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a community plan for MAYO

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A COMMUNITY DEVELOPMENT PLAN

For

MAYO, Y. T.

by

Synergy West Ltd.

for the

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of the
al Government of the Yukon

and

he Community of Mayo

May, 1974

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Date Due

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FOREWARD

The aim of a development plan is to set out long-term design objectives for the future development of a community and provide a more flexible guide than is possible through zoning controls. The development plan provides a background against which changes made to existing land uses can take into account community goals.

The proper use of a development plan should enable even short-term changes or zoning amendments to be made with the knowledge of their ultimate effects on the design of the community. This comparison provides a continuous reference against which planning changes can be considered.

The development plan explains the design objectives and gives in broad terms the extent and use of all land necessary for the complete life of the community.

Zoning and development plans are not means to an end; they are merely the tools by which urban groups, large and small, may evolve and change in an orderly fashion according to their community goals. Both are to be used, modified, and amended from time to time as these goals and objectives change. Periodic reviews should be built into the planning objectives on at least a five-year frequency.

HISTORICAL BACKGROUND

With the gold discoveries at Circle and Fortymile, followed by the spectacular discoveries at Bonanza Creek, the many tentacles of the Yukon River System were subjected to the sluice and the pan. In 1899 four Swedes discovered gold on Duncan Creek, a tributary of the Mayo River. In the small scramble that followed, Minto Creek, another tributary of the Mayo River, was staked on its entire length and two settlements sprang up - Mayo Landing, and slightly to its east, Gordon's Landing, both vying for importance as transportation centres on the Stewart River.

In 1906 a large silver-lead ore body was discovered on what was appropriately named Galena Hill. It was not until 1914 that large-scale production of the Galena Hill ore body began. A road was built from Mayo Landing to the mining site, ensuring Mayo's future and rendering Gordon's Landing a ghost town. The Galena Hill operation was the forerunner to the United Keno Mine at Elsa.

In 1919 Keno Hill Mine was struck and from that time to the mid-1920's, with the increased silver ore production, Mayo Landing grew from a trading post to a river port settlement, exporting ore and importing goods and services for the mining operation.

Through the thirties silver prices sagged and smaller mining operations closed down. Following the Second World War increasing development costs further cut back mineral extraction activity. In order to assist this depressed economy and to put mining operations on a year-round basis, a road was constructed between Whitehorse and Mayo in 1950-51, continuing to

Dawson City by 1953. Although this was no doubt a great assistance to the mining industry, permitting twelve-month operation, reducing trans-shipping, and reducing transportation costs, it ended the era of Mayo as a living, self-supporting port community. The Government did move in and establish regional offices but the bank moved out within months and re-opened at Elsa.

Since that time, Mayo has functioned as a regional administration centre for both Federal and Territorial Government offices, which provide its main economic base. There is some local sawmilling, providing for example, pit props for United Keno, the only mine still operating.

Mayo was a white community. In 1961 native people were moved in from their traditional location some eight miles downstream on the Stewart River, establishing its current bi-cultural characteristic.

Currently, Mayo is civically governed as a Local Improvement District, having a Board of three Trustees, one of whom acts as Chairman.

CHAPTER I

THE REGION AND MAYO'S PHYSICAL SETTING

LOCATION

Mayo is located at 63°36' north latitude and 135°54' west longitude. It is situated approximately 35 miles east of the Stewart River crossing of the Klondike Highway on the Mayo-Elsa-Keno extension road. The existing townsite is on the flood plain of the Mayo River at its junction with the Stewart River. It is at the upper reach of navigation on the Stewart.

GEOGRAPHY

The region is characterized by the Stewart River Valley and closed to the north by the Gustavus Range and Patterson Range to elevations in the order of 6,500' above sea level. To the south the Valley is delineated by rolling hills up to 4,500'.

The river valley is defined on the horizon by mountain ranges with barren slopes, growth being confined to the lower rolling hills of the valley and in particular along the water courses. The Mayo region may be described as a rough upland with rounded bosses. The focal point of the valley is the Stewart River, an eroded trench, as are its tributaries below the valley floor.

FEDERAL DEVELOPMENT CONTROL BOUNDARY

In order to prevent unorganized development in the areas adjacent to

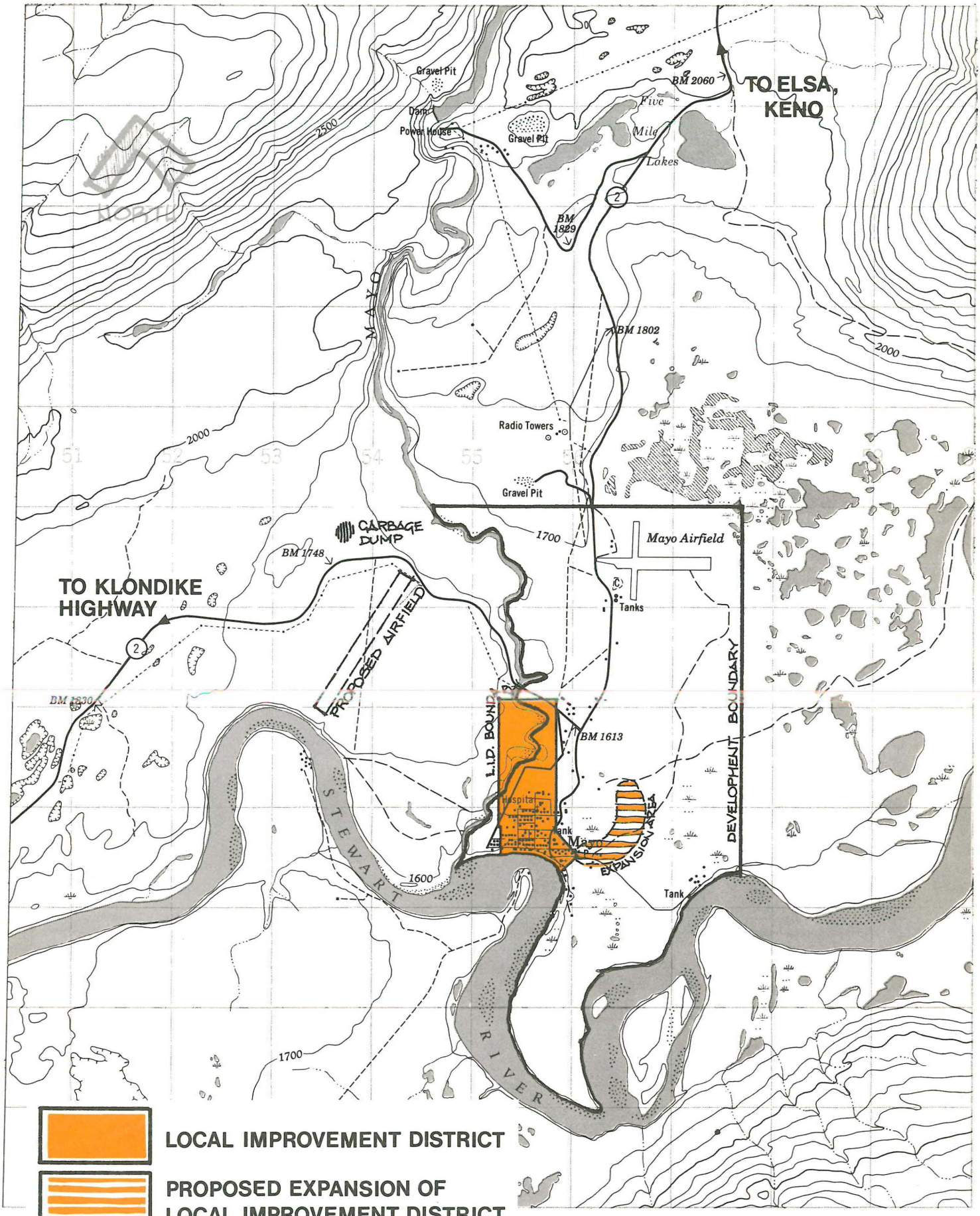
communities in the Yukon, all unsurveyed Crown lands within a particular described area may be withdrawn from disposal by Order in Council. The development control boundary in effect for Mayo is shown on the drawing entitled "Mayo Regional Plan." It is bounded on the south by the Stewart River, on the west by the Mayo River, on the north by an east-west boundary immediately north of the Mayo airfield, and to the east by a north-south boundary line approximately one quarter mile east of the end of the Mayo airfield landing strip. This is an area of 2,642 acres.

An airfield proposal east of the limits of the development control boundary is shown on the regional plan. In order to control this potential development and particularly the satellite uses it will encourage, it is recommended that the development control zone be extended eastward to include the airfield site. That is to say, the northern boundary should be extended westwards a distance of approximately 1.25 miles and thence directly south to intersect with the Stewart River; the southern boundary to be the limits of the Stewart River to its point of intersection with the existing development control boundary.

L.I.D. BOUNDARY

Mayo is a Local Improvement District with authority as granted by the Yukon Territorial Government in the Ordinance respecting such districts. The area of the district is as shown in full orange on the Mayo Regional Plan and is an area of 190 acres, bounded on the south by the Stewart River.

A potential expansion area to the Local Improvement District is shown in striped orange on the regional plan. This represents an area most suitable



MAYO REGIONAL PLAN

to habitation and construction. It is an area of approximately 80 acres, characterized by granular soils as defined by AASHO standards and not subject to permafrost. It is well-treed with deciduous growth and is at least 20 feet above the flood plain.

Expansion of the L.I.D. district is based on consolidation of Mayo with Elsa and the relocation of the latter community or definite indications of expansion in the mining industry in the immediate Mayo region. It should not be considered on the basis of individual lot development requests as adequate serviced land exists within the existing townsite.

The limits of the expansion area as shown actually describe the area most conducive to development. It is recognized that should this expansion take place, the actual survey delineating the expansion area would be conducted with the use of more regular meets and bounds.

CLIMATE

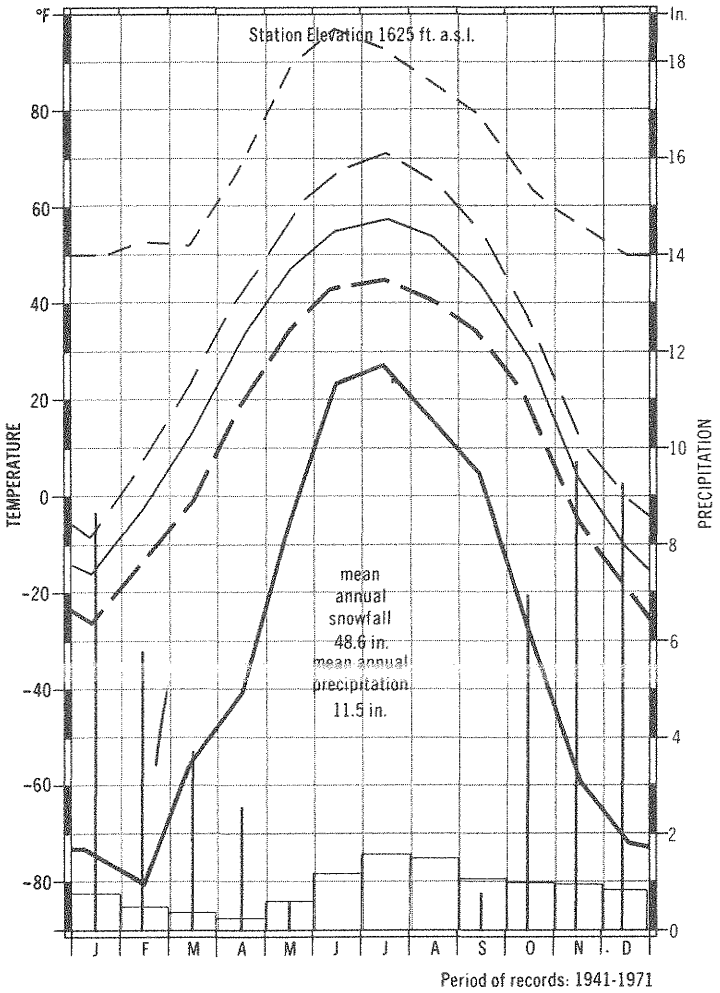
The climatic characteristics of Mayo and of its neighboring community, Elsa, are indicated on Plates 2 and 3 respectively. The source of this information is the long-term "climatic abstract listing and preliminary new period 1941-1971, normal printouts," Atmospheric Environmental Services, Department of the Environment, Government of Canada.

The mean annual precipitation in Mayo is 11.5 inches. The mean annual snowfall is 48.6 inches. November is the month which averages greatest snowfall, a characteristic common to most Yukon communities.

A comparison of the temperature experiences between the two communities

CLIMATIC CHARACTERISTICS

MAYO

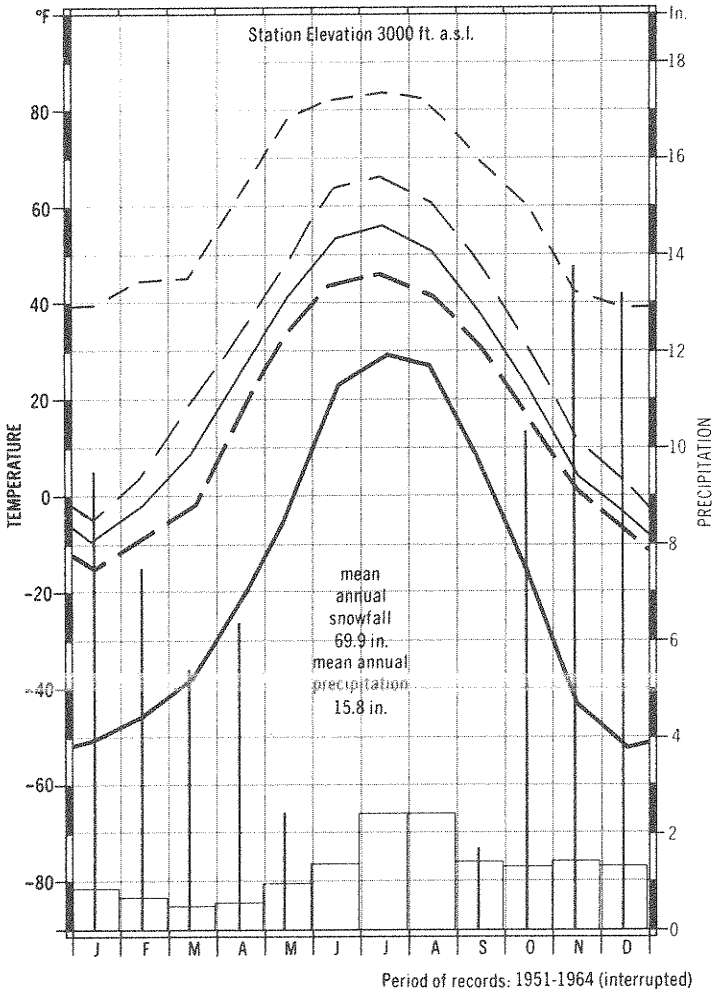


Sources: Long-term climatic abstract listings and preliminary new period (1941-1971) normal print-outs, Atmospheric Environment Service, Department of the Environment.

- Extreme maximum temperature
- Mean daily maximum temperature
- Mean daily temperature
- Mean daily minimum temperature
- Extreme minimum temperature
- Mean snowfall
- Mean total precipitation

CLIMATIC CHARACTERISTICS

ELSA



Period of records: 1951-1964 (interrupted)

Sources: Long-term climatic abstract listings and preliminary new period (1941-1971) normal print-outs, Atmospheric Environment Service, Department of the Environment.

- Extreme maximum temperature
- Mean daily maximum temperature
- Mean daily temperature
- Mean daily minimum temperature
- Extreme minimum temperature
- Mean snowfall
- Mean total precipitation

indicates a similarity in mean daily temperatures and a significant divergence of experience for extreme maximum and minimum temperatures, with Mayo suffering these extremes. Mayo is in fact on a floodplain well below the general level of the valley, and consequently experiences a very local climate. Much comment has been made at both the local and regional levels concerning the adversity of these local extremes and speculating whether this was a significant reason in the consideration of relocating the community. An examination of the climatic characteristics of Watson Lake included in the report entitled "A Community Plan for Watson Lake" should lessen this concern as this is a growing and viable community which experiences temperature conditions both in the average and in the extremes most comparable to that of Mayo.

With respect to navigation on the Stewart River, on the average freeze-up occurs in the first week in November and ice break-up in mid-May. Coldest weather can be expected in February and warmest during the period of the summer solstice.

REGIONAL RESOURCES

Planning for the future of Mayo will probably be an exercise in futility unless it is tied to the land and examines with Government agencies and private enterprise, the future development of its natural resources. A brief description of these follows.

Woodlands

The most common species of trees found in this region are white spruce,

black spruce and poplar. Suitable saw-timber may be found along the alluvial flats of the Stewart River and along the Talbot Creek - Francis Lake Depression. The saw-timber is basically white spruce, milled locally to provide pit props at United Keno Mines. The region cannot support an active pulp or timber industry for external markets as tree growth is sparse and regeneration of growth extended. Care should be taken to restrict cutting to its present level and avoid clear cutting.

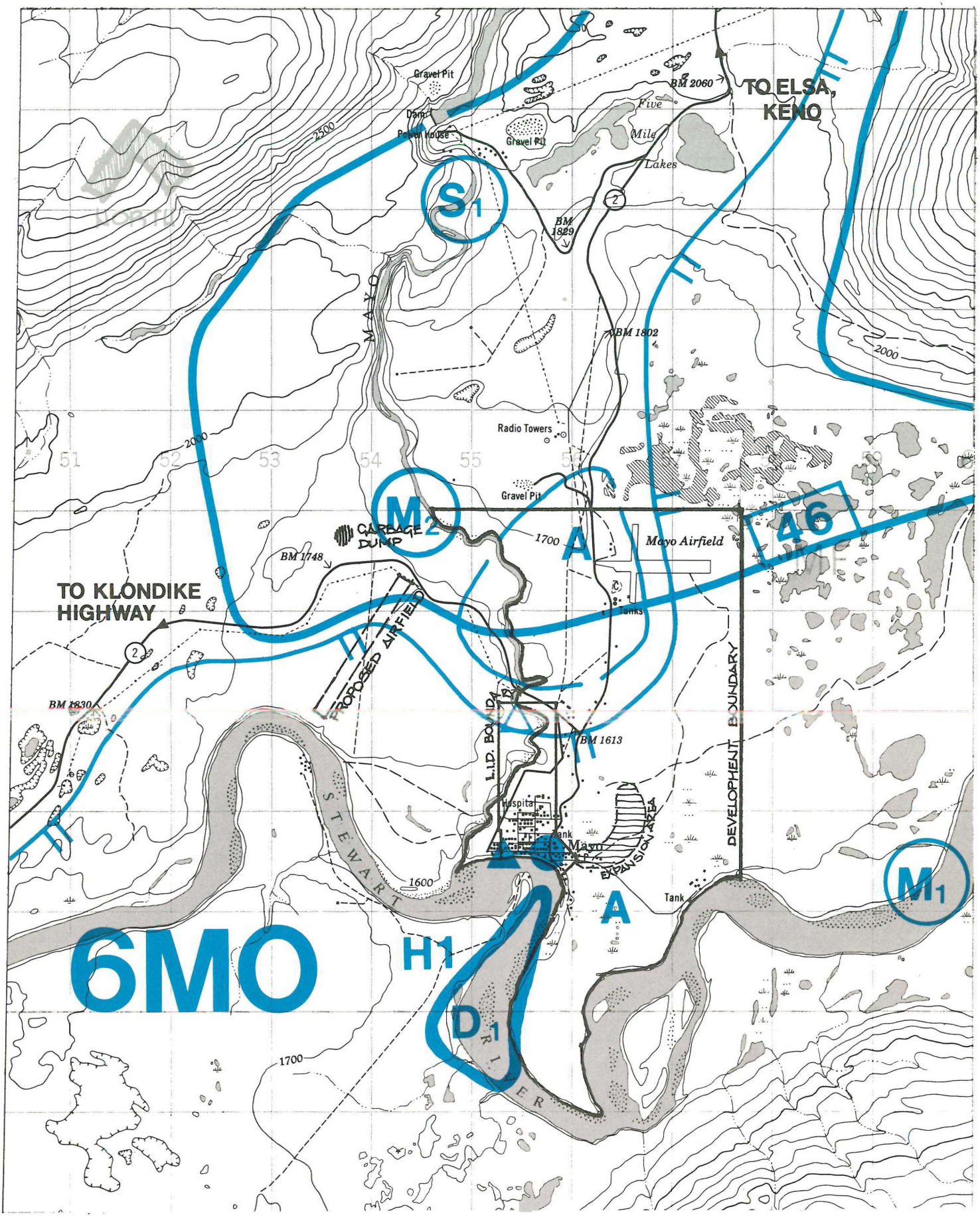
Fishing

A limited domestic fishery for Chinook Salmon is conducted at Mayo. This forms part of the food resources locally. Spawning grounds for the salmon extend up the Stewart River to Fraser Falls and up the Mayo River to the outlet of Wareham Lake, where it is restricted by the N.C.P.C. hydro-electric dam. Historically, the area between the dam and the Mayo Lake contained extensive Chinook Salmon spawning areas. Should the fish bio-mass show signs of depletion, consideration of a fish ladder bypassing this obstruction is encouraged. Plate 4 illustrates the nature of the fish resources and their location.

Limited commercial fishing for lake trout and whitefish is conducted at Mayo Lake and Big Kalzas Lake.

Hunting and Trapping

Local to the Mayo townsite, the land within a five-mile radius is reserved for the use of older and disabled persons. Trapping may be irregular during the season, but is considered important.



CANADA LAND USE INFORMATION

MAYO

PLATE 4

LEGEND & NOTES

CANADA LAND USE INFORMATION

LEGEND SUMMARY

Boundary of a proposed Development Control Zone



Boundary of an outfitter, game hunting area



Fish migration route



Existing or potential fish spawning area



Important area for domestic fishing



Boundary of a proposed IBP-CT reserve site



Campground



Hydrometric and water quality station



Archeological site



Area of archeological interest



Historical site

FISH RESOURCES & FISHING



Chinook salmon spawning grounds are limited to an area of the Mayo River below Wareham Lake



Chum and chinook salmon ascend the Stewart River in late summer and fall. The limit of upstream migration for chum salmon is believed to be the Mayo area; chinook salmon proceed further to headwater spawning areas (1).



Chinook salmon ascend the Mayo River to Wareham Lake. Further upstream migration is prevented by a power dam at the outlet of the lake (1).



In late summer, alimited domestic fishery for chinook salmon is conducted at Mayo. The fish are caught in gill nets and partially dried on racks.

COMENTS ON HUNTING & TRAPPING

6MO

Land within a five mile radius of the settlement of Mayo is reserved for the use of older and disabled persons. although trapping activity may be irregular during the season, this area is considered important.

HISTORIC SITES

H1

An old Indian settlement and cementary are located across the river from Mayo. The site, which was last occupied in the 1930s', contains several old buildings, including a church.

Within the Mayo region, the most significant species by value include: beaver, lynx, marten and mink. Value of furs exported has been in the range of $8-10,000 over the past five years.

Hunting provides an important source of food for many Yukoners and Mayo is no exception. Moose is the main species hunted, although woodland caribou are occasionally taken. Two outfitters for big game hunting are active in the Mayo region.

Mining

The only active mining operation in the Mayo region is the silver-lead-zinc operation at United Keno Hill Mines at Elsa. This is an underground mining operation located on the north slope of Galena Hill and overlooking the South McQueston River valley. There are several mine shafts and a concentrator milling 500 tons per day. The concentrates are trucked to Whitehorse and trans-shipped by rail to Skagway.

For many years the life expectancy of the operation has been stated as two years, based on proven deposits and current market prices. With improving market prices for non-renewable resources, this life-expectancy projection may be extended.

The office of the local Mines and Claims Recorder is located in Mayo. The region in which this office has jurisdiction represents an area of almost one quarter of the Territory. It extends north to the Peel River, northeast to the N.W.T. boundary, east to the Canol Road, south to the Pelly River and west to the Yukon River. A significant increase in the number of claims recorded began in 1972 when it increased 50% over the average of the previous

ten years. A further 50% increase was experienced in 1973 when 2587 claims were registered. By February 28, 1974, 1318 claims had already been recorded, indicating an even greater rate of activity.

Today, approximately 40 mining companies are carrying out active exploration programs in the Mayo region. These include: Barrier Resources, Conwest Exploration, Cyprus Exploration, Brinco, Cominco, Farem, Acme, and Noranda.

This increased regional mining activity has resulted in the use of the Mayo airport as the base point, increasing activity for existing helicopter operation, a building permit request to the L.I.D. for a second helicopter operation, storage space requirement for exploration equipment, a need for servicing this equipment, demand for supplies, and a request to the L.I.D. for permission to locate mobile homes within the community.

Historically, the reason for Mayo's existence has been a supply role to the mining industry. The current expansion in the exploration field offers benefits to the community already being realized. Whether the long-term benefits of mining operations can be injected into Mayo's economy depends on the proximity of these operations to the community, the availability of road access, the close liaison between the community and the Territorial Government and the mining operators and the capability of Mayo expanding to meet these demands and the quality of the community in terms of the reliability of the utility system, its business tructure, its social life and its civic structure.

Recreation - Tourism

Local outdoor recreation includes hunting and fishing. Summer cabins owned

principally by local residents are located at Janet Lake, Wareham Lake, Ethel Lake, and Mayo Lake. The Stewart River is used for recreational boating basically as the access means to remote hunting and fishing areas.

Sites of historic points of interest in the region include the first hard-rock mine developed in the Yukon Territory located at Keno Hill; Gordon's Landing, an abandoned settlement just east of Mayo on the Stewart River, which at the turn of the century vied with Mayo in importance; and an old Indian settlement and cemetary located across the Stewart River from Mayo, shown as H-1 on Plate #4.

Farming

Considerable comment was made by local residents concerning the cost of goods and foodstuffs. On that basis, the potential for growing garden vegetables locally has been examined.

Climate is the main factor that determines what can be grown in an area. The climatic requirements for successful crop production north of the 55th latitude are:

- a period of 80 days free of a killing frost
- a vegetative period of 110 days
- an accumulation of 1000 growing-degree days
- adequate precipitation during the growing season.

Examination of the climatic data experienced at Mayo over the past 30 years indicates a killing frost-free period of 96 days, the average dates being May 25th through August 28th. An examination over the past 10 years indicates a vegetative period experience of 138 days per annum, occurring

on the average between May 6 and September 21. An examination of 30-year records indicates an average number of growing-degree days of 1349.

Therefore, considering the availability of water from either the Stewart or the Mayo rivers, which would augment any precipitation deficiencies, it is quite possible to produce garden vegetables locally, providing that techniques developed over the past ten years are followed assiduously.

The Canadian Department of Agriculture has carried out considerable work in this field. Publications through that Department which would be of interest include:

Publication 1466 - "Farming Potential of the Canadian Northwest," 1972

Publication 1192 - "Gardening in the Yukon," 1963

Publication 1337 - "How to Build a Plastic Crop Shelter or Greenhouse," 1967

Publication 1408 - "Gardening on Permafrost," 1970

Publication 1081 - "Handbook for Northern Gardeners," 1964.

There are two obvious benefits which could be achieved through this type of activity. The first, a reduction in general vegetable prices in Mayo, particularly if sufficient are grown and stored for winter use; and second, development of a viable, local business opportunity.

CONCLUSION

It is apparent that mining remains the sole private economic justification for the continuing existence of Mayo as a community. As will be seen in Chapter II, entitled "The Community," most of the activity in the existing townsite involves government support functions. These however, have

regional significance only in the context of a continuing demand for mineral resources. Should current exploration prove successful and/or should United Keno Hill Mines develop new reserves, expansion of Mayo into a viable regional community is possible. Otherwise, the L.I.D. should be contained within its present confines and development curtailed to infilling within the existing settlement as its use as a regional centre will sharply decline when United Keno Hill closes.

RECOMMENDATIONS

. Expansion of the community should be based on an outside or private requirement, i.e. continuation of the existing mining operation at United Keno on a predicted basis of 5-10 years, or development of new operations for which Mayo will have a regional role.

. Maintain the existing community townsite limits and develop by infilling as much as possible until recommendation 1 is realized.

. The community has limited tourism potential at this time, principally due to the distance of its points of interest from the Klondike Highway.

. Large government expenditures should be limited in Mayo until there is an active rejuvenation of the regional mining industry in which Mayo can take an active part.

CHAPTER II

THE COMMUNITY

THE TOWNSITE



The townsite is laid out in grid fashion - the east-west avenues roughly parallel to the Stewart River and the north-south streets roughly parallel to the Mayo River. Its principal building development has taken place on three adjacent north-south streets - Congdon Street, Centre Street, and Laurier Street.

The town may be divided into two parts with respect to the natural soils (See Plate 5) - the northwest, consisting of gravels and sand, no permafrost, and with the groundwater table located at approximately 10-12 feet below grade; and the southeast zone, which is predominantly clay and silt and is affected by permafrost.

The population of Mayo was 462 in 1971. Approximately 25% of the population is native Indian or YANSI. This group was settled downstream of Mayo on the Stewart River. The area is subject to flooding and in recent years some relocation has taken place to the southeast of the community and in low-income housing off Laurier Street in the northeast of the community.

MUNICIPAL SERVICES

Sanitary Sewers

The central part of the community and the southeastern part along Duncan Avenue are serviced by sanitary sewers (see Existing Sewer and Water System Plate). Sewers operate by gravity and discharge into the Stewart River through a lift station located on the river bank at First Avenue. This lift station operates during periods of high river level only.

In winter, prevention of freezing of sewage in the collection system is attempted by augmenting that volume with a continuous flow of water from the water distribution system.

No sewage treatment facilities exist at this time. Sewage treatment by "Lagoon" has been suggested in the Stanley Associates Engineering Ltd. report entitled "Community Services Improvement Program" should suitable land be available. Alternatively, a primary or secondary treatment package



MAYO
EXISTING SEWER & WATER SYSTEM
SYNERGY WEST LIMITED

SEWER & WATER

SEWER ONLY

WATER ONLY

plant could be considered if sufficient area for location presents a problem.

All sewage from the townsite is discharged into the Stewart River, which is the only practical location for effluent discharge. Because of the shallowness of the river in dry weather flow situations, and because of eddy currents associated with shallow rivers, complaints have been received, most with respect to floating or suspended materials which can be swept into backwaters or shallow waters, thus creating an unsightly and unhealthy nuisance. Although the degree of treatment necessary for the community bears specific study, particularly with respect to the detailed effects downstream of the outfall, it would seem as a minimum practical to screen and/or settle out inorganic particles, larger organic particles, and floatables. The effluent for discharge should be chlorinated.

In spite of the prevention technique applied as described in the penultimate paragraph, freezing of sewage flows in winter does occur. This is not the fault of the technique, but rather of the installation. In latitudes such as Mayo, sanitary sewers should be laid to a minimum depth of 10 feet. In several areas of the collection system, the main is laid only 3 feet below grade. These sub-standard areas must be reconstructed to meet minimum northern standards if the collection system is to function properly on a continuous basis. The cost of repairs on an annual basis is staggering relative to normal costs for maintaining a sewer system. The disruption of service is both inconvenient and hazardous to the health of the residents.

Water Supply and Distribution

The most suitable and practicable source of water for the townsite is wells. This source requires little purification and no clarification and is thus

most economic. Three wells in the northwest section of the community provide for the water demand of the community (see Existing Sewer and Water System Plate). Present water consumption in Mayo is 100,000 g.p.d. in summer and 250,000 g.p.d. in winter. The pumphouse contains a 250 g.p.m. diesel-driven pump, a hypo-chlorinator, fluoridation equipment, and a boiler with a 240,000 b.t.u. per hour capacity for water heating. A 17,500 gallon water storage tank is located adjacent to the pumphouse.

Comments:

The hypo-chlorinator and the fluoridation equipment are seldom used. The boiler is capable of elevating the water temperature by only $2^{O}F$ during periods of maximum water consumption. Since the temperature of the well water is normally 34-$35^{O}F$, this capacity of the boiler is less than that required to prevent freezing in the water distribution system.

Recommendations:

1. A second pump of 200-250 g.p.m. capacity should be installed, both as a standby unit and to meet minimum fire underwriters' specifications.
2. The chlorinator and the fluoride feeder should be fully automatic, the latter to be liquid-fed. Pre-mixed liquid fluoride is available in carboys. Both pieces of equipment require periodic maintenance. As maintenance personnel are not available as L.I.D. employees, it is suggested that these duties might be handled through the D.P.W. offices in Mayo. Any training necessary can be provided by the manufacturer.
3. Provide additional boiler heating capacity to raise the water temperature at discharge to the distribution system to $40^{O}F$ minimum.

Water Distribution System

All of the existing mains are asbestos-cement. Although they have adequate capacity to serve their tributary areas, because of their brittle character many breaks occur in winter. When disconnected for repairs, significant sections of the distribution system freeze, causing further breaks and extreme difficulty in re-activating the flow. The problem is worsened by the low temperature of the water itself.

The distribution system and its service connections are continuously bled to reduce the chance of freezing, which accounts for the high water demand during winter. The system is replete with dead-end mains, which guarantees great variations in available water pressure, reduces the fire flow potential at any given point, and increases the area affected by freezing.

Comments:

Stanley Engineering has stated that approximately two-thirds of the water distribution system requires replacement. Although this report concurs with that finding, it is believed that this is a preliminary step only, due to the fact that the network is entirely an asbestos-cement pipe system and that ultimately all of this material will have to be replaced because of its fragility.

Tests should be carried out to evaluate materials, to develop optimum installation techniques, and to establish minimum standards of construction for water and sewer installations. Comparative analysis of materials and methods must be based on the total costs over the anticipated life of the plant. It is most important that these tests consider systems which will

require little maintenance. The small communities of the Yukon such as Mayo will never have more than a token maintenance force.

Recommendations:

1. Lay all new watermains at a minimum 8 feet below grade.
2. Use only flexible watermain. Note that in terms of capital costs, this will be a more expensive investment. Nevertheless, in terms of the life expectancy of the distribution system and the total of all costs including capital, operating, and maintenance over that period, the additional cost of purchasing flexible pipe will be insignificant if the cost of repairs due to breaks is dramatically reduced.
3. Use materials that conduct electricity, or if economically feasible when using a non-conductive material, install heating cable within the main.
4. Eliminate all dead-ends to improve the flow capabilities, to achieve better pressure distribution, and to provide two sources of supply to any area.
5. When installing mains, consider using improved bedding standards and backfill around and above the pipes to a minimum of three feet above the pipes with coarse granular material with a uniformity coefficient as near to 1 as possible.
6. Should ferric piping be selected, i.e. ductile iron, inaugurate a regular program of flushing the system. This will reduce build-up of crenothryx which will quickly reduce the effective diameter of the main and increase the friction factor, thus increasing the potential of freeze up. Problems with crenothryx are greater in groundwater supply systems where iron and magnesium oxides are more prevalent than in

other potable water sources.

Solid Waste Collection and Disposal

A portion of the garbage generated in Mayo is collected by contract. The remainder is taken by individuals to the local dump. The dump is located off the Mayo Highway as shown on the Mayo Regional Plan. The dump is on the side of a hill. Material is piled and burned at the top and bulldozed down the side.

Comments:

The present disposal method is decidedly unsanitary. Sanitary landfill techniques should be adopted immediately. The garbage should be compacted in layers not exceeding three feet in limited areas and covered with a minimum of one foot of borrow material on at least a weekly basis in summer and a monthly basis in winter.

Surface Drainage

As it is located on a flood plain, the townsite is extremely flat and drains poorly. This condition must be improved with open ditches and some piping in the commercial area as quickly as possible. Executing this work will not be totally possible until sanitary sewer and watermains at conflicting elevations have been relocated. Storm sewer outfall through the dike must be equipped with a tide gate to prevent backflooding of the community during periods of high river flow.

Roads, Sidewalks, and Street Lighting

Roads in the community are of the flexible type, with a gravel base. Due

to inadequate drainage, they suffer from frost heaves, are irregular both in profile and cross-section, and consequently are in poor condition. Until the drainage situation has been improved, they will remain in this condition.

Boardwalk sidewalks exist on part of First Avenue and Centre Street. These should be extended up Centre Street to Sixth Avenue.

The existing street lighting is adequate.

Fire Protection

A volunteer fire-fighting unit of ten members serves Mayo. Its equipment includes: a 500 g.p.m. pumper, two 160 g.p.m. portable pumps, a thousand gallon tanker truck, portable electric generator and normal accessories. Communication is by conference telephone and siren. Water source is available through six fire hydrants.

Comments:

The existing fire hall is totally insufficient for the needs of the community and should be replaced as soon as possible. The number of fire hydrants available is inconsistent with the size of the community and their number should be augmented as part of the revamping of the water distribution system to standards developed by the Canadian Underwriters' Association. The available equipment appears satisfactory at this time.

Cemetary

A large cemetary is available. Activities in its regard are recorded and maintained and no change is suggested.

Education

Public schooling from grades 1 through 12 is provided in Mayo. The secondary element of this school provides a regional service to students from Keno, Elsa and Stewart Crossing. They are bussed daily to and from school. Neither kindergarden nor vocational training education is available. Both were considered important by citizens interviewed in the community and it is recommended that this extension to the education program be considered. Expansion of the public school is required as there is not sufficient classroom space currently available.

Library

A branch library exists and provides adequate service to the community.

Police

A regional service is provided by R.C.M.P. detachment and consists of one corporal and one constable, two SSB radios, one car and one boat. This service appears adequate for present needs.

Medical Service

Mayo has a 16-bed hospital, staffed by a resident doctor and four nurses. A regional public health nurse is stationed in Mayo and provides service to communities along the Mayo highway from Stewart Crossing to Keno. An ambulance service is available. These facilities are adequate to Mayo's needs.

Dental service is available approximately four times a year when a dentist visits the community. This service is considered inadequate and prompted much negative comment when discussed with residents of the community.

Recreation

A minimum quality recreation service, considering climate, is available in Mayo. The community hall is used for dances and social functions and movies are shown on a twice-weekly basis. Indoor organized sports such as volleyball and badminton are played in the gymnasium of the school. The community has a two-sheet curling rink, an outdoor swimming pool, an outdoor skating rink, and a ball diamond, which is in poor condition.

Comments:

Recreation, whether it be organized activities, leisure pastime, or cultural interests, has two focal points - those that are done out of doors and those that are done indoors. In the summer, Yukoners enjoy the great outdoors for the Territory is a natural recreation area. In the winter they must endure the confinement of the indoors, for in the cold few people remain outside any longer than absolutely necessary. But it is not the cold alone which is unbearable. It is the combination of the cold and the hours of darkness of northern climates which is the strain.

At the turn of the century, Tappin Adney made the still relevant comment especially to those who claim that the north is no colder than Edmonton or Winnipeg that "The dry,crisp cold was no greater than one could stand but from the first of December until the middle of January the cold and darkness combine to weigh upon mind and body. Even with plenty of work to do, the short, dull days and the interminable nights were gloomy and dispiriting."

Jim Lotz, in his book Northern Realities, made a similar comment that "The cold and the darkness are deterrents to northern settlement, especially

where women are involved. One Yukon woman told me she would "go nuts" if she did not have her indoor plants and flowers." It is apparent that there are lower limits for human operation that must be recognized. As a consequence of these conditions, Yukoners in communities group together for mutual comfort during the winter. Historically the site of these meetings has been the bar or tavern.

Recommendations:

It is recommended that by policy each regional centre such as Mayo be equipped with a cultural, social, and recreational centre; this facility to be available to both native peoples and whites and provide for special facilities for each culture where desirable.

In combination with the local school, which may already provide some of the services under consideration, the following are the type of facilities which could be provided:

- nursery school
- adult education program
- rifle range
- chess club
- handicrafts, such as weaving, batik or ceramics
- camera club
- stamp or coin collection club
- drama club
- scouts and guides
- available space for dances or other social get-togethers
- space for social service and businessmen's clubs

- provide for organized games and activities such as badminton, handball, squash, swimming, volleyball, conditioning area, and sauna.

The purpose of the centre is to provide a focal point for the community over the winter. As such, it should be centrally located and as close to the school as practically possible.

Parks and Green Areas

Considerable area within the L.I.D. boundary has been left as undeveloped green areas. These are largely low-lying areas subject to periodic flooding and hence unsuitable for building. In the exposed, natural state there are severe limitations placed on the factors affecting biological production of vegetation and consequently, protection of the natural growth with human activities basically confined to pathways, is recommended. Formal park plans, as often created in more southern climates, should be avoided as they will be difficult to maintain. An exception to this is the area south of First Avenue between the road and Stewart River. Said area should be topsoiled, grassed, and planted with shrubs as it is an area of natural beauty.

Social Welfare Service

The Territorial Government operates a regional office in Mayo. This service is adequate for present needs.

COMMUNICATIONS - INFORMATION

Postal Service

Bulk mail is delivered to Mayo from Whitehorse by truck on a twice-weekly basis. First class mail is delivered three times per week by air. Mail boxes are available at the Post Office. The current service is satisfactory.

Telephone Service

This is provided through a local exchange. It is basically a party-line system. Some improvement is necessary as getting a line is frequently difficult and long-distance telephoning is, at best, a very time-consuming process.

Radio--T.V.

A CBC network relay station exists in the community. Television is to be imminently available through relay from the Anik Satellite System.

A CN Telecommunications office is located on Centre Street.

TRANSPORTATION AND FREIGHT

Air Service

An airstrip is located approximately 1/2 mile north of Mayo. It offers two gravel runways - one of 4,500 feet, the second of 2,700 feet in length. The strip is regularly maintained and has a transmitter site, navigational aids, and one runway is lit. Relocation of this airstrip to the site shown as proposed on the Mayo Regional Plan, has been considered. At the time of writing this

report, extension to existing runways appears to have more priority. Scheduled air service is provided by Northward Aviation operating a route between Whitehorse, Mayo and Dawson City on a three-time per week basis.

Private use of the airport is permitted and float planes dock off Mayo in the Stewart River.

Helicopter service is privately available from a site on the west side of the entrance road to Mayo in the northeast area of the community. There are indications that a second helicopter service will be in operation in 1974.

Bus Service

Yukon Bus Limited operates a scheduled service to Mayo from Whitehorse on a three-time-per-week basis. Comments from the community indicate that this service is poor and scheduling unreliable.

Freight Service

Foodstuffs are delivered by truck through a weekly freezer service and a weekly cooler service. Comments in the community indicate that an additional cooler service delivery is needed.

Service Stations

One service station exists in the community and this is considered adequate.

BANKING

Currently there are no banking facilities in Mayo. If the community is to

function as a regional service centre, a permanent bank should be established.

HOUSING

Outside of most Government buildings or subsidized housing the town appears dilapidated and unkempt. Low-cost rental housing, although recently built, shows signs of wear and neglect. Private homes may be described as adequate to fair in condition, but their appearance is mitigated against by the practice of storing old machines, unpiled wood, and debris on adjacent property and combining residential with industrial-type uses. The community could use a clean-up program to its benefit.

Houses in the native village area west of Mayo Street are in poor condition and are located in an area that is frequently flooded. Some families have moved to the eastern part of Mayo or into low-income housing. Unfortunately, others have moved into their abandoned buildings. In future, buildings in this area when abandoned should be demolished, or if their condition permits, relocated.

LOCAL GOVERNMENT OFFICES

Mayo has no L.I.D. office and, considering its regional importance and the number of regional services presently available within the community at dispersed locations, immediate consideration should be given to constructing such office space. This building should be located on Centre Street, preferably between Third and Sixth Avenues.

ELECTRIC POWER SERVICE

N.C.P.C. operates a regional hydro-electric station located on the Mayo River at the discharge from Wareham Lake. This regional service is provided to United Keno Hill Mines at Elsa and the communities of Mayo, Elsa and Keno. Its capacity is 5,000 kilowatts and is supported by stand-by diesel generating equipment.

SOCIAL FACTORS

According to Statistics Canada the population of Mayo in 1971 was 462. The population and experience over the past twenty years has been as follows:

Year	1951*	1961*	1966*	1971*	1973**
Population	241	342	479	462	396

Although there has been very recent indication of potential population increase because of increased mineral exploration activity in the region, it appears most likely, considering the longer-range historical experience, that, although some people are moving out and others moving in, this is a rotating phenomenon and the population in terms of total numbers is at best static.

In 1972 the Yukon Housing Bureau carried out a survey of 80% of the local population of Mayo. Findings from this survey show that the average number of persons per family is five, and the average number of children per family is three. The age-sex characteristics of the inhabitants studied indicate a reasonable balance between males and females and the largest population group are children from the ages 0 through 14 years. They represent 41.5%

* Statistics Canada
**Unconfirmed census data

TABLE 1

AGE GROUPS

Age	Sex		TOTAL
	Male	Female	
0 - 4 years	22	19	41
5 - 9 years	30	30	60
10 - 14 years	23	27	50
15 - 19 years	18	18	36
20 - 24 years	7	7	14
25 - 34 years	17	19	36
35 - 44 years	21	18	39
45 - 54 years	14	16	30
55 - 64 years	4	5	9
65 - 69 years	4	4	8
70 - 75 years	3	2	5
75 - 80 years		1	1
80 years and over		2	2

SOURCE: Yukon Housing Bureau Survey, 1972

of the population studied. The population by age-group sags noticeably in the group 19-25 years and then rebounds to the level expected through the period 25-80 years. This is significant in that it indicates the strong desire of young people to get out of Mayo, and perhaps the Yukon, and that they are being replaced in the normal working life period by wage earners from outside of the community. This condition is one of the fundamental causes of the sense of impermance and lack of social commitment that is frequently felt when visiting Mayo. (See Table 1).

The Bi-Cultural Community

Interviews and meetings were conducted with representatives of the Territorial Government and the Indian and white elements of the community. These have been used to develop an impression of the effects of the Y.T.G. on citizen participation in local planning. These interviews suggest that the people in the community, both white and native, do not have a favorable image of the Y.T.G. with regard to facilitating citizen participation and local decision-making. The image held by local people of the Y.T.G. might be described as "authoritarian-paternalistic" and moreover that decisions are controlled by the central authority.

The Indians feel that greater legitimacy with respect to their rights is due the Federal Department of Indian Affairs and Northern Development (DIAND). This is the group with which they have historically dealt and who they feel have treaty responsibilities. There is reason to believe that the relationship of the Federal Government to the Indian is also authoritarian-paternalistic.

White residents, when discussing their involvement in local decisions,

stated for example "Look at the municipal acts if you want to see how much say we have in things." They can recount instances when they feel the Y.T.G. has told them one thing and done another. Whether these are accurate or not is unimportant, it's the belief that must be considered. At public meetings local citizens have stated great scepticism about the benefits of citizen participation: "Let the Government do it. They'll do it their way anyway. . . . We aren't even allowed to do things we want with the money we raise outselves." Indeed, whites will suggest that their almost lack of interest is due to the overwhelming dominance of Government, either Federal or Territorial.

This dominance is reinforced by the existing governmental building structures, including government housing in the various communities, and by the presence of government vehicles identified as such by emblems on their sides. While elsewhere these governmental accoutrements blend in, they dominate the scene in northern communities.

Indians are also suspicious of the Y.T.G. and appear to feel caught in a power squeeze between the Territorial Government and DIAND. They also believe that the two governmental organizations view the Indian differently. They believe that the Y.T.G. doesn't recognize them as a population group with distinctive needs, rights, and problems, while DIAND recognizes this formally, by treaty and by action. Whether this belief is true or not, it is important to recognize that it is believed by native people.

Given a history of people believing that they have been excluded from the decision-making process by what must be viewed as an authoritarian-paternalistic governmental organization, it becomes easier for whites and

Indians alike to avoid involvement in local planning. This involvement includes taking public stances on issues which may be controversial. Involvement includes the potential for open cleavages and open community conflict between various interest groups and persons who have to live together and associate with each other on a day-to-day basis. Open controversy, open conflict is avoided in favor of living together in relative harmony. In the present circumstance, the avoidance of open conflict is easier under the authoritarian-paternalistic government. Rather than risk potential personal animosities, it is easier to rely on a relatively abstract government structure for decisions. Blame for failure or dissatisfaction is also easier to assign to government than to one's immediate associates and neighbors.

In most instances, co-operation between whites and Indians in Mayo is symbiotic. Accommodation is frequently reached only by ritual avoidance. That is, association is constrained by community custom and is defined by various kinds of relationships such as work relationships. This ritual avoidance occurs for example, when Indians will not attend meetings held in a building perceived to belong to whites. Conversely, it is doubtful if whites would attend meetings in Indian homes or buildings designated as Indian. Taverns and bars become known as Indian hangouts; others are obviously exclusively white. In Dawson City, for example, no Indians were observed in the bar in the Eldorado Hotel nor in the hotel restaurant. On the other hand, the tavern across the street was frequented by Indians.

It was significant and encouraging to note that at each of the public meetings held in Mayo, a representative of the native people was in attendance, an indication that the seeds of co-operation were available. The representative

did not participate in the meetings, but acted more as a reporter on behalf of the band council. Apparently, the public meetings were viewed as white meetings, and, in fact, separate meetings were held later with the native people.

Given this indication of goodwill, the physical evidence of whites and Indians living in an ad-mixed state in Mayo, and the attitude prevalent in the interviews of the ability of the two cultures to work together in Mayo, it seems possible that both can take an active role in the planning function for the community at the local level. In order to partially overcome mutual hesitance in involvement in local planning, it is recommended that local citizen groups be identified and representatives placed on a committee which would function in an advisory capacity to the L.I.D. Council and have the responsibility for implementing and updating the Development and Zoning Plans that are hereinunder recommended.

Caution

Citizen participation and involvement in community planning carries with it certain risks. Frequently this involves at least a modification of plans or proposals that might at the outset be deemed essential by the planning agency. Sometimes this modification can be quite radical.

Case studies of citizen participation attempts are noteworthy for their descriptions of failures rather than of outstanding successes. There is usually a crisis situation involved in successful attempts, thus frequently rendering the attempt redundant.

Community planning processes take time. Trying to push communities in

order to expedite matters can lead to outright rejection of very good proposals and plans. The philosophy of local community participation is more adequately discussed in Chapter VI of this report.

Bi-Cultural Co-Operation

Because of the favorable indications for bi-cultural co-operation, the Development Plan and the Zoning Plan have been prepared adhering to the imperative that the community be one unit.

LEGISLATIVE AUTHORITY OF THE L.I.D. COUNCIL

The legislative authority of the L.I.D. Council is embodied in the Yukon Territorial Ordinance entitled "An Ordinance Respecting Local Improvement Districts." The Council of the L.I.D. is a Board of three Trustees, duly elected by citizens of the District. The Chairman is designated by the Board from one of its number.

The powers and responsibilities of the L.I.D. Council include the right to purchase, acquire and hold land for the purposes of the District and the operation and maintenance of any local improvements in that District which are owned by the District or which they have been authorized to operate and maintain on behalf of the Commissioner of the Yukon Territory. They further have the power to make bylaws (a) adopting procedures for the election of Trustees; (b) regulation procedures and preserving order at the meetings of the Board of Trustees and at the Annual General Meeting; (c) providing for the construction or acquisition of any building or work necessary for the operation and maintenance of any local improvement in their District; (d) describing the fees and charges that shall be levied

for local improvements; (e) providing for the collection of the fees and charges; (f) adopting such procedures as are necessary to enable it to perform its functions as set forth in the Ordinance; and (g) adoption of bylaws providing for the licensing and control of animals within the District.

All such powers and authority are subject to the approval of the Commissioner.

At this time the L.I.D. Council does not have the authority to approve, amend, or administer development plans and zoning bylaws. Nevertheless, they have recommended approval of the plans and bylaws embodied in this report to the Territorial Government (see Appendix 1).

Further, this report recommends (see Chapter VI) that the office of Development Officer be created; that the incumbent initially be an employee of the Department of Local Government of the Territory; and that on a planned basis, following a training period, this authority for the planning process and its administration be transferred to the Local Improvement District Council and that the Development Officer serve in its employ.

CHAPTER III

ECONOMIC EVALUATION OF MAYO CONSOLIDATION OR RELOCATION

The function of this chapter is to consider expanding the townsite plan or preparing a new community plan and that the necessary engineering and cost evaluations be carried out to determine the best course of action. The communities to be considered in analyzing consolidation potential are Mayo and Elsa.

Both communities are located in the Yukon River drainage basin and are about 20 miles apart. Mayo is situated on a flood plain with the townsite being susceptible to flooding during spring run-offs, even though the community is protected by a dike system. Elsa is well drained, because of its location on the side slope of the South McQuesten River Valley.

Mayo, in economic terms, serves as a regional, commercial, and supply centre, not only for Elsa but for other communities such as Keno and Stewart River. As a regional centre Mayo also serves as headquarters for Y.T.G. Highways Maintenance Camp, Forestry Service, and Mines and Claims Registry Office. In terms of social services, the community provides for high-schooling, hospital and medical services, as well as police protection.

The community of Elsa is a private "company town" established to provide housing and essential services for the employees of the United Keno Hill Mine. As such, almost all of the people who reside at Elsa are in the direct employ of United Keno. In the order of 8-10 mine employees live in Mayo. The life expectancy of the mine and the community is uncertain, depending on the success of future exploratory work and the world price of

base metals.

ANALYSIS APPROACH

In general terms the analysis was required to assess the economic alternatives as related to possible townsite relocations and consolidations for the communities of Mayo and Elsa. The numbers associated with each alternative studied are order of magnitude "costs" and as such reflect the relative difference between each alternative. Also, in association with the suggested cost is the ability to compare the alternatives over the next 3-5 year period should a decision not be immediately forthcoming, for the increase in material and construction costs will be relative. The costs outlined below are all capital costs and are similar to those items covered in the "Community Services Improvement Program" prepared by Stanley Associates Engineering Ltd. Detailed cost estimates have not been made for each service provided, nor have costs been established for such things as social disruption, environmental changes, or the salvage values (except in the case of housing).

Alternative Strategies

As the basis of the following analysis, six major alternative strategies have been considered, along with their associated costs. The last three alternatives are sub-divided into two sub-strategies, which are considered viable economic solutions to the question of relocation. These sub-strategies are in the provision of shelter - one being the construction of new housing; and the other being the relocation of existing buildings.

Alternative 1 - Status Quo

Under this strategy both Elsa and Mayo would remain in their present locations and operate as a company town and as a Local Improvement District - supply centres - respectively. There would be no alterations with regard to infrastructure systems or social services; thus the Territorial Government would not have to expend any additional monies other than those for systems maintenance.

In realistic terms this alternative does not appear to be one which would be viable or socially and politically acceptable. However, there would be no monies allocated for major capital improvements projects.

Alternative 2 - Community Services Improvement Program (see Table 2)

In 1973 the Territorial Government commissioned a report which identified in a general way the problems existing in Yukon communities, recommendations of remedial actions which could be contemplated and the order of magnitude costs. The report identified improvements to the existing community services, particularly in the utility systems and municipal services. The major items of high priority included:

- improved water supply and sewage treatment
- improved solid waste handling and disposal
- a new fire hall
- an office for the Local Improvement District.

Over a five-year period, excluding the cost for Y.T.G. staff housing ($210,000) the total capital cost was estimated at $861,800 (1973 costs - see Table 2).

This estimated cost did not include extension of a piped sewage system to those dwelling units that utilized either septic tanks or privies. Also, the costs suggested for water supply and distribution were calculated for revamping only the poor sections of the system (approximately 2/3 of the watermains). This type of program would establish a reasonable level of service for the community.

Alternative 3 - Modified Community Services Improvement Program

This alternative assumes the basic costs suggested in the "Community Services Improvement Program" and in addition makes some modifications to the program. The two areas suggested for change would be in the water supply and distribution system and the sewage collection system. In order to provide a high level of service and a totally reliable system, it is recommended under this alternative to completely revamp the water distribution system and extend piped sewage to all dwelling units not presently served by the piped system. The additional costs for providing these utility systems would be $127,000 for the water distribution system and $150,000 for the sewage collection system. This would provide the community of Mayo with an excellent utility system and range of social services. The total cost of this alternative would be $1,138,800 (excluding the cost of Y.T.G. staff housing - $210,000).

Alternative 4 - Relocation of Mayo to Elsa

In reviewing the possibilities for townsite relocation, one alternative which appears viable from a physical point of view is relocation of Mayo to the Elsa area. The area whcih is considered feasible for townsite development is the area around Flat Creek, where there is fairly flat

terrain of a suitable size. As part of the strategy for relocating Mayo at Elsa, there are two alternatives possible for provision of housing accommodation. These would be: the construction of new housing for the new area; or, the relocation of existing buildings from Mayo to the new site.

The capital costs associated with the relocation of Mayo to Elsa reflect the fact that an entirely new community utility system would have to be constructed as well as providing for the required social service systems (i.e. health, education, police). To provide a realistic level of service, it is estimated that the total capital costs (excluding housing) would be in the order of $5.5 million. This figure does not take into consideration possible utilization of systems in Elsa that are not presently being used to capacity (i.e. water supply and distribution system). A detailed breakdown of costs is provided in Table 2.

To provide new housing in Elsa for the relocation of the Mayo population (462 in 1972), there would be a requirement for some 120 new homes. Based on 1973 construction costs for the Yukon (approximately $35 per square foot) it is estimated the costs for housing accommodation would be slightly in excess of $5 million. This figure establishes an upper figure for the cost of relocation and new housing for the community of Mayo.

A second alternative which may be feasible for providing housing accommodation in Elsa would be the relocation of existing housing stock from Mayo. This has been successfully done in some northern communities; for example, Vale Island, and Hay River, N. W. T. However, it is doubtful that all of the houses in Mayo could be relocated. To establish a lower limit for housing costs it is assumed that all of the houses in Mayo could be relocated to Elsa.

The resulting costs for moving the housing units and the construction of suitable foundations would be in the order of $800,000. This estimate is based on relocation prices verified with contractors specializing in this field of construction who have had experience "north of 60."

Alternative 5 - New Townsite Development

The concept of a new townsite for Mayo is a feasible alternative and would, in essence, be very similar to alternative 3. It is suggested that the new townsite would be somewhere between the two existing sites on permafrost-free land, adjacent to the transportation corridor, with water suppy readily available. This might be somewhere near the airport or in the Minto Creek area. Under this alternative, the costs for such a new townsite development would be approximately $6.6 million and the same two housing alternatives would be available as with alternative 3 (see Table 2).

Alternative 6 - Mayo-Elsa Townsite Consolidation

One alternative to the strategy suggested in alternative 3 would be the consolidation of Elsa and Mayo at a new location. This location could possibly be in the area of the airport or in the vicinity of Minto Creek. The viability of this alternative is subject to the intensity of mining activities in the McQuesten Valley area and as such can probably only be considered if there are major finds in the region and following consultation with mining officials to ensure life expectancies in the order of 5-10 years minimum.

The total population of this new community at present population levels would be in excess of 900 people, thus making it the second largest community

in the Territory. To provide utility and social services to a community of this size will require a considerable capital expenditure. An order of magnitude figure which has been calculated suggests that the total cost (excluding housing) would be approximately $8.9 million. A detailed breakdown of costs is contained in Table 2.

The problem of housing accommodation has been again considered under two alternative strategies; one for new housing and the other for the relocation of housing from both Elsa and Mayo. Considering the first alternative (new housing), the costs of providing these facilities for the population of Mayo would be the same as that contained in alternative 3; $5 million. The provision of housing for the people at Elsa could be considered in two components: single family accommodation, estimated at $1.4 million for 34 houses; and, considering that the unmarried segment of the working force could be housed in higher-density accommodation, an estimated 150 units would be required at an expenditure of $2.3 million. Thus, the total cost for new housing would be in the order of $3.7 million. This figure establishes the upper range for the provision of housing.

The second sub-alternative would be the relocation of housing from both the communities, which in the case of Mayo would be approximately $800,000. Depending on the ability to relocate the single men's quarters from Elsa, the cost of relocation would be near $450,000. Therefore, the lower range for housing accommodations under this alternative would be in the order of $1.25 million.

Table 1 which follows shows the range of costs between the various alternatives. It is assumed that the requirements for Y.T.G. staff housing

would be constant to each of the alternatives and therefore of no relative importance to the cost comparison.

Table 1

Alternative	Upper Cost Range	Lower Cost Range
1	nil	nil
2	$ 1,071,800	$ 1,071,800
3	1,348,800	1,348,800
4	10,683,800	6,483,800
5	11,862,000	7,662,000
6	17,412,000	9,962,000

It is reasonable to assume that the actual costs associated with the relocation for the last three alternatives will lie somewhere between the lower and upper range. This is due to the fact that not all houses in either Mayo or Elsa could be relocated and that possibly some people would prefer the option of being situated in a new house.

Table 2 has been prepared to show the cost break-down completed in order to arrive at the total figures given in Table 1.

TABLE 2

COST BREAKDOWN BY ALTERNATIVE FOR ESSENTIAL COMMUNITY SERVICES
(Amounts shown in thousands of dollars)

	Service	I	II	III	IV	V	VI
1.	water supply and distribution	-	$ 380	$ 507	$ 507	$ 507	$1,000
2.	sewerage and sewage disposal	-	90	240	700	1,200	1,700
3.	solid waste collection and disposal	-	18	18.8	18.8	26	48
4.	roads	-	77	77	700	1,200	2,000
5.	sidewalks	-	20	20	20	20	30
6.	drainage	-	7	7	30	50	50
7.	street lighting	-	-	-	Assessed on monthly basis @ $5-7.00/unit		
8.	electrical power	-	-	-	5	5	15
9.	fire protection	-	45	45	45	45	60
10.	cemetary	-	-	-	3	3	3
11.	education	-	-	-	1,500	1,500	1,500
12.	library	-	-	-	-	-	-

	Service	I	II	III	IV	V	VI
13.	police	-	-	-	$ 90	$ 90	$ 90
14.	municipal building	-	$ 70	$ 70	105	105	105
15.	medical facilities	-	-	-	1,500	1,500	1,500
16.	community hall	-	-	-	94	94	94
17.	curling rink	-	-	-	-	144	144
18.	skating/hockey	-	150	150	150	150	150
19.	swimming pool	-	2	2	-	2	2
20.	playfield	-	1	1	5	10	10
21.	bank			private facility			
22.	gas station			private facility			
23.	dog pound	-	1	1	1	1	1
24.	Y.T.G. staff housing	-	210	210	210	210	210
25.	Sub Total	-	$1,071.8	$1,348.8	$5,683.8	$6,862.0	$8,712.0
26.	Housing Relocation Costs (Upper limits/Lower limits)	-/-	-/-	-/-	5000 / 800	5000 / 800	8700 / 1250
27.	TOTAL - Upper Limits / Lower Limits	-	$1,071.8	$1,348.8	$10,683 / 6,483.8	$11,862 / 7,662	$17,412 / 9,962

FACTORS INFLUENCING ALTERNATIVES

The following information is presented to provide an overview of factors which may influence the final choice of one alternative and also to provide a basis for evaluating each. Some of the factors listed below are easily quantifiable, while others can only be assessed in terms of quality.

- From a social point of view it is difficult to predict the reaction of the people who reside in Mayo regarding their acceptance of relocation either to Elsa or to a new townsite. Reactions in interviews were certainly split in this regard and reactions in conversation are one thing, reactions to a fait accompli are something else.
- The native people who reside in Mayo have developed their own sense of indigenous association and values and these are not incorporated into a sense of relocation acceptance.
- What will be the official reaction of United Keno Hill Mines Ltd. with regard to the election of alternative 6 and would their working force be depleted should the Territorial Government bear the cost of relocation but not subsidize the living costs?
- The uncertainty of the mining industry in general and how increased activity would influence a decision on relocation.
- Based on world economy as related to the price of base metals and the present general economic conditions: the effects this may have on the mining industry.
- The total environmental costs associated with any of the relocation alternatives (i.e. sewage disposal).
- The diseconomies as related to the existing stock of housing

in Mayo should one of the relocation alternatives be chosen.

- The problems associated with the implementation of an alternative to ensure reasonable levels of service during the period of relocation.
- The total capital costs of the project as related to other expenditures required for other communities in the Yukon - this being in terms of cost-benefit analysis on a territorial basis.

CONCLUSIONS

The concept of townsite relocation, either to a new site or consolidation with an existing community, is a principle which has considerable merit. Frequently governments have felt that this type of strategy would solve many of the problems which plague a community and, in some instances, this is proving the case. However, any relocation scheme has tremendous implications in terms of social and psychological attitudes, capital costs and environmental disruption. One example which should be studied is that of the Aklavik relocation plan, which saw the creation of Inuvik in the late 1950's. The community of Akalvik has not only remained where it was, but has increased in population and now has become a hamlet. Before any commitment is made regarding the relocation of Elsa, it may be prudent to carefully review the Aklavik situation with some of the people there and in Inuvik.

Taking into consideration all of the above factors and costs, the most realistic options appear to be alternatives 2 or 3, based on today's conditions. Should mining in the South McQueston River Valley area stabilize,

MAYO Y.T.

synergy West Ltd.
CALGARY, ALBERTA • WHITEHORSE, YUKON TERRITORY

0	100	200	300	500	1000	2000



PROPOSED EXPANSION AREA

CHARACTERISTICS:

1) SOILS: BASICALLY GRANULAR
NO APPARENT PERMAFROST
2) TREED WITH POPLAR
3) ELEV.: 20' ABOVE SWAMPY AREA
4) AREA: 80 ACRES APROX.
300 SINGLE FAMILY HOUSES

to the extent that it has an anticipated life expectancy no less than five years, and more acceptably in the order of ten years,or more, consideration should be given to relocating Elsa to Mayo in the area shown as future development on the plan provided.

In the interim, and observing alternatives 2 or 3, it is further recommended that Mayo in its community planning, make every effort to consolidate the residential development in areas where there is reduced danger of flooding. This will allow for development of a reasonable uitlity system making the task of either partial revamping (alternative 2) or new construction (alternative 3) more viable and reliable. Depending on detailed studies regarding the flooding sutuation, it may be reasonable to expend monies for increased flood protection.

CHAPTER IV

THE DEVELOPMENT PLAN

DEFINITION

The Development Plan is a plan which shows the ultimate desirable existing and future land use, transportation and servicing goals. These goals are set during the present for the future; therefore, it is mandatory that the plan be reviewed every two to five years.

PURPOSE

The Development Plan should be sympathetic to desirable existing development, and offer solutions to existing undesirable development. In either case, it must acknowledge the past and present of the community.

While not a working document such as the Zoning Plan, its purpose is to provide the basis for making zoning changes, as well as future service extensions, road construction, acquisition of parks and recreation areas and general capital budgeting.

OBJECTIVES

The objectives of the Development Plan are to assure land availability for future growth of living, working and recreational areas. The plan attempts to eliminate present and future conflicts in land use, and seeks to avoid land uses which would not be compatible when mixed or adjacent. It offers a wide choice of land uses without losing the compactness of the community

in order to ensure economic expansion.

GROWTH

The growth potential of Mayo depends on outside forces. Existing trends indicate that the community is stable; that is, population projections alone show that Mayo will not grow beyond its present size, and may even decline in population. Other factors or forces such as stabilization of mining operations in the immediate region could provide the impetus for expansion.

If Mayo were to, as the regional centre, draw population from Elsa and Keno, as well as other new mine sites, considerable growth and expansion would occur and would have to be facilitated (see Chapter III).

The physical restraints to continuous development are contained primarily by the Stewart and Mayo rivers, and land made undevelopable for reasons of poor drainage and permafrost to the immediate north and east of present development.

Preliminary inspection indicates that the area shown for future development on the Development Plan would be the nearest and best land for future development. This development is envisaged as being primarily residential with associated amenities.

The expansion to this area could not be economically justified without a great influx of population, so it is therefore essential that present growth be accommodated in the existing community by means of infilling vacant lots. There has been considerable objection on the part of the inhabitants of Mayo

MAYO
EXISTING LAND USE

SYNERGY WEST LIMITED

0 100 200 300 500 1000 2000 FEET



NORTH

INDUSTRIAL

COMMERCIAL

PARKS & RECREATION

INSTITUTIONAL

RESIDENTIAL

GOVERNMENT BUILDINGS

MAYO DEVELOPMENT PLAN

SYNERGY WEST LIMITED

0 100 200 300 500 1000 2000 FEET



NORTH

INDUSTRIAL

COMMERCIAL

PARKS & RECREATION

INSTITUTIONAL

RESIDENTIAL

MULTI RESIDENTIAL

FUTURE DEVELOPMENT

to the suggestion of infill on the basis of the existing vacant land which is primarily in the hands of private individuals and priced above market prices considered acceptable to local residents. The fact is that urban land cannot be developed for the low costs which were and are asked when Crown land is sold.

There is no question that an individual's ability to buy vacant Crown land cheaply, without having to develop the same, in spite of Government stipulations to the contrary, has retarded the availability of land for bona fide potential home owners. However, in future, citizens of Mayo should not expect land to be easily available at the unrealistically low prices of the past.

If Mayo is to grow, the associated costs should be realistically allocated to the citizens of the community. This allocation could have two favorable consequences: one - the vacant land holders would be economically forced into a "sell or develop" situation; and two - the citizens of Mayo would be encouraged to participate responsibly in future growth schemes. This commitment focuses attention on community development by the individual. His stake in the community becomes real and measurable.

LAND USES

The Development Plan includes existing and future areas for the following land uses: Industrial, Commercial, Institutional, Residential, and Parks and Recreation. These uses are defined in the Zoning Bylaw.

Industrial

There is little existing industry in Mayo and what little exists is scattered

throughout the community (see existing Land Use Plan) to the detriment of potential residential areas. Examples of this are storage areas containing stacked firewood, obsolete machinery, scrap metal and debris.

The location shown for storage of materials and new industries to concentrate has been chosen for several reasons:

- An existing heliport is located in the area, and residents have accepted its location.
- The area is best located in terms of transportation, or specifically the road to the Klondike Highway and the mine sites of Elsa and Keno Hill. This is an important consideration as industrial areas normally generate considerable trucking activity, and this activity by means of location would not conflict with residential areas.
- The area indicated, being poorly drained, would require higher development costs for residential or commercial development, while industries would require less site development, and normally would be capable of absorbing higher development costs.

Commercial

The Commercial area shown was designated to accommodate stores and services already in Mayo, and provides additional space for expansion in the same areas as existing commercial services. The majority of new commercial space is located along Centre Street.

If this area (along Centre Street) were to develop totally, it may be desirable to close Second and Third Avenues as shown to eliminate conflict

between residential and commercial traffic, and act as an effective buffer between the two land uses.

Institutional

Institutional uses have been shown separately from other areas because by the nature of their services and economic functions they cannot be considered as commercial uses, and by their scale they cannot "fit" a residential area without forethought.

A partial list of institutional uses are: churches, non-profit organizations, and Government service buildings (i.e. R.C.M.P., Forestry Services).

Mayo in its existing infrastructure has a cluster of institutional uses on the north end of Centre Street, and although some of these uses are housed in conventional residences, it is recommended that any building changes or upgrading take place in the same area which is well located in relation to the commercial and residential areas.

Aside from this institutional cluster, the existing church on Duncan Avenue is acknowledged in the Development Plan as it serves a residential area, and adds quality to the southeast area of the community.

Residential

The residential areas shown on the Development Plan have been designated in response to existing residential development and the absence of requirements for additional other uses. A comparison between the area shown and the existing Land Use Plan will show an abundance of undeveloped lots for future use. The multiple family residential areas, or areas where apartments,

townhouses, or fourplexes could be located, are along major streets (those streets carrying additional traffice from other areas) to decrease traffic on minor streets. It is not anticipated that a sizable demand for this land use will occur unless influenced by outside demands such as mining development. In the short-term, adequate single family and duplex dwelling spaces are provided. A separate area buffering the residential zones has been provided for multi-family dwellings.

As a policy in all areas, but particularly in residential areas, good housekeeping should be stressed. The best of plans will fail when implemented if residents are not encouraged to take pride in their homes and businesses and properties.

The Development Plan also provides a means to separate incompatibilities such as residential and industrial uses. This improves the residential environment considerably; however, if residential areas are kept in a manner similar to that associated with industries, then the improvement is negated.

Parks and Recreation

The designated Parks and Recreation areas include: school sites, active recreation facilities (playing fields to community centres), passive quiet park areas, and parks left in their natural state. The community, through the L.I.D. Council, could and should begin acquisition of this land as soon as possible. Acquired areas are to be kept in their natural state until required for improvements.

The area shown adjacent to the existing school grounds should be used for

extending playing fields. The area along the river bank would lend itself to the development of a natural park area with pathways where residents could enjoy passive recreation and relaxation.

The triangular park area between First and Fourth Avenues and east of the entrance road from Elsa, could be left largely in natural state except where development of ball diamonds has already occurred.

TRAFFIC

The roads shown on the Development Plan deviate from Mayo's original "grid" pattern of the community and indicate cul-de-sacs separating the residential zones from business areas. They are shown only as a devise to physically realize this separation but should only be implemented on an individual basis following establishment of need and desirability following requests by local residents.

The existing traffic volume is so low that road hierarchies or parking requirements are not presently required. Should Mayo experience significant population increase, and therefore traffic, within the period of this plan, the following are recommendations:

- access to the community be limited from the entrance road to First, Fourth and Seventh Avenues. This to eliminate congestion on the entrance road as well as restrict inbound business traffic from travelling through residential areas.
- First, Fourth and Seventh Avenues would act as collectors to funnel traffic efficiently and effectively into the commercial area, or to the quiet residential streets.

CHAPTER V

THE ZONING PLAN

The Zoning Plan and Bylaw are the major means of accomplishing the goals set out in the Development Plan. It is the day-to-day working document that creates and organizes various land uses within the community as well as setting standards for development.

While the Development Plan considers the future goals of the community, the Zoning Plan concerns itself with current application, considering those future goals. It does not anticipate the future by allowing an albeit acceptable land use in an area where there are no immediate plans for development. When the likelihood of an acceptable development does occur however, the Zoning Bylaw can be referenced so that the proposal may be quickly assessed.

Zoning amendments, i.e. approved modifications to the Zoning Bylaw, may be required from time to time. Such changes are normal to the administration of zoning bylaws and should not be construed as a flaw in the document, which would not function in the best interest of the community if used as a rigid set of unalterable laws. Such amendments will observe the general precepts of the bylaw while modifying for specific needs in the community. As a flexible document, therefore, it must be updated and reconsolidated on the average once in five years so that it continues to function on a current needs basis.

The zones shown on the Plan include: Industrial, Commercial, Residential, Institutional, Parks and Recreation and Development Control. With the exception of the latter, these zones correspond with the policies indicated

MAYO ZONING MAP

SYNERGY WEST LIMITED



0 100 200 300 500 1000 2000 FEET

NORTH

- INDUSTRIAL
- COMMERCIAL
- DEVELOPMENT CONTROL
- PARKS & RECREATION
- INSTITUTIONAL
- RESIDENTIAL
- MULTI RESIDENTIAL

in the Development Plan. The zones also correspond with existing land uses which are compatible with the Mayo Development Plan insofar as use is concerned.

INDUSTRIAL

There is little industry in Mayo at present. In fact, only one industrial use exists in the area designated Industrial on the Development Plan. The Zoning Plan acknowledges the existence of this use in its present location but does not necessarily accept the existing yard and performance standards as stated in the Zoning Bylaw.

True conformance being a matter of both location and standards, industrial expansion, if necessary, will require the zoning of a tract of land across the entrance road in the northeast corner of Mayo.

COMMERCIAL AND DEVELOPMENT CONTROL

The Commercial and Development Control zones are discussed together as the Development Control zone area is basically a future commercial zone.

The reason for implementing a Development Control zone is to protect land owners who do not conform to the commercial land use zone by nature of their present use (usually residential) and would be impeded in improving their property because of the commercial standards. This is particularly important in view of Mayo's questionable growth potential. That is to say that the total amount of commercial--development control land indicated may never be required for that purpose.

The Commercial zones shown along Centre Street are presently developed;

however, some existing development does not conform to the standards of the Zoning Bylaw. The property owners involved may be considered non-conforming or may apply for zoning adjustments which would make them fully conforming uses. The procedure for application for zoning adjustments is discussed in Chapter VI and fully established in the Zoning Bylaw.

The Commercial zone along First Avenue is presently partially developed. Current non-commercial use along this Avenue consists of vacant lots and abandoned buildings. It is, therefore, not considered a hardship on the land owners to have Commercial zoning applied to their properties.

The general quality of commercial services in Mayo is low, due primarily to the economics of serving a small population base. With this in mind, some flexibility will be required in interpreting and granting adjustments to the Zoning Bylaw. Any new developments, however, should be made to conform.

RESIDENTIAL

The Residential zones correspond almost identically to those shown on the Development Plan. Through infilling as discussed in Chapter IV, this should be sufficient to provide for the normal needs of Mayo during the life period of this Development Plan. Zoning for new residential areas should not be considered until the majority of vacant lots in the present residential zone are developed.

Three areas are shown for the use of multiple family dwellings. This classification should not be of concern to residents in the area who presently live in single family homes, for although it does allow apartments,

townhouses, or other forms of multiple family homes in an area, they should be grouped rather than interspersed and located where they are best suited in terms of municipal service needs and in relation to greater traffic flow. The zone is not designated in anticipation of large numbers of multi-family dwellings, but rather provides an acceptable area where they could locate should the demand occur.

INSTITUTIONAL

This zone is shown as a reflection of the existing uses which qualify as institutional by definition. This includes: hospitals, government buildings, utility structures, fire halls, police stations, senior citizens' homes, and nursing homes. Institutional buildings on a small scale (churches, clubs) can be accommodated in most other zones with some conscientious placement. Accordingly, most rezoning applications for new developments of this nature would receive sympathetic considerations by the administrator of the bylaw.

PARKS AND RECREATION

Some of the Parks and Recreation zones as shown may not be feasible today. However, for a community to have the authority to zone land for public purposes, the community must own the land. This legal requirement may involve the transfer of land from the Crown or the Territorial Government to the L.I.D. Action to acquire this land is recommended so that it may be preserved for present and future use.

The community center, school and grounds have been placed in this zone.

Additional area has been included for expansion of field sports, the school, and buffering from future industrial growth. The zone between the Stewart River and First Avenue has been included in order to protect what is one of the best natural amenities of the community, the river bank.

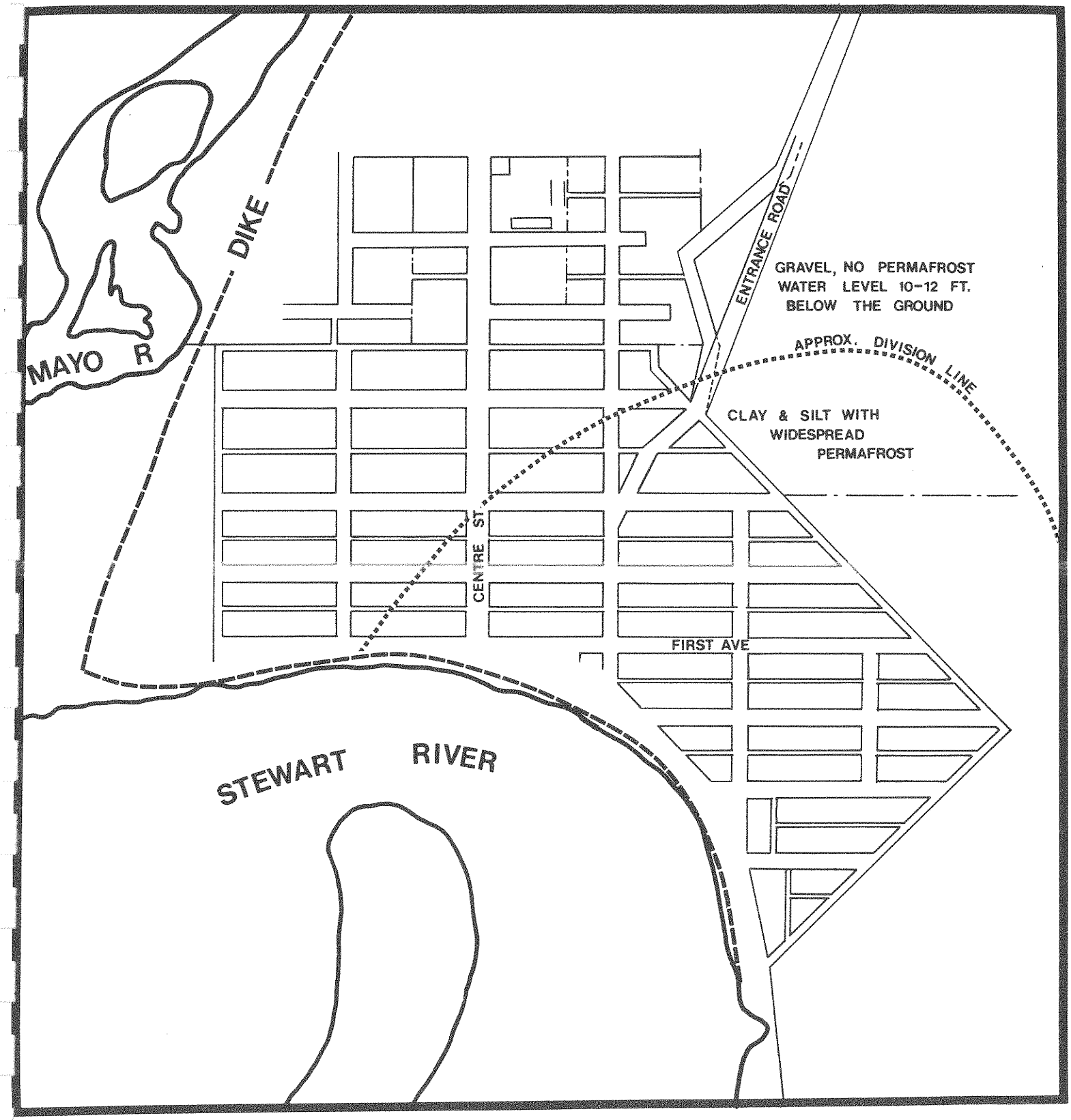
It is within this zone particularly that community-sponsored development is urged. Landscaping, walkways and benches would make this a focal feature of the community.

PERMAFROST AREA

An area affected by permafrost is delineated in Chapter I, Plate 5 and it is opportune to discuss future use of this area in the context of parks and recreation zoning. Although presently occupied by building, the ultimate goal of the community should see this area revert to a park use. Concentration of building should be in the northwest or southeast sectors of Mayo and servicing through the area can ultimately be minimal, merely connecting the two buildable areas where required. On this limited servicing basis, utility corridors may prove economically feasible based on total life costs and their essential character.

The above-mentioned is stated as an ultimate goal and should not be construed as a declaration for immediate demolition of all existing buildings in the area affected by permafrost. It does recommend that no further development be considered there and that existing buildings be relocated when possible or allowed to remain without major improvement until they are abandoned.

APPROXIMATE AREA EFFECTED BY PERMAFROST



SOURCE; STANLEY ASSOCIATES,

QUALITY OF LIFE STUDIES 1973

USE OF THE ZONING BYLAW

The Bylaw consists of twenty-two (22) sections. A brief explanation of these follows:

Section 1.0

Stipulates the area to which the zoning bylaw applied.

Section 2.0

Names the authority who will be responsible for the supervisions, enforcement, and interpretation of the bylaw. This authority, an Inspector of Local Improvement Districts, may handle more than one community initially; however, it is hoped that eventually Mayo would have a local Inspector who, as a member of the community, would be fully cognizant of the community's goals and local feelings.

Section 3.0

Defines any words used in the bylaw which may be subject to different interpretations by individuals. It is expected that definitions will have to be added and changed as the bylaw is used. Where this section fails to interpret a point of contention or confusion, the Inspector of Local Improvements has the authority to interpret the meaning of the bylaw.

Sections 4.0 and 5.0

State the zones in the bylaw, and a partial list of the uses allowed within each zone. The section attempts only to list typical uses and it is expected that some uses will be subject to interpretation. When there appears to be wide latitudes in the interpretation, it is imperative that the public affected should have opportunity to put input into the interpretation.

Where precedent is set, the use involved should be added to the list of acceptable uses for a particular zone.

Section 6.0

States the conditions which must apply to all zones within the bylaw.

Section 7.0

Gives the standards and regulations for each individual zone, so that when a particular use is located in the zone which it is acceptable, that use must still conform to various yard and bulk standards. These standards may be relaxed in some instances when good reason is given in support of a relaxation.

Section 8.0

Stipulates the off-street parking requirements and quality standards for each zone.

Section 9.0

Embodies the regulations for the erection of signs within the various zones, and sets standards for individual signs.

Section 10.0

Establishes the position of Development Officer and outlines his duties and responsibilities.

Sections 11.0 and 12.0

Establish a Zoning Appeals Board and Secretary to hear zoning appeals.

Section 13.0

Provides the general rules for development.

Section 14.0

Stipulates the restrictions and regulations applied to buildings, properties, or uses which were existing prior to the bylaw, and which now do not conform.

Section 15.0

Lists the forms of development which are not affected by the Zoning Bylaw, and would not require development permits.

Section 16.0

Outlines the procedure and requirements to be followed in order to obtain a development permit in Mayo.

Section 17.0

Outlines the procedure to gain a hearing of the Zoning Appeals Board created in Sections 11 and 12.

Section 18.0

Explains the function and nature of a building permit in relation to the development permit.

Section 19.0

States that the actual construction of a development must conform to the plans approved by the Development Officer.

Section 20.0

States what action and penalties may be imposed if an individual does not conform to the bylaw, or obtain a development permit.

Section 21.0

Outlines the rights of the Development Officer when checking as to the conformity of any development, and the penalty which may be levied for

non-conformance.

Section 22.0

Describes the coming into effect of the bylaw.

USING THE ZONING BYLAW

The individual in utilizing the Zoning Bylaw would, with the assistance of the Development Officer, follow the procedure as outlined below:

1. Check Section 15 of the bylaw to determine if the proposed development is affected by the bylaw. In most instances this will be the case.

2. Sections 4 and 5 explain the zone that the proposed development belongs in. Interpretive assistance would be provided by the Development Officer.

3. Having classified the development by zone, the Zoning Plan will be checked to find the appropriate areas for the development's location. If there is no economic means of developing in the zoned area, the Development Plan will ascertain what areas may be rezoned to accommodate the development.

4. Using Section 6 - general conditions in all zones; 7 - specific bulk regulations for the zone of development; 8 - parking standards; and 9 - signing standards; the individual will prepare a permit application as outlined in Section 16.

5. All uses and standards conforming, the application will be granted, and the development may proceed in conformity with the approved permit.

CHAPTER VI

THE PLANNING PROCESS AND ADMINISTRATION OF ITS REGULATIONS

COMMUNITY DEVELOPMENT

Community development is an approach for direct change in a community towards higher levels of living as conceived by change agents and community members. As such, it involves process, method, program, and movement.

As a process, community development refers to a sequence of phases in overall change. For example, a community may move from a pre-industrial community to an industrial community or from a mining town to a tourist centre or from a transport-supply community functioning in an overall regional support system to one whose goals are for its own maintenance or similarly from a type of community where resources and specialists come from the outside to one where local people make most use of their own resources.

As a method, community development is a means of attaining specified goals. It is a method which aims to carry the community through the processes of development in order that the will of Government, representing local people, may be carried out. This goal may be the establishment of better health facilities, housing or other physical improvements; or, it may be developing social institutions of local autonomy and self-government. Emphasis is upon achieving a desired goal.

As a program, the method becomes stated procedures as a list of activities. It comes into contact with specialists associated with activities such as

health activities, recreation activities, or industrial-commercial activities. If too highly formalized, there is the danger that the emphasis is placed on the program rather than upon what is happening to the people involved in the program. For example, development of a better transport facility may result in unwanted relocation of people; or preservation of natural areas may decrease opportunities for local inhabitants to improve their level of living. As a program then, the emphasis is upon activities. A typical activity to be considered in the Mayo community is practical means of infilling vacant land within the existing townsite.

As a movement, community development may become a cause to which people become committed. It is dedicated to progress. But, progress is a philosophic concept and is viewed in terms of values and goals. The question is, whose values and goals? These differ in different social systems. For example, do native people and whites in Yukon communities define progress in the same way? Do local residents feel progress in the same terms as the Territorial and/or National Governments? Frequently the answers to these rhetorical questions are negative. In this regard then, community development has a political connotation. Another reason for the political nature of community development is the necessity of turning to Government for funds, personnel, and enabling legislation.

COMMUNITY INVOLVEMENT IN DEVELOPMENT

Successful community development implies growth and regeneration from within the community. As such, it implies local participation and involvement. Development is not achieved through the creation of a department or bureau

charged with that specific responsibility. Rather, it involves vertical integration of grass-roots participants, elected public officials, professional planners, and Government agencies. One element emerges as central in successful development projects that have a long-term effect and which pre-conditions further development -- that element is local involvement. There are three stages in the involvement process:

- the incipient stage
- the convergent stage
- the participant stage.

The Incipient Stage

This stage pertains to the recognition by local community members of problematic situations and their definition and classification consistent with the value system, beliefs, and traditions of the community. Recognition is often precipitated by a crisis in the community or by the effects of professionals dedicated to tasks of long-range planning. The important point is that the problem is non-existent until recognized and articulated by someone.

The Convergent Stage

Once the problem has been articulated in terms of beliefs, sentiments, and values, the basis is laid to develop a network of community relationships. This requires a convergence of interests that is a pre-requisite to formulation of a general objective or statement or purpose that can direct action. This must be formed in such a way that diverse elements of the community can converge to act on the problem.

These include:

1. Consideration of the symbols of social value which may unite divergent interests.
2. Consideration and appraisal of individual needs and desires.
3. Consideration and appraisal of organizational needs and limitations.

As such, this stage is characterized by compromise which will lead to commitment and actual participation of diverse interest groups and individuals.

It is important that a convergence of interests between the role of outside planning organizations (whether they be governmental or consultants) and the local community interests, be articulated. Frequently and normally, there are conflicting interests and these involve conflicting ends. Why should National or Territorial Government policies parallel local values and ends? Even where this is not the case, it is difficult to articulate National and Territorial Government policy in terms of local community values and sentiments. This is particularly the situation for a Yukon community such as Mayo that is supported as a direct result of government policy, but which, historically, served other purposes and has its own developed interests, objectives, values, and sentiments. In general then, for the community's success, the important aspect of the convergent stage for outside agencies is the legitimation of action goals in terms of local community values and sentiments.

The Participant Stage

Finally, the involvement process may result in concerted social action.

The type of participation of an individual or group will be dependent on their respective positions in the community structure. For example, the type of participation is related to position relative to community power and influence, to length of residence, and to social class or ethnic and racial position. In Yukon communities, an overriding consideration is the position of the native peoples; it is extremely problematic to obtain their involvement in local development. Rational planning is conditional on the recognition of local differentiation in order that an efficient and effective blending of efforts in concerted action can be facilitated. This increases the opportunity of success and decreases cleavages within the community. The important aspect of the participant stage is concerted social action and commitment consistent with the pre-existing community structure.

PLANNING IN MAYO

It is important that planning in communities seriously consider the non-physical aspects of community development. This includes planning for:

- institutional structures with broad powers for planning locally
- representative local political institutions.
- local social and economic organizations.

These are the life-blood of a community and are most instrumental in facilitating community adjustment to changing economic conditions which are occurring in the Yukon.

One suggestion that could be singled out of the community development process is to develop the indigenous leadership potential using the community development plan as a focus point.*

Using the Development Plan, meetings could be conducted locally on:

- community planning and development
- community problem identification and solving processes
- community co-ordinated processes and social and political organizations
- community financing and economic systems
- community physical and environmental structure and processes.

For such a program to be successful, the following are required:

- The community should invite and desire outside experts to help advise and organize such development meetings. Local leadership is necessary.
- Time should be allotted for a proper background workup in the community. The Development Plan could be used.
- The community should identify a local problem as a basis for conducting the meeting. The community would be its own laboratory.
- Vertical integration of efforts ranging at least from grass-roots local organizations, outside experts, Territorial Government representatives, should be cultivated.

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*It is not satisfactory to merely train young people, because their training is likely to occur outside the community and they thus lose their position of influence should they return; and second, if successful, will usually migrate elsewhere. What is needed is an extension-type program on a local basis.

INVOLVING THE INDIVIDUAL

Basic to mobilizing community involvement in groups or as individuals is recognition of a set of traditional beliefs that can be activated. These are developed through human relationships and include:

- Patterns of obligations between local organizations; i.e. a service provided by an organization for another requires some reciprocal action in the future.
- Friendship relationships and obligations.
- Patterns of ideological belief, i.e. "for the community," "for my people," "responsibility of the citizen," are symbols that may be activated as a reason for participation.
- Assurances that the results of efforts by individuals and groups within the community are, in fact, going to be translated into productive and tangible results.

THE ROLE OF THE "OUTSIDER"

Frequently community development is used to disguise techniques for manipulation for national, regional, or personal ends from the outside. This may occur consciously or quite unconsciously. In either case, it is counter-productive for future development plans and for the chances of success in current planning. The "outsider" must reconcile his role to the idea that development implies change from within if it is to be lasting, effective, and lead to future success. There are additional problems with the role of the "outsider". These include the following:

- Too often the "outsider," because he is an "expert" attempts

to impose his own definition of the problem and his own program on the community, rather than assisting the community to identify its own problems and to develop its own solutions.

- The "outsider's" primary loyalties are to some agency other than the community. It may be a unit of the National or Territorial Government, to a consulting firm, or to a university. Conflicts of interests do occur between outsider loyalties and interests of the local community.
- The "outsider" develops only minor social bonds with local people, and, because he is a "generalist," often advises without sufficient knowledge of local conditions, particularly of local customs, traditions, sentiments, and values.
- There is a difference of perception of the role of the "outsider" between those within the community and the "outsider." Viewed from the perspective of the former, the role is to advise, organize, co-ordinate, and consult with the local groups rather than to devise, supervise and administer programs. Viewed from the perspective of the "outsider," his role is often seen as "expert" providing information directly, endeavouring to train local leaders, and to devise and administer programs directly. This should not be the case. In general, the role of the "outsider" is to assist local participants to gain control over the development process. The "outsider" in addition to having expertise must be: a sensitive listener, knowledgeable in human relations; an organizer; and capable of recognizing acceptable compromise situations; and, above all, must have as his objective the goal of "working himself out of a job" in that particular community.

ADMINISTRATION

As has been stated in Chapter II the responsibility of the L.I.D. Council rests mainly in the power to purchase, acquire and hold land for the purposes of the L.I.D. Ordinance and the responsibility of operating and maintaining any local improvements in the District which are owned by the District or which they have been authorized to operate and maintain on behalf of the Commissioner.

Responsibility for: assessment, registration of land sales, consideration of development proposals and building permits, is administered through the Territorial Department of Local Government.

The proposed Zoning Bylaw for Mayo, a supplement to this report, defines and describes administrative roles with respect to the regulations. These include the following:

1. Development Officer - The office of Development Officer is created, said office to be filled by the "Inspector of Local Improvement Districts" appointed by the Commissioner. Decisions on the successful candidate should follow consultation between representatives of the Department of Local Government and the L.I.D. Council.

   His duties shall include:

   (a) Dealing with all applications for development;

   (b) Hold for public perusal copy of the Bylaws pertaining zoning, development, and building and all amendments thereto; a register of all applications for development, including the decisions rendered;

   (c) Ensure that copies of these Bylaws are obtainable to the public;

(d) Interpret the Bylaws where necessary;

(e) Provide advice on development proposals;

(f) Issue development permits and building permits on conforming proposals;

(g) Act as the co-ordinator and communications link between the Territorial Department of Local Government and the L.I.D. Council.

As the Development Officer will be one of, at most, two administrative officers regularly available to local citizens, he must have access to or be responsible for the current assessment roll and the current land ownership and notice of transfers documents, all in order to carry out his development responsibilities both to the local community and its L.I.D. Council.

The responsibilities of the Development Officer shall be within the limits of the Local Improvement District in the specific sense. On general matters, however, respecting the Federal development control zone, he shall act as an information officer to the Territorial Department of Local Government handling local queries and liaising with the Local Council.

ROUTE OF AUTHORITY

As per the Zoning Bylaw, the Development Officer receives his appointment through the Commissioner and the Territorial Government. There are several reasons for this:

1. The L.I.D. does not have the authority.
2. The function can be best carried out by a Yukoner with knowledge of the area. Trained personnel are not, at the moment, available. The Territorial Department of Local Government is best equipped to undertake such a training program.

3. Local government officials should be well versed in the operating techniques and regulations governing their senior government counterparts.

The ultimate goal is, however, that the Development Officer become an employee of the local community. This can be achieved by:

1. Mayo becoming a municipality; or
2. Amendment to the Local Improvement District Ordinance respecting Mayo.

The latter appears more achievable, given Mayo's current size and financial dependency. Such a change could not take place overnight but as a goal, and with co-operation and effort at the local level, and assistance from appropriate Territorial departments, could be achieved in 2-3 years.

ZONING APPEALS BOARD

The Zoning Appeals Board has been recommended for the purpose of reviewing requests for zoning amendments which have been refused. It is administrative in nature, designed to review and make recommendations to the appropriate legislative body. It does not have, and should not have, legislative power which is more properly vested in elected officials.

The Secretary of the Zoning Appeals Board shall be the Secretary of the Local Improvement District Council. His principal duties include: filing of minutes of the business transacted at all meetings of the Appeals Board and issuance to all affected and interested parties and all persons attending Board hearings, notices of the decisions of the Board and the reasons therefor.

Comments to the Citizens

1. Citizens may attend and address the L.I.D. Council at its regular monthly meeting each calendar month.

2. All land within the boundaries of the L.I.D. of Mayo is now zoned, each zone accommodating a specific type of urban development.

3. Applications for a development permit shall be made in duplicate to the Development Officer in writing on a form to be supplied at the L.I.D. offices and shall be accompanied by:
   (a) A site plan, in duplicate, showing the legal description and front, rear and side yards, if any, and any provisions for off-street loading and vehicle parking.
   (b) Floor plans and elevations and sections in duplicate.
   (c) A statement of ownership of land and interest of the applicant therein.
   (d) A statement of uses.
   (e) The estimated commencement and completion dates.

4. These permits are required for any construction, alteration or repair of a building within the limits of the Local Improvement District of Mayo.

CHAPTER VII

SUMMARY

The following is a summary of the principal recommendations. These are more fully detailed in the body of the report but are hereinunder provided for the sake of convenience.

A. GENERAL

1. Maintain existing townsite physical limits until reason for major expansion occurs. Provide for unit building demands by infilling.

2. Expansion of the existing community to be based on outside or private requirements, i. e. continuation of the existing mining operations at United Keno Hill Mines on a 5-10 year basis, or development of new mining operations for which Mayo will have a regional role.

3. Limit large Government expenditures (i. e. consolidation of Elsa, Mayo) until there is active rejuvenation of the regional mining industry in which Mayo can take an active part.

B. FEDERAL CONTROL BOUNDARY

1. Unsurveyed Crown lands within the Federal Control Boundary and outside the Local Improvement District may be withdrawn from disposal by Order in Council. Some lands within that area are currently privately owned and thus could be developed upon successful application for building permit.

It is therefore recommended that no building permits be issued within the limits of the Federal Control Boundary Area unless Municipal Services are available or could be made available and in the latter instance that the cost for the required extension to the Municipal Services System to the property for which a building permit has been requested be borne as a Local Improvement Tax by the applicant or by all affected land owners along the route of the required extension, including the applicant, following a referendum on which at least 2/3 of the affected owners have agreed to the tax.

C. COMMUNITY SERVICES

1. Analyze Stewart River water quality downstream of the existing sanitary sewer outfall to determine deleterious effects of the effluent on the receiving stream. Based on this information, determine the degree of treatment necessary and propose plans to meet those requirements.

2. Replace sections of the sanitary sewer system which do not meet standards for northern installations - i.e. less than 10-foot cover, questionable bedding.

   Inspect interior of existing sewer mains to determine leaks, cracks, open joints and other failures by the method of continuous television filming.

   Study condition of existing system to determine the minimum extent of replacement necessary. Analyze this cost, including

additional pumping stations that will be required against the cost of total replacement.

3. Replace all of the existing water distribution system where asbestos cement pipe is used. Replace with non-brittle, preferably flexible, piping material. Provide distribution system with heating capacity either by using conductive materials or providing internal heating cables. Eliminate all dead-ends. Provide more valves and hydrants to the system for greater serviceability.

4. Develop through a pilot test program minimum standards for municipal services installation in the north. Such standards should include selection of acceptable piping materials, depth of bury required, bedding procedures and materials, backfilling techniques, and minimum distances between services.

5. Provide additional firepump at water source. Automate the chlorinator and fluoride feeders. Provide additional boiler capacity to provide for discharge of potable water at $40^{O}F$.

6. Commence operation of garbage disposal site as a sanitary landfill. Cover with inert material should be on the basis of once per week during summer and once per month during winter.

7. Following the completion of revamping of the water and sewer systems, provide for surface drainage throughout the community and replenish base courses for roadbeds.

8. Construct new fire hall.

9. Re-examine dental service and provide for additional visits on a regular basis.

10. Provide a regional centre for cultural, social and recreational activities. This facility to be available to both native people and whites and to provide special facilities for each culture where desired. The building to be located on Centre Street as near as possible to the existing school. Determination of the facilities to be provided within the complex to be done following consultation with the L.I.D. Council and the citizens of the community.

11. Encourage location of a banking service within the community.

12. Provide a regional and local government administration building on Centre Street.

13. Initiate a community-wide clean-up program. This to be carried out on a local basis, under the authority of the L.I.D. Council.

D. ECONOMIC EVALUATION OF MAYO CONSOLIDATION OR RELOCATION

Six major alternative strategies were considered along with their associate costs. The numbers associated with each alternative are in order of magnitude costs and as such, reflect the relative difference between each alternative. The alternatives included maintaining the status quo, instigating a community services improvement program in Mayo, instituting a modified community services improvement program, relocation of Mayo to Elsa, development of a new townsite for Mayo, consolidation of Mayo and Elsa

at a new location. The range of costs for these alternatives ranged from nil to $17,412,000 representing the upper range of the costs associated with relocating and consolidating Elsa and Mayo at a new townsite location.

Although each of the above-mentioned options are open, the most realistic, considering today's conditions, appear to be improvement of the community services program or modified community services improvement program at an estimated cost range of $1,071,800 to $1,348,800.

Should mining in the South McQuesten River Valley area stabilize to the extent that it has an anticipated life expectancy no less than 5 years, or should mining development in the immediate Mayo region take place, consideration should be given at that time to relocating Elsa to Mayo in the area shown as future development on the plan provided.

E. THE DEVELOPMENT PLAN

A Development Plan has been prepared for the existing community of Mayo. This Plan has been accepted by resolution of the L.I.D. Council. It is recommended that it be similarly approved by the Yukon Territorial Government.

F. ZONING PLAN AND BYLAW

The Zoning Plan and Bylaw have been completed and have been approved in principal by the L.I.D. Council. It is recommended that this regulation be adopted by the Yukon Territorial Government.

This regulation is outside the powers of authority of the L.I.D. Council. It is recommended at this time that these powers be exercised through the

Department of Local Government of the Yukon Territory and that responsibilities for its day-to-day operation be administered by a Development Officer for the community to be appointed by the Commissioner.

It is further recommended that the ultimate goal be that the Development Officer become an employee of the local community, it being felt that this could be achieved in the period of 2-3 years with co-operation and effort at the local level in Mayo and assistance in training of the appropriate individual through an on-the-job training program organized and administered by the Territorial Department of Local Government.

G. THE PLANNING PROCESS - LOCAL INVOLVEMENT

Successful community development implies growth and regeneration from within the community. As such, it implies local participation and involvement. In order to initiate involvement in local planning, it is recommended that local citizens groups be identified from both within the white and native cultures and representatives placed on a committee which would function in an advisory capacity to the L.I.D. Council and have responsibility for the operation of the zoning and development plans in consultation with the Development Officer.