TELECONSTRUCTION

DIPLOMA

SOUTHEAST
Technical College

THE
SMART
WAY UP

2320 N Career Ave ■ Sioux Falls, SD 57107

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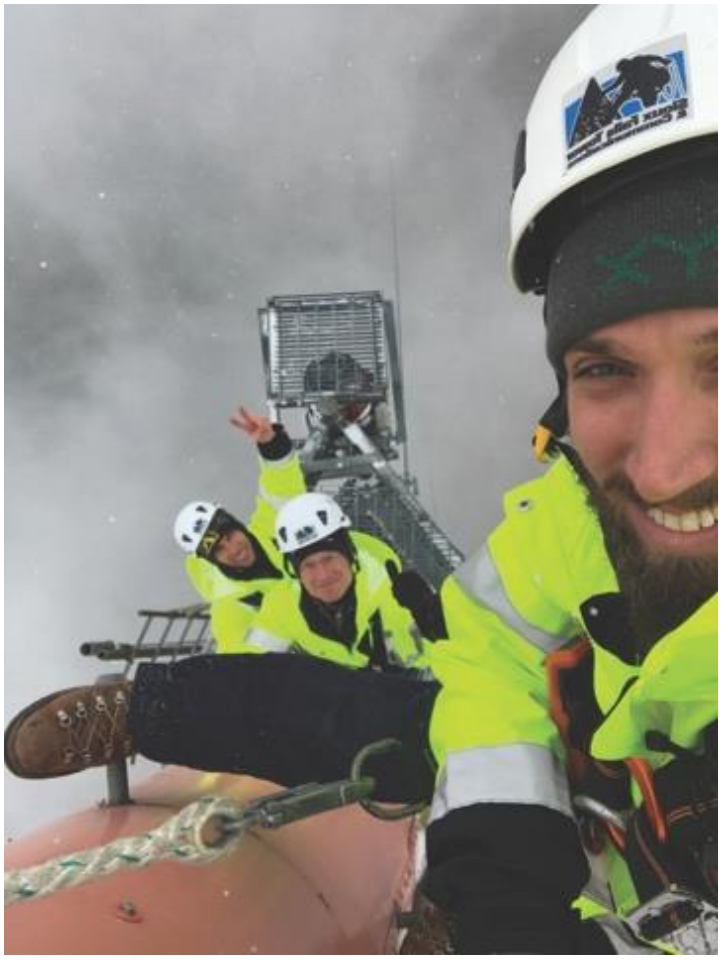

TELECONSTRUCTION DIPLOMA

Executive Summary

Southeast Tech worked with VIKOR Teleconstruction in the fall of 2018 to create the Wireless Infrastructure Technician certificate to assist with meeting the ever-growing needs of the wireless telecommunications industry in South Dakota. VIKOR Teleconstruction, for over 30 years, has been the leading provider of wireless infrastructure in South Dakota. The need for a stronger wireless telecommunications workforce is even greater with the challenge presented by the Honorable Paul TenHaken, Mayor of Sioux Falls. Mayor TenHaken has established a Department of Innovation and Technology which has been charged with having Sioux Falls become a 5G connected city to support such initiatives as autonomous vehicles, adaptive traffic flow technology, mobile notification systems and many other innovative technology supported programs.

> "THIS RESTRUCTURE WILL ENSURE WE STAY ON THE LEADING EDGE OF SMART CITY GOVERNMENT."
>
> Mayor Paul TenHaken

The modification to a diploma provides a more rounded graduate, a solid background in Teleconstruction through the embedded industry certificate and the choice of additional curriculum in an area that would be beneficial to the graduate, but also interesting to the student. The diploma also provides the opportunity for students to pursue financial aid, which will help in the recruitment of students.

Identification and Description of the Program

The Teleconstruction Diploma embeds the Wireless Telecommunication Tower Technician 1 into the curriculum while building a more complete graduate. The diploma will include General Education courses not offered through the certificate. Students will become skilled in basic rigging, fall protection, safety, fiber optics, wireless technology, cell components, antenna basics, principles of electricity, and spectrum management. In addition, students can select additional curriculum beneficial to Teleconstruction such as general construction, electrician or mechatronics areas. Students who complete the Teleconstruction Diploma are eligible to continue their education and earn their Associate in

Applied Science in Mechatronics, Construction Management or Electrician, depending upon their additional coursework.

Objectives and Purpose of the Program

1. Understand and implement the fundamental aspects of fall protection and rescue theory and practical application to tower safety practices for a competent worker.
2. Identify and apply the basic principles of overhead tower construction including safe work habits, protective equipment and tower climbing techniques.
3. Identify, understand and apply the fundamentals of cable accessories and carrier installation standards for a broad cross section of wireless construction.
4. Identify, understand, and discriminate among the basic fundamental elements of wireless technology relevant to tower installation including wireless networks, application, service and a basic technical overview of spectrum principles.
5. Identify and apply the basic principles of electricity and safety standards. Choose and use basic tower installation tools at each job site.
6. Identify tower inspection and maintenance items from Current ANSI tower inspection criteria and apply those items to tower inspection fieldwork and reports.
7. Additional outcomes based upon selected additional courses.

Methods of Attaining the Objectives of the Program

Upon receipt of the South Dakota Board of Technical Education approval, Southeast Technical College will accept up to 24 students for the first class to begin in Fall 2021. The marketing campaign to recruit students will include web, print and radio spots as well as working with VIKOR and other tower installation companies.

The Teleconstruction Diploma will be offered traditionally in a partnership with VIKOR Teleconstruction. Students will attend classes at Southeast Technical College but meet lab requirements at the VIKOR facility and at Southeast Technical College. Courses will also be offered in hybrid formats. Southeast has been a laptop campus longer than any school in South Dakota, and all

classes utilize the Learning Management System, providing students with resources during class and supplemental material and information outside of the classroom.

Description of Labor Market Demands in the United States and South Dakota

Employment Projections for Teleconstruction graduates in the area of Radio, Cellular, and Tower Equipment Installers and Repairers and Telecommunications Equipment Installers.

STATE/REGIONAL DATA

The South Dakota Department of Labor & Regulation lists the Telecommunications Equipment Installers as a field expecting 11.7% growth. See Table Below:

According to Todd Schlekeway, Executive Director for the National Association of Tower Erectors (NATE), he is estimating that South Dakota based companies could hire an additional 440 technicians over the next 5 years. In addition, regional companies in Northwest Iowa, Southwest Minnesota and Northeast Nebraska would have additional hires outside of the 440 technicians.

SD Bureau of Labor Statistics 2018 – 2028			
Position: SOC 49-2022	**Employees 2018**	**Employees 2028**	**2018-2028 %**
Telecommunications Equipment Installers and Repairers, Except Line Installers	526	584	11.7%

NATIONAL DATA

According to the 2019 – 2029 National Bureau of Labor Statistics, there is an expected change from a decrease of 2.6 % in general telecommunications to an increase of 3.7% in wireless infrastructure technician employment. The academic expectations for the Radio, Cellular and Tower Equipment Installer and Repairer is higher and will be addressed by this program. See Table Below:

National Bureau of Labor Statistics 2019 – 2029			
Position:	**Employees 2019**	**Employees 2029**	**2019–2029 %**
Radio, Cellular and Tower Equipment Installers and Repairers (49-2021)	15,000	15,500	3.7%
Telecommunications equipment installers and repairers, except line installers (49-2022)	215,700	210,100	-2.6%

https://www.onetonline.org/link/summary/49-2021.00#WagesEmployment

SOC* - Standard Industrial Classification

Source: Labor Market Information Center from the South Dakota Department of labor Bureau of Labor Statistics and the U.S. Department of Labor

STUDENT NEEDS

This program will provide students with an opportunity to enter an expanding industry that has many different entry points, areas for growth, and training that meets industry need. Most students will enter as a Tower Technician.

INDUSTRY SUPPORT

Southeast Technical College has consulted with VIKOR Teleconstruction, Senator John Thune, the Federal Communications Commission and the City of Sioux Falls and has received a strong level of support as indicated by the letters of support attached in Appendix B. These individuals have indicated they are not able to recruit enough Tower Technicians to meet their needs and in some cases are hiring untrained individuals and training in-house and on-the-job. These letters show support from the certificate creation.

Population to be Served by the Program

This program will be available to all students who successfully meet Southeast Technical College admission criteria established for the program. No restriction will be made regarding race, creed, gender or age.

Southeast Technical College will recruit students from a variety of backgrounds including both traditional and non-traditional.

PROGRAM ENROLLMENT

Starting Semester	Delivery Format	Capacity
Fall 2021	Traditional Day	24

Southeast Tech will start a cohort of 24 students in the Fall of each year. Scheduling of the diploma can include spring start students.

Projected Three-Year Budget Plan

BUDGET PROJECTIONS			
Year	**2021 - 2022**	**2022 - 2023**	**2023 - 2024**
Salaries/Benefits	$0.00	$0.00	$0.00
Adjunct Faculty	$25,000.00	$25,000.00	$25,000.00
Staff Travel	$1,000.00	$1,000.00	$1,000.00
Instructional Materials	$8,000.00	$8,000.00	$8,000.00
Equipment Purchases	$25,000.00	$15,000.00	$6,000.00
Accreditation Fees	$0.00	$0.00	$0.00
Training	$5,000.00	$2,500.00	$1,000.00
Software/Books/Fees	$0.00	$0.00	$0.00
Totals	$64,000.00	$51,500.00	$41,000.00

STAFF CERTIFICATION

Southeast Tech will work with industry to hire qualified adjuncts for this program. The adjuncts will proceed through Southeast Tech's training and mentoring program, including certification as a faculty member for South Dakota Technical Colleges.

SALARIES/BENEFITS/FTE/EQUIPMENT

Southeast Tech will utilize adjunct faculty to teach the Teleconstruction specific courses, lowering the cost of salaries and benefits. Additional core classes in Electrician, Construction and Mechatronics will utilize existing courseware, so no additional budget is required.

Southeast Tech will need to procure safety and harness equipment, specialty tools and equipment. Southeast Tech will work with industry to leverage equipment, tools and supplies.

Program Competencies and Entry and Exit

PROGRAM COMPETENCIES

1. Understand and implement the fundamental aspects of fall protection and rescue theory and practical application to tower safety practices for a competent worker.
2. Identify and apply the basic principles of overhead tower construction including safe work habits, protective equipment and tower climbing techniques.
3. Identify, understand and apply the fundamentals of cable accessories and carrier installation standards for a broad cross section of wireless construction.
4. Identify, understand, and discriminate among the basic fundamental elements of wireless technology relevant to tower installation including wireless networks, application, service and a basic technical overview of spectrum principles.
5. Identify and apply the basic principles of electricity and safety standards. Choose and use basic tower installation tools at each job site.
6. Identify tower inspection and maintenance items from Current ANSI tower inspection criteria and apply those items to tower inspection fieldwork and reports.

ENTRY AND EXIT POINTS

Entry point: Starting in the Fall 2021 semester. Entry will happen at the start of the spring semester each academic year and Southeast Tech will also look at fall starts.

Exit point: Graduation of a one-year diploma with possibilities to enter multiple AAS degrees. Transfer to a SDBOR degree would be more probable for Mechatronics and Construction Management as they have transfer agreements with SDSU, while Electricians graduate and work toward their journeyman's license.

Statement of Non-Duplication

The Telecommunications Diploma is a modification of an existing Southeast Technical College certificate and is not offered by any of the Technical Colleges in South Dakota.

Wage Factor

Data from the South Dakota Department of Labor Occupational Wage Estimates for 2019 positions annual starting wage range from $19.23 to $24.03 for the 10th to 25th percentile. The average wage for 2019 was from $26.55 to $29.17. See Table Below:

South Dakota Department of Labor Occupational Wage Estimates 2019 Data			
Occupation	**2019 Avg Wage**	**10th Percentile**	**25th Percentile**
Radio, Cellular and Tower Equipment Installers and Repairers (SOC 49-2021)	$26.55	$19.24	$20.51
Telecommunications Equipment Installers and Repairers, Except Line Installers (SOC 49-2022)	$29.17	$19.23	$24.03

Data from the National Department of Labor Occupational Wage Estimates for 2019 positions annual starting wage range from $15.46 to $20.95 for the 10th to 25th percentile. The average wage for 2019 was from $27.80 to $28.15.

See Table Below:

National Department of Labor Occupational Wage Estimates 2019 Data			
Occupation	**2019 Avg Wage**	**10th Percentile**	**25th Percentile**
Radio, Cellular and Tower Equipment Installers and Repairers (49-2021)	$27.80	$15.46	$19.76
Telecommunications Equipment Installers and Repairers, Except Line Installers (49-2022)	$28.15	$15.91	$20.95

Suggested CIP Code

CIP Code: 47.0103

Title: Communications Systems Installation and Repair Technology

Definition: A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair one- and two- way communications equipment and systems, including television cable systems and mobile or stationary communication devices. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of communications systems.

Appendix A – Curriculum Design

TELECONSTRUCTION DIPLOMA

General Education Courses:

Course #	Course Name	Credits
MATH	Math Electives – MATH 100, 102T, 103T	3
ENGL	Communications Electives – ENGL 100, 101T	3
Science/Humanities	EMT 105, PSYC 100, 102	3
	Total Credits:	**9**

Teleconstruction Courses:

Course #	Course Name	Credits
WIT 110	Site Safety Practices and Procedures	2
WIT 120	Wireless Technology and Structures	2
WIT 130	Wireless Site Operations	2
WIT 140	Regulations, Standards and Professionalism	2
	Total Credits:	**8**

CHOICE OF ADDITIONAL CURRICULUM MODULES:

Construction Courses:

Course #	Course Name	Credits
CMT 101	Construction Basics	3
DT 102	Print Reading for Construction	2
CMT 110	Construction Equipment	2
CMT 210	Risk Management & Safety	3
	Elective Credits	3
	Total Credits:	**13**

Electrician Courses:

Course #	Course Name	Credits
ELCN 101	Fundamentals of Electricity	3
ELCN 101L	Fundamentals of Electricity Lab	2
ELCN 122	Blueprints and Schematics I	3
	Elective Credits	5
	Total Credits:	**13**

Mechatronics Courses:

Course #	Course Name	Credits
CIS 112	Network Electronics	2
ET 114	Electronic Concepts I	3
ET 116	DC/AC Electronics Lab	3
	Elective Credits	5
	Total Credits:	**13**

PROGRAM COURSE LIST WITH DESCRIPTIONS

Teleconstruction Courses:

WIT 110 – Site Safety Practices and Procedures

2 Credit Hours

This course focuses on practical application of working at heights using various methods of fall protection, especially use of the Personal Fall Protection System, Rope Access techniques, and rescue systems. Other topics include: emergency response, dropped objects, electricity and electrical safety, “struck by”/”caught between”, radio frequency (RF) energy, ladders, excavations, heavy machinery, traffic control, hazard identification and mitigation, and situational awareness

WIT 120 – Wireless Technologies and Structures

2 Credit Hours

This course introduces the fundamental elements of wireless technology including cellular, microwave and broadcast antenna systems and the structures that support them. Coursework will provide practical application of installation of shelter-based radio equipment, batteries, grounding, feedlines and connectors, tower-top signal and power distribution and radio equipment, antenna mounts and antennas. Other topics include: basic technical overview of wireless networks, spectrum principles and characteristics, antenna system testing instruments and procedures, basics of tower structure design, construction and maintenance and aviation marking/lighting systems.

WIT 130 – Wireless Site Operations

2 Credit Hours

This course introduces the fundamental tools, machinery, methods and skills required for efficient and safe work on Wireless Antenna Sites. Coursework will provide practical application of rigging equipment to lift loads and personnel, rigging plans, equipment operation, Commercial Motor Vehicle driving, power tool usage and hand tools.

WIT 140 – Regulations, Standards and Professionalism

2 Credit Hours

This course introduces the ANSI/ASSE A10.48 standard for work on communication structures as well as an overview of other principal standards and regulations governing the industry. Coursework will provide practical application of blueprints, installation drawings, rigging plans, close-out packages, site access protocols, computer and mobile device usage, communications, and professionalism. Students will prepare for and earn the NWSA TTT1 credential.

Construction Courses:

CMT 101 - Construction Basics

3 Credit

An introductory course that will introduce students to shop safety, basic hand tools, basic power tools and construction basics. Students will learn the essentials of construction and build construction projects in Construction Basics Lab to help reinforce their skills.

DT 102 – Print Reading for Construction

2 Credits

This is an introductory course to print reading for the engineering technology field. This course will cover the use of prints to determine structures and common materials labeled on plans. Basic sketching and lettering will be covered as it relates to the construction industry

CMT 110 - Construction Equipment

2 Credits

This course is designed to introduce students to a variety of construction equipment. The course will include some hands-on instruction of equipment as well as overviews of large construction equipment. The course will discuss the preventative maintenance requirements of construction equipment.

CMT 210 – Risk Management & Safety

3 Credits

Students will be introduced to field construction management and operations. Particular emphasis will be placed on integrating into the construction companies during the field construction lab experiences. An OSHA Construction Safety course will be conducted prior to entry to the field.

Elective Credits

3 Credits

Construction/Electrician/Electronics/Surveying/Welding/Business/Supervision

Electrician Courses:

ELCN 101 – Fundamentals of Electricity Lab

3 Credits

This course will introduce students to the theory of DC and AC electricity including Ohm's law and the principals affecting the transmission of electrical current through conductive media. Electrical safety and safe practices are introduced. Applied mathematics will be used to investigate multi-phase applications of alternating current.

ELCN 101L - Fundamentals of Electricity Lab

2 Credits

This lab provides hands-on experience for concepts introduced in Fundamentals of Electricity. Students will build and test DC and AC circuits gaining experience using electrical equipment.

ELCN 122 - Blueprints and Schematics I

3 Credits

This course will introduce students to electrical symbols, conductor types and sizes, connector types and sizes, electrical schematics and the basics of architectural drawing.

Elective Credits

5 Credits

Construction/Electronics/Surveying/Welding/Business/Supervision

Mechatronics Courses:

CIS 112 – Network Electronics

2 Credits

This hands-on course is designed to give computer networking students the background and foundational knowledge of electronics, and its relation to the computing field. This course will cover basics like AC/DC voltage, current, resistance, frequency, analog signals, electronic components, safety, and wire/cabling specifications. Other advanced topics will include power supplies, PoE (Power over Ethernet), power calculations watts/ dB, modulation, throughput calculations, and digital signals.

ET 114 – Electronic Concepts I

3 Credits

An introduction to electronic components, their diagrams, wiring methods and electrical safety. Voltage sources, current properties, component characteristics, and their relationships using Ohm's law, Watt's law and Kirchoff's laws will be studied with a mathematical approach to analyze electronic circuits. Also included. Basic algebra, exponents, metric prefixes, and trigonometry will be covered as it relates to electronic circuits.

ET 116 - DC/AC Electronics Lab

3 Credits

Provides hands-on experience in breadboarding circuits, reading schematics, soldering, and operation of test equipment to measure voltage, current, and resistance. Ohm's Law, Watt's Law, and Kirchoff's Laws are studied. AC concepts and theory are also studied. The practical aspects of using meters, oscilloscopes, and function generators to evaluate and troubleshoot reactive, resonant, and transformer circuits are practiced.

Elective Credits

5 Credits

Construction/Electrician/Electronics/Surveying/Welding/Business/Supervision

Appendix B – Letters of Support

THE HONORABLE JOHN THUNE, US SENATOR TO SOUTH DAKOTA

Chairman
Commerce Committee's Subcommittee on Communications, Technology, Innovation, & the Internet

BRENDAN CARR

Commissioner
Federal Communications Commission

CRAIG SNYDER

Chief Executive Officer
Vikor

TODD SCHLEKEWAY

Executive Director
NATE

JOHN THUNE
SOUTH DAKOTA

COMMITTEES
AGRICULTURE, NUTRITION & FORESTRY
COMMERCE, SCIENCE & TRANSPORTATION
FINANCE

https://www.thune.senate.gov

United States Senate
WASHINGTON, DC 20510–4105

August 2, 2019

Nick Wendell
Executive Director
South Dakota Board of Technical Education
South Dakota Department of Education
800 Governors Drive
Pierre, SD 57501

Dear Mr. Wendell:

Technology advancements are impacting the lives of Americans in ways many of us could never have imagined. Deploying modernized broadband infrastructure to make those advancements available throughout America and here in South Dakota has never been more important. I applaud Southeast Technical Institute (STI) for developing its proposed Wireless Infrastructure Technician certification program that would help train the workforce needed to deploy fifth-generation (5G) wireless services.

5G is expected to contribute $275 billion in new American investment, $500 billion in economic growth, and create three million new jobs. Winning the race to 5G requires world-leading technology, spectrum, and the ability to deploy and build-out wireless services. Cell tower climbers and technicians specialize in the maintenance and installation of cell tower components. It is estimated that over 800,000 small cells will need to be deployed nationwide to support 5G networks. It is crucial that all states have the workforce to meet those needs.

I am excited to watch how emerging technologies will continue to take shape. States like South Dakota can play a leading role in the technological revolution, and I appreciate STI's commitment to helping ensure that we have the necessary workforce to deploy and build 5G services in South Dakota.

Sincerely,

JOHN THUNE
United States Senator

Cc: Mr. Robert J. Griggs, President, Southeast Technical Institute

246 FOUNDERS PARK DRIVE
SUITE 102
RAPID CITY, SD 57701
(605) 348–7551

5015 SOUTH BUR OAK PLACE
SIOUX FALLS, SD 57108
(605) 334–9596

320 SOUTH 1ST STREET
SUITE 101
ABERDEEN, SD 57401
(605) 225–8823

Federal Communications Commission
Washington, D.C. 20554

Brendan Carr
Commissioner

August 15, 2019

Nick Wendell
Executive Director
South Dakota Board of Technical Education
South Dakota Department of Education
800 Governors Drive
Pierre, SD 57501

Dear Mr. Wendell:

The U.S. is in the midst of a transition to 5G, which is the next generation of wireless connectivity. 5G is more than just faster Internet speeds—it is a massive new infrastructure build that will power everything from smart cities to precision agriculture. To enable 5G, the private sector is working to increase the number of cell sites in the U.S. by 10 to 100 fold.

At the FCC, we have been working to accelerate the buildout of 5G infrastructure—everything from the thousands of new cell towers to the hundreds of miles of new fiber builds needed to connect these sites. These efforts and the private sector's investments have been delivering results. In the U.S., more fiber was built last year than ever before, and 60,000 small cells were deployed in 2018—a massive increase from the 17,000 deployed in 2017. In fact, industry estimates that over 800,000 new small cells will need to be built by 2026, not to mention the tens of thousands of additional cell towers and upgrades to existing structures that will be required to transition to 5G.

But all of this growth highlights a new challenge and opportunity: how do we ensure that South Dakota and the rest of the country have the skilled workforce in place to build these next-gen networks.

That's where a Wireless Infrastructure Technician certification program like the one Southeast Tech is considering could make a significant difference—it can create a pipeline to good-paying jobs building out this 5G infrastructure.

The data show the significant demand for tower techs and the challenges that employers face in filling these jobs. Across the country, wireless crews estimate that they need an additional 20,000 skilled workers to complete this 5G build. That would nearly double the size of this group of skilled workers, bringing thousands of families into the middle class. In South Dakota alone, tower companies estimate they can hire an additional 440 tower technicians over the next five years to meet current and future demand. And as Sioux Falls is a hub for wireless

deployments in Northwest Iowa, Southwest Minnesota, and Northeast Nebraska, those communities will present new job opportunities as well for South Dakota tower techs.

Tower climbing is not just a one-off job, it's a career with a clear pathway for upward mobility. Nationwide, the average wage for an entry-level tower tech ranges from $15-$20 an hour, and that figure quickly jumps to $22-$25 with just a few years of experience. For those who go on to become a crew leader or foreman, they can make anywhere from $26 to $38. And I've met with several tower climbers who started out as tower techs and went on to become CEOs of their respective companies.

Spending time with tower techs and telecom crews across the country has only reinforced the need for programs that can train more 5G workers. In Cincinnati, Ohio, I met with a company that has doubled the number of small cells they're putting up from 30 to 60 a month, and they recently hired four new crews to keep up with demand. In San Jose, California, I met with a worker who has been climbing towers for seven years. He now wants to double the size of his crew but is struggling to find enough workers. In Lewisville, Texas, I met with one company that had more than 500 openings for tower techs they were looking to fill.

Every crew I've met with agrees that having more tower training programs, like the one proposed by Southeast Tech, would reduce training time and churn and free up thousands of dollars that can be put toward other purposes like hiring more workers and deploying more infrastructure. So I'm pleased to write in support of Southeast Tech's initiative.

Southeast Tech's program would be modeled on the Tower Installation Program at Aiken Technical College in South Carolina. Their seven to twelve-week program trains students in accordance with the standards and internationally-recognized certifications, including "TTT-1," established by the National Wireless Safety Alliance. This program can provide the right mix of physical and classroom skills to land a good-paying job in this field. I understand nearly 100 percent of the Aiken program's graduates are placed with a local tower company, with the vast majority receiving job offers even before they graduate. Establishing a program of this kind at Southeast Tech will address South Dakota's need for more 5G-ready workers and help close the skills gap in wireless infrastructure.

5G is estimated to require $275 billion in investment, adding $500 billion in economic growth and creating three million new jobs. South Dakota has a vital role to play in this effort and creating a pipeline for 5G jobs at Southeast Tech will help ensure we have the necessary workforce to deploy next-gen networks across the state. I strongly support Southeast Tech's proposed Wireless Infrastructure Technician certification program and look forward to seeing South Dakota reap the benefits of a more robust wireless workforce.

Sincerely,

Brendan Carr
Commissioner
Federal Communications Commission

VIKOR
TELECONSTRUCTION

4300 N NORTHVIEW AVE, SIOUX FALLS, SD 57107
605.331.6972 / INFO@VIKORINC.COM

VIKORINC.COM

August 14, 2019

Nick Wendell, Executive Director
South Dakota Board of Technical Education
SD Board of Education
800 Governors Drive
Pierre, SD 57501

Re: Letter of Support for STI's Wireless Infrastructure Technician program

Dear Mr. Wendell and South Dakota Board of Technical Education Members,

We are strongly in support of the Wireless Telecommunications Technician program being proposed by Southeast Tech and recommend the board's approval.

By way of background, VIKOR Teleconstruction is one of the leading providers of wireless teleconstruction services in the state of South Dakota with offices in Sioux Falls and Rapid City. We perform work for all the major carriers such as Verizon, AT&T, T-Mobile and Sprint. We also provide similar services for radio, television, public safety, and other related industries.

At present our industry relies on training from within our own organizations. There are no trade programs within the state and only one nationally in South Carolina that we can rely on for recruitment of trained individuals. We spend roughly $12,000 per person on training within the first six months of employment. A qualified individual is capable of earning upwards of $70,000 annually in their first year of employment. Industry demand for wireless telecommunications technicians is high and has been steady for several years. With 5G technology in its early stages, the demand will only grow from here. VIKOR estimates the need for 45 technicians per year for the foreseeable future. And we are just one employer in the state.

Furthermore, STI has the opportunity to be leaders in the nation in this emerging trade. With the recent release by the National Wireless Safety Alliance of wireless technician trade credentials, it is perfect timing for the school to train to these nationally recognized standards and have the potential to attract students from far and wide.

Our company is only limited in growth by the number of qualified individuals we can bring on board. We strongly encourage approval of STI's proposal and stand ready to place as many of the certified students as we can. If I can answer any other questions, I'm happy to do so.

Sincerely yours,

Craig M. Snyder

Craig M. Snyder
Chief Executive Officer

National Association of Tower Erectors

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August 14, 2019

Nick Wendell, Executive Director
South Dakota Board of Technical Education
SD Board of Education
800 Governors Drive
Pierre, SD 57501

Dear Mr. Wendell and South Dakota Board of Technical Education Members:

The National Association of Tower Erectors (NATE), a South Dakota-based national trade organization in the wireless infrastructure industry whose membership consists of over 900 member companies, offers our full endorsement and support for the Wireless Infrastructure Technician Program that is under development at Southeast Technical Institute in Sioux Falls, South Dakota. The Association encourages the South Dakota Board of Technical Education to formally approve this program in an expedient manner.

NATE's member companies know firsthand that one of the significant challenges facing the industry is the shortage of a properly trained and qualified workforce that is expected to possess the diverse skill set necessary to produce the expansion of universal broadband, public safety communications and ubiquitous 5G coverage across South Dakota and the United States. To demonstrate this point, NATE estimates that the industry could employ an additional 20,000 technician jobs to meet this demand nationally. To extrapolate this further, the Association believes that our member companies located in South Dakota could accommodate an additional 440 wireless technicians over the course of the next 5 years.

Given the robust nature of the industry, workforce development has emerged as a top priority and the Association is encouraging community colleges and technical institutes to develop classroom and field-based programs to educate and train a future pipeline of workers to build, deploy and maintain the next generation networks and related-infrastructure that is so vital for the city, state and country's future. NATE believes that the Wireless Infrastructure Technician Program at Southeast Technical Institute will ultimately serve as a model to emulate nationally in order to promote the professional career path opportunities available in our thriving industry.

In summary, NATE strongly supports the Wireless Infrastructure Technician Program at Southeast Technical Institute and believes it will be a successful, in-demand program that will ultimately benefit both technical education and employers in the region. Please feel free to contact me directly with any additional questions you may have regarding NATE and our industry.

Sincerely,

Todd Schlekeway
Executive Director

Your Partner in Safety, Standards, and Education.