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Public Hearing: 11/16/21  
Amended: 11/16/21  
Adopted: 11/16/21

**MATANUSKA-SUSITNA BOROUGH**  
**RESOLUTION SERIAL NO. 21-115**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY APPROVING  
A LIST OF POTENTIAL FEDERALLY FUNDED INFRASTRUCTURE PROJECTS

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**Roads, Rail and Port Projects**

**1. 2021 MSB TRANSPORTATION INFRASTRUCTURE PACKAGE - \$61,135,000**

The Matanuska-Susitna Borough has realized a dramatic population increase in the past two decades. In the year 2000, there were approximately 60,000 residents in the Borough. Since then, approximately 48,000 additional people have come to call the Borough home. This population increase has resulted in an ever-increasing demand for new public infrastructure as traffic congestion increases and serious accidents and fatalities rise. It is recognized that the overall network of transportation systems are vital to the well-being of the Borough to allow for efficient movement of people and goods throughout the Borough. Over a six-month time span, Borough staff compiled a list of projects that were needed to increase highway traffic and pedestrian safety, decrease traffic congestion, and provide for more efficient traffic flow for freight and goods on the Borough's road network. The Borough Assembly then reviewed and prioritized those needed projects and on August 17, 2021, approved a package of 20 transportation infrastructure projects for which funding is being sought. The project list includes new roads, road upgrades and extensions, pedestrian/bicycle pathways, and transit facility development.

Funding this MSB Transportation Infrastructure Package will cover necessary planning, design, right-of-way acquisition, utility relocations, engineering, inspections and testing, administrative expenses, and construction for the following projects:

Trunk Road Connector/Katherine Drive; Smith Road Extension Upgrade and Pathway; Old Glenn Pathway Phase 2; 49th State Street Pathway; Hemmer Road Extension South; Lakes Boulevard Upgrade; Point MacKenzie Road Reconstruction MP 0-7; Lucille Street and Pathway Upgrade; Tex-Al Drive Extension Upgrade and Pathway; MSB School District Shaw Elementary Turn-Lane; Engstrom Road to Trunk Road Corridor; Edgerton Parks Road-Mtn. Trails Drive Upgrade and

Pathway; Caswell Lakes Road/Bendapole Road/Passthebait Avenue Paving; Cheri Lake Drive/Karen Avenue/King Arthur Drive; Hidden Hills and Passthebait Avenue Reconstruction; Palmer-Fishhook Separated Pathway; Fern Street Upgrade and Pathway; Seward Meridian Parkway-Tambert Traffic Signal; MSB School District 2018 Pedestrian Projects, and the Multi-Modal Wasilla Depot.

## **2. COMPLETION OF PORT MACKENZIE RAIL EXTENSION - \$140,000,000**

Project scope would include final design and construction of Segment 2 including the Rail Reserve, and for Segments 1-5 final design, survey, construction of sub-ballast, rail, ties, ballast, and signal/communications installation. Port MacKenzie is a deep-water port where one of the largest cargo vessels in the world has docked and been loaded. This rail extension from the Alaska Railroad mainline to Port MacKenzie will provide a shorter rail route from Interior Alaska to tidewater, which in turn will substantially boost the export of Alaska's minerals and natural resources, helping diversify the statewide economy. The project will create jobs, lower transportation costs, and increase economic development. Fuel imports transported north on Port MacKenzie Rail to the Interior would help lower high energy costs. The Alaska Railroad is the first in the nation to receive approval by the Federal Railroad Administration to transport Liquefied Natural Gas by International Standards Organization container. The Alaska Industrial Development and Export Authority is working to expand a LNG facility adjacent to the rail extension and near Port MacKenzie to develop a fuel supply chain to Interior communities. By providing bulk transportation of LNG, the use of LNG in the Interior will increase and significantly improve the air quality, an added benefit. The rail extension could also save more than \$100 million in construction costs for the State's proposed natural gas pipeline over other ports as Port MacKenzie is 140 miles closer than Seward and 32 miles closer than Anchorage to the Interior. Less expensive bulk transport costs will also help stimulate the development of natural resources and mines such as the one-billion-ton limestone deposit near Livengood. Several sizable mining projects have designated Port MacKenzie as their marine terminal for exports including Trilogy Metals, Inc., in the Ambler Mining District which is projected to hold 8 billion pounds of copper, 3 billion pounds of zinc, and more than 1 million ounces of gold-equivalent precious metals that could be transported on this rail system and shipped out of Port MacKenzie.

The shorter mileage to tidewater will also reduce the cost of transporting coal when coal prices recover, helping coal from Alaska's Interior be competitive on the world market. A number of private companies have leased land at Port MacKenzie and will take

advantage of the rail extension's quicker transport time to the Interior, including Central Alaska Energy, which plans to import low sulfur fuel, store it in million gallon tanks, and transport it around the state.

**3. CHANLYUT CIRCLE AND CENTRAL LANDFILL ACCESS RELOCATION - \$4,500,000**

Reconstruct Chanlyut Circle and extend it across Central Landfill's property to the site of a proposed new access location on the west side of the property and away from traffic congestion on N. 49<sup>th</sup> State Street.

**4. PORT MACKENZIE BULK FUEL STORAGE FACILITY - \$50,000,000**

The purpose of this project is to construct marine tanker discharge facilities and bulk refined petroleum storage tanks at Port MacKenzie. In May 2021, gasoline shortages were caused by panic buying in the southern and east coast regions of the United States after a gasoline and jet fuel pipeline company suffered a ransomware attack. After the 2018 earthquake, Anchorage experienced panic buying producing shortages at some service stations even though no supply disruption occurred. Some experts assess that damage to the supply chain or existing storage facility in Anchorage would result in panic buying within hours leading to gas rationing in Alaska within days. For decades the State of Alaska has not maintained an adequate reserve of refined petroleum products to ensure motor vehicle fuel, generator fuel, and aircraft fuel which will be available during a manmade or natural disaster. Currently the State's two refineries control the only unleaded and diesel storage tanks at Port of Anchorage. This leaves the State with inadequate stocks to meet emergency demand and has led to pricing far higher than the cost of fuel in Seattle plus shipping. A terminal at Port MacKenzie will provide resiliency improving the State's ability to recover from disasters as well as increased price competition that benefits the entire central and northern region of the State. This project would make approximately 30,000,000 gallons of refined fuel storage capacity available as well as a refined petroleum tanker ship discharge facility. Port MacKenzie can accommodate deep draft refined petroleum tankers and has more than sufficient space to accommodate the storage tanks.

**5. PORT MACKENZIE NATURAL GAS LINE - \$14,000,000**

The purpose of this project is to extend the natural gas distribution line from Ayrshire Avenue the remaining fifteen miles to Port MacKenzie. Natural gas availability creates competitive advantages that spur development and manufacturing. Lower heating and manufacturing costs will result in benefits to consumer purchasing power and confidence, higher profit margins, and

improvements in cost-competiveness. For energy intensive industries such as chemicals, metals, food, and refining production costs are reduced as a result of natural gas availability. Port MacKenzie has 14 square miles available for manufacturing and industrial use.

#### **6. SAFE ROUTES TO SCHOOLS - \$5,000,000**

As development density in the core area of the Borough increases, the desire for walking infrastructure does as well. The mile-and-a-half radii around schools are some of the most crucial and highest value areas for walking infrastructure because of the volume of current and potential pedestrians, and because of the direct impact walking infrastructure has on student safety. Walking route projects will include the development of pathways, lighting, and signals within the one-mile radius around schools. Funding will be used for construction, design, right-of-way acquisition, utility relocation, and pathway maintenance. Projects will be prioritized based on immediate safety concerns.

#### **7. LNG GAS PLANT EXPANSION AND GAS STORAGE RAIL ACCESS - \$152,000,000**

The Fairbanks North Star Borough (FNSB) and the MSB are partnering with the Alaska Railroad Corporation (ARRC) on a regional project that will serve both Interior and South Central Alaska. There are three main components of this project:

- Expansion of a LNG Gas Plant near Port MacKenzie, Alaska
- Rail access to the LNG Gas Plant via a plant rail spur and completing 18 miles of the Port MacKenzie Rail Extension (PMRE)
- Rail Spur to LNG storage facilities in Fairbanks, Alaska and North Pole, Alaska

An existing LNG gas plant approximately 15 miles north of Port MacKenzie, Alaska along Ayrshire Avenue receives gas from Cook Inlet and Beluga gas fields. A portion of this gas is being trucked to the FNSB, an Air Quality Non-Attainment Zone in Interior Alaska, by way of the George Parks Highway. Two gas storage facilities have been constructed and are in use, one in Fairbanks and the other in North Pole.

As the FNSB continues to develop a LNG storage and distribution system with the goal to significantly reduce air pollution in the FNSB, the need for additional gas increases. At the request of the FNSB, the ARRC tested the feasibility of transporting LNG by rail. The Federal Railroad Administration issued a permit in 2015 and the test was successful. Rail access from the gas plant to the ARRC Mainline near Houston, Alaska is now needed. The MSB has

in the meantime been pursuing development of a rail line from the ARRC Mainline to Port MacKenzie. As part of this larger project, the MSB has constructed a 19-mile long railroad embankment that reaches from the ARRC Mainline to within a quarter mile of the gas plant. The most northern mile of this segment has rail, signaling, and communications towers installed and is actively being used. The remaining 18 miles of rail embankment is awaiting funding to place subballast and install a southern communications tower, fiber optic cable, ties, ballast, and rail. A short ¼ mile long rail spur from the PMRE to the LNG gas plant, as well as short rail spurs to LNG gas storage facilities in Fairbanks and North Pole, Alaska, will also require development.

#### **8. SUBSTANDARD ROADS AND BRIDGES - \$10,000,000**

The Matanuska-Susitna Borough is the fastest growing borough in the State of Alaska. Much of the new development is accessed by roads that were not built to Borough standards, have substandard gravel bases, lack sufficient right-of-way and sight distance, and are underbuilt for the amount of traffic on the roads. Improvements to these roads will ensure that the functionality and safety of the roads meet the proper classification and design standards. The substandard roads are part of the community transportation plan and the Borough's Long Range Transportation Plan.

Numerous bridges on the Borough's road system have outlived their design life and require costly repairs or complete replacement. Several bridges received substandard sufficiency ratings on their most recent inspections by the Department of Transportation & Public Facilities Bridge Section. Work needed to bring the bridges into compliance with federal standards range from riprap replacement to protect against the rivers and creeks that they cross, to full replacement of bridges that are settling or have reduced structural capacity. Several bridges have reduced weight limits because of substandard design and/or gradual deterioration, which limits the type of vehicle that can use the bridges hindering the operations and development of private properties that rely on the bridges for access. There are two bridges that received a very low sufficiency rating and need immediate replacement. At least three other bridges are posted with reduced weight limits, and should be upgraded as soon as possible. Five bridges have been identified as at risk of scour from migrating river channels or insufficient armoring along the abutments. Addressing these deficiencies and making improvements will extend the life of the bridges for at least another 30 years.

#### **9. INNER-OUTER SPRINGER LOOP PATHWAY - \$1,000,000**

The project would provide a valuable connection between two



existing pathways, one adjacent to the Glenn Highway and the other adjacent to Cope Industrial Way in the heavily populated area surrounding Palmer near the Alaska State Fairgrounds. This segment of Inner and Outer Springer Loop has minimal road shoulders, but is heavily used by pedestrians and bicyclist during many times of the year. This project will increase the safety of these residents and visitors by removing them from the vehicle travel lanes.

### Bridges and Culverts

#### **10. SETTLERS BAY DRIVE AT CROCKER CREEK FISH PASSAGE IMPROVEMENTS - \$700,000**

This project would restore the damaged, undersized culvert on Crocker Creek to improve the passage of fish and other aquatic organisms under Settlers Bay Drive. Currently this culvert sits perched with a damaged end section and contains an unsuitable, deteriorating fish ladder causing a barrier to migrating and rearing salmon within the watershed. The project would open 3.11 km of stream habitat and 2.27 hectares of lake habitat as well as provide sound flood protection of Settlers Bay Drive which serves a large community with limited options for alternate egress and ingress.

#### **11. MASTODON ROAD AT BIRCH CREEK FISH PASSAGE IMPROVEMENTS - \$300,000**

This site is a tributary to Birch Creek near Talkeetna and impedes access to approximately 6.5 km of anadromous stream habitat and extensive wetlands to an undeveloped upstream area. The crossing currently contains an undersized culvert, which creates a high-velocity of water and impedes juvenile fish movements through the area. Replacement of this culvert using stream simulation guidelines would greatly improve the movement and survivability of the juvenile salmon that rely on this water system for rearing.

#### **12. HIDDEN HILLS ROAD AT CASWELL CREEK FISH PASSAGE IMPROVEMENTS - \$300,000**

This site is located on Hidden Hills Road in the Caswell Lakes subdivision and impedes access to 1.5 km of anadromous stream habitat and two hectares of ponds and lakes, as well as extensive unmapped wetland and old beaver complexes. This undersized culvert has become less passable to migrating and rearing salmon due to the loss of an additional overflow culvert and is also prone to blockage by beavers and flooding. Replacement under the stream simulation guidelines would provide improved migration capability of salmon through the area, discourage beaver blockages, and reduce flood risk of Hidden Hills Road, which serves as the sole ingress and egress to a large subdivision. Design for this project is

already funded and will be completed by the end of 2021.

**13. BRADLEY ROAD BRIDGE - \$1,100,000**

Replace the existing substandard bridge with a new bridge, and eliminate weight restrictions.

**14. LYNX LAKE BRIDGE AND BRIDGE ACCESS IMPROVEMENTS - \$1,500,000**

The project would improve Lynx Lake Road to a condition that allows bridge construction equipment to reach the bridge site then replace the substandard bridge with a new bridge eliminating weight restrictions.

**15. YODER ROAD BRIDGE REPLACEMENT AND BRIDGE ACCESS IMPROVEMENTS - \$4,500,000.**

The Yoder Road Bridge was designed and constructed in the early 1940's for the ALCAN road project. It was repurposed in the 1980's to bridge Montana Creek on Yoder Road. The bridge is now nearly 80 years old, had been repaired a number of times for structural damage and has a wooden deck that needs to be replaced approximately every ten years. The project would improve Yoder Road access to and from the bridge, provide stream bank protection around the bridge abutments and replace the bridge.

**16. TUXEDO AVENUE BRIDGE - \$500,000**

Replace the existing substandard bridge with a new large diameter culvert, and improve safety by adding guardrail.

**Flood Mitigation**

**17. TALKEETNA FLOOD AND EROSION CONTROL MEASURES - \$10,000,000**

Replace existing and/or enhance the current flood and erosion control infrastructure. This could include the construction of new revetments, dikes, floodwalls, etc., around the town. Project scoping is in progress as part of the U.S. Army Corps of Engineers (USCOE) 205 Talkeetna Project with no preferred option currently. The planning project is projected to be completed in September of 2022.

The MSB Hazard Mitigation plan supports this through mitigation goal #FL - 1: eliminate vulnerability to flooding within the Mat-Su Borough, #FL - 2: decrease the financial losses caused by floods; # FL - 3: improve habitat preservation and stream enhancement, and # ER - 1: reduce property damage caused by wind or water erosion.

**18. FLOOD MITIGATION FOR ACQUISITION OF HIGH HAZARD AREAS -  
\$2,500,000**

Inventory all floodway properties, analyze, and prioritize the most at-risk areas to flooding and erosion. Offer a voluntary acquisition to maintain open space corridors and enhance flood risk reduction methods, including ice jam flooding, channel migration, and enhancement of fish habitat. There are estimated to be 100 homes with an estimated project cost of \$20 Million. \$2,500,000 represents most critical needs and those homeowners expressing interest in buyouts.

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**19. CIRCLE VIEW DIKES - \$1,000,000**

Repair damage to dikes caused by river scouring over several decades. Dike 4 and Dike 3 are priorities. Engineering plans were developed to the preliminary level in 2015 and updated with a H&H report in 2020.

**Hazard Mitigation**

**20. JOINT FIRE/EMERGENCY SERVICES STATION 12-1 - \$8,000,000**

Willow is in need of a joint public safety building in the core area of the Willow community along the Parks Highway corridor. The current facility, Station 12-1, consists of old antiquated apparatus bays and a classroom building which was recently condemned and deemed unsafe to use. This new facility would be a joint complex envisioned to house Willow Fire Department (Administrative and Operational facilities), an Emergency Services (EMS) area for the staffing of a future full-time Willow-based ambulance, and area wide rescue support. This would also provide an area for law enforcement to utilize the support facilities and infrastructure access. The current building is inadequate for any of our current identified needs and does not support projected growth. As the community grows, these needs only become more apparent. Currently the Willow Fire Chief lacks a private office to conduct sensitive business. The current work area at Station 12-6 would be re-purposed for training and logistical support. The current station has no facilities or basic amenities to support emergency responders in serving their community. There are no common living spaces, dorm rooms or even adequate showering facilities to clean up following a fire. An important component of



our cancer risk reduction plan for our fire-rescue responders is immediate decontamination of personnel and equipment following fires and related responses. An exercise area will increase responder health and fitness. The other key component to reducing response times to emergencies is having a facility that responders can use and respond from immediately. The proposed common areas, dorms, kitchen, and training rooms would fulfill this need. This facility would combine the Willow EMS station into the Fire Station making more efficient/economical use of the facility for the community by meeting multiple needs. This would allow us to exit a costly lease for the Willow EMS station.

#### **21. SEISMIC RESILIENCE IMPROVEMENT PROJECTS - \$4,250,000**

The Borough conducted inspections to determine the seismic resiliency needs of 39 buildings owned and operated by the Borough. The initial findings of these inspections has revealed that 17 buildings scored low on their seismic resiliency and improvements are needed for safety purposes or to comply with current building code. The cost of improvements for each structure on average is in the \$250,000 range. The total cost for improvements on the 17 structures is estimated at \$4,250,000. The scope will vary for each structure but systems such as ceiling grid anchoring, mechanical and piping supports, concrete masonry walls and veneer attachments, among other system improvements, will be needed as part of the seismic resiliency improvements.

#### **Drinking Water and Wastewater**

#### **22. TALKEETNA WATER AND WASTEWATER INFRASTRUCTURE - \$15,000,000**

Infrastructure improvements to the following Talkeetna Water and Wastewater Systems: Two water wells including well house, 35 fire hydrants, water treatment facility, water distribution lines, wastewater treatment facility, wastewater collection lines, and all components associated with both systems to include but not limited to, the Supervisory Control and Data Acquisition (SCADA) system, valves, water meters, manholes, and lift stations.

The Talkeetna Water and Wastewater Systems were built in three separate projects. The first project was constructed in 1989, the second in 1990, and the third in 1992 and 1993. Water is supplied by two ground water wells located in a well house at 22111 North C Street. The wells are approximately 150 feet deep in a confined aquifer. There is approximately 2,633 linear feet of 12" DIP and 30,703 linear feet of 8" DIP of water distribution lines. All DIP lines are class 52. Currently there are 214 water customer accounts. The water treatment plant was constructed in 2012 for the removal of arsenic and manganese prior to distribution. The

wastewater collection system was constructed at the same time the water system was constructed. There is approximately 2,560 linear feet of 12" DIP and 21,579 linear feet of 8" DIP as gravity mains with 5,790 linear feet of 6" DIP force mains. DIP for gravity is Class 50 and Class 52 for the force mains. The wastewater treatment plant was upgraded in 2020.

Source water assessments have given the wells a natural susceptibility rating of very high. This rating is a combination of susceptibility rating of very high for the actual wellhead and a very high rating for the aquifer from which the well is drawing water. Identified potential and current contamination sources for the Talkeetna Public Water System include an inactive gasoline station, sewer lines and septic systems, fuel storage tanks, roads, a rail corridor, a pit toilet, outhouses, a campground, Department of Environmental Conservation (DEC) recognized contaminated sites, and Leaking Underground Storage Tank (LUST) sites. These are considered sources of bacteria and viruses, nitrates and/or nitrites, volatile organic chemicals, heavy metals, cyanide and other inorganic chemicals, and other organic chemicals. Additionally, the wells are in an active flood plain for the Talkeetna and Susitna Rivers. Combining the natural susceptibility of the well with the contaminant risk, the public water system for Talkeetna received an overall vulnerability rating of very high for volatile organic chemicals and heavy metals, cyanide, and other inorganic chemicals, a high rating for bacteria and viruses, nitrates and/or nitrites and synthetic organic chemicals, and a medium rating for other organic chemicals.

During normal maintenance and operation activities of the water distribution system, it has been observed that extensive corrosion has taken place on both the water mains and service connection lines belonging to the MSB. Many of these lines have been installed for more than 30 years and have an expected service life of between 30 and 50 years under normal operating conditions. The MSB has detected and repaired large underground water leaks in several areas that were caused by severely corroded water distribution lines. Repairs exposed the actual extent of the corrosion and poor condition of the piping. A corrosion engineering firm was consulted in 2017. They observed the corroded distribution lines and service lines and recommended MSB begin planning immediately for replacing them. Additionally, several areas of the system are susceptible to freezing temperatures due to piping depth and dead end lines. The wastewater collection system has issues with inflow and infiltration (I&I), requiring the treatment plant to process significant amounts of wastewater that it would not normally have to. Repairs to the manholes to reduce I&I have taken place. Damage

to the collection piping is much more difficult to locate to perform repairs. I&I is noticed when the amount of water being treated at the water plant is lower than the amount of influent coming into the wastewater plant to be treated. Water distribution leaks are noticed when the amount of water being treated is greater than the amount of influent at the wastewater plant being treated.

In order to determine the extent of corrosive damage to both systems, a comprehensive analysis will be conducted by an engineering firm to develop an appropriate course of action to bring the systems up to today's national standards. It is anticipated that this analysis will recommend the replacement of major components of both systems to include but not limited to the replacement of the water distribution system, identifying and constructing a new source of water if feasible or upgrading the existing water treatment facility, ensure positive water pressure at all times, cleaning and repairing wastewater collection system, flood and fire control measures to protect infrastructure, and public relations.

**23. LEACHATE TREATMENT FACILITY - \$5,000,000**

Construct a new leachate treatment facility at the Central Landfill and eliminate transporting leachate to the AWWU facility in Anchorage.

**24. VISITOR RESTROOM FACILITIES - \$730,000**

Install restroom facilities in five locations throughout the Borough: one three-stall CXT-type bathroom in Talkeetna (\$250,000) connected to the City of Talkeetna services, and two vault CXT-type roadside bathrooms on the Glenn Highway and two vault CXT-type roadside bathrooms on the Parks Highway (\$480,000). Maintenance costs for the Glenn Highway and Parks Highway units will be approximately a total of \$85,000 per year.

**25. BOGARD WATER BOOSTER STATION - \$2,300,000**

Access to safe, reliable drinking water and fire protection water is a key and essential component in the continued development of the Matanuska-Susitna Borough Core Area. The City of Palmer has been working to extend water service to portions of the Core Area within its utility service area since 2004. This Bogard Booster Station project is critical to providing needed drinking water and fire protection water along the Bogard Road corridor and the Colony Middle School and Colony High School complex. In 2015, approximately 12,000 linear feet of 18-inch water main was installed along Bogard Road as part of the Bogard Road Water Extension Projects. The water main connects to the existing Palmer Water System near Palmer's Reservoir 1 (located off Scott Road)

and ends west of 49<sup>th</sup> State Street at Colony High School. The water main crosses from a lower pressure zone to a higher-pressure zone just east of Arabian Lane, and therefore requires a booster station to increase the pressure to serve Zone 3. Until the Booster Station is complete, the water main along Bogard Road will remain disconnected.

### Broadband

#### **26. BROADBAND EXPANSION - \$10,000,000**

This project, in partnership with Matanuska Telephone Association, will place 318,400 feet of fiber optic cable in the Big Lake, Goose Creek, and Caswell areas. This will bring improved or new broadband service to 673 locations and pass 2,070 properties. The project will also provide a secondary route in the Big Lake area, and areas along Knik-Goose Bay Road, which will improve the reliability of the network.

### Energy

#### **27. NATURAL GAS TRANSMISSION LINE TO WILLOW - \$47,600,000**

Currently ENSTAR Natural Gas Company provides gas service to customers across southcentral Alaska, with their northernmost customers being near the southern edge of Houston, off Cheri Lake Road. To serve the remaining customers in the Houston area ENSTAR could simply continue to extend its distribution (low pressure) mains to the north far enough to serve the remaining Houston customers that are not currently served. However, extending the distribution system farther north of Houston to serve any additional customers in that direction is not feasible as the system would have difficulty meeting demand during the winter heating season. The ENSTAR distribution system as it exists today in the Houston area is near its full capacity and even growing to the north to complete service to all of the Houston area would require additional reinforcement of large diameter mains to help ensure that system pressures can be maintained during peak heating loads.

To get gas service farther north to Willow a transmission (high pressure) pipeline would be required to bring gas from ENSTAR's 20-inch diameter Beluga Pipeline, north to the Willow area. With a transmission line to Willow, ENSTAR foresees installing a pressure regulator station (Reg Station) to drop the high-pressure gas to distribution pressures and feed into a local distribution system in Willow. If gas service to Willow should occur then a second Reg Station could be constructed in Houston, as the new transmission line would pass through this area, to feed into a new

distribution system in the Houston area and provide a redundant feed for gas to both current and new customers in the Houston and Big Lake areas. The existing system is currently fed only from ENSTAR's farthest north Reg Station located near the Vine Road and Parks Highway intersection. Having a second station in Houston would provide a second and redundant feed, and significantly boost reliability of service in a particularly cold part of ENSTAR's system.

ENSTAR has done a quick study to determine where distribution pipelines will be installed in the Houston and Willow Areas, and developed a pipeline alignment to route transmission pipelines through, or to, both areas. These cost estimates provided are non-binding and high-level estimates. Another noteworthy assumption for this estimate is that there will be no significant unforeseen challenges with ROW (or environmental) for underlying property owners along the proposed alignment that would impact schedule or costs. For example, the route for the Phase 1 portion of the project assumes that an alignment would be granted that is adjacent to the railroad bed that is currently owned by the Mat-Su Borough. If a permit is granted for this alignment and it is within the ROW that could eventually become under the control of the Alaska Railroad Corporation there could be costs associated with that that are not included in this estimate. In other words, ENSTAR has not included costs for a leasing fee, or for extra depth installation and assumes that it will not be asked to pay a leasing fee in the future for this ROW.

The estimate also assumes that ENSTAR will manage the work, and to the extent possible and reasonable, utilize its own workforce for the design, permitting, procurement, surveying, construction, and management of the project.

In understanding the costs, it is best to look at the project in two phases.

Phase 1 - Gas to Houston \$23,000,000:

- Construct an 8-inch diameter Transmission Line from Beluga Pipeline (near ENSTAR's MP39 facility on Ayrshire Road) to near the Parks Highway just south of the Little Susitna River (via railroad corridor; approximately 18.8 miles). This line would be rated for the same pressure (or higher) as the existing Beluga Pipeline and could move 30-40 mmscfd of gas to customers. The installation of this line in this portion of the route would be alongside of the existing roadbed that is the intended location of a future railroad



track. The land in this area is mostly swamp and black spruce and so a pipeline constructed here would be completed during winter months and would utilize the adjacent and existing gravel road prism as a construction work pad that would assist with construction traffic, material laydowns to help reduce construction challenges that would otherwise occur along a remote route where a road would be required to be built, or along an active road where precaution would be required to coexist safely with traffic.

- Install a large Reg Station in Houston near the intersection of the Parks Highway and the proposed railroad alignment. This station would be large enough to provide service to any new Houston area customers as well as to other existing neighborhoods to the South.
- Construct low pressure Distribution Pipeline System in Houston Area. It is assumed that this area will serve all customers immediately north of the Cheri Lake Rd portion of ENSTAR's system to the Little Susitna River and continue north along the Parks Highway right of way crossing the Little Susitna and serving businesses and residences along the highway corridor for approximately 1-mile. ENSTAR's estimate of mains to serve approximately 400 lots in this area will require 2, 4 and 8-inch pipe lengths of 15.5, 4.0, and 3.0 miles respectively.

Phase 2 - Gas to Willow (contingent on completion of Phase 1)  
\$24,600,000:

- Construct an 8-inch diameter Transmission Line from Houston to Willow following the Parks Highway corridor (approximately 13.7 miles). The pipeline would be installed within the Parks Highway ROW via a utility permit. The line would operate at the same pressure as the Beluga Pipeline and the Phase 1 pipeline and would be able to deliver up to 30 mmscfd of gas to Willow.
- Install a large Reg Station in Willow near the intersection of the Parks Highway and Willow Fishhook Road. This station would be large enough to provide service to any Willow area customers as well as accommodate growth in any direction.

Construct low pressure Distribution Pipeline System in Willow Area. It is assumed that this area will comprise all customers within and around the perimeter of Willow Creek Parkway, N Crystal Lake Road, Long Lake Road, Winter

Park Road, and the Parks Highway. ENSTAR's estimate of mains to serve approximately 530 lots in this area will require 2, 4 and 8-inch pipe lengths of 40.8, 10.8, and 4.0 miles respectively.

NOW, THEREFORE, BE IT RESOLVED, the Assembly hereby approves this list of potential infrastructure projects.

ADOPTED by the Matanuska-Susitna Borough Assembly this 16 day of November, 2021.

  
EDNA DEVRIES, Borough Mayor

ATTEST:

  
DONNIE B. McKECHNIE, CMC, Borough Clerk

(SEAL)



PASSED UNANIMOUSLY: Hale, Nowers, McKee, Yundt, Tew, Sumner, and Boeve