



# STANDING ROCK SIOUX TRIBE

## BUREAU OF INDIAN AFFIARS ROUTE 6 RAISE GRANT APPLICATION



### BASIC PROJECT INFORMATION

Project Name	Bureau of Indian Affairs Route 6 Reconstruction and Preservation Project
Project Sponsor	Standing Rock Sioux Tribe
Project Type	Rural Capital Project
RAISE Request Amount	\$18,572,895
Total Project Cost	\$18,882,756

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Supporting Information can be found at:

<https://www.srfconsulting.com/srst-bia-rt-6-raise/>

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## Merit Criteria

### 1. Safety

The BIA 6 Reconstruction and Preservation Project (Project) will improve safety for all users of the transportation system, including motor vehicles, pedestrians, bicyclists, and Tribal transit users. Restored pavement on BIA 6 will provide a smooth driving surface with improved friction coefficients, reducing the likelihood of collisions, reducing hydroplaning, and reducing the risk of fatalities and injuries by 26 percent<sup>1</sup>. Updated roadway striping, new centerline, and new edge line rumble strips will increase visibility and warn drivers of lane and road departure, reducing the risks of injury or death by up to 29 percent<sup>2</sup>. The shoulder restoration of the Project provides additional space for vehicles that depart the travel lane to maneuver safely back onto the roadway. Correcting deficient ditches or inslopes where applicable along BIA 6, improves safety and reduces the severity of crashes involving roadway departure<sup>3</sup>. Correcting cross slope deficiencies and inconsistencies on BIA 6 will decrease the risk of hydroplaning and reduce damage deficient cross slopes can cause to the roadway and shoulder through stormwater runoff, ultimately reducing the risk of hazardous conditions on BIA 6 caused by storm related weather events. Phase 1, or the reconstruction portion of the Project will improve vertical curves, increasing sight lines, enhancing perception-reaction time, and improving stopping sight distance<sup>4</sup>.

#### *Executive Order 13985*

The safety benefits of the Project will help address a parallel priority objective of USDOT: equity. *Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government* provides direction to advance equity for all people, including people of color and others who have historically been underserved, marginalized, and negatively impacted by persistent poverty and inequality<sup>5</sup>. USDOT is focused on the disproportionate negative safety impacts that affect roadways on the Standing Rock Reservation including BIA 6. According to USDOT's National Highway Traffic Safety Administration (NHTSA), people who are American Indian and Alaska Native have roadway fatality rates more than double the national rate on a per population basis<sup>6</sup>. As of 2020, Sioux County, ND within the Standing Rock Indian Reservation (Reservation), has a racial makeup of 81 percent American Indian and Alaska Native, 14 percent White, 4 percent Two or More Races, and less than 1 percent Black or African American.

Figure 1. BIA 6 Existing Conditions



<sup>1</sup> <https://tinyurl.com/mr8zzad6>

<sup>2</sup> [National Cooperative Highway Research Program \(NCHRP\) Report 641](https://www.nchrp.org/publications/641)

<sup>3</sup> [https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/horcurves/fhwasa15084/ch6.cfm](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/horcurves/fhwasa15084/ch6.cfm)

<sup>4</sup> [https://safety.fhwa.dot.gov/older\\_users/handbook/ch4.cfm#ss2](https://safety.fhwa.dot.gov/older_users/handbook/ch4.cfm#ss2)

<sup>5</sup> <https://www.federalregister.gov/documents/2021/01/25/2021-01753/advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government>

<sup>6</sup> <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813118>



### Crash Data

In 2022, the Standing Rock Sioux Tribe (Tribe) began updating its existing Tribal Transportation Safety Plan. Through this process, the Tribe discovered that there are alarming holes in crash data available for the Reservation and Sioux County. For example, for the years 2014 and 2018 through 2021, NDDOT reported no crashes in all Sioux County. The Tribal Transportation Department has put in a data request with the Tribal Police Department and the Bureau of Indian Affairs (BIA) to verify data is being reported and coordinated with NDDOT. As of the writing of this narrative, no additional data has been received. There appear to be issues and validation concerns with five-year (2017-2021) crash data therefore, 10-year (2012-2021) crash data was also analyzed. The 10-year crash data showed only one property damage only crash on BIA 6 in 2015. Standing Rock Sioux Tribe is working diligently to understand why there are null values for entire years of crash data, and until site specific data is received, the Tribe is focusing on proven proactive safety countermeasures which will be implemented through the Project.

Figure 2. Safety Survey Comments



### Tribal Transportation Safety Plan

The Tribe is currently in the process of updating the [current safety plan](#). Through the update, qualitative data has been collected regarding [safety on BIA 6](#). A summary of those comments provides valuable insight into the existing safety concerns residents have within the Project area. Specific comments on BIA 6 include:

- Pavement Condition
- Steep Inslopes
- No Guardrails

### National Roadway Safety Strategy & Implementation

The Project forwards objectives of USDOT and the National Roadway Safety Strategy<sup>7</sup>. The primary Safe System Approach elements advanced by the Project include:

Element of the Safe System Approach	As Addressed by BIA 6 Project
<b>Safer Roads:</b> Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.	<ul style="list-style-type: none"> <li>• The Project will improve safety for a vulnerable Tribal population and is located entirely in an Area of Persistent Poverty and Historically Disadvantaged Community.</li> <li>• New pavement will provide a smooth driving surface. Improved friction will reduce the likelihood and incidence of collisions and hydroplaning.</li> </ul>

<sup>7</sup> <https://www.transportation.gov/sites/dot.gov/files/2022-02/USDOT-National-Roadway-Safety-Strategy.pdf>

**Safer Roads:** continued...

- Restore the pavement to an excellent condition. A 2014 study<sup>8</sup> showed rural, two-lane highways with pavement kept in good condition, reduced fatalities and injuries by 26 percent when compared to roadways in poor condition.
- Update roadway striping and install new centerline and edge line rumble strips will warn drivers of lane departure, further reducing the risk of collisions due to lane and road departure.
- Shoulder restoration will provide additional space for vehicles that depart the travel lane to maneuver safely back onto the roadway.
- The Project will correct deficient ditches or inslopes where applicable, improving safety and reducing the severity of crashes involving road departure<sup>9</sup>.
- Cross slope correction will fix variability and inconsistencies on BIA 6 to decrease the risk of hydroplaning and reduce the damage deficient cross slopes can cause to the roadway and shoulder through stormwater runoff, reducing the risk of hazardous conditions caused by storm related weather events.

**Safer Speeds:** Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted outreach and education campaigns, and enforcement.

- Phase 1, or the reconstruction portion of the Project will improve existing vertical curve deficiencies, increasing sight lines, enhancing perception-reaction time, and improving stopping sight distance<sup>10</sup>.

Work that the SRST is doing now, aside from the BIA 6 Project also addresses an additional Safe System Approach element:

Element of the Safe System Approach	As Addressed by the Tribe
<b>Safer People:</b> Encourage safe, responsible behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.	<ul style="list-style-type: none"> <li>• The <a href="#">North Dakota Safety Council</a> has partnered with the Tribe, rural Tribal communities, Standing Rock Community School (k-12), and other public and private organizations across the Reservation to provide safety training as it relates to driver safety and behavior, among other courses.</li> </ul>

<sup>8</sup> <https://tinyurl.com/mr8zzad6>

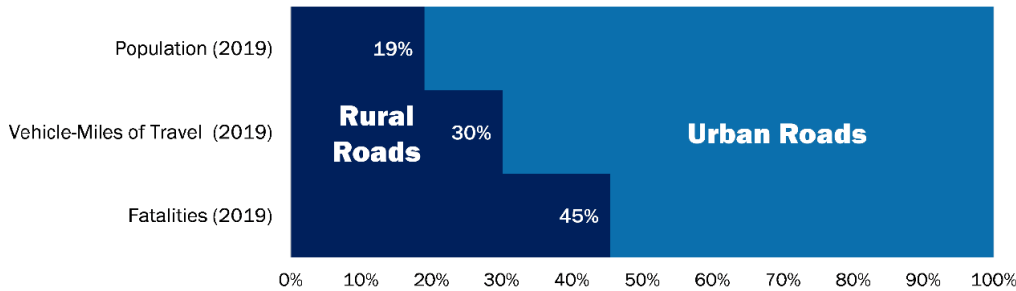
<sup>9</sup> [https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/horcurves/fhwasa15084/ch6.cfm](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/horcurves/fhwasa15084/ch6.cfm)

<sup>10</sup> [https://safety.fhwa.dot.gov/older\\_users/handbook/ch4.cfm#ss2](https://safety.fhwa.dot.gov/older_users/handbook/ch4.cfm#ss2)

The Project is on a rural road, known to USDOT as having a disproportionate level of fatalities and fatal crashes. If

**Figure 3. Rural Roadway Safety Disproportionality (USDOT)**

**Fatalities and fatal crashes occur disproportionately – by both population and vehicle travel – on rural roads.**



Source: Fatality Analysis Reporting System, U.S. Census

a RAISE grant is awarded, the Project can be constructed, forwarding USDOT's National Roadway Safety Strategy.

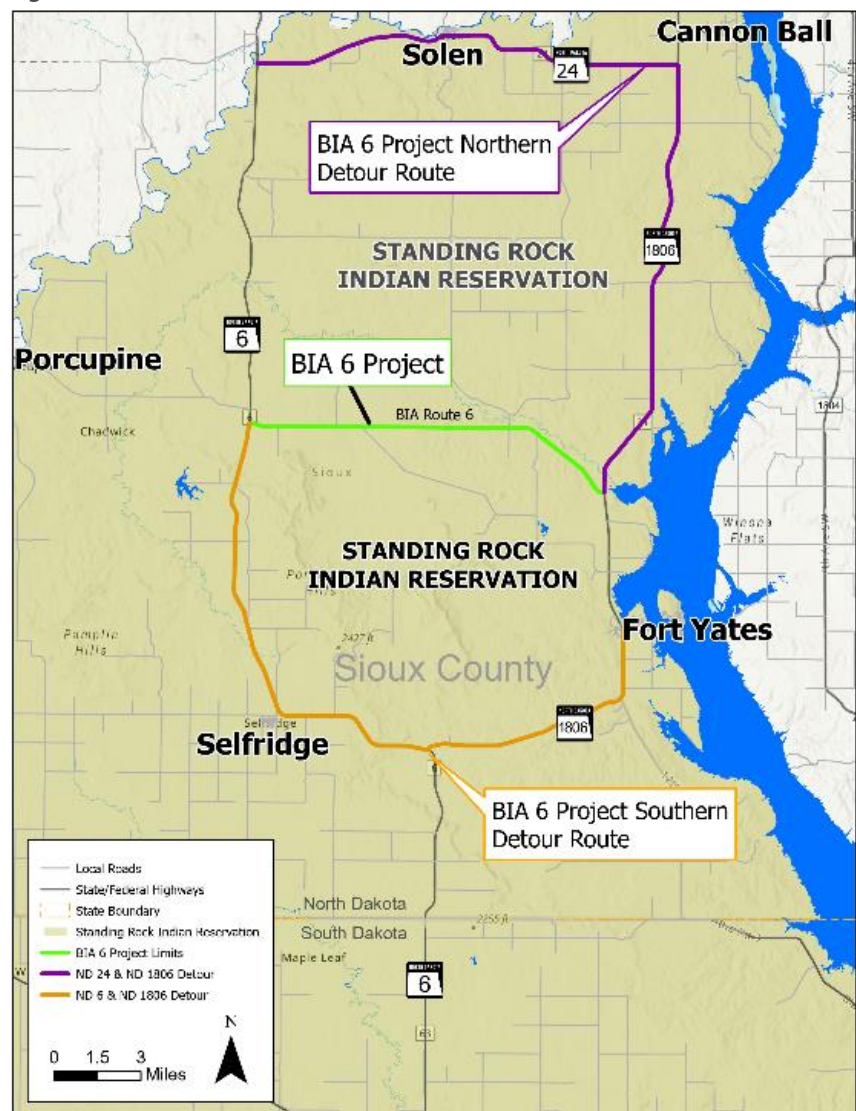
Enhanced multimodal safety for a rural and vulnerable population is a significant factor of the Project.

## 2. Environmental Sustainability

### Greenhouse Gas Emissions

If the Standing Rock Sioux Tribe is unsuccessful in obtaining a 2023 RAISE grant award for construction and given BIA 6's current condition, the Tribe will be forced to pursue a no-build option for the rural two-lane roadway. Under the no-build scenario, and as described in the [Benefit-Cost Analysis \(BCA\) Memorandum](#), the Tribe would grind the existing deteriorated asphalt pavement and overlay the entire BIA 6 with gravel, converting the route to a rural gravel road. The no-build scenario would cause natural traffic diversion off the gravel roadway to alternative paved routes north and south of BIA 6 as shown in Figure 4. The resulting traffic diversion to alternative routes and a reduced speed limit on the gravel (failed) BIA 6 would increase vehicle miles traveled (VMT) and vehicle hours traveled (VHT) resulting in greater greenhouse gas emissions.

**Figure 4. BIA 6 Detours**



Through the year 2045, under the no-build scenario, it is estimated that over 6,000 pounds (approximately 2.7 metric tons) more greenhouse gases will be emitted by vehicles and trucks impacted by a BIA 6 gravel conversion. Construction of the Project will reduce transportation-related air pollution and greenhouse gas emissions in an underserved Tribal community defined as both an area of persistent poverty and historically disadvantaged community.

### *Standing Rock Public Transit*

Since 1989, Sitting Bull College in Fort Yates, ND has operated [Standing Rock Public Transit](#) to serve rural tribal communities and other rural communities within and adjacent to the Standing Rock Indian Reservation. The current transit program provides inter-city services for 12 communities and two casinos which offer additional transit services to major transportation hubs such as airports and charter bus service. The program also provides Dial-A-Ride services in Fort Yates and twice monthly trips to both the Fargo, North Dakota and Sturgis, South Dakota Veterans Affairs Hospitals.

Although [current transit routes](#) are not shown on BIA 6, the overall resiliency of transit service on the Reservation would be negatively impacted under a no-build scenario. BIA 6 offers an alternative route between Tribal and rural communities to Fort Yates, especially if ND 24, ND 1806, or ND 6 were closed, impassable, or required a significant detour. If the BIA 6 construction project does not occur, transit resiliency and overall performance will decline, as the gravel surfacing under the no-build scenario will decrease transit mobility and increase overall operations and maintenance costs. BIA 6 restored to an excellent and safer roadway provide a vital lifeline and alternative route for transit, at times when service may be shifted off primary routes. The Project will strengthen transit resiliency by providing an alternative route on the Reservation and exciting potential for future service expansion to meet the needs of an underserved and vulnerable population.

### *Resiliency*

The resiliency of BIA 6 is essential for safety and mobility across the Reservation. Given the current pavement condition of poor to fair in the Project area, deficient cross slopes, and steep ditch slopes or inslopes, the roadway is at a higher risk of failure associated with extreme weather events. Pavement deterioration is exacerbated by North Dakota's naturally extreme weather events. However, the extremes have gotten worse and been more damaging over the past century due to climate change. For example, the summer of 2021, based on average temperatures, was [North Dakota's 2<sup>nd</sup> hottest summer on record](#) since 1875, when record-keeping first began. Precipitation too, is trending up and has been near or above average since 1990 with the wettest consecutive 5-year average of 20.5 inches occurring between 2007-2011<sup>11</sup>.

In recent years, the Standing Rock Sioux Tribe has seen devastating loss to natural disasters, including flash flooding. In 2019, [two people were killed and several injured](#) on BIA 3, just south of Fort Yates, ND, after the roadway washed away during an intense precipitation event and subsequent flash flood event. The flash flooding caused a chasm 70-feet deep and washed away a portion of BIA 3. The Tribe is determined to address climate resiliency in future projects moving forward, to strengthen infrastructure against extreme weather events, and avoid unacceptable loss of life. The Project addresses resiliency to climate change in several ways: (1) new pavement surface increases friction coefficients, reducing the risk of hydroplaning; (2) improved cross slopes ensure safe and efficient stormwater runoff, reducing the risk of hydroplaning and damage to the roadway and shoulder caused by improper drainage; (3) improving ditch slope or inslopes, decreasing hazards caused by erosion due to steep slopes; (4) and extending culverts where applicable, to sustain proper drainage under BIA 6.

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<sup>11</sup> <https://statesummaries.ncics.org/chapter/nd/>



### 3. Quality of Life

BIA 6 provides critical east-west mobility across the rural Standing Rock Reservation, with very few alternate routes available to travelers. Together with BIA 7, located just northwest of the western Project termini, BIA 6 is one of only four highways that provide full east-west connectivity across the Reservation. BIA 6 provides mobility to and from rural areas and Tribal communities to Fort Yates, ND the center of government for the Standing Rock Sioux Tribe and Sioux County, education including higher education, healthcare, social services, cultural and heritage events, and historical sites. If BIA 6 were converted to gravel under the no-build scenario, the quality of life for residents of the Reservation would be negatively impacted.

If the Project does not receive a 2023 RAISE grant, the Tribe would be forced to either close the road or convert it to a gravel surface. Either scenario would reduce mobility, as conversion to gravel surface would reduce the speed from 65 MPH to 50 MPH and cause natural traffic diversion. Subsequent impacts to regional mobility and quality of life would include:

- Reduced access to economic opportunities, cultural and heritage-related events such as powwows or interpretive sites, healthcare, and other goods and services.
- Reduced access to hunting and gathering of food including medicinal and culturally significant plants<sup>12</sup>.
- Increased time spent in motor vehicles, with increasing exposure to adverse driving conditions such as winter weather, icy conditions, or other extreme weather events.
- Increased vehicle miles traveled and greenhouse gas emissions.
- Diminished connectivity and resiliency of tribal transit, school busing, and emergency services.
- Overall diminished reliability of the route and degradation of Standing Rock Reservation's quality of life.

The Project will proactively address equity and quality of life in an area of persistent poverty and historically disadvantaged community by increasing mobility and safety of BIA 6. BIA 6 is a critical connection between rural areas, Tribal communities, regional metropolitan hubs, and across the Reservation.

Figure 5. Sitting Bull Burial Site & Memorial in Fort Yates

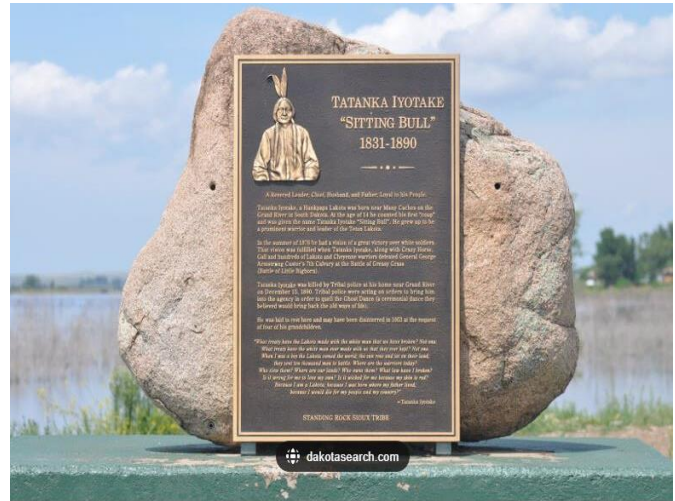


Figure 6. Fort Yates Pow Wow (Sydney Davies)



<sup>12</sup> [Culturally Important Plants of the Lakota](#)

### *Substance Abuse and Deaths of Despair*

Economic adversity perpetuates a cycle of substance abuse, chronic impoverishment, and premature morbidity. American Indian and Alaska Natives are disproportionately impacted by “deaths of despair” (mortality stemming from alcohol-related liver disease, drug overdoses, and suicides). Suicide rates for this group are 50 percent greater than those for non-Hispanic whites<sup>13</sup>. Deaths attributable to chronic liver disease are five times greater<sup>14</sup>.

The opioid epidemic has also negatively impacted the Reservation. A July 30, 2020, story by Vice News demonstrates how opioid manufacturers flooded the prescription drug market, intentionally targeting Native American communities. The per-capita supply to Standing Rock was 32 pills per person from 2006 to 2014, Vice reports.

Although infrastructure improvements cannot fix the opioid crisis, investing in infrastructure through the BIA 6 Project helps reverse endemic inequities and strengthen mobility and access to opportunities including education, employment, social services, cultural heritage, emergency medical care, and overall sense of community.

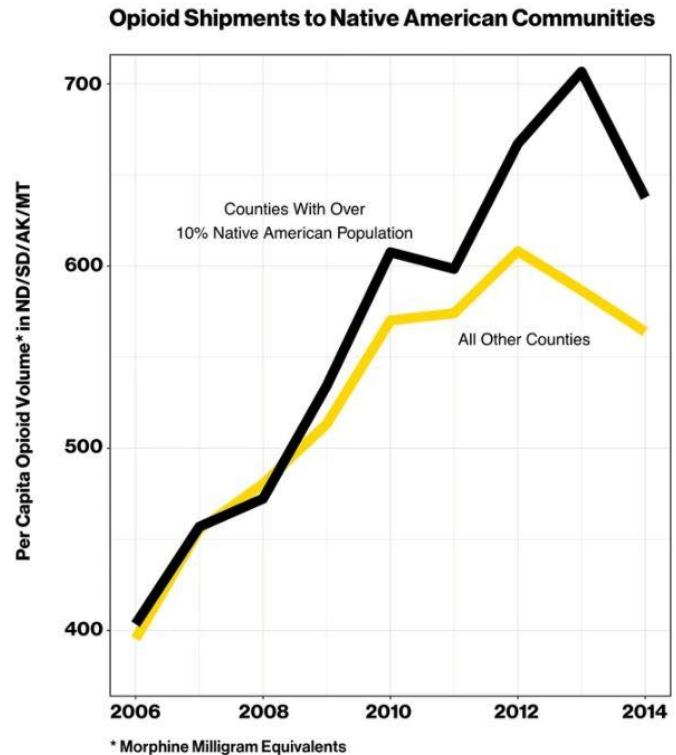
### *Access to Healthcare Facilities & Emergency Services*

BIA 6 provides access to the Indian Health Service (IHS) clinic and hospital in Fort Yates. The roadway also connects residents to the regional highway network, so people can access hospital facilities with a higher level of care (Level II Trauma Centers) located approximately 50-miles north of Fort Yates, in the Bismarck-Mandan metro area.

IHS facilities are located within Fort Yates. The Fort Yates Hospital is a fully accredited, 12-bed hospital staffed by Physicians and Nurse Practitioners and provides primary care and an emergency department that offers 24-hour care. The facility is designated as a Level IV Trauma Center. Additional services provided by Indian Health Service at the Fort Yates location include dental and pharmacy services.

The Project sustains safety and mobility for residents of the Reservation to access critical healthcare services. Emergency service providers depend on BIA 6 to effectively respond to acute needs of individuals experiencing sometimes life-threatening health problems. If funding for the Project is not received through the 2023 RAISE grant opportunity, the roadway will be closed or converted to gravel, negatively impacting emergency response times and ultimately the health and well-being of an underserved community.

*Figure 7. Opioid Shipments to Native American Communities (Vice News)*



<sup>13</sup> Herne MA, Bartholomew ML. Suicide mortality among American Indians and Alaska Natives, 1999–2009. *Am J Public Health*. 2014;104(suppl 3):S336–S342. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

<sup>14</sup> Espey DK, Jim MA, Cobb N et al. Leading causes of death and all-cause mortality in American Indians and Alaska Natives. *Am J Public Health*. 2014;104(suppl 3):S303–S311. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

### *Access to Everyday Goods*

Everyday goods are difficult to access for residents of Sioux County and the Standing Rock Indian Reservation. A Family Dollar store is located on ND 24, just north of Fort Yates, offering everyday goods and groceries including limited fresh produce options. Limited goods are also available at the Prairie Knights Quick Mart, located with the Prairie Knights Casino on ND 24, about 15-miles north of Fort Yates. The closest big box stores are in the Bismarck-Mandan metro area, approximately 50-miles north of Fort Yates. It is imperative to maintain regional roadway connections to retain access to goods and services.

The Project sustains a vital connection for residents of the Reservation to safely travel to Fort Yates and beyond, to access everyday goods and maintain their quality of life.

## 4. Improves Mobility and Community Connectivity

BIA 6 is a key piece of the Tribal roadway system. With BIA 7, it extends across the Reservation and provides direct connectivity from the Tribal community of Porcupine (2020 pop. 162) to Fort Yates (2020 pop. 180). With ND 6, BIA 6 forms the shortest route between Fort Yates and the Bismarck-Mandan metropolitan area. If this connection were lost, it would increase travel demands on an underserved population that is not positioned to absorb the added costs of time and money associated with alternate routes to the north and south of BIA 6. Improving BIA 6 is essential for the resilience and future of public transit, and as a school busing route. Maintaining this route in a safe operable condition supports the Tribal education system from pre-kindergarten to higher education, connects workers to vital employment opportunities, and improves essential community connectivity across the Reservation and Sioux County.

BIA 6 reconstruction and resurfacing will reduce travel times on BIA 6, enhancing not only vehicular mobility, but freight mobility as well. For example, and as described in the [BCA Memo](#), vehicle hours traveled would increase through year 2045 by 97,353 hours for cars and 10,876 for trucks under the no-build scenario. The Project will improve overall mobility from communities across the Reservation and provide critical improved mobility for freight, enhancing economic efficiency and delivery of goods and products needed by the Reservation's underserved population.

## 5. Economic Competitiveness and Opportunity

### *Tourism*

BIA 6 provides direct access to Tribal lands that are used for hunting, fishing, and trapping. The Tribe sells hunting, fishing, and trapping licenses to hunters and anglers attracted from around the region to the bountiful rural and natural ecosystem that make up the Tribal lands of the Reservation, located within the Missouri River Basin<sup>15</sup>. The Game and Fish Department offers 17 different licenses for various hunting, fishing, and trapping activities including the hunting of species as large as elk or buffalo, and as small as prairie dogs.

BIA 6 provides access to the Prairie Knights Casino and Resort, located approximately nine miles north of the Project's western termini and intersection with ND 1806. Gaming or gambling on the Reservation attracts visitor spending and contributes directly to the Tribe's ability to finance roadway improvements; the Roads Department

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<sup>15</sup> <https://www.usbr.gov/gp/recreation/>

receives about \$250,000 per year from gaming revenues<sup>16</sup>. There are two casinos owned and managed by the Tribe:

**Prairie Knights Casino and Resort** – 7932 ND Hwy 24, Fort Yates, ND 58538

**Grand River Casino and Resort** – 2 US Hwy 12, Mobridge, SD 57601

Gaming on the reservation is a huge driver of tourism-related spending and provides consistent revenue production for the Tribe, helping to fund critical programs on the Reservation. Gaming is a substantial industry for Tribes in North Dakota and in 2014, the five Tribal casinos in the State brought in \$237 million of gaming revenue and \$38 million of non-gaming revenue<sup>17</sup>.

The Project will sustain safe access and mobility to Tribal lands for hunting, fishing, and trapping; and to the Prairie Knights Casino and Resort, providing a critical facilitation of the Tribe's tourism industry and enhancing economic competitiveness for an underserved community.

### *Standing Rock National Native American Scenic Byway*

The Project's eastern terminus (ND 1806) is also part of the 350-mile [Native American Scenic Byway](#), which travels through the lands of the Yankton, Crow Creek, Lower Brule, Cheyenne River, and Standing Rock Sioux Tribes. The scenic route not only provides access to the natural beauty of the Missouri River and enchanting landscape of the Upper Great Plains, but also connects to Tribal history, heritage, and culture showcased throughout. Points of interest on the Standing Rock Indian Reservation within Sioux County, ND include:

- Sitting Bull Burial Site & Memorial in Fort Yates
- Sitting Bull Visitor Center on the Sitting Bull College Campus in Fort Yates
- The Lewis and Clark Legacy Trail, near the Prairie Knights Casino just north of Fort Yates
- Fort Yates Stockade
- Standing Rock Monument in Fort Yates

The BIA 6 Project enhances the safe mobility and accessibility of important cultural sites on the Standing Rock Indian Reservation for residents and travelers exploring the Native American Scenic Byway and increases the resiliency of the Tribe's growing tourism industry.

### *Anpetu Wi Wind Farm*

The Project will support development of the Anpetu Wi ("morning light") wind farm. Owned by Tribe, this 235-megawatt, 60 turbine wind farm will provide renewable clean energy for the Reservation in perpetuity, representing a critical step toward self-determination and economic development. Anpetu Wi Wind Farm will

Figure 8. Sitting Bull Visitor Center (Sitting Bull College)



<sup>16</sup> <https://www.fhwa.dot.gov/tribal/tribalprgm/govts/standingrock.htm>

<sup>17</sup> <https://news.prairiepublic.org/chasing-the-dream/2016-06-30/chasing-the-dream-steven-light-and-kathryn-rand-on-indian-gaming-in-north-dakota-and-the-us>

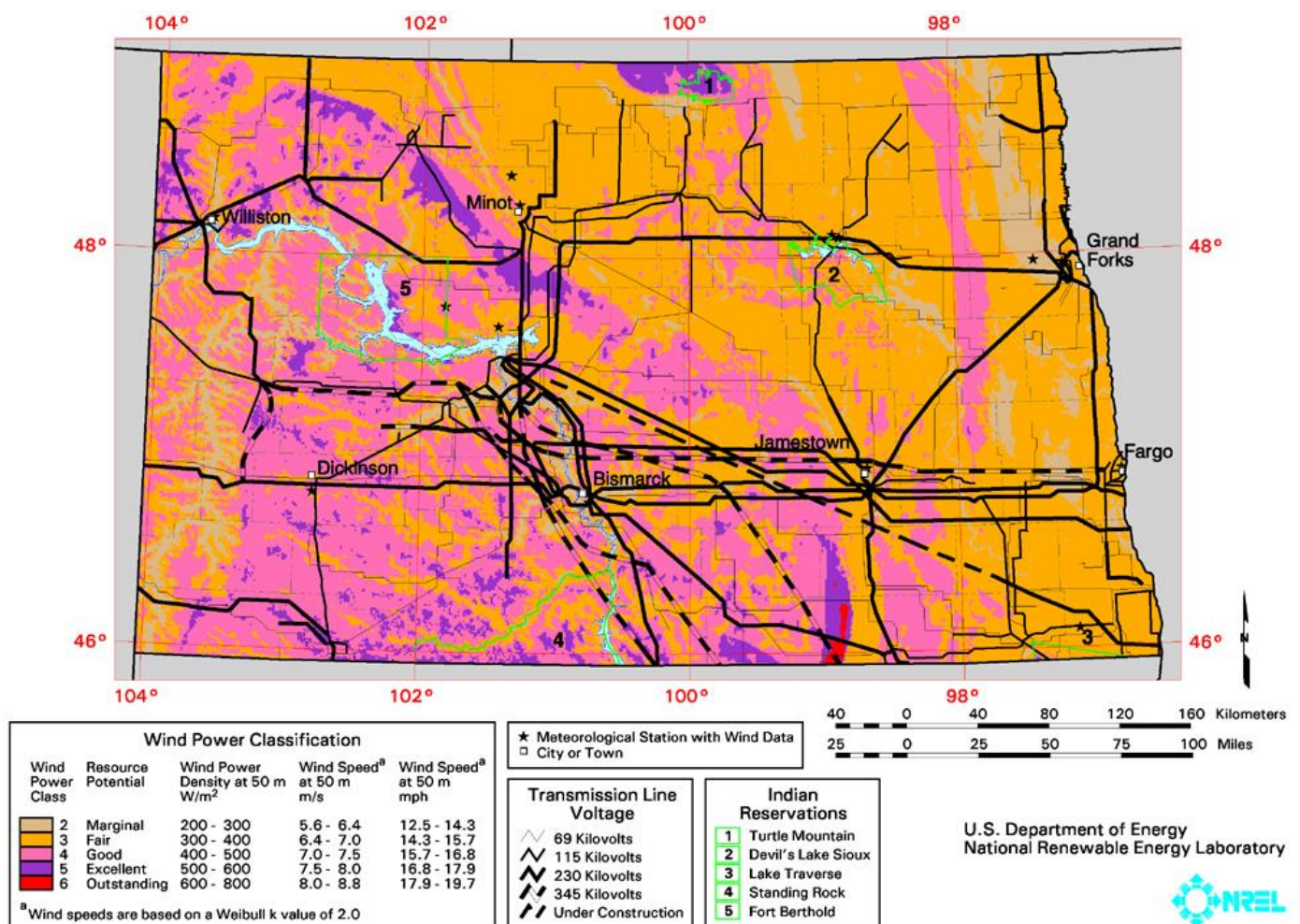


emerge as the single largest source of revenue for the Tribe. Revenues would be reinvested into future projects and Tribal infrastructure.

Over \$4 million in funding has been secured for the wind farm through grants and public-private partnership investments. This money is being used to complete pre-development studies and prepare for full project development<sup>18</sup>.

The U.S. Department of Energy identifies many areas within the Reservation as excellent for wind energy resource potential. The wind farm developer has identified suitable Tribal land just south of BIA 6 and west of ND 6, on the Porcupine Hills, which is ideal for wind farm development<sup>19</sup>. The BIA 6 Project will support and sustain access to this once-in-a-generation economic development opportunity.

Figure 9. North Dakota Wind Resource Map (USDOE)



### Access to Employment

BIA 6 provides access to employment opportunities in Fort Yates and to future jobs such as the Anpetu Wi Wind Farm. Current employment opportunities in Fort Yates are primarily associated with Tribal government, Sioux County local government, education including higher education, social services, and healthcare. BIA 6 also

<sup>18</sup> <https://anpetuwi.com/>

<sup>19</sup> <https://anpetuwi.com/sage-development-authority-in-the-bismarck-tribune/>

provides access to Prairie Knights Casino and Resort just north of Fort Yates (300 staff) and less directly supports access to Grand River Casino and Resort located in Mobridge, SD (100 staff).

The Project will help promote long-term economic growth for the Tribe and residents of the Reservation by improving mobility and safety to access employment opportunities including future opportunities. Improving BIA 6 will provide access to hunting, fishing, and trapping opportunities; and access to gaming opportunities which help bolster the Tribal tourism industry and provide substantial job opportunities for an underserved population. The BIA 6 Project will have a positive impact not only Tribal residents to access existing jobs, but also in transforming the Tribe's economy through the Anpetu Wi Wind Farm development, a native-owned project, to provide future employment opportunities and renewable clean energy for Tribal residents.

## 6. State of Good Repair

Improving the pavement condition for BIA 6 is a primary objective of the Project. Historically the Standing Rock Sioux Tribe stretches their funding as far as they can to perform basic routine maintenance on the BIA and Tribal roadway networks. Given the existing condition of BIA 6, current Tribal funding sources for basic routine maintenance are insufficient to bring the pavement into a state of good repair. Exacerbated by the extreme weather conditions of the Upper Great Plains, the pavement condition has deteriorated to the point where it is unsafe to travel at the posted speed limit (65 MPH) for a majority of BIA 6. Roadway reconstruction and pavement preservation (resurfacing) are needed to bring the roadway into a safe and operable condition. If the Tribe is unsuccessful in their 2023 RAISE grant pursuit, the pavement condition is expected to degrade to a level where the asphalt pavement can no longer be maintained responsibly and will become a hazard to travel on. In such circumstances, the Tribe will have no choice but to: A) close the roadway; or B) grind BIA 6's asphalt pavement, overlay it with gravel surfacing, restrict heavy truck and freight traffic, and reduce the posted speed limit. The Project is necessary to maintain BIA 6 in a state of good repair.

### *Pavement Condition*

The pavement condition of BIA 6 was evaluated in the Tribe's 2017 [Long-Range Transportation Plan \(LRTP\)](#) using the Pavement Surface Evaluation and Rating System (PASER). Roads were scored on a scale of 1 to 10, where 10 indicates perfect condition (new pavement) and 1 is a gravel road. At the time, most of BIA 6 was scored as 4 to 6 (fair to good). Over five years since BIA 6 conditions were evaluated, as of 2023, the Tribe estimates that the surface condition has fallen to 3 to 5 (poor to fair). A PASER rating of 3 is the lowest score for paved surfaces on the Reservation. A score of 2 (very poor) is used for failed pavement that has been graveled over; no roads on the Reservation meet this definition however, the Tribe knows some portions of BIA 6 may be on the verge of failing at any time.

**Phase 1 Segment:** 2017 condition of poor to fair (PASER of 3 to 4). The surface demonstrates severe cracking and rutting with visible potholes. The Tribe's Roads Department has repeatedly patched and repatched the pavement to maintain a minimum standard of operability. In many areas, roadway shoulders have

*Figure 10. BIA 6 Intersection with ND 6 (Western Termini)*





eroded to or past the edge lines of the travel lanes. Pavement striping is limited. This roadway section cannot be traveled safely at the posted speed limit, which puts BIA 6 at risk of closure. Reconstruction is recommended for roadway sections in poor condition.

**Phase 2 Segment:** 2017 condition of fair (PASER of 5).

This section demonstrates moderate to heavy cracking and rutting. It can be traveled at the posted speed limit but is at risk of falling into poor condition and remains susceptible to closure. Roadway sections in fair condition can be rehabilitated through overlay improvements (e.g., asphalt overlay or mill and overlay). These types of improvements are much more cost-effective than reconstruction.

The Project will reconstruct BIA 6 in the Phase 1 Segment and resurface the roadway in the Phase 2 Segment. The Phase 1 Segment pavement has met its useful life and is becoming increasingly hazardous each day, while the Phase 2 Segment can still be rehabilitated to an excellent pavement condition. Funding is needed before it is too late, and the Phase 2 Segment deteriorates to a point similar to Phase 1, where reconstruction, roadway closure, or conversion to gravel, are the only options.

*Figure 11. Deteriorating Conditions on BIA 6*



### *Maintenance*

Given the current pavement conditions of BIA 6, current funding levels for maintenance of the roadway are insufficient and ineffective at remedying the underlying problem. The Tribe expends approximately \$130,000 per year on asphalt pavement surface repairs on BIA 6. Without the 2023 RAISE grant, the Tribe will need to close BIA 6 until there is funding available to grind the asphalt pavement and overlay it with gravel to convert to a gravel road. As detailed in the [BCA Memo](#), maintenance of a failed pavement (gravel road) is more than double the cost of maintenance costs associated with an asphalt pavement in excellent or good condition. The Project is necessary for the Tribe to maintain BIA 6 in a state of good repair as efficiently as possible and with their available resources.

### *Responsibility*

The Tribe will be responsible for maintenance and is committed to implementing timely investments in capital and preventative maintenance treatments to extend the service life of transportation assets while efficiently reducing lifecycle costs, and will maintain BIA 6 as safely and efficiently as possible with current funding resources which include:

- **Tribal Transportation Program (TTP, formerly known as IRR):** approximately \$1.5 million annually.
- **Gaming Revenues:** approximately \$250,000 annually.
- **Bureau of Indian Affairs (BIA) Maintenance Funds:** \$450,000 annually.
- **BIA Transportation Planning Funds:** \$36,000 annually.

With limited funding revenues dedicated to the transportation system, a 2.3-million-acre Reservation land area (nearly twice the size of the State of Delaware by land area), and over 200-miles on the BIA system alone, the Tribe relies on and pursues discretionary funding opportunities to provide a Tribal transportation system in a state of good repair as efficiently and effectively as possible. As detailed in the [BCA Memo](#), the Project is more cost-effective than letting BIA 6 pavements fail, closing the road, and eventually converting to gravel pavement.

## 7. Partnership and Collaboration

### *Project Partners*

Standing Rock Sioux Tribe is the applicant for this 2022 RAISE grant. This project has [documented support](#) from the Tribal Council, the North Dakota Department of Transportation, the North Dakota Congressional Delegation, and Sioux County. The BIA 6 route is a key link between ND Highway 6 and ND Highway 1806/24. The Project has received documented support from:



### *Anpetu Wi Wind Farm*

The Project will be coordinated with the Anpetu Wi Wind Farm, a transformational economic development and renewable energy infrastructure project located just south of BIA 6. Coordination with the Wind Farm project is taken very seriously, to ensure that the BIA 6 reconstruction and preservation activities respond to the Wind Farm development and operational needs. A solicitation of views letter will be submitted to formally request feedback from the Wind Farm developer and respond to formal feedback regarding coordination with the BIA 6 Project.

### *Tribal Employment and Contracting Rights (TERO)*

The Project will strictly adhere to the Standing Rock Sioux Tribe's [Tribal Employment and Contracting Rights \(TERO\)](#) regulations for the purposes of requiring Indian preference in employment, training, subcontracting, and other economic opportunities. If the 2023 RAISE grant funding is awarded, it will lead to good-paying jobs for people in underrepresented communities, who identify as American Indian. TERO requirements apply to every piece of the Project and will directly benefit the Reservation and rural Tribal Communities.

## 8. Innovation

### *Innovative Project Delivery*

The Standing Rock Sioux Tribe fully intends to use a Tribe-owned gravel pit and aggregate crusher to source critical aggregate supply for the Project. The gravel pit is located within the Reservation, southeast of the community of Wakpala, SD. The Tribe has an existing pit and approximately 200,000 metric tons of aggregate stockpiled at this location. Materials from the pit is intended for the Tribe to maintain existing roadways and provide an aggregate source for future projects such as the BIA 6 Project. As of February 2023, aggregate materials from the site are being tested to verify compliance with specifications required to build the Project. Sourcing aggregate from the site would help save on transporting costs associated with bringing aggregate from

Figure 12. Standing Rock Sioux Tribe's Gravel Pit





further distances and supports economic development on the Reservation to help provide good-paying jobs for underserved populations.

## Supporting Documents

All supporting documents and the RAISE grant application narrative are also available to view at the following webpage:

<https://www.srfconsulting.com/srst-bia-rt-6-raise/>