Interfaces-Voice/Data-each	/month	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00	\$434.00
	B-Channels-Voice/Data-Each	/month	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92	\$0.92
	Telephone Numbers (per number)	/month	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19	\$0.19
	E911 (per number)	/month	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00

**Explanation:** This service is for the Primary Rate ISDN Services over SONET. SONET is ordered separately. No customer equipment is included. NetTN Service Level Agreements do not apply. Primary Rate ISDN (PRI) Voice/Data option provides two-way voice and/or data transmission and includes the functionality of hunting and calling line identification (i.e. PBX Trunk Aggregation).

<u>Description</u>	<u>Detail</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
		<u>Unit</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Failover Circuit</b>	Failover Managed Circuit 1.544 mbps	/month	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00	\$595.00

**Explanation:** This section is used for End Sites to order a back-up NetTN managed WAN circuit with Internet access to any alternate NetTN NAP. Service must provide automated failover capability. All NetTN Service Level Agreements apply.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>End Site Router Equipment</b>	End Site Router 10/100 24 Switch Ports	/month	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
	End Site Router 10/100 48 Switch Ports	/month	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00	\$225.00
	End Site Router PoE 802.af	/month	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00
	End Site Router Wireless Option (802.11b/g)	/month	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00

**Explanation:** This section is used for ordering equipment to connect to the NetTN End Site Managed Services or NetTN unmanaged services.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10</u>										
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	
<b>Additional End Site WAN Data LAN Connection</b>	Ethernet 10 Mbps	/month	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90	\$9.90
	Ethernet 100 Mbps	/month	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00

**Explanation:** This section is for ordering additional data LAN connection(s) to the End Site. In a campus environment or multi-agency building, an end site may require more than one LAN interface. In the event that the router must be upgraded to accommodate multiple LAN interfaces, the router upgrade and associated cost will be the responsibility of the NetTN Service provider. A managed WAN circuit includes (2) 10/100 Mbps LAN interface ports between the router and LAN switch.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>	
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>End Site Services</b>	Cutover implementation	/incident	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
	New services	/incident	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	\$950.00	
	On-site work order hardware configuration change	/incident	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	
	<b>Consulting Services</b>												
	Principal Architect Consulting Services-Note 1	/hour		\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00
	Program Manager Consulting Services – Note 1	/hour		\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00
	Sr. Consultant Consulting Services – Note 1	/hour		\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00	\$204.00
	Technology/Security Consulting Services – Note 1	/hour		\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00
	Senior Engineer Consulting Service – Note 1	/hour		\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00
	Project Manager II Consulting Services – Note 1	/hour		\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00	\$172.00
	Project Manager I Consulting Services – Note 1	/hour		\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00
	Engineer Consulting Services – Note 1	/hour		\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00	\$131.00
	Technician Consulting Services – Note 1	/hour		\$83.00	\$83.00	\$83.00	\$83.00	\$83.00	\$83.00	\$83.00	\$83.00	\$83.00	\$83.00
	Site Survey	/incident	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00
	Load Testing Point-to-Point Circuits	/incident	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
	Migration end site order processing	/order	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Expedite charges/per WAN Circuit	/incident	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00	\$250.00
	TACACS Additional user accounts 7-12 users –Note 2	/incident		\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00
	TACACS Additional user accounts 13-25 users – Note 2	/incident		\$765.00	\$765.00	\$765.00	\$765.00	\$765.00	\$765.00	\$765.00	\$765.00	\$765.00	\$765.00
	Telecommunications Service Priority (TSP) – per circuit – Note 3	/Monthly		\$1.13	\$1.13	\$1.13	\$1.13	\$1.13	\$1.13	\$1.13	\$1.13	\$1.13	\$1.13

**Explanation:** This section is for ordering integration service whether it is for the initial cutover implementation, new services for new end sites or existing end sites, or consulting services.

**Reminder:** All End Sites that are cutover onto the NetTN WAN infrastructure shall include the managed service offerings as specified in the RFP document. NetTN WAN equipment software or configuration changes, modifications, enhancements, and improvements are to be considered part of the managed service offerings.

**Clarification:** The following further clarifies the definition of the above labor or services that can be charged by the NetTN Service Provider to the appropriate TNII Association Partner:

**Cutover Implementation** refers to the migration of an existing TNII Association end site to the new NetTN WAN infrastructure. Embedded in the cost are the migration planning, hardware and software configurations, on-site installation services, end site documentation, and acceptance tests.

**New Services** are for new end sites.

**On Site** work order hardware configuration changes refer to situations where a technician needs to travel to the customer premise to change the NetTN provided equipment only where the end site WAN circuit is not changing.

**Consulting Services** are available on a per hour basis for consulting on NetTN Scope of Services.

Note 1 – A statement of work will be developed and agreed upon between the State and the Contractor for specific categories of consulting services.

**Load Testing Point-to-Point Circuits:** Validating the actual throughput that the circuit can handle.

**Note 2 - TACACS** - Read only access for up to 3000 NetTN managed routers via Telnet. If the number of concurrent sessions is exceeded the State will ensure that Enabled Employees log off the sessions if requested to do so by AT&T personnel.

**Note 3 - Telecommunications Service Priority – FEMA telecommunications restoral priority.**

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
Enhanced Firewall	Enhanced Firewall – stand alone Firewall at end-site	/month	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
	Enhanced Firewall-IDS	/month	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00

**Explanation:** This section is used for ordering equipment to connect to the NetTN End Site Managed Services or NetTN unmanaged services.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Managed End Site Firewall and Managed End Site Switch</b>	End Site Integrated FW IOS	/month	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	
	End Site 24 Port Integrated Switch	/month	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	\$550.00	
	End Site 48 Port Integrated Switch	/month	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	\$650.00	
	End Site Integrated FW IOS / 24 Port Integrated Switch	/month	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	\$750.00	
	End Site Integrated FW IOS / 48 Port Integrated Switch	/month	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	\$850.00	
	End Site Cisco ASA 5510, Note 1 & 2	/month	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00	\$459.00
	End Site Cisco ASA 5520, Note 1 & 3	/month	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20	\$1,387.20
	End Site Cisco ASA 5520 High Availability-Note 1 & 4	/month	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40	\$2,774.40
	End Site Cisco ASA 5540 - Note 1 & 5	/month	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20	\$4,855.20
	End Site Cisco ASA 5540HA GigE - Note 1 & 6	/month	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00	\$5,202.00
End Site Cisco ASA 5550HA GigE - Note 1 & 7	/month	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	\$10,404.00	

**Explanation:** This section is used for ordering end site firewall and LAN switch. Cost per month includes all hardware, software, operations support and management for firewall and switch. These services may be ordered with any managed end site circuit with or without Internet access.

Note 1 - This is a premise-based firewall, fully managed and monitored by AT&T. AT&T provides the following support for this managed firewall:

- Proactive 7x24 monitoring and management, maintenance and updates.
- Initial consultation for the activation of the firewall service, and testing at customer location.
- Change/configuration Management – Customers may request up to 6 change requests per month, per device.
- On-site maintenance response is available 7 days/week, 24 hours/day. Technicians dispatched to customer location within 4 business hours of validated trouble

Note 2 – Small Office with approved Throughput = 2 x T1

Note 3 – Medium Office with approved Throughput = T1 / DS3

Note 4 – Medium Office, high availability\* with approved Throughput = T1 / DS3

Note 5 - Large Office, high availability\* with approved Throughput = OC-3

Note 6 - Large Office, high availability\* with approved Throughput = OC-3

Note 7 - X-large Office, high availability\* with approved Throughput = OC-3 plus

\* High Availability option can be configured as a two-Firewall cluster including Active/Standby mode with automatic failover in the case of hardware failure.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
Co-location Services	Racks/Cabinet Installation	/incident	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00
	19" Open Rack	/month	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00
	23" Open Rack	/month	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00	\$1,600.00
	Cabinet	/month	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
	Cage/Square Footage	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Power - 48v DC 20 Amps A/B	/month	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
	Power - 48v DC 30 Amps A/B	/month	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
	Power - 48v DC 40 Amps A/B	/month	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00	\$400.00
	Power - 48v DC 50 Amps A/B	/month	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
	Power – 48v DC 60 Amps A/B	/month	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00	\$600.00
	Cross Connect – DS1	/incident	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
	Cross Connect – DS1	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Cross Connect – DS3/Coax	/incident	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
	Cross Connect – DS3/Coax	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Cross Connect – Ethernet/Cat 5	/incident	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
	Cross Connect – Ethernet/Cat 5	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Cross Connect - Fiber	/incident	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
	Cross Connect - Fiber	/month	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

**Explanation:** This is for a customer who wishes to co-locate equipment within the NetTN Service Provider's NAP or POP facilities for special purposes, such as SAN servers. Included in this cost are the physical space, air conditioning and restricted access privileges.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year 1</u> <u>Unit Cost</u>	<u>Year 2</u> <u>Unit Cost</u>	<u>Year 3</u> <u>Unit Cost</u>	<u>Year 4</u> <u>Unit Cost</u>	<u>Year 5</u> <u>Unit Cost</u>	<u>Year 6</u> <u>Unit Cost</u>	<u>Year 7</u> <u>Unit Cost</u>	<u>Year 8</u> <u>Unit Cost</u>	<u>Year 9</u> <u>Unit Cost</u>	<u>Year 10</u> <u>Unit Cost</u>
Hosted Identity Management	Authentication – Note 1	Per user /month	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80	\$10.80
	Authentication – Note 2	Per user /month	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05	\$4.05
	Authentication – Note 3	Per user /month	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000

Explanation: This section is for ordering Hosted Identity Management for eHealth and future defined NetTN Association Partner VRFs. This service is subject to NetTN Service Level Agreements.

Note 1 – This includes all users that require identity authentication through the Trusted Authentication Manager (Log directly into the TN eHealth Network portal). All users will be eligible for Customer support levels one through three as defined below.

Note 2 – This includes all users that authenticate their identity through their organization's Web Identity and Access Management system and then federate the user's credentials to the AT&T Trusted Identity Broker. AT&T is responsible to transform the federation protocol of the user's credentials to whatever protocol required by the relying endpoint and then pass on the user's credentials to the relying party endpoint. Users in this scenario are eligible for customer support levels two and three as defined below, whereas the Identity provider organization is responsible for level one customer support.

AT&T, through its subcontractor relationship(s) shall provide access to Help Desk services for the purposes of reporting TN eHealth Network-related problems, as described below:  
Definition of Customer Support Levels:

Support Level 1 – The problem is affecting time-critical applications with production work at a standstill. The TN eHealth Portal is completely unusable and no work-around is currently known. The Help Desk and not the Change Control Process would address resolution of this problem.

Support Level 2 - The Trusted Broker Platform does not function properly, but key business processes are not interrupted. The TN eHealth Portal is significantly impaired such that key business processes cannot be conducted and no known workaround is currently available. The AT&T Help Desk and not the Change Control Process would address resolution of this problem.

Support Level 3 – The Trusted Broker Platform is functioning, but specific User (s) is affected and cannot conduct work as needed.

Note 3 - State of Tennessee Health agencies/employees will authenticate to the NetTN network. Such State of Tennessee Health agencies/employees will not be subject to authentication charges by the NetTN contractor.

<u>Description</u>	<u>Detail</u>	<u>Unit</u>	<u>Year</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>	<u>Year 8</u>	<u>Year 9</u>	<u>Year 10</u>
			<u>1</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>	<u>Unit Cost</u>
<b>Next Generation 9-1-1 (NG -911)</b>	Aggregation Point – NHVL,Knox, Chatt & Memphis Facilities	/incident		\$137,634.88	\$137,634.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Aggregation -Hardware	/incident		\$272,939.82	\$272,939.82	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Aggregation -Installation	/incident		\$234,666.00	\$234,666.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Network Control Center – Facilities & Build out	/incident		\$137,634.88	\$137,634.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	NCC-Hardware -	/incident		\$667,186.22	\$667,186.22	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	NCC -Installation	/incident		\$572,473.35	\$572,473.35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Call delivery & Monitoring Software	/incident		\$1,166,725.34	\$1,166,725.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	PSAPs Edge Hardware	/incident		\$10,487.44	\$10,487.44	\$10,487.44	\$10,487.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	PSAPs Edge Installation	/incident		\$6,991.62	\$6,991.62	\$6,991.62	\$6,991.62	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Network Usage Information, Traffic reports per measurement ID, per report	/incident		\$20.40	\$20.40	\$20.40	\$20.40	\$20.40	\$20.40	\$20.40	\$20.40	\$20.40
	E-911 SS7 Trunk group – per one way trunk group	/incident		\$706.86	\$706.86	\$706.86	\$706.86	\$706.86	\$706.86	\$706.86	\$706.86	\$706.86
	E-911 SS7 Trunk group – per one way trunk group	/month		\$10.20	\$10.20	\$10.20	\$10.20	\$10.20	\$10.20	\$10.20	\$10.20	\$10.20
	E-911 SS7 DSO Trunk – 1 <sup>st</sup> mile Per trunk – initial trunk group	/incident		\$329.46	\$329.46	\$329.46	\$329.46	\$329.46	\$329.46	\$329.46	\$329.46	\$329.46
	E-911 SS7 DSO Trunk – 1 <sup>st</sup> mile Per trunk – initial trunk group	/month		\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22
	E-911 SS7 DSO Trunk – ea. additional mile per Trunk	/month		\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06	\$0.06
	E-911 SS7 DSO Trunk, 1 <sup>st</sup> mile per trunk, subsequent to initial group setup	/incident		\$496.74	\$496.74	\$496.74	\$496.74	\$496.74	\$496.74	\$496.74	\$496.74	\$496.74
	E-911 SS7 DSO Trunk, 1 <sup>st</sup> mile per trunk, subsequent to initial group setup	/month		\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22
	Custom Routing, Per PSAP Routing Number	/incident		\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32

Speed Call List, Per EMNT trunk, initial or rearrangement	/incident		\$52.02	\$52.02	\$52.02	\$52.02	\$52.02	\$52.02	\$52.02	\$52.02	\$52.02
Core hardware Maintenance	/month		\$27,741.96	\$27,742.96	\$27,741.96	\$27,742.96	\$27,741.96	\$27,742.96	\$27,741.96	\$27,742.96	\$27,741.96
Software Maintenance-Call delivery & monitoring	/month		\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98	\$42,685.98
Edge PSAP Hardware Mtc.	/month		\$345.14	\$345.14	\$345.14	\$345.14	\$345.14	\$345.14	\$345.14	\$345.14	\$345.14
NetTN 9-1-1 Support Services	/month		\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68	\$54,655.68

Explanation: **This section is for NG-9-1-1 over NetTN.** This service is subject to NetTN Service Level Agreements. **This project will be implemented in three stages as described below:**

**Stage 1:** The Aggregation Points and NetTN Control Centers will be deployed. Wireless Carriers and VoIP Providers will move their 9-1-1 call traffic from the legacy 9-1-1 selective routers to the Aggregation Points. 9-1-1 Calls will be delivered from the 9-1-1 Over NetTN Control Centers (NCC) to the appropriate legacy selective router for delivery to the PSAP. This places the Aggregation Points and NCCs into service without making any changes that will directly impact the PSAPs.

**Stage 2:** NetTN Call Delivery to the PSAPs. Edge devices and firewalls will be deployed at the PSAPs and NetTN connections will be installed. 9-1-1 Calls will be delivered from the NCC directly to the PSAP over NetTN.

**Stage 3:** All remaining originating 9-1-1 call traffic (landline 9-1-1 calls) will be migrated off the legacy selective routers and connected to the managed IP network at designated edge routers and the legacy 9-1-1- selective router may be decommissioned.

**Attachment T – TN-NG911 Requirements**

- T.1** The Tennessee Emergency Communications Board (TECB) provides oversight and direction for emergency communications in the State of Tennessee. The TECB is planning to move to a fully integrated Statewide Next Generation 9-1-1 solution leveraging the NetTN network and a phased approach.

The intent is to implement a robust IP-enabled Next Generation E9-1-1 call delivery network. This network will initially deliver wireless and nomadic VoIP {non-wireline} 9-1-1 traffic from all of the wireless carriers and VoIP providers operating in the State of Tennessee to each PSAP utilizing the existing 9-1-1 tandems (Stage 1). In Stage 2, this 9-1-1 traffic will be delivered to each PSAP over the IP network. It is envisioned that additional network elements will be added in the future that will ultimately replace a portion or all of the existing 9-1-1 tandem requirements and support the delivery of all 9-1-1 traffic in the future.

By using technologies that are tried and proven in the commercial sector, the State hopes to gain many of the benefits that have been realized by businesses when transitioning from proprietary and often hardware-based legacy systems to open systems based on commoditized components and accepted open standards. Some of the benefits that the TECB is seeking include:

- I. Increased reliability, resiliency and flexibility to accommodate changing requirements
- II. Ability to easily integrate new technology
- III. Ability to easily extract management information from the system
- IV. Improve public safety for the citizens of and visitors to the State of Tennessee
- V. Equalize service across the State, increasing functionality and capabilities for all Public Safety Answering Points (PSAPs)
- VI. Improve call transfer functionality across jurisdictions, including LATA boundaries
- VII. Improve communications between PSAPs
- VIII. Facilitate transfer of GIS data across jurisdictional boundaries
- IX. Prepare PSAPs for future 9-1-1 technologies (telematics, VoIP, ACN)
- X. Provide a cost effective means of PSAP backup and fail over (call rerouting)
- XI. Improve reliability and redundancy in the 9-1-1 delivery network
- XII. Facilitate a cooperative project initiative involving all public safety stakeholders and other potential partners in Tennessee
- XIII. Emphasize inter-agency cooperation and the sharing of information across traditional boundaries in a manner that promotes true system-wide interoperability from call delivery through event dispatch and response.

In order to facilitate a smooth migration from the legacy 9-1-1 network to the 9-1-1 Over NetTN network, an incremental implementation approach will be used. This Project is focused on Stage 1 & 2 (described below). Stage 3 is a future requirement and described here only to provide a high level perspective of the overall longer term plan. The focus of the first phase of this is to move deployment of Stage 1 & 2 forward. Stage 3 will be addressed at a later date when appropriate.

- I. Provide a migration plan for 9-1-1 in Tennessee to move from the legacy TDM based network architecture to a next generation IP enabled network architecture.
- II. Create a uniform voice and data delivery architecture that facilitates seamless 9-1-1 delivery to PSAPs and between PSAPs in Tennessee.
- III. Reduce geographic boundaries with neighboring states to enable 9-1-1 call transfer.

- IV. Seamlessly integrate with both TDM and SIP capable PSAP equipment in order to allow PSAPs to use either legacy or next generation equipment.
- V. Provide an IP based solution (versus TDM) to 9-1-1 stakeholders in order to create redundancy and diversity, and provide improved survivability to the PSAPs.
- VI. Provide options for failover, contingency call flow, and congestion control including diverse and robust network paths which may be chosen on an individual PSAP level by the TECB.
- VII. Create a network of networks that integrates with other next generation Public Safety networks at the local and national levels per industry recommendations.

- T.1.a.** Implementation Stage 1: The Aggregation Points and NetTN Control Centers will be deployed. Wireless Carriers and VoIP Providers will move their 9-1-1 call traffic from the legacy 9-1-1 selective routers to the Aggregation Points. 9-1-1 Calls will be delivered from the 9-1-1 Over NetTN Control Centers (NCC) to the appropriate legacy selective router for delivery to the PSAP. This places the Aggregations Points and NCCs into service without making any changes that will directly impact the PSAPs.
- T.1.b.** Implementation Stage 2: NetTN Call Delivery to the PSAPs. Edge devices and firewalls will be deployed at the PSAPs and NetTN connections will be installed. 9-1-1 Calls will be delivered from the NCC directly to the PSAP over NetTN.
- T.1.c.** Stage 3: All remaining originating 9-1-1 call traffic (landline 9-1-1 calls) will be migrated off the legacy selective routers and connected to the managed IP network at designated edge routers and the legacy 9-1-1- selective router may be decommissioned.
- T.1.d.** The core infrastructure for 9-1-1 Over NetTN will be located in geographically diverse, redundant facilities. There will be two NetTN Control Centers (NCCs) located in Nashville and Knoxville Central Offices.
- T.1.e.** 9-1-1 Over NetTN services will be an AT&T Labs approved solution and will fit in with AT&T's long term products and services while meeting the NetTN long term products and services requirements and goals.
- T.1.f.** 9-1-1 Over NetTN services will comply with NENA standards for NG 9-1-1.
- T.1.g.** TECB and AT&T will agree on interface requirements for CPE vendors that have an interest in connecting to the network using native SIP. These requirements will be based on Public Safety SIP standards which are still under consideration at this time.
- T.1.h.** AT&T will monitor and report bandwidth utilization and recommend bandwidth upgrades as defined by Service Level Agreement A.11 of the NetTN contract. TECB will define the minimum bandwidth requirements for each participating PSAP and number of PSAP connections to NetTN.
- T.1.i.** 9-1-1 Over NetTN will be standards based (forward focused), have an open architecture, be fully redundant including geographic diversity and be built upon common off the shelf equipment. 9-1-1 Over NetTN will not contain proprietary interfaces.
- T.1.j.** 9-1-1 Over NetTN will leverage the NetTN network infrastructure to provide connectivity to PSAPs within all 95 counties within the State of Tennessee regardless of LATA and franchise boundaries. The TEBC will determine the deployment plan and timelines in providing connectivity to the PSAPs.

- T.1.k.** Four geographically diverse network Aggregation Points for wireless and VoIP 9-1-1 calls will be located in Knoxville, Nashville, Memphis and Chattanooga. At the Aggregation Points, TDM to IP gateways will perform the SS7 to IP conversion required to transport voice traffic over the network. Each carrier will connect to two or more of the Aggregation Points for redundancy purposes. Each Aggregation Point (four total) will be sized for at least 40% of the total statewide inbound call volume to ensure call delivery.
- T.1.l.** Inbound trunk groups from originating wireless carriers and nomadic VoIP providers will be built at the County level to facilitate default routing.
- T.1.m.** Call delivery will be IP based from the Aggregation Points to the NCCs. Each NCC (Two total) will be sized to handle 100% of the statewide call volume so that if a single NCC fails, call delivery is still handled seamlessly.
- T.1.n.** Call Transfer of wireless and nomadic VoIP 9-1-1 calls will allow the ability to transfer calls with ALI anywhere within Tennessee, as well as the ability to transfer calls with ALI to/from PSAPs served by Kentucky and Mississippi 911 tandems (Owensboro KY and Jackson MS).
- T.1.o.** Call Transfer of landline and static VoIP 9-1-1 calls will allow the ability to transfer calls anywhere within Tennessee, as well as the ability to transfer calls to/from PSAPs served by Kentucky and Mississippi 911 tandems (Owensboro, KY and Jackson, MS). ALI delivery of transferred calls will depend on the availability of the ALI information provided by the receiving PSAPs ALI database provider.
- T.1.p.** 9-1-1 Over NetTN will continue using the legacy ALI Database Services from the existing ALI Database providers to support ALI for all calls including transfers until notified otherwise by the TECB. The solution will allow for the coordination and management of carriers data (wireless and VoIP), the coordination of legacy database providers (AT&T, Frontier and CenturyLink) and provide an opportunity to move to non-dialable pANIs.
- T.1.q.** 9-1-1 Over NetTN will allow connections to the PSAPs to remain unchanged to minimize impact at the PSAP level. The solution will allow IP calls to be delivered to the PSAP and then converted to a legacy format (CAMA like) in order to ensure legacy PSAP equipment can remain unchanged.
- T.1.r.** During implementation and migration, the legacy network will leverage existing ALI connections and add SS7 connections from the aggregation points to the legacy selective routers (7 in state, 2 out of state). Post implementation, the legacy 9-1-1 network can be leveraged for alternate routing and redundancy as an option at the TECB's choosing.
- T.1.s.** The PSAPs' with existing ALI databases will provide ALI responses for calls delivered to the PSAP by NetTN 9-1-1 Services.
- T.1.t.** The following are the Database requirements for wireless and nomadic VoIP:
  - i. ALI retrieval requires steering to MPCs and VPCs. Existing steering links in use by the existing ALI database providers will continue to be used.
  - ii. pANIs will be associated with wireless carriers and VPCs
  - iii. Approximately 23,000 shell records exist in the current AT&T database; it is estimated there are approximately 30,000 shell records for all Tennessee PSAPs; the Database shall accommodate the necessary shell records for Tennessee PSAPs.
  - iv. The wireless carriers will have an opportunity to move to non-dialable pANIs (NXX = 211, 511, etc.)
  - v. pANIs, associated MSAG entries and steering entries will be updated in all applicable Databases

- T.1.u. PSAP connectivity is estimated based on current capacity to handle wireless calls. This information was provided to AT&T by the State of Tennessee based on PSAP survey data collected in the first half of 2009. Circuit capacity was calculated based on each call requiring 100 Kbps throughput across the IP network. Any site that was calculated to need up to 1.5Mbps was rounded up to a T1 NetTN connection to match the NetTN contract. Since no site required more than 3Mbps, any site requiring more than 1.5Mbps was assumed to have a 3Mbps NetTN connection.
  
- T.1.v. 9-1-1 Over NetTN will have tandem-to-tandem connections to seven legacy Selective Routers in the State of Tennessee:
  - i. Chattanooga
  - ii. Jackson
  - iii. Knoxville
  - iv. Memphis
  - v. Nashville
  - vi. Johnson City
  - vii. Cookeville
  
- T.1.w. 9-1-1 Over NetTN will have redundant fault tolerant tandem-to-tandem connections to out-of-state AT&T legacy Selective Routers located in Jackson MS and Owensboro KY.
  
- T.1.x. The connectivity from the Aggregation Point to the Legacy Selective Routers will be sized based on call volumes from the carriers to those routers. Once carriers transition to the new network, the connectivity will be scaled for the appropriate legacy connectivity requirement and as required for alternate routing.
  
- T.1.y. Call delivery scenarios including tabular routing, alternate routing and overflow routing will be supported. AT&T and the TECB will work with the PSAPs to develop and implement a jointly approved test plan to ensure all appropriate call routing scenarios are all implemented and working correctly.
  
- T.1.z. Post-implementation operational support will be provided by the AT&T Life Cycle Management team.

## T.2 Operations Requirements

A proposed implementation plan is shown below. Note: Some of these tasks can be performed concurrently. The TECB and AT&T jointly agreed upon project plan will clearly define the task structure and timeline. The TEBC will have the final authority to decide the specific deployment plan and timelines with the migration of PSAPs into the 9-1-1 over NetTN system.

- i. Install the Nashville and Knoxville NCCs
- ii. Install SS7-IP gateways at the four Tennessee Aggregation Points
- iii. Implement NetTN connectivity among Aggregation Points and Data Centers
- iv. Connect NCCs to 9 legacy tandems
- v. Deploy MSAGs and pANIs in ALI Database(s)
- vi. Establish new pANI ranges as required
- vii. Connect wireless and nomadic VoIP providers to Aggregation Points.
- viii. Test call delivery from carriers through 9-1-1 Over NetTN Core and to legacy tandems
- ix. Move wireless and nomadic VoIP 9-1-1 calls to Aggregation Points.

- x. Deliver 9-1-1 calls from 9-1-1 Over NetTN Core to the legacy tandems for delivery to the PSAPs.
- xi. Install 9-1-1 Over NetTN PSAP Router and NetTN WAN CE devices at PSAPs
- xii. Implement TEBC's call delivery schemas for each PSAP – primary, default, overflow, alternate, etc.
- xiii. Test call delivery from carriers through 9-1-1 Over NetTN Core to the PSAPs over the NetTN network.
- xiv. Implement TEBC's cut over plan for PSAPs
- xv. Deliver 9-1-1 calls from 9-1-1 Over NetTN Core to PSAPs over NetTN

**T.2.a.** AT&T and its subcontractors (as required) will be responsible for the end to end solution up to the AT&T demarcation point.

**T.2.b.** A dedicated AT&T project manager will lead the implementation of the solution for the duration of implementation period.

**T.2.c.** A dedicated Life Cycle Management (LCM) Operations Manager will manage the service and support of the 9-1-1 over NetTN network for the duration of the NetTN contract.

### **T.3 Future Requirements and Considerations**

**T.3.a** Integration with the State's alternate IP network. AT&T understands that IP enables a customer to provide a back up network to the primary IP network and that NENA is looking to various alternate IP network technologies to provide redundancy to the primary IP network. AT&T will work with the State of Tennessee to determine how an alternate IP network could be connected to NetTN, which will serve as the primary network. When a design is mutually agreed upon by both AT&T and the State of Tennessee, AT&T will work with the State of Tennessee to develop the operational interface agreements that would need to exist in order to support this future product offering and price the solution accordingly. Upon joint agreement on design and operations, AT&T and the State of Tennessee will work together to create this product offering under the NetTN contract.

**T.3.b.** Landline 911- All remaining originating 9-1-1 call traffic (landline 9-1-1 calls) will be migrated off the legacy selective routers and connected to the managed IP network. The TECB will determine the deployment plan and timelines in providing the migration strategy for the PSAPs.

**T.3.c.** Static VoIP 911-All originating Static VoIP call traffic will be migrated off the legacy selective routers and connected to the managed IP network. The TECB will determine the deployment plan and timelines in providing the migration strategy for the PSAPs.

**T.3.d.** Native VoIP Delivery to 9-1-1 Over NetTN – No VoIP carriers currently deliver calls in this manner. If this capability is offered, the TECB and AT&T will review requirements and modify as required. Additional security requirements must be considered.

**T.3.e.** Text messaging via SMS, MMS, etc. As industry standards are defined, AT&T will work with the State of Tennessee to develop the architectural and operational interface agreements that would need to exist in order to support this future product offering and price the solution accordingly. Upon joint agreement on design and operations, AT&T and the State of Tennessee will work together to create this product offering under the NetTN contract.

**T.3.f.** Video relay - As industry standards are defined, AT&T will work with the State of Tennessee to develop the architectural and operational interface agreements that would need to exist in order to support this future product offering and price the solution accordingly. Upon joint agreement

on design and operations, AT&T and the State of Tennessee will work together to create this product offering under the NetTN contract.

**T.4 Security Requirements**

- T.4.1** As defined by the TECB, each PSAP connection may require NetTN managed end-site firewall services for individual PSAP security purposes.
- T.4.2** IP security processes and procedures will be put in place as defined by the NetTN contract in conjunction with the TEBC.