Executive Summary

a. Backhaul capacity is a critical element in providing affordable broadband services. Without the “middle mile” link between local Internet access points and Internet backbone networks, the broadband revolution will slow to a crawl – and in remote, rural areas, it will not happen at all. Numerous localities around the United States desperately require low-cost, high-capacity middle-mile links. 52|eighty will close that gap in rural areas, using high-capacity microwave links and infrastructure sharing. 52|eighty will empower wireless last-mile broadband providers to reach more consumers, anchor organizations, public safety agencies and small businesses. It will do this by putting middle-mile infrastructure within the last-mile providers’ reach – both geographically and economically. Because of the cost advantages of microwave links over constructing fiber backhaul networks, 52|eighty’s Vertical Fiber project will enable last-mile broadband providers to avoid prohibitively expensive backhaul facilities. They will then be able to extend the reach of their own last-mile networks further into unserved and underserved areas, with more affordable broadband service packages. For these areas, building fiber backhaul networks is simply cost-prohibitive relative to wireless links. b. 52|eighty has identified over 39 rural sites for which microwave is the middle-mile answer. These 39 sites will serve 1292 communities across 16 states – from Friendship, AK, to Pickens, SC, to Oskaloosa, MO. The common denominator in these areas is a lack of affordable broadband coverage, due largely to the historically high costs of infrastructure – including backhaul. c. The Vertical Fiber project will pass 1.9 million households and a total of 4.7 million residents. It will pass 351,635 businesses. These figures are based on the 2000 census numbers and account for the communities covered, per above. Great care was taken to make the mapping tool maps match technically feasible service areas as contemplated in the official engineering of the network; however, as with any infrastructure deployment, there may be a need to make small adjustments once the deployment teams are in the field. d. Vertical Fiber will pass 2,397 medical and educational facilities, libraries, public safety entities, and critical community organizations. These institutions will be particularly well served by 52|eighty’s project. For example, remote education and telemedicine services are two key areas that are seriously lacking in the rural communities 52|eighty intends to serve. Vertical Fiber will remedy this and enable currently disenfranchised communities and end users to enjoy the benefits of 21st century communications. Additionally, 52|eighty will work with last-mile service providers to provide targeted service packages and rate plans for educational and medical institutions as well as other anchor institutions, so that they can pioneer digital applications and services that will be key for the well being of residents throughout the 1292 rural communities. e. As a long-standing provider of wireless tower infrastructure access and support services, 52|eighty is able to leverage that capacity and capability to create an unprecedented model of backhaul efficiency and effectiveness. The
company has an agreement with Level 3 to establish towers on or adjacent to Level 3’s backbone points of presence (POPs), allowing 52|eighty to terminate microwave links from last-mile providers in the rural, unserved and underserved areas. Last-mile providers can either hub their traffic and route it to 52|eighty’s facilities or co-locate their base stations at those tower sites. 52|eighty will provide the tower access, site preparation, installation, interconnection, and maintenance for the microwave links to the rural last-mile providers, in addition to the lateral fiber connection to Level 3’s backbone POP. (See Supplement for letter of agreement.) The resulting middle-mile service will be able to sustain last-mile download speeds of 100 megabits per second or more – and at competitive cost of approximately $190,000 per service area. This capability has already attracted last mile providers, including Clear Talk, Open Range, Pocket Communications, and the Digital Bridge program. These broadband service providers see 52|eighty as an essential link between their own rural networks and the larger backbone providers such as Level 3. In addition, 52|eighty is actively working with its last-mile partners to pioneer pricing packages and marketing incentives. The company is already partnering with Open Range and the NTCH/Clear Talk on pilot networks in Arizona and Colorado, respectively. These projects allow for a variety of pricing plans, which will include 52|eighty providing free tower access to last-mile providers for the first year – with half-priced service for the second year. With BIP/BTOP funding, 52|eighty will be able to extend this offer to all 39 sites and 1292 communities, greatly lowering initial capital costs for last-mile service providers. In addition, 52|eighty plans to offer discounted pricing for links either directly to anchor institutions or for last-mile providers serving those institutions. f. 52|eighty is committed to adhering to the principles of the FCC’s Internet Policy Statement. We will not favor any lawful Internet application or content over another, and our middle mile service will act strictly as a transport medium for last mile and other providers, providing the connection to the public Internet backbone. 52|eighty intends to negotiate in good faith with all interested parties. Our infrastructure and business plans are structured to serve last-mile providers that use any broadband wireless access technology. 52|eighty will be technology-neutral and non-discriminatory in providing access to its middle-mile services. g. 52|eighty will deploy a hybrid network, adding to the overall cost-effectiveness of WiMAX as opposed to wired technology options. The Vertical Fiber project will provide middle-mile links for last-mile providers that use any broadband wireless access technology, including 802.16 (WiMAX) and LTE 4G systems. The lack of older, legacy network architectures at 52|eighty’s facilities will translate into lower preparation, installation and interconnection costs for multiple last-mile providers. h. The 52|eighty management team consists of professionals with extensive experience in the areas of network design, deployment, operations, and growth. Our areas of expertise include traditional landline telephony and data networks, wireless telephony and data networks, and IT networks and systems. 52|eighty also benefits from an experienced sales staff with vast knowledge of the intended local telecom markets combined with an all IP-based ethernet support network. i. The overall infrastructure cost for 52|eighty’s middle-mile broadband project will be approximately $7.8 million. The cost translates into roughly $190,000 per service area. j. The overall expected subscriber projection for the project is 588,431 subscribers by the end of year five, 43,990 businesses and 300 strategic institutions. k. The award of BIP/BTOP monies to 52|eighty will generate new jobs, both directly and indirectly. As a threshold matter, 52|eighty will create new positions within its own employment ranks, in the areas of sales, marketing, installation, service provision and maintenance of its interconnection sites. Secondary job creation will occur among the ranks of employees at 52|eighty’s downstream last-mile customers,
which will be able to build their businesses upon the reality of cost-effective, high-capacity backhaul links. This will lead to tertiary effects on employment, as end users take advantage of broadband Internet access to start and expand businesses. Providers of broadband wireless customer premises equipment will find new customers in these previously unserved and underserved areas. And it is difficult to calculate the number of jobs that will be created and/or preserved across the 1292 rural communities that will have high-speed Internet access, but the multiplying effect could be dramatic. Moreover, 52|eighty’s business plan calls for procuring American-designed and American-manufactured network equipment. This will provide further downstream benefits for U.S. telecommunications equipment companies and their employees. 52|eighty believes that U.S. technology is highly competitive in terms of cost and quality and will therefore constitute an important part of its offerings to last-mile operators in rural areas.