

Attachment A
Development Plan



NUSHAGAK COOPERATIVE

ALEKNAGIK, AK TO LEVELOCK, AK

PLAN OF DEVELOPMENT (POD) FOR MIDDLE MILE TRANSPORT FIBER

1. PURPOSE AND NEED FOR THE PROJECT

Nushagak Cooperative telecommunications requests an easement from the Alaska Department of Natural Resources (ADNR) to support construction and operation of a buried primary fiber optic telecommunications facility connecting Dillingham, Aleknagik, Ekwok, and Levelock. Nushagak is a subgrantee through Choggiung Limited who has been awarded an NTIA grant that will fund the construction of a new fiber optic broadband system from Levelock to Aleknagik and Dillingham Alaska. This facility will bring reliable high-speed internet to underserved & underprivileged, remote communities, as well as providing telecommunication diversity to the region.

2. PROJECT LOCATION

a. Geographic Location

The requested area for this easement is on state lands between Aleknagik & Levelock, across open tundra. The requested easement route will include passing through the village of Ekwok. The proposed route first enters State Lands approximately 9 route miles east of Aleknagik. The route continues through approximately 28.5 miles of State Lands before leaving them west of Ekwok, and then re-enters State Lands approximately 3 miles east of Ekwok as the route turns southeasterly, finally leaving State Lands approximately 5 miles northwest of Levelock.

b. Maps

USGS-based maps showing the general vicinity, and 1" = 1 mile scaled route sheets of the project and surrounding topography are provided. These figures are provided in [Section 18](#), below.

3. FACILITY DESIGN FACTORS

a. Dimensions of Easement

The project is comprised of 2 major Easement segments occupying State Land, consisting of a combined 52.69 Miles (278,155.7 ft) of length, by 30' in width. Totaling 191.58 acres of land, more or less.

b. Proposed Improvements and Uses

The easement areas will be developed to install buried (plowed/trenched/bored) subsea grade fiber optic telecommunication cable, as well as buried manholes at splice locations along the route.

c. Preconstruction Activities

Land clearing is expected to be required for much of the route as heavily wooded areas are encountered. Preconstruction and construction activities will be carried out in compliance with the Migratory Bird Treaty Act.

A crew of two to four persons will complete staking and site preparation. Surveying, staking, and grubbing equipment will be used in pre-construction. Hydro-ax and excavator / mini-excavator may be on site during this phase.

d. Construction and Operation of Facility

Construction of the facility will occur between April 2023 and December 2024. Construction will take place in both winter and summer months to leverage environmental safety advantages in the more saturated soils. Equipment used will include a mini excavator, cable plow, directional drill, ripper-equipped dozer, trencher, and seasonally appropriate supply/transportation support vehicles.

The facility will be un-manned within the easement lots. A field crew may occasionally access the facility route for visual inspection “as-needed”.

4. LEGAL DESCRIPTION OF LAND

The easement will occur in State Lands between Aleknagik, Ekwok, and Levelock. A breakdown of Easement area per Section is attached in [Section 19](#), below, and as shown in attached maps in [Section 18](#), below.

5. TERRAIN / GROUND COVER

The project area is located within Alaska’s Intermontane Plateau System, Bering Shelf Province, Ahklun Mountains Province (IP36) and Western Alaska Province, Nushagak-Bristol Bay Lowland Section (IP32) (USDA, 2010). The Nushagak-Bristol Bay Lowland Section is covered by wet organic soils which support low and dwarf shrub communities of willow, birch, and alder. Mosses and lichens are abundant ground covers. Within the Ahklun Mountains Province dwarf shrub-lichen tundra dominates mountain crests and upper slopes where permafrost is discontinuous. Shrubs (willows, birches, and alders) become progressively more abundant and robust at lower elevations as permafrost becomes more fragmented. In valleys, shrublands are punctuated by sedge-tussock tundra meadows (on very wet areas) and mixed forests.

Specific wetlands delineation has been completed and a Jurisdictional Determination has been drafted for application for a Section 404 wetlands permit with the US Corps of Engineers, as very little National Wetlands Inventory (NWI) data is available for the facility region.

6. RESOURCE VALUES AND ENVIRONMENTAL CONCERNS

This project will not be constructed near any developed areas within State Land, and thus would not have any potential impact to existing State infrastructure. Construction of the buried fiber would have negligible impact to the current uses.

Investigation is presently concurrently underway for Alaska State Historical Preservation Office (SHPO) review requirements relating to the entire facility route.

During the construction seasons there will be a minor increase in noise, similar to road noise conditions near a city. The easement area is uninhabited. There are no anticipated long-term impacts to geologic, mineral or energy sources, nor to wildlife or threatened or endangered species.

The State of Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Database does not indicate any contamination throughout the proposed route corridor. The nearest contaminated site to State Lands is approximately 3 miles from proposed easement area, near Ekwok.

7. STABILIZATION AND REHABILITATION

a. Soil Replacement and Stabilization

Most of the fiber installation in uplands will be installed by plow method. Plowing produces the smallest impact on soils for buried utility construction. Any above-grade material produced or grade alteration by the plowing action is manually replaced and tamped, as close to natural grade as possible. Areas of the project where the soils are made up of saturated type wetlands will be installed in winter conditions utilizing a chain trencher (or a rock saw) to cut a slot into the soil to plow the cable. For areas where trenching is necessary to bury the fiber, trench spoils will be placed into the trench and re-tamped. The cable depth will be maximum 24" deep so that in the event of areas of discontinuous permafrost, the cable will reside in the "active layer" above the permafrost to discourage thermo-karsting. The final ground surface following installation will be re-graded to closely match the original ground contours. Manholes will be placed at roughly 20,000 L.F. intervals to facilitate splicing fiber reels, along with select stream crossings. Care will be taken to minimize disturbed soil footprint at these locations, manholes will be set to grade, and adjacent soil disturbance will be backfilled naturally, and tamped to original grade.

b. Stormwater Pollution Prevention Plan

A SWPPP will be necessary for this project. Upon selection of the installation contractor, a SWPPP will be developed and filed jointly in the name of the contractor and the project owner, Nushagak Cooperative. The SWPPP will be developed by the same environmental consultant that performed the wetlands delineation to provide continuity of environmental protections.

c. Revegetation

In order to minimize erosion to disturbed soils, forested areas requiring clearing will only be cleared down to the ground surface, allowing the root mass to remain in place. In these areas the contractor will utilize a trencher to cut the upper surface of the trenchline to 'grub' ahead of the cable plow. Other areas where the fiber cable will be plowed may not require a trencher. In both instances, the majority of the work zone will be allowed to revegetate naturally to maintain natural vegetation types. In areas with larger amounts of disturbed soil requiring revegetation to comply with SWPPP, a grass seed mixture will be developed in coordination with the Alaska Plant Materials Center and utilized accordingly.

8. ACCESS

Access to the easement route from the west end (Aleknagik) will be across open tundra, existing 4-wheeler trails & existing State & City roads allow access to project alignment outside of State lands. Access to the easement route on the east end (Levelock) will be via existing 4-wheeler trails leading to state lands, along which the fiber route is partially situated. Some segments of the route will be accessed from Ekwok via 4-wheeler, snowmachine, or other suitable off-road vehicle operated along the project alignment.

9. BUILDINGS AND OTHER STRUCTURES

There are no buildings planned to be installed onto the easement. Fiber splice manholes will be installed to grade at roughly 20,000 route-foot intervals and select stream crossings for the length of the facility, including State Lands, and will remain in place for the duration of the easement.

10. POWER SOURCE

No power sources are necessary for installation on easement land.

11. WASTE TYPES, WASTE SOURCES, AND DISPOSAL METHODS

Any waste generated during construction will be transported back to the construction staging area and disposed of in an approved landfill.

12. HAZARDOUS SUBSTANCES

Hazardous substances, as defined by the Resource Conservation Recovery Act (RCRA), will not be stored on the easement.

13. WATER SUPPLY

There will be no water supply required for the long-term utilization of the project. The project will apply for a State temporary water use permit for any required directional drilling. Drinking water for the construction crew will be brought in as bottled water by the individual crew members.

14. PARKING AREAS AND STORAGE AREAS

There are no parking areas or storage

15. NUMBER OF PEOPLE USING THE SITE

During construction a crew of up to 12 may access the site. During operation, the easement will be unmanned.

16. MAINTENANCE AND OPERATIONS

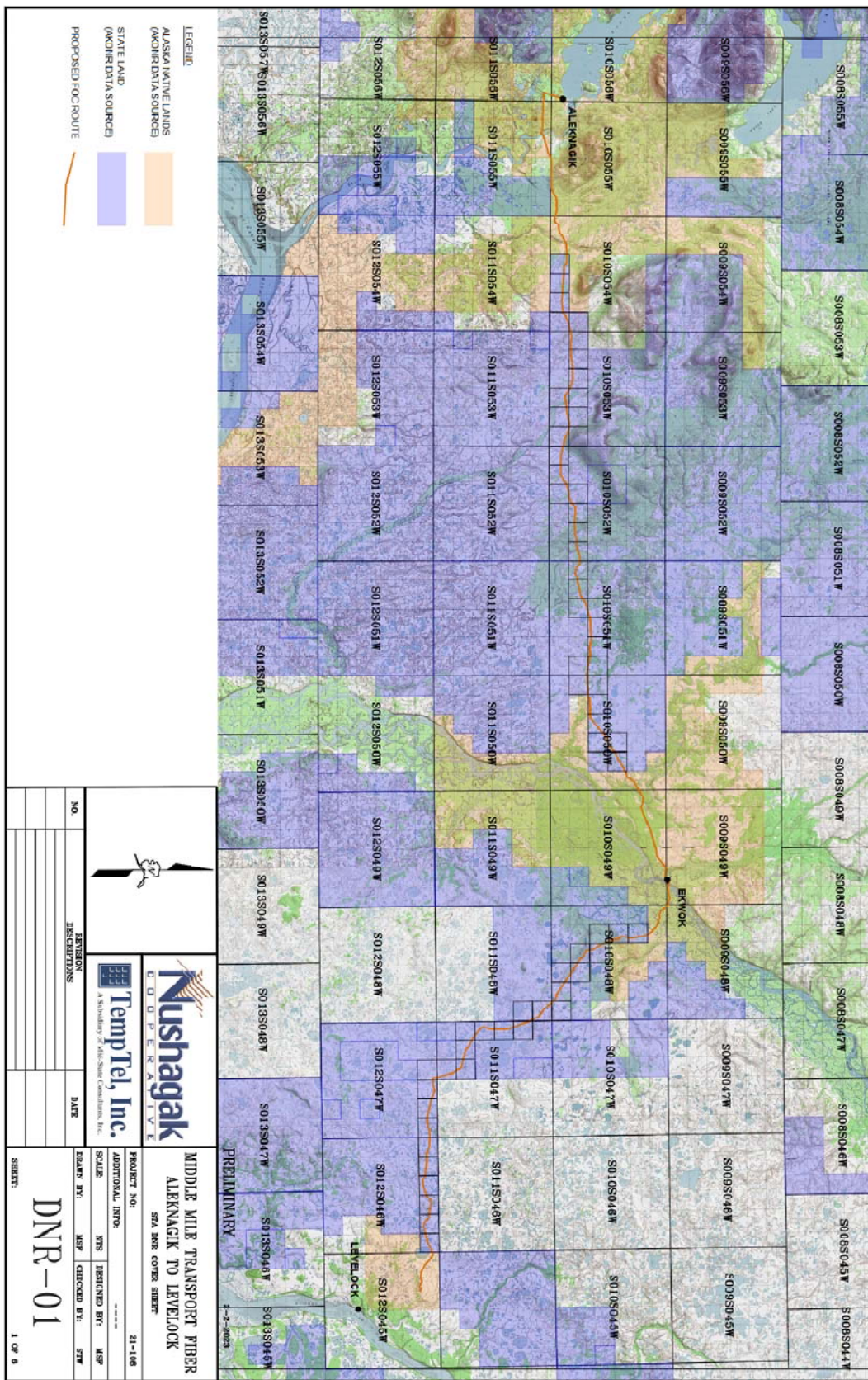
Once the fiber is installed and telecommunication lines connected & tested as operational, little to no maintenance is required. Site visits will be rare, and on "as-needed" basis. Visual inspections may be carried out during site visits to determine whether facility maintenance is required.

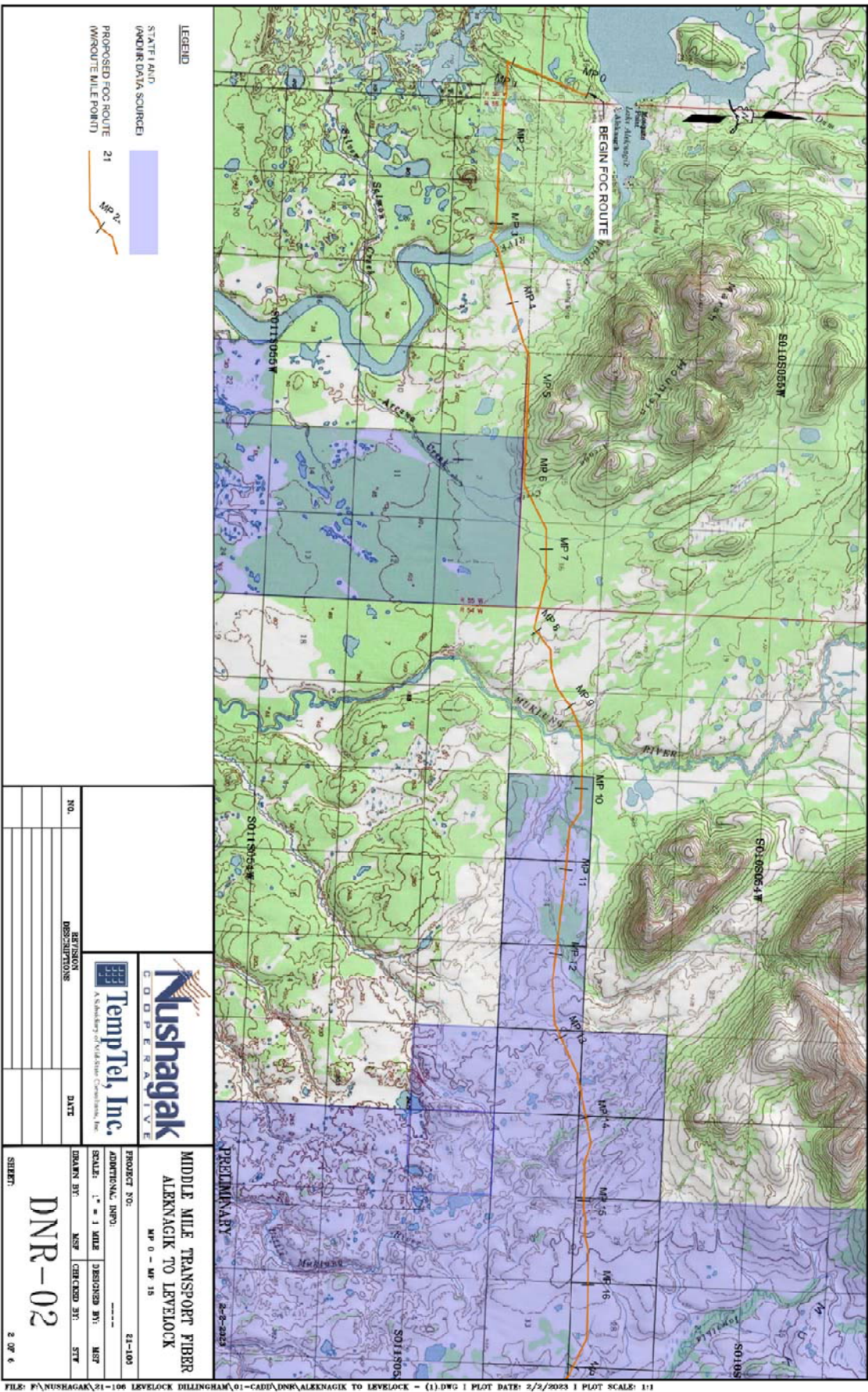
17. CLOSURE / RECLAMATION PLAN

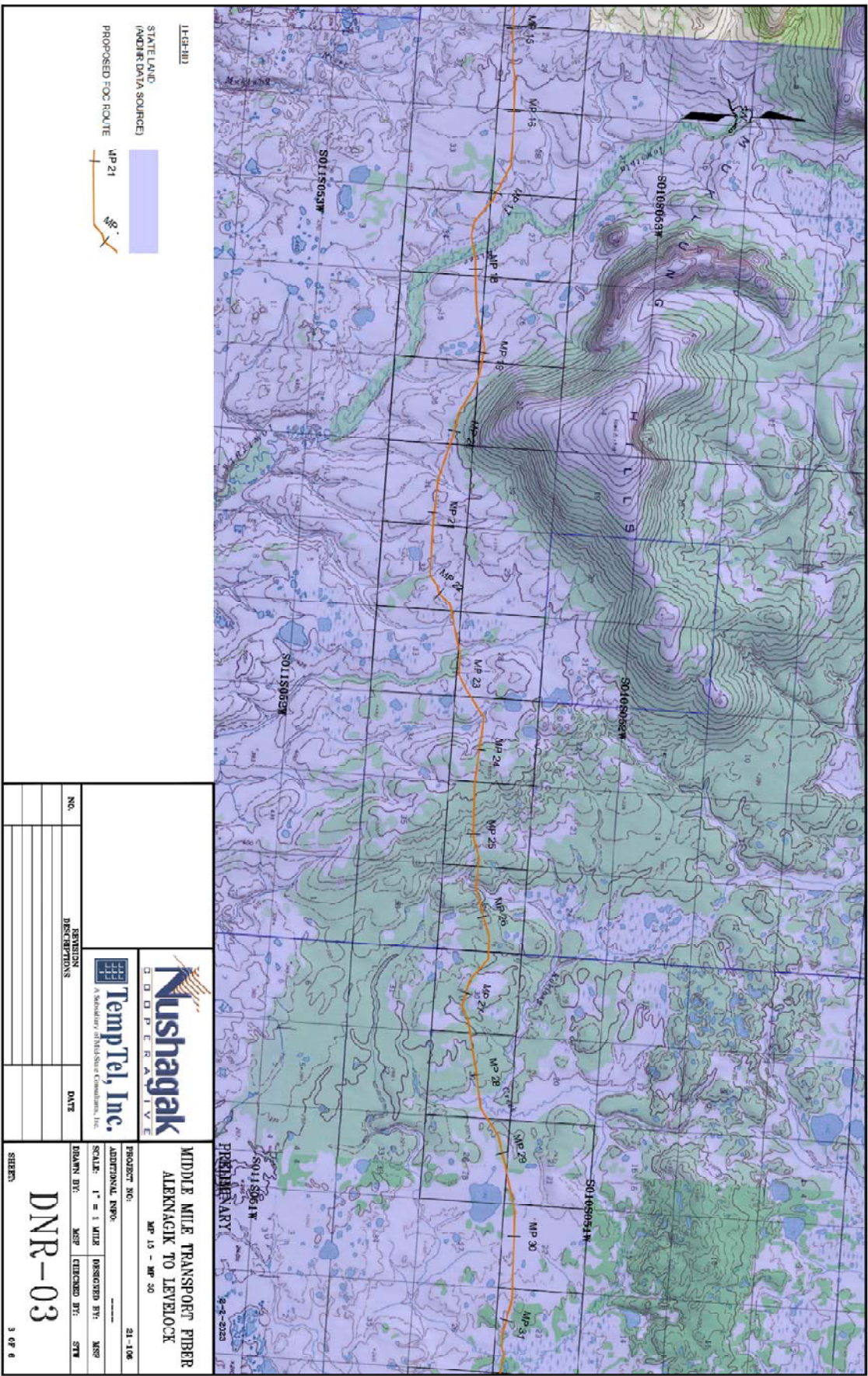
No closure plan is required at this time.

18. SKETCH OF THE DEVELOPMENT AREA

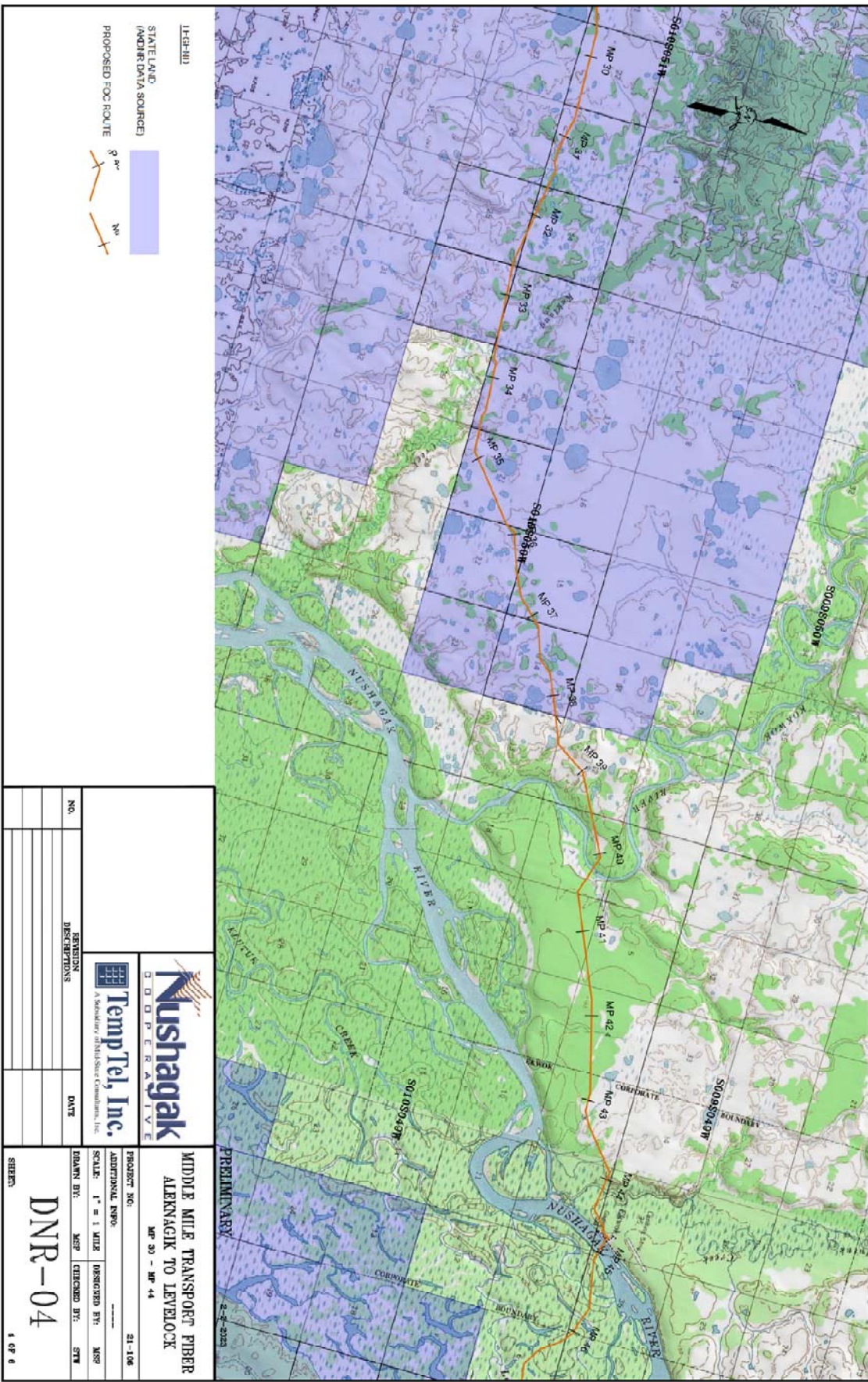
Following are the various maps detailing the proposed easement area & fiber installation route.



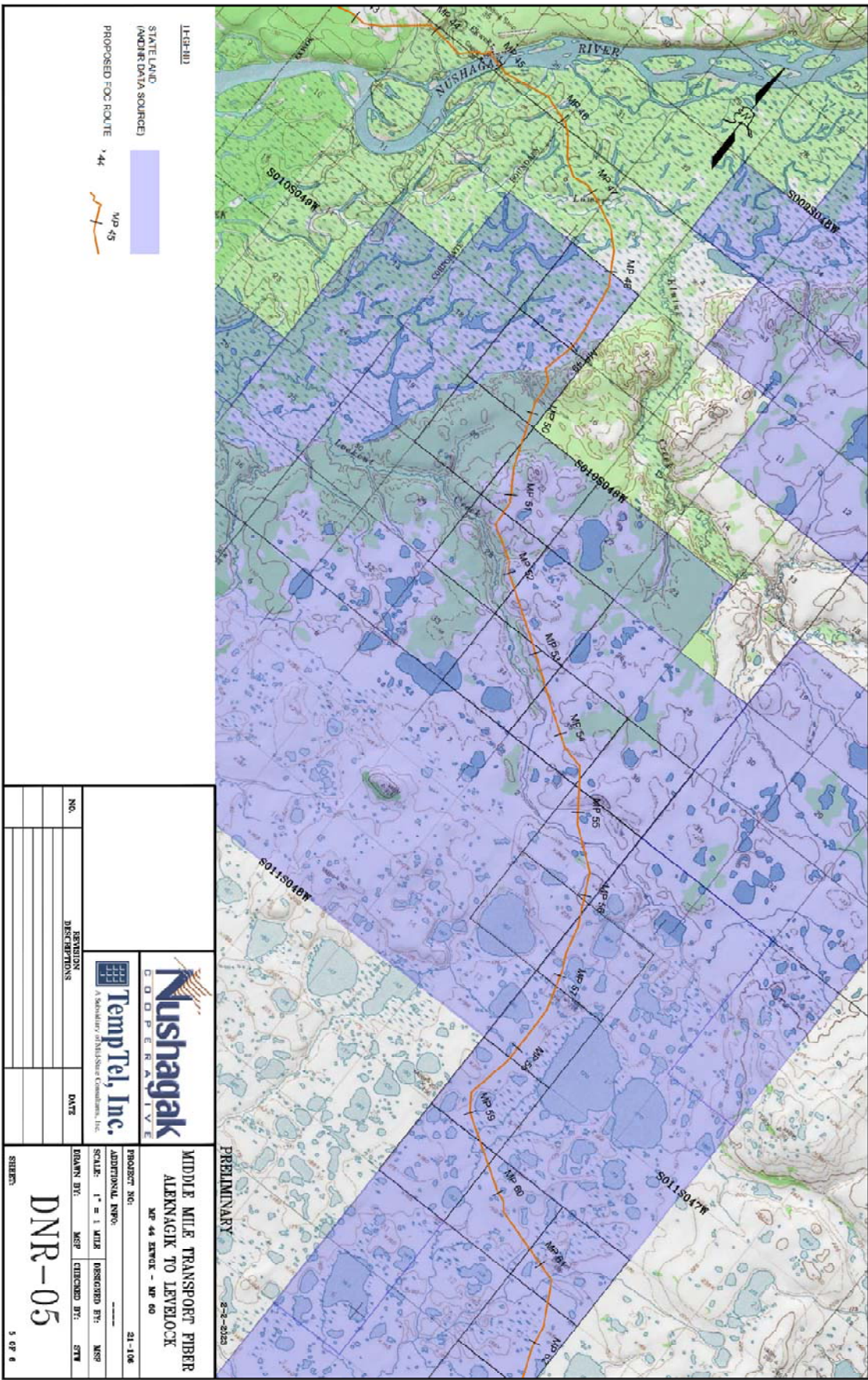




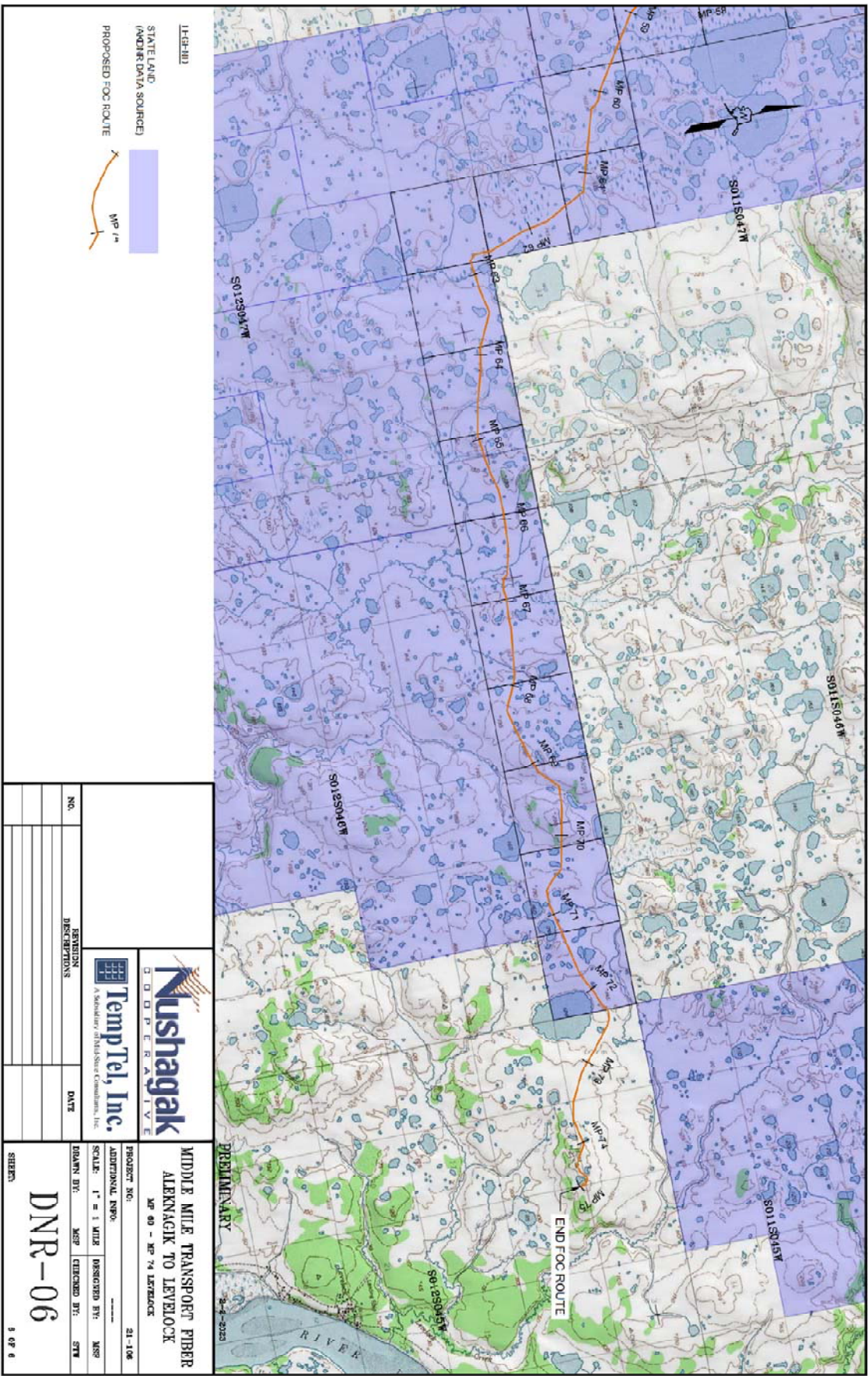
FILE: F:\NUSHAGAK\21-106 LEVELOCK DILLINGHAM\01-CADD\DNR\ALEKNAGIK TO LEVELOCK - (1).DWG | PLOT DATE: 2/2/2023 | PLOT SCALE: 1:1



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19. MTRS BREAKDOWN OF EASEMENT LANDS

MTR	SECTION	LENGTH (ft)	ACRES	MTR	SECTION	LENGTH (ft)	ACRES
S010S048W	28	5114.4	3.52	S010S053W	26	1848.2	1.27
S010S048W	35	6356.1	4.38	S010S053W	25	1049.4	0.72
S010S048W	20	1205.3	0.83	S010S053W	34	5056.7	3.48
S010S048W	21	4598.8	3.17	S010S053W	29	5329.5	3.67
S010S048W	36	534.34	0.37	S010S053W	36	4520.7	3.11
S010S048W	8	5448.5	3.75	S010S053W	28	5446.7	3.75
S010S048W	17	5728.4	3.95	S010S053W	27	661.09	0.46
S010S048W	27	3590.9	2.47	S010S053W	30	5207.2	3.59
S010S048W	34	2786.6	1.92	S010S054W	33	5465.5	3.76
S010S050W	20	5395.8	3.72	S010S054W	34	5294.7	3.65
S010S050W	21	6433.9	4.43	S010S054W	35	5346.3	3.68
S010S050W	22	3257.7	2.24	S010S054W	36	3831.3	2.64
S010S050W	15	3199.8	2.20	S010S054W	25	1839.4	1.27
S010S050W	14	6113.8	4.21	S011S047W	33	5651.1	3.89
S010S050W	19	1272.7	0.88	S011S047W	28	3803.4	2.62
S010S050W	30	3836.2	2.64	S011S047W	29	5970.2	4.11
S010S051W	23	5369.1	3.70	S011S047W	19	6466.9	4.45
S010S051W	24	3012.4	2.07	S011S047W	18	5351.4	3.69
S010S051W	25	2326.9	1.60	S011S047W	30	1500.8	1.03
S010S051W	29	5526.6	3.81	S011S047W	7	4734.5	3.26
S010S051W	28	3587.8	2.47	S011S048W	1	7104.5	4.89
S010S051W	21	2126.9	1.46	S011S048W	12	934.91	0.64
S010S051W	22	5299.8	3.65	S012S046W	1	5655.4	3.89
S010S051W	30	5613.8	3.87	S012S046W	2	5847.2	4.03
S010S052W	28	3307.4	2.28	S012S046W	3	5786.3	3.99
S010S052W	32	5853.5	4.03	S012S046W	4	5574.8	3.84
S010S052W	25	5456.4	3.76	S012S046W	5	5343.1	3.68
S010S052W	26	5359.5	3.69	S012S046W	6	5405.9	3.72
S010S052W	27	5580.8	3.84	S012S047W	4	1486.4	1.02
S010S052W	33	2321.9	1.60	S012S047W	1	5343.7	3.68
S010S052W	31	5187.6	3.57	S012S047W	2	5429.8	3.74
S010S053W	35	3545.1	2.44	S012S047W	3	5544.6	3.82
Total Acres		191.58					