UNITED STATES OF AMERICA
SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2020

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from__________ to __________

Commission File No.: 000-09881

SHENTEL®

SHENANDOAH TELECOMMUNICATIONS COMPANY

(Exact name of registrant as specified in its charter)

Virginia	**54-1162807**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

500 Shentel Way, Edinburg, Virginia 22824
(Address of principal executive offices) (Zip Code)

(540) 984-4141
(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(B) OF THE ACT:

Common Stock (No Par Value)	SHEN	NASDAQ Global Select Market	49,852,174
(Title of Class)	(Trading Symbol)	(Name of Exchange on which Registered)	(The number of shares of the registrant's common stock outstanding on July 24, 2020)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes ☐ No ☒

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SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands)

	June 30, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 143,712	$ 101,651
Accounts receivable, net of allowance for doubtful accounts of $445 and $533, respectively	91,682	63,541
Income taxes receivable	4,452	10,306
Inventory, net of allowances of $40 and $66, respectively	3,295	5,728
Prepaid expenses and other	56,392	60,527
Total current assets	299,533	241,753
Investments	12,661	12,388
Property, plant and equipment, net	703,012	701,514
Intangible assets, net	285,081	314,147
Goodwill	149,070	149,070
Operating lease right-of-use assets	376,912	392,589
Deferred charges and other assets	54,311	53,352
Total assets	$ 1,880,580	$ 1,864,813
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current maturities of long-term debt, net of unamortized loan fees	$ 31,689	$ 31,650
Accounts payable	26,702	40,295
Advanced billings and customer deposits	8,188	8,358
Accrued compensation	13,439	10,075
Current operating lease liabilities	45,005	42,567
Accrued liabilities and other	20,304	14,391
Total current liabilities	145,327	147,336
Long-term debt, less current maturities, net of unamortized loan fees	672,601	688,464
Other long-term liabilities:		
Deferred income taxes	144,273	137,567
Asset retirement obligations	37,929	36,914
Benefit plan obligations	12,247	12,675
Noncurrent operating lease liabilities	332,850	352,439
Other liabilities	23,896	16,990
Total other long-term liabilities	551,195	556,585
Shareholders' equity:		
Common stock, no par value, authorized 96,000; 49,852 and 49,671 issued and outstanding at June 30, 2020 and December 31, 2019, respectively	—	—
Additional paid in capital	44,659	42,110
Retained earnings	472,537	430,010
Accumulated other comprehensive (loss) income, net of taxes	(5,739)	308
Total shareholders' equity	511,457	472,428
Total liabilities and shareholders' equity	$ 1,880,580	$ 1,864,813

See accompanying notes to unaudited condensed consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Revenue:				
Service revenue and other	$ 159,720	$ 142,059	$ 299,908	$ 285,290
Equipment revenue	9,806	16,855	22,806	32,467
Total revenue	169,526	158,914	322,714	317,757
Operating expenses:				
Cost of services	50,640	49,497	100,205	99,015
Cost of goods sold	9,658	15,874	22,329	30,511
Selling, general and administrative	31,394	27,170	62,385	55,892
Depreciation and amortization	34,832	42,353	71,743	83,532
Total operating expenses	126,524	134,894	256,662	268,950
Operating income	43,002	24,020	66,052	48,807
Other income (expense):				
Interest expense	(5,044)	(7,522)	(11,255)	(15,476)
Other	1,573	1,176	2,306	2,463
Income before income taxes	39,531	17,674	57,103	35,794
Income tax expense	10,284	4,524	14,576	8,734
Net income	29,247	13,150	42,527	27,060
Other comprehensive income:				
Unrealized income (loss) on interest rate hedge, net of tax	59	(4,212)	(6,047)	(6,940)
Comprehensive income	$ 29,306	$ 8,938	$ 36,480	$ 20,120
Net income per share, basic and diluted:				
Basic net income per share	$ 0.59	$ 0.26	$ 0.85	$ 0.54
Diluted net income per share	$ 0.58	$ 0.26	$ 0.85	$ 0.54
Weighted average shares outstanding, basic	49,902	49,848	49,878	49,812
Weighted average shares outstanding, diluted	50,082	50,142	50,039	50,118

See accompanying notes to unaudited condensed consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands)

	Shares of Common Stock (no par value)	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
Balance, March 31, 2020	49,842	$ 43,158	$ 443,290	$ (5,798)	$ 480,650
Net income	—	—	29,247	—	29,247
Other comprehensive loss, net of tax	—	—	—	59	59
Stock-based compensation	15	1,731	—	—	1,731
Common stock issued	—	7	—	—	7
Shares retired for settlement of employee taxes upon issuance of vested equity awards	(5)	(237)	—	—	(237)
Balance, June 30, 2020	49,852	$ 44,659	$ 472,537	$ (5,739)	$ 511,457

	Shares of Common Stock (no par value)	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
Balance, December 31, 2019	49,671	$ 42,110	$ 430,010	$ 308	$ 472,428
Net income	—	—	42,527	—	42,527
Other comprehensive loss, net of tax	—	—	—	(6,047)	(6,047)
Stock-based compensation	152	4,716	—	—	4,716
Common stock issued	—	15	—	—	15
Shares retired for settlement of employee taxes upon issuance of vested equity awards	(47)	(2,182)	—	—	(2,182)
Common stock issued to acquire non-controlling interest in nTelos	76	—	—	—	—
Balance, June 30, 2020	49,852	$ 44,659	$ 472,537	$ (5,739)	$ 511,457

	Shares of Common Stock (no par value)	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
Balance, March 31, 2019	49,844	$ 46,641	$ 402,406	$ 5,552	$ 454,599
Net income	—	—	13,150	—	13,150
Other comprehensive loss, net of tax	—	—	—	(4,212)	(4,212)
Stock-based compensation	17	695	—	—	695
Stock options exercised	1	(94)	—	—	(94)
Common stock issued	—	8	—	—	8
Shares retired for settlement of employee taxes upon issuance of vested equity awards	(5)	(112)	—	—	(112)
Balance, June 30, 2019	49,857	$ 47,138	$ 415,556	$ 1,340	$ 464,034

	Shares of Common Stock (no par value)	Additional Paid in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
Balance, December 31, 2018	49,630	$ 47,456	$ 388,496	$ 8,280	$ 444,232
Net income	—	—	27,060	—	27,060
Other comprehensive loss, net of tax	—	—	—	(6,940)	(6,940)
Stock-based compensation	184	2,497	—	—	2,497
Stock options exercised	29	81	—	—	81
Common stock issued	—	16	—	—	16
Shares retired for settlement of employee taxes upon issuance of vested equity awards	(62)	(2,912)	—	—	(2,912)
Common stock issued to acquire non-controlling interest in nTelos	76	—	—	—	—
Balance, June 30, 2019	49,857	$ 47,138	$ 415,556	$ 1,340	$ 464,034

See accompanying notes to unaudited condensed consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES

UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Six Months Ended June 30, 2020	
	2020	**2019**
Cash flows from operating activities:		
Net income	$ 42,527	$ 27,060
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	63,258	72,737
Amortization of intangible assets	9,336	10,795
Accretion of asset retirement obligations	816	708
Bad debt expense	436	764
Stock based compensation expense, net of amount capitalized	4,520	2,307
Deferred income taxes	8,714	3,434
Gain from patronage and investments	(236)	(2,081)
Amortization of long-term debt issuance costs	1,343	1,648
Changes in assets and liabilities:		
Accounts receivable	(28,573)	(4,561)
Inventory, net	2,433	(1,301)
Current income taxes	5,854	1,138
Operating lease right-of-use assets	21,178	25,389
Waived management fee	19,707	19,320
Other assets	1,271	(8,679)
Accounts payable	(10,331)	6,311
Lease liabilities	(22,652)	(21,880)
Other deferrals and accruals	9,338	(3,477)
Net cash provided by operating activities	128,939	129,632
Cash flows used in investing activities:		
Capital expenditures	$ (66,626)	(79,124)
Cash disbursed for acquisitions	—	(10,000)
Cash disbursed for deposit on FCC spectrum leases	(1,200)	—
Proceeds from sale of assets and other	286	105
Net cash used in investing activities	(67,540)	(89,019)
Cash flows used in financing activities:		
Principal payments on long-term debt	$ (17,061)	(24,777)
Taxes paid for equity award issuances	(2,182)	(2,912)
Other	(95)	81
Net cash used in financing activities	(19,338)	(27,608)
Net increase (decrease) in cash and cash equivalents	42,061	13,005
Cash and cash equivalents, beginning of period	101,651	85,086
Cash and cash equivalents, end of period	$ 143,712	$ 98,091

See accompanying notes to unaudited condensed consolidated financial statements.

SHENANDOAH TELECOMMUNICATIONS COMPANY AND SUBSIDIARIES
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Basis of Presentation and Other Information

The accompanying unaudited consolidated financial statements have been prepared in accordance with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X for interim financial information. All normal recurring adjustments considered necessary for a fair presentation have been included. Certain disclosures normally included in annual consolidated financial statements prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) have been omitted. These consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes contained in our Annual Report on Form 10-K for the year ended December 31, 2019.

The preparation of the unaudited interim consolidated financial statements requires management of the Company to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingencies at the date of the unaudited interim consolidated financial statements. These estimates are inherently subject to judgment and actual results could differ.

T-Mobile Acquisition of Sprint
On April 1, 2020, T-Mobile US, Inc. ("T-Mobile") announced the completion of its business combination with Sprint Corporation ("Sprint") and subsequently delivered to the Company a notice of Network Technology Conversion, Brand Conversion and Combination Conversion (a "Conversion Notice") pursuant to the terms of our affiliate agreement. The 90-day period following receipt of the Conversion Notice for the parties to negotiate mutually agreeable terms and conditions under which the Company would continue as an affiliate of T-Mobile, expired on June 30, 2020. The affiliate agreement further provides that, if T-Mobile and the Company have not negotiated a mutually acceptable agreement within the initial 90-day period, then T-Mobile would have a period of 60 days thereafter to exercise an option to purchase the assets of our Wireless operations for 90% of the "Entire Business Value," (as defined under our affiliate agreement and determined pursuant to the appraisal process under the affiliate agreement); this period will expire on August 31, 2020. If T-Mobile does not exercise its purchase option, the Company would then have a 60-day period to exercise an option to purchase the legacy T-Mobile network and subscribers in our service area. If the Company does not exercise its purchase option, T-Mobile must sell or decommission its legacy network and customers in our service area. The outcome of these proceedings could significantly impact our business operations and financial statements.

T-Mobile has not exercised its purchase option to date, and Shentel is not committed to a plan to sell our wireless segment that is probable of closing within one year. Accordingly, our wireless segment continues to be presented in continuing operations.

We continue to operate as an affiliate of Sprint Corporation, which is a wholly-owned indirect subsidiary of T-Mobile and thus continue to refer to our relationship with Sprint below.

Our Sprint affiliate agreement required T-Mobile to comply with certain restrictive operating requirements during the 90 day period following their Conversion Notice which ended on June 30, 2020. T-Mobile publicly announced on July 22, 2020 its intention to begin integration of the brands, rate plans, sales and network on August 2, 2020. Although the impact to Sprint customers in our affiliate area is uncertain at this point in time, the integration plans are likely to adversely affect our Wireless segment operating and financial results in future periods.

Revision of Prior Period Financial Statements
In connection with the preparation of our unaudited condensed consolidated financial statements for the three months ended March 31, 2020, we determined that certain errors existed in our previously issued financial statements. Specifically:

- Prepaid and other assets, as of December 31, 2019, were understated by $2.7 million, deferred tax liabilities were understated by $0.7 million, and retained earnings were understated by $2.0 million as the result of a failure to properly account for handsets that were utilized as demo phones in certain wireless retail stores within our area of operation. All of the impact to retained earnings is attributable to 2017 and prior years.
- Property, plant and equipment, net, and deferred income tax liabilities as of December 31, 2019 were understated by $1.4 million and $0.4 million, respectively. Depreciation expense was overstated by $1.4 million for the year and quarter ended December 31, 2019. Income tax expense and net income were understated by $0.4 million and $1.0 million, respectively, for the year and quarter ended December 31, 2019.

We evaluated these errors under the U.S. Securities and Exchange Commission's ("SEC's") authoritative guidance on materiality and the quantification of the effect of prior period misstatements on financial statements, and we have determined that the impact of these errors on our prior period consolidated financial statements is immaterial. However, since the correction of these errors in the first quarter of 2020 could have become material to our results of operations for the year ending December 31, 2020, we revised our prior period financial statements to correct these errors herein. For the year and quarter ended December 31, 2019, the correction of these errors resulted in a $0.02 increase in both basic and diluted earnings per share.

Adoption of New Accounting Principles

There have been no developments related to recently issued accounting standards, including the expected dates of adoption and estimated effects on the Company's unaudited condensed consolidated financial statements and note disclosures, from those disclosed in the Company's 2019 Annual Report on Form 10-K, that would be expected to impact the Company except for the following:

The Company adopted ASU No. 2016-13, *Financial Instruments - Credit Losses ("ASC 326"): Measurement of Credit Losses on Financial Instruments*, as of January 1, 2020 using the modified retrospective transition method. ASC 326 requires the application of a current expected credit loss (“CECL”) impairment model to financial assets measured at amortized cost including trade accounts receivable, net investments in leases, and certain off-balance-sheet credit exposures. Under the CECL model, lifetime expected credit losses on such financial assets are measured and recognized at each reporting date based on historical, current, and forecasted information. Furthermore, the CECL model requires financial assets with similar risk characteristics to be analyzed on a collective basis. There was no significant impact to condensed consolidated financial statements upon adoption.

The Company adopted ASU No. 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software ("ASC 350"): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract,* as of January 1, 2020. ASC 350 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. Upon adoption of the standard, implementation costs were capitalized in the period incurred and will be amortized over the term of the hosting arrangement. There was no significant impact to condensed consolidated financial statements upon adoption.

In March 2020, the FASB issued ASU 2020-04 “*Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting.*” This accounting update provides optional accounting relief to entities with contracts, hedge accounting relationships or other transactions that reference London Interbank Offering Rate (LIBOR) or other interest rate benchmarks for which the referenced rate is expected to be discontinued or replaced. This optional relief generally allows for contract modifications solely related to the replacement of the reference rate to be accounted for as a continuation of the existing contract instead of as an extinguishment of the contract, and therefore would not require reassessment of a previous accounting determination. The Company's Credit Agreement and interest rate swaps have LIBOR as a reference rate. We plan to apply the accounting relief as relevant contract modifications are made to our Credit Agreement and interest rate swap contracts during the course of the reference rate reform transition period. The optional relief can be applied beginning January 1, 2020, and ending December 31, 2022.

Note 2. Revenue from Contracts with Customers

Refer to Note 13, *Segment Reporting*, for a summary of our revenue streams, which are discussed further below.

Wireless Segment Revenue

Historically we earned $1.5 million in monthly fees for services that we provided to Sprint customers who pass through our network, ("travel revenue"). On April 30, 2019, the agreed upon pricing for this service expired, and Sprint suspended further payments. At that time, we ceased recognition of travel revenue until an agreement on pricing could be reached, but continued to provide this service to Sprint’s customers. In October 2019, we initiated binding arbitration with Sprint pursuant to the terms of our affiliate agreement. During June 2020, the arbitrators reset the fee to $1.5 million per month pricing through December 31, 2021. As a result, we recognized $21.0 million of travel revenue during the three and six months ended June 30, 2020 for service that we have provided since May 1, 2019. We collected payment of this amount in July of 2020. We recognized $1.5 million and $6.0 million in travel revenue for the three and six month periods ended June 30, 2019, respectively.

Below is a summary of the Wireless segment's contract asset:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2020**	**2019**	**2020**	**2019**
Beginning Balance	$ 86,198	$ 70,371	$ 84,663	$ 65,674
Contract payments	14,937	17,565	33,182	35,716
Contract amortization against revenue	(17,456)	(14,147)	(34,166)	(27,601)
Ending Balance	$ 83,679	$ 73,789	$ 83,679	$ 73,789

Our Wireless contract asset is reduced by an estimated obligation to refund amounts that Sprint is later unable to collect from its subscribers. This refund obligation totaled $10.0 million at June 30, 2020 and $7.0 million at December 31, 2019. A change to Sprint's collection policies extended the timeline to write-off a delinquent subscriber's invoice from four to five months. This had the effect of increasing the cash that we collected from Sprint during the period, but also extended the timeframe under which we can be required to refund those amounts. This drove a $1.8 million increase in the refund obligation, but had no impact on our recognition of revenue. The remaining $1.2 million increase was recognized as contra revenue and was driven by changes in expected credit losses, primarily as a result of COVID-19 and Sprint's participation in the Keep Americans Connected pledge.

Broadband Segment Revenue

Below is a summary of the Broadband segment's capitalized contract acquisition costs:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2020**	**2019**	**2020**	**2019**
Beginning Balance	$ 11,663	$ 10,409	$ 11,005	$ 10,091
Contract payments	2,248	1,457	3,933	3,156
Contract amortization	(1,131)	(1,390)	(2,158)	(2,771)
Ending Balance	$ 12,780	$ 10,476	$ 12,780	$ 10,476

Future performance obligations
On June 30, 2020, the Company had approximately $3.1 million allocated to unsatisfied performance obligations that will be satisfied at the rate of approximately $0.8 million per year.

Note 3. Investments

Investments consist of the following:

(in thousands)	**June 30, 2020**	**December 31, 2019**
SERP investments at fair value	$ 2,096	$ 2,278
Cost method investments	9,993	9,497
Equity method investments	572	613
Total investments	$ 12,661	$ 12,388

SERP Investments at Fair Value: The Supplemental Executive Retirement Plan ("SERP") is a benefit plan that provides deferred compensation to certain employees. The Company holds the related investments in a rabbi trust as a source of funding for future payments under the plan. The SERP's investments were designated as trading securities and will be liquidated and paid out to the participants upon retirement. The benefit obligation to participants is always equal to the value of the SERP assets under ASC 710 *Compensation*. Changes to the investments' fair value are presented in Other income (expense), while the reciprocal changes in the liability are presented in selling, general and administrative expense.

Cost Method Investments: Our investment in CoBank's Class A common stock represented substantially all of our cost method investments with a balance of $9.2 million and $8.7 million at June 30, 2020 and December 31, 2019, respectively. We recognized approximately $1.0 million and $0.9 million of patronage income in Other income (expense) in the three months ended June 30, 2020 and 2019, respectively, and approximately $2.0 million and $1.8 million in the six months ended June 30, 2020 and 2019, respectively. Historically, approximately 75% of the patronage distributions were in cash and 25% in equity.

Equity Method Investments: At June 30, 2020, the Company had a 20.0% ownership interest in Valley Network Partnership ("ValleyNet"). The Company and ValleyNet purchase capacity on one another's fiber network. We recognized revenue of $0.3 million from providing service to ValleyNet during both of the three months ended June 30, 2020 and 2019, and approximately $0.5 million during both of the six months ended June 30, 2020 and 2019. We recognized cost of service of $0.6 million and $0.8 million for the use of ValleyNet's network during the three months ended June 30, 2020 and 2019, respectively, and approximately $1.4 million and $1.5 million in the six months ended June 30, 2020 and 2019, respectively.

Note 4. Property, Plant and Equipment

Property, plant and equipment consisted of the following:

($ in thousands)	Estimated Useful Lives	June 30, 2020	December 31, 2019
Land		$ 7,485	$ 6,976
Buildings and structures	10 - 40 years	239,772	232,730
Cable and fiber	15 - 40 years	354,819	334,260
Equipment and software	3 - 20 years	887,584	867,898
Plant in service		1,489,660	1,441,864
Plant under construction		71,388	56,827
Total property, plant and equipment		1,561,048	1,498,691
Less: accumulated amortization and depreciation		858,036	797,177
Property, plant and equipment, net		$ 703,012	$ 701,514

Note 5. Goodwill and Intangible Assets

There were no changes to goodwill during the three and six months ended June 30, 2020.

Other intangible assets consisted of the following:

	June 30, 2020			December 31, 2019		
(in thousands)	Gross Carrying Amount	Accumulated Amortization and Other	Net	Gross Carrying Amount	Accumulated Amortization and Other	Net
Indefinite-lived intangibles:						
Cable franchise rights	$ 64,334	$ —	$ 64,334	$ 64,334	$ —	$ 64,334
FCC spectrum licenses	13,839	—	13,839	13,839	—	13,839
Railroad crossing rights	141	—	141	141	—	141
Total indefinite-lived intangibles	78,314	—	78,314	78,314	—	78,314
Finite-lived intangibles:						
Sprint affiliate contract expansion - Wireless	455,305	(255,441)	199,864	455,305	(226,712)	228,593
FCC spectrum licenses	4,659	(221)	4,438	4,659	(97)	4,562
Acquired subscribers - Cable	28,065	(25,800)	2,265	28,065	(25,600)	2,465
Other intangibles	463	(263)	200	463	(250)	213
Total finite-lived intangibles	488,492	(281,725)	206,767	488,492	(252,659)	235,833
Total intangible assets	$ 566,806	$ (281,725)	$ 285,081	$ 566,806	$ (252,659)	$ 314,147

We acquired Big Sandy Broadband, Inc. ("Big Sandy") on February 28, 2019. The $10 million acquisition price was allocated as follows within our Broadband segment: $4.6 million of property, plant and equipment; $2.8 million of subscriber relationships; and $2.6 million of goodwill.

In 2016, we acquired nTelos Holdings Corp. and immediately transferred certain of the acquired assets to Sprint in an interrelated nonmonetary exchange. In the exchange, we received a corresponding expansion of our Sprint Affiliate Area, future billings associated with Sprint subscribers already in that expanded area, and an increase in the price that Sprint would pay to buy our Wireless asset group in the event that either party chooses not to renew the affiliate agreement. Sprint also agreed to waive up to $4.2 million of our monthly management fee, not to exceed $255.6 million in total, over a multi-year period. We accounted for these collective rights as an affiliate contract expansion ("ACE") intangible, which is amortized over the expected benefit period and further reduced as management fees are waived by Sprint. The Company realized management fee waivers of $9.9 million and $9.7 million during the three months ended June 30, 2020 and 2019, respectively, and $19.7 million and $19.3 million in the six months ended June 30, 2020 and 2019, respectively, and $156.9 million since the date of the business combination.

During 2017 and 2018, we entered into purchase agreements with Sprint to further expand our affiliate territory to include areas around Parkersburg, West Virginia, and Richmond, Virginia, respectively. The relevant portion of these payments were also capitalized as ACE intangible assets.

Amounts paid in connection with the acquisition of a business are presented as amortization expense in our income statement. Amounts paid to Sprint outside of a business combination are accounted for as consideration paid to a customer with amortization presented as a reduction of Service and other revenue in our unaudited condensed consolidated statements of comprehensive income.

Amortization of intangible assets was $4.4 million and $5.1 million during the three months ended June 30, 2020 and 2019, respectively, and $9.3 million and $10.8 million for the six months ended June 30, 2020 and 2019, respectively.

Note 6. Other Assets and Accrued Liabilities

Prepaid expenses and other, classified as current assets, included the following:

(in thousands)	June 30, 2020	December 31, 2019
Wireless contract asset	$ 44,593	$ 44,844
Broadband contract acquisition and fulfillment costs	4,451	4,898
Prepaid maintenance expenses	4,696	3,329
Interest rate swaps	—	1,382
Other	2,652	6,074
Prepaid expenses and other	$ 56,392	$ 60,527

Deferred charges and other assets, classified as long-term assets, included the following:

(in thousands)	June 30, 2020	December 31, 2019
Wireless contract asset	$ 39,086	$ 39,819
Broadband contract acquisition and fulfillment costs	8,329	6,107
Interest rate swaps	—	1,252
Prepaid expenses and other	6,896	6,174
Deferred charges and other assets	$ 54,311	$ 53,352

Accrued liabilities and other, classified as current liabilities, included the following:

(in thousands)	June 30, 2020	December 31, 2019
Sales and property taxes payable	$ 5,748	$ 3,789
Accrued programming costs	2,988	3,023
Interest rate swaps	2,894	—
Asset retirement obligations	223	148
Financing leases	95	94
FCC spectrum license obligations	28	105
Other current liabilities	8,328	7,232
Accrued liabilities and other	$ 20,304	$ 14,391

Other liabilities, classified as long-term liabilities, included the following:

(in thousands)	June 30, 2020	December 31, 2019
Noncurrent portion of deferred lease revenue	$ 16,992	$ 12,449
FCC spectrum license obligations	1,696	1,699
Noncurrent portion of financing leases	1,548	1,591
Interest rate swaps	2,527	—
Other	1,133	1,251
Other liabilities	$ 23,896	$ 16,990

Market expectations of the projected LIBOR decreased significantly during 2020, which drove the fair value of our interest rate swaps to a liability. Refer to Note 9, *Derivatives and Hedging* for more information.

Note 7. Leases

At June 30, 2020, our operating leases had a weighted average remaining lease term of nine years and a weighted average discount rate of 4.3%. Our finance leases had a weighted average remaining lease term of fifteen years and a weighted average discount rate of 5.1%.

During the three and six months ended June 30, 2020, we recognized $17.8 million and $35.6 million of operating lease expense, respectively. Comparatively, during the three and six months ended June 30, 2019, we recognized $16.8 million and $33.7 million of operating lease expense, respectively. We recognized $0.1 million and $0.3 million of interest and depreciation expense on finance leases during the three and six months ended June 30, 2020 and June 30, 2019, respectively. Operating lease expense is presented in cost of service or selling, general and administrative expense based on the use of the relevant facility. Variable lease payments and short-term lease expense were both immaterial. We remitted $16.4 million and $31.8 million of operating lease payments during the three and six months ended June 30, 2020, respectively. We remitted $15.9 million and $30.5 million of operating lease payments during the three and six months ended June 30, 2019, respectively. We also obtained $2.2 million and $5.5 million of leased assets in exchange for new operating lease liabilities during the three and six months ended June 30, 2020, respectively. We obtained $21.2 million and $25.7 million of leased assets in exchange for new operating lease liabilities during the three and six months ended June 30, 2019, respectively.

The following table summarizes the expected maturity of lease liabilities at June 30, 2020:

(in thousands)	Operating Leases	Finance Leases	Total
2020	$ 28,935	$ 93	$ 29,028
2021	66,338	174	66,512
2022	64,493	174	64,667
2023	60,994	174	61,168
2024	56,329	174	56,503
2025 and thereafter	193,826	1,530	195,356
Total lease payments	470,915	2,319	473,234
Less: Interest	93,060	676	93,736
Present value of lease liabilities	$ 377,855	$ 1,643	$ 379,498

We recognized $2.1 million and $4.2 million of operating lease revenue during the three and six months ended June 30, 2020, respectively, and $2.0 million and $4.0 million during the three and six months ended June 30, 2019, respectively, related to the cell site colocation space and dedicated fiber optic strands that we lease to our customers, which is included in Service and other revenue in the unaudited condensed consolidated statements of comprehensive income. Substantially all of our lease revenue relates to fixed lease payments.

Below is a summary of our minimum rental receipts under the lease agreements in place at June 30, 2020:

(in thousands)	Operating Leases
2020	$ 3,938
2021	6,007
2022	4,944
2023	3,313
2024	2,117
2025 and thereafter	4,517
Total	$ 24,836

Note 8. Long-Term Debt

Our syndicated Credit Agreement includes a $75 million, five-year undrawn revolving credit facility, as well as the following outstanding term loans:

(in thousands)	June 30, 2020	December 31, 2019
Term loan A-1	$ 244,004	$ 258,571
Term loan A-2	470,975	473,469
	714,979	732,040
Less: unamortized loan fees	10,689	11,926
Total debt, net of unamortized loan fees	$ 704,290	$ 720,114

Term Loan A-1 bears interest at one-month LIBOR plus a margin of 1.50%, while Term Loan A-2 bears interest at one-month LIBOR plus a margin of 1.75%. LIBOR resets monthly. Our cash payments for interest were $10.3 million and $14.5 million during the six months ended June 30, 2020 and 2019, respectively.

As shown below, as of June 30, 2020, the Company was in compliance with the financial covenants in its credit agreements.

	Actual	Covenant Requirement
Total leverage ratio	2.3	3.25 or Lower
Debt service coverage ratio	5.7	2.00 or Higher
Minimum liquidity balance (in millions)	$ 218.5	$25.0 or Higher

Rate quotations provided by a group of banks that sustain LIBOR will no longer be required after 2021. As a result, it is uncertain whether LIBOR will continue to be quoted after 2021. Our term loans and interest rate swaps identify LIBOR as a reference rate and mature after 2021. Alternative reference rates that replace LIBOR may not yield the same or similar economic results over the terms of the financial instruments. The transition from LIBOR could result in us paying higher or lower interest rates on our current LIBOR-indexed term loans, affect the fair value of the derivative instruments we hold, or affect our ability to effectively use interest rate swaps to manage interest rate risk. Our Credit Agreement includes provisions that provide for the identification of a LIBOR replacement rate. Due to the uncertainty regarding the transition from LIBOR-indexed financial instruments, including when it will happen, and the manner in which an alternative reference rate will apply, we cannot yet reasonably estimate the expected financial impact of the LIBOR transition.

Note 9. Derivatives and Hedging

The Company's interest rate swaps are pay-fixed (1.16%), receive-variable (one month LIBOR) that hedged approximately 44.4% of outstanding debt with outstanding notional amounts totaling $317.6 million and $339.8 million, as of June 30, 2020 and December 31, 2019, respectively.

The fair value of these instruments was estimated using an income approach and observable market inputs. The hedge was determined to be highly effective and therefore all of the change in its fair value was recognized through Other comprehensive income. During the three months ended June 30, 2020, the change in fair market value was immaterial. During the six months ended June 30, 2020 the fair market value decreased $8.1 million due to a decline in the one month LIBOR. They were presented as follows:

(in thousands)	June 30, 2020	December 31, 2019
Balance sheet location of derivative financial instruments:		
Prepaid expenses and other	$ —	$ 1,382
Deferred charges and other assets, net	—	1,252
Accrued liabilities and other	2,894	—
Other liabilities	2,527	—
Total derivatives designated as hedging instruments	$ 5,421	$ 2,634

The table below summarizes changes in accumulated other comprehensive income (loss) by component:

(in thousands)	Gains (Losses) on Cash Flow Hedges	Income Tax (Expense) Benefit	Accumulated Other Comprehensive Income (Loss), net of taxes
Balance as of December 31, 2019	$ 2,634	$ (2,326)	$ 308
Net change in unrealized gain (loss)	(8,183)	2,040	(6,143)
Amounts reclassified from accumulated other comprehensive income (loss) to interest expense	128	(32)	96
Net current period other comprehensive income (loss)	(8,055)	2,008	(6,047)
Balance as of June 30, 2020	$ (5,421)	$ (318)	$ (5,739)

Note 10. Income Taxes

The Company files U.S. federal income tax returns and various state income tax returns. The Company is not subject to any state or federal income tax audits as of June 30, 2020. The Company's returns are generally open to examination from 2016 forward and the net operating losses acquired in the acquisition of nTelos are open to examination from 2002 forward.

The Company's effective tax rate for the three months ended June 30, 2020 was approximately 26.0%, as compared with approximately 25.6% for the three months ended June 30, 2019. The Company's effective tax rate for the six months ended June 30, 2020 was approximately 25.5%, as compared with approximately 24.4% for the six months ended June 30, 2019. The Company had no significant cash payments or refunds for income taxes during the six months ended June 30, 2020. The Company paid cash income taxes of $4.2 million during the six months ended June 30, 2019.

Note 11. Stock Compensation

The Company granted approximately 81 thousand restricted stock units (RSUs) to employees during the six months ended June 30, 2020. Approximately 70 thousand and 11 thousand of these RSUs were granted during the first and second quarter of 2020, respectively, at market prices of $48.47 and $52.70 in those respective quarters. The Company also granted approximately 14 thousand RSUs to members of the board of directors at a market price of $48.47 per award in the first quarter of 2020. Additionally, approximately 40 thousand Relative Total Shareholder Return ("RTSR") awards were granted to employees at a value of $56.32 per award in the first quarter of 2020. Under the terms of the award agreements, the RSUs granted to employees vest over the anniversary date of the grants through 2024. The RSUs granted to the members of the board of directors vest fully on the first anniversary of the grant date. Pursuant to the terms of the RTSR awards, the Company's stock performance over a three-year period, ending December 31, 2022, will be compared to a group of peer companies, and the actual number of shares to be issued will be determined based upon the performance of the Company's stock as compared with that of the peer group. The actual number of shares to be issued ranges from 0 shares (if the Company's stock performance is in the bottom 25% of the peer group) to 150% of the awards granted (if the Company's stock performance is in the top 25% of the peer group). The Company's stock-based compensation award vesting is subject to requirements relating to continued employment with the Company through the service or performance periods, and to special vesting provisions in case of a change of control, death, disability or retirement.

We utilize the treasury stock method to calculate the impact on diluted earnings per share that potentially dilutive stock-based compensation awards have. The following table indicates the computation of basic and diluted earnings per share:

	Three Months Ended June 30,		Six Months Ended June 30, 2020	
(in thousands, except per share amounts)	**2020**	**2019**	**2020**	**2019**
Calculation of net income per share:				
Net income	$ 29,247	$ 13,150	$ 42,527	$ 27,060
Basic weighted average shares outstanding	49,902	49,848	49,878	49,812
Basic net income per share	$ 0.59	$ 0.26	$ 0.85	$ 0.54
Effect of stock-based compensation awards outstanding:				
Basic weighted average shares outstanding	49,902	49,848	49,878	49,812
Effect from dilutive shares and options outstanding	180	294	161	306
Diluted weighted average shares outstanding	50,082	50,142	50,039	50,118
Diluted net income per share	$ 0.58	$ 0.26	$ 0.85	$ 0.54

There were fewer than 105,000 anti-dilutive awards outstanding during the three and six months ended 2020 and 2019.

Note 12. Commitments and Contingencies

We are committed to make payments to satisfy our lease liabilities and long-term debt. The scheduled payments under those obligations are summarized in the respective notes above. We are also committed to make annual payments of approximately $108.0 thousand on our FCC spectrum license obligation through 2039.

The Company is subject to claims and legal actions that may arise in the ordinary course of business. The Company does not believe that any of these pending claims or legal actions are either probable or reasonably possible of a material loss.

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Note 13. Segment Reporting

Three Months Ended June 30, 2020:

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue					
Postpaid	$ 73,269	$ —	$ —	$ —	$ 73,269
Prepaid	12,432	—	—	—	12,432
Tower lease	—	—	1,829	—	1,829
Cable, residential and SMB (1)	—	35,829	—	—	35,829
Fiber, enterprise and wholesale	—	5,663	—	—	5,663
Rural local exchange carrier	—	4,602	—	—	4,602
Travel, installation, and other	24,438	1,658	—	—	26,096
Service revenue and other	110,139	47,752	1,829	—	159,720
Equipment	9,610	196	—	—	9,806
Total external revenue	119,749	47,948	1,829	—	169,526
Revenue from other segments	—	2,185	2,430	(4,615)	—
Total revenue	119,749	50,133	4,259	(4,615)	169,526
Operating expenses					
Cost of services	33,237	20,640	1,315	(4,552)	50,640
Cost of goods sold	9,437	221	—	—	9,658
Selling, general and administrative	9,783	9,260	238	12,113	31,394
Depreciation and amortization	23,420	11,245	477	(310)	34,832
Total operating expenses	75,877	41,366	2,030	7,251	126,524
Operating income (loss)	$ 43,872	$ 8,767	$ 2,229	$ (11,866)	$ 43,002

(1) SMB refers to Small and Medium Businesses.

Three Months Ended June 30, 2019:

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue					
Postpaid	$ 75,997	$ —	$ —	$ —	$ 75,997
Prepaid	13,603	—	—	—	13,603
Tower lease	—	—	1,751	—	1,751
Cable, residential and SMB	—	33,581	—	—	33,581
Fiber, enterprise and wholesale	—	4,921	—	—	4,921
Rural local exchange carrier	—	5,581	—	—	5,581
Travel, installation, and other	4,971	1,654	—	—	6,625
Service revenue and other	94,571	45,737	1,751	—	142,059
Equipment	16,548	307	—	—	16,855
Total external revenue	111,119	46,044	1,751	—	158,914
Revenue from other segments	—	2,507	1,270	(3,777)	—
Total revenue	111,119	48,551	3,021	(3,777)	158,914
Operating expenses					
Cost of services	32,668	19,014	895	(3,080)	49,497
Cost of goods sold	15,742	131	—	1	15,874
Selling, general and administrative	10,318	7,524	274	9,054	27,170
Depreciation and amortization	31,463	10,002	756	132	42,353
Total operating expenses	90,191	36,671	1,925	6,107	134,894
Operating income (loss)	$ 20,928	$ 11,880	$ 1,096	$ (9,884)	$ 24,020

Six Months Ended June 30, 2020:

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue					
Postpaid	$ 148,197	$ —	$ —	$ —	$ 148,197
Prepaid	25,541	—	—	—	25,541
Tower lease	—	—	3,626	—	3,626
Cable, residential and SMB	—	70,772	—	—	70,772
Fiber, enterprise and wholesale	—	11,151	—	—	11,151
Rural local exchange carrier	—	9,358	—	—	9,358
Travel, installation, and other	27,789	3,474	—	—	31,263
Service revenue and other	201,527	94,755	3,626	—	299,908
Equipment	22,360	446	—	—	22,806
Total external revenue	223,887	95,201	3,626	—	322,714
Revenue from other segments	—	4,718	4,363	(9,081)	—
Total revenue	223,887	99,919	7,989	(9,081)	322,714
Operating expenses					
Cost of services	66,676	39,883	2,254	(8,608)	100,205
Cost of goods sold	21,965	364	—	—	22,329
Selling, general and administrative	19,211	18,759	764	23,651	62,385
Depreciation and amortization	48,719	22,116	947	(39)	71,743
Total operating expenses	156,571	81,122	3,965	15,004	256,662
Operating income (loss)	$ 67,316	$ 18,797	$ 4,024	$ (24,085)	$ 66,052

Six Months Ended June 30, 2019:

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
External revenue					
Postpaid	$ 152,179	$ —	$ —	$ —	$ 152,179
Prepaid	26,733	—	—	—	26,733
Tower lease	—	—	3,514	—	3,514
Cable, residential and SMB	—	66,007	—	—	66,007
Fiber, enterprise and wholesale	—	9,749	—	—	9,749
Rural local exchange carrier	—	10,819	—	—	10,819
Travel, installation, and other	12,989	3,300	—	—	16,289
Service revenue and other	191,901	89,875	3,514	—	285,290
Equipment	31,839	628	—	—	32,467
Total external revenue	223,740	90,503	3,514	—	317,757
Revenue from other segments	—	4,929	2,540	(7,469)	—
Total revenue	223,740	95,432	6,054	(7,469)	317,757
Operating expenses					
Cost of services	65,200	38,075	1,841	(6,101)	99,015
Cost of goods sold	30,169	342	—	—	30,511
Selling, general and administrative	21,397	15,093	557	18,845	55,892
Depreciation and amortization	61,833	19,993	1,436	270	83,532
Total operating expenses	178,599	73,503	3,834	13,014	268,950
Operating income (loss)	$ 45,141	$ 21,929	$ 2,220	$ (20,483)	$ 48,807

A reconciliation of the total of the reportable segments' operating income to consolidated income before taxes is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2020	2019	2020	2019
Total consolidated operating income	$ 43,002	$ 24,020	$ 66,052	$ 48,807
Interest expense	(5,044)	(7,522)	(11,255)	(15,476)
Other	1,573	1,176	2,306	2,463
Income before income taxes	$ 39,531	$ 17,674	$ 57,103	$ 35,794

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This management's discussion and analysis includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. When used in this report, the words "anticipate," "believe," "estimate," "expect," "intend," "plan" and similar expressions as they relate to Shenandoah Telecommunications Company or its management are intended to identify these forward-looking statements. All statements regarding Shenandoah Telecommunications Company's expected future financial position and operating results, business strategy, financing plans, forecasted trends relating to the markets in which Shenandoah Telecommunications Company operates and similar matters, including information concerning our response to COVID-19, are forward-looking statements. We cannot assure you that the Company's expectations expressed or implied in these forward-looking statements will turn out to be correct. The Company's actual results could be materially different from its expectations because of various factors, that may include natural disasters, pandemics and outbreaks of contagious diseases and other adverse public health developments, such as COVID-19, natural disasters, changes in general economic conditions, increases in costs, changes in regulation and other competitive factors. Updates to the Risk Factors described in "Item 1A-Risk Factors" as provided in our Annual Report on Form 10-K for the year ended December 31, 2019, may be found below in Part II, under the heading "Item 1A-Risk Factors.
The following management's discussion and analysis should be read in conjunction with the Company's Annual Report on Form 10-K for its fiscal year ended December 31, 2019, including the consolidated financial statements and related notes included therein.

Overview

Shenandoah Telecommunications Company ("Shentel", "we", "our", "us", or the "Company"), is a provider of a comprehensive range of wireless, broadband and tower communications products and services in the Mid-Atlantic portion of the United States. Management's Discussion and Analysis is organized around our reporting segments. Refer to Note 13, Segment Reporting, in our unaudited condensed consolidated financial statements for additional information.

2020 Developments

Sprint Matters

Travel Dispute
Our travel revenue dispute with Sprint was resolved through binding arbitration during June 2020. The arbitrators' ruling reset the fee of $1.5 million per month through December 31, 2021. As a result, we recognized $21.0 million of travel revenue during the second quarter 2020 for service that we have provided since May 1, 2019. We recognized and collected $6.0 million in travel revenue in 2019 prior to Sprint ceasing payments in May 2019. Sprint paid the $21.0 million in July 2020.

T-Mobile business combination with Sprint Developments
On April 1, 2020, T-Mobile US, Inc. ("T-Mobile") announced the completion of its business combination with Sprint Corporation ("Sprint") and subsequently delivered to the Company a notice of Network Technology Conversion, Brand Conversion and Combination Conversion (a "Conversion Notice") pursuant to the terms of the Company's affiliate agreement with Sprint. As described in more detail in the Company's 2019 Annual Report on Form 10-K, our Wireless segment has been an affiliate of Sprint since 1999.

The affiliate agreement provided for a 90-day period following receipt of the Conversion Notice for the parties to negotiate mutually agreeable terms and conditions under which the Company would continue as an affiliate of T-Mobile, which expired on June 30, 2020. T-Mobile and the Company have not negotiated a mutually acceptable agreement. As such, T-Mobile has until August 31, 2020 to exercise an option to purchase the assets of our Wireless operations for 90% of the "Entire Business Value" (as defined under our affiliate agreement and determined pursuant to the appraisal process under the affiliate agreement). If T-Mobile does not exercise its purchase option, the Company would then have a 60-day period to exercise an option to purchase the legacy T-Mobile network and subscribers in our service area. If the Company does not exercise its purchase option, T-Mobile must sell or decommission its legacy network and customers in our service area. T-Mobile has not exercised its purchase option to date.

We continue to operate as an affiliate of Sprint Corporation, which is a wholly-owned indirect subsidiary of T-Mobile. Recent operating developments affecting our wireless segment since the close of their merger include the following:

- Our Sprint affiliate agreement required T-Mobile to comply with certain restrictive operating requirements during the 90 day period following their Conversion Notice which ended on June 30, 2020. T-Mobile publicly announced on July 22, 2020 its intention to begin integration of the brands, rate plans, sales and network on August 2, 2020. Although the impact to Sprint customers in our affiliate area is uncertain at this point in time, the integration plans are likely to adversely affect our Wireless segment operating and financial results in future periods.
- During the second quarter 2020, Sprint adopted the T-Mobile credit and collection policies for Sprint branded customers including those in the Shentel service area. Approximately 4,400 involuntary (non-payment) postpaid disconnects were accelerated into our second quarter subscriber results. Excluding this policy change, postpaid net additions for the quarter would have been 3,021.
- When the T-Mobile merger with Sprint was announced, we put in place retention bonuses for certain employees with roles supporting our wireless segment. Payment of these bonuses is subject to various conditions being met, including the successful closing of the merger between Sprint and T-Mobile. On April 1, 2020, T-Mobile closed its acquisition of Sprint, and at that time, our payment of retention bonuses under this pre-existing plan became probable because these amounts will be paid if we either re-affiliate with T-Mobile or sell our wireless segment to T-Mobile. We recognized $1.2 million in expense during the second quarter of 2020 as a result, which was presented within the cost of service and selling, general, and administrative expense captions. Of the amount recognized, $0.4 million was related to Wireless, $0.2 million was related to Broadband, and $0.6 million was related to Corporate. We expect to incur $1.2 million in additional retention expense through the end of the vesting period, which we estimate to be in the fourth quarter 2021.

COVID-19 Update:

Broadband

- The stay-at-home directives by our governments spurred strong demand for broadband services during the second quarter 2020 resulting in record data net additions of 6,000 and the first quarter of positive video net additions since 2014.

- Approximately 700 COVID-19 related non-payment service disconnections were deferred during the quarter ending June 30, 2020. We resumed normal collection practices on July 1, 2020 and expect this will have minimal impact on bad debt expense in future periods.

Wireless

- Our markets continued to be affected by the stay-at-home directives and the phased re-opening of local economies. We re-opened all the Sprint branded retail stores by the end of June that were temporarily closed in mid-March. Wireless postpaid gross additions and voluntary churn declined year over year approximately 28% and 23%, respectively, for the three months ended June 30, 2020 due to the store closures and lower store traffic from the stay-at-home directives.

- As a Sprint affiliate, our wireless segment participated in the Keep Americans Connected pledge and deferred an estimated 2,300 COVID-19 related non-payment service disconnections during the quarter ended June 30, 2020. While the majority of these subscribers have agreed to payment plans with Sprint, we recognized contra-revenue of $1.2 million during the second quarter of 2020, which effectively represents the pass-through of Sprint's bad debt expense for these customers. Sprint resumed normal collection practices on July 1, 2020.

- During the second quarter of 2020, Sprint issued $1.4 million of credits to prepaid customers in our service territory to alleviate the impacts of COVID-19 and keep these customers connected. Issuance of these credits ceased on June 1, 2020.

- Expense for payroll paid to idled employees and as a premium for certain employees interfacing with the general public, totaled $1.1 million for the three months ended June 30, 2020 and was presented within the cost of service and selling, general, and administrative expense captions.

- With the stay-at-home directives continuing through the second quarter, we also reduced our wireless advertising spend for the three month period ended June 30, 2020 by $2.8 million from the comparable prior year period.

We do not expect COVID-19 to affect our long-term growth prospects. However, the impact of the pandemic is expected to temporarily disrupt our Wireless sales momentum, until the economies in the markets that we serve more fully re-open. As we do our part to stop COVID-19 from spreading, we will continue to evaluate the impact of COVID-19 on our business and operations, including the effect of related state, local and federal government guidelines. The virus and related macroeconomic factors may impact the demand for our products and services, the ways in which our customers use our products and services and our suppliers' and vendors' ability to provide products and services to us. Some of these factors could increase the demand for our products and services, while others could decrease demand or make it more difficult for us to serve our customers. Due to the uncertainty surrounding the magnitude and duration of COVID-19, we are unable at this time to predict the future impact of COVID-19 on our financial condition, results of operations or cash flow.

Results of Operations

Three Months Ended June 30, 2020 Compared with the Three Months Ended June 30, 2019

The Company's consolidated results from operations are summarized as follows:

	Three Months Ended June 30,				Change	
($ in thousands)	**2020**	**% of Revenue**	**2019**	**% of Revenue**	**$**	**%**
Revenue	$ 169,526	100.0	$ 158,914	100.0	10,612	6.7
Operating expenses	126,524	74.6	134,894	84.9	(8,370)	(6.2)
Operating income	43,002	25.4	24,020	15.1	18,982	79.0
Interest expense	(5,044)	(3.0)	(7,522)	(4.7)	(2,478)	(32.9)
Other income	1,573	0.9	1,176	0.7	397	33.8
Income before taxes	39,531	23.3	17,674	11.1	21,857	123.7
Income tax expense	10,284	6.1	4,524	2.8	5,760	127.3
Net income	$ 29,247	17.3	$ 13,150	8.3	16,097	122.4

Revenue

Revenue in the second quarter of 2020 was $169.5 million compared with $158.9 million in the second quarter of 2019, due to growth of $8.6 million, $1.9 million and $0.1 million, in the Wireless, Broadband and Tower segments, respectively. The Wireless growth was driven by the resolution of the travel dispute with Sprint.

Refer to the discussion of the results of operations for the Wireless, Broadband and Tower segments, included within this quarterly report, for additional information.

Operating expenses

Operating expenses decreased approximately $8.4 million, or 6.2%, during the three months ended June 30, 2020 compared with the three months ended June 30, 2019. The decrease was primarily due to a decline in Wireless operating expenses driven by depreciation and amortization expense as certain assets acquired from nTelos became fully depreciated and lower cost of goods sold and selling, general and administrative expenses related to temporary retail store closures. This decrease was partially offset by an increase in Broadband operating expenses incurred to support the launch of our new fiber-to-the-home service, Glo Fiber, and new fixed wireless broadband service, Beam.

Interest expense

Interest expense decreased approximately $2.5 million, or 32.9%, during the three months ended June 30, 2020 compared with the three months ended June 30, 2019. The decrease in interest expense was primarily attributable to the significant decline in LIBOR, which reduces interest expense on the 55.6% of our debt that is not subject to our cash flow hedge. Also contributing to the decline was a reduction of the applicable base interest rate by 25 basis points and principal repayments on our Credit Facility term loans.

Other income

Other income increased approximately $0.4 million, or 33.8%, during the three months ended June 30, 2020 compared with the three months ended June 30, 2019. The increase was primarily due to changes in the fair value of our investments that are used to fund our obligation under the supplemental executive retirement plan.

Six Months Ended June 30, 2020 Compared with the Six Months Ended June 30, 2019

The Company’s consolidated results from operations are summarized as follows:

	Six Months Ended June 30,				Change	
($ in thousands)	**2020**	**% of Revenue**	**2019**	**% of Revenue**	**$**	**%**
Revenue	$ 322,714	100.0	$ 317,757	100.0	4,957	1.6
Operating expenses	256,662	79.5	268,950	84.6	(12,288)	(4.6)
Operating income	66,052	20.5	48,807	15.4	17,245	35.3
Interest expense	(11,255)	(3.5)	(15,476)	(4.9)	(4,221)	(27.3)
Other income	2,306	0.7	2,463	0.8	(157)	(6.4)
Income before taxes	57,103	17.7	35,794	11.3	21,309	59.5
Income tax expense	14,576	4.5	8,734	2.7	5,842	66.9
Net income	$ 42,527	13.2	$ 27,060	8.5	15,467	57.2

Revenue

Revenue increased $5.0 million or 1.6%, during the six months ended June 30, 2020 compared with the six months ended June 30, 2019, due to growth of $4.7 million, $0.1 million, and $0.1 million, in the Broadband, Wireless and Tower segments, respectively.

Refer to the discussion of the results of operations for the Wireless, Broadband and Tower segments, included within this quarterly report, for additional information.

Operating expenses

Operating expenses decreased approximately $12.3 million, or 4.6%, during the six months ended June 30, 2020 compared with the six months ended June 30, 2019. The decrease was primarily due to a decline in Wireless operating expenses driven by depreciation and amortization expense as certain assets acquired from nTelos became fully depreciated and lower cost of goods sold and selling, general and administrative expenses related to temporary retail store closures. This decrease was partially offset by an increase in Broadband operating expenses incurred to support the launch of our new fiber-to-the-home service, Glo Fiber, and fixed wireless broadband solution, Beam.

Interest expense

Interest expense decreased approximately $4.2 million, or 27.3%, during the six months ended June 30, 2020 compared with the six months ended June 30, 2019. The decrease in interest expense was primarily attributable to the significant decline in LIBOR, which reduces interest expense on the 55.6% of our debt that is not subject to our cash flow hedge. Also contributing to the decline was a reduction of the applicable base interest rate by 25 basis points and principal repayments on our Credit Facility term loans.

Other income

Other income decreased approximately $0.2 million, or 6.4%, during the six months ended June 30, 2020 compared with the six months ended June 30, 2019. The decrease was primarily due to changes in the fair value of our investments that are used to fund our obligation under the supplemental executive retirement plan.

Wireless

Wireless earns postpaid, prepaid and wholesale revenues from Sprint for their subscribers that use our Wireless network service in our Wireless network coverage area. The Company's wireless revenue is variable based on billed revenues to Sprint's subscribers in our Affiliate Area less applicable fees retained by Sprint. Sprint retains an 8% Management Fee and an 8.6% Net Service Fee on postpaid revenues and a 6% Management Fee on prepaid wireless revenues. For postpaid, the Company is also charged for the costs of subsidized handsets sold through Sprint's national channels as well as commissions paid by Sprint to third-party dealers in our Sprint Affiliate Area. Sprint also charges the Company separately to acquire and support prepaid customers. These charges are calculated based on Sprint's national averages for its prepaid programs, and are billed per user or per gross additional customer, as appropriate.

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The following tables indicate selected operating statistics of Wireless, including Sprint subscribers:

	June 30, 2020	June 30, 2019
Retail PCS total subscribers - postpaid	846,428	811,719
Retail PCS phone subscribers	735,028	726,899
Retail PCS connected device subscribers	111,400	84,820
Retail PCS subscribers - prepaid	289,449	269,039
PCS market POPS (000) (1)	7,227	7,227
PCS covered POP (000) (1)	6,379	6,285
Macro base stations (cell sites)	1,968	1,910

	Three Months Ended June 30,		Six Months Ended June 30,	
Postpaid:	**2020**	**2019**	**2020**	**2019**
Gross PCS total subscriber additions	37,832	52,799	89,823	103,646
Gross PCS phone additions	26,567	39,948	63,301	77,734
Gross PCS connected device additions	11,265	12,851	26,522	25,912
Net PCS total subscriber (losses) additions (2)	(1,343)	10,767	2,234	16,543
Net PCS phone (losses) additions	(3,967)	4,069	(6,278)	3,444
Net PCS connected device additions	2,624	6,698	8,512	13,099
PCS monthly retail total churn % (2)	1.55%	1.74%	1.73%	1.81%
PCS monthly phone churn %	1.38%	1.62%	1.57%	1.68%
PCS monthly connected device churn %	2.63%	2.88%	2.80%	3.09%
Prepaid:				
Gross PCS subscriber additions	39,083	33,753	78,157	74,732
Net PCS subscriber additions	10,353	1,819	15,437	10,335
PCS monthly retail churn %	3.38%	3.97%	3.76%	4.06%

(1) "POPS" refers to the estimated population of a given geographic area. Market POPS are those within a market area which we are authorized to serve under our Sprint PCS affiliate agreements, and Covered POPS are those covered by our network. The data source for POPS is U.S. census data.

(2) Includes an estimated 4,364 involuntary (nonpayment) postpaid disconnects were accelerated into our second quarter subscriber results due to a change in Sprint collection policy. Excluding this policy change, postpaid net additions for the three and six months ending June 30, 2020 would have been 3,021 and 6,598, respectively, and churn would have been 1.37% and 1.64%, respectively.

Three Months Ended June 30, 2020 Compared with the Three Months Ended June 30, 2019

Wireless results from operations are summarized as follows:

	Three Months Ended June 30,				Change	
($ in thousands)	2020	% of Revenue	2019	% of Revenue	$	%
Wireless revenue:						
Gross postpaid billings	$ 102,879	85.9	$ 102,053	91.8	826	0.8 %
Allocated bad debt	(6,061)	(5.1)	(4,274)	(3.8)	1,787	41.8 %
Amortization of contract asset and other	(7,001)	(5.8)	(5,636)	(5.1)	1,365	24.2 %
Sprint management fee and net service fee	(16,548)	(13.8)	(16,146)	(14.5)	402	2.5 %
Total postpaid service revenue	73,269	61.2	75,997	68.4	(2,728)	(3.6)%
Gross prepaid billings	30,966	25.9	30,328	27.3	638	2.1 %
Amortization of contract asset and other	(16,601)	(13.9)	(14,814)	(13.3)	1,787	12.1 %
Sprint management fee	(1,933)	(1.6)	(1,911)	(1.7)	22	1.2 %
Total prepaid service revenue	12,432	10.4	13,603	12.2	(1,171)	(8.6)%
Travel and other	24,438	20.4	4,971	4.5	19,467	391.6 %
Wireless service revenue and other	110,139	92.0	94,571	85.1	15,568	16.5 %
Equipment revenue	9,610	8.0	16,548	14.9	(6,938)	(41.9)%
Total wireless revenue	119,749	100.0	111,119	100.0	8,630	7.8 %
Wireless operating expenses:						
Cost of services	33,237	27.8	32,668	29.4	569	1.7 %
Cost of goods sold	9,437	7.9	15,742	14.2	(6,305)	(40.1)%
Selling, general and administrative	9,783	8.2	10,318	9.3	(535)	(5.2)%
Depreciation and amortization	23,420	19.6	31,463	28.3	(8,043)	(25.6)%
Total wireless operating expenses	75,877	63.4	90,191	81.2	(14,314)	(15.9)%
Wireless operating income	$ 43,872	36.6	$ 20,928	18.8	22,944	109.6 %

Revenue

Wireless revenue increased approximately $8.6 million, or 7.8%, for the three months ended June 30, 2020 compared with the three months ended June 30, 2019. The growth was driven by a $19.5 million increase in travel revenue due to the resolution of the Sprint travel fee dispute, $1.5 million due to subscriber growth, $0.7 million in higher roaming and MVNO revenues partially offset by a $6.9 million decline in equipment revenue as retail stores were temporarily closed amidst the COVID-19 outbreak, $3.2 million in higher amortized customer contract costs, $1.4 million in COVID related prepaid customer retention credits and $1.2 million of COVID-19 related postpaid bad debt in connection with the Keep Americans Connected pledge.

Resolution of our travel revenue dispute during June of 2020 reset the travel fee at $1.5 million per month through 2021. As a result, we recognized $21.0 million of travel revenue during the three months ended June 30, 2020 for service that we have provided since May 1, 2019. Of that amount, $4.5 million related to service provided during the three months ended June 30, 2020.

Cost of services

Cost of services increased approximately $0.6 million, or 1.7%, for the three months ended June 30, 2020 compared with the three months ended June 30, 2019, primarily due to the expansion of our network and higher cell site rent expense.

Cost of goods sold

Cost of goods sold decreased approximately $6.3 million, or 40.1%, for the three months ended June 30, 2020 compared with the three months ended June 30, 2019 due to lower volume of equipment sales driven by temporary closure of certain retail stores.

Selling, general and administrative

Selling, general and administrative expense decreased approximately $0.5 million, or 5.2%, for the three months ended June 30, 2020, compared with the three months ended June 30, 2019 due to $2.8 million in lower advertising costs driven by COVID-19 related slower economic activity, partially offset by $1.1 million in COVID-19 related payroll expense, $0.6 million of legal fees to support the Sprint dispute matter, $0.6 million in higher operating taxes due to a non-recurring benefit recognized in the second quarter 2019, and $0.2 million in employee retention bonus accrual relating to the Sprint/T-Mobile merger.

Depreciation and amortization

Depreciation and amortization decreased approximately $8.0 million, or 25.6%, for the three months ended June 30, 2020 compared with the three months ended June 30, 2019. Depreciation expense declined $6.9 million as certain assets acquired from nTelos in 2016 became fully depreciated. Amortization expense also declined primarily as a result of our Sprint affiliate contract expansion asset which amortizes under an accelerated method that declines over time.

Six Months Ended June 30, 2020 Compared with the Six Months Ended June 30, 2019

Wireless results from operations are summarized as follows:

	Six Months Ended June 30,				Change	
($ in thousands)	2020	% of Revenue	2019	% of Revenue	$	%
Wireless revenue:						
Gross postpaid billings	$ 205,975	92.0	$ 203,923	91.1	2,052	1.0 %
Allocated bad debt	(11,074)	(4.9)	(8,668)	(3.9)	2,406	27.8 %
Amortization of contract asset and other	(13,839)	(6.2)	(10,824)	(4.8)	3,015	27.9 %
Sprint management fee and net service fee	(32,865)	(14.7)	(32,252)	(14.4)	613	1.9 %
Total postpaid service revenue	148,197	66.2	152,179	68.0	(3,982)	(2.6)%
Gross prepaid billings	61,902	27.6	59,861	26.8	2,041	3.4 %
Amortization of contract asset and other	(32,493)	(14.5)	(29,351)	(13.1)	3,142	10.7 %
Sprint management fee	(3,868)	(1.7)	(3,777)	(1.7)	91	2.4 %
Total prepaid service revenue	25,541	11.4	26,733	11.9	(1,192)	(4.5)%
Travel and other	27,789	12.4	12,989	5.8	14,800	113.9 %
Wireless service revenue and other	201,527	90.0	191,901	85.8	9,626	5.0 %
Equipment revenue	22,360	10.0	31,839	14.2	(9,479)	(29.8)%
Total wireless revenue	223,887	100.0	223,740	100.0	147	0.1 %
Wireless operating expenses:						
Cost of services	66,676	29.8	65,200	29.1	1,476	2.3 %
Cost of goods sold	21,965	9.8	30,169	13.5	(8,204)	(27.2)%
Selling, general and administrative	19,211	8.6	21,397	9.6	(2,186)	(10.2)%
Depreciation and amortization	48,719	21.8	61,833	27.6	(13,114)	(21.2)%
Total wireless operating expenses	156,571	69.9	178,599	79.8	(22,028)	(12.3)%
Wireless operating income	$ 67,316	30.1	$ 45,141	20.2	22,175	49.1 %

Revenue

Wireless revenue increased approximately $0.1 million, or 0.1%, for the six months ended June 30, 2020 compared with the six months ended June 30, 2019. The change was primarily attributable to a $15.0 million increase in travel revenue due to the resolution of the travel fee dispute, a $4.1 million increase in postpaid and prepaid revenue from growth in subscribers and $1.3 million increase in roaming and MVNO revenues, and was offset by a $9.5 million decline in equipment revenue as retail stores were temporarily closed amidst the COVID-19 outbreak, a $2.4 million increase in allocated bad debt, about half of which related to COVID-19, a $6.2 million increase in amortization of customer contract costs and $0.7 million increase in Sprint management and net service fees.

Resolution of our travel revenue dispute during June of 2020 reset the travel fee at $1.5 million per month through 2021. As a result, we recognized $21.0 million of travel revenue during the six months ended June 30, 2020 for service that we have provided since May 1, 2019. Of that amount, $9.0 million related to service provided during the six months ended June 30, 2020.

Cost of services

Cost of services increased approximately $1.5 million, or 2.3%, for the six months ended June 30, 2020 compared with the six months ended June 30, 2019, primarily due to the expansion of our network and higher cell site rent expense.

Cost of goods sold

Cost of goods sold decreased approximately $8.2 million, or 27.2%, for the six months ended June 30, 2020 compared with the six months ended June 30, 2019 due to lower volume of equipment sales driven by temporary closure of certain retail stores.

Selling, general and administrative

Selling, general and administrative expense decreased approximately $2.2 million, or 10.2%, for the six months ended June 30, 2020 compared with the six months ended June 30, 2019. With COVID-19 stay-at-home directives and slower economic activity continuing through the second quarter, we reduced our wireless advertising activities, by $3.8 million for the six months ended June 30, 2020 as compared with the six months ended June 30, 2019. This reduction in expense was partially offset by a $1.3 million increase in payroll expense, primarily from the aforementioned COVID-19 supplemental pay and wireless retention programs, and a $0.6 million increase in legal fees that was primarily to support the Sprint dispute matter.

Depreciation and amortization

Depreciation and amortization decreased approximately $13.1 million, or 21.2%, for the six months ended June 30, 2020 compared with the six months ended June 30, 2019. Depreciation expense declined $10.6 million as certain assets acquired from nTelos in 2016 became fully depreciated. Amortization expense also declined primarily as a result of our Sprint affiliate contract expansion asset which amortizes under an accelerated method that declines over time.

Broadband

Our Broadband segment provides broadband, video and voice services to residential and commercial customers in portions of Virginia, West Virginia, Maryland, and Kentucky, via fiber optic and hybrid fiber coaxial (“HFC”) cable. The Broadband segment also leases dark fiber and provides Ethernet and Wavelength fiber optic services to enterprise and wholesale customers throughout the entirety of our service area. The Broadband segment also provides voice and digital subscriber line (“DSL”) telephone services to customers in Virginia’s Shenandoah County as a Rural Local Exchange Carrier (“RLEC”). These integrated networks are connected by an approximately 6,300 fiber route mile network. This fiber optic network also supports our Wireless segment operations and these intercompany transactions are reported at their market value.

The following table indicates selected operating statistics of Broadband:

	June 30, 2020	June 30, 2019
Broadband homes passed (1) (2)	220,442	206,262
Incumbent Cable	207,269	206,262
Glo Fiber	13,173	—
Broadband customer relationships (3)	101,816	88,860
Video:		
RGUs	53,153	57,215
Penetration (4)	24.1%	27.7%
Digital video penetration (5)	94.3%	90.3%
Broadband:		
RGUs	92,695	79,507
Incumbent Cable	91,364	79,507
Glo Fiber	1,331	—
Penetration (4)	42.0%	38.5%
Incumbent Cable penetration (4)	44.1%	38.5%
Glo Fiber penetration (4)	10.1%	—%
Voice:		
RGUs	32,252	30,754
Penetration (4)	16.5%	16.2%
Total Cable and Glo Fiber RGUs	178,100	167,476
RLEC homes passed	25,852	25,814
RLEC customer relationships (3)	12,587	13,528
RLEC RGUs:		
Data RLEC	7,755	8,424
Penetration (4)	30.0%	32.6%
Voice RLEC	13,812	14,873
Penetration (4)	53.4%	57.6%
Total RLEC RGUs	21,567	23,297
Total RGUs	**199,667**	**190,773**
Fiber route miles	6,478	5,833
Total fiber miles (6)	346,969	307,125

(1) Homes and businesses are considered passed ("homes passed") if we can connect them to our distribution system without further extending the transmission lines. Homes passed is an estimate based upon the best available information. Homes passed have access to video, broadband and voice services.
(2) Includes approximately 16,600 RLEC homes passed where we are the dual incumbent telephone and cable provider.
(3) Customer relationships represent the number of billed customers who receive at least one of our services.
(4) Penetration is calculated by dividing the number of users by the number of homes passed or available homes, as appropriate.
(5) Digital video penetration is calculated by dividing the number of digital video users by total video users. Digital video users are video customers who receive any level of video service via digital transmission. A dwelling with one or more digital set-top boxes or digital adapters counts as one digital video user.
(6) Total fiber miles are measured by taking the number of fiber strands in a cable and multiplying that number by the route distance. For example, a 10 mile route with 144 fiber strands would equal 1,440 fiber miles.

Three Months Ended June 30, 2020 Compared with the Three Months Ended June 30, 2019

Broadband results from operations are summarized as follows:

	Three Months Ended June 30,				Change	
($ in thousands)	2020	% of Revenue	2019	% of Revenue	$	%
Broadband operating revenue						
Cable, residential and SMB	$ 35,829	71.5	$ 33,581	69.2	2,248	6.7
Fiber, enterprise and wholesale	7,619	15.2	6,725	13.9	894	13.3
Rural local exchange carrier	4,830	9.6	6,041	12.4	(1,211)	(20.0)
Equipment and other	1,855	3.7	2,204	4.5	(349)	(15.8)
Total broadband revenue	50,133	100.0	48,551	100.0%	1,582	3.3
Broadband operating expenses						
Cost of services	20,640	41.2	19,014	39.2	1,626	8.6
Cost of goods sold	221	0.4	131	0.3	90	68.7
Selling, general, and administrative	9,260	18.5	7,524	15.5	1,736	23.1
Depreciation and amortization	11,245	22.4	10,002	20.6	1,243	12.4
Total broadband operating expenses	41,366	82.5	36,671	75.5	4,695	12.8
Broadband operating income	$ 8,767	17.5	$ 11,880	24.5	(3,113)	(26.2)

Cable, residential and small and medium business (SMB) revenue
Cable, residential and SMB revenue increased during the three months ended June 30, 2020 approximately $2.2 million, or 6.7%, primarily driven by broadband subscriber growth.

Fiber, enterprise and wholesale revenue
Fiber, enterprise and wholesale revenue increased during the three months ended June 30, 2020 approximately $0.9 million, or 13.3%, due primarily to an increase in new enterprise and backhaul connections.

Rural local exchange carrier (RLEC) revenue
RLEC revenue decreased approximately $1.2 million, or 20.0%, compared with the three months ended June 30, 2019 due to lower governmental support and a decline in residential voice and data subscribers.

Cost of services
Cost of services increased $1.6 million, or 8.6%, primarily driven by $0.9 million of compensation costs and $0.7 million of network support costs, required to support the expansion of our network. The compensation increase was due to the aforementioned COVID-19 supplemental pay and retention program of $0.5 million and an increase in Glo Fiber and Beam start-up staffing.

Cost of goods sold
Cost of goods sold were comparable with three months ended June 30, 2019.

Selling, general and administrative
Selling, general and administrative expense increased $1.7 million or 23.1% compared with the three months ended June 30, 2019. The increase was driven by $1.3 million in higher payroll and benefit expense due to a combination of Glo Fiber and fixed wireless start-up staffing, an increase in benefit plans and higher incentive accrual from strong operating results and $0.4 million increase in professional fees.

Depreciation and amortization
Depreciation and amortization increased $1.2 million or 12.4%, compared with the three months ended June 30, 2019, primarily as a result of our network expansion, the introduction of fiber to the home service under our brand, Glo Fiber, and our fixed wireless broadband solution, Beam.

Six Months Ended June 30, 2020 Compared with the Six Months Ended June 30, 2019

Broadband results from operations are summarized as follows:

	Six Months Ended June 30,						Change	
($ in thousands)		2020	% of Revenue		2019	% of Revenue	$	%
Broadband revenue								
Cable, residential and SMB	$	70,772	70.8	$	66,007	69.2	4,765	7.2
Fiber, enterprise and wholesale		15,264	15.3		13,288	13.9	1,976	14.9
Rural local exchange carrier		9,962	10.0		11,722	12.3	(1,760)	(15.0)
Equipment and other		3,921	3.9		4,415	4.6	(494)	(11.2)
Total broadband revenue		99,919	100.0		95,432	100.0%	4,487	4.7
Broadband operating expenses								
Cost of services		39,883	39.9		38,075	39.9	1,808	4.7
Cost of goods sold		364	0.4		342	0.4	22	6.4
Selling, general, and administrative		18,759	18.8		15,093	15.8	3,666	24.3
Depreciation and amortization		22,116	22.1		19,993	20.9	2,123	10.6
Total broadband operating expenses		81,122	81.2		73,503	77.0	7,619	10.4
Broadband operating income	$	18,797	18.8	$	21,929	23.0	(3,132)	(14.3)

Cable, residential and small and medium business (SMB) revenue
Cable, residential and SMB revenue increased during the six months ended June 30, 2020 approximately $4.8 million, or 7.2%, primarily driven by broadband subscriber growth.

Fiber, enterprise and wholesale revenue
Fiber, enterprise and wholesale revenue increased during the six months ended June 30, 2020 approximately $2.0 million, or 14.9%, due primarily to an increase in new enterprise and backhaul connections.

Rural local exchange carrier (RLEC) revenue
RLEC revenue decreased approximately $1.8 million, or 15.0%, compared with the six months ended June 30, 2019 due primarily to lower governmental support, a decline in residential voice and data subscribers and switched access revenue from other carriers.

Cost of services
Cost of services increased $1.8 million, or 4.7%, primarily driven by $1.1 million of compensation expense and $0.7 million of network support costs, required to support the expansion of our network. The aforementioned COVID-19 supplemental pay and retention program drove $0.5 million of the increase in compensation expense.

Cost of goods sold
Cost of goods sold were comparable with six months ended June 30, 2019.

Selling, general and administrative
Selling, general and administrative expense increased $3.7 million or 24.3% compared with the six months ended June 30, 2019, due to increases in compensation expense of $2.6 million as a result of Glo Fiber and fixed wireless start-up staffing, higher benefit plan and incentive accruals from strong operating results, $0.7 million of professional fees and $0.5 million in advertising, both necessary to support our growth.

Depreciation and amortization
Depreciation and amortization increased $2.1 million or 10.6%, compared with the six months ended June 30, 2019, primarily as a result of our network expansion and the introduction of fiber to the home service under our brand, Glo Fiber.

Tower

Our Tower segment owns 228 cell towers and small cell sites and leases colocation space on the towers to our Wireless segment and other wireless communications providers. Substantially all of our owned towers are built on ground that we lease from the respective landlords. The colocation space that we lease to our Wireless segment is priced at our estimate of fair market value.

The following table indicates selected operating statistics of the Tower segment:

	June 30, 2020	June 30, 2019
Macro towers owned	220	217
Small cell sites	8	—
Tenants (1)	413	377
Average tenants per tower	1.8	1.7

(1) Includes 206 and 177 intercompany tenants for our Wireless segment as of June 30, 2020 and 2019, respectively.

Three Months Ended June 30, 2020 Compared with the Three Months Ended June 30, 2019

Tower results from operations are summarized as follows:

	Three Months Ended June 30,				Change	
($ in thousands)	2020	% of Revenue	2019	% of Revenue	$	%
Tower revenue	$ 4,259	100.0	$ 3,021	100.0	1,238	41.0
Tower operating expenses	2,030	47.7	1,925	63.7	105	5.5
Tower operating income	$ 2,229	52.3	$ 1,096	36.3	1,133	103.4

Revenue

Revenue increased approximately $1.2 million, or 41.0%, during the three months ended June 30, 2020 compared with the three months ended June 30, 2019. This increase was due to a 9.5% increase in tenants and a 29.3% increase in the average lease rate driven by amendments to intercompany leases.

Operating expenses

Operating expenses were comparable with the prior year quarter.

Six Months Ended June 30, 2020 Compared with the Six Months Ended June 30, 2019

Tower results from operations are summarized as follows:

	Six Months Ended June 30,				Change	
($ in thousands)	2020	% of Revenue	2019	% of Revenue	$	%
Tower revenue	$ 7,989	100.0	$ 6,054	100.0	1,935	32.0
Tower operating expenses	3,965	49.6	3,834	63.3	131	3.4
Tower operating income	$ 4,024	50.4	$ 2,220	36.7	1,804	81.3

Revenue

Revenue increased approximately $1.9 million, or 32.0%, during the six months ended June 30, 2020 compared with the six months ended June 30, 2019. This increase was due to a 9.5% increase in tenants and a 20.8% increase in the average lease rate driven by amendments to intercompany leases.

Operating expenses

Operating expenses were comparable with the prior year quarter.

Non-GAAP Financial Measures

Adjusted OIBDA

Adjusted OIBDA represents Operating income before depreciation, amortization of intangible assets, stock-based compensation and certain other items of revenue, expense, gain or loss not reflective of our operating performance, which may or may not be recurring in nature.

Adjusted OIBDA is a non-GAAP financial measure that we use to evaluate our operating performance in comparison to our competitors. Management believes that analysts and investors use Adjusted OIBDA as a supplemental measure of operating performance to facilitate comparisons with other telecommunications companies. This measure isolates and evaluates operating performance by excluding the cost of financing (e.g., interest expense), as well as the non-cash depreciation and amortization of past capital investments, non-cash share-based compensation expense, and certain other items of revenue, expense, gain or loss not reflective of our operating performance, which may or may not be recurring in nature.

Adjusted OIBDA has limitations as an analytical tool and should not be considered in isolation or as a substitute for operating income, net income or any other measure of financial performance reported in accordance with U.S. Generally Accepted Accounting Principles ("GAAP").

The following tables reconcile Adjusted OIBDA to operating income, which we consider to be the most directly comparable GAAP financial measure:

Three Months Ended June 30, 2020

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
Operating income	$ 43,872	$ 8,767	$ 2,229	$ (11,866)	$ 43,002
Depreciation	19,545	11,078	477	(310)	30,790
Amortization of intangible assets	4,301	167	—	—	4,468
OIBDA	67,718	20,012	2,706	(12,176)	78,260
Share-based compensation expense	—	—	—	1,615	1,615
Deal advisory fees	—	—	—	1,060	1,060
Adjusted OIBDA	$ 67,718	$ 20,012	$ 2,706	$ (9,501)	$ 80,935

Three Months Ended June 30, 2019

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
Operating income	$ 20,928	$ 11,880	$ 1,096	$ (9,884)	$ 24,020
Depreciation	26,447	9,882	756	132	37,217
Amortization of intangible assets	5,016	120	—	—	5,136
OIBDA	52,391	21,882	1,852	(9,752)	66,373
Share-based compensation expense	—	—	—	593	593
Adjusted OIBDA	$ 52,391	$ 21,882	$ 1,852	$ (9,159)	$ 66,966

Six Months Ended June 30, 2020

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
Operating income	$ 67,316	$ 18,797	$ 4,024	$ (24,085)	$ 66,052
Depreciation	40,555	21,795	947	(39)	63,258
Amortization of intangible assets	9,015	321	—	—	9,336
OIBDA	116,886	40,913	4,971	(24,124)	138,646
Share-based compensation expense	—	—	—	4,520	4,520
Deal advisory fees	—	—	—	1,970	1,970
Adjusted OIBDA	$ 116,886	$ 40,913	$ 4,971	$ (17,634)	$ 145,136

Six Months Ended June 30, 2019

(in thousands)	Wireless	Broadband	Tower	Corporate & Eliminations	Consolidated
Operating income	$ 45,141	$ 21,929	$ 2,220	$ (20,483)	$ 48,807
Depreciation	51,199	19,832	1,436	270	72,737
Amortization of intangible assets	10,634	161	—	—	10,795
OIBDA	106,974	41,922	3,656	(20,213)	132,339
Share-based compensation expense	—	—	—	2,307	2,307
Adjusted OIBDA	$ 106,974	$ 41,922	$ 3,656	$ (17,906)	$ 134,646

Financial Condition, Liquidity and Capital Resources

Sources and Uses of Cash: Our principal sources of liquidity are our cash and cash equivalents, cash generated from operations, and proceeds available under our revolving line of credit.

As of June 30, 2020 our cash and cash equivalents totaled $143.7 million and the availability under our revolving line of credit was $75.0 million, for total available liquidity of $218.7 million.

The Company generated approximately $128.9 million of net cash from operations during the six months ended June 30, 2020, consistent with the six months ended June 30, 2019.

Net cash used in investing activities decreased $21.5 million during the six months ended June 30, 2020, compared with the six months ended June 30, 2019 due to the following:

- $10.0 million decline in acquisitions. In 2019, the Company acquired Big Sandy Broadband, Inc. for $10.0 million.
- $12.5 million decrease in capital expenditures due primarily to a $30.1 million decline in the Wireless segment as the nTelos and Parkersburg network expansions were completed in the first half of 2019 and Richmond Sliver territory expansion projects have been postponed as we await further clarity on the impact of ongoing negotiations with the new T-Mobile, partially offset by $19.5 million in higher spending in the Broadband segment primarily driven by our Glo Fiber market expansion.

Net cash used in financing activities decreased $8.3 million during the six months ended June 30, 2020 primarily driven by:

- $7.6 million decrease in principal repayments on our term loans, and
- $0.7 million decrease in payments for taxes related to share-based compensation vesting events.

Indebtedness: As of June 30, 2020, the Company’s indebtedness totaled approximately $704.3 million, net of unamortized loan fees of $10.7 million, with an annualized overall weighted average interest rate of approximately 2.5%. Refer to Note 8, *Long-Term Debt* for information about the Company's Credit Facility and financial covenants.

Borrowing Capacity: As of June 30, 2020, the Company’s outstanding debt principal, under the Credit Facility, totaled $715.0 million, with an estimated annualized effective interest rate of 2.5% after considering the impact of the interest rate swap contracts and unamortized loan costs.

As of June 30, 2020, we were in compliance with the financial covenants in our Credit Facility agreement.

We expect our cash on hand, available funds under our revolving credit facility, and our cash flow from operations will be sufficient to meet our anticipated liquidity needs for business operations for the next twelve months. There can be no assurance that we will continue to generate cash flows at or above current levels or that we will be able to maintain our ability to borrow under our credit facility. Thereafter, capital expenditures will likely be required to continue planned capital upgrades to the wireless and broadband networks and provide increased capacity to meet expected growth in demand for our products and services. The actual amount and timing of our future capital requirements may differ materially from our estimate depending on the demand for our products and services, including the outcome of a potential amendment of our wireless affiliate agreement with T-Mobile, new market developments and expansion opportunities.

Our cash flows from operations could be adversely affected by events outside our control, including, without limitation, changes in overall economic conditions, regulatory requirements, changes in technologies, demand for our products and services, availability of labor resources and capital, changes in our relationship with Sprint, natural disasters, pandemics and outbreaks of contagious diseases and other adverse public health developments, such as COVID-19, and other conditions. The Wireless segment’s operations are dependent upon Sprint’s ability to execute certain functions such as billing, customer care, and collections; our ability to develop and implement successful marketing programs and new products and services; and our ability to effectively and economically manage other operating activities under our agreements with Sprint. Our ability to attract and maintain a sufficient customer base, particularly in our Broadband markets, is also critical to our ability to maintain a positive cash flow from operations. The foregoing events individually or collectively could affect our results.

Critical Accounting Policies

There have been no material changes to the critical accounting policies as previously disclosed in Part II, Item 8 of our Annual Report on Form 10-K for the year ended December 31, 2019.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As of June 30, 2020, the Company had $715.0 million of gross variable rate debt outstanding, bearing interest at a weighted average rate of 2.5%. An increase in market interest rates of 1.00% would add approximately $7.0 million to annual interest expense, excluding the effect of our interest rate swaps. The swaps cover notional principal equal to $317.6 million, or approximately 44.4% as of June 30, 2020. The Company is required to pay a combined fixed rate of approximately 1.16% and receive a variable rate based on one month LIBOR (0.17% at June 30, 2020), to manage a portion of its interest rate risk. Changes in the net interest paid or received under the swaps would offset a corresponding portion of the change in interest expense on the variable rate debt outstanding.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Management, with the participation of our President and Chief Executive Officer, who is the Principal Executive Officer, the Senior Vice President - Finance and Chief Financial Officer, who is the Principal Financial Officer, and the Vice President and Chief Accounting Officer, who is the Principal Accounting Officer, conducted an evaluation of our disclosure controls and procedures, (as defined by Rule 13a-15(e) under the Securities Exchange Act of 1934), as of the end of the period covered by this Quarterly report on Form 10-Q.

As disclosed in our Annual Report on Form 10-K for our fiscal year ended December 31, 2019, we identified material weaknesses in internal control over financial reporting. The material weaknesses will not be considered remediated until the applicable enhanced controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. As remediation has not yet been completed, our President and Chief Executive Officer, our Senior Vice President - Finance and Chief Financial Officer, and our Vice President - Chief Accounting Officer, have concluded that our disclosure controls and procedures continued to be ineffective as of June 30, 2020.

In light of the material weaknesses, management performed additional analysis and other procedures to ensure that our unaudited condensed consolidated financial statements were prepared in accordance with U.S. generally accepted accounting principles (GAAP).

Notwithstanding the material weaknesses, management has concluded that the unaudited condensed consolidated financial statements included in this Quarterly Report on Form 10-Q fairly state, in all material respects, our financial position, results of operations and cash flows for the periods presented.

Changes in Internal Control over Financial Reporting

During the three months ended June 30, 2020, the Company continued execution of Management's Remediation Plan. Aside from continued improvements under this plan, there were no changes in our internal control over financial reporting that materially affected or are reasonably likely to materially affect our internal control over financial reporting.

PART II

ITEM 1A. RISK FACTORS

We discuss in our Annual Report on Form 10-K various risks that may materially affect our business. We use this section to update this discussion to reflect material developments since our Form 10-K was filed. As of June 30, 2020, except as described below, there have been no significant changes to the Risk Factors previously disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2019.

Risks Related to the Business Combination between T-Mobile and Sprint could cause significant volatility in the trading and value of the Company's common stock and are likely to adversely affect the operating and financial results of our Wireless segment.

As previously disclosed, on April 1, 2020, T-Mobile US, Inc. ("T-Mobile") publicly announced the completion of its business combination with Sprint Corporation ("Sprint") and subsequently delivered to the Company a notice of Network Technology Conversion, Brand Conversion and Combination Conversion (a "Conversion Notice") pursuant to the terms of the Company's affiliate agreement with Sprint.

Delivery of the Conversion Notice initiated the process set forth in the affiliate agreement to determine the nature of the Company's relationship with the combined entity ("New T-Mobile"). The affiliate agreement provided for a 90-day period following receipt of the Conversion Notice for the parties to negotiate mutually agreeable terms and conditions under which the Company would continue as an affiliate of New T-Mobile. That period expired on June 30, 2020 and New T-Mobile and the Company have not negotiated a mutually acceptable agreement. As such, New T-Mobile has until August 31, 2020, to exercise an option to purchase the assets of our Wireless operations for 90% of the "Entire Business Value" (as defined under our affiliate agreement and determined pursuant to the appraisal process under the affiliate agreement). If New T-Mobile does not exercise its purchase option, the Company would then have a 60-day period to exercise an option to purchase the legacy T-Mobile network and subscribers in our service area. If the Company does not exercise its purchase option, New T-Mobile must sell or decommission its legacy network and customers in our service area.

As previously disclosed, the Company's management has been in discussions with New T-Mobile regarding the future of the Company's Wireless operations; however, there can be no assurance as to the outcome of these discussions, including, without limitation, the timing or terms of, or potential delays or disputes in respect of, any sale of the assets of the Company's Wireless operations to New T-Mobile (including the value received by the Company pursuant to a negotiated transaction or as a result of the appraisal process under the affiliate agreement), or the use of proceeds from any such sale transaction or the post-closing composition or capital structure of the Company's remaining operations and business following any such sale transaction, or the terms of any purchase of the legacy T-Mobile subscriber and network assets in our service area or the terms to finance such an asset purchase. The pending discussions and any ensuing transaction with the New T-Mobile, including any appraisal process with respect to the determination of the valuation of the Company's Wireless operations as provided for under our affiliate agreement, could cause significant volatility in the trading and value of the Company's common stock.

The affiliate agreement also provides that 90 days following delivery of the Conversion Notice, New T-Mobile may effect a Technology Conversion, Brand Conversion and Combination Conversion (each as defined in the affiliate agreement), following which New T-Mobile is permitted to take certain competitive and other actions that could directly or indirectly adversely affect the Company's Wireless business and operations. T-Mobile publicly announced on July 22, 2020 its intention to begin integration of the brands, rate plans, sales and network on August 2, 2020. Although the impact to Sprint customers in our affiliate area is uncertain at this point in time, the integration plans are likely to adversely affect our Wireless segment operating and financial results in future periods. These integration plans and uncertainties may, among other potential impacts, impair our ability to attract and retain customers, disrupt our sales distribution channels including web sales, tele sales, national retailers and third party dealers who may seek to change, cancel or fail to renew existing or expand new business relationships with us. The change in brand from Sprint to T-Mobile may confuse new and existing customers which could slow traffic in our Sprint branded retail stores. Network integration could impair the quality of our network service and cause our customers to change wireless service providers. Competitors may also target our existing customers by highlighting potential uncertainties and integration difficulties that may result from the uncertainties at this time. The merger may also impair our ability to retain and motivate key personnel during the pendency of a potential transaction with New T-Mobile, as existing and prospective employees may experience uncertainty about their future roles.

In addition, management and financial resources have been diverted and will continue to be diverted toward a potential transaction with New T-Mobile. We have incurred, and expect to incur, significant costs, expenses and fees for professional services and other transaction costs in connection with this process and related planning. These costs could adversely affect our financial condition and results of operations prior to the determination of the future of our Wireless operations.

Risks Related to Our Business

The COVID-19 pandemic, and the future outbreak of other highly infectious or contagious diseases, could disrupt the operation on our business resulting in adverse impacts to our financial condition, results of operations, and cash flow.

Since being reported in December 2019 in China, an outbreak of a new strain of coronavirus ("COVID-19") has spread globally, including to every state in the United States. In March 2020, the World Health Organization declared COVID-19 a pandemic and the United States declared a national emergency. The COVID-19 pandemic has negatively impacted the global economy, disrupted global supply chains, and created significant volatility and disruption of financial markets, and another pandemic in the future could have similar effects. Given the ongoing and dynamic nature of the circumstances, it is difficult to predict the impact of COVID-19 on the Company, and there is no guarantee that efforts by Shentel, designed to address adverse impacts of the coronavirus, will be effective.

Governments in the markets that we operate have mandated residents to stay at home and have temporarily closed businesses that are not considered essential. Although our businesses are considered essential, the Company temporarily closed approximately 40% of its Sprint branded retail stores during March 2020 as a result of the COVID-19 pandemic before re-opening them in the second quarter of 2020, which will adversely affect postpaid subscriber gross additions in the Wireless segment. In addition, the current COVID-19 pandemic, or a future pandemic, could have material and adverse effects on our ability to successfully operate and on our financial condition, results of operations and cash flows due to, among other factors:

- additional disruptions or delays in our operations or network performance, as well as network maintenance and construction, testing, supervisory and customer support activities, and inventory and supply procurement;
- increases in operating costs, inventory shortages and/or a decrease in productivity related to travel bans and social distancing efforts, which could include delays in our ability to install broadband services at customer locations or require our vendors and contractors to incur additional costs that may be passed onto us;
- a deterioration in our ability to operate in affected areas or delays in the supply of products or services to us from vendors that are needed for our efficient operations;
- a decrease in the ability of our counterparties to meet their obligations to us in full, or at all;
- a general reduction in business and economic activity may severely impact our customers and may cause them to be unable to pay for services provided; and
- the potential negative impact on the health of our personnel, particularly if a significant number of them are impacted, could result in a deterioration in our ability to ensure business continuity during a disruption.

Shentel has implemented policies and procedures designed to mitigate the risk of adverse impacts of the COVID-19 pandemic, or a future pandemic, on the Company's operations, but it may incur additional costs to ensure continuity of business operations caused by COVID-19, or other future pandemics, which could adversely affect its financial condition and results of operations. However, the extent of such impacts will depend on future developments, which are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of COVID-19 and actions taken to contain COVID-19 or its impact.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

Unregistered Sales of Equity Securities

None.

Use of Proceeds from Registered Securities

None.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

The following table provides information about shares repurchased during the second quarter ended June 30, 2020, to settle employee tax withholding related to the vesting of stock awards. There have been no repurchases of shares during the first half of 2020 through the share repurchase program.

($ in thousands, except per share amounts)	**Number of Shares Surrendered**	**Average Price Paid per Share**	**Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs**	**Approximate Dollar Value that May Yet be Purchased under the Plans or Programs**
April 1 to April 30	—	N/A	—	$ 72,765
May 1 to May 31	1,056	$ 47.98	—	$ 72,765
June 1 to June 30	3,624	$ 51.33	—	$ 72,765
Total	4,680		—	$ 72,765

ITEM 6. Exhibits Index

Exhibit No.	Exhibit	
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.	
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.	
31.3*	Certification of Principal Accounting Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.	
32**	Certifications pursuant to Rule 13a-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. § 1350.	
(101)	Formatted in XBRL (Extensible Business Reporting Language)	
	101.INS	XBRL Instance Document - the instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document
	101.SCH	XBRL Taxonomy Extension Schema Document
	101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
	101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
	101.LAB	XBRL Taxonomy Extension Label Linkbase Document
	101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith

** This certification is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended (Securities Act), or the Exchange Act.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

SHENANDOAH TELECOMMUNICATIONS COMPANY

/s/James J. Volk

James J. Volk

Senior Vice President - Chief Financial Officer
(Principal Financial Officer)

Date: July 30, 2020

EXHIBIT 31.1

CERTIFICATION

I, Christopher E. French, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Shenandoah Telecommunications Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ CHRISTOPHER E. FRENCH
Christopher E. French, President and Chief Executive Officer
(Principal Executive Officer)
Date: July 30, 2020

EXHIBIT 31.2

CERTIFICATION

I, James J. Volk, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Shenandoah Telecommunications Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/JAMES J. VOLK
James J. Volk, Senior Vice President – Chief Financial Officer
(Principal Financial Officer)
Date: July 30, 2020

EXHIBIT 31.3

CERTIFICATION

I, Chase L. Stobbe, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Shenandoah Telecommunications Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/CHASE L. STOBBE
Chase L. Stobbe, Vice President - Chief Accounting Officer
(Principal Accounting Officer)
Date: July 30, 2020

EXHIBIT 32

Written Statement of Chief Executive Officer and Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Each of the undersigned, the President and Chief Executive Officer and the Senior Vice President - Chief Financial Officer, of Shenandoah Telecommunications Company (the “Company”), hereby certifies that, on the date hereof:

(1) The quarterly report on Form 10-Q of the Company for the three months ended June 30, 2020 filed on the date hereof with the Securities and Exchange Commission (the “Report”) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) Information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/CHRISTOPHER E. FRENCH
Christopher E. French
President and Chief Executive Officer
(Principal Executive Officer)
July 30, 2020

/s/JAMES J. VOLK
James J. Volk
Senior Vice President – Chief Financial Officer
(Principal Fincncial Officer)
July 30, 2020

The foregoing certification is being furnished solely pursuant to Rule 13a-14(b) under the Securities Exchange Act of 1934 (the “Exchange Act”) and 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document. This certification shall not be deemed “filed” for purposes of Section 18 of the Exchange Act or otherwise subject to liability under that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act except to the extent this Exhibit 32 is expressly and specifically incorporated by reference in any such filing.