

**SA** Stanley Associates  
Engineering Ltd.  
Consulting Engineers and Planners

11748 Kingsway Avenue  
Edmonton, Alberta T5G 0X5  
Telephone (403) 453-3441

LETTER OF TRANSMITTAL

September 6, 1976

File: 1303-1-1-1

Mayor and Council,  
City of Whitehorse,  
2121 Second Avenue,  
WHITEHORSE, Yukon Territory,  
Y1A 1C1

Your Worship and Members of Council:

We are pleased to submit herewith the Whitehorse General Plan - 1976.

The intent of the Plan is to provide policy direction for the accommodation of future growth in accordance with the stipulated objectives and in accordance with our present anticipation of future events. There are, however, three possible areas of future discontinuity which, should they occur, will require detailed examination within the context of the present Plan.

A northerly extension of railhead will have physical implications, but is not expected to have a negative economic impact.

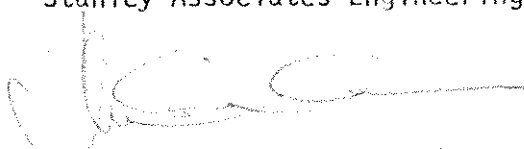
Construction of an Alcan pipeline will have an extreme short-term impact upon the City, along with continuing benefits relating to energy supply and employment.

Finally, the settlement of native land claims may entail substantial physical and economic implications for the City.

We recommend that this General Plan be adopted by Council, and that City of Whitehorse Bylaw 493 be amended to reflect the recommendations herein.

Respectfully submitted,

Stanley Associates Engineering Ltd.,

  
J. M. Lainsbury, P. Eng., M.C.I.P.,  
Director, Planning Division.


  
T. A. MacDougall, P. Eng.,  
Project Planner.

TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGEMENTS . . . . .	i
SECTION 1 INTRODUCTION . . . . .	1
SECTION 2 DEVELOPMENT COORDINATION . . . . .	3
SECTION 3 RESIDENTIAL LAND USE . . . . .	5
SECTION 4 COMMERCIAL LAND USE . . . . .	9
SECTION 5 INDUSTRIAL LAND USE . . . . .	11
SECTION 6 PARKS AND OPEN SPACE . . . . .	13
SECTION 7 DOWNTOWN DEVELOPMENT . . . . .	15
SECTION 8 SOCIAL INFRASTRUCTURE . . . . .	17
SECTION 9 PHYSICAL INFRASTRUCTURE . . . . .	19
SECTION 10 COMMUNITY AESTHETICS . . . . .	23
SECTION 11 TAKHINI AND VALLEYVIEW . . . . .	25
SECTION 12 EMERGENCY SERVICES . . . . .	27
SECTION 13 THE UNDEVELOPED REGION . . . . .	29
SECTION 14 ECONOMIC FUTURE . . . . .	32

LIST OF FIGURES

- FIGURE 1      CONCEPT OF NEIGHBOURHOOD RESIDENTIAL DEVELOPMENT
- FIGURE 2      EXISTING LAND USE - 1976 (URBANIZED PORTION)
- FIGURE 3      EXISTING LAND USE - 1976 (DOWNTOWN)
- FIGURE 4      EXISTING LAND USE - 1976 (RURAL PORTION)
- FIGURE 5      FUTURE LAND USE
- FIGURE 6      DOWNTOWN DEVELOPMENT SCHEME
- FIGURE 7      EXISTING AND PLANNED WATER SYSTEM
- FIGURE 8      EXISTING AND PLANNED SEWAGE SYSTEM
- FIGURE 9      EXISTING AND PLANNED STORM SYSTEM
- FIGURE 10     EXISTING AND PLANNED ROADWAY SYSTEM

## ACKNOWLEDGEMENTS

This General Plan has evolved in response to locally perceived problems and issues facing the Whitehorse Community. Identification of these issues, and the appropriate tactics for dealing with them have been in the first instance the responsibility of the General Plan Advisory Committee. We wish to thank the membership of the Committee for their help, their patience and their encouragement.

Members of the General Plan Advisory Committee were:

Mayor Ione Christensen	Mrs. Sharon Borgford
Mrs. Lin LeBarge	Mrs. Jo Thompson
Mr. Mel Olson	Mr. John Ferbey
Mr. Dietmar Ordowski	Mr. Dave Robertson
Mr. Peter Alexandrovich	Mr. Brian Stanhope
Mr. Daryle Scheelar	Mr. Grant Livingston
Mrs. Sophie Smarch	Mr. Dave Gairns
Mrs. Karen Webb	Alderman Doug Bell
Mr. Phil Blaker	Mr. Geoff Lattin
Alderman Maggie Heath	Mr. Al Heiland
Mr. Jean Besier	Mr. Chuck Halliday
Mr. Bert Norrie	Mr. Phil Zaitsoff
Mr. Paul Sheridan	

# WHITEHORSE GENERAL PLAN

## SECTION 1

### INTRODUCTION

This General Plan has been prepared in accordance with a proposal by Stanley Associates Engineering Ltd. dated January 26, 1976.

The intent of the General Plan is to provide a series of policy recommendations in response to present and anticipated concerns and issues within the community, in order to establish a rational basis whereby the community can move into the future.

The first stage of the General Plan process has involved the compilation of a comprehensive data base relative to the present status of the City of Whitehorse. This data was then analyzed to identify and quantify specific problem areas within the community. A record of this data base and analysis is contained in a separate report entitled, "City of Whitehorse, Survey and Analysis - 1976".

A Citizens Advisory Committee was appointed by Whitehorse Council to work with the consultants and to provide direct community input into the planning process. The Committee was initially responsible for identifying the locally perceived issues and concerns facing the community, and for developing an over-riding set of community objectives.

The first of these objectives is a recognition that senior levels of government are heavily involved in the City's development process, and that the level of coordination between the three levels of government is less than desirable. The first objective is stated as follows:

"To achieve a higher level of inter-governmental coordination within the urban development process such that the defined responsibility of each level of government is met in a mutually satisfactory manner".

The second objective relates to a perceived weakness in current land use policies, and is stated as follows:

"To articulate, through the General Plan, a comprehensive land use policy that reflects the needs and aspirations of the people of Whitehorse".

The third objective relates to a recognition of concerns relative to the present level of social and recreational programs and facilities available within the City and is stated as follows:

"To improve social/cultural/recreational programs and facilities within the City to a level commensurate with community needs and resources".

The fourth of these general community objectives recognizes the requirement for continuing improvement and extension of physical services such as sewer, water and roads within the community and is stated as follows:

"To improve the physical infrastructure within the City to a level commensurate with community needs and resources".

The following sections of this General Plan document provide a brief discussion relating to various aspects of the Whitehorse community, along with a series of related recommendations, all of which are intended to move the community towards achievement of the above noted objectives.

## SECTION 2

### DEVELOPMENT COORDINATION

#### DISCUSSION

The Yukon is sparsely populated and a majority of residents live in Whitehorse. Others are scattered throughout a number of smaller settlements. Because of their size, these smaller settlements must look to the Territorial Government to supply land development services. It is only reasonable that the City of Whitehorse use these Territorial Government services also, rather than duplicate the government's land development capability at the local level.

Further, it is not necessary that the City assume ownership of all public lands within the City's boundaries, since this too would involve a substantial and uneconomic duplication of the Territorial Government's capabilities in the real estate field.

What does appear essential, however, is the assertion of the right of the City to play a specific and key role in the determination of its destiny and specifically to determine the manner in which land is used and developed within the City's boundaries. This right, on the part of the City, also implies a definite responsibility; that of careful and rational planning and implementation of development policies. The current Plan is a reflection of that responsibility.

Because of Whitehorse's role as the capital city of the Yukon, as well as its role within the economic region, senior governments play an exceptionally large part in the determination of what actually happens to and within the City. It is important that these senior government activities be coordinated with local government administration in order to assure a con-

sistent approach towards community objectives. It is equally important that the implication of these community objectives in areas surrounding the corporate limits of the City are also recognized by senior governments.

#### RECOMMENDATIONS

1. That development of new growth areas on Commissioner's Crown lands within the City remain the responsibility of the Yukon Territorial Government.
2. That all land development proposals within the City of Whitehorse be in accordance with the recommendations of this General Plan and subject to land use and municipal servicing approvals by the City prior to development.
3. That a tri-level inter-governmental committee be formed to coordinate the roles of senior governments with the development aspirations of the City of Whitehorse.
4. That the City request the Territorial Government to define a Whitehorse centred region and to appoint a regional planning commission with City representation, having responsibility for preparation and administration of a regional plan.

## SECTION 3

### RESIDENTIAL LAND USE

#### DISCUSSION

Scattered residential development throughout the City is costly to service with the necessary physical infrastructure and is conducive to unnecessarily high user costs stemming from necessary intracity trips. It is therefore proposed that future urban residential development be directed to areas which may be economically serviced and which will reflect the lowest possible user costs.

At the same time, a demand is recognized for more remote, semi-rural residential areas within the City. This demand should be met in locations which will not be subject to urban development pressures within the foreseeable future and in areas which are readily accessible from current roadway networks.

For reasons of economy and convenience, the City of Whitehorse is currently experiencing pressure for higher density residential development. On the basis of some current development examples within the City, there are substantial concerns relative to the proper location of such higher density residential development, and particularly relative to the most desirable locational relationship of such development with lower density housing.

In order to provide a model for the desirable inter-relationship of housing types, and in order to provide residential development that will place all housing within easy walking distance from an elementary school and neighbourhood park, the concept of neighbourhood residential development is proposed. As illustrated by Figure 1, the focal point of the neighbourhood area is an elementary school and neighbourhood park. The neighbourhood is sized so as to provide sufficient housing to accommodate a total population

in the order of 3,500 people, which under present conditions will generate approximately 400 elementary school children requiring a full size 16 room elementary school. Multiple family housing, generally in a patio home or townhouse type of configuration, is placed in close proximity to the central neighbourhood park and school. Since this type of housing will normally generate more school age children per unit of area than single family housing, it is appropriate to provide immediate access to the school site in order to reduce aggregate student walking distance. Furthermore, proximity to the neighbourhood park will tend to compensate for the lack of open space which is inherent in higher density family accommodation.

Conventional single family detached housing is placed beyond the multiple units, but again within easy walking distance of the elementary school and neighbourhood park.

One and two bedroom apartments, normally found in a three-storey walkup type of configuration, generally yield fewer elementary school children per unit of area as compared to other housing forms, while generating higher traffic movements. It is therefore appropriate to place this type of housing in a position of easy access to external roadways in order to avoid drawing unnecessary traffic into the center of the neighbourhood.

It is suggested that the central park may be extended throughout the neighbourhood through the retention of open spaces in a linear configuration that will serve as walkways or cycle paths during the summer months and double as cross country ski trails during the winter.

Finally, provision is made within the neighbourhood for development of a small commercial outlet intended to provide convenience shopping for neighbourhood residents.

The mobile home offers adequate and relatively low cost housing and forms a substantial portion (11%) of the housing stock within the City of Whitehorse. Some opposition has been voiced relative to further mobile

home developments within the City, largely as a result of the example set by previous developments which are for the most part poorly planned and developed.

To an extent, the term "mobile home" is a misnomer, since the newer, larger units are, in fact, relatively immobile. The mobile home is, in essence, simply another form of conventional single family housing. It therefore reflects the same kind of locational criteria as conventional single family housing. For this reason, it is proposed that mobile homes be accommodated within new residential development areas, and that discrete areas within new neighbourhoods be specifically designed for mobile homes.

One other form of modern residential accommodation deserves some discussion. High rise apartments offer convenient accommodation which normally, for reasons of economy of scale, come complete with an amenity package which is not affordable in less dense types of residential accommodation. It is proposed that development of high rise residential accommodation be permitted only within specified areas in downtown Whitehorse. High rise development is not recommended in the outlying residential areas.

#### RECOMMENDATIONS

1. That planned residential expansion of the Porter Creek and Riverdale residential areas proceed to completion.
2. That an Outline Plan be prepared for a new urban residential area north and west of Hillcrest (Refer to Figure 5).
3. That, in the event that a road connection is completed between Porter Creek and the Marwell area, an Outline Plan be prepared for a new residential neighbourhood north of the Takhini Mobile Home Park.
4. That new urban residential development within the City be designed on a neighbourhood principle as illustrated by Figure 1.

5. That high rise residential development be permitted only within the downtown area (Refer to Section 7 for a more detailed location).
6. That mobile home subdivisions be integrated into new residential areas, and further that mobile home subdivisions be zoned in accordance with the following two subcategories:
  - MHS - this zoning would apply to mobile home subdivision areas with lots less than 540 square metres (6,000 square feet) in area. Only mobile home units would be permitted on these lots.
  - MH-RS - this zoning would apply to mobile home subdivision areas with lots equal to or greater than 540 square metres (6,000 square feet) and would include provisions for the eventual conversion of the lots to a conventional single family dwelling after a minimum two year occupancy.
7. That rural residential areas be developed on the periphery of the City and adjacent to the Alaska Highway as denoted by Figure 5.
8. That title to lots within a rural residential development be subject to a restrictive covenant such that the lots may not be subdivided in future years.
9. That rural residential lots be no less than one hectare (2.2 acres), or such area may be required to accommodate on-site sewage disposal, whichever may be the greater.

## SECTION 4

### COMMERCIAL LAND USE

#### DISCUSSION

Commercial development within Whitehorse is generally well controlled. There is more than adequate retail floor space within the City, and with the opening of the new Territorial building, there is currently an excess of office space. Concern has been expressed relative to the extent of highway commercial development along the Alaska Highway, and a lack of local convenience stores has been noted.

Whitehorse is fortunate to have a reasonably compact and viable downtown core. Experience in other communities has indicated the kind of negative impact that the development of major outlying shopping centres will have upon the viability of the downtown core. It is proposed that the City of Whitehorse not allow any major commercial developments outside of the downtown core until the total City population reaches at least 40,000.

#### RECOMMENDATIONS

1. That provision be made within future residential outline plans for the establishment of neighbourhood stores, with one site established for each neighbourhood. Retail floor space should not exceed 0.1 square metres (1 square foot) per capita of neighbourhood population.
2. That provision be made to accommodate the development of small district shopping plazas for groups of two or more neighbourhoods with an area appropriate to provide for retail floor space of no more than 0.4 square metres (4 square feet) per capita of district population.

3. That major shopping centre proposals (greater than 3,600 square metres [40,000 square feet] gross leasable area) be not approved for development in any location other than the downtown area until the City population is in excess of 40,000 people.
4. That new hotel development be encouraged to locate in the downtown area.
5. That highway commercial development along the Alaska Highway be concentrated in predefined development nodes located such as to minimize problems of access and egress.

## SECTION 5

### INDUSTRIAL LAND USE

#### DISCUSSION

Industrial development in the City is dispersed throughout the community, with concentration in nine industrial districts. A significant portion of the total industrial land within the City is related to transportation facilities such as railway yards, major transshipment facilities and trucking operations.

The scattered nature of industrial development increases the opportunity for conflict with adjacent land uses and makes the assignment of truck routes extremely difficult.

#### RECOMMENDATIONS

1. That current planning proceed for the development of a new industrial area west of Porter Creek.
2. That new industrial development be directed to McRae, Marwell, and the proposed Porter Creek industrial area.
3. That strip industrial use along the Alaska Highway be phased out and consolidated in either McRae, Marwell or the proposed Porter Creek industrial area.
4. That development control regulations be strenuously enforced in the present Porter Creek industrial area in order to avoid extensive conflict with adjacent residential uses and in order to improve the visual quality of the northern approach to the City.

5. That a long term program be established for the eventual phasing out of the existing Porter Creek industrial area. Such a program should only be implemented when there is adequate alternative industrial space available.

## SECTION 6

### PARKS AND OPEN SPACE

#### DISCUSSION

Much of the City of Whitehorse is classified as open space, with some portions having more precise definition. The Chadburn Lake Park Reserve and the Long Lake Recreation Reserve indicated on Figure 5 represent formal open space designations.

In addition, many portions of the area are used for specific activities such as hiking, trail biking, fishing, skiing and snowmobiling. Other portions of the area have significance for other reasons. Haeckel Hill is a golden eagle nesting site and raven roosting area. Lake and stream edges zones throughout the City provide a habitat for wildlife and birds.

Within the urban portion of the City, the provision of open space is adequate when compared with generally accepted standards, although in some instances, it is poorly located. In particular, more attention must be given to the appropriate nature and location of parks and residential areas and to the provision of open space within the downtown area.

#### RECOMMENDATIONS

1. That future residential development be planned on a neighbourhood basis, with each neighbourhood being centered upon a combined neighbourhood park and elementary school site, the area of which should be no less than 5 hectare (12 acres).
2. That the City negotiate the inclusion of small urban park areas as a part of any redevelopment in the downtown area, with particular emphasis on the blocks bounded by Elliot, Lambert, Second and Fourth.

3. That the waterfront park provided by the present Rotary Park be extended northward along the waterfront to the present dock area.
4. That a pedestrian/cycle path be developed along the toe of the escarpment within the downtown area, and that the flatter areas within the escarpment property in the vicinity of Rogers and Hawkins Streets be developed as playground areas.

## SECTION 7

### DOWNTOWN DEVELOPMENT

#### DISCUSSION

The downtown area of Whitehorse is the most intensively developed portion of the City and therefore is deserving of special and more detailed consideration than other less intensively developed portions of the City.

As noted in Section 4, the central business district of the downtown area is healthy and should be encouraged to retain its compact and viable nature. The area presently zoned for comprehensive commercial will need to be expanded one block north in the near future in order to provide for reasonable choice in the expansion and development of central City facilities.

The area to the north of the central business district is currently in non-intensive use for service commercial and light industrial uses. There is room available for expansion of these uses and no changes of land use designation appear necessary.

The residential area to the south of Main Street has been subjected to substantial redevelopment to higher density over the past few years, and this area appears appropriate to accommodate such redevelopment. On the other hand, the residential area north of Main Street is a relatively stable single family area, and should remain as such into the foreseeable future in order to maintain that residential option within the Downtown area.

The area at the west extremity of Main Street is also appropriate for higher density residential development and could accommodate "high rise" development should demand for that form of housing develop in future years.

Should a cultural/convention centre be developed in Whitehorse, the block bounded by Lambert Street, Elliot Street, First Avenue and Second Avenue would provide a desirable location, being close to major hotels and shops as well as being close to the Territorial Government building.

While preliminary research indicates that there are sufficient parking spaces within the downtown area, the location of these spaces is not always appropriate and a number of localized problem areas are evident. Further, on-site observations suggests that traffic control mechanisms are less than effective. A detailed and comprehensive traffic and parking study is required immediately in the downtown area to establish precise parking requirements and make recommendations as to their provision, to review and make recommendations relative to the improvement of traffic flow, and to provide preliminary design of necessary intersection improvements and railroad crossing requirements.

#### RECOMMENDATIONS

1. That land use in the downtown area be guided towards the land use organization illustrated by Figure 6.
2. That a detailed traffic and parking study of the downtown area be commissioned as soon as funding can be approved.
3. That the City cooperate with any citizens' groups within the downtown residential areas wishing to initiate improvement or rehabilitation programs within their residential areas in accordance with currently available Federal Government programs.

## SECTION 8

### SOCIAL INFRASTRUCTURE

#### DISCUSSION

While the social infrastructure of a community is extremely complex, it may be viewed simplistically as a hierarchy of needs and related programs and facilities. At the apex of this hierarchy are the "one of a kind" city scale facilities such as the hospital, the main library, the senior high school, a recreational complex and similar facilities. At the base of the hierarchy are neighbourhood level facilities such as tot lots, nursing homes, neighbourhood parks and schools, and similar localized facilities and programs.

It is suggested that, particularly with respect to neighbourhood scale facilities and programs, local residents groups might play a formal role in the establishment of local needs and priorities, leaving a central recreation committee to deal with City-scale programs and overall budget allocations. This type of approach would reflect the recognition that there is in fact a hierarchy of social facilities and programs which might properly be dealt with at corresponding levels in the community hierarchy.

Again, particularly at the neighbourhood level, every effort should be made to ensure that schools are designed and operated such as to accommodate not only the educational function but also complimentary social and recreational functions.

A nursing home for senior citizens is required and it is suggested that this be developed in conjunction with the Whitehorse General Hospital in order to allow utilization of core facilities such as food preparation and laundry. Further, affordable housing is required by senior citizens who are able to care for themselves. This is a relatively new requirement within the

City, reflecting a maturing of the average age level, and the desire of older residents to remain in the community. Funding is available for the construction of such accommodation, but local groups must be encouraged to spearhead the necessary development programs.

The location of schools in Whitehorse is not always in keeping with the locations of the areas being served. The development of future residential areas in accordance with the previously discussed neighbourhood concept (refer to Figure 1) will eliminate this problem in future development areas.

### RECOMMENDATIONS

1. That the City encourage the formation of local citizens committees to provide "grass roots" input into the determination of locally perceived aspirations and priorities, particularly in the area of cultural and recreational programs and facility requirements.
2. That the City encourage local service clubs to become involved in spearheading the provision of senior citizens housing in appropriate locations throughout the City.
3. That the "quiet zone" around the Whitehorse General Hospital be rigidly enforced.
4. That the City initiate discussions with Health and Welfare Canada leading to the development of a Nursing Home Annex to the Whitehorse General Hospital.

## SECTION 9

### PHYSICAL INFRASTRUCTURE

#### DISCUSSION

The physical infrastructure of a community refers to all the physical utilities and services such as water supply and distribution systems, sewage collection and treatment, solids wastes collection and disposal, roadway systems, transit systems, power and telephone, which are part of the City. The current nature of this infrastructure and manner in which it may be economically expanded has played a large role in determining future growth patterns for the City.

The City's water supply source is the Yukon River. The quality of water upstream of the City is such that only chlorination and fluoridation is required. It is essential that the Yukon River watershed be protected from any development that may have a detrimental impact on water quality since a deterioration in quality would force the City to more sophisticated and expensive water treatment processes.

At present, there is a considerable amount of development opposite the water intake on Schwatka Lake. The Ministry of Transport float plane base, private float plane docks; the M.V. Schwatka pier, and numerous pleasure boat docks are located along the north half of the western lakeshore. A small marina for pleasure craft is located in a protected bay in the southeast corner of the lake. Some concern exists over the future use of Schwatka Lake by motorized craft such as sea planes, waterski boats, and large cabin cruisers complete with on-board washroom facilities. Suggested solutions to the problem have ranged from outright prohibition to centralized control through the use of sea plane docks and marinas, complete with on-shore pumpout facilities. The City is currently holding discussions with the Ministry of Transport and Federal Health officials to resolve the problem. The location

of existing and planned trunk water mains and reservoirs is indicated by Figure 7.

Figure 8 indicates the existing and planned trunk sewers and treatment facilities, forming the basic sewage collection and treatment system. There are four major outfall lines; two leading to treatment facilities at Crestview and Porter Creek and the other two discharging directly to the River. The two latter outfalls will be diverted into a new outfall facility which will tie into the proposed new sewage lagoon on the east bank of the Yukon River, all of which is scheduled for construction in 1977.

Figure 9 shows the existing and planned trunk storm sewers required to drain water from development areas. Because of Whitehorse's relatively low rainfall intensity, major storm sewers are only required extensively in the downtown with minor sewers required in the major residential areas of Riverdale and Porter Creek.

The sewer, water, and storm systems, as currently constructed and with the additions currently planned, are considered to be adequate to handle existing and currently planned development. Outline plans for new development areas will indicate any modification or upgrading necessary to service such areas.

The major roadway system within the City of Whitehorse is indicated by Figure 10. This system is more than adequate to handle existing development. Geotechnical examination is required in order to determine the feasibility of a new roadway connection between Marwell and Porter Creek, involving a crossing of the escarpment immediately southwest of the Takhini Mobile Home Park. If this alignment is judged economically and physically feasible, then the Porter Creek area will be assured of a high level of service into the foreseeable future. If the escarpment crossing is not possible, then completion of development of the Porter Creek area will result in a reduction of the level of service currently available on the Alaska Highway, with operating speeds probably reduced to 35 miles per hour during peak periods as the Porter Creek population reaches its ultimate capacity of approximately 7,000.

Similarly, users of the Lewes Boulevard and Bridge connection between Riverdale and the downtown area will experience a reduction in level of service as the Riverdale development approaches its peak capacity of approximately 6,400.

Outline plans for new development areas will indicate necessary improvements and modifications to the City's roadway system and the appropriate timing of such improvements.

The present City dump is located in the old War Eagle Copper pits. The site is located well away from the built-up portion of the community. The site is adequate for the medium-term future but has a limited life.

The City has instituted a Mini-bus service which commenced in the early months of 1976. Due to the spread-out nature of the community this is a much needed service and should be continued and expanded to new growth areas in the future. Although operated at a loss, it must be kept in mind that an efficiently run transit system will tend to reduce car ownership and peak hour traffic, thereby postponing requirements for costly roadway improvements as the City grows.

Power and telephone services are distributed to residential, commercial and industrial consumers primarily through overhead wiring. Some underground services are provided in the downtown but all residential services are above-ground. There is a strong desire, on the part of the community, to have utility companies install underground services in new residential subdivisions. There is a reluctance on the part of the power utility company to install underground services as a result of previous development experience. The problem appears to be one of land development coordination, and not one of a technical nature.

#### RECOMMENDATIONS

1. That no development be allowed which may be detrimental to the City's water supply quality.

2. That the City continue discussions with the Ministry of Transport, Federal Health officials, and various private interests to establish an informed development policy for the use of Schwatka Lake.
3. That Outline Plans for new development areas within the City specify the impact of such developments upon the service systems and indicate the timing and capital budget required for any necessary improvements.
4. That the City proceed, as funding becomes available, with detailed design of a Porter Creek - Marwell road connection.
5. That the City retain the Mini-bus system and expand the service to new residential growth areas.
6. That the City in cooperation with YTG encourage the development of underground wiring and telephone cables in new residential subdivisions through the establishment of a clearly defined development process.

## SECTION 10

### COMMUNITY AESTHETICS

#### DISCUSSION

Whitehorse is located in an extraordinarily beautiful setting which tends to draw the observer's attention from the often less attractive appearance of the City itself. Discussions with residents relative to community appearance have generated observations ranging from "it's an untidy city and we need to clean up" to "surely it's a bit junky, but that is the Yukon lifestyle and that's the way we like it".

There does appear to be a reasonable consensus that poorly maintained properties that have a direct and detrimental effect on a neighbour's enjoyment of his own property should be cleaned up. There is an obvious move towards civic tidiness at the municipal level as reflected by the annual spring cleanup campaign.

If community aesthetics are seen as being important, then the Council itself is going to have to lead the way by allocating funds to designated impact areas and through reasonable enforcement of appropriate by-laws.

#### RECOMMENDATIONS

1. That City of Whitehorse By-Law No. 236 be rigidly enforced with particular emphasis on Section 2 of that by-law. An examination of recycling possibilities may add credance to the City's position in this respect.
2. That the current residential development practice of retaining as many trees as possible on individual lots be continued and encouraged.

3. That the City strive to present well defined and aesthetically pleasing approaches to the City.
  - 3.1 That suitable signing be installed on the Alaska Highway to encourage northbound motorists to enter downtown Whitehorse via the Southern Access Road.
  - 3.2 That a tree planting program be undertaken on the northeast corner of 2 Mile Hill to partially screen the Marwell Industrial area from motorists entering the City via the 2 Mile Hill.
  - 3.3 That the northern approach to the City be improved through the gradual phasing out of the Porter Creek Industrial district in accordance with Recommendation 5 of Section 5.
  - 3.4 That the former City dump be cleaned up, covered over, and re-vegetated.
  - 3.5 That the City ask the Yukon Government to institute a gravel pit reclamation and control program.
4. That the City strive to create a more pleasing pedestrian environment in the downtown, through encouraging private owners to maintain their properties, and through investment in paved streets, curb and gutter, street furniture, tree planting, and downtown parks.

## SECTION 11

### TAKHINI AND VALLEYVIEW

#### DISCUSSION

Land, housing and some engineering services in the residential community of Valleyview are owned by the Federal Government and operated as housing accommodation for Ministry of Transport personnel. Takhini has split ownership between the Federal Government, the Yukon Territorial Government and the City.

Valleyview is a small residential community of about 140 people, located just outside the 30 NEF contour.

Takhini is much larger and more complex in its land use. Federal Government offices are situated along the escarpment and residential accommodation is provided for approximately 600 people. School children attending grades K to 7 are accommodated in the 13 classroom Takhini Elementary School. The City owns, operates and maintains the Takhini Fire Hall which primarily services the surrounding residential communities of Hillcrest, Valleyview, and numerous mobile home parks, as well as Porter Creek - Crestview. Takhini contains large tracts of undeveloped open space, of which a considerable amount falls within the 30 NEF contour. Land within the 30 NEF contour is unsuitable for residential development and places some restrictions on other forms of development as well. With future residential development proposed for Hillcrest, Porter Creek and Riverdale, Takhini is becoming the geographic centre of the City, and future land use planning for the area must recognize this locational factor.

## RECOMMENDATIONS

1. That Valleyview residential properties be subdivided and sold to residents; and that the remaining engineering services under Federal control be turned over to the City in good working order.
2. That a special joint study be undertaken by the Federal and Yukon Governments and the City for the purpose of producing an appropriate development scheme for Takhini.
3. That Takhini be considered as an appropriate site for the proposed Family Recreation Complex since the location is central to the entire community.

## SECTION 12

### EMERGENCY SERVICES

#### DISCUSSION

Public protection and law enforcement within the City rest mainly with the R.C.M.P. City by-law enforcement, including parking violations, is undertaken by the City's by-law enforcement officers. Police services performed by the R.C.M.P. in Whitehorse, and in the remainder of the Yukon, are set out in a contract with the Yukon Territorial Government.

No particular problems have been experienced by the R.C.M.P. as a result of previous planning and development within the City. Most of their concerns centre upon the drinking problem and related crimes, and the possible impact on crime rates in Whitehorse as a result of building a gas pipeline along the Alaska Highway or the Mackenzie River.

Responsibility for fire protection in the City is divided between the City, the Yukon Lands and Forests Service, and the Ministry of Transport. Responsibilities for fire protection in the built-up portion of the City rest with the Whitehorse Fire Department, with the exception of the airport runways beyond the apron which are the responsibility of the Ministry of Transport. The remaining large tracts of open forested areas within the City are patrolled by the Yukon Lands and Forests Service.

The two most serious problems with the community's fire fighting capabilities relate to the inability of the City's Fire Department to combat fires in high rise buildings and to contain, and put out, major industrial fires. Requirements to overcome these difficulties include better equipment, more staffing, and a coordinated contingency plan including the three fire fighting agencies.

The Whitehorse General Hospital has a 120 bed capacity. At current Yukon growth rates this facility should be adequate until at least 1981. The hospital site is large enough to accommodate future expansion with little trouble. Emergency transportation services to and from the hospital are provided by the Yukon Government ambulance service. No problems have been encountered to date with the service and access to the hospital is considered adequate.

#### RECOMMENDATIONS

1. That the City establish a contingency plan under the present Whitehorse disaster plan to combat the possibility of a major industrial fire in the Marwell and Valleyview tank farms.
2. Prior to allowing development of residential and commercial high rise buildings, the City should purchase the additional fire fighting equipment required to effectively fight high rise fires.
3. That the City, through YTG approach Health and Welfare Canada to ensure that plans are underway for an anticipated hospital expansion within the next few years.

## SECTION 13

### THE UNDEVELOPED REGION

#### DISCUSSION

The City of Whitehorse controls 420 km<sup>2</sup> (162 square miles) of land out of which only 18 km<sup>2</sup> (7 square miles) are urbanized. The undeveloped portion represents 96 per cent of the total area within the City boundaries. Included in this area are numerous lakes, hills and mountains within large tracts of coniferous trees. Through the centre of the City flows the Yukon River which is fed by numerous tributaries such as Wolf Creek, Croucher Creek and McIntyre Creek. Significant historical and environmentally sensitive areas within the City have been identified in Sections 3.7.4 and 3.7.5 in the Survey and Analysis portion of the General Plan. Formal recognition has been given by the Commissioner to the requirement for passive wilderness recreation areas in close proximity to the urbanized area. Under Section 8 of the Territorial Lands Ordinance, the Commissioner has withdrawn lands in the Long Lake Recreational Area and the Chadburn Lake Park Reserve from surface disposition. However, this Ordinance does not speak to the withdrawal of subsurface rights. As of April of 1976, there were active mineral claims within the Chadburn Lake Park Reserve. At the same time, it is recognized that the City contains a mineralized area consisting primarily of copper which outcrops along a line which roughly parallels the Alaska Highway to the west. This mineralized belt swings east to cross the Alaska Highway in the vicinity of the Kopper King and McIntyre Creek.

Section 2 3.2 of the Survey and Analysis document discusses the climate of the area with particular emphasis upon the vertical temperature profile (Table 2-2) and winter inversion conditions on the Yukon River flood plains. The annual temperature and wind profiles suggest that the most suitable land for human habitation is situated between 750 and 900 metres above

sea level. Land below 750 metres in the flood plains is colder and national carbon monoxide standards can be exceeded in the downtown areas during periods of winter inversion conditions.

An air of uncertainty exists with respect to a northern rail extension through the City of Whitehorse. Three railway routes have been identified within the numerous reports on the subject. It is imperative that one prime route be established which is acceptable to both the Railway and City so that future land development planning will not constrict or alienate the use of the prime route, if required at some future date.

#### RECOMMENDATIONS

1. That the City declare important historical areas as historic sites and zone these accordingly to preserve the cultural heritage of the community.
2. That the Canyon and Closeleigh Townsites be identified and an historical walkway be cleared and established between the two, following the old Tram Line alignment.
3. That development be prohibited on Haeckel Hill since it is a golden eagle nesting area.
4. That intensive development be kept 100 metres from the high water mark on all water bodies within the City.
5. That the City approach the Yukon and Federal Governments and request that the Long Lake and Chadburn Lake Park Reserves be withdrawn from staking by the mining industry.

6. That urban development be restricted from areas which are being actively explored and/or developed by the mineral industry until such time as their commercial value has been evaluated.
7. That intensive urban development be limited to lands below 900 metres above sea level.
8. That continued development of the downtown should only be permitted under conditions where carbon monoxide will not present a serious health hazard during the winter months.
9. That a prime rail extension right-of-way, mutually acceptable to the City and the Railway, be established through the City and that development be prohibited within 400 metres of this alignment until such time as the rail extension is constructed.

## SECTION 14

### ECONOMIC FUTURE

#### DISCUSSION

The economic base of the community consists of those activities which bring income into the community from outside, and which provide the stimulus for growth in the other, non-basic activities, serving the community itself. A common method of analyzing employment to determine the basic and non-basic factions involves comparison of community percentages with national average percentages. The amount by which the percentage of employment in an industry exceeds the national average for similar communities is considered the basic fraction.

Employment data from the 1971 census have been analyzed to determine the nature of basic industry within the City of Whitehorse. Results of the analysis show the following employment industry groups as having a basic economic component:

1. Public Administration and Defence
2. Transportation and Storage
3. Mining
4. Tourism
5. Construction
6. Communications and Utilities

Although the analysis suggests a widely based economy, the sectors of transportation, construction, communication and utilities depend largely upon regional economic development which in turn is highly dependent upon the activity of the mining industry. Also, the comparison of Whitehorse with the Canadian average for cities between 10,000 and 30,000 is only valid so long

as the trading area economy of Whitehorse remains stable. A high percentage of the cities in this population range are located in the agricultural areas of Southern Canada. These urban centres service a renewable resource trading area (based upon agriculture); whereas Whitehorse primarily services a non-renewable resource trading area (based upon mining).

A more realistic assessment of the City's economic base would point to mining, government and tourism as being basic to the economic health of the community and the Yukon.

Attempts should continue to diversify the economic base of Whitehorse and the Yukon in order to insulate the City from the economic fluctuations of the mining business cycle.

The City's financial position is basically sound with only 42 percent of operating revenues obtained from senior government sources. Annual expenditures are higher than normal for environmental engineering, protective and transportation services due to the spread out nature of the community. General government and recreational and cultural servicing costs are comparable to other northern communities. When expected revenues are deducted from forecasted expenditures, the net cost of running the City for 1976 is estimated at \$212 per capita, or slightly over three million dollars. Over half of this cost will be recovered through real property taxes within the City; the remainder will be recovered from grants in lieu of taxes, and unconditional and conditional grants from senior levels of government.

Since amalgamation in 1971, considerable expense has been incurred by the City in bringing annexed residential areas up to city-wide engineering standards. The recent installation of sanitary sewers in Porter Creek and Crestview is an example of capital expenditures which were required to bring two annexed residential communities up to a similar level of service with the rest of the City. The cost borne by the City amounts to 10 percent of the trunk sewer and sewage lagoon expenditures and a small portion of the collector sewers which front onto individual residential lots.

However, similar offsite expenditures for sewage trunks and a sewage treatment facility will be required to service Riverdale, Downtown, Hillcrest, and Valleyview out of which the City will be responsible for paying 10 percent of the capital cost. Any real property tax inequities inherited by the City as a result of amalgamation should be remedied in the 1976 re-assessment which should be available for the 1977 tax year.

The current split between residential and commercial/industrial taxable assessment stands at approximately 70:30 respectively.

Although a 70:30 split between residential and commercial/industrial taxable assessment is satisfactory, some consideration might be given by the City of Whitehorse to improving this ratio to one of 60:40 to shift a portion of the tax load from the residential property owner. One way of moving toward this objective would involve the imposition of a business tax under Section 60 of the Taxation Ordinance.

Taxable assessment for 1975 attributed to land is 11 million dollars and that attributed to improvements is 39 million dollars, for a total taxable assessment of approximately 50 million dollars. A further 27 million dollars of real property assessment is exempt from taxation. Approximately 25 million dollars of this total can be attributed to the senior levels of government and federal agencies.

#### RECOMMENDATIONS

1. That the City's five year capital budget be amended to reflect the development policies of the General Plan, 1976.
2. That the City encourage diversification of its economic base. Possible avenues open for investigation include the establishment of Whitehorse as a northern convention city, and the establishment of a post-secondary

education and research centre with curriculum and research directed toward specialized areas of direct northern relevance.

# CITY OF WHITEHORSE

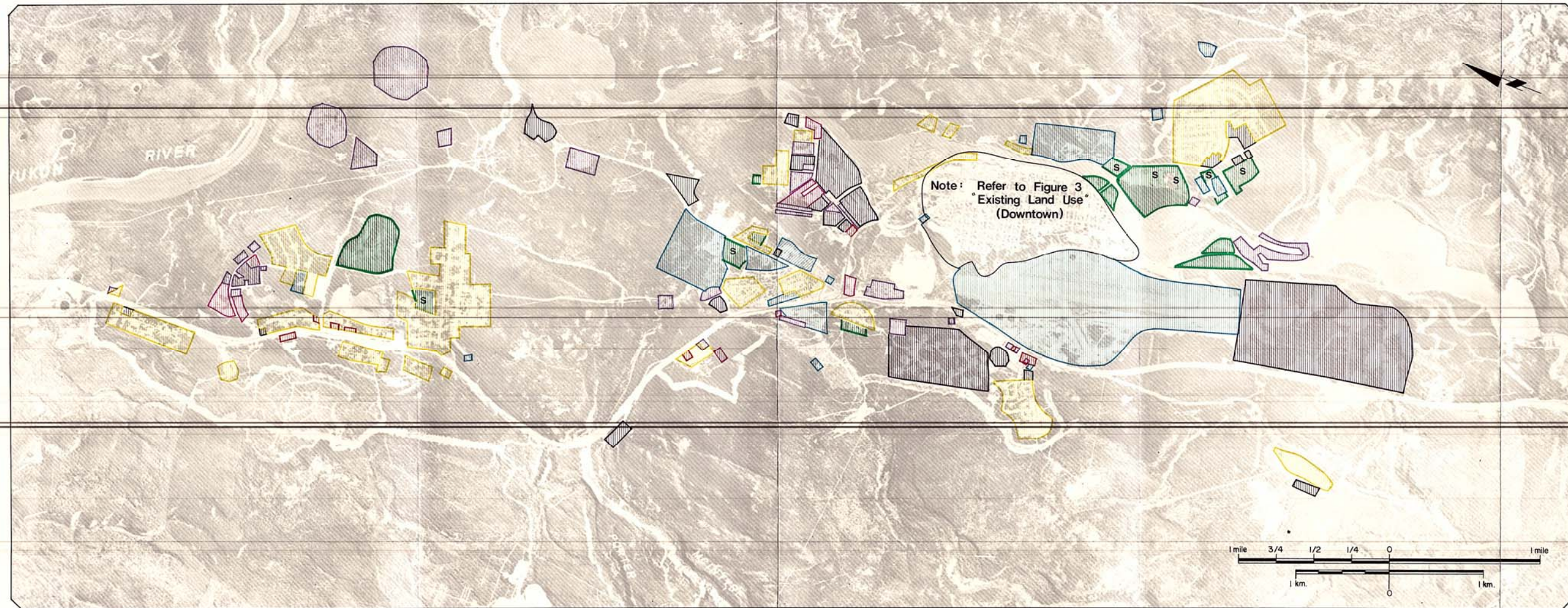
## Concept Of Neighbourhood Residential Development



### LEGEND

-  single family
-  multiple family
-  apartments
-  parks, schools, open space
-  commercial
-  arterial road
-  collector road

**FIGURE 1**



**CITY OF WHITEHORSE**  
Yukon Territory

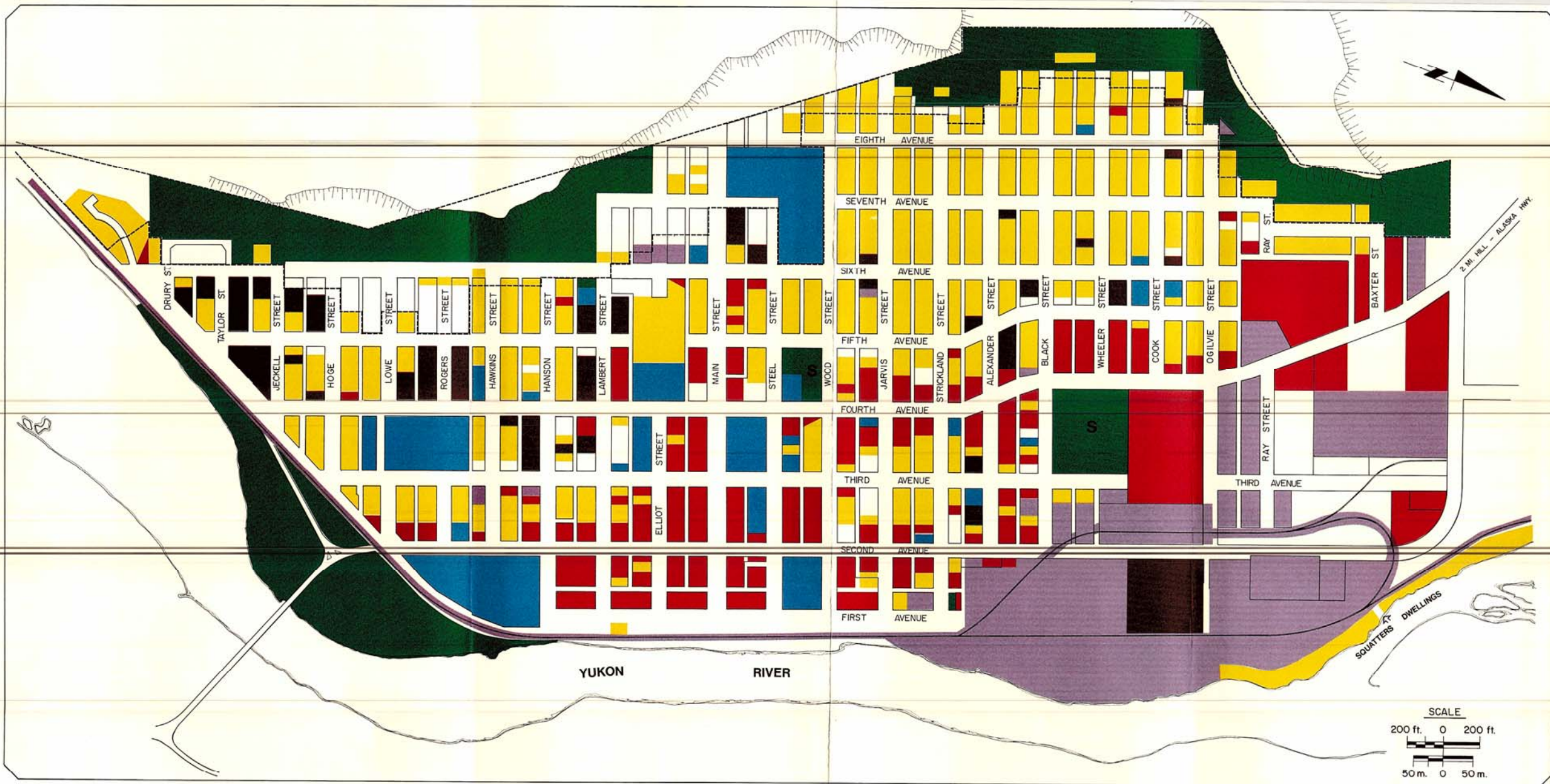
**Existing Land Use**  
(URBANIZED REGION)

**LEGEND**

- low density residential
- medium density residential
- public - quasi public
- parks, schools, open space
- commercial
- light industrial
- medium industrial
- heavy industrial

**FIGURE 2**

Stanley Associates  
Engineering Ltd.  
Consulting Engineers and Planners



**CITY OF WHITEHORSE**  
**Yukon Territory**

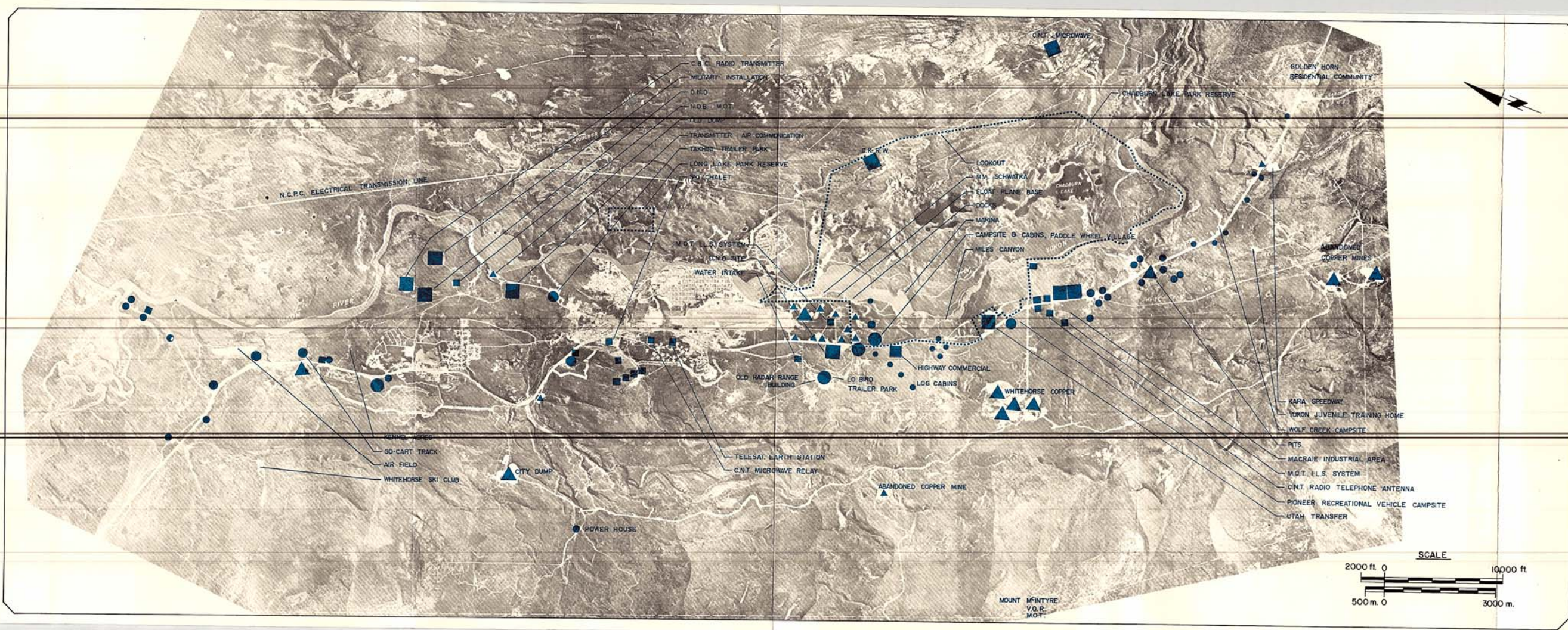
**Existing Land Use**  
**(DOWNTOWN)**

**LEGEND**

- low density residential
- medium density residential
- public · quasi public
- parks, schools, open space
- commercial
- light industrial

**FIGURE 3**

Stanley Associates  
 Engineering Ltd.  
 Planning, Surveying and Design



**CITY OF WHITEHORSE  
Yukon Territory**

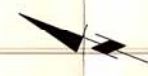
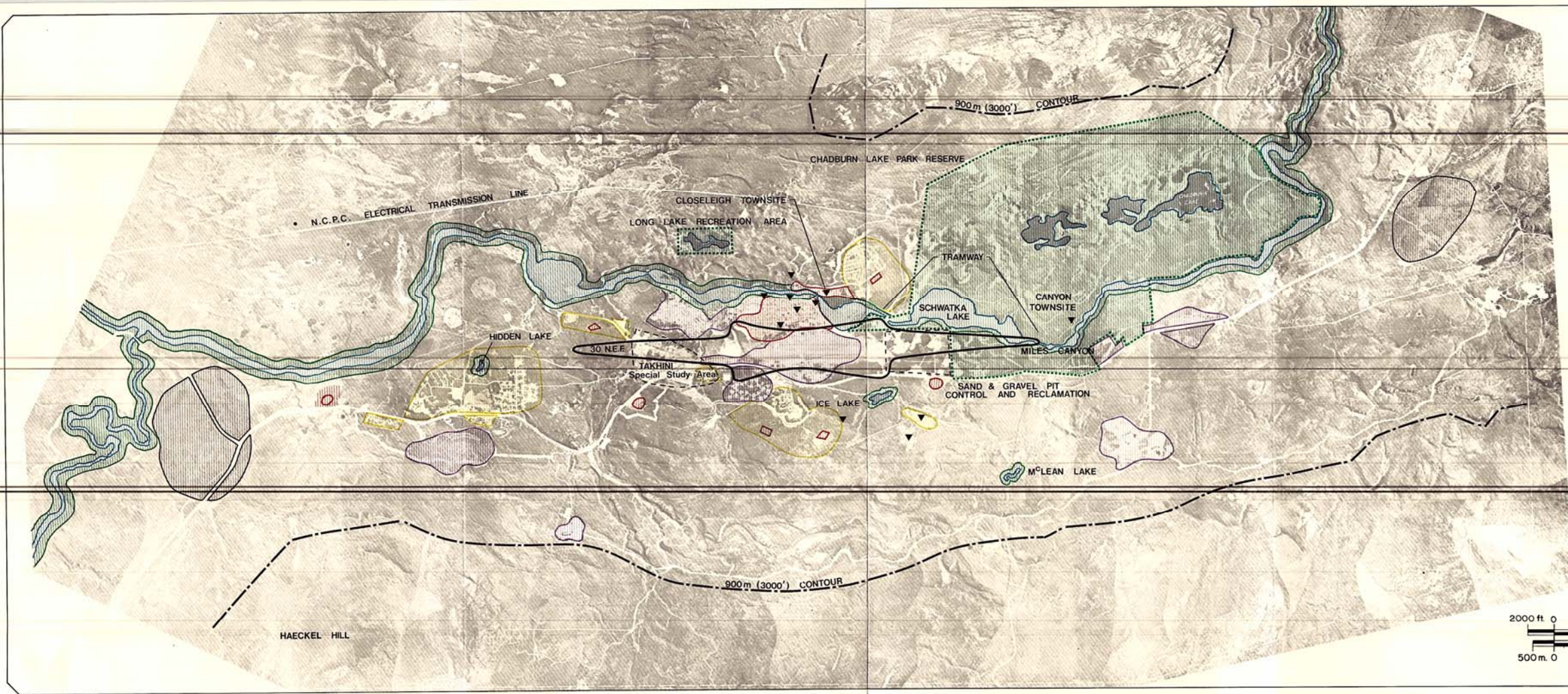
**Existing Land Use  
(RURAL REGION)**

**LEGEND**

- residential
- ▲ industrial quarries
- transportation · communication · industrial

**FIGURE 4**

Stanley Associates  
Engineering Ltd.  
Civil, Electrical and Mechanical

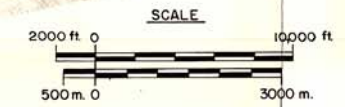


**CITY OF WHITEHORSE  
Yukon Territory**

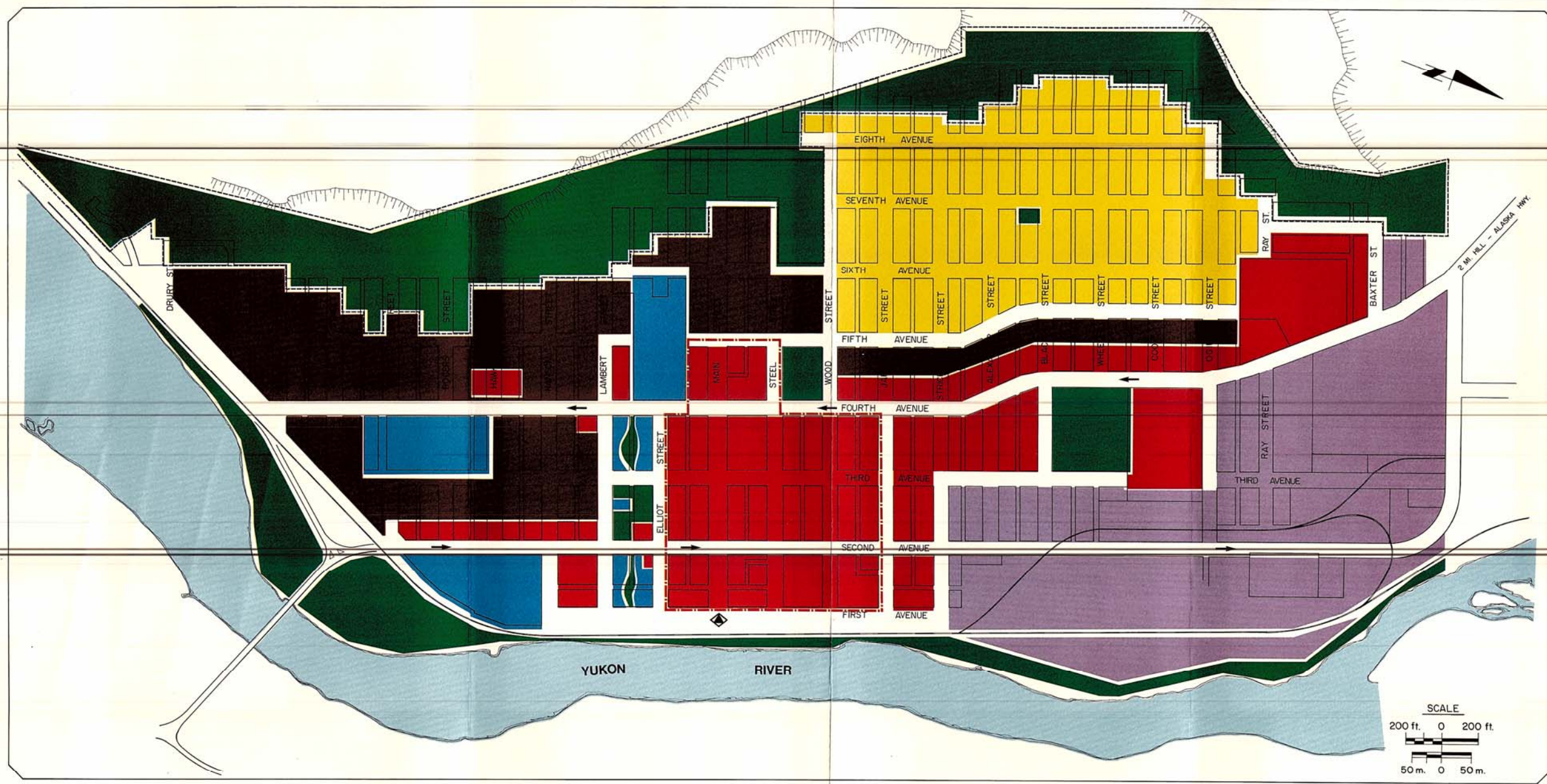
**Future Land Use**

**LEGEND**

- central business district
- residential · urban
- residential · rural
- industrial
- commercial
- recreational reserves and environmental control zones
- airport noise exposure forecast (30 NEF)
- historic site
- recreational park boundaries
- vertical limit to intensive urban development



**FIGURE 5**  
Stanley Associates  
Engineering, Ltd.  
Consulting Engineers and Planners



**CITY OF WHITEHORSE**  
Yukon Territory

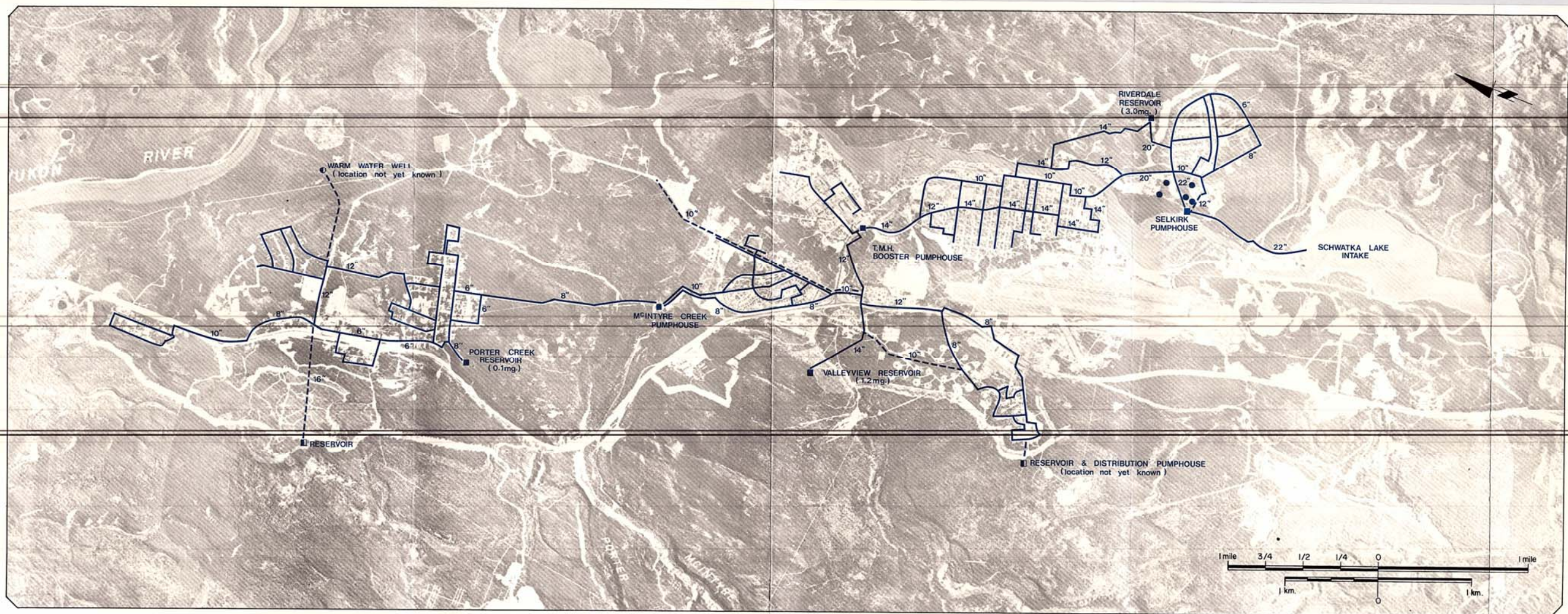
**Proposed Downtown  
Development Scheme**

**LEGEND**

- low density residential
- medium density residential
- public-quasi public
- parks, schools, open space
- commercial
- light industry
- White Pass Passenger Station
- comprehensive commercial district
- traffic flow

**FIGURE 6**

Stanley Associates  
Engineering Ltd.  
Chartered Engineers and Planners

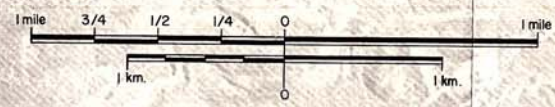


**CITY OF WHITEHORSE  
Yukon Territory**

**Water Supply  
and  
Distribution System**

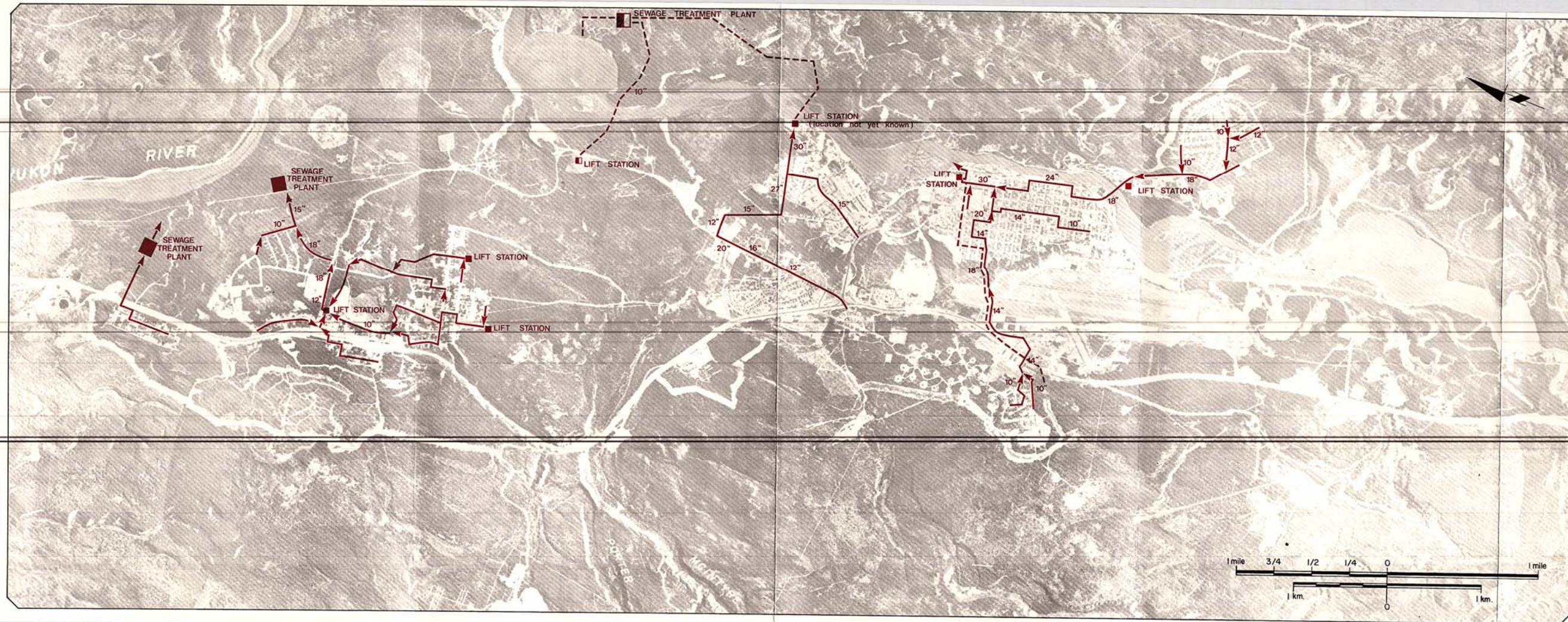
**LEGEND**

- existing water distribution system
- well locations
- - - planned extensions



**FIGURE 7**

Stanley Associates  
Engineering Ltd.  
Consulting Engineers and Planners

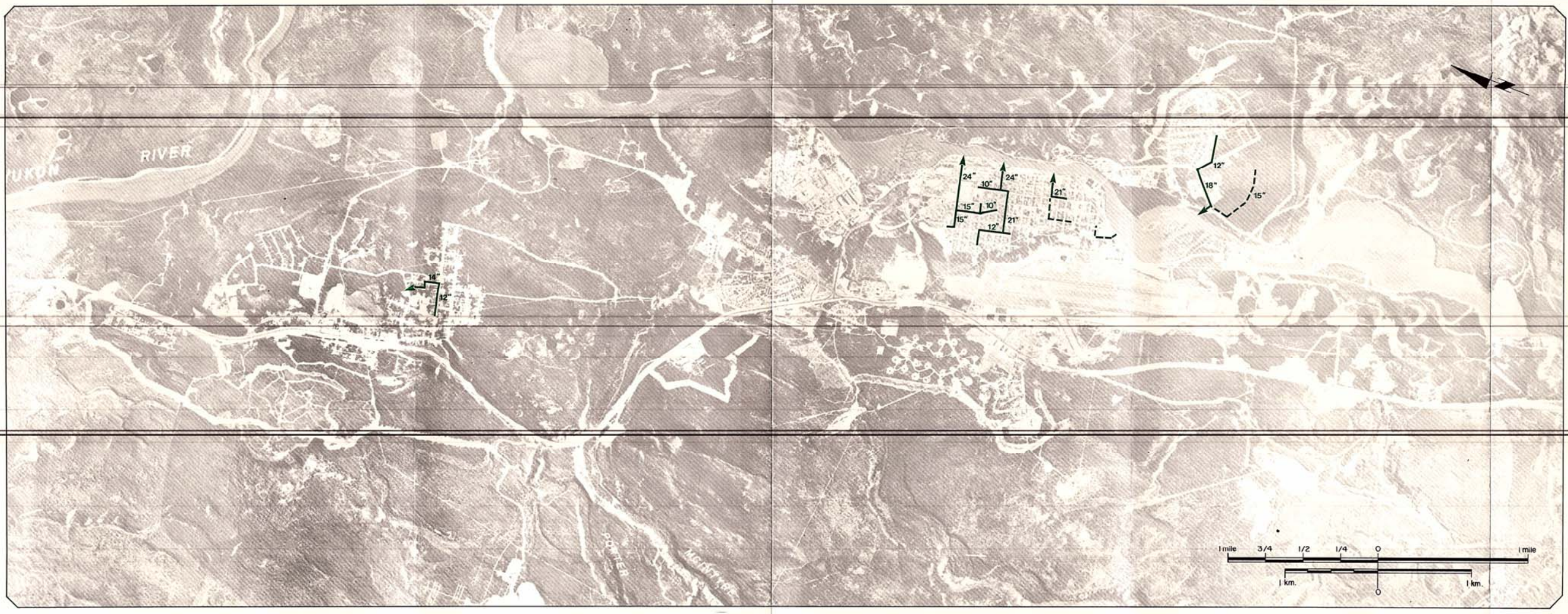


**CITY OF WHITEHORSE  
Yukon Territory**

**Sanitary Sewer System**

- LEGEND**
- existing sanitary sewer system
  - - - future sanitary sewer system

**FIGURE 8**  
Stanley Associates  
Engineering Ltd.  
Consulting Engineers and Planners



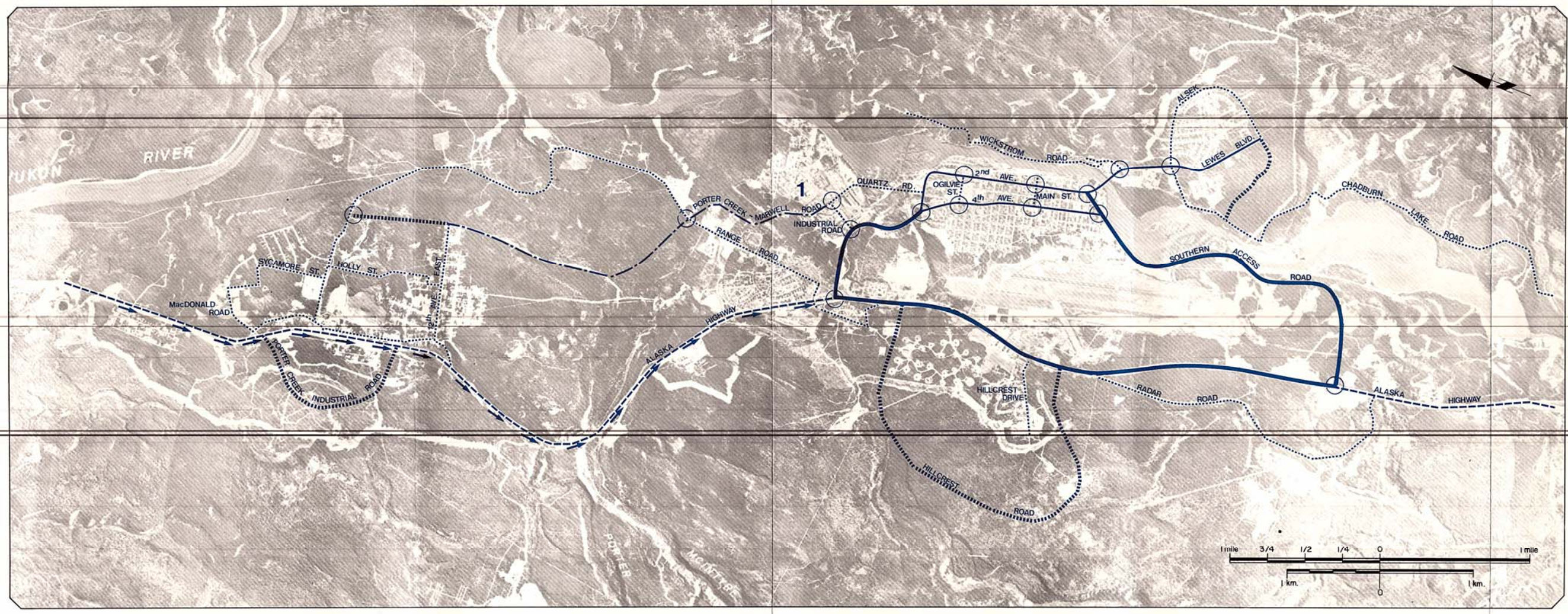
**CITY OF WHITEHORSE  
Yukon Territory**

**Storm Sewer Location**

- LEGEND**
- existing storm sewer system
  - - - future storm sewer system



**FIGURE 9**  
Stanley Associates  
Engineering Ltd.  
Planning, Design and Finance

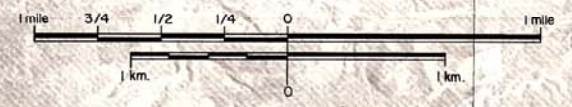


**CITY OF WHITEHORSE  
Yukon Territory**

**Roadway System**

- LEGEND**
- existing highway
  - existing urban arterial roads
  - ..... existing collector roads
  - - - future urban arterial roads
  - ..... future collector roads
  - future intersection improvements
  - highway upgrading
  - possible highway upgrading

**1** Porter Creek - Marwell connection  
(REQUIRES DETAILED SOILS INVESTIGATION  
TO PROVE FEASIBILITY)



**FIGURE 10**

Stanley Associates  
Engineering Ltd.  
Planning, Design and Permit