

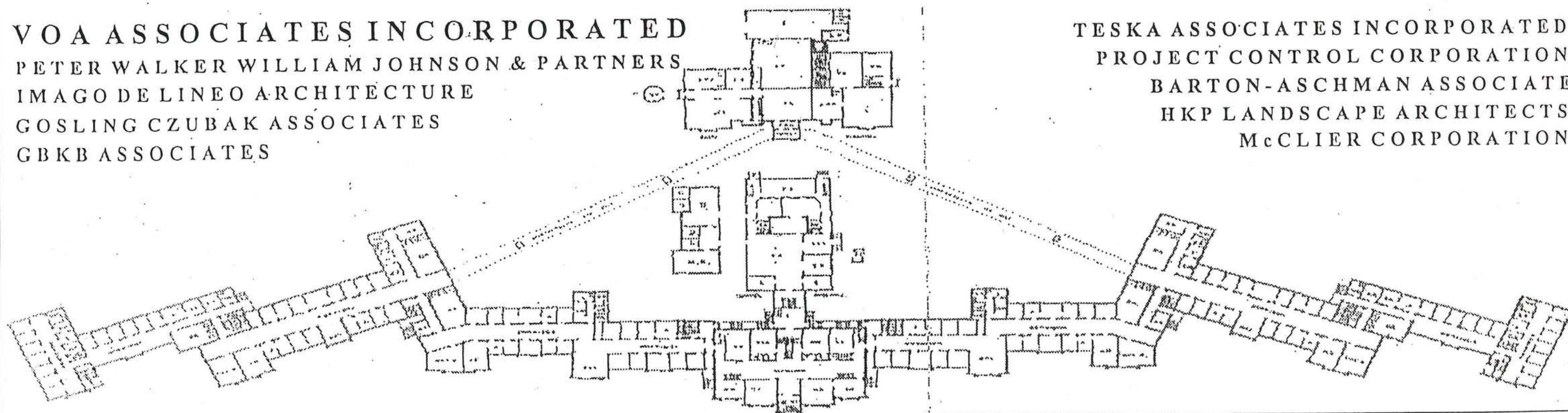
GRAND TRAVERSE COMMONS DISTRICT PLAN



GRAND TRAVERSE COMMONS REDEVELOPMENT CORPORATION

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I. EXECUTIVE SUMMARY

This District Plan for the Grand Traverse Commons Planned Redevelopment District is submitted by the Grand Traverse Commons Redevelopment Corporation and its Master Developer to the joint Planning Commissions of the City of Traverse City and Garfield Township. This District Plan focuses on the comprehensive rehabilitation, renovation and redevelopment of the Traverse City State Hospital and its grounds. Opened in 1885, the Traverse City State Hospital exemplified the 19th Century Kirkbride campus style building concept for medical institutions treating the mentally infirm. Under the vision of its first Superintendent, Dr. James D. Munson, the complex achieved a pastoral harmony of buildings and landscape while fostering the therapeutic value of nature in the treatment of the mentally infirm. The overall purpose of this District Plan is to restore this vision for uses appropriate for the area and to ensure that the pastoral setting is preserved.

This District Plan for the Grand Traverse Commons Planned Redevelopment District consists of planning concepts and design guidelines for eight subareas: 1) Medical Campus, 2) Continuing Care Retirement Community, 3) Residential/Activity Center, 4) Community Services Center, 5) Traverse Bay Area Intermediate School District Area, 6) Recreation/Activity Center, 7) Woodlands Conservation Area, and 8) Wetlands Conservation Area. Redevelopment is anticipated to include the following components:

- conservation and enhancement of the open space and natural systems and rehabilitation of the historic landscape,
- development of a medical campus at the northern edge of the property to accommodate a skilled nursing care facility, hospital uses, support uses, support parking facilities for institutional uses, medical office, and medically related residential uses for the historic north cottages;
- rehabilitation and conversion of the main historic State Hospital building (Building 50) into a continuing care retirement community with expanded independent living and an activity and service center located directly west of Building 50 in the area of the existing support buildings;
- rehabilitation and conversion of the historic south cottages into independent and assisted living residences with support and other ancillary services;
- continued use and promotion of community services and activities in All Faiths Chapel, Helen's House, and the State Office Building, as well as site management and marketing uses;
- continuation of the Traverse Bay Area Intermediate School District educational, recreational, and conference uses; and
- rehabilitation and conversion of the historic Farm structures for recreation and/or community uses; and development of expanded recreation and community uses adjacent to the Farm area.

All of the development concepts and plans outlined in the District Plan reflect the redevelopment guidelines established in the 1990 *Adaptive Reuse Feasibility Plan for the Traverse City State Hospital* and Public Act 250 Development Plan Amendment DP-93-1, which constitute the seminal and base controls for the site. The following key aspects regulate development.

- *Acceptable Land Use.* The proposed interim and future medical, residential, community, recreation, and open space uses fall within the guidelines of the Adaptive Reuse Plan and DP-93-1.
- *Development Area and Density.* Allowable density permitted on the site will be limited by existing impervious surface. Development zones will be established so that a system of transferrable development rights will allow a balance between areas of high density, such as the Medical Campus, and limited or no density in the open space and conservation areas.
- *Historic Preservation and Rehabilitation.* The State Hospital, its cottages, the Farm and other contributing structures, as well as the landscape, must conform to all historic preservation guidelines.
- *Landscape Preservation and Rehabilitation.* Existing natural features and open spaces will be preserved, rehabilitated and enhanced through a landscape preservation and rehabilitation effort which promotes contiguity of natural and open space areas and minimizes disruption and conflict with vehicular traffic. The Grand Traverse Commons Planned Redevelopment District will be open for community passive recreational uses while offering site residents the therapeutic benefits of its natural and open areas.

The successful redevelopment of the Grand Traverse Commons Planned Redevelopment District will occur over a twenty year period and will be dependent on solving key technical issues that affect both this site and the surrounding neighborhoods. These issues are addressed in this District Plan and will be specifically addressed in each Subarea Development Plan which will be reviewed by the City of Traverse City and Garfield Township.

Traffic is addressed through a concept of multiple access points terminating into a "loop" system servicing each principle activity within the subareas of the site. Each loop will be separated so as to prevent circulation of cross-through traffic through the site while maintaining a system for emergency and service vehicles. The community concerns regarding the Munson Medical Center existing shift traffic is addressed through the implementation of a west access from Long Lake Road to designated parking lots and decks for the Munson Medical Center staff.

Parking in the Grand Traverse Commons Planned Redevelopment District will be restricted to the specific subareas being served and shall be accessible only from the designated traffic loops. Where the parking requirements exceed the available site area in any particular subarea, parking decks will be constructed.

Stormwater management will be based upon the Grand Traverse County stormwater management ordinance provisions as well as the applicable recommendations from the Kids Creek Watershed Management Plan developed for Garfield Township and the City of Traverse City for new development while also improving existing systems where appropriate. The principal aspects of

this stormwater management plan include the use of infiltration and sedimentation controls, the construction of sedimentation and detention basins and the integration of landscape design into stormwater control facilities to encourage vegetative, wildlife, and aesthetic diversity.

A landscape conservation plan that establishes guidelines to conserve and enhance the major landscape systems of wetlands, meadows, arboretums and forested bluffs as well as the many watercourses, springs, and streams which connect the landscape system shall also be implemented.

In conclusion, the District Plan for the Grand Traverse Commons Planned Redevelopment District restores a significant component of the historic function e.g., the therapy of natural surroundings in the care giving environment while respecting the historic intent of this site. Dr. James D. Munson developed a site of beauty, service, and public accommodation. This District Plan holds these same goals.

II. INTRODUCTION

The Grand Traverse Commons Planned Redevelopment District represents a unique opportunity for the Grand Traverse Commons Redevelopment Corporation and its selected master developer to participate in the redevelopment and rehabilitation of the historic Grand Traverse Commons, with the City of Traverse City and Garfield Township. This District Plan establishes the land use plan and design controls for the redevelopment of the approximately 500-acre campus of hills, wetlands, meadows and historic structures which comprise the Commons.

The purpose of the District Plan for the Grand Traverse Commons Planned Redevelopment District is to guide redevelopment activities by ensuring that the significant historic characteristics of the site are preserved, and that interim and long-term uses are developed in a coordinated and integrated manner to accomplish the objectives of the Michigan Urban Redevelopment Corporations Act, 1941 PA 250, M.C.L.A. §125.901 et. seq. as amended (Public Act 250). The Grand Traverse Commons was designated as an "area" under Section 2 of Public Act 250 in 1992 by the planning commissions of Traverse City and Garfield Township. This designation affirmed the need for area-wide replanning and rehabilitation to remove the blighting conditions affecting the site and to facilitate the redevelopment of the property to protect it and the surrounding area from blighting influences.

The redevelopment of the Grand Traverse Commons Planned Redevelopment District reflected in this District Plan centers on the rehabilitation and renovation of the historic Traverse City State Hospital and grounds. The manner in which this institution was built and operated exemplifies the Kirkbride Plan which was a popular hospital planning concept in the 19th Century. As a result of this movement and 19th Century schools of landscape planning and architectural design, the Traverse City State Hospital complex achieved a pastoral harmony between buildings and landscape. Although there has been much change and development on this site since the buildings were first constructed, the essence of the original plan still remains intact. The overall objective of this District Plan is to enhance the original Kirkbride Plan of the historic core of the Grand Traverse Commons Planned Redevelopment District, and create a redevelopment project that has the economic strength to maintain and protect this important historic property now and into the future.

This District Plan addresses the concerns and desires expressed by individual members of the community as well as representatives from the following organizations: Slabtown Neighborhood Association, Central Neighborhood Association, the South Slabtown/Hospital Neighborhood, Munson Medical Center, the Grand Traverse Medical Care Facility, the Women's Resource Center, the Traverse Bay Area Intermediate School District, All Faiths Chapel tenants, the State Office Building tenants, the Grand Traverse Commons Redevelopment Corporation, Traverse City, Garfield Township, and Grand Traverse County. The District Plan also addresses how the proposed redevelopment will benefit the end users of the Grand Traverse Commons Planned Redevelopment District as well as the community at large.

A. Background Chronology

The Grand Traverse Commons redevelopment project was initiated by a community effort to preserve portions of the 109-year-old State of Michigan regional psychiatric hospital once known as the Traverse City State Hospital. Located on the western edge of Traverse City, the site is now referred to as the Grand Traverse Commons, and constitutes a campus of hills, wetlands, meadows and historic structures of nearly 500 acres.

Attempts by the State of Michigan to demolish the structures on the Grand Traverse Commons resulted in a successful community effort to preserve the property. Further community action resulted in the designation of a portion of the property as a Historic District on the National Register of Historic Places, and the adoption of a plan for the adaptive reuse of the Traverse City State Hospital property. Ultimately, the popular grass roots effort to save the Commons caused the formation of a redevelopment corporation under Michigan's Urban Redevelopment Corporation Act (Public Act 250) to acquire the property and oversee its disposition and redevelopment.

On March 14, 1990, the City of Traverse City and Garfield Township adopted the *Adaptive Reuse Feasibility Plan for the Traverse City State Hospital* (the Adaptive Reuse Plan) recommending the acquisition, preservation, restoration, and redevelopment of the Grand Traverse Commons property. To implement the Adaptive Reuse Plan recommendations, the Grand Traverse Commons Redevelopment Corporation (GTCRC) was created pursuant to Public Act 141.

After the adoption of the Adaptive Reuse Plan and the initiation of the Grand Traverse Commons Redevelopment Corporation, the Traverse City State Hospital property was renamed the Grand Traverse Commons signifying the rebirth of the property and the establishment of its identity in response to the Adaptive Reuse Plan recommendations.

In June, 1991, the Grand Traverse Commons Redevelopment Corporation was incorporated by the City of Traverse City and Garfield Township, pursuant to the authority granted in Section 6 of Public Act 250, for the purpose of formulating, obtaining approval of, and putting into effect a development plan for the Commons; the acquisition of the Commons; and the construction, maintenance and operation of a development pursuant to Public Act 250.

In December, 1992, the GTCRC selected Kids Creek Partners Limited Partnership as the master planner and developer of the Grand Traverse Commons to undertake its rehabilitation, redevelopment, and adaptive reuse.

On January 6, 1993, the GTCRC and the State of Michigan, Department of Management and Budget reached agreement for disposition of the entire former Traverse City State Hospital facility and grounds.

On May 17, 1993, acting Governor Connie Binsfield signed enabling legislation authorizing the transfer of the former Traverse City State Hospital property to the GTCRC as well as to the City of Traverse City and Garfield Township.

In connection with its impending acquisition of the Commons and its responsibility to oversee redevelopment activities for the site as a whole, the GTCRC submitted Public Act 250 Development Plan Amendment DP-93-1 (DP-93-1) to address the comprehensive development of the site in its entirety. This District Plan results from the development control process instituted in DP-93-1.

In December, 1993, the State of Michigan commenced transferring a significant portion of the Grand Traverse Commons property to the GTCRC, the City of Traverse City and Garfield Township. It is anticipated that the remaining parcels of land which comprise the Grand Traverse Commons will be conveyed to the GTCRC by the summer of 1994.

B. Redevelopment Framework

The redevelopment of the Grand Traverse Commons Planned Redevelopment District is governed by the Adaptive Reuse Plan and Public Act 250. The Adaptive Reuse Plan was incorporated into the comprehensive plans of Traverse City and Garfield Township. Consequently, the Adaptive Reuse Plan is the conceptual land use guide and policy document for the Grand Traverse Commons Planned Redevelopment District. It establishes the development goals for the site. Public Act 250 governs all development in the Grand Traverse Commons Planned Redevelopment District and serves as the statutory framework through which the land use policies of the Adaptive Reuse Plan will be implemented.

Under Public Act 250, the GTCRC is responsible for the comprehensive redevelopment of the Commons. Public Act 250 requires that a development plan or amendment to an existing development plan be filed with, and approved by, the planning commissions of Traverse City and Garfield Township prior to the commencement of any development activities on the Commons. In this regard the GTCRC, in 1992, submitted to the planning commissions an initial development plan and two development plan amendments for portions of the Commons.

The Initial Development Plan (DP-92-1) addressed the redevelopment of All Faiths Chapel and Building 80 for community non-profit uses. Development Plan Amendment (DP-92-2) addressed Munson Medical Center's need for access and use of the site for service and assumption of responsibility for the redevelopment of Cottages 27 and 29. Development Plan Amendment (DP-92-3) addressed the relocation of Grand Traverse Medical Care Facility to the Commons. In each case, the Initial Development Plan and Amendments were submitted to address specific issues on the Commons. In connection with its acquisition of the Commons, the GTCRC submitted Development Plan Amendment (DP-93-1) to the joint planning commissions to address the comprehensive development of the site as a whole. On July, 14, 1993, DP-93-1 was approved by the joint planning commissions of Traverse City and Garfield Township.

DP-93-1 incorporates the goals and policies of the Adaptive Reuse Plan and establishes the comprehensive development framework for the Grand Traverse Commons Planned Redevelopment District. It calls for the rehabilitation of all historically significant structures and landscape elements on the site; the conservation of open, wooded, hill and wetland areas; the development of a medical campus on the northern portion of the site

and the development of a continuing care retirement community in and around the main building (Building 50).

Given the complexity, visibility, and scale of the proposed redevelopment project and the property's location within two municipal jurisdictions, DP-93-1 also initiated an enforceable development control process to be based in zoning via the planned development process to ensure that all development and conservation of the Grand Traverse Commons Planned Redevelopment District will be undertaken in a comprehensive manner consistent with the Adaptive Reuse Plan and DP-93-1. This District Plan is the realization of that development process. The process which is being implemented as a planned development includes the following steps:

- approval of a planned development application incorporating this District Plan which will result in the rezoning of the Grand Traverse Commons property as a Planned Redevelopment District;
- approval of Subarea Development Plans for each subarea of the Grand Traverse Commons Planned Redevelopment District that are consistent with the District Plan, and an Act 250 Development Plan, as amended, applicable to each subarea, and
- approval of Site Plans consistent with the District Plan and the applicable Subarea Development Plan.

1. Planned Redevelopment District (PRD) Application/District Plan

Zoning for the Commons site will be accomplished through the planned development process as indicated in DP-93-1 resulting in a designation as a Planned Redevelopment District. The District Plan, which constitutes the Planned Redevelopment District application, is based on the Adaptive Reuse Plan and DP-93-1. Once adopted, all planning within the Grand Traverse Commons Planned Redevelopment District must conform to the District Plan.

The planned development process is being pursued for the Grand Traverse Commons because it allows flexibility in accomplishing the objectives of Public Act 250 by creating a land development process which is based on the application of site planning criteria designed to achieve integration of the proposed redevelopment with the characteristics of the Grand Traverse Commons property. It provides flexibility for locating parking, circulation, infrastructure, and other needs of all site users within the planned development, and assures that the redevelopment process will occur in an integrated phased manner.

Additionally, the planned development process will make possible the transference of development rights within the Planned Redevelopment District, and outside the Planned Redevelopment District under certain conditions. The transfer of development rights will induce private investment within the Grand Traverse Commons Planned Redevelopment District and stimulate redevelopment by allowing for the creation of denser, and hence, more compact and economical

development within certain areas of the Grand Traverse Commons Planned Redevelopment District thereby achieving the objectives of Public Act 250.

Transfer of development rights from low density locations to higher density locations within or between subareas of the planned development will result in the protection of these areas from future development while offsetting the costs associated with conservation and preservation. Concentrating density within specific areas of the Grand Traverse Commons Planned Redevelopment District will allow viable development projects to be undertaken which will contribute to the financing of infrastructure such as shared parking and circulation.

Allocation and transfer of development rights between subareas of the planned development will be monitored and tracked by the Grand Traverse Commons Redevelopment Corporation to assure compliance with all the requirements of DP-93-1 and the planned development process. All development rights and transfers will be recorded by the Master Developer with the Recorder of Deeds for Grand Traverse County, and will be recorded by the Grand Traverse Commons Redevelopment Corporation with the appropriate supervising governmental bodies.

The Grand Traverse Commons Planned Redevelopment District application and District Plan will be reviewed and approved, jointly, by the planning commissions and legislative bodies of Traverse City and Garfield Township. Approval of the Grand Traverse Commons Planned Redevelopment District application and this District Plan will be based on the procedures and standards set forth in the zoning amendment enabling the creation of a Planned Redevelopment District.

2. Subarea Development Plans

After final approval of the Grand Traverse Commons Planned Redevelopment District application, all development in the Grand Traverse Commons Planned Redevelopment District shall occur in accordance with this District Plan. A Subarea Development Plan will address, at a minimum where relevant to the redevelopment of the specific subarea, the following considerations:

- architectural features including materials, signage, lighting, historic preservation elements, and building elements;
- building envelopes and footprints, buildable areas, and parcel boundaries;
- density, lot coverage and floor area;
- roadway definition;
- grading;
- easements and rights-of-way;
- type and location of development;
- interim and long-term uses;
- parking (temporary/permanent);
- curb cuts (temporary/permanent);
- loading docks and facilities;
- building entrances;

- view corridors, vistas, restricted development zones;
- trails;
- streetwall, building heights and building setbacks;
- development phasing and timing;
- open space including use, size, location, character, surface treatment, landscaping, furnishings, artwork, dedication to public and related Conditions, management and maintenance;
- stormwater management;
- public improvements and public services including public roads and related improvements (i.e. curbs, gutters, sidewalks, street furnishings, lighting, related appurtenances) and bikeways, signage, public transportation facilities;
- public and private utilities; and
- compliance documentation.

Subarea Development Plans will be reviewed and approved by the Planning Commissions of Traverse City and Garfield Township on the basis of their consistency with this District Plan, and the Act 250 Development Plan, as amended, which is applicable to the specific subarea. Prior to the initiation of any redevelopment within a subarea of the Commons Planned Redevelopment District, a Subarea Development Plan will be submitted to the Traverse City and Garfield Township Planning Commissions by the Master Developer of the Grand Traverse Commons Planned Redevelopment District concurrent with the submission to such Planning Commissions by the GTCRC of an Act 250 development plan amendment specifically describing the redevelopment of the subarea.

Given that the Grand Traverse Commons Planned Redevelopment District lies within Traverse City and Garfield Township, the review and approval procedures for Subarea Development Plans will vary. For those subareas which overlap the jurisdictional boundaries of Traverse City and Garfield Township, the review and approval of the applicable Subarea Development Plans will require review and approval, in joint conference, by the Planning Commissions. For the subareas which are located completely within the jurisdiction of either the City or the Township, the respective Planning Commission may hold its deliberations and decision making in joint conference with the other Planning Commission.

3. Site Plans

No redevelopment project within the Grand Traverse Commons Planned Redevelopment District will occur unless a Site Plan for such redevelopment project has been approved. The Site Plans, which will be submitted for all areas by the Master Developer, will demonstrate the proposed redevelopment project's compliance with the provisions of this District Plan, and the applicable Subarea Development Plan.

Prior to review by the City of Traverse City and/or Garfield Township, all Site Plans will first be reviewed by the Master Developer for conformance with the

District Plan and the applicable Subarea Development Plans within a 60-day period of time commencing upon their receipt by the Master Developer. Within this period of time, the Master Developer will issue a letter to the preparer of the applicable Site Plan indicating its conformance or non-conformance to the District Plan and applicable Subarea Development Plan.

Once submitted to the City of Traverse City and Garfield Township, Site Plans will require only administrative approval by the appropriate department of the jurisdiction in which the redevelopment project is located. Site Plans which substantially conform with an approved Subarea Development Plan shall be approved as an administrative function.

As with Subarea Development Plans, the review and approval procedures for Site Plans will vary. For those subareas which overlap the jurisdictional boundaries of Traverse City and Garfield Township, the review and approval of the applicable Site Plan will require review and approval, in joint conference, by the appropriate personnel within Traverse City and Garfield Township. For the subareas which are located completely within the jurisdiction of either the City or the Township, the respective personnel assigned the responsibility for review and approval of Site Plans may hold their deliberations and decision making in joint conference with the administrative reviewer in the other jurisdiction.

III. PROPERTY DESCRIPTION AND CONDITIONS

The Grand Traverse Commons Planned Redevelopment District property includes the land and buildings that comprise the former Traverse City State Hospital. The Grand Traverse Commons Planned Redevelopment District includes over 65 structures distributed across the nearly 500-acre site. The description of the property and its existing conditions are described in this section.

A. Location

The State of Michigan contains 3,200 miles of Lake Michigan shoreline, more than 11,000 inland lakes, and an immense network of parks and forests. Michigan's natural heritage is perhaps its greatest resource and principal visitor attraction. One of Michigan's more impressive natural features are the two peninsulas which thrust into Lake Michigan. These peninsulas form what is called Grand Traverse Bay, which consist of the East and West Arm. Traverse City is located at the southerly terminus of the West Arm of Grand Traverse Bay, and is part of a region that is recognized as one of Michigan's finest recreational and tourism centers (Figure 1).

The Grand Traverse Commons Planned Redevelopment District is located within this region, less than a mile from Grand Traverse Bay. The site lies partly within the corporate municipal boundaries of the City of Traverse City and the Charter Township of Garfield (Figure 2). It is generally bordered by the Munson Medical Center and Grand Traverse Medical Care Facility to the north, Division Street to the east, North Long Lake Road to the west, and West Silver Lake Road to the south (Figure 2). A legal description and boundary line survey of the property are provided in the Appendix.

One of the predominant characteristics of the site is its natural setting. Approximately 250 acres of the nearly 500-acre site consists of undeveloped natural areas. The remaining developed portion of the site is characterized by an open, campus setting. The undeveloped natural areas surround the central campus area with steep hills to the west and wetlands to the east. These hillsides are covered with beech, maple, and hemlock trees and open meadows. The undeveloped eastern portions of the site are comprised of wetlands contiguous to Kids Creek. The developed part of the Commons Planned Redevelopment District is located in the central portion of the site at the base of the hills to the west and above the low floodplain areas of Kids Creek to the south and east. It encompasses many species of mature trees as well as lawn areas.

B. Land Uses and Zoning

1. Existing Land Uses and Zoning in the Grand Traverse Commons Planned Redevelopment District

Since the State of Michigan closed the Traverse City State Hospital in the late 1980s, most of the buildings have been deactivated. The following existing uses



FIGURE No. 1

LOCATION MAP

are currently accommodated in the Grand Traverse Commons Planned Redevelopment District.

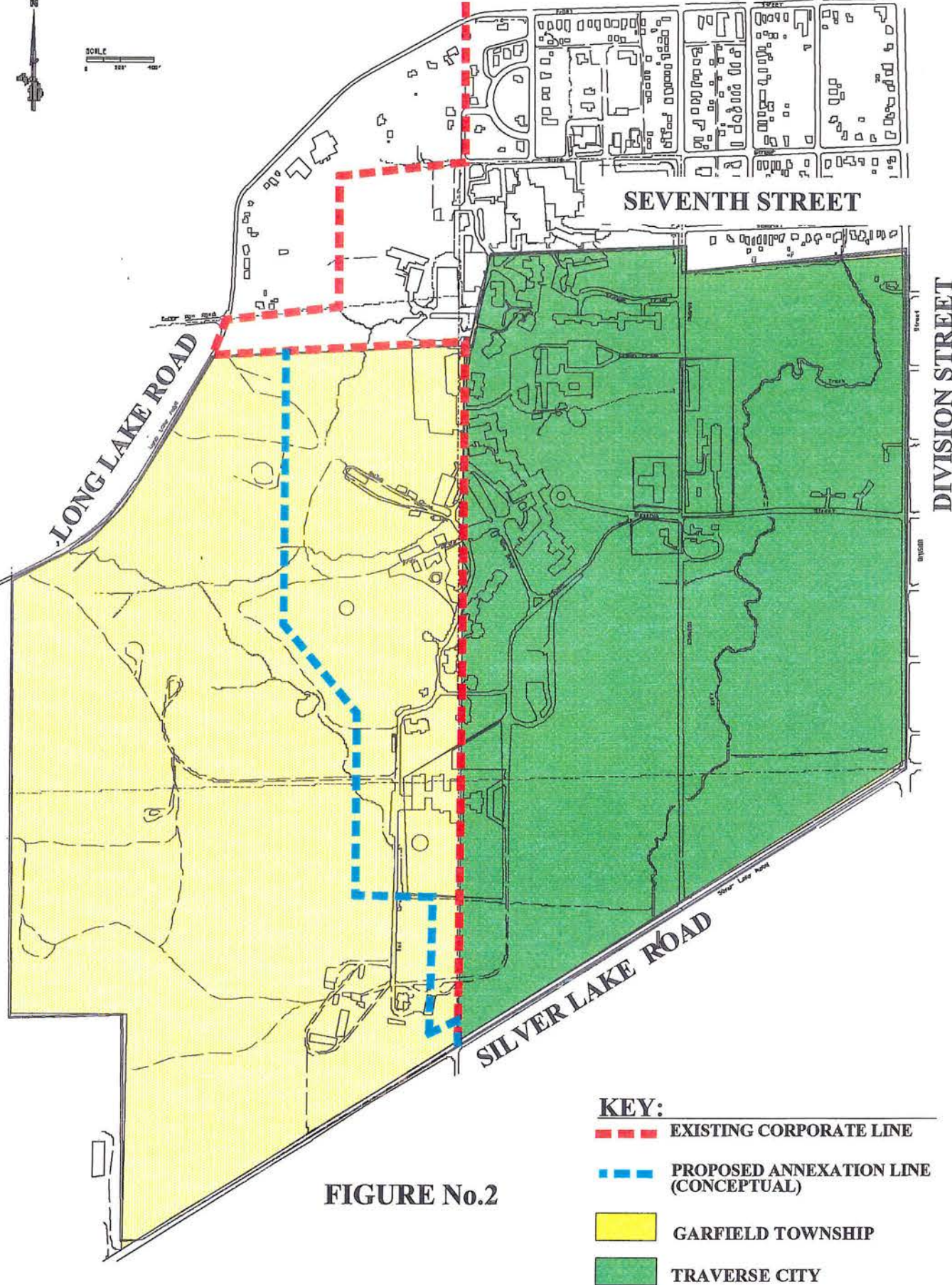
- Munson Medical Center, an adjacent neighbor to the north, uses the Commons property for interim employee parking, storage and warehousing, and interim outpatient clinics; and its employees and visitors heavily use the property's roadways to access the Medical Center.
- The Grand Traverse Medical Care Facility, another adjacent neighbor to the north, uses the property, minimally, for storage, warehousing, and parking.
- The State of Michigan has located some of its regional offices and social service agencies in various buildings on the site.
- The existing houses on the property are used for residential purposes.
- A variety of community service groups operate out of All Faiths Chapel.
- The Traverse Bay Area Intermediate School District occupies the former Arnell Engstrom Children's Center building.
- The property also is used by the community for walking, hiking, biking, and cross country skiing.

On existing zoning maps, the Grand Traverse Commons property is identified as R-2 Single Family Residence District for that portion of the site which lies within Traverse City, and as A1 Agricultural District for that portion of the site which lies within Garfield Township. Almost all of the existing uses currently accommodated on the Commons property are inconsistent with these zoning classifications. However, local zoning has never been applied to the property because it has been solely owned, until recently, by the State of Michigan.

2. Land Uses and Zoning Adjacent to the Grand Traverse Commons Planned Redevelopment District

The land uses adjacent to the Grand Traverse Commons Planned Redevelopment District can be defined as residential neighborhoods to the north and east, Munson Medical Center and Grand Traverse Medical Care Facility to the north, and environmentally sensitive areas to the south and west. Additional residential areas are located to the far west in Garfield Township as well as the educational uses to the southwest (Figure 3).

The permitted uses of property located adjacent to the Grand Traverse Commons Planned Redevelopment District directly impacts its character. The successful redevelopment of the Commons Planned Redevelopment District in accordance with the Adaptive Reuse Plan and DP-93-1 is dependent upon the preservation of



SITE MAP

the existing character and density of the surrounding land uses in order to maintain existing view corridors, and the overall scale and density of development.

Munson Medical Center. Directly to the north of the Grand Traverse Commons Planned Redevelopment District is Munson Medical Center. This property is zoned as a C-1 Office Service District. Limited opportunities exist to accommodate Munson's future expansion needs. Residential neighborhoods to the north and east limit the expansion of the Medical Center to the Commons Planned Redevelopment District or to the west on Munson's existing property. Expansion to the west on Munson's existing property is limited due to topographic and wetlands constraints, while any expansion into the Grand Traverse Commons Planned Redevelopment District requires careful and coordinated planning for the site's redevelopment. Through a series of variances and PUD Applications, the development parameters of a C-1 Office Service District have been effectively avoided in the development of the Munson site. In order to prevent further density and buildout, which would adversely impact the Grand Traverse Commons Planned Redevelopment District, it is important to discourage further development on the Munson site unless it is consistent with the goals of this District Plan and adjacent neighborhoods.

Munson Medical Center's traffic, with its visitor and large employee population, also has a significant impact on the Grand Traverse Commons Planned Redevelopment District site and the surrounding neighborhoods by creating traffic volumes that filter through the neighborhoods and the Grand Traverse Commons Planned Redevelopment District, particularly at shift changes. Parking capacity is inadequate and currently cannot be accommodated on Munson's existing property. As such, Munson Medical Center currently leases over 650 parking spaces on the Commons' property.

Numerous medical offices related to Munson Medical Center are located near the hospital in a C-1 District to the north and east.

Grand Traverse Medical Care Facility. The Grand Traverse Medical Care Facility is a skilled nursing facility owned by Grand Traverse County and operated by the Grand Traverse County Social Services Board. It is located on the northern edge of the Grand Traverse Commons Planned Redevelopment District, adjacent to and just south of Munson Medical Center, within the R-2 Single Family Residence District. It is the intention of the Grand Traverse County Social Services Board to seek the opportunity to expand and relocate the facility to a new building at the northern end of the Grand Traverse Commons Planned Redevelopment District.

Medical Offices. Primarily medical office uses including clinics, professional offices, and other medically related commercial uses are located in the area immediately to the north of Munson Medical Center between Sixth and Front Streets. This area is zoned as C-1 Office Services District and R-2 Single Family Residence District. The medical-related uses in this confined area generate additional vehicular trips per day and compete with Munson Medical Center's

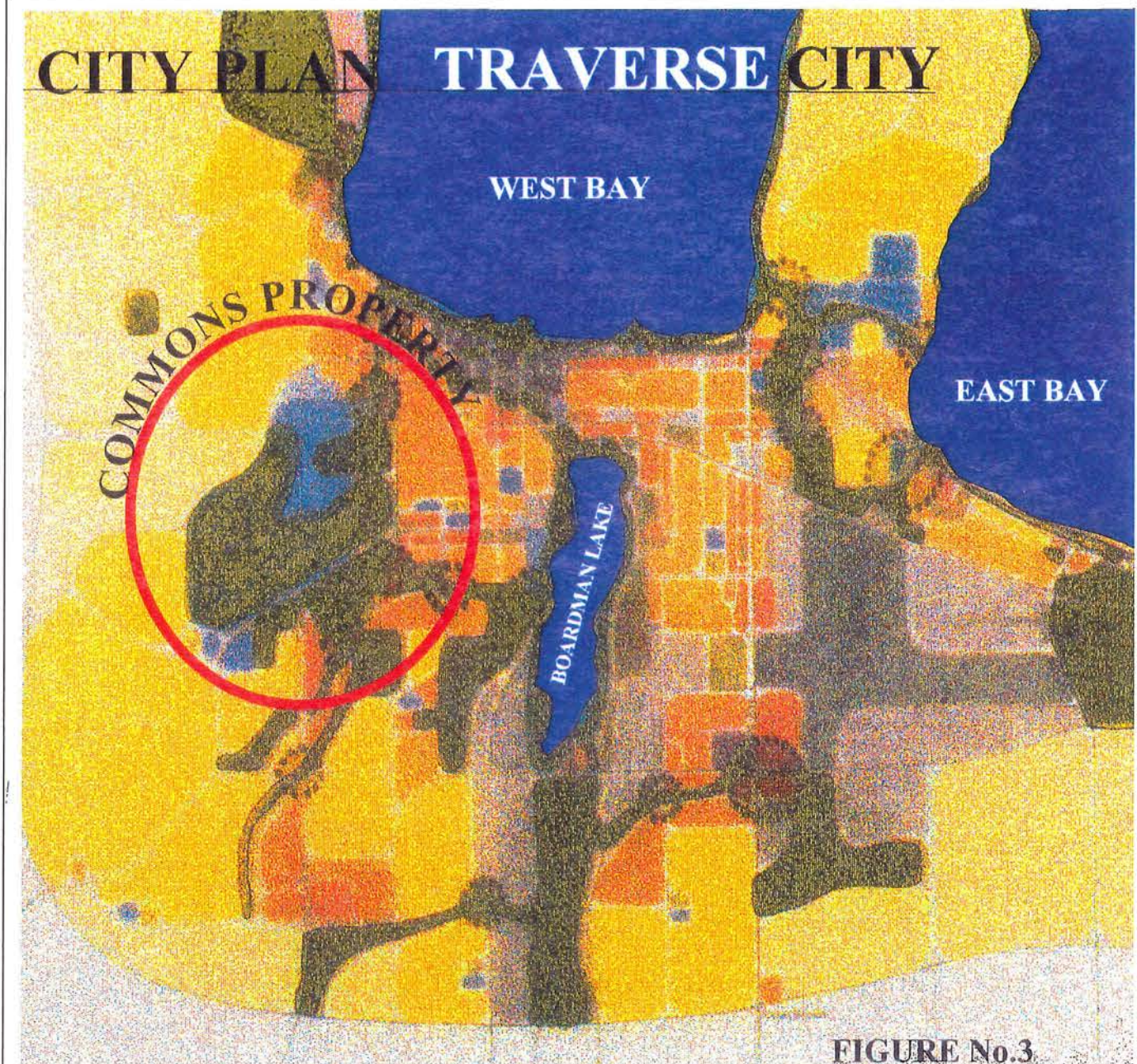


FIGURE No.3

- Parks, Recreation & Open Space
- Moderate Density Single Family Housing
- Institutional
- Low Density Single Family Housing
- Industrial
- Commercial

GENERALIZED LAND USE CONCEPT FOR TRAVERSE CITY URBAN AREA

employees for limited on-street parking. Patients, physicians, and employees from these offices also generate pedestrian traffic to and from Munson Medical Center. Owners and users in this area have experienced difficulty with traffic and parking. Some of the structures have also sustained damage due to flooding of the nearby Kids Creek.

Residential Neighborhoods. Established single family residential neighborhoods are located two blocks north and directly east of the Grand Traverse Commons Planned Redevelopment District. Zoning designations within these areas include R-2, R-3, and R-4. These neighborhoods include Central Neighborhood, Slabtown Neighborhood, and South Slabtown/Hospital Neighborhood. Many of the residents of these neighborhoods currently use the Grand Traverse Commons Planned Redevelopment District and its existing open space for recreational purposes, and are very interested in the preservation of these open spaces. The major concerns for the neighborhood residents is the volume of existing traffic that passes through the neighborhoods to get to the medical and office facilities and on street parking. Flooding problems have increased in the residential neighborhood located immediately east of Munson Medical Center, in those areas in close proximity to Kids Creek. The Kids Creek Watershed Study attributes this problem, in part, to increased water run-off in the areas upstream.

Other Land Uses. Land uses to the south and southeast of the property include two community level shopping centers, and a public school. These areas are generally zoned as R-2, R-4, R-5, PUD, C-2, or C-3. In order to help retain the character of the Grand Traverse Commons Planned Redevelopment District site and the surrounding area, it is important to preserve the area's existing wetlands and minimize stormwater runoff from future surrounding developments to protect the region's water quality and minimize downstream flooding.

The land uses to the south and west in Garfield Township are gradually changing from agricultural to commercial and low density residential. These areas are generally zoned as A1 Agricultural, R1A Rural Residential, or R1B One Family Residential.

3. Proposed Land Uses and Zoning on the Grand Traverse Commons Planned Redevelopment District

The proposed future development on the Grand Traverse Commons Planned Redevelopment District conforms to the Adaptive Reuse Plan and DP-93-1, both of which have been adopted by Traverse City and Garfield Township for the Grand Traverse Commons property. As previously discussed, these documents have established the conceptual plan, development framework, and development program for the Grand Traverse Commons property.

The Adaptive Reuse Plan and DP-93-1 contemplate a mix of institutional, medical, residential, community, recreational, and conservation uses for the Grand Traverse Commons site. The future land uses proposed for the site as described in this District Plan are consistent with the uses proposed in the Adaptive Reuse

NOTE: This figure is conceptual only. See sheets <Subarea #>.1 for more specific information. (Amended February 10, 1996)

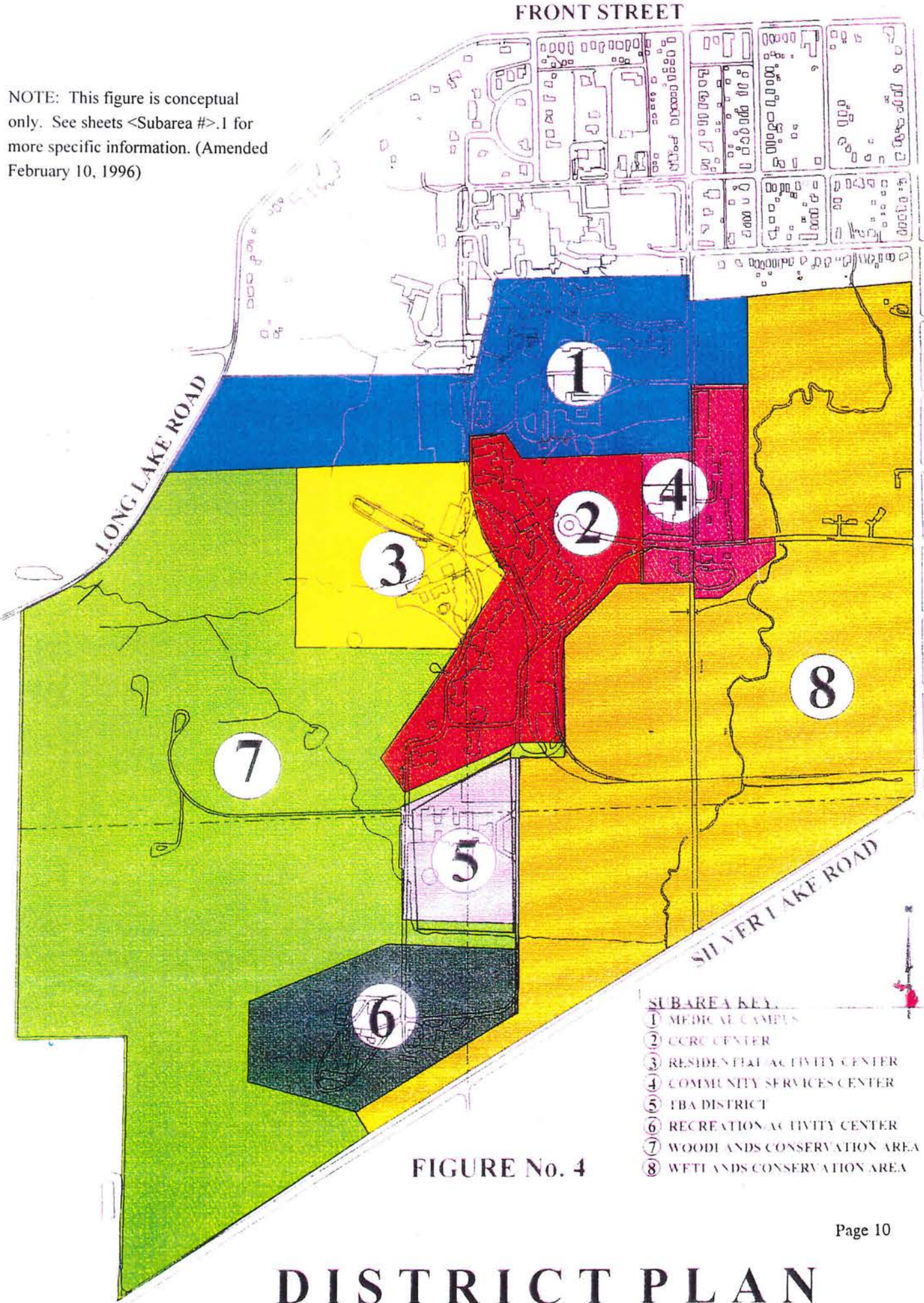


FIGURE No. 4

DISTRICT PLAN

Plan and DP-93-1. In order to redevelop the property in conformance with the Adaptive Reuse Plan and DP-93-1, the Grand Traverse Commons site must be rezoned. As outlined in the Adaptive Reuse Plan and DP-93-1, zoning for the Grand Traverse Commons site will be accomplished through the planned development process.

The redevelopment of the Grand Traverse Commons Planned Redevelopment District is anticipated to include the following uses in eight separate subareas (Figure 4).

Medical Campus. Development of a medical campus is envisioned for the northern portion of the Grand Traverse Commons Planned Redevelopment District, adjacent to the Grand Traverse Medical Care Facility and Munson Medical Center to the north. It is anticipated that the medical campus will include the rehabilitation of the northern cottages (Buildings 21, 23, 25, 27 and 29), new construction, and the reinstatement and enhancement of the front lawn. The following types of uses are anticipated for the medical campus.

- new construction of medical and/or medically related facilities including a skilled nursing care facility, a daycare center, a research and treatment center, and medical offices;
- new construction of surface and/or structured parking facilities;
- expansion of existing lawn areas.

These uses are consistent with the Adaptive Reuse Plan and DP-93-1, and are compatible with the medical uses located on adjacent property directly north of the Grand Traverse Commons Planned Redevelopment District. These uses also conform to the Kirkbride planning concept upon which the original traverse City State Hospital was designed. The Kirkbride concept emphasized a holistic approach to the treatment of the mentally infirm which involved the intermeshing of the landscape and nature in the treatment of patients. The design of buildings to allow patient views, air, and light was viewed as therapeutic. The placement of a skilled nursing facility adjacent to the lawn area to allow the lawn to "reach in" to the facility typifies the Kirkbride principles.

Regarding the northern cottages, the Adaptive Reuse Plan proposes the development of the following uses: museums, offices, and related medical accessory uses. The Alternative 2 Preliminary Opportunity Plan presented in the Adaptive Reuse Plan calls for the enhancement of the original lawn area by removing buildings 37, 37a, 33, 35, and 39 and by closing and removing Elmwood Avenue as a through road. It recommends that Munson Medical Center Expansion within the Grand Traverse Commons Planned Redevelopment District be accommodated in rehabilitated buildings, and new buildings that are situated similarly to the existing cottages so as to respect the integrity of the original Kirkbride design. DP-93-1 reinforces these land use and development goals.

The Adaptive Reuse Plan contemplates that other medical uses will occur on the Grand Traverse Commons site which are not necessarily affiliated with Munson Medical Center. The most significant of such uses is the replacement facility proposed by the Grand Traverse Medical Care Facility; the skilled nursing facility owned by Grand Traverse County and operated by the Grand Traverse County Social Services Board which is currently located directly north of the Commons Planned Redevelopment District.

A request for the accommodation of a relocated Grand Traverse Medical Care Facility was submitted in February 1990 just prior to the adoption of the Adaptive Reuse Plan. The State Hospital Task Force which commissioned the Adaptive Reuse Plan determined that a new Medical Care Facility would be a logical addition to the Grand Traverse Commons, although it was not

reflected in the Preliminary Opportunity Plans presented in the Adaptive Reuse Plan.

Subsequently, Grand Traverse Medical Care Facility gained representation on the GTCRC board, and submitted a Public Act 250 Development Plan Amendment (DP-92-3) relating to the construction of a new Grand Traverse Medical Care Facility on the Commons property. DP-92-3 was presented to the Planning Commissions of Traverse City and Garfield Township, and approved by these bodies on September 15, 1992. The Grand Traverse Medical Care Facility is also seeking participation in the provision of assisted living and other elderly services on the Grand Traverse Commons Planned Redevelopment District. DP-93-1 reflects these proposed uses.

The Subarea 1 property west of Red Drive consists of some developable property on the westerly and easterly portions with some wetlands in the central portion and forested hills along the southerly portion. In 1995, the State of Michigan dedicated a portion of the property to Grand Traverse County for public road purposes. The central area is part of a major wetland/forested hills area flowing from north of the parcel on Munson's existing property through the site to the Conservation Areas to the South. District Plan Amendment #1, February 10, 1996.

Continuing Care Retirement Community. Development of a Continuing Care Retirement Community (CCRC) is envisioned to include the rehabilitation of Building 50 into a continuing care retirement center, new construction of independent residential buildings in place of or in the existing service and storage structures, and the rehabilitation of the south cottages for independent and/or assisted living and activities which service and support the CCRC and/or the adjacent Traverse Bay Area Intermediate School District property. The following types of residential uses are anticipated within the Grand Traverse Commons Planned Redevelopment District:

- rehabilitation of existing structures to accommodate a continuing care retirement center,
- rehabilitation of existing structures for independent residential uses and ancillary commercial and community uses,
- new construction of independent residential housing and ancillary commercial and community uses, and
- new construction of surface and/or structured parking facilities.

These types of uses are consistent with the Adaptive Reuse Plan and DP-93-1, and are compatible with the other uses proposed for the Grand Traverse Commons Planned Redevelopment District. Both of the preliminary opportunity plan alternatives presented in the Adaptive Reuse Plan call for Building 50 to be rehabilitated to accommodate senior housing and accessory uses. The adaptive Reuse Plan recommended the removal of the "architecturally incongruous" mid-section of the building (51A).

In both alternatives, the Adaptive Reuse Plan recommends the programming of community-type uses in this location of the Commons site. The Adaptive Reuse Plan also indicates that this area of the site has the unique capability of accommodating new construction of a compatible nature. According to the Adaptive Reuse Plan, "Inherently the site soils are buildable, no steep slopes exist and the proposed development could be integrated into the existing vegetation and structures" within the CCRC subarea. DP-93-1 reflects these land uses and development goals.

Community Services. Existing community services located within All Faiths Chapel, Helen's House, and the State Office Building will continue as part of the redevelopment project. It is anticipated that parking for these users will be reorganized and that community or site support services will be conducted out of Buildings 82 and 88.

These types of activities are consistent and in conformance with the Adaptive Reuse Plan and DP-93-1, and are compatible with the other uses proposed for the Grand Traverse Commons Planned Redevelopment District.

Educational Uses. The educational uses provided by the Traverse Bay Area Intermediate School District property will continue as part of the redevelopment program for the Grand Traverse Commons Planned Redevelopment District. This type of development is consistent with the Adaptive Reuse Plan and DP-93-1, and is compatible with the other uses proposed for the Grand Traverse Commons Planned Redevelopment District.

The Adaptive Reuse Plan was amended in March, 1993 to address the redevelopment of this property. The Adaptive Reuse Plan recommends community and educational uses for this parcel. The Adaptive Reuse Plan calls for the reuse of the existing buildings to be implemented in a manner consistent with the total plan for the Commons, and the retention of the undeveloped land within this parcel as public open space. DP-93-1 incorporates these land uses and development goals.

Recreation Center. It is anticipated that the Farm area will be primarily redeveloped as the recreation center of the Grand Traverse Commons Planned Redevelopment District given its proximity to the trail system and contiguity to the open space areas of the property. Development of this portion of the Grand Traverse Commons Planned Redevelopment District is envisioned to include the rehabilitation of the Barns (Building 204 and 206) and possibly some of the ancillary structures for low density community-related and low impact recreational uses, and the enhancement of the open space segments. The following types of uses are anticipated for Farm portion of the Grand Traverse Commons Planned Redevelopment District.

- rehabilitation of the barn structures to accommodate low impact or community and/or low intensity recreational uses, and
- enhancement of the trail systems and recreational amenities.

This type of development is consistent with the Adaptive Reuse Plan and DP-93-1, and is compatible with adjacent land uses. The Adaptive Reuse Plan was amended in March 1993 to address the redevelopment of the Farm Area. The Adaptive Reuse Plan recommends that community educational or community recreational uses would be most appropriate for this area and would be compatible with the residential uses proposed for the main portion of the Commons Planned Redevelopment District. DP-93-1 incorporates these land uses and development goals.

Conservation Areas. The conservation of the hills, meadows, and wetlands located in the eastern and western portions of the Grand Traverse Commons Planned Redevelopment District is a primary goal of this District Plan. No new development is anticipated in these areas other than the enhancement of the natural environment, the restoration and/or enhancement of existing woodland wetland area, the augmentation of the trail system, limited parking for public access to the conservation amenities, and possibly, the very limited management of stormwater generated by a portion of the Medical Campus Subarea which may not be able to be accommodated elsewhere on the site upon further examination and the construction of an electric substation to serve the west side of Traverse City.

Within the Subarea 1 property west of Red Drive there is some developable land along the westerly portion allowing for limited development adjacent to the west access road. District Plan Amendment #1, February 10, 1996.

These uses are consistent with the Adaptive Reuse Plan which states "... it has been a consistent goal of the community that these areas remain undeveloped and in their natural state open for passive public use. Each of the proposed alternatives acknowledge the environmental sensitivity of these areas and no proposed development." DP-93-1 reinforces these land uses and development goal which are compatible with surrounding land uses which are primarily residential in nature.

C. Existing Building Descriptions

1. Building History

The Traverse City State Hospital was the third state mental hospital developed in Michigan (Kalamazoo and Pontiac being the first and second respectively). The

acquisition of the original site of 400 acres was authorized by the state legislature and purchased in 1881. As the facilities were developed and the importance of the farming operations increased, the site grew to a maximum size of nearly 1,000 acres in the mid 1950s, much of it under cultivation or used for pasture land. The farm was phased out in the late 1950s. By 1969 only 500 acres remained--primarily the original site.

The original building construction began in April, 1883. All of the brick was locally manufactured in kilns constructed specifically for the hospital project. The main building (now known as Building 50) was modeled after the Pontiac facility, but was modified to conform to the site topography and to provide views of Grand Traverse Bay. Originally it contained men's and women's wings with administration and staff apartments in the core. A Chapel building was constructed to the west of the central core and contained the chapel, kitchen, and additional staff apartments. As originally configured, the building was intended to house 500 patients. By 1888 infirmaries for men and women were constructed and later connected to Building 50. Additional wings were added in 1900, 1916, 1919, and 1924. In 1950, the original central core was replaced with "modern" offices, a patient lounge and a canteen/snack bar.

Building 50 was found to lack sufficient space almost as soon as it was opened. Eleven "cottages" were constructed between 1890 and 1906. All of these buildings were constructed on the same general contour as the main building. The support buildings necessary for operation of a facility of this size were also constructed, including a bakery, maintenance shops, power plant, laundry, warehouses, garages, residences and barns. Until 1915 or so, all buildings were sympathetic to the original site concept--that is linear buildings following site contours and oriented towards the bay and/or the great lawn.

The legislature authorized a medical hospital program to serve the entire Grand Traverse area in 1915. Originally housed in a frame building near the corner of Elmwood Avenue and Eleventh Street (now known as building 88), the program was immediately successful and by 1921 had generated enough revenue to begin construction of a new building. The hospital continued as a department of the State Hospital or separate unit under the Mental Health Board until 1947, when it became the independent James Decker Munson Hospital, now the Munson Medical Center.

Beginning in the 1920s, new buildings (now known as 22, 33, 35, 37, 37A, 39, 41, and 42) were constructed on the site, characterized by concrete frames, masonry enclosure walls, flat roof, and a massive, box like appearance in the institutional style of the first half of the 20th Century rather than in keeping with the architectural design of the original campus. Buildings 37 and 37A were placed into the middle of the grand lawn, blocking the view from the original buildings. The new power plant was completed in the 1950s. In 1964 demand for children's services was great enough that the hospital converted Cottage 34 into a children's unit and began planning a new children's hospital which was completed in 1970 and named the Arnell Engstrom Children's Center.

During the late 1970s and early 1980s, the entire philosophy of delivery systems for mental health services shifted from hospital-based to community-based service. The patient load, which had peaked at over 2,000 in the 1960s, rapidly declined, until the entire hospital was closed down in the late 1980s.

2. Current Conditions of Buildings

Over 65 structures are located on the Grand Traverse Commons Planned Redevelopment District (Figure 5). For the purposes of describing existing conditions, these buildings can be grouped into six basic categories related to their use and construction time period. The first category includes the historically significant buildings originally intended for housing and treatment of patients. This group was generally constructed between 1883 and 1915. The second category includes support buildings constructed in the 1885-1915 era for purposes such as storage, maintenance shops and food preparation. Both groups are characterized by brick masonry bearing walls and heavy timber construction systems. Roofs are generally pitched and include towers or spires as architectural accents.

The third category of buildings includes patient care structures constructed between 1920 and 1955. These buildings tend to be constructed of reinforced concrete with brick and limestone exterior walls and details. The support buildings constructed between 1920 and 1955 constitute the fourth category of buildings. The larger members of this group are reinforced concrete framed with brick and concrete masonry wall systems. The smaller buildings have concrete masonry walls and light wood framed roof systems. The latter two groups tend to be box-like in visual character with flat roofs.

The fifth category includes the staff residence buildings. The residences were constructed between 1890 and 1957. Some are sympathetic to the historic buildings, others are basic 1950s housing stock. The sixth category of buildings includes the agricultural structures. These buildings range from large, well constructed barns to small equipment sheds.

Main Building

The largest and oldest of the hospital's buildings, Building 50 has not been occupied for some time, except for the 1950s era offices, canteen, snack bar and lounge which are still in use. The heavy timber and masonry building is structurally sound. The building's finished surfaces have deteriorated from moisture damage, and lack of heat and maintenance, particularly the plaster and the wood flooring. The roof structure is sound. The roofing itself is showing signs of wear. The spires are generally intact, although most will require re-roofing and painting at a minimum.

The building did have an extensive fire protection sprinkler system at one time, although it may not be usable in a new configuration. Heat was supplied by steam radiators in the basement with forced air distributing the heat to the floors

above. The building (except for the canteen section) does not have its own furnace or boiler system. The electrical system will require complete replacement.

Bearing walls appear to be the long axis walls, with joists partially spanning from exterior walls to corridor walls. The masonry is massive and reasonably sound. There is an extensive utility tunnel system connecting the building to other buildings on the site. Floor to floor heights are adequate to superior, ranging from 9' or 10' in the lowest level to 13' or 14' on the three main levels. Floor to peak heights in the attic areas range from 20' to 22'. The attics are generally open and in good condition. Some of the attics have, at times, been occupied as program space, but most have served primarily as mechanical support spaces.

Windows are in moderate disrepair with deteriorating sash and broken glass. However, the masonry openings housing them appear sound. Replacement or rehabilitation should be possible within the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Cottages

The cottages were constructed between 1890 and 1915, and are designated by the following building classification system: 21, 23, 25, 27, 28, 29, 30, 32, 34, 36, and 40. All are heavy timber and massive masonry bearing wall construction and are structurally in sound condition. Roof structures are generally sound, although most of the roofing materials will need to be replaced. The towers and spires of the cottages are particularly impressive, although the roofing and exterior finishes will require rehabilitating or replacement.

Some of the units were extensively remodeled in the last 20 years to house new programs. As with Building 50, most finish surfaces, particularly the plaster and the wood flooring need to be repaired or restored. The mechanical and electrical systems, will need to be completely overhauled or replaced. With the exception of a portion of Cottage 36, none of these buildings are currently occupied.

Floor to floor heights range from 9' to 11' at the lowest (below grade) floor level to 12' to 14' at the two upper floor levels. The attic spaces of the cottages have generally not been occupied except for mechanical support functions. They have good headroom with floor to peak heights ranging from 14' to 20' and are generally open. They show signs of long term occupancy by pigeons, but do not seem excessively damaged. The existing stairwells extend into the attic spaces.

Windows are in moderate disrepair, with deteriorating sash and broken glass. The masonry openings housing them appear sound. Replacement or rehabilitation should be possible within the Secretary of the Interior's Standards for the Treatment of Historic Properties. Generally, all of the cottages have wood sash except for Buildings 32 and 36 which have aluminum security sash which are out of character. All of the cottages' exterior walls have been painted at some point in the past.

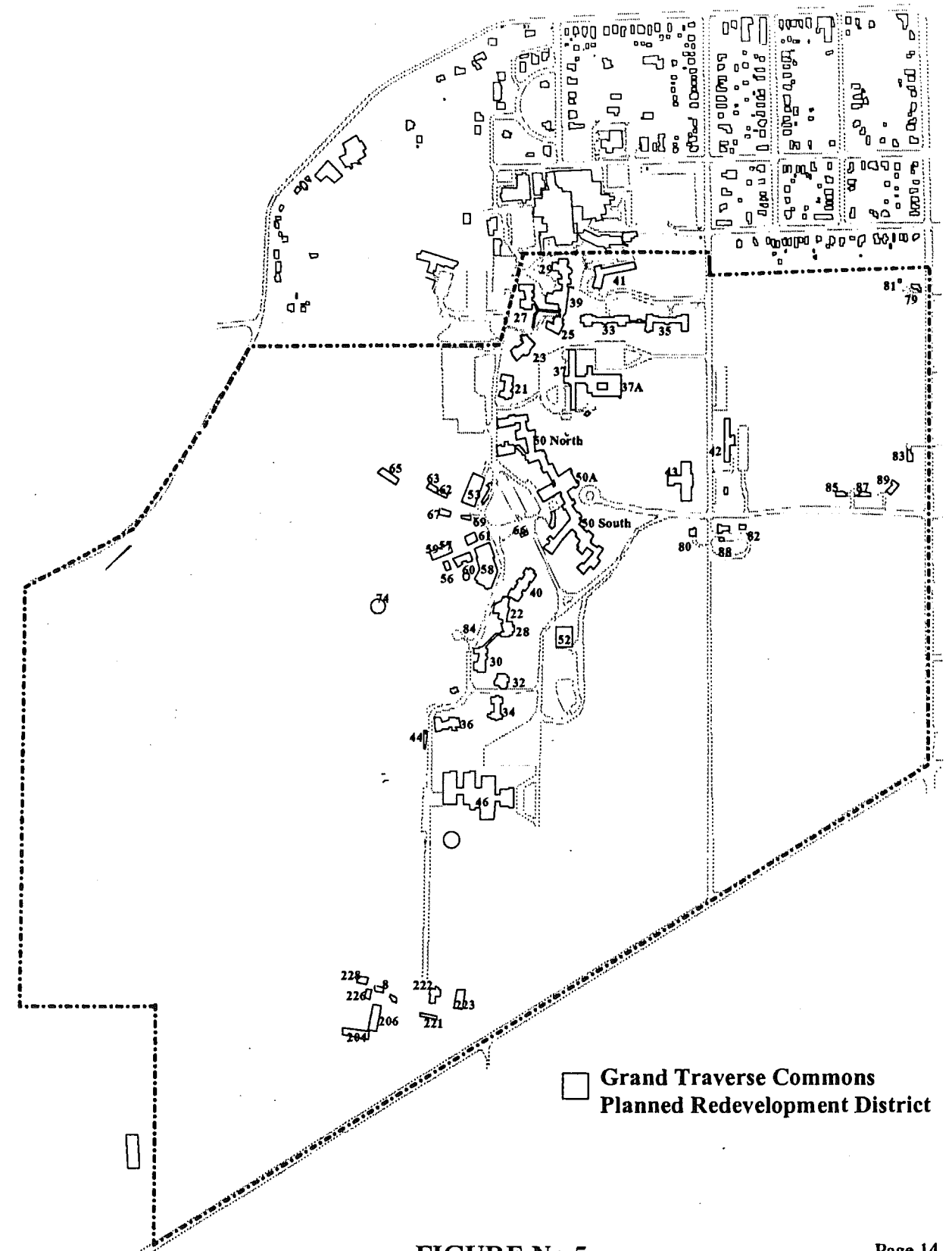


FIGURE No.5

EXISTING BUILDINGS

Barns

The barns (Buildings 206 and 204) were constructed in 1900 and 1932, respectively. General construction is masonry and heavy timber. Each is two levels with the lower level having a concrete floor structure. The buildings are connected with a passage at the lower level. The barns are structurally in good condition with straight ridge lines. The roofing appears to be in reasonable repair. There does not appear to be evidence of excessive cracking of the masonry walls.

The floor to floor height at the lower level ranges from 8'-6" to 10'. Building 206 has two different floor levels on the upper level and a floor to peak height of between 31' and 29'6". The upper level of Building 204 has a floor to peak height of 30'6". Although originally designed to house and support livestock, both buildings have been used primarily for storage since the mid-60s.

The barns do not have any mechanical heating or ventilation systems. The electrical systems are minimal and limited to general lighting and a few outlets. The existence or absence of a sprinkler system has not been verified.

Post-1920 Service and Storage Buildings

The service and storage buildings were constructed between 1920 and 1956 and include the following buildings: 53, 56, 57/59, 58, 60, 65 and 67. Buildings 53 and 56 are of brick and reinforced concrete construction. The others have concrete floors, painted concrete block walls and wood roof joists. All are "flat top" buildings which do not match the style or siting characteristics of Building 50 and the cottages.

The buildings are structurally sound. They are generally background-character structures. Window sash are steel (53, 58 and 60) or wood. Mechanical and electrical systems vary from minimal to fairly extensive depending on the original use of the building. Building 65 (originally an employee garage) is isolated by distance from the rest of the buildings and is without any architectural character or distinguishing detail.

The chief benefit of this group of buildings is that they contain raw square footage. Most would require major remodeling for anything but shop or storage use.

Pre-1920 Service Buildings

Buildings 61, 62, 63, and 69 were constructed between 1890 and 1917 and generally include brick masonry bearing walls with heavy timber intermediate floors and/or roof structures. These buildings are very utilitarian with minimal utility services. They do not match the style or siting characteristics of the main buildings, but are generally sound structures in fair condition. All but Building 61 are single story, at-grade structures.

Building 61 is multi-story (one down, two up) with a flat roof and steel window sash. Its most recent use was as an upholstery shop and storage building, although it was once used for occupational therapy. Buildings 62 and 63 were originally root cellars. Most recently they served as general storage buildings. They have rubble masonry foundation walls, brick exterior walls and heavy timber framed pitched roofs. They are the oldest of the storage buildings, and possess the nicest detailing of the group. Building 69 has painted brick masonry walls. The roof structure has a moderate pitch behind a rectangular (east) facade.

All Faiths Chapel

All Faiths Chapel (Building 43) was constructed in 1963 as a multi-faith chapel. The walls are load bearing masonry (brick or stone on concrete masonry) with a laminated timber roof structure. The overall condition of the building is very good. It is currently used by a variety of community service agencies.

Pre-1931 Residential Buildings

Residential buildings 79, 80, 82, 84, and 88 are former staff residences which were constructed between 1890 and 1931. Most are of frame construction on a stone masonry foundation, although building 80 has masonry bearing walls. The condition of the buildings ranges from poor to fair. Most need roof replacement or repair, window replacement and new mechanical and electrical systems. Recently, Building 80 was renovated for use by the Women's Resource Center.

Post-1951 Residential Buildings

Residential buildings 83, 85, 87, and 89 were constructed between 1951 and 1957. All are single story wood frame single family houses. All four are in good condition. They are representative of the 1950s, and are out of character for their location at the Eleventh Street entrance to the site.

"Flat Top" Buildings

These buildings which include 33, 35, 37, 37A, 39, and 41 were constructed between the 1920s and the 1950s. They are generally reinforced concrete structures with brick enclosure walls, limestone accents and steel sash. Except for Building 35, all are sound structurally, but with the exception of Buildings 37A and 41, the structural modules are so limited that the buildings cannot be easily modified. Preliminary studies have found that these buildings are lacking in their ability to be adapted to new medical uses mainly due to the insufficient square footage and floor to floor heights. Additionally, Buildings 33, 35, and 37 have plaster damage from roof leaks. All buildings have a large amount of asbestos containing materials (ACMs).

Power Plant

This building housed the now defunct steam and electric power plant for the Grand Traverse Commons complex. Constructed in 1950, the structure is steel framed with concrete roof and floor slabs. The system was originally coal fired and served by a railroad siding. Boilers were converted to gas in the early 1970s. The physical condition of the plant is good.

State Office Building

Originally constructed as a nurse's residence (dormitory), this building is now being used as a state office building. It has a reinforced concrete structure with brick enclosure walls, limestone accents and steel sash. It is in good condition. The State Office Building property has been augmented by a concrete block mechanical structure.

Building 46 (Traverse Bay Area Intermediate School District Facility)

Formerly the Arnell Engstrom Children's Center, this building is owned by the Traverse Bay Intermediate School District and houses their non-vocational programs. It was completed in 1970 and is constructed with precast concrete roof structures bearing on brick and concrete masonry walls. It houses classrooms, offices, a small gymnasium and a swimming pool. It is generally in excellent condition.

Miscellaneous Structures

There are additional garages, maintenance and storage buildings scattered over the site. Most are in fair condition, have concrete floors, concrete masonry walls and wood framed "flat" roofs. They have minimal mechanical and electrical systems.

D. Topography, Drainage Patterns and Soil Conditions

1. Topography and Drainage Patterns

The topography of the Grand Traverse Commons Planned Redevelopment District site is characteristic of lateral moraines in the Grand Traverse area that were formed about 12,000 years ago during the Wisconsin Period of Glaciation. The site occupies part of the eastern slope of the lateral moraine that forms the western boundary of the West Arm of Grand Traverse Bay and the Boardman River watershed. Kids Creek, which runs through the site, is a tributary to the Boardman River and the site lies within the Kids Creek watershed which is a sub-watershed of the larger Boardman River watershed.

The topography of the Grand Traverse Commons Planned Redevelopment District generally slopes downward from west to east. The extreme western portion of the site contains steep slopes which lessen in grade moving eastward. Gentle slopes characterize the central portion of the site. The eastern portion of the site is quite

flat and contains Kids Creek and its adjacent floodplain and wetlands.

The steeper slopes in the extreme western portion of the site are heavily wooded and undeveloped. These steep slope areas occupy approximately 40 acres of the site with grades of about 20% meaning that the terrain slopes at a rate of 20 feet vertically for every 100 feet horizontally. The central area of the site where the majority of the existing buildings are located has gently sloping terrain with grades that are roughly 3% to 5%.

The wetlands occupy approximately the eastern 2,000 feet of the site between Silver Lake Road and Eleventh Street and approximately the eastern 1,000 feet of the site between Eleventh Street and Seventh Street. Kids Creek flows through the middle of the wetlands. Details of the site's topography are shown on the topographic map (Figure 6).

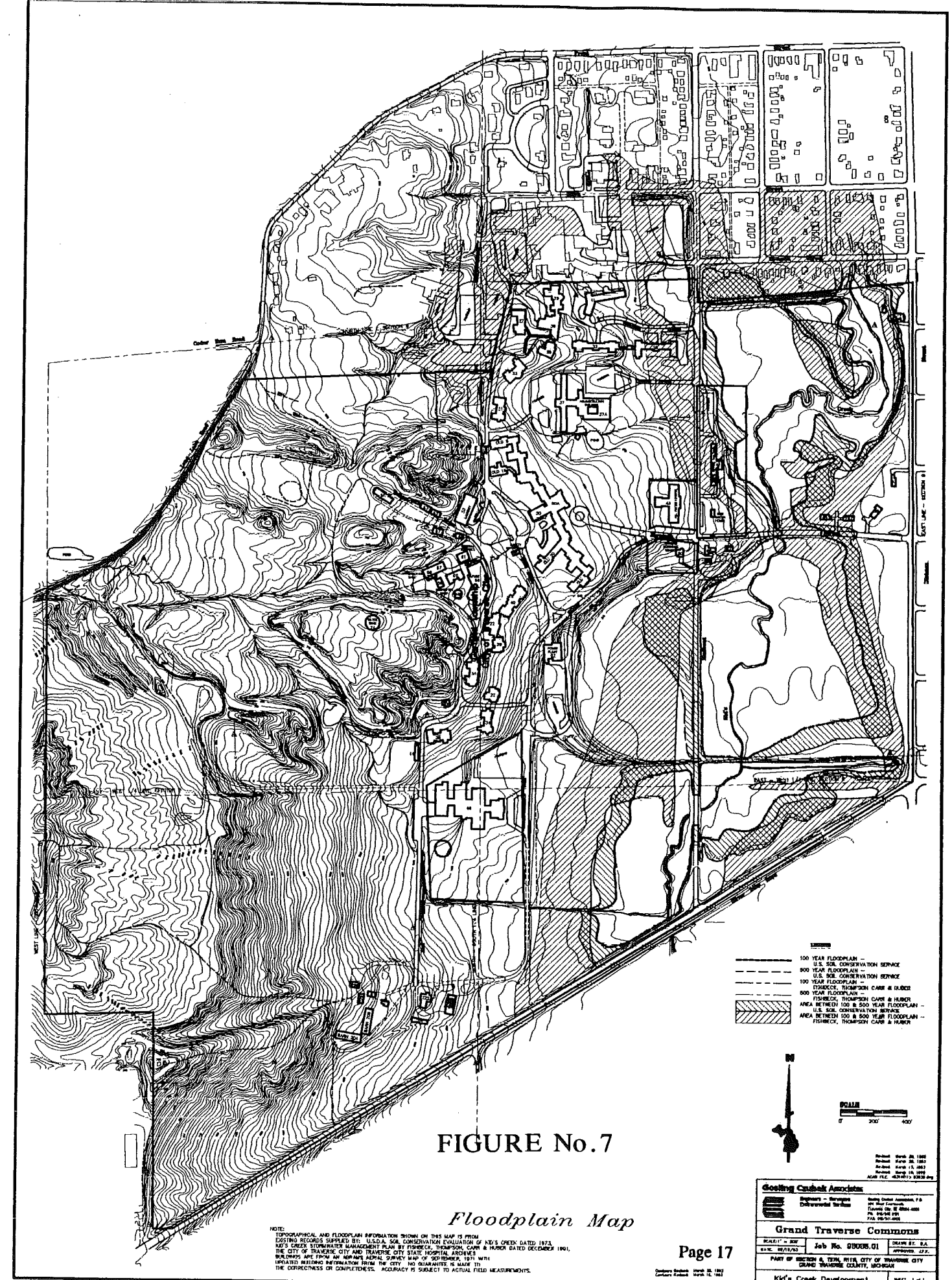
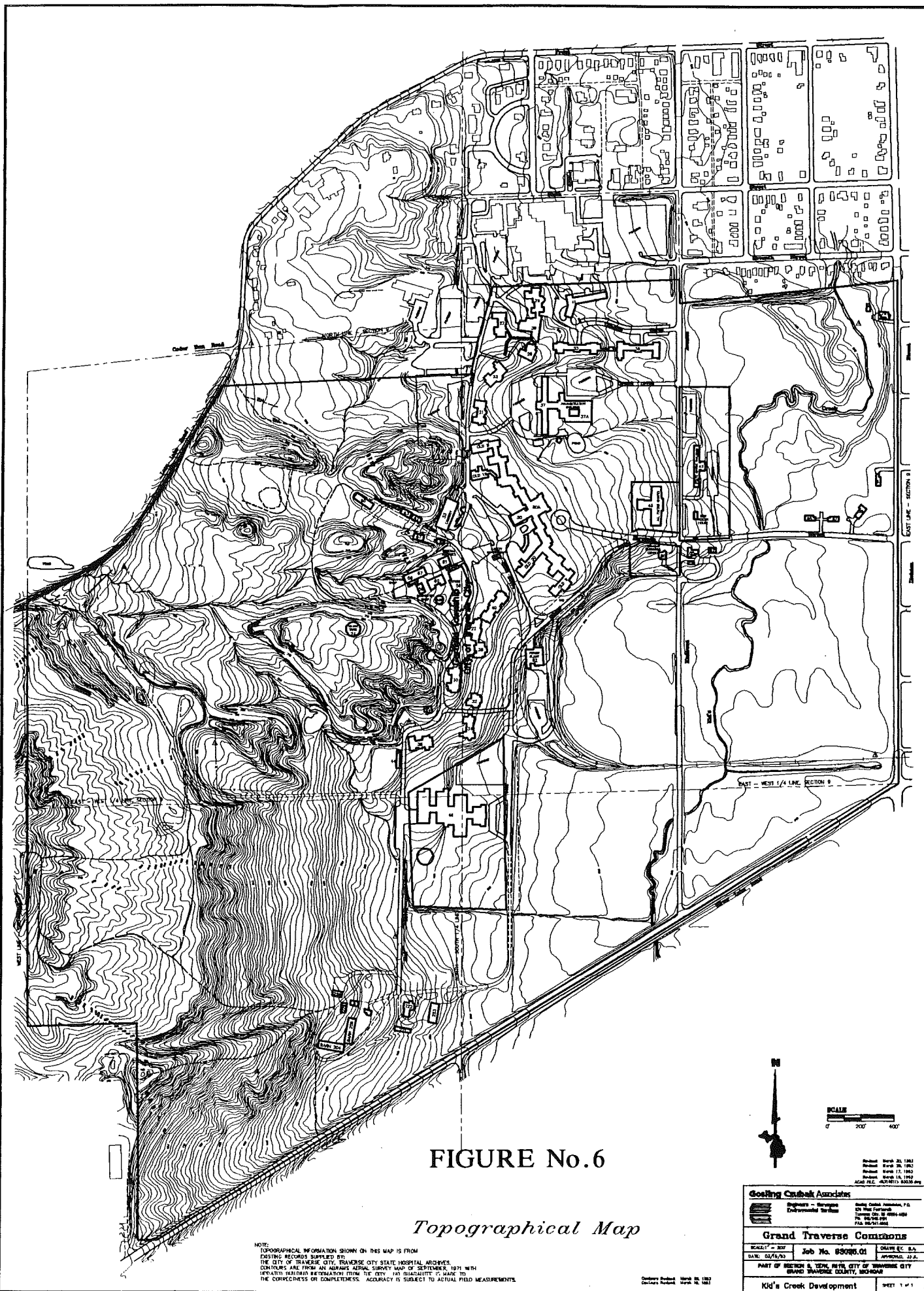
The predominate natural drainage facility on the site is Kids Creek which is located in the easterly portion of the site. Kids Creek is a high quality trout stream. As previously described, Kids Creek flows through wetlands on the site and is a tributary to the Boardman River and the West Arm of Grand Traverse Bay. Kids Creek falls about 10 feet from its point of entry on the site at Silver Lake Road on the south to where it exits the site on the north at Seventh Street.

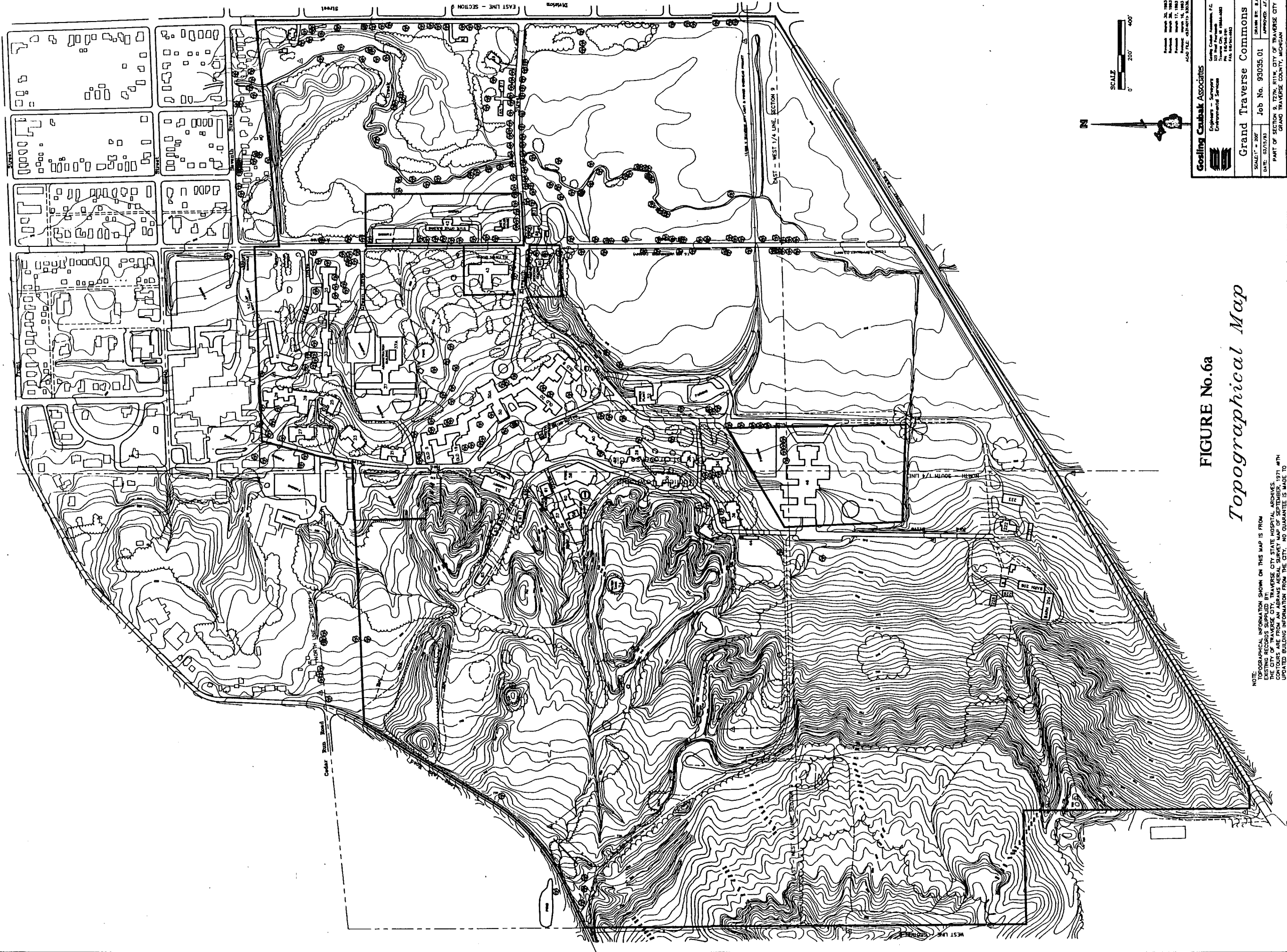
The Kids Creek floodplain occupies a significant portion of the wetland on the eastern portion of the Grand Traverse Commons Planned Redevelopment District. Both a 100 year and a 500 year floodplain have been computed for Kids Creek by the U.S. Soil Conservation Service and Fishbeck, Thompson, Carr & Huber.

The U.S. Soil Conservation floodplain delineation was undertaken in 1973 following the flooding of the Kids Creek Basin. At the request of the City of Traverse City, the floodplain delineation was recalculated by Fishbeck, Thompson, Carr & Huber in 1991 to take into account stormwater improvements made since the 1973 evaluation undertaken by the U.S. Soil Conservation, and the impact of these improvements upon the floodplain boundaries. While the Fishbeck determination has not been adopted or generally accepted as the "official" floodplain determination, it is referenced in this District Plan to highlight the inconclusiveness regarding the current and actual boundaries of the floodplain.

The precise location of both the 100 year and 500 year floodplains for Kids Creek is shown on the floodplain map (Figure 7) . The width of the 100 year floodplain varies from approximately 400 feet to 1,000 feet in the south and central portion of the wetland area adjacent to the creek. In the northerly portion of the wetland (north of Eleventh Street), the 100 year floodplain ranges from about 200 to 800 feet wide.

A number of springs and small feeder creeks emanate from the hillside on the Grand Traverse Commons Planned Redevelopment District. The location of these springs and feeder creeks is shown on the topographic map (Figure 6). Most of





NOTE: TOPOGRAPHICAL INFORMATION SHOWN ON THIS MAP IS FROM EXISTING RECORDS SUPPLIED BY TRAVERSE CITY STATE HOSPITAL ARCHIVES. CONTOURS ARE FROM AN AERIAL SURVEY MAP OF SEPTEMBER, 1971. UPDATED BUILDING INFORMATION FROM THE CITY. NO GUARANTEE IS MADE TO THE CORRECTNESS OR COMPLETENESS. ACCURACY IS SUBJECT TO ACTUAL FIELD MEASUREMENTS.

Contractor: Kid's Creek Development
 Date: March 18, 1993

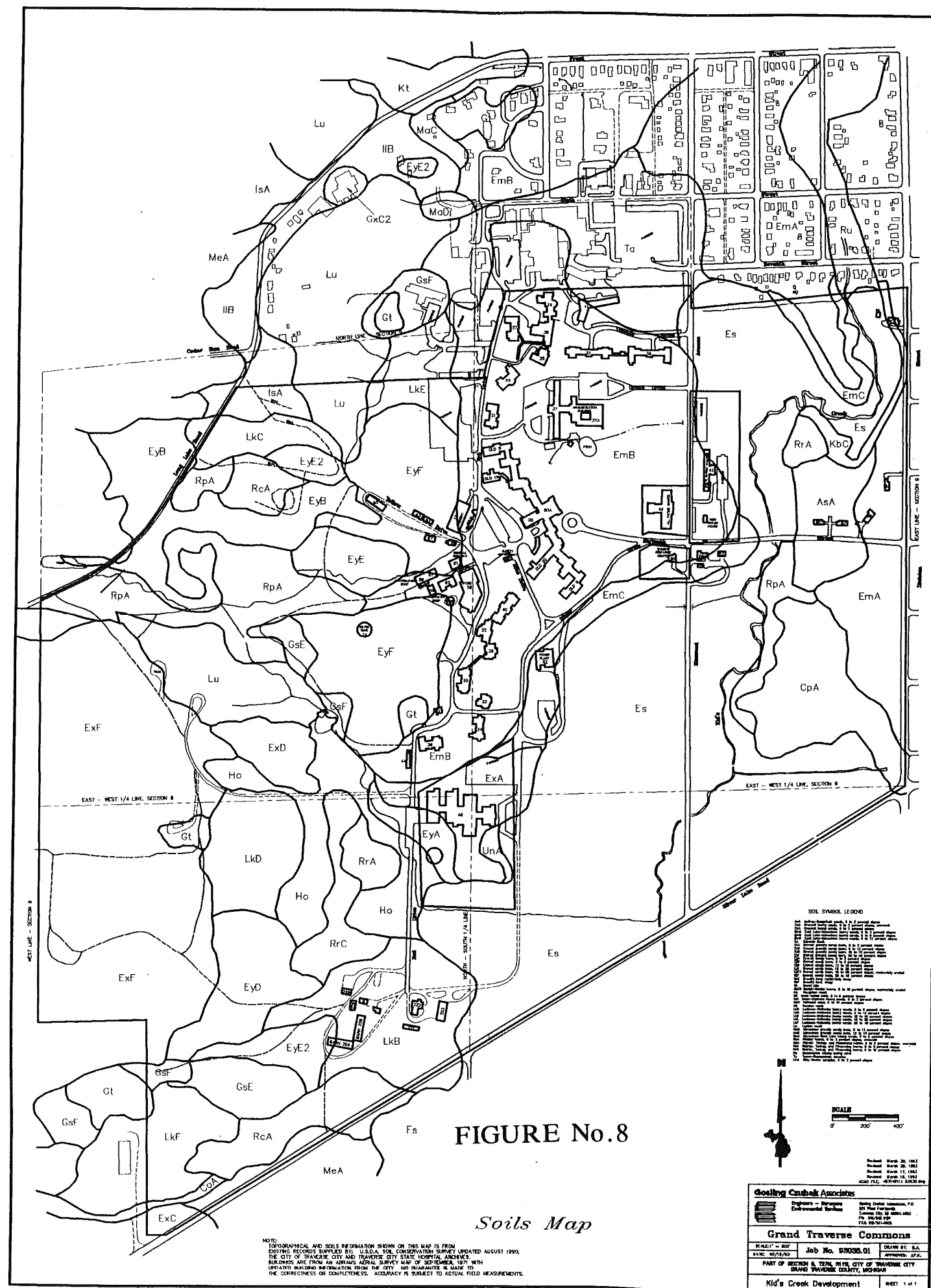


FIGURE No. 7a
Floodplain Map

NOTE: TOPOGRAPHICAL AND FLOODPLAIN INFORMATION SHOWN ON THIS MAP IS FROM EXISTING RECORDS SUPPLIED BY: U.S.D.A. SOIL CONSERVATION SERVICE, FISHBECK, THOMPSON, CARR & HUBER DATED DECEMBER 1981. THE CITY OF TRAVERSE CITY, MICHIGAN, HAS REVIEWED THIS MAP AND FOUND IT TO BE A CORRECT REPRESENTATION OF THE FLOODPLAIN INFORMATION. BUILDINGS ARE FROM AN ABRAMS AERIAL SURVEY MAP OF SEPTEMBER, 1971. WITH UPDATED BUILDING INFORMATION FROM THE CITY. NO GUARANTEE IS MADE TO THE CORRECTNESS OR COMPLETENESS. ACCURACY IS SUBJECT TO ACTUAL FIELD MEASUREMENTS.

Geisling Consulting Associates
 Engineers - Surveyors
 Environmental Services
 1000 Grand Traverse Commons
 Traverse City, MI 49782-4003
 P.O. Box 1000
 P.O. Box 1000

Grand Traverse Commons
 Job No. 93035.01
 SCALE: 1" = 200'
 DATE: 02/25/93
 PART OF SECTION 8, 13TH, 14TH, 15TH, 16TH, 17TH, 18TH, 19TH, 20TH, 21ST, 22ND, 23RD, 24TH, 25TH, 26TH, 27TH, 28TH, 29TH, 30TH, 31ST, 32ND, 33RD, 34TH, 35TH, 36TH, 37TH, 38TH, 39TH, 40TH, 41ST, 42ND, 43RD, 44TH, 45TH, 46TH, 47TH, 48TH, 49TH, 50TH, 51ST, 52ND, 53RD, 54TH, 55TH, 56TH, 57TH, 58TH, 59TH, 60TH, 61ST, 62ND, 63RD, 64TH, 65TH, 66TH, 67TH, 68TH, 69TH, 70TH, 71ST, 72ND, 73RD, 74TH, 75TH, 76TH, 77TH, 78TH, 79TH, 80TH, 81ST, 82ND, 83RD, 84TH, 85TH, 86TH, 87TH, 88TH, 89TH, 90TH, 91ST, 92ND, 93RD, 94TH, 95TH, 96TH, 97TH, 98TH, 99TH, 100TH, 101ST, 102ND, 103RD, 104TH, 105TH, 106TH, 107TH, 108TH, 109TH, 110TH, 111ST, 112ND, 113RD, 114TH, 115TH, 116TH, 117TH, 118TH, 119TH, 120TH, 121ST, 122ND, 123RD, 124TH, 125TH, 126TH, 127TH, 128TH, 129TH, 130TH, 131ST, 132ND, 133RD, 134TH, 135TH, 136TH, 137TH, 138TH, 139TH, 140TH, 141ST, 142ND, 143RD, 144TH, 145TH, 146TH, 147TH, 148TH, 149TH, 150TH, 151ST, 152ND, 153RD, 154TH, 155TH, 156TH, 157TH, 158TH, 159TH, 160TH, 161ST, 162ND, 163RD, 164TH, 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these streams and springs flow continuously. A small stream west and slightly south of Munson Medical Center is routed through a storm drain on Sixth Street near Munson Medical Center. This storm sewer outlets into an excavated stream channel adjacent to the main parking lot at Munson Medical Center.

2. Soil Conditions

Soils on the site were mapped by the Soil Conservation Service (SCS) in 1966 and updated in 1990. The SCS soil mapping has been reproduced on the site soils map (Figure 8). The specific soils classifications used by SCS are listed on the soils map.

Soils on the site are diverse and characteristic of the mixture of sands, gravel, silts and clays that are found in lateral moraines in northwestern Michigan. There are also muck deposits in the wetland areas and in some of the upland areas of the site. This condition is unusual in this part of Michigan. The upland mucks are attributable to the high water table and springs on portions of the westerly hillside.

The predominate soil types on the site are sandy loams. Loam is an agricultural term that refers to a mixture of sand, silt and clay. Sandy loam indicates that the portion of sand in the loam is higher than the silt and clay content.

Six soil borings were made in December, 1993. The borings were made in the north central portion of the site. One boring was made immediately east of Elmwood Avenue across from Orange Drive. The other five borings were made 100 to 600 feet west of Elmwood Avenue from the north boundary of the site to Eleventh Street. The borings were made to obtain preliminary information about the soil suitability for building foundation construction and stormwater retention and detention facilities.

The soil borings generally confirmed the SCS soil classification. Soils east of Elmwood were predominately mucks having a water table within two to three feet of the ground surface. Soils immediately west of Elmwood Avenue near the north property boundary had a water table within about three feet of the ground surface. Soils near the surface were mixtures of sand, silt marl, and muck.

Deposits of muck and marl were limited to the upper three to five feet of soil. The soils in this area may not be suitable for construction of shallow building foundations. Removal of unsuitable soils or special foundation construction techniques may be required. Additional soil borings are needed in this area before design and construction commences.

The soils typically were more sandy and the water table deeper in the borings that were made further west of Elmwood Avenue and south of the north property boundary. A 20-foot deep soil boring made near the Eleventh Street cul-de-sac revealed predominately sand. Groundwater was not encountered.

Except for the wetland areas and the small areas of upland mucks, the soils are amenable to development. Soil deposits in the area will typically support low-rise buildings on conventional shallow footings. Mid-rise buildings may require deep foundations. Development on slopes steeper than 10% should receive special measures for erosion control. Development should be avoided, if possible, on slopes greater than 15%.

Groundwater on the easterly and westerly portions of the site (on the hillside and near the wetlands) may restrict the practical depth of basements and new tunnels or may necessitate dewatering for utility construction. Perimeter drains for structures and basements ~~are~~^{is} recommended as a rule for any new construction. Utility construction dewatering will not exceed the normal capabilities of local contractors.

E. Natural Systems

The Grand Traverse Commons Planned Redevelopment District has a variety of natural systems that give it its appealing character and provide a setting for sensitive development. These natural systems include wetlands, meadows, an arboretum, park-like open space, and woodlands which are characterized by a variety of vegetation (Figures 9 and 9a). They are connected by underground and overground water systems.

1. Wetlands

The wetlands are contiguous along the entire eastern portion of the Commons Planned Redevelopment District, between Elmwood Avenue and Division Street. Kids Creek runs the full length of the wetlands, and indicator plants such as Black Willow, Eastern Cottonwood, Poplars, Redtwig Dogwood, and Cattails are prominent. The soil type in the wetlands area is Edwards Muck on Post-Glacial sediment. Much of the wetlands area adjacent to Kids Creek was used as agricultural fields when the State Hospital was in operation.

Upstream development has created an increase in the amount of water flowing through Kids Creek, and the resultant sand erosion to the edge and bottom conditions of Kids Creek. The most obvious problem with water quality on the Commons Planned Redevelopment District is sand erosion and the infiltration of oils and salts from parking lots into the natural system.

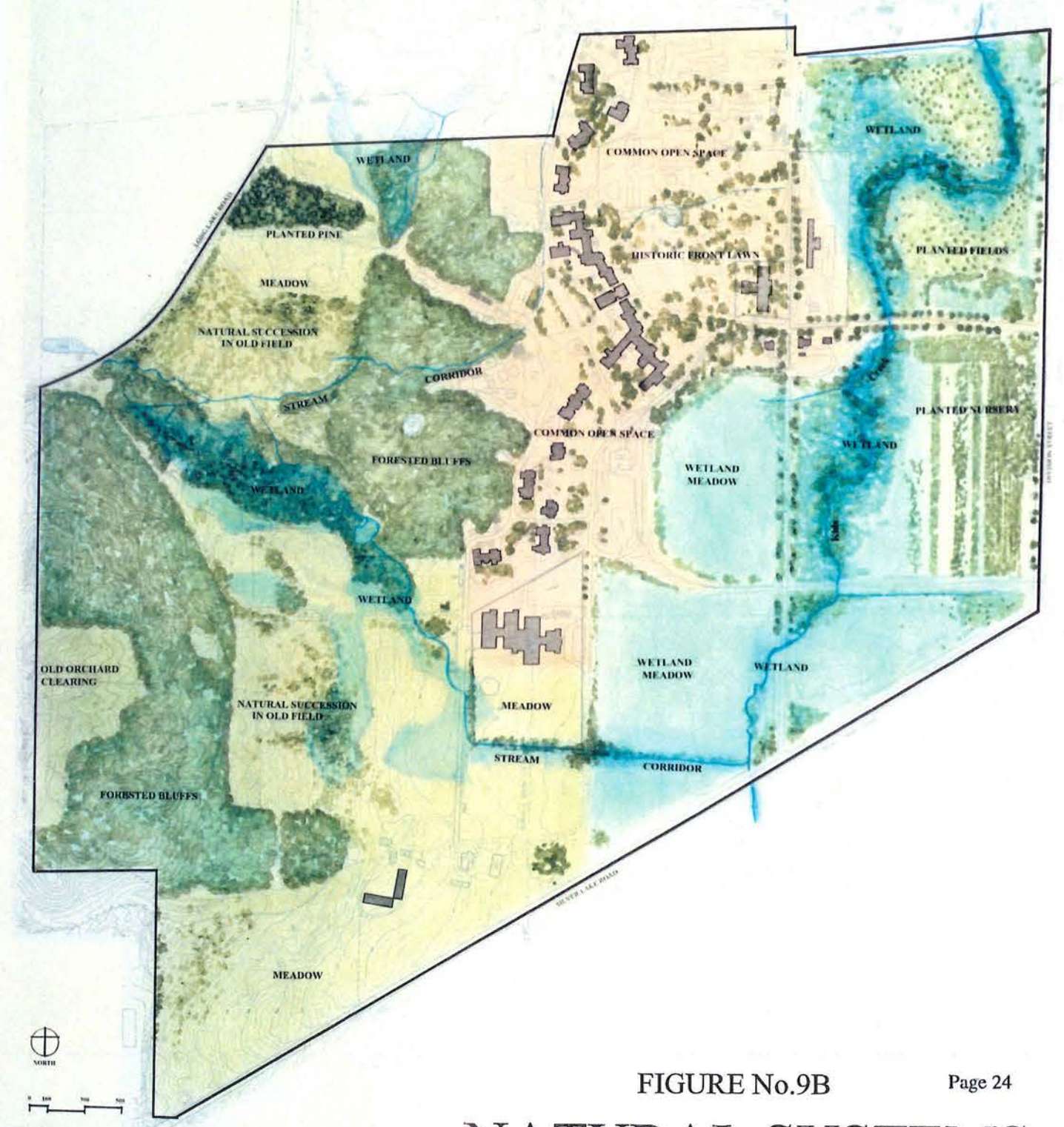
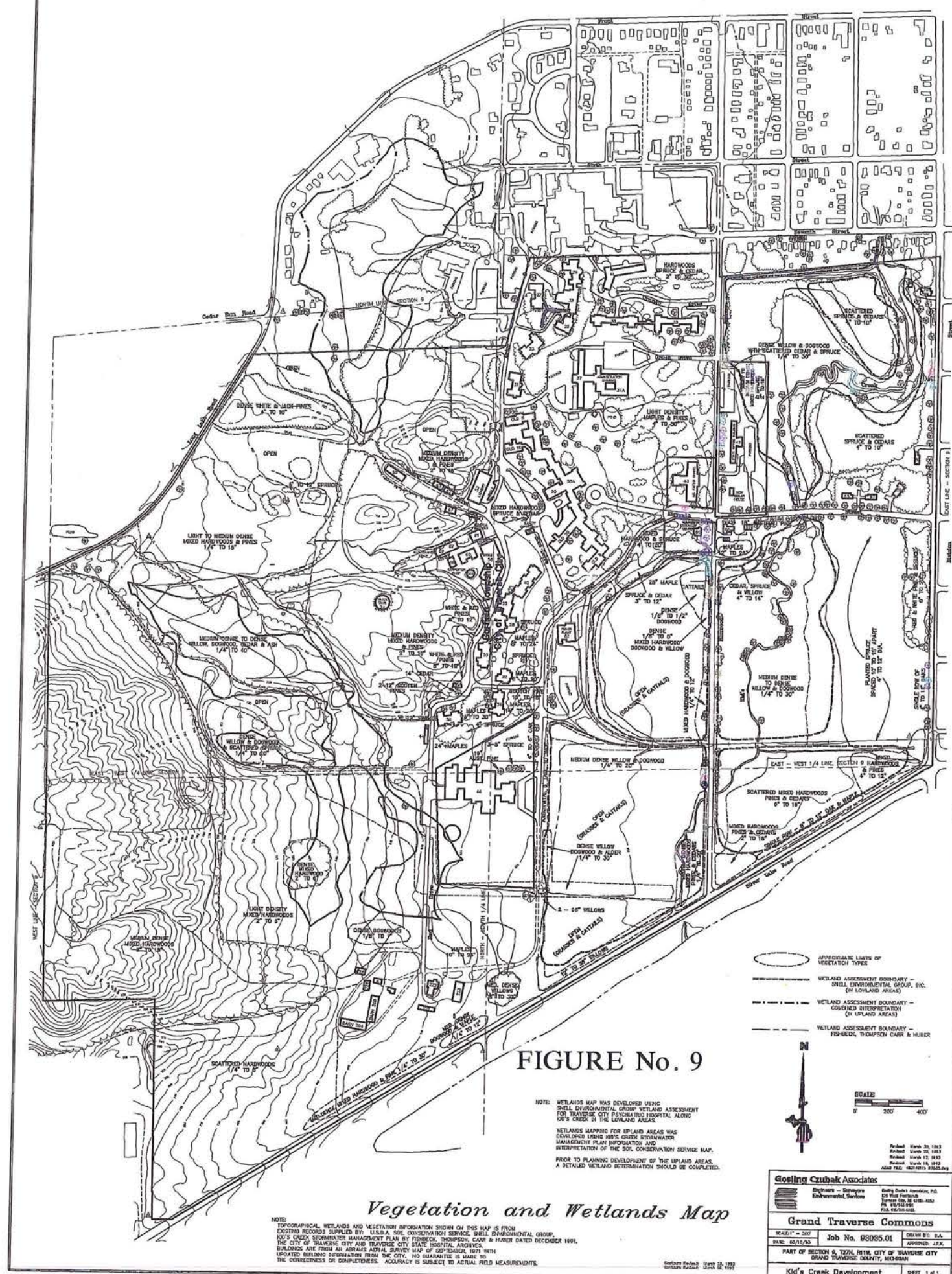
Forested wetlands form pocket environments at the top of the bluffs along the western side of the Commons Planned Redevelopment District. These areas are sensitive to development and provide a home for a wide variety of wildlife. A sampling of the animals seen in these areas include White Tail Deer, Eastern Cottontail, Ruffed Grouse, Downy Woodpecker, Great Horned Owl, and Red Squirrel.

2. Meadows

Up from the wetlands the land changes to either natural meadow or a developed, park-like landscape. The natural meadow extends from the wetlands to the base of the bluffs along the south side of the Commons Planned Redevelopment District. It encompasses the Traverse Bay Area Intermediate School District property and the barns area and is the most dominant land type viewed from Silver Lake Road. The meadow contains pockets of cattail marsh indicating underground seeps. The natural meadow is as important as the wetlands as a natural setting and peripheral buffer for the site.

3. Park-Like Open Space and Arboretum

The developed, park-like landscape consists of the maintained open lawn adjacent to all of the primary buildings on the Grand Traverse Commons Planned



Redevelopment District. This area includes the historic front lawn of Building 50 which contains one of the most extensive collections of northern hardy tree species in Michigan.

4. Woodlands

The wooded bluffs provide a backdrop along the entire western edge of the site and are characterized by mixed hardwood species including Sugar Maple, White Ash, Ironwood, American Beech, and mature Eastern Hemlock which indicates that succession here is at an advanced climax phase.

The topsoil layer is thin in the wooded bluffs and the underlying soil is Kalkaska Sand. The steep slopes are highly erodible and undevelopable, except for passive recreation use.

5. Vegetation

The vegetation on the Grand Traverse Commons Planned Redevelopment District closely relates to the landform of the site. The plant communities found are easily defined in terms of land characteristics such as wetlands, meadows, woodlands, and the maintained lawn area (Figure 9). Many studies and plant surveys have been completed describing the plant communities such as Steve Redman's The Flora of the State Hospital Grounds at Traverse City, Michigan. The fact that this site contains such a wide variety of plant communities and a large number of species of northern hardy trees in the central lawn area puts the Grand Traverse Commons Planned Redevelopment District in a unique position to function as a major arboretum in northern Michigan.

The Commons Planned Redevelopment District contains over 100 tree types within the tree families of Cherry, Ash, Oak, Maple, Apple, Elm, Hawthorn, Beech, Chestnut, Sycamore, Walnut, Aspen, Poplar, Birch, and Willow. The preservation and enhancement of the existing arboretum is a primary goal in the redevelopment of the Commons Planned Redevelopment District. The management of such an arboretum should provide central control of grounds maintenance, interpretive programs, plant propagation, complete plant cataloging, and control of theme collections and arboreta expansion within a master management plan.

Future plans specific to each subarea of the Grand Traverse Commons Planned Redevelopment District shall explore ways to enhance the existing plant communities.

F. Infrastructure and Utilities

The location of the existing utilities, including storm sewer, sanitary sewer, water electric, and natural gas, are reflected on Figures 10 and 11. Figure 10 shows the location and size of the sanitary sewer, storm sewer and water mains. Natural gas, telephone, electric and cable TV locations are depicted on Figure 11.

Water and sewer treatment is supplied by the City of Traverse City's municipal systems. Natural gas is available on the site from Michigan Consolidated Gas Company. Electrical service is available from two sources which include Traverse City Light & Power and Consumers Power Company.

1. Utility Substation

In an effort to enhance the capacity of the Traverse City Light & Power (TCLP) utility corporation and achieve its long term goals, TCLP has requested a location on the Grand Traverse Commons Planned Redevelopment District for the placement of an electrical substation. The Grand Traverse Commons Planned Redevelopment District may afford a location for the proposed utility substation provided that the property and its future development is not negatively impacted. Concerns relating to the location of a substation within the Grand Traverse Commons Planned Redevelopment District include the following: 1) conditions and protection of the environment; 2) the context of the substation within the historic district; 3) safety of the general public accessing the site; 4) the aesthetic impact on the Commons Planned Redevelopment District and the adjacent neighborhoods; 5) the ability to bury utility lines; and 6) the financial constraints of TCLP with regard to alternative locations. Alternative locations within the Grand Traverse Commons Planned Redevelopment District and design restrictions will be discussed with TCLP. Development of a utility substation will be subject to the Planned Redevelopment District zoning process for the Grand Traverse Commons.

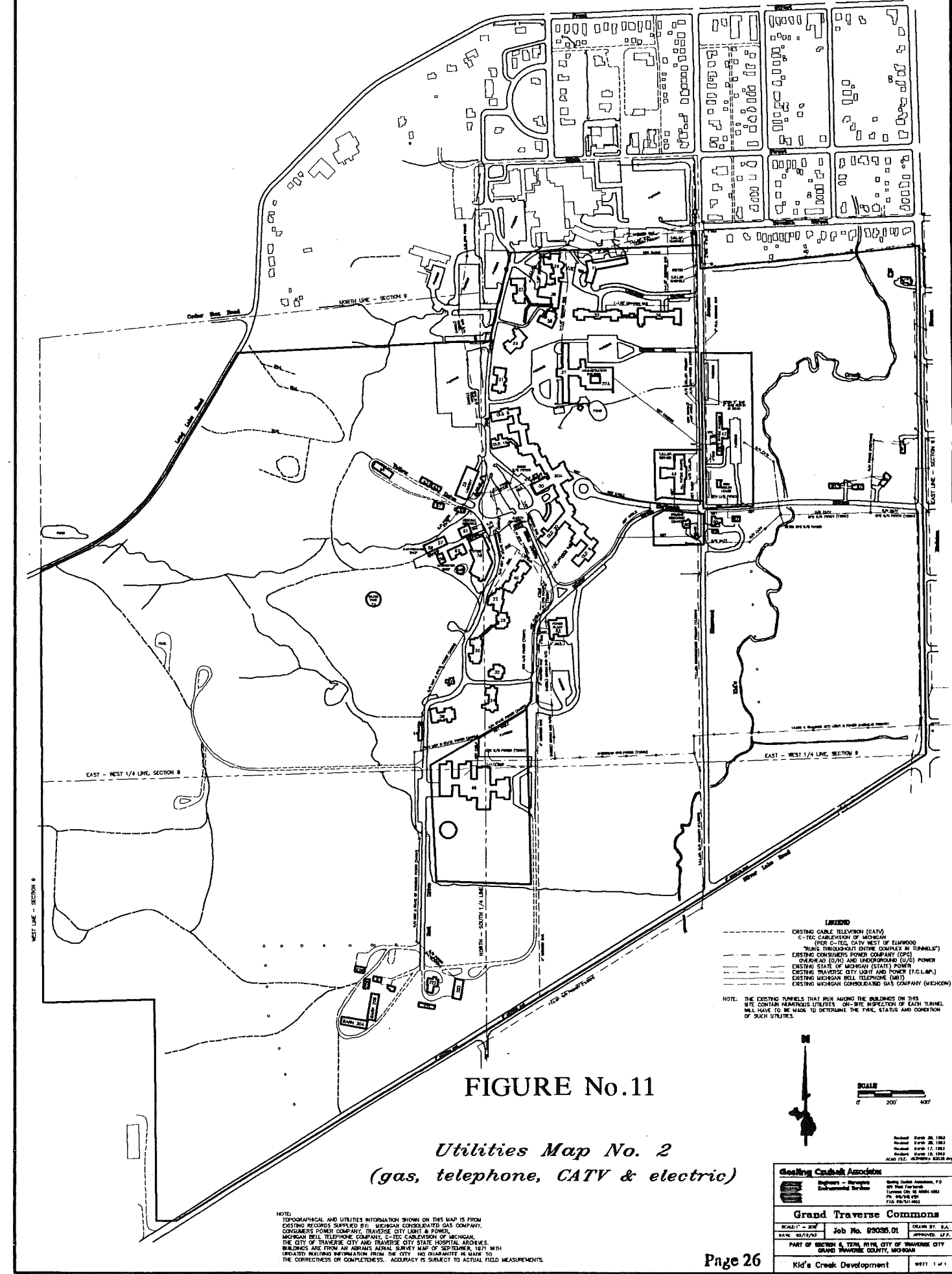
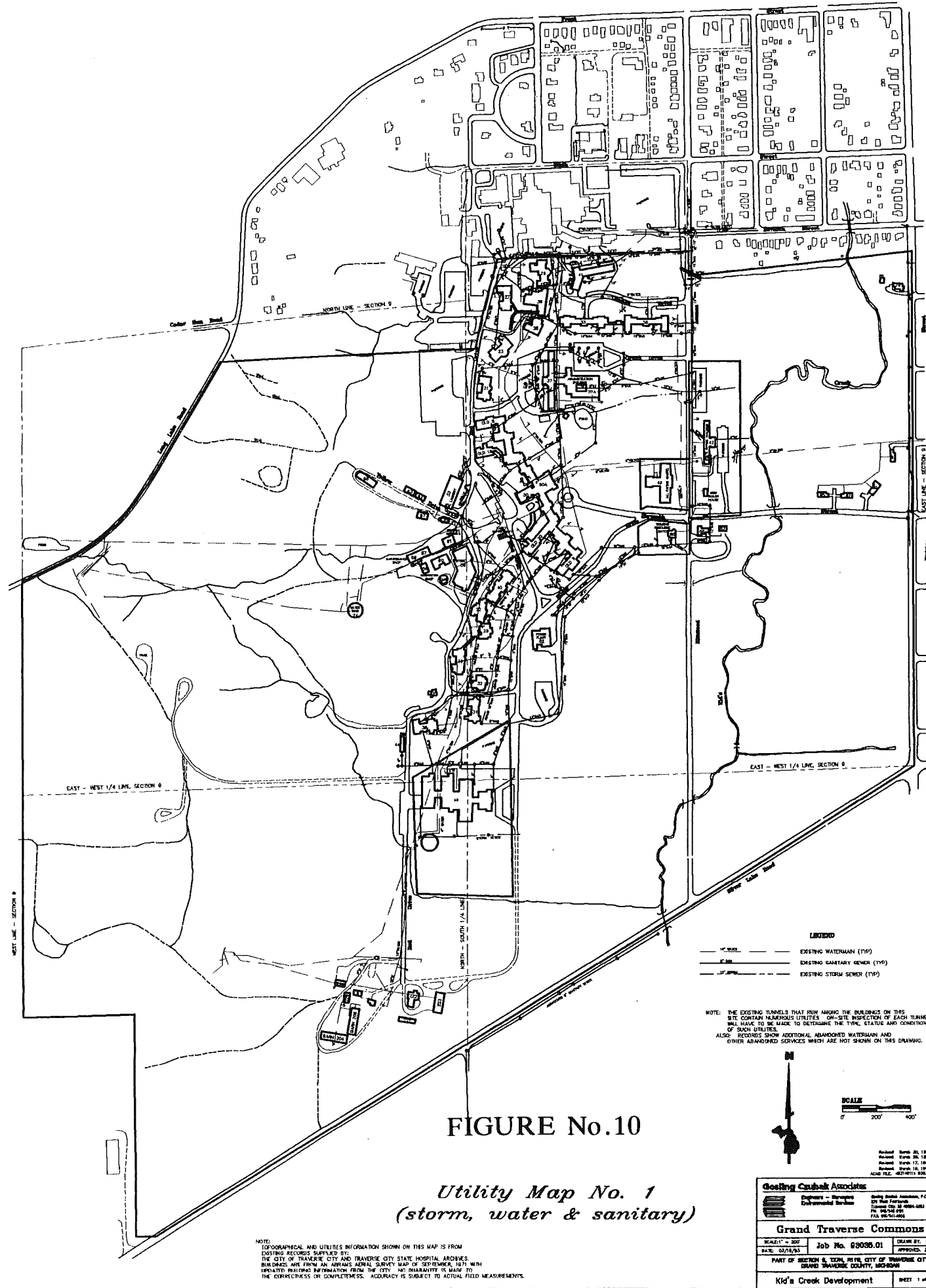
2. Water system

The existing water system consists of a complex network of four, six, eight, and ten inch water mains. The City of Traverse City system is currently connected to the site at two locations. A ten inch main connects at the intersection of Elmwood Avenue at Seventh Street. A second eight inch main runs from Division Street to Elmwood Avenue, south of the State Office Building (Building 42), and connects to a six inch main which currently services Building 50a (the central canteen).

The primary water system consists of a ten inch main running from the Farm buildings (Buildings 204 through 228) in the southerly portion of the site, west of Building 50, to the east of building 29 on the extreme northern portion of the site. An additional six inch main is employed to form a looped system. The resulting cross connections are commonly made through the basements of existing buildings, and occasionally employ the tunnel system. Additional detailed investigation on a building-by building basis should be done to confirm the location of abandoned mains.

3. Sanitary Sewer System

The site contains an extensive network of sanitary sewers and sanitary sewer services to individual buildings. The sanitary sewers are eight, ten, and twelve



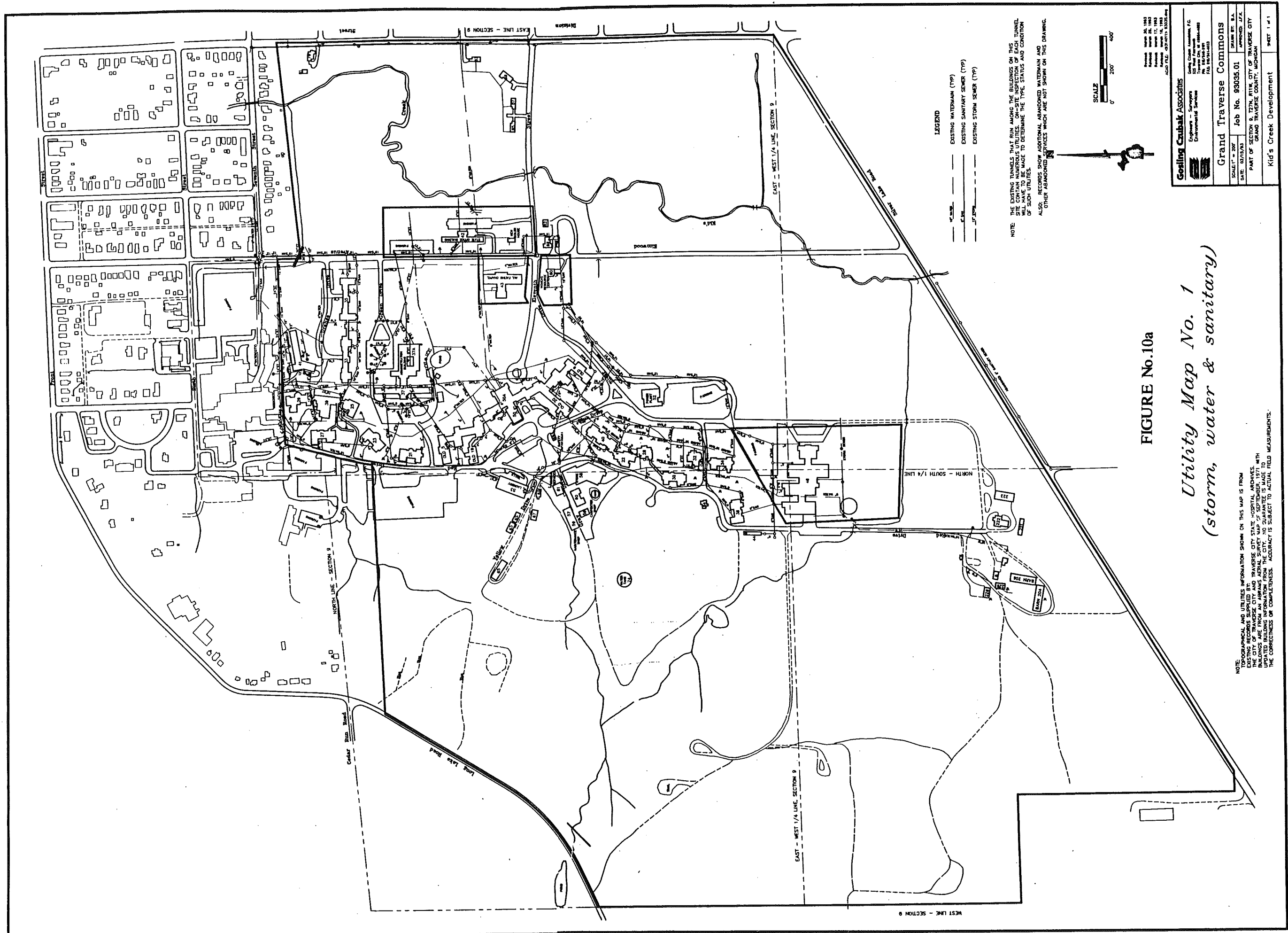


FIGURE No.10a

*Utility Map No. 1
(storm, water & sanitary)*

NOTE: THE EXISTING TUNNELS THAT RUN ALONG THE BUILDINGS ON THIS MAP IS FROM EXISTING RECORDS SUPPLIED BY THE CITY OF TRAVERSE CITY AND TRAVERSE CITY STATE - HOSPITAL ARCHIVES. BUILDINGS ARE SHOWN AS ABANDONED AND ARE NOT GUARANTEED TO BE WITH THE CORRECTNESS OF COMPLETENESS. ACCURACY IS SUBJECT TO ACTUAL FIELD MEASUREMENTS.

- LEGEND**
- EXISTING WATERMAIN (TYP)
 - EXISTING SANITARY SEWER (TYP)
 - EXISTING STORM SEWER (TYP)



ASD FILE 02-0015 93035.01

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 Consulting Engineers & Surveyors
 Environmental Services
 1000 West 1st Street
 Traverse City, MI 49781-1000
 Phone: (231) 941-1000
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Grand Traverse Commons	
DATE: 03/23/03	Job No. 93035.01
SCALE: 1" = 200'	DRAWN BY: S.A.
PART OF SECTION 9, T37N, R17E, CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN	
Kid's Creek Development	
PAGE 1 OF 1	

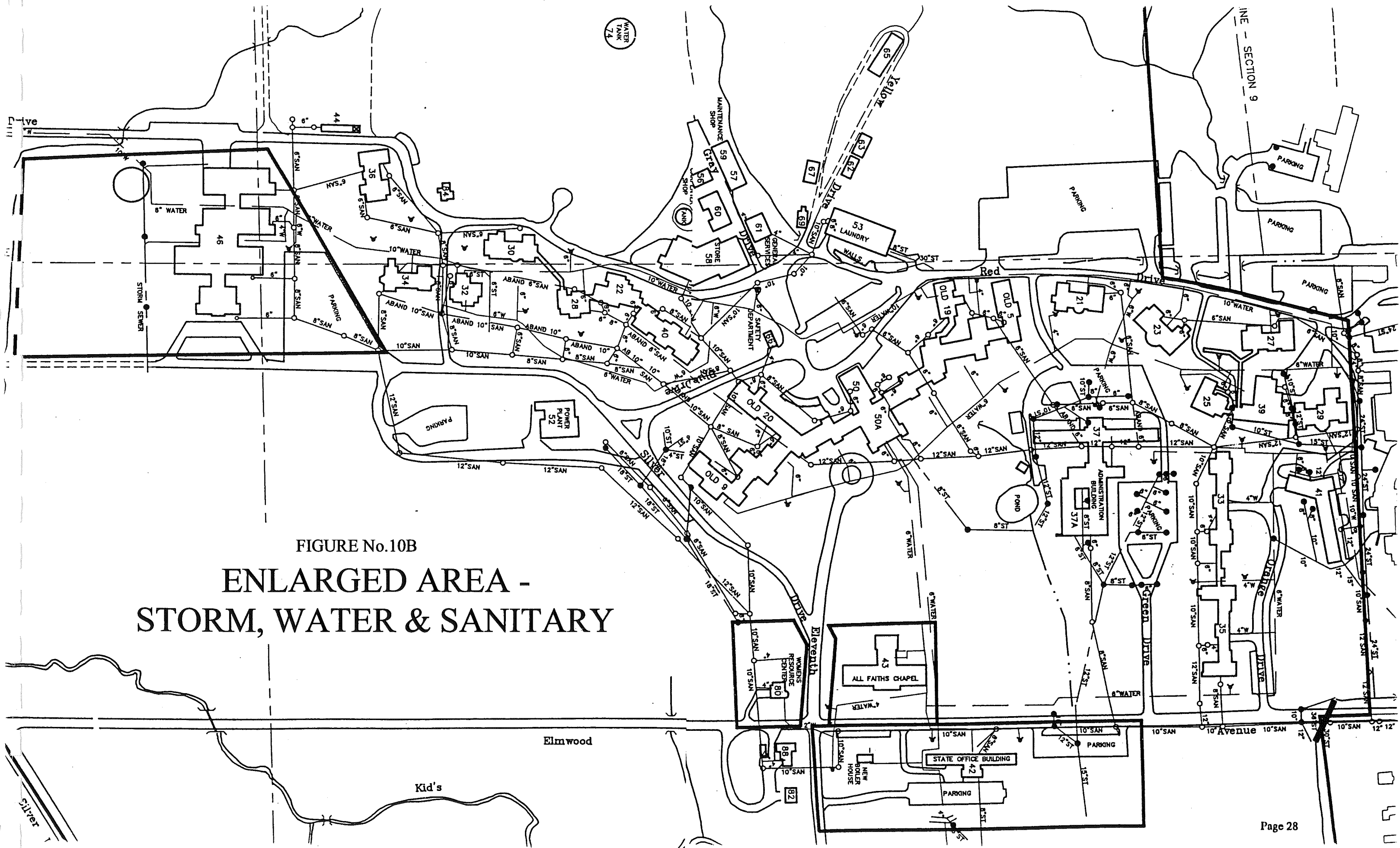


FIGURE No.10B
 ENLARGED AREA -
 STORM, WATER & SANITARY

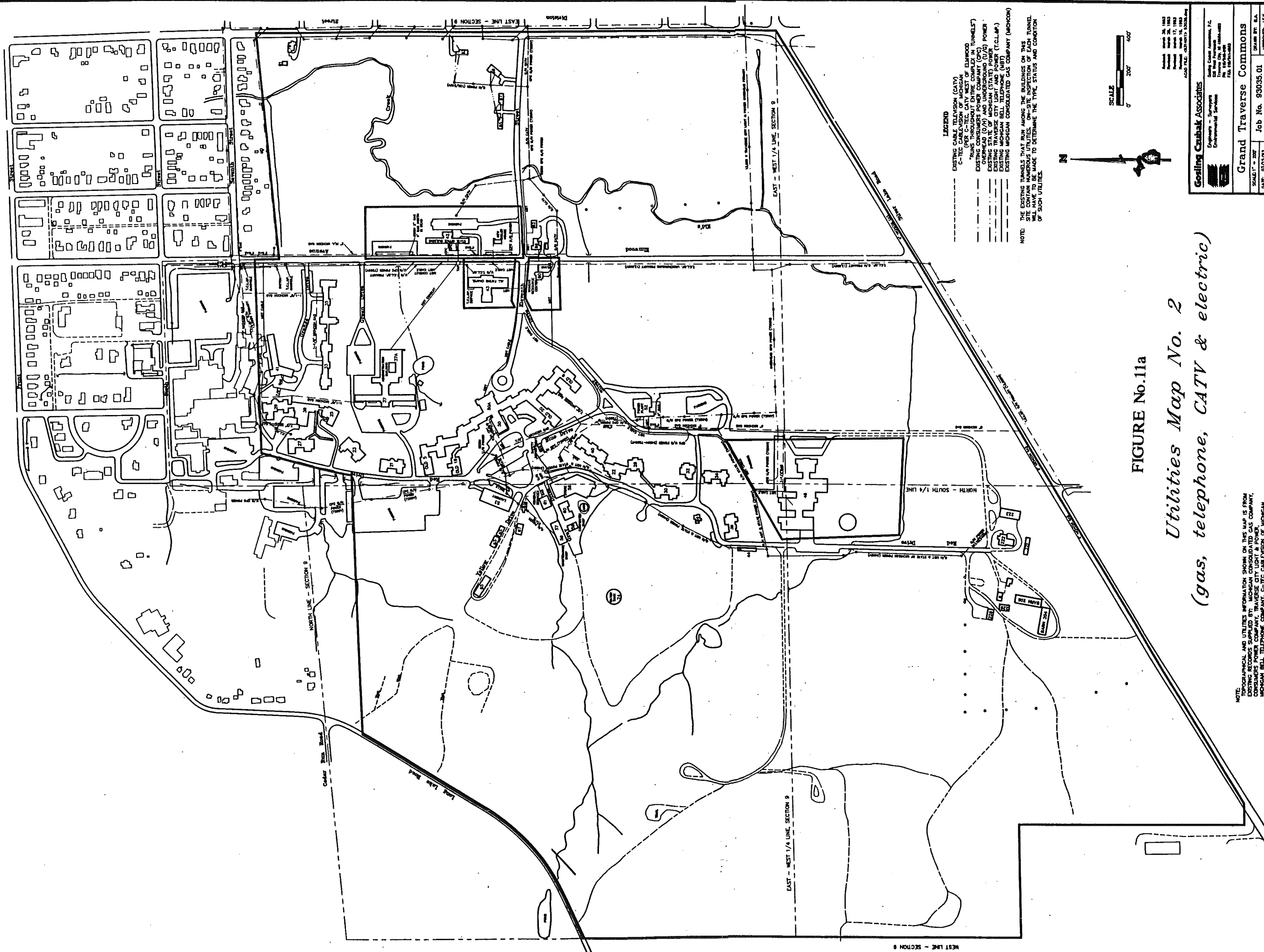


FIGURE No.11a
Utilities Map No. 2
(gas, telephone, CATV & electric)

NOTE: TOPOGRAPHICAL AND UTILITIES INFORMATION SHOWN ON THIS MAP IS FROM EXISTING RECORDS SUPPLIED BY: MICHIGAN CONSOLIDATED GAS COMPANY, MICHIGAN BELL TELEPHONE COMPANY, C-TEC CABLEVISION OF MICHIGAN, THE CITY OF TRAVERSE CITY AND TRAVERSE CITY STATE HOSPITAL ARCHIVES. BUILDINGS ARE FROM AN AIRPHOTO SURVEY MAP OF SEPTEMBER, 1971 WITH UNDATED BUILDING FOOTPRINTS. ACCURACY IS SUBJECT TO ACTUAL FIELD MEASUREMENTS.

Gosling Curbak Associates
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 Environmental Services
 1000 Grand Avenue, P.O.
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Grand Traverse Commons
 SCALE: 1" = 200'
 Job No. 93035.01
 DATE: 03/01/93
 PART OF SECTION 9, T34N, R14W, CITY OF TRAVERSE CITY
 GRAND TRAVERSE COUNTY, MICHIGAN
 Kid's Creek Development
 SHEET 1 of 1

inches in diameter. Manhole spacing is less than 300 feet. All buildings on the site are served by sanitary sewer except for the barn complex (Buildings 204 to 228) at the south end of the site. Waste water is discharged into the Traverse City sewage collection system at Seventh Street. The entire sanitary sewer system flows by gravity. There are no sewage pumping stations on the site. The sewers are buried in individual trenches. Because leaking sewers can be a health hazard and can release explosive concentrations of methane gas, no sewers are constructed in the tunnel system.

4. Water and Sewer Conditions

Most of the utility systems have been constructed or reconstructed within the last 40 to 60 years. The condition of the various utilities varies with the type and location of the particular systems. An in-depth study about the condition of the water and sewer system was not conducted as part of this initial planning effort. However, no notable problems about the sewer condition were discovered during the research and mapping phase of the planning.

In general, the water and sewer systems are typical of any comparable municipal area of similar age. That is, there are no known problems with the condition of the water and sewer system that would limit new development on the site or make it prohibitively expensive. However, the water supply to portions of the site is somewhat limited. Munson Medical Center currently experiences occasional low water flow. The cause of the low water flow is the limited size of the water pipes that supply the Commons site and adjacent property from Traverse City's distribution system. While the site contains some ten inch diameter mains, it is supplied by six inch mains in the City.

The City is aware of this problem and plans to construct a twelve inch water main along and near the east side of the Grand Traverse Commons Planned Redevelopment District. A portion of the project will be constructed in Elmwood Avenue from Eleventh Street to Munson Medical Center. According to representatives of the City's Engineering Department, construction is planned for 1994. Construction of this water main will substantially improve water distribution and pressure.

The precise capacity of the individual utility systems was not determined in this phase of the planning effort. However, the utility systems on this site served a hospital population of approximately 3,000 and a full staff when the Traverse City State Hospital was operated as a regional psychiatric hospital. Any proposed development of the site that does not exceed a similarly sized load should be adequately served by the existing sewer system. The capacity of the water system should be generally adequate except as previously noted. However, the capacity and location of the existing utilities should be given a site specific evaluation as each phase of any proposed development is designed. In particular, construction of new buildings in the medical campus will probably necessitate relocation of 1,500 to 2,000 feet of sanitary sewers.

5. Natural Gas

The natural gas system serving the Commons site is owned by Michigan Consolidated Gas Company (MichCon). The location of the distribution network is shown on Figure 11. The site is served by a six inch gas main from Silver Lake Road on the south, and two inch and four inch gas mains from the intersection of Elmwood Avenue and Seventh Street. The buildings on the site that are currently in use are typically served with natural gas for heat. The natural gas system replaced the central steam heating system that was in use when the Traverse City State Hospital was in operation.

MichCon reports that the natural gas system may require some additional distribution piping to serve new construction. However, the supply lines feeding the site will be adequate for the proposed development.

6. Electrical

The site is served by two electrical utilities. They are Traverse City Light & Power and Consumers Power Company. The location and the capacity of the various electrical cables on the site are shown on Figure 11. Electrical power from these utilities serves all of the buildings on the site. Like the natural gas system, the electrical distribution network may require modifications to accommodate individual phases or portions of the project. Additionally, the Adaptive Reuse Plan recommends that all utility lines be buried. In order to serve the campus, a district-wide infrastructure program will be established for the purpose of selecting the most efficient manner for providing electrical service to the Grand Traverse Commons Planned Redevelopment District.

7. Storm Sewer System

The site has a limited storm sewer system (Figure 10). The majority of the storm sewer system is in the northern portion of the developed area. The storm sewers in this area range in size from six inches to 36 inches. The smaller diameter pipes serve the northwestern portion of the site and function as individual storm sewer leads to catch basins. As shown on Figure 10, the pipe diameters get progressively larger to the east where they discharge to the wetlands adjacent to Kids Creek.

Storm sewers in the vicinity of Green Drive drain to the north central portion of the site in addition to the wetlands adjacent to Kids Creek. These storm sewers range in size of between six and 15 inches.

Other locations that have storm sewers are the Silver Drive area and the Traverse Bay Area Intermediate School District area. These storm sewers drain to the east and the wetlands adjacent to Kids Creek.

All of the existing storm sewers within the Grand Traverse Commons Planned Redevelopment District eventually discharge into the flood plain and wetlands

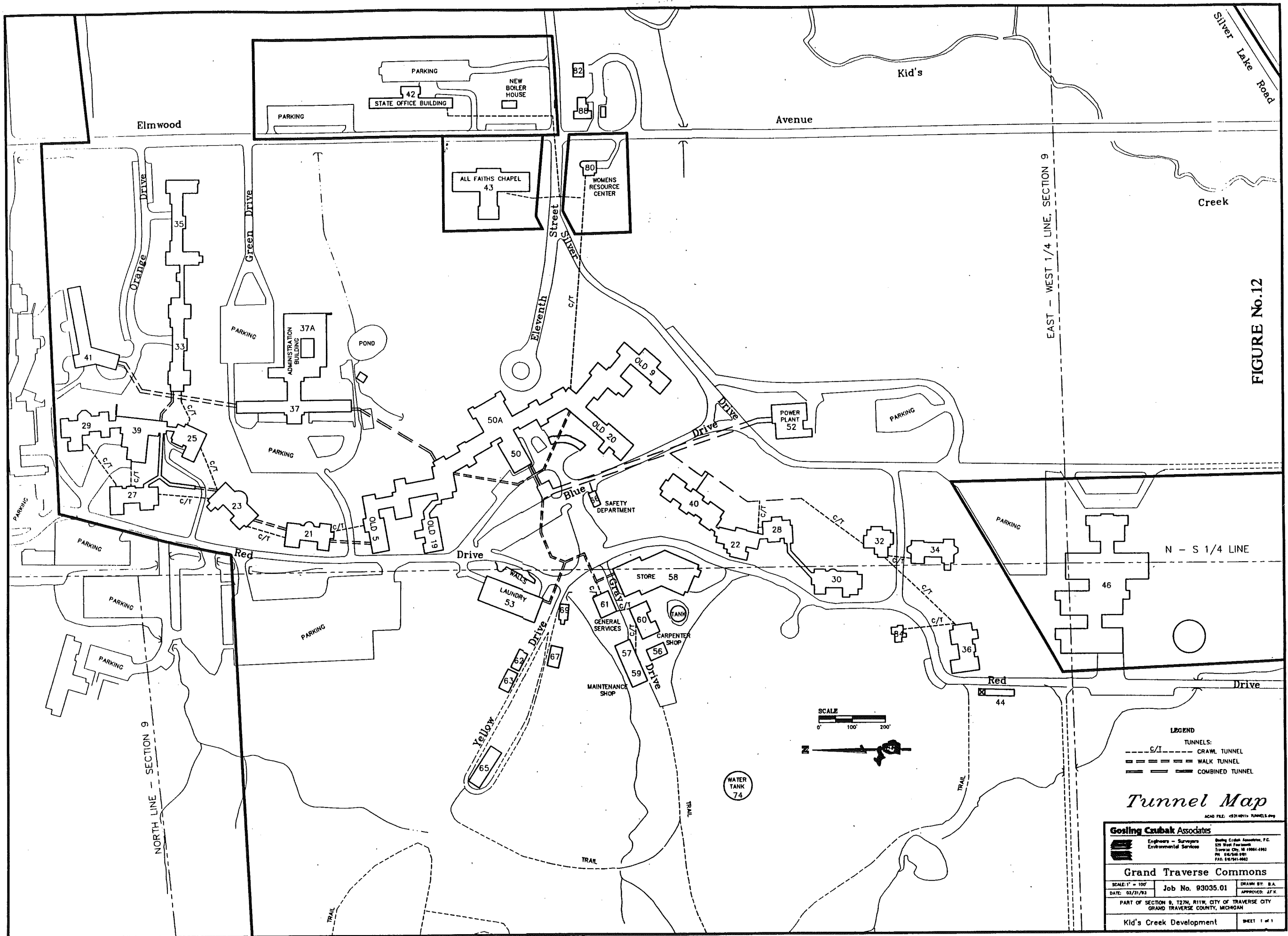


FIGURE No.12

adjacent to Kids Creek. Currently, there are not any stormwater retention, detention, and sedimentation basins on the Commons property. In view of current stormwater management planning, proper stormwater improvements shall be applied to the stormwater discharge before it enters Kids Creek, the flood plain, and/or the wetlands.

The capacity of the system is unknown but it seems to adequately serve the existing development. Except for road culverts, storm sewers only exist in areas of the site that are developed. Construction of new storm sewers and stormwater retention/detention facilities to serve any new development shall be included as part of the overall redevelopment project.

8. Tunnel System

The types of tunnels existing on the Commons property vary from location to location. The tunnel systems accommodate utility networks which connect most of the historically significant structures on the site. The services now abandoned, consisted of steam, domestic water, electrical and data cables.

The tunnel system also supported a comprehensive movement system which allowed the circulation of both pedestrian and materials from building to building. There are three types of tunnels which are identified on Figure 12 which include crawl tunnels, walking tunnels, and combined tunnels. The crawl tunnels were constructed to house utilities. The combined tunnel is located between the former power plant (building 52) and Building 50. There are walking tunnels between the following buildings: 50, 53, 58, 50, 37, 33, 41, and between 21, 23, 39 and 25, 27, 29 which, at one time, connected to Munson Hospital. There are crawl tunnels between buildings 50, 53, 58, 50, 37, 28, 32, 34, 36, 84, 80, 43 and 42. Most of the tunnels surveyed appeared to be reusable for both pedestrian circulation and new utility service required by the development.

From a development standpoint, the existing tunnels can provide an excellent means of pedestrian circulation, particularly during poor weather. The incorporation of the tunnel system into the movement system will involve modifications in order to meet applicable regulations as well as the planning objectives of this District Plan.

G. Vehicular Access

The Grand Traverse Commons Planned Redevelopment District is bordered by state highway US-31/M-37 on the east, West Silver Lake Road on the south, and North Long Lake Road on a portion of the west boundary (Figure 13). Access to the site is principally from US-31/M-37, a major, four-lane state highway which is one of the most heavily travelled roads in the Traverse City area.

Access to the site from the east is via Eleventh Street. Eleventh Street has a paved width that is adequate for two traffic lanes and one lane of parking.

~~City now provides maintenance for Eleventh Street. Eleventh Street has a paved width~~

~~that is adequate for two traffic lanes and one lane of parking.~~

Traffic can access the site from the north via Elmwood Avenue. The City of Traverse City maintains a right-of-way easement for Elmwood Avenue. The paved width of Elmwood Avenue north of Eleventh Street includes two traffic and two parking lanes. This northern access requires vehicles to travel through residential areas and allows traffic to traverse the Grand Traverse Commons Planned Redevelopment District.

West Silver Lake Road is owned and maintained by the Grand Traverse County Road Commission. It is also a major highway in the area and is four lanes wide. Many years ago a gravel road to the site was constructed from Silver Lake Road through the wetlands in the southeast portion of the site and aligned with Elmwood Avenue. The road is unusable for a portion every year. Its condition is poor and the City of Traverse City closes it periodically. Removal of this road is recommended.

There is no access to the site from North Long Lake Road. Construction of a road from the site to North Long Lake Road is proposed. This road would help to alleviate existing traffic problems associated with Munson Medical Center in the residential areas surrounding the site. Additionally, there is no southern access from Silver Lake Road. Construction of a south access is proposed to service the Traverse Bay Area Intermediate School District facility. As part of the transfer of the property to the Grand Traverse Commons Redevelopment Corporation, the State of Michigan required an easement for this southern access.

Other roads on the site are paved and are typically two lanes wide. They are part of the site's access roads and are not maintained by the City of Traverse City. Pavement condition is generally fair. New development will require the construction of roads and parking to serve the new facilities from the existing on-site network of roads. Portions of the existing roads will be resurfaced as part of the road and parking lot construction associated with new construction. A more detailed analysis of existing conditions is included in the Traffic Study in the Appendix. In addition to the road network, the Grand Traverse Commons Planned Redevelopment District contains a system of pedestrian sidewalks connecting the site buildings and trail paths through the natural areas.

IV. DISTRICT PLAN

This District Plan for the Grand Traverse Commons Planned Redevelopment District reflects the goals and objectives of the *Adaptive Reuse Feasibility Plan for the Traverse City State Hospital* and the development guidelines of the *Grand Traverse Commons Public Act 250 Development Plan Amendment (DP-93-1)*. This District Plan is the realization of the control mechanism initiated in DP-93-1 which is being implemented through the planned development zoning process to ensure that redevelopment is undertaken in a coordinated and comprehensive manner given the complexity and scale of the redevelopment project and its location within two municipal jurisdictions. The approval of this District Plan and accompanying planned development application will result in the rezoning of the Grand Traverse Commons property as a Planned Redevelopment District.

Consistent with the goals of the Adaptive Reuse Plan and DP-93-1, this District Plan comprehensively addresses preservation of the historic character of the Grand Traverse Commons, preservation and rehabilitation of the significant historic structures on the Grand Traverse Commons, conservation and enhancement of open space, conversion of the vacated State of Michigan mental health institution into a senior retirement community, development of a medical campus, retention of a community services area, development of a community recreation area, roadway and circulation systems, utility and infrastructure systems, district-wide traffic mitigation, district-wide stormwater management, interim site uses, and long-term uses. This rehabilitation will preserve the historical character and function of the site while addressing the larger community concerns of accessibility to and conservation of open space, and minimizing the redevelopment impact in adjacent neighborhoods through the development of comprehensive traffic management plans and stormwater controls. In this regard, this District Plan addresses the fundamental principles of the Adaptive Reuse Plan and DP-93-1.

This District Plan represents a multi-phase redevelopment project with a 20-year life span which will be implemented in integrated segments. Market demand and community-based needs will dictate the progress of development. This District Plan contemplates not only long-term uses but also interim uses to promote the active use of buildings in an effort to preserve the structures until the development of end uses is achieved.

A. Future Comprehensive Site Development

The overall purpose of this District Plan is to restore the original vision of the Traverse City State Hospital which achieved a pastoral harmony of buildings and landscape while fostering the therapeutic value of nature in the treatment of the infirm, for modern uses appropriate for the area, and to ensure that the pastoral setting is preserved. In support of this purpose, this District Plan focuses on the rehabilitation and conversion of the significant historic structures on the Grand Traverse Commons, in combination with new construction, into a senior residential environment arranged in a park-like setting encompassing the natural systems, the arboretum, and the front lawn. The residential environment anticipated to be developed is based on the concept of a continuum of care which includes the provision of a variety of living options ranging from independent living to complete care.

1. Overview of New Development

This District Plan supports the primary concepts outlined in the Adaptive Reuse Plan and the policy statements and development guidelines reflected in DP-93-1. The following is a list of the primary goals of the Adaptive Reuse Plan.

- a. The "campus-like" pastoral and historical character of the site shall be maintained.
- b. The existing [historic] structures shall be reused whenever economically and physically possible.
- c. New development shall be located such that minimum impact will occur on the visual character and environmentally sensitive areas of the site.
- d. The proposed land uses shall be compatible with the adjacent land uses.
- e. The proposed uses must be economically viable and meet the market demands of the community.

These concepts are reinforced as policy statements and development guidelines in DP-93-1. The new development proposed in this District Plan is in conformance with these restrictions.

Primary Concept 1

The "campus-like" pastoral and historical character of the site shall be maintained.

This goal of the Adaptive Reuse Plan is reflected in the policy statements of DP-93-1 which emphasize the preservation and enhancement of the Grand Traverse Commons' natural environment and historic setting. The development guidelines reflected in DP-93-1 dictate that redevelopment of the Commons should enhance open spaces, the historic front lawn, and the arboretum; and maintain the historic integrity of the site in accordance with the Secretary of the Interior's Standards for Rehabilitation. (Refer to Figure 16 for location of front lawn.) Redevelopment should emphasize the preservation and restoration of the historic district structures. The development guidelines in DP-93-1 also stress the removal of structures which do not contribute to the site's historic or architectural character or are in conflict with the enhancement of the lawn area and the preservation of the conservation areas.

This District Plan addresses these goals, policies, and guidelines in the following manner:

- control of new development growth in relation to the front lawn,
- demolition of existing structures placed in the front lawn in order to

Medical Campus
Development Zone

West Access road
Improvement Zone

Central Commercial
& Residential Core
Development Zone

Mixed Use / Production
Development Zone

Note: C.C.R.C. was previously short for
Continuum of Care Retirement Center.
The definition of C.C.R.C. is amended to
Central Commercial and Residential Core
to reflect the amended land uses on the site

Medical Campus
Development Zones

North Cottages
Improvement Zone

Community Services
Improvement Zone

South Cottages
Development Zone

TBA Improvement Zone

South Access
Improvement Zone

Farms Area
Development Zone

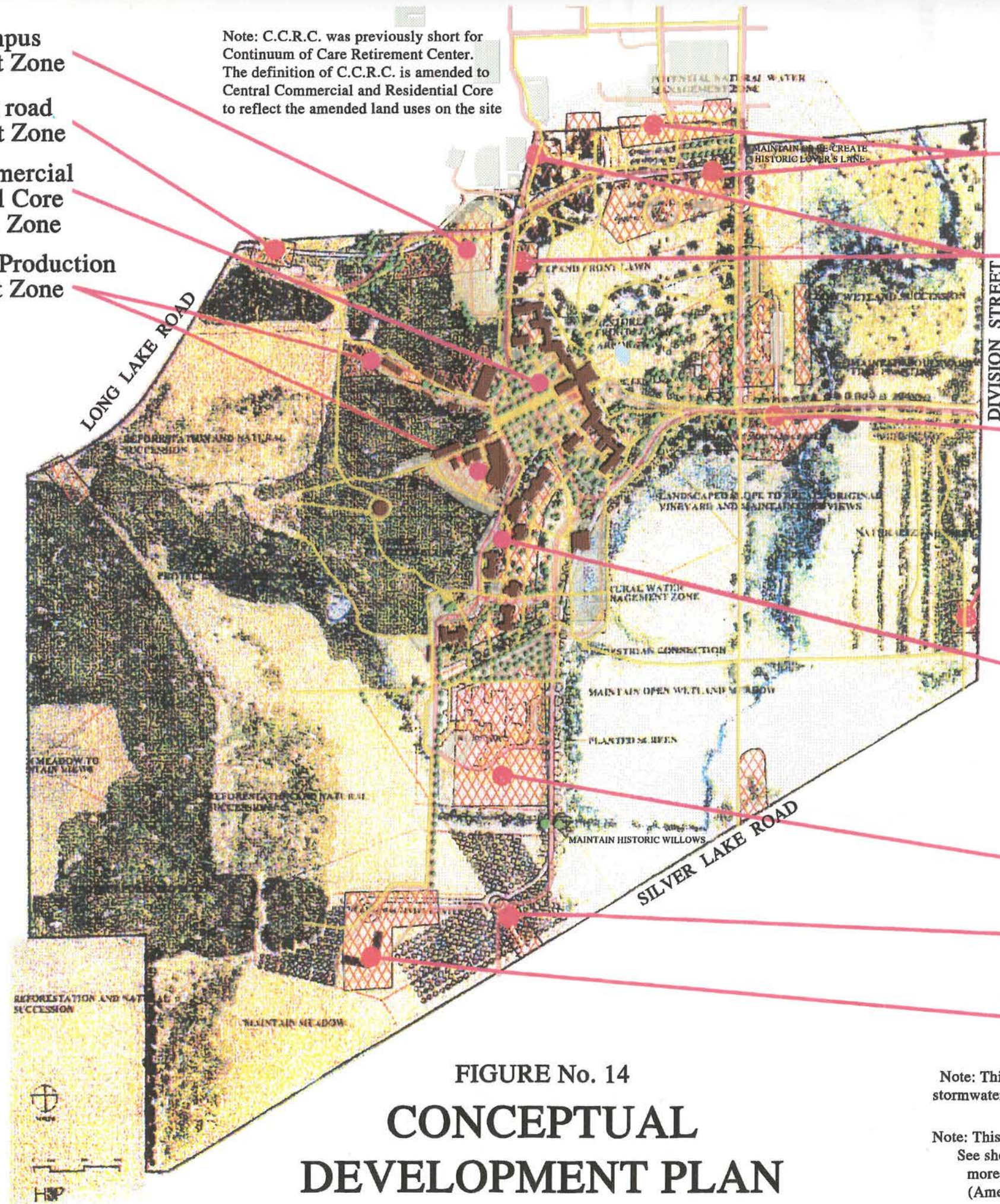


FIGURE No. 14
**CONCEPTUAL
DEVELOPMENT PLAN**

Note: This figure will be revised to correspond to the
stormwater management diagram on Page 56, Sheet 1.1

Note: This figure is conceptual only.
See sheets <Subarea #.1> for
more specific information
(Amended May 15, 2003)

return the area to green space,

- rehabilitation of the significant historic structures: Building 50, the north and south cottages, the barns (Buildings 204 and 206), and Building 88,
- development of a continuous open space/trail system which connects all outdoor spaces with minimum interruption from vehicular traffic, and
- implementation of a traffic management plan that routes the majority of traffic to a system of destination spokes throughout the Commons Planned Redevelopment District that prevents traffic from crossing through the campus, and enhances the pedestrian experience.

Primary Concept 2

The existing [historic] structures shall be reused whenever economically and physically possible.

DP-93-1 reinforces this goal of the Adaptive Reuse Plan by emphasizing the preservation and restoration of the Commons historic district. The development guidelines of DP-93-1 stress that redevelopment should center on the rehabilitation and renovation of the Commons historic district. Further emphasis is placed on the rehabilitation of the historic district structures, unless rehabilitation of a specific structure is economically infeasible, which include the following: 1) the rehabilitation of northern cottages (21, 23, 25, 27, and 29) in compliance with the goals of the medical campus, and 2) the rehabilitation of Building 50 and the areas surrounding Building 50 into a continuing care retirement community.

This District Plan addresses these goals, policies, and guidelines, and supports the recommendation of the Michigan Bureau of History to expand the boundaries of the existing historic district. A comprehensive retirement community is proposed for the Grand Traverse Commons Planned Redevelopment District through the rehabilitation of the existing historic structures. This includes Building 50 and the south cottages 28, 30, 32, 34, and 36. An important planning component of this retirement community is the development of a village center to the west of Building 50 which will include activity areas as well as housing for independent living. The cottages located north of Building 50, which include Buildings 21, 23, 25, 27, and 29 are reserved for rehabilitation for medical and medical related functions.

Primary Concept 3

New development shall be located such that minimum impact will occur on the visual character and environmentally sensitive areas of the site.

DP-93-1 reflects this Adaptive Reuse Plan goal by prescribing the enhancement of the visual character and the protection of environmentally sensitive areas to

ensure that they are not compromised through redevelopment. DP-93-1 further emphasizes that redevelopment must not negatively impact open spaces, the arboretum, and natural areas; and recommends the concentration of higher density development in the northern portion of the Commons with limitations on total density based on present and historical density.

These goals, policies, and guidelines are addressed in this District Plan in the following manner:

- limitations on the total impervious surface area allowable within the Grand Traverse Commons Planned Redevelopment District,
- concentration of intensity of development in the northern portion of the Grand Traverse Commons Planned Redevelopment District in the medical campus, north of the defined edges of the front lawn,
- concentration of new development to areas that have had building or development which has changed the character of the original site,
- preservation of over 300 acres of conservation area beyond the area preserved as the front lawn, and
- development and implementation of a conservation and stormwater management plan.

Primary Concept 4

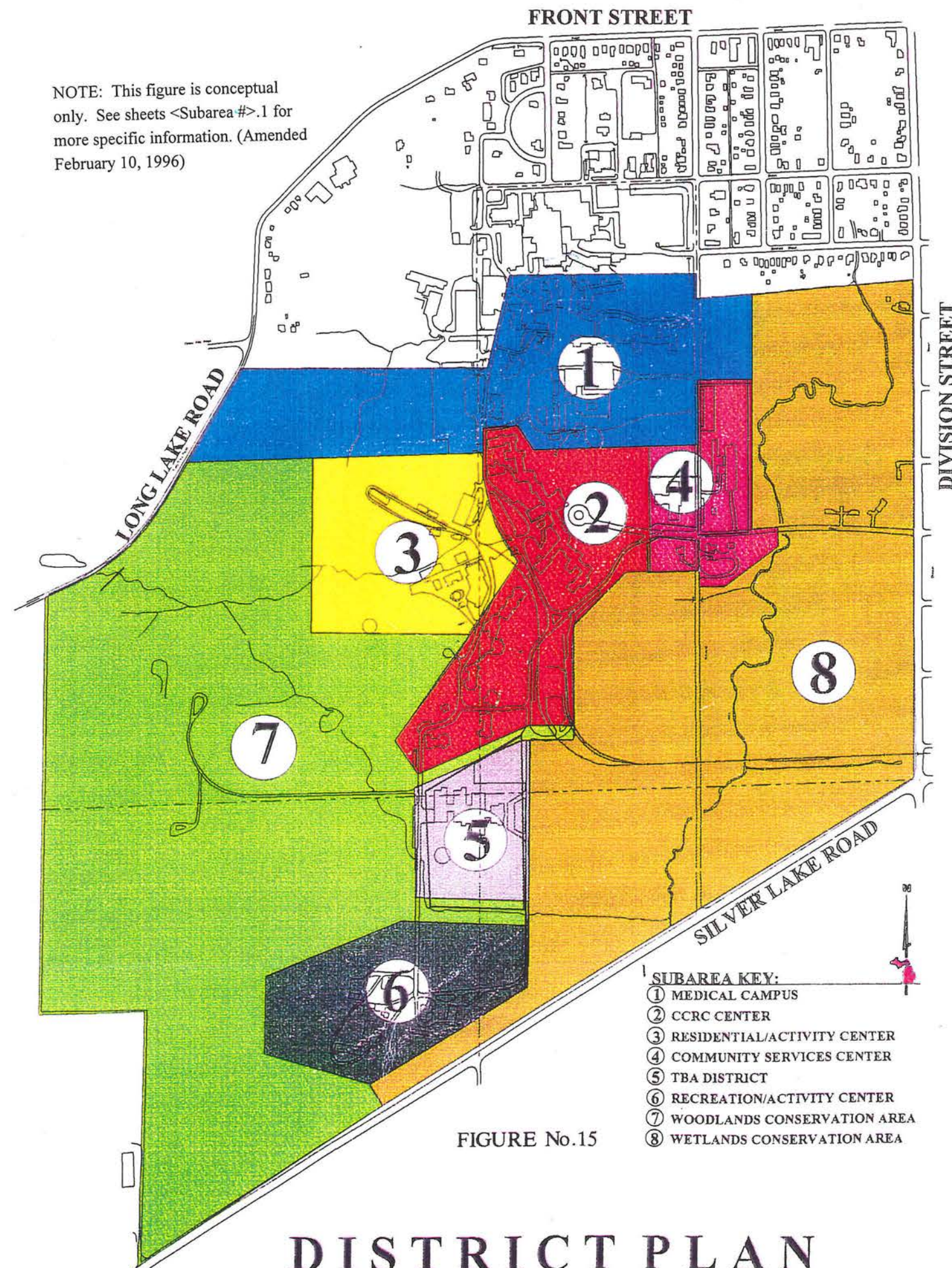
The proposed land uses shall be compatible with the adjacent land uses.

This goal of the Adaptive Reuse Plan is reflected in DP-93-1 which dictates that redevelopment of the Commons be compatible with the adjacent areas. DP-93-1 specifically calls for the northern portion of the Commons to be used as a medical campus that is responsive to the expansion needs of Munson Medical Center and the Grand Traverse Medical Care Facility.

These goals, policies, and guidelines are addressed in this District Plan in the following manner:

- development of a medical campus which allows for the expansion of Munson Medical Center as well as the Grand Traverse Medical Care Facility,
- conservation of open space and natural areas that are open to the community, and are protected from segmentation by vehicular traffic,
- retention of existing community and educational services provided within the Commons Planned Redevelopment District, and

NOTE: This figure is conceptual only. See sheets <Subarea #>.1 for more specific information. (Amended February 10, 1996)



- development of a recreation and activity center which is open for community use.

Primary Concept 5

The proposed uses must be economically viable and meet the market demands of the community.

This goal of the Adaptive Reuse Plan is addressed in DP-93-1 through the establishment of a means to support and financially assist in rehabilitation of historic structures and conservation of open areas through a development rights transfer formula by concentrating density within the Commons to create a critical mass for the attraction of investment capital.

The continuing care retirement community consisting of Building 50, the south cottages, and the village center creates a critical mass for a financially sound retirement community. The adjacent medical campus development which is anticipated to include a skilled nursing care facility and ancillary uses with the possibility of direct connection via the tunnels to the CCRC strengthens the market for the overall retirement community. Adjacency to Munson Medical Center, the primary regional hospital in the northern lower peninsula of Michigan, and the conservation areas also supports this market.

This District Plan for the Grand Traverse Commons Planned Redevelopment District is organized into eight subareas that will be comprised of similar uses in each subarea that are compatible with the uses in the district as a whole. The Commons Planned Redevelopment District shall be planned and implemented accordingly.

2. Subarea Descriptions

Redevelopment of the Grand Traverse Commons Planned Redevelopment District is functionally divided into the following eight integrated subareas. The boundaries of these subareas are depicted in Figure 15.

Subarea 1: Medical Campus

The Medical Campus Subarea is located on approximately 50 acres in the northern portion of the Grand Traverse Commons Planned Redevelopment District, adjacent to the Grand Traverse Medical Care Facility and Munson Medical Center property to the north. The development plan for the Medical Campus calls for new construction, the rehabilitation of the northern cottages (Buildings 21, 23, 25, 27, and 29), and the rehabilitation and enhancement of the front lawn while reincorporating the front lawn into a care-giving environment. Accommodation of this development program requires the removal of the existing buildings which are not functionally or economically feasible for rehabilitation for medical-oriented uses. These structures include 33, 35, 37, 37a, 39, and 41.

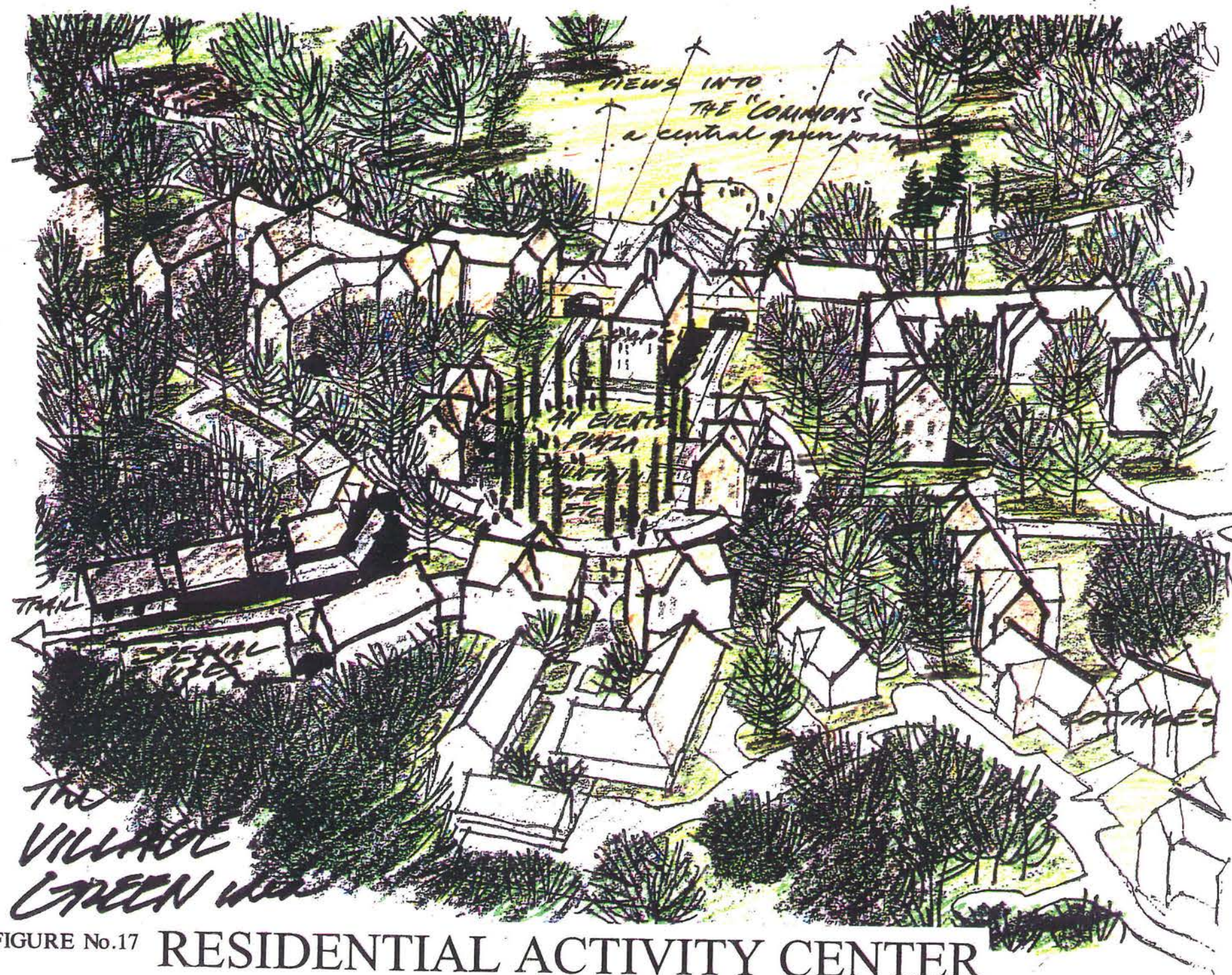


FIGURE No.17 RESIDENTIAL ACTIVITY CENTER
SUBAREA 3

Three development parcels comprise the areas in which new development will be allowed within the Medical Campus. Two of the development parcels are planned directly north and south of a redesigned Orange Drive. The parcel north of the new Orange Drive will accommodate new construction of medical office and associated parking. The area south of the new Orange Drive is reserved for medical and/or medically related facilities including a skilled nursing care facility, a daycare center, a research and treatment center, and associated parking.

A new west access serving the Medical Campus from North Long Lake Road will become the primary ingress and egress for the Medical Campus as well as employee parking areas serving Munson Medical Center. The third development parcel is situated parallel to the west access road generally in the area currently known as "Lot K", and is planned to accommodate new construction consisting of medical offices and parking. The third development parcel is geographically larger than the area comprising Lot K. In addition, there is some developable area along the westerly portion of the West Access Road parcel. District Plan Amendment #1, February 10, 1996.

The rationale supporting the construction of a west access road is based on the long-standing desire of the adjacent communities to redirect Munson's employee traffic away from the adjacent neighborhoods. The redevelopment of the Grand Traverse Commons Planned Redevelopment District makes this a possible solution given the availability of suitable land to accommodate the necessary right-of-way dimensions.

In addition to new construction, the historic cottages 27 and 29 are planned for rehabilitation for medically related uses while cottages 21, 23, and 25 are planned for rehabilitation for both medically related and assisted living uses, provided that rehabilitation is economically feasible.

The major steps in rehabilitating the historic front lawn are the demolition and removal of Buildings 37 and 37a and their associated roadwork and parking lots, and the reincorporation of the lawn's original purpose: providing access to open space to the residents in need of care.

Subarea 2: Continuing Care Retirement Community (CCRC)

Subarea 2 encompasses approximately 35 acres of the Grand Traverse Commons Planned Redevelopment District. It represents the center piece of the entire redevelopment project through the rehabilitation of the former Traverse City State Hospital (Building 50) and its associated south cottages (Buildings 24, 26, 28, 30, 32, and 40) into a continuing care retirement center.

In order to support the level of capital improvements necessary to implement the redevelopment of the Grand Traverse Commons Planned Redevelopment District, new independent housing is anticipated to be developed within this subarea as well as ancillary commercial uses. As contemplated, new development will complement Building 50 and the south cottages, fostering a village-type environment which has as its center piece the traditional "town square" design (Figure 17). Ancillary commercial uses including lodging and hospitality house

uses will be encouraged.

The historic lawn in front of Building 50 as well as the opens space areas in front of the south cottages will be preserved and enhanced. Critical to the rehabilitation of Building 50 and the south cottages is the demolition of the former power plant (Building 52) and the development of a stormwater retention area in its place which will be designed to enhance the natural landscape.

Subarea 3: Residential/Activity Center

This subarea, which encompasses approximately 26 acres, is located directly behind the CCRC in the area of the former support buildings for the Traverse City State Hospital which include Buildings 53, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, and 69. The placement of these support buildings disrupted the original land condition. Where economically feasible support buildings with historic significance will be retained, rehabilitated, and incorporated into the new uses.

In order to support the level of capital improvements necessary to implement the redevelopment of the Grand Traverse Commons Planned Redevelopment District, the development of new independent senior housing, a community activity center, and ancillary commercial development, including lodging and hospitality house uses, for the convenience of the site users as well as those community residents who are using the adjacent open space trails is contemplated for this subarea.

New development will conform and respect the topographic features within this subarea. The development parcels planned for this subarea are divided by large areas of open space. A central open space corridor will integrate the development parcels and enhance the existing stream.

Subarea 4: Community Services Center

This subarea, which includes approximately 15 acres, will retain its present function as a community services center. Existing community services located within All Faiths Chapel, the Women's Resource Center (Building 80), and the State Office Building and its contingent parking lots will continue as part of the redevelopment project. It is contemplated that Buildings 82 and 88 will be rehabilitated to house community and site support services.

New development within this subarea will be limited to the construction and reorganization of existing parking areas. It is anticipated that parking for these users will be reorganized.

This subarea provides one point of community access to the adjacent open space areas which include the historic front lawn and arboretum as well as the wetlands conservation area. Ultimately, to enhance the open space connections between the adjacent subareas, the parking lot located north of the State Office Building should be moved south as part of the reconfiguration of the State's parking areas. This will allow for the complete closure of Elmwood Avenue in the vicinity of

the State Office Building's northern parking lot resulting in a continuous green connection between the Medical Campus, Community Services, and Wetlands Conservation Subareas.

Subarea 5: Traverse Bay Area Intermediate School District Property

The Traverse Bay Area Intermediate School District will remain in this location and continue its present education-oriented functions. New development will consist of the continued renovation of the existing facility to construct a conference center, and the reorganization of parking.

Access to this subarea will be provided by a new south access off of Silver Lake Road which will be located in the vicinity of Franke Road. A traffic control circle will be provided at the northern parking lot entrance to limit traffic through the Grand Traverse Commons Planned Redevelopment District. Landscape screening is planned in and along the edges of this subarea reminiscent of the historic agrarian character which dominated the landscape of the original Traverse City State Hospital property.

Subarea 6: Recreation/Activity Center

This subarea, which constitutes nearly 24 acres, is located in the historic farm area. Of the historic farm buildings, the barns (Buildings 204 and 206) are significant and will remain. New uses for this area will include recreational activities in the form of trail system access, group outdoor assembly, and outdoor recreation support. Other uses such as low-intensity administration offices and community programs are also contemplated.

In order to support the level of capital improvements necessary to implement the redevelopment of the Grand Traverse Commons Planned Redevelopment District and community-based programs, new development accommodating the previously described uses for this subarea is envisioned. New development will conform and respect the topographic and natural features within this subarea.

To support these activities, this subarea will be served by the new south access off of Silver Lake Road, and new roadways into this subarea will be constructed which will include traffic loops for the controlled dispersion of traffic.

Subarea 7: Woodlands Conservation Area

This subarea encompasses the wooded hills and bluffs which dominate the western portion of the Grand Traverse Commons Planned Redevelopment District, and includes approximately 169 acres. Passive recreational uses which include a network of trails, interpretive facilities, educational activities, community garden plots, and picnic areas will be developed or enhanced, and allowed within this subarea. To support these activities, a trail head located off of Long Lake Road may be developed. To avoid vehicular conflicts with the trail system by separating pedestrian and vehicular movements, land bridges may connect this

Although the Grand Traverse Commons Planned Redevelopment District is organized into subareas for planning purposes, the open space will appear as a unified system which will transcend the subarea boundaries. Open space within

the Grand Traverse Commons Planned Redevelopment District will be organized into zones.

Medical Campus Landscape Zones

The Medical Campus includes a variety of open space and landscape zones, but generally reflects the extension of the historic landscape of broad lawns and large trees as typified by the open space areas surrounding Building 50 (Figure 18). The landscape areas within the Medical Campus decrease in scale and become more detailed as they relate more closely to the buildings and roadways. The open space and landscape zones within the Medical Campus include the following: Building Landscape Zone, Landscape Transition Zone, and Circulation Corridor Landscape Zone.

- Building Landscape Zone

The Building Landscape Zone is the immediate setting of individual buildings, and includes building entrances, front treatments, side yards, gardens, and courtyards. Plantings within this zone can be quite detailed. Shrubs and flowers are important to this zone.

- Landscape Transition Zone

The Landscape Transition Zone is the space between the buildings and the historic front lawn where the change from the building landscapes to the broad park character is accomplished. The goal for the treatment of this zone is appropriate furnishing of the building settings while simplifying the landscape as it progresses back to the historic landscape.

- Circulation Corridor Landscape Zone

The Circulation Corridor Landscape Zone continues the treatment of the main roads throughout the Grand Traverse Commons Planned Redevelopment District along the Medical Campus roadways. Treatment will include large trees, lights, walks, and other standard elements. Parking buffer treatments will be used along all parking edges with large plantings serving as buffers. The historic Lovers Lane is a special situation which serves as an organizing element for new development within the Medical Campus.

Historic Landscape Zone

The Historic Landscape Zone generally encompasses the historic front lawn, Building 50, and the south cottages (Figure 20). The landscape quality in this zone shall adhere to the original Victorian character of the broad open lawns and

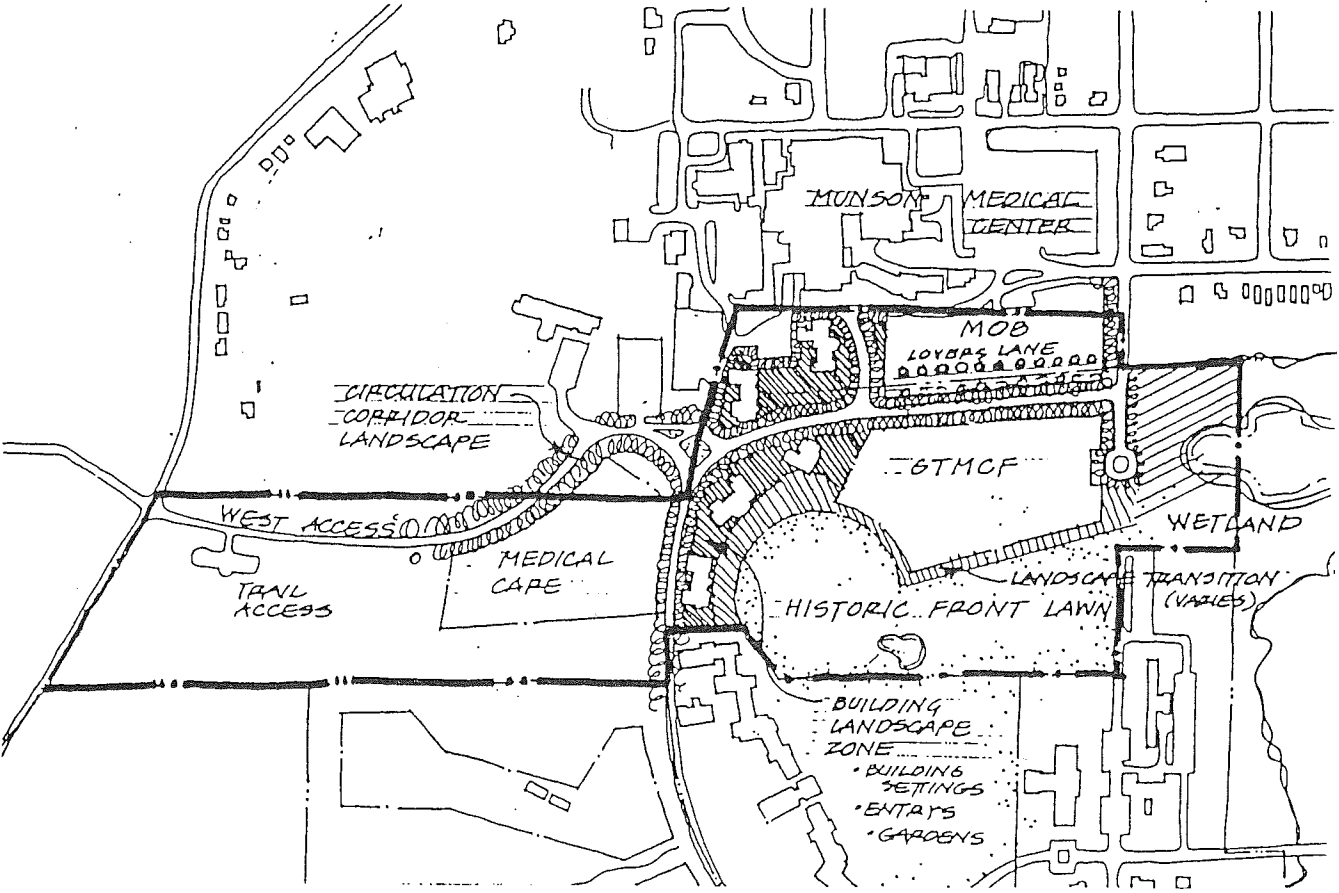


FIGURE No.18

Note: In the final document, this figure will be revised to correspond to the stormwater management diagram reflected on Page 56, Sheet 1.1.

NOTE: This figure is conceptual only. See sheets <Subarea #>.1 for more specific information. (Amended February 10, 1996)



11TH ST
TOWARDS SOUTH

VILLAGE GARDEN

AUTO APPROACH TO VILLAGE
FIRE LANE & PEDESTRIAN
PROMENADE
AT TURN IN 11TH ST
APPROACH DRIVE

FIGURE No.19

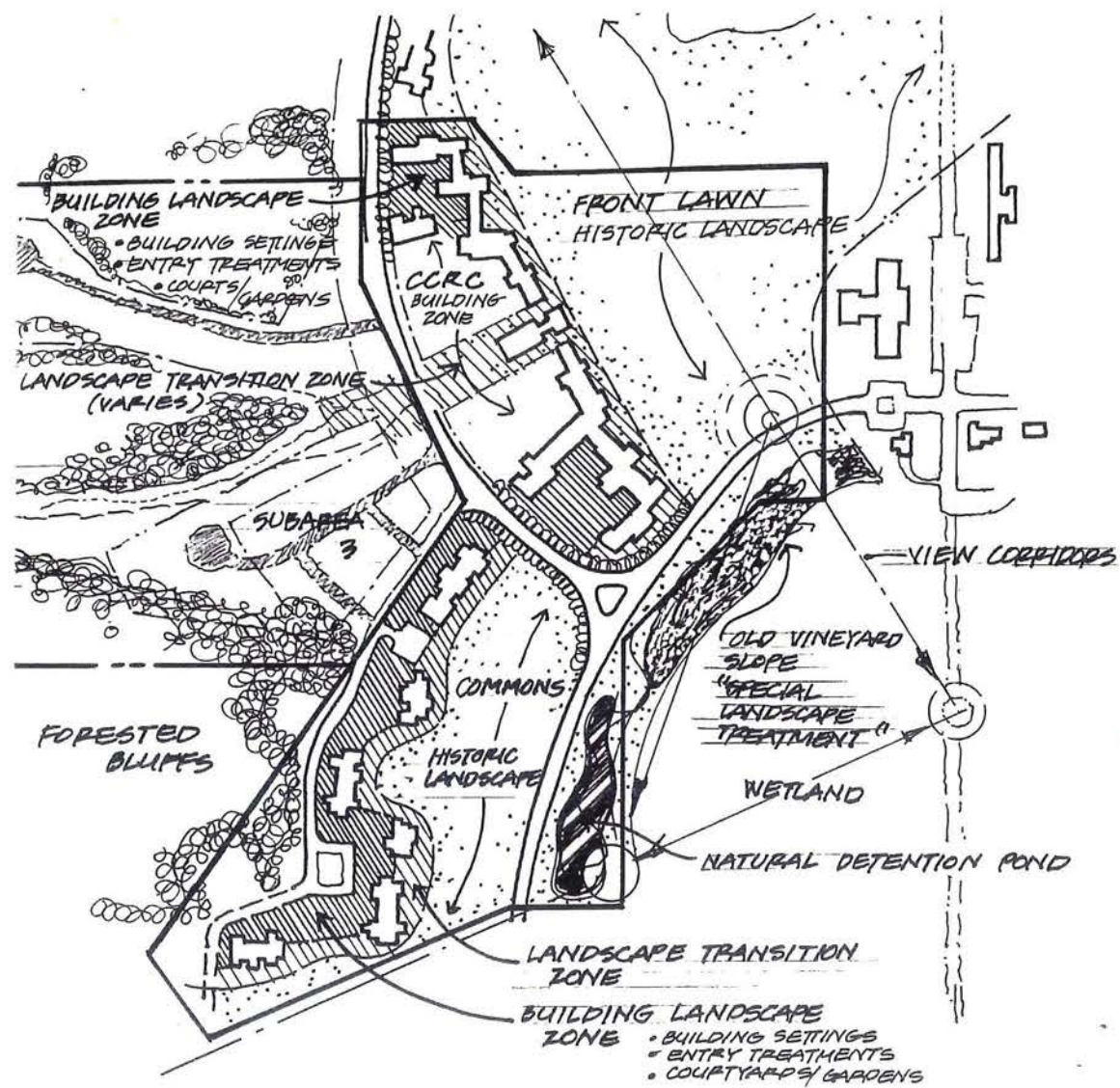


FIGURE No.20



POTENTIAL FOR POND, WATER, MUSIC FEATURE IN THE COMMONS.
FIGURE No.21

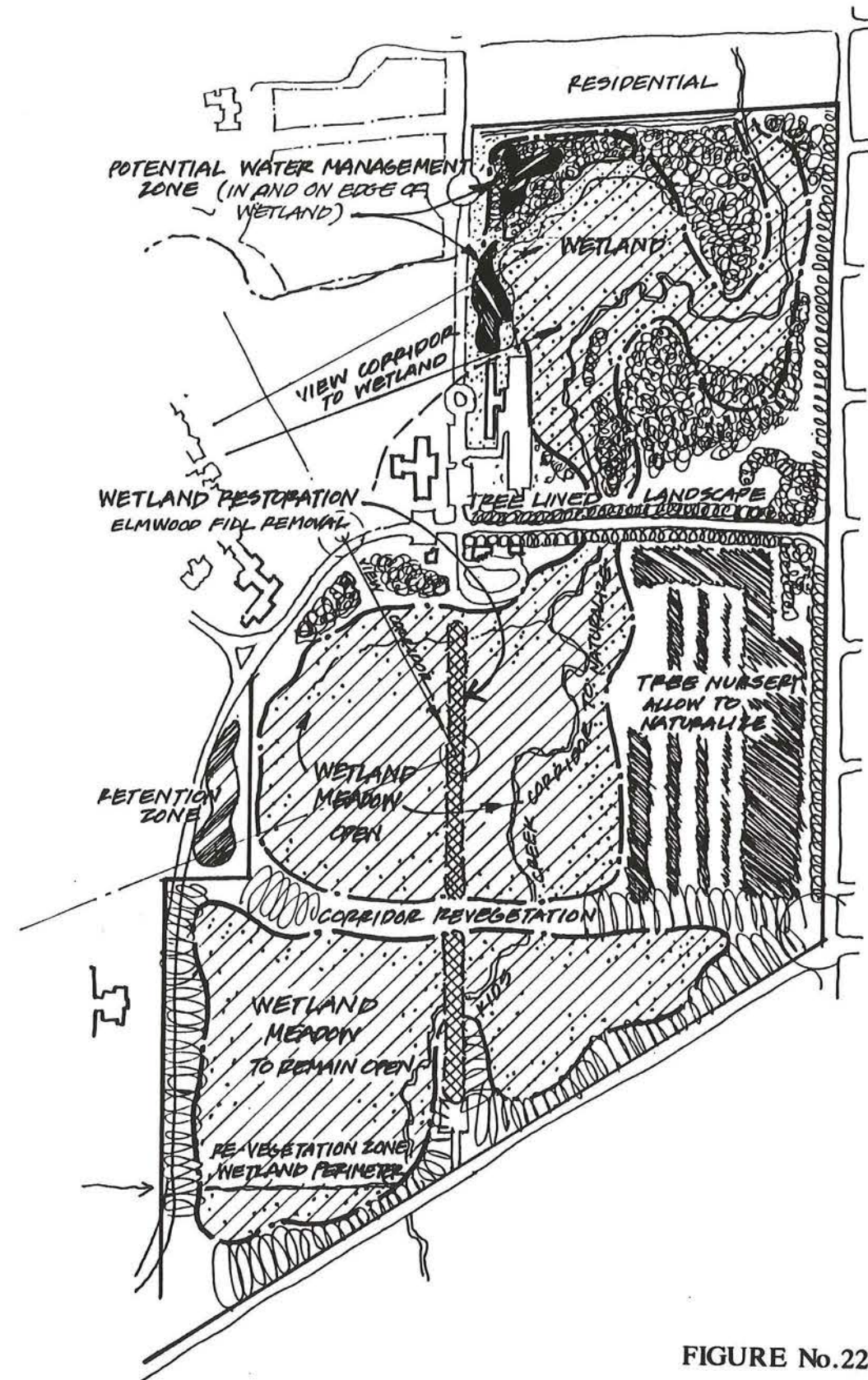


FIGURE No.22

large trees. The park-like setting of the front lawn and arboretum is the main image landscape of the entire redevelopment project, and serves as the front setting for all of the major historic buildings. Elaboration of the landscape theme shall occur only in the immediate area of the buildings, where the lawn evolves into specific settings of building entrances, gardens, courtyards, and other outdoor uses. Landscape detail and the richness of planting increases with the decrease in the size of landscape space and intensity of use. Connections to other landscape zones within the Grand Traverse Commons Planned Redevelopment District are important and may be realized through such devices as controlled lines of view into natural areas and long prospects out to the community and the Grand Traverse Bay. Other linkages may be accommodated in the form of pedestrian routes and the judicious placement of special landscape features such as garden shelters, gazebos, and gathering places.

Wetland Landscape Zone

The wetlands occupy most of the eastern portion of the Grand Traverse Commons Planned Redevelopment District, and are traversed by Kids Creek which meanders through the wooded wetlands in the north and across broad open spaces in the south (Figure 22). Several landscape treatments are proposed for this zone with the goal of restoring degraded areas to more natural conditions. Removal of fill may occur in several places to eliminate sections of existing roadway and filled wetlands edges. Areas may be excavated and reshaped to create limited zones of open water for stormwater retention and wildlife habitat. Revegetation along the wetlands perimeter is important, and can be accomplished both through management practices and installation of new planting. Removal of non-native plant species in the main area of the wetlands may be part of the management program, and existing zones of old nursery trees on the eastern property edge may be modified to incorporate the area into the pedestrian trail system. Selective thinning in certain areas may be undertaken to enhance views from the development areas into the natural areas, and the views from the Main Building will open out onto broad expanses of the wetlands.

Recreation, TBA, and Woodlands Landscape Zones

The Recreation, School District, and Woodlands Landscape Zones correspond to the Recreation/Activity, Traverse Bay Area Intermediate School District, and Woodlands Conservation Subareas (Figure 24). These areas abut each other at the southern end of the Grand Traverse Commons Planned Redevelopment District, and are flanked by wooded hills to the west and low wetlands to the east. The farm image will be retained within the Recreation Landscape Zone, and will be reflected in the treatment of the south access to the Commons using such elements as farm fencing and orchard plantings. Visitor parking areas, new structures, enclosures and plantings will enhance the farm image. All buildings and landscape treatments will be simple, and scaled to express an agricultural setting.



FIGURE No.23

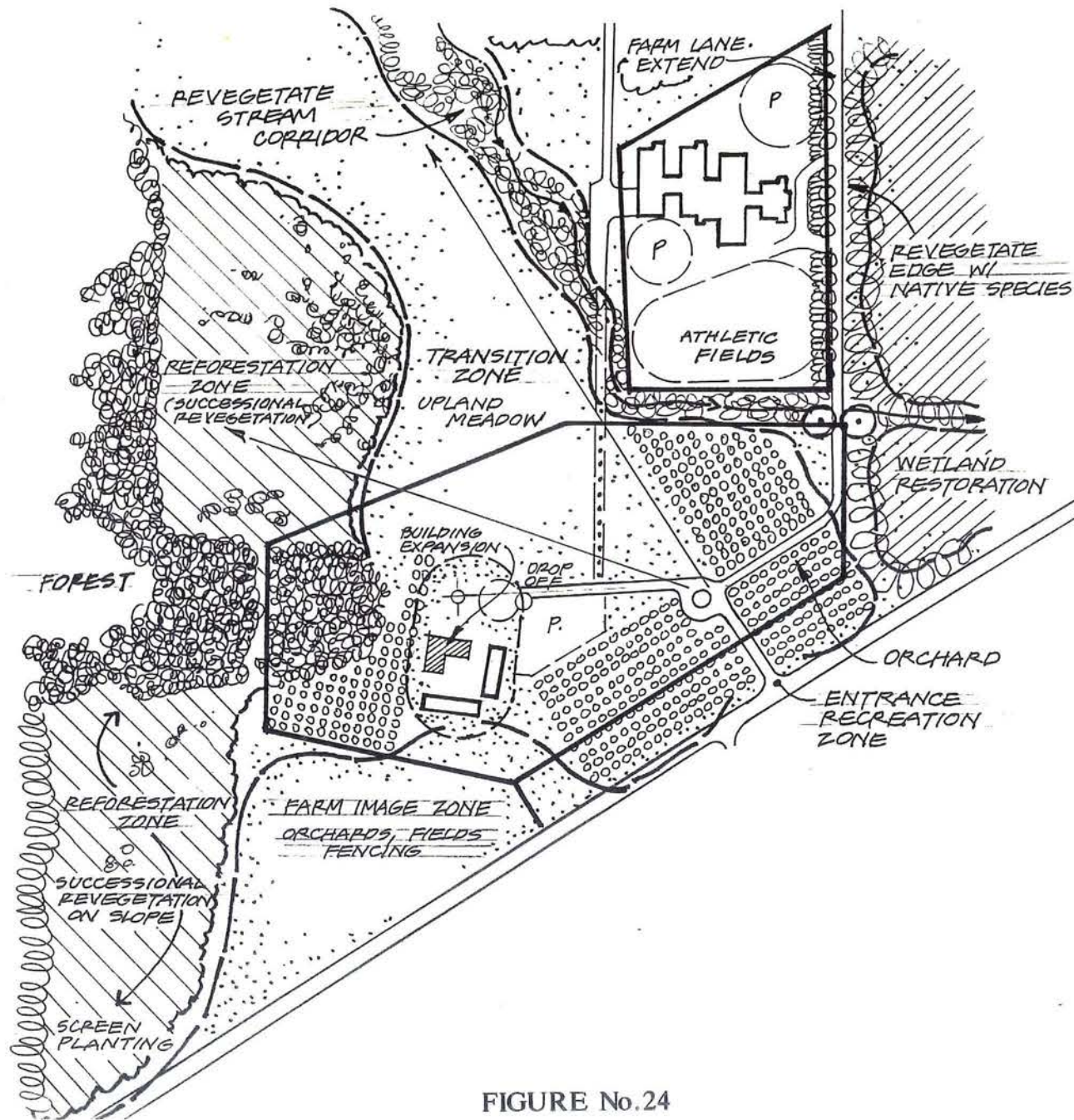


FIGURE No.24



- Retain
- Enhance upland
- add
Trail networks

FIGURE No.25

Adjacent areas in the Woodlands Landscape Zone will be designated for either revegetation or maintenance as open meadow with the latter serving as a transition between the Recreation/Activity Subarea and the natural areas of the site.

The TBA Landscape Zone generally addresses perimeter issues such as screening and adjustments to vehicular circulation. The existing stream at the south end of this zone should be protected and upgraded as an important link in the natural surface drainage system between the woodlands and the wetlands. Plantings of native species may be reintroduced to the area to serve as visual buffers and enrich the native vegetation.

4. Site Circulation

Circulation within the Grand Traverse Commons Planned Redevelopment District addresses vehicular, pedestrian, and bicycle movement systems.

Vehicular Circulation

The vehicular circulation plan addresses the internal circulation and access needs of Grand Traverse Commons Planned Redevelopment District users while preventing traffic from crossing through the site. The vehicular circulation plan also mitigates the impact, on surrounding communities, of existing traffic volume generated by adjacent land uses while addressing the impact of increased traffic volume to be generated by redevelopment on the Commons as it affects the surrounding neighborhoods.

Currently, the Commons site as well as the adjacent neighborhoods are impacted by traffic flow generated by Munson Medical Center. This District Plan minimizes the impact of traffic flow through the Commons Planned Redevelopment District and the adjacent neighborhoods while addressing the circulation needs of Munson Medical Center. Particular attention has been focussed on employee shift traffic as it relates to ingress and egress through the site and the adjacent neighborhoods.

The vehicular circulation plan is based on a concept of multiple access points terminating in a "loop" system servicing each principal area of activity (Figure 26). Any public roadway proposed for removal as part of this vehicular circulation plan shall be subject to the normal vacation process of the City of Traverse City or Garfield Township prior to the removal of the applicable public right-of-way.

The vehicular plan presented in this District Plan will encourage low velocity traffic and public transportation usage. Intrusion from one loop system to another will not be possible based on the implementation of traffic control mechanisms throughout the site that may consist of security guard points, "no through traffic" or "no outlet" signage, movable or immovable physical barriers, etc. The design and execution of this system will prevent the circulation of cross-through traffic

while maintaining a system for emergency and service vehicle access throughout the property. The concept maintains the integrity of the site and the continuity of the open space areas. Implementation of the proposed system will lessen the traffic impact on non-arterial roads in the surrounding community by providing several access points into the property, and directing heavy traffic flow away from the adjacent neighborhoods. In particular, the vehicular circulation plan calls for parking areas for high volume employee traffic which would be reached only through site access points intersecting major arterial roadways.

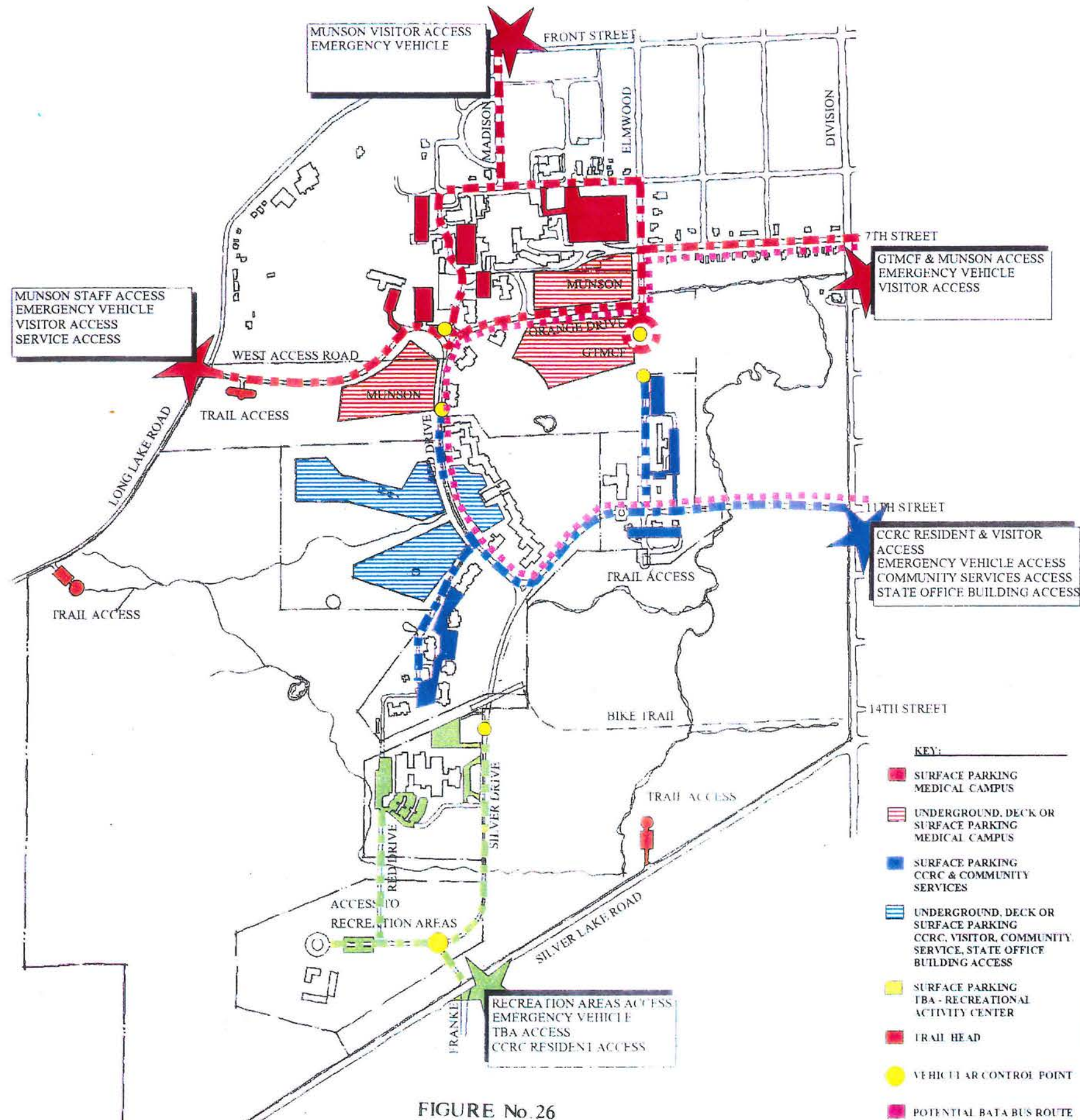
Non-Medical Campus Subareas. The access road to the Community Service, Continuing Care Retirement Community, and Residential/Activity Subareas will be Eleventh Street. Eleventh Street is anticipated to remain in its current configuration.

A new access road is also proposed in the southern portion of the Grand Traverse Commons Planned Redevelopment District to connect Eleventh Street to Silver Lake Road, parallel and to the west of existing Elmwood Avenue. The proposed point of intersection on Silver Lake Road is in the general area of Franke Road. This vehicular loop would provide access to the Recreation/Activity and Traverse Bay Area Intermediate School District Subareas. The south access will allow users of the open space areas to enter the site without having to circulate through it. The south access will also act as the primary entry point for users of the Traverse Bay Area Intermediate School District facility. The new linkages to existing perimeter roadways should employ "smart" traffic lights at the proposed intersections.

Medical Campus Subarea. As part of the proposed vehicular circulation plan, a new west access road provides entry to the site for the Medical Campus and employee parking areas servicing Munson Medical Center. Additionally, this access road will provide service entry to Medical Campus users. It is suggested that the proposed roadway intersect Long Lake Road to the north of Cedar Run Road. The rationale supporting this recommendation is based on the long-standing desire of the adjacent communities to redirect Munson's employee traffic away from the adjacent neighborhoods. The redevelopment of the Grand Traverse Commons Planned Redevelopment District makes this a possible solution given the availability of suitable land to accommodate the necessary right-of-way dimensions.

Under the proposed vehicular circulation plan, principal visitor traffic to Munson Medical Center would access the site via Madison Street with the ability to circulate around the perimeter of the hospital's property via a "ring" road. Employee access to the ring road will be restricted in order to discourage its use as an east-west "shortcut" through the site and the adjacent neighborhoods. Emergency traffic will continue to circulate in the existing pattern through the adjacent neighborhoods.

Non-Vehicular Circulation



NOTE: This figure is conceptual only. See sheets <Subarea #>.6 for more specific information. (Amended February 10, 1996)

FIGURE No. 26

VEHICULAR CIRCULATION

Non-vehicular circulation access paths connect the Grand Traverse Commons Planned Redevelopment District to the community for bike and foot traffic, and tie together the different elements within the site itself (Figure 27). There are several different types of paths depending on location and use. Hard surfaced paths are planned for the primary foot/bike pathways in the developed portions of the site and along the perimeter of the property. In areas like the "front lawn", the path system that encircles the lawn will accommodate emergency vehicles. Vehicular and pedestrian traffic are separated wherever possible. Crushed limestone paths or paths of similar materials are planned to carry lower volumes of traffic around the edges of the central campus and within the preserve areas. The lowest intensity pathway will be the wood chip path. It will be used primarily for low volume foot traffic and in the most sensitive areas of the preserves. Paths will avoid alignments that increase the risk of erosion in the hillside areas. Another form of pathway is the boardwalk which will be used for providing careful and sensitive access to the wetland areas. Siting of the boardwalk will be done to minimize any impact on the wetlands while still providing access.

5. Stormwater Management

The protection and enhancement of water quality has been increasingly established as the dominant conditional element for developing real estate in the Grand Traverse Bay region of northern Michigan. As identified in the 1990 Adaptive Reuse Plan, and reinforced through the subsequent adoption of stormwater management ordinances by Grand Traverse County and Traverse City, stormwater management plays an important part in the redevelopment of the Grand Traverse Commons Planned Redevelopment District.

This District Plan recognizes that there is a continuum of thought in the methods for achieving "best management practices" (BMPs). Regional stormwater management studies initiated by the local units of government and the U.S. Soil conservation Service in the 1970s and continuing to the present have addressed the Kids Creek Watershed in particular. Kids Creek traverses the Grand Traverse Commons Planned Redevelopment District with multiple tributaries feeding it from the woodlands through the built areas of the site. This condition complicates solving the complete lack of stormwater control for the project site.

In order to adequately address stormwater management this District Plan recognizes that Grand Traverse County's stormwater management ordinance has jurisdiction over the Grand Traverse Commons Planned Redevelopment District. The studies for the Kids Creek Watershed and prevailing BMPs will be used to determine the stormwater management system for the Grand Traverse Commons Planned Redevelopment District. The Grand Traverse Commons Redevelopment Corporation along with its Master Developer will continue to work in concert with local advocacy agencies and local government to reach consensus on the best management practices for the Grand Traverse Commons Planned Redevelopment District.

- a. The following generalized stormwater BMPs will be implemented for the Grand Traverse commons Planned Redevelopment District.
 - (1) Infiltration of stormwater will be accomplished wherever possible and discharges to Kids Creek will be minimized.
 - (2) Direct discharges to Kids Creek without stormwater retention and sedimentation control will be eliminated, and efforts will be undertaken to ensure that the controlled discharge does not affect the temperature of Kids Creek.
 - (3) Vegetated buffer strips shall be used between impervious surfaces and the stream or wetlands.
 - (4) Landscape design shall be incorporated into stormwater control facilities such as retention ponds to encourage vegetative diversity and wildlife habitat and site aesthetics.
- b. The specific stormwater BMPs for the project are listed below. A drawing showing the location of the planned improvements is included as Figure 28.
 - (1) A sediment trap will be installed in Kids Creek north of Silver Lake Road in accordance with the recommendations of the Kids Creek Watershed Management Plan.
 - (2) A sedimentation basin will be constructed at the outlet of the existing storm sewer from the Traverse Bay Area Intermediate School District property. This will improve the stormwater runoff quality before it is discharged into the wetlands.
 - (3) A sedimentation basin will be constructed at the outlet of the storm sewer near the Women's Resource Center. This will improve the water quality from runoff generated near the former power plant before it enters the wetlands. This facility may be incorporated with efforts to enhance and diversify the wetlands.
 - (4) A sedimentation basin will be constructed at the outlet of the storm sewer east of the parking lot that is north of the present State Office Building (Building 42). The size and location of any sedimentation basin will be dependent on wetlands permitting requirements. This basin may displace the State Office Building parking area and be built as a wet detention pond.
 - (5) A stormwater sedimentation basin and a detention zone serving the proposed development within the Medical Campus Subarea and including portions of the west access, will be constructed east of Elmwood Avenue and north of the State Office Building

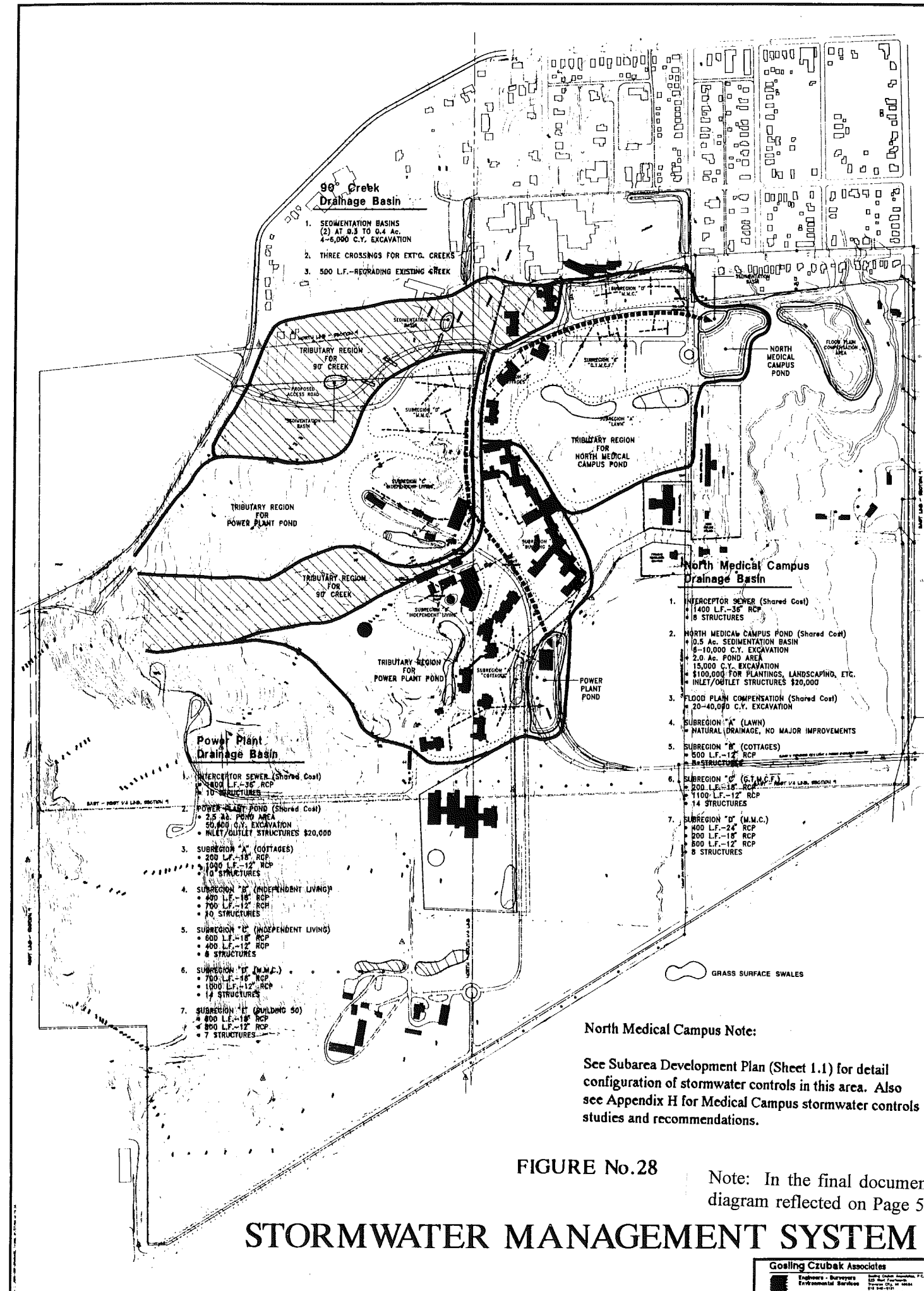


NOTE: This figure is conceptual only. See sheets <Subarea #>.1 for more specific information. (Amended February 10, 1996)

parking lot. This will require the development of a detailed retention and drainage plan because wetland and floodplain permitting issues are anticipated. An additional sedimentation basin and wet retention pond will be constructed on the site of the currently unused power plant to serve development on the west portion of the Medical Campus Subarea, the south cottages, Building 50, its residential village, and the independent housing west of Building 50. Water flow from the historic tributary system will continue to flow north and east into the wetlands.

Proposed construction of stormwater retention facilities are considered for this area east of Elmwood Avenue for the following reasons.

- Stormwater retention in this area is needed to provide stormwater management including treatment and mitigation for downstream flooding from the existing storm sewers that discharge in this area.
- Stormwater retention in this area is needed to provide stormwater management for the proposed new development within the Medical Campus Subarea, namely the Grand Traverse Medical Care Facility and the expansion of Munson Medical Center, that must be located in this area to comply with the overall planning goals of the project.
- A potential floodplain and wetland mitigation area is adjacent to the site.
- This area was previously used for agricultural purposes and was therefore previously disturbed by human activities.
- Construction of the stormwater management system in this area will preserve the lawn area and other landscape features of the site in character with the arboretum. (It should be noted that the Bureau of History prefers locating stormwater management in locations other than the front lawn to preserve the historic landscape features of the front lawn and arboretum.) Water can be detained adjacent to the historic front lawn in the form of dry swales as long as the swales are subtle and the lawn dries out after each storm event, and the tree base in the arboretum is not negatively impacted.
- Proper design of the stormwater facilities can enhance and diversify the wetland habitat.



Note: In the final document, this figure will be revised to correspond to the stormwater management diagram reflected on Page 56, Sheet 1.1.

6. Infrastructure and Utilities

New development may require extensions and modifications of the existing utility systems. Any required modifications are not anticipated to be major and would not typically affect the feasibility of development. The capacity of the natural gas utility, the electrical utilities serving the site, and the Traverse City wastewater system are adequate to serve an equivalent population of several thousand. The City's planned water main improvement project in Elmwood Avenue to Munson Medical Center and the implementation of the following improvements will increase the water system capacity. To augment the water pressure, flows, and fire flows, construction of the following water mains are anticipated.

A new twelve inch primary water main, a portion of which will run west on Eleventh Street to Elmwood Avenue, north on Elmwood Avenue to the Grand Traverse Commons property line, and will continue north and west of Munson Medical Center to Madison Street, connecting to a section of six inch main currently owned by Munson Medical Center, is scheduled to be installed by the City of Traverse City during calendar year 1994. An additional connection of approximately 20 feet will be made between the Munson system and the north Commons system in the area of Red Drive.

A series of water line cuts, capping and fire hydrant removals will result in the removal of all unoccupied structures, as well as all antiquated or inadequate water lines, from the existing primary ten inch north/south main.

A new twelve inch main is proposed to run west on Silver Drive from Elmwood Avenue at Eleventh Street, around the south end of Building 50, and to connect to the primary north/south main currently in place. This new main will complete the master loop system as proposed.

A new twelve inch feeder main is anticipated to connect to the new Elmwood line, and run west in the vicinity of Orange Drive. This line will service new construction which will occur in the Medical Campus Subarea. The completion of the new Elmwood Avenue main and the connection to the Munson Medical Center system at Red Drive, will be adequate to serve new development on the northern portion of the Grand Traverse Commons Planned Redevelopment District. Therefore, it should not be necessary to perform costly system wide upgrades before new development can take place.

An additional section of new twelve inch water main will be required at the Traverse Bay Area (TBA) Intermediate School District facility. This new main will replace the section of main servicing the barns area which currently runs through the basement the TBA facility.

The completion of these improvements will result in a comprehensive looped water system which will adequately service the Grand Traverse Commons Planned Redevelopment District, as well as provide system redundancy. Reconnection to the system after the rehabilitation of a historic structure, as well

as appropriate service for new development will be readily available throughout the Grand Traverse Commons Planned Redevelopment District. It is anticipated that the City of Traverse City will accept ownership of the water distribution system on the Grand Traverse Commons Campus.

Individual phases of the development and their effect on the infrastructure system will continue to be evaluated on a site specific basis within the context of the overall Grand Traverse Commons Planned Redevelopment District during the next stage of planning to identify the economics of utility extensions or modifications.

Utility and other infrastructure that serve the existing structures will be reviewed on a building-by-building basis. The former and proposed use of the building will affect the need to improve utilities and infrastructure. For example, a building that was formerly used for hospital or residential purposes may only require minor utility modifications. However, a building that might have been used for office or storage purposes which will now be used for more intensive purposes may require enlarged water, electrical and perhaps natural gas services.

The tunnel system can be utilized for the construction of some utilities where practical and beneficial. It is not anticipated that storm sewer and sanitary sewer facilities be placed in the tunnels. Since gravity flow is necessary for these utilities and leaks could be hazardous, planning for the tunnel system use will exclude these facilities.

Because the overall utility system and infrastructure serving the site is adequate, utility modifications should not be difficult or unusually expensive to accomplish when compared to the overall project cost. MichCon reports that the natural gas system may require some additional distribution piping to serve new construction. However, the supply lines feeding the site will be adequate for the proposed development. Like the natural gas system, the electrical distribution network may require modifications to accommodate individual phases or portions of the project. In order to serve the campus, a site-wide infrastructure program will be established for the purpose of selecting the most efficient manner for providing electrical service to the Grand Traverse Commons Planned Redevelopment District.

7. Development Capacity and Controls

The total development capacity for new development within the Grand Traverse Commons Planned Redevelopment District consists of impervious surface capacity and building volume capacity. New development within the Grand Traverse Commons Planned Redevelopment District shall be limited to the extent that the total of all new impervious surface and existing impervious surface to be retained may not exceed the amount of impervious surface currently existing within the Grand Traverse Commons. The amount of impervious surface currently on the Grand Traverse Commons is set forth in Table A below.

TABLE A
EXISTING IMPERVIOUS SURFACE
(District Wide)

Note: The definition of impervious surface for the District reflects the definition of impervious surface used by the Grand Traverse County Drain Commissioner as per the Soil Erosion and Stormwater Runoff Control Ordinance. Consequently, gravel (Hardpacked Impervious) contributes to the district-wide existing impervious surface.

Buildings	566,331
Roads	522,457
Parking	504,212
Sidewalks	143,049
Shoulders	42,973
Gravel (Hardpacked Impervious)	612,409
Other (footings, pads, etc.)	68,235
TOTAL	2,459,666

a. New Impervious Surface Capacity

The total amount of new impervious surface development within the Grand Traverse Commons Planned Redevelopment District shall not exceed the total amount of existing impervious surface demolished and removed from within the Grand Traverse Commons Planned Redevelopment District. The amount of existing impervious surface to be removed from the Grand Traverse Commons Planned Redevelopment District is set forth in Table B below.

TABLE B
IMPERVIOUS SURFACE TO BE REMOVED
(District Wide)

Buildings	232,819
Roads	522,457
Parking	504,212
Sidewalks	143,049
Shoulders	42,973
Gravel (Hardpacked Impervious)	612,409
Other (footings, pads, etc.)	68,235
TOTAL	2,126,154

New impervious surface development allocated to new building and parking construction within the Grand Traverse Commons Planned Redevelopment District shall be limited to a total of 1,077,419 square feet. Table C below allocates this total of new impervious surface capacity by subarea.

TABLE C
MAXIMUM NEW BUILDING
IMPERVIOUS SURFACE CAPACITY
(By Subarea)

Subarea 1 (Medical Campus)	493,658
Subarea 2 (CCRC)	183,840
Subarea 3 (Residential/Activity)	285,732
Subarea 4 (Community Services)	1,200
Subarea 5 (TBA)	800
Subarea 6 (Recreation/Activity)	21,713
Subarea 7 (Woodlands Conservation)	10,000
Subarea 8 (Wetlands Conservation)	80,477

TOTAL 1,077,419

The total of all new impervious surface and retained impervious surface may not exceed 2,459,666 square feet. As currently configured, this District Plan contemplates that the total of all new and existing impervious surface to be retained within the Grand Traverse Commons Planned Redevelopment District shall be allocated to the subareas as set forth below in Table D.

TABLE D
TOTAL IMPERVIOUS SURFACE CAPACITY
(Retained & New)

~~TOTAL~~

Subarea 1 (Medical Campus)	615,253
Subarea 2 (CCRC)	419,871
Subarea 3 (Residential/Activity)	296,243
Subarea 4 (Community Services)	128,196
Subarea 5 (TBA)	142,300
Subarea 6 (Recreation/Activity)	72,070
Subarea 7 (Woodlands Conservation)	10,000
Subarea 8 (Wetlands Conservation)	84,972
New Roads (all subareas combined)	594,642
Reserve	96,119

TOTAL 2,459,666

Note: With the exception of roadways, the total impervious surface for each subarea is capped as reflected in this Table D. The total impervious surface for roadways is capped for the district as a whole. This is to allow for flexibility in refining the actual impervious surface that will be installed as the project proceeds from design development to construction drawings. The "Reserve" line item represents the difference between the full development as proposed in this District Plan, including roadways, and the existing impervious surface cap for the District. The total new and retained impervious surface for the district (Table D) equals the existing impervious surface within the District (Table A).

b. Building Volume Capacity

New Building Volume Capacity within the Grand Traverse Commons Planned Redevelopment District shall be limited to a total of 2,036,197 square feet. The allocation of new Building Volume Capacity between subareas within the Grand Traverse Commons Planned Redevelopment

District is set forth in Table E below.

TABLE E
MAXIMUM NEW BUILDING VOLUME CAPACITY
(By Subarea)

Subarea 1 (Medical Campus)	1,204,454
Subarea 2 (CCRC)	278,714
Subarea 3 (Residential/Activity)	489,059
Subarea 4 (Community Services)	0
Subarea 5 (TBA)	0
Subarea 6 (Recreation/Activity)	11,112
Subarea 7 (Woodlands Conservation)	0
Subarea 8 (Wetlands Conservation)	52,858
TOTAL	2,036,197

The location of New Building Volume within each subarea within the Grand Traverse Commons Planned Redevelopment District is governed by application of the design guidelines of DP-93-1 and this District Plan. The guidelines provide that the allowable volume of any new building within the Grand Traverse Commons Planned Redevelopment District decreases in direct relation to its proximity to sensitive open areas and historic structures. This system of volume control guidelines is reduced to a series of volume tables in the Appendix to this District Plan.

(c) Transfer of Development Capacities

Existing impervious surface within the Grand Traverse Commons Planned Redevelopment District is currently located in areas inconsistent with the allocations set forth in Tables C and D of this Development Capacity and Controls section of the District Plan. Accordingly, impervious surface capacities will be transferred from one subarea to another. In no case, however, shall the transfer of development capacities from one subarea in the Grand Traverse Commons Planned Redevelopment District to another subarea cause the development capacity of any subarea to exceed the amounts allocated in Tables C and D of this section.

- (1) Subject to compliance with the relevant sections of the Planned Redevelopment District Section of the Traverse City and Garfield Township zoning ordinances, development capacity shall be transferable between subareas comprising the Grand Traverse Commons Planned Redevelopment District.

- (2) Subject to compliance with the relevant provisions of the Planned Redevelopment District Section of the Traverse City and Garfield Township zoning ordinances, development capacity shall be transferable from one subarea within the Grand Traverse Commons Planned Redevelopment District to an area contiguous to, but outside, the Grand Traverse Commons Planned Redevelopment District provided that the area outside the PRD has been designated by the City of Traverse City and/or Garfield Township, as appropriate, as eligible to receive development capacity pursuant to the following requirements:

- i) the existing and proposed uses within such area outside of the PRD must be compatible with the uses in the PRD, and an Act 250 Development Plan, as amended, adopted for the designated PRD District,
- ii) such transfer of development capacity outside of the PRD must further the purpose of the PRD and enhance redevelopment of the PRD District, and
- iii) such transfer of development capacity into an area outside of the PRD shall not affect the underlying zoning of the area outside the PRD except to allow for the transfer of development capacity.

(d) Development Capacity Controls

- (1) Upon approval of this Grand Traverse Commons Planned Redevelopment District, the Master Developer shall cause to be recorded with the Recorder of Deeds for Grand Traverse County a certificate evidencing the appropriate fee ownership of new building and parking development capacities within the Grand Traverse Commons Planned Redevelopment District in the total amount set forth in Table B.
- (2) Upon the approval of any subarea development plan within the Grand Traverse Commons Planned Redevelopment District, the Master Developer shall cause to be recorded with the Recorder of Deeds for Grand Traverse County, a certificate and deed evidencing the transfer of such amount of development capacity as shall at that time be allocated, sold or transferred to such subarea, provided that in no event shall the amount of development capacity exceed the amount of development capacity set forth for such subarea in Tables D and E above.
- (3) Concurrent with the transfer of any development capacities between the subareas within the Grand Traverse Commons Planned Redevelopment District or from any subarea within the

Grand Traverse Commons Planned Redevelopment District to an area outside of the Grand Traverse Commons Planned Redevelopment District, the Master Developer shall cause to be recorded with the Recorder of Deeds for Grand Traverse County a certificate and deed evidencing such transfer.

- (4) In the event of any transfer of development capacity as set forth in subparagraphs (a), (b), and (c) above, the Grand Traverse Commons Redevelopment Corporation shall cause to be filed with the Code Enforcement Officer of Garfield Township and the Planning Director of the City of Traverse City a certificate evidencing such transfer in compliance with the relevant provisions of the Planned Redevelopment District Section of the Traverse City and Garfield Township zoning ordinances.

8. Subarea Plans

B. Interim Uses

The Grand Traverse Commons Planned Redevelopment District contains over 60 structures which were used by the State of Michigan, Department of Mental Health to service the mission of the former Traverse City State Hospital (TCSH). The different types and uses of the buildings include residential, single and multi-family; institutional, hospital in bed, out-patient, psychiatric care, and schools; medical office and office; industrial and service workshop; storage active, inactive and cold storage; agricultural process and storage; and power generating facilities. In addition the site has been used for parking, construction staging, storage, water supply and storage, snow collection, stormwater management, agriculture, pastureland, arboretum and recreation.

A noted and historically recognized feature of the former TCSH was its self-sufficiency as an institution. This aspect of the TCSH played an important role in its service mission. In order to address the complexities of a phased Planned Redevelopment District, consideration must be given to interim uses of those structures and areas within the Grand Traverse Commons Planned Redevelopment District which can effectively be used in their present state and condition or with minor modification provide an interim use.

An Interim Use Plan for the Grand Traverse Commons Property (Revised) (dated June 2, 1993) was devised to codify the potential for interim use of the site, and has been appropriately modified for inclusion in the Appendix of this District Plan. The Interim Use Plan established policy regarding the use of the site on an interim basis. The Interim Use Plan provides for:

- continued interim use of buildings which are already occupied;
- emphasis on interim uses in buildings requiring the least amount of capital improvements;
- promotion of interim uses which generate a minimal amount of traffic and parking demands;
- interim uses which promote security and underwrite maintenance costs for the Grand Traverse Commons Planned Redevelopment District;
- interim uses which do not conflict with or in any way negatively impact the redevelopment of the Grand Traverse Commons Planned Redevelopment District; and
- interim uses which help to preserve historic structures until rehabilitation and restoration proceeds.

Interim uses permitted within the Grand Traverse Commons Planned Redevelopment include:

- non-active storage/warehouse uses;
- seasonal recreational uses;

- club/workshop uses;
- community/education-related uses;
- temporary medical-related and/or governmental uses;
- temporary surface parking; and
- construction staging.

Interim uses shall be consistent with the staging and intended end uses of the subareas of the Grand Traverse Commons Planned Redevelopment District.

Development Capacity Table

O/A Adjustment factor 0.72

Subarea 1 (as amended)

a	b	c	d	e	f	g	h	i	j	k
Zone	Building Envelope	Imper. Surface Factor	Imper. Surface	Bldg Coverage Factor	Bldg Coverage	Density Factor	Maximum Density	Open Area Factor	Total Lot SF	Acreage
I.1	71,737	0.95	68,150	0.95	64,800	6.00	388,800	5.71	409,654	9.40
I.2	31,193	0.90	28,074	0.69	19,250	2.25	43,313	2.77	86,477	1.99
II.1	225,463	0.54	121,186	0.86	104,232	1.30	135,502	1.95	439,595	10.09
II.2	132,015	0.80	50,747	0.87	44,347	1.15	50,999	2.04	269,445	6.19
II.3	24,301	0.80	4,620	0.90	4,145	1.00	4,145	1.95	47,374	1.09
III.1	19,000	0.95	18,050	0.90	16,245	6.00	97,470	5.67	107,801	2.47
III.2	78,378	0.91	71,000	0.92	65,600	6.00	393,600	5.66	460,198	10.56
III.3	43,000	0.88	38,000	1.00	38,000	0.00	0.00	1.36	58,544	1.34
III.4	57,000	0.91	52,000	1.00	52,000	0.00	0.00	1.38	78,782	1.81
III.5	18,400	0.95	17,480	0.69	12,000	2.00	24,000	2.63	48,362	1.11

Sub-total 700,487 469,307 420,619 1,137,828 2,006,233 46.06

Historic Buildings	48,513	1.00	48,513	1.00	48,513	0.00	0.00	1.45	70,128	1.61
Hist. Parking	97,433	1.00	97,433	1.00	97,433	0.00	0.00	1.45	140,843	3.23

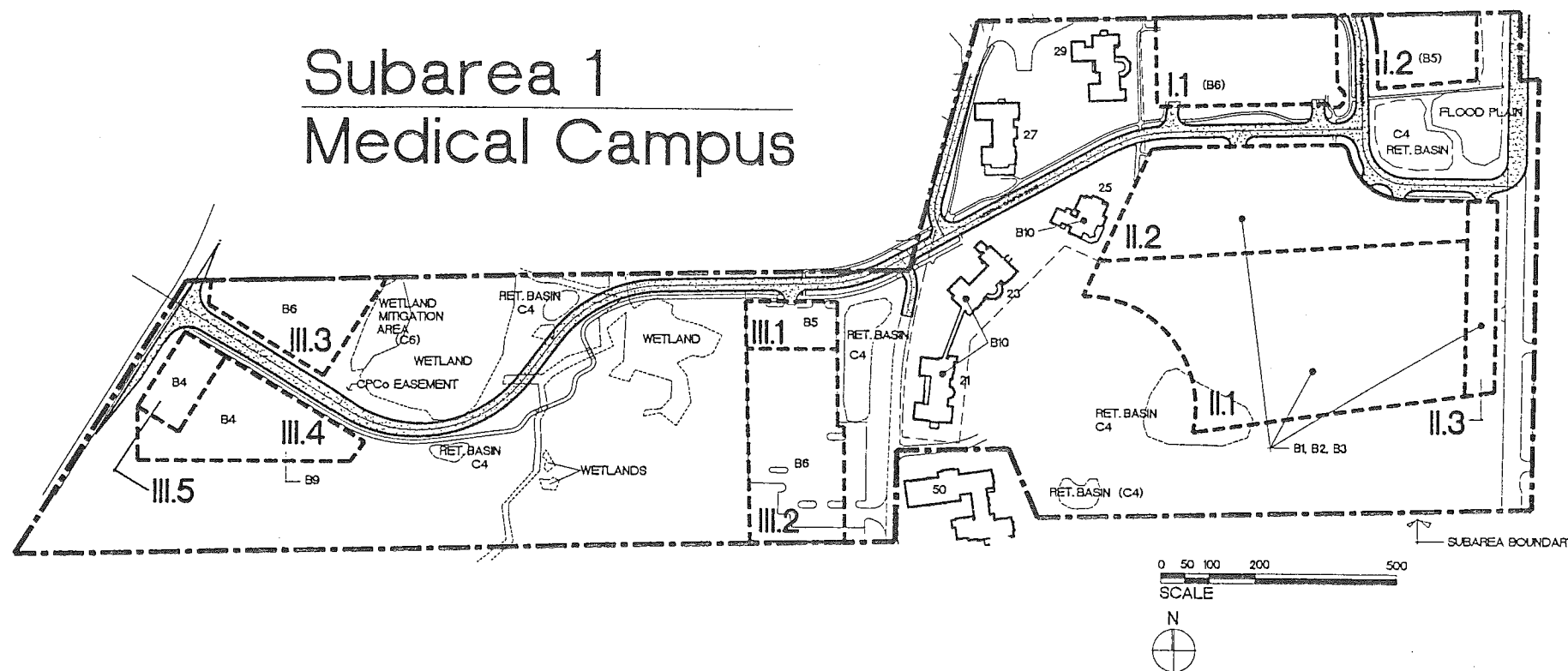
Sub-total 145,946 145,946 145,946 210,971 4.84

New Roads		0.00	182,160	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Med. Campus Total 846,433 797,413 566,565 1,137,828 2,217,204 50.90

TRU_DEV.WK4

Subarea 1 Medical Campus

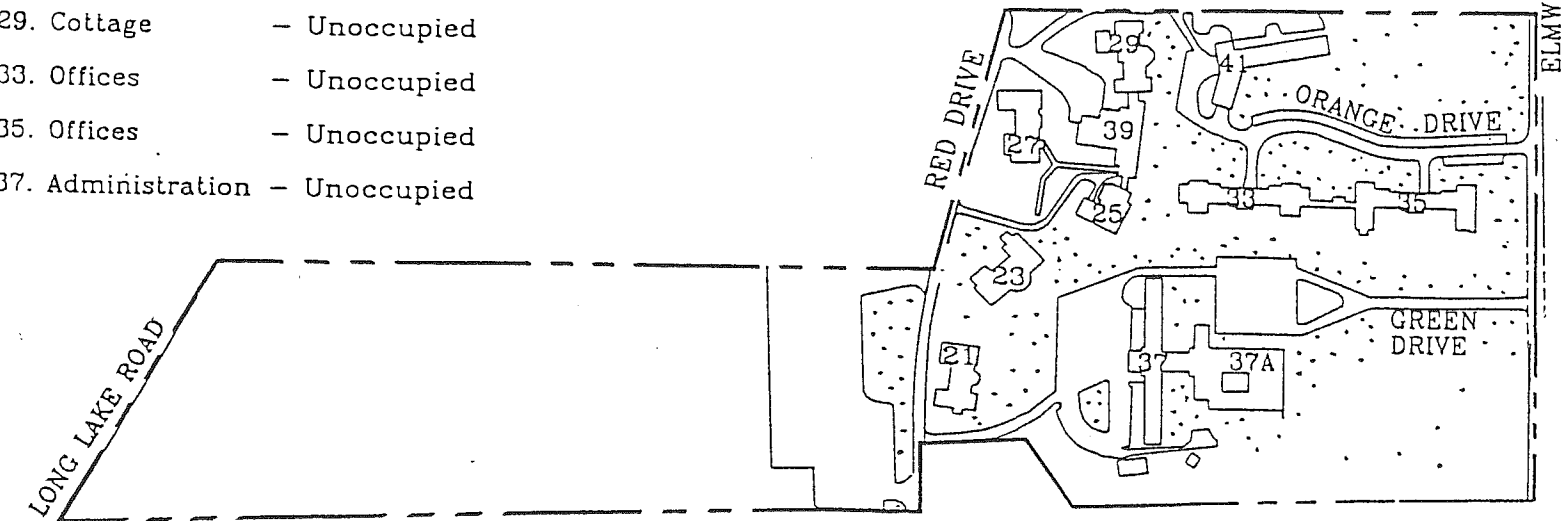


SUBAREA 1 PLAN

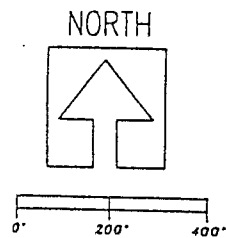
Medical Campus

BUILDING KEY

- 21. Cottage - Unoccupied
- 23. Cottage - Unoccupied
- 25. Cottage - Unoccupied
- 27. Cottage - Unoccupied
- 29. Cottage - Unoccupied
- 33. Offices - Unoccupied
- 35. Offices - Unoccupied
- 37. Administration - Unoccupied



- 37a. Administration - Unoccupied
- 39. Dining Hall - Unoccupied
- 41. Geriatric Bldg. - Unoccupied



EXISTING BUILDINGS AND ROADS

DESCRIPTION

Cottages 21, 23, 25, 27, & 29 Are Part Of The Historic District.

Buildings 33, 35, 37, 37a, 39, & 41 Were Constructed Between The 1920's and 1960's In The Contemporary Style Of Their Period, Ranging From International Style To Modern Art Deco.

Elmwood Avenue Is A High-Use North / South Connector Street Which Carries Through Traffic And Serves As A Major Feeder To Munson Medical Center.

Red Drive Is An Internal North / South Connecting Road Serving The Commons Site And Munson Medical Center.

Orange & Green Drives Are Minor Access Roads Serving The Site Which Feed Into Parking Areas Currently Being Used By Munson Medical Center For Temporary Staff Parking.

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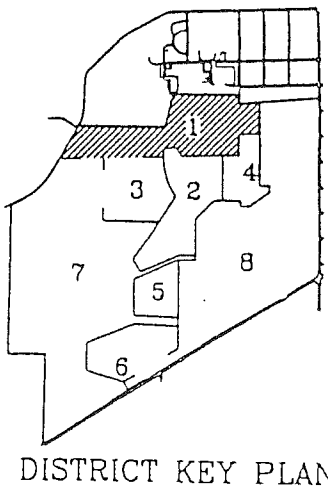
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DISTRICT KEY PLAN

NOTE: The boundary of the subarea shown on this sheet is approximate. See Sheet No. 1.1 for the actual subarea boundary. (Amended February 10, 1996)

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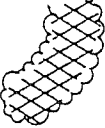


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 SHEET NO. : 1.2

SUBAREA 1 PLAN

Medical Campus

LANDSCAPE KEY

-  Individual Tree
-  Tree Mass
-  Meadow
-  Lawn

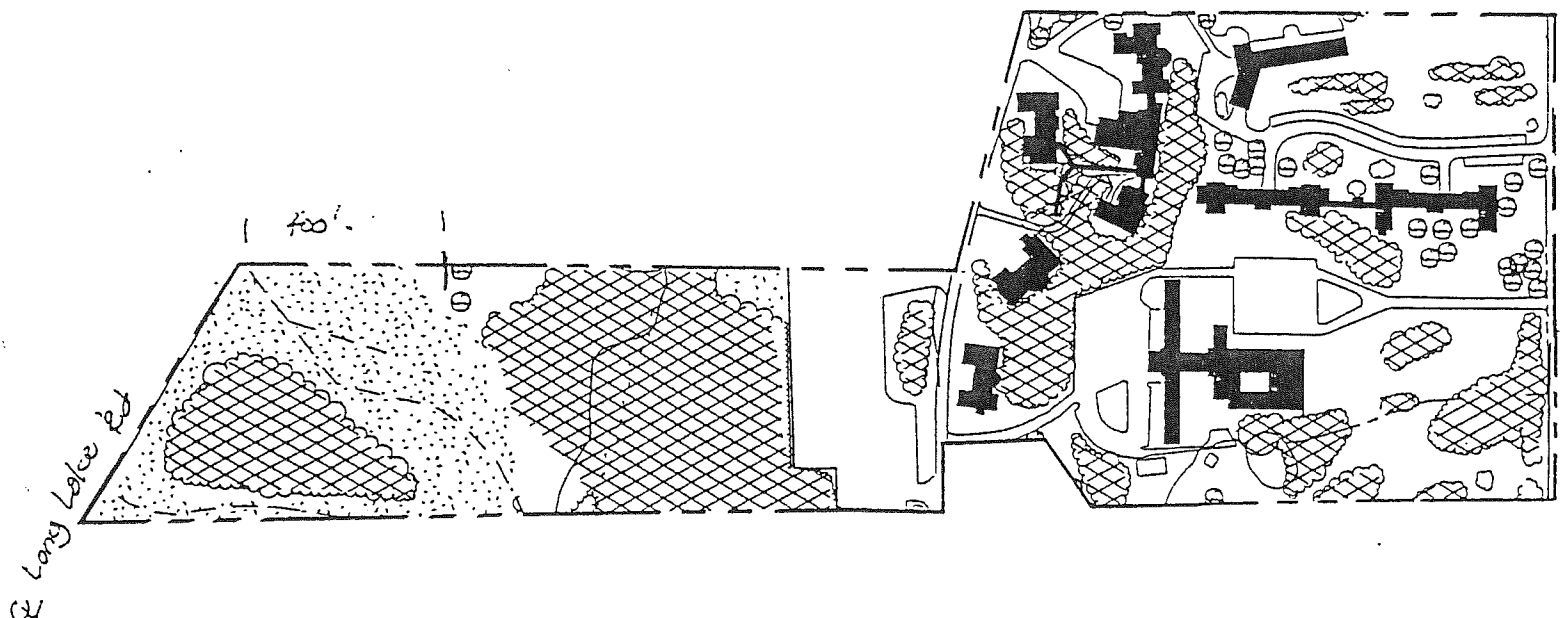
DESCRIPTION

The Western Portion Of This Subarea Exists In A Relatively Natural State Consisting Of Meadows And Stands Of Mixed Deciduous And Evergreen Trees.

The Eastern Portion Exists In Maintained Landscape Condition Including Notable Features Such As Tree Rows Forming Alle's.

The Southern Edge Of This Area Includes A Portion Of The Historic Lawn And Arboretum.

The Eastern Edge Contains Native Wetland And Planted Vegetation.



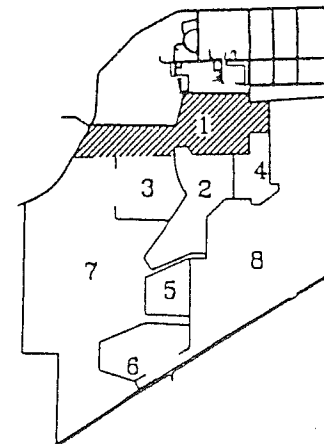
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DISTRICT KEY PLAN

EXISTING LANDSCAPE AND NATURAL FEATURES

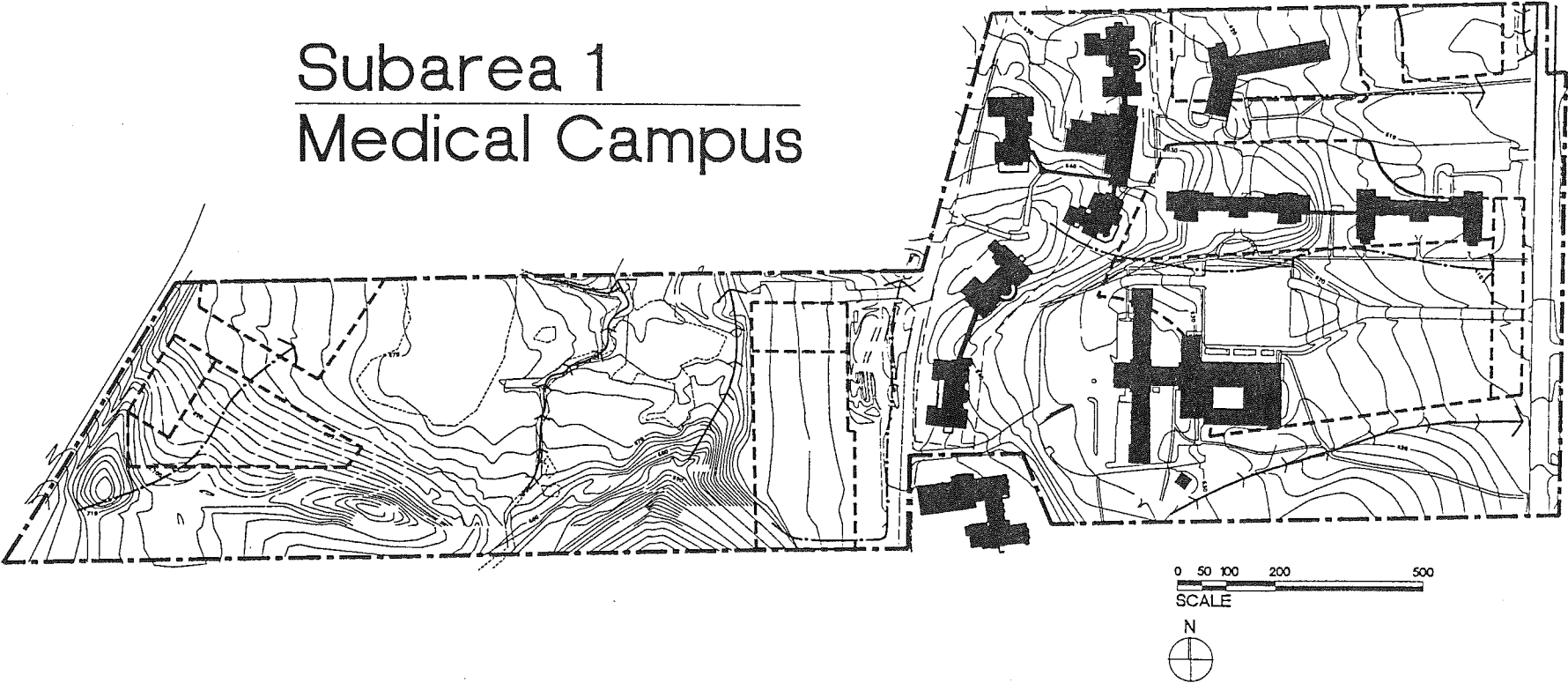
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Subarea 1 Medical Campus



KEY

- TOPOGRAPHIC CONTOURS AT 2'-0" INTERVALS
- WETLAND BOUNDARY
- NATURAL STREAM
- DRAINAGE COURSE

DESCRIPTION

- A. This Area Contains Diverse Topographic Features Sloping Generally To The North And East.
- B. The Steep Bluffs On The Western Portion Of The Site Are Wooded And Offer Dramatic Scenic Points From The Higher Elevations.
- C. A Portion Of The West Half Is Covered By Approximately 2.8 Acres Of A Larger Wetland Which Extends To The Property North Of This Subarea.
- D. The Eastern Portion Of The Area Is Adjacent To And Mostly Covered By Wetlands.

DISTRICT PLAN AMENDMENT #1 - FEB. 10, 1996

**MUNSON
ENGINEERING
& DESIGN**

DATE 2-10-96

DRAWN BY

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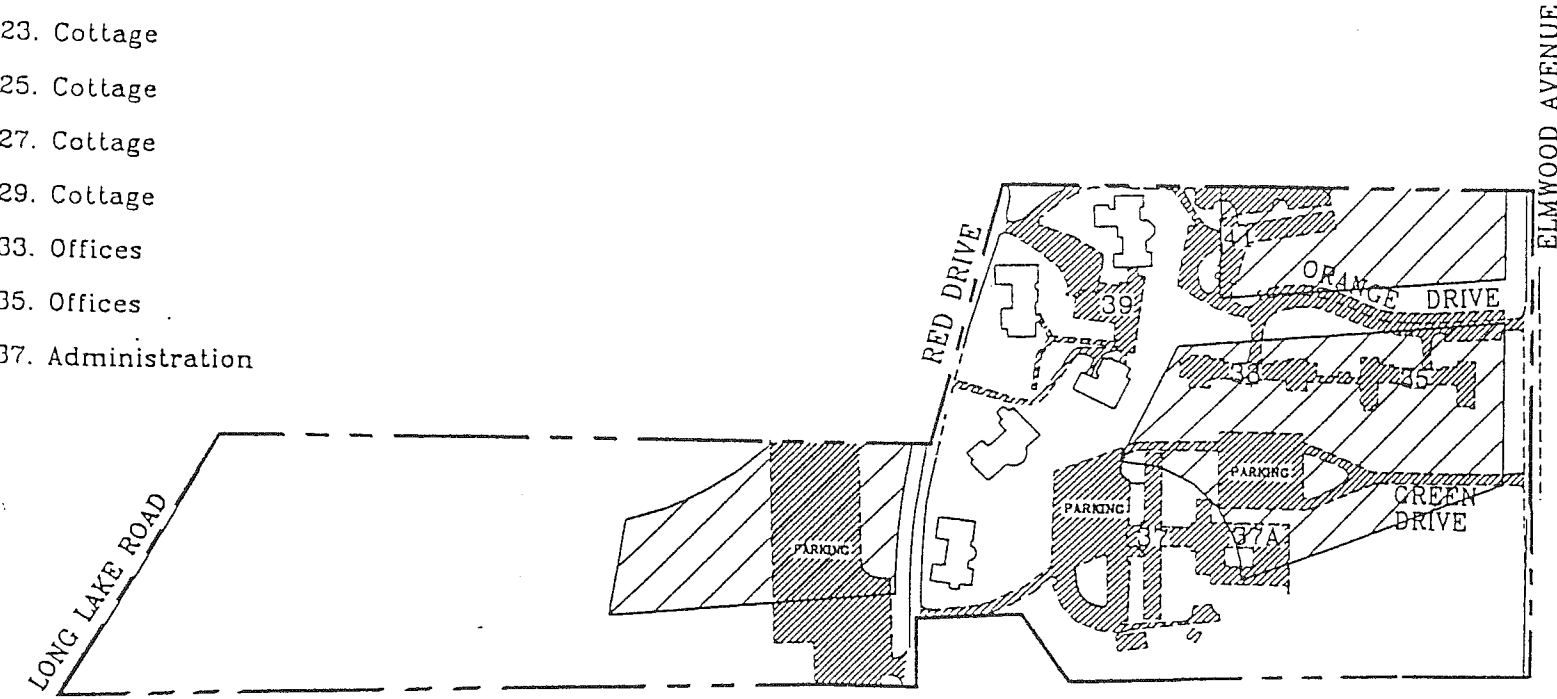
SCALE

SUBAREA 1 PLAN

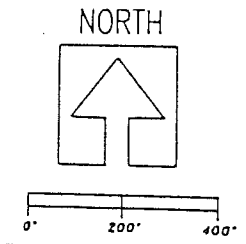
Medical Campus

BUILDING KEY

- 21. Cottage
- 23. Cottage
- 25. Cottage
- 27. Cottage
- 29. Cottage
- 33. Offices
- 35. Offices
- 37. Administration



- 37a. Administration
- 39. Dining Hall
- 41. Geriatric Bldg.

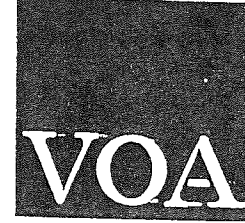


EXISTING ROADS, BUILDINGS AND PARKING LOTS
TO BE DEMOLISHED

KEY

- Existing Roads Or Buildings To Be Removed.
- Building Envelope

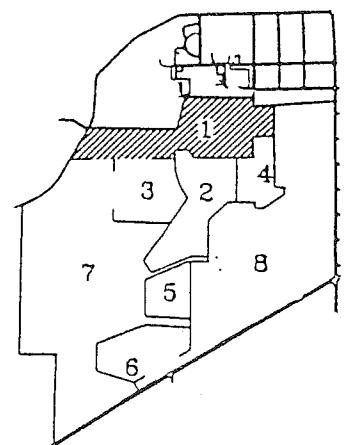
NOTE: The boundary of the subarea shown on this sheet is approximate. See Sheet No. 1.1 for the actual subarea boundary. (Amended February 10, 1996)



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DISTRICT KEY PLAN

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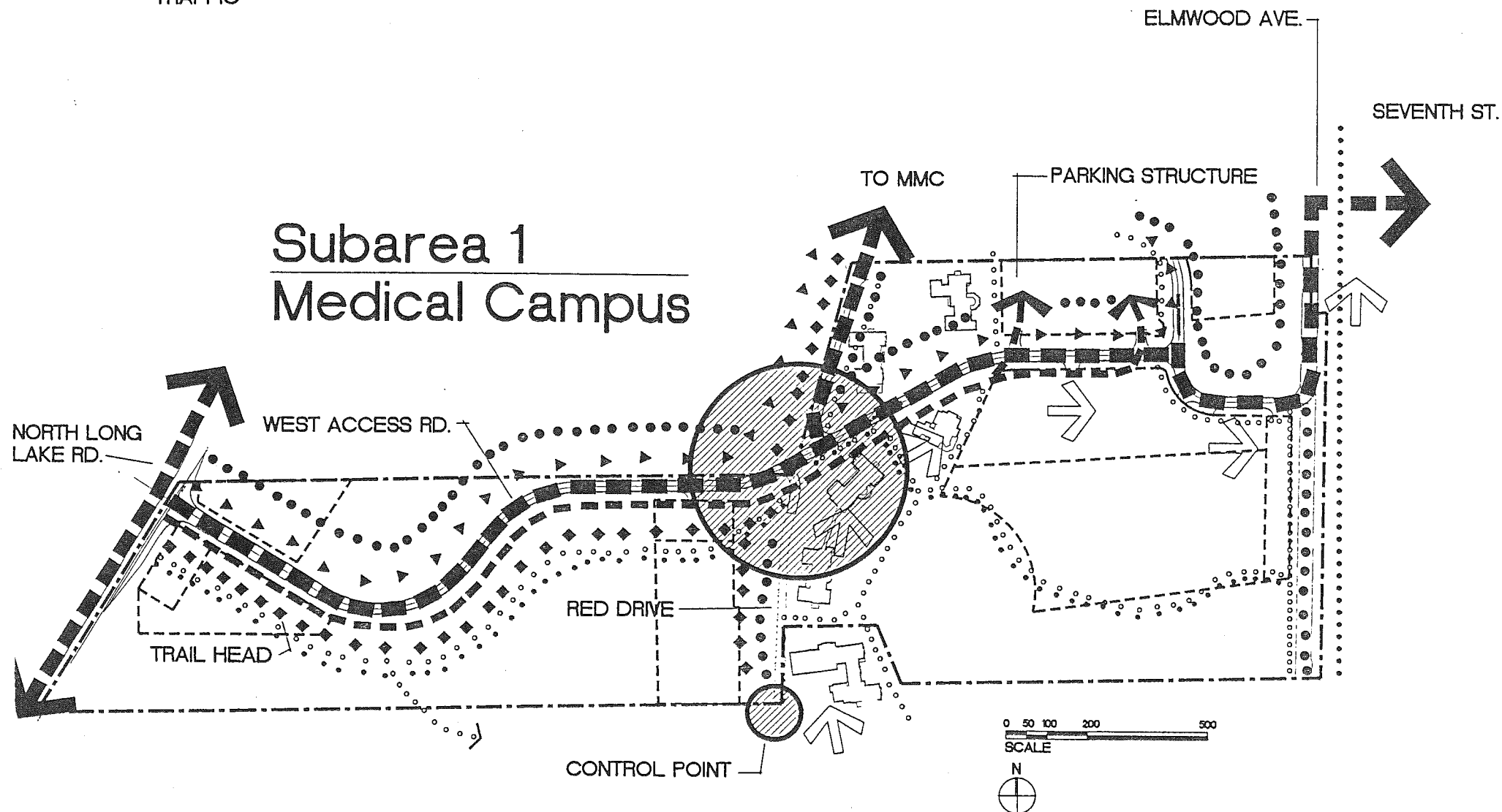
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CIRCULATION KEY

- ← - - - - MAJOR ACCESS
- - - - STAFF ACCESS
- ◆ ◆ ◆ ◆ SERVICE
- ● ● ● LIFE SAFETY ACCESS
- ▶ ▶ ▶ ▶ AMBULANCE
- ○ ○ ○ ○ ○ PEDESTRIAN
- BICYCLE
- VEHICULAR CONTROL POINT
- ⇐ ⇐ ⇐ FUTURE BATA BUS ROUTE

NOTE: MAJOR ACCESS MEANS MAJOR ACCESS TO A PORTION OF THE PROPERTY, AND DOES NOT CONSTITUTE AN ACCESS POINT FOR CROSS-THROUGH TRAFFIC

Subarea 1 Medical Campus



REVISIONS

PROJECT TITLE
DISTRICT PLAN AMENDMENT #1 - FEB. 10, 1996

**MUNSON
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& DESIGN**

DATE 2-10-96

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FILE NAME

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SHEET TITLE

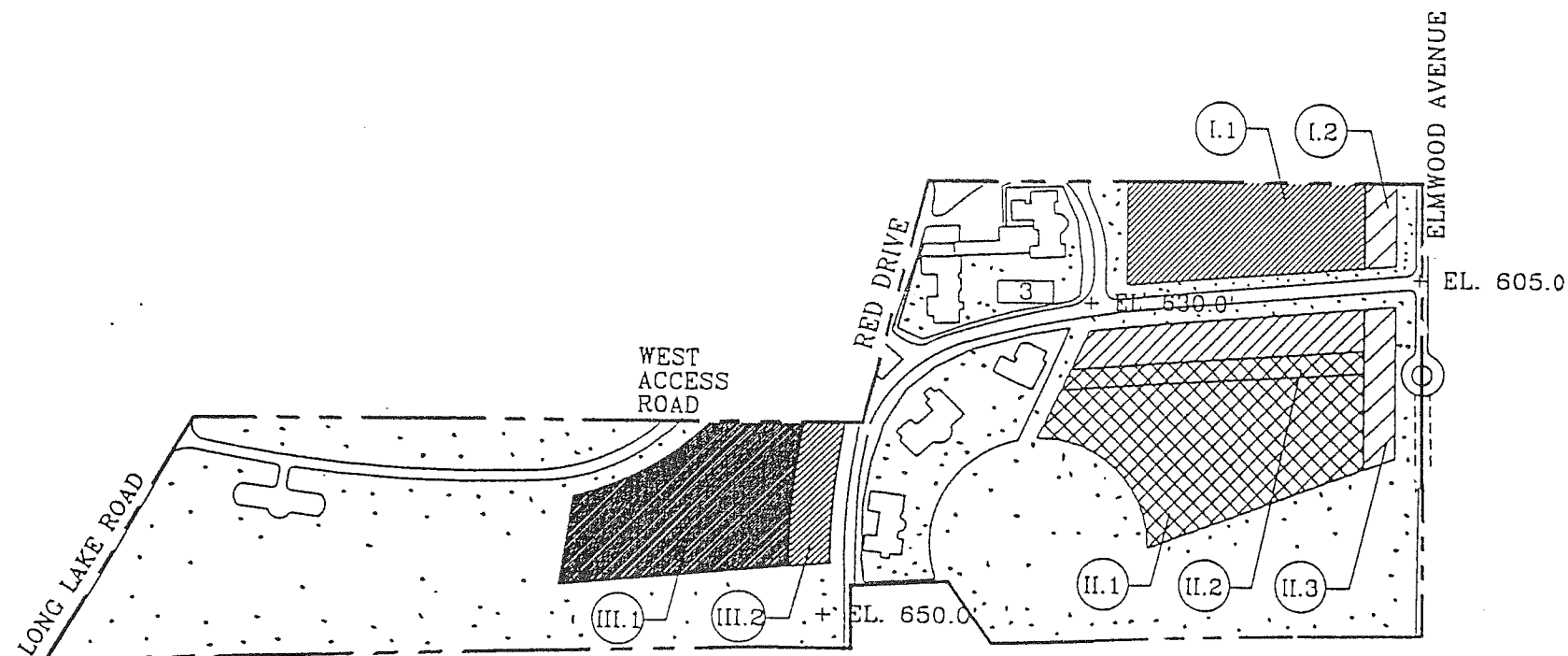
CIRCULATION PLAN

Page 61 **1.6**

SUBAREA 1 PLAN

Medical Campus

KEY



BUILDING VOLUME ENVELOPE

Allowable Height of Envelope Measured to Building Cornice

630.0'

655.0'

670.0'

690.0'

738.0'

Open Space

Development At Grade

(X.X) Sub Development Zone Designation

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)

Note: In the final document, Sheet 1.7 will be modified to reflect a change in the configuration of the western development parcel to avoid the recently documented wetlands area in that vicinity.

(In the final document, this line, which was drawn in error, will be removed.)

(In the final document, the building envelope for the historic cottages will reflect the "development at grade" designation to accommodate parking associated with the rehabilitated cottages.

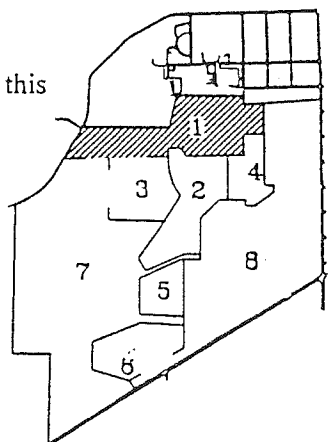
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DISTRICT KEY PLAN

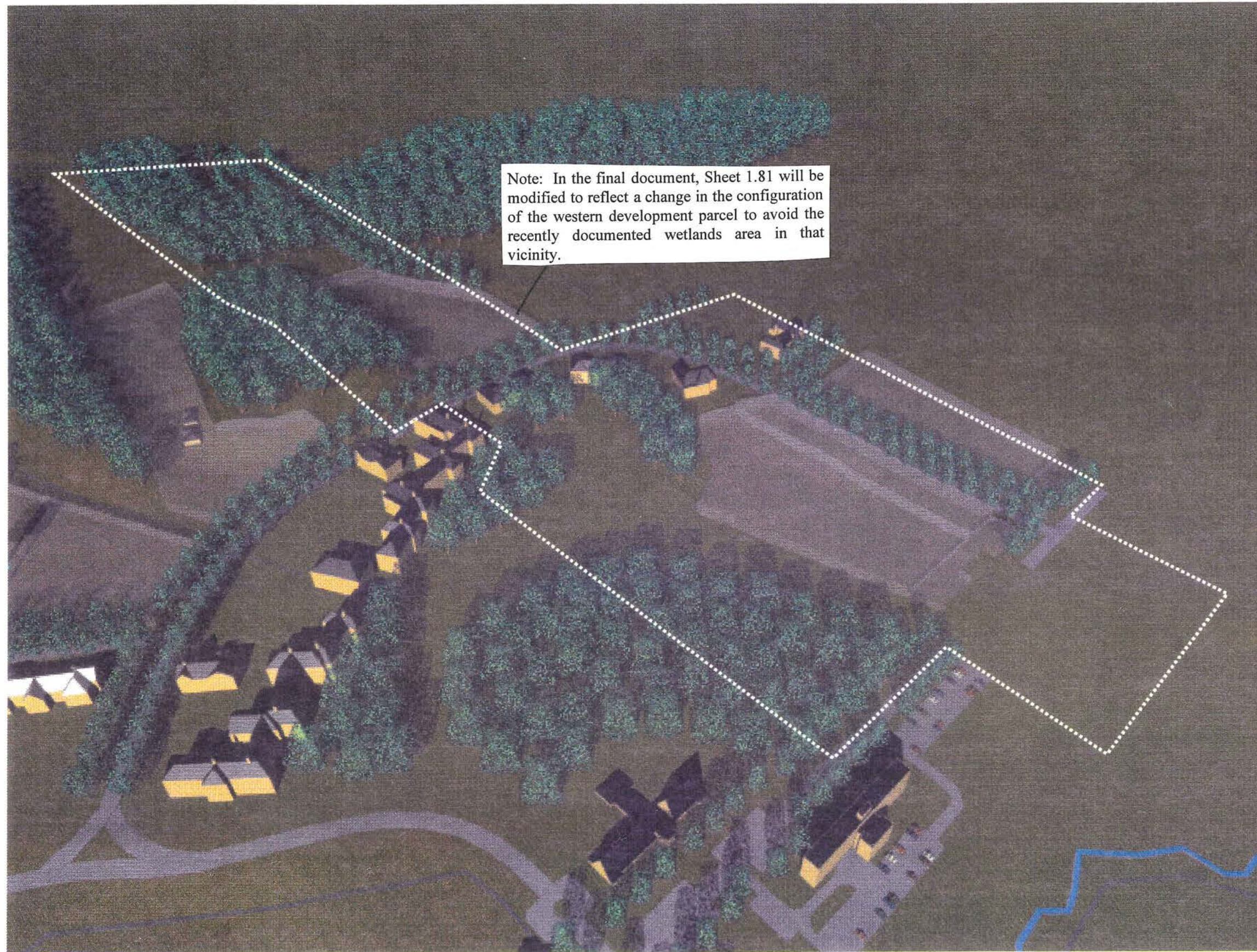
NOTE: The boundary of the subarea shown on this sheet is approximate. See Sheet No. 1.1 for the actual subarea boundary. (Amended February 10, 1996)

NOTE: The allowable heights listed on this sheet are superseded by the "Subarea 1 Building Heights" table on Sheet No. 1.1. (Amended February 10, 1996)

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

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Aerial View - District 1

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FOR SOUTH COAST HIGHWAY
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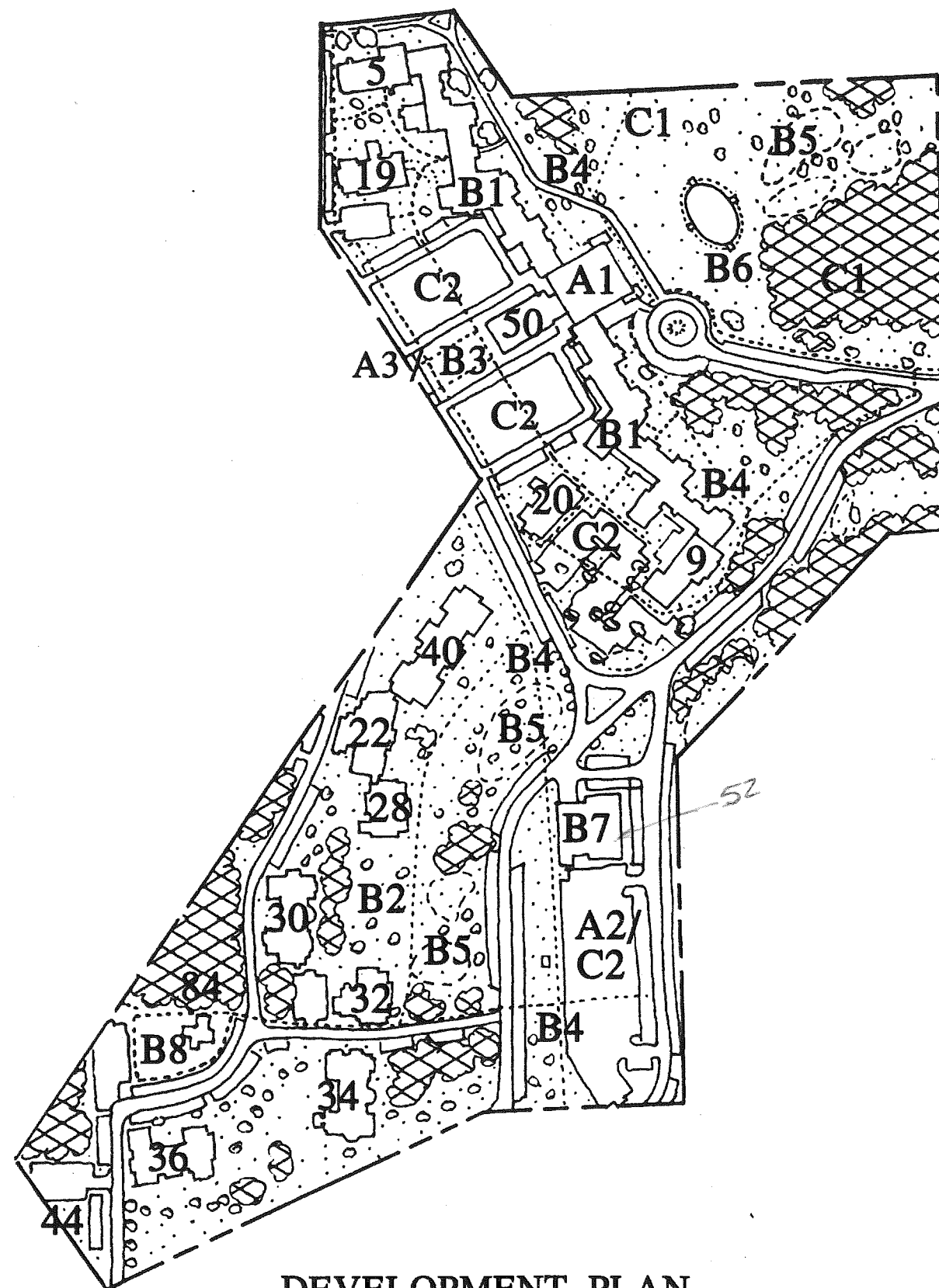
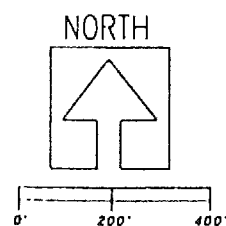
SHEET NO. : 1.8.1

BUILDING KEY

- 5. North Wing
- 9. South Wing
- 19. Cottage
- 20. Cottage
- 22. Cottage
- 28. Cottage
- 30. Cottage
- 32. Cottage
- 34. Cottage
- 36. Cottage
- 40. Cottage
- 44. Green House
- 50. Main Building
- 52. Power Plant
- 84. House



Tree Grouping



DEVELOPMENT PLAN

SUBAREA 2 PLAN

The Village

SITE DEVELOPMENT GUIDELINES

A. PROGRAMMED USES:

1. Village Center
2. Mix of Uses
3. Village Plaza

Note: Allowed uses are listed in Exhibit 8.

B. PROPOSED DEVELOPMENT

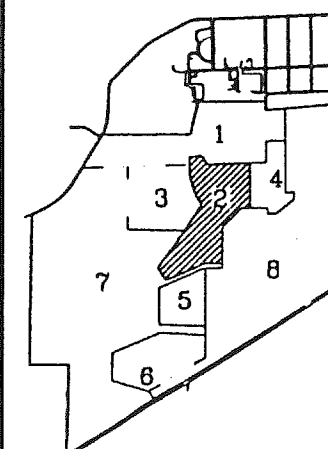
1. Rehabilitation and Adaptation of Building 50 to mixed use infill development
2. Rehabilitation and Adaptation of Cottages for mixed or single uses
3. Village Plaza connecting Subareas 2 and 3
4. Yellow Brick Road and Emergency Vehicle Access
5. Storm Water management
6. Possible re-creation of Willow Pond on Front Lawn
7. Conversion or Reuse of Power Plant
8. Trailhead Plaza and Brew Pub

C. LANDSCAPE PROVISIONS

1. Preserve and Enhance Front Lawn and Arboretum
2. Integrate parking with pastoral landscape

D. HISTORIC PROVISIONS

1. Rehabilitate and Adapt Building 50 and South Cottages preserving the original intent of the Kirkbride design
2. Preserve the original intent of the Front Lawn and Arboretum.



DISTRICT KEY PLAN

AMENDED __/__/__

05/22/2003

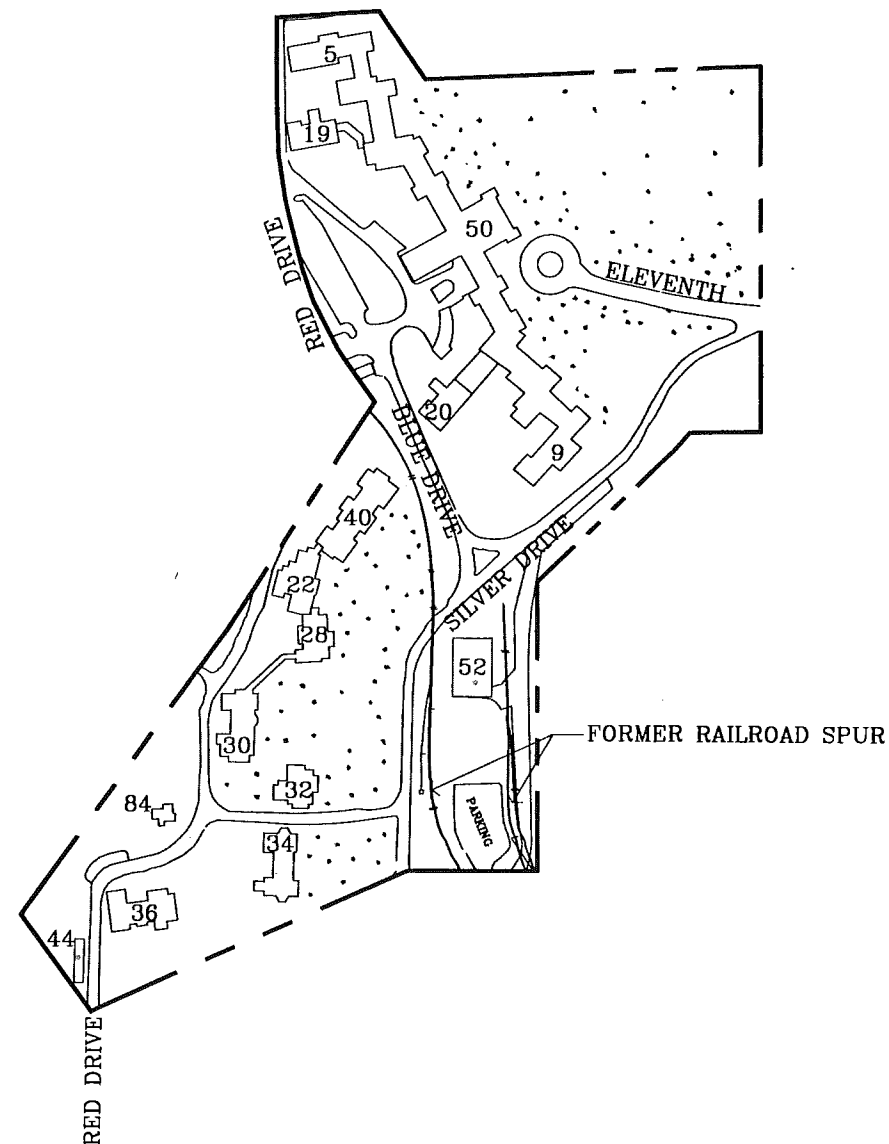
2.1

SUBAREA 2 PLAN

CCRC Center

BUILDING KEY

5. North Wing	- Unoccupied
9. South Wing	- Unoccupied
19. Cottage	- Unoccupied
20. Cottage	- Unoccupied
22. Cottage	- Unoccupied
28. Cottage	- Unoccupied
30. Cottage	- Unoccupied
32. Cottage	- Unoccupied
34. Cottage	- Unoccupied
36. Cottage	- Occupied
40. Cottage	- Unoccupied
44. Green House	- Unoccupied
50. Main Building	- Partially Occupied
52. Power Plant	- Unoccupied
84. House	- Unoccupied



EXISTING BUILDINGS AND ROADS

DESCRIPTION

With The Exception Of The Greenhouse & Minor Connecting Pieces, All Structures, Are Part Of The Historic District.

Red Drive Is An Internal Connecting Road Running North / South Through The Area.

Silver Road Has Served As The Primary Access Road From Eleventh Street To This Subarea.

A Drop-off And Turnaround Exists In A Similar Alignment To The Original Hospital Plan.

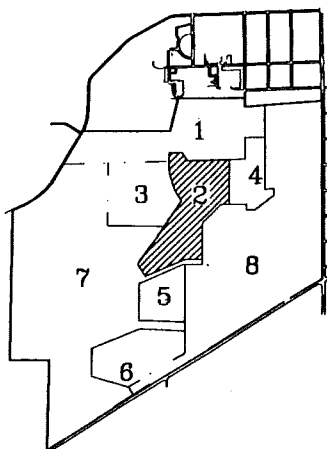
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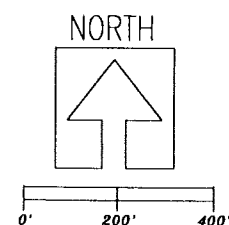
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DISTRICT KEY PLAN



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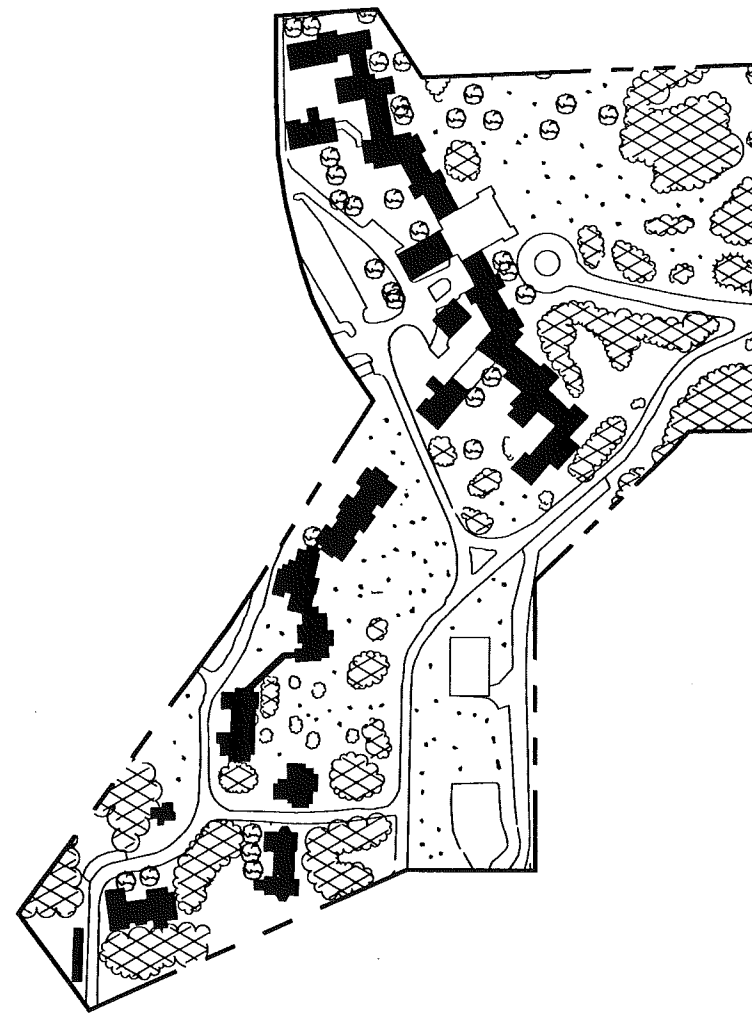
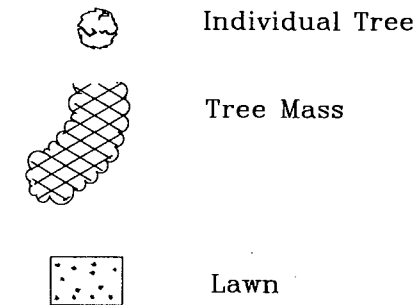
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SUBAREA 2 PLAN

CCRC Center

LANDSCAPE KEY

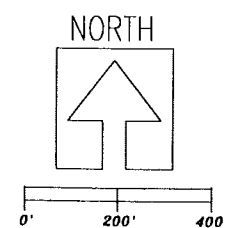


DESCRIPTION

The Northeast Portion Of This Subarea Contains The Historic Lawn Space Which Served As The Foreground For The State Hospital. It Also Contains Specimens Of Various Tree Species Imported By The Hospital's First Director, Dr. Munson.

The Balance Of The Subarea Is Generally Landscaped In An Informal Manner and Maintained.

There Are No Undisturbed Natural Features In This Subarea.



EXISTING LANDSCAPE AND NATURAL FEATURES

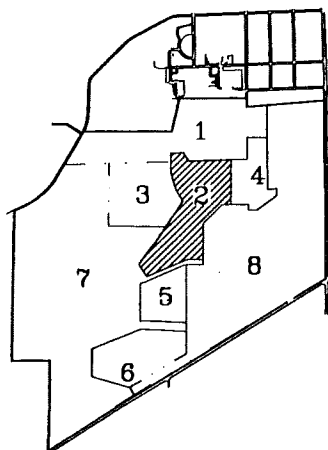
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DISTRICT KEY PLAN

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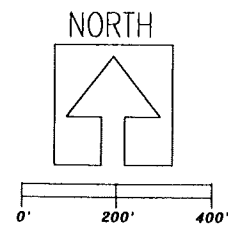
PLT MTC

SUBAREA 2 PLAN

CCRC Center

KEY

-  Topographic Contours @ 2'-0" Intervals
-  Natural Stream
-  Drainage Tendency
-  Steep Slopes



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

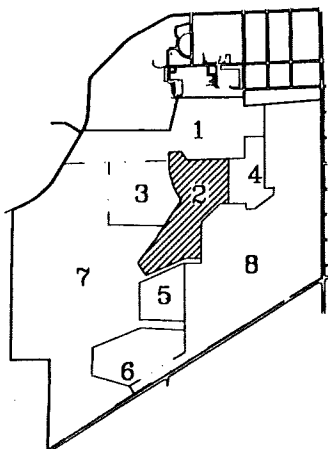
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DISTRICT KEY PLAN

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Page 67
SHEET NO. : 2.4

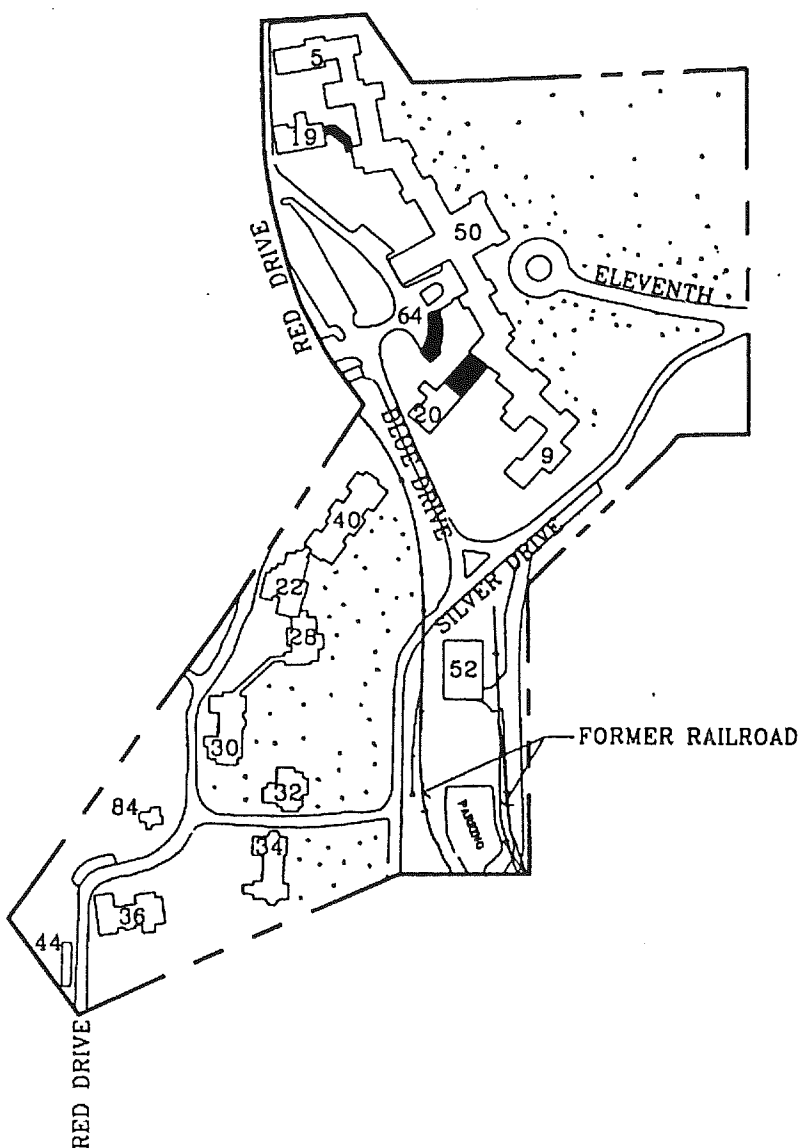
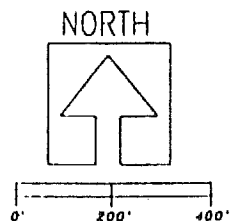
NOT MTC

SUBAREA 2 PLAN

The Village

BUILDING KEY

5. North Wing	- Unoccupied
9. South Wing	- Unoccupied
19. Collage	- Unoccupied
20. Collage	- Unoccupied
22. Collage	- Unoccupied
28. Collage	- Unoccupied
30. Collage	- Unoccupied
32. Collage	- Unoccupied
34. Collage	- Unoccupied
36. Collage	- Occupied
40. Collage	- Unoccupied
44. Green House	- Unoccupied
50. Main Building	- Occupied
52. Power Plant	- Unoccupied
84. House	- Unoccupied



**EXISTING STRUCTURES TARGETED
FOR POSSIBLE DEMOLITION**

KEY

- Existing structure to be either retained or removed
- Existing structure to remain

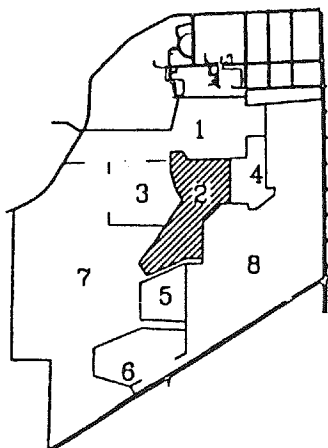
Structures targeted:

1. Link to Hall 19
2. Link to Hall 20
3. Former Staff Garage # 64

NOTE :

Targeted structures can be either removed or retained
All demolition to be approved by S.H.P.O.

Stair and elevator core for Hall 20
to be erected on part of link footprint



DISTRICT KEY PLAN

AMENDED __/__/__

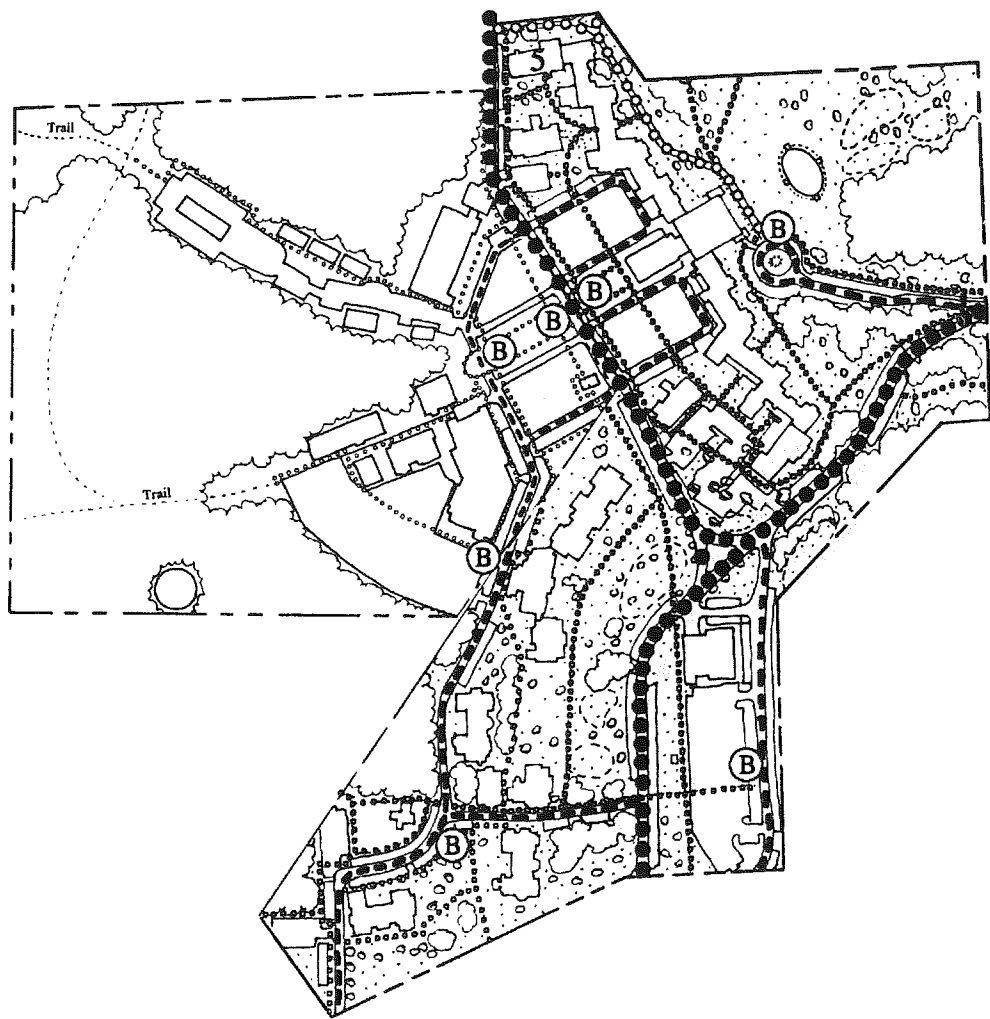
06/03/2003

2.5

SUBAREAS 2 & 3

The Village

CIRCULATION KEY



- o o o o o Life Safety / Yellow Brick Road
- Yellow Brick Road Promenade & trails
- Motorized Vehicle Local
- ● ● ● ● Motorized Vehicle circulation
- ⓑ Bata Bus Stop

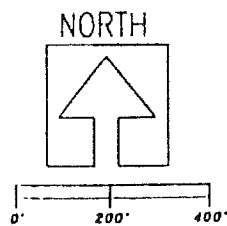
NOTE :

Whole Site to be declared Pedestrian Zone

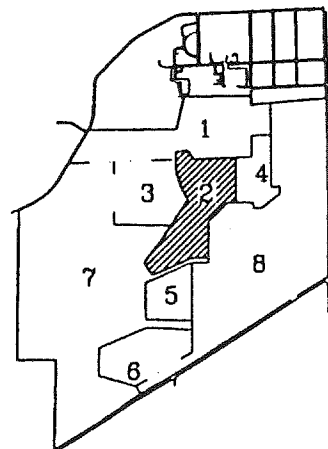
Motor Vehicles to Yield at All Times and on all Streets
to Pedestrians, Animals and Non Motorized Vehicles

Speed limit on Site 25 mph

Bicycles authorized on sidewalks at speeds under 10 mph



CIRCULATION PLAN



DISTRICT KEY PLAN

AMENDED __/__/__

05/27/2003

2.6

SUBAREA 2 PLAN

The Village

KEY

Allowable Height of Envelope Measured to
Building Cornice

Height Above Sea Level / Above First Floor of Building 50

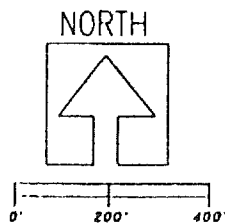
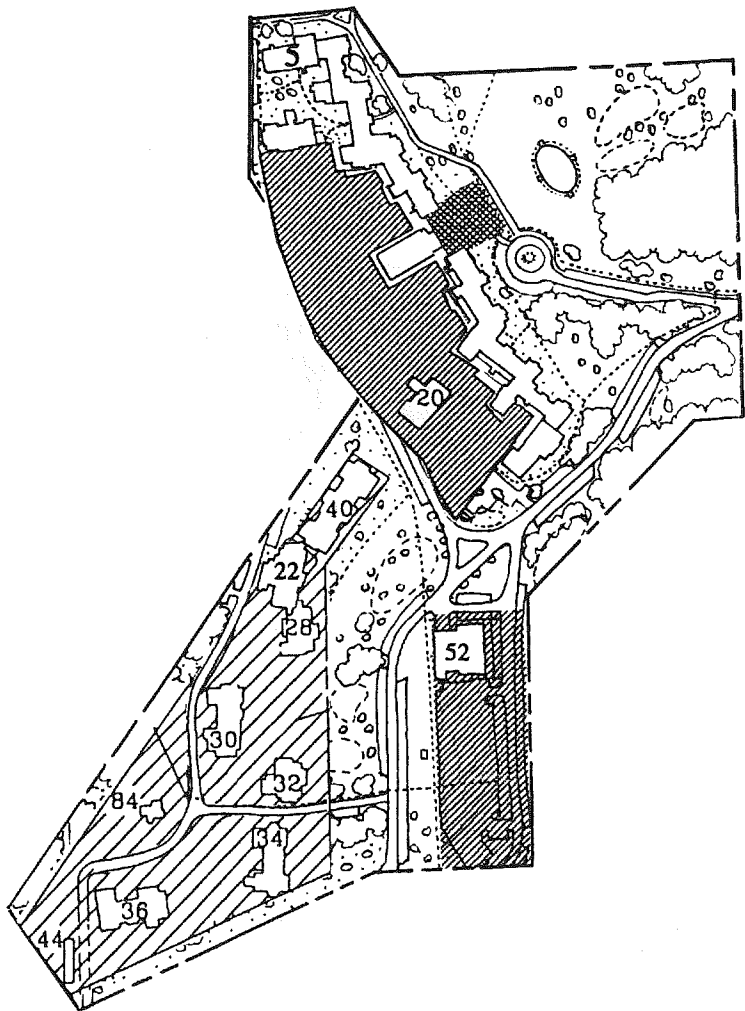
750.0' / 100.0'

700.0' / 50.0'

685.0' / 35.0'

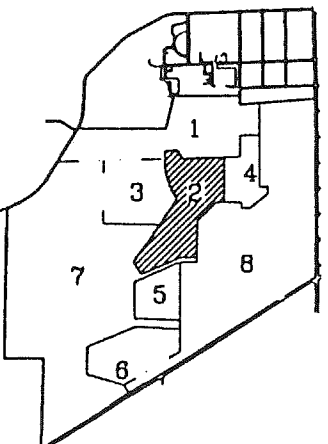
Development at Grade

Open Space Improvement at Grade



BUILDING VOLUME ENVELOPE

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.



DISTRICT KEY PLAN

AMENDED __/__/__





05/27/2003

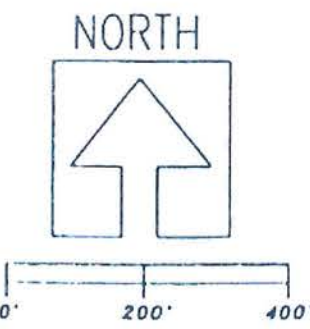
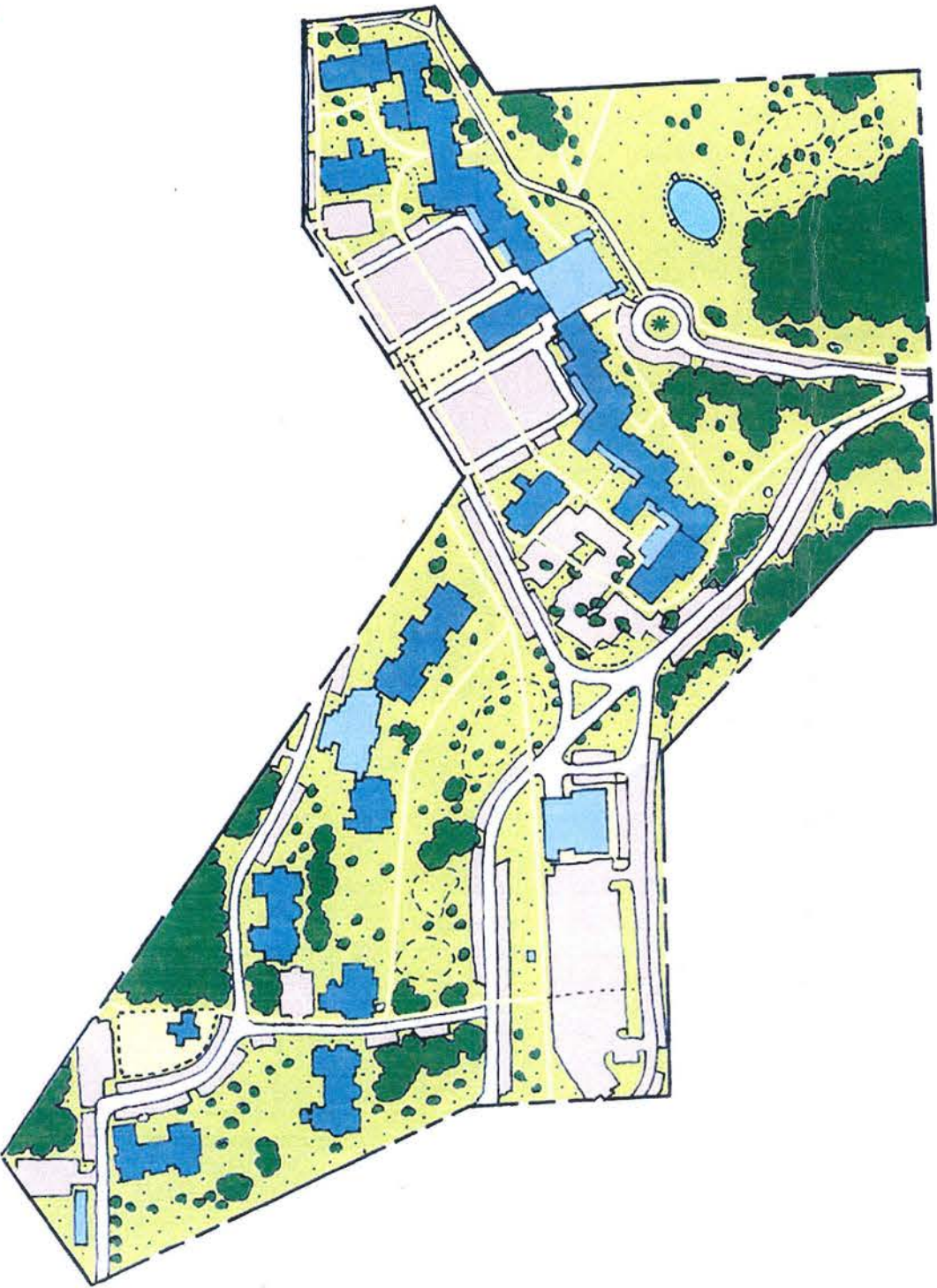
2.7

SUBAREA 2 PLAN

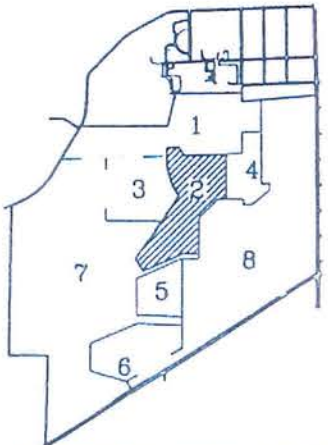
The Village

COLOR KEY

-  Sloped Roof Buildings
-  Flat Roof Buildings
-  Yellow Brick Road
-  Parking Area



SITE PLAN



DISTRICT KEY PLAN

AMENDED __/__/__



Aerial View - District 2

VOA

DESIGNER: VOA
DATE: 10/10/94
PROJECT: 2.8.1
SHEET: 71

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SHEET NO:

2.8.1

SUBAREA 3 PLAN

The Village

SITE DEVELOPMENT GUIDELINES

A. PROGRAMMED USES:

1. Recreation
2. Mix of Uses
3. Village Plaza

Note: Allowed uses are listed in Exhibit 8.

B. PROPOSED DEVELOPMENT

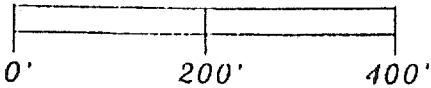
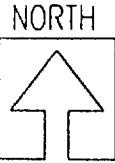
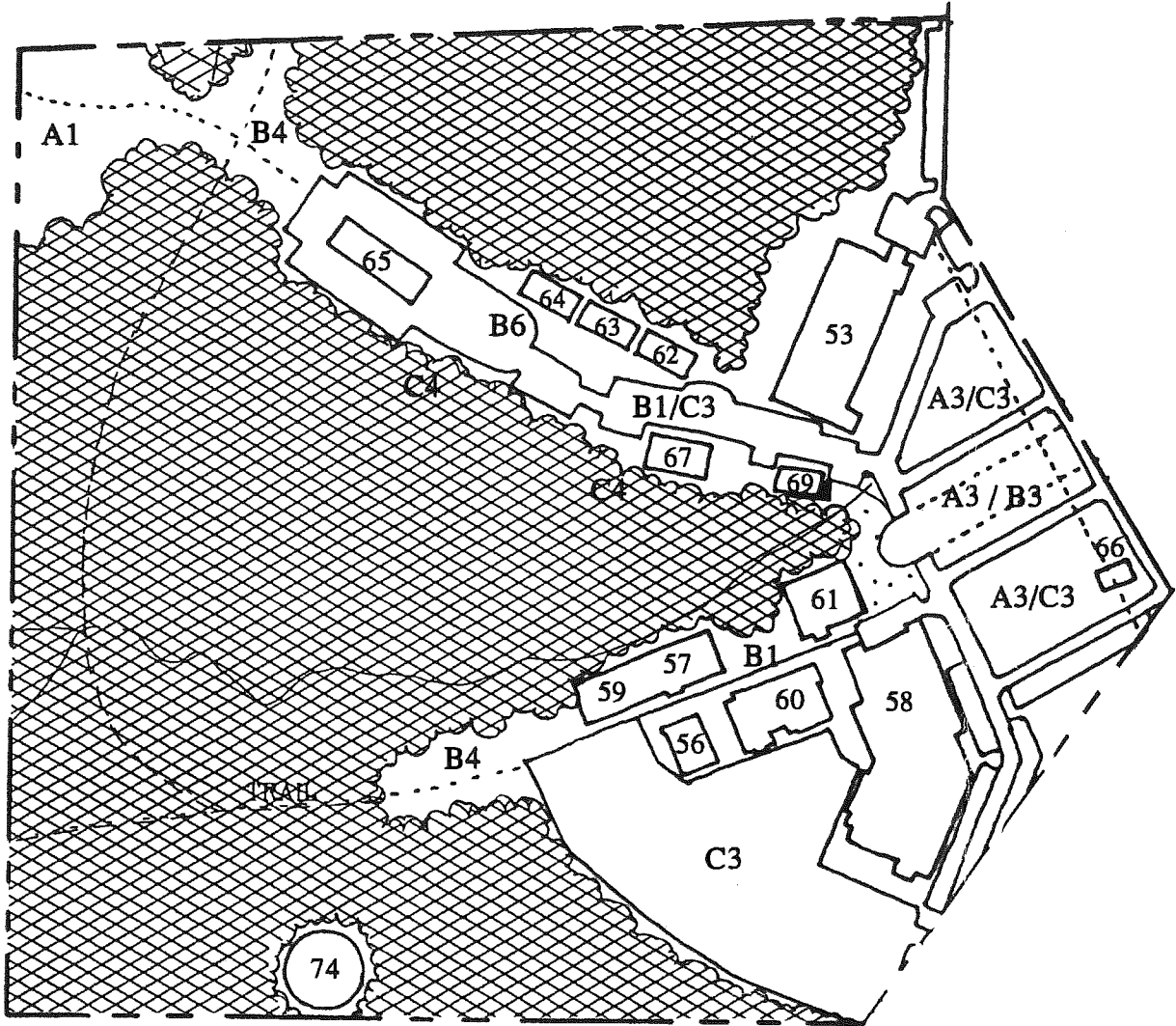
1. Rehabilitation and Adaptation of Buildings to mixed use infill development
2. Preservation and Enhancement of Wooded Hills
3. Village Plaza connecting Subareas 2 and 3
4. Yellow Brick Road and Trails
5. Storm Water management is in Subarea 2
6. Possible re-creation of Building 64

C. HISTORIC AND LANDSCAPE PROVISIONS

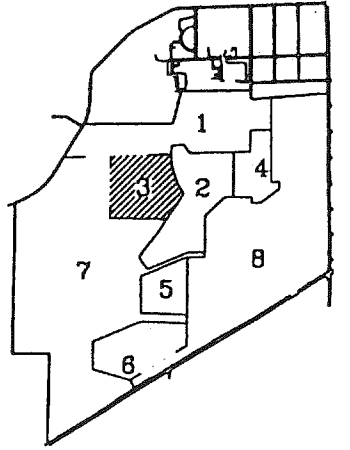
1. Rehabilitate and Adapt All Contributing Buildings
2. Preserve the original intent of the Kirkbride design
3. Integrate parking with pastoral landscape
4. Existing Wetlands will be Identified and Preserved

BUILDING KEY

- 53. Laundry Building
- 56. Carpenter Shop
- 57. Maintenance Shop
- 58. Warehouse
- 59. Maintenance Shop
- 60. Shop
- 61. General Services
- 62. Root Cellar
- 63. Root Cellar
- 65. Garage
- 66. Fire House
- 67. Garage
- 69. Garage
- 74. Water Reservoir



DEVELOPMENT PLAN



DISTRICT KEY PLAN

AMENDED __ / __ / __

06/03/2003

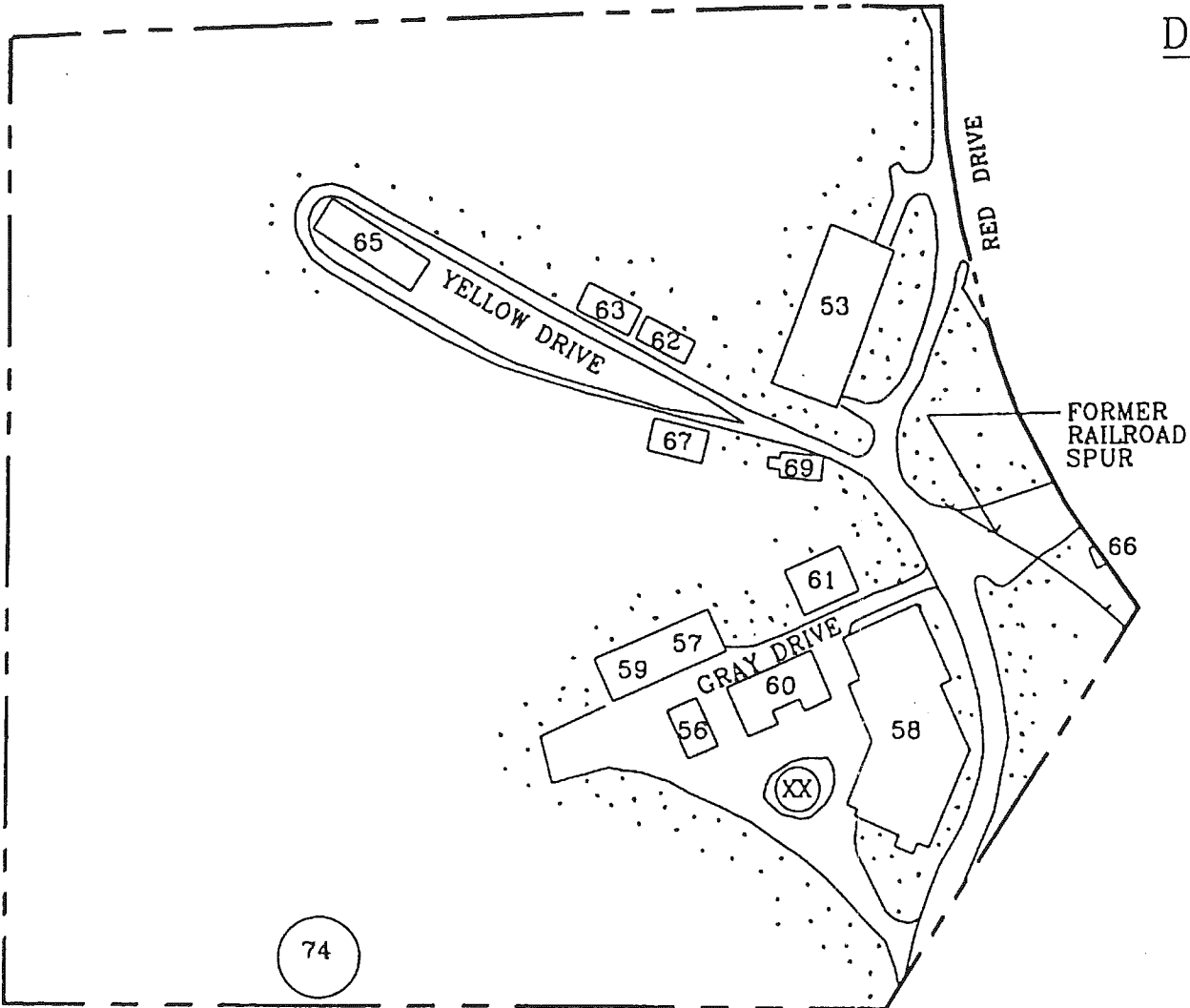
3.1

SUBAREA 3 PLAN

The Village

BUILDING KEY

- 53. Laundry Building
- 56. Carpenter Shop
- 57. Maintenance Shop
- 58. Warehouse
- 59. Maintenance Shop
- 60. Shop
- 61. General Services
- 62. Root Cellar
- 63. Root Cellar
- 65. Garage
- 66. Fire House
- 67. Garage
- 69. Garage
- 74. Water Reservoir



DESCRIPTION

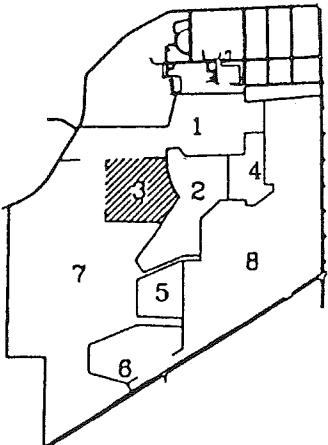
Subarea 3 is the service side of the former Asylum. It links the site's centerpiece to the therapeutic wooded hills protecting it from prevailing winds

The Improved Portions Of This Subarea Have Historically Served As Support To The State Hospital.

Buildings 58, 61, 62, 63 & 69 Date Back To The Original Hospital Campus. Those buildings are contributing to the historic significance of the site

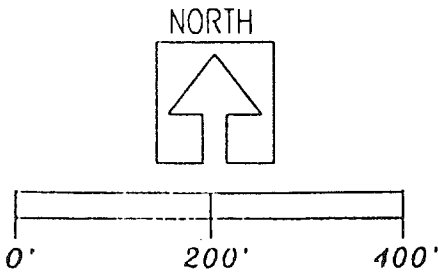
No Structures In This Subarea Contain The Historically Significant Architectural Style Of Building 50 And The Cottages.

Yellow And Gray Drive Are Minor Service Roads.



DISTRICT KEY PLAN

AMENDED __/__/__

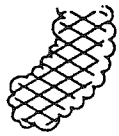


EXISTING BUILDINGS AND ROADS

SUBAREA 3 PLAN

The Village

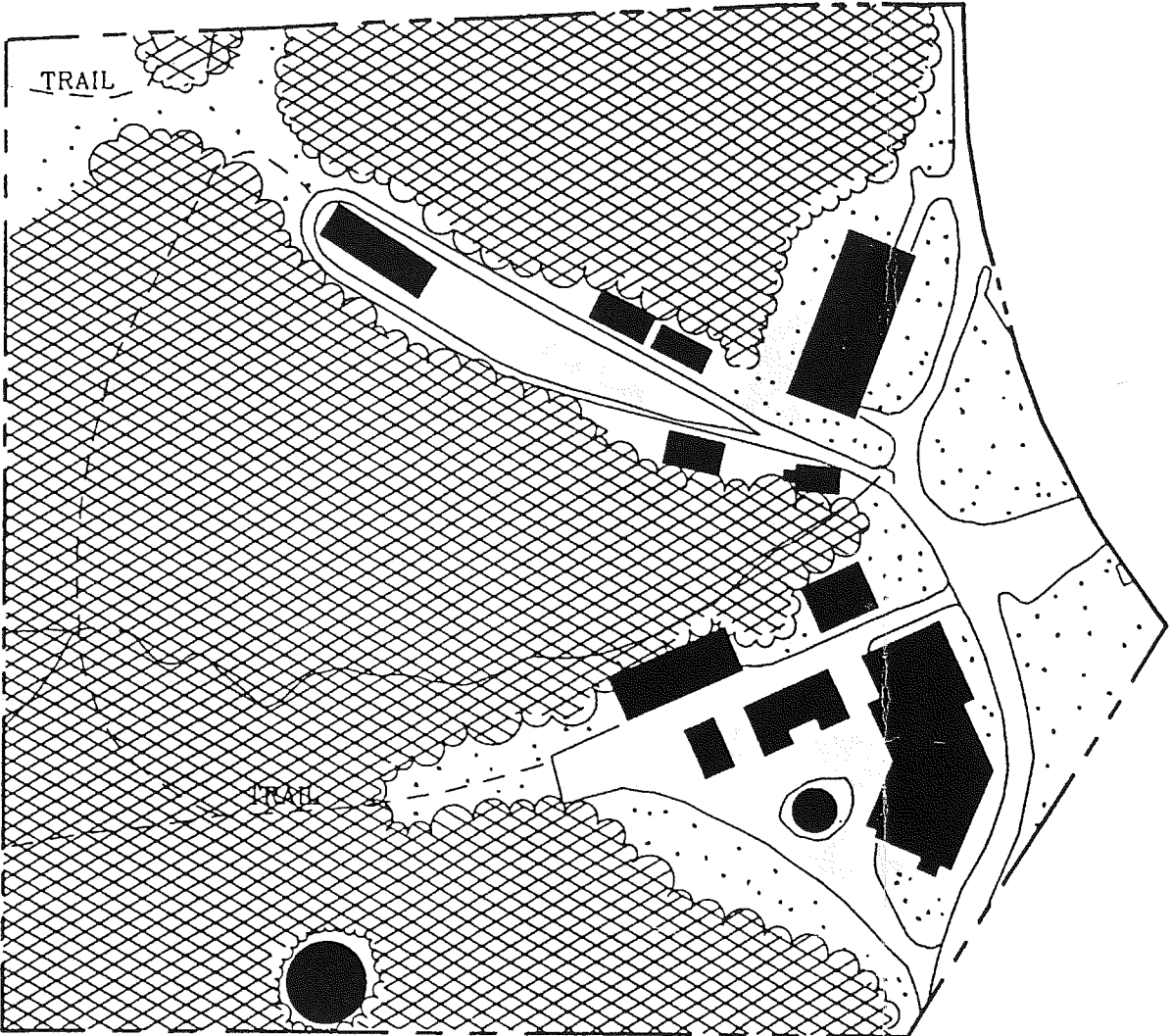
LANDSCAPE KEY



Multiple Tree Mass

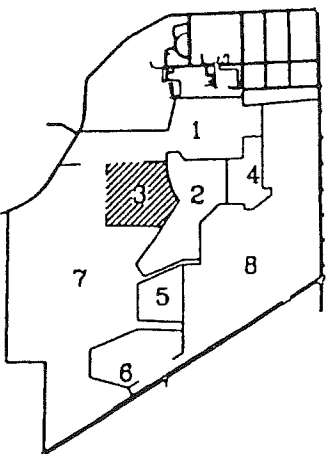


Lawn



DESCRIPTION

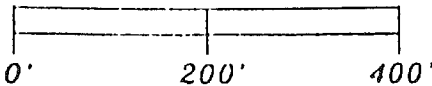
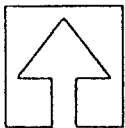
The Forested Bluffs Dominate The West Half Of This Subarea And Create A Strong Enclosing Edge To This Subarea.



DISTRICT KEY PLAN

AMENDED __/__/__

NORTH







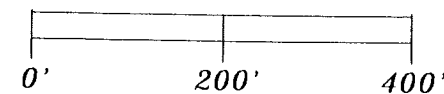
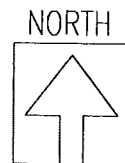
EXISTING LANDSCAPE AND NATURAL FEATURES

SUBAREA 3 PLAN

Residential/Activity Center

KEY

-  Topographic Contours @ 2'-0" Intervals
-  Natural Stream
-  Drainage Tendency
-  Steep Slopes



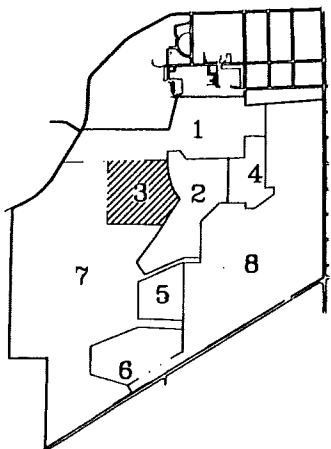
EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

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ARCHITECTURE



DISTRICT KEY PLAN

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
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APPROVED BY :
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PROJECT NO. :

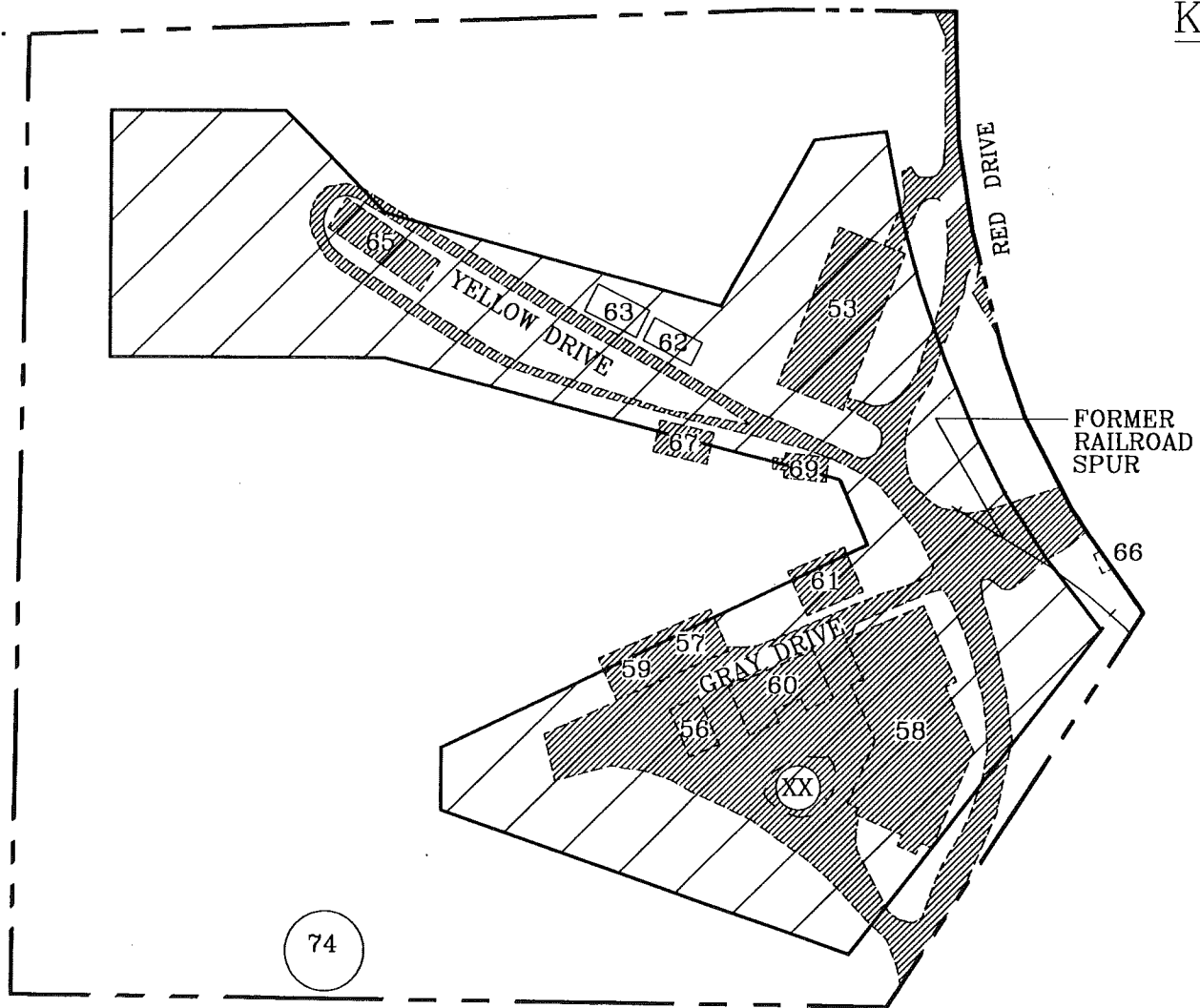
Page 75
SHEET NO. : 3.4

SUBAREA 3 PLAN

Residential/Activity Center

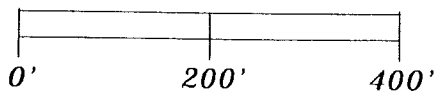
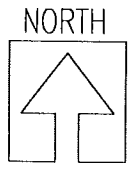
KEY

-  Existing Roads Or Buildings To Be Removed.
-  Building Envelope



BUILDING KEY

- 53. Laundry Building
- 56. Carpenter Shop
- 57. Maintenance Shop
- 58. Warehouse
- 59. Maintenance Shop
- 60. Shop
- 61. General Services
- 62. Root Cellar
- 63. Root Cellar
- 65. Garage
- 66. Fire House
- 67. Garage
- 69. Garage
- 74. Water Reservoir



EXISTING ROADS, BUILDINGS AND PARKING LOTS
TO BE DEMOLISHED

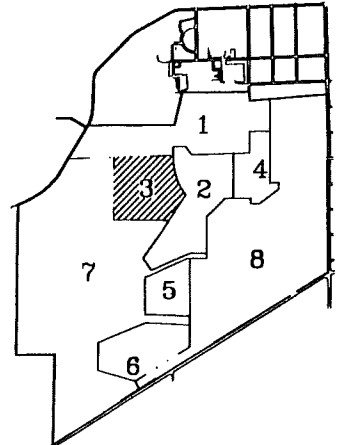
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SUBAREA 3 PLAN

Residential/Activity Center

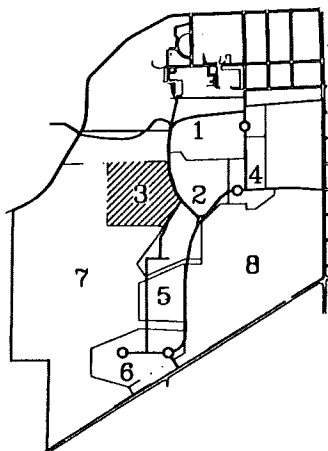
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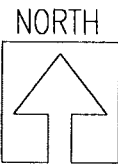
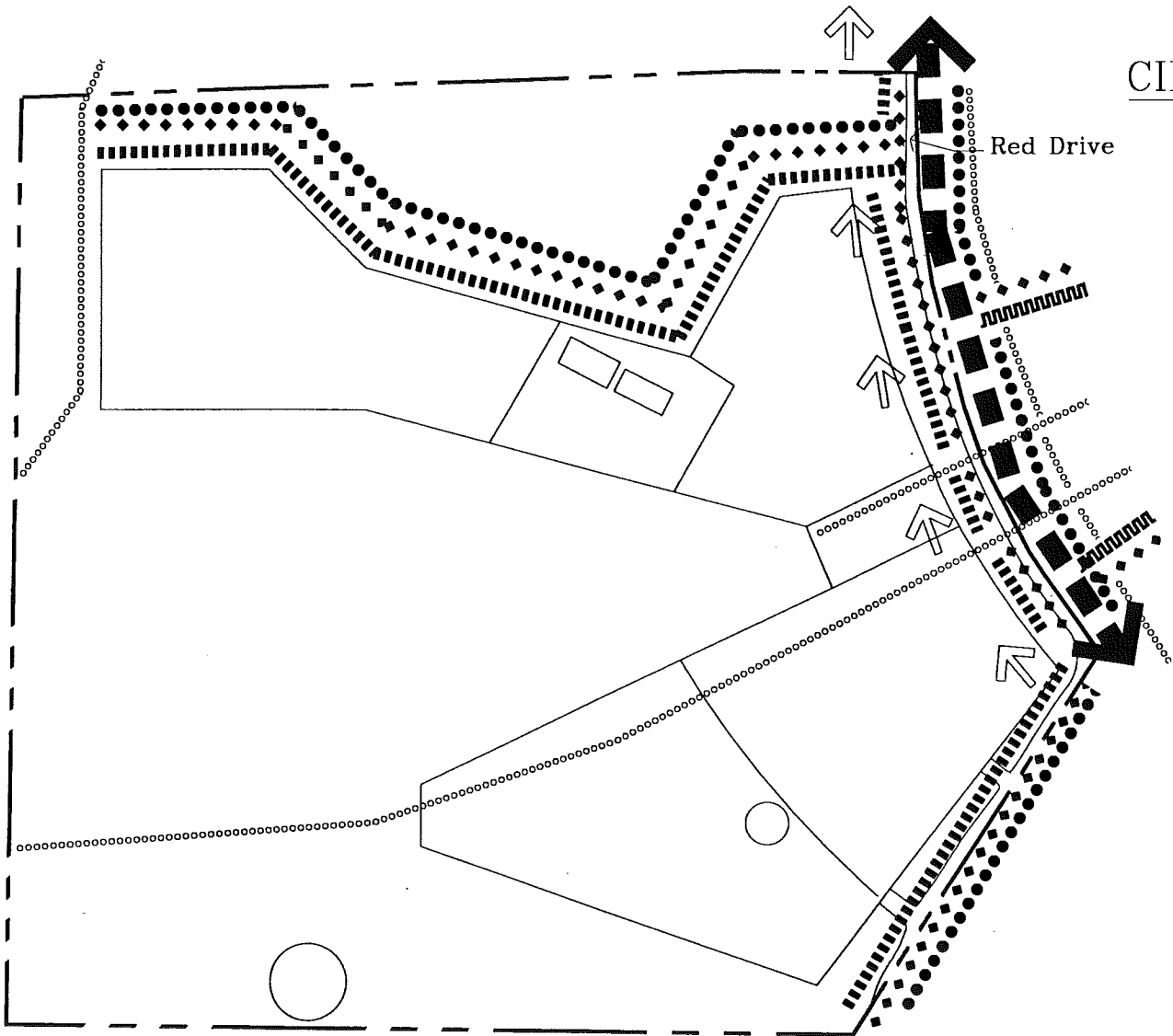


DISTRICT KEY PLAN

CIRCULATION KEY

-  Major Access
-  Staff Access
-  Service
-  Resident Access
-  Life Safety Access
-  Pedestrian
-  Future BATA Bus Route

Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.



0' 200' 400'

CIRCULATION PLAN

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
Page 77
SHEET NO. : 3.6


SUBAREA 3 PLAN


Residential/Activity Center

KEY

Allowable Height of Envelope Measured to Building Cornice

 750.0' Maximum

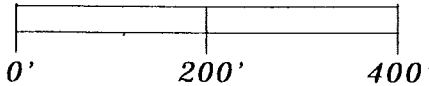
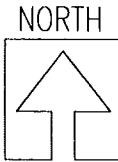
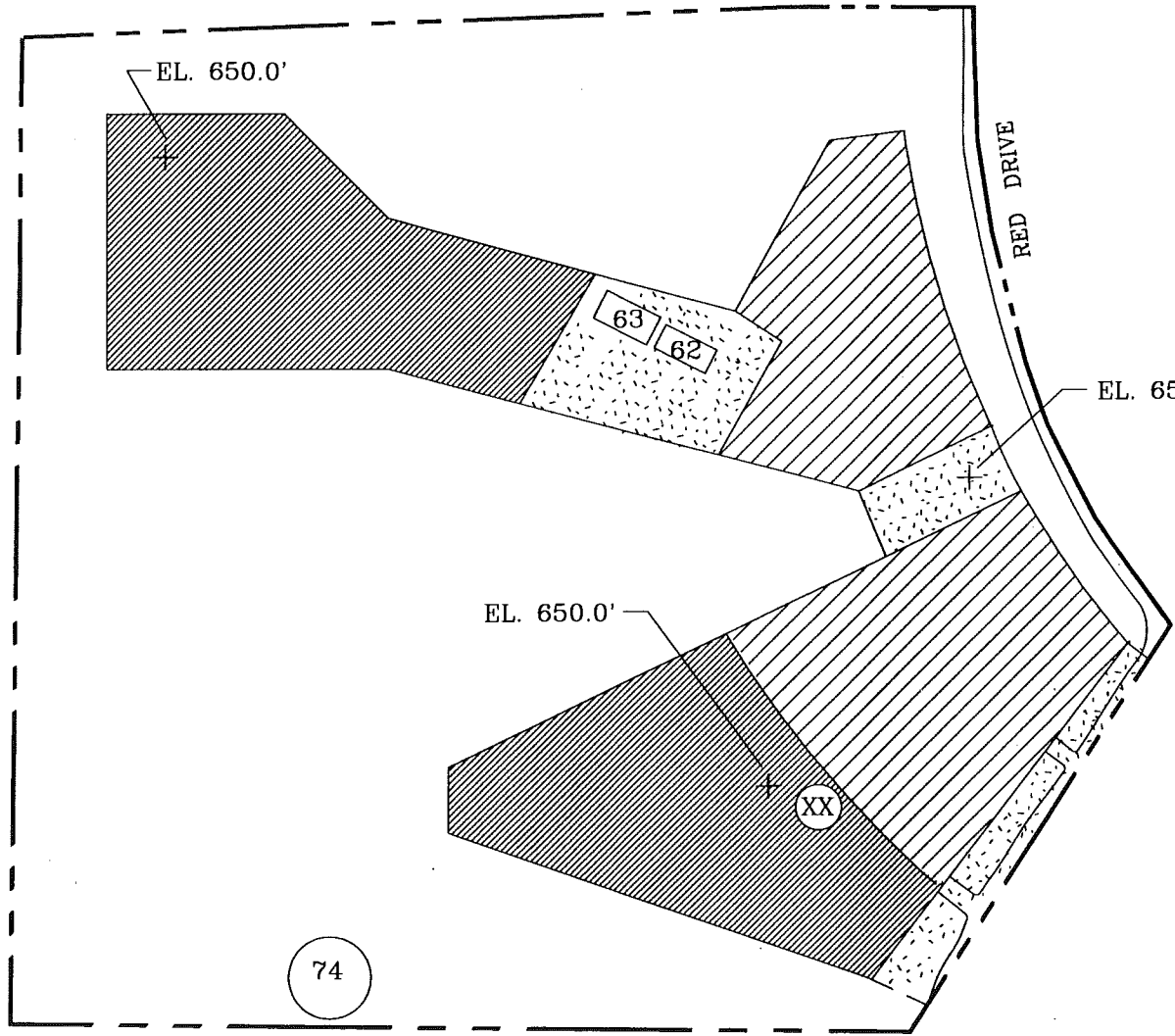
 3 Story Maximum at 15'-0" ea.

 Surface Area Improvements Only, No Build Zone

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



BUILDING VOLUME ENVELOPE

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

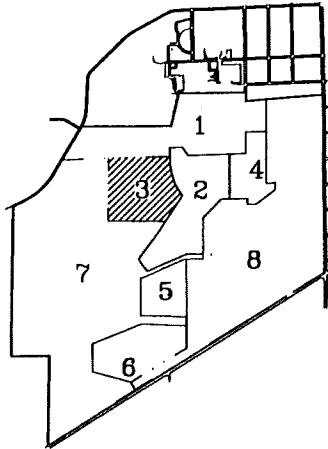
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DISTRICT KEY PLAN

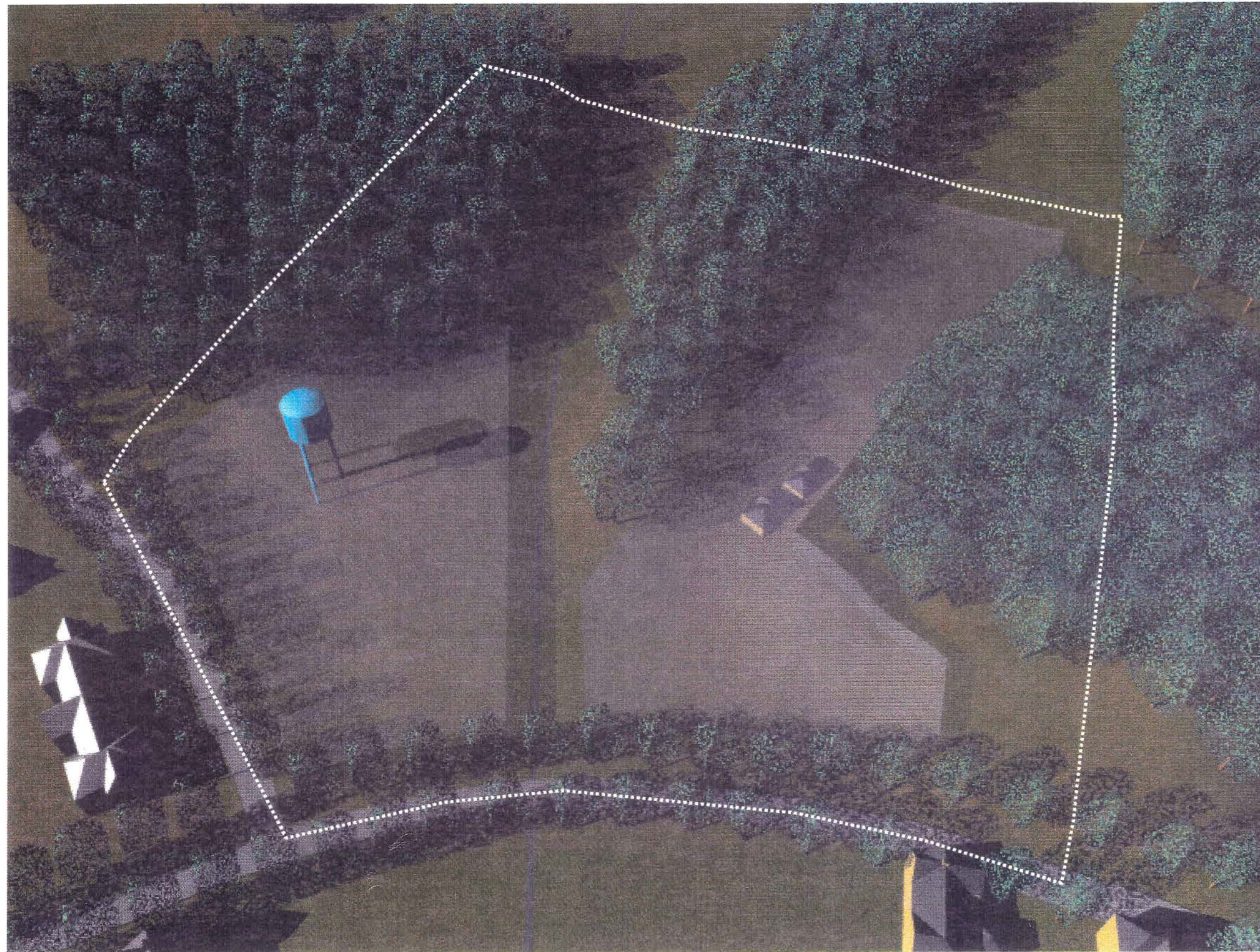
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3.7



Aerial View - District 3

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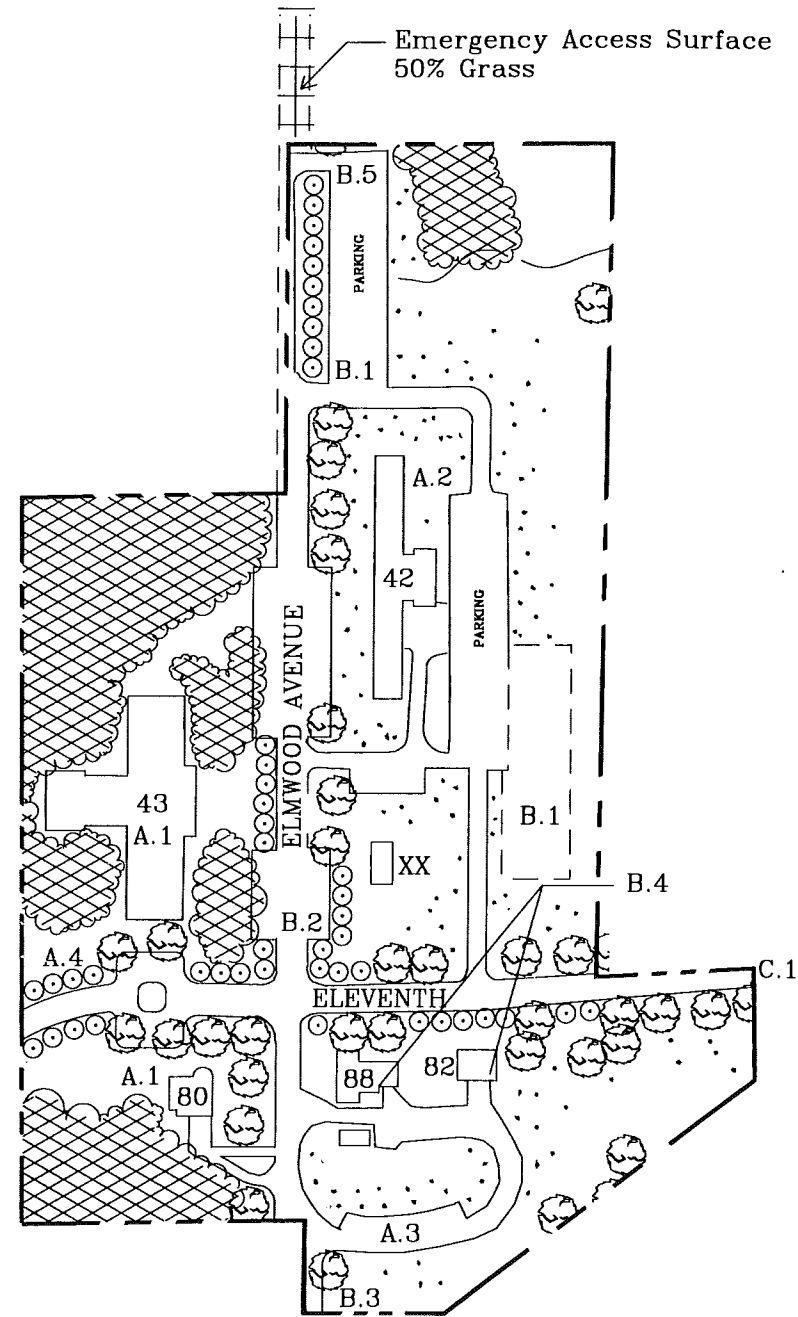
SHEET NO. 5.0.1

3.8.1

BUILDING KEY

- 42. State Office Building – Occupied
- 43. All Faith's Chapel – Occupied
- 80. Women's Resource Center – Occupied
- 82. House – Occupied
- 88. House – Unoccupied
- XX. New Boiler House

 = Tree Grouping



DEVELOPMENT PLAN

SUBAREA 4 PLAN

Community Services Center

SITE DEVELOPMENT GUIDELINES

A. PROGRAMMED USES:

1. Community Services
 - a. Women's Resource Center
 - b. All Faith's Chapel
2. State Office Building
3. Trail System Access
4. Major Symbolic / Historic Access To Commons

B. PROPOSED DEVELOPMENT:

1. Relocation and Reconfiguration Of State Office Parking To South (Subject To State Approval).
2. Parking For All Faith's Chapel
3. Parking Area For Trail Systems
4. Site Management/Community Use
5. Stormwater Control Sedimentation Basin Potential Location.

C. LANDSCAPE PROVISIONS:

1. Reinforce And Maintain Street Trees.
2. Control Edge Interface With Major Open Spaces
3. Support Visual Corridor Of Elmwood Avenue.
4. Enhance Existing Entry Quality.

D. HISTORIC PROVISIONS:

1. Boulevards
2. Rehabilitation/Adaptive Reuse Of Buildings 80, 82, 88.

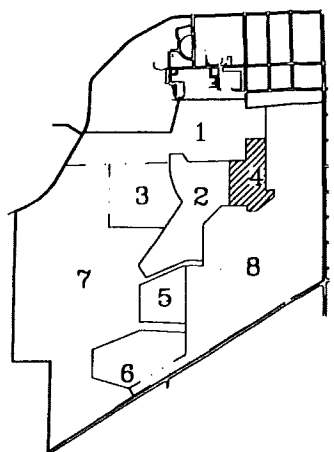
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DISTRICT KEY PLAN

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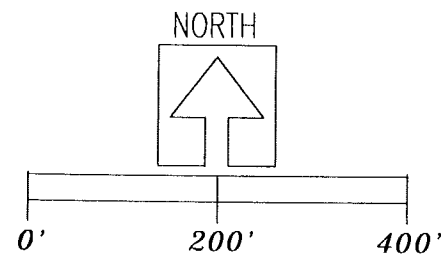
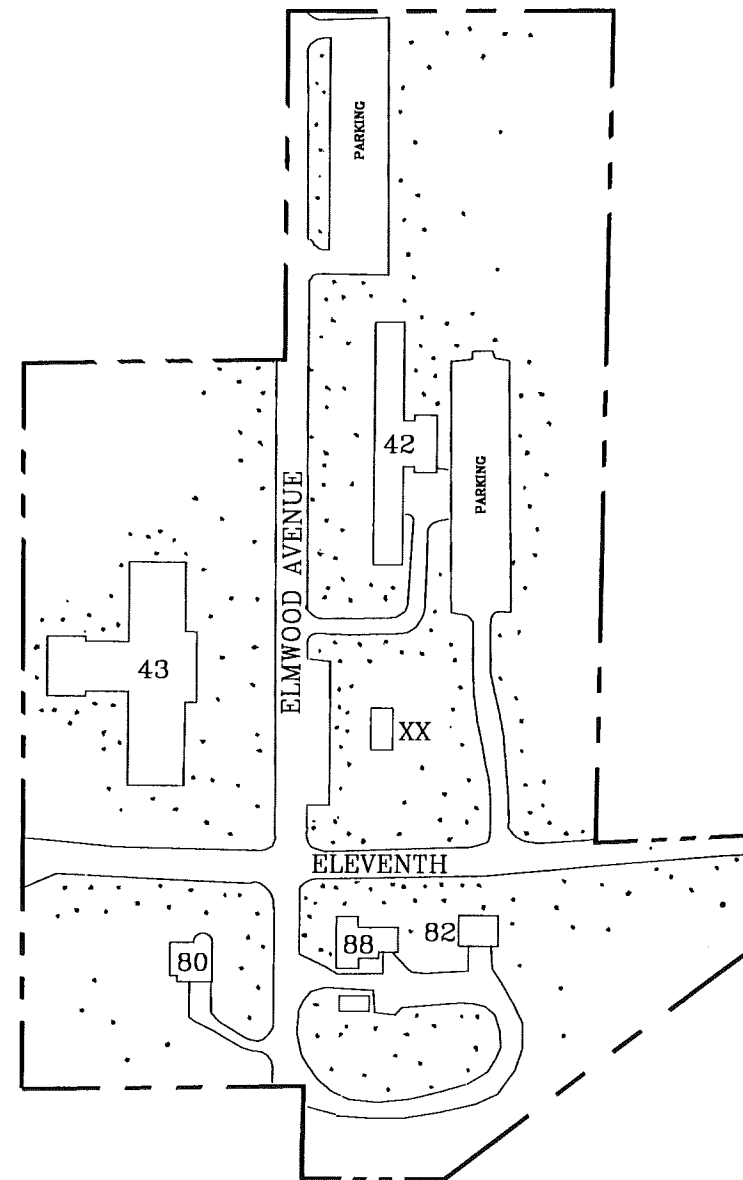
4.1

SUBAREA 4 PLAN

Community Services Center

BUILDING KEY

- 42. State Office Building – Occupied
- 43. All Faith's Chapel – Occupied
- 80. Women's Resource Center – Occupied
- 82. House – Occupied
- 88. House – Unoccupied
- XX. New Boiler House



EXISTING BUILDINGS AND ROADS

DESCRIPTION

All Structures In This Subarea Are Currently Occupied, With The Exception Of Building 88.

Buildings 80 & 88 Date Back To The Original State Hospital Plan And Have Historical Significance.

Buildings 42 & 43 Are Recent Structures Which Provide Space For Many Civic And Community Service Functions.

Building 80 Houses The Women's Resource Center.

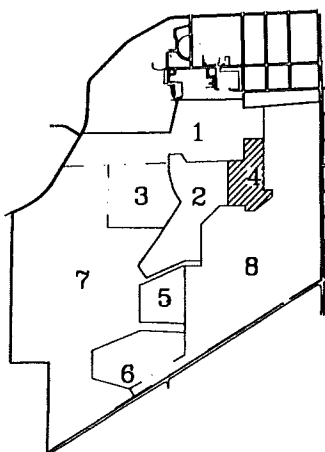
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DISTRICT KEY PLAN

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4.2

SUBAREA 4 PLAN

Community Services Center

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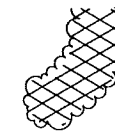
GBKB

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LANDSCAPE KEY



Boulevard Tree



Multiple Tree Mass



Lawn

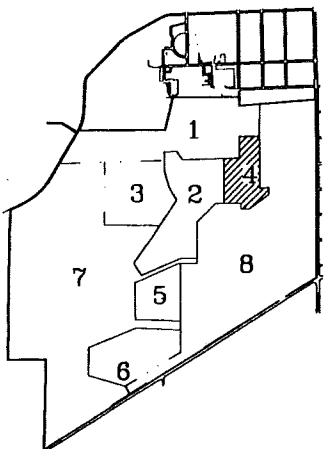


Unmaintained Natural Vegetated
Wetland Edge

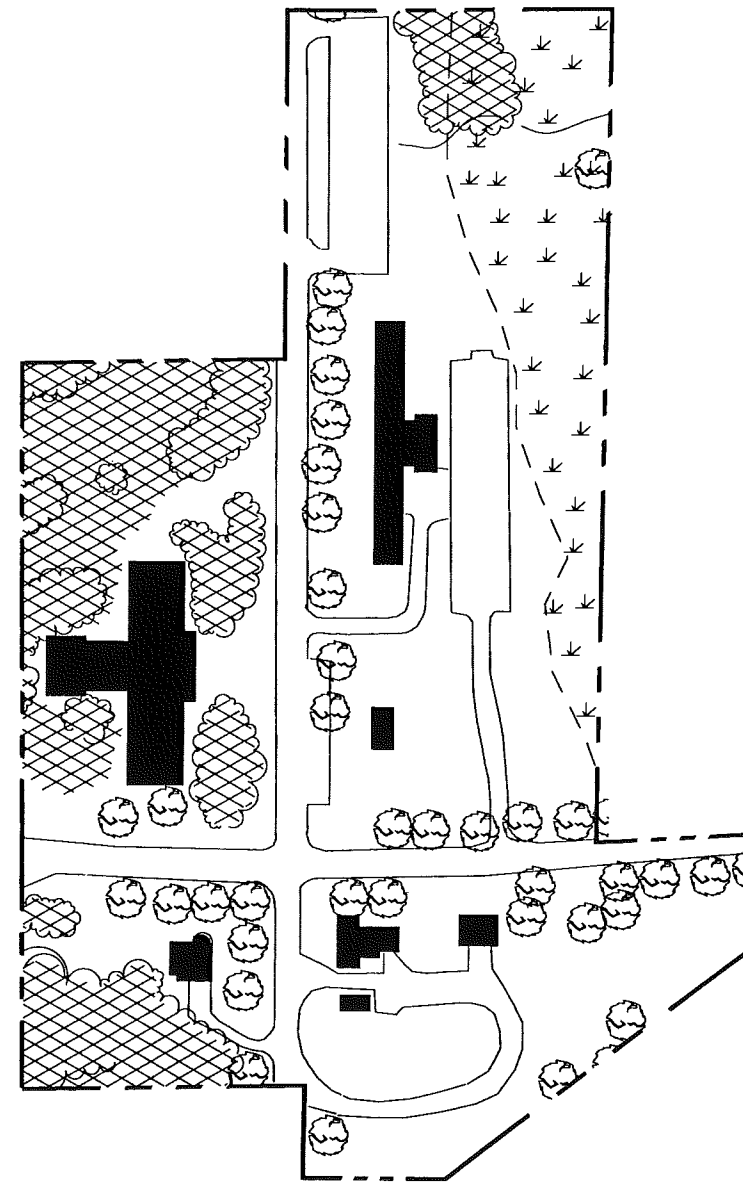
DESCRIPTION

The Northwest Portion Of This Subarea
Contains Part Of The Lawn & Arboretum.

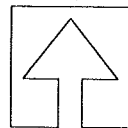
The East And Southern Edges Include And
Abut Larger Wetland Systems Associated
With Kids Creek.



DISTRICT KEY PLAN



NORTH



0' 200' 400'

EXISTING LANDSCAPE AND NATURAL FEATURES

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SHEET NO. : 4.3

PLAN 82

SUBAREA 4 PLAN

Community Services Center

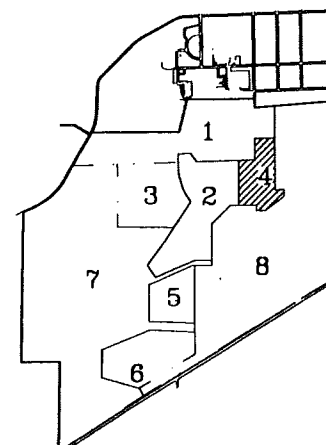
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ARCHITECTURE



DISTRICT KEY PLAN






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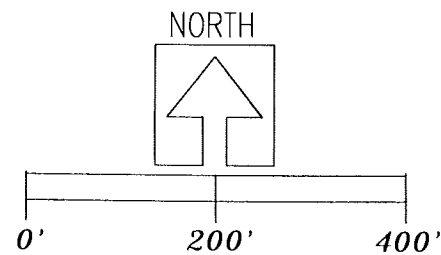
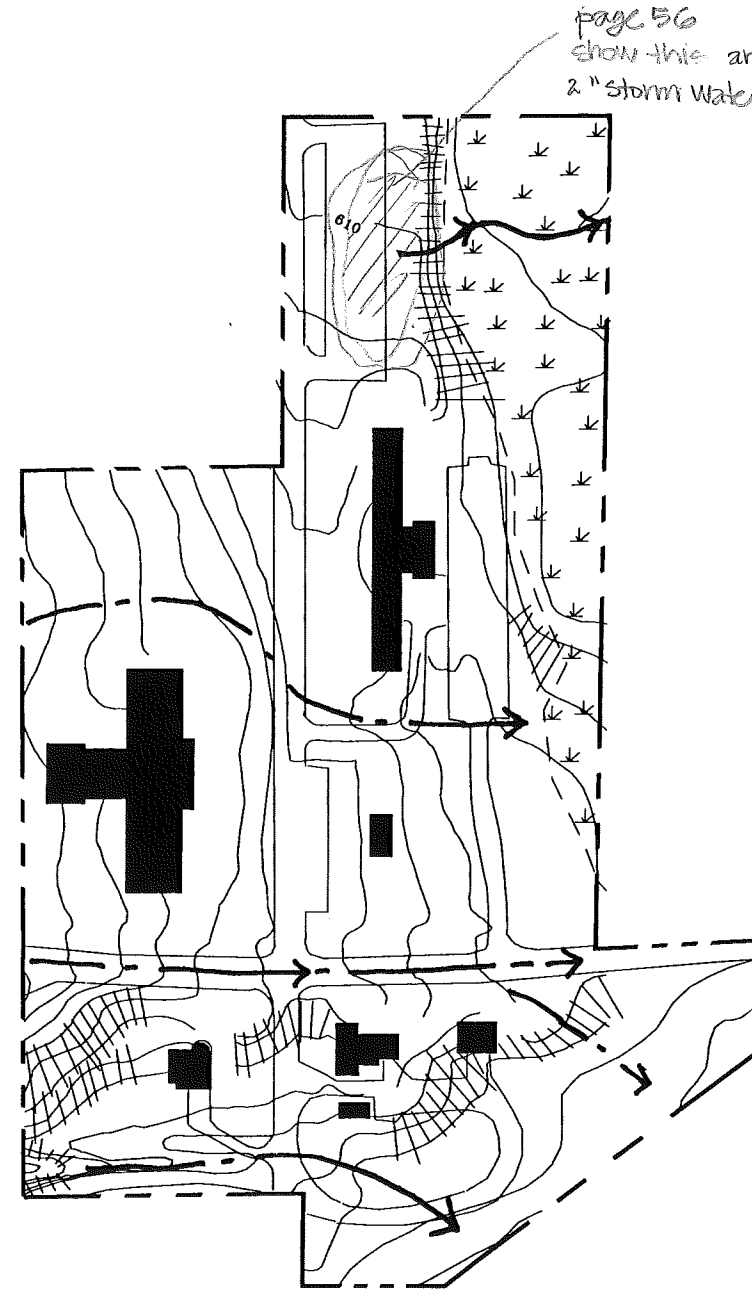
SHEET NO. : 4.4

KEY

-  Topographic Contours @ 2'-0" Intervals
-  Drainage Tendency
-  Natural Stream
-  Steep Slope
-  Wetland

DESCRIPTION

This Subarea Is Gently Sloping Down To The East Where It Abuts the Wetland Associated With Kids Creek.



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

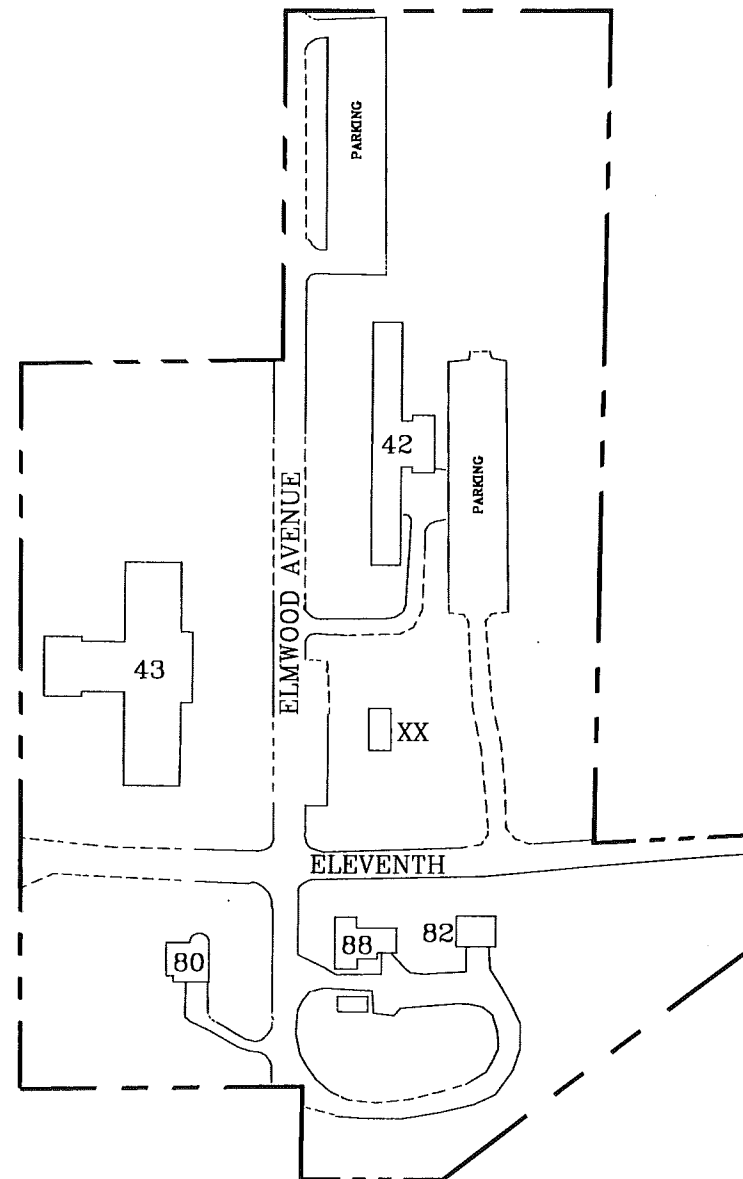
SUBAREA 4 PLAN

Community Services Center

BUILDING KEY

- 42. State Office Building — Occupied
- 43. All Faith's Chapel — Occupied
- 80. Women's Resource Center — Occupied
- 82. House — Occupied
- 88. House — Unoccupied
- XX. New Boiler House

Is 11th Street extended to be retained or removed? There appears to be a conflict between subarea plans as to the disposition of this Street... (see subarea 2 plan)



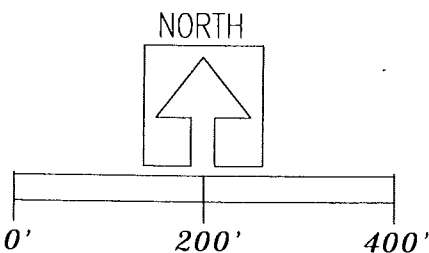
DESCRIPTION

Under the Proposed Plan There Will Be No Building Demolition In This Subarea. However There May Be Parking Lot And Roadway Demolition.

KEY



Existing Roads Or Buildings To Be Removed.



EXISTING ROADS, BUILDINGS AND PARKING LOTS TO BE DEMOLISHED

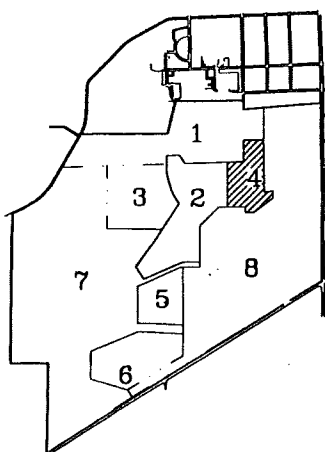
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DISTRICT KEY PLAN

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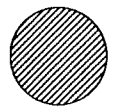

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SHEET NO. : 4.5

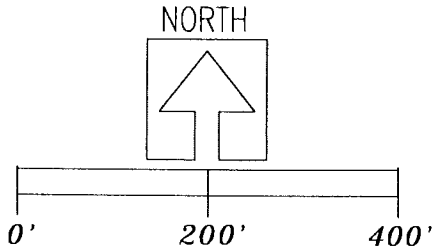
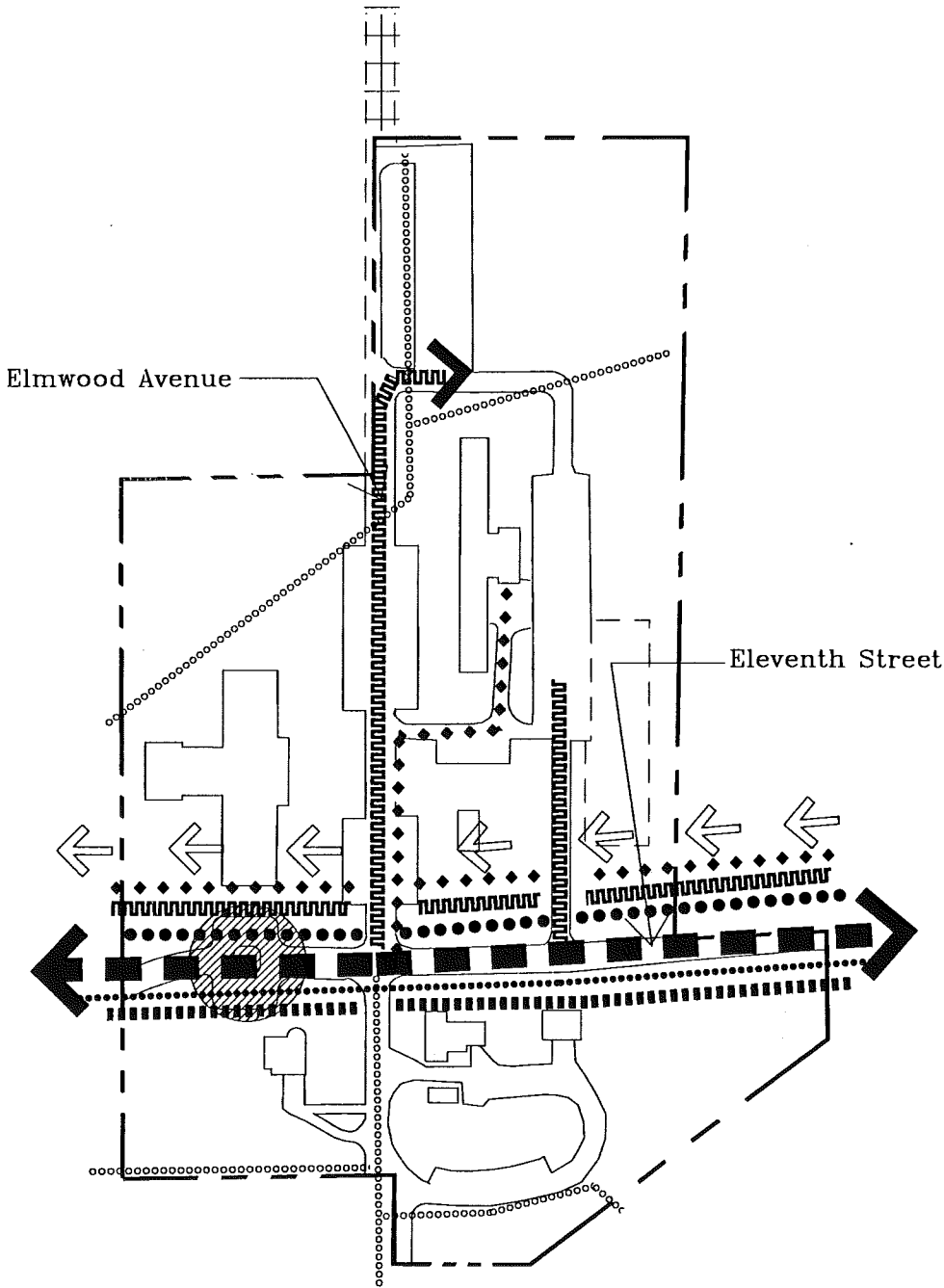
SUBAREA 4 PLAN

Community Services Center

CIRCULATION KEY

-  Major Access
-  Staff Access
-  Service
-  Resident Access
-  Life Safety Access
-  Pedestrian
-  Bicycle
-  Vehicular Control Point
-  Future BATA Bus Route

Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.



CIRCULATION PLAN

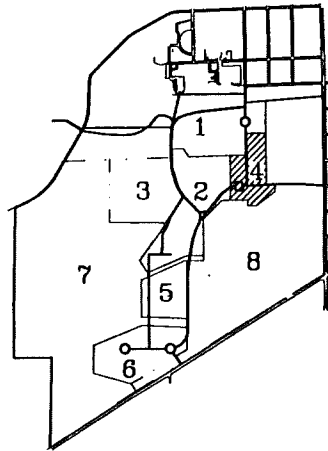
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SUBAREA 4 PLAN

Community Services Center

KEY

Allowable Height of Envelope Measured to Building Cornice

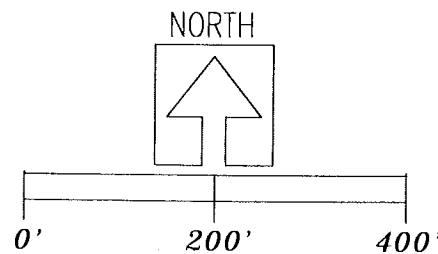
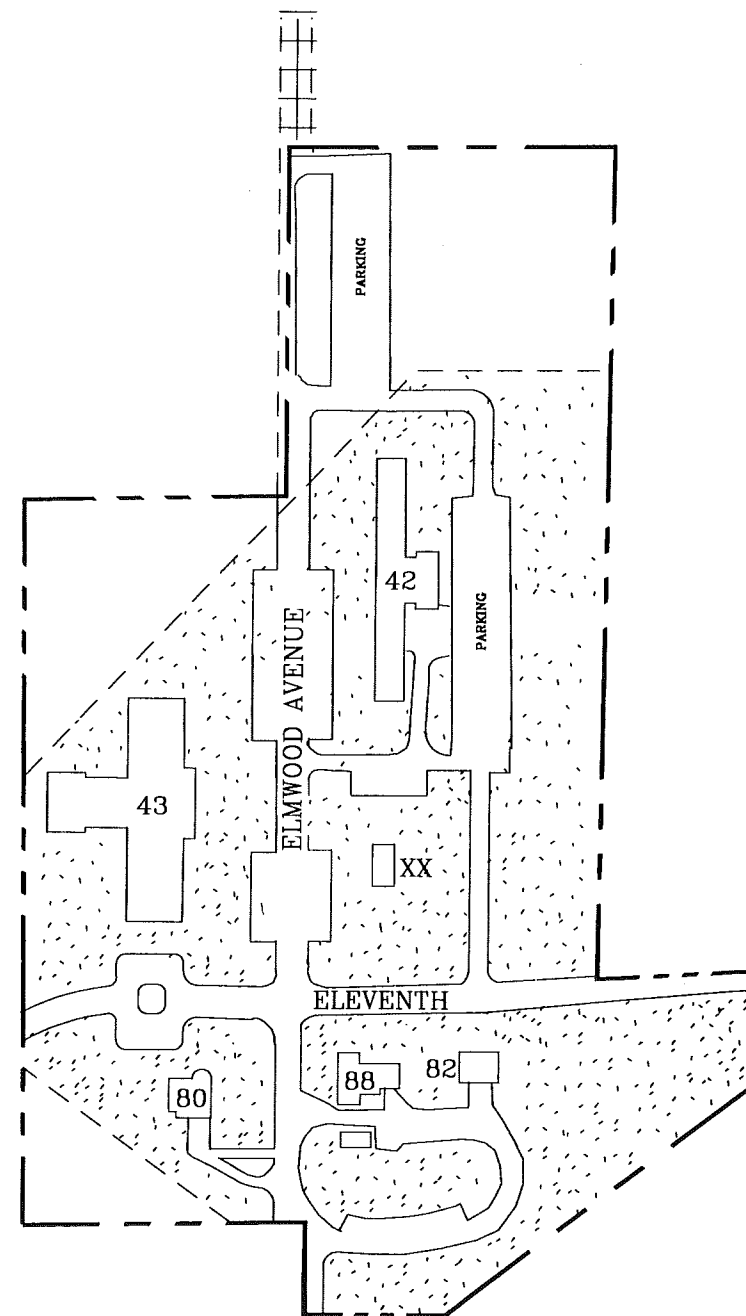
Open Space Improvement At Grade

At Grade Development Only

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



BUILDING VOLUME ENVELOPE

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

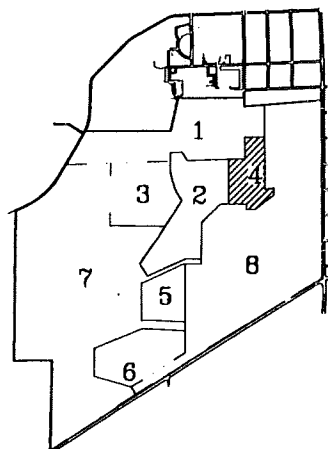
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DISTRICT KEY PLAN

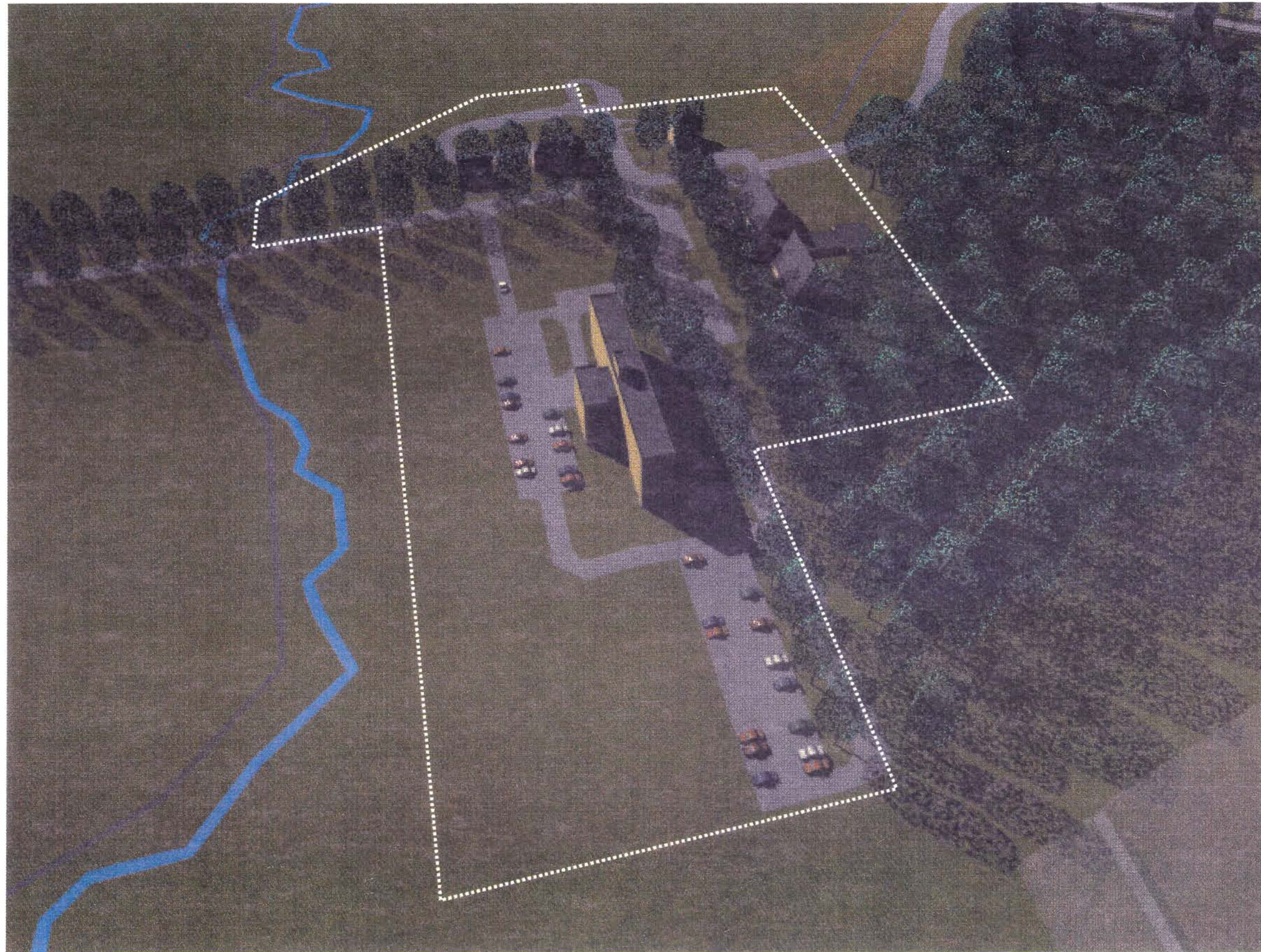
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4.7



Aerial View - District 4

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SUBAREA 5 PLAN

TBA Center

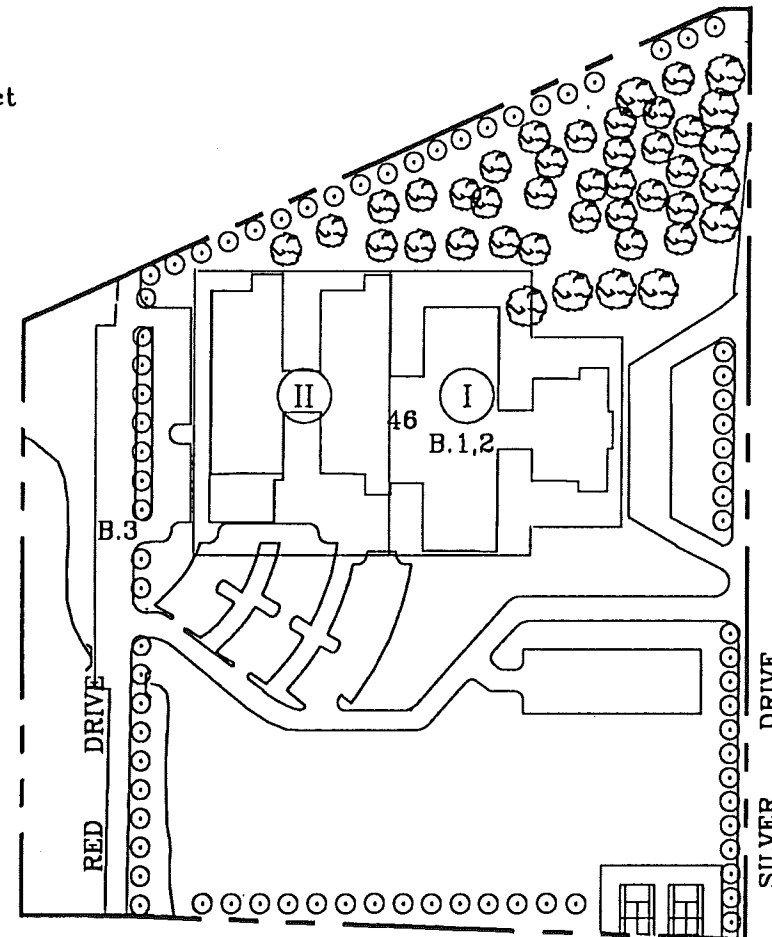
SITE DEVELOPMENT GUIDELINES

BUILDING KEY

46. Traverse Bay Area Intermediate School District

(X) = Subarea Development Zone

Note: The boundary of the area in which building can occur will be revised to encompass the proposed parking lot.



0' 200' 400'

DEVELOPMENT PLAN

A. PROGRAMMED USES:

1. Traverse Bay Area Intermediate School District Special Education
2. TBA

B. PROPOSED DEVELOPMENT

1. Additional New Space For Regional & Community Conference Activities
2. Remodel Swimming Pool Area and Gymnasium.
3. Revise Parking Area & Bus Queing. Note: All Parking To Be Phased To South.
4. Traffic Control Circle To Control Through Traffic Movement.

C. LANDSCAPE PROVISIONS

1. Connect Open Space Areas To The East & West Through & Adjacent To This Subarea
2. Visual Buffering Of Parking Area From Open Space Areas
3. Peripheral Zones To Express Rural Character With Tree Lined Lanes And Orchards.

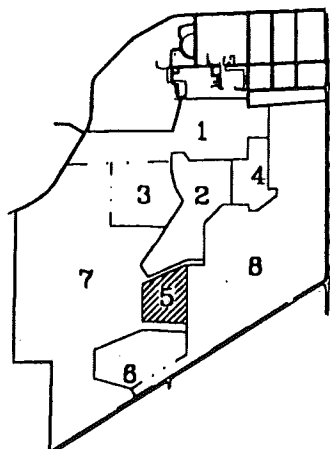
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DISTRICT KEY PLAN

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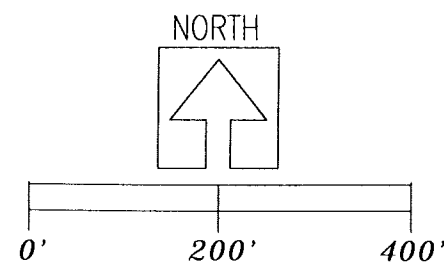
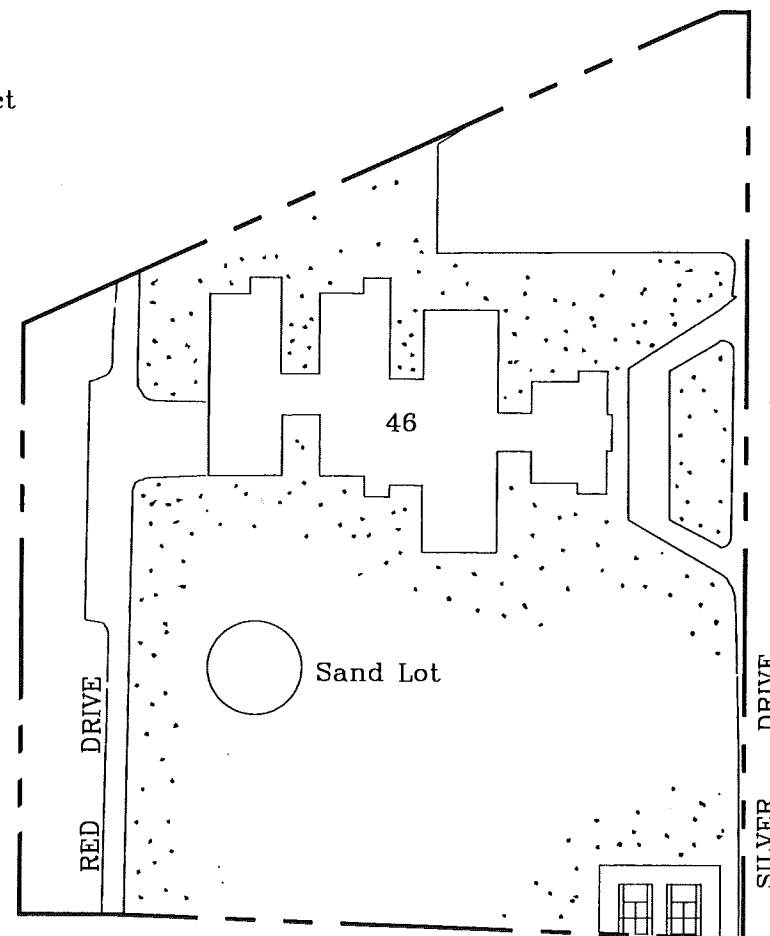
5.1

SUBAREA 5 PLAN

TBA Center

BUILDING KEY

46. Traverse Bay Area Intermediate School District



EXISTING BUILDINGS AND ROADS

DESCRIPTION

The Existing Structure Was Originally Constructed As A Special Education School Facility And Is Currently Owned By The Traverse Bay Area Intermediate School District And Is Used In Part For Special Education Needs.

Silver Drive Is The Primary Access, Via Eleventh Street To The TBA Area And Does Not Connect With Silver Lake Road.

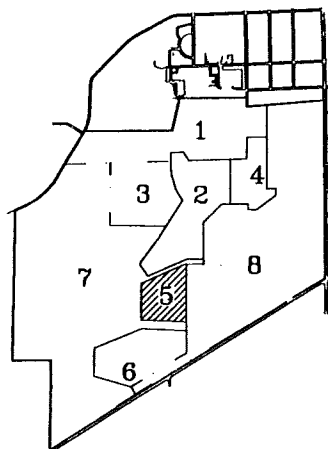
Red Drive Also Extends From The South Farm Area North To The Medical Campus As A Service Access.

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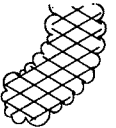


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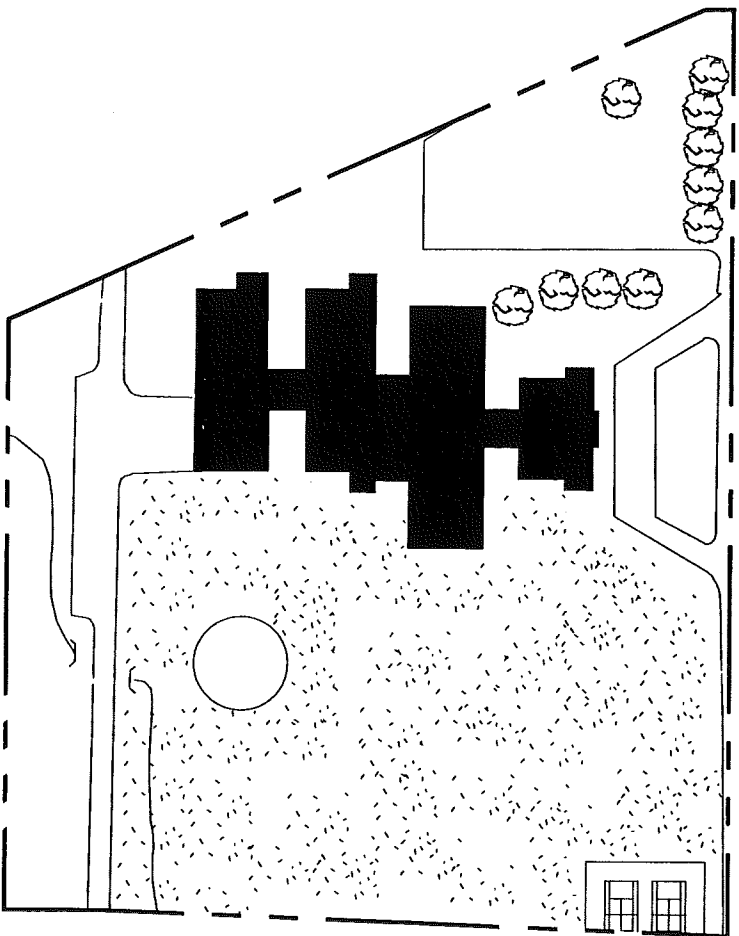
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SHEET NO. : 5.2

SUBAREA 5 PLAN

TBA Center

LANDSCAPE KEY

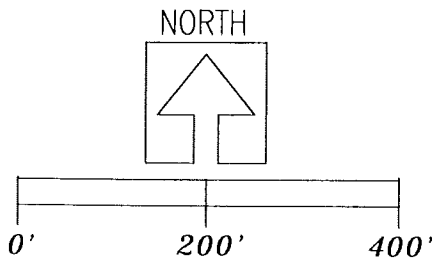
-  Individual Tree
-  Multiple Tree Mass
-  Meadow
-  Lawn



DESCRIPTION

The Southern Edge Of This Subarea Blends With A Meadow Area Contiguous To The Kids Creek Watershed.

There Are Significant Groupings Of Black Willows At The Southwest And Southeast Corners Of This Subarea.



EXISTING LANDSCAPE AND NATURAL FEATURES

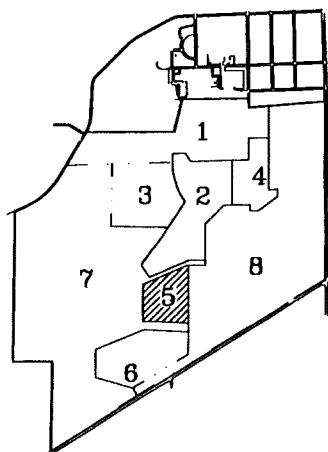
VOA

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SUBAREA 5 PLAN

TBA Center

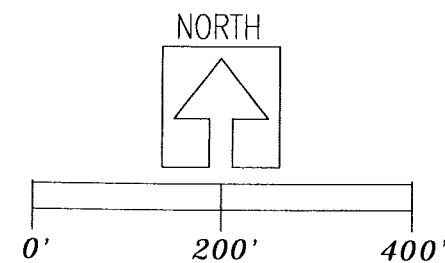
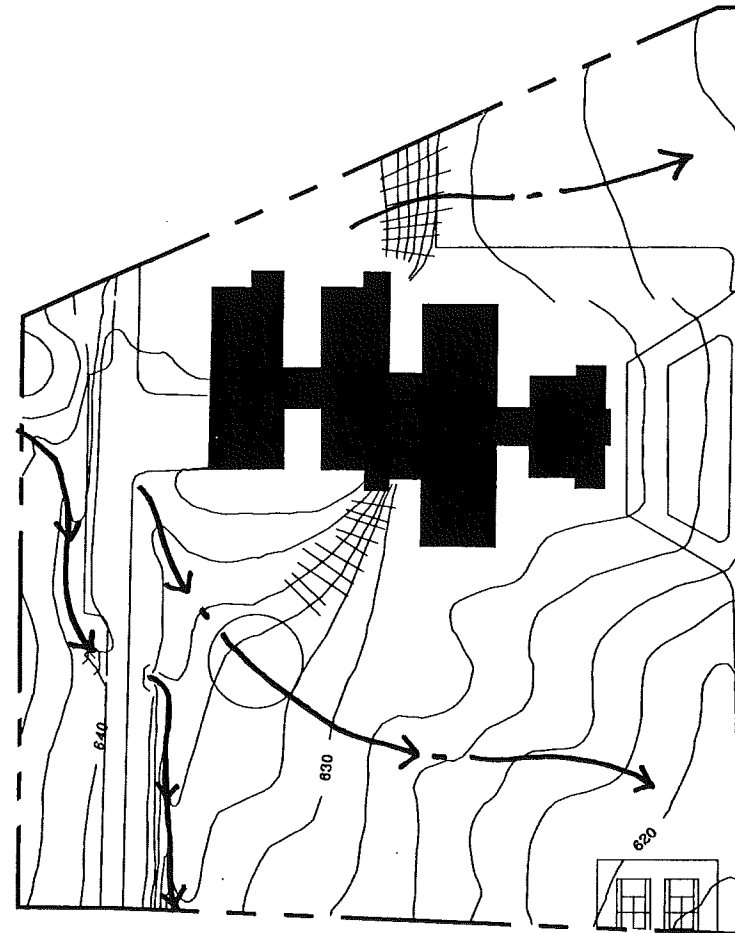
KEY

-  Topographic Contours @ 2'-0" Intervals.
-  Natural Stream
-  Drainage Tendency
-  Steep Slope

DESCRIPTION

This Subarea Gently Slopes Down To The East Adjacent To A Large Wetland Associated With Kids Creek.

The Stream Course At The Western Edge Of The Subarea Has Been Diverted Through A Manmade Channel To The South Where It Eventually Drains To Kids Creek.



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

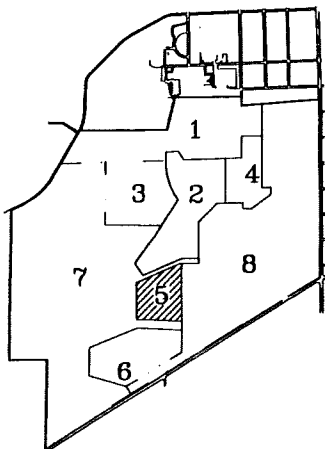
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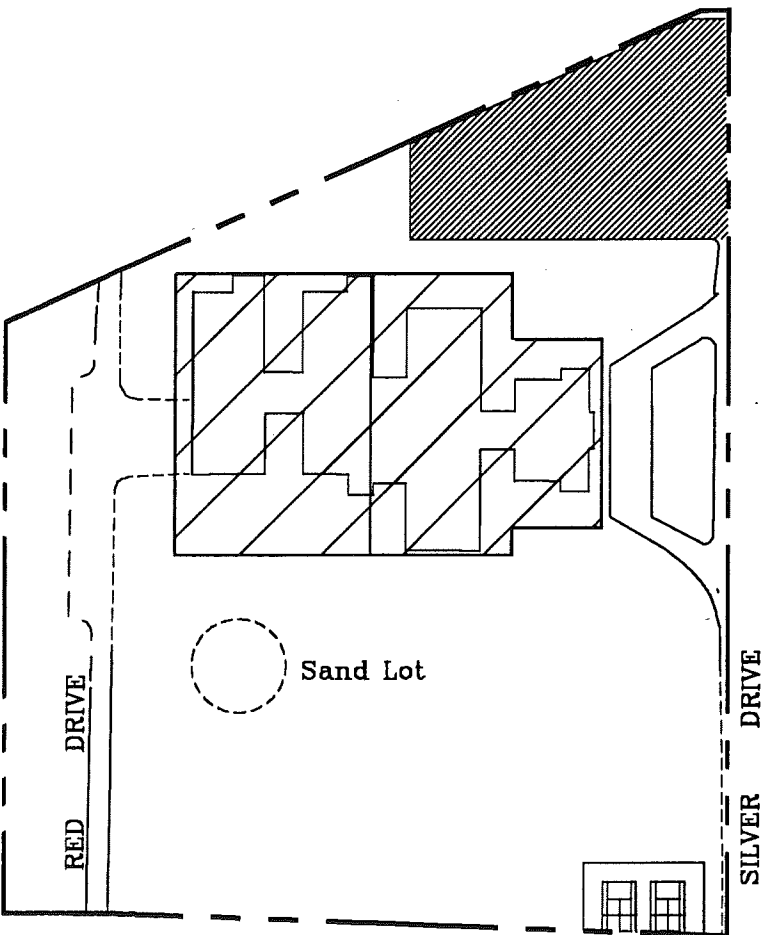
SUBAREA 5 PLAN

TBA Center

BUILDING KEY

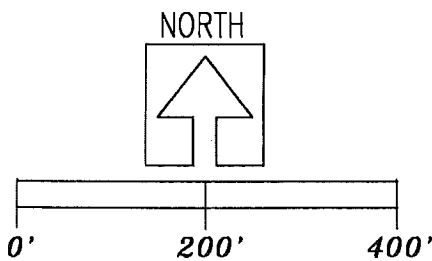
48. Traverse Bay Area Intermediate School District

Note: The boundary of the area in which building can occur will be revised to encompass the proposed parking lot.



KEY

- Existing Roads Or Buildings To Be Removed.
- Building Envelope



EXISTING ROADS, BUILDINGS, PARKING LOTS
TO BE DEMOLISHED

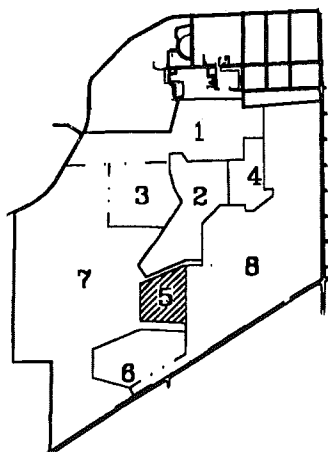
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DISTRICT KEY PLAN

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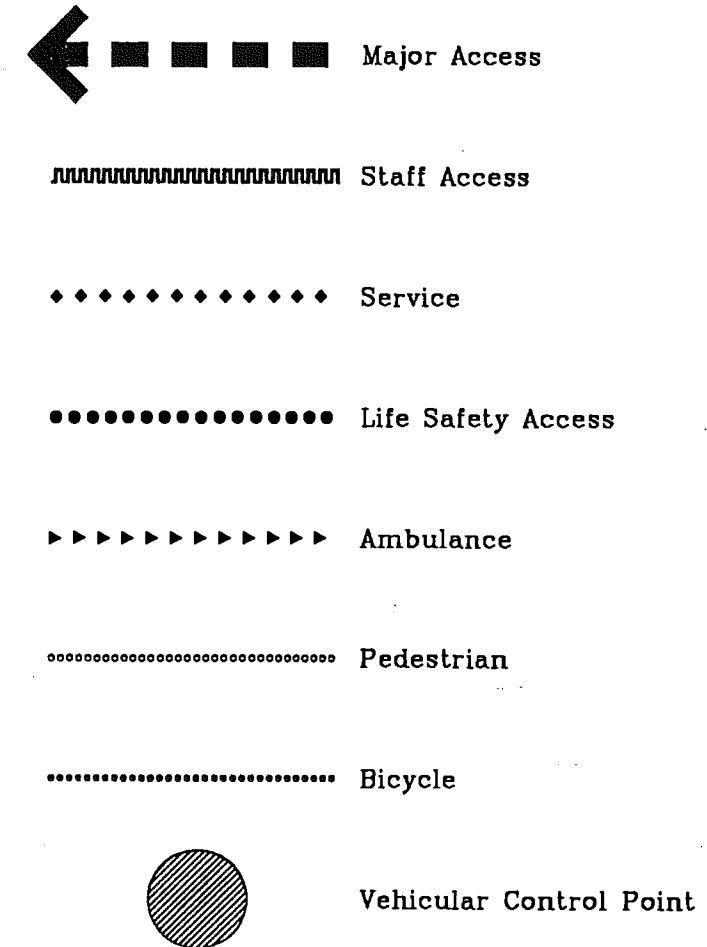
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SHEET NO. : 5.5

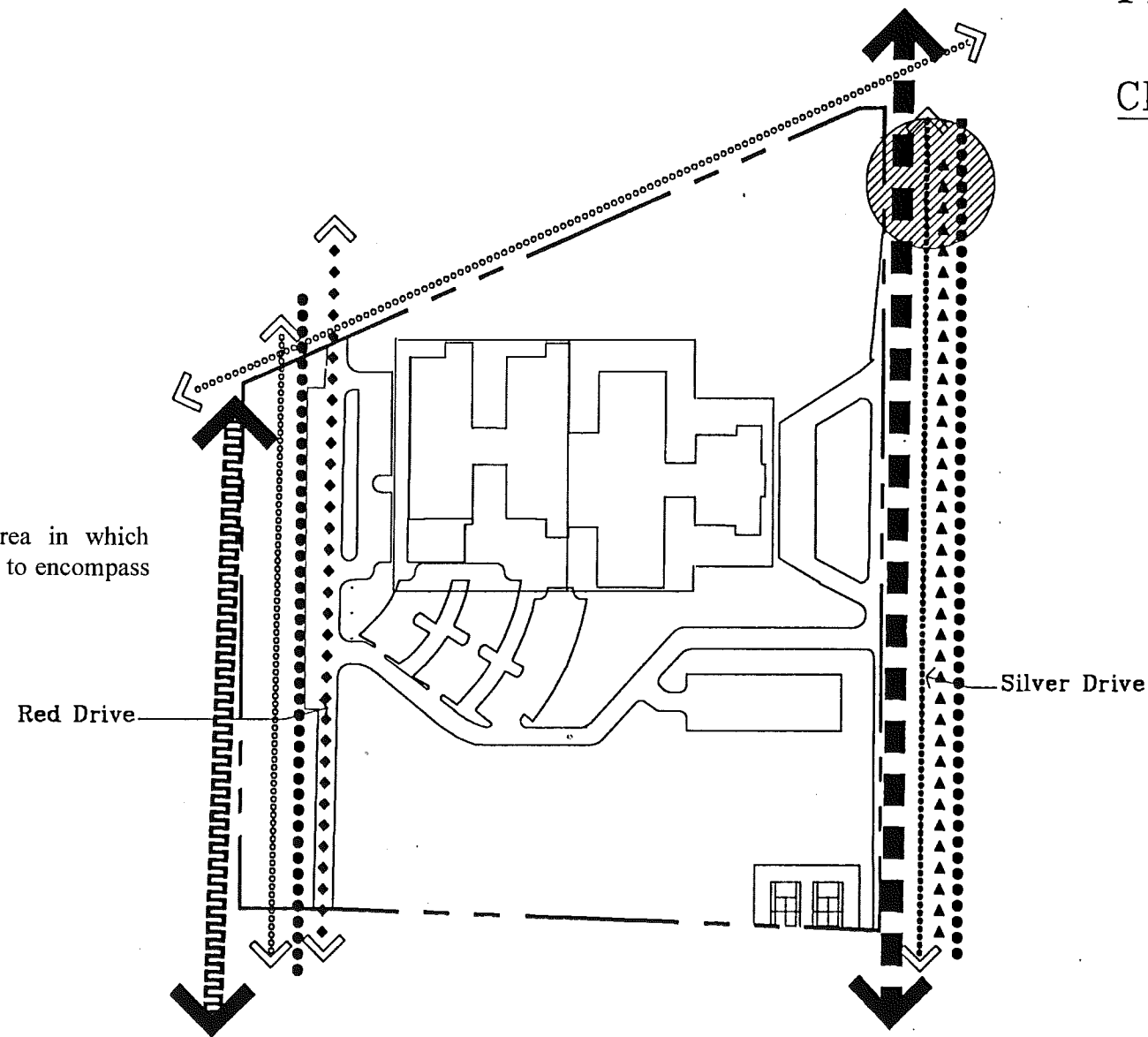
SUBAREA 5 PLAN

TBA Center

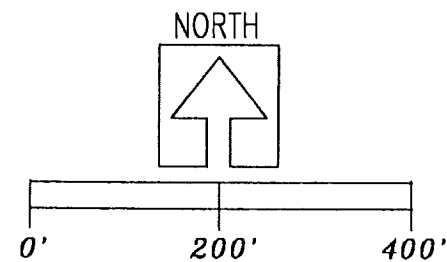
CIRCULATION KEY



Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.



Note: The boundary of the area in which building can occur will be revised to encompass the proposed parking lot.



CIRCULATION PLAN

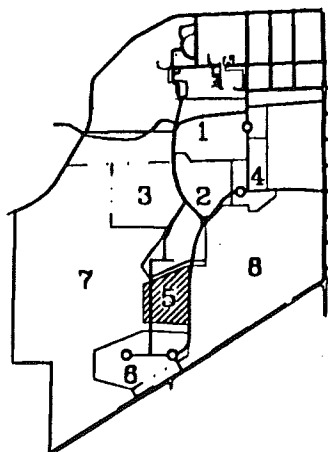
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DISTRICT KEY PLAN

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SUBAREA 5 PLAN

TBA Center

KEY

Allowable Height of Envelope Measured to Building Cornice

642.0'

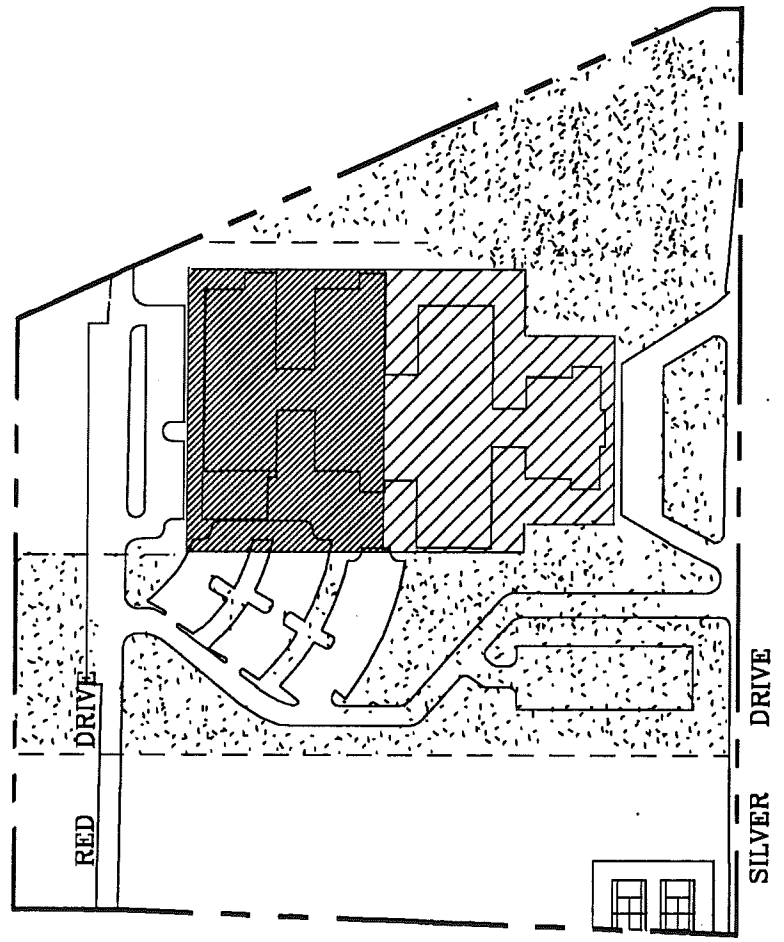
652.0'

Surface Area Improvements Only,
No Build Zone

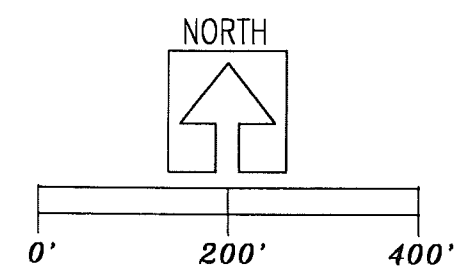
(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



Note: The boundary of the area in which building can occur will be revised to encompass the proposed parking lot.



BUILDING VOLUME ENVELOPE

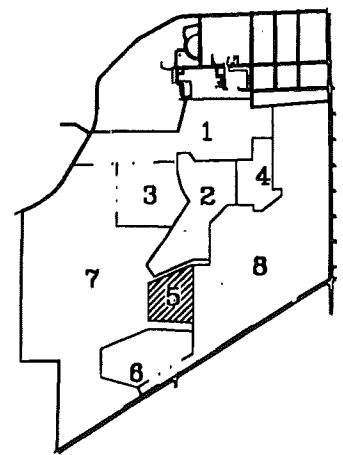
(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

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DISTRICT KEY PLAN

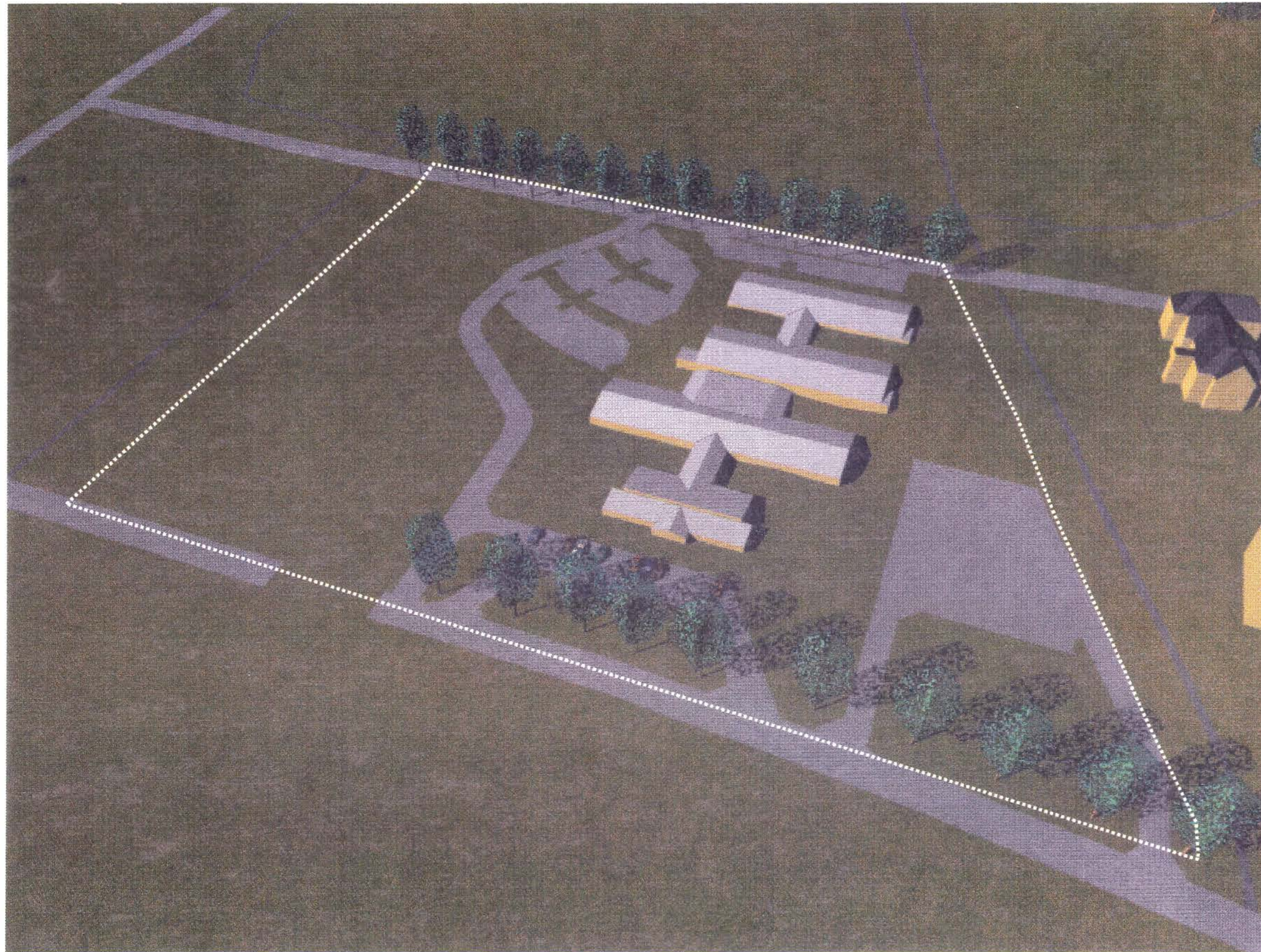
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5.7



Aerial View - District 5

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2008 年 12 月 10 日 20:04 收到

2012-11-14 (1)

Results: 1

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5.8.1

SUBAREA 6 PLAN

Recreation Activity Center


SITE DEVELOPMENT GUIDELINES

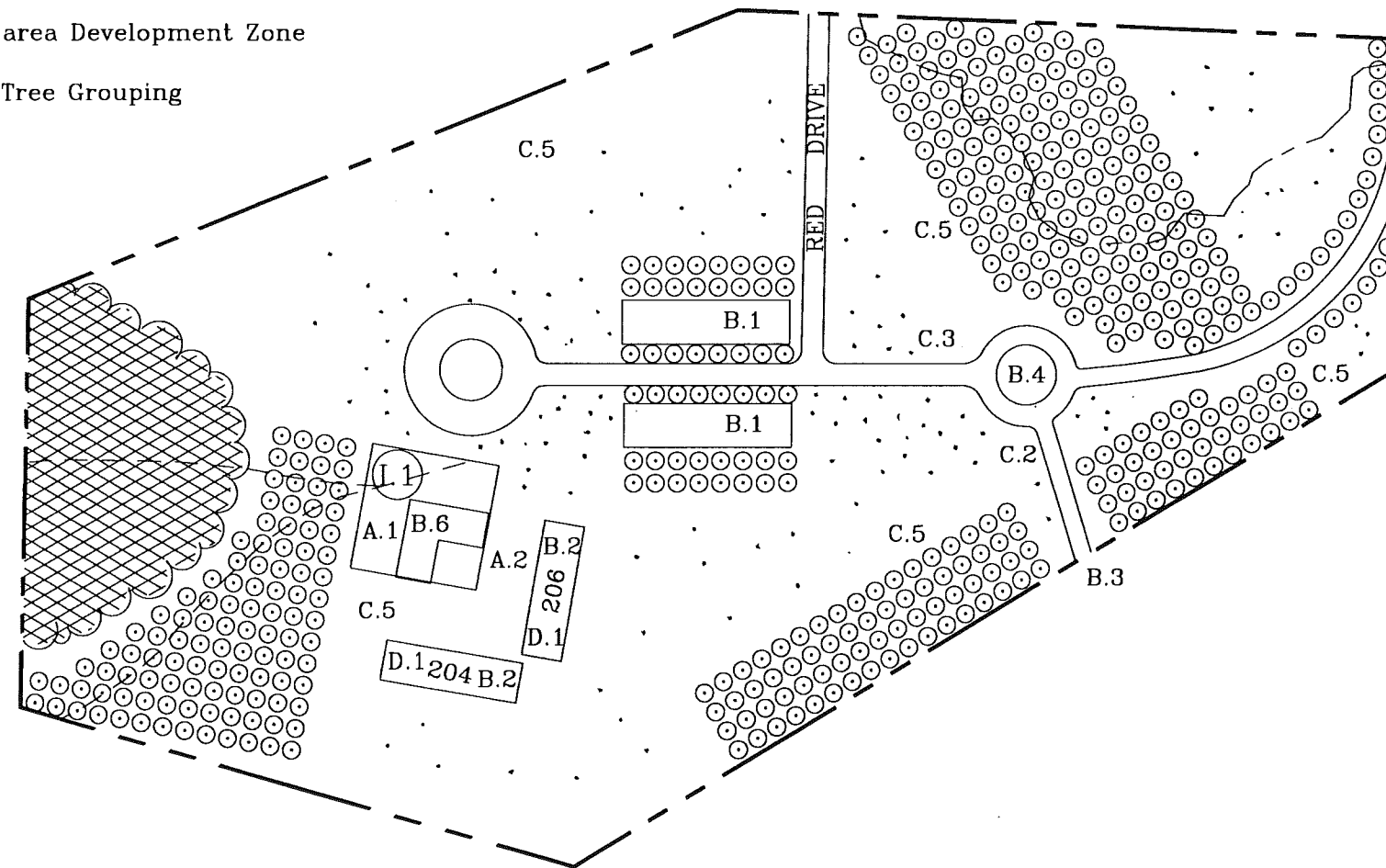
BUILDING KEY

204. Barn

206. Barn

(X) = Subarea Development Zone

 = Tree Grouping



DEVELOPMENT PLAN

A. PROGRAMMED USES:

1. Recreational Activities
 - a. Trail System Access
 - b. Group Outdoor Assembly Areas
 - c. Outdoor Recreation Support
2. Administration Offices
3. Arts

B. PROPOSED DEVELOPMENT

1. Parking Areas
2. Renovation & Adaptation Of Farm Barns
3. New Road Intersection At Franke Road
4. Traffic Circle To Restrict Vehicle Movement
6. New Construction For Administration/Offices Art Uses.

C. LANDSCAPE PROVISIONS

1. Establish Identity Planting At Franke Intersection Signal
2. Confine Road To Inhibit Traffic
3. Sculpt Terrain For Amphitheater
4. Mitigate Wetlands To Compensate For West Access Construction.
5. Develop Orchard Effect.

D. HISTORIC PROVISIONS

1. Rehabilitate Barns
2. Speaks Of Use Of The Land

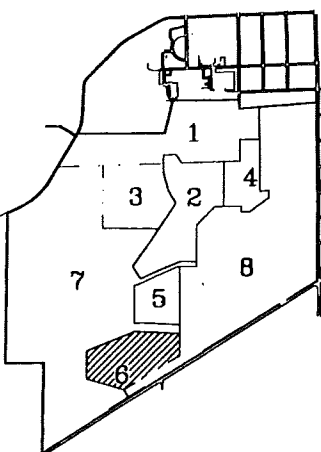
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DISTRICT KEY PLAN

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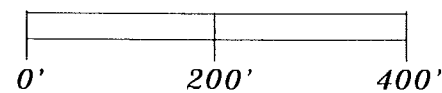
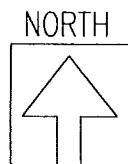
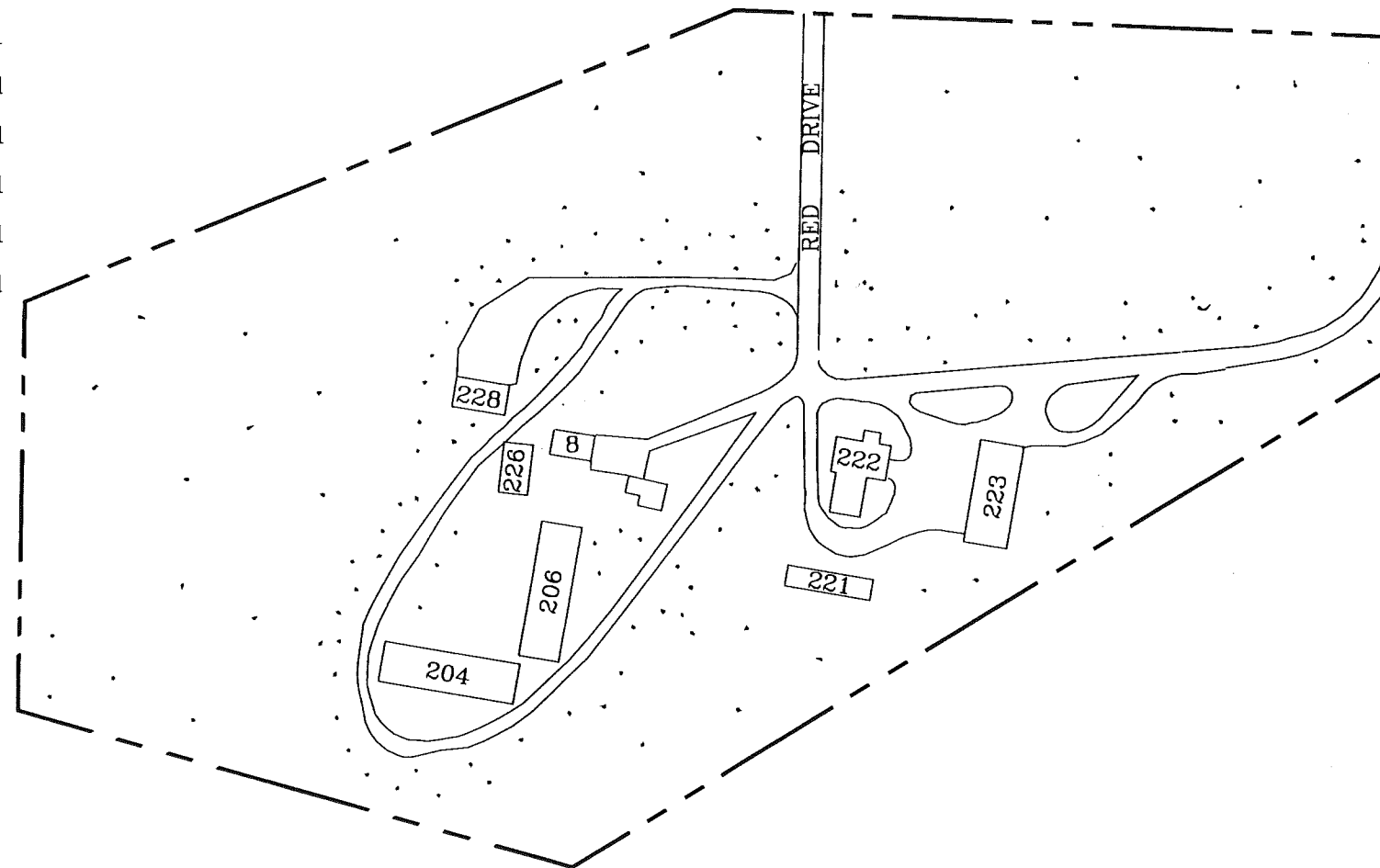
6.1

SUBAREA 6 PLAN

Recreation Activity Center

BUILDING KEY

- 8. Shed
- 204. Barn
- 206. Barn
- 221. Shed
- 222. Shed
- 223. Shed
- 226. Shed
- 228. Shed



EXISTING BUILDINGS AND ROADS

DESCRIPTION

Buildings 204 & 206 Are Historically Significant Brick Structures.

All Other Structures Are Utilitarian One Story Buildings.

This Subarea Is Accessed By Red Drive And Silver Drive Via Eleventh Street. There Is No Connection To Silver Lake Road.

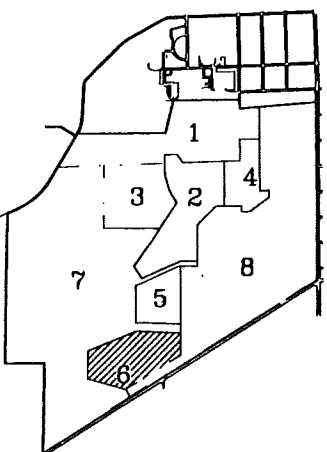
VOA

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DISTRICT KEY PLAN

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SHEET NO. :

6.2

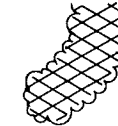
SUBAREA 6 PLAN

Recreation Activity Center

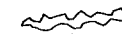
LANDSCAPE KEY



Boulevard Tree



Multiple Tree Mass



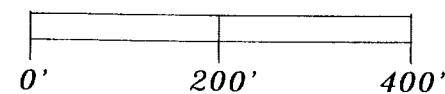
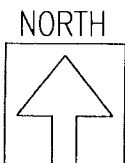
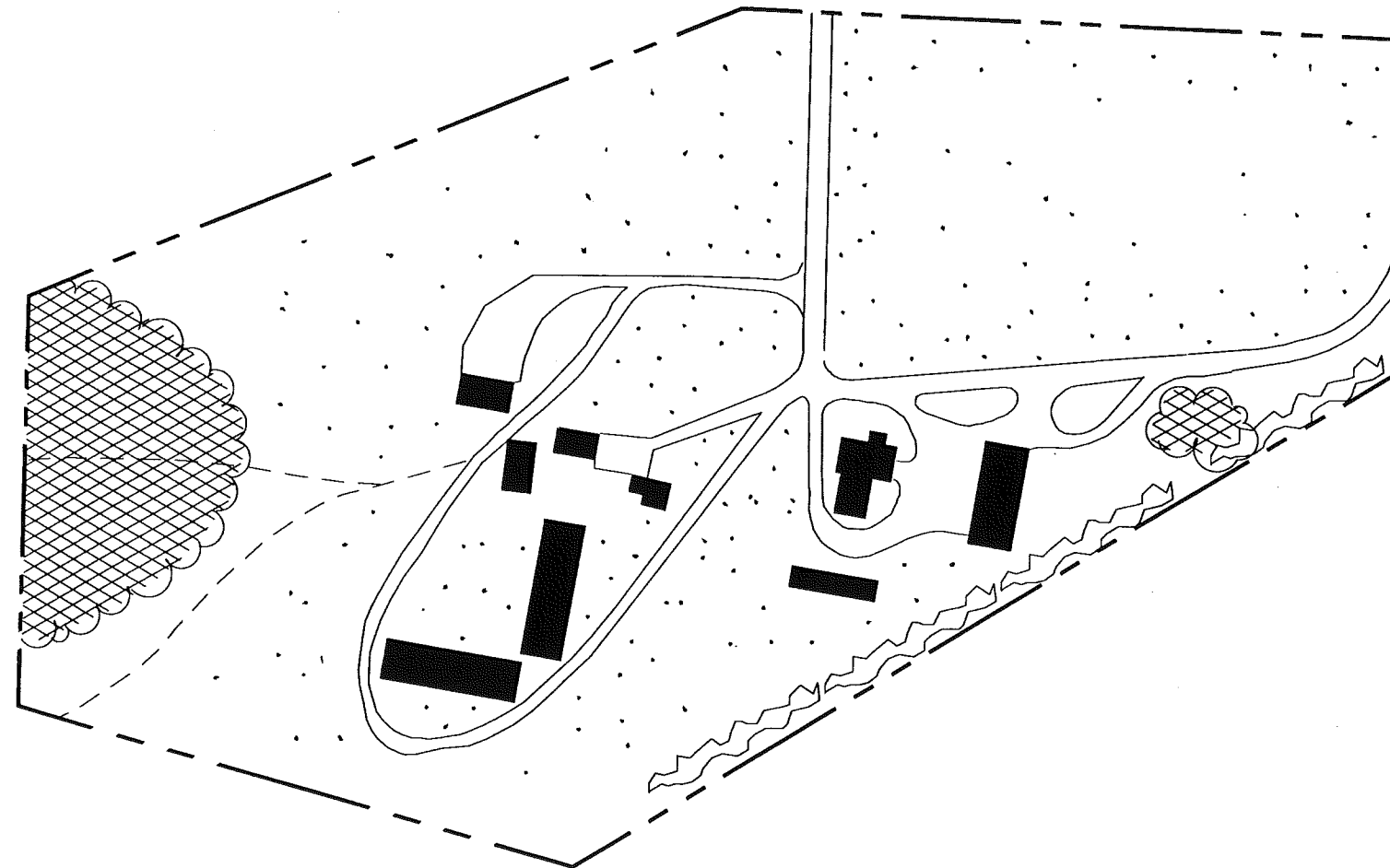
Forested Edge



Meadow

DESCRIPTION

This Subarea Is Predominately In Meadow With Tree Groupings In Isolated Stands And A Forested Edge At The West End Of The Area.



EXISTING LANDSCAPE AND NATURAL FEATURES

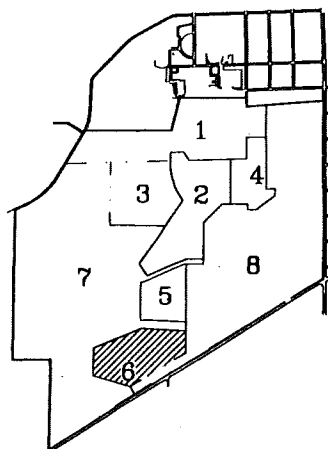


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SUBAREA 6 PLAN

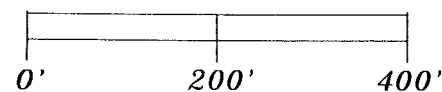
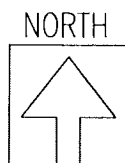
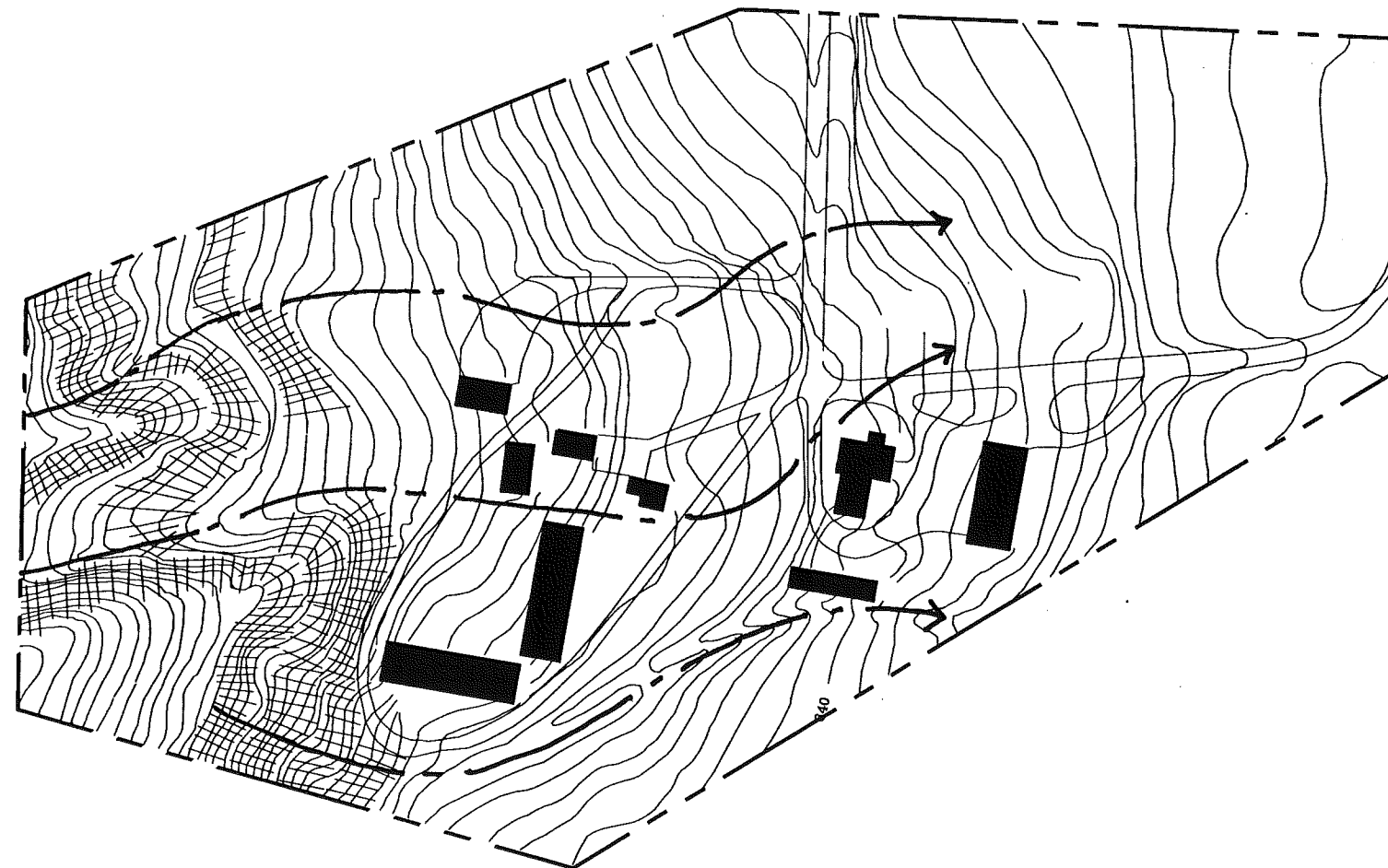
Recreation Activity Center

KEY

-  Topographic Contours @ 2'-0" Intervals
-  Natural Stream
-  Drainage Tendency
-  Steep Slope

DESCRIPTION

This Subarea Slopes Down From West To East With Very Steep Areas To The West Transitioning To Gentle Slopes On The East Blending Into The Adjacent Wetland Area.



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

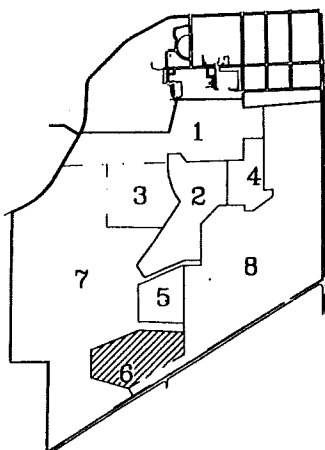
VOA

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SHEET NO. : 6.4

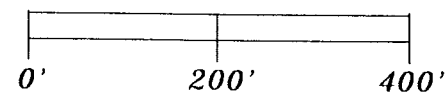
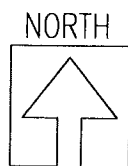
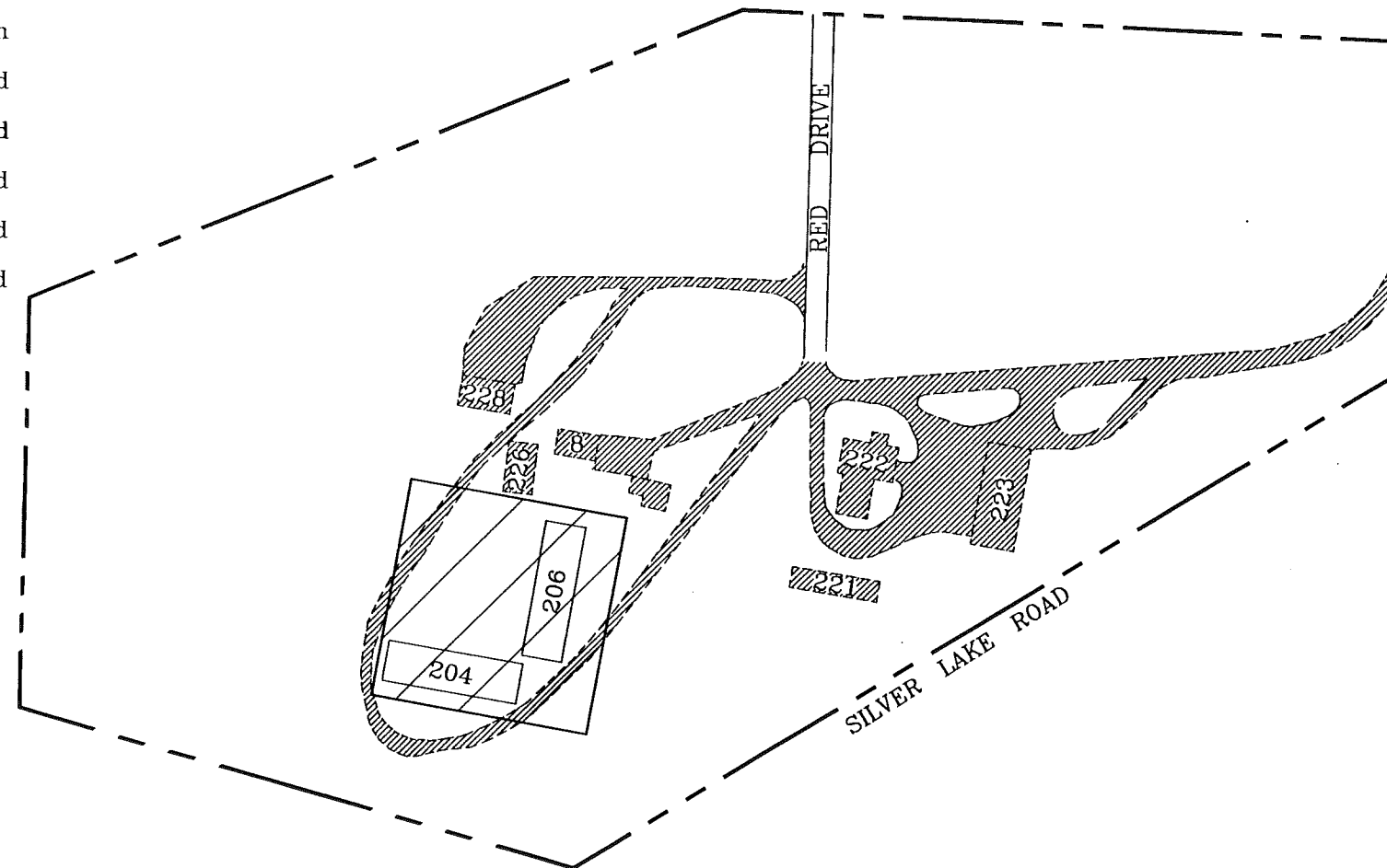
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SUBAREA 6 PLAN

Recreation Activity Center



BUILDING KEY

- 8. Shed
- 204. Barn
- 206. Barn
- 221. Shed
- 222. Shed
- 223. Shed
- 226. Shed
- 228. Shed



EXISTING ROADS, BUILDINGS AND PARKING LOTS
TO BE DEMOLISHED

KEY

-  Existing Roads Or Buildings
To Be Removed.
-  Building Envelope

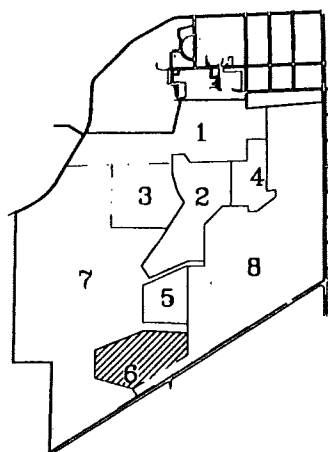
VOA

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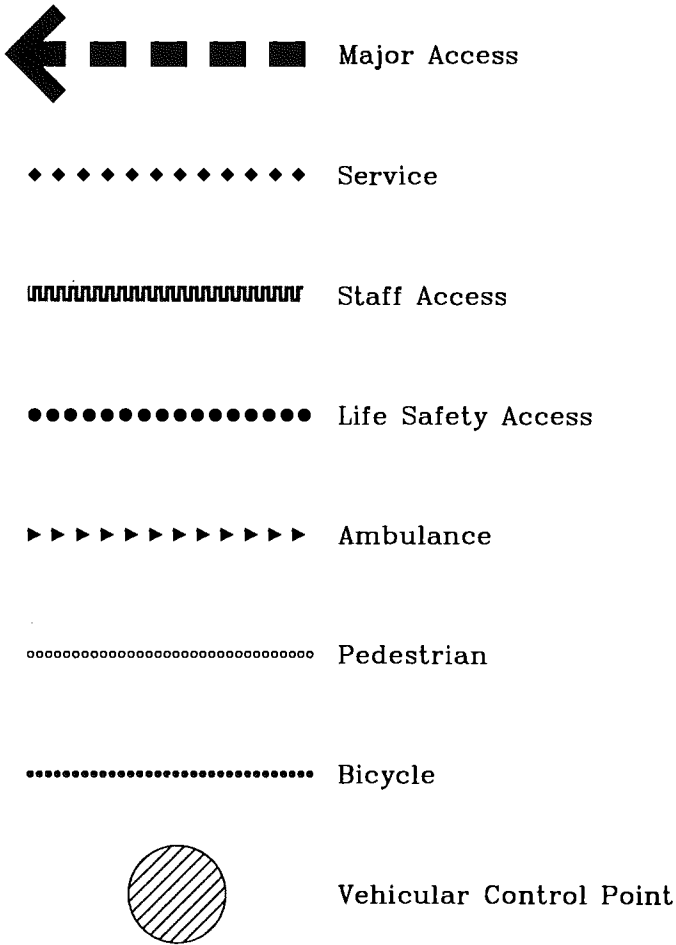
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SUBAREA 6 PLAN

Recreation Activity Center

CIRCULATION KEY



Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.

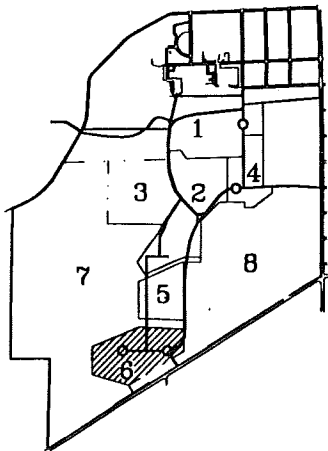
VOA

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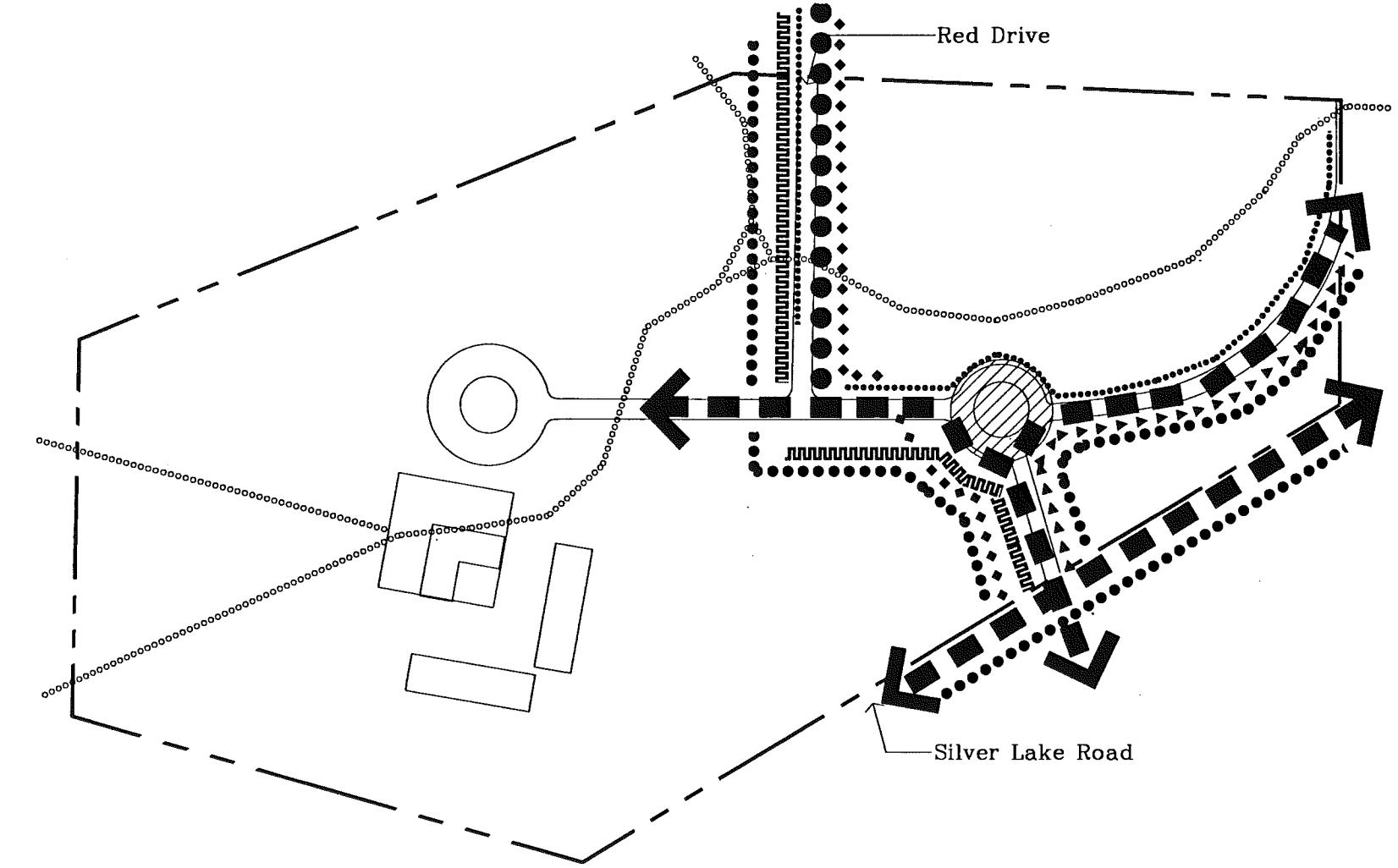
DISTRICT KEY PLAN

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NOT ATE



0' 200' 400'

CIRCULATION PLAN


SUBAREA 6 PLAN


Recreation Activity Center

KEY

Allowable Height of Envelope Measured to Building Cornice

 725.0'

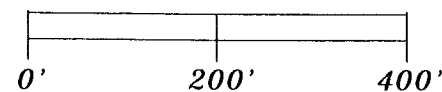
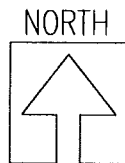
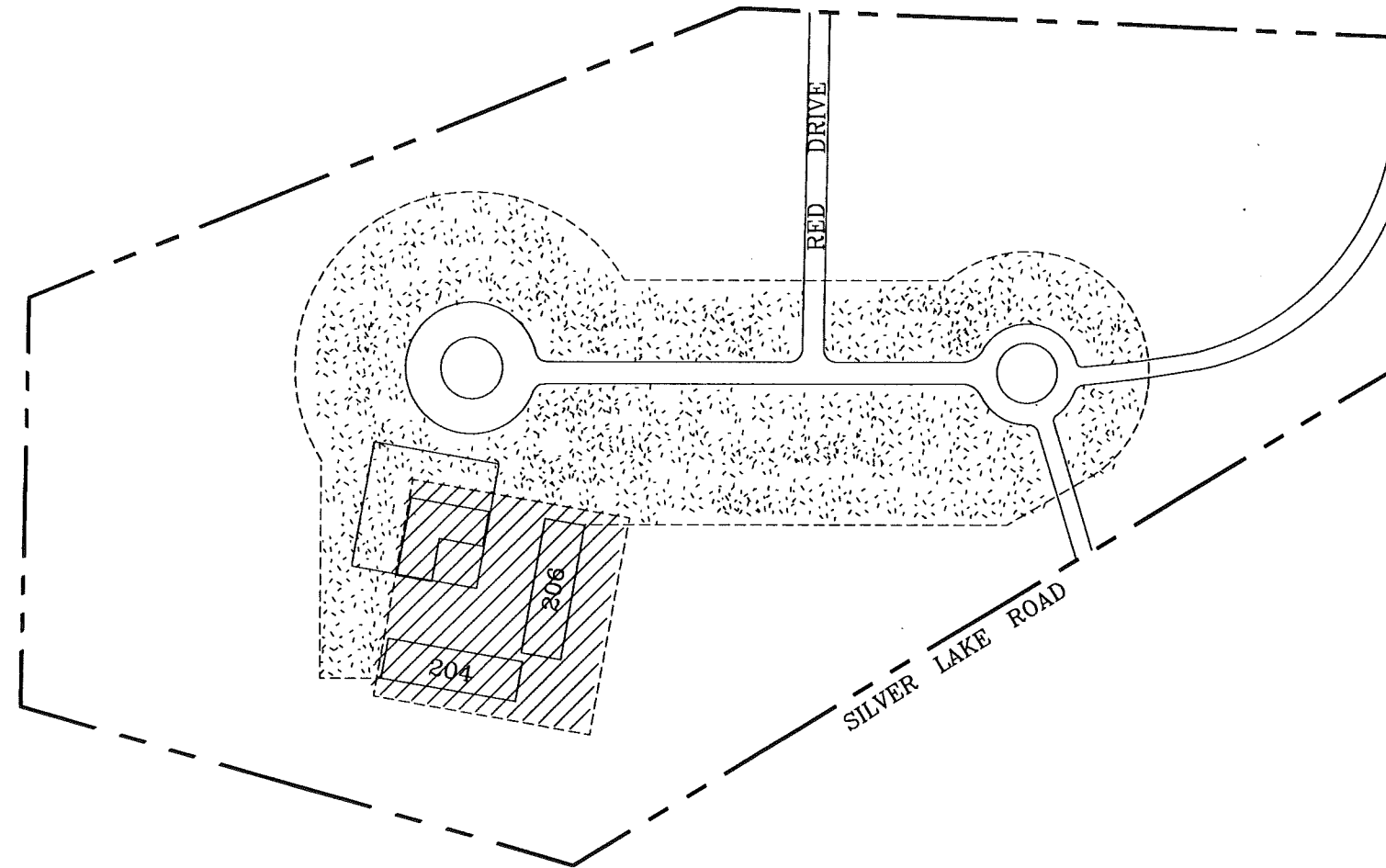
 Open Space

 Surface Area Improvements Only, No Build Zone

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



BUILDING VOLUME ENVELOPE

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

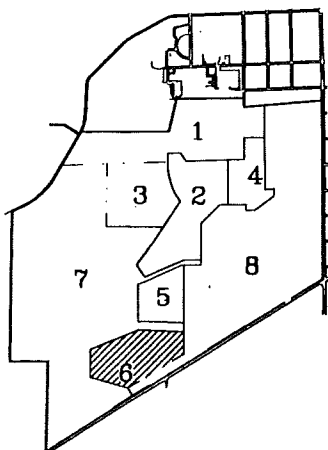
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DISTRICT KEY PLAN

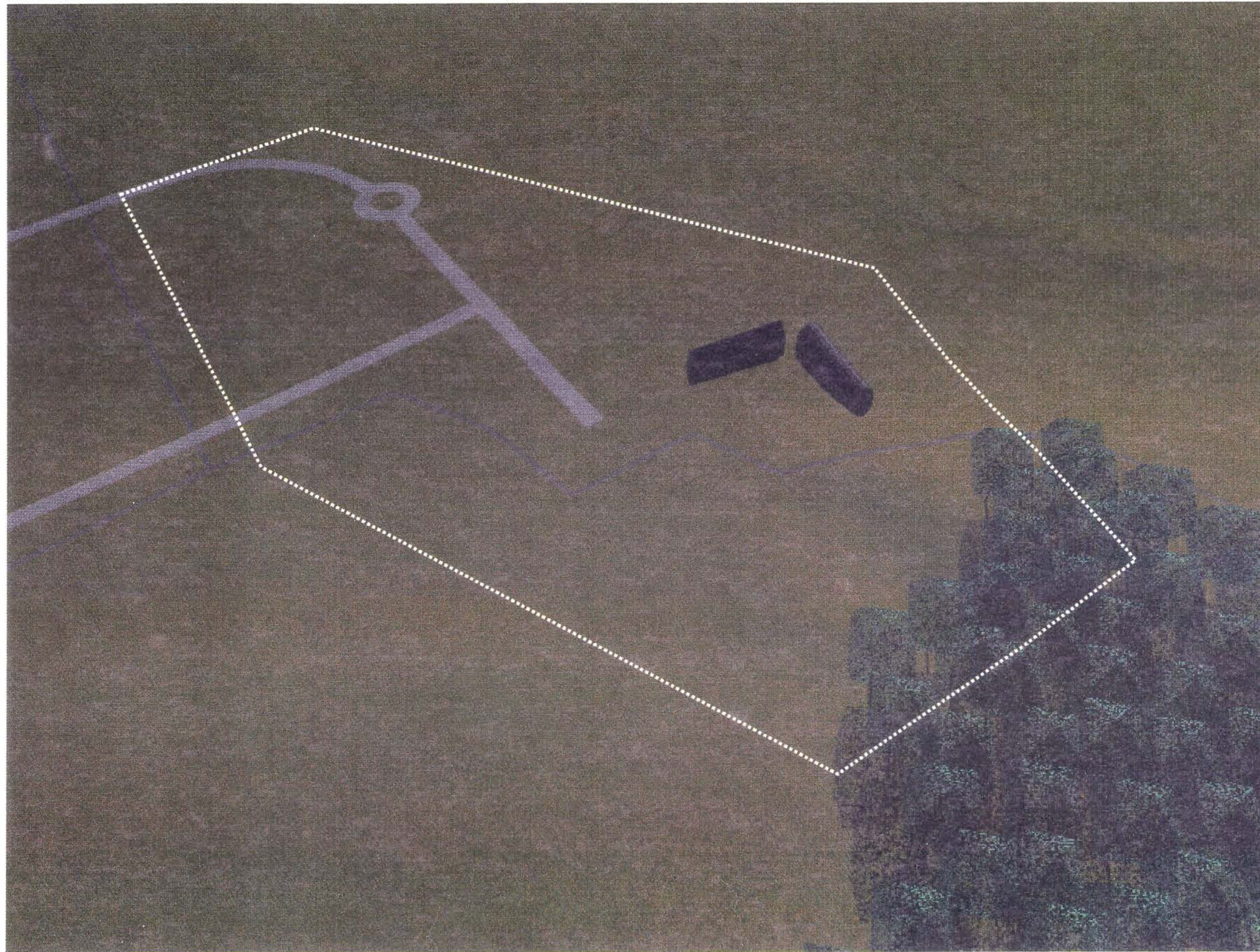
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6.7



Aerial View - District 6

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DESIGNATION OF LAND AREA
 MAP NO.
 OFFICIAL SURVEY WORKSHEET
 DATE OF SURVEY
 FIELD NO. AND
 PLANNING
 ARCHITECTURE


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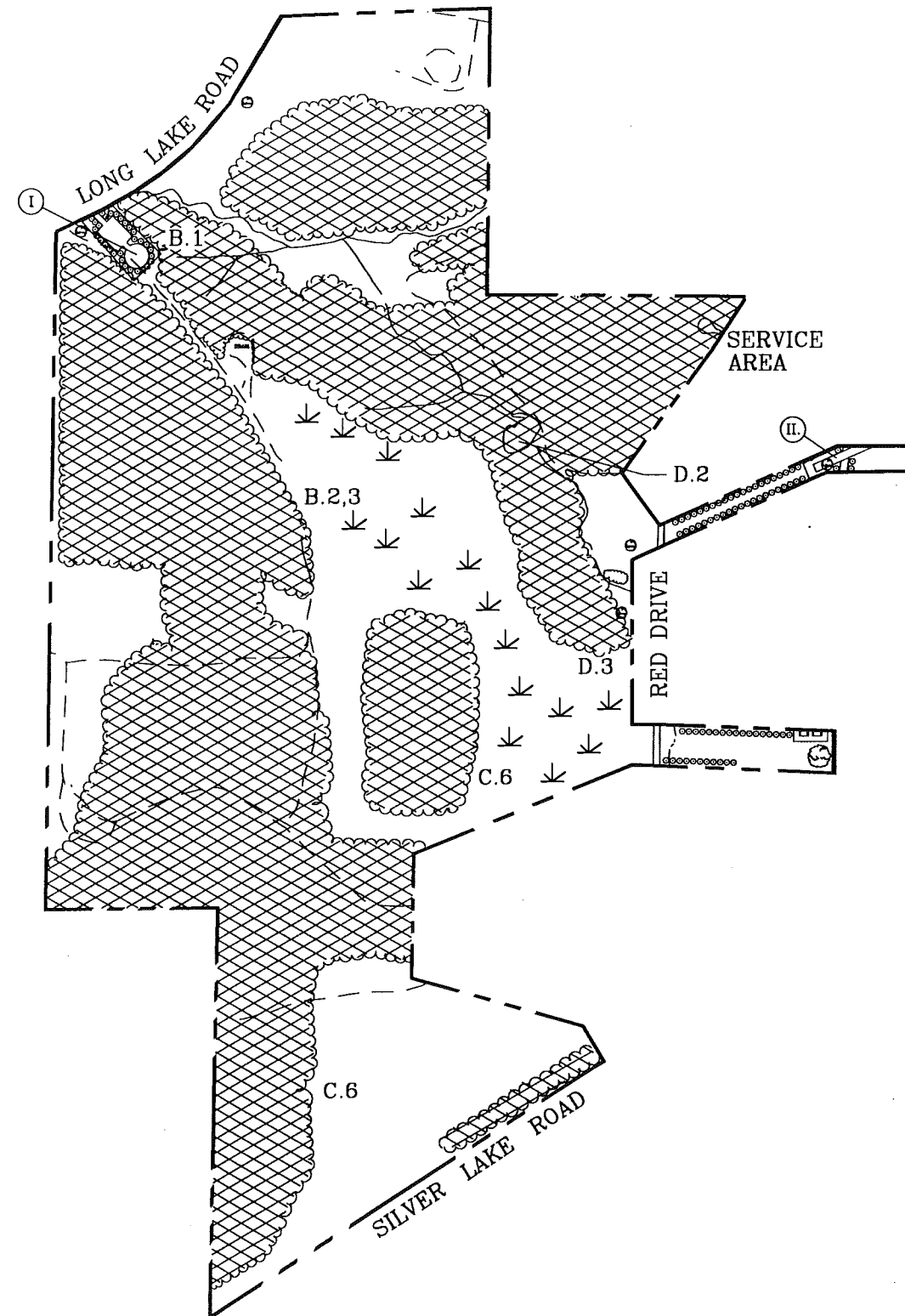
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 ARCHITECTURE

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 SHEET NO. 6.8.1

BUILDING KEY

 = Tree Grouping



DEVELOPMENT PLAN

SUBAREA 7 PLAN

Woodlands Conservation Area

SITE DEVELOPMENT GUIDELINES

A. PROGRAMMED USES:

1. Passive Recreation
2. Trail Network:
Foot / Cross Country Skiing
3. Interpretive Facilities
4. Educational Activities
5. Community Gardens
6. Picnic Areas

B. PROPOSED DEVELOPMENT

1. Parking & Trail Head Facilities
2. Trail Network
3. Road Systems Will Be Converted To Trail Use

C. LANDSCAPE PROVISIONS

1. Preserve And Enhance This Natural Area.
2. Significant Topographic Features Provide View & Orientation Potential
3. Trail Network Is To Utilize Existing Pathways. New Trails Will Connect To Significant Points
4. Parking Areas Are To Be Visually Buffered With Landscaping
5. Retain Old Orchard Opening To Maintain Open Major View.
6. Allow Natural Succession And Reforest Woods Edge.

D. HISTORIC PROVISIONS

1. Orchards & Gardens Have Been Past Uses Of The Area
2. Water Storage Reservoir Dates To Original Site Development
3. Maintain Meadows To Support Past Use As Pasture And Garden.

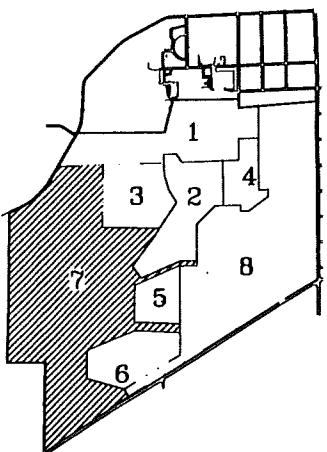
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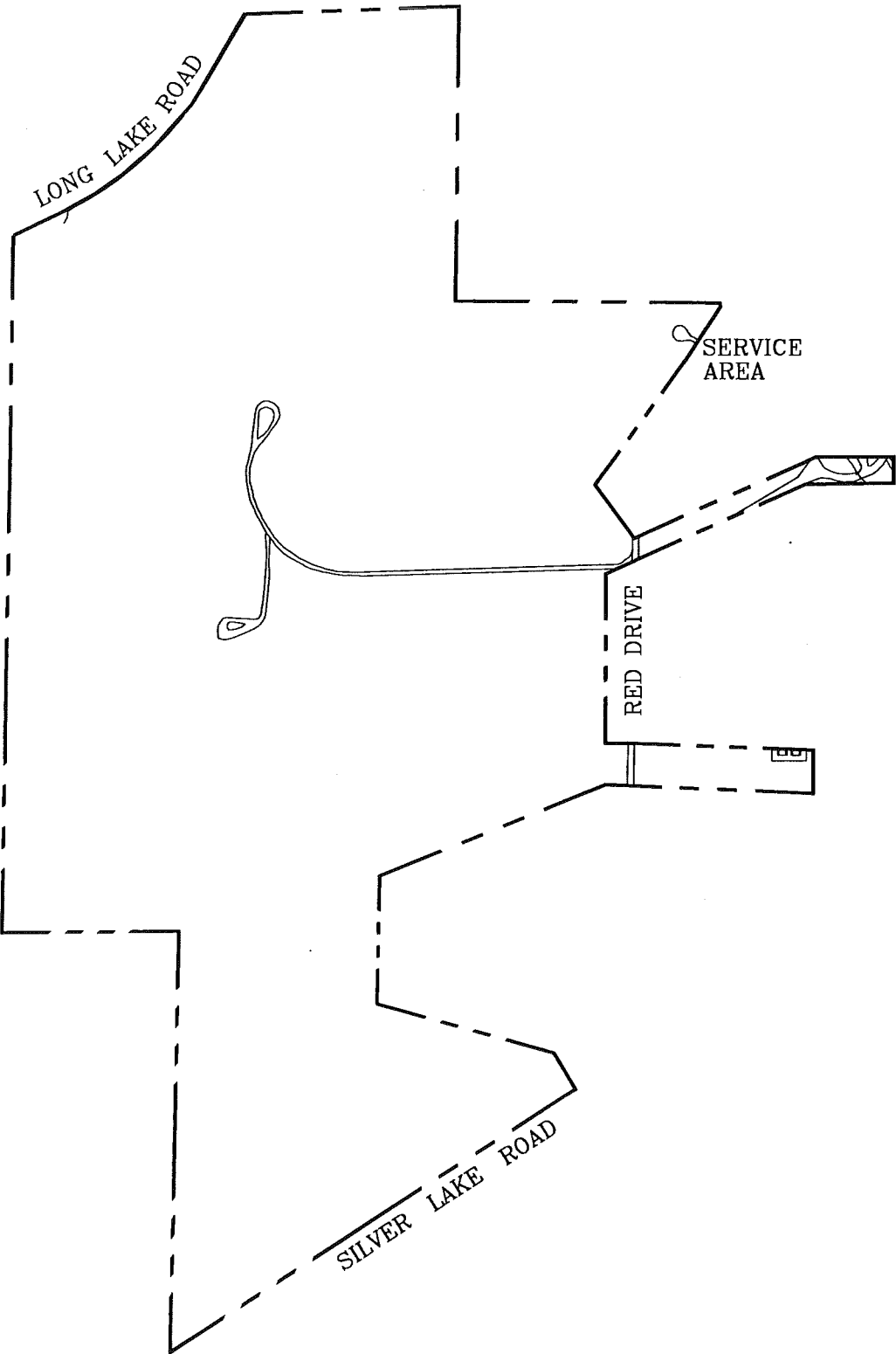
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SUBAREA 7 PLAN

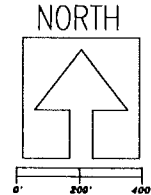
Woodlands Conservation Area

DESCRIPTION

Existing Roadways Have Been Used Historically As Service Roads To Connections On The West Side Of The Project Site.



EXISTING BUILDINGS AND ROADS



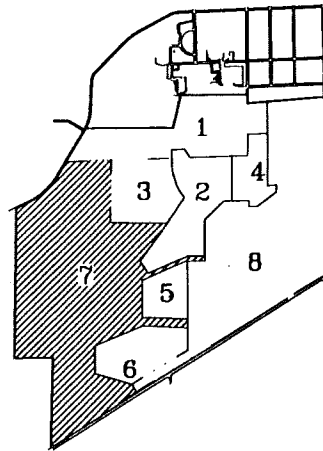
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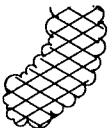
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SUBAREA 7 PLAN

Woodlands Conservation Area

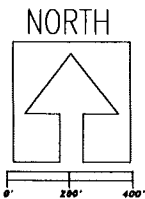
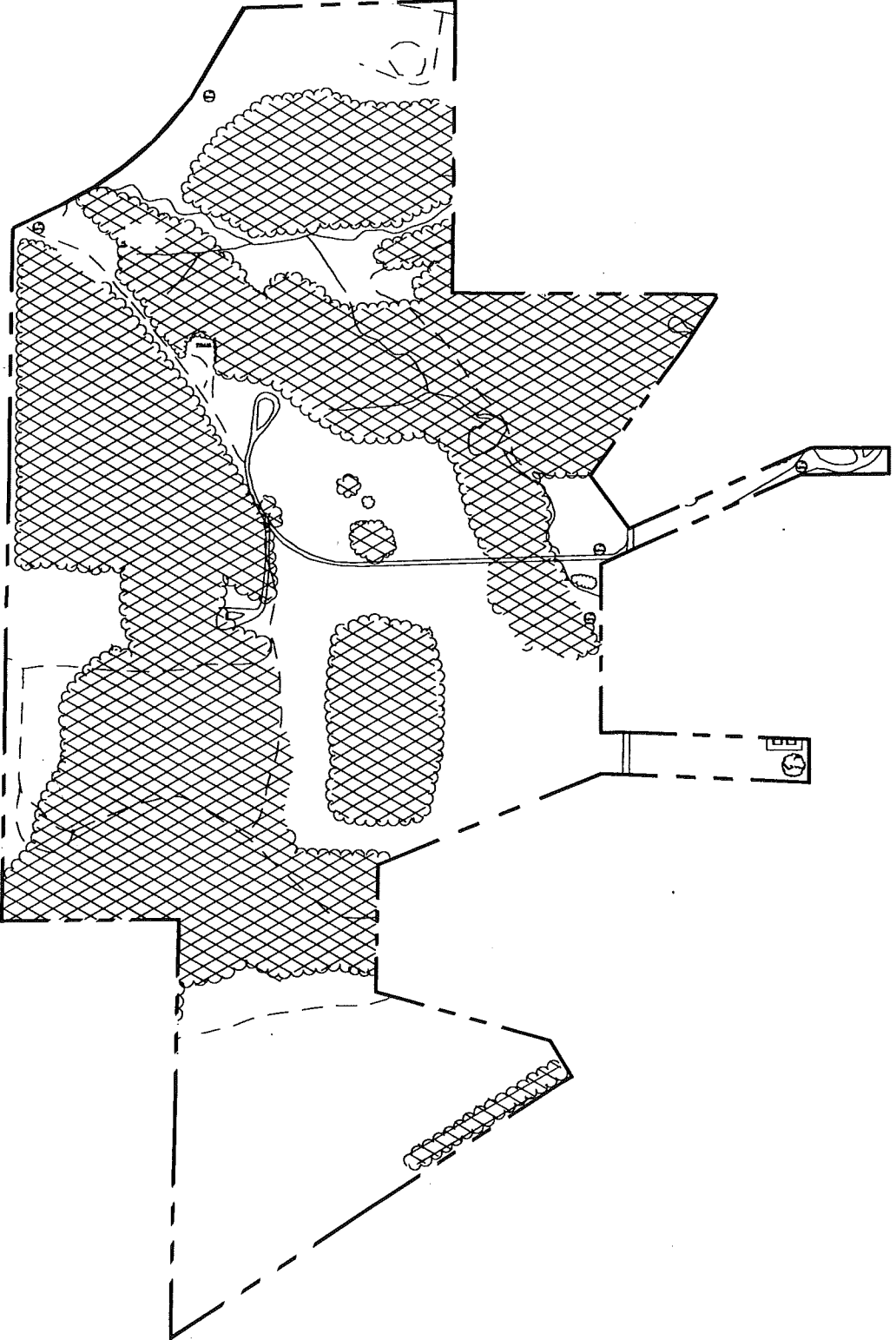
LANDSCAPE KEY



Multiple Tree Mass



Meadow



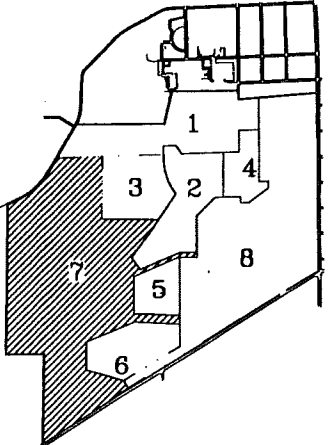
EXISTING LANDSCAPE AND NATURAL FEATURES

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SUBAREA 7 PLAN


Woodlands Conservation Area

KEY

 Topographic Contours @
2'-0" Intervals

 Steep Slopes

 Natural Stream

 Drainage Tendency

 Wetland

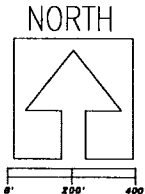
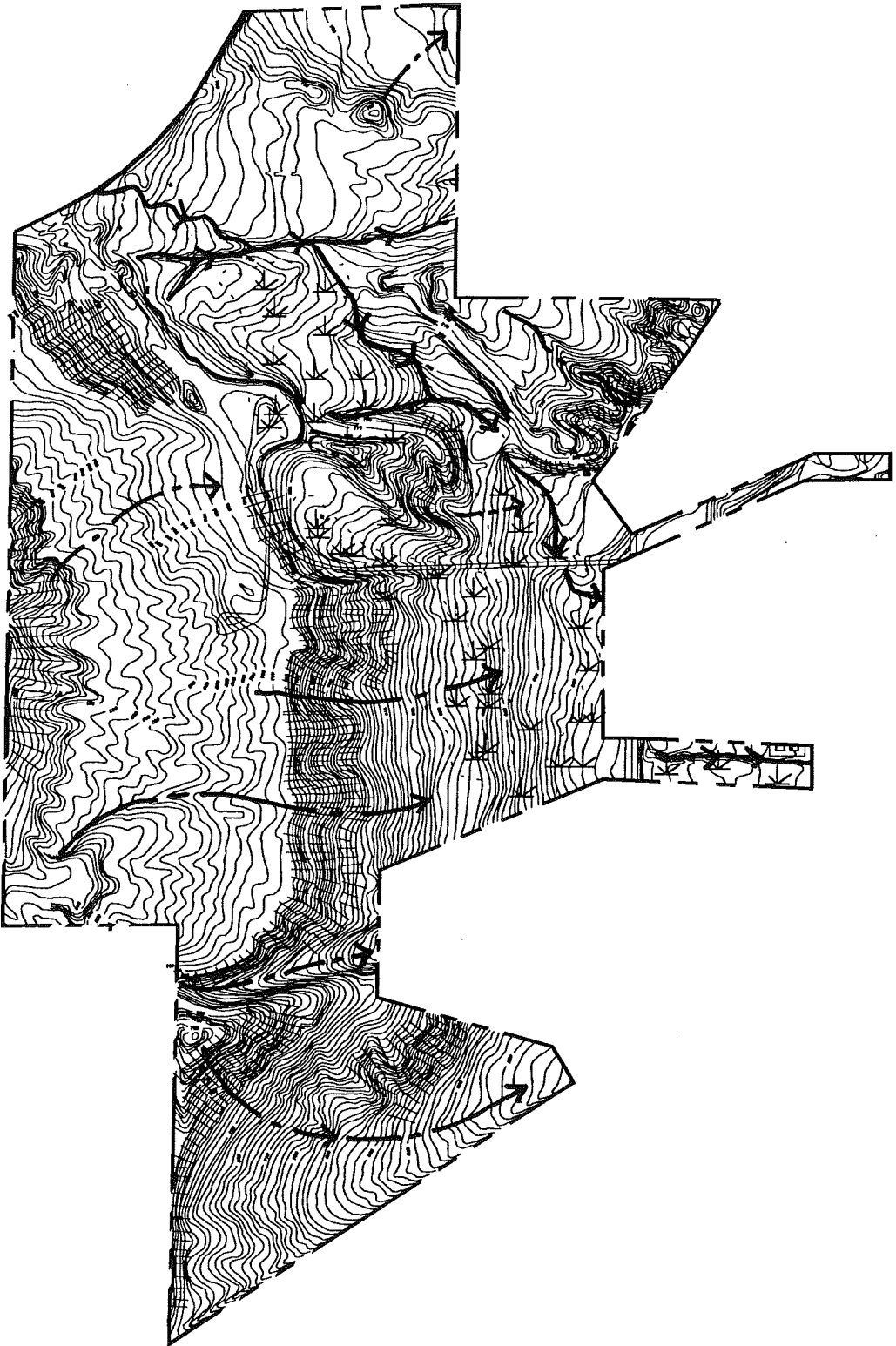
DESCRIPTION

This Subarea Consists Of Steep Forested Hillsides With Well Defined Drainage Courses.

The Wetland Area Is A Mixture Of Forested Wetlands And Meadows.

A Manmade Reservoir Releases Water To A Stream Course Which Runs Through This Subarea And Connects With Kids Creek.

Three Major Drainage Basins Occur In This Subarea And Drain To Kids Creek.



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

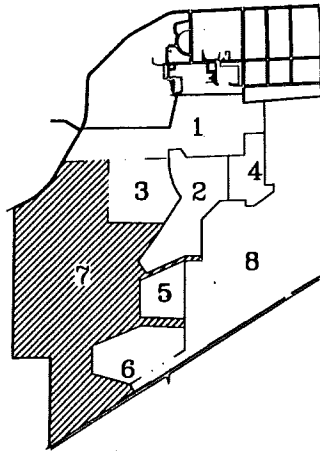
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DISTRICT KEY PLAN

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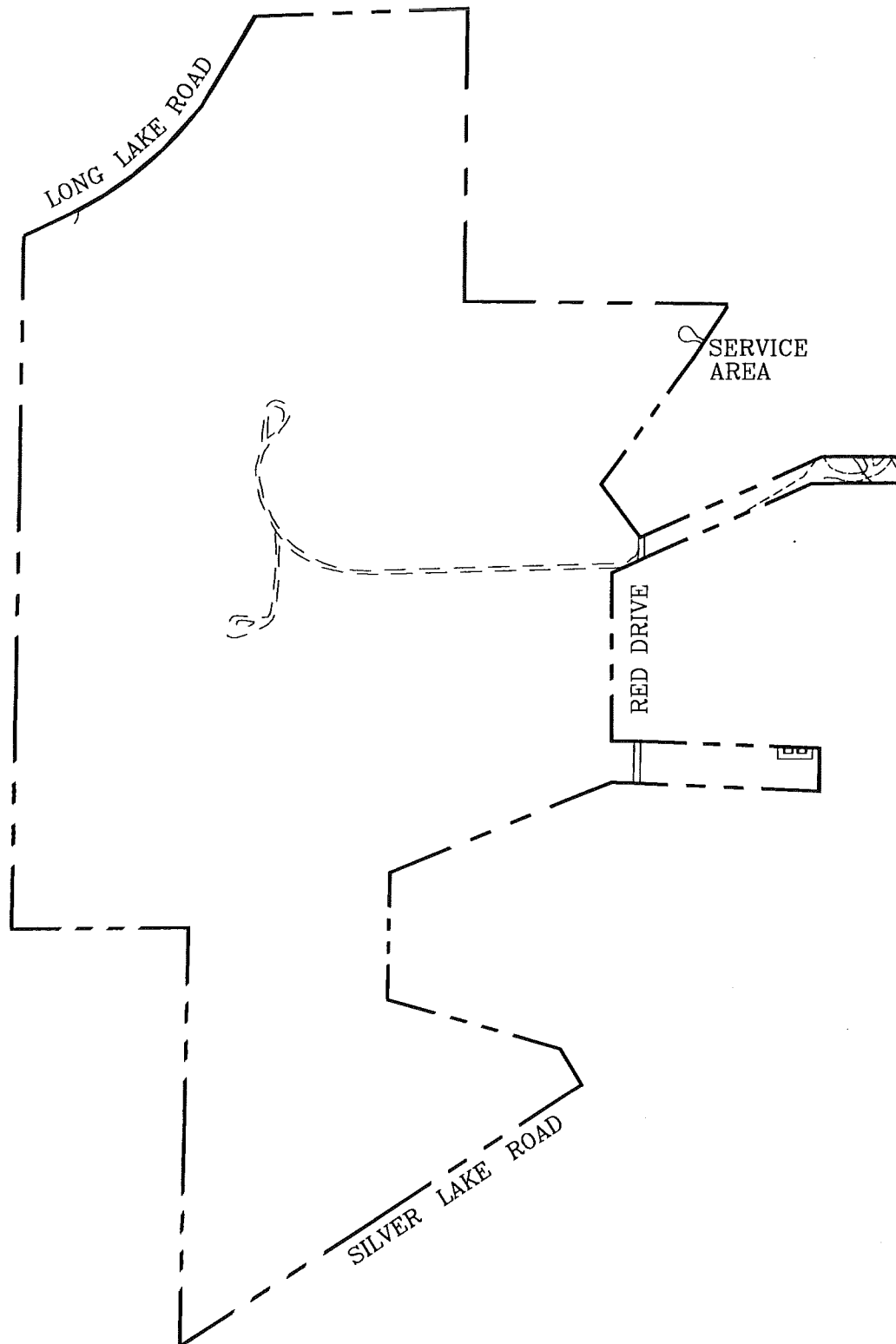
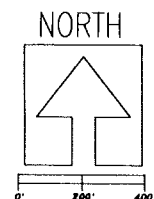
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7.4

BUILDING KEY



EXISTING ROADS, BUILDINGS AND PARKING LOTS
TO BE DEMOLISHED

SUBAREA 7 PLAN

Woodlands Conservation Area

KEY



Existing Roads Or Buildings
To Be Removed.

DESCRIPTION

Portions Of The Paved Surfaces Adjacent To
The Power Plant Are To Be Removed.

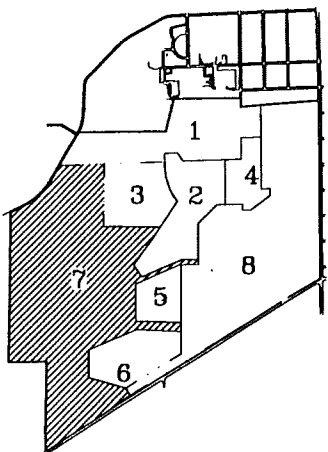
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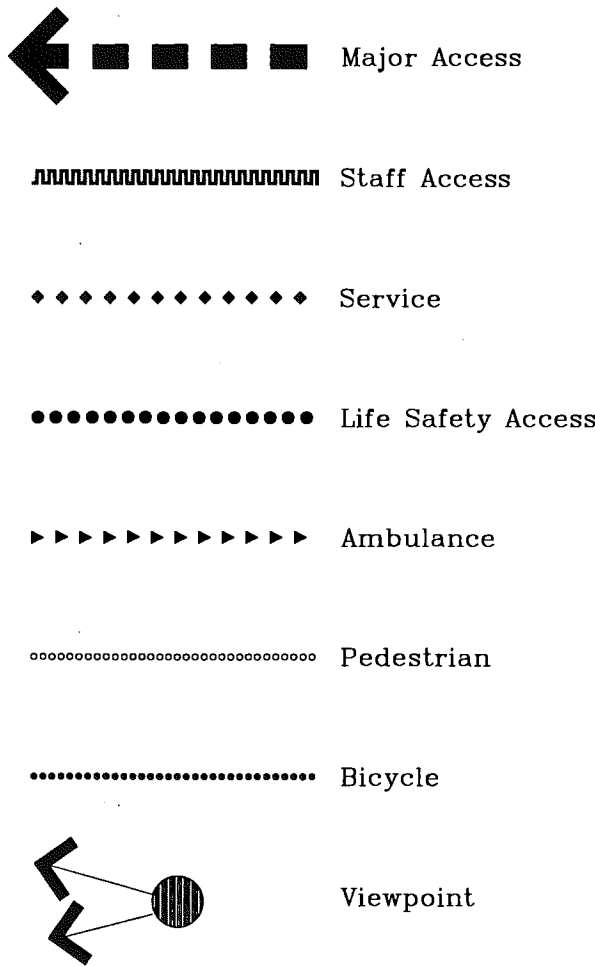
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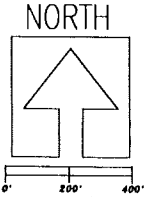
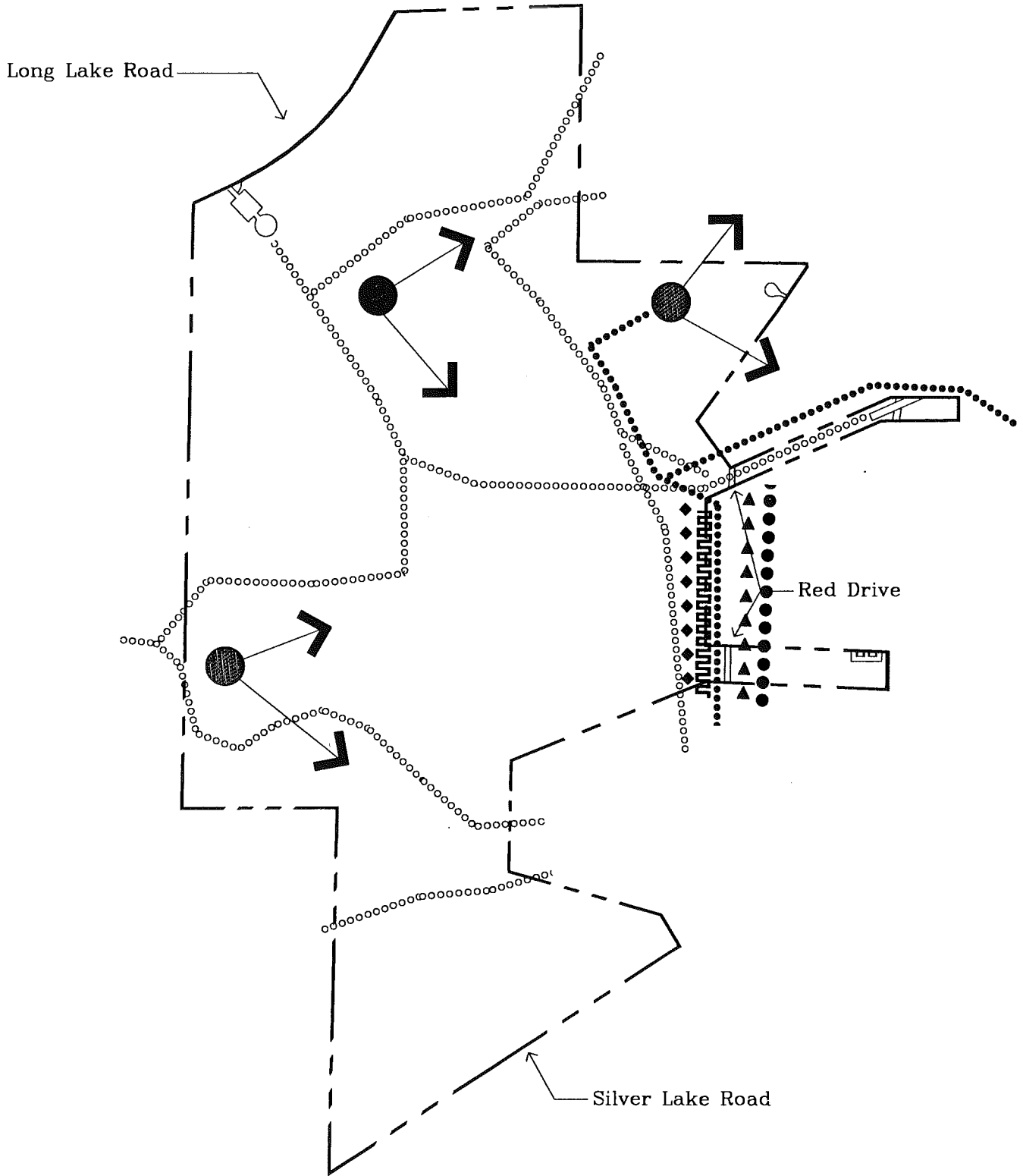
SUBAREA 7 PLAN

Woodlands Conservation Area

CIRCULATION KEY



Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.



CIRCULATION PLAN

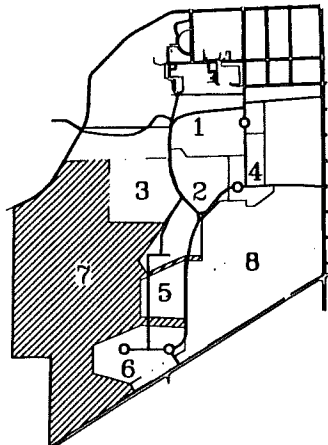
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SUBAREA 7 PLAN

Woodlands Conservation Area

KEY

Allowable Height of Envelope Measured to Building Cornice



Open Space

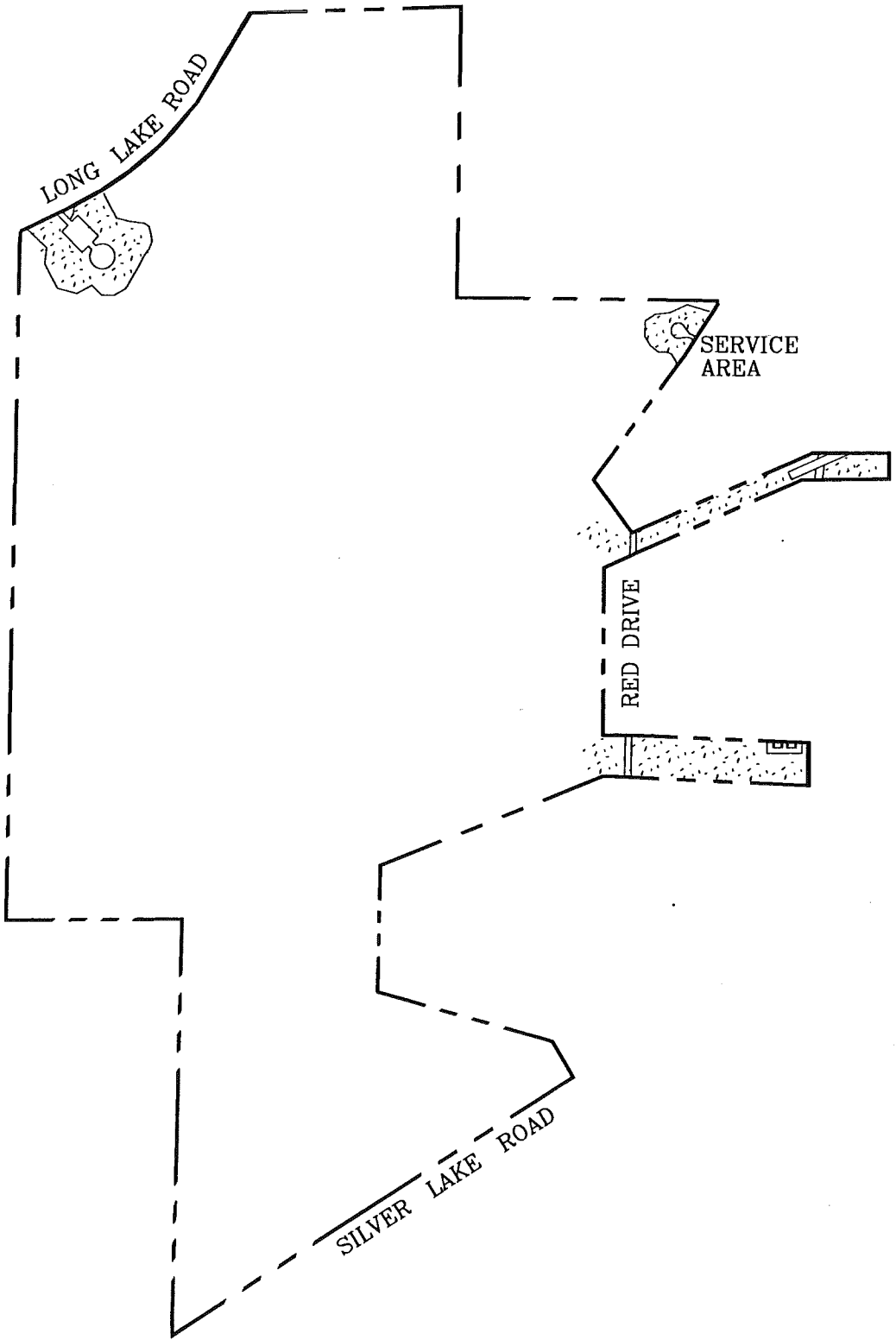


Development At Grade

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



BUILDING VOLUME ENVELOPE

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

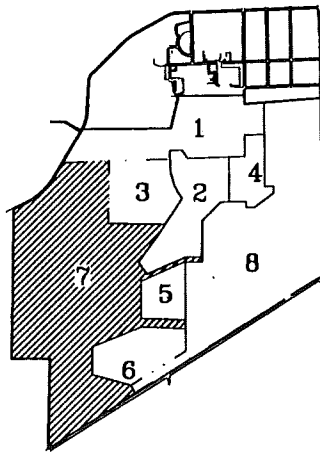
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7.7



Aerial View - District 7

VOA

DRY TOWN, CALIFORNIA
 10000 S. 10000 E.
 10000 S. 10000 E.
 10000 S. 10000 E.
 10000 S. 10000 E.

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 ARCHITECTURE

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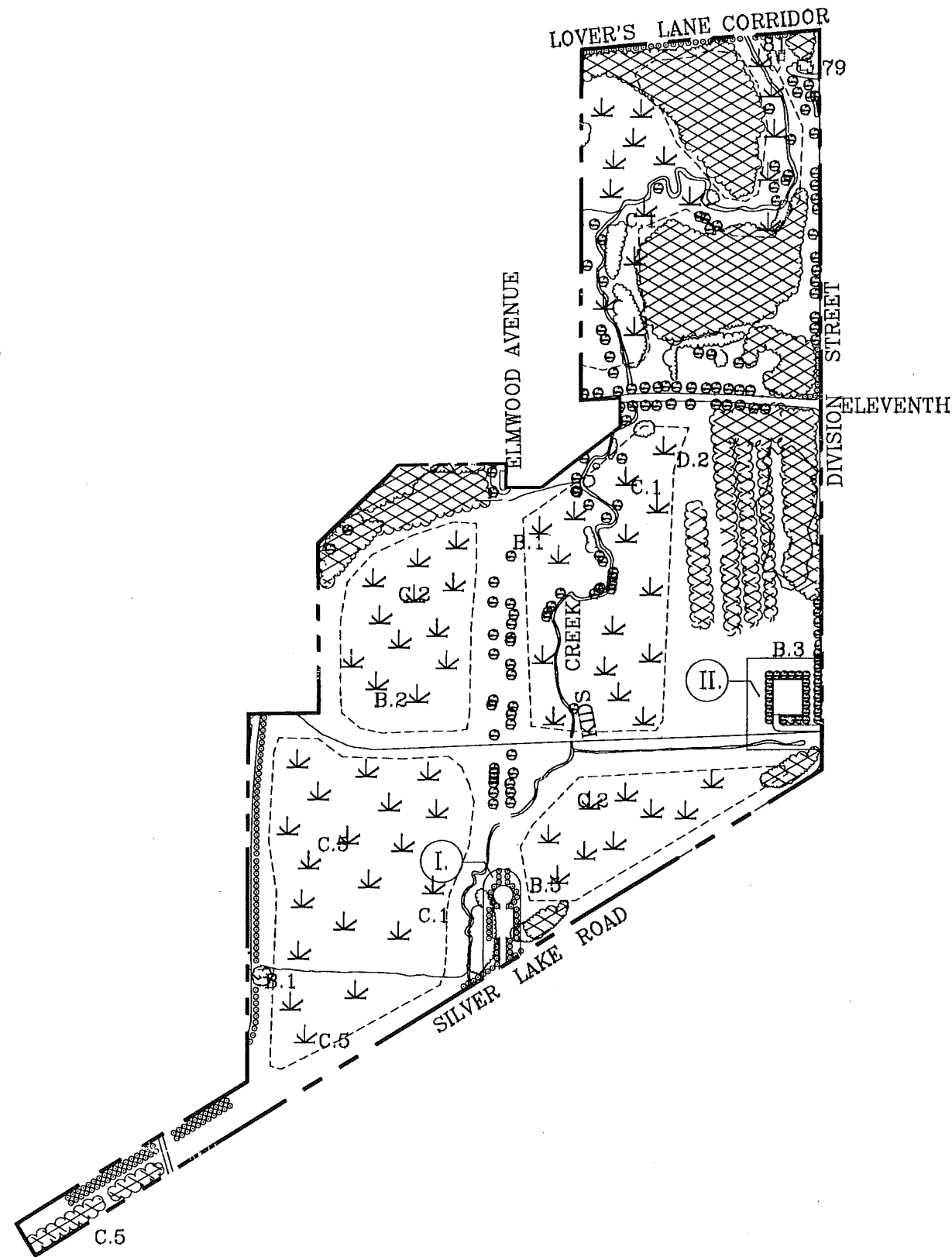
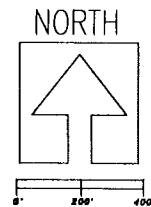
BUILDING KEY

79. House

81. Ancillary Structure

(X) = Subarea Development Zone

 = Tree Grouping



DEVELOPMENT PLAN

SUBAREA 8 PLAN

Wetlands Conservation Area

SITE DEVELOPMENT GUIDELINES

A. PROGRAMMED USES:

1. Trail Network
 - a. Pedestrian / Ski
 - b. Bicycle
2. Power Distribution

B. PROPOSED DEVELOPMENT

1. Foot Trails
2. Bicycle Trails
3. Potential Power Substation
4. View Point / Picnic Areas
5. Parking Areas

C. LANDSCAPE PROVISIONS

1. General Theme Is Protection, Preservation, And Enhancement Of The Wetland Systems
2. Establish Significant View Points For Orientation - Maintain Open Meadows.
3. Visually Buffer Parking Areas
4. Blend Landscape Edges To Enhance Continuity Of Open Space
5. Orchard Or Wetland Buffer To Enhance Farm Image.

D. HISTORIC PROVISIONS

1. Land Used For Pasture And Farm Production.
2. Contemporary Tree Nursery.

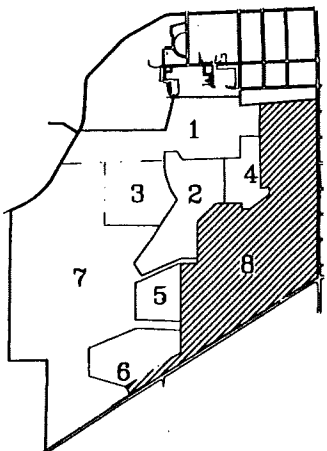
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Page 112

SHEET NO. :

8.1

BUILDING KEY

- | | |
|-------------------------|------------|
| 79. House | — Occupied |
| 81. Ancillary Structure | — Occupied |
| 83. Residence | — Occupied |
| 85. Residence | — Occupied |
| 87. Residence | — Occupied |
| 89. Residence | — Occupied |

SUBAREA 8 PLAN

Wetlands Conservation Area

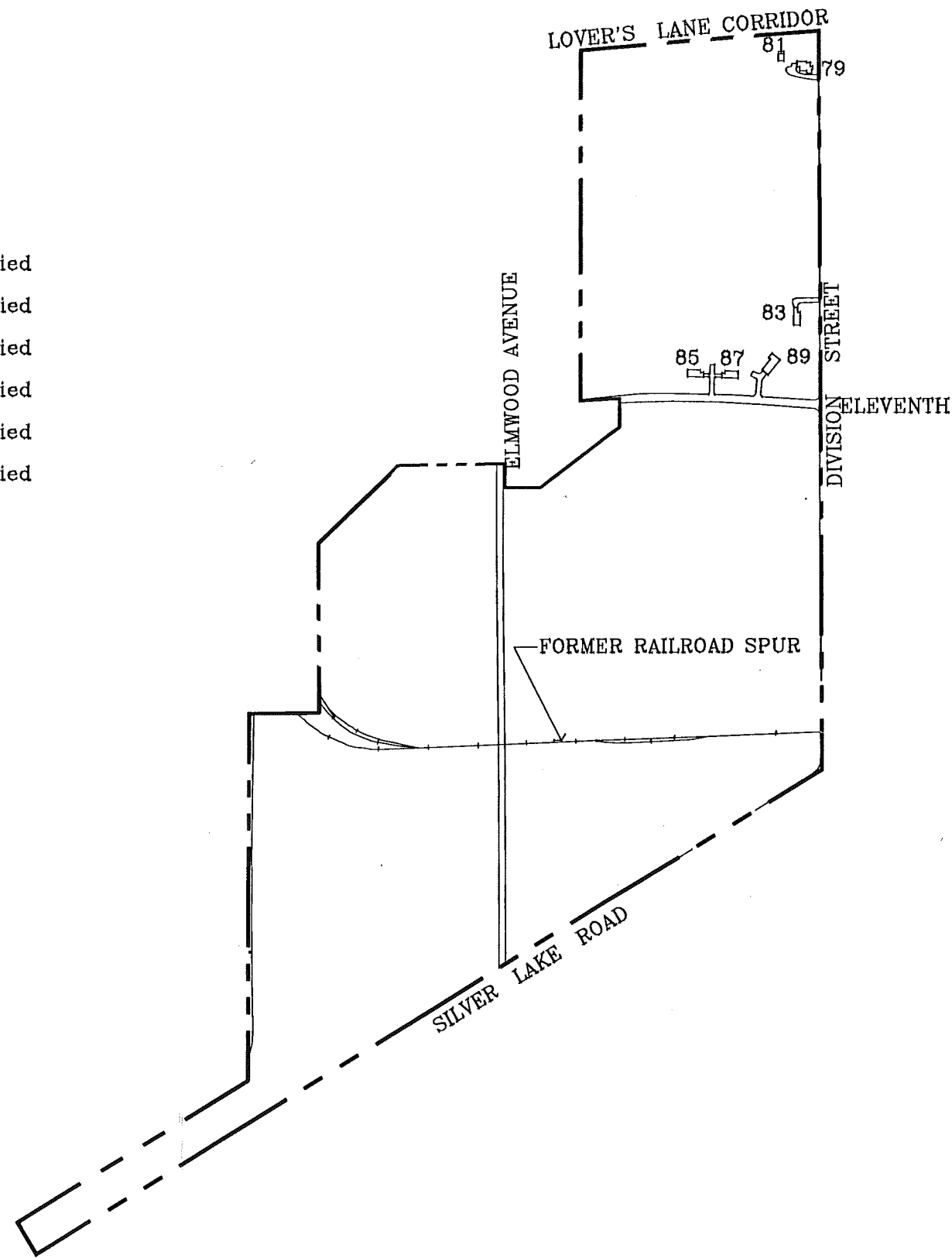
DESCRIPTION

Building 79 & 80 Are Residential Structures Built In The Victorian Style.

Buildings 83, 85, 87, & 89 Are One Story Ranch Style Residences.

Eleventh Avenue Is The Major Entry Access Drive For The State Hospital Property And Is Lined With Mature Boulevard Trees.

Elmwood Avenue In This Subarea Is A Seasonal Road Situated Within The Wetland And Is Unavailable For Portions Of The Year.



EXISTING BUILDINGS AND ROADS

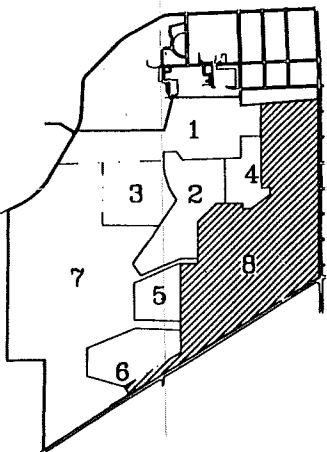
VOA

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Page 113




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8.2

SUBAREA 8 PLAN

Wetlands Conservation Area

LANDSCAPE KEY

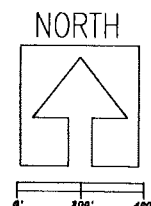
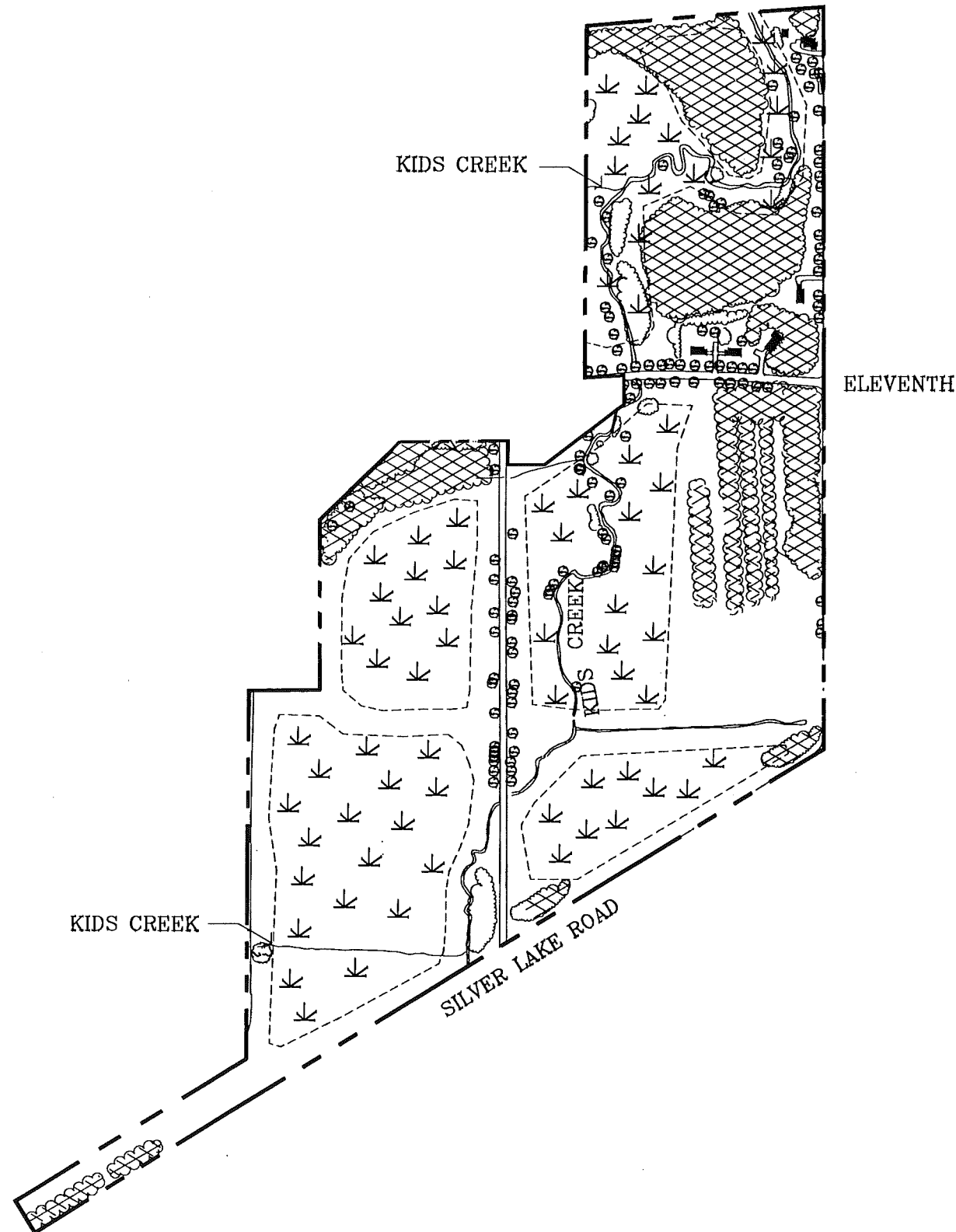
-  Individual Tree
-  Multiple Tree Mass
-  Wetland

DESCRIPTION

This Subarea Is Predominately A Wetland Containing A Mixture Of Meadows And Independent Tree Stands South Of Eleventh Avenue.

North Of Eleventh, The Subarea Exists As A Wooded And Open Natural Area.

A Nursery Reminant From The Period Of The Operating State Hospital Exists Along The East Edge Of The Subarea.



EXISTING LANDSCAPE AND NATURAL FEATURES

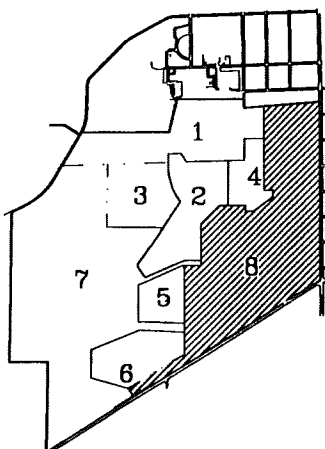
VOA

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
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PROJECT NO. :

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SHEET NO. : 8.3

SUBAREA 8 PLAN

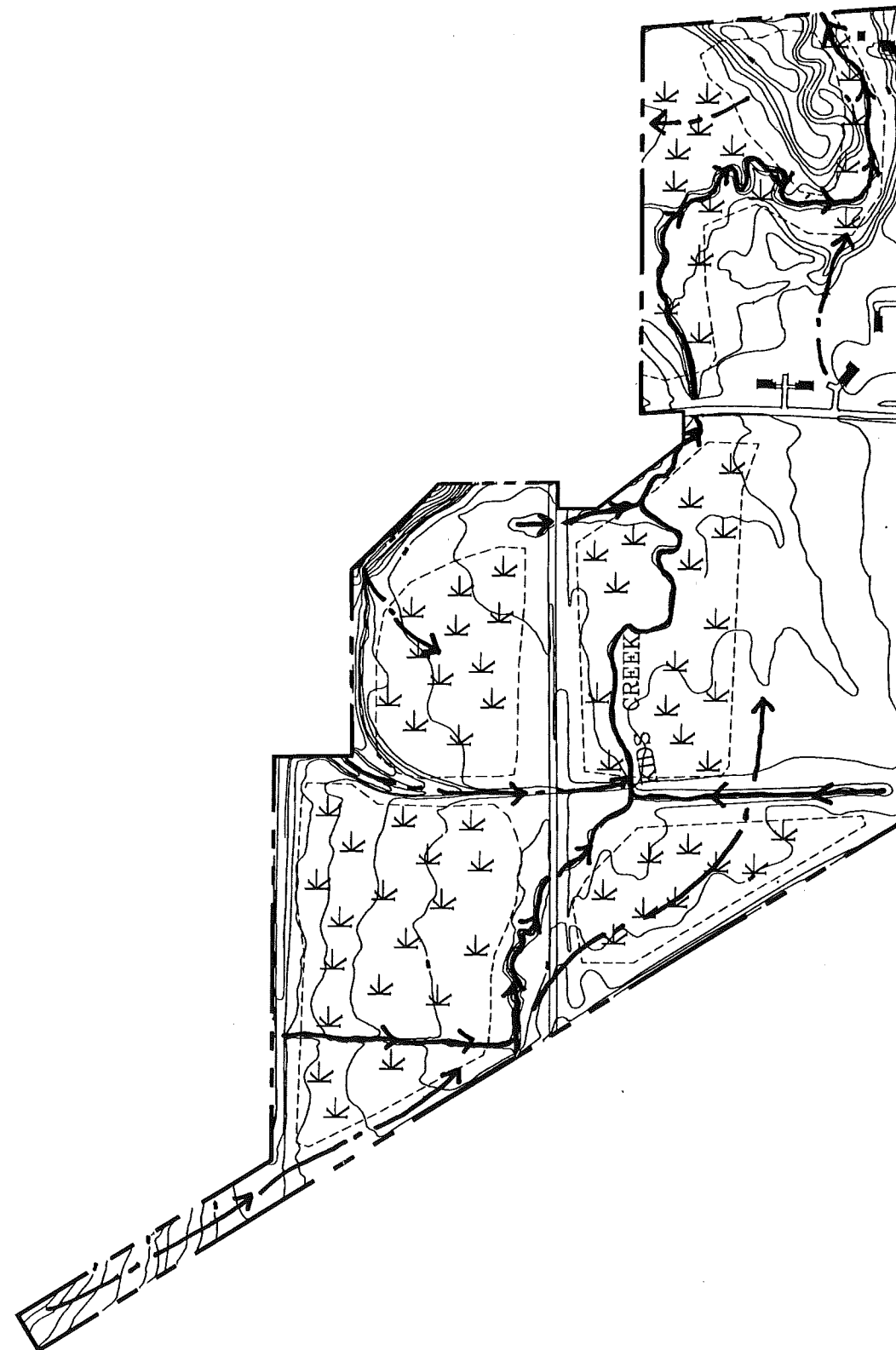
Wetlands Conservation Area

KEY

-  Topographic Contours @ 2'-0" Intervals
-  Natural Stream
-  Drainage Course
-  Wetland

DESCRIPTION

This Subarea Is Generally Flat To Gently Rolling Containing A Large Wetland Area Interrupted Only By Eleventh Street And Elmwood The Former Railroad Spur.



EXISTING TOPOGRAPHY AND DRAINAGE PATTERNS

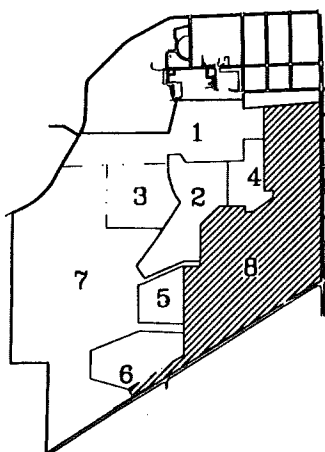
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SHEET NO. : 8.4



BUILDING KEY

79. House	- Occupied
81. Ancillary Structure	- Occupied
83. Residence	- Occupied
85. Residence	- Occupied
87. Residence	- Occupied
89. Residence	- Occupied

SUBAREA 8 PLAN

Wetlands Conservation Area

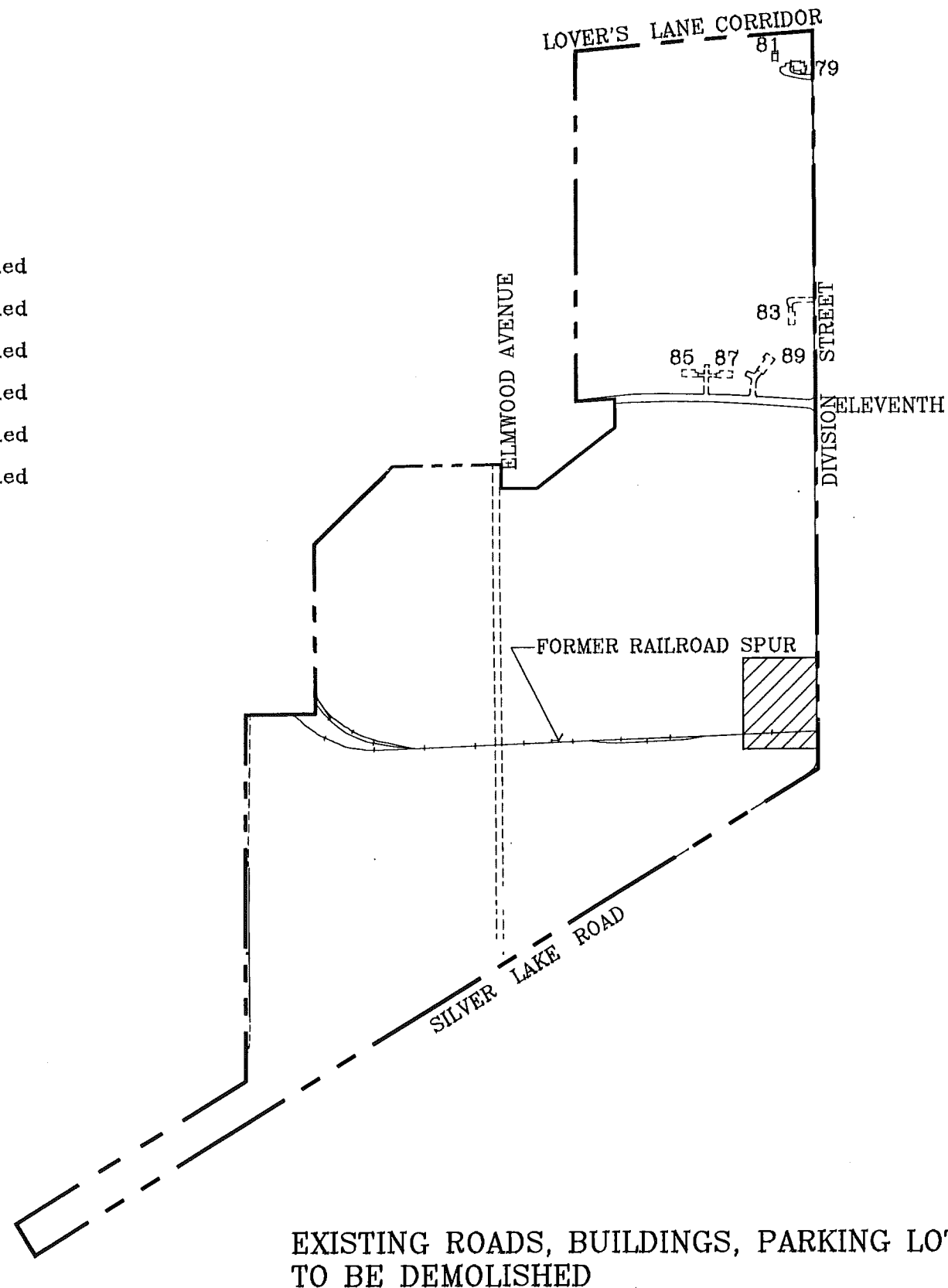
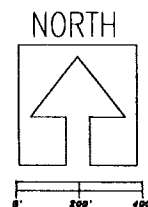
KEY

	Existing Roads Or Buildings To Be Removed.
	Building Envelope

DESCRIPTION

Building 79 And 81 Are To Be Retained,
All Others Will Be Removed.

Elmwood Avenue Will Be Partially Abandoned
And Converted To A Pedestrian Street.



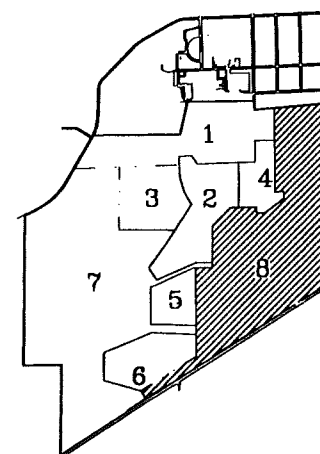
VOA

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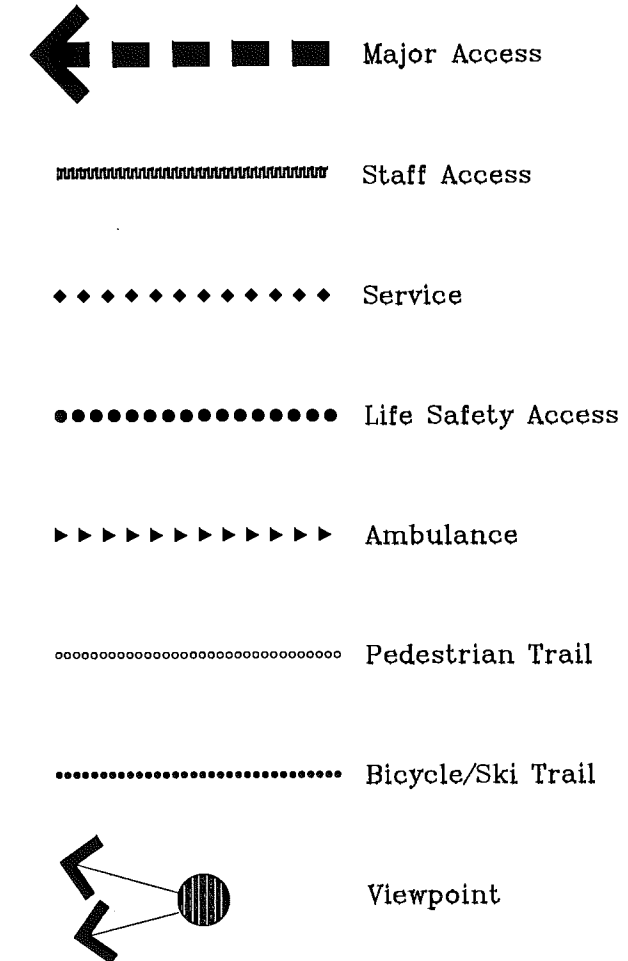
Page 116

SHEET NO. : 8.5

SUBAREA 8 PLAN

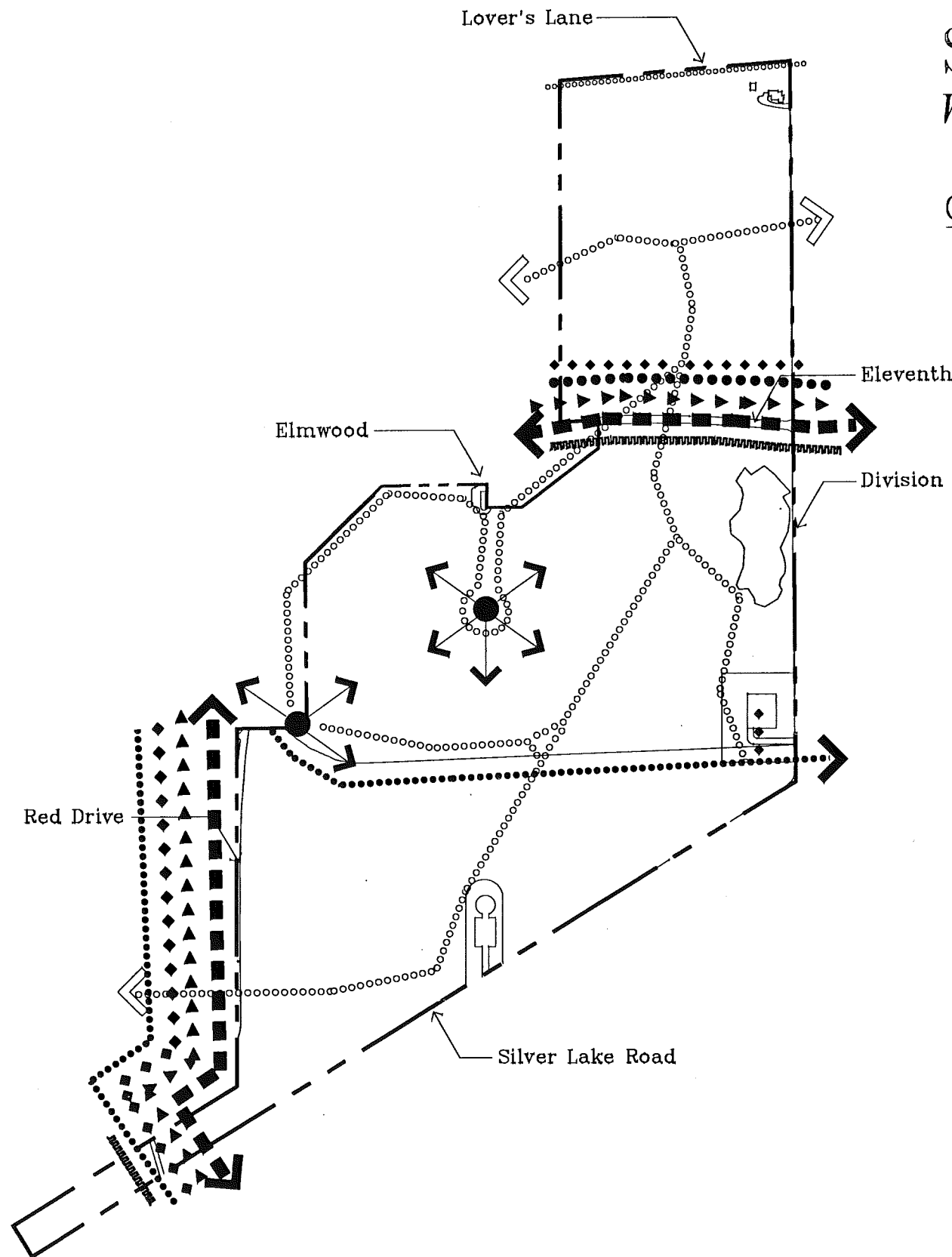
Wetlands Conservation Area

CIRCULATION KEY

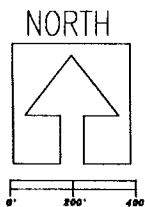


Note: Major access means major access to a portion of the property, and does not constitute an access point for cross-through traffic.

Note: A vehicular control point identifier will be placed on this sheet in the appropriate location to correspond with the vehicular control point identified on Subarea Plan Sheet 6.6.



CIRCULATION PLAN



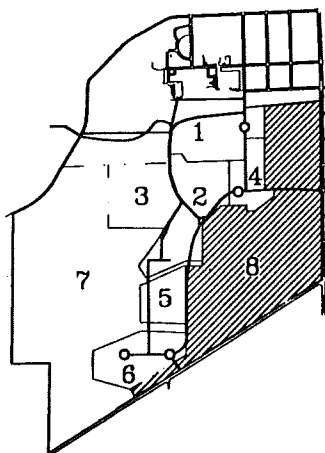
VOA

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SHEET NO. : 8.6

SUBAREA 8 PLAN

Wetlands Conservation Area

KEY

Allowable Height of Envelope Measured to Building Cornice

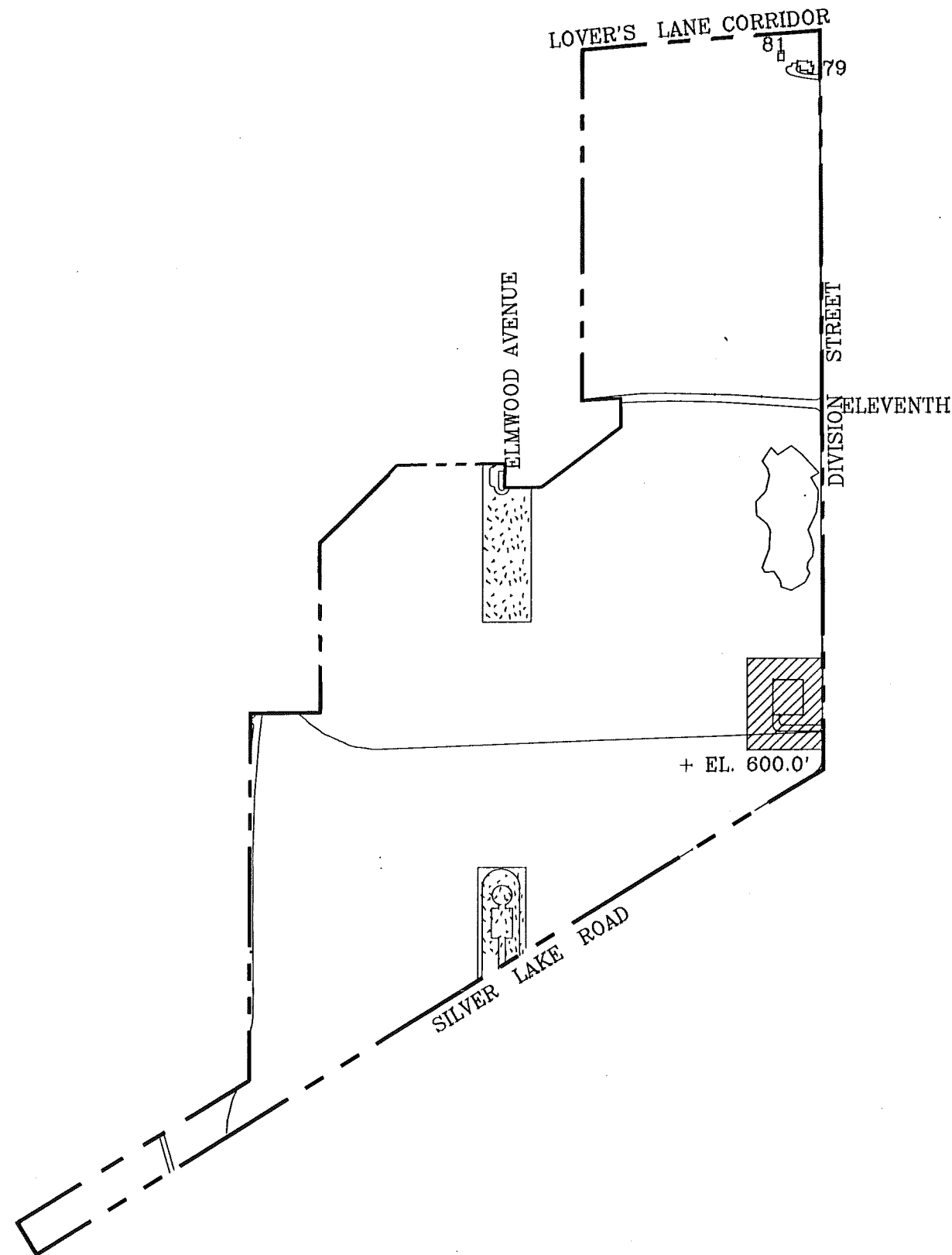
 Open Space Improvement At Grade

 630.0'

(The Sub Development Zone Designation corresponds with the Site Identification Column of Development Capacity Table 2 in Appendix C.)

Note: Base elevation equals sea level. The lowest point within the District is approximately elevation +600.0'. Elevation of the first floor of Building 50 is approximately +650.0'. The elevation limit is at the height above sea level indicated. The elevation limit is a plane parallel to the floor plate of Building 50 within the boundaries of a sub-development zone.

(In the final document, base elevations on this sheet will be better highlighted.)



BUILDING VOLUME ENVELOPE

(The boundaries of the area in which building can occur will be subject to minor modifications resulting from the progression through Schematic Design to Design Development.)

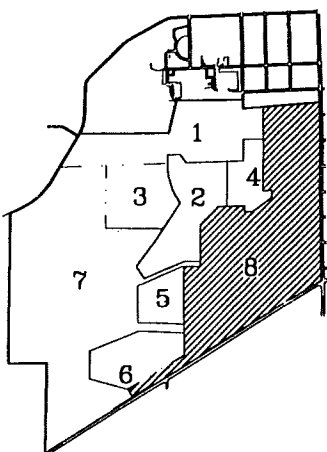
VOA

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8.7



Aerial View - District 8

VOA

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 TIME: 10:10
 PROJECT: 8.8.1
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 APPROVED BY: [blank]
 DATE: [blank]
 PROJECT NO.: [blank]

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SHAW & SHAW
 ARCHITECTURE

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 APPROVED BY: [blank]
 DATE: [blank]
 PROJECT NO.: [blank]

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 SHEET NO. 8.8.1

V. DESIGN GUIDELINES

A. Design Influences

The design of the Traverse City State Hospital reflects the principles of the Kirkbride Plan, 19th Century Hospital Planning, and the Picturesque Movement in Landscape Planning and Architecture. The following summaries on the Kirkbride Plan, 19th Century Hospital Planning, and the Picturesque Movement in Landscape Planning and Architectural Design are expanded upon in the Appendix. A summation of these planning movements is presented here as well as the fundamental interrelations with the Traverse City State Hospital for the Insane.

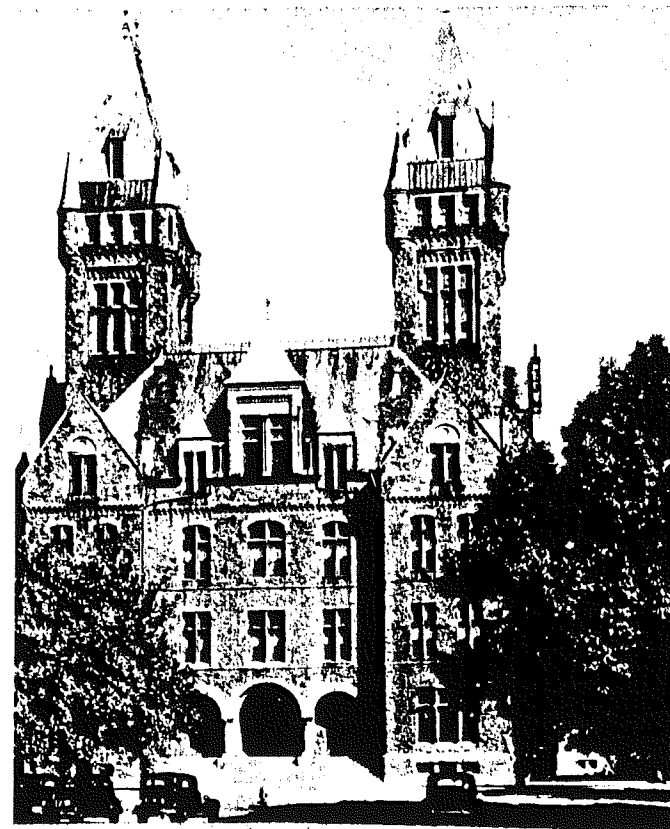
1. The Kirkbride Plan

The Kirkbride Plan was a specific recommended model (or prototype) for building a complex to house the mentally ill. It was published in 1851 by Thomas S. Kirkbride, one of the original founders of the Association of Medical Superintendents of American Institutions for the Insane, which is now known as the American Psychiatric Association. The proposals set forth in this plan were the result of meetings of this newly formed association to provide guidelines for building what was becoming a new building type, a publicly funded hospital. Thomas S. Kirkbride was the preeminent American psychiatrist of his time and also had traveled in Britain and Europe to study new hospital developments.

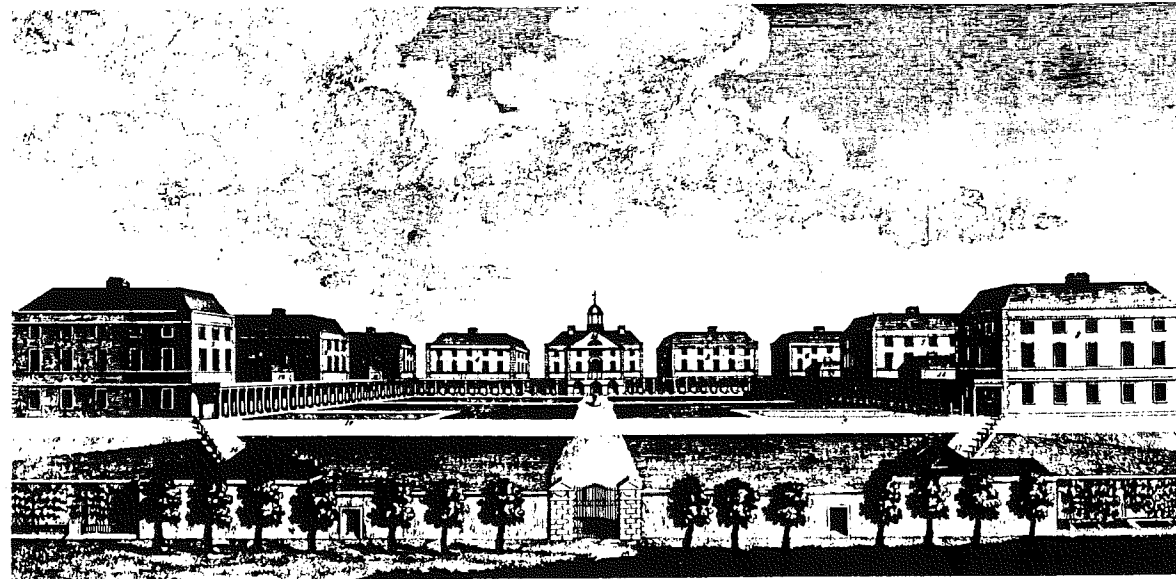
The model was proposed with the firm conviction that mental illness could be cured. By placing the dependent in the right environment and involving him in a therapeutic process, his illness could be cured, and he could return to society as a productive member.

This attitude was new. It was part of an era of social reform and had its roots in the Enlightenment. The developments in America were highly influenced by the work of Philippe Pinel in France and William Tuke of England, who formed the York Retreat. Thomas S. Kirkbride noted in 1846 the debt his profession owed to the work of these two men. The plan is a product of its social and cultural milieu which, like many Americans in the first half of the 19th Century, held a romantic ideal that seemed threatened by development that augured ill for the future. They extolled the agrarian way of life and denigrated the values of urbanization. "We find" wrote Kirkbride, "as was always believed, that no life is so generally conducive to health as one that, like agriculture, gives active exercise in open air, that none is so likely to be troubled by nervous affections, and none so generally to be preferred for those who are constitutionally disposed to this class of infirmities."

The plan as written can be found in the Appendix. Its proposals cover construction, site selection, administration, and operations. Significant in the selection of site was its acreage, not less than fifty acres and, if a working farm,

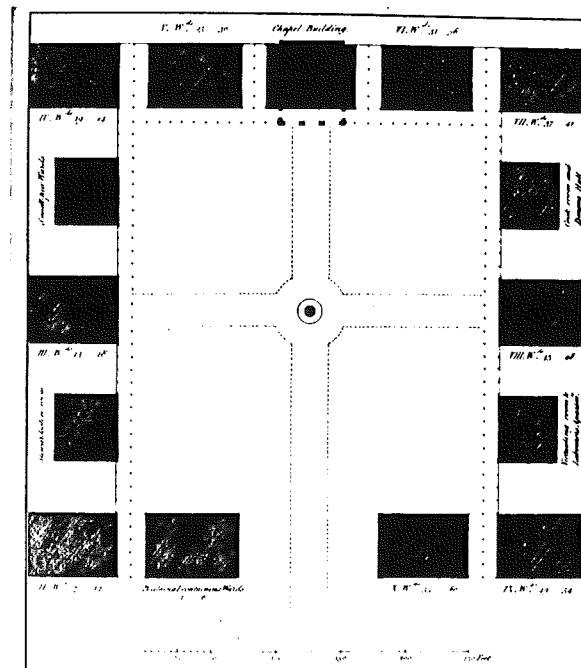


Central Administration Building, New York State Hospital, Buffalo, New York, H. H. Richardson, Architect



Plan, Royal Naval Hospital, Stonehouse, near Plymouth , England, 1762

FIGURE No.30



Royal Naval Hospital, Stonehouse, near Plymouth , England, 1762

FIGURE No.31

one hundred acres, and its relationship to the City, which was to be at least two miles distant. A rural atmosphere with sufficient water supply was required, with the type and quality of grounds needed for the patient's therapy.

The building was to have a central administrative block with wings. Each of the wings was to have separate wards, so as not to mix separate and diverse groups of patients. Each of these wards were to allow patients to have their own rooms with windows for views, air, and light. The wards could also contain support facilities, corridors with windows for light and ventilation, and day rooms or parlors to create a community and residential atmosphere.

Much attention in the Kirkbride Plan is given to heating, ventilation and utility support. These are primary components for the health of patients. Additionally, the construction of the building and its components must be fireproof.

The most articulate expression of the plan was the original design for the New York State Hospital in Buffalo by H. H. Richardson in 1870, in collaboration with Frederick Law Olmsted. In this particular case the Hospital was located on a large tract of land next to Delaware Park, which was also being designed by Olmsted. In H. H. Richardson's plan, the wards, which are located symmetrically on either side of a central administration block, are articulated as pavilions or separate buildings connected by arcades. In this respect the planning resembles the European "pavilion" plan, which had become the prototype for the general medical hospital which H. H. Richardson could have been familiar with, either through publication or his own training at architecture school of the Beaux Arts in Paris, France (Figures 30 and 31). Kirkbride himself would have known this prototype through his extensive tour of hospitals in Europe and the British Isles.

2. 19th Century Hospital Planning

Similarities between general hospital planning in Europe and the Kirkbride Plan must first be examined at its sources. General medical practice, like psychiatry, was revolutionized at the end of the 18th Century when disease ceased to be considered a stroke of fate but rather a pathological fact that could be observed, studied, and cured through proper practices and techniques. The effect on hospital design was to be profound. It was recognized through comparative studies by the Englishman Howard, the Frenchman Tenon and the Austrian Hunczousky that there was a link between the rate of mortality and certain medical practices and spacial arrangements. They condemned the then traditional hospital arrangements of mixing diverse groups of patients with various and infectious diseases. This spurred the adoption of the "pavilion" type of hospital, of which the first example is the Stonehouse Hospital in Plymouth, England, designed by Rovehead in 1760.

The pavilion hospital consisted of a central administrative block with separate wards located in distinct pavilions, separated by courtyards and connected to each



Sherbone Castle; Landscape design by Capability Brown, 1750-1760

FIGURE No.32

other and the central block by covered walkways. The functional goal of this plan was to address the concerns of the spread of disease, by using uncontaminated air, sanitary practices and separating diverse groups of the ill.

The theoretical model for this hospital was developed by the Academe des Science Commission in France in 1788. This model, designed by Bernard Poyet, shows a central administration block and separate pavilion wings, connected by covered walkways. This model was realized in the Hospital Lariboisiere in Paris, France, designed by Martin Pierre Gauthier in 1839; the Hospital of the Order of Deaconesses, Bethany, Berlin, designed by Ludwig Persius between 1845-1847; and, more contemporary with Richardson's work in Buffalo, the New Royal Infirmary in Edinburgh, Scotland, designed in 1870.

Hospital design in the 19th Century developed prototypes to find solutions to problems created in traditional methods of hospital design. These prototypes had similarities to the Kirkbride Plan; however, of more significance is the importance attached to the development of a prototype.

3. Picturesque Movement in Landscape Planning and Architectural Design

The picturesque aesthetic in landscape and architectural design is the predominant aesthetic of the 19th Century in both Europe and America. This is a broad characterization which includes a number of trends and philosophies, both visual and social, much as the classic, baroque and modern are broad in their designations. The origins of this movement are both English and French; these ideals carried over the Atlantic to America, where they were popularized and incorporated into larger social concerns.

The origins of this movement are rooted in late 18th Century literature, landscape and art. In England, Edmund Burke's *A Philosophical Enquiry Into the Origin of Our Ideas of the Sublime and Beautiful* of 1757 was to be a major contribution in defining a range of reactions in art, from ideal beauty alone (classic) to include a range of sensations such as awe (ultimately the heroic), the gay, the melancholic, the pathetic and ultimately the picturesque, the rustic and irregular. The latter, the picturesque, the rustic and irregular, were enlarged by Sir Uvedale Price and Richard Payne Knight and fitted well with the English landscape theory of William Kent and Humphrey Repton.

The picturesque gardens in England influenced the writer, philosopher, and genius of the 18th Century Jean-Jacques Rousseau, who laid the basis of a new attitude toward nature among Europeans, who traditionally viewed nature as the habitat of hostile and malign forces. Rousseau saw Nature as benign, the source of spiritual and material nourishment. Nature in her unadorned state was the paradigm of beauty. Rousseau's belief in the beauty and innocence of nature was extended from plants and trees to man. He believed that natural man was virtuous. In his writing of *Social Contract*, he developed the idea of the noble savage in primal, unspoiled landscape. Man was primarily an emotional rather than intellectual being. Rousseau emphasized the difference between individuals,



Example of the picturesque in landscape gardening from Andrew Jackson Downing's *Landscape Gardening*.

FIGURE No.33



FIGURE No.34

JUDGE SAMUEL TOWNSEND HOUSE
GROSSE ISLE, MICHIGAN
ARCHITECT: GORDON W. LLOYD

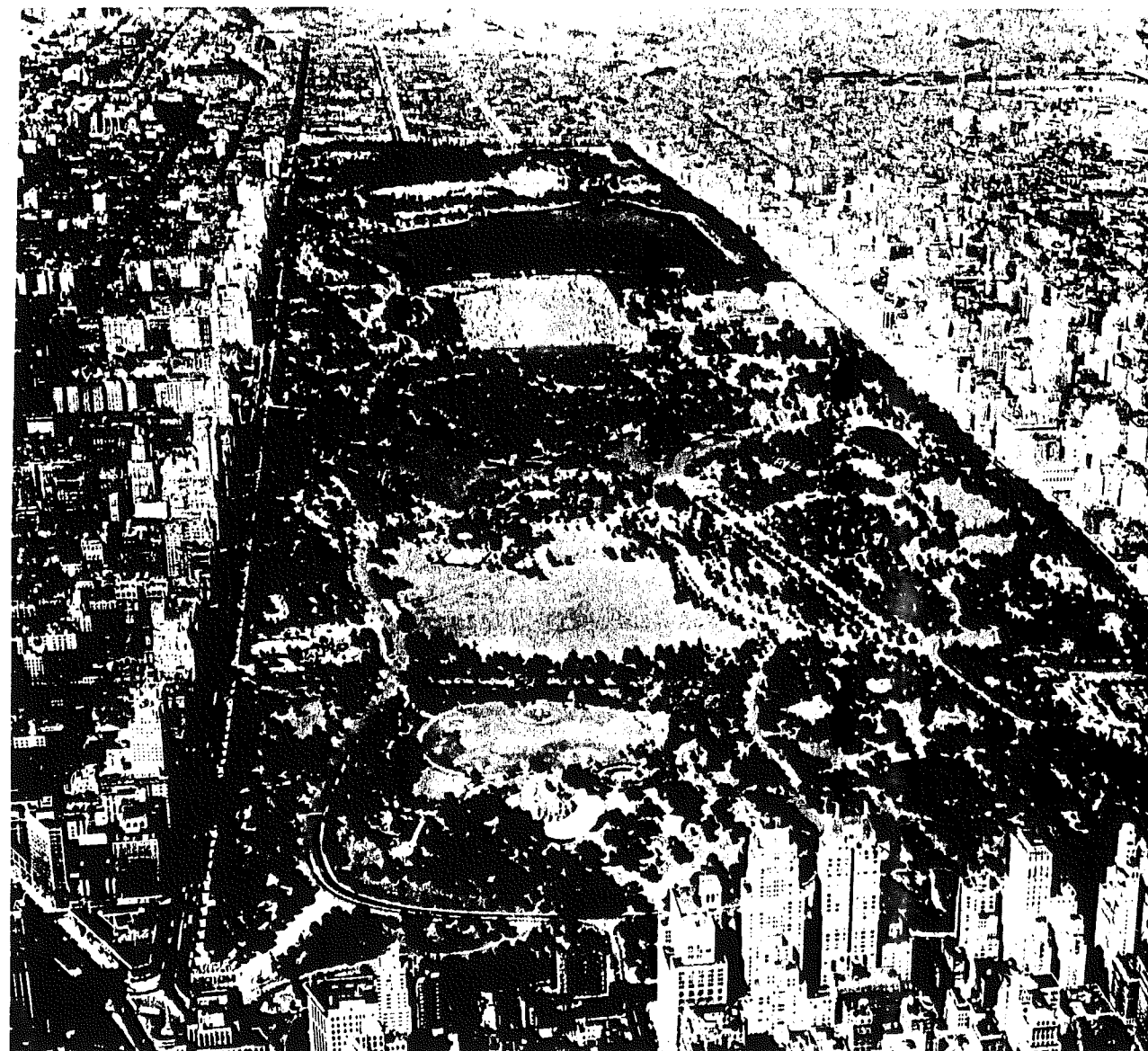
the uniqueness of each man and, above all, the intrinsic rights of the great passions. Sensorial experience became primary in man's development, henceforth acknowledging the effect of man's environment. This was to have profound effect on art, architecture, literature and science.

In art, the cult of the natural landscape was popularized through the paintings of Poussin, Claude Lorrain, Salvator Rosa Constable and Corot. It was popularized in the writings of Goethe, Woodsworth and Rousseau. It was put into physical form in the landscape and buildings of Sir William Chambers, William Kent, Capability Brown and Humphrey Repton, who, along with Uvedale Price, popularized the picturesque landscape in their writings. In architecture, the concern and mixing of historical style, their representative value, and their applicability and appropriateness to new building types were engaged with qualities of variety, movement, irregularity, intricacy and roughness that were inherent qualities of the landscapes and paintings mentioned above. These qualities translated into buildings of variety through dramatic silhouettes, movement through the varied arrangements of their parts, irregularity through the use of asymmetries and direct functional expression, intricacy in the complex relationships of parts, and roughness in the use of materials and vernacular styles.

The influence of the picturesque in America was popularized and expounded upon by Andrew Jackson Downing, the talented son of a Hudson River, New York, nurseryman who made himself into our first professional landscape architect. At the time of his early death in 1852, he was the most influential of all American writers on country houses and grounds. Downing's *Treatise on the Theory and Practice of Landscape Gardening*, 1841 was immediately and greatly popular, going through twelve publications by 1860. The book found at the time of its publication, five years after Ralph Waldo Emerson's *Nature*, a ready audience of the almost universal reverence for natural scenery.

Downing's influence spread to both site and buildings. A chapter in his *Treatise on the Theory and Practice of Landscape Gardening* was devoted to picturesque architectural theory. A year later in 1842, Downing published a book of plans for modest rural dwellings, "cottage residences," with the help of architects Alexander Jackson Davis and John Notham. The influence of these books can be seen in the house that Gordon W. Lloyd, the architect for the Traverse City State Hospital, design for Judge Samuel Townsend in Grosse Isle, Michigan.

Downing advocated strongly the picturesque in architecture and landscape design, but also went further to advocate the social impact of living in the country versus the city. Downing held the firm belief that human behavior is greatly affected by the environment and that living in the country was ideal for the social and moral development of people. Although Downing died at an early age, his influence was brought to a new level through the collaboration of his protegee, Calvert Vaux, and the man who was to become America's most comprehensive environmental planner and designer, Frederick Law Olmsted (1822-1903).



CENTRAL PARK, NEW YORK CITY
OLMSTEAD & VAUX LANDSCAPE ARCHITECTS

FIGURE No.35

Olmsted's contribution to the development of our cities, regions, and national parks system is still strongly felt today. It was always with a commitment to social democracy that he completed his prototypical designs for such planned environments as urban parks, parkways, suburban communities and campuses.

Olmsted, like other philosophical leaders of his generation, most notably Ralph Waldo Emerson, believed in the critical impact that the environment had on the human senses. The increasing tempo of life, particularly evident in cities, mandated alternative environments that were tranquil for what Olmsted termed passive recreation. It was a democratic obligation to provide such public facilities, for no individual could or would make available the necessary land. It was in the public spaces (parks, streets, campuses and hospital grounds), that citizens would experience the reality of democratic life.

Olmsted's and Vaux's design for Central Park in New York City, which they won by open competition, is perhaps their best known work and an example of the picturesque as applied to the institution of the public park (Figure 35). Olmsted also collaborated with the great American architect H. H. Richardson in the design of the State Asylum of New York in Buffalo, whose design was based on the Kirkbride Plan.

4. Summation

The background provided on these planning movements illuminates the conditions of philosophy, building, planning and society at the time of the Kirkbride Plan and, ultimately, the building of the Traverse City State Hospital for the Insane.

There was a revolution in the approach to psychiatric care regarding the cure of mental illness, much as there was a revolution in medicine and science. This revolution was based on the belief and study of nature directly versus religious concepts. Nature and the environment is seen as essential for the moral and social development of people. The environment can also provide the setting for the therapeutic process for the mentally ill. Nature in her unspoiled state becomes the paradigm of beauty and is reflected in landscape and environmental design. The crosscurrent of all these movements can be found both consciously and unconsciously in the development of the Traverse City State Hospital for the Insane.

B. State Hospital Original Design/Development

The following is a description of the historical development of the Traverse City Hospital for the Insane, its site, and its buildings (Figure 36). The redevelopment took place in multiple phases and was influenced by many sources: the Kirkbride Plan, the picturesque movement (through the architect Gordon W. Lloyd's work), and by practical considerations of adequate water supply, agricultural concerns, and the need for expansion.



FIGURE No.36 VIEW OF TRAVERSE CITY STATE HOSPITAL CIRCA 1992 Page 125

NORTHERN ASYLUM

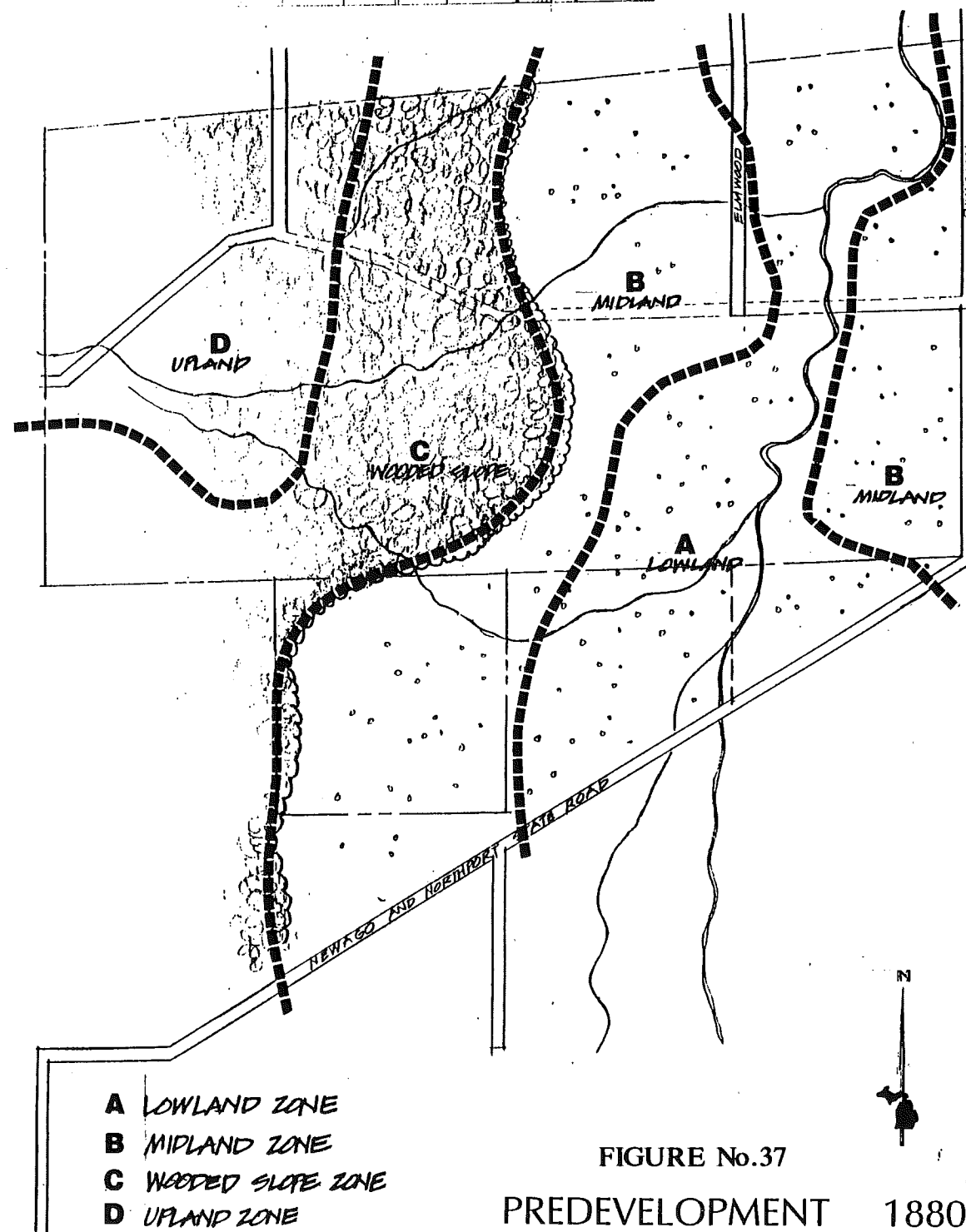
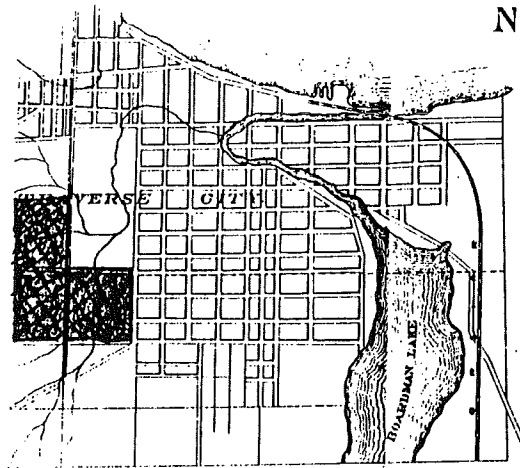
FOR THE INSANE,

TRAVERSE CITY,

MICH.

Reduced scale.

Showing their position relative to Traverse City and Grand Traverse Bay.



1. Site and Landscape

a. Predevelopment -- 1880

The Traverse City State Hospital in its original state was a northern coastal moraine forest, typical of this region. The site falls more than 300 feet in elevation from the northwest corner to Kids Creek, along the east edge. Topography divides the site generally into four north-south zones which include the Lowland Zone, the Midland Zone, the Wooded Slopes zone, and the Upland Zone (Figure 37).

Immediately prior to the purchase of the land for the Traverse City State Hospital, major portions of the lowland and midland zones were lumbered, while the steep slopes were left heavily wooded. Several springs originated on site and drained eastward to the creek on the east side of the property. Excerpts from the 1882 Report of the Board of Commissioners describe an ideal site for the future hospital:

"THE IDEAL SITE

of an institution for the care and treatment of the insane should possess advantages and characteristics so varied as rarely to be found at any one locality."

"The town or city near which it is situated should be of considerable size, possessing good markets, not to be exhausted by the daily demand for perishable provisions, nor purposely cornered. The labor supply should be abundant" . . . "Also, not less important than these material considerations, is the social life, refinements and wealth that always center in a large town, with its advantages of schools, churches, amusements, and societies."

"The site should be at the proper distance from the town, and west or northwest from it to give an east or southeast frontage to the buildings. The daily intercourse between the town and the asylum is considerable, and should be convenient; else it will be found difficult to retain attendants and assistants; and much that might serve to relieve the monotony of continued life in an asylum will not be attainable."

"On the other hand the asylum, though near the city, should have, as far as possible, the seclusion of the country, and the privacy of grounds devoted exclusively to its own use. These grounds should be ample both for the general division of the male and female patients, and the separation of the distinct parties of either sex from the several wards seeking the open air, sunshine, and

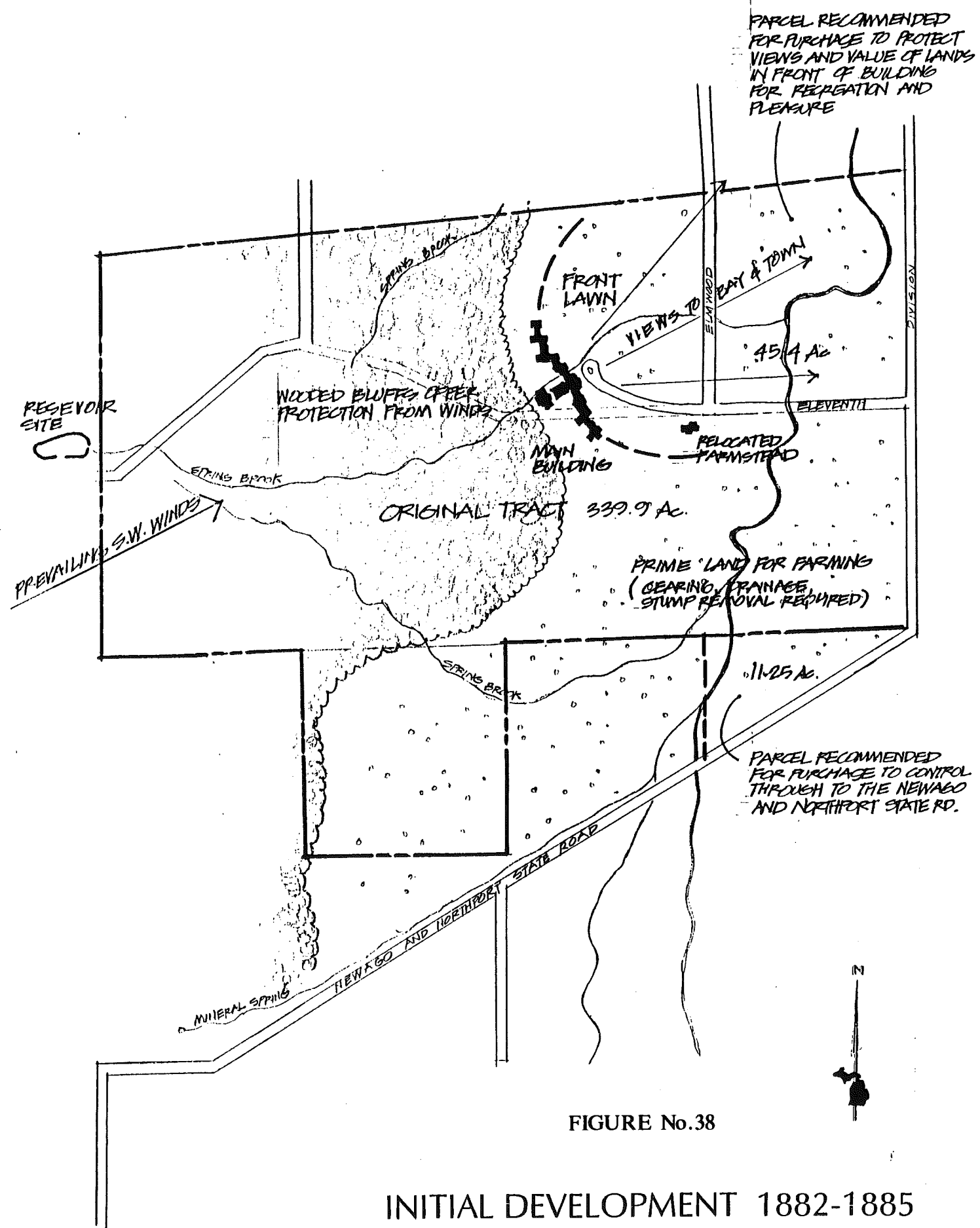


FIGURE No.38

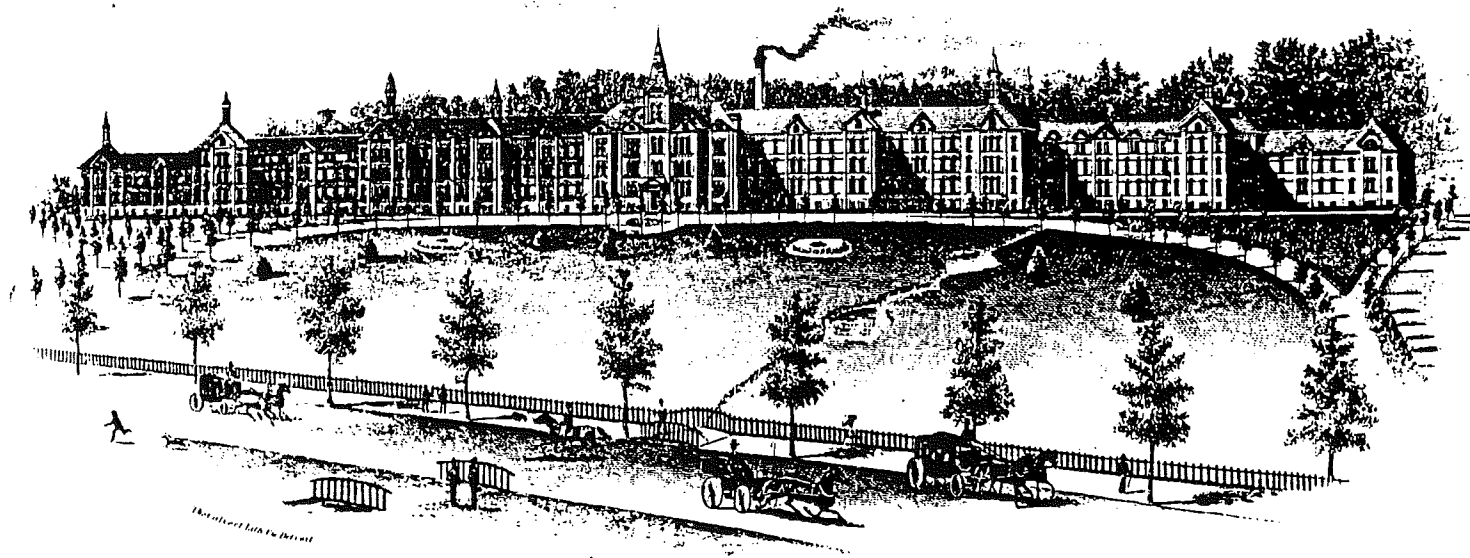
INITIAL DEVELOPMENT 1882-1885

shade."

"The ideal site should have an elevation sufficient to command a view of the town and its surroundings, but should be sheltered from storms and prevailing winds. The ground should ascend to the building plateau, which should cover a nearly level area of about twelve acres, back of which the ground may again advantageously rise. If the buildings can be placed in the midst of the primitive timber, the most favorable conditions will exist for adapting the grounds to the use of patients. Should the grounds both in front and rear of the building plateau be broken in surface, the natural beauty of the site will be enhanced, while artificial embellishment will be less needed and at the same time more effective. It is scarcely necessary to add that the site should be far removed from marshes and stagnant water, should be crossed by no public highways, should have facilities for ready drainage and sewerage, and should possess an abundant supply of pure, living water."

b. Initial Development -- 1882 to 1885

The site for the Northern Michigan Asylum (i.e., the Traverse City State Hospital) was purchased in 1882 and consisted of 339.9 acres, with two additional tracts of 45.4 and 11.0 acres recommended for additional purchase (Figure 38). The advantages of this site and the rationale for the building location are described in these excerpts from the 1882 Report of the Board of Commissioners:



FROM 1882 REPORT OF THE BOARD OF COMMISSIONERS

ARTIST RENDERING

FIGURE No.39

CORD-EAGLE, TRAVERSE CITY, MICHIGAN

PHOTO DURING CONSTRUCTION

FIGURE No.40

THURSDAY,



THE SITE AT TRAVERSE CITY

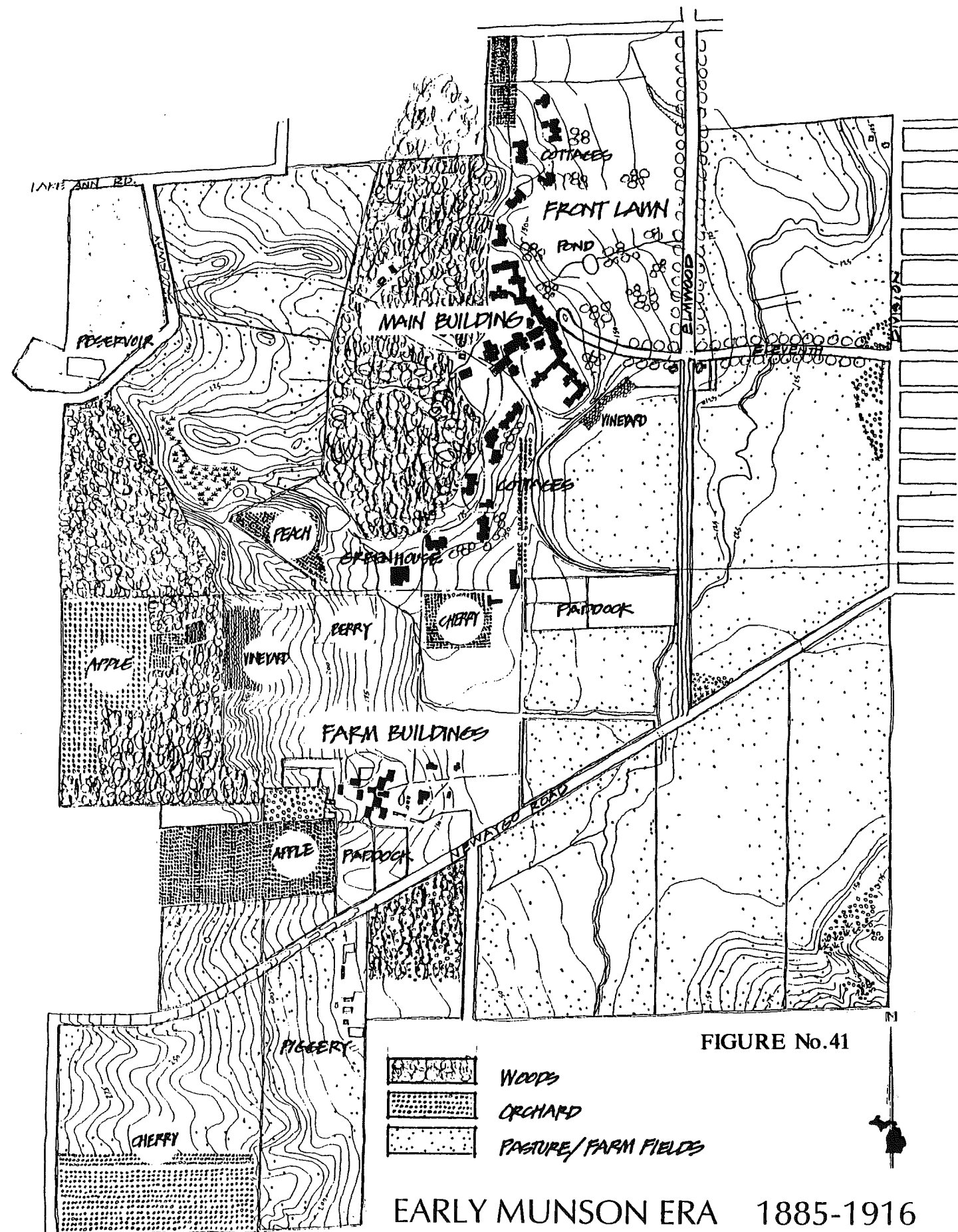
"Many of the advantages and characteristics of an ideal site for an institution for the insane" . . . "are found at that selected for the Northern Asylum at Traverse City. The healthfulness of the region has already been mentioned. The buildings will be approached over pleasant and excellent roads at a distance of one and one-half miles south of west from the city. The tract is partly within the corporate limits, but the nature of the ground immediately in front is of such character that it will remain permanently isolated. The building plateau is sixty-one feet above the level of Grand Traverse Bay, and three-fourths of one mile from it, with an extended view of the bay, the city, and its surroundings. The grounds in the rear ascend in a series of heavily wooded hills, separated by ravines, affording complete protection from the southwest winds. These timbered ridges overlooking the bay and the city, and the intervals, shaded with a primitive growth of beech and maple, each with a little rivulet, will prove an attractive feature in the outdoor exercise of patients and are so secluded as to be adaptable to all classes of inmates."

WATER SUPPLY

"The supply of water is more than sufficient for all the purposes of the institution." "The amount is ample and the source is sufficiently high to carry the water into the attic, thus ensuring a constant flow of fresh water through the waste pipes and sewerage system, rendering the formation of sewer gas impossible. A large spring, the water of which can be conveyed to the asylum from the land of Messrs. Hannah, Lay & Co., less than a mile distant, will furnish an unlimited alternative supply should such ever be needed."

THE ASYLUM SITE

"The farm as purchased comprises 339 90-100 acres of land in the main wooded. The soil is sand and gravel, with some gravelly loam. The whole tract is well watered, is susceptible of good drainage, and will make an excellent farm. The timber on the wooded portion is largely hard maple, with beech, some hemlock and cedar. The wood and lumber that can be cut therefrom, so near the mills, is valuable, and will go far towards repaying the expense of clearing."



(BASED ON 1916 MAP OF FARM & GROUNDS)

Construction of the main facility was started early in the year of 1882 and completed in 1885. Dr. J. D. Munson was hired as the first medical superintendent for the Northern Michigan Asylum which had a patient population of 330. Initial activities related to the development of the site included ditching to improve drainage, stump clearing, and lumbering to prepare the area for farm development. The framework for the development of the front lawn was started with street tree plantings along Elmwood and Division, and the creation of Willow Pond.

c. Early Munson Era -- 1885 to 1916

During this period, under the direction of Dr. J. D. Munson, the initial building complex had grown to include 13 cottages, numerous support buildings, and an extensive working farm. The site had grown from the original 340 acres to over 650 acres (Figure 41). The name of the facility had changed from Northern Michigan Asylum to Traverse City State Hospital. The year 1916 was selected as a milepost, as a detailed map of the hospital, farm and grounds exists, which is the basis for the accompanying plan, and the period seems to incorporate a majority of the Victorian style buildings and fully developed farm operation.

Expansion in the patient population was handled by construction of detached cottage units. These units were "for the quieter class of patients and for those who have acquired a degree of self control" and had large dormitory rooms instead of single patient rooms.

The farm operations were an integral part of the hospital complex providing therapeutic employment for able bodied patients while furnishing a fresh nourishing source of food. Farm operations included such livestock as a large beef and dairy cattle herd, horses, hogs, and fowl along with their required pasture and barns and crop operations included apple, peach and cherry orchards, vineyards and berry patches, and a full complement of garden crops, particularly potatoes which were a staple for the institution.

During this period Dr. Munson paid particular attention to the development of the front lawn area for the recreation and pleasure of the patients. Local legend tells that Dr. Munson in his various travels throughout the country would collect unusual trees to be planted on the hospital grounds. Upon his return from these trips, Dr. Munson along with his farm manager would go to an area deemed suitable for planting and would toss a number of stones on the ground and the trees would be planted wherever the stones landed. This method would seem to account for the seemingly random placement of groups of unique specimen trees throughout the front lawn area. Board fences cut from the native timber

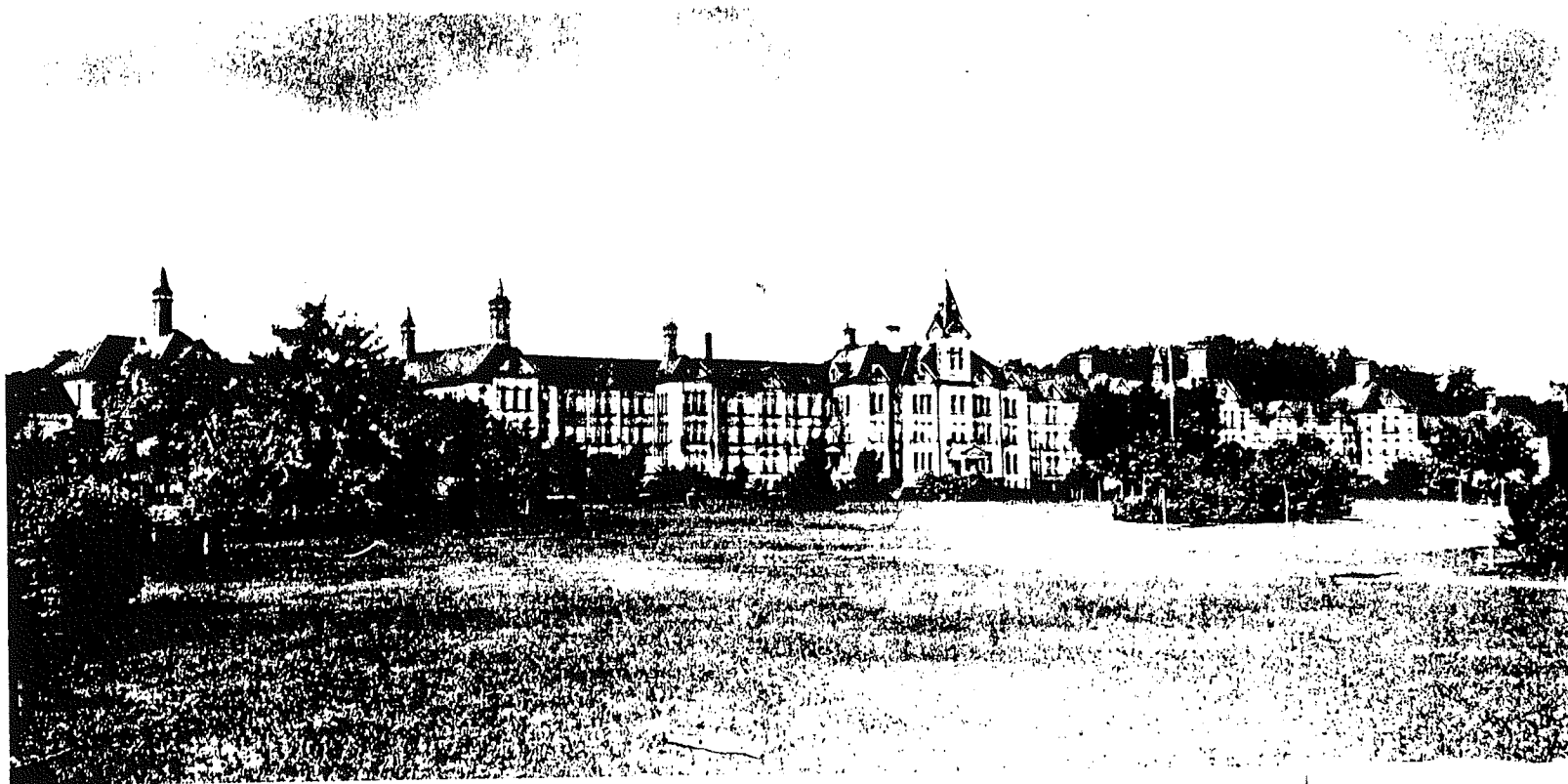
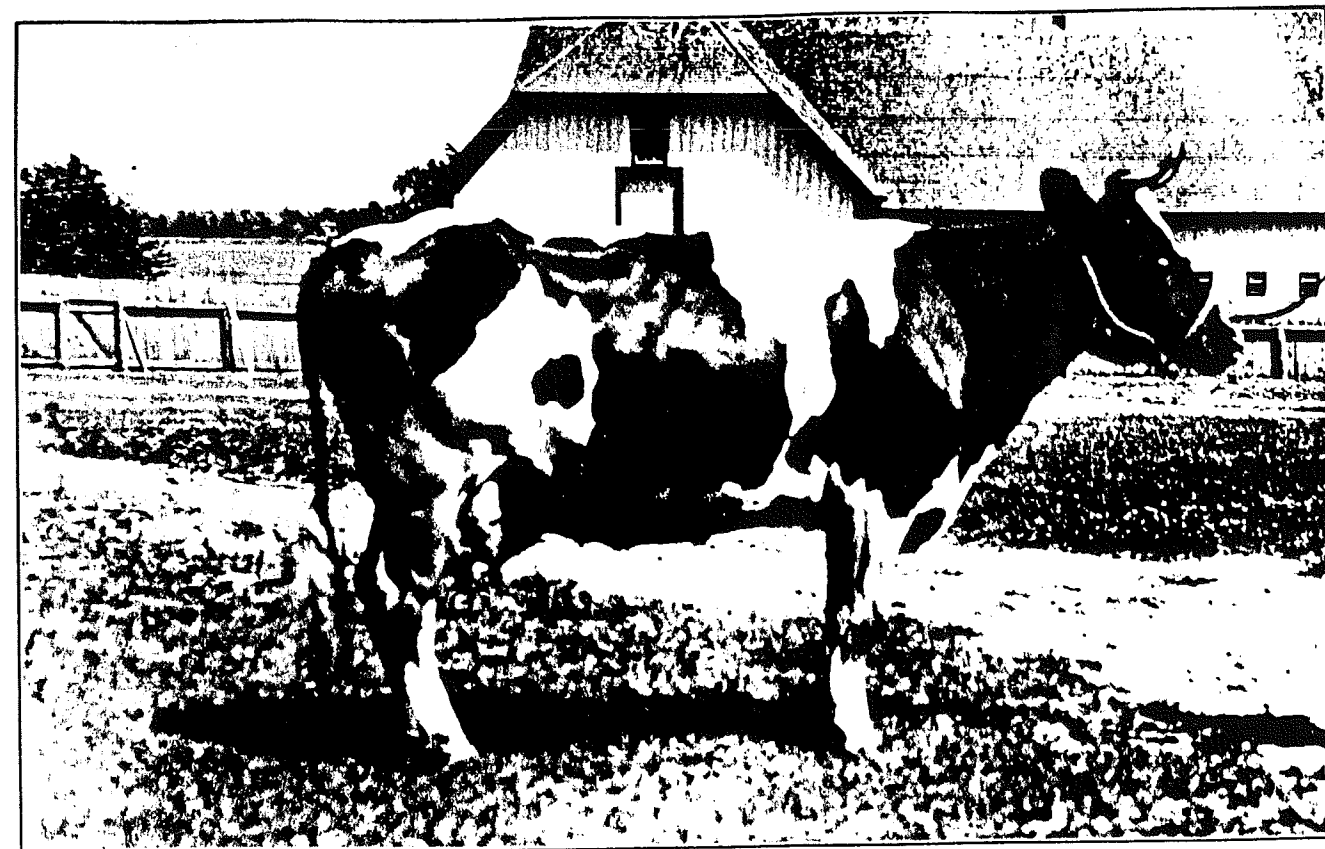


FIGURE No.42

NORTHERN MICHIGAN ASYLUM.

1892 BOARD OF COMMISSIONERS REPORT



TRAVERSE PRINCESS WEG No. 106215. Age 5 years, 4 months, 9 days

Her official test for 1821 days is as follows: 7 days - Butter, 31.681; Milk, 767.2 lbs. 30 days - Butter, 133.062; Milk, 3192.6 lbs. 60 days - Butter, 251.832; Milk, 5840.3 lbs. 90 days - Butter, 375.365; Milk, 8660 lbs. World's Record when made. 120 days - Butter, 491.860; Milk, 11326.7 lbs. (World's Record when made). 150 days - Butter, 596.282; Milk, 13756.5 lbs. (World's Record). 1821 days - Butter, 703.230; Milk, 16202.9 lbs. (World's Record). Yearly record: Butter, 1123.66 lbs.; Milk, 24657.4 lbs. She had been milked eleven months when photo was taken.

1914 BOARD OF COMMISSIONERS REPORT

FIGURE No.44

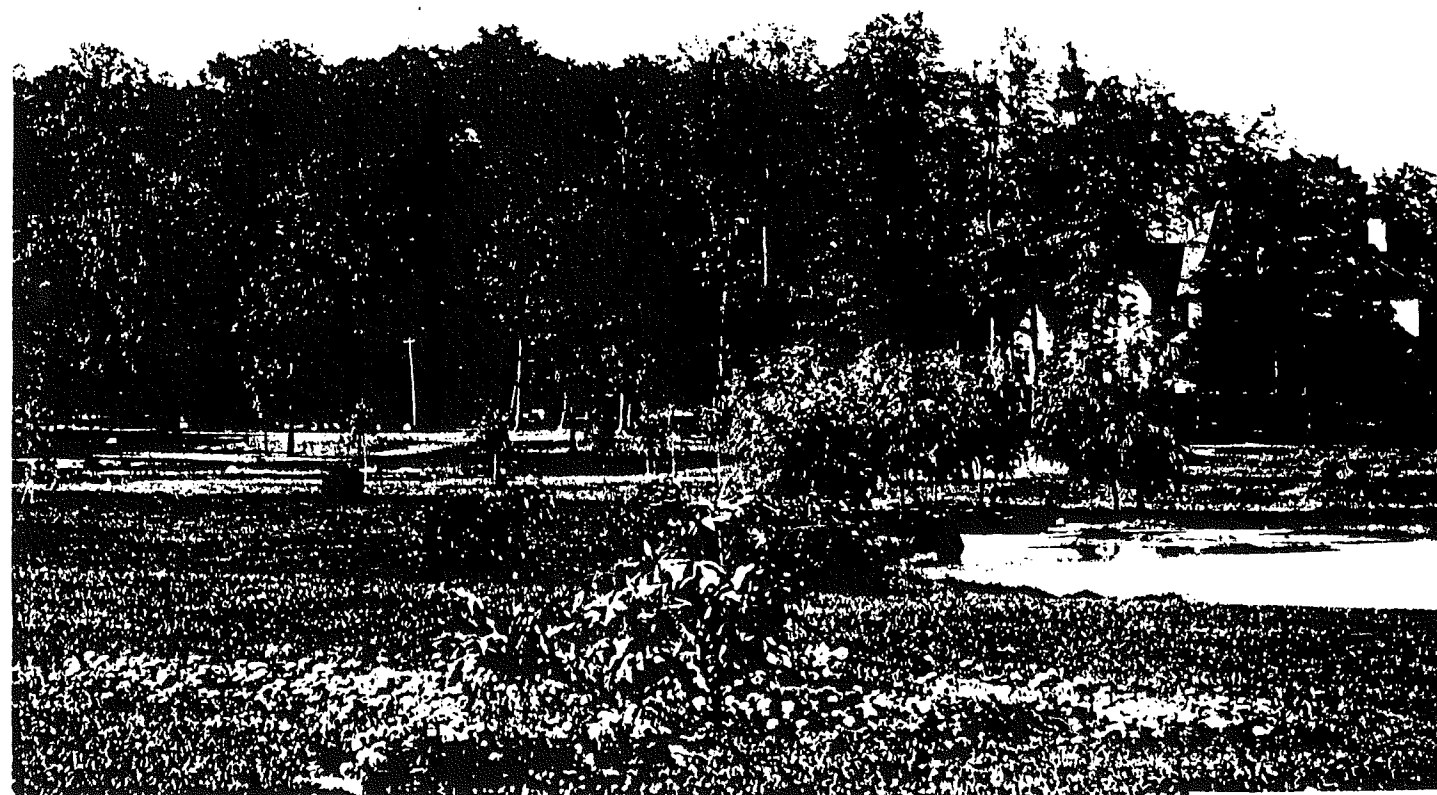


FIGURE No.43

1892 BOARD OF COMMISSIONERS REPORT

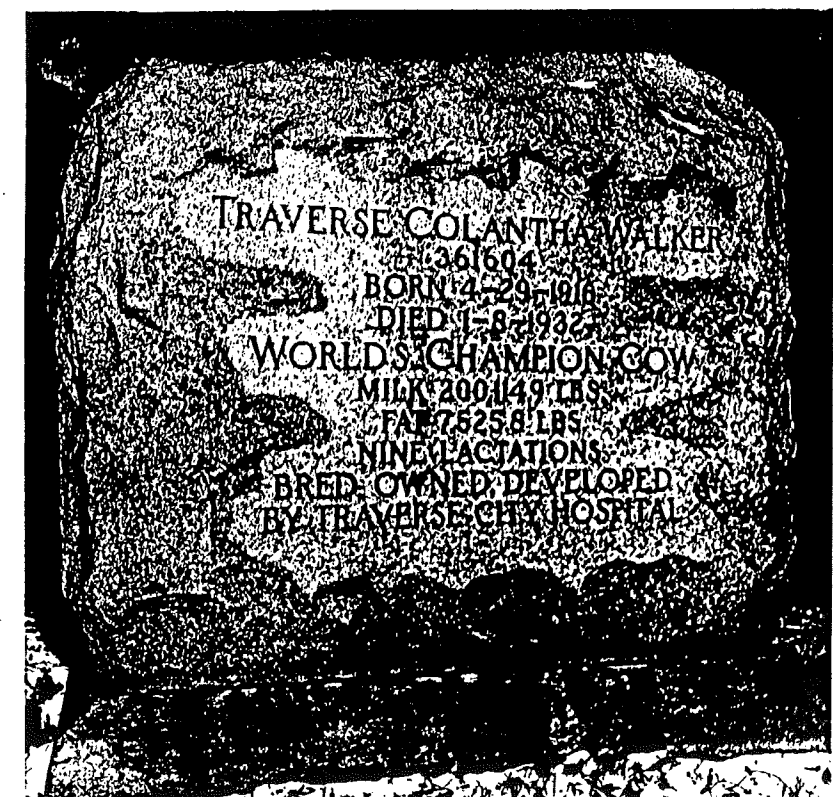
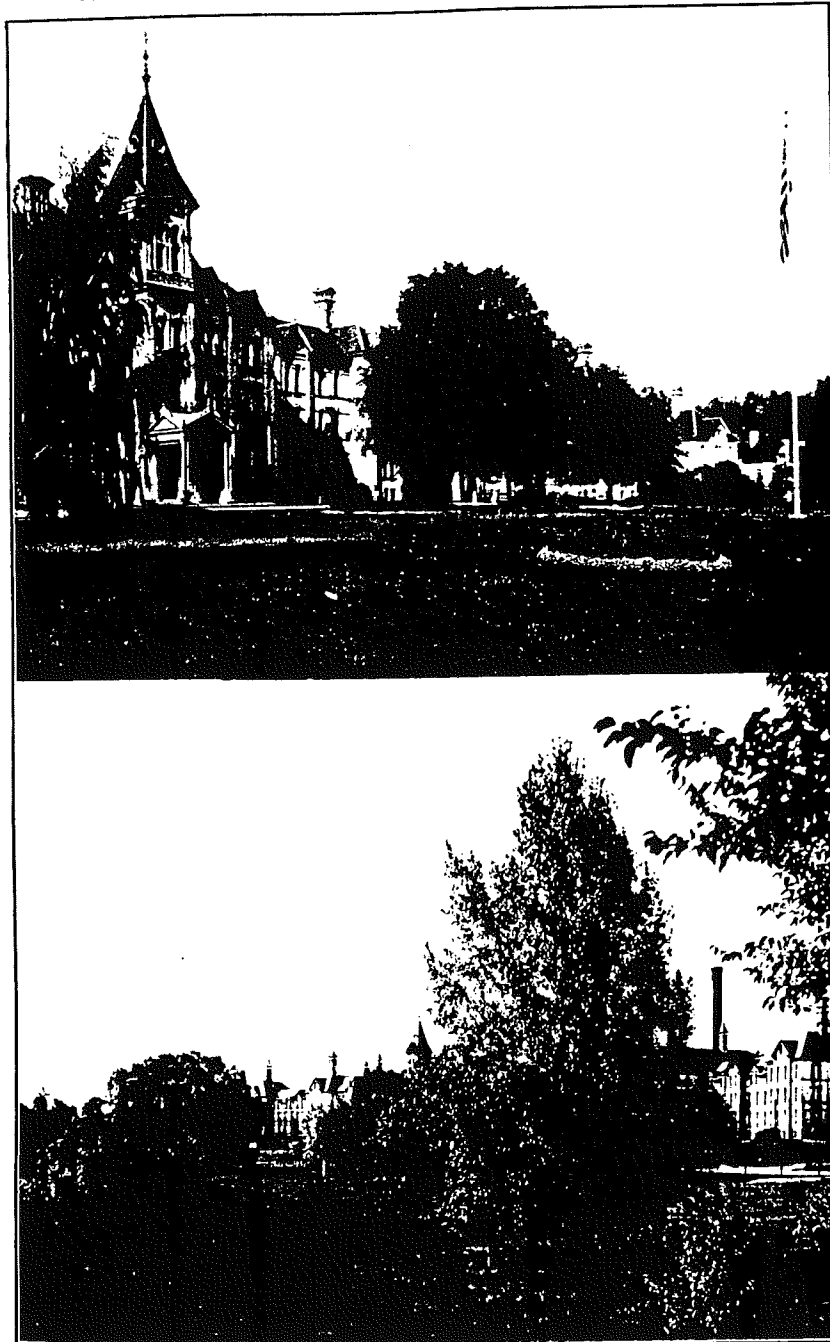


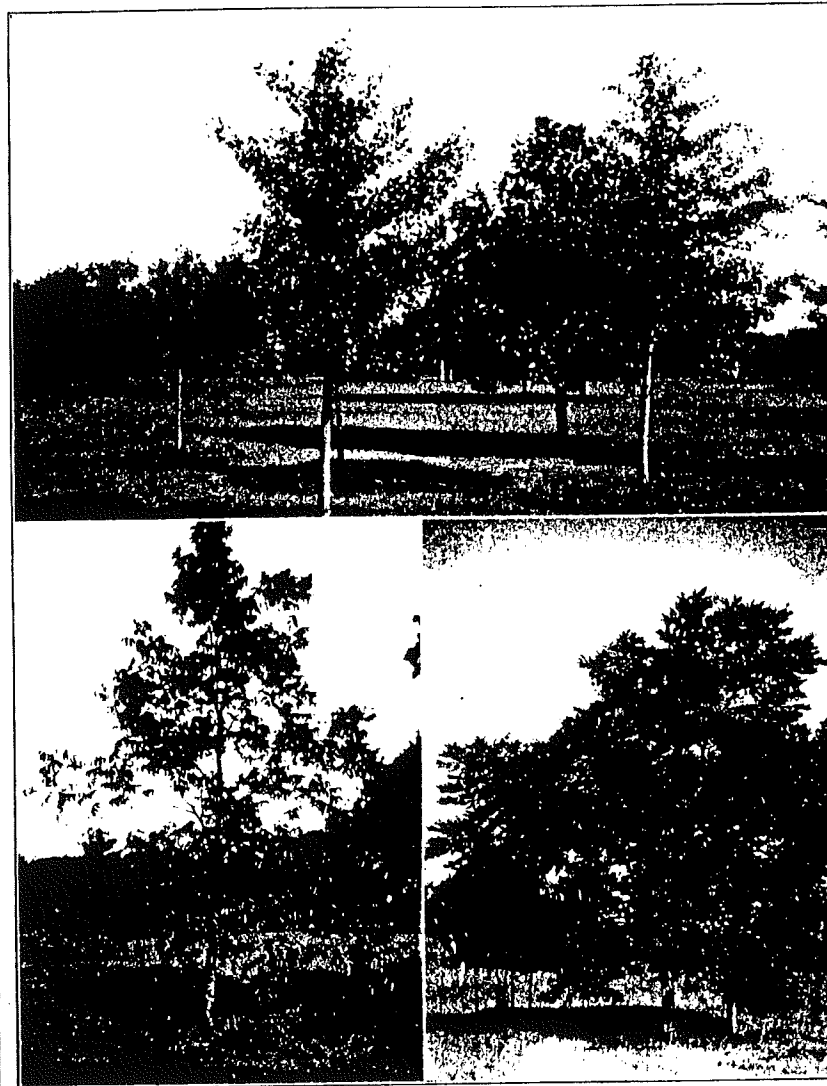
FIGURE No.45

TRAVERSE COLANTHA WALKER
BORN 4-29-1916
DIED 1-8-1932
WORLD'S CHAMPION COW
MILK 200,149 LBS.
FAT 7,525.8 LBS.
NINE LACTATIONS
BRED, OWNED, DEVELOPED
BY TRAVERSE CITY HOSPITAL



TRAVERSE CITY STATE HOSPITAL FIGURE No.46

1914



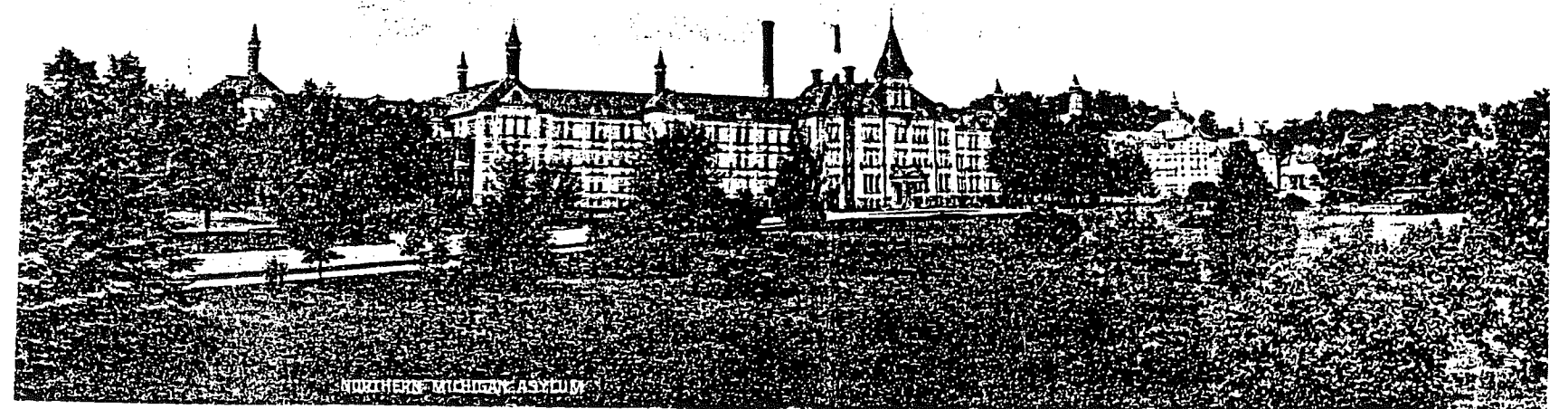
Young Pecan

TREES ON GROUNDS

Young Coffee

1912 BOARD OF COMMISSIONERS REPORT

FIGURE No.47



NORTHERN MICHIGAN ASYLUM

FIGURE No.48

"Northern Michigan Asylum", as it looked in 1906.

"THROUGH THE YEARS" CHMER-J. CURTISS

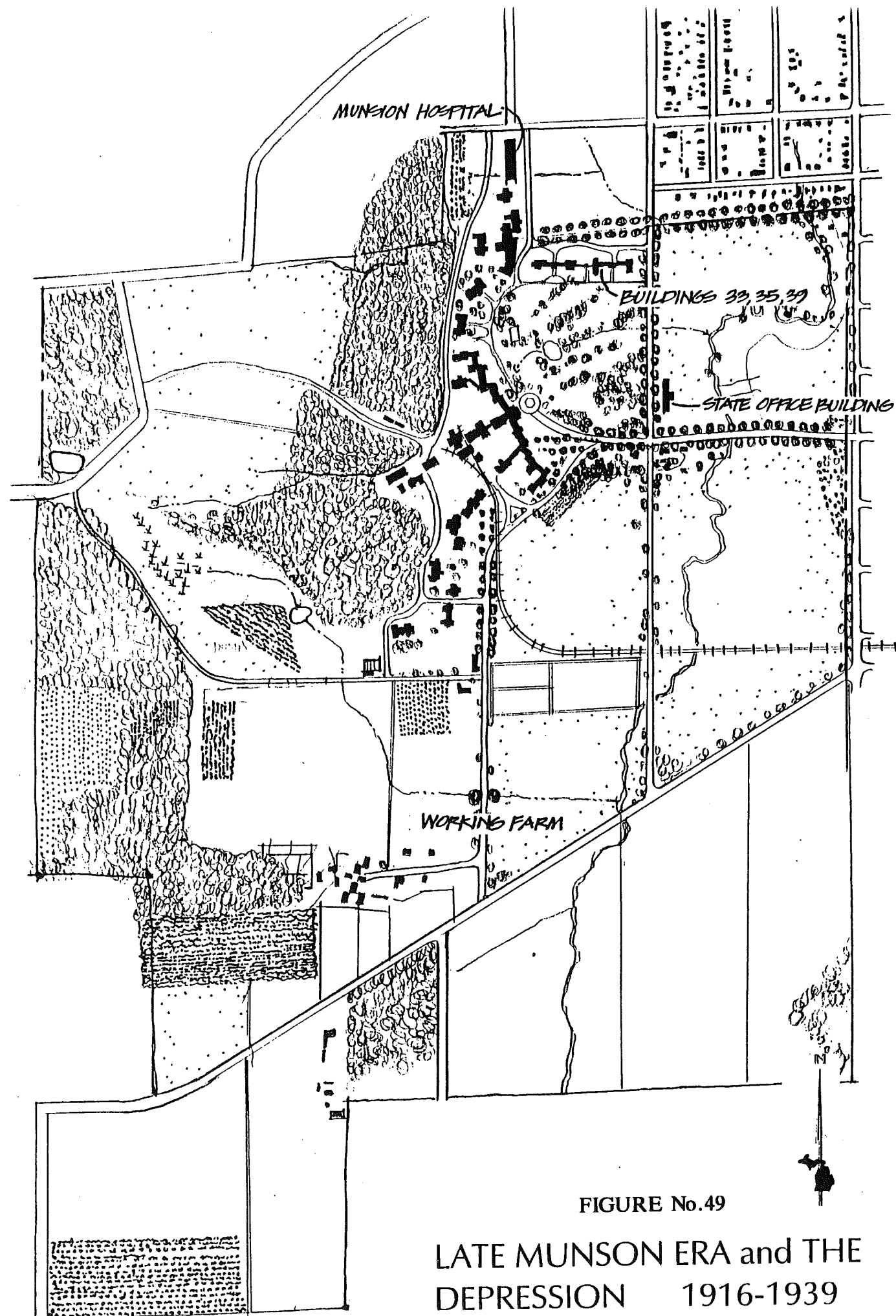


FIGURE No.49

LATE MUNSON ERA and THE DEPRESSION 1916-1939

dominated the landscape. Quoting from the 1888 Report of the Board of Trustees:

"Quite a number of ornamental shrubs have been planted, and shade trees have been set along the Asylum avenues. Settees have been made and placed about the grounds. The underbrush and debris from the parks have been in part removed, which not only adds to their beauty, but increases their value for the recreation of patients. An artificial lake has been made immediately in front of the building. It is enjoyed by all, and greatly embellishes the grounds. The pleasure grounds are fast becoming attractive, but the possibility for their improvement is very great."

d. Late Munson Era and the Depression - 1916 to 1939

The later part of Dr. Munson's tenure as director represented the continuance of farm operations and the maintenance of the hospital functions. The farms gardens, orchards, and fields prospered and the champion cow herd is renowned (Figure 49).

Dr. Munson retired in 1924, but not until he was instrumental in establishing the James Decker Munson Hospital for the community of Traverse City. The first building was constructed on the northern edge of the State Hospital property and leased until the hospital and the land it occupied was turned over to the community.

Medical buildings 33,35 and 39 were built in the original front lawn just south of Lovers Lane. These were the first Depression-era buildings built on site. Later, a dormitory for nurses (the present State Office Building) was built east of Elmwood Avenue in what used to be farm field.

The tree collection that Munson planted matured to adolescence in this era and the "arboretum" image we know today was materializing.

e. The Modern Era - 1939 to 1994

These years saw the decline of Traverse City State Hospital and the rise of other uses on the Grand Traverse Commons site. New approaches in psychiatric care including drug therapy and Family Care programs returned patients back into the community. The expense of a large antiquated and unsafe facility was no longer necessary. As the patient

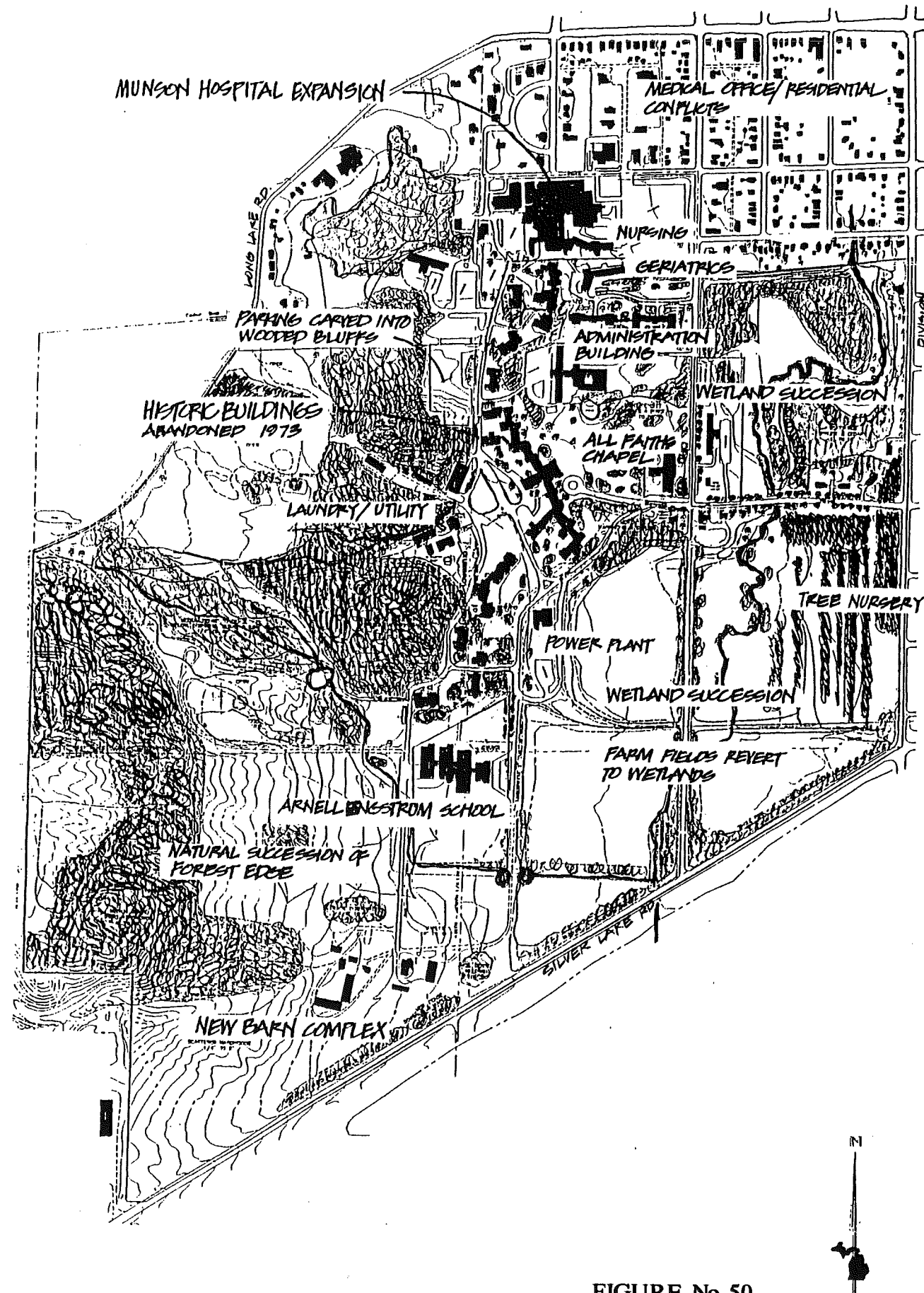


FIGURE No.50

THE MODERN ERA 1939-1994

population decreased, so did the need for food production and the working farm was slowly cut back. The farm system ended in 1957 and Building 50 and the adjacent cottages were abandoned in 1973.

During the State Hospital's waning years some outmoded structures were replaced (Figure 50). The original power plant was demolished and moved south on a site filling in the edge of old pasture and vineyard. New utility buildings were added, such as the laundry in the service core. The original barns were demolished and replaced with the present structures. The original administration core tower of Building 50 was demolished in 1963 and replaced with a two story building. The administration function was then housed in a building that was placed in the north central portion of the old front lawn. The original sloping grade in this area was flattened to provide for this site.

The Munson Medical Center complex expanded in the north to its present location. Its parking needs spilled into the Traverse City State Hospital grounds and new parking lots expanded into the unused State Hospital site, affecting portions of the old forested bluffs. The Grand Traverse Medical Care Facility, medical offices and a drug rehabilitation center were added into areas adjacent to Munson Medical Center. The All Faiths Chapel was added in the front lawn in the 1960s.

In 1968 the Arnell Engstrom Children's Center (now the Traverse Bay Area Intermediate School District facility) replaced the original special barns and orchard in the old farm area.

What was left of the original front lawn matured and the beauty of this 100 year landscape is realized. Concern about maintaining the affect of the front lawn and building grounds in 1968, prompted the planting of major tree nurseries in the abandoned fields adjoining Kids Creek. These trees were planted to replace those declining on the grounds and have naturalized what originally where open fields. With the abandonment of the farm function the natural systems have gradually taken over. Wetland plant varieties have taken over fields and natural succession is occurring along forested edges, fields and where orchards once stood. What was public institution, working farm, natural forest and the "pleasure lawn" is now treasured by the local community and used heavily as a natural recreation area close to home.

2. Building 50

The Traverse City State Hospital, known formerly as the Northern Asylum for the Insane, was founded in June of 1881 through the appointment of a Board of Commissioners to select a site for a new hospital. Perry Hannah of Traverse City, Honorable M. A. Butler of Mt. Clemens and Dr. E. H. Van Deausen of Kalamazoo constituted the board. Charles W. Wells was appointed Superintendent for the erection of the building, E. H. Van Deausen furnished the



FIGURE No.51

CLIPPING BUREAU

EAST LANSING, MICH.
TELEPHONE EDgewood 2-4610
257 Michigan Avenue

MICHIGAN
Traverse City Record-Eagle
(D)

JUN 24-68

FIGURE No.52



INSPECTS PLANTINGS—Looking over some recent plantings at Traverse City State Hospital, part of an intensive program of tree trimming and planting, are Willard Stone (left), hospital grounds maintenance superintendent, and Robert Mosher, business executive. Since the spring of 1967, more than 2,000 plantings have been made.
(State Hospital Photo)

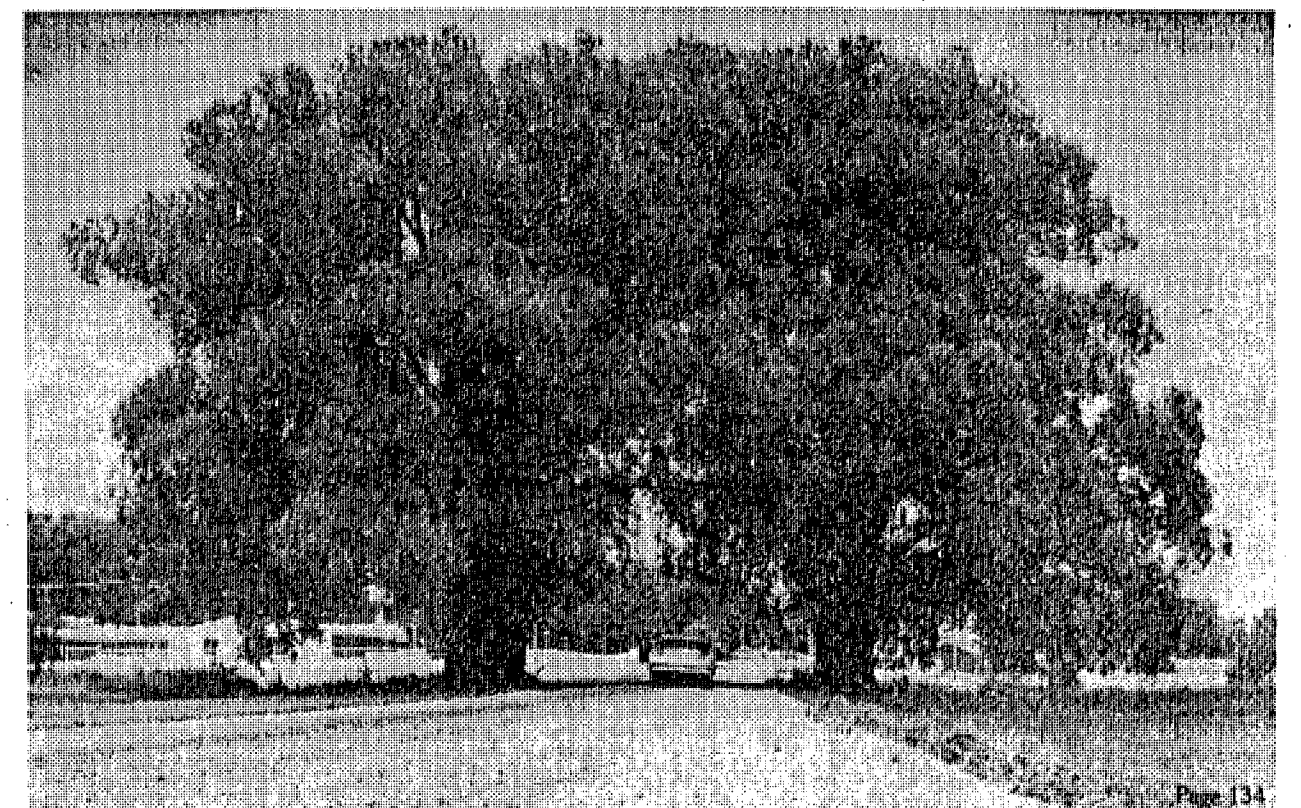


FIGURE No.53 **World Champion Black Willows Dominate Traverse Scene**

Two majestic black willow trees, one the largest in the world, flank a road at Traverse City State Hospital, dwarfing the automobile parked between them.

The one on the left is the world champion, with a girth

of 313 inches and a height of more than 100 feet. Michigan leads all states with record-sized tree species—53 champions at last count.

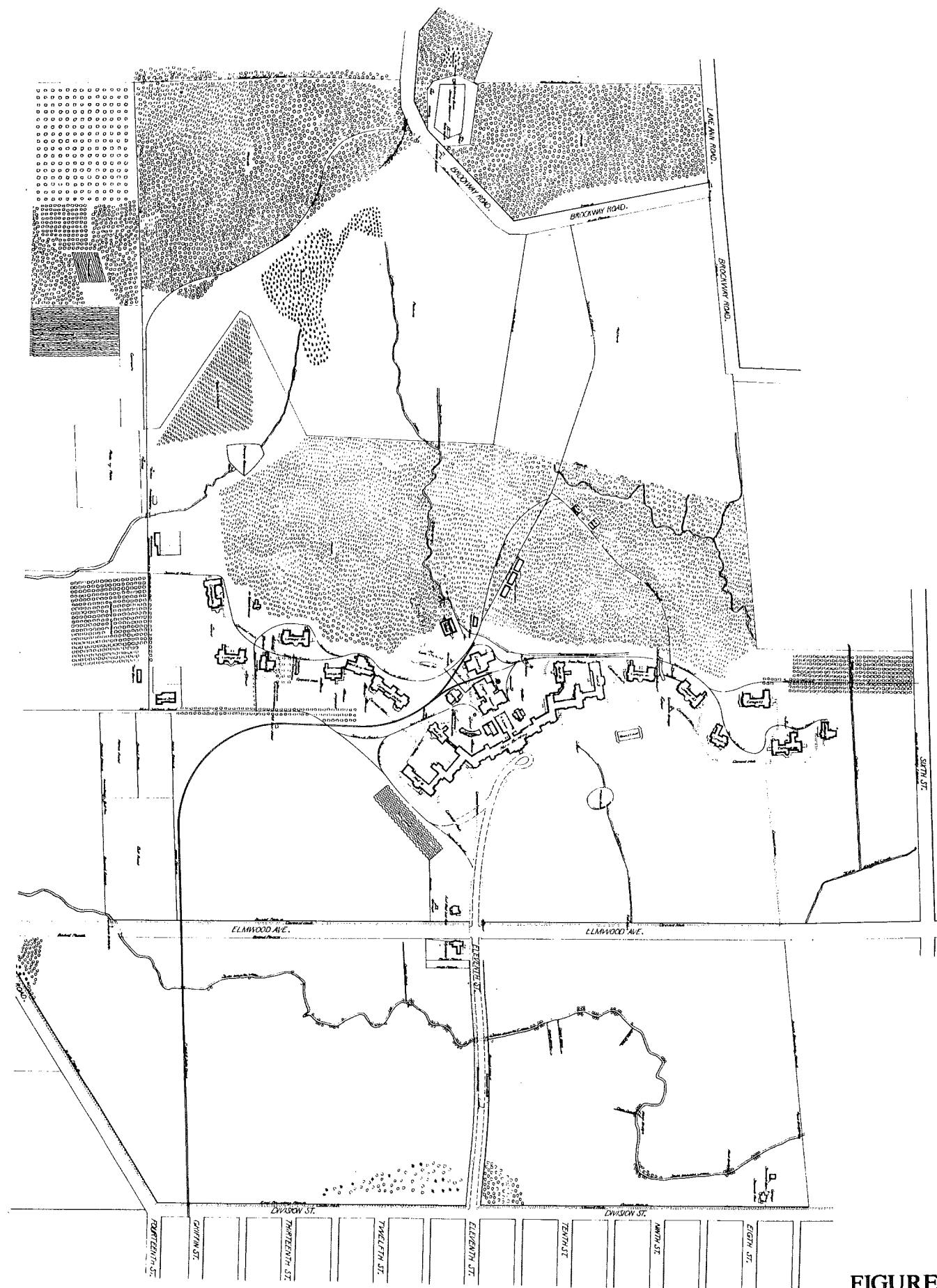


FIGURE No.54

ground plans for the site and Gordon W. Lloyd, an architect from Detroit, was selected for the design of the asylum, now Building 50. Dr. J. D. Munson was appointed as the first superintendent of the asylum on 3 September 1885.

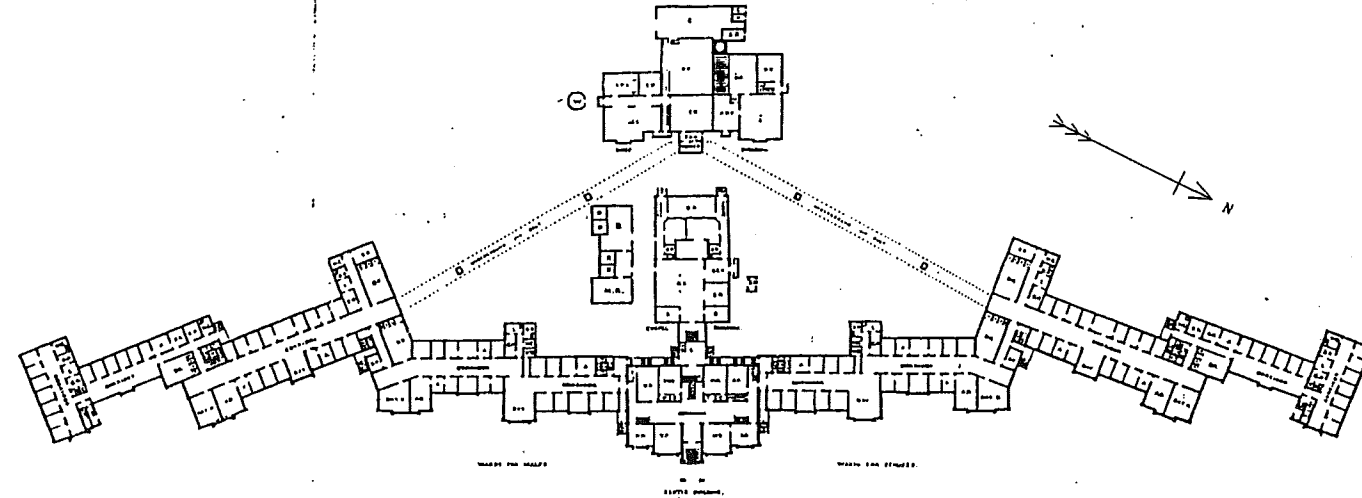
The hospital was designed by Gordon W. Lloyd along the guidelines of the Kirkbride Plan, which has been discussed earlier and is detailed in the Appendix. Gordon W. Lloyd was an architect of considerable standing in Detroit. He was called "one of Detroit's most prominent architects ... an authority on classical and gothic architecture" by the Detroit Free Press in December, 1904. His reputation as an ecclesiastical architect was reflected in the many churches he designed in Detroit, other cities in Michigan, and in the United States. His design for the home of Judge Samuel Townsend in 1859-1860 exhibits the strong influence of Andrew Jackson Downing. Lloyd's design for the Traverse City State Hospital was, to quote Kathryn Bishop Eckert, "A remarkable work by one of Michigan's most notable 19th Century architects." The planning follows the Kirkbride Plan almost line per line in most of its entirety. Significant in its planning are the following principles.

The hospital consists of a main central building and wings (see *Kirkbride Plan* XIV). It had a total of twenty distinct wards on both sides of the central administration block (see *Kirkbride Plan* VII). Each ward consisted of a double loaded corridor with day rooms, support facilities and windows at the end of each corridor, as well as in each room (see *Kirkbride Plan* VIII, X, XVI). The north and south end pavilions contained single loaded corridors for patients of the more excitable class, with windows for views (*Kirkbride Plan* XXV). The complex had a ventilation system for the supply and distribution of fresh air and forced heat. A detached building to house the boiler was located directly behind the central administration block (see *Kirkbride Plan* XX, XXI, XXII). The construction of the hospital was a brick and stone bearing wall, with a slate roof and metal ventilators. The first floor of rooms was located $\frac{1}{2}$ story above grade (see *Kirkbride Plan* VI, IX).

The siting also followed the tenets of the Kirkbride Plan. It was located in a rural area outside Traverse City, on a 340 acre site (Figure 54). The water reservoir system was sufficient and adequate pleasure grounds were provided by the lawn on the east side of the hospital (see *Kirkbride Plan* I, II, III, XXVI).

The building itself is a masterpiece in planning. Although large, it breaks the potential large expanses through a 45° shift on the wings at their mid point and employs a stepping back effect which works with the contours of the slope. The plan is a compact version of the H. H. Richardson plan for the State Hospital in Buffalo (see Appendix). The State Hospital in Buffalo was designed ten years earlier than Traverse City and employed a strong projecting central administration building with stepped back pavilions connected at their ground floor. Gordon Lloyd might have been familiar with this through his work with the Kirkbride Plan, the popularity of H. H. Richardson and his own work in Buffalo between 1872 and 1873 on the Church of the Ascension.

NORTHERN MICHIGAN ASYLUM, TRAVERSE CITY, MICHIGAN.



PLAN OF FIRST STORY.

SHOP BUILDING.	CHAPEL BUILDING.	WINGS	CENTER BUILDING.
W.—Wall House. L.—Laundry. D. R.—Drying Room. R. R.—Reception Room. A. D. H.—Amorizing and Delivery Room. D. W.—Dumb Waiter. C. S.—Carpenter Shop. S. P. R.—Smith and Pipe Shop. E. O.—Engineer's Office. K. H.—Kicker Room. E. R.—Engine Room. W. C.—Water Closet. C.—Coal Shed. H.—Hire House. N. H.—Nurse House.	S.—Barn. H.—Refectory. O. K.—General Kitchen. S. C. H.—Steam Cooking House. S. H.—Sick House. W. C.—Water Closet. D. R.—Dish Room. U.—Bakery. O.—Oven. H. H.—Hiring House. S. H.—Sail House.	A.—Attendant's Room. D. H.—Dining Room. C. H.—Chicken House. L.—Lavatory. H. H.—Bath House. W. C.—Water Closet. K. H.—Sick House. E.—Shed for Pipes. H.—Dish Room. DAY H.—Day Room.	A. D.—Associated Dormitory. D. S.—Drying Shaft. C.—Closet. C. S.—Chicken Shaft. Patients' House. I.—China Closet. S.—Dumb Waiter. A.—Sink. D.—Drying Shaft. R. R.—Reception Room. T. P.—Tramway Parlor. M. O.—Medical Office. S. O.—Superintendent's Office. P.—Pantry. D. R.—Dining Room. S. D. O.—Seward's Office. M. H.—Matron's Room. C.—Closet. D. W.—Dumb Waiter. S.—Shed for Pipes. W. C.—Water Closet. L.—Library. V.—Vault. T.—Telephone Office.

FIGURE No.55

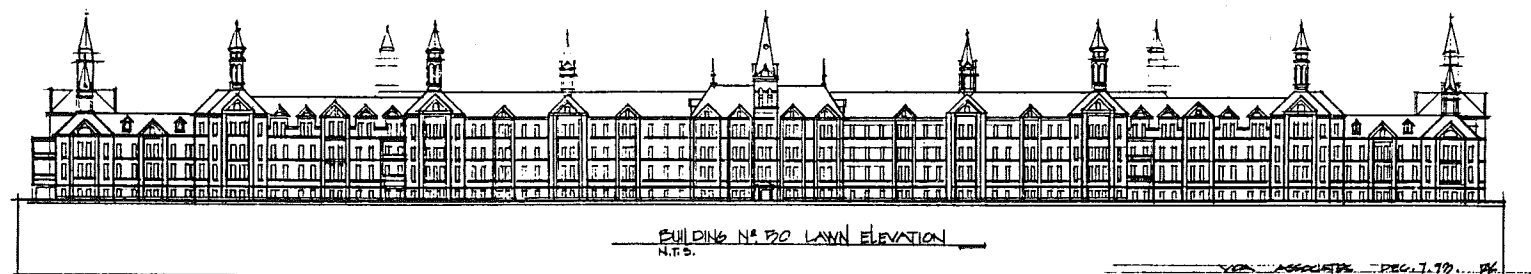


FIGURE No.56

The main facade of the building was a simple Italianate design with pedimented bays, projecting dormers, gable and hipped roofs, galvanized metal ventilation towers, segmental arch caps over each window with horizontal string courses at each floor level. The structure is generally three stories with a subgrade level used as a base. The pedimented bay reflects the day rooms and are used as points where the building shifts direction. The central administration block is expressed as a series of pedimented bays with a central tower and classically detailed porch. To quote Lloyd's description of the building from his 1884 report to the board of commissioners, (as quoted in *Buildings of Michigan*, Kathryn Bishop Eckert, author), "The building front is of Italian character, modified by considerations of expenses and climate, avoiding elaborate detail and depending on general grouping ... picturesque light and shade effects ... a general aspect of suitability to its purpose and avoidance of all purely decorative features."

Lloyd himself terms his building picturesque. If this building were to be evaluated in the broad terms Carroll Meeks used in his book *The Railroad Station* to describe the architecture of the Traverse City State Hospital buildings, many complimentary characteristics to the Picturesque Movement would be found.

Variety: The stepped building heights from the end wing to the center pavilion with the mechanical ventilators, central tower and dormers provide a dramatic silhouette. Variety is also seen in the surface treatment with one bay being different from the next.

Movement: The changing direction of the pavilions and the stepped building volume to the central administration tower create a dynamic interplay between the components of this building.

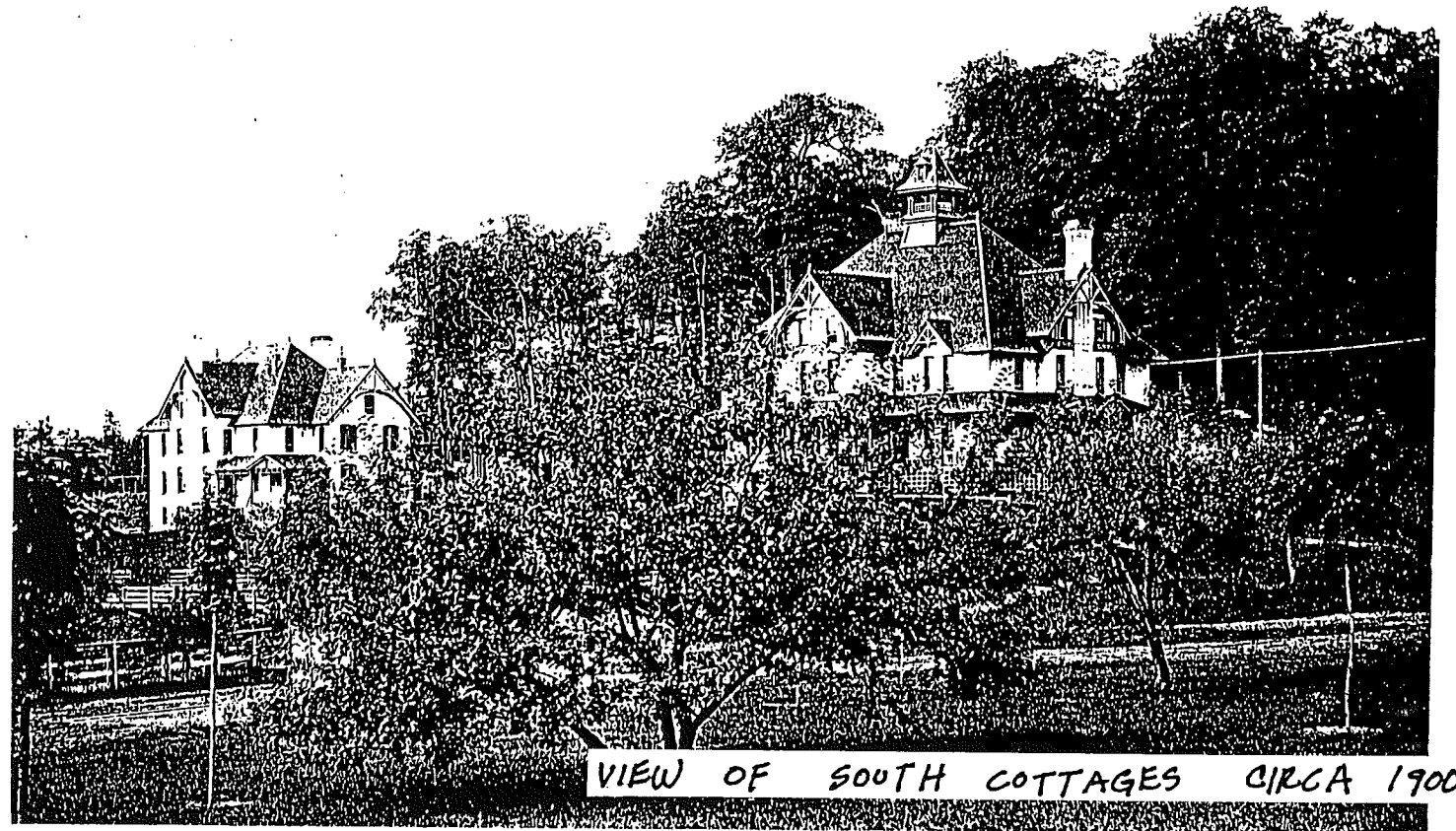
Irregularity: The form of this building is not simple, but rather a complex stepping that articulates each component ward and expresses the function of the day room.

Intricacy: The multiplicity of the parts and the time it takes to decipher them makes this building intricate.

Roughness: This quality is inherent in the building's simple detailing and rusticated base.

Besides those qualities of the actual building, the essence of the picturesque is the commanding view from and of the buildings. The view of the bay, front lawn, and the natural marshlands surrounding Kids Creek in the front of the lawn have given this ensemble the qualities of a Frederick Church painting.

FIGURE No.57



3. Cottages

The cottages were not designed by Gordon W. Lloyd. They were built by contractors who were following the patterns set by the main building, but were varied in style from Italianate, to Queen Anne and Victorian (Figure 57).

The fourteen cottages were constructed between 1892 and 1906. As in the main building, they are austere in detail with hipped and gabled roofs, pedimented and sometimes circular projections that are reflected in the roof lines and give these cottages the same quality of dramatic silhouette on Building 50. The Cottage for Women and Cottage 28 are strong examples of the Queen Anne style. These again would be considered picturesque in their broad character.

The cottages were planned from the inception of Building 50. This is confirmed in the *Board of Commissioners Report*, 1886.

4. Farm Area

The farm buildings are located on the south edge of the site and are different in character and function than the main building and cottages. Today there exists a series of small one story concrete brick buildings which were built between 1900 and 1932. The Barns (Buildings 204 and 206) give the site its agrarian character through the beauty of their simple construction.

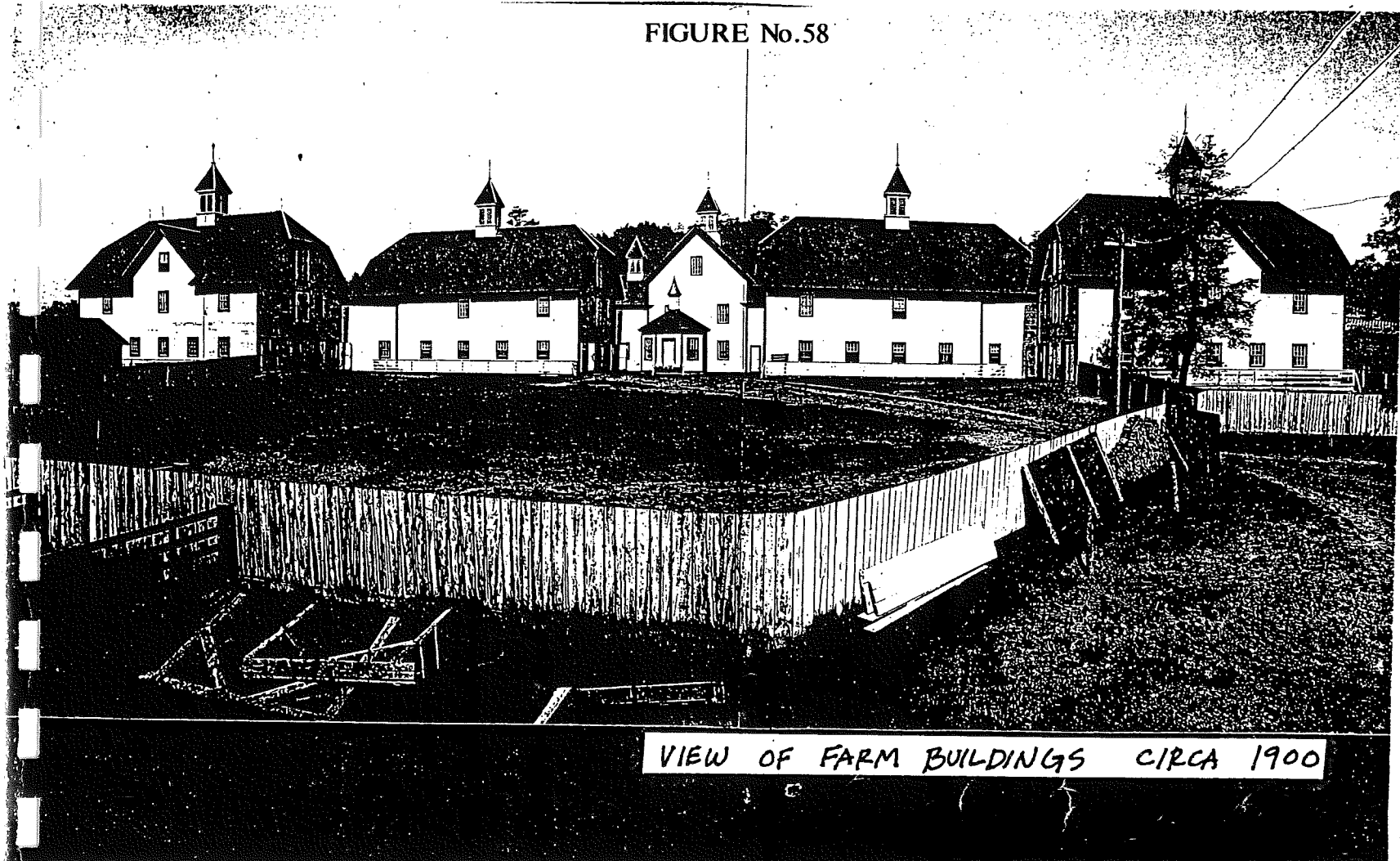
The farm program was a major part of the hospital. It was important for the financial success of the operation that the farm be self-sufficient. It was also used as part of the therapeutic process, with patients working in the fields and participating in all aspects of the farm operations.

The original farm buildings were a completely functional grouping that reflected contemporary layouts for large scale farming. The buildings were built of wood, and had pedimented and hipped roofs with raised ventilators above the roof line (Figure 58). The designs are reminiscent of simple midwestern farms and the architecture of the Shakers, who built very simple, elegant well-proportioned vernacular buildings.

5. Support Buildings

The support buildings located on the site today were mostly built between 1900 and 1960, with the majority constructed between 1934 and 1960. Many of the buildings are located directly behind Building 50. The support buildings include the shops for maintenance and carpentry, general services (Building 61), the laundry building, and the root cellars (Buildings 63 and 62). The root cellars are probably the most representative of the time period between 1890 and 1916. The power plant located south of Building 50 along Silver Drive was built in 1950 and commands a strong dominating presence over the site when seen from the south. Other support buildings have been destroyed. The most interesting of these were the green houses, which were located in the area of the south cottages

FIGURE No.58



and were used to support the agricultural activity.

6. Summation

The development of the Grand Traverse Commons was a result of multiple design efforts that were implemented over time at the hand of both professionals and dilettantes. Up through 1927, which represented Dr. Munson's tenure as Superintendent of the State Hospital, the principles of the building and site development were consistent. They responded to the principles of the Kirkbride Plan, the picturesque movement, agrarian development, and Dr. Munson's advocacy of the arboretum development of the front lawn. The result is a hybrid of concepts which still support the natural and agrarian landscape as both a visual and symbolic environment, which aids in the renewal of the people who inhabit it. In this regard, the influences of Kirkbride and Downing were brought to realization through the labors of Dr. Munson and Gordon W. Lloyd. In a larger sense the crosscurrents of 19th Century art, science and social philosophy are represented in the Grand Traverse Commons.

C. Guidelines for Rehabilitation for the Grand Traverse Commons

The historic development of the Grand Traverse Commons site was based on the principle of the healing power of reconnecting individuals with the natural environment and activities which are related to the natural environment. Redevelopment of the site must be based on similar principles. However, one would place "enriching" in the place of "healing": enrichment for the planned retirement community, enrichment for the medical campus users and, most important, enrichment for the community at large. The principles for the redevelopment of the Grand Traverse Commons are articulated in the Treatment of the Land, which includes all guidelines that pertain to the landscape and site development issues. Treatment of Circulation pertains to the relationship between roadways, pedestrian paths, trails and the larger site development. Treatment of Historic Structures reviews the National Park Service guidelines for evaluating this site. Treatment of New Buildings addresses the development of planning, formal language and material guidelines for new buildings to be built with a character that is sympathetic with the historic buildings on this site.

The intent of the Guidelines for Rehabilitation for the Grand Traverse Commons is to establish parameters which ensure that the goals of the Adaptive Reuse Plan, DP-93-1 and this District Plan are addressed as development proceeds. Whereas the Subarea Development Plans contemplated by this District Plan will address the specifics, these guidelines identify the amenities, strengths and opportunities, and limitations of the Grand Traverse Commons Planned Redevelopment District. In evaluating the appropriateness of Subarea Development Plans and Site Plans, the Planning Commissions and applicable staff of the City of Traverse City and Garfield Township shall look to these guidelines for guidance.

→ Amendment insert

Drawings included with these guidelines are for illustration purposes only and are not intended to represent actual improvements.

1. Treatment of the Land

a. General Goals

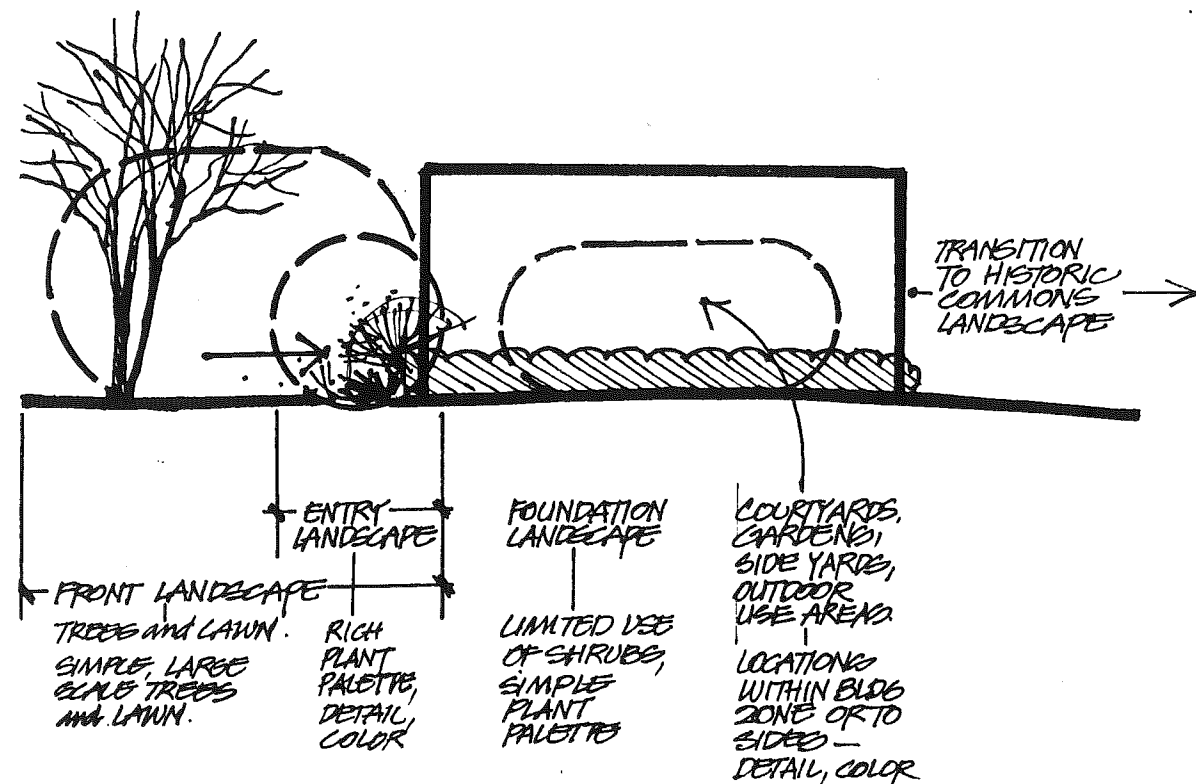
- (1) Rehabilitation of the landscape shall be consistent with the spirit and intent of the original landscape.
- (2) New development shall respect and preserve existing elements of the original development, and continue historic patterns and connections, particularly as they relate to views and building/site relationships.
- (3) Redevelopment shall address inappropriate site modifications which either interrupt the natural patterns and systems on the site or are not consistent with the principles of the original plan.

b. Design Guidelines - Landscape

- (1) Preserve and protect existing original historic elements of the landscape.
- (2) Reinststate grandness of scale and nobility of landscape expression by expanding and defining important visual corridors and clarifying the connections between open spaces.
- (3) Induce movement through the landscape by the ordering of connecting open spaces.
- (4) Enrich the visual quality of the site through the ordered disposition of architectural and landscape elements on the site.
- (5) Achieve a dynamic landscape character by the interplay of important distant views and view corridors on the property with the layout of actual circulation on the site.
- (6) Develop outdoor spaces between buildings and the large open space of the front lawn which are transitional in scale and character between the architecture and the central organizing space.

c. Design Guidelines - Topography

- (1) Site buildings shall fit the grade to minimize excavation. Where excavation is necessary, cut and fill quantities shall balance.
- (2) Cuts into the natural grade are permissible for unsightly secondary structures such as parking decks, where the combination of insertion into the slope and landscape treatments



BUILDING LANDSCAPE ZONE

FIGURE No. 59

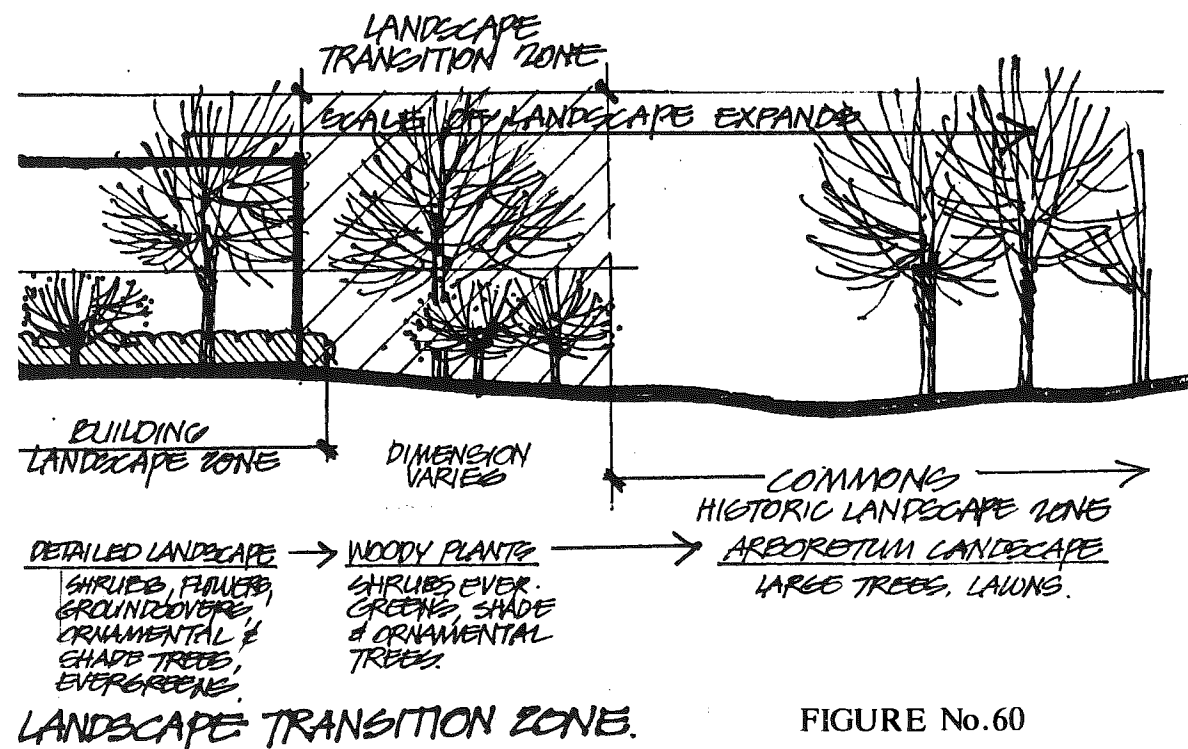
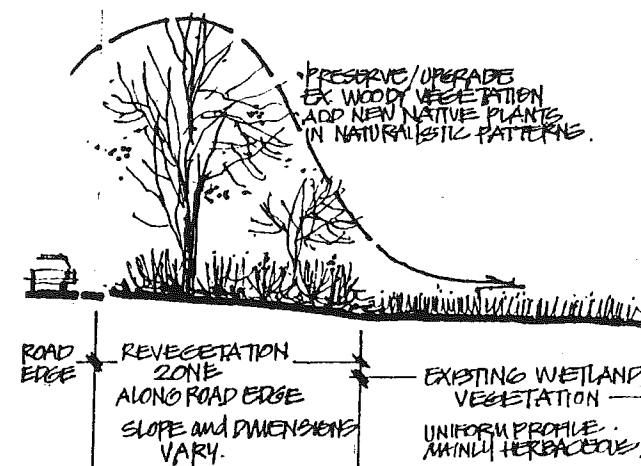


FIGURE No. 60



REVEGETATION: WETLAND PERIMETER.

FIGURE No. 62



VIEW ENHANCEMENT.

FIGURE No. 63

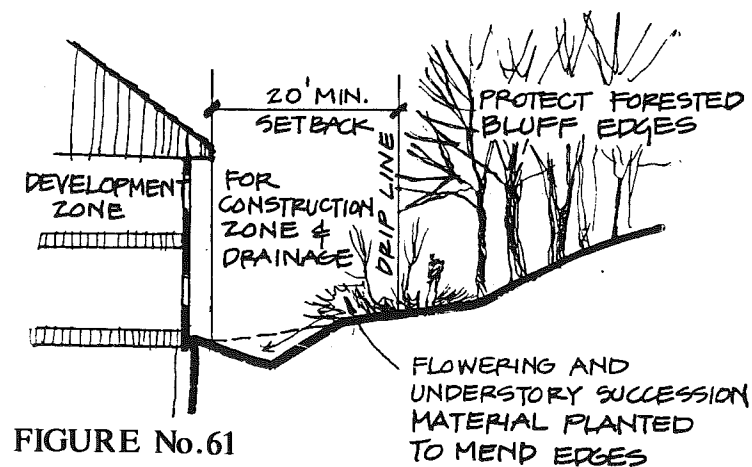
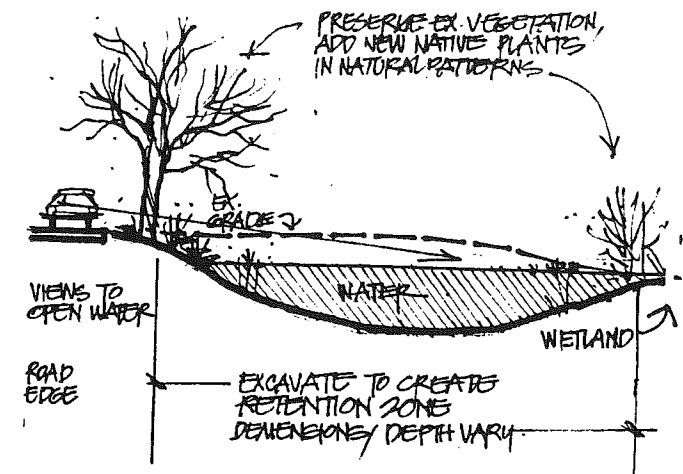
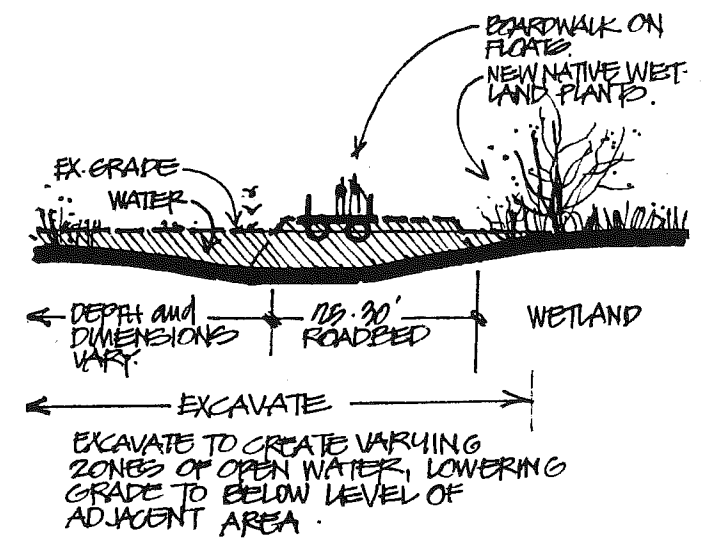


FIGURE No. 61

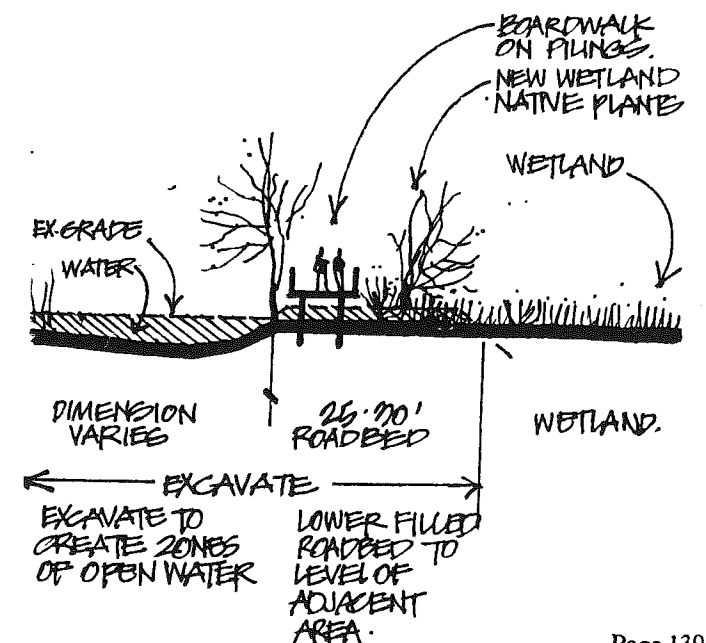


RETENTION ZONES

FIGURE No. 64



EXCAVATION ALT. A. FIGURE No. 65



EXCAVATION ALT. B.

FIGURE No. 66

can visually buffer the building.

- (3) Restoration of areas to original grade (for example, the site of buildings 37 & 37A) shall be accomplished through distribution of materials excavated for new construction, or materials removed from earlier fill locations (for example, the present site of the power plant, to the south of Building 50).
- (4) It is desirable, where practical, to remove linear fill zones which cross the wetland and impede the natural patterns of surface drainage on the site. Expansion of openings through the fill zones may be an option, if fill cannot be completely removed.

d. Design Guidelines - Vegetation

- (1) Existing elements of the historic designed landscape shall be the basis of all further planting on the site, and shall be the guide for selection, scale of layout, and design character of all new planted landscape.
- (2) The historic significance of the Grand Traverse Commons Planned Redevelopment District property and landscape requires that all plantings within the Commons, including plantings along publicly dedicated rights-of-way or on publicly owned land, must conform to the National Park Service's view of the landscape. Consequently, the conservation and preservation of significant plantings along publicly dedicated rights-of-way or on publicly owned land shall take precedence over all normal tree and/or street maintenance requirements.
- (3) Preservation and replication of original landscape plantings shall be the goal in the Commons area, including the cottages, where photographic information of the historic landscape is available.
- (4) The grand allée of sugar maples which lines the main entrance drive along Eleventh Street shall be the model for treatment of the main drives within the CCRC and Residential/Activity Subareas and the Medical Campus Subarea on the north end of the site, but shall not be applied to service roads or the site entrance drives from the west and south.
- (5) The planted landscape in the Recreation/Activity Subarea shall be accomplished through the use of orchards, hedgerows, windbreaks and farm lane plantings to express the scale and simplicity of an agricultural setting.
- (6) Native species, selected for suitability for the specific natural situation, shall be used for all new and restoration planting in the

The reestablishment of orchards will prove costly and one could question the value of such a program. Who will spray, prune and otherwise maintain the orchards and what happens to the fruit?

Woodland and Wetland Subareas on the property.

- (7) Management programs shall include strategies and practices to eradicate exotic species and return the natural flora to the wetland and forested areas of the site.
- (8) Use native species in natural combinations to accomplish visual screening, where necessary, along the interface between the wetland and the developed landscape.
- (9) Protect natural vegetation zones along drainage corridors on the site.

e. Design Guidelines - Site Development

- (1) Specific elements of the landscape such as lighting, furniture, garden structures, fences, fountains and bridges shall be sympathetic in design and materials to the period and style of the historic architecture.
- (2) Historic elements shall be rehabilitated according to the Secretary of Interiors Standards for the Treatment of Historic Properties.
- (3) The design of new site structures and development introduced in the adaptive reuse of historic buildings shall be consistent with the original character of site development.

f. Design Details

(1) Building Landscape Zone

The landscape treatments of the building within this zone include the most detailed application of plantings and other elements of site design (Figure 59). The cottages are very large buildings, by residential standards, so the actual treatment of the front landscapes, building entrances, foundation plantings, courtyards, gardens and other outdoor use areas are larger and somewhat simpler than would be the case in a conventional residential landscape. The building landscapes are the one zone within the overall Grand Traverse Commons Planned Redevelopment District where the full range of landscape plants, from flowers and groundcovers, to shrubs, ornamental trees, evergreens and shade trees are appropriately used. The building landscape zone is further broken down into specific design areas with prescribed types of landscape materials.

(2) Landscape Transition Zone

A zone of variable dimension, depending upon the design and orientation of the buildings, will allow for the graceful transition in scale and landscape treatment from the detail of the individual building landscapes to the general park-like character of the Commons historic landscape (Figure 60). The type and scale of plantings is intermediate between the two landscape zones.

(3) Wetland and Woodland Treatment

(a) Development Zone Edge Treatment at Wood Bluffs

A minimum 20' setback from building or parking face to drip line of undisturbed forest edge is required (Figure 61).

(b) Perimeter Revegetation

Wetland edges will be managed/replanted to reinstate native woody species as significant components of the wetland flora, in zones and patterns consistent with their occurrence in nature (Figure 62).

(c) View Enhancement

Existing stands of mature trees may be thinned in some instances to enhance views from central locations within the historic zone (Figure 63).

(d) Retention Zones

Excavate in specific locations at edges of the wetland to create areas for stormwater retention, and provide enhanced wildlife habitat and opportunities for views to open water (Figure 64). Install wetland trees and shrubs especially along upland edges of retention area.

(e) Excavation of Fill Zones

Excavate out segments of the Elmwood Avenue roadbed across the wetland to at least partially reinstate natural patterns of surface flow (Figures 65-66). Pedestrian systems may follow the road alignment as surface paths in sections where the roadbed remains, or as boardwalks on either pilings or floats over the old alignment. Additional excavation to create open water zones adjacent to the boardwalks will enhance both the aesthetics and the wildlife value by increasing the physical diversity of the area.

(4) Site Lighting

insert amendment

Lighting throughout the Grand Traverse Commons Planned Redevelopment District shall be designed to allow for safe pedestrian and vehicular circulation with an emphasis on pedestrian scale fixtures to maintain the historic character of the site. Light fixture and pole styles shall be compatible with the historic character of the original buildings. Light source type shall be high pressure sodium and shall be consistent throughout the site. Light source should be shielded, diffused or indirect to avoid glare or unnecessary light spillage. District Plan Amendment #1, February 10, 1996.

(a) Historic Zone (Subareas 2,3,4)

Light fixtures and poles will be Victorian in style and pedestrian scale with light levels along walks, parking areas and entrances in the $\frac{1}{2}$ to $1\frac{1}{2}$ fc range (Figure 67). Low bollards and garden lights will be used in specialized areas.

(b) Medical Campus Zone (Subarea 1)

Pedestrian light units will be similar to historic zone units (Figure 68). Parking ramp and entrance drive lighting may be taller, directed light type units of contemporary design and compatible materials and finishes relating to a particular structure. Light levels in use areas will be in the 1 to 2 fc range.

(c) Recreation/TBA Zone (Subareas 5,6)

Lighting will be minimal with simple unobtrusive fixture design compatible with the character of the farm buildings in an agrarian setting (Figure 69).

(5) Site Furnishings

Benches, waste receptacles, fences, trellises, kiosks and other site furnishings in the developed portions of the Grand Traverse Commons Planned Redevelopment District shall reflect the exact historic character of the site (see Figure 70 as our example) if historical information exists to verify its accuracy. Otherwise site furnishings will be modern and quiet in character so as not to distract from the historic character of the site.

(6) Site Graphics

FIGURE No.67

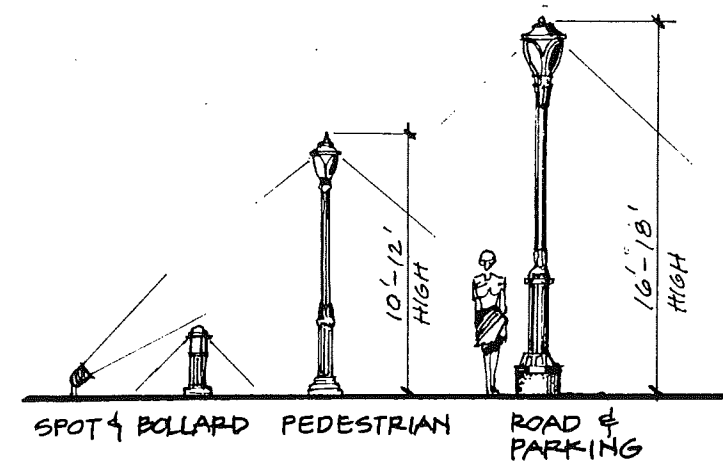


FIGURE No.68

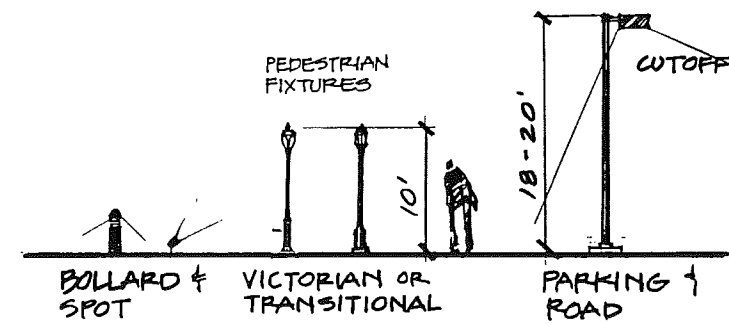
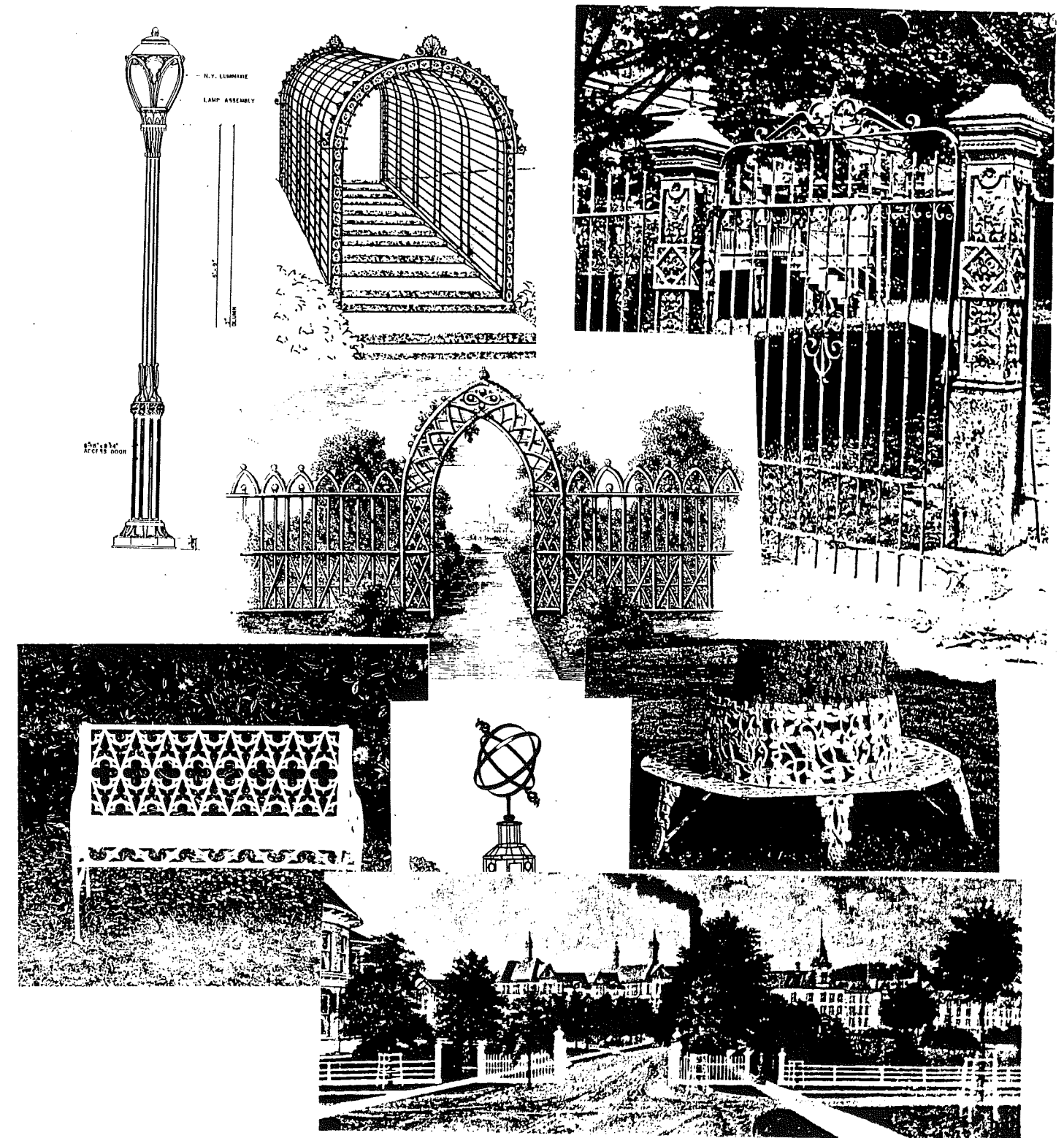


FIGURE No.69

'UTILITY' LIGHT
ON WOOD POLE



FIGURE No.70



A comprehensive site graphics system will be implemented to accomplish the following:

- (a) provide clear directional signage for roadways, parking lots, buildings and pathways; and
- (b) provide informational signage for site history, natural systems education and site activity information.

The Grand Traverse Commons Planned Redevelopment District will include traffic directional signage, project signage, identification signage, and interpretive signage. Traffic signage is an important element of convenience, guiding users through the site. A unified system applied to all posts and signs throughout the site will help provide a cohesive identity to the Commons Planned Redevelopment District. Simplicity of design will minimize the visual clutter of these elements.

Project signage that identifies specific users, buildings, parking locations or other destinations also needs to be part of a unified system. Form, scale, graphic design and selection of material and color should blend with rehabilitated architecture. It should be easy to read, with contrast between copy and background and easy to understand.

Identification signage for specific user groups should be part of the project signage system so that there are no signs that visually clash with the overall project character. Interpretive signage is another potential information system within the site.

Interpretive signage within the central Commons area, relating to the historic buildings or arboretum should blend with the rehabilitated architecture and project signage in terms of form, scale, graphic design and selection of material and color. In the Conservation Subareas it is important that the interpretive signage blend with the natural setting within which it will be located. A color or size that is appropriate in the Medical Campus Subarea may not be appropriate in the Conservation Subareas. All signage will be part of a unified signage program which will be reviewed by the Development Plan Committee of the Grand Traverse Commons Redevelopment Corporation.

2. Treatment of Circulation

a. Design Guidelines - Circulation

- (1) The main entrances and site drives shall be developed to fit their specific settings: i.e., the east entrance drive (Eleventh Street) to the site lined by sugar maples, and with walks along the drive edge; the west entrance drive through the forested upland, then down to the Medical Campus Subarea at the north end of the

property; and the entrance from Silver Lake Road to the Recreational/Activity Center Subarea in the farm area.

- (2) The cross section of the primary drives on the site shall include lighting, street trees and walks. Bikeways may be included, either with the traffic way or walks, depending upon the specifics of the situation.
- (3) Traffic circles, changes in roadway design, and specific control mechanisms may be employed as traffic controls in the design of the overall system to effect separation of different users of the site and discourage fast and through movement of general traffic.
- (4) Service drives and access routes shall be conveniently laid out, but screened, and not furnished with street trees, walks or lighting.
- (5) All service points shall be screened from the general traffic ways, outdoor use areas, and residences.
- (6) Resident parking facilities shall be designated and located for reasonable convenience to dwellings, but without negative impact upon residential outdoor living space.
- (7) Major pedestrian ways are the primary organizing element of the historic commons space.
- (8) The major pedestrian routes may be laid out for dual use as emergency and maintenance access corridors.
- (9) Bikeways may be integrated with segments of both the vehicular and pedestrian systems, depending upon the specific situations in different areas of the site; maintain level to gentle gradients.
- (10) Formal walkways and pavements will be restricted to the architectural settings, and may be the primary structuring of courts and other outdoor use areas.
- (11) All pedestrian pavements serving the core areas on the site shall be designed in full compliance with the Americans with Disabilities Act standards.
- (12) Paths, walks and trails in the natural areas of the site will be subject in their layout and design to the actual conditions in the specific locations; wetlands, woods and steep slopes will all impose particular constraints upon alignment and construction, and the hierarchy of pedestrian ways will be developed to take maximum advantage of existing conditions that will serve the

purpose of unimpeded access by all to the richest variety of natural environments on the property.

b. Design Details - Vehicular Circulation

Vehicular circulation is controlled on the Grand Traverse Commons Planned Redevelopment District to maximize pedestrian access with minimal conflict. This is accomplished by separating traffic flow into specific user entries and controlling through traffic flow and service access.

(1) Historic Zone (Subareas 2, 3, 4)

The main vehicular entry drives in the Historic Zone shall express the rural tree lined image presently experienced (Figure 71). These existing drives will be maintained and, in new roads, trees will be planted of the same species at 50 feet on center. Roadways are two way and normally two lanes.

(2) Medical Campus Zone (Subarea 1)

To provide continuity with the Historic Zone, tree lined drives will continue through the Medical Campus (Figure 72). The road cross section and treatment is the same even though the spaces are more urban in character.

(3) Access Through Natural Areas

Roads serving the Medical Campus and the Recreation/TBA Zone while traversing natural systems shall express the character of the adjacent open space (Figure 73).

(4) Views from the Vehicular System

When visual linkages are required along the road system, planting shall enhance the views, not obstruct them (Figure 74). This is true in both the development areas and in natural areas.

(5) Traffic Control Loops

Traffic control loops are proposed in order to control traffic through the site, slow down traffic and provide decision making points along the vehicular system (Figure 75). Their treatment in the landscape depends upon where they are located. Plantings shall enclose them, provide direction and a canopy, as though entering an outdoor room.

(6) Service Roads

Across the site service roads have a variety of uses (Figure 76). They may provide general daily access or occasional emergency circulation.

- Vehicular service pavement shall consist of bituminous or concrete with curbs.
- Main pedestrian paths shall include stabilized grass shoulders to accommodate occasional service traffic.
- Emergency access shall be provided on grass pavers.

c. Design Details - Pedestrian Circulation

A hierarchy of pedestrian routes from major walks, to secondary walks, to paths will be developed to serve the Grand Traverse Commons Planned Redevelopment District. Walk size, materials, layout, and related furnishings shall vary depending on volume, nature of use, and the area

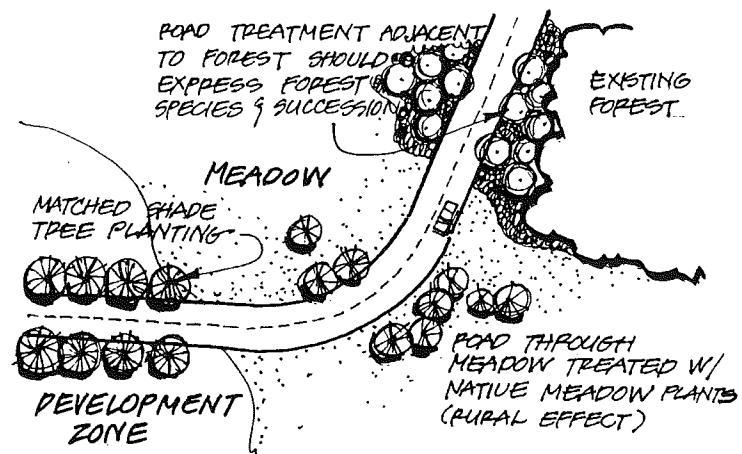


FIGURE No.73

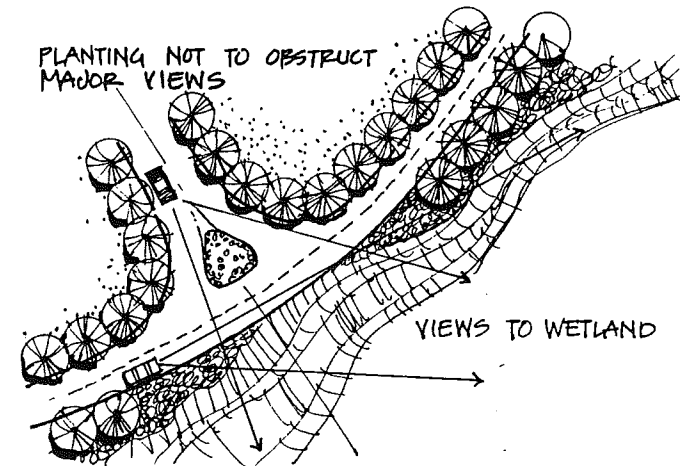


FIGURE No.74

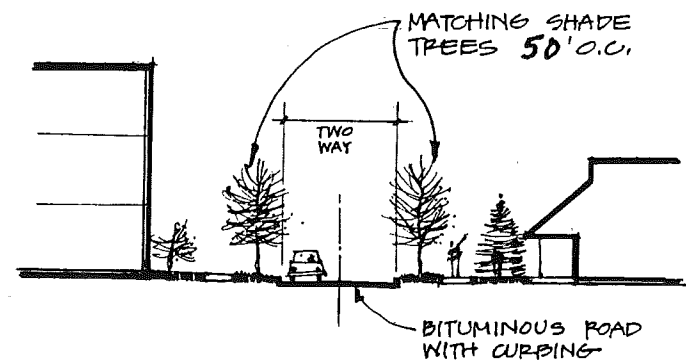


FIGURE No.72

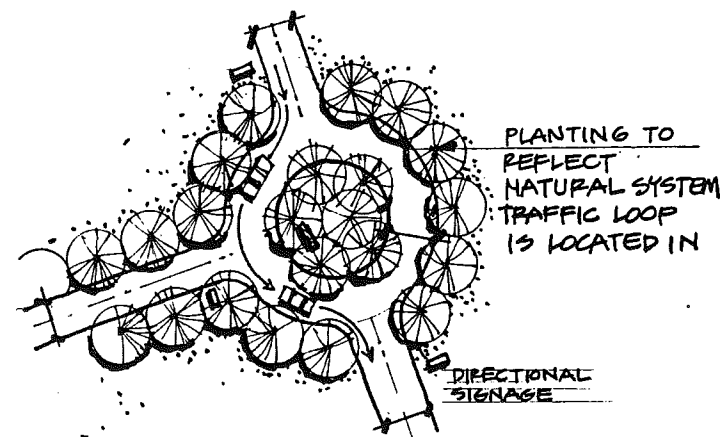


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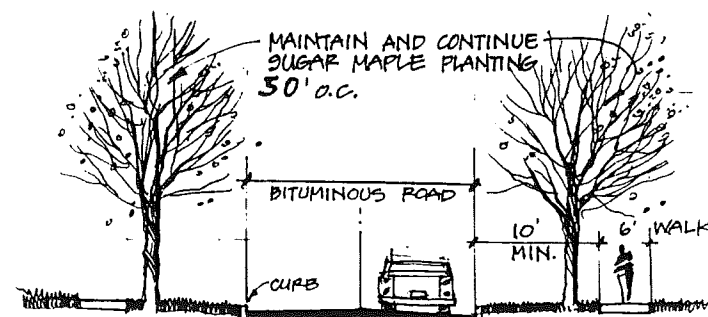


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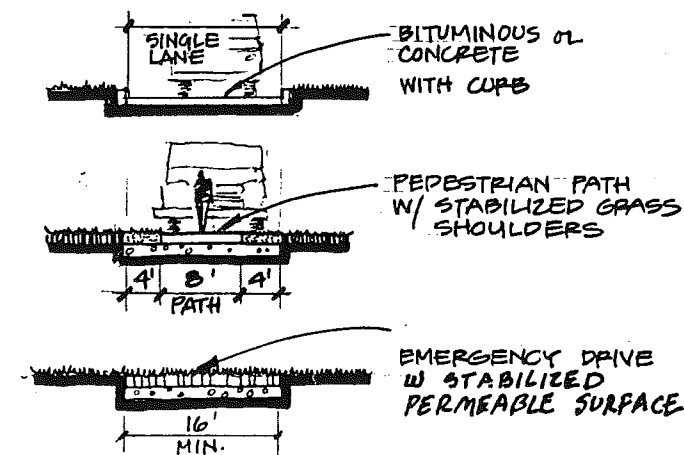


FIGURE No.76

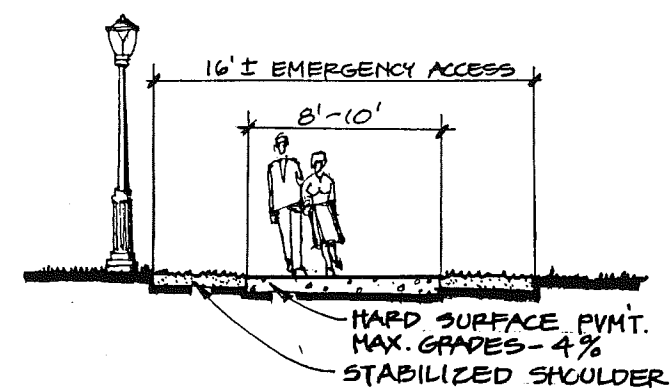


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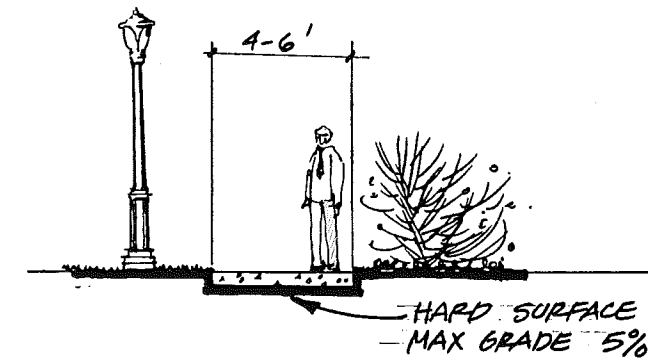


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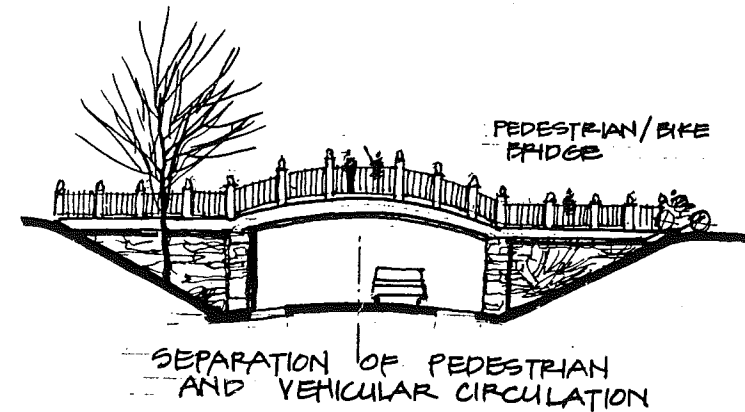


FIGURE No.79

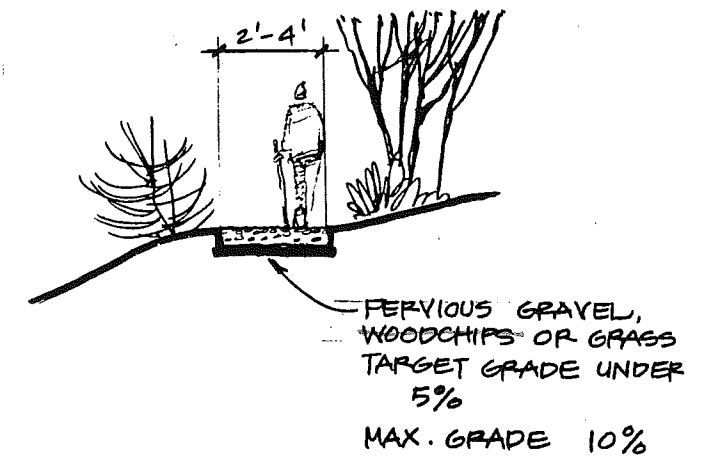


FIGURE No.81

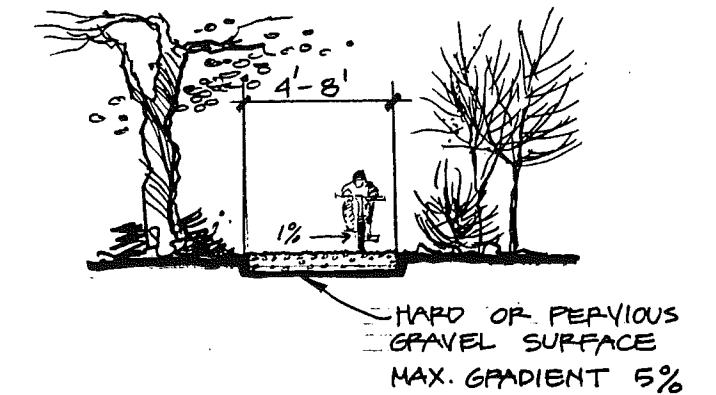


FIGURE No.80

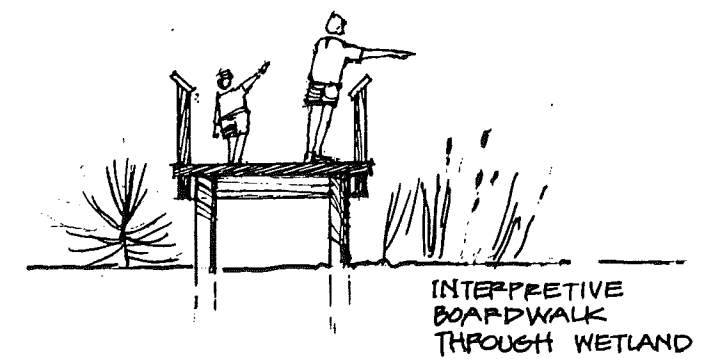


FIGURE No.82

served. Wherever possible pedestrian circulation routes will be separated from vehicular circulation and will meet handicap accessibility standards. Paths and trails will serve the natural area and range from path systems accommodating both walkers and bikers, to nature trails that are meant only for pedestrian use.

(1) Main Pedestrian Walks

Main walks connecting primary destinations shall be 8 to 10 feet in width, with hard surface pavement such as concrete, bituminous, unit pavers, or brick (Figure 77). They will always be handicap accessible with pedestrian scale lighting. Where applicable, they may double as emergency or maintenance routes with stabilized shoulders and negotiable alignments. Where walks cross streets, ramps will always be used.

(2) Secondary Walks

Secondary walks connecting building entrances, site features and parking shall be 4 to 6 feet wide, hard surfaced, and handicapped accessible with pedestrian scale lighting (Figure 78). Ramps will be provided at all street crossings.

(3) Walk Separation

Where applicable, walks will be separated vertically from vehicular traffic (Figure 79). Pedestrian bridges over vehicular traffic are favored over tunnelling, providing better views and more light for the walker.

(4) Path Systems

Paths will be hard surfaced in bituminous or stabilized gravel. Paths shall vary in width from 4 feet if strictly pedestrian, to 8 feet if dual pedestrian/bicycle use (Figure 80). Paths shall be closely aligned to meet existing grades and natural features. Lighting is optional. Paths will be handicap accessible.

(5) Nature Trail Systems

Nature trails shall be pervious, made of gravel, wood chips or mowed grass, depending on intensity and type of use (Figure 81). Trails will respect natural grades and features with a minimum of impact. Whenever possible they will be handicap accessible.

(6) Specialized Circulation Systems

These systems include boardwalks allowing access over but not disturbing wetlands (Figure 82). They also include all terrain bike trails and cross-country skiing trails.

d. Design Details - Parking

Parking shall be handled by two methods within the Grand Traverse Commons Planned Redevelopment District, either as surface parking or deck parking within or adjacent to buildings. Landscape treatment is essential in mitigating the adverse effects of parking on the Commons.

(1) Surface Parking

Surface parking will consider the user with convenient access to their destinations and sensitive placement in relation to natural zones (Figure 83). Minimum space size allowed will be 9' x 18' with 24' two way lanes. Handicapped parking will be controlled by the most recent ADA standards.

(2) Angled Parking

Angled parking can be used if one way traffic has an advantage in saving space and is sensitive to a particular site condition (Figure 84). The moving lane shall be a minimum of 16' wide, with 9' x 18' spaces at 60 degrees.

(3) Screening of Parking Lots

Screening of parking from adjacent roads and buildings will be accomplished with a minimum of a 20' wide planted buffer (Figure 85). This buffer treatment will be planted with a minimum of 4" caliper shade trees at 25' on center, as well as a continuous treatment of berming, use of flowering trees and/or evergreen trees to sufficiently screen the lot from adjacent uses.

(4) Parking Deck Screening

In the required setback of 50' from roads, a double row of shade trees shall be provided (Figure 86). Screening of decks with evergreen trees and flowering trees for seasonal interest will be required.

(5) Snow Storage (Figure 87)

Convenient snow storage will be allowed in all parking areas and shall not block major drainage ways or conflict with plantings.

(6) Parking Lot Materials

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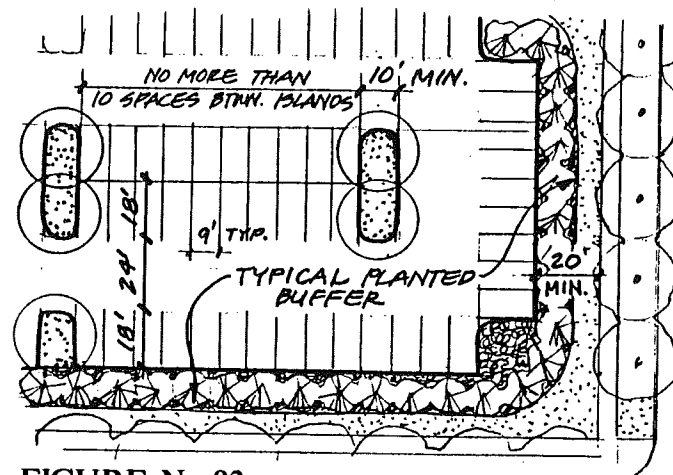


FIGURE No.83

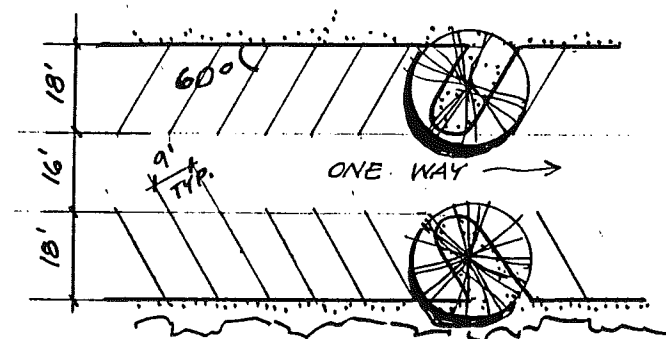


FIGURE No.84

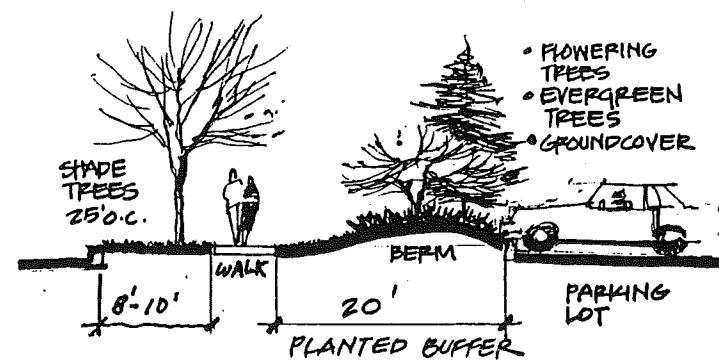


FIGURE No.85

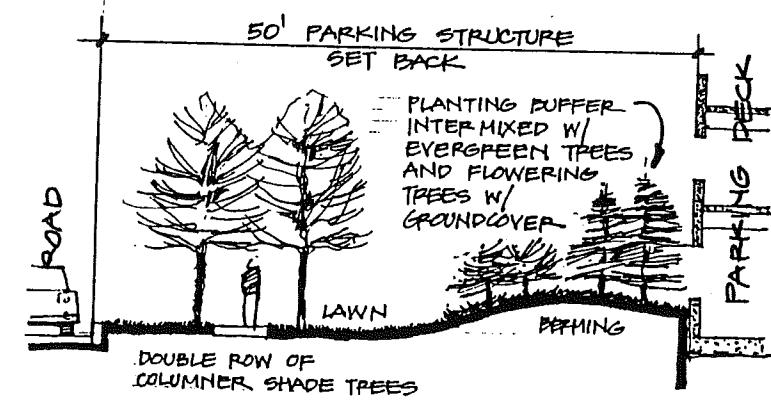


FIGURE No.86

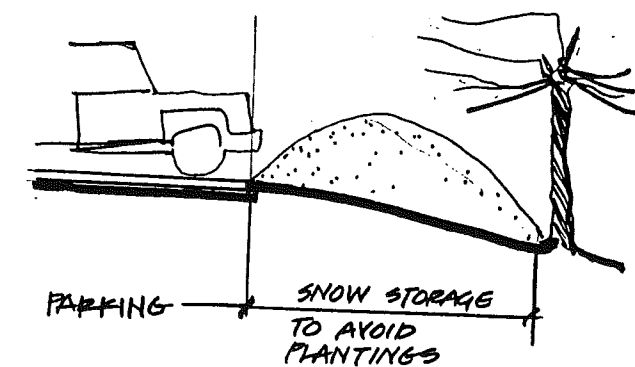


FIGURE No.87

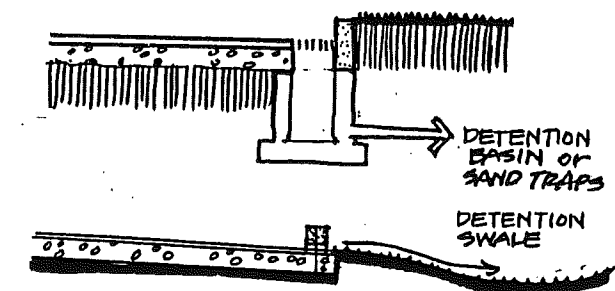


FIGURE No.88

Use of materials shall be consistent with the areas in which parking is located (Figure 88).

- Parking within Subareas 1, 2, 3, 4, and 5 will require curbing, pavement, and underground storm systems.
- Parking within Subareas 6, 7, and 8 and at trailheads will be treated with precast bumpers, gravel, or pavement with surface stormwater control, or, where applicable, temporary and overflow parking may occur in stabilized meadows.

3. Treatment of Historic Structures

The historic core of the Grand Traverse Commons Site includes a diverse collection of structures and landscape that has been listed on the National Register of Historic Places as a historic district.

This designation requires that for the project to qualify for the Federal Preservation Tax Incentives Program, it must be carried out in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (see Appendix).

Although the historic district as currently defined excludes a number of structures and a large amount of land, these same standards should be used in dealing with all aspects of the site. This will guarantee not only a continuity of treatment for all the existing structures and features, but will ensure that there will be no future conflicts or jeopardization of the tax credits when the boundaries of the district are expanded as anticipated.

The Secretary of the Interior's Standards for the Treatment of Historic Properties have recently been redefined in order to simplify the understanding of what the treatments are and how they should be interpreted. The four treatment standards are Preservation, Rehabilitation, Restoration and Reconstruction and are summarized in the National Park Service's 1992 draft as follows:

"The treatment **Preservation** focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. **Rehabilitation** acknowledges the need to update a historic property to meet continuing or changing use requirements, i.e., adding and altering, where necessary. **Restoration** is undertaken to depict a property at a particular period of time in its history, while removing evidence of other periods. **Reconstruction** re-creates a non-surviving property, in part or in full, for interpretive purposes. Documentation requirements for both Restoration and Reconstruction are exacting."

Choosing a primary treatment is very important. It will set the main standard that will be used both in executing the work and also in forming the basis by which the reviewers from the National Park Service (NPS) will make their evaluation.

Although the NPS warns against "arbitrarily mixing treatments", it would be very difficult to apply only one standard for a project of the scope of the Grand Traverse Commons Planned Redevelopment District. Rather, there will necessarily be some combination of all four treatments, with the primary treatment being rehabilitation.

The Park Service defines Rehabilitation as:

"... the act or process of returning a property to a state of utility, through repair or alternation, which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical and cultural values."

While it is clear that the buildings will have to be rehabilitated in order to make them function in their new uses, the extent of Preservation and Restoration will be used to give the whole project a cohesiveness and highlight its major period of significance.

The same approach applies to the treatment of the landscape. It has been established that the landscape surrounding the buildings and in fact the entire site was an integral part of the original intent of building the asylum on a large tract of land according to the Kirkbride Plan. Its use as a working farm and Dr. James D. Munson's deliberate enhancement of the Commons areas added to its significance.

Many characteristics have occurred to the landscape since its early period; much work will be needed to rehabilitate it, adapt it to its new use, and reestablish its original intent and meaning.

No matter which treatments are chosen, it must be remembered that this project will also be a product of its own time. The application of treatment standards, technical knowledge of conservation treatments and the entire approach to a project of this scale will all reflect the preservation attitudes of the 1990s. The most important thing is to preserve and enhance those lasting qualities of the historic elements of the property so its significance will continue to inform and enrich the lives of those people using it today and for future generations.

Historic Preservation Principles Guiding Development:

- Adaptive reuse implies spacial, functional and structural alterations; however, nothing should be introduced which would create an exterior expression inconsistent with the original structure.

- Where structures have been altered, partially removed or added onto, new work which results in an effect consistent with and supporting the original structure may be permitted.
- At the time of rehabilitation of a structure for any use, the exterior must be routed to the original condition.
- Handicap access shall be provided through a generalized grading plan rather than isolated freestanding ramps.
- Additions may be permitted if the proposed alteration is consistent both in scale and design vocabulary.

4. Treatment of New Buildings

a. General Design Guidelines

- (1) All new buildings in Subareas 1, 2, 3 and 4 will be developed in such manner that is sympathetic to the fundamental characteristics of Building 50 and its associated cottages.
- (2) All new buildings in Subareas 6, 7, and 8 will be developed in such manner that is sympathetic to the historic agricultural buildings.
- (3) All new buildings will be limited in area, height and ground coverage by the restrictions set by each subarea section of the District Plan (Figures 89 and 90).
- (4) Density will be counted on floors above a subgrade level without roofs (Figure 91). Floor area in the subgrade level or attic will not contribute to density of building.

b. Design Vocabulary

The design vocabulary of new buildings will have both a relationship to the historic character of the Grand Traverse Commons and each building's particular functional requirements.

- (1) **Shedding Water** - All buildings are to have either sloped or curved linear roofs with slopes of 15° or greater. Overhangs, where they occur, shall be proportioned to the height of the building (Figure 91).
- (2) **Natural Lighting** - All window openings will be rectangular in proportion, with the greater dimension in the vertical axis. Square openings are the minimum allowable proportion. Opening areas shall not exceed 30% of total wall surface area.

Openings in roofs shall be accomplished through dormers, bay projections, cupolas or lanterns (Figure 92).

- (3) **Exterior Articulation of Important Interior Spaces** - Expressions of spaces of importance may employ larger glazed areas of horizontal proportion, if expressed as a porch, bay or arcade consistent with the vocabulary of the historic buildings (Figure 93).
- (4) All main entrances will have porches. All access ramps will be concealed in these porches (Figure 93).
- (5) Partial basements and/or expression of base, or landscaped podium will be mandated for all buildings with exterior frontage on historic front lawn.
- (6) Vertical punctuation in the roof or building facade in the form of lanterns, cupolas and bay projections is encouraged to enhance the building silhouette and provide variety in the building facade and massing (Figure 94).
- (7) Multistory structures shall have horizontal expression through rustication and string courses, where applicable. String courses must delineate subgrade levels from full floors above (Figure 95).
- (8) No structure will be longer in any one direction than 90'-0" without a break in the plane of the building on those lot edges which face the lawn or the roadway system (Figure 96).
- (9) Structures which frame the historic lawn will form transition spaces between the outdoor space of the lawn and the enclosed space of the building. Transition spaces are courtyards, porches and arcades (Figure 96).
- (10) Mechanical penthouses as they occur in the buildings must be completely shielded from view and within architectural enclosures. Louvers, stacks, and other mechanically related elements which need exposure to the exterior must be designed to conform to the design vocabulary of the Historic District (Figure 93).
- (11) All freestanding HVAC or utility components (cooling towers and condensing unit), which by Code must remain on the outside of a building enclosure, shall be:
 - (a) designed with an architectural enclosure which is in conformance with the design vocabulary of the Historic District; and

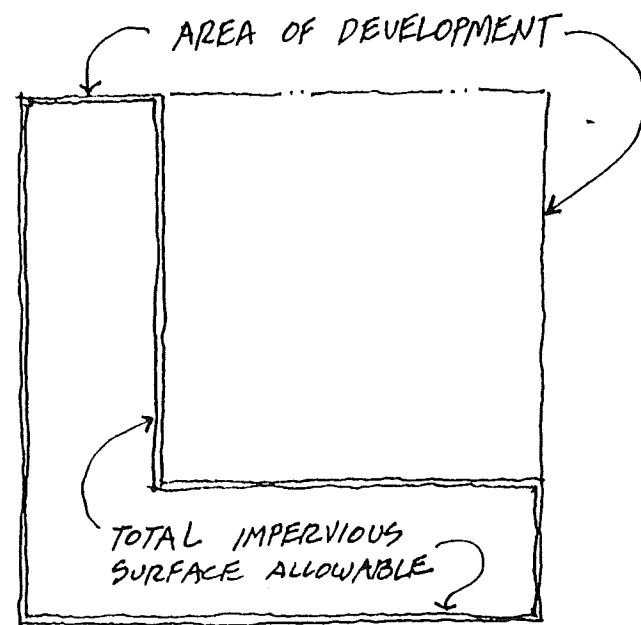


FIGURE No. 89

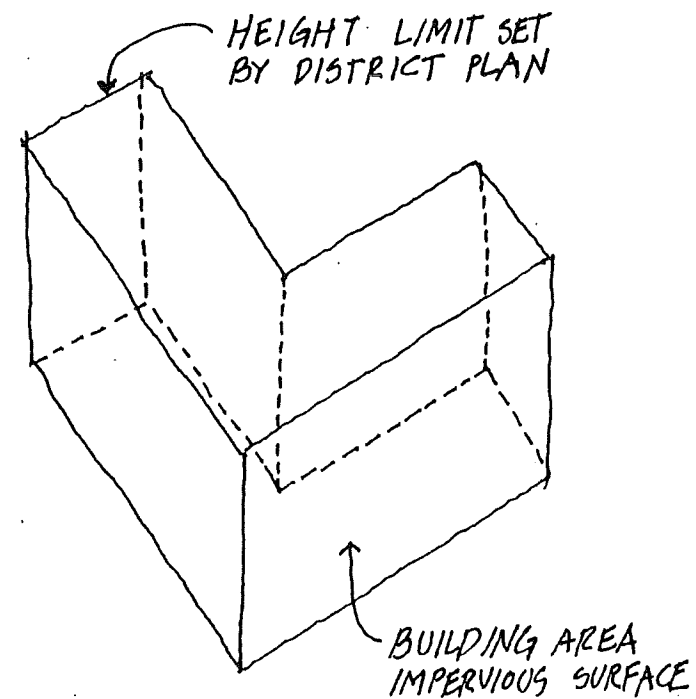


FIGURE No. 90

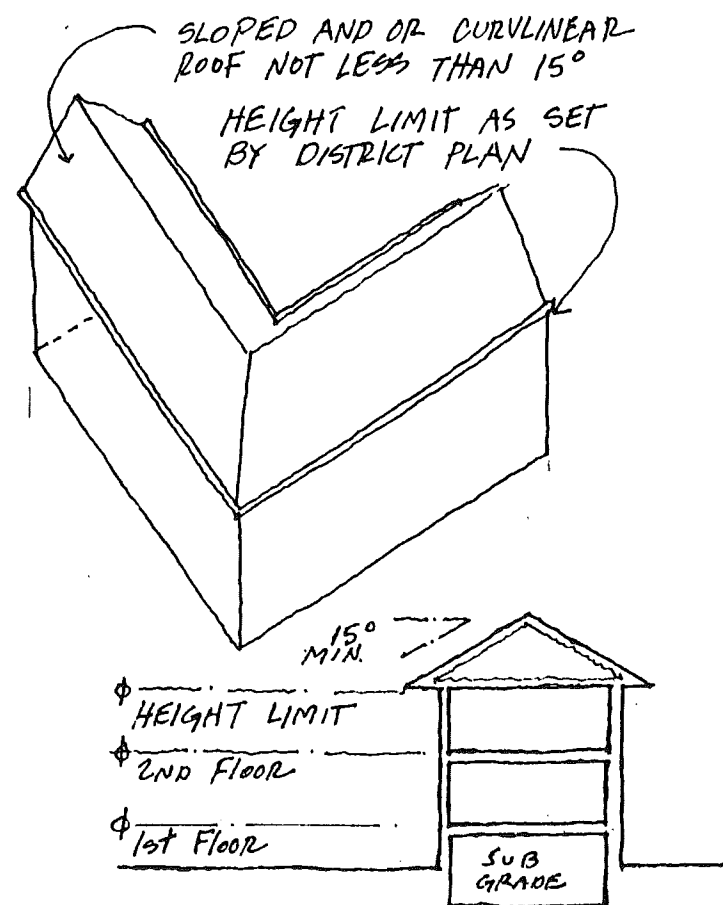


FIGURE No. 91

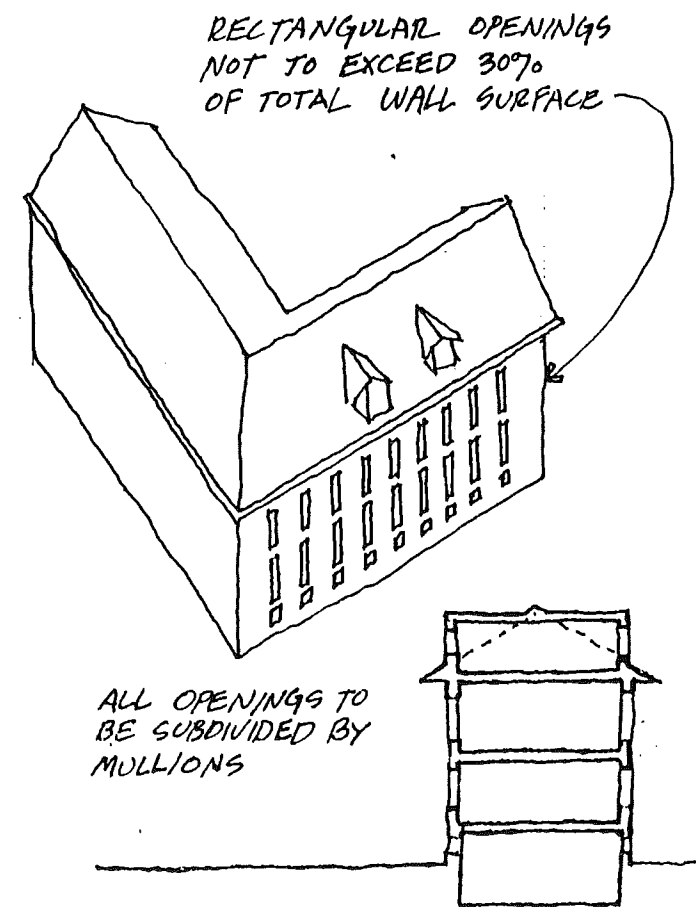


FIGURE No. 92

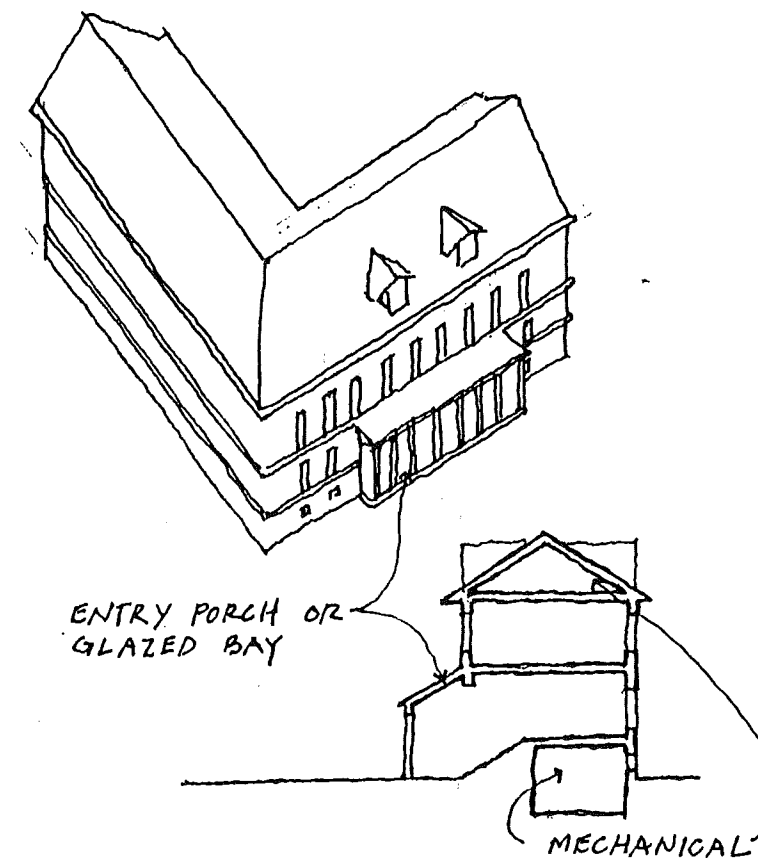


FIGURE No. 93

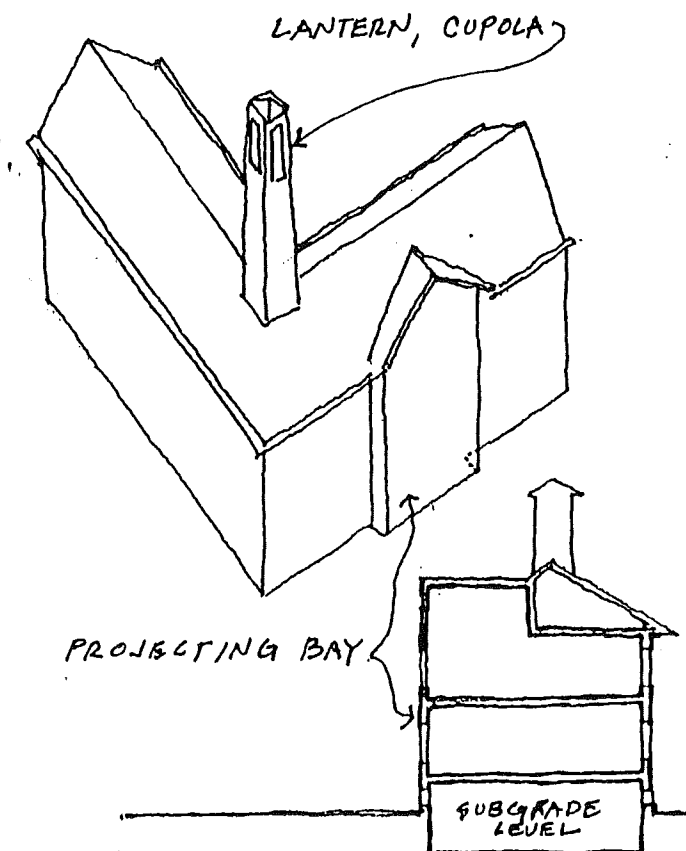


FIGURE No. 94

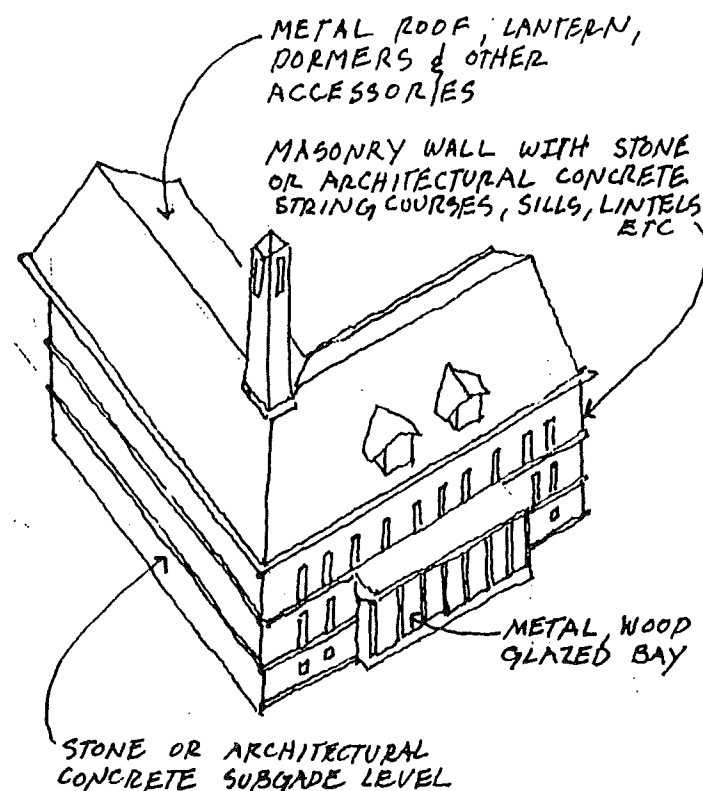


FIGURE No. 95

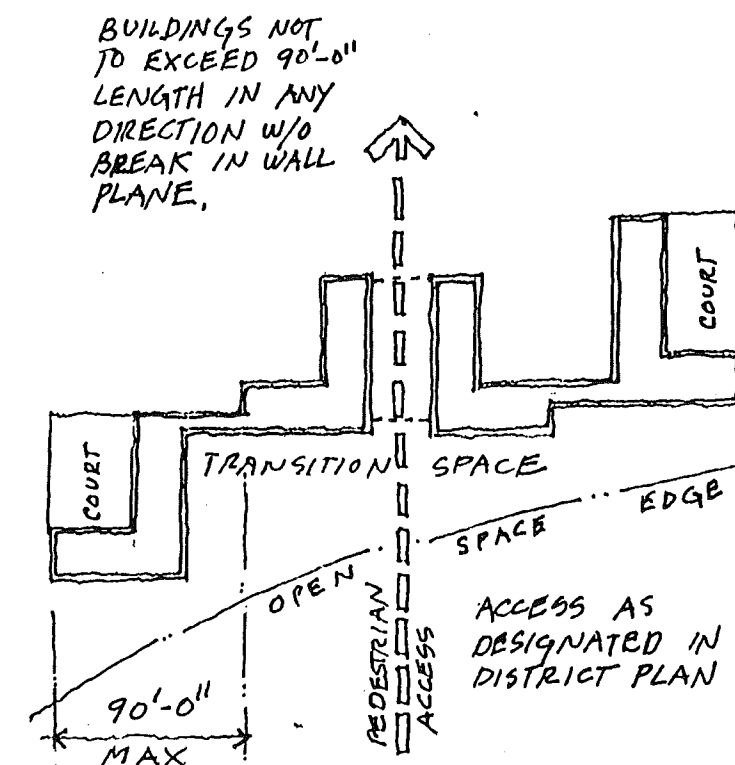


FIGURE No. 96

- (b) screened with a combination of landscaping and fencing so as to provide a complete visual screening from grade levels as well as from residential view.

c. Materials of Construction

(1) Subareas 1, 2, 3 and 4

- (a) All exterior wall construction shall be a combination of masonry, stone and/or architectural concrete. The masonry should be the dominant expression of the wall material. All subgrade exposed construction may have stone and/or architectural concrete as the dominant expression insofar as it is expressed with string courses and rustication.
- (b) Dormer, turrets, exposed ventilators and other such roof projections may be a combination of metal, wood and its associated roofing material.
- (c) All glazing must be clear or lightly tinted. Reflective glass is not allowed. Windows are to be subdivided in mullions, with a rectangular pattern.
- (d) All porches or bay projections can employ masonry, metal, wood or combinations thereof.
- (e) Entablatures, brackets, eaves and soffits may be either metal or wood construction.
- (f) Fencing will be either cast iron or painted aluminum.
- (g) The color palette for buildings in Subareas 1, 2, 3 and 4 will follow the historical evolution of the Commons through the use of colors that are light, earth toned (beige, ocher, etc.), and are natural material expressions. White buildings will not be allowed nor will wall materials darker than the light, earth toned palette.

(2) Subdistricts 6, 7 and 8

Materials for construction will be the same as in Districts 1, 2, 3 and 4, with the following exceptions:

- (a) Wall materials may be a combination of masonry and wood to reflect the character of the historic agricultural buildings. Wood must be in the form of painted 4 inch clapboard.

- (b) Roof materials may employ asphalt shingles.
- (c) Fencing where it occurs shall be wood and conform to the character of the historic agricultural development.
- (d) The color palette for buildings in Subareas 6, 7 and 8 may follow the historic character of the barns, will be specifically determined at the level of the Subarea Development, and shall be compatible with the color palette of the entire Grand Traverse Commons Planned Redevelopment District.

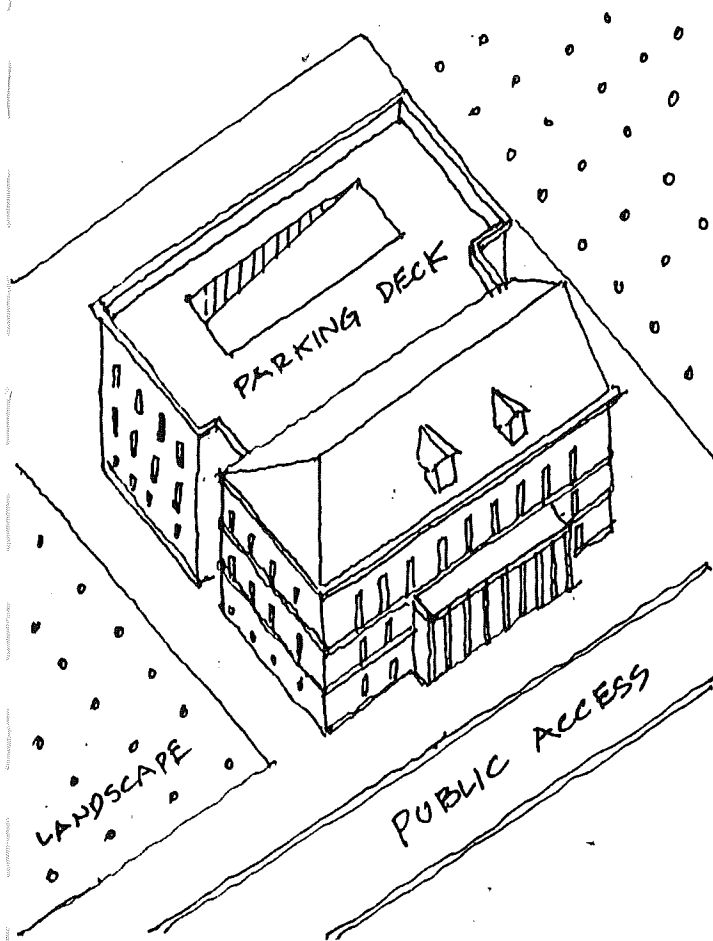


FIGURE No.97 - DECK ADJACENT TO BUILDING

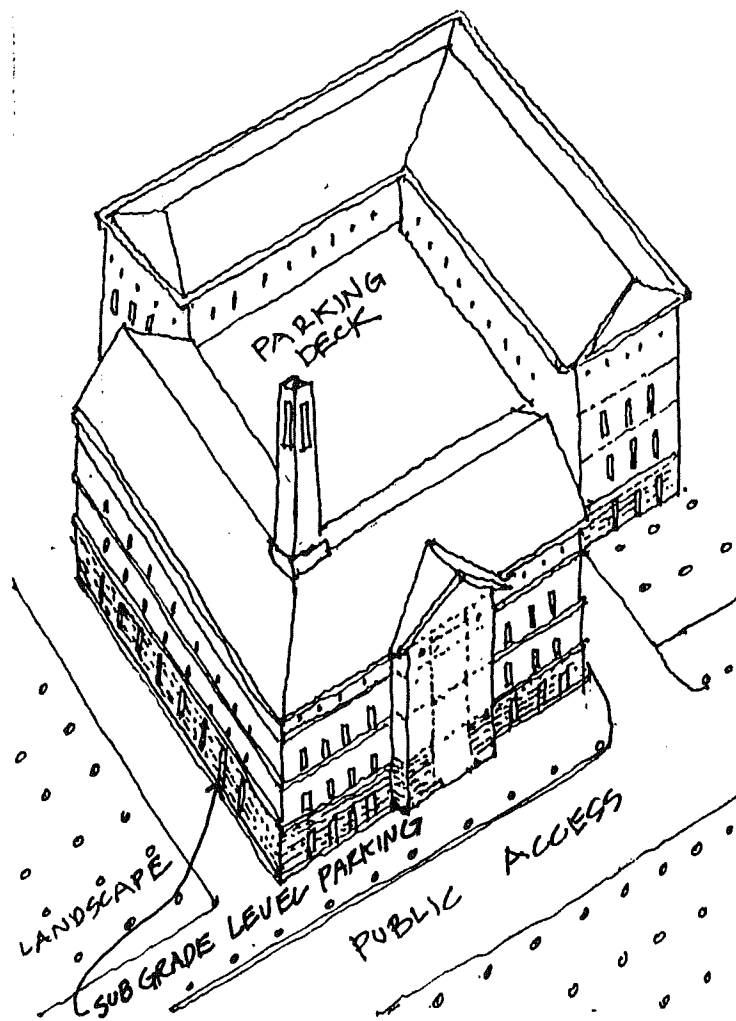


FIGURE No.98 - DECK WITHIN BUILDING

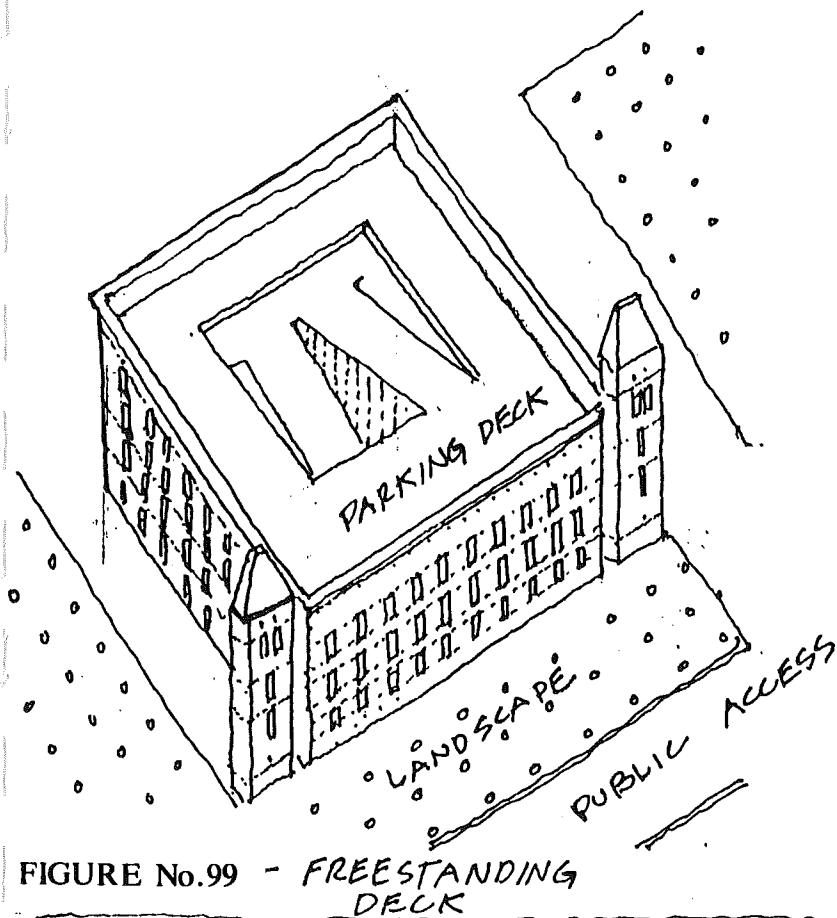


FIGURE No.99 - FREESTANDING DECK

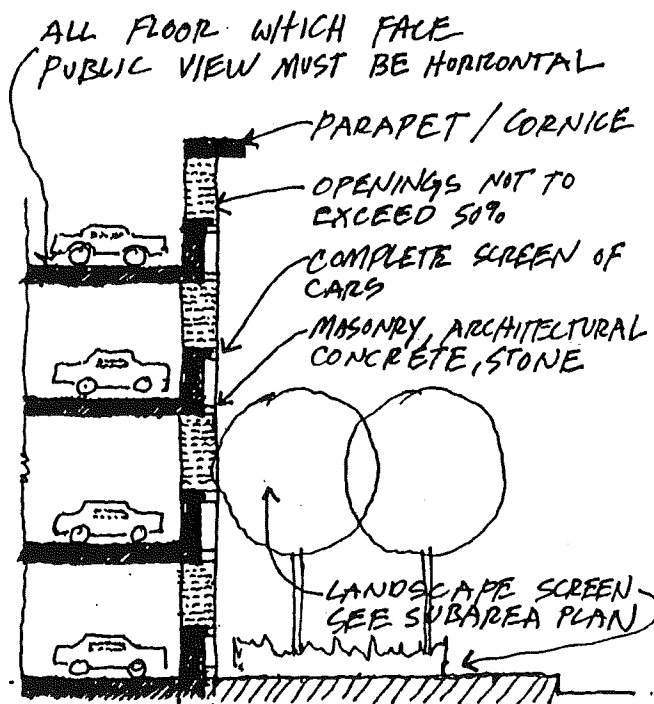


FIGURE No.100 - SECTION - PARKING DECK

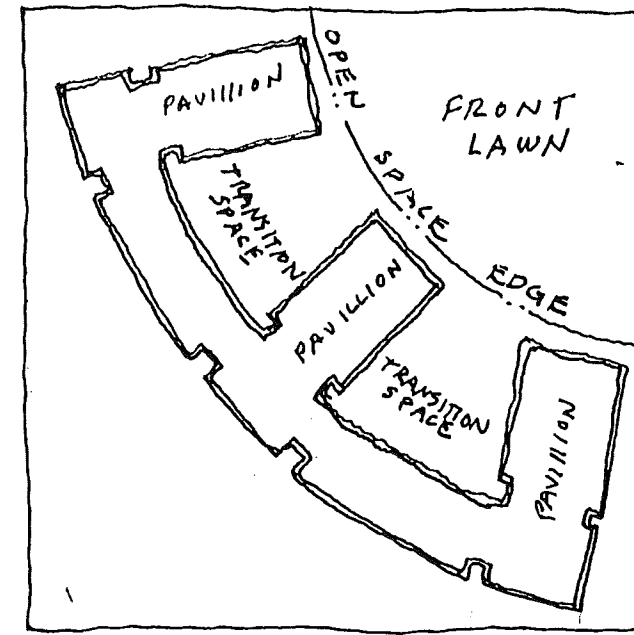


FIGURE No.101 - EXAMPLE OF PAVILLION MODULATION

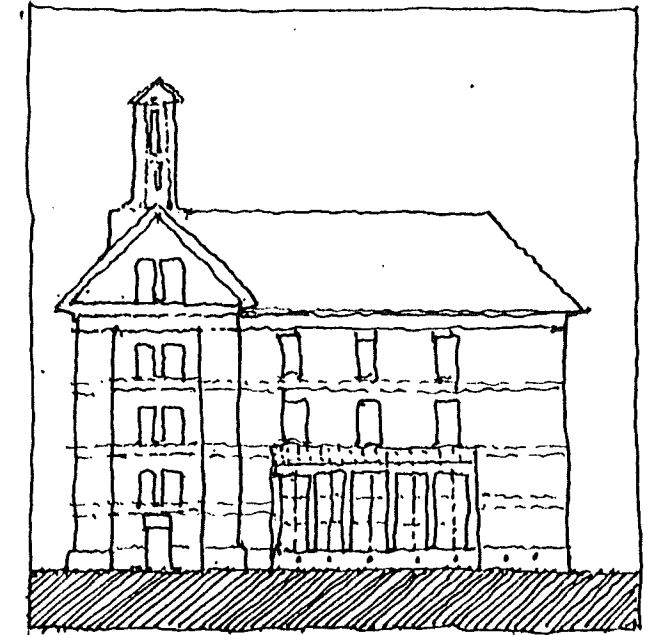


FIGURE No.102 - "ASYMMETRY"

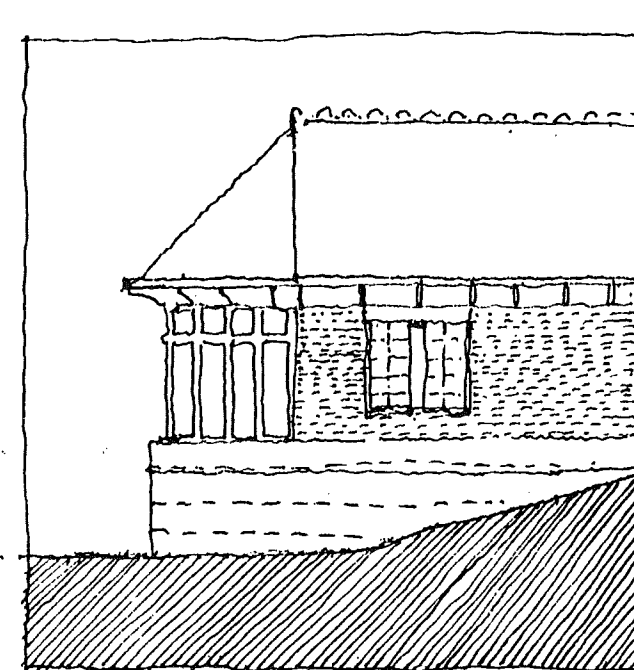


FIGURE No.103 - "EMERGENCE"

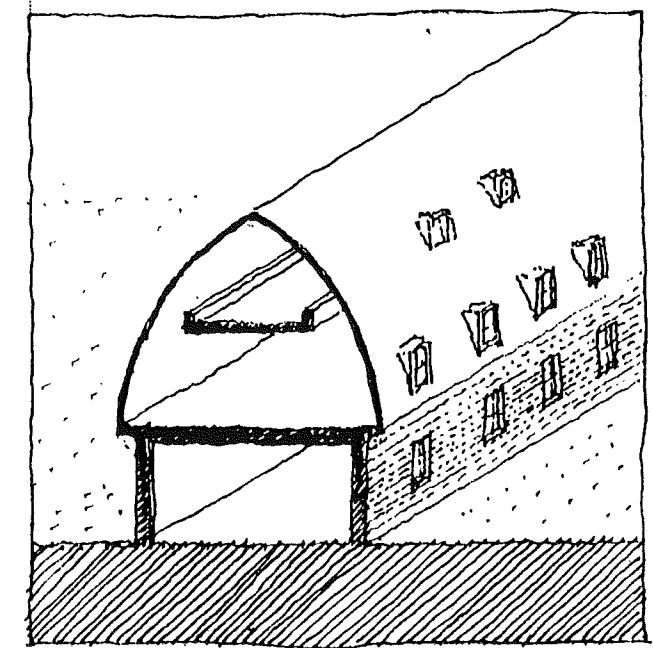


FIGURE No.104 - "AGRICULTURAL CHARACTER" Page 152

d. Parking Decks

- (1) Parking decks will be used in three possible conditions on the Grand Traverse Commons site:
 - (a) Decks adjacent to buildings (Figure 97).
 - (b) Decks within buildings or under buildings (Figure 98).
 - (c) Free standing decks (Figure 99).
- (2) The following guidelines shall apply to the construction of parking decks.
 - (a) Parking decks must be designed to have horizontal versus stepped or sloping levels at areas of public view. All ramping must be concealed from public view (Figure 100).
 - (b) Openings will not exceed 50% of total wall surface, to allow the deck to meet applicable regulations for natural ventilation. Openings will be expressed in a manner similar to openings in buildings where rectangular openings with greater dimension in vertical axis are required. Square openings are the minimum allowable proportion.
 - (c) Materials for parking decks will follow the same restrictions as buildings.
 - (d) Sloped roofs are not required for parking decks; however, the following restrictions shall apply.
 - i) The upper and lowest level of parking must incorporate sufficient screening to shield cars from public view.
 - ii) Parapet treatment will be required to terminate the deck and give proper architectural finish to the structure (Figure 100). Cornices, overhangs and other devices which are consistent with the language of the historical buildings may be employed.
 - (e) All decks must be completely screened from view from residents in Subareas 2 and 3.
 - (f) No freestanding deck will be allowed within view of the

historic lawn.

- (g) The design of all parking decks shall be consistent with the language of the historical buildings.

e. Composition

Historic precedent has establish patterns which should be considered.

- (1) The buildings on the front lawn should be expressed in a series of functional components or "Pavilions" which will bring new buildings to the residential scale of cottages (Figure 101).
- (2) A combination of symmetry and asymmetry will guarantee variety, irregularity, movement and intricacy, all qualities of picturesque design (Figure 102).
- (3) The relationships of buildings to landscape will be consistent to buildings in the Historic District. Subgrade level will negotiate changes in topography. The quality of emergence where buildings appear to grow out of the landscape will add to the picturesque quality of this site (Figure 103).
- (4) The buildings in Subareas 6, 7 and 8 should have agricultural characteristics. In general, the roof form dominates the composition regardless of the resolution of its general form (Figure 104).

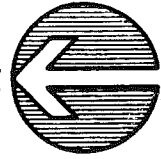
VI. APPENDIX

A. Legal Description and Boundary Survey

CERTIFICATE OF SURVEY

PART OF THE NORTHEAST FRACTIONAL 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN

NORTH



SCALE 1" = 500'



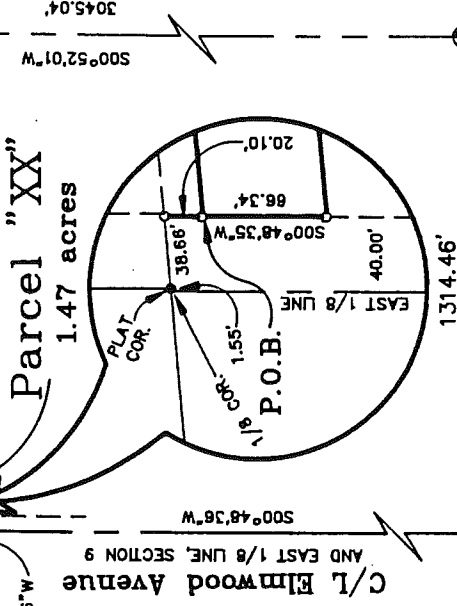
NORTH 1/4 CORNER, SECTION 9, T27N, R11W
FOUND 3/4"x30" PIPE & CAP #25828
SET BY P. BEAVER FROM J.W. SOIL WITNESSES
IS 1.55' WEST OF FOUND
IRON AT S.W. COR., BLOCK 7,
HANNAH, LAY & COS. 8TH ADDN.
FD. CENTER OF S.E. BOLT OF
ALUMINUM LIGHT POLE N13°W 27.43'
FD. N.W. CORNER COITAGE 27 N75°E 200.12'
FD. S.W. CORNER COITAGE 27 S69°E 215.36'
SET SPIKE IN 6" MAPLE S13°W 43.05'

NOTE:
EAST 1/8 CORNER ON
NORTH SECTION LINE
IS 1.55' WEST OF FOUND
IRON AT S.W. COR., BLOCK 7,
HANNAH, LAY & COS. 8TH ADDN.

N.E. CORNER, SECTION 9, T27N, R11W
FD. 3" DISC IN MON. BOX
RESET SPIKE IN 24" OAK S48°W 62.68'
MSHD REF. TAG IN P.POLE S17°E 77.40'
MSHD REF. TAG IN P.POLE S29°E 49.89'
MSHD REF. TAG IN P.POLE S67°W 29.58'

WEST 1/4 CORNER, SECTION 9, T27N, R11W
FOUND 3" BRASS DISC
SET SPIKE IN 10" MAPLE N71°E 27.14'
FD. SPIKE IN 10" MAPLE N13°W 29.74'
FD. SPIKE IN 6" MAPLE N68°W 28.93'
FD. SPIKE IN 10" MAPLE S78°W 18.45'

- LEGEND
- IRON FOUND
 - IRON SET
 - IRON SET #25828
 - ▲ P.K. NAIL FOUND
 - △ P.K. NAIL SET
 - ⊙ MONUMENT OR
 - ⊕ MON. BOX FOUND
 - ⊕ MONUMENT SET
 - (R) RECORD
 - (M) MEASURED



SOUTH 1/4 CORNER, SECTION 9, T27N, R11W
FD. IRON & (UNREADABLE) CAP IN C/L FRANKIE RD.
N.E. COR. GARAGE (SIDING) S88°W 58.07'
S.E. COR. GARAGE (SIDING) S65°W 87.00'
FD. CHISLED "X" N. END TOP OF CURB N45°E 54.98'
N.W. COR. MEYER BLDG. S68°E 96.34'

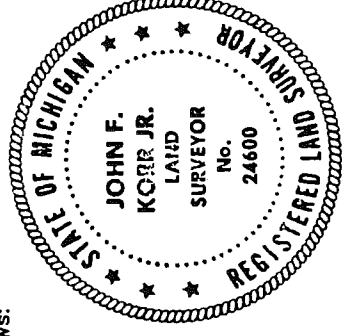
EAST 1/4 CORNER, SECTION 9, T27N, R11W
FOUND IRON & CAP #25828 IN MON. BOX
SET SPIKE IN P.POLE N88°W 91.72'
SET SPIKE IN P.POLE N77°E 136.65'
FOUND P-K IN P.POLE S38°E 121.27'
SET SPIKE IN LIGHT POLE S22°W 146.84'

DESCRIPTION
PARCEL XX

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of
Traverse City, Grand Traverse County, Michigan more fully described as follows:

Commencing at the Northeast corner of said Section 9; thence along
the North line of said section S84°59'04"W 1283.72 feet; thence
parallel with and 40.00 feet Easterly of the East 1/8 line of said
Section 9 S00°48'36"W 20.10 feet to the Point of Beginning;
thence continuing along the same line S00°48'36"W 66.34 feet;
thence N84°59'04"E 701.68 feet; thence S00°48'36"W 75.00 feet;
thence N84°59'04"E 125.00 feet; thence N00°48'36"E 141.34 feet;
thence S84°59'04"W 826.68 feet to the Point of Beginning.

The above parcel contains 1.47 acres of land, more or less.
Subject to all applicable building, use restrictions and easements, if
any, affecting the premises.



ACAD FILE: <9314048> 93035XX.DWG
C:\WORKING\9314048\93035XX, 1=500, 12/14/93 at 08:18

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land,
that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the
regulations of Act 132, P.A. 1970 as amended.
The basis for bearings is: A previous survey by Fred J.W. Solt, R.L.S. #1090.

Error of Closure is 1' / 5000' +

R.L.S. No. 24600

Gosling Czubak Associates

Engineers - Surveyors
Environmental Services

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
PH: 616/946-9191
FAX: 616/941-4603

FOR:

**Grand Traverse Commons
Redevelopment Corporation**

DATE: December 14, 1993	SHEET 1 of 1
DWN. B.A.	CHK. J.F.K.
FILE NO. 93035.02-C	

CERTIFICATE OF SURVEY

PART OF THE NORTHEAST FRACTIONAL 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN

LEGEND

- IRON FOUND
- IRON SET
- IRON SET #25828
- ▲ P.K. NAIL FOUND
- ▲ P.K. NAIL SET
- ⊕ MONUMENT OR
- ⊕ MON. BOX FOUND
- ⊕ MONUMENT SET
- (R) RECORD
- (M) MEASURED

NORTH 1/4 CORNER, SECTION 9, T27N, R11W
FOUND 3/4"x30" PIPE & CAP #25828

SET BY P. BEAVER FROM J.W. SOLL WITNESSES
FD. CENTER OF S.E. BOLT OF

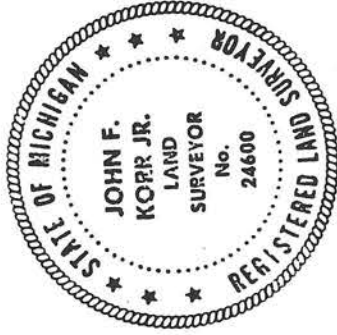
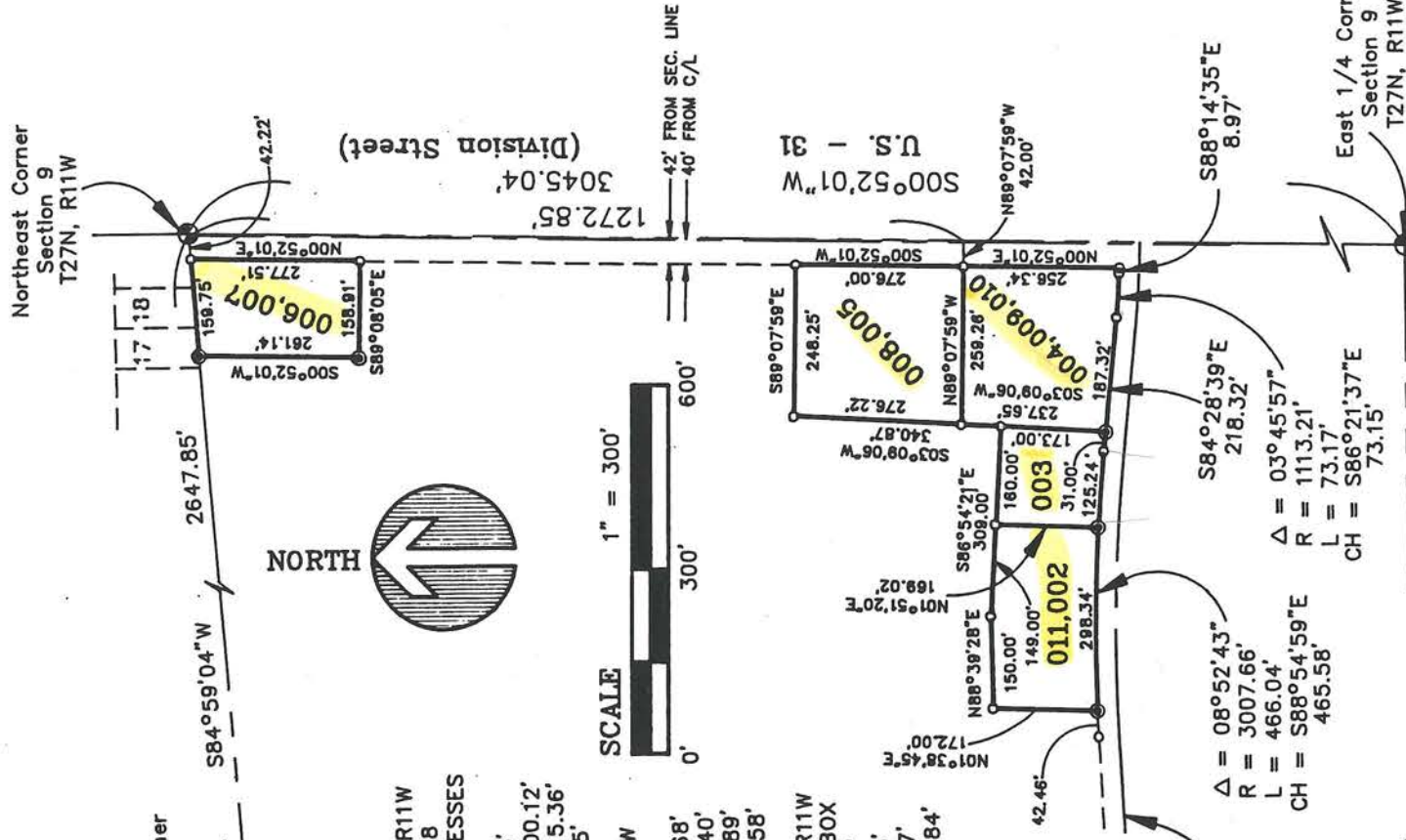
ALUMINUM LIGHT POLE N13°W 27.43'
FD. N.W. CORNER COTTAGE 27 N75°E 200.12'
FD. S.W. CORNER COTTAGE 27 S69°E 215.36'
SET SPIKE IN 6" MAPLE S13°W 43.05'

N.E. CORNER, SECTION 9, T27N, R11W

FD. 3" DISC IN MON. BOX
RESET SPIKE IN 24" OAK S48°W 62.68'
MSHD REF. TAG IN P.POLE S17°E 77.40'
MSHD REF. TAG IN P.POLE S29°E 49.89'
MSHD REF. TAG IN P.POLE S87°W 29.58'

EAST 1/4 CORNER, SECTION 9, T27N, R11W
FOUND IRON & CAP #25828 IN MON. BOX

SET SPIKE IN P.POLE N88°W 91.72'
SET SPIKE IN P.POLE N77°E 136.65'
FOUND P-K IN P.POLE S38°E 121.27'
SET SPIKE IN LIGHT POLE S22°W 146.84'



CURVE DATA, North line of 11TH ST.			
PARCEL	RADIUS	DELTA	CHORD
003	3007.66'	02°23'09"	N85°40'13"W 125.23'
011,002	3007.66'	05°41'00"	N89°42'18"W 298.22'

ACAD FILE: <9314046> 11THPLAT.DWG
C:\WORKING\9314046\11THPLAT, 1=300, 12/08/93 at 09:56

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.

The basis for bearings is: A previous survey by Fred J.W. Soll, R.L.S. #1090.

Error of Closure is 1' / 5000' +

R.L.S. No. 24600

Gosling Czubak Associates

Engineers - Surveyors
Environmental Services

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
PH: 616/946-9191
FAX: 616/941-4603

FOR:

**Grand Traverse Commons
Redevelopment Corporation**

DATE: December 8, 1993	SHEET 1 OF 6
DWN. B.A.	CHK J.F.K.
FILE NO. 93035.02-C	

CERTIFICATE OF SURVEY

PART OF THE SOUTH 1/2 OF SECTION 9, T27N, R11W,
GARFIELD TOWNSHIP AND CITY OF TRAVERSE CITY,
GRAND TRAVERSE COUNTY, MICHIGAN

S.W. CORNER, SECTION 9, T27N, R11W
FOUND 1/2"x12" CABIN SPIKE OVER
IRON & CAP #25(0or8)75
FD. SPIKE IN 14" MAPLE N13°E 171.18'
FACE OF TOP NUT ON 2' DIA.
FLANGE PLATE OF STEEL STORAGE TANK EAST 16.89'
FD. SPIKE IN 20" MAPLE S04°W 171.69'
CHISLED "X" IN TOP WEST END 15" CMP S38°W 55.90'

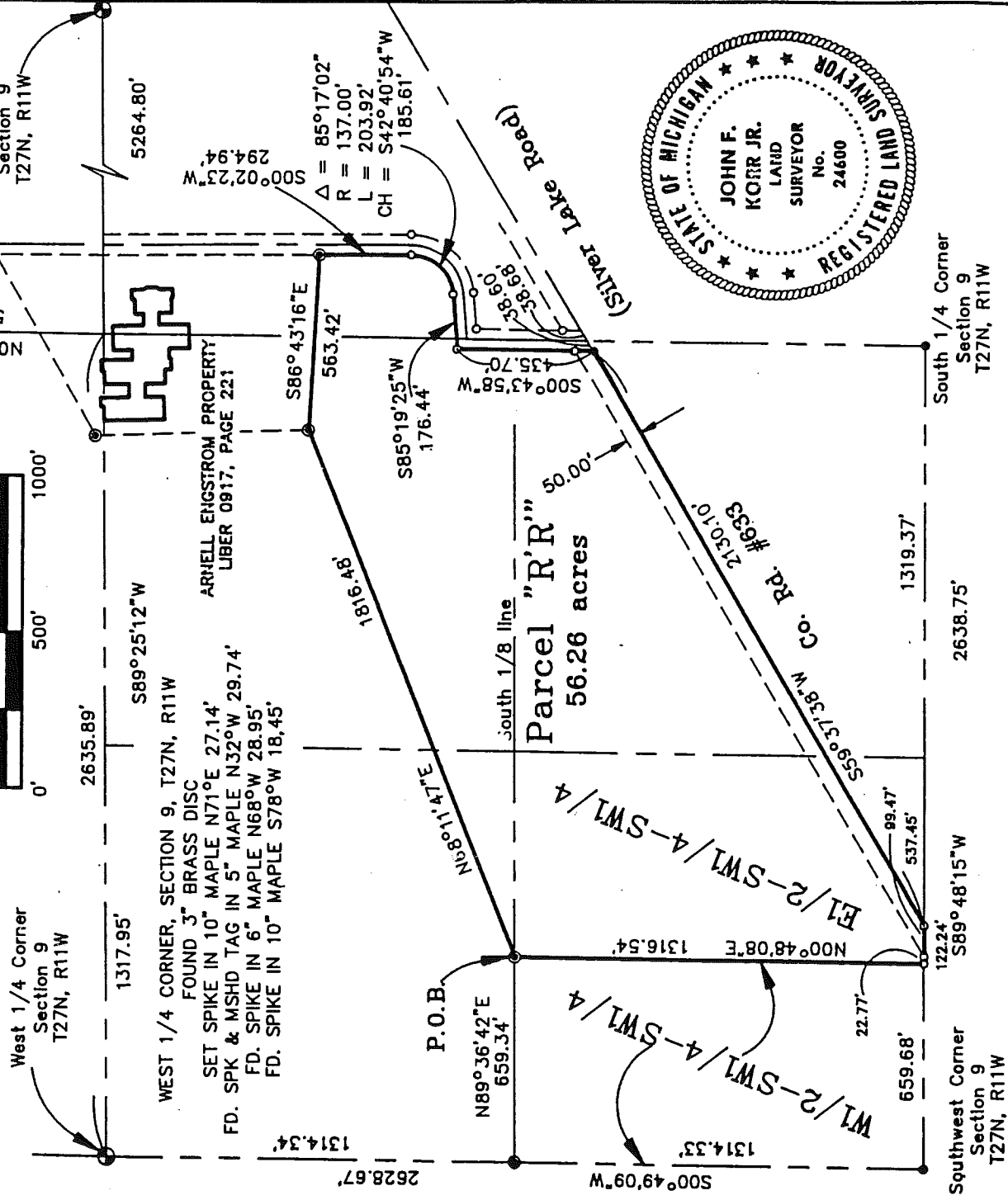
SOUTH 1/4 CORNER, SECTION 9, T27N, R11W
FD. IRON & (UNREADABLE) CAP IN C/L FRANKIE RD.
N.E. COR. GARAGE (SIDING) S88°W 56.07'
S.E. COR. GARAGE (SIDING) S65°W 87.00'
FD. CHISLED "X" N. END TOP OF CURB N45°E 54.98'
N.W. COR. MEIER BLDG. S68°E 96.34'

LEGEND

- IRON FOUND
- IRON SET
- IRON SET #25828
- ▲ P.K. NAIL FOUND
- △ P.K. NAIL SET
- ⊙ MON. OR MON. BOX FD.
- ⊕ MONUMENT SET
- (R) RECORD
- (M) MEASURED

SCALE 1" = 500'

0' 500' 1000'



ACAD FILE: <8314048> 93035RRR.DWG
C:\WORKING\9314048\93035RRR, 1=500, 12/08/93 at 10:01

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.
The basis for bearings is: A previous survey by Fred J.W. Soll, R.L.S. #1090.

Error of Closure is 1' / 5000' +

FOR: *[Signature]* R.L.S. No. **24600**

Gosling Czubak Associates

Engineers - Surveyors
Environmental Services

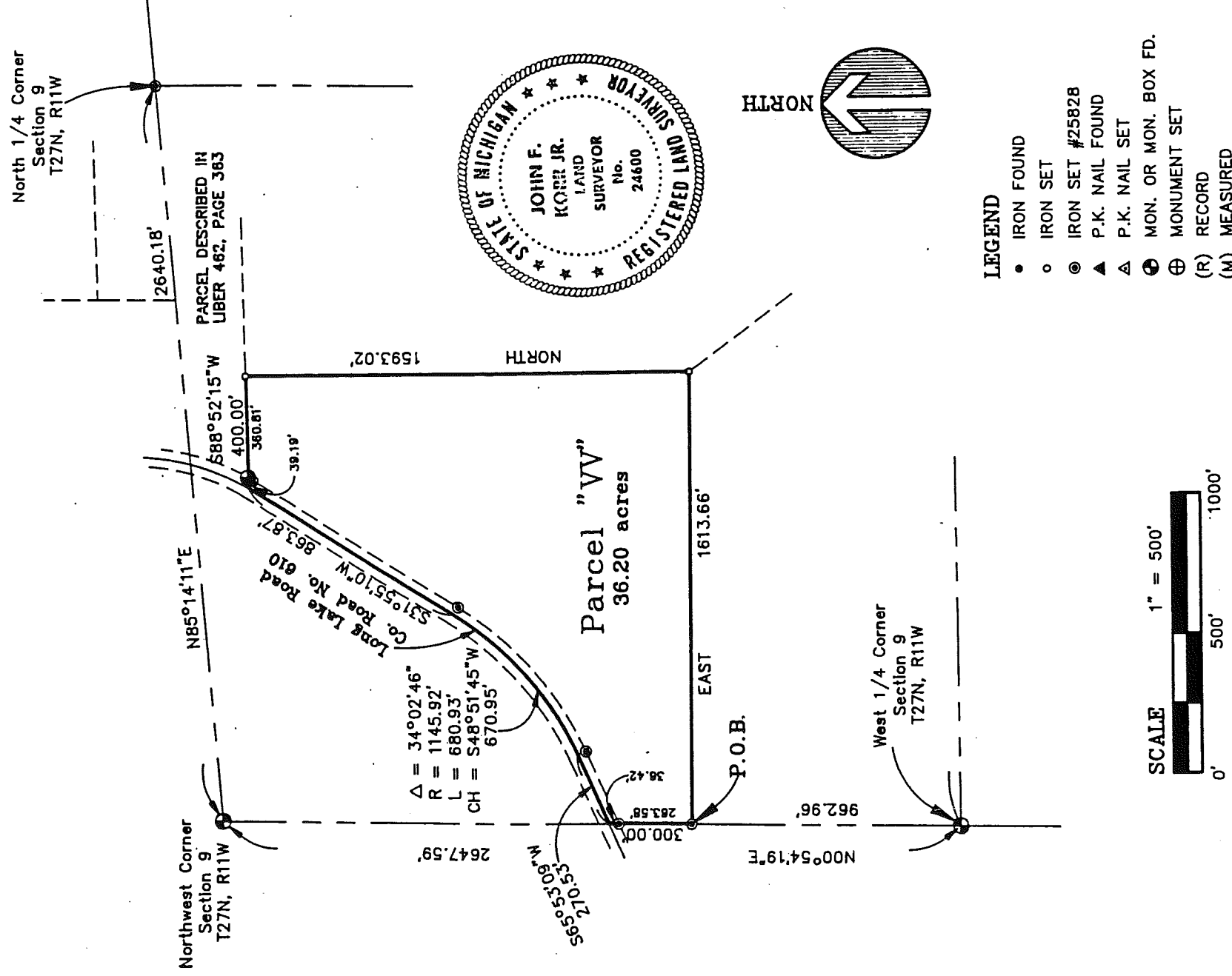
Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
PH 616/946-8191
FAX 616/941-4603

Grand Traverse Commons
Redevelopment Corporation

DATE: December 8, 1993 SHEET 2 of 6
DWL B.A. CHK. J.F.K. FILE NO. 93035.02-C

CERTIFICATE OF SURVEY

PART OF THE NORTHWEST FRACTIONAL 1/4 AND
PART OF THE SOUTHWEST 1/4 OF SECTION 9, T27N, R11W,
GARFIELD TOWNSHIP, GRAND TRAVERSE COUNTY, MICHIGAN



NOTE: SEE PAGES 1 & 2 FOR CORNER WITNESSES

ACAD FILE: <9314044> 93035RR.DWG
C:\WORKING\9314046\93035VW, 1=500 , 12/08/93 at 10:04

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.

The basis for bearings is: A previous survey by Fred J.W. Soil, R.L.S. #1090.

Error of Closure is 1' / 5000' +

FOR: R.L.S. No. 24600

Gosling Czubak Associates



Engineers - Surveyors
Environmental Services

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49884-4093
PH: 616/946-9191
FAX: 616/941-4603

Grand Traverse Commons
Redevelopment Corporation

DATE: December 8, 1993	SHEET: 3 of 6
DWL: B.A.	CHK: J.F.K.
FILE NO. 93035.02-C	

DESCRIPTION
PARCEL 006,007

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the North line of said section S84°59'04"W 42.22 feet to the Point of Beginning; thence continuing along the same line S84°59'04"W 159.75 feet; thence parallel with the East line of said section S00°52'01"W 261.14 feet; thence S89°08'05"E 158.91 feet; thence parallel with and 42.00 feet Westerly of the East line of said section N00°52'01"E 277.51 feet to the Point of Beginning.

The above parcel contains 0.98 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

DESCRIPTION
PARCEL 008,005

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the East line of said section S00°52'01"W 1272.85 feet; thence N89°07'59"W 42.00 feet to the Point of Beginning; thence continuing along the same line N89°07'59"W 259.26 feet; thence N03°09'06"E 276.22 feet; thence S89°07'59"E 248.25 feet; thence S00°52'01"W 276.00 feet to the Point of Beginning.

The above parcel contains 1.61 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

DESCRIPTION
PARCEL 004,009,010

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the East line of said section S00°52'01"W 1272.85 feet; thence N89°07'59"W 42.00 feet to the Point of Beginning; thence continuing along the same line N89°07'59"W 259.26 feet; thence S03°09'06"W 237.65 feet to the North line of Eleventh Street (66' wide); thence along said North line on the following three (3) courses: S84°28'39"E 187.32 feet, along a curve to the left (R=1113.21 feet, Delta=03°45'57", Chord=S86°21'37"E 73.15 feet) 73.17 feet and S88°14'35"E 8.97 feet; thence parallel with and 42.00 feet Westerly of the East line of said section N00°52'01"E 256.34 feet to the Point of Beginning.

The above parcel contains 1.50 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



**Engineers • Surveyors
Environmental Services**

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
616 946-9191
Fax 616 941-4603

Prepared for: **GRAND TRAVERSE COMMONS
REDEVELOPMENT CORPORATION**

Sheet 4 of 6

Date December 8, 1993

File No. 93035.02-C

DESCRIPTION
PARCEL 003

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the East line of said section S00°52'01"W 1272.85 feet; thence N89°07'59"W 301.26 feet; thence S03°09'06"W 64.65 feet to the Point of Beginning; thence continuing along the same line S03°09'06"W 173.00 feet to the North line of Eleventh Street (66'wide); thence along said North line N84°28'39"W 31.00 feet and along a curve to the left (R=3007.66 feet, Delta=02°23'09", Chord=N85°40'13"W 125.23 feet) 125.24 feet; thence N01°51'20"E 169.02 feet; thence S86°54'21"E 160.00 feet to the Point of Beginning.

The above parcel contains 0.62 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

DESCRIPTION
PARCEL 011,002

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the East line of said section S00°52'01"W 1272.85 feet; thence N89°07'59"W 301.26 feet; thence S03°09'06"W 64.65 feet; thence N86°54'21"W 160.00 feet to the Point of Beginning; thence S01°51'20"W 169.02 feet to the North line of Eleventh Street (66'wide); thence along said North line along a curve to left (R=3007.66 feet, Delta=05°41'00", Chord=N89°42'18"W 298.22 feet) 298.34 feet; thence N01°38'45"E 172.00 feet; thence N88°39'28"E 150.00 feet; thence S86°54'21"E 149.00 feet to the Point of Beginning.

The above parcel contains 1.17 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

DESCRIPTION
PARCEL R'R'

Part of the South 1/2 of Section 9, T27N, R11W, Garfield Township and City of Traverse City, Grand Traverse County, Michigan more fully described as follows:

Commencing at the West 1/4 corner of said Section 9; thence along the West line of said section S00°49'09"W 1314.34 feet; thence along the South 1/8 line of said section N89°36'42"E 659.34 feet to the Northwest corner of the East 1/2 of the Southwest 1/4 of the Southwest 1/4 of said section and the Point of Beginning; thence N68°11'47"E 1816.48 feet to the Southwest corner of the Arnell Engstrom property as recorded in Liber 0917, Page 221; thence along the South line of said parcel S86°43'16"E 563.42 feet; thence S00°02'23"W 294.94 feet; thence along a curve to the right (R=137.00 feet, Delta=85°17'02", Chord=S42°40'54"W 185.61 feet) 203.92 feet; thence S85°19'25"W 176.44 feet; thence parallel with and 33.00 feet Westerly of the North-South 1/4 line of said section S00°43'58"W 435.70 feet to the centerline of County Road No. 633 (Silver Lake Road); thence along said centerline S59°37'38"W 2130.10 feet to the South line of said section; thence along said South line S89°48'15"W 122.24 feet; thence along the West line of said East 1/2 of the Southwest 1/4 of the Southwest 1/4 N00°48'08"E 1316.54 feet to the Point of Beginning.

The above parcel contains 56.26 acres of land, more or less.
Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



Engineers • Surveyors
Environmental Services
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Traverse City, MI 49684-4093
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Fax 616 941-4603

GRAND TRAVERSE COMMONS
Prepared for: REDEVELOPMENT CORPORATION
Sheet 5 of 6
Date December 8, 1993
File No. 93035.02-C

**DESCRIPTION
PARCEL VV**

Part of the Northwest fractional 1/4 of Section 9, T27N, R11W, Garfield Township, Grand Traverse County, Michigan more fully described as follows:

Commencing at the West 1/4 corner of said Section 9; thence along the West line of said section N00°54'19"E 962.96 feet to a point S00°54'19"W 300.00 feet from the centerline of County Road No. 610 (Long Lake Road) and the Point of Beginning; thence EAST 1613.66 feet; thence NORTH 1593.02 feet to the South line of a parcel described in Liber 462, Page 363; thence along the Southerly line of said parcel S88°52'15"W (recorded as S89°47'10"W) 400.00 feet to the centerline of said County Road No. 610; thence along said centerline on the following three (3) courses: S31°55'10"W 863.87 feet, along a curve to the right (R=1145.92 feet, Delta=34°02'46", Chord=S48°51'45"W 670.95 feet) 680.93 feet and S65°53'09"W 270.53 feet to said West line of Section 9; thence along said section line S00°54'19"W 300.00 feet to the Point of Beginning.

The above parcel contains 36.20 acres of land, more or less.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



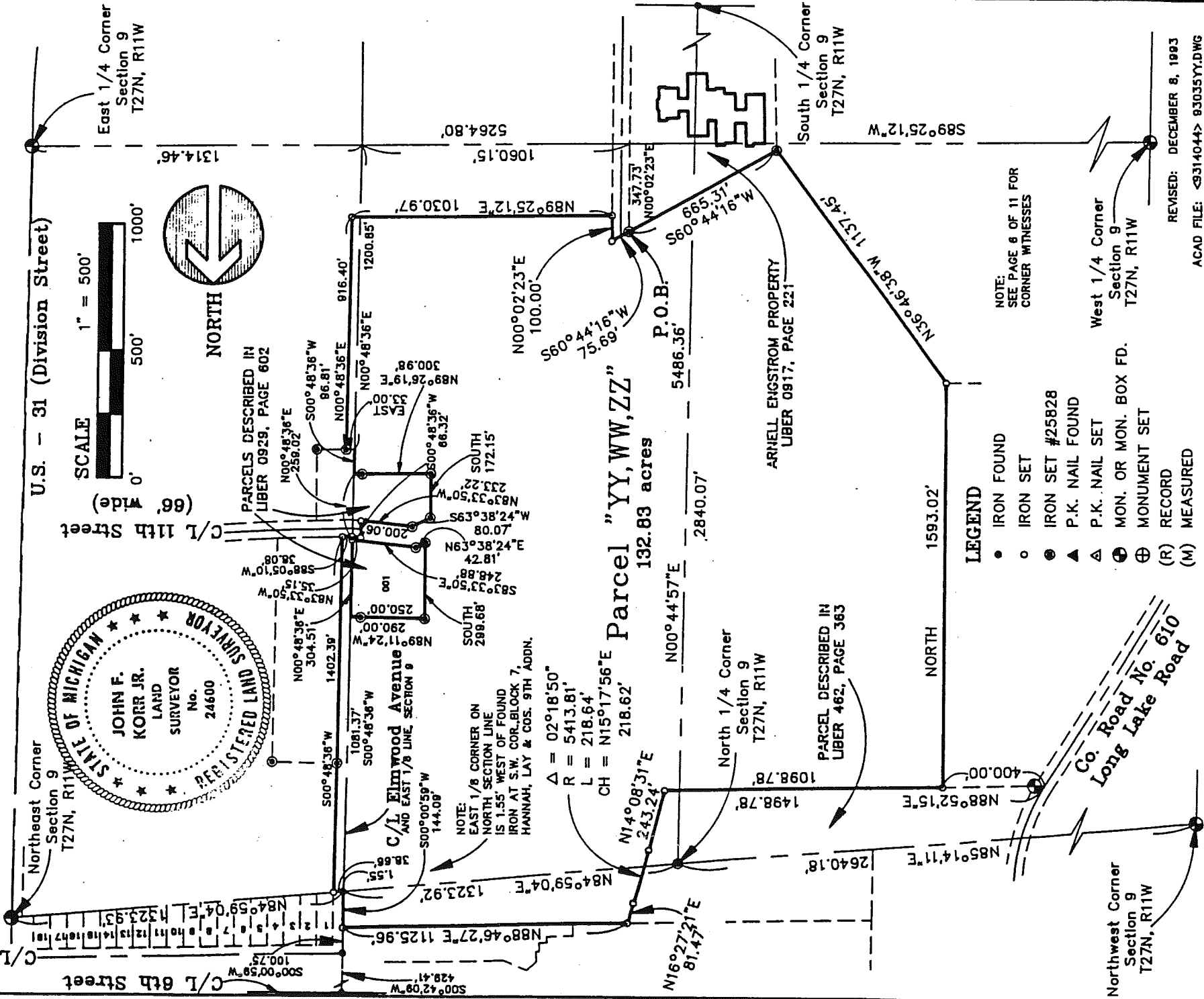
**Engineers • Surveyors
Environmental Services**

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Traverse City, MI 49684-4093
616 946-9191
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GRAND TRAVERSE COMMONS
REDEVELOPMENT CORPORATION

Prepared for: _____
Sheet 6 of 6
Date December 8, 1993
File No. 93035.02-C

CERTIFICATE OF SURVEY
PART OF THE SOUTH 1/2 OF SECTION 4 AND PART OF THE NORTHWEST FRACTIONAL 1/4
AND PART OF THE NORTHEAST FRACTIONAL 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY AND GARFIELD TOWNSHIP, GRAND TRAVERSE COUNTY, MICHIGAN



I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.
The basis for bearings is: A previous survey by Fred J.W. Soll, R.L.S. #1090.

Error of Closure is 1' / 5000' +

Gosling Czubak Associates

Engineers - Surveyors
Environmental Services

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525 West Fourteenth
Traverse City, MI 49604-4093
PH: 616/946-9191
FAX: 616/941-4603

FOR:

**Grand Traverse Commons
Redevelopment Corporation**

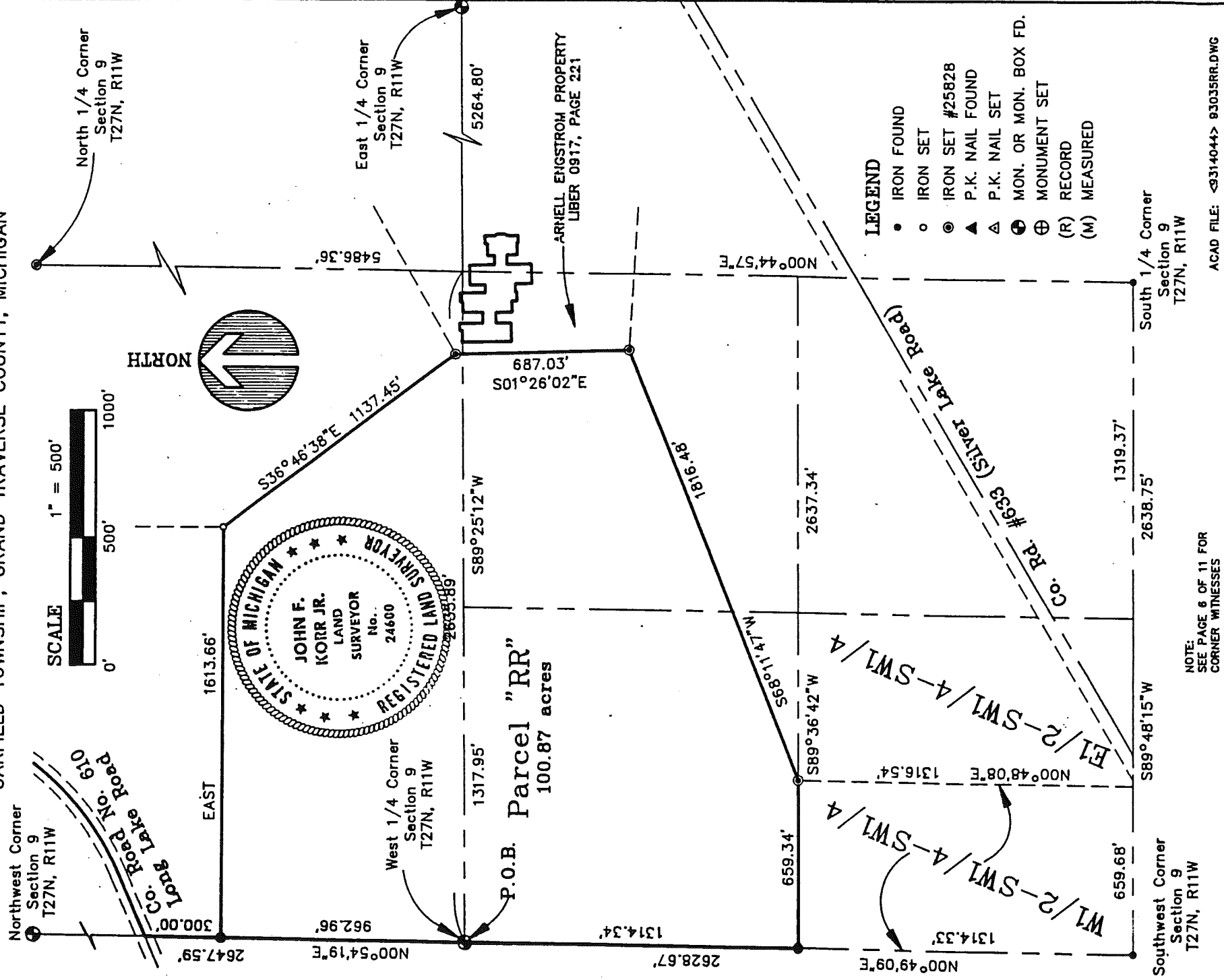
DATE: October 26, 1993
SHEET 1 of 11
DWG: B.A.
CHK: J.F.K.
FILE NO. 93035.02-C

R.L.S. No. 24600

REvised: DECEMBER 8, 1993
ACAD FILE: <9314044> 93035YY, 1-500, 12/08/93 at 14:53
C:\WORKING\9314044\93035YY, 1-500, 12/08/93 at 14:53

CERTIFICATE OF SURVEY

PART OF THE NORTHWEST FRACTIONAL 1/4 AND
PART OF THE SOUTHWEST 1/4 OF SECTION 9, T27N, R11W,
GARFIELD TOWNSHIP, GRAND TRAVERSE COUNTY, MICHIGAN



I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.
The basis for bearings is: A previous survey by J.M. Soli, R.L.S. #1090.

Error of Closure is 1' / 5000' +

Gosling Czubak Associates



Engineers - Surveyors
Environmental Services

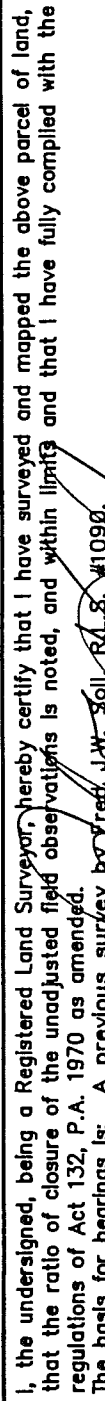
Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
PH: 616/946-9191
FAX: 616/941-4603

FOR:

**Grand Traverse Commons
Redevelopment Corporation**

DATE: October 26, 1993	SHEET 2 of 11
DWL B.A.	CHK J.F.K.
FILE NO. 93035.02-C	

PART OF THE NORTHEAST FRACTIONAL 1/4 AND
PART OF THE SOUTHEAST 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN

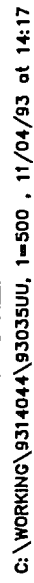
R.L.S. No. 24600

**Grand Traverse Commons
Redevelopment Corporation**

**Engineers — Surveyors
Environmental Services**

DATE: October 26, 1993	SHEET 3 of 11
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PART OF THE NORTHEAST FRACTIONAL 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN



I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.

survey by ~~Fred t.W.~~ Soll, R.L.S. #1090.

Error of Closure is 1' / 5000' +

R.L.S. No. 24600

Gosling Czubak Associates

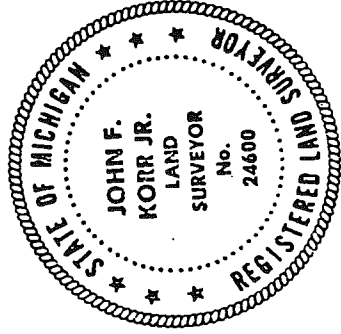
**Engineers – Surveyors
Environmental Services**

Grand Traverse Commons
Redevelopment Corporation

DATE: October 26, 1993 SHEET 4 of 11

DWL	B.A.	CHK	J.F.K.	FILE NO.	93035.02-C
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CERTIFICATE OF SURVEY
PART OF THE NORTHEAST FRACTIONAL 1/4 OF SECTION 9, T27N, R11W,
CITY OF TRAVERSE CITY, GRAND TRAVERSE COUNTY, MICHIGAN



- LEGEND**
- IRON FOUND
 - IRON SET
 - IRON SET #25828
 - ▲ P.K. NAIL FOUND
 - △ P.K. NAIL SET
 - ⊕ MONUMENT OR
 - ⊕ MON. BOX FOUND
 - ⊕ MONUMENT SET
 - (R) RECORD
 - (M) MEASURED

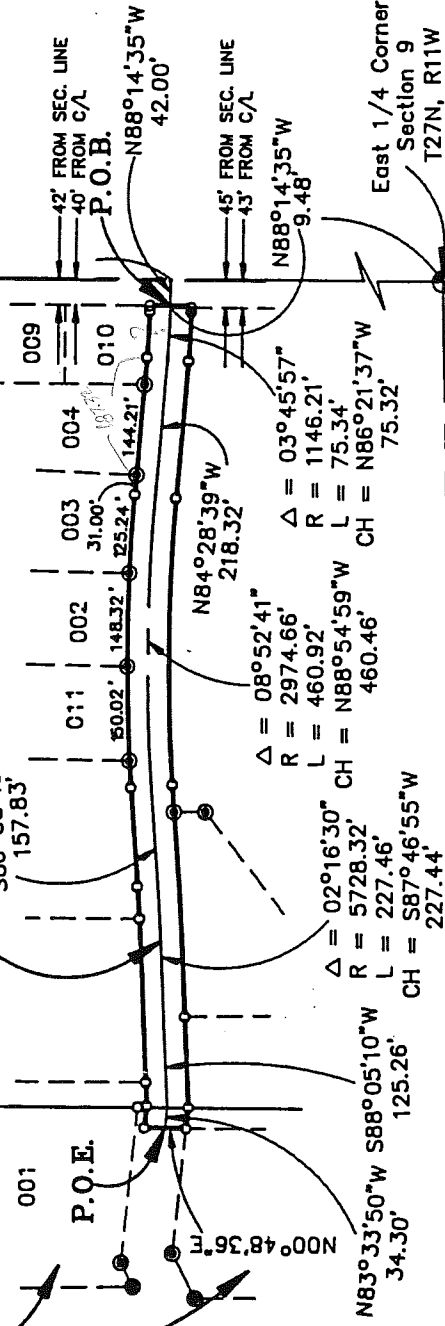


PARCELS DESCRIBED IN
LIBER 0929, PAGE 602
Parcel "YY,WW,ZZ"
SEE SHEET 1

C/L Elmwood Avenue
AND EAST 1/8 LINE, SECTION 9

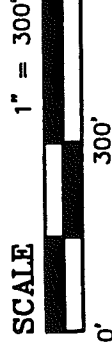
Parcel "UU"
SEE SHEET 4

C/L 11th Street
(66' wide)
(1.98 acres)



Parcel "TT"
SEE SHEET 3

NOTE:
SEE PAGE 6 OF 11 FOR
CORNER WITNESSES



ACAD FILE: <9314044> 11THST.DWG
C:\WORKING\9314044\11THST, 1=300 , 11/04/93 at 14:32

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.
The basis for bearings is: A previous survey by Fred J. N. Soli, R.L.S. #1090.

Error of Closure is 1' / 5000' +

R.L.S. No. 24600 1

Gosling Czubak Associates

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FOR:

**Grand Traverse Commons
Redevelopment Corporation**

DATE: October 26, 1993 SHEET 5 of 11

DWL B.A. CHK J.F.K. FILE NO. 93035.02-C

WITNESSES

N.W. CORNER, SECTION 9, T27N, R11W
FD. 1-1/2" IRON BAR IN MON. BOX
FD. NAIL & TAG #25828 S03°W 35.50'
FD. SPIKE IN 12" CHERRY S43°E 53.38'
FD. SPIKE IN 14" CEDAR N08°E 53.81'
FD. SPIKE IN 12" CEDAR N33°E 63.59'

NORTH 1/4 CORNER, SECTION 9, T27N, R11W
FOUND 3/4"x30" PIPE & CAP #25828
SET BY P. BEAVER FROM J.W. SOLL WITNESSES
FD. CENTER OF S.E. BOLT OF

ALUMINUM LIGHT POLE N13°W 27.43'
FD. N.W. CORNER COTTAGE 27 N75°E 200.12'
FD. S.W. CORNER COTTAGE 27 S69°E 215.36'
SET SPIKE IN 6" MAPLE S13°W 43.05'

N.E. CORNER, SECTION 9, T27N, R11W
FD. 3" DISC IN MON. BOX
RESET SPIKE IN 24" OAK S48°W 62.68'
MSHD REF. TAG IN P.POLE S17°E 77.40'
MSHD REF. TAG IN P.POLE S29°E 49.89'
MSHD REF. TAG IN P.POLE S87°W 29.58'

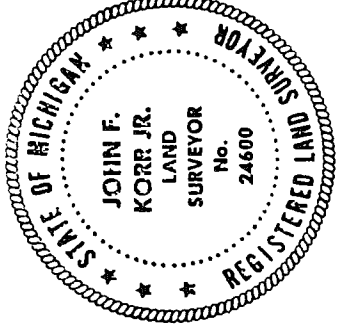
WEST 1/4 CORNER, SECTION 9, T27N, R11W
FOUND 3" BRASS DISC
SET SPIKE IN 10" MAPLE N71°E 27.14'
FD. SPK & MSHD TAG IN 5" MAPLE N32°W 29.74'
FD. SPIKE IN 6" MAPLE N68°W 28.95'
FD. SPIKE IN 10" MAPLE S78°W 18.45'

EAST 1/4 CORNER, SECTION 9, T27N, R11W
FOUND IRON & CAP #25828 IN MON. BOX
SET SPIKE IN P.POLE N88°W 91.72'
SET SPIKE IN P.POLE N77°E 136.65'
FOUND P-K IN P.POLE S38°E 121.27'
SET SPIKE IN LIGHT POLE S22°W 146.84'

S.W. CORNER, SECTION 9, T27N, R11W
FOUND 1/2"x12" CABIN SPIKE OVER
IRON & CAP #25(0or8)75
FD. SPIKE IN 14" MAPLE N13°E 171.18'
FACE OF TOP NUT ON 2' DIA.

FLANGE PLATE OF STEEL STORAGE TANK EAST 16.89'
FD. SPIKE IN 20" MAPLE S04°W 171.69'
CHISLED "X" IN TOP WEST END 15" CMP S38°W 55.90'

SOUTH 1/4 CORNER, SECTION 9, T27N, R11W
FD. IRON & (UNREADABLE) CAP IN C/L FRANKIE RD.
N.E. COR. GARAGE (SIDING) S88°W 56.07'
S.E. COR. GARAGE (SIDING) S65°W 87.00'
FD. CHISLED "X" N. END TOP OF CURB N45°E 54.98'
N.W. COR. MEIJER BLDG. S68°E 96.34'



ACAD FILE: <9314044> SHEET8.DWG
C:\WORKING\9314044\SHEET8, 1=300 , 11/04/93 at 14:36

FOR:

Gosling Czubak Associates



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Grand Traverse Commons Redevelopment Corporation

DATE: October 26, 1993 SHEET 6 of 11

DWN. B.A. CHK. J.F.K. FILE NO. 93035.02-C

DESCRIPTION
PARCEL (COMBINED YY,WW,ZZ) at FMV

Part of the South 1/2 of Section 4, part of the Northwest fractional 1/4 and part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City and Garfield Township, Grand Traverse County, Michigan more fully described as follows:

Commencing at the East 1/4 corner of said Section 9; thence along the East-West 1/4 line of said section S89°25'12"W 2374.61 feet to the East line of the Arnell Engstrom property as recorded in Liber 0917, Page 221; thence along said East line N00°02'23"E 347.73 feet to the Northeast corner of said property and the Point of Beginning; thence along the North line of said property S60°44'16"W 665.31 feet; thence N36°46'38"W 1137.45 feet; thence NORTH 1593.02 feet to the South line of a parcel described in Liber 462, Page 363; thence along the Southerly and Easterly lines of said parcel on the following four (4) courses: N88°52'15"E (recorded as N89°47'10"E) 1098.78 feet to the Westerly right-of-way line of a 33-foot wide road, along said right-of-way line N14°08'31"E (recorded as N15°03'40"E) 243.24 feet, along said right-of-way line on a curve to the right (R=5413.81 feet, Delta=02°18'50", Chord=N15°17'56"E (recorded as N16°13'05"E) 218.62 feet) 218.64 feet and N16°27'21"E (recorded as N17°22'30"E) 81.47 feet; thence along the South line of a parcel described in Liber 177, Page 610 N88°46'27"E (recorded as N89°47'10"E) 1125.96 feet to a point in the centerline of Elmwood Avenue 530.16 feet Southerly along said centerline from the centerline of Sixth Street; thence along the centerline of Elmwood Avenue S00°00'59"W 144.09 feet to the Section line common to said Sections 4 and 9; thence along said section line N84°59'04"E 38.66 feet; thence parallel with and 40.00 feet Easterly of the East 1/8 line of said Section 9 S00°48'36"W 1402.39 feet to the North line of Eleventh Street (66' wide); thence along said North line S88°05'10"W 38.08 feet and N83°33'50"W 35.15 feet; thence S00°48'36"W 66.32 feet; thence along the Northerly, Westerly and Southerly lines of a parcel described in Liber 0929, Page 602 on the following four (4) courses: N83°33'50"W 200.06 feet, S63°38'24"W 80.07 feet, SOUTH 172.15 feet and N89°26'19"E 300.98 feet to the East 1/8 line of said Section 9; thence along said 1/8 line S00°48'36"W 96.81 feet; thence EAST 33.00 feet; thence S00°48'36"W 916.40 feet; thence parallel with the East-West 1/4 line of said section S89°25'12"W 1030.97 feet; thence N00°02'23"E 100.00 feet; thence S60°44'16"W 75.69 feet to the Point of Beginning.

EXCEPT: A parcel of land as recorded in Liber 0929, Page 598 and noted in Liber 0929, Page 602 and described as:

Parcel 1: A parcel of land located in Section 9, T27N, R11W, Grand Traverse County, Michigan and described as follows:

Commencing at the East 1/4 corner of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan; thence South 89 degrees 25'12" West 1314.46 feet, on the East-West 1/4 line of Section 9 to the East line of the West 1/2 of the Northeast 1/4 of said Section 9, being the centerline of Elmwood Avenue; thence North 00 degrees 48'36" East 1556.68 feet on said East line to the point of beginning of this description; thence North 00 degrees 48'36" East 304.51 feet, on said East line; thence North 89 degrees 11'24" West 290.00 feet; thence South 00 degrees 00'00" West 299.69 feet; thence North 63 degrees 38'24" East 42.81 feet; thence South 83 degrees 33'50" East 248.88 feet, to the point of beginning.

The above parcel contains 132.83 acres of land, more or less.
Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



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Fax 616 941-4603

Prepared for: GRAND TRAVERSE COMMONS
REDEVELOPMENT CORPORATION

Sheet 7 of 11
Date October 26, 1993
File No. 93035.02-C

DESCRIPTION
PARCEL RR as PARK LAND

Part of the Northwest fractional 1/4 and part of the Southwest 1/4 of Section 9, T27N, R11W, Garfield Township, Grand Traverse County, Michigan more fully described as follows:

Beginning at the West 1/4 corner of said Section 9; thence along the West line of said section N00°54'19"E 962.96 feet to a point S00°54'19"W 300.00 feet from the centerline of County Road No. 610 (Long Lake Road); thence EAST 1613.66 feet; thence S36°46'38"E 1137.45 feet to the Northwest corner of the Arnell Engstrom property as recorded in Liber 0917, Page 221; thence along the West line of said parcel S01°26'02"E 687.03 feet; thence S68°11'47"W 1816.48 feet to the Northeast corner of the West 1/2 of the Southwest 1/4 of said Southwest 1/4 of Section 9; thence along the South 1/8 line of said section S89°36'42"W 659.34 feet to the West line of said section; thence along said West line N00°49'09"E 1314.34 feet to the Point of Beginning.

The above parcel contains 100.87 acres of land, more or less. Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



**Engineers
Surveyors**

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616 946-9191
Fax 616 941-4603

Grand Traverse Commons
Prepared for: Redevelopment Corporation

Sheet 8 of 11

Date October 26, 1993

File No. 93035.02-C

DESCRIPTION
PARCEL TT as PARK LAND

Part of the Northeast fractional 1/4 and part of the Southeast 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan more fully described as follows:

Commencing at the East 1/4 corner of said Section 9; thence along the East-West 1/4 line of said section S89°25'12"W 2308.61 feet to the Point of Beginning; thence parallel with and 66.00 feet Easterly of the East line of the Arnell Engstrom property as recorded in Liber 0917, Page 221 N00°02'23"E 284.06 feet; thence N89°25'12"E 1030.97 feet; thence parallel with and 33.00 feet Easterly of the East 1/8 line of said Section 9 N00°48'36"E 916.40 feet; thence EAST 116.16 feet; thence N52°57'46"E 407.24 feet; thence NORTH 49.90 feet to the South line of Eleventh Street (66' wide); thence along said South line on the following five (5) courses: N86°38'40"E 43.29 feet, along a curve to the right (R=2941.66 feet, Delta=08°52'41", Chord=S88°54'59"E 455.35 feet) 455.81 feet, S84°28'39"E 218.32 feet, along a curve to the left (R=1179.21 feet, Delta=03°45'57", Chord=S86°21'37"E 77.49 feet) 77.50 feet and S88°14'35"E 6.99 feet; thence parallel with and 45.00 feet Westerly of the East line of said Section 9 S00°52'01"W 1477.70 feet to the centerline of County Road No. 633 (Silver Lake Road); thence along said centerline S59°08'51"W 2994.21 feet; thence parallel with and 33.00 feet Easterly of the North-South 1/4 line of said section N00°43'58"E 335.46 feet; thence N85°19'25"E 116.40 feet; thence along a curve to the left (R=203.00 feet, Delta=85°17'02", Chord=N42°40'55"E 275.03 feet) 302.16 feet; thence N00°02'23"E 992.17 feet to the Point of Beginning.

The above parcel contains 84.57 acres of land, more or less.
Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



**Engineers
Surveyors**

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
616 946-9191
Fax 616 941-4603

Grand Traverse Commons

Prepared for: Redevelopment Corporation

Sheet 9 of 11

Date October 26, 1993

File No. 93035.02-C

DESCRIPTION
PARCEL UU as PARK LAND

Part of the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan more fully described as follows:

Commencing at the Northeast corner of said Section 9; thence along the North line of said section S84°59'04"W 201.97 feet to the Point of Beginning; thence parallel with the East line of said section S00°52'01"W 261.14 feet; thence S89°07'59"E 158.91 feet; thence parallel with and 42.00 feet Westerly of said East line S00°52'01"W 715.01 feet; thence N89°07'59"W 248.25 feet; thence S03°09'06"W 340.87 feet; thence N86°54'21"W 309.00 feet; thence S88°39'28"W 150.00 feet; thence S01°38'43"W 172.00 feet to the North line of Eleventh Street (66' wide); thence along said North line on the following three (3) courses: along a curve to the left (R=3007.66 feet, Delta=00°48'32", Chord=S87°03'10"W 42.46 feet) 42.46 feet, S86°38'40"W 157.83 feet and along a curve to the right (R=5695.32 feet, Delta=00°30'51", Chord=S86°54'14"W 51.11 feet) 51.11 feet; thence parallel with the East 1/8 line of said Section 9 N00°48'36"E 881.28 feet; thence N89°11'24"W 260.00 feet; thence parallel with and 40.00 feet Easterly of said East 1/8 line N00°48'36"E 422.15 feet; thence N84°59'04"E 701.68 feet; thence S00°48'36"W 75.00 feet; thence N84°59'04"E 125.00 feet; thence N00°48'36"E 141.34 feet; thence S84°59'04"W 826.68 feet; thence parallel with and 40.00 feet Easterly of said East 1/8 line N00°48'36"E 20.10 feet to the aforesaid North line of said Section 9; thence along said line N84°59'04"E 1081.75 feet to the Point of Beginning.

The above parcel contains 28.31 acres of land, more or less.
Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



**Engineers
Surveyors**

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Fax 616.941-4603

Grand Traverse Commons
Prepared for: Redevelopment Corporation

Sheet 10 of 11
Date October 26, 1993
File No. 93035.02-C

DESCRIPTION
PARCEL COVERING ELEVENTH STREET (66' WIDE)
FROM DIVISION STREET TO ELMWOOD AVENUE

A parcel of land 66.00 feet in width lying 33.00 feet each side of and coincident with the following centerline in the Northeast fractional 1/4 of Section 9, T27N, R11W, City of Traverse City, Grand Traverse County, Michigan described as follows:

Commencing at the Northeast corner of said Section 9; thence along the East line of said section S00°52'01"W 1562.85 feet; thence N88°14'35"W 42.00 feet to the Point of Beginning; thence continuing on the same line N88°14'35"W 9.48 feet; thence along a curve to the right (R=1146.21 feet, Delta=03°45'57", Chord=N86°21'37"W 75.32 feet) 75.34 feet; thence N84°28'39"W 218.32 feet; thence along a curve to the left (R=2974.66 feet, Delta=08°52'41", Chord=N88°54'59"W 460.46 feet) 460.92 feet; thence S86°38'40"W 157.83 feet; thence along a curve to the right (R=5728.32 feet, Delta=02°16'30", Chord=S87°46'55"W 227.44 feet) 227.46 feet; thence S88°05'10"W 125.26 feet; thence N83°33'50"W 34.30 feet to the Point of Ending.

The above parcel contains 1.98 acres of land, more or less.

The sidelines of the above parcel lengthen or shorten to intersect a bearing of N00°52'01"E and S00°52'01"W from the Point of Beginning and to intersect a bearing of N00°48'36"E and S00°48'36"W from the Point of Ending.

Subject to the Right-of way of Highway US-31 (Division Street) as recorded in Liber 195, Page 306 over a portion of the Easterly 2.00 feet of the above described parcel.

Subject to all applicable building, use restrictions and easements, if any, affecting the premises.

Gosling Czubak Associates



**Engineers
Surveyors**

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
616 946-9191
Fax 616 941-4603

Prepared for: Grand Traverse Commons
Redevelopment Corporation

Sheet 11 of 11

Date October 26, 1993

File No. 93035.02-C

PART OF THE SOUTH 1/2 OF SECTION 9,
T27N, R11W, CITY OF TRAVERSE CITY,
GRAND TRAVERSE COUNTY, MICHIGAN

Amell Engstrom
Parcel per
Survey by
Peter D. Beaver
February 7, 1992

Amell Engstrom
Parcel per
Survey by
Peter D. Beaver
February 7, 1992

04/14/09

Centerline
66' Easment for
Ingress, egress and
for the installation
and maintenance
of public and
private utilities.

CURVE

$$\begin{aligned}\Delta &= 85^{\circ}17'02'' \\ R &= 170.00' \\ L &= 253.04' \\ CH &= S42^{\circ}40'54''W \\ &\quad 230.32'\end{aligned}$$

WITNESSES
Southwest Cor
Section 9, T27N,

● IRON FOUND
○ IRON SET
▲ P.K. NAIL FOUND
△ P.K. NAIL SET
⊕ MONUMENT FOUND
⊗ MONUMENT SET
(R) RECORD
(M) MEASURED

WITNESSES
Southwest Corner
Section 9, T27N, R11W

FOUND 1/2" X 12" SQ. CABIN SPIKE
OVER IRON & CAP
N13°E 171.18' FD. SPIKE IN 14" MAPLE
EAST 16.89' FACE OF TOP NUT ON 2' DIA.
FLANGE PLACE OF STORAGE TANK
S04°W 171.68' FD. SPIKE IN 20" MAPLE
S38°W 55.80' CHISLED "X" IN TOP OF
WEST END 15' C.M.P.

South 1/4 Corner
Section 9, T27N, R11W

S88°W 56.07' N.E. CORNER GARAGE SIDING
S65°W 87.00' S.E. CORNER HOUSE SIDING
N45°E 54.98' FOUND CHISLED "X" IN
NORTH END TOP OF CURB
S88°E 96.34' N.W. CORNER MEIJER BLDG.

Southwest Corner
Section 9
T27N, R11W

South 1/4 Corner
— Section 9
T27N, R11W

REMOVED: JULY 30, 1993

ACAD FILE: <9314034> E9303501.DWG

C:\DCA\CIVIL\P\9303501\E9303501, 1=200, 07/30/93 at 14:05

I, the undersigned, being a Registered Land Surveyor, hereby certify that I have surveyed and mapped the above parcel of land, that the ratio of closure of the unadjusted field observations is noted, and within limits and that I have fully complied with the regulations of Act 132, P.A. 1970 as amended.

The basis for bearings is: survey dated February 7, 1992 by Peter D. Beaver, #25828. Regulations of Act 132, P.A. 1970 as amended.

Error of Closure Is 1' / 5000' +

R.L.S. No.

24600

Gosling Czubak Associates

**Engineers – Surveyors
Environmental Services**

Gosling Czubak Associates, P.C.
525 West Fourteenth
Traverse City, MI 49684-4093
PH: 616/946-9191
FAX: 616/941-4603

**Grand Traverse Commons
Redevelopment Corporation**

DATE: July 22, 1993 SHEET 1 of 2

DWN. B.A.	CHK. J.F.K.	FILE NO.	93035.01-C
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DWN. B.A.	CHK. J.F.K.	FILE NO.	93035.01-C
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**DESCRIPTION
66' WIDE EASEMENT**

A 66 foot wide Easement for ingress, egress and for the installation and maintenance of public and private utilities lying 33.00 feet each side of and contiguous with the following described centerline in part of the Southeast 1/4 of Section 9, T27N, R11W, City of Traverse City, and part of the Southwest 1/4 of Section 9, T27N, R11W, Garfield Township, Grand Traverse County, Michigan:

Commencing at the East 1/4 Corner of said Section 9; thence along the East - West 1/4 line of said section S89°25'12"W 2374.61 feet; thence N00°02'23"E 347.73 feet; thence N60°44'16"E 37.84 feet to the Point of Beginning; thence S00°02'23"W 1357.71 feet; thence along a curve to the right (R=170.00 feet, Delta=85°17'02", Chord=S42°40'54"W 230.32 feet) 253.04 feet; thence S85°19'25"W 146.42 feet; thence S00°43'58"W 385.70 feet to the centerline of Silver Lake Road and the Point of Ending. The sidelines of the above described easment lengthen or shorten to terminate at the centerline of said Silver Lake Road at the Point of Ending and to terminate at a line running S60°44'16"W and N60°44'16"E from the Point of Beginning.

Gosling Czubak Associates



**Engineers
Surveyors**

Gosling Czubak Associates, P.C.
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Grand Traverse Commons
Prepared for: Redevelopment Corporation
Sheet 2 of 2
Date July 22, 1993
File No. 93035.01-C
Revised: July 30, 1993

LEGAL DESCRIPTION OF
TRAVERSE BAY AREA INTERMEDIATE SCHOOL DISTRICT PROPERTY
AS PER
ACT 250 DEVELOPMENT PLAN AMENDMENT DP-93-2
APPROVED BY THE JOINT PLANNING COMMISSIONS
IN OCTOBER, 1994

"GRAND TRAVERSE COMMONS REDEVELOPMENT CORPORATION
DEVELOPMENT PLAN AMENDMENT DP-93-2

OCTOBER 14, 1993

This Development Plan Amendment **DP-93-2**, concerns the Traverse Bay Area intermediate School District (TBA) property known as the ARNELL ENGSTROM SCHOOL, located within the GRAND TRAVERSE COMMONS District, Grand Traverse County, Michigan. This Development Plan Amendment is submitted by the Grand Traverse Commons Redevelopment Corporation (GTCRC) on behalf of TBA.

a. **Description of the development area:**

Commencing at the E ¼ corner of Section 9, T27N,R11W, City of Traverse City, Grand Traverse County, Michigan; thence S89°25'12"W 2,374.61 feet, on the E-W ¼ line of said Section 9 to the point of beginning of this description; thence S00°02'23"W 696.52 feet; thence N86°43'16"W 563.42 feet; thence N01°26'02"W 687.03 feet; thence N60°44'16"E 665.31 feet; thence S00°02'23"W 347.73 feet, to the point of beginning. The above described parcel contains 11.38 acres, more or less. All bearings are relative and referenced to a previous survey of this parent parcel by Fred J.W. Soll, R.L.S. #1090, by which observations of Polaris were taken."

B. Traffic Analysis

KIDS CREEK



March 14, 1994

Ms. Suzanne Antosh
Chairperson
Grand Traverse Commons Redevelopment Corporation
1200 West Eleventh Street
Traverse City, Michigan 49684

Dear Ms. Antosh:

Enclosed is the final draft of the traffic study prepared by Barton-Aschman Associates, Inc. which was commissioned by Kids Creek Partners, on behalf of the Grand Traverse Commons Redevelopment Corporation, pursuant to our obligations under the May 27, 1994 Redevelopment Agreement and the December 2, 1993 Exclusivity Agreement between Kids Creek Partners and the Grand Traverse Commons Redevelopment Corporation. The enclosed draft should be incorporated into the District Plan for the Grand Traverse Commons Planned Redevelopment District.

Sincerely,

A handwritten signature in black ink, appearing to read 'Carl T. Groesbeck', written over a horizontal line.

Carl T. Groesbeck, President
Kids Creek Development Company

357 West Chicago Ave
Suite 400
Chicago, IL 60610

312.944.8444 Voice
312.944.8432 Fax

720 South Elmwood
Traverse City, MI 49684

616.929.4662 Voice

Site Traffic Analysis
**Grand Traverse Commons
Redevelopment**
Traverse City, Michigan

Prepared for
KIDS CREEK PARTNERS

BY BARTON-ASCHMAN ASSOCIATES, INC.

Site Traffic Analysis
Grand Traverse Commons Redevelopment
Traverse City, Michigan

Prepared for
Kids Creek Partners

By Barton-Aschman Associates, Inc.

Evanston, Illinois
March 1994

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1. Introduction

Barton-Aschman Associates, Inc., was retained by Kids Creek Partners (KCP) to determine the traffic impacts of the proposed Grand Traverse Commons Redevelopment to be located on the site of the existing Traverse City State Hospital property, commonly referred to as Grand Traverse Commons (GTC) in Traverse City, Michigan. The purpose of the study was to conduct a comprehensive traffic and transportation study for the GTC property as well as the existing and proposed land-use adjacent to the site. To this extent, the study examined, analyzed, and evaluated the impact of the proposed redevelopment of GTC property as well as the following issues:

- The existing traffic problems and roadway capacity deficiencies in the site vicinity.
- The existing and future impacts of the MMC and GTMCF on the local roadway system and the surrounding land-uses, particularly the adjacent neighborhoods and the GTC property.
- The intrusion of traffic from the MMC, GTMCF, and the GTC property on the neighborhoods and other developments surrounding these facilities.
- The impact that general growth in the area (other redevelopment of the GTC property and growth at MMC and GTMCF) will have on the site, adjacent land-uses, and the roadway system.

KCP retained Barton-Aschman on behalf of KCP and the Grand Traverse Commons Redevelopment Corporation (GTCRC), with KCP's understanding of participation by the Munson Medical Center (MMC) and the cooperation of Grand Traverse Medical Care Facility (GTMCF), the City of Traverse City, and the Township of Garfield.

The redevelopment of the GTC property will encompass a wide variety of development and a number of different land-uses. The principal components of the redevelopment of the GTC

property will consist of the development of a retirement community, the expansion of the MMC on the existing GTMCF property and GTC property, the construction of a new GTMCF, the expansion of the Traverse Bay Area School District (TBASD) facility (which is currently located within the GTC site), and the development of large conservation subareas. The following outlines the major development of the proposed redevelopment plan:

- Retirement Community:

Continuing Care	400 units
Independent Housing	200 units
Independent Senior Housing	300 units
- MMC Expansion—Medical Office 150,000 square feet
- New GTMCF

Nursing Care Facility	220 beds
Alzheimer Facility	20 units
Intergenerational Day Care	80 people
- TBASD Expansion—Conference Center 2,500 square feet
- Conservation Subareas 310 acres
- Recreation/Administration Offices 50 employees

It should be noted that the proposed 220-bed nursing care facility will replace the existing 180-bed facility that is currently located at GTMCF.

The GTC property, which is approximately 500 acres in size, is bounded by Division Street on the east, Silver Lake Road on the south, the Munson Medical Center (MMC) and Grand Traverse Medical Care Facility (GTMCF) campus on the north, and Long Lake Road and undeveloped hilly terrain on the west. The GTC property currently houses a limited number of uses, including the TBASD intermediate school, but for the most part the property is vacant.

The MMC and the GTMCF are located adjacent to the GTC property. The GTC property, the MMC, and the GTMCF currently share both access and circulation roads. The MMC and GTMCF property is bounded by Sixth Street on the north, Elmwood Avenue on the east, GTC on the south, and undeveloped hilly terrain on the west. The proposed Grand Traverse Commons Redevelopment Project will accommodate the expansion of the MMC and the relocation of the GTMCF onto the GTC property.

The principal objectives of the traffic planning effort are to address the internal circulation and access needs of the Grand Traverse Commons Redevelopment Project, as well as examining the existing and future impacts of the MMC, GTMCF, and other land-uses in the site vicinity. This includes analyzing and evaluating alternatives to prevent traffic from crossing through the

site, and minimizing the impact of traffic volumes from the resulting redevelopment of the GTC as well as the MMC and GTMCF on the surrounding neighborhoods. Kids Creek Partners and the Grand Traverse Commons Redevelopment Corporation have been working and continue to work with Munson Medical Center, Grand Traverse Medical Care Facility, groups from the adjacent neighborhoods, community organizations, and units of government to address and coordinate traffic and circulation needs. Particular attention is being focused on MMC and GTMCF's employee traffic with regard to ingress and egress through the Commons site and the adjacent neighborhoods.

Barton-Aschman was retained to determine the traffic impacts on the surrounding roadway network system that would result from the proposed Grand Traverse Commons Redevelopment and any potential growth at both the MMC and the GTMCF. This traffic impact analysis included an evaluation of the existing and project improvements warranted near the GTC property.

Methodology

The objectives of this study were to (1) evaluate the impact that traffic generated by Grand Traverse Commons Redevelopment will have on traffic conditions on the surrounding roadways and in the local neighborhoods, (2) review and evaluate the planned site access system and recommend any improvements necessary to provide safe and efficient ingress and egress, and (3) recommend any improvements to external roadways that will be necessary to accommodate site-generated and through (nonsite) traffic volumes. The scope of the analysis included the following steps.

Site Accessibility Investigation and Data Collection

Existing traffic and roadway conditions that might affect the access of the proposed development were identified from field surveys, on-site observations during peak traffic periods, and discussions with local officials. Data was obtained on existing and historical traffic volumes, roadways, and planned or proposed roadway improvements. Traffic counts also were conducted during the weekday morning and evening peak periods at major roadway intersections in the site vicinity, as well as at the site access drives.

Evaluation of Access and Circulation System

During the preliminary stages of the study, Barton-Aschman worked closely with Kids Creek Partners, its development team, the MMC, the GTMCF, groups from the adjacent neighborhoods, community organizations, and the various government agencies to address and coordinate the circulation and access needs of the redevelopment of the GTC and the existing MMC and GTMCF. The primary objective in this planning effort was to develop an adequate circulation and access system for the redevelopment project while minimizing the traffic impact of the redevelopment on the surrounding neighborhoods, commercial developments, and the area in general. While a number of alternative circulation and access systems were explored, the alternative that was chosen as the preferred option adequately balances the competing concerns within the com-

munity regarding access to, and circulation through, the property. The following lists some of the design elements of the preferred alternative:

- The system is designed to provide multiple access points, which will help disperse MMC and GTMCF traffic over the various approaches, and which will mitigate the impact that these facilities currently have on the existing roadway system and on the adjacent neighborhoods. Likewise, these multiple access points will also disperse the traffic generated by any future growth of the MMC and GTMCF and the redevelopment of the GTC, which will reduce the impact of these potential developments on the roadway system and the surrounding neighborhood.
- The system is designed to lessen the traffic impacts on the community, particularly the adjacent neighborhoods, by providing multiple access points into the circulation system and directing heavy traffic flow away from the adjacent neighborhoods. Further, many of the features of the proposed system will separate, from a vehicular traffic standpoint, the neighborhood from GTC, the MMC, and the GTMCF.
- The system is designed to limit negative traffic impacts internally as well as externally. It is based on a concept of multiple access points terminating in a loop system serving each development subarea. Intrusion from one loop system to another will not be possible. The design and execution of this system will prevent the circulation of cross-through traffic while maintaining a system for emergency and service vehicles throughout the property. The concept maintains the integrity of the site and the continuity of the open space areas.

Traffic Characteristics of the Proposed Development

The directions from which patients, visitors, and employees would approach and depart the site and the MMC and the GTMCF were determined by an analysis of existing travel patterns to and from the MMC and on employee home residence information. The additional traffic volumes that would be generated by the proposed development were based on counts of existing traffic at the MMC and the GTMCF, on studies conducted by Barton-Aschman at similar facilities, and on rates published by the Institute of Transportation Engineers (ITE).

Traffic Assignment and Analysis

Based on the directional distribution analysis, the estimated traffic volumes traveling to and from the Grand Traverse Commons Redevelopment, the MMC, and the GTMCF during the peak hours were assigned to the roadway system at the site access points. Site-generated traffic volumes were combined with projected traffic in order to obtain the total traffic volumes projected for the site access points and the external roadways. Capacity analyses for the total peak traffic periods were conducted to determine the roadway and site access requirements necessary to serve site traffic demands.

**2.
Site Accessibility**

Factors that affect access to any development site include its location with respect to the area transportation system and the characteristics of that system. The accessibility of the site will be governed primarily by:

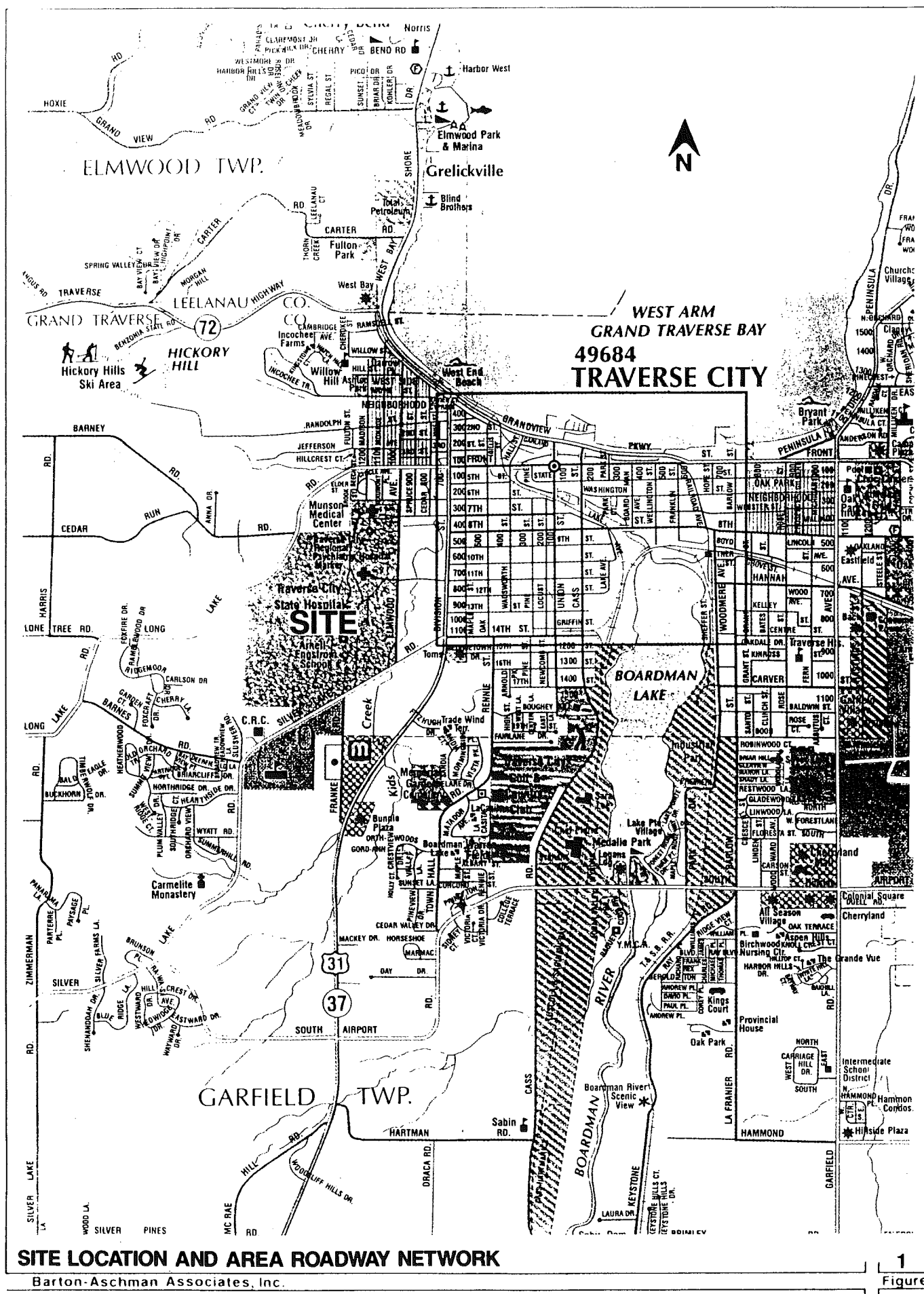
1. Its location with respect to area roadways, which serve as approach and departure routes.
2. The existing condition of these roadways.
3. Planned or proposed roadway improvements.
4. Planned or proposed developments in the area.

Site Location

The GTC property is bounded on the south by Silver Lake Road, on the east by Division Street, on the north by the MMC and the GTMCF, and on the west by Long Lake Road and undeveloped hilly terrain. The land-use near the site consists of residential neighborhoods to the north, east, and west. Commercial uses are located south of the site, and north and west of the site along Division Street and Front Street. Downtown Traverse City, Michigan, is located approximately one mile east of the site. The MMC and the GTMCF and their supporting medical offices are located directly north of the site. Figure 1 illustrates the location of the site with respect to the area roadnet.

Area Roadways

The major roadways that serve the GTC property are described in the following text.



Front Street is an east-west arterial roadway that extends from East Bay Boulevard west to Madison Street. West of Madison Street, Front Street becomes Long Lake Road and extends in a west and southwest direction to U.S. Route 31. In the site vicinity, Front Street has a very wide two-lane cross section, with parking permitted on the north side of the street. Front Street provides separate left-turn lanes at its signalized intersection with Division Street. In the site vicinity, Front Street has a posted speed limit of 25 mph.

Long Lake Road has a four-lane cross section between Madison Street and Cedar Run Road. South of Cedar Run Road, Long Lake Road has a two-lane cross section. At its intersection with Madison Street, eastbound Long Lake Road has a separate right-turn lane. The posted speed limit on Long Lake Road is 35 mph north of Cedar Run Road and 45 mph south of Cedar Run Road.

Division Street is a north-south arterial roadway that extends from Grandview Parkway (U.S. Route 31, MI 72, MI 37) to Silver Lake Road/Fourteenth Street. South of Silver Lake Road/Fourteenth Street, Division Street becomes U.S. Route 31 and MI 37 and extends south to the lower portion of Michigan. Division Street has a four-lane cross section, and parking is prohibited on both sides of the street. At its signalized intersections with Grandview Parkway, Front Street, and Silver Lake Road/Fourteenth Street, Division Street provides separate left-turn lanes. Division Street has a posted speed limit of 40 mph.

Silver Lake Road is a northeast-southwest road that extends from Division Street to U.S. Route 31. East of Division Street, Silver Lake Road becomes Fourteenth Street and extends to just east of Cass Road. In the site vicinity, Silver Lake Road has a four-lane cross section. At its intersection with Division Street, Silver Lake Road provides separate left-turn lanes.

Fourteenth Street has a three-lane cross section and a posted speed limit of 25 mph in the vicinity of the site. At its intersection with Division Street, Fourteenth Street has a five-lane cross section that provides a separate left-turn lane.

Cedar Run Road is a north-south arterial roadway that extends from Long Lake Road to Lewis Road. Cedar Run Road has a two-lane cross section.

Elmwood Avenue is a north-south collector street that extends from Silver Lake Road to Grandview Parkway. In the site vicinity, Elmwood Avenue has a wide two-lane cross section, with parking generally permitted on both sides of the street. Elmwood Avenue has a posted speed limit of 35 mph south of Eleventh Street and 25 mph north of Eleventh Street. Between Silver Lake Road and Eleventh Street, Elmwood Avenue is an unimproved road that is closed during the winter months.

Sixth Street is an east-west collector street that extends from Red Drive to Union Street. In the site vicinity, Sixth Street has a wide two-lane cross section, with parking generally permitted on both sides of the street. At its intersection with Division Street, left turns from westbound Sixth Street to northbound Eleventh Street are prohibited.

Seventh Street is an east-west collector street that extends from Elmwood Avenue to Union Street. West of Elmwood Avenue, Seventh Street becomes an access drive to the main parking lot of the MMC and the GTMCF. In the site vicinity, Seventh Street has a wide two-lane cross section, with parking generally permitted on both sides of the street. Between Division Street and Maple Street, Seventh Street is one-way eastbound, and left turns are prohibited at its signalized intersection with Division Street.

Eleventh Street is an east-west collector street that extends from Lake Avenue past Elmwood Avenue into the GTC site. In the site vicinity, Eleventh Street has a two-lane cross section and a posted speed limit of 20 mph. Between Elmwood Avenue and Division Street, parking is generally not permitted on Eleventh Street.

Madison Street is a north-south collector street that extends from Willow Street to Sixth Street. In the site vicinity, Madison Street has a wide two-lane cross section, with parking generally permitted on both sides of the street. At its intersections with Front Street and Sixth Street, Madison Street is controlled by stop signs.

Beaumont Place is a north-south collector street that extends from Sixth Street to just south of Front Street. South of Sixth Street, Beaumont Place becomes an access drive to the main parking lot of the MMC and the GTMCF. Beaumont Place has a wide two-lane cross section, and parking is permitted on both sides of the street.

Red Drive is a north-south street that extends from Sixth Street south through the site to Eleventh Street. Red Drive provides access to the MMC and the GTMCF employee parking lot and auxiliary buildings, as well as to the existing GTC site. North of Sixth Street, Red Drive becomes Brook Street. Red Drive has a two-lane cross section, and parking is generally not permitted on either side of the street.

Orange Drive is an east-west road that extends from Elmwood Avenue to Red Drive. Orange Drive provides access to the south side of both the MMC and GTMCF. Orange Drive has a two-lane cross section.

Green Drive is an east-west road that extends from Elmwood Drive to Red Drive. Green Drive has a two-lane cross section.

Existing Traffic Volumes

Barton-Aschman conducted traffic counts at 18 intersections surrounding the site during weekdays in the months of March, May, and July, 1993. The traffic counts were generally conducted from 6:00 to 9:00 A.M. and from 3:00 to 6:00 P.M.

The traffic counts indicated that the morning peak hour of traffic occurs from 7:30 to 8:30 A.M., and the evening peak hour from 4:30 to 5:30 P.M. The morning and evening weekday

peak-hour traffic volumes are illustrated in Figure 2. It should be noted that these volumes represent the peak-hour traffic on the entire roadway system that was surveyed and do not necessarily correspond to the peak-hour traffic volumes of the MMC, the GTMCF, and GTC. In fact, the traffic counts at the access drives to the MMC, the GTMCF, and GTC indicate that the morning peak hour of traffic for these facilities occurs from 7:30 to 8:30 A.M., and the evening peak hour from 3:00 to 4:00 P.M. However, the purpose of this study is to analyze the highest total of future and existing traffic volumes on the entire roadway system, not just at the site access drives. It should be noted that traffic counts were not conducted at the driveways to the State Office Building or any other buildings in the surrounding area. However, the traffic that is generated by these land-uses was accounted for in the traffic counts that were conducted at the various intersections in the site vicinity.

In addition, the traffic counts that were conducted for this study took place during several different months (March, May, and July) in order to determine the seasonal variation in traffic at the MMC, the GTMCF, and the area in general. Since Traverse City is a summer resort city, traffic volumes are generally higher during the summer months than during the rest of the year. A comparison of various traffic counts conducted for this study area and previous counts conducted in the area confirmed this fact. Therefore, the existing traffic volumes (see Figure 2) that were surveyed in March and May were increased slightly to approximate the higher summer (July) counts.

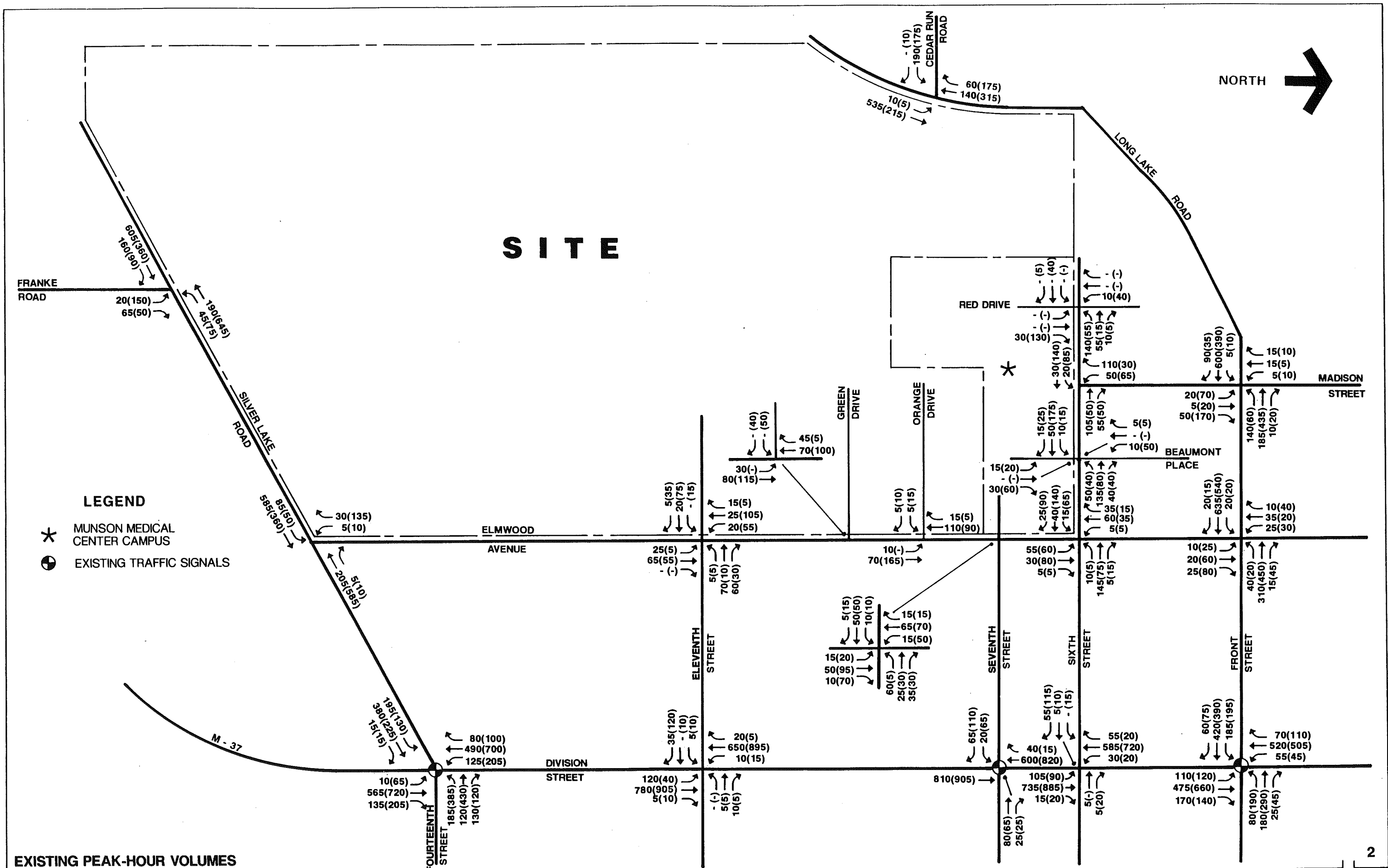
Analyses of the highest total volume of site and nonsite vehicular traffic on the area road system and at the site's access points during the peak hour determine what roadway improvements will be necessary to provide efficient access for the site with minimal interruption to through (nonsite) traffic.

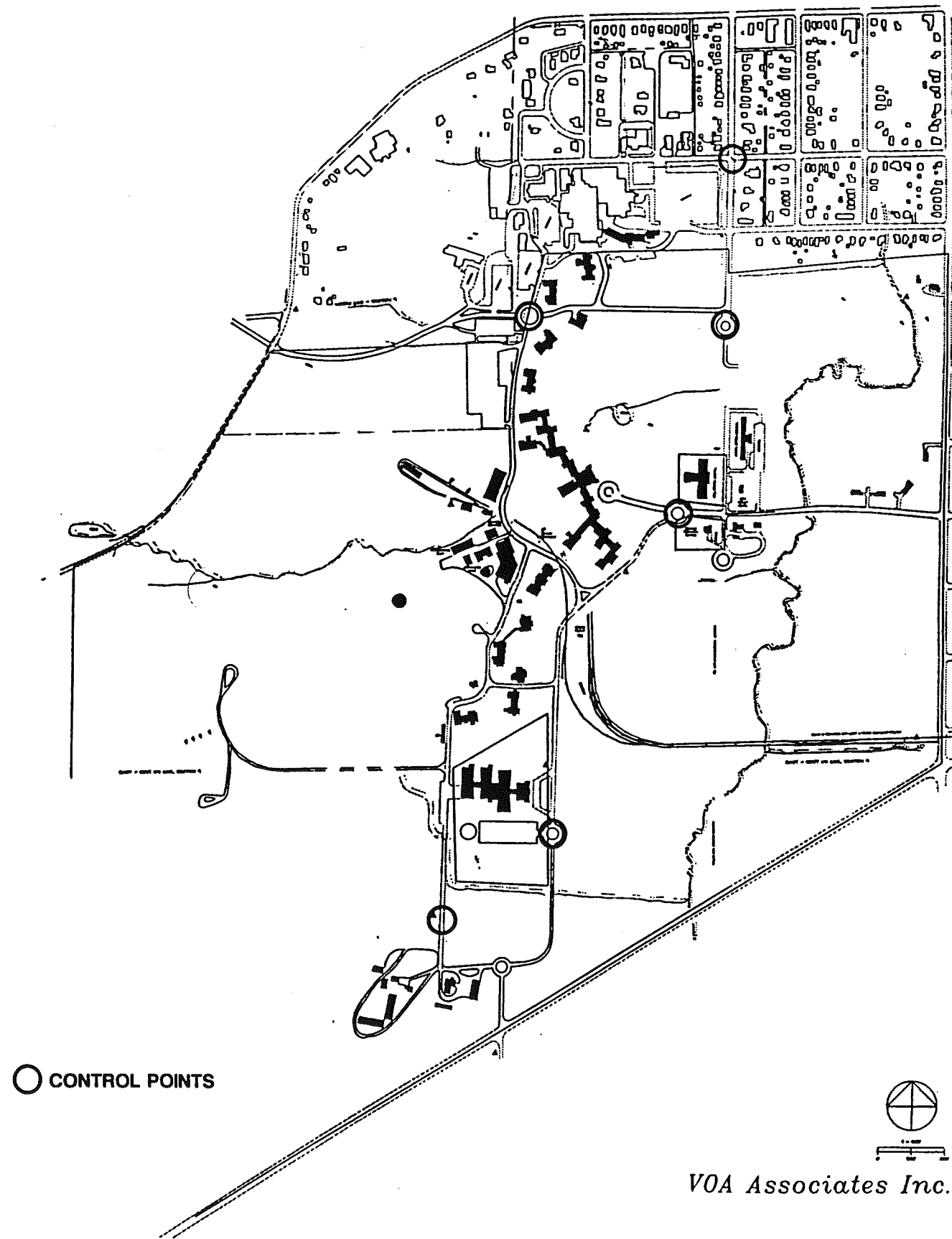
Planned Roadway Improvements

Based on discussions with city, township, and county officials, it was determined that there are no significant roadway improvements planned and/or programmed for the area surrounding the site. However, there are a number of roadway modifications and/or improvements that are proposed for the area as part of the Grand Traverse Commons Redevelopment project. It should be noted that many of these modifications and/or improvements were developed to mitigate the existing impact that MMC and GTMCF had on the area roadway system and on the adjacent neighborhoods. These modifications and/or improvements were developed to mitigate these existing problems, as well as to reduce the impact any future growth at MMC and GTMCF, as well as the redevelopment of the GTC, may have. Figure 3 illustrates the proposed comprehensive vehicle circulation plan for Grand Traverse Commons, and the proposed roadway modifications/improvements are discussed below.

Site Access

As currently planned, new access to the redeveloped GTC property will be provided via the existing Eleventh Street access drive and a new proposed southern access drive, a new proposed western access drive on Long Lake Road, and a new eastern access drive on Elmwood Avenue.





PROPOSED COMPREHENSIVE VEHICULAR PLAN

FIGURE 3

- The proposed new western access drive would be located on Long Lake Road just south of where Cedar Run Road currently intersects Long Lake Road. As proposed, the intersection of Cedar Run Road and Long Lake Road would need to be relocated south in order to be aligned opposite the new western access drive to form a new four-legged intersection. The western access drive will provide limited access to a new proposed east-west road that would extend east through Red Drive to the proposed new eastern access drive on Elmwood Avenue. Construction of the western access road would provide a means by which MMC could mitigate its current traffic problems with regard to the adjacent neighborhoods by redirecting all employee traffic to the western access road; this would also provide a means to consolidate employee parking in large parking areas that would be accessed by the new western access drive.
- The proposed new eastern access drive will be located on Elmwood Avenue approximately where Orange Drive currently intersects Elmwood Avenue. This drive will provide limited access to the new east-west road that will extend to Long Lake Road. Between Red Drive and Elmwood Drive, this new proposed east-west road will form the southern portion of a proposed circulation ring road, with limited traffic access, that would be developed for the Medical Campus, primarily MMC and GTMCF. This proposed circulation ring road is intended for visitor, service, and emergency traffic only and will restrict use by MMC employee traffic.
- Access to the remainder of the GTC property would be provided via the existing Eleventh Street access drive and a new proposed southern access road. The proposed new southern access drive would be located on Silver Lake Road and would be aligned opposite Franke Road. This access drive would form the fourth leg of the existing three-legged intersection of Silver Lake Road and Franke Road.

Circulation Ring Road

As indicated previously, a circulation ring road for visitor, service, and emergency traffic would be developed for the Medical Campus to tie into the MMC property to the north. This circulation road would run along Sixth Street on the north, Red Drive on the west, the new east-west road on the south, and Elmwood Avenue on the east. In addition, the circulation ring road would have a middle east-west road that would extend along the south side of the existing MMC property from Red Drive to Seventh Street. With the implementation of traffic control measures, employee cross-through traffic would not be allowed to use the circulation ring road to travel east, west, north, or south through the GTC site or the adjacent neighborhoods.

External Roadways

- *Elmwood Avenue.* As part of the Grand Traverse Commons Redevelopment Project, Elmwood Avenue is proposed to be vacated from Silver Lake Road north to Eleventh Street. In addition, a portion of Elmwood Avenue would be vacated between the parking lot north of the State Office Building to just south of the proposed new eastern access drive. Therefore, Elmwood Avenue would be vacated between the proposed eastern access drive and Silver Lake Road, except for a small portion that will provide access to the State Office Building from Eleventh Street.

- **Sixth Street/Elmwood Avenue Intersection.** In order to disconnect the nearby neighborhood from the existing MMC property and the GTC property for traffic purposes, it is proposed that a diagonal diverter be installed at this intersection. The purpose of the diagonal diverter would be to separate the intersection into 2 two-legged intersections, one that would connect the west side of Sixth Street to the south side of Elmwood Avenue, and one that would connect the west side of Sixth Street to the north side of Elmwood Avenue. The diagonal diverter would then eliminate MMC/GTMCF traffic from both Elmwood Avenue and Sixth Street in this neighborhood.

Adjusted Existing Traffic Volumes

In order to provide a comparison between existing and future traffic conditions, the existing traffic counts had to be modified to reflect the roadway modifications and improvements proposed as part of the redevelopment of the GTC property. These proposed modifications and improvements will have a significant impact on the traffic pattern to and from the MMC and GTMCF property. Therefore, for the purpose of this study, all of the traffic generated by MMC and GTMCF and the existing GTC property was subtracted from the existing traffic volumes to obtain existing traffic volumes without traffic volumes from the existing site and the MMC and GTMCF. Based on the new directional distribution developed for the MMC and GTMCF (described in Chapter 3), the existing traffic generated by MMC and GTMCF will be added back to the modified roadway system later in the study.

For the purposes of this analysis, it was assumed that all existing peak-hour traffic generated by MMC and GTMCF was only that traffic using the following direct access drives to the GTMCF campus:

- Red Drive
- Beaumont Place
- Seventh Street
- Orange Drive
- Green Drive
- Eleventh Street

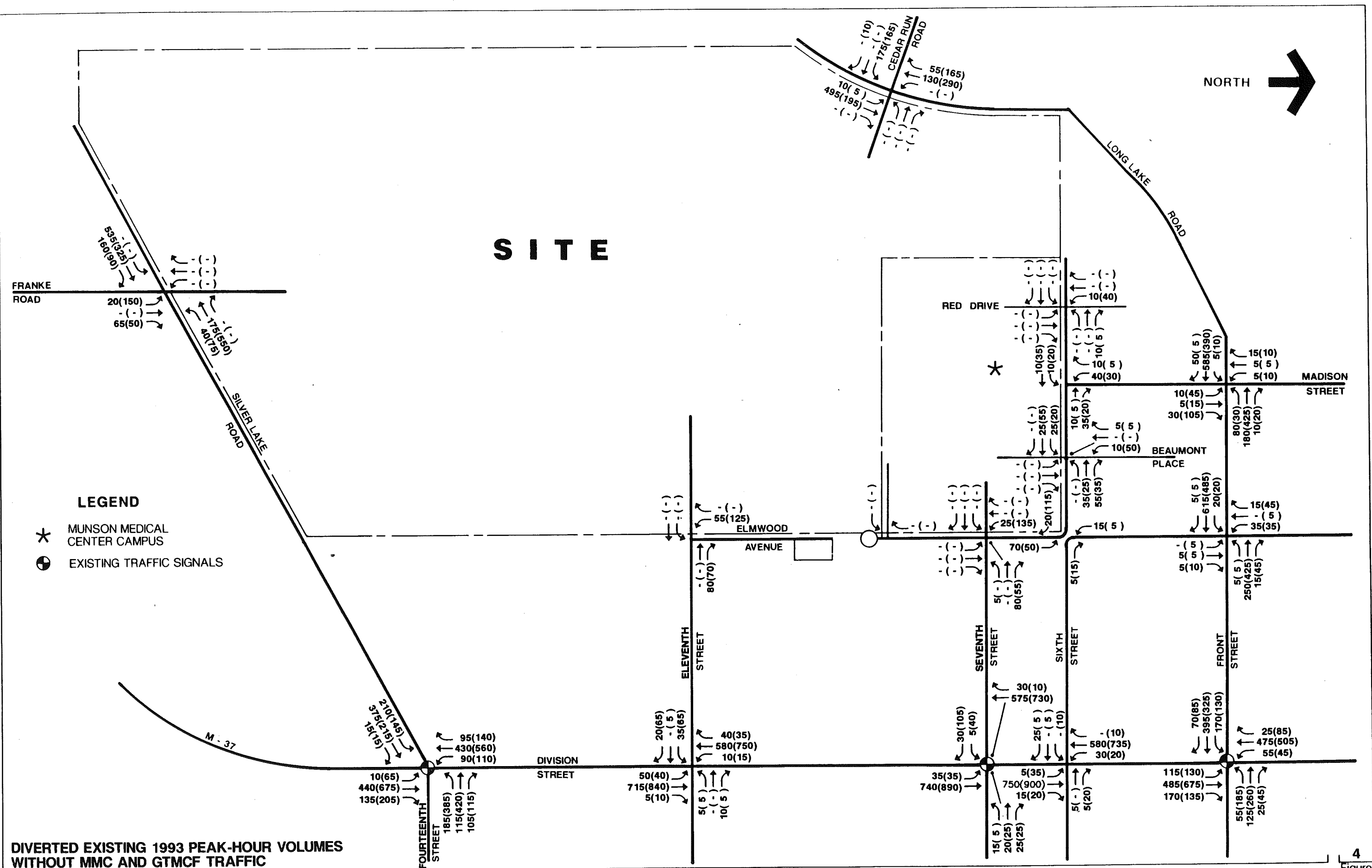
It is understood that a number of the trips generated by MMC and GTMCF do not access any of the driveways listed above, but instead park on-street (e.g., Sixth Street) or at other parking lots north of the MMC and GTMCF property. However, it is very difficult to accurately estimate the number of trips that do not access one of the drives serving the existing MMC and GTMCF property. Further, it should be noted that our estimate of the existing peak-hour traffic generated by MMC and GTMCF is very conservative, since it includes traffic that is generated by the other uses currently located on the GTC property, including the TBASD intermediate school. Therefore, it is our opinion that the conservative estimate of existing trip generation for MMC and GTMCF compensates for the limited amount of MMC and GTMCF traffic that does not park on-site. Table 1 shows the existing peak-hour traffic that is generated by MMC and GTMCF.

Based on the existing traffic counts and the existing roadway system, the peak-hour traffic that is generated by MMC and GTMCF was subtracted from the roadway system. In addition, modifications were made to the existing traffic (nonsite and hospital traffic) to represent changing traffic patterns caused by the proposed vacation of Elmwood Avenue and the proposed diag-

Table 1
EXISTING PEAK-HOUR TRAFFIC VOLUMES: MMC AND GTMCF

Location	A.M.		P.M.	
	Inbound	Outbound	Inbound	Outbound
Red Drive	195	30	70	170
Beaumont Place	65	45	65	80
Seventh Street	55	65	65	75
Orange Drive	25	10	5	25
Green Drive	70	5	0	90
Eleventh Street	<u>110</u>	<u>25</u>	<u>20</u>	<u>125</u>
Total	520	180	225	565

onal diverter at the intersection of Sixth Street and Elmwood Avenue. While many locations and movements have diversion potential, only major movements with high traffic volumes were rerouted. Figure 4 illustrates the 1993 existing traffic volumes without MMC and GTMCF traffic, but with the rerouting of existing traffic on the proposed future road network.



3. Traffic Characteristics of the Proposed Development

The following traffic characteristics of the proposed Grand Traverse Commons Redevelopment were analyzed in order to evaluate its impact on area roadways and traffic conditions:

1. The directional distribution of new site-generated traffic on the area roadway system.
2. The peak traffic flow periods of the development.
3. The additional traffic volumes that would be generated by the development during peak traffic periods.

Directional Distribution

The directions from which motorists approach and depart a development are based on several variables. The nature and framework of the regional and local road network, the levels of congestion on roadways within the area of influence of the development, the distribution of population within the area of influence, and the relative ease of travel on these roadways generally determine the travel patterns of drivers. In addition, studies have shown that drivers will usually take the quickest, which is not necessarily the shortest, route to and from their destinations.

Since the land-uses proposed for the GTC property are very similar to those at MMC and GTMCF, it was assumed that the GTC land-uses would have a similar directional distribution. Therefore, it was assumed that the proposed retirement community and MMC and GTMCF would have the same directional distribution. In addition, two separate directional distributions were developed: one for employee trips and one for patron/patient/visitor trips.

The distribution of patient, visitor, and employee traffic is normally based on the distribution of residences within the trade area and the relationship of these residences to the area road network.

The employee directional distribution was based on the addresses of all current employees of both MMC and GTMCF. The directional distribution of patient/visitor traffic was based on the existing travel patterns in the area, as determined from the existing traffic counts and as observed in our fieldwork. The results of the directional distribution analyses are illustrated in Figures 5 and 6. It should be noted that the following assumptions were considered in determining the directional distributions:

1. Access to and from the MMC property for employees of MMC will be restricted to the new western access drive only.
2. There will be no shared access and/or direct access between the existing MMC property and the medical portion of the GTC property and the proposed retirement community.
3. Implementation of the roadway modifications and improvements proposed as part of the redevelopment will be in place.

Peak Traffic Flow Periods

Analysis of the highest total volume of future and existing vehicular traffic on the area roadway system during peak hours determines what roadway improvements will be necessary to provide efficient and safe access to and from a development. The peak traffic flow for the developments considered in the study occur during the morning (6:00 to 9:00 A.M.) and evening (3:00 to 6:00 P.M.) commuter rush hours. The traffic counts conducted during both the morning and evening weekday peak periods indicate that the evening peak hour represents the highest total traffic volumes on the roadways surrounding the site.

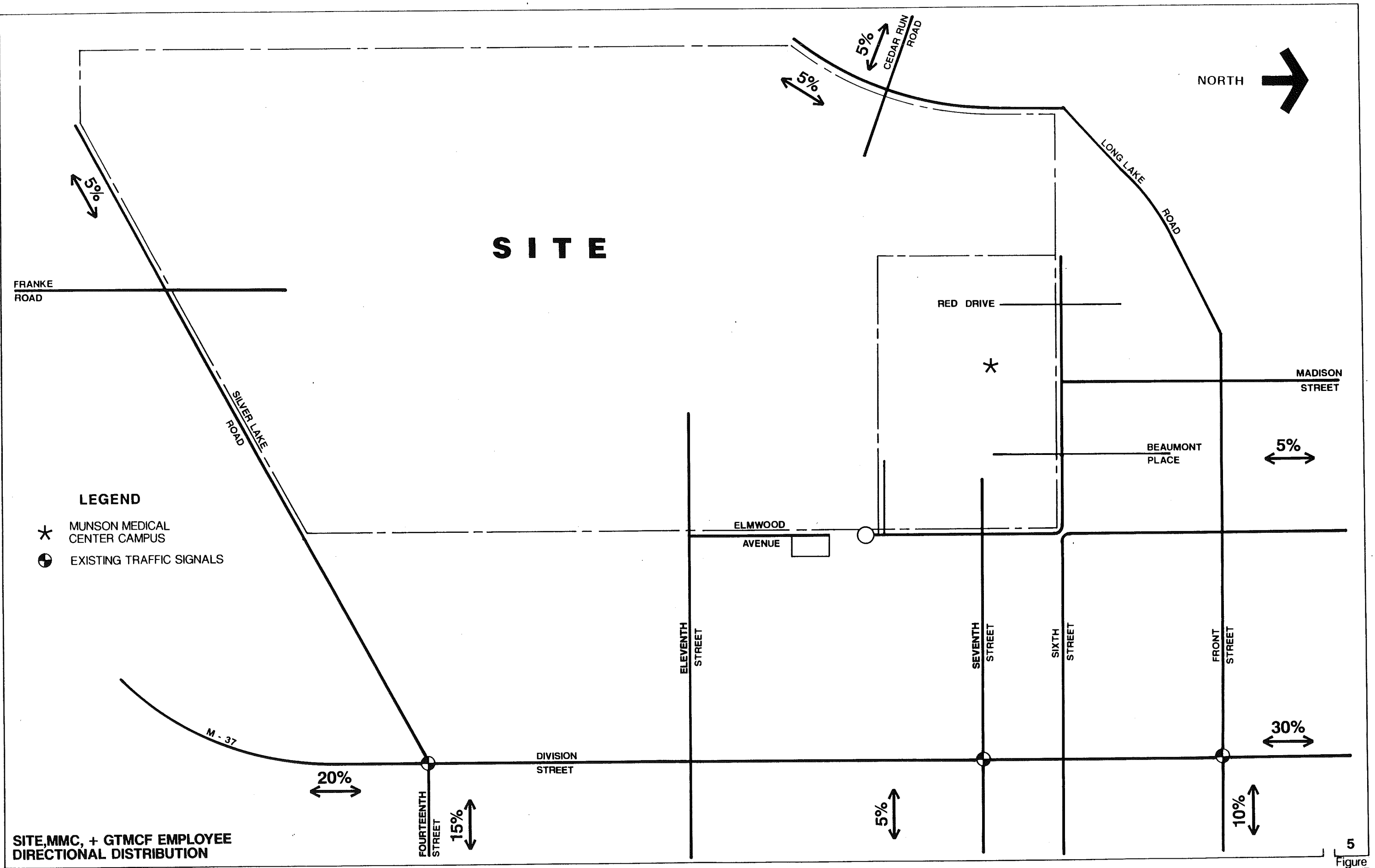
Trip Generation

The trip generation characteristics of any development are based on the magnitude and character of its land-use. As indicated previously, the proposed Grand Traverse Commons Redevelopment will consist of the redevelopment of the GTC property which will accommodate the future growth of both MMC and GTMCF.

MMC and GTMCF Future Growth

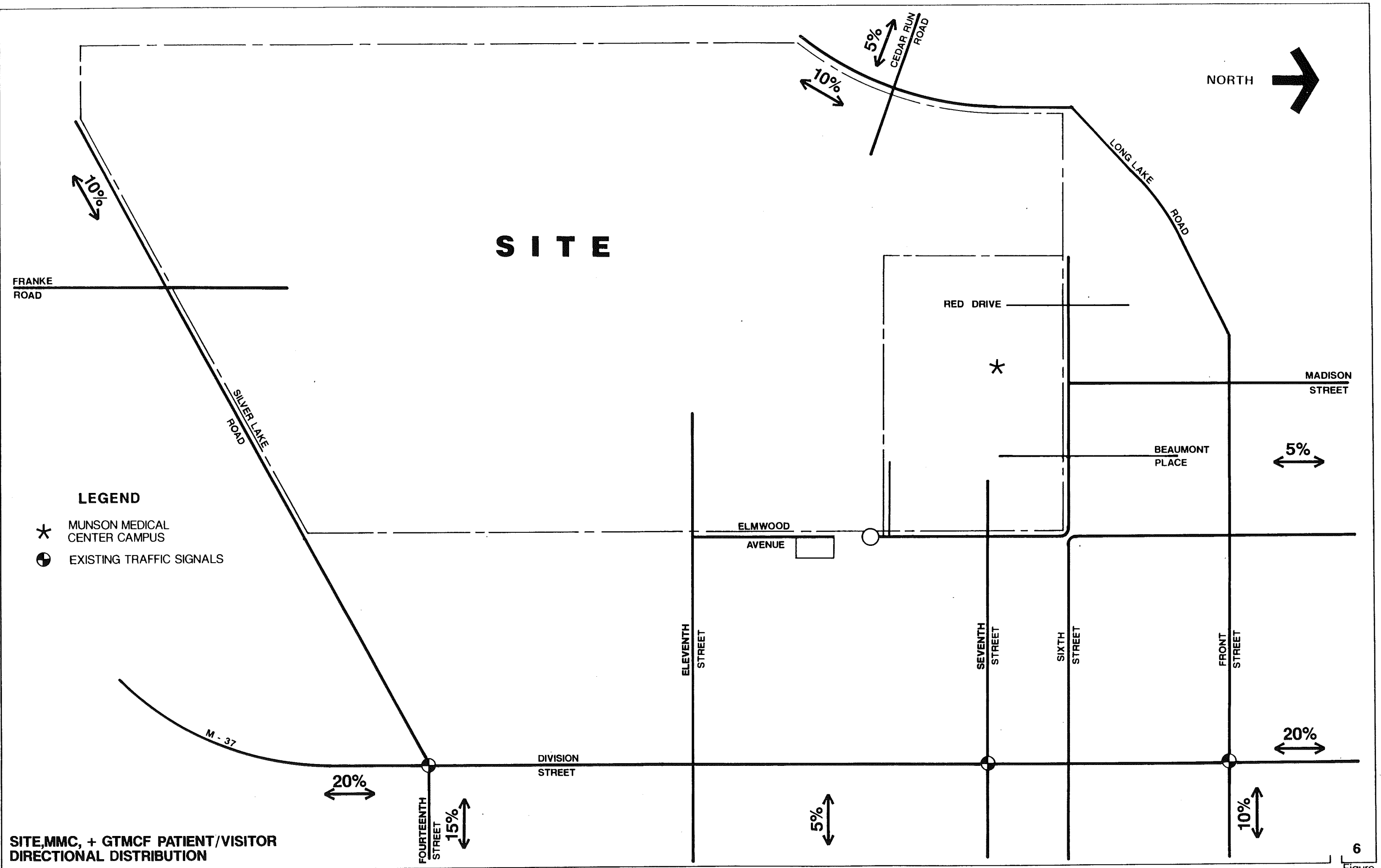
As indicated previously, the growth at the MMC and GTMCF will consist of construction of a new GTMCF to be located just south of the existing facility. MMC would then expand its current facility, either by renovating the existing GTMCF facility or constructing a new building on the site of the existing GTMCF. As currently proposed, MMC ultimate expansion plans would consist of 150,000 square feet of new medical office space. The GTMCF is proposing development of a new facility that would house the following uses:

- | | |
|------------------------------|-----------|
| • Nursing Care Facility | 220 beds |
| • Alzheimer Facility | 20 units |
| • Intergenerational Day Care | 80 people |



**SITE, MMC, + GTMCF EMPLOYEE
DIRECTIONAL DISTRIBUTION**

Barton - Aschman Associates, Inc.



**SITE, MMC, + GTMCF PATIENT/VISITOR
DIRECTIONAL DISTRIBUTION**

Barton - Aschman Associates, Inc.

It should be noted that the existing GTMCF consists of a 180-bed nursing care facility. With development of the new GTMCF, those 180 beds will remain, but will be relocated. Therefore, the new GTMCF will increase its nursing care facility by a total of 40 beds.

The number of trips that will be generated by the expansion of the MMC and the new GTMCF was based on trip rates determined from surveys conducted by Barton-Aschman and ITE. The volume estimates for the proposed medical offices were based on rates published by ITE in its *Trip Generation Manual*, 5th Edition. The volume estimates for the nursing care facility, the Alzheimer facility, and the intergenerational day care facility were based on surveys conducted by Barton-Aschman at similar facilities. Table 2 illustrates the number of trips currently generated by the MMC and GTMCF and the estimate of the future trips that will be generated by the proposed growth at both facilities.

Table 2
EXISTING AND PROJECTED PEAK-HOUR SITE-GENERATED TRAFFIC: MMC AND GTMCF

	A.M.		P.M.	
	Inbound	Outbound	Inbound	Outbound
Existing Traffic Volumes ^a	520	180	225	565
Projected Traffic Volumes				
Medical Office Space (150,000 sq. ft.)	220	70	150	335
Nursing Care Facility (40 beds) ^b	5	5	5	5
Alzheimer's Facility	5	0	0	5
Intergenerational Day Care (80 people)	<u>35</u>	<u>30</u>	<u>30</u>	<u>30</u>
Total	295	110	215	460

^a Estimated based on existing counts conducted at access drives to the MMC and GTMCF property.

^b The nursing care facility projections are based on only 40 beds because 180 of the 220 beds are already located in the existing GTMCF facility.

Redevelopment of the GTC Property

As indicated previously, in addition to the expansion of the medical campus, the principal components of the redevelopment of the GTC property will be the development of a retirement community, the expansion of the TBASD facility (which is currently located within the GTC site), and the development of large expanses of conservation subareas. The following outlines the amenities of each component:

- Retirement Community:
 - Continuing Care 400 units
 - Independent Housing 200 units
 - Independent Senior Housing 300 units
- TBASD Expansion—Conference Center 2,500 square feet
- Conservation Subareas 310 acres
- Recreation/Administration Offices 50 employees

To determine the number of trips that will be generated by the proposed retirement community, a review was made of trips rates determined from surveys conducted by Barton-Aschman and ITE. The volume estimates for the proposed uses were based on surveys conducted by Barton-Aschman at similar facilities. As currently proposed, access to the retirement community will be from Eleventh Street only.

The estimate of trips that would be generated by the existing TBASD school and its proposed expansion was determined based on information provided by TBASD. According to TBASD officials, the school currently generates approximately 60 cars and buses on a daily basis, with the majority of these vehicles arriving at the school between 8:00 and 9:00 A.M. and departing the school between 3:00 and 4:00 P.M. As proposed, the expansion of TBASD is not to increase school enrollment, but rather to include a conference center capable of accommodating 100 to 150 people. According to TBASD officials, attendance at most conferences will not exceed 20 to 25 people; conferences will be held between 8:30 A.M. and 4:00 P.M. Larger conferences, with attendance of 100 to 150, will occur no more than two to three times a month. Since both the school and the conferences will adjourn long before the evening peak hour, it was assumed that the school and conferences would not generate any traffic during the evening peak hour. Further, since the larger conferences will be held infrequently, the traffic generation estimate for the conference center was based on a typical day. Finally, it should be noted that under the proposed circulation and access plan, the TBASD school will have access only from the new south access drive.

The estimate of trips that would be generated by the conservation subareas was based on information provided by Kids Creek Development. According to Kids Creek, the administration offices are expected to employ approximately 50 people, with approximately 50 patrons/visitors per day. At this time, there is no information on the expected use of the conservation subareas. However, it is reasonable to assume that these land-uses will generate very little traffic during the morning and evening peak hours. As with the TBASD school, all access will to the administration offices will be from the new south access drive. Several parking lots are being developed throughout the site for those people who would like to use the conservation subarea facilities. Therefore, access to these parking areas will be from the various access drives serving the GTC property. Estimates of the traffic that would be generated by the redeveloped GTC are shown in Table 3.

Table 3
PROJECTED PEAK-HOUR SITE-GENERATED TRAFFIC: REDEVELOPED GTC PROPERTY

	A.M.		P.M.	
	Inbound	Outbound	Inbound	Outbound
Continuing Care Retirement (400 units)	80	40	45	75
Independent Housing (200 units)	40	20	20	40
Independent Senior Housing (300 units)	60	30	35	55
TBASD School				
Existing School	25	5	0	5
Proposed Conference Center	15	5	0	0
Conservation Subareas				
Administration Offices	20	5	5	15
Recreational/Trail Network	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>
Total Traffic Volumes	245	110	110	195

Future Growth

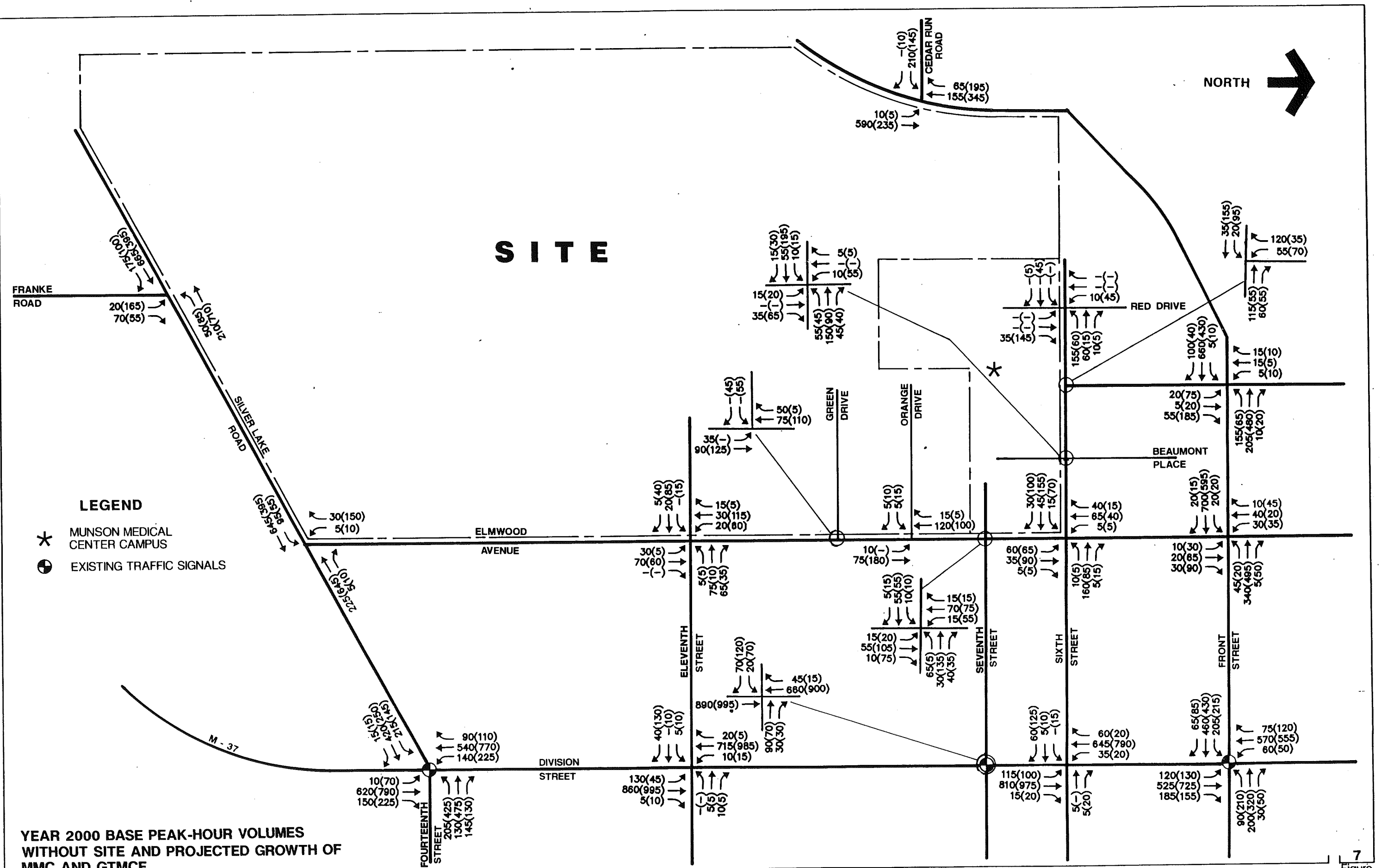
Prior to evaluating the impact that expansion-generated traffic will have on area roadways, it was necessary to estimate the increase in nonsite traffic due to general growth in the area (other than the redevelopment of the site and growth at MMC and GTMCF) for a horizon year. This increase in traffic volumes represents what the projected horizon year traffic volumes will be on area roadways without the redevelopment of the GTC or the projected growth at MMC and GTMCF. It is our understanding that the proposed redevelopment of the GTC property will take place over a 10- to 15-year period. However, for the purpose of this study, the horizon year chosen was 2000.

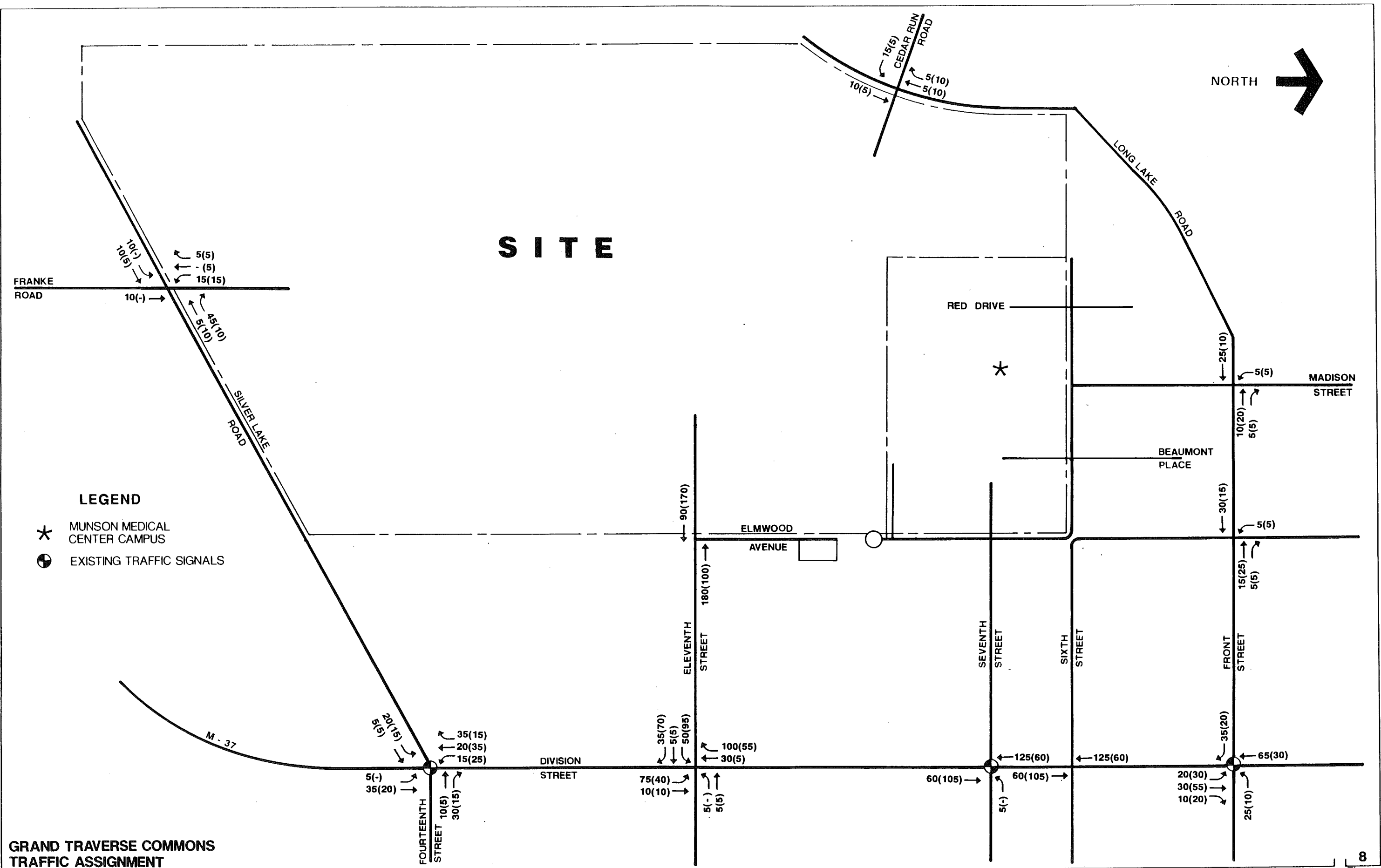
A review of 1990 traffic volumes and the projected 2010 volumes supplied by the Traverse City Area Transportation and Land-Use Study (TC-TALUS) indicated that the area surrounding GTC is projected to experience traffic growth of approximately 4 to 5 percent per year. However, discussions with officials of TC-TALUS indicate that the majority of the growth projected for the area will be generated by the redevelopment of GTC and the growth of MMC and GTMCF. Therefore, for the purpose of this analysis, this growth factor was not appropriate, as the study had already taken into consideration the increase in traffic due to the redevelopment of GTC and growth at MMC and GTMCF. TC-TALUS officials indicated that approximately two-thirds to three-fourths of the projected increase in traffic was due to GTC and the MMC and GTMCF. Therefore, it was mutually agreed that for the purposes of this analysis, an ambient

growth factor of 1.5 percent per year was appropriate. The existing 1993 traffic volumes were increased by 10 percent, 1.5 percent per year for 7 years, in order to project year 2000 traffic volumes. The projected 2000 base peak-hour traffic volumes without site traffic and growth at MMC and GTMCF are illustrated in Figure 7.

Traffic Assignments

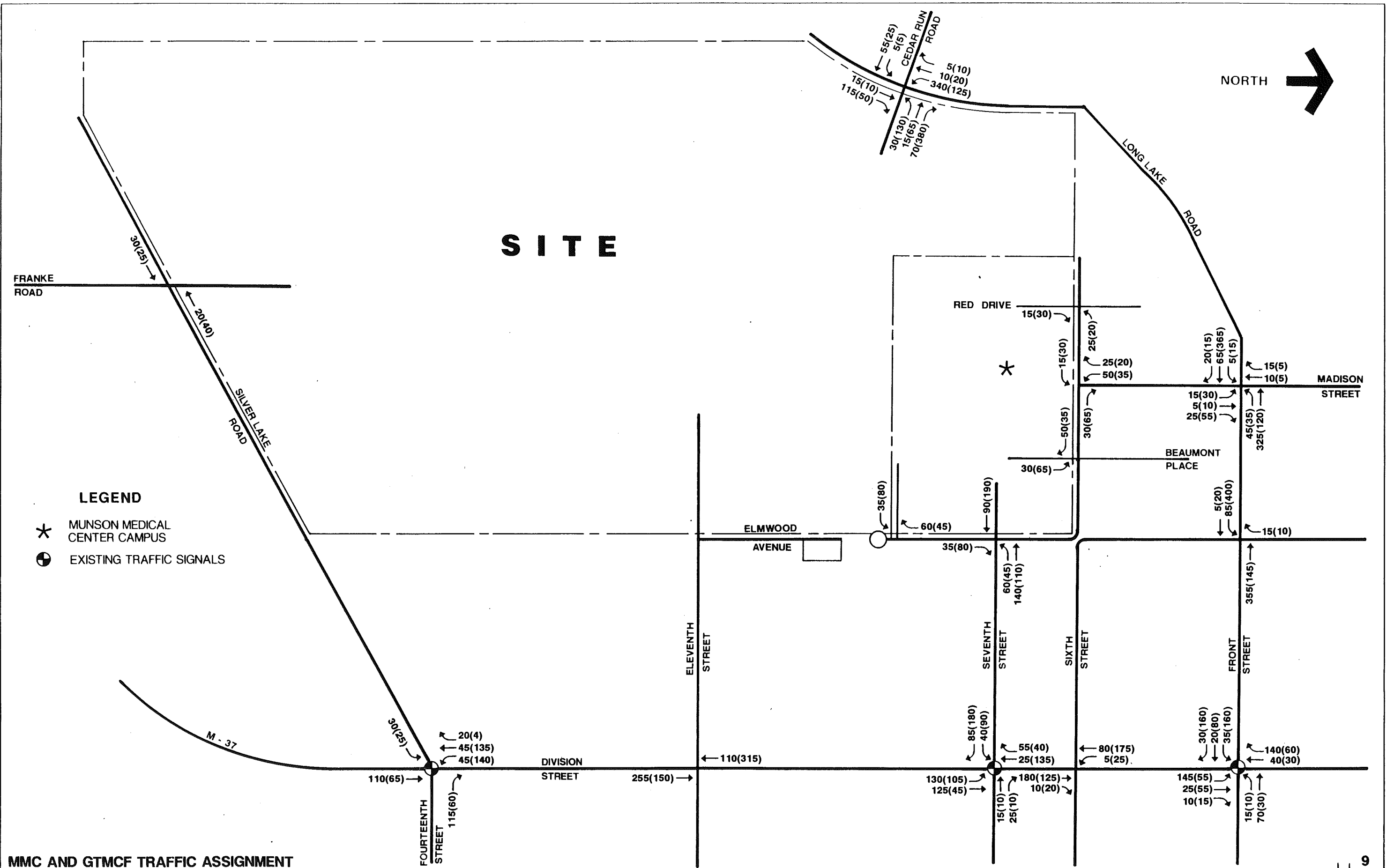
The estimated traffic volumes that will be generated by the proposed Grand Traverse Commons Redevelopment were assigned to the roadway system according to the directional distributions discussed previously. Figure 8 illustrates the traffic assignment of the proposed redevelopment of GTC. Figure 9 illustrates the traffic assignment of MMC and GTMCF, which includes assignment of both existing and projected traffic volumes. To determine the roadway improvements that would be necessary to accommodate the traffic that will be generated by the proposed Grand Traverse Commons Redevelopment, the estimated site traffic volumes (for both the retirement community and MMC and GTMCF) were combined with projected diverted (diverted existing 1993 volumes without MMC and GTMCF traffic plus the ambient growth factor) traffic volumes (Figure 4) to produce year 2000 total peak-hour traffic volumes, which are illustrated in Figure 10.





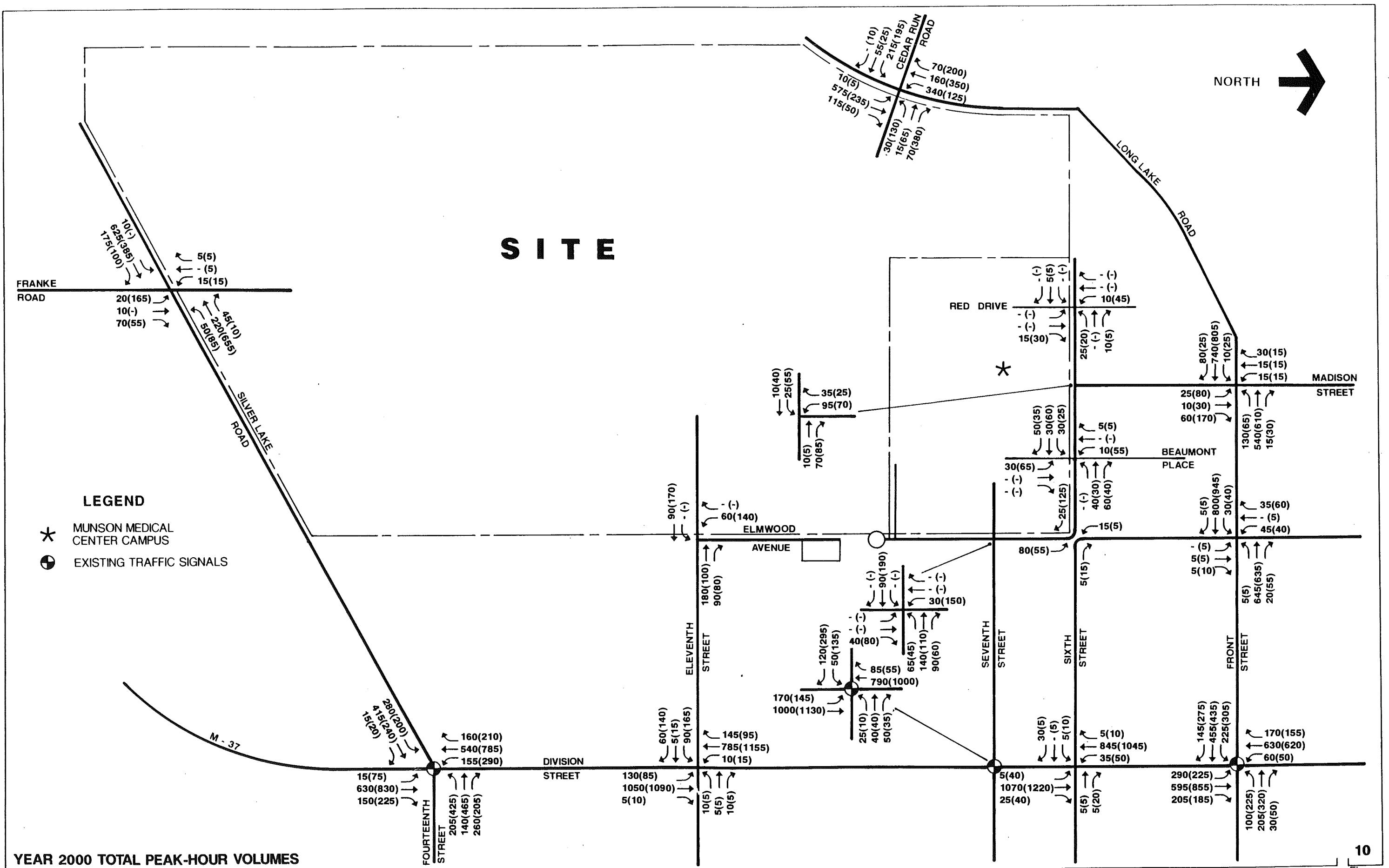
**GRAND TRAVERSE COMMONS
TRAFFIC ASSIGNMENT**

Barton - Aschman Associates, Inc.



MMC AND GTMCF TRAFFIC ASSIGNMENT

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4. Traffic Impact Analysis

In order to accommodate the anticipated total traffic volumes, including redevelopment of the site as well as projected growth at both MMC and GTMCF, plans for roadway improvements and site access facilities were developed based on estimates of through and site-generated traffic volumes on the roadway network serving the site. The principal design criterion for the public roadway system in the vicinity of the site was based on the efficient accommodation of peak-hour traffic volumes.

Site Access and Roadway Requirement Criteria

The site access driveways must fulfill the objectives of providing safe, convenient, and efficient interchange of traffic between the development and adjacent roadways. These facilities should satisfy the following basic design criteria:

1. A system of site access points should be provided, i.e., a sufficient number to ensure that site-generated traffic will be distributed evenly on the external roadways. In addition, the access points should be spaced far enough apart to minimize vehicular conflicts.
2. Each access point should be designed to provide adequate capacity as well as safe ingress and egress.
3. Site entrances and exits should be designed to allow adequate storage capacity and proper guidance of vehicles to and from the development.
4. The site access system and external roadway improvements should be compatible and should be coordinated in terms of staging and form with existing and future land-uses adjacent to the development.
5. The access system should be easily understood by the average driver.

As indicated previously, the purpose of this study was to conduct a comprehensive traffic and transportation study for the GTC property as well as the existing and proposed land-uses adjacent to the site. Therefore, the roadway improvements were developed to minimize the impact that the redevelopment of the GTC property would have on the existing roadway system and to consider the following issues and concerns:

- The existing traffic problems and roadway capacity deficiencies in the site vicinity.
- The existing and future impacts of the MMC and GTMCF on the local roadway system and the surrounding land-uses, particularly the adjacent neighborhoods and the GTC property.
- The impact that general growth in the area (other than the redevelopment of the GTC property and growth at MMC and GTMCF) will have on the site, the adjacent land-uses, and the roadway system.

The traffic planning principles observed in the development of these recommendations were:

1. The adjacent highways should be designed to accommodate site-generated traffic volumes.
2. The vehicular access system should be designed to provide efficient interchange of development traffic with the external road system and to minimize interference with through traffic on adjacent roadways.

Capacity Analysis

The traffic impacts generated by a proposed development are typically assessed in terms of the ability of the area roadway system to accommodate site-generated traffic, particularly at site access drives and adjacent critical intersections. This ability of the intersections to accommodate new and existing traffic is expressed in terms of level of service.

There are six levels of service (A through F), which relate to driving conditions from best to worst, respectively. Levels of service for signalized intersections are defined in terms of delay, which is a measure of driver discomfort and lost travel time. The level of service criteria, as defined in the 1985 *Highway Capacity Manual*, are provided in Table 4.

Capacity analyses were conducted for critical intersections in the vicinity of the site. The following combinations of street networks and land-uses were tested:

1. Year 2000 base peak-hour traffic volumes, without site traffic and projected growth of MMC and GTMCF, with existing geometrics.
2. Year 2000 base peak-hour traffic volumes, without site traffic and projected growth of MMC and GTMCF, with recommended roadway improvements for base conditions only.

Table 4
LEVEL OF SERVICE CRITERIA

Level of Service	Interpretation	Delay per Vehicle (seconds)
A	Very short delay, with extremely favorable progression. Most vehicles arrive during the green phase and do not stop at all.	≤ 5.0
B	Good progression, with more vehicles stopping than for Level of Service A, causing higher levels of average delay.	5.1-15.0
C	Light congestion, with individual cycle failures beginning to appear. Number of vehicles stopping is significant at this level.	15.1-25.0
D	Congestion is more noticeable, with longer delays resulting from combinations of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.	25.1-40.0
E	Limit of acceptable delay. High delays result from poor progression, high cycle lengths, and high volume to capacity ratios.	40.1-60.0
F	Unacceptable delays occurring, with oversaturation.	> 60.0

Source: *Highway Capacity Manual*, 1985.

- Year 2000 total peak-hour traffic volumes, including site traffic and projected growth of MMC and GTMCF, with recommended roadway improvements for base conditions only.
- Year 2000 total peak-hour traffic volumes, including site traffic and projected growth of MMC and GTMCF, with recommended site roadway improvements.

Table 5 presents the improvements needed at the critical intersections analyzed, based on our capacity analyses of the traffic assignments under the scenarios listed above. Tables 6, 7, 8, and 9 present a summary of the levels of service for these intersections under each scenario.

It should be noted that the improvements that are recommended in this study are based on a worst-case scenario and suggest the improvements that will be warranted if (1) the entire projected general growth in the area is realized and (2) the GTC, MMC, and GTMCF achieve full buildout and/or projected growth. If these ultimate growth projections and projected development plans are not realized, many of the recommended improvements would not be necessary. Further, the recommended improvements were developed to ensure that area roadways and intersections would have sufficient additional capacity to meet the minimal travel characteristics that have been accepted by the industry (i.e., average vehicle delay, intersection delay, travel times,

TABLE 5
INTERSECTION IMPROVEMENT NEEDS

INTERSECTION	EXISTING CONDITIONS	BASE CONDITIONS RECOMMENDED IMPROVEMENTS	TOTAL CONDITIONS RECOMMENDED IMPROVEMENTS
FRONT STREET AND DIVISION STREET		NONE	
FOURTEENTH STREET SILVER LAKE ROAD AND DIVISION STREET			NONE
SEVENTH STREET AND DIVISION STREET		NONE	
ELEVENTH STREET AND DIVISION STREET			NONE
MADISON STREET AND FRONT STREET			
LONG LAKE ROAD AND CEDAR RUN ROAD		NONE	
SILVER LAKE ROAD AND FRANKE ROAD		NONE	

SIGNALIZED INTERSECTION
Barton-Aschman Associates, Inc.

Figure

Table 6
SIGNALIZED INTERSECTION LEVEL OF SERVICE, YEAR 2000 BASE VOLUMES,
WITHOUT SITE TRAFFIC AND POTENTIAL GROWTH OF MMC AND GTMCF,
WITH EXISTING GEOMETRICS

	Weekday A.M. Peak		Weekday P.M. Peak	
	Level of Service	Delay (seconds)	Level of Service	Delay (seconds)
Division Street with				
Front Street	C+	19.1	C	20.5
Seventh Street	B+	6.2	B+	6.9
Silver Lake Road/Fourteenth Street	C+	19.9	E+	41.3

Table 7
SIGNALIZED INTERSECTION LEVEL OF SERVICE, YEAR 2000 BASE VOLUMES,
WITHOUT SITE TRAFFIC AND POTENTIAL GROWTH OF MMC AND GTMCF,
WITH RECOMMENDED IMPROVEMENTS FOR BASE CONDITIONS ONLY

	Weekday A.M. Peak		Weekday P.M. Peak	
	Level of Service	Delay (seconds)	Level of Service	Delay (seconds)
Division Street with				
Eleventh Street ^a	B+	8.1	B	12.3
Silver Lake Road/Fourteenth Street ^b	C	20.5	D+	23.3

^a Assumes the addition of separate left-turn lanes on all approaches except the east approach and the installation of a traffic signal.

^b Assumes the addition of a second left-turn lane on both the east and west approaches, as well as signal phasing and timing modifications.

Table 8
SIGNALIZED INTERSECTION LEVEL OF SERVICE, YEAR 2000 TOTAL
VOLUMES, WITH SITE TRAFFIC AND POTENTIAL GROWTH OF MMC AND
GTMCF, WITH RECOMMENDED IMPROVEMENTS FOR BASE CONDITIONS ONLY

	Weekday A.M. Peak		Weekday P.M. Peak	
	Level of Service	Delay (seconds)	Level of Service	Delay (seconds)
Division Street with				
Front Street ^a	E+	38.9	F	65.2
Seventh Street ^b	D+	29.3	E+	46.9
Eleventh Street ^c	B	12.6	B	14.7
Silver Lake Road/Fourteenth Street ^d	C	23.2	D+	29.2

^a Assumes modifications to the signal phasing and timing.

^b Assumes that northbound to westbound left turns and eastbound to southbound left turns are permitted at this intersection.

^c Assumes the addition of separate left-turn lanes on all approaches except the east approach and the installation of a traffic signal.

^d Assumes the addition of a second left-turn lane on both the east and west approaches as well as signal phasing and timing modifications.

Table 9
**SIGNALIZED INTERSECTION LEVEL OF SERVICE, YEAR 2000 TOTAL
 VOLUMES, WITH SITE TRAFFIC AND POTENTIAL GROWTH OF MMC AND
 GTMCF, WITH SITE-RECOMMENDED ROADWAY IMPROVEMENTS**

	Weekday A.M. Peak		Weekday P.M. Peak	
	Level of Service	Delay (sec.)	Level of Service	Delay (sec.)
Division Street with				
Front Street ^a	D+	29.8	D+	28.8
Seventh Street ^b	B	14.6	C+	15.3
Madison Street with Front Street^c	B	13.8	C+	17.3
Long Lake Road with Cedar Run Road^d	C+	20.2	C+	17.9
Silver Lake Road with Franke Road^e	B+	9.6	C+	13.6

^a Assumes the addition of a second through lane on both the east and west approaches as well as signal phasing and timing modifications.

^b Assumes the addition of a separate left-turn lane on all approaches except the north approach as well as signal phasing and timing modifications.

^c Assumes the addition of a separate left-turn lane on all approaches except the north approach and the installation of a traffic signal.

^d Assumes the addition of a separate left-turn lane on the north, south, and west approaches, a three-lane cross section with a separate left-, through, and right-turn lane on the new western access drive (east approach), and the installation of a traffic signal.

^e Assumes the addition of a separate left-turn lane on the east, south, and west approaches, a two-lane cross section with a separate left-turn lane and a shared through and right-turn lane on the new southern access drive (north approach), and the installation of a traffic signal.

travel speeds). These travel characteristics were established as the accepted tolerance level of the average driver. However, it should be noted that the number and extent of improvements that will be implemented will be the decision of the community and whether it is willing to accept a lower level of mobility in exchange for other community benefits. Therefore, recommended improvements were developed to mitigate existing and projected traffic problems in the area. However, it is the choice of the community whether these improvements should be implemented.

External Roadway Improvements

Year 2000 Base Conditions

From Table 5 and 6 it can be seen that one out of the three signalized intersections analyzed operates at an unsatisfactory level of service. In addition, Table 5 illustrates that two of the unsignalized intersections also require some improvements, as both of these intersections operate at or over their current carrying capacity. **The following paragraphs describe the roadway improvements that are recommended at these intersections in order to adequately accommodate the year 2000 base traffic volumes, which do not include any projected traffic from redevelopment of the site or from projected growth of MMC and GTMCF. The need for improvements at these intersections is not a result of the redevelopment of the GTC or projected growth of MMC and GTMCF, but rather the result of both existing traffic growth in the area and the growth projected over the next seven years.**

- *Division Street and Silver Lake Road/Fourteenth Street.* Because of the high volume of east-bound to southbound left turns in both the morning and evening peak hours, a second left-turn lane is recommended on the east approach of this intersection. The dual left-turn lanes on the east approach of Fourteenth Street are required to provide sufficient stacking storage for left-turning vehicles as well as to provide additional capacity for the projected 425 vehicles that will make this maneuver in the evening peak hour. In order to match the geometry of the east approach, a second left-turn lane also should be installed on the west approach. Some widening will be required on both Fourteenth Street and Silver Lake Road to accommodate these additional left-turn lanes. Finally, modifications to the signal phasing and timing will and timing are recommended.
- *Division Street and Eleventh Street.* Our analysis indicates that a traffic signal will be warranted at this intersection because of the projected growth in the area. In addition, separate left-turn lanes are recommended on all approaches except the east approach. Some widening on Eleventh Street and Division Street will be required to accommodate the left-turn lanes.
- *Front Street.* In order to improve the carrying capacity of Front Street between Madison Street and Division Street, this roadway will need to be either (1) widened to provide a three-lane cross section from Madison Street to a point approximately 250 feet east of Division Street or (2) widened to provide separate left-turn lanes at each of the intersections between Madison Street and Division Street. Along this section, Front Street currently has an existing width that varies

between 31 feet and 37 feet. In order to provide a three-lane cross section and a minimum width of 33 feet, Front Street will need to be widened a maximum of 2 feet, and on-street parking, which is currently allowed, will have to be prohibited. Likewise, if only separate left-turn lanes are installed at the various intersections, some portions of Front Street will still need to be widened. However, if this alternative is chosen it is likely that a larger portion of Front Street would not have to be widened at all. On-street parking would also need to be removed under this alternative. This stretch of Front Street is currently (with existing 1993 traffic volumes) exceeding its present capacity, and the additional lane and/or additional left-turn lanes are needed to meet the generally accepted levels of service defined in the 1985 *Highway Capacity Manual*, even without the proposed redevelopment of the GTC or any other growth in the area.

- **Front Street and Madison Street.** A second left-turn lane will need to be added on all approaches except the north approach. Some widening of Front Street will be required to accommodate the left-turn lanes. However, the south side of Madison appears wide enough to accommodate the striping of a separate left-turn lane on this approach.

Year 2000 Total Traffic Conditions

From Tables 5 and 8 it can be seen that with the addition of site-generated traffic and traffic from the projected growth of MMC and GTMCF, two of the signalized intersections will operate at an unsatisfactory level of service. In addition, Table 5 shows that three of the unsignalized intersections will also require some improvements, as they will operate at or over their capacity. The following roadway improvement recommendations were developed in order to mitigate any impact that redevelopment-generated traffic may have on the area roadway system. These recommendations are in addition to those described above for year 2000 base conditions.

- **Front Street and Division Street.** The addition of a second through lane is required on both approaches of Front Street. The existing cross section of Front Street would need to be widened approximately six feet to accommodate the proposed five-lane cross section. As is required under base conditions, some modifications to the signal phasing and timing will be required.
- **Division Street and Seventh Street.** With the modifications to the Medical Campus access and circulation system, it is recommended that northbound to westbound left turns and eastbound to southbound left turns be permitted at this intersection. In order to safely allow these maneuvers and to increase capacity at the intersection, the addition of separate left-turn lanes will be needed on both the south and west approaches of the intersection. Only Division Street will need to be widened to accommodate the separate left-turn lane. The Seventh Street cross section is wide enough to accommodate an additional lane. The east approach of the intersection would need to be restriped to provide a separate left-turn lane and a shared through and right-turn lane. Modifications to the signal phasing and timings also will be required. In order to help mitigate the impact on the neighborhood east of Division Street, it is recommended that Seventh Street remain a one-way westbound street east of Division Street.
- **Front Street and Madison Street.** In addition to the improvements to the lane geometrics, our analysis indicates that a traffic signal will be warranted at this intersection when the redevelopment of GTC, and MMC, and GTMCF achieve full buildout and/or projected growth.

- **Long Lake Road and Cedar Run Road/Western Access Drive.** As indicated previously, it is proposed that the intersection of Long Lake Road and Cedar Run Road be relocated to the south in order to align it opposite the new western access drive. Under this proposal, separate left-turn lanes would be required on both approaches of Long Lake Road. The addition of these left-turn lanes will require some widening of Long Lake Road. The realignment of Cedar Street should be designed to provide a separate left-turn lane and a shared through and right-turn lane. The western access drive should be designed to provide two inbound lanes and three outbound lanes. The three outbound lanes should be striped to provide a separate right-turn lane, a through lane, and a left-turn lane. Our analysis indicates that a traffic signal will be warranted at this intersection when GTC, MMC, and GTMCF achieve full buildout and/or projected growth.
- **Silver Lake Road and Franke Road/Southern Access Drive.** At this intersection, the addition of left-turn lanes will be needed on both approaches of Silver Lake Road, which will require widening Silver Lake Road. Franke Road needs to be restriped to provide a separate left-turn lane and a shared through and right-turn lane. The southern access drive should be designed to provide one inbound lane and two outbound lanes. The two outbound lanes should be striped to provide a separate left-turn lane and a shared through and right-turn lane. Our analysis indicates that a signal will be warranted at this intersection once the redevelopment achieves full buildout.
- **Bay Street with Monroe Street and Elmwood Avenue.** In order to help deter GTC, MMC, and GTMCF traffic from traversing the Slab Town neighborhood, it is recommended that both Monroe Street and Elmwood Avenue be cul-de-sacked at their respective intersections with Bay Street. Currently, many motorists traveling to and from GTC, MMC, and GTMCF from the west on M-72 and the north on M-22 bypass Division Street and cut through the neighborhood along Madison Street, Monroe Street, and Elmwood Avenue via Bay Street. Cul-de-sacking Monroe and Elmwood will greatly help mitigate the problem of cut-through traffic and will have minimal impact on the residents of the neighborhood, since a number of other neighborhood streets access Bay Street.

It should be noted that these improvements are based on full buildout of the redevelopment and an overall five percent growth of both MMC and GTMCF. Therefore, not all of the improvements will be needed immediately; rather, they should be implemented or phased in as the redevelopment approaches full buildout.

Site Access

As currently planned, access to the redeveloped site will be provided via two access drives, one on Silver Lake Road and the other on Elmwood Avenue. Access to the Medical Campus will be provided by five access drives and a pickup/drop-off circle. Two access drives and the pickup/drop-off circle will be located on Sixth Street, two access drives will be located on Elmwood Avenue, and the last access drive will be located on Long Lake Road. The access drives are described below.

Redeveloped GTC

1. The first access drive to the site will be the existing Eleventh Street access drive. This drive currently forms the west leg of the intersection of Elmwood Avenue and Eleventh Street. This new access drive should provide a minimum cross section of 24 feet, with one inbound lane and one outbound lane.
2. The second access drive to the site will be proposed new southern access that will be located on Silver Lake Road. As proposed, this access drive will be aligned opposite Franke Road and will form the fourth left of the existing three-legged intersection of Silver Lake Road and Franke Road. This access drive should provide a minimum cross section of 36 feet, with one inbound lane and two outbound lanes. The two outbound lanes should be striped to provide a separate left-turn lane and a shared through and right-turn lane.

The Medical Campus

1. The western Sixth Street access drive to the Medical Campus will be the existing Red Drive access drive, which is currently aligned opposite Brook Street. This drive will provide access to the western portion of the proposed Medical Campus circulation ring road. This access drive should provide a minimum cross section of 24 feet, with one inbound lane and one outbound lane.
2. The eastern Sixth Street access drive to the Medical Campus will be the existing Beaumont Place access drive. This access drive forms the south leg of the intersection of Beaumont Place and Sixth Street and provides access to the main patient/visitor parking lot. This access drive should provide a minimum cross section of 24 feet, with one inbound lane and one outbound lane.
3. The northern Elmwood Avenue access drive to the Medical Campus will be the existing Seventh Street access drive. This access drive forms the west leg of the intersection of Seventh Street and Elmwood Avenue. The drive will provide access to the main patient/visitor parking lot, as well as to the proposed middle east-west road of the circulation ring road. This access drive should provide a minimum cross section of 24 feet, with one inbound and one outbound lane.
4. The southern Elmwood Avenue access drive will be located approximately 470 feet south of Seventh Street. This drive will provide access to the southern portion of the Medical Campus circulation ring road. This access drive should provide a minimum cross section of 24 feet, with one inbound lane and one outbound lane.
5. The Long Lake Road access drive is proposed to be located on Long Lake Road approximately 200 feet south of Cedar Run Road. As proposed, Cedar Run Road would be realigned to the south so that it would align opposite the proposed access drive and form one 4-legged intersection. As proposed, this drive will provide access to the new east-west road that would extend to the proposed circulation ring road. This access drive should provide a minimum cross section

of 36 feet, with one inbound lane and two outbound lanes. The two outbound lanes should be striped to provide a separate left-turn lane and a shared through and right-turn lane.

Impact on the Surrounding Neighborhoods

One of the main objectives in developing the comprehensive vehicle plan for the Grand Traverse Commons Redevelopment was to minimize the impact of traffic from GTC, MMC, and GTMCF on the neighborhoods surrounding the site. Particular attention was given to alternatives that would separate the neighborhoods from the developments and the traffic generated by the developments. The proposed circulation and access system will lessen the impact of traffic on the surrounding community by providing a number of access points into the site and directing heavy traffic flows away from the adjacent neighborhoods. Further, this proposed system provides a means by which MMC and GTMCF can mitigate the existing traffic problems with regard to the adjacent neighborhood. The following paragraphs describe the design aspects of the proposed circulation and access system, as well as the roadway improvements that will minimize the impact of traffic on the surrounding neighborhoods. As indicated previously, these are recommendations that we believe will help mitigate existing and future problems. Ultimately, the community must decide what, if any, action it wants to take to mitigate these problems.

Sixth Street Neighborhood

This neighborhood is located in the southwest quadrant of the intersection of Front Street and Division Street. Under the proposed circulation and access system, this neighborhood would be separated from MMC and GTMCF by a proposed diagonal diverter that would be installed at the intersection of Elmwood Avenue and Sixth Street. As proposed, this diagonal diverter would eliminate the use of Sixth Street and Elmwood Avenue as an access route to MMC and GTMCF through the neighborhood. Therefore, this proposed diagonal diverter will eliminate the MMC and GTMCF traffic through the neighborhood and convert these streets into local residential streets that will serve only neighborhood traffic.

Slab Town Neighborhood

This neighborhood is located north of Front Street and west of Division Street. In order to reduce the traffic impact of GTC, MMC, and GTMCF on this neighborhood, it is recommended that both Monroe Street and Elmwood Avenue be cul-de-sac'd at their intersections with Bay Street. The purpose of the cul-de-sacs would be to prevent motorists traveling to GTC, MMC, and GTMCF from the west on M-72 and the north on M-22 from cutting through the neighborhood. Many of these motorists currently bypass Division Street and cut through the neighborhood via Bay Street.

Central Neighborhood

This neighborhood is located east of Division Street and south of Front Street. With the elimination of Sixth Street as a main access to MMC and GTMCF, much of the traffic traveling

along Sixth Street through this neighborhood will be eliminated. In addition, it has been recommended that Seventh Street remain one-way westbound through this neighborhood in order to help reduce the amount of cut-through traffic by motorists exiting the Medical Campus.

Parking in the Neighborhoods

Based on discussions with residents who live in the neighborhoods surrounding the MMC and GTMCF, it has been determined that there is a significant problem concerning the number of MMC and GTMCF employees and visitors who park in the neighborhoods. In order to control this parking problem it is recommended that these neighborhoods implement some type of parking control to be enforced by local authorities. The most efficient way of controlling parking is by implementing a parking permit program in the neighborhoods. If the program is enforced, it should eliminate the parking problems in the neighborhoods, as well as reduce the amount of traffic traveling through them.

5. Conclusions

This report examined the traffic impacts of the proposed redevelopment of GTC and its proposed comprehensive vehicle plan. The study analyzed the traffic impacts of the proposed redevelopment under both existing and future conditions. Capacity analyses were performed for critical intersections in the area that are expected to be impacted by the total projected traffic when the redevelopment is completed. Roadway improvements were developed to mitigate both existing conditions and the impact that the proposed redevelopment would have on traffic conditions in the area.

With the proposed access and circulation system, as well as the improvements recommended to accommodate both existing and projected conditions, the traffic generated by the redevelopment of GTC will have minimal impact on traffic flow, and there will be sufficient traffic capacity to accommodate future growth in the area. The proposed access and circulation system was designed to provide sufficient and safe traffic movements to and from GTC, MMC, and GTMCF with minimal interruption to through (nonsite) traffic on the external roadway system.

The proposed comprehensive vehicle plan of the Grand Traverse Commons Redevelopment project will greatly minimize the impact of GTC, MMC, and GTMCF on the neighborhoods surrounding the site. Particular attention was given to alternatives that would separate the neighborhoods from the developments and the traffic generated by the developments. The proposed circulation and access system will lessen the impact of traffic on the surrounding community by providing a number of access points into the site and directing heavy traffic flow away from the adjacent neighborhoods. Further, this proposed system provides a means by which MMC and GTMCF can mitigate the existing traffic problems with regard to the adjacent neighborhood.

Finally, it should be noted that the improvements that are recommended in this study are based on a worst-case scenario and suggest the improvements that will be warranted if (1) the

entire projected general growth in the area is realized and (2) the GTC, MMC, and GTMCF achieve full buildout and/or projected growth. If these ultimate growth projections and projected development plans are not realized, many of the recommended improvements would not be necessary. Further, the recommended improvements were developed to ensure that area roadways and intersections would have sufficient additional capacity to meet the minimal travel characteristics that have been accepted by the industry (i.e., average vehicle delay, intersection delay, travel times, travel speeds). These travel characteristics were established as the accepted tolerance level of the average driver. However, it should be noted that the number and extent of improvements that will be implemented will be the decision of the community and whether it is willing to accept a lower level of mobility in exchange for other community benefits. Therefore, recommended improvements were developed to mitigate existing and projected traffic problems in the area. However, it is the choice of the community whether these improvements should be implemented.

C. Development Capacity Tables

NOTE: Development Capacity Table 2 reflected in this revision of the March 15, 1994 District Plan replaces the Development Capacity Table 2 reflected in the original March 15, 1994 District Plan. For the final District Plan, the Development Capacity Tables will be footnoted and a preface will be incorporated which explains the tables.

SHOULD BE CLEAR

Table 1

Grand Traverse Commons - Impervious Surface Inventory			
Kids Creek Partners		03/02/94	
District Plan Subarea	Existing Impervious Surface	Surface to be Demolished	Existing Surface to Retain

Subarea 1			
Buildings	156,002	103,606	52,396
Roads	126,192	126,192	0
Parking	221,254	221,254	0
Sidewalks	55,510	55,510	0
Shoulders	2,121	2,121	0
Gravel	29,121	29,121	0
Misc.	20,803	20,803	0
Subtotal Subarea 1	611,003	558,607	52,396

Subarea 2			
Buildings	177,787	36,942	140,845
Roads	121,918	121,918	0
Parking	75,569	75,569	0
Sidewalks	45,592	45,592	0
Shoulders	9,609	9,609	0
Gravel	33,770	33,770	0
Misc.	9,359	9,359	0
Subtotal Subarea 2	473,604	332,759	140,845

Subarea 3			
Buildings	83,452	65,403	18,049
Roads	25,993	25,993	0
Parking	67,238	67,238	0
Sidewalks	6,595	6,595	0
Shoulders	884	884	0
Gravel	111,991	111,991	0
Misc.	4,482	4,482	0
Subtotal Subarea 3	300,635	282,586	18,049

Subarea 4			
Buildings	38,500	0	38,500
Roads	46,362	46,362	0
Parking	47,319	47,319	0
Sidewalks	15,777	15,777	0
Shoulders	941	941	0
Gravel	21,633	21,633	0
Misc.	1,431	1,431	0
Subtotal Subarea 4	171,963	133,463	38,500

Subarea 5			
Buildings	65,000	0	65,000
Roads	14,327	14,327	0
Parking	83,571	83,571	0
Sidewalks	10,237	10,237	0
Shoulders	767	767	0
Gravel	17,243	17,243	0
Misc.	16,273	16,273	0
Subtotal Subarea 5	207,418	142,418	65,000

Table 1 (cont)

Grand Traverse Commons - Impervious Surface Inventory			
Kids Creek Partners		03/02/94	
District Plan Subarea	Existing Impervious Surface	Surface to be Demolished	Existing Surface to Retain

Subarea 6			
Buildings	33,968	19,138	14,830
Roads	0	0	0
Parking	0	0	0
Sidewalks	0	0	0
Shoulders	0	0	0
Gravel	138,609	138,609	0
Misc.	14,393	14,393	0
Subtotal Subarea 6	186,970	172,140	14,830

Subarea 7			
Buildings	0	0	0
Roads	60,362	60,362	0
Parking	3,301	3,301	0
Sidewalks	660	660	0
Shoulders	12,979	12,979	0
Gravel	154,559	154,559	0
Misc.	1,172	1,172	0
Subtotal Subarea 7	233,033	233,033	0

Subarea 8			
Buildings	11,622	7,730	3,892
Roads	127,303	127,303	0
Parking	5,960	5,960	0
Sidewalks	8,678	8,678	0
Shoulders	15,672	15,672	0
Gravel	105,483	105,483	0
Misc.	322	322	0
Subtotal Subarea 7	275,040	271,148	3,892

District Totals			
Buildings	566,331	232,819	333,512
Roads	522,457	522,457	0
Parking	504,212	504,212	0
Sidewalks	143,049	143,049	0
Shoulders	42,973	42,973	0
Gravel	612,409	612,409	0
Misc.	68,235	68,235	0
District Totals	2,459,666	2,126,154	333,512

Table 2 This Table 2 Replaces the March 15, 1994 GTC District Plan Table 2
Grand Traverse Commons - District Plan - Design Guidelines for Development Capacity Analysis (by Subarea)
04/21/94

District Subarea 1, The Medical Campus Development Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Sub Dev Zone 1.1	116,555	0.95	110,727	0.90	99,655	4.25	423,532	4.96	578,656	13.28
Sub Dev Zone 1.2	12,610	0.90	11,349	0.80	9,079	1.50	13,619	2.60	32,842	0.75
Sub Dev Zone 11.1	185,231	0.65	120,400	0.65	78,260	1.25	97,825	2.08	384,427	8.82
Sub Dev Zone 11.2	90,207	0.80	72,166	0.70	50,516	1.50	75,774	2.44	220,253	5.06
Sub Dev Zone 11.3	24,235	0.80	19,388	0.70	13,572	1.25	16,965	2.24	54,242	1.24
Sub Dev Zone 111.1	143,956	0.95	136,758	0.90	123,082	4.50	553,871	5.17	743,984	17.08
Sub Dev Zone 111.2	28,587	0.80	22,870	0.80	18,296	1.25	22,870	2.32	66,309	1.52
Subtotal	601,381		493,658		392,459		1,204,454		2,080,712	47.76
Historic Buildings	46,905	1.10	51,596	1.00	51,596	0.00	0	1.71	80,168	1.84
Hist Bldg Parking	70,000	1.00	70,000	0.00	0	0.00	0	0.81	56,972	1.31
Subtotal	116,905		121,596		51,596		0		137,139	3.15
New Roads	0	0.00	182,160	0.00	0	0.00	0	0.00	0	n/a
Med. Campus Totals	718,286		797,413		444,055		1,204,454		2,217,851	50.90

O/A Adj Facto 0.81

Grand Traverse Commons - Development Capacity Analysis

District Subarea 2, Continuing Care Retirement Center Development Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Sub Dev Zone 1.1	64,235	0.65	41,753	0.65	27,139	2.00	54,279	2.61	167,830	3.85
Sub Dev Zone 1.2	91,728	0.65	59,623	0.65	38,755	2.00	77,510	2.61	239,662	5.50
Sub Dev Zone 1.3	11,525	0.65	7,491	0.80	5,993	4.50	26,969	4.71	54,293	1.25
Sub Dev Zone 11.1	214,208	0.35	74,973	0.80	59,978	2.00	119,956	2.49	534,232	12.26
Subtotal	381,696		183,840		131,866		278,714		996,017	22.86
Historic Buildings	144,119	1.10	158,531	1.00	158,531	0.00	0	1.66	239,621	5.50
Hist Bldg Parking	77,500	1.00	77,500	0.00	0	0.00	0	0.79	61,360	1.41
Subtotal	221,619		236,031		158,531		0		300,981	6.91
New Roads	0	0.00	140,898	0.00	0	0.00	0	0.00	0	n/a
CCRC Totals	603,315		560,769		290,397		278,714		1,296,998	29.77

O/A Adj Facto 0.79

Table 2 (cont)
Grand Traverse Commons - Development Capacity Analysis

District Subarea 3, Residential/Activity Development Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Sub Dev Zone 1.1	78,466	0.65	51,003	0.65	33,152	2.50	82,880	2.83	222,089	5.10
Sub Dev Zone 1.2	32,362	0.35	11,327	0.65	7,362	2.00	14,725	2.23	72,313	1.66
Sub Dev Zone 1.3	103,944	0.80	83,155	0.90	74,840	2.00	149,679	2.76	286,459	6.57
Sub Dev Zone 11.1	93,797	0.65	60,968	0.65	39,629	2.50	99,073	2.83	265,481	6.09
Sub Dev Zone 11.2	99,099	0.80	79,279	0.90	71,351	2.00	142,703	2.76	273,106	6.27
Subtotal	407,668		285,732		226,334		489,059		1,119,448	25.69
Historic Buildings	5,692	1.10	6,261	1.00	6,261	0.00	0	1.56	8,903	0.20
Hist Bldg Parking	4,250	1.00	4,250	0.00	0	0.00	0	0.74	3,166	0.07
Subtotal	9,942		10,511		6,261		0		12,069	0.28
New Roads	0	0.00	16,560	0.00	0	0.00	0	0.00	0	n/a
Res/Act. Totals	417,610		312,803		232,596		489,059		1,131,517	25.97

O/A Adj Facto 0.74

Grand Traverse Commons - Development Capacity Analysis

District Subarea 4, Community Services Improvement Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Trail Allowance	6,000	0.20	1,200	0.00	0	0.00	0	0.73	4,377	0.10
Subtotal	6,000		1,200		0		0		4,377	0.10
Historic Buildings	35,905	1.10	39,496	1.00	39,496	0.00	0	7.66	275,021	6.31
Hist Bldg Parking	87,500	1.00	87,500	0.00	0	0.00	0	3.65	319,153	7.33
Subtotal	123,405		126,996		39,496		0		594,174	13.64
New Roads	0	0.00	27,600	0.00	0	0.00	0	0.00	0	n/a
Comm. Serv. Totals	129,405		155,796		39,496		0		598,551	13.74

O/A Adj Facto 3.65

Table 2 (cont)
Grand Traverse Commons - Development Capacity Analysis

District Subarea 5, Traverse Bay Area Intermediate School District, (TBA) Improvement Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Trail Allowance	4,000	0.20	800	0.00	0	0.00	0	0.40	1,585	0.04
Subtotal	4,000		800		0		0		1,585	0.04
Historic Buildings	65,000	1.10	71,500	1.00	71,500	1.50	107,250	7.13	463,519	10.64
Hist Bldg Parking	70,000	1.00	70,000	0.00	0	0.00	0	1.98	138,659	3.18
Subtotal	135,000		141,500		71,500		107,250		602,178	13.82
New Roads	0	0.00	147,384	0.00	0	0.00	0	0.00	0	n/a
TBA Totals	139,000		289,684		71,500		107,250		603,763	13.86

O/A Adj Facto 1.98

Grand Traverse Commons - Development Capacity Analysis

District Subarea 6, Recreation Activity (Farms Area) Development Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Sub Dev Zone 1.1	20,736	0.65	13,478	0.40	5,391	2.00	10,783	15.79	327,346	7.51
Sub Dev Zone 1.2	23,526	0.35	8,234	0.02	165	2.00	329	12.27	288,588	6.62
Subtotal	44,262		21,713		5,556		11,112		615,934	14.14
Historic Buildings	13,961	1.10	15,357	1.00	15,357	0.00	0	10.87	151,746	3.48
Hist Bldg Parking	35,000	1.00	35,000	0.00	0	0.00	0	5.18	181,155	4.16
Subtotal	48,961	1.00	50,357		15,357		0		332,901	7.64
New Roads	0	0.00	18,170	0.00	0	0.00	0	0.00	0	n/a
Farms Totals	93,223		90,240		20,913		11,112		948,835	21.78

O/A Adj Facto 5.18

Table 2 (cont)
Grand Traverse Commons - Development Capacity Analysis

District Subarea 7, Woodlands Conservation Zone

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Trail Allowance	50,000	0.20	10,000	0.00	0	0.00	0	149.31	7,465,580	171.35
										0.00
Subtotal	50,000		10,000		0		0		7,465,580	171.35
Historic Buildings	0	0.00	0	1.00	0	0.00	0	746.56	0	0.00
Hist Bldg Parking	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Subtotal	0		0		0		0		0	0.00
New Roads	0	0.00	14,030	0.00	0	0.00	0	0.00	0	n/a
Woolands Totals	50,000		24,030		0		0		7,465,580	171.35

O/A Adj Facto 746.56

Grand Traverse Commons - Development Capacity Analysis

District Subarea 8, Wetlands Conservation Area

Site Identification	Lot Area	Impervi Surface Factor	Impervious Surface	Building Covera Factor	Building Coverage	Density Factor	Maximum Density	Open Area Factor	Total Sq. Ft. Area	Acerage
Trail Allowance	50,000	0.20	10,000	0.00	0	0.00	0	3.09	154,612	3.55
Sub Dev Zone 1.1	108,426	0.65	70,477	0.30	21,143	2.50	52,858	53.34	5,783,557	132.74
Subtotal	158,426		80,477		21,143		52,858		5,938,169	136.29
Historic Buildings	2,814	1.10	3,095	1.00	3,095	0.00	0	32.47	91,366	2.10
Hist Bldg Parking	1,400	1.00	1,400	0.00	0	0.00	0	15.46	21,646	0.50
Subtotal	4,214		4,495		3,095		0		113,012	2.59
New Roads	0	0.00	47,840	0.00	0	0.00	0	0.00	0	n/a
Wetlands Totals	162,640		132,812		24,238		52,858		6,051,181	138.88

O/A Adj Facto 15.46

Table 2 (cont)
Grand Traverse Commons - Development Capacity Analysis

District Totals

Site Identification	Lot Area	Percent District	Impervious Surface	Percent District	Building Coverage	Percent District	Maximum Density	Percent District	Total Sq. Ft. Area	Acerage
District Sub Area 1	601,381	26.0%	493,658	27.9%	392,459	34.9%	1,204,454	56.2%	2,080,712	47.76
District Sub Area 2	381,696	16.5%	183,840	10.4%	131,866	11.7%	278,714	13.0%	996,017	22.86
District Sub Area 3	407,668	17.6%	285,732	16.2%	226,334	20.2%	489,059	22.8%	1,119,448	25.69
District Sub Area 4	6,000	0.3%	1,200	0.1%	0	0.0%	0	0.0%	4,377	0.10
District Sub Area 5	4,000	0.2%	800	0.0%	0	0.0%	0	0.0%	1,585	0.04
District Sub Area 6	44,262	1.9%	21,713	1.2%	5,556	0.5%	11,112	0.5%	615,934	14.14
District Sub Area 7	50,000	2.2%	10,000	0.6%	0	0.0%	0	0.0%	7,465,580	171.35
District Sub Area 8	158,426	6.8%	80,477	4.5%	21,143	1.9%	52,858	2.5%	5,938,169	136.29
Subtotal	1,653,433	71.5%	1,077,419	60.9%	777,359	69.2%	2,036,197	95.0%	18,221,822	418.22
Hist Bldg Area 1	46,905	2.0%	51,596	2.9%	51,596	4.6%	0	0.0%	80,168	1.84
Hist Bldg Pkng A1	70,000	3.0%	70,000	4.0%	0	0.0%	0	0.0%	56,972	1.31
Hist Bldg Area 2	144,119	6.2%	158,531	9.0%	158,531	14.1%	0	0.0%	239,621	5.50
Hist Bldg Pkng A2	77,500	3.3%	77,500	4.4%	0	0.0%	0	0.0%	61,360	1.41
Hist Bldg Area 3	5,692	0.2%	6,261	0.4%	6,261	0.6%	0	0.0%	8,903	0.20
Hist Bldg Pkng A3	4,250	0.2%	4,250	0.2%	0	0.0%	0	0.0%	3,166	0.07
Hist Bldg Area 4	35,905	1.6%	39,496	2.2%	39,496	3.5%	0	0.0%	275,021	6.31
Hist Bldg Pkng A4	87,500	3.8%	87,500	4.9%	0	0.0%	0	0.0%	319,153	7.33
Hist Bldg Area 5	65,000	2.8%	71,500	4.0%	71,500	6.4%	107,250	5.0%	463,519	10.64
Hist Bldg Pkng A5	70,000	3.0%	70,000	4.0%	0	0.0%	0	0.0%	138,659	3.18
Hist Bldg Area 6	13,961	0.6%	15,357	0.9%	15,357	1.4%	0	0.0%	151,746	3.48
Hist Bldg Pkng A6	35,000	1.5%	35,000	2.0%	0	0.0%	0	0.0%	181,155	4.16
Hist Bldg Area 7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.00
Hist Bldg Pkng A7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.00
Hist Bldg Area 8	2,814	0.1%	3,095	0.2%	3,095	0.3%	0	0.0%	91,366	2.10
Hist Bldg Pkng A8	1,400	0.1%	1,400	0.1%	0	0.0%	0	0.0%	21,646	0.50
Subtotal	660,046	28.5%	691,486	39.1%	345,836	30.8%	107,250	5.0%	2,092,454	48.03
Roads to Subarea by %										
New Roads Area 1	0		182,160	30.6%	0		0		0	n/a
New Roads Area 2	0		140,898	23.7%	0		0		0	n/a
New Roads Area 3	0		16,560	2.8%	0		0		0	n/a
New Roads Area 4	0		27,600	4.6%	0		0		0	n/a
New Roads Area 5	0		147,384	24.8%	0		0		0	n/a
New Roads Area 6	0		18,170	3.1%	0		0		0	n/a
New Roads Area 7	0		14,030	2.4%	0		0		0	n/a
New Roads Area 8	0		47,840	8.0%	0		0		0	n/a
Subtotal	0		594,642	100.0%	0		0		0	n/a
District Totals	2,313,479		2,363,547		1,123,194		2,143,447		20,314,276	466

D. Interim Use Plan

DETAILED INTERIM USE PLAN
GRAND TRAVERSE COMMONS PLANNED REDEVELOPMENT DISTRICT
March, 1994

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INTRODUCTION

The purpose of the interim use plan is to identify and promote appropriate active uses of buildings within the Grand Traverse Commons in an effort to preserve the structures until the development of end uses is achieved. Upon approval by the Grand Traverse Commons Redevelopment Corporation (GTCRC), the interim use plan will assist the GTCRC in responding to requests for space within the Commons and ensure that appropriate interim uses are selected which will not inhibit the redevelopment of the property nor compromise the integrity of the site. Implementation of the interim use plan may require that the GTCRC enter into a lease arrangement with Kids Creek Partners (KCP), and possibly the State of Michigan.

To responsibly assess the feasibility of promoting interim uses of the Grand Traverse Commons property, the following elements have been addressed in the interim use plan:

- overview of the interim use plan precepts,
- prioritization of the applicable buildings based upon their suitability for interim use,
- identification of the acceptable types of interim uses,
- identification of the types of potential users,
- traffic and parking conditions,
- compliance with Public Act 250 and the Adaptive Reuse Plan,
- assessment of the necessary building improvements and compliance with the Americans with Disabilities Act and building code requirements, and
- profiles of selected buildings.

The plan addresses the acceptable interim uses for a select grouping of buildings located within the Commons, and identifies potential users. The residential structures currently being leased by the State of Michigan, on a short-term basis, have also been included in the interim use plan, but only minimally. Given that these structures are currently in use and may continue to be controlled by the State for some time, the interim use plan only addresses the acceptable types of interim uses for these buildings.

OVERVIEW OF THE INTERIM USE PLAN PRECEPTS

The interim use plan emphasizes the continued use of buildings which are already occupied, and those which are easiest to re-use temporarily based on their condition, size, and location. The plan recommends the re-use of a selection of buildings that are in the best condition, and promotes uses which require the least capital improvements and generate minimal traffic and parking demands.

The interim use plan emphasizes a cost-effective approach regarding the re-use of structures in the short-term. As such, interim users will be required to pay for necessary repairs and improvements net of rent. Preference will be given to short-term users with self-managment abilities. Additionally, all interim users will be required to provide sufficient evidence of their ability to meet the rent requirements.

The buildings identified as candidates for interim uses are located away from demolition areas, and in a pattern most likely to provide security and maintenance for the entire Grand Traverse Commons property. Generally, none of the buildings located in the northern portion of the site which are slated for demolition or in areas which may constitute the first phase of development have been selected for interim use. The rationale for avoiding these buildings is based on the premise that they are subject to the shortest term of availability and therefore will be least cost effective to put into service.

BUILDING SELECTION PRIORITIES

In preparation of the interim use plan, KCP surveyed each of the buildings within the Commons property to assess the condition of the structures and their suitability for short-term use. The primary factors that were considered in the selection of the buildings included the effort and financial resources that would be required to prepare them for interim use. Based on this survey and on the identified precepts, the buildings selected for interim use were chosen in order of priority according to the following criteria:

- buildings that are readily available from the State in the short-term,
- buildings that are currently in use,
- buildings that require moderate capital improvements, and
- buildings that require significant capital improvements.

Twenty-six buildings have been selected as candidates for new or continued interim uses.

Continuation of Existing Uses

The interim use plan encourages the continued use of buildings which are already occupied. These include Buildings 50 (the Canteen), 36, 79, 82, 83, 85, 87, 89.

Building 50 (the Canteen) is currently being used by Community Mental Health for a Geriatric Day Care Facility. Building 36 is presently being used as a temporary clinic for Munson Medical Center. Buildings 79, 82, 83, 85, 87, and 89 are currently being used for a variety of residential-type uses.

High Use Potential (Buildings Requiring Moderate Improvements)

A number of buildings fall within this category based on their condition and size. These buildings require minor to moderate improvements, and have re-use potential on a temporary basis. Additionally, such buildings are scattered throughout the site in a pattern which will extend security across the campus. The following buildings have been identified as having high use potential.

Farm Buildings

- Barn 204
- Barn 206
- Building 221

- Building 222
- Building 223

Shop and Service Buildings

- Building 44
- Building 53
- Building 56
- Building 57
- Building 58
- Building 60
- Building 61
- Building 66
- Building 67

Moderate Use Potential (Buildings Requiring Significant Improvements)

Five buildings fall within this category and include cottages in both the northern and southern sections of the Commons property. These buildings require more improvements than the high use potential buildings in order to become inhabitable for interim users. In view of the significant improvement costs, these structures may need to be used on an interim basis for a long enough period of time to make these buildings marketable. The following structures have been included in this classification.

North Cottages

- Cottage 21 (Potential is dependent upon end-use development schedule.)
- Cottage 23 (Potential is dependent upon end-use development schedule.)
- Cottage 25 (Potential is dependent upon end-use development schedule.)

South Cottages

- Cottage 34

Other Buildings

- Building 88

ACCEPTABLE INTERIM USES

Based on KCP's experience and the results of the building survey, a number of interim uses may be feasible. The following types of interim uses should be permitted on the site in addition to the existing short-term uses currently in place. Suitable interim uses for selected buildings include the following:

- storage and/or warehouse uses (Buildings 44, 53, 57, 58, 60, 61, 67, 204, 206, 221, 222, 223),
- seasonal recreational uses (204, 206, 221, 222, 223),
- workshop/repair/maintenance uses (53, 56, 57, 58)
- artist/studio and/or workshop uses (Buildings 60, 61, 67),
- municipal (Building 66),
- temporary medical-related/governmental/office uses (Cottages 21, 23, 25, 36), and
- temporary office/educational/non-profit uses (Cottages 34 and 36).

These types of uses have been chosen for a number of reasons. They are low-impact uses. They are consistent with the types of activities that previously took place within the selected structures. They generally require minimal improvements to the buildings which can then be amortized over a short period of time, and they are generally consistent with the Adaptive Reuse Plan. None of these types of uses will cause undue wear on the buildings or the campus.

In addition to acceptable interim uses for buildings, the following site uses are also considered to be acceptable on an interim basis:

- existing temporary surface parking, and
- construction staging.

Acceptable Interim Uses for Non-Residential Buildings

The acceptable interim uses for the selected non-residential buildings within the Grand Traverse Commons are described below.

Storage/Warehouse Uses

Several of the buildings selected for the interim use plan are suitable for storage and warehousing uses. They include Buildings 44, 53, 57, 58, 60, 61, 67, 204, 206, 221, 222, 223. All of these structures have been previously used as storage facilities. From an interim use standpoint, this is an attractive approach to promote because it may obviate the need for the structures to be brought into complete compliance with all applicable requirements of the local building codes during the interim use phase.

According to the Traverse City Building Department as well as the zoning officials of Traverse City and Garfield Township, the continuation of the same uses as in the past for these buildings is not likely to result in their having to be brought into compliance with the current requirements of the building code. Clearly, following this type of approach may serve to minimize the costs associated with making these structures available for interim use.

In addition to the cost factor, these types of uses are suitable for these structures. These structures are located in areas of the site where existing impervious surface will be able to accommodate the parking needs of the users, and existing roadways will be able to handle the traffic. Such uses must not generate excessive trips to the site nor should they result in general public access to sensitive properties (i.e. the historic structures).

Seasonal Recreational Uses

Several of the Farm buildings (204, 206, 221, 222, and 223) may present opportunities for seasonal recreational uses along the lines of the Adventure School Program which has been proposed for this area. The Adventure School Program proposal requested the use of some of the farms structures for active indoor recreation uses such as rope and wall climbing.

Seasonal recreational uses may be a possibility and may not result in the need to bring the buildings into complete compliance with the local building code. As such, it may be feasible as an interim use depending upon the level of improvements that would be required.

Workshop/Repair/Maintenance Uses

Many of the shop and service buildings located to the west of Building 50, are suitable as interim workshop/repair/maintenance space for local clubs and organizations given their condition and configuration. These buildings include the following: 53, 56, 57 58) With minimal improvements, these structures can be reused on an interim basis. Additionally, these structures are located in areas of the site where existing impervious surface located adjacent to the structures will be able to accommodate the parking needs of the users, and existing roadways will be able to handle the traffic. Such uses will not generate excessive trips to the site.

Artist/Studio/Workshop Uses

In addition to the workshop space uses, some of the shops and service buildings can be marketed as artist/studio space with minimal improvements. Buildings particularly suited to these types of uses include 60, 61, and 67 based on their layout, configuration, and condition. These structures are also located adjacent to existing impervious surfaces that will be able to accommodate the parking needs of the interim users, and will not generate significant traffic impacts.

Temporary Medical-Related/Governmental/Office/Education/Non-Profit Uses

Given the relatively good condition of Cottages 21, 23, 25, and 34, these structures may be suitable for temporary medical-related or governmental/office uses. Additionally, Cottages 34 and 36 may be suitable for educational and/or non-profit uses. However, the cost to prepare these structures for interim uses may be significant. Consequently, the marketing of these structures for short-term medical-related or office use may necessitate that the use be allowed to remain in place for no less than two years in order to make it a feasible interim use arrangement.

In addition to the cost factor, the interim use of Cottages 21, 23 and 25 in particular is dependent upon the development schedule for long-term uses on the property due to their location in the proposed medical campus zone which is anticipated to be part of the first phase of long-term development. It may only be feasible to promote the interim use of these structures if they can be converted to end uses.

Acceptable Interim Uses for Residential Buildings

It is recommended that the current uses of the residential buildings located along Eleventh Street and Division Street within the Commons be continued until such time as the master lease is put into place, the properties are acquired, and/or they become subject to a area-specific development plan. At that time, the continuation of these uses should be re-evaluated for compatibility with the terms of the master lease, conveyance documents, and/or the site-specific development plan. These uses include the following:

- Building 79 (Residential, Community Mental Health Group Home),
- Building 82 (Residential),
- Building 83 (Residential),
- Building 85 (Residential),
- Building 87 (Residential, Community Mental Health Group Home),
- Building 89 (Residential),
- Building 222 (Michigan Department of Transportation), and
- Building 223 (Michigan Department of Transportation).

Acceptable Interim Uses for the Site

In addition to determining suitable interim uses for buildings located within the Commons, the interim use plan also recommends suitable short-term site uses. They include the following:

- existing temporary surface parking, and
- construction staging areas.

The continuation of the existing temporary surface parking is considered to be an acceptable site use on an interim basis. In addition to parking, construction staging areas should also be permitted to occupy the site temporarily in a tightly controlled manner. In order to control the impact of temporary construction activity on the site as well as overflow of construction activity from adjacent properties, the identification of temporary construction staging areas is recommended. It is important to control and charge for such activity so as to mitigate negative impacts upon the Commons property.

POTENTIAL USERS

Based on the interest already generated in the site, it is plausible that several of the buildings will be relatively easy to re-use and will not require an intense marketing effort. Recent marketing of space in All Faiths Chapel identified a variety of prospects. A renewed marketing effort most likely will generate additional lists, especially if a central marketing theme is encouraged.

It is KCP's intention to retain a local representative to act as the leasing agent for the property. The marketing effort for interim users, which will include the specific identification of short-term tenants, will commence once the local representative is on board and the appropriate legal arrangements are put into place. Users with self-management potential and minimal parking and traffic requirements will be given priority. Prospective short-term tenants may include the following:

- community groups previously identified,
- arts, environmental/nature, educational organizations, and other thematic groups,
- Munson Medical Center,
- Community Mental Health,
- governmental agencies,
- existing tenants, and
- rough loft users (artists, craftsmen, etc.).

Interim users will be required to pay for necessary repairs and improvements, net of rent.

TRAFFIC AND PARKING CONDITIONS

Until definite tenants are identified for each applicable structure, it is premature to discuss specific parking and traffic impacts. However, one of the key precepts of the interim use plan is to minimize the traffic and parking impacts on the site that will be generated by interim users. To achieve this situation, parking must generally be limited to existing impervious surfaces, preferably adjacent to, or within close proximity to, the applicable structures. If it is absolutely required, consideration may be given to the creation of new temporary surface parking. However, this will only be considered if the overall benefits of having the interim user in place are great. It should be noted that construction of additional surface parking lots that are not associated with the interim uses of structures or provide interim construction staging parking will absolutely not be pursued under the interim use plan.

It is further recommended that the existing temporary surface parking areas that are currently in use be incorporated under the interim use plan.

COMPLIANCE WITH PUBLIC ACT 250 AND THE ADAPTIVE REUSE PLAN

The interim use plan is consistent with Public Act 250 and the Adaptive Reuse Plan.

Public Act 250

Public Act 250 allows the GTCRC to lease buildings and improvements, subject to the approval of the supervising agency. However, the supervising agency may only withhold its approval if the lease is being made for the purpose of evading the regulatory provisions of the Act. The Act also allows the GTCRC to acquire real property in its name via a lease or other method prior to or after the certificates of approval of its development plan have been issued.

Given that the interim use plan calls for only the level of improvement necessary to make the spaces available on an interim basis, a development plan does not have to be in place. The provision in Public Act 250 which requires a redevelopment corporation to not undertake any clearance, reconstruction, improvement alteration, or construction in connection with any development until the certificates of approval has been issued does not apply because it is not in connection with any development.

Adaptive Reuse Plan

All of the interim uses proposed in this interim use plan conform to the Adaptive Reuse Plan. According to the ARP Reuse Market Analysis section, there is ". . . office space demand . . . for governmental, new profit service organizations, and medical-related uses." The ARP further states that office and medical-related uses are suitable uses for the historic cottage structures which is in keeping with the interim uses proposed for Cottages 21, 23, 25, and 34.

With regard to workshop and artist-related uses, the research undertaken for the ARP "indicates that there is a demand for workshop . . . style accommodations . . ." and that ". . . there is a need for affordable studio space within the City of Traverse City." It is further indicated in the ARP that the shops and service buildings are suitable for workshop and artist-related uses.

Storage-related uses are also promoted in the ARP, particularly in the shop and service buildings area. Recreational uses are also supported. Recent amendments to the ARP regarding the farm structures indicates that "community educational or community recreational uses . . . would be most appropriate" for the farm buildings.

The interim uses proposed are similar or identical to the previous uses on the property when it was operating as the Traverse City State Hospital, and there may be some conflict between the proposed interim uses and the Adaptive Reuse Plan. The uses recommended in this Interim Use Plan are interim uses suitable for a temporary period of time only and should not be considered to be accepted long term, permanent uses.

NECESSARY BUILDING IMPROVEMENTS

Information regarding existing conditions and necessary improvements are based upon the observations and experience of KCP in viewing the structures. The necessary repairs that have been identified assume only the minimal improvements that are required to make the buildings available for interim use. The analysis of necessary building improvements does not include a detailed assessment of the Americans with Disabilities Act, the Traverse City building code, the Garfield Township building code, or other relevant regulations which may add costs unless waivers and exceptions can be obtained. The detailed analysis will occur at the time that definite tenants are identified. However, a summary overview of these requirements has been included.

Compliance with the Americans with Disabilities Act (ADA)

Based on a cursory overview of the ADA, it is possible that these requirements will not have to be met in order to make the suitable buildings available for interim use. According to the ADA requirements, "Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility." In addition historic buildings which require structurally impracticable modifications are generally exempted from conformance under the ADA and the State of Michigan recognized building and accessibility requirements.

The buildings selected for interim use generally require the reinstatement of mechanical, electrical, and heating systems as well as roofing work. It is KCP's interpretation that these improvements do not constitute an alteration or change the usability of the facility. However, until definite tenants and specific improvements are identified, a final determination cannot be made.

Compliance with the Building Code Requirements

According to the Traverse City and the Garfield Township Building Departments, a change in the use of the structures, regardless of their temporary nature, would require that the buildings be brought completely up to code. However, the continuation of the same uses as in the past for these buildings may not result in their having to be brought into complete compliance with all of the applicable requirements of the building code. However, a definitive answer will not be forthcoming until specific uses and improvements are known.

Description of Necessary Improvements by Building Group

Generally, the selected buildings require the reinstatement of mechanical, electrical, plumbing, and heating systems, roofing work, and cleaning. A description of the necessary improvements are detailed by building group.

Cottages 21, 23, 25, 34, and 36

These buildings are in generally fair to good condition and will require moderate improvements to bring the buildings to a condition which will allow their interim use as temporary office space. The roof systems of these buildings need selective work. Some window and door repair is required.

Washroom facilities will require selective improvements. All electrical systems must be inspected, with selective repairs anticipated. The interim use of these structures will be subject to appropriate integration within the development schedule of the medical campus component of the master plan being prepared for the Commons property.

Buildings 44, 53, 56, 57, 58, 60, 61, 66, and 67

These buildings, located west of Building 50, originally served as workshops, service or mechanical shops, support facilities, or storage space. They are not residential in nature. With the exception of Building 44, they are all in good to very good condition, and can be appropriately used for similar purposes with selective improvements to the electrical, plumbing, HVAC systems, and roof systems, and additional cleanup costs.

The structures recommended for storage, if cold storage, would not require retrofitting of heating systems. Building 53 will require removal of laundry piping, equipment and associated insulating materials not completely cleared by the State.

The remaining buildings, which are recommended for various human activities rather than storage, must be retrofitted with temporary heating systems before the onset of the 1993/1994 heating season if occupied.

Washroom facilities in these structures will require selective improvements. Some window and door repair or modifications would be required. All electrical systems must be inspected, with selective repairs anticipated.

All buildings require roof inspection and selective repair. The condition of the roof systems and the current degree of moisture incursion was a prime factor in the selection of these structures as appropriate for interim use. These structures have sustained either very minor or no roof leakage as of Spring, 1993.

Farm Buildings (204, 206, 221, 222, and 223)

Both of the barn structures are in very good condition. They require minimal preparation for use as storage or seasonal recreation activities. The types of improvements generally include electrical inspection and selective repair, cleaning, and the removal of debris. The other Farm structures including 221, 222, and 223 are generally in good condition.

BUILDING PROFILES

A profile has been prepared for each building proposed for interim use. It summarizes the information that has been presented previously, and includes the following:

- building name,
- building number,
- building count,
- building description,
- building square footage,
- date constructed,
- national register status,
- original use,
- proposed interim use,
- current condition,
- prior uses,
- ARP proposed uses,
- potential interim uses, and
- potential interim users.

In preparing the list of potential users, KCP reviewed existing requests for space that have been submitted to the GTCRC as well as uses proposed in the Adaptive Reuse Plan.

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #21	Housing	Existing Museum	Temporary Offices	Governmental Agencies
Building Number	21	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	1	Storage	Human Services (CMH Offices)	Storage	
Description	2 Story + Basement & Attic		Bed and Breakfast		
Area (Sq Ft)	31,179			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1901				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #23	Housing	Human Services (CMH Office)	Temporary Offices	Governmental Agencies
Building Number	23	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	3	Storage	Museum (Maritime/Other)	Storage	
Description	2 Story + Basement & Attic				
Area (Sq Ft)	31,160			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1904				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #25	Housing	Hospitality House	Temporary Offices	Governmental Agencies
Building Number	25	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	4	Storage	Museum (Maritime/Other)	Storage	
Description	2 Story + Basement & Attic				
Area (Sq Ft)	22,600			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1892				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage 34 - Vocational School	Housing	A. Engstrom	Temp Office	Governmental Agencies
Building Number	34	Office	Unknown	Office	Medical
Building Count	11	Storage		Storage	Community
Description	3 Story Custodial/Training	School		School	
Area (Sq Ft)	23,000	Shop		Not for Profit Agency	
Date Constructed	1901				
Nat'l Register	Yes				
Zone	CCRC Res. (2)				
Original Use	Vocational				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage 36 - Childrens Unit	Housing	A. Engstrom	Munson Outpatient Serv.	Munson Hospital
Building Number	36	Office	Juvenile Patient Care	Office	Governmental Agencies
Building Count	13	Storage		Storage	Community
Description	3 Story Custodial/Residential	School		School	
Area (Sq Ft)	23,000				
Date Constructed	1906				
Nat'l Register	Yes				
Zone	CCRC Res. (2)				
Original Use	Vocational				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Greenhouse	Storage	None	Storage	TBA Storage
Building Number	44				
Building Count	21				
Description	Single Story - Block				
Area (Sq Ft)	1,840				
Date Constructed	1935				
Nat'l Register	No				
Zone	Hills (1)				
Original Use	Hospital Support Services				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Central Replacement - Canteen	Office	Demolition	Community Mental Health	Community Mental Health
Building Number	50	Recreation		Geriatric Day Care	Geriatric Day Care
Building Count	23	School		Office	GTCRC Office
Description	2 Story Custodial/Office	Conference Center		Recreation	Developer Office
Area (Sq Ft)	21,504	Storage		School	Temp Construction Office
Date Constructed	1963			Storage	
Nat'l Register	No				
Zone	CCRC Res. (2)				
Original Use	Hospital - Custodial				
Current Condition	Currently in use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Laundry	Industrial	Hospital Storage	Storage	Munson
Building Number	53	Storage	Cottage Industry	Office	Other Storage
Building Count	28	Office	Cold Storage	Repair	
Description	2 Story Hospital Services	Repair	Repair	Maintenance	
Area (Sq Ft)	15,080	Maintenance	Maintenance		
Date Constructed	1956	Laundry			
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	T.V. Shop	Repair	Workshop/Loft	Repair	Community
Building Number	56	Maintenance	Workshop	Maintenance	Temp Construction Office/Storage
Building Count	29	Workshop	Cottage Industry	Workshop	Private/Artist
Description	1 Story - Shop	Storage		Storage	
Area (Sq Ft)	2,430				
Date Constructed	1932				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good, dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Maintenance Shop	Repair	Storage	Workshop	Rock & Mineral Club
Building Number	57	Maintenance	Workshop	Club	Other Clubs
Building Count	30	Workshop	Cottage Industry	Storage	Community
Description	1 Story - Mechanical Shop	Storage		Repair	Private
Area (Sq Ft)	6,530	Industrial		Maintenance	Construction Temp Office
Date Constructed	1930				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good, dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Hospital Storage Building	Storage	Recreation/Fitness Center	Storage	Medical
Building Number	58	Maintenance	Cottage Industry	Maintenance	Munson
Building Count	31	Workshop	Workshop	Workshop	GTMCF
Description	2 Story - Cold Storage	Office		Office	Connstruction Temp Storage
Area (Sq Ft)	56,000	Food Processing			
Date Constructed	1933	Industrial			
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Storage				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Carpenter & Paint Shop	Industrial	Workshop/Loft	Artist / Loft	Artist/Loft Users
Building Number	60	Storage	Workshop	Workshop	Club / Organizations
Building Count	32	Maintenance	Cottage Industry	Office	Community
Description	2 Story - Shop	Workshop	Maintenance	Storage	Construction Temp Office
Area (Sq Ft)	7,620	Office			
Date Constructed	1931				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good - Minor water				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Occupational Therapy	Industrial	Workshop/Loft	Artist / Loft	Artist/Loft Users
Building Number	61	Storage	Workshop	Workshop	Club / Organizations
Building Count	33	Maintenance	Cottage Industry	Storage	Community
Description	2 Story Hospital	Workshop	Fitness Center	Maintenance	Construction Temp Office
Area (Sq Ft)	12,990	Office		Office	
Date Constructed	1917				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital - Therapy				
Current Condition	Good - minor water				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Fire Hall	Office	Demolition	Municipal	Munucipal
Building Number	66	Storage			
Building Count	38	Maintenance			
Description	1 Story - Garage	Garage			
Area (Sq Ft)	1,000	Municipal			
Date Constructed	1928				
Nat'l Register	no				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Rag Storage	Storage	Workshop/Loft/Garage	Artist/Loft	Artist/Loft Users
Building Number	67		Workshop	Club	Club / Organizations
Building Count	39		Cottage Industry	Workshop	Community
Description	1 Story - Storage				
Area (Sq Ft)	2,180				
Date Constructed	1916				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Storage				
Current Condition	Good - Dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Group Home - CMH		
Building Number	79				
Building Count	42				
Description	Single Family Residence				
Area (Sq Ft)	4,920				
Date Constructed	1900				
Nat'l Register	No				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	KCP Local Housing	Residential	KCP/Developer
Building Number	82	Office	Hospitality House	Office	
Building Count	45		Low-Income Housing		
Description	Hospital Staff Housing				
Area (Sq Ft)	5,500				
Date Constructed	1931				
Nat'l Register	No				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Shelter (CMH/Women's Res Cntr)	Community Service Group	Community
Building Number	83		Demolition	Office	Private
Building Count	46			Shelter	
Description	Single Family Residence				
Area (Sq Ft)	2,130				
Date Constructed	1957				
Nat'l Register	No				
Zone	CCRC Res. (2)				
Original Use	Staff Housing				
Current Condition	In use				

DETAILED INTERIM USE PLAN
GRAND TRAVERSE COMMONS PLANNED REDEVELOPMENT DISTRICT
March, 1994

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INTRODUCTION

The purpose of the interim use plan is to identify and promote appropriate active uses of buildings within the Grand Traverse Commons in an effort to preserve the structures until the development of end uses is achieved. Upon approval by the Grand Traverse Commons Redevelopment Corporation (GTCRC), the interim use plan will assist the GTCRC in responding to requests for space within the Commons and ensure that appropriate interim uses are selected which will not inhibit the redevelopment of the property nor compromise the integrity of the site. Implementation of the interim use plan may require that the GTCRC enter into a lease arrangement with Kids Creek Partners (KCP), and possibly the State of Michigan.

To responsibly assess the feasibility of promoting interim uses of the Grand Traverse Commons property, the following elements have been addressed in the interim use plan:

- overview of the interim use plan precepts,
- prioritization of the applicable buildings based upon their suitability for interim use,
- identification of the acceptable types of interim uses,
- identification of the types of potential users,
- traffic and parking conditions,
- compliance with Public Act 250 and the Adaptive Reuse Plan,
- assessment of the necessary building improvements and compliance with the Americans with Disabilities Act and building code requirements, and
- profiles of selected buildings.

The plan addresses the acceptable interim uses for a select grouping of buildings located within the Commons, and identifies potential users. The residential structures currently being leased by the State of Michigan, on a short-term basis, have also been included in the interim use plan, but only minimally. Given that these structures are currently in use and may continue to be controlled by the State for some time, the interim use plan only addresses the acceptable types of interim uses for these buildings.

OVERVIEW OF THE INTERIM USE PLAN PRECEPTS

The interim use plan emphasizes the continued use of buildings which are already occupied, and those which are easiest to re-use temporarily based on their condition, size, and location. The plan recommends the re-use of a selection of buildings that are in the best condition, and promotes uses which require the least capital improvements and generate minimal traffic and parking demands.

The interim use plan emphasizes a cost-effective approach regarding the re-use of structures in the short-term. As such, interim users will be required to pay for necessary repairs and improvements net of rent. Preference will be given to short-term users with self-managment abilities. Additionally, all interim users will be required to provide sufficient evidence of their ability to meet the rent requirements.

The buildings identified as candidates for interim uses are located away from demolition areas, and in a pattern most likely to provide security and maintenance for the entire Grand Traverse Commons property. Generally, none of the buildings located in the northern portion of the site which are slated for demolition or in areas which may constitute the first phase of development have been selected for interim use. The rationale for avoiding these buildings is based on the premise that they are subject to the shortest term of availability and therefore will be least cost effective to put into service.

BUILDING SELECTION PRIORITIES

In preparation of the interim use plan, KCP surveyed each of the buildings within the Commons property to assess the condition of the structures and their suitability for short-term use. The primary factors that were considered in the selection of the buildings included the effort and financial resources that would be required to prepare them for interim use. Based on this survey and on the identified precepts, the buildings selected for interim use were chosen in order of priority according to the following criteria:

- buildings that are readily available from the State in the short-term,
- buildings that are currently in use,
- buildings that require moderate capital improvements, and
- buildings that require significant capital improvements.

Twenty-six buildings have been selected as candidates for new or continued interim uses.

Continuation of Existing Uses

The interim use plan encourages the continued use of buildings which are already occupied. These include Buildings 50 (the Canteen), 36, 79, 82, 83, 85, 87, 89.

Building 50 (the Canteen) is currently being used by Community Mental Health for a Geriatric Day Care Facility. Building 36 is presently being used as a temporary clinic for Munson Medical Center. Buildings 79, 82, 83, 85, 87, and 89 are currently being used for a variety of residential-type uses.

High Use Potential (Buildings Requiring Moderate Improvements)

A number of buildings fall within this category based on their condition and size. These buildings require minor to moderate improvements, and have re-use potential on a temporary basis. Additionally, such buildings are scattered throughout the site in a pattern which will extend security across the campus. The following buildings have been identified as having high use potential.

Farm Buildings

- Barn 204
- Barn 206
- Building 221

- Building 222
- Building 223

Shop and Service Buildings

- Building 44
- Building 53
- Building 56
- Building 57
- Building 58
- Building 60
- Building 61
- Building 66
- Building 67

Moderate Use Potential (Buildings Requiring Significant Improvements)

Five buildings fall within this category and include cottages in both the northern and southern sections of the Commons property. These buildings require more improvements than the high use potential buildings in order to become inhabitable for interim users. In view of the significant improvement costs, these structures may need to be used on an interim basis for a long enough period of time to make these buildings marketable. The following structures have been included in this classification.

North Cottages

- Cottage 21 (Potential is dependent upon end-use development schedule.)
- Cottage 23 (Potential is dependent upon end-use development schedule.)
- Cottage 25 (Potential is dependent upon end-use development schedule.)

South Cottages

- Cottage 34

Other Buildings

- Building 88

ACCEPTABLE INTERIM USES

Based on KCP's experience and the results of the building survey, a number of interim uses may be feasible. The following types of interim uses should be permitted on the site in addition to the existing short-term uses currently in place. Suitable interim uses for selected buildings include the following:

- storage and/or warehouse uses (Buildings 44, 53, 57, 58, 60, 61, 67, 204, 206, 221, 222, 223),
- seasonal recreational uses (204, 206, 221, 222, 223),
- workshop/repair/maintenance uses (53, 56, 57, 58)
- artist/studio and/or workshop uses (Buildings 60, 61, 67),
- municipal (Building 66),
- temporary medical-related/governmental/office uses (Cottages 21, 23, 25, 36), and
- temporary office/educational/non-profit uses (Cottages 34 and 36).

These types of uses have been chosen for a number of reasons. They are low-impact uses. They are consistent with the types of activities that previously took place within the selected structures. They generally require minimal improvements to the buildings which can then be amortized over a short period of time, and they are generally consistent with the Adaptive Reuse Plan. None of these types of uses will cause undue wear on the buildings or the campus.

In addition to acceptable interim uses for buildings, the following site uses are also considered to be acceptable on an interim basis:

- existing temporary surface parking, and
- construction staging.

Acceptable Interim Uses for Non-Residential Buildings

The acceptable interim uses for the selected non-residential buildings within the Grand Traverse Commons are described below.

Storage/Warehouse Uses

Several of the buildings selected for the interim use plan are suitable for storage and warehousing uses. They include Buildings 44, 53, 57, 58, 60, 61, 67, 204, 206, 221, 222, 223. All of these structures have been previously used as storage facilities. From an interim use standpoint, this is an attractive approach to promote because it may obviate the need for the structures to be brought into complete compliance with all applicable requirements of the local building codes during the interim use phase.

According to the Traverse City Building Department as well as the zoning officials of Traverse City and Garfield Township, the continuation of the same uses as in the past for these buildings is not likely to result in their having to be brought into compliance with the current requirements of the building code. Clearly, following this type of approach may serve to minimize the costs associated with making these structures available for interim use.

In addition to the cost factor, these types of uses are suitable for these structures. These structures are located in areas of the site where existing impervious surface will be able to accommodate the parking needs of the users, and existing roadways will be able to handle the traffic. Such uses must not generate excessive trips to the site nor should they result in general public access to sensitive properties (i.e. the historic structures).

Seasonal Recreational Uses

Several of the Farm buildings (204, 206, 221, 222, and 223) may present opportunities for seasonal recreational uses along the lines of the Adventure School Program which has been proposed for this area. The Adventure School Program proposal requested the use of some of the farms structures for active indoor recreation uses such as rope and wall climbing.

Seasonal recreational uses may be a possibility and may not result in the need to bring the buildings into complete compliance with the local building code. As such, it may be feasible as an interim use depending upon the level of improvements that would be required.

Workshop/Repair/Maintenance Uses

Many of the shop and service buildings located to the west of Building 50, are suitable as interim workshop/repair/maintenance space for local clubs and organizations given their condition and configuration. These buildings include the following: 53, 56, 57 58) With minimal improvements, these structures can be reused on an interim basis. Additionally, these structures are located in areas of the site where existing impervious surface located adjacent to the structures will be able to accommodate the parking needs of the users, and existing roadways will be able to handle the traffic. Such uses will not generate excessive trips to the site.

Artist/Studio/Workshop Uses

In addition to the workshop space uses, some of the shops and service buildings can be marketed as artist/studio space with minimal improvements. Buildings particularly suited to these types of uses include 60, 61, and 67 based on their layout, configuration, and condition. These structures are also located adjacent to existing impervious surfaces that will be able to accommodate the parking needs of the interim users, and will not generate significant traffic impacts.

Temporary Medical-Related/Governmental/Office/Education/Non-Profit Uses

Given the relatively good condition of Cottages 21, 23, 25, and 34, these structures may be suitable for temporary medical-related or governmental/office uses. Additionally, Cottages 34 and 36 may be suitable for educational and/or non-profit uses. However, the cost to prepare these structures for interim uses may be significant. Consequently, the marketing of these structures for short-term medical-related or office use may necessitate that the use be allowed to remain in place for no less than two years in order to make it a feasible interim use arrangement.

In addition to the cost factor, the interim use of Cottages 21, 23 and 25 in particular is dependent upon the development schedule for long-term uses on the property due to their location in the proposed medical campus zone which is anticipated to be part of the first phase of long-term development. It may only be feasible to promote the interim use of these structures if they can be converted to end uses.

Acceptable Interim Uses for Residential Buildings

It is recommended that the current uses of the residential buildings located along Eleventh Street and Division Street within the Commons be continued until such time as the master lease is put into place, the properties are acquired, and/or they become subject to a area-specific development plan. At that time, the continuation of these uses should be re-evaluated for compatibility with the terms of the master lease, conveyance documents, and/or the site-specific development plan. These uses include the following:

- Building 79 (Residential, Community Mental Health Group Home),
- Building 82 (Residential),
- Building 83 (Residential),
- Building 85 (Residential),
- Building 87 (Residential, Community Mental Health Group Home),
- Building 89 (Residential),
- Building 222 (Michigan Department of Transportation), and
- Building 223 (Michigan Department of Transportation).

Acceptable Interim Uses for the Site

In addition to determining suitable interim uses for buildings located within the Commons, the interim use plan also recommends suitable short-term site uses. They include the following:

- existing temporary surface parking, and
- construction staging areas.

The continuation of the existing temporary surface parking is considered to be an acceptable site use on an interim basis. In addition to parking, construction staging areas should also be permitted to occupy the site temporarily in a tightly controlled manner. In order to control the impact of temporary construction activity on the site as well as overflow of construction activity from adjacent properties, the identification of temporary construction staging areas is recommended. It is important to control and charge for such activity so as to mitigate negative impacts upon the Commons property.

POTENTIAL USERS

Based on the interest already generated in the site, it is plausible that several of the buildings will be relatively easy to re-use and will not require an intense marketing effort. Recent marketing of space in All Faiths Chapel identified a variety of prospects. A renewed marketing effort most likely will generate additional lists, especially if a central marketing theme is encouraged.

It is KCP's intention to retain a local representative to act as the leasing agent for the property. The marketing effort for interim users, which will include the specific identification of short-term tenants, will commence once the local representative is on board and the appropriate legal arrangements are put into place. Users with self-management potential and minimal parking and traffic requirements will be given priority. Prospective short-term tenants may include the following:

- community groups previously identified,
- arts, environmental/nature, educational organizations, and other thematic groups,
- Munson Medical Center,
- Community Mental Health,
- governmental agencies,
- existing tenants, and
- rough loft users (artists, craftsmen, etc.).

Interim users will be required to pay for necessary repairs and improvements, net of rent.

TRAFFIC AND PARKING CONDITIONS

Until definite tenants are identified for each applicable structure, it is premature to discuss specific parking and traffic impacts. However, one of the key precepts of the interim use plan is to minimize the traffic and parking impacts on the site that will be generated by interim users. To achieve this situation, parking must generally be limited to existing impervious surfaces, preferably adjacent to, or within close proximity to, the applicable structures. If it is absolutely required, consideration may be given to the creation of new temporary surface parking. However, this will only be considered if the overall benefits of having the interim user in place are great. It should be noted that construction of additional surface parking lots that are not associated with the interim uses of structures or provide interim construction staging parking will absolutely not be pursued under the interim use plan.

It is further recommended that the existing temporary surface parking areas that are currently in use be incorporated under the interim use plan.

COMPLIANCE WITH PUBLIC ACT 250 AND THE ADAPTIVE REUSE PLAN

The interim use plan is consistent with Public Act 250 and the Adaptive Reuse Plan.

Public Act 250

Public Act 250 allows the GTCRC to lease buildings and improvements, subject to the approval of the supervising agency. However, the supervising agency may only withhold its approval if the lease is being made for the purpose of evading the regulatory provisions of the Act. The Act also allows the GTCRC to acquire real property in its name via a lease or other method prior to or after the certificates of approval of its development plan have been issued.

Given that the interim use plan calls for only the level of improvement necessary to make the spaces available on an interim basis, a development plan does not have to be in place. The provision in Public Act 250 which requires a redevelopment corporation to not undertake any clearance, reconstruction, improvement alteration, or construction in connection with any development until the certificates of approval has been issued does not apply because it is not in connection with any development.

Adaptive Reuse Plan

All of the interim uses proposed in this interim use plan conform to the Adaptive Reuse Plan. According to the ARP Reuse Market Analysis section, there is ". . . office space demand . . . for governmental, new profit service organizations, and medical-related uses." The ARP further states that office and medical-related uses are suitable uses for the historic cottage structures which is in keeping with the interim uses proposed for Cottages 21, 23, 25, and 34.

With regard to workshop and artist-related uses, the research undertaken for the ARP "indicates that there is a demand for workshop . . . style accommodations . . ." and that ". . . there is a need for affordable studio space within the City of Traverse City." It is further indicated in the ARP that the shops and service buildings are suitable for workshop and artist-related uses.

Storage-related uses are also promoted in the ARP, particularly in the shop and service buildings area. Recreational uses are also supported. Recent amendments to the ARP regarding the farm structures indicates that "community educational or community recreational uses . . . would be most appropriate" for the farm buildings.

The interim uses proposed are similar or identical to the previous uses on the property when it was operating as the Traverse City State Hospital, and there may be some conflict between the proposed interim uses and the Adaptive Reuse Plan. The uses recommended in this Interim Use Plan are interim uses suitable for a temporary period of time only and should not be considered to be accepted long term, permanent uses.

NECESSARY BUILDING IMPROVEMENTS

Information regarding existing conditions and necessary improvements are based upon the observations and experience of KCP in viewing the structures. The necessary repairs that have been identified assume only the minimal improvements that are required to make the buildings available for interim use. The analysis of necessary building improvements does not include a detailed assessment of the Americans with Disabilities Act, the Traverse City building code, the Garfield Township building code, or other relevant regulations which may add costs unless waivers and exceptions can be obtained. The detailed analysis will occur at the time that definite tenants are identified. However, a summary overview of these requirements has been included.

Compliance with the Americans with Disabilities Act (ADA)

Based on a cursory overview of the ADA, it is possible that these requirements will not have to be met in order to make the suitable buildings available for interim use. According to the ADA requirements, "Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility." In addition historic buildings which require structurally impracticable modifications are generally exempted from conformance under the ADA and the State of Michigan recognized building and accessibility requirements.

The buildings selected for interim use generally require the reinstatement of mechanical, electrical, and heating systems as well as roofing work. It is KCP's interpretation that these improvements do not constitute an alteration or change the usability of the facility. However, until definite tenants and specific improvements are identified, a final determination cannot be made.

Compliance with the Building Code Requirements

According to the Traverse City and the Garfield Township Building Departments, a change in the use of the structures, regardless of their temporary nature, would require that the buildings be brought completely up to code. However, the continuation of the same uses as in the past for these buildings may not result in their having to be brought into complete compliance with all of the applicable requirements of the building code. However, a definitive answer will not be forthcoming until specific uses and improvements are known.

Description of Necessary Improvements by Building Group

Generally, the selected buildings require the reinstatement of mechanical, electrical, plumbing, and heating systems, roofing work, and cleaning. A description of the necessary improvements are detailed by building group.

Cottages 21, 23, 25, 34, and 36

These buildings are in generally fair to good condition and will require moderate improvements to bring the buildings to a condition which will allow their interim use as temporary office space. The roof systems of these buildings need selective work. Some window and door repair is required.

Washroom facilities will require selective improvements. All electrical systems must be inspected, with selective repairs anticipated. The interim use of these structures will be subject to appropriate integration within the development schedule of the medical campus component of the master plan being prepared for the Commons property.

Buildings 44, 53, 56, 57, 58, 60, 61, 66, and 67

These buildings, located west of Building 50, originally served as workshops, service or mechanical shops, support facilities, or storage space. They are not residential in nature. With the exception of Building 44, they are all in good to very good condition, and can be appropriately used for similar purposes with selective improvements to the electrical, plumbing, HVAC systems, and roof systems, and additional cleanup costs.

The structures recommended for storage, if cold storage, would not require retrofitting of heating systems. Building 53 will require removal of laundry piping, equipment and associated insulating materials not completely cleared by the State.

The remaining buildings, which are recommended for various human activities rather than storage, must be retrofitted with temporary heating systems before the onset of the 1993/1994 heating season if occupied.

Washroom facilities in these structures will require selective improvements. Some window and door repair or modifications would be required. All electrical systems must be inspected, with selective repairs anticipated.

All buildings require roof inspection and selective repair. The condition of the roof systems and the current degree of moisture incursion was a prime factor in the selection of these structures as appropriate for interim use. These structures have sustained either very minor or no roof leakage as of Spring, 1993.

Farm Buildings (204, 206, 221, 222, and 223)

Both of the barn structures are in very good condition. They require minimal preparation for use as storage or seasonal recreation activities. The types of improvements generally include electrical inspection and selective repair, cleaning, and the removal of debris. The other Farm structures including 221, 222, and 223 are generally in good condition.

BUILDING PROFILES

A profile has been prepared for each building proposed for interim use. It summarizes the information that has been presented previously, and includes the following:

- building name,
- building number,
- building count,
- building description,
- building square footage,
- date constructed,
- national register status,
- original use,
- proposed interim use,
- current condition,
- prior uses,
- ARP proposed uses,
- potential interim uses, and
- potential interim users.

In preparing the list of potential users, KCP reviewed existing requests for space that have been submitted to the GTCRC as well as uses proposed in the Adaptive Reuse Plan.

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #21	Housing	Existing Museum	Temporary Offices	Governmental Agencies
Building Number	21	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	1	Storage	Human Services (CMH Offices)	Storage	
Description	2 Story + Basement & Attic		Bed and Breakfast		
Area (Sq Ft)	31,179			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1901				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #23	Housing	Human Services (CMH Office)	Temporary Offices	Governmental Agencies
Building Number	23	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	3	Storage	Museum (Maritime/Other)	Storage	
Description	2 Story + Basement & Attic				
Area (Sq Ft)	31,160			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1904				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage #25	Housing	Hospitality House	Temporary Offices	Governmental Agencies
Building Number	25	Office	Medical-Related (Munson)	Medical-Related	Medical
Building Count	4	Storage	Museum (Maritime/Other)	Storage	
Description	2 Story + Basement & Attic				
Area (Sq Ft)	22,600			(Interim use subject to Medical Campus Master Plan)	
Date Constructed	1892				
Nat'l Register	Yes				
Zone	Med. Campus (1)				
Original Use	Hospital - Custodial				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage 34 - Vocational School	Housing	A. Engstrom	Temp Office	Governmental Agencies
Building Number	34	Office	Unknown	Office	Medical
Building Count	11	Storage		Storage	Community
Description	3 Story Custodial/Training	School		School	
Area (Sq Ft)	23,000	Shop		Not for Profit Agency	
Date Constructed	1901				
Nat'l Register	Yes				
Zone	CCRC Res. (2)				
Original Use	Vocational				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Cottage 36 - Childrens Unit	Housing	A. Engstrom	Munson Outpatient Serv.	Munson Hospital
Building Number	36	Office	Juvenile Patient Care	Office	Governmental Agencies
Building Count	13	Storage		Storage	Community
Description	3 Story Custodial/Residential	School		School	
Area (Sq Ft)	23,000				
Date Constructed	1906				
Nat'l Register	Yes				
Zone	CCRC Res. (2)				
Original Use	Vocational				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Greenhouse	Storage	None	Storage	TBA Storage
Building Number	44				
Building Count	21				
Description	Single Story - Block				
Area (Sq Ft)	1,840				
Date Constructed	1935				
Nat'l Register	No				
Zone	Hills (1)				
Original Use	Hospital Support Services				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Central Replacement - Canteen	Office	Demolition	Community Mental Health	Community Mental Health
Building Number	50	Recreation		Geriatric Day Care	Geriatric Day Care
Building Count	23	School		Office	GTCRC Office
Description	2 Story Custodial/Office	Conference Center		Recreation	Developer Office
Area (Sq Ft)	21,504	Storage		School	Temp Construction Office
Date Constructed	1963			Storage	
Nat'l Register	No				
Zone	CCRC Res. (2)				
Original Use	Hospital - Custodial				
Current Condition	Currently in use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Laundry	Industrial	Hospital Storage	Storage	Munson
Building Number	53	Storage	Cottage Industry	Office	Other Storage
Building Count	28	Office	Cold Storage	Repair	
Description	2 Story Hospital Services	Repair	Repair	Maintenance	
Area (Sq Ft)	15,080	Maintenance	Maintenance		
Date Constructed	1956	Laundry			
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	T.V. Shop	Repair	Workshop/Loft	Repair	Community
Building Number	56	Maintenance	Workshop	Maintenance	Temp Construction Office/Storage
Building Count	29	Workshop	Cottage Industry	Workshop	Private/Artist
Description	1 Story - Shop	Storage		Storage	
Area (Sq Ft)	2,430				
Date Constructed	1932				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good, dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Maintenance Shop	Repair	Storage	Workshop	Rock & Mineral Club
Building Number	57	Maintenance	Workshop	Club	Other Clubs
Building Count	30	Workshop	Cottage Industry	Storage	Community
Description	1 Story - Mechanical Shop	Storage		Repair	Private
Area (Sq Ft)	6,530	Industrial		Maintenance	Construction Temp Office
Date Constructed	1930				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good, dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Hospital Storage Building	Storage	Recreation/Fitness Center	Storage	Medical
Building Number	58	Maintenance	Cottage Industry	Maintenance	Munson
Building Count	31	Workshop	Workshop	Workshop	GTMCF
Description	2 Story - Cold Storage	Office		Office	Connstruction Temp Storage
Area (Sq Ft)	56,000	Food Processing			
Date Constructed	1933	Industrial			
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Storage				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Carpenter & Paint Shop	Industrial	Workshop/Loft	Artist / Loft	Artist/Loft Users
Building Number	60	Storage	Workshop	Workshop	Club / Organizations
Building Count	32	Maintenance	Cottage Industry	Office	Community
Description	2 Story - Shop	Workshop	Maintenance	Storage	Construction Temp Office
Area (Sq Ft)	7,620	Office			
Date Constructed	1931				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good - Minor water				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Occupational Therapy	Industrial	Workshop/Loft	Artist / Loft	Artist/Loft Users
Building Number	61	Storage	Workshop	Workshop	Club / Organizations
Building Count	33	Maintenance	Cottage Industry	Storage	Community
Description	2 Story Hospital	Workshop	Fitness Center	Maintenance	Construction Temp Office
Area (Sq Ft)	12,990	Office		Office	
Date Constructed	1917				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Hospital - Therapy				
Current Condition	Good - minor water				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Fire Hall	Office	Demolition	Municipal	Municipal
Building Number	66	Storage			
Building Count	38	Maintenance			
Description	1 Story - Garage	Garage			
Area (Sq Ft)	1,000	Municipal			
Date Constructed	1928				
Nat'l Register	no				
Zone	Activity (3)				
Original Use	Hospital Support Services				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Rag Storage	Storage	Workshop/Loft/Garage	Artist/Loft	Artist/Loft Users
Building Number	67		Workshop	Club	Club / Organizations
Building Count	39		Cottage Industry	Workshop	Community
Description	1 Story - Storage				
Area (Sq Ft)	2,180				
Date Constructed	1916				
Nat'l Register	No				
Zone	Activity (3)				
Original Use	Storage				
Current Condition	Good - Dry				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Group Home - CMH		
Building Number	79				
Building Count	42				
Description	Single Family Residence				
Area (Sq Ft)	4,920				
Date Constructed	1900				
Nat'l Register	No				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	KCP Local Housing	Residential	KCP/Developer
Building Number	82	Office	Hospitality House	Office	
Building Count	45		Low-income Housing		
Description	Hospital Staff Housing				
Area (Sq Ft)	5,500				
Date Constructed	1931				
Nat'l Register	No				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Shelter (CMH/Women's Res Cntr)	Community Service Group	Community
Building Number	83		Demolition	Office	Private
Building Count	46			Shelter	
Description	Single Family Residence				
Area (Sq Ft)	2,130				
Date Constructed	1957				
Nat'l Register	No				
Zone	CCRC Res. (2)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Shelter (CMH/Women's Res Cntr) Demolition	Community Service Group Office Shelter	Community Private
Building Number	87				
Building Count	49				
Description	Single Family Residence				
Area (Sq Ft)	1,620				
Date Constructed	1951				
Nat'l Register	No				
Zone	Community Srv (7)				
Original Use	Staff Housing				
Current Condition	0				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Shelter (CMH/Women's Res Cntr) Demolition	Community Service Group Office Shelter	Community Private
Building Number	85				
Building Count	48				
Description	Single Family Residence				
Area (Sq Ft)	1,620				
Date Constructed	1951				
Nat'l Register	No				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	In use				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Apartments	Residential Office	Shelter (Women's Resource Center) Hospitality House Low-Income Housing	Community Service Group Office Shelter	WRC Community
Building Number	88				
Building Count	50				
Description	Hospital Staff Housing				
Area (Sq Ft)	6,410				
Date Constructed	1890				
Nat'l Register	Yes				
Zone	Community Srv (4)				
Original Use	Staff Housing				
Current Condition	fair				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Residence	Residential	Shelter (CMH/Women's Res Cntr)	Community Service Group	Community
Building Number	89		Social Center (CMH)	Office	Private
Building Count	51		Demolition	Shelter	
Description	Hospital - official residence				
Area (Sq Ft)	3,120				
Date Constructed	1956				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Staff Housing				
Current Condition	0				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Barn	Storage	Unknown	Seasonal Recreational	Maritime Heritage Alliance
Building Number	204	Industrial		Storage	Other Clubs
Building Count	52	Agricultural		Agricultural	
Description	Agricultural/Storage (Farms)			Storage/Warehousing	
Area (Sq Ft)	11,670			Community	
Date Constructed	1932				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Agricultural/Storage				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Barn	Storage	Unknown	Seasonal Recreational	Adventure School
Building Number	206	Industrial		Storage	SK8 Club
Building Count	53	Agricultural		Agricultural	Skate Committee
Description	Agricultural/Storage (Farms)			Storage/Warehousing	Other Recreational Users
Area (Sq Ft)	11,470			Community	
Date Constructed	1900				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Agricultural/Storage				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Garage	Storage	None	Seasonal Recreational	
Building Number	221	Industrial		Storage	
Building Count	57	Agricultural		Agricultural	
Description	2 stories, 10 bays	Equipment		Storage/Warehousing	
Area (Sq Ft)	2,130			Community	
Date Constructed	1915				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Hospital Storage				
Current Condition	Very Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Garage	Storage	None	Seasonal Recreational	
Building Number	222	Industrial		Storage	
Building Count	58	Agricultural		Agricultural	
Description	Garage/Storage (Farms)	Equipment		Storage/Warehousing	
Area (Sq Ft)	4,650			Community	
Date Constructed	1900				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Storage				
Current Condition	Good				

Grand Traverse Commons Existing Structure Survey / Interim Use Profiles
Kids Creek Development Company

Grand Traverse Commons Existing Structure Data Sheet		Prior Uses	ARP Proposed Uses	Proposed Interim Uses	Potential Interim Users
Name	Automotive Shop	Storage	None	Seasonal Recreational	
Building Number	223	Industrial		Storage	
Building Count	59	Agricultural		Agricultural	
Description	1 floor	Equipment		Storage/Warehousing	
Area (Sq Ft)	2,500			Community	
Date Constructed	1933				
Nat'l Register	No				
Zone	Recreation (6)				
Original Use	Auto/Mechanical Shop				
Current Condition	Very good				

E. Kirkbride Plan & 19th Century Hospital Planning



Figure 1 *House of Employment, Almshouse and Pennsylvania Hospital (mid 1760's)*

E. Kirkbride Plan & 19th Century Hospital Planning

The Kirkbride Plan is ultimately rooted in the manner in which American Society handled the problems associated with mental disease in the nineteenth century. Issues such as the definition of disease, the criteria for institutionalization, the financial and administrative structures governing hospitals, both private and public, and differential care and treatment of various socio-economic groups were issues which transcended strictly medical and scientific considerations. The larger economic, political, social, and intellectual forces helped shape policy toward dependent groups such as the mentally ill.

Colonial American policies regarding the mentally ill were modelled after those of England. The family was primarily responsible for the welfare of any of its members; however, fiscal inadequacy or public safety spurred guardianship involving the larger community. Provision by the community was contingent upon the ability to establish residency in the community, which reflected the contemporary concern that all members of the community be able to contribute to their well being and survival.

The treatment of the insane was concerned mostly with its social and economic implications, not its medical treatment. Mental illness was not widespread in colonial America. The care of the insane was a custodial function of the family, which sometimes was subsidized by the community. Communities sometimes authorized the construction of buildings to confine troublesome individuals and from time to time communities rid themselves of these individuals, if their legal residency had not been established. However, until the middle of the eighteenth century, there were no hospitals in any of the colonies that could provide either therapy or custodial care for insane persons.

The early eighteenth century saw the establishment of general welfare institutions such as almshouse, which cared for a variety of groups besides the mentally ill (i.e., the aged, infirm and very young). The reasons for this were the changing demographic patterns and the general growth in population.

The problems of lumping together the undifferentiated dependent groups became a similar problem in all colonial urban areas. "The almshouse in Boston is perhaps the only instance known where people of every description and disease are lodged under the same roof and in some instances the same compartments by which the sick are disturbed by the noises of the healthy and the infirm rendered liable to the vices and diseases of the diseased and profligate." The undifferentiated charities of almshouses and similar welfare institutions reflected both public concern and ambivalence. As in England, welfare was both a public and private charity system, and the demarcation between these two entities were at best blurred before the Civil War.

Out of this mixed system emerged the first urban hospitals, beginning in the mid-eighteenth century and increasing with rapidity in the nineteenth century. Europe was the leader, with Paris in the forefront of a revolution in the theory and practice of medicine.

In America, the Pennsylvania Hospital in Philadelphia was the first institution founded specifically for the care and treatment of the sick and the mentally ill (see figure 1). It was founded by Dr. Thomas Bond, a Quaker, who having visited Bethlehem Hospital in England was impressed by the care given to the mentally ill. With the assistance of

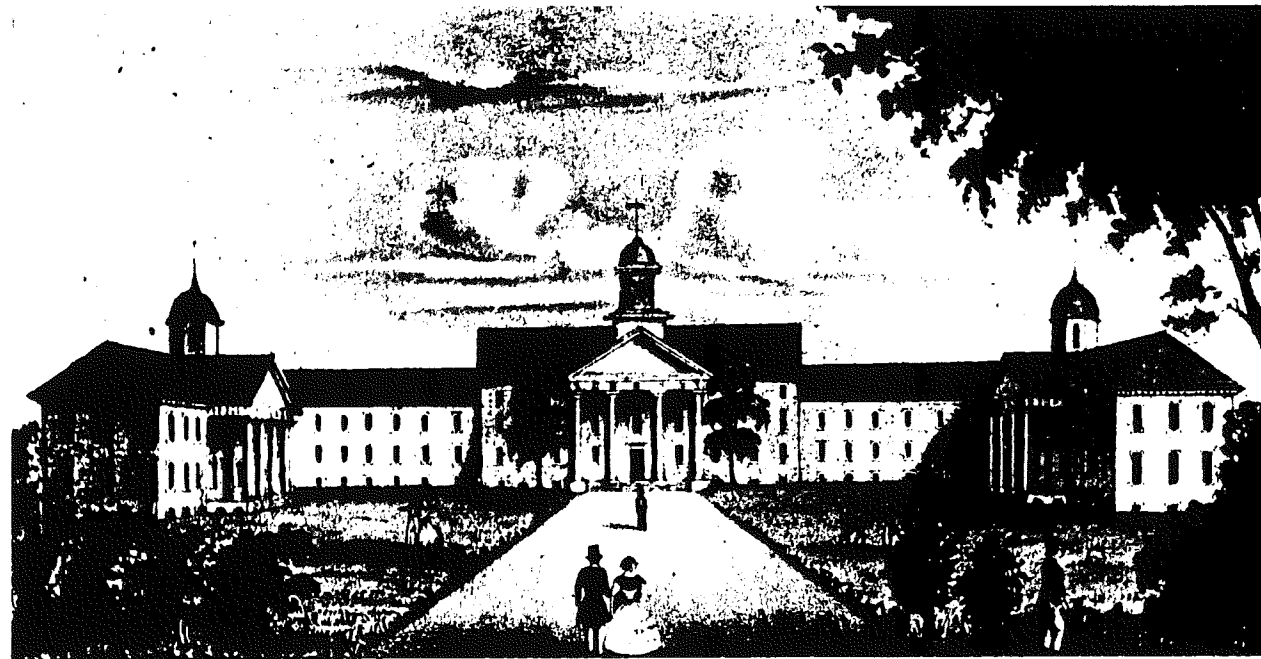


Figure 2 The Virginia Eastern Lunatic Asylum, 1773 (engraving circa 1884)

Benjamin Franklin, funding was attained through public and private sources. It was believed that proper treatment could restore a large proportion of the insane to health and England was impressed by the care given to the mentally ill. With the assistance of that these facilities would ultimately benefit the community, because it would enable those cured individuals to provide for themselves and their community.

It was in Virginia that the first hospital for the exclusive treatment of the mentally ill was established. Although predominantly rural and agricultural in character and possessing no large urban center, British tradition provided much of the impulse through its governing elites knowledge of developments at home and abroad.

The Virginia legislation promoted the establishment of a hospital on the grounds that it would cure those insane persons whose cases were not "quite desperate" and restrain others who were "dangerous to society." This institution, the Virginia Eastern Lunatic Asylum, was located in Williamsburg, was completed in 1773, and its first patient was admitted that same year (see figure 2).

A lay administrator oversaw and supervised the institutional regimen in order to provide human care for the patient and security for the community. A visiting physician had responsibility for mechanical treatment where appropriate. Medical treatment for insanity did not differ appreciably from treatment of other diseases; newer concepts of insanity developed in Europe, which lay emphasis on psychological factors, were unknown to the Williamsburg institution. The treatment was traditional; due to its limited capacity, the enforced shutdown during the American Revolution and its lack of information dispersion, this institution never emerged as a model for a publicly supported mental hospital.

In New York, a hospital that accepted mentally ill patients was established. The New York Hospital was opened in 1791 for the benefit of rich and poor alike and to raise the standards of medical practices in the metropolis. All cases of mental illness were treated by the general medical service until a separate insane department was established in 1808. Before 1800, the number of insane cases were relatively few; after 1800, their number increased at a rapid rate. This led to two internal reorganizations, of which the second witnessed the emergence of the Bloomingdale Asylum for the insane in 1821. It was this same structural reorganization at the Pennsylvania Hospital that led in 1841 to the establishment of a separate institution for the mentally ill.

The population increase in America between 1830 and 1850 brought an increase in mental illness dependency. Immigrants, who accounted for the greater proportion of this increase, were for the most part unskilled and could only find work in low paid, dangerous and often unhealthy occupations, lived in slums and were susceptible to disease.

The population increase in and of itself did not mandate the establishment of new hospitals for mental illness. The awareness of alternative methods for caring for the mentally ill, with an approach to curing mental illness through a therapeutic process, was part of a larger revolutionary movement in science and medicine that believed that all problems in mankind could be minimized, if not abolished altogether, through the application of human intelligence. These convictions led to specific policy proposals that were intended to sharply change existing practices and institutions; in the case of mental illness, it was believed it could be cured. The Kirkbride Plan is formulated to this specific purpose.

Philippe Pinel of France emerges as the pivotal figure in developing the new approach in psychiatric theory and practice. He adhered to the philosophy of "ideology", which was developed by a group of notable thinkers in Paris, circa 1780, all disciples of John Locke and influenced by the writings of Jean-Jasque Rousseau. To them, sensory data was the basis of knowledge. All ideas and, furthermore, all of the faculties of human understanding, were simply compounds of sensations that could be resolved by an analytical method, if not by their component parts.

Ideas rested upon experience. Nothing could be present in the mind except that which entered through the senses. This empiricism would enable man to learn and understand human nature and undertake political, social, economic, and moral measures to better improve his condition.

Pinel was closely associated with these ideologies and influenced by their ideas. He undertook to redefine medical theory by applying to it an analytically empirical method, which resulted in the publication of his major work, Nosographie Philosophique ou Méthods de l'Analyse Appliquée à la Médecine. Through the emphasis that medicine should employ the same methods "commonly used in all other branches of Natural History", Pinel believed that psychological concepts could be broken down into original sensations, clinical data could be studied in a similar manner and changes in human organs could be further investigated in order to analyze the entire pathological picture.

Pinel's work concentrated on the external causes of insanity versus the abstract causes, such as the nature of mental disease or the operation of the mind and its relation to the body. Through observation and analysis of his patients, he kept extensive case histories of his patients in the hopes of ultimately discovering the component parts of insanity. He believed that there were multiple causes for insanity, including such factors as heredity, the social and physical environment, excessive passions, alcoholism and even violent blows on the head. Although Pinel's contributions to psychiatric theory were modest, his therapeutic improvisations were destined to play a major role in the development of institutional care and treatment of the mentally ill. Not only did Pinel insist upon a humanitarian approach, he proposed a mode of care that makes an institutional setting the primary vehicle for mental rehabilitation. As a result, the mental hospital became the foundation upon which psychiatry would develop for much of the nineteenth century. This was especially true in the United States, where private practice in psychiatry was virtually unknown before 1875.

Pinel emphasized a psychologically oriented therapy. Seeking to gain the patient's confidence and install a sense of hope in him, he developed what became known as moral treatment or moral management. Moral treatment involved the creation of a new environment. It assumed that insanity was a curable disease, given patience, tenderness, guidance, understanding and proper treatment. Moral treatment specifically refers to therapeutic efforts which affected the patient's psychology.

There are other individuals who played significant roles in transforming the practice of psychiatry, such as Vincenzo Chiarugi of Italy and Benjamin Rush of the Pennsylvania Hospital, whose famous textbook helped to spread some of the new psychologically-oriented therapeutic concepts. More important was William Tuke, an English Quaker, who established The York Retreat in 1792.

The York Retreat was a new institution, founded as a Quaker Institution to serve Quakers. The therapeutic system developed at the Retreat was similar in some respects to those advocated by Pinel, although the two were independently conceived. The basic objective of the Retreat's regimen was to develop in patients an internal means of self-restraint and self-control. At the Retreat, it was made clear to inmates that their treatment was directly dependent on their personal conduct. Physical coercion and physical punishment were virtually eliminated, and the principles of fear judiciously applied and the "desire for esteem" were encouraged. This approach is similar to Pinel's moral management approach, with the significant difference being the Retreat's emphasis on value structures of a religious basis. The emphasis of the role of religion in moral management fulfilled two functions simultaneously. The first promoted self-restraint on the part of the patient. Quakers were convinced that their religious principles and values were conducive to and furthered social harmony and stability. Truly religious persons did not behave in socially unacceptable or improper ways. The incorporation of religious beliefs and practices into the internal environment of the Retreat would prove to be beneficial for all patients. Secondly, religion reinforced in the mentally ill person "an attention to his accustomed modes of paying homage to his Maker." Quakers believed this was an obligation that no individual could or should avoid.

The regimen at the Retreat created an atmosphere in which internal self-restraint and discipline replaced external fetters, with the underlying assumption that insanity in some respect involved behavioral transgressions; a proper environment would demonstrate to a mentally ill person that he had to accept responsibility for his actions, and that rewards and punishments would follow accordingly. The management of The York Retreat was both benevolent and authoritarian in its operations.

The significance of psychiatric reformers such as Pinel and William Tuke was that they provided, at least in theory, an alternative to the confinement of mentally ill persons in undifferentiated welfare institutions serving a largely custodial function.

Thomas S. Kirkbride, a Quaker and one of the most important American psychiatrists on the nineteenth century, noted in 1846 how the world was indebted to these men. Both of these men wrote Kirkbride, "by a singular coincidence, without any knowledge of each other's movement and who were at the same time in different kingdoms, engaged in the same noble work of discarding time honored prejudices and abuses, and from actual practice, giving to the work, a code of principles for the moral treatment of Insanity, which even now can hardly be improved."

Moral management was a reflection of social and intellectual currents that changed in medical theory. Moral management could be interpreted in a variety of ways which left it vulnerable to the influence of internal and external social, economic, and intellectual forces. The development of the mental hospital was much more than the product of change in psychiatric theory. It required transformation in public policy that supported concrete proposals for new therapeutic approaches. Such support became available as a result of the combined impact of the Second Great Awakening and a sharp increase in the philanthropic activities of certain wealthy urban elites.

The Second Great Awakening was a movement to redefine the theory and practice of American Christianity, in order to make it more relevant to existing society, and helped create a climate more conducive to institutional reform. It replaced the Calvinistic

emphasis on the essential depravity of human nature and the inability of men to save themselves with the optimistic idea of a loving and beneficent God whose first concern was the happiness of his creatures. Good behavior, they argued, was dependent not so much on external restraints but on the inner check of conscience and self-control. This individual conversion and regeneration was essential to the establishment and maintenance of the good society, for a truly converted person not only would be free from temptation but would voluntarily undertake the work of God in building a better world. This philosophy, when fused with the millennial vision of a society performing a divine mission by eradicating all evidence of evil, transformed evangelical Protestantism into an activist social force promoting social reform.

The second development that aided the course of reform was financial support from the wealthy elite which, through their philanthropic support, demonstrated that prominence and wealth had not been amassed solely for personal gain and satisfaction but would be used to support socially desirable community projects. Ultimately this led to the establishment of institutions which were intended to serve the entire community. Additional subsidies were needed from State Legislatures (attempts to gain Federal subsidies had failed) and increasingly, through the growing custodial function and population of these institutions, institutions ultimately became publicly funded. However, the important principle is that these institutions were founded with the optimistic belief that through a therapeutic approach, individuals could be cured of mental disease; that rich and poor alike should have opportunity for this therapy, and that these individuals could ultimately return and become, if not productive, non-disruptive members of their community and their families.

The early nineteenth century saw the establishment of institutions in large population centers, which were both privately and publicly funded. Significant in this development was Thomas Eddy's proposal in 1815 to the governors of the New York Hospital for a series of far-reaching recommendations that were intended to transform the character of the asylum. These proposals were heavily influenced by The York Retreat, with the emphasis on the moderate and judicious use of the "principle of fear," the necessity of treating the patient as a rational being, and the importance of proprietary self-restraint by utilizing the precepts of religion. With this and other recommendations, Eddy proposed that the hospital purchase a lot within a few miles of the city and erect a "rural retreat." This facility, he noted, would "afford ample opportunity of ascertaining how far disease may be removed by moral management alone, which it is believed, will, in many instances, be more effectual in controlling the maniac, than medical treatment, especially in those cases where disease has proceeded from causes operating directly on the mind."

The founding of public institutions brought into question the role of the State in forming policy for these institutions which, from the standpoint of the early nineteenth century, did not have many prototypes to model and also lacked a cohesive psychiatric profession to rely on for expert advice. It was the institution and its superintendents that formed the psychiatric profession as we know it today, and Thomas S. Kirkbride was a principle figure in this formation. Psychiatry developed within an institutional framework created by society in response to the perception of its needs. The common interests and problems associated with these institutions brought the superintendents together, eventually forming the Association of Medical Superintendents of American Institutions for the Insane (now the American Psychiatric Association). Through the forming of this association, these superintendents would meet annually to lay down guidelines to govern the care and

treatment of the mentally ill. These guidelines included the setting of architectural standards for the physical plant, size of institution, mode of governance, and the personal and professional qualifications required of practitioners.

The Association of Medical Superintendents of American Institutions for the Insane challenged public authority on the promotion of policy as it related to the care of the mentally ill. Institutions had to be reviewed by the experienced superintendents, who were fighting for their autonomy in the decision-making process. Architecture had to reflect institutional function, and function could only be defined by competent authority. Kirkbride, who had made a careful study of hospitals at home and abroad, published his volume known as the "Kirkbride Plan" just three years after the Association of Medical Superintendents of American Institutions for the Insane had adopted its proposals. In his book he laid down general principles and specific details relating to mental hospitals; for the remainder of the century, the majority of institutions were constructed according to the Kirkbride Plan.

The superintendent became both the physician, psychiatrist, administrator and guardian for his institution. Architecturally, the Kirkbride Plan placed his office and residence in the center of the institution with equal access to the wings, which later became attached separate pavilions to house groups of the mentally ill with similar characteristics and thus would not mix diverse groups.

The superintendents were more interested in the moral or intellectual causes of insanity, partly because of their own commitment to prevention (preventable causes seemed psychological) and partly because such cases seemed to account for the largest proportion of cases. As firm believers in organized religion, they also felt much freer in their discussions of morality than they did in their pathological observations (not being trained pathologists). The moral causes of mental disease included, to cite a few examples, intemperance, overwork, domestic difficulties, excessive ambitions, faulty education, personal disappointments, marital problems, jealousy, pride and, above all, the pressures of an urban, industrial and commercial civilization, which was considered to be unnatural to the human organization. Psychiatrists, on other words, saw mental illness as the inevitable consequences of behavior that represented a departure from their own normative model.

Like many Americans during the first half of the nineteenth century, psychiatrists held a romantic and sentimental ideal of mankind, an ideal that seemed threatened by development and which augured ill for the future. Thus they extolled the agrarian way of life and denigrated the values of urbanization. "We find" wrote Kirkbride, "as was always believed, that no life is so generally conducive to health as one that, like agriculture, gives active exercise in open air, that none is so likely to be troubled by nervous affections, and none so generally to be preferred for those who are constitutionally disposed to this class of infirmities." Psychiatrists above all saw a clear relationship between the advance of civilization and the incidence of mental illness. The beliefs of most mid-nineteenth century psychiatrists in many ways were not fundamentally dissimilar from those of other critics of American Society, whose own values were hostile to social and economic change and who rejected the emerging urban industrial order and romanticized the American past. A substantial part of psychiatric theory therefore was but a reflection of particular social ideology, presented as empirical fact.

The following is a synopsis of the Kirkbride Plan as published in 1851.

EXCERPT FROM THE BOOK

"At a meeting of "THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE," held at Philadelphia, in May, 1851, the following series of propositions relative to the construction of Hospitals for the Insane, was unanimously adopted as the sentiments of that body on the subjects referred to; and, in like manner, at the meeting held in Baltimore, in 1852, the succeeding series of propositions in reference to the organization of these institutions was also adopted, and, with the former, directed to be published in the "American Journal of Insanity," and to be appended to the annual reports of the different institutions:

PROPOSITIONS RELATIVE TO THE CONSTRUCTION OF HOSPITALS FOR THE INSANE

- I. Every hospital for the insane should be in the country, no within less than two miles of a large town, and easily accessible at all seasons.
- II. No hospital for the insane, however limited its capacity, should have less than fifty acres of land, devoted to gardens and pleasure-grounds for its patients. At least one hundred acres should be possessed by every state hospital, or other institutions for two hundred patients, to which number these propositions apply, unless otherwise mentioned.
- III. Means should be provided to raise ten thousand gallons of water daily to reservoirs that will supply the highest parts of the building.
- IV. No hospital for the insane should be built without the plan having been first submitted to some physician or physicians who have had charge of a similar establishment, or are practically acquainted with all the details of their arrangements, and received his or their full approbation.
- V. The highest number that can with propriety be treated in one building is two hundred and fifty, while two hundred is a preferable maximum.
- VI. All such buildings should be constructed of stone or brick, have slate or metallic roofs, and, as far as possible, be made secure from accidents by fire.
- VII. Every hospital, having provision for two hundred or more patients, should have in it at least eight distinct wards for each sex, making sixteen classes in the entire establishment.
- VIII. Each ward should have in it a parlor, a corridor, single lodging-rooms for patients, an associated dormitory, communicating with a chamber for two attendants; a clothes-room, a bath-room, a water-closet, a dining-room, a dumb-waiter, and a speaking-tube leading to the kitchen or other central part of the building.
- IX. No apartments should ever be provided for the confinement of patients, or as their lodging rooms, that are not entirely above ground.
- X. No class of rooms should ever be constructed without some kind of window in each, communicating directly with the external atmosphere.
- XI. No chamber for the use of a single patient should ever be less than eight by ten feet, nor should the ceiling of any story occupied by patients be less than twelve feet in height.
- XII. The floors of patients' apartments should always be of wood.
- XIII. The stairways should always be of iron, stone, or other indestructible material, ample in size and number, and easy of ascent, to afford convenient egress in case of accident from fire.
- XIV. A large hospital should consist of a main central building with wings.
- XV. The main central building should contain the offices, receiving-rooms for company, and apartment, entirely private, for the superintending physician and his family, in case that officer resides in the hospital building.
- XVI. The wings should be so arranged that, if rooms are placed on both sides of a corridor, the corridors should be furnished at both ends with movable glazed sashes, for the free admission of both light and air.
- XVII. The lighting should be by gas, on account of its convenience, cleanliness, safety, and economy.
- XVIII. The apartments for washing clothing should be detached from the hospital building.
- XIX. The drainage should be under ground, and all the inlets to the sewers should be properly secured to prevent offensive emanations.
- XX. All hospitals should be warmed by passing an abundance of pure fresh air from the external atmosphere, over pipes or plates, containing steam under low pressure, or hot water, the temperature of which at the boiler does not exceed 212° F., and placed in the basement or cellar of the building to be heated.
- XXI. A complete system of forced ventilation, in connection with the heating, is indispensable to give purity to the air of a hospital for the insane and no expense that is required to effect this object thoroughly can be deemed either misplaced or injudicious.
- XXII. The boilers for generating steam for warming the building should be in a detached structure, connected with which may be the engine for pumping water, driving the washing apparatus, and other machinery.

- XXIII. All water-closets should, as far as possible, be made of indestructible materials, be simple in their arrangements, and have a strong downward ventilation connected with them.
- XXIV. The floors of bath-rooms, water-closets, and basement stories, should, as far as possible, be made of materials that will not absorb moisture.
- XXV. The wards for the most excited class should be constructed with rooms on but one side of a corridor, not less than ten feet wide, the external windows of which should be large, and have pleasant views from them.
- XXVI. Wherever practicable, the pleasure-grounds of a hospital for the insane, should be surrounded by a substantial wall, so placed as not to be unpleasantly visible from the building.

PROPOSITIONS RELATIVE TO THE ORGANIZATION OF HOSPITALS FOR THE INSANE

- I. The general controlling power should be vested in a Board of Trustees or Managers; if of a state institution, selected in such manner as will be likely most effectually to protect it from all influences connected with political measures or political changes; if a private corporation, by those properly authorized to vote.
- II. The Board of Trustees should not exceed twelve in number, and be composed of individuals possessing the public confidence, distinguished for liberality, intelligence, and active benevolence, above all political influence, and able and willing faithfully to attend to the duties of their station. Their tenure of office should be so arranged that when changes are deemed desirable, the terms of not more than one-third of the whole number should expire in any one year.
- III. The Board of Trustees should appoint the Physician, Steward and Matron. They should, as a board, or by committee, visit and examine every part of the institution at frequent stated intervals, not less than semi-monthly, and at such other times as they may deem expedient, and exercise so careful supervision over the expenditures and general operations of the hospital, as to give to the community a proper degree of confidence in the correctness of its management.
- IV. The Physician should be the Superintendent and Chief Executive Officer of the establishment. Besides being a well educated physician, he should possess the mental, physical and social qualities to fit him for the post. He should serve during good behavior, reside on or very near the premises, and his compensation should be so liberal as to enable him to devote his whole time and energies to the welfare of the Hospital. He should nominate to the board suitable persons to act as Assistant Physician, Steward and Matron. He should have entire control of the medical, moral and dietetic treatment of the patients, the unrestricted power of appointment and discharge of all persons engaged in their care and should exercise a general supervision and direction of every department of the institution.

- V. The Assistant Physician, or Assistant Physicians, where more than one are required, should be graduates of medicine, of such character and qualifications as to be able to represent and to perform the ordinary duties of the Physician during his absence.
- VI. The Steward, under the direction of the Superintending Physician, and by his order, should make all purchases for the Institution, keep accounts, make engagements with, pay and discharge those employed about the establishment, have a supervision of the farm, garden and grounds, and perform such other duties as may be assigned him.
- VII. The Matron, under the direction of the Superintendent, should have a general supervision of the domestic arrangements of the house; and, under the same direction, do what she can to promote the comfort and restoration of the patients.
- VIII. In institutions containing more than two hundred patients, a Second Assistant Physician and an Apothecary should be employed; to the latter of whom other duties; in the male wards may be conveniently assigned.
- IX. If a Chaplain is deemed desirable as a permanent officer, he should be selected by the Superintendent, and, like all other engaged in the care of the patients, should be entirely under his direction.
- X. In every hospital for the insane, there should be one supervisor for each sex, exercising a general oversight of all the attendants and patients, and forming a medium of communication between them and the officers.
- XI. In no institution should the number of persons in immediate attendance on the patient be in a lower ratio than one attendant for every ten patients; and a much larger proportion of attendants will commonly be desirable.
- XII. The fullest authority should be given to the Superintendent to take every precaution that can guard against fire or accident within an institution; and to secure this an efficient night-watch should always be provided.
- XIII. The situation and circumstances of different institutions require a considerable number of persons to be employed in various other positions; but in every hospital, at least all those that have been referred to are deemed not only desirable, but absolutely necessary to give all the advantages that may be hoped for from a liberal and enlightened treatment of the insane.
- XIV. All persons employed in the care of the insane should be vigilant, cheerful, and in good health. They should be of a kind and of a benevolent disposition; be educated, and in all respects trustworthy, and their compensation should be sufficiently liberal to secure the services of individuals of this description."

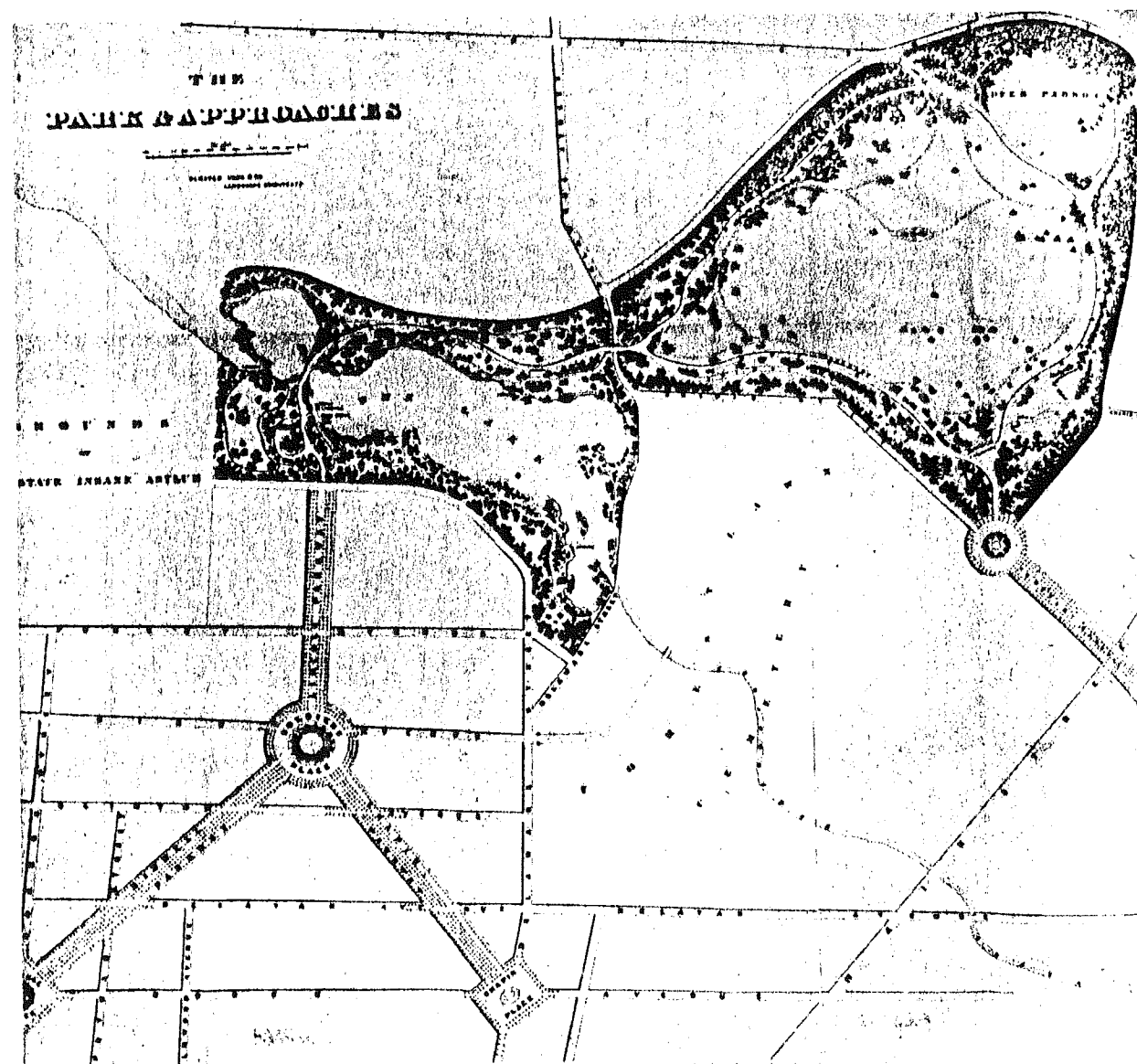


Figure 3 Delaware Park and Approaches, Buffalo, New York, 1868, Olmstead, Vaux and Co. (Note location of grounds to state insane asylum.)

The plan itself deals with construction, site selection, administration and operations. Significant in the site was its acreage and relationship to the city. It was a rural atmosphere that was needed, with a site that could provide water in the necessary quantities and the types of grounds needed for the therapy of the patients.

The building was to have a central administrative block with wings. Each of the wings was to have separate wards to not mix diverse groups of patients. Each ward was to allow patients to have their own room with windows for views, support facilities and corridors with windows for light and ventilation, and day rooms or parlors to create a residential atmosphere.

Much attention is given in the Kirkbride Plan to heating, ventilation and utility support, primary components for the health of patients. The construction of the building and its components must be fireproof.

Probably the most diagrammatic and articulate expression of the plan was the original design for the New York State Hospital in Buffalo by H. H. Richardson in 1870, in collaboration with Frederick Law Olmsted (see figures 3, 4, 5). In this particular case the Hospital was located on a large tract of land next to Delaware Park, which was also being designed by Olmsted (see figure 6). In H. H. Richardson's plan, the wards are articulated as pavilions or buildings connected by arcades. This approach would have been consistent with his training at the Beaux Arts School in Paris. Kirkbride himself was familiar with the changes in hospital design in Europe and Britain. Kirkbride, before writing the plan, took an extensive tour of hospitals in France and the British Isles.

As in psychiatry, the general medical practice revolutionized the conquest of disease when it ceased to be considered a stroke of fate versus a pathological fact. When it was recognized through comparative studies by the Englishman, Howard, the Frenchman, Tenon and the Austrian, Hunczousky of the link between the rate of mortality and certain medical practices and spacial arrangements, a condemnation of traditional hospital arrangements which mixed diverse groups with various and infectious diseases spurred the adoption of a pavilion type hospital. The first example of this was the Stonehouse Hospital in Plymouth, designed by Rovehead in 1760 (see figure 7).

The pavilion hospital consisted of a central administrative block, with separate wards located in distinct pavilions and attached to the central block with covered walkways. The goal was to start addressing concerns of the spread of disease, by using uncontaminated air, sanitary practices and separating diverse groups of the ill.

The theoretical model for this hospital was developed by the Academe des Science Commission in France in 1788 through the design of Bernard Poyet (see figure 8). This model, which shows the central administration block and separate pavilion wings, can be seen in such realizations as the Hospital Lariboisiere in Paris designed by Martin Pierre Gauthier in 1839 (see figure 9); the hospital of the Order of Deaconesses, Bethany, Berlin, designed and built between 1845-1847 by Ludwig Persius; and more contemporary with the work for Traverse City, the New Royal Infirmary in Edinburgh, Scotland (see figure 10).

In conclusion, hospital design in the nineteenth century developed prototypes to deal with the problems created in the traditional methods of hospital design. These prototypes had similarity to the Kirkbride Plan, but perhaps even more important was the perceived need to develop and implement prototypes.

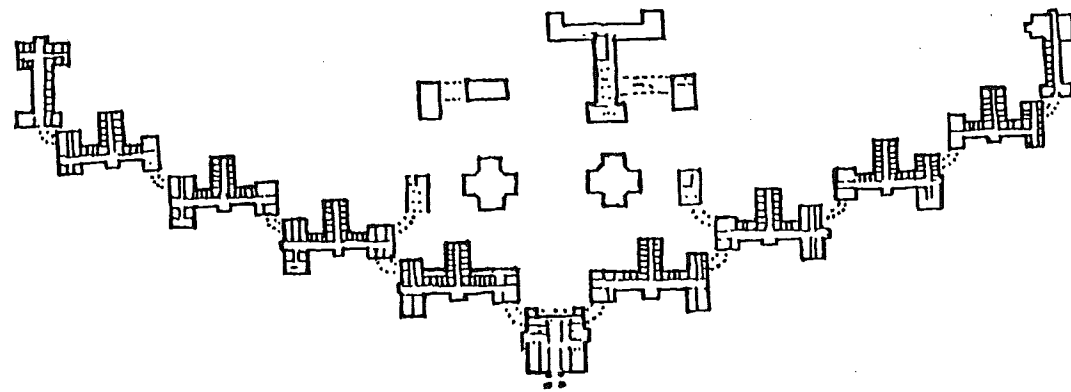


Figure 4 Original Plan, New York State Hospital, Buffalo, New York, H. H. Richardson, Architect, 1870

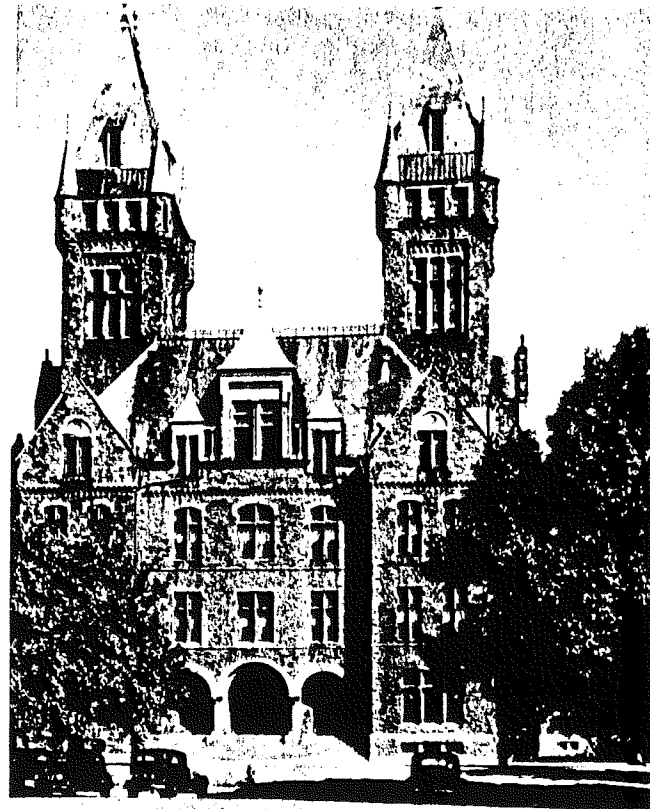


Figure 5 Central Administration Building, New York State Hospital, Buffalo, New York, H. H. Richardson, Architect

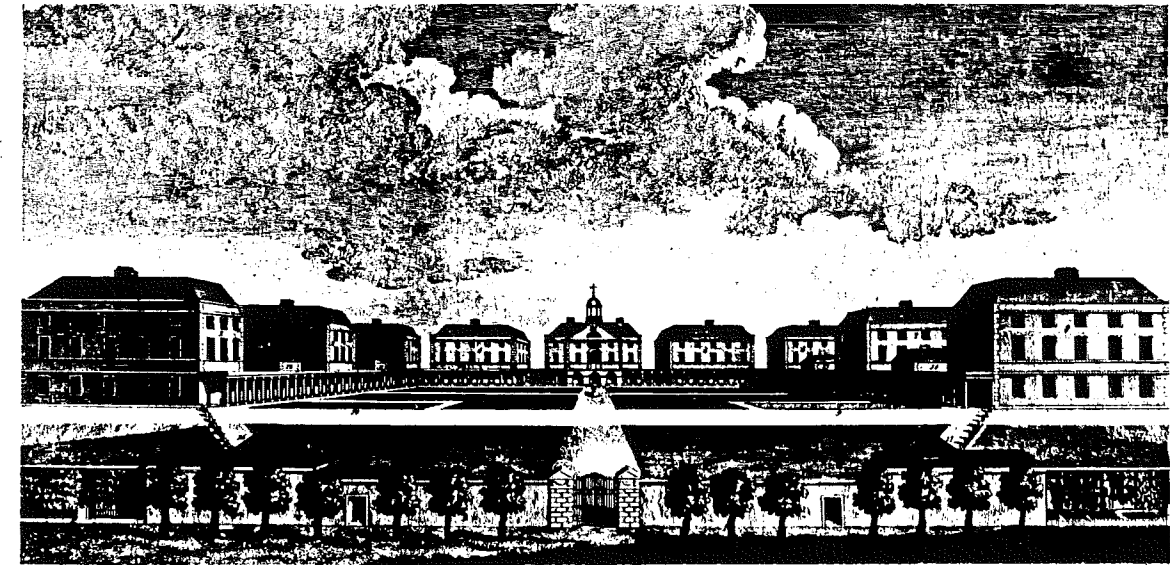


Figure 6 Royal Naval Hospital, Stonehouse, near Plymouth, England, 1762

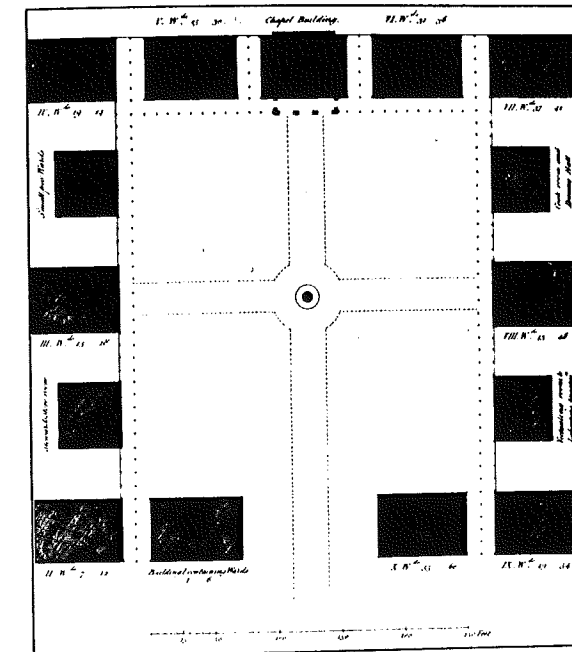


Figure 7 Plan, Royal Naval Hospital, Stonehouse, near Plymouth, England, 1762

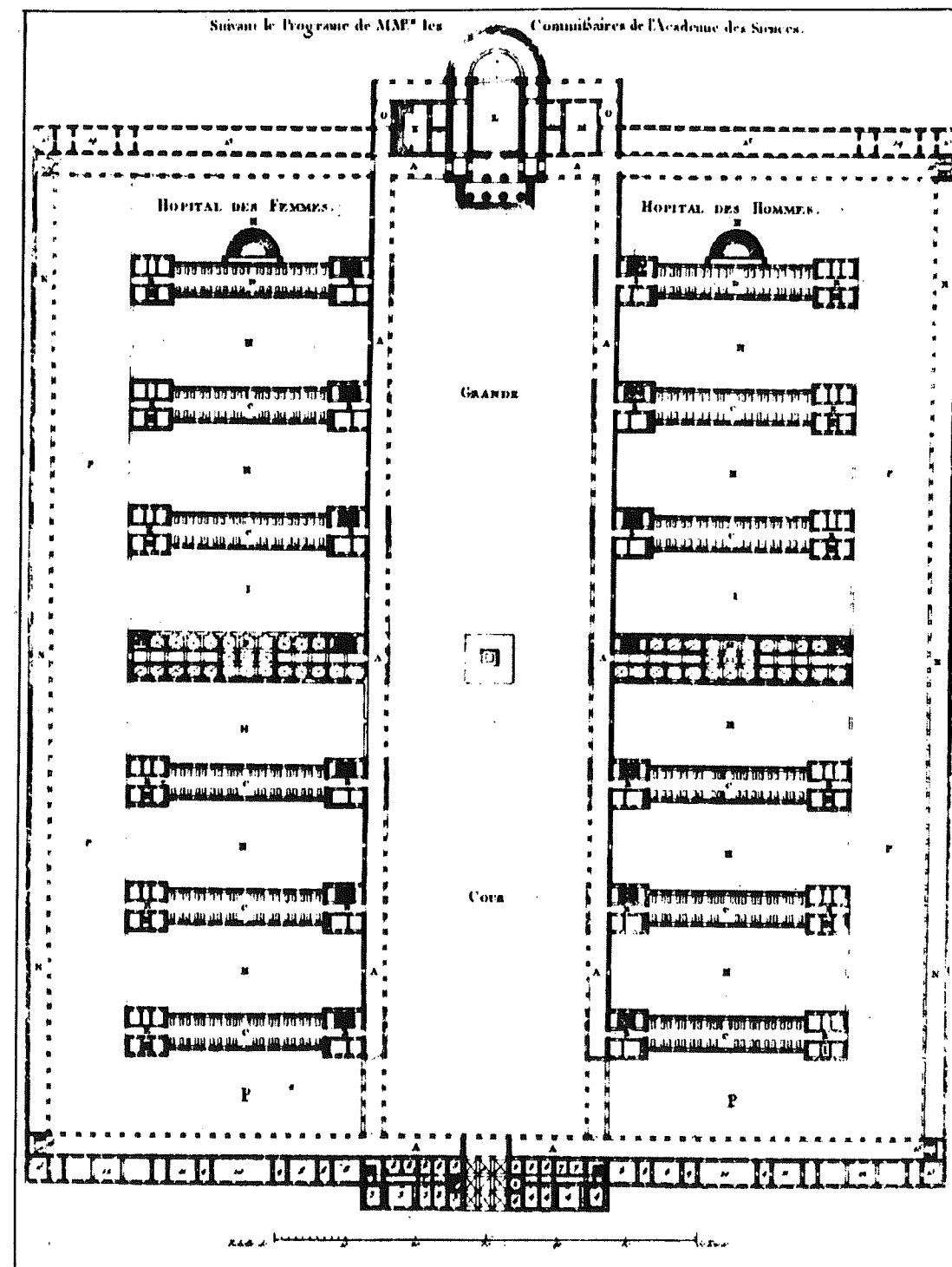


Figure 8 Final project for ideal hospital in Paris, 1788

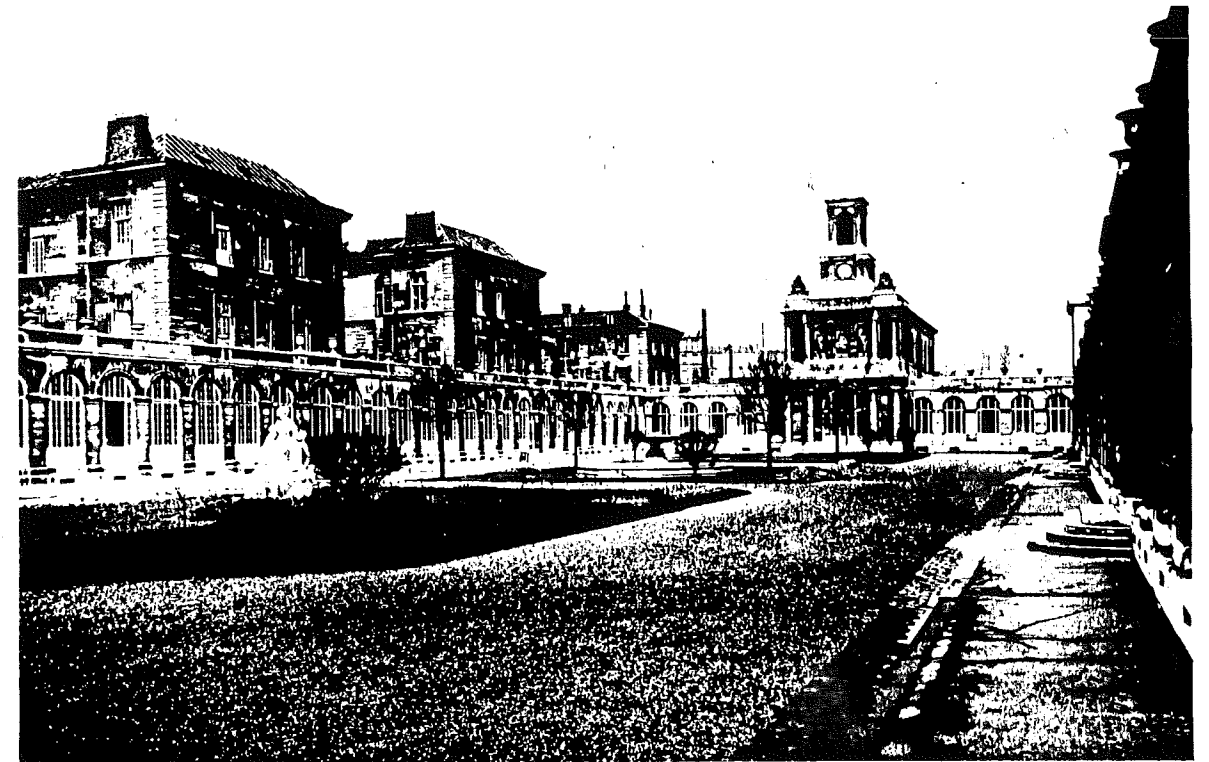


Figure 9 Hospital Lariboisiere, Paris, view of courtyard; Martin Pierre Gauthier Designed, 1839

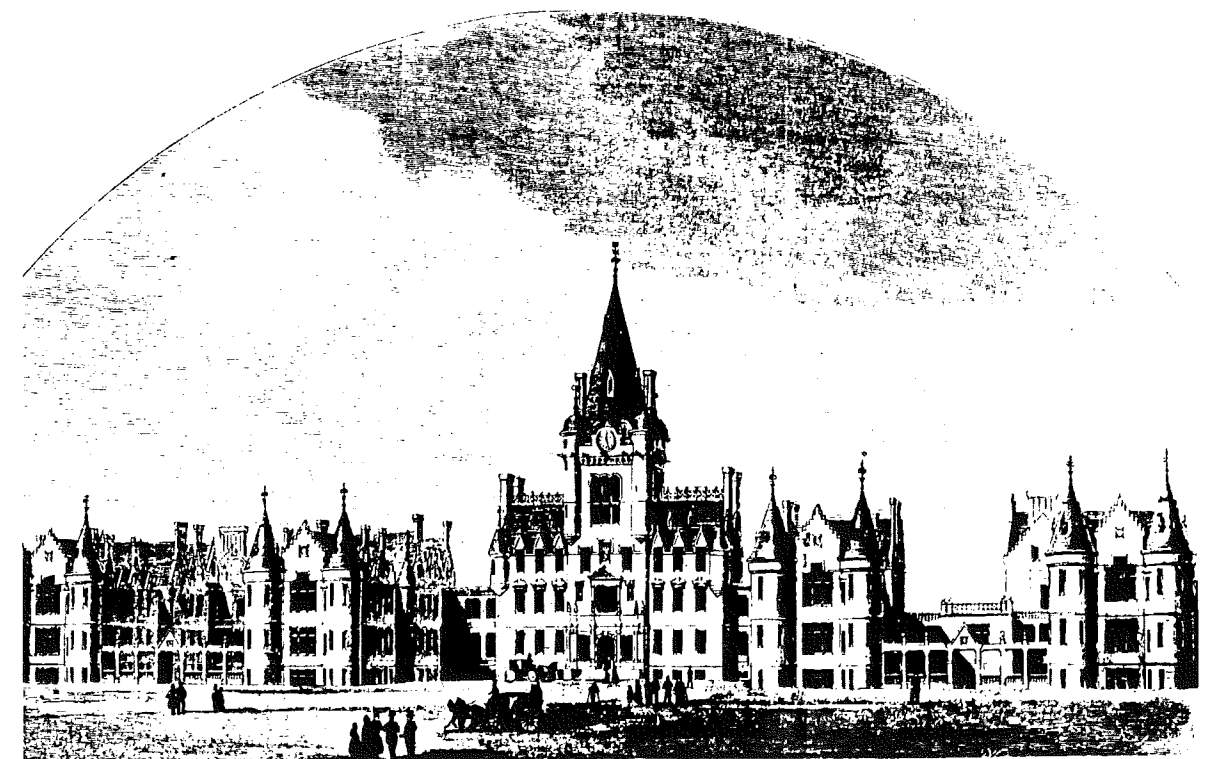


Figure 10 New Royal Infirmary, Edinburgh, Scotland; main facade; David Bryce 1870-1879

F. Picturesque Movement in Landscape Planning and Architectural Design

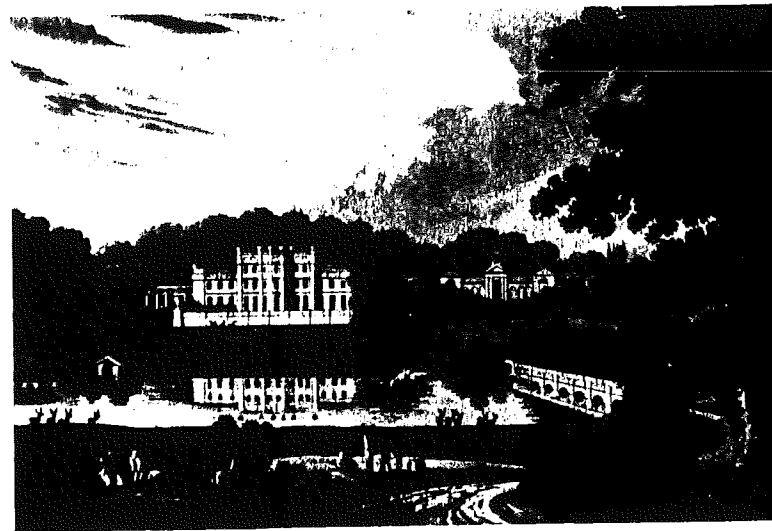


Figure 13 Harleston House and Park, Northampton, England. Landscape and house redesign by Humphrey Repton, 1808-1809



Figure 14 Audley End, near Saffron Walden, Essex, England. Landscape design by Capability Brown, 1776

While the word picturesque implies a garden or building, as a kind of a picture which in eighteenth and nineteenth century terms implies the painters mentioned above, it is a decisive break from classic and baroque traditions of design. Carroll Meeks in his book The Railroad Station begins his study of this nineteenth century building type by discussing the dominance of the picturesque in the architecture of the nineteenth century and its relation to the landscape theories as developed by Uvedale Price and others. His classifications describe well the broader aspects of this movement.

<u>Classic</u>	<u>Baroque</u>	<u>Picturesque Eclecticism</u>	<u>Modern</u>
linear	painterly	variety	planarity
plane	recession	movement	space time
closed	open	irregularity	transparency
multiplicity	unity	intricacy	interpenetration
clearness	unclearness	roughness	simplicity

The classifications for Classic and Baroque were developed by the great historian Heinrich Wofflin, and the classifications of Picturesque Eclecticism and Modern were developed by Carroll Meeks.

The following is a description of the characteristics of the picturesque as defined by Carroll Meeks.

The picturesque quality of variety as compared to linear and painterly has its most conspicuous manifestation in the striving for a varied silhouette or, as Uvedale Price noted, "The grandeur, richness and variety" of the summit. Chimneys, towers and gables sprouted from the elaborate roofs of palaces and prisons. Variety could of course be achieved in other ways - by surface treatment and particularly through asymmetry. The repetition of identical motives associated with the classical styles was avoided.

The second picturesque quality, movement, corresponds in a general way to the classic "plane" and baroque "recession." "Movement," said the architect Robert Adam in the late eighteenth century, is concerned with "the rising and falling, advancing and receding, with the convexity and concavity and other forms of the great parts...." Movement related masses and elements to naturalistic landscape, and is most easily discerned when the building is viewed from a distance.

The third quality, irregularity, is related to the class "openness" and is in opposition to the baroque "closed" form. Irregularity is achieved through spontaneity and accident in design versus calculation. A. W. Pugin, the champion of the gothic revival in early nineteenth century England thought irregularity should express the functional parts. Pugin also commented on a contemporary building in England, criticizing it for being "a long unbroken mass of building without light and shade is monotonous and unsightly." Asymmetry is one of the means most frequently resorted to. The correspondence between parts should not be too obvious in order to avoid the monotony of classical buildings.

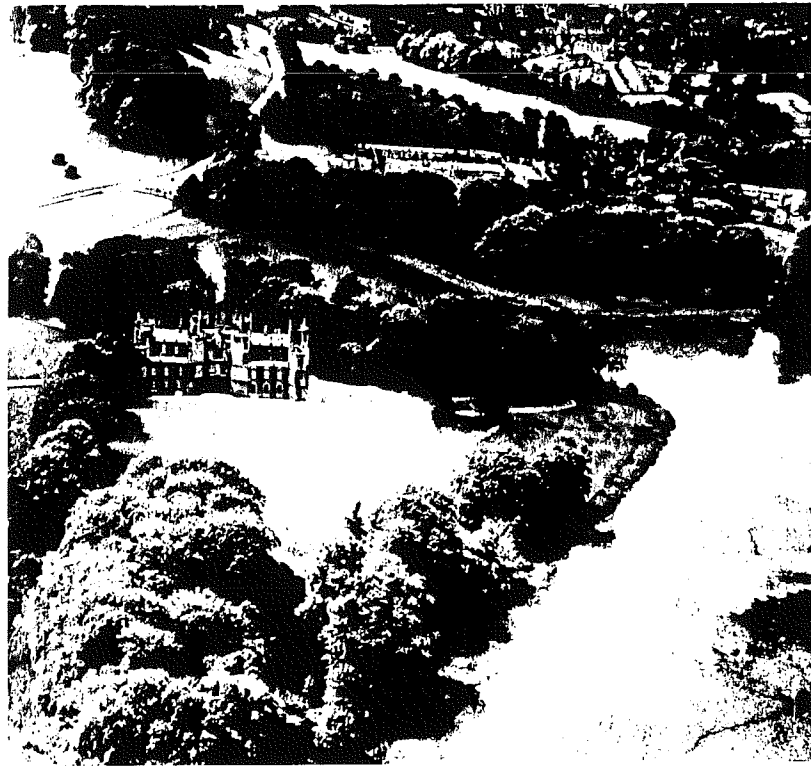


Figure 15 Sherbone Castle; Landscape design by Capability Brown, 1750-1760



Figure 16 Example of the picturesque in landscape gardening from Andrew Jackson Downing's Landscape Gardening.

The fourth picturesque quality is intricacy, which is related to the classic "multiplicity" and baroque "unity." Intricacy signifies that the relationships of the parts are complex, not to be discerned immediately. The beholder must make an effort to decipher the relationships; his interest will be increased by the temporary perplexity.

The fifth picturesque quality, roughness, is related to the classic "cleanness" and the baroque "uncleanness." Roughness involves emphatic stone joints, quarry faced ashlar, and roofs of coarse tile or stone; it is directly opposed to smooth surfaces, careful finished joints and precise clarity of classical practice. The architecture of H. H. Richardson in the United States best expresses this quality.

These characteristics are broad and relate to both buildings and site design and ultimately will be used with other characteristics to describe the original intent of the site and building design of the Traverse City State Hospital.

In terms of site design, the picturesque emphasized the quality of the larger sense of open space as opposed to the manmade objects (buildings) within them. Open views with the quality of uninterrupted nature, visual connection of natural forms through the development and emphasis of view axis between these forms and variety in the views and natural forms produce a dynamic interplay between buildings and their natural landscape.

A stunning example of the difference between a classic-baroque design and a picturesque overlay can be seen in Capability Brown's redesign of the grounds for Blenheim Palace in England, originally designed by Henry Wise and Sir John Vanbrugh (see figures 11 and 12); other works by Brown, Audrey End (see figure 14) and Sherborne Castle (see figure 15); as well as Humphrey Repton's transformation of Harleston House and Park, Northampton (see figure 13), which shows the essential component of the beauty of natural form (as designed to appear so) and its dominance of the site in general. The qualities of variety, movement, irregularity and intricacy can also be found in these compositions.

The theories were popularized and expounded upon in America by Andrew Jackson Downing, ambitious and talented son of a Hudson nurseryman who made himself into our first professional landscape architect. At the time of his early death, in 1852, in the burning of the Hudson Steamer, Henry Clay, he was the most influential of all American writers on country houses and grounds. Downing's treatise on the theory and practice of landscape gardening (1841) was immediately and greatly popular, going through twelve publications by 1860. The book found at the time of its publication, five years after Emerson's nature, a ready audience of the almost universal reverence for natural scenery.

Downing's influence spread to both site and buildings. A chapter in his treatise on the theory and practice of landscape gardening was devoted to picturesque architectural theory. A year later in 1842, Downing published a book of plans for modest rural dwellings, or cottage residences, with the help of architects Alexander Jackson Davis and John Notham. Downing's most important architectural publication, The Architecture of Country Houses, appeared in 1850.

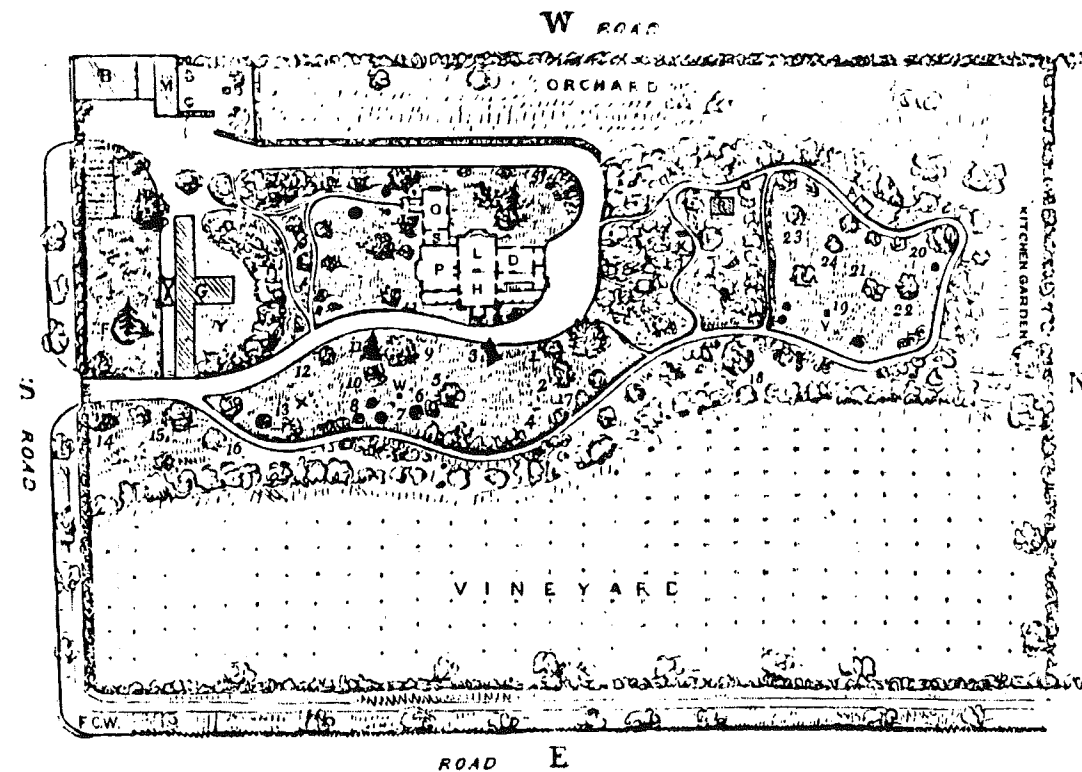


Figure 17 Site Plan, Andrew Jackson Downing's House, Newburgh, New York



Figure 18 Andrew Jackson Downing's House, Newburgh, New York (Drawing by Frederick Withers)

Downing advocated strongly the picturesque in architecture and landscape design, but also went further to advocate the social impact of living in the country versus the city. One of the most remarkable characteristics of this unusual self-made man was his firmly held conviction, perhaps ill-expressed but yet far ahead of his time, that human behavior is greatly affected by environment. To quote from his book, The Architecture of Country Houses, Section IX, Downing describes rural living:

"The villa, or country house proper, then, is the most refined home of America--the home of its most leisurely and educated class of citizens. Nature and Art both lend it their happiest influence. Amid the serenity and peace of sylvan scenes, surrounded by the perennial freshness of nature, enriched without and within by objects of universal beauty and interest -- objects that touch the heart and awaken the understanding -- it is in such houses that we should look for the happiest social and moral development of our people.

Like a farm-house, the villa is, too, the more individual home. It is there that the social virtues are more honestly practiced. That the duties and graces of life have more meaning than the character has more room to develop its best and finest traits than within the wall of cities.

In this most cultivated country life, everything lends its aid to awaken the finer sentiments of our nature. The occupations of the country are full of health for both soul and body, and for the most refined as well as the most rustic taste. The heart has there, always within its reach, something on which to bestow its affections. We beget a partiality for every copse that we have planted, every tree which has for years govern us a welcome under its shady boughs. Every winding path throughout the woods, every secluded resting-place in the valley, every dell where the brook lives and sings, becomes part of our affections, friendship, joy, and sorrows. Happy is he who lives this life of a cultivated mind in the country!"

Downing's illustrations of homes (see figure 16) in natural landscapes in his book Landscape Gardening gave power vision to the ideas that he was a proponent of. His own house (see figures 17 and 18) had both a picturesque and agrarian character, with orchards on the west and a vineyard on the east side of the property. Downing's legacy was continued and brought to a higher level by his protegee, Calvert Vaux, and his partner Frederick Law Olmsted.

Frederick Law Olmsted (1822-1903) was America's most comprehensive environmental planner and designer. He contributed to the development of cities and regions, to a national park system, and to the United State's Forest Service. It was always with a commitment to social democracy that he completed his prototypical designs for such planned environments as urban parks, parkways, suburban communities and campuses. His work, or examples of his influence, are still evident in every region of America and in Canada.

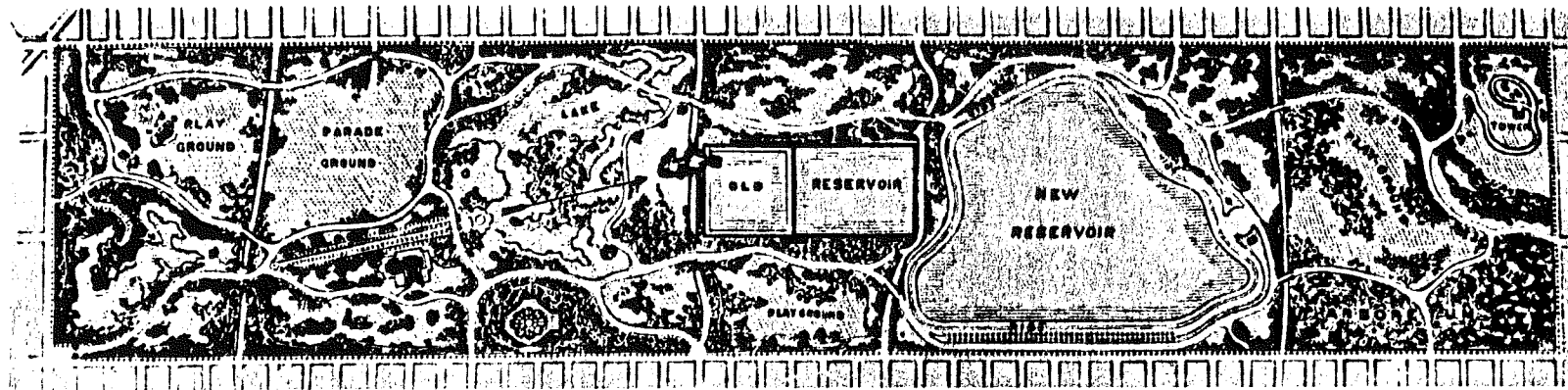


Figure 19 Olmsted and Vaux, winning entry for the design of Central Park Competition, 1857

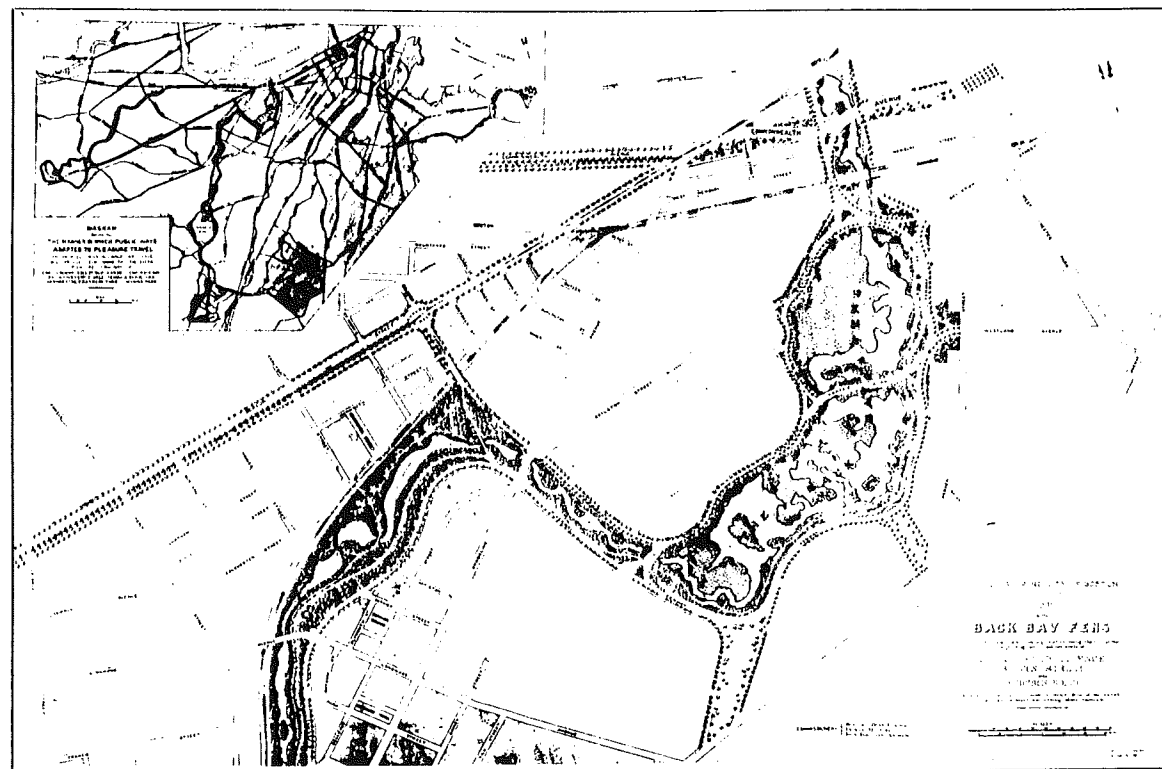


Figure 20 Back Bay Fens, Boston, Massachusetts, Frederick Law Olmsted, 1887

Olmsted, like other philosophical leaders of his generation, most notably Ralph Waldo Emerson, believed in the critical impact that the environment had on the human senses. The increasing tempo of life, particularly evident in cities, mandated alternative environments that were tranquil for what Olmsted termed as passive recreation. It was a democratic obligation to provide such public facilities, for no individual could or would make available the necessary land. It was in the public spaces, parks, streets, campuses and hospital grounds, that citizens would experience the reality of democratic life.

Olmsted's and Vaux's design for Central Park, which they won by open competition, is perhaps their best known work and an example of the picturesque as applied to the institution of the public park (see figure 19). Olmsted also collaborated with the great American architect H. H. Richardson in the design of the New York Insane Asylum in Buffalo, New York (see figures 3, 4, 5). This asylum was designed in 1870, was located next to the major public park in Buffalo, Delaware Park; its design was based on the Kirkbride Plan. Olmsted's Back Bay Fens represented his supreme effort in bringing the natural and symbolic into the fabric of the city (see figure 20).

G. Secretary of the Interiors Standards for Historic Preservation



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127



H30(424)

MAY 20 1992

Dear Colleague:

In 1990, the Preservation Assistance Division began the process of reviewing and revising the Secretary of the Interior's Standards for Historic Preservation Projects. In late August 1990, a draft was circulated within the NPS and to State Historic Preservation Officers for comment; a number of comments were received and evaluated in early 1991. Based on this evaluation, direction of the original revision was modified to reflect reviewer suggestions that the revised Standards be broadened in scope to include *all* property types, including--but not emphasizing--landscapes.

Attached for your review and comment is the draft, the Secretary of the Interior's Standards for the Treatment of Historic Properties (Rev. 1992). In addition to a change in title, the standards for acquisition have been eliminated. Protection and stabilization have been integrated into the standards for preservation. As a result, there are now four sets of treatment standards instead of seven: preservation, rehabilitation, restoration, and reconstruction.

It should be noted that the rehabilitation standards published in 36 CFR Part 67 (Tax Certification regulations) specifically apply to buildings; the rehabilitation standards in the Secretary of the Interior's Standards for the Treatment of Historic Properties apply to all properties, not just buildings. As a result, the word "property" has been substituted together with other minor word changes that seemed too narrowly focused. Revisions to all of the guidelines that accompany the treatment standards will be undertaken once the language of the standards has been made final.

Please provide comments on the attached draft by July 3, and return to H. Ward Jandl, Chief, Technical Preservation Services Branch, Preservation Assistance Division, National Park Service, P.O. Box 37127, Washington, D.C. 20013-7127. We look forward to hearing from you.

Sincerely,

Chief, Preservation Assistance
Division

Enclosures

Introduction

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The Secretary of the Interior is responsible for establishing professional standards for the preservation of historic properties in Federal ownership or control and for providing advice on the preservation and protection of all cultural resources listed on or eligible for the National Register of Historic Places.

In 1975, The Secretary of the Interior's Standards for Historic Preservation Projects were developed in partial fulfillment of this responsibility. Sets of standards were written to guide seven types of projects: acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction. This document consisted of general standards for all projects and specific standards for each of the types of work.

The Standards, as initially developed, were widely used within the Historic Preservation Grants-in-Aid Program and the Preservation Tax Incentives Program; in 1983 the Standards were revised for the first time, primarily to expand guidance on protecting and preserving archeological resources while undertaking project work. In the same year, the Secretary's Standards for Historic Preservation Projects became one section of the Standards for Archeology and Historic Preservation, which also contains sets of Standards for identification, documentation, planning, and archeology.

In 1991, a decision was made to update and revise the Secretary of the Interior's Standards for Historic Preservation Projects (the Standards for Rehabilitation had been modified in 1990 as part of the historic preservation certification regulations, 36 CFR 67). Goals included a simplification of both language and format of the 1975 document; a sharper focus on treatment philosophies together with a new emphasis on the interpretive ramifications of each treatment; and, finally, the broadening of the Standards to include not only buildings, structures, sites, objects, and districts, but also landscapes. (Museum and art objects are not included on the National Register and, therefore, are not included here.)

The revised Standards have been re-named **The Secretary of the Interior's Standards for the Treatment of Historic Properties** to more accurately describe their purpose and to further differentiate them from other sets of standards with similar titles. Because the focus of the revised Standards is treatment, or project work, the earlier Standards for Acquisition have been eliminated.

The former Standards for Protection and Standards for Stabilization--two treatments which are generally regarded as preparatory to preservation--have been incorporated into the Standards for Preservation. As a result, there are now only four sets of treatment Standards: Preservation, Rehabilitation, Restoration and Reconstruction.

Finally, as re-written, the four sets of Standards within the revised document represent four distinct, but interrelated, approaches to the treatment of historic properties. The resulting document is thus shorter and more convenient for cultural resources managers, Federal agencies, and historic district commissions to use.

The treatment Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. Rehabilitation acknowledges the need to update a historic property to meet continuing or changing use requirements, i.e., adding and altering, where necessary. Restoration is undertaken to depict a property at a particular period of time in its history, while removing evidence of other periods. Reconstruction re-creates a non-surviving property, in part or in full, for interpretive purposes. Documentation requirements for both Restoration and Reconstruction are exacting.

In summary, the simplification and sharper focus of the revised sets of treatment Standards are intended to assist users in identifying a primary treatment rather than arbitrarily mixing treatments. Choosing the most appropriate treatment is critical; this choice depends on a variety of factors: the significance of the resource, its proposed use, and its intended interpretation. For Park resources, legislation establishing the park may dictate a specific treatment.

Standards

The Secretary of the Interior's Standards for the Treatment of Historic Properties may be applied to a broad variety of property types, including buildings, structures, sites, objects, districts, and landscapes. For buildings, this encompasses all sizes, materials, occupancy, and construction types; and applies to interior and exterior work as well as new exterior additions, and adjacent or related new construction. For designed landscapes, this encompasses all aspects of construction, including vegetative materials, water features, roads and walkways, structures, and site furnishings. It should be noted that the revisions to the Standards for Preservation, Rehabilitation, Restoration, and Reconstruction will not affect their application so that a project which was previously acceptable would continue to be acceptable.

Guidelines

The Guidelines consist of recommendations for treatments and approaches that are consistent with the Standards. It should be noted that the Guidelines are intended to assist in applying the Standards to projects generally; consequently they are not meant to give case-specific advice or address exceptions or rare instances.

Technical Guidance Publications

The National Park Service, U. S. Department of the Interior, conducts a variety of activities to guide Federal agencies, State, and the general public in historic preservation project work. In addition to establishing Standards and Guidelines, the Service develops, publishes, and distributes technical information on appropriate preservation treatments, including Preservation Briefs, Preservation Tech Notes, case studies and NPS Reading Lists.

The Secretary of the Interior's Standards for the Treatment of Historic Properties

Preservation

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work may include preliminary measures to protect and stabilize the property, but generally focuses upon the ongoing maintenance and repair of historic materials. Extensive change in the form of alterations and additions is not within the scope of this treatment.

Standards for Preservation

1. A property shall be used for its historic purpose or be given a new use that minimizes the loss of distinctive materials, features, and spaces.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. New work needed to stabilize existing features shall be differentiated from the old to protect the historic form and integrity of the property.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, scale and proportion, color, texture, and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments that cause damage to historic materials shall not be used. Surface cleaning, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

The Secretary of the Interior's
Standards for the Treatment of Historic Properties

Rehabilitation

Rehabilitation is defined as the act or process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical and cultural values.

Standards for Rehabilitation

1. A property shall be used for its historic purpose or be given a new use that requires minimal change to its defining characteristics.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, scale and proportion, color, texture, and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. Surface cleaning, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and historic features to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The Secretary of the Interior's
Standards for the Treatment of Historic Properties

Reconstruction

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features and detailing of a non-surviving building, site, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Standards for Reconstruction

1. Reconstruction shall be undertaken only when a contemporary depiction is essential for understanding and interpreting a property's historic value, including the re-creation of significant missing components in a historic district or site; when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction.
2. A reconstruction shall be used to depict the property's time and place, and, when appropriate, use.
3. Reconstruction of a building, landscape, structure, or object on its historic site shall be preceded by a thorough archeological investigation to locate, identify, and evaluate the significance of all subsurface features and artifacts. Significant archeological resources affected by a project shall be protected and preserved.
4. Reconstruction shall include measures to preserve any remaining historic fabric, including foundations, and subsurface or ancillary elements.
6. Reconstruction shall be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence, rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property shall re-create the appearance of the non-surviving historic property in materials, design, scale and proportion, color, and texture.
7. A reconstruction shall be clearly identified as a contemporary re-creation for interpretive purposes.
8. Designs that were never executed historically shall not be newly constructed.

The Secretary of the Interior's Standards
for the Treatment of Historic Properties

Restoration

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of later work and/or by the replacement of missing earlier work.

Standards for Restoration

1. Restoration shall be undertaken when the property's artistic merit or historic significance at one particular time outweighs the potential loss of extant materials, features, spaces, and finishes that characterize other historical periods; and when there is definitive physical and documentary evidence for the work.
2. A restored property shall be used for its historic purpose or be given a new use that is compatible with the restoration period.
3. Features and materials from the restoration period shall be retained and preserved rather than replaced in kind.
4. Most properties change over time; those materials, features, spaces, and finishes that characterize later historical periods shall be documented prior to their alteration or removal.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that date from the restoration period shall be preserved.
6. Deteriorated historic features from the restoration period shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in materials, design, scale and proportion, color, and texture.
7. Replacement of missing features from the restoration period shall be substantiated by documentary, physical, or pictorial evidence; alternatively, if no evidence exists for the replacement feature, an extant, later feature may be retained. The addition of conjectural features or elements from other properties shall not be undertaken.
8. Chemical or physical treatments that cause damage to historic materials shall not be used. Surface cleaning, if appropriate, shall be undertaken using the gentlest means possible.
9. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
10. Designs that were never executed historically shall not be newly constructed.

D R A F T

Guidelines for the Treatment of Historic Landscapes

Prepared by
Technical Preservation Services Branch
Preservation Assistance Division
National Park Service
Washington, D.C.

May, 1992

FOREWORD

This publication was prepared by the Technical Preservation Services Branch of the Preservation Assistance Division, National Park Service, Washington, D.C. The *Guidelines for the Treatment of Historic Landscapes* were modelled after the *Guidelines for Rehabilitating Historic Buildings* which were developed in 1983 by Kay Weeks and Gary Hume.

A number of individuals and organizations have contributed to the development of this document. This draft is composite of the suggestions made by these individuals and groups over the last two years. In particular, the Alliance for Historic Landscape Preservation and the American Society of Landscape Architects (ASLA) Open Committee on Historic Preservation have greatly assisted the NPS with the direction and content of these guidelines. We wish to thank the following individuals for their contributions: Shary Page Berg, Charles Birnbaum, Chris Capella-Peters, George Curry, Reed Engle, Catherine Evans, Ian Firth, Cathy Gilbert, Genevieve Keller, J. Timothy Keller, Anne Henderson, Scott Kunst, Tina LeCoff, Arlene LeVee, Ellen Lipsey, Kathleen Maloney, Linda McClelland, Robert Melnick, Nora Mitchell, Patricia O'Donnell, Robert Page, Julia Sniderman, Noel Vernon, and Barbara Wyatt. The Guidelines have been prepared by Lauren Meier under the direction of H. Ward Jandl. Special thanks go to Kay Weeks for serving as project editor in Washington, D.C., and to Rolf Diamant and the Olmsted National Historic Site for project support.

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INTRODUCTION

The Purpose of Preservation Standards and Guidelines

The Secretary of the Interior is responsible for establishing professional standards for the preservation of historic properties in Federal ownership or control and for providing advice on the preservation and protection of all cultural resources listed on or eligible for the National Register of Historic Places. In partial fulfillment of this responsibility, the *Secretary of the Interior's Standards for Historic Preservation Projects* were developed to guide treatment work undertaken on historic properties.

In their entirety, the *Secretary of the Interior's Standards for Historic Preservation Projects* are general principles for the treatment of buildings, structures, sites, objects, districts, and landscapes. The treatment standards are one set of standards included in the broader group known as the *Secretary of the Interior's Standards for Archeology and Historic Preservation* published by the National Park Service. Under this umbrella are separate standards for preservation planning, identification, evaluation, registration, and historical documentation (Appendix A).

The intent of the Standards is to assist in the long-term preservation of historic properties through the retention, care, and repair of materials and features.¹ The *Guidelines for the Treatment of Historic Landscapes* provide more in-depth guidance for one resource type, namely landscapes. They parallel the *Guidelines for Rehabilitating Historic Buildings*, and, as such, follow the "Recommended" and "Not Recommended" format.

¹ Since the *Standards for Historic Preservation Projects*, the treatment standards, are being revised as a separate effort, they have not been included in this document.

Terms (SIDEBAR)

Historic character: the physical appearance of a property as it has evolved over time, i.e. the original configuration together with losses and later changes. The qualities of a property conveyed by its materials, features, spaces, and finishes are referred to as character-defining.

Historic designed landscape: a landscape having historic significance as a design or work of art because it was consciously designed and laid out by a landscape architect, master gardener, architect, or horticulturist according to a design principles, or by an owner or other amateur using a recognized style or tradition in response or reaction to a recognized style or tradition; has a historical association with a significant person or persons, trend, or event in landscape gardening or landscape architecture; or a significant relationship to the theory and practice of landscape architecture.²

Historic landscape: a geographic area, including both historic and natural features, associated with an event, person, activity, or design style that is significant in American history. They include historic designed landscapes, vernacular landscapes, and historic sites. Historic landscapes are a subset of the more inclusive term, cultural landscape (see Appendix C).

Historic property: any prehistoric or historic district, site, building, structure or object on, or eligible for listing in, the National Register of Historic Places.³

Historic significance: the importance for which a property has been evaluated and found to meet the National Register criteria.⁴

Historic vernacular landscape: a landscape whose use, construction, or physical layout reflects endemic traditions, customs, beliefs or values; in which the expression of cultural values, social behavior, and individual actions over time is manifested in the physical features and materials and their interrelationships, including patterns of spatial organization, land use, circulation, vegetation, structures, and objects; in which the physical biological, and cultural features reflect the customs and everyday lives of people.⁵ **Historic rural landscapes** are vernacular landscapes that historically have been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features.⁶

² Keller, J. Timothy and Genevieve Keller. *National Register Bulletin 18: How to Evaluate and Nominate Designed Historic Landscapes*. Washington, D.C.: National Park Service, Interagency Resources Division, 1987.

³ National Park Service. *National Register Bulletin 16A: How to Complete the National Register Registration Form*. Washington, D.C.: U.S. Dept. of the Interior, National Park Service, Interagency Resources Division, 1991.

⁴ Ibid.

⁵ National Park Service. *NPS 28: Cultural Resource Guidelines*. Washington, D.C.: U.S. Dept. of the Interior, NPS, History Division (draft Release No. 4), 1991.

⁶ McClelland, Linda Flint, J. Timothy Keller, Genevieve P. Keller, Robert Z. Melnick. *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*. Washington, D.C.: U.S. Dept. of the Interior, NPS, Interagency Resources Division, 1990.

Integrity: the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period. The seven qualities of integrity are location, setting, feeling, association, design, workmanship, and materials.⁷

Period of significance: the span of time in which a property attained the importance or association for which it meets the National Register criteria.⁸

⁷ National Park Service. *National Register Bulletin 16A: How to Complete the National Register Registration Form*. Washington, D.C.: U.S. Dept. of the Interior, NPS, Interagency Resources Division, 1991.

⁸ Ibid.

Preservation Planning: *Historical Research, Inventory and Documentation, Site Analysis, and Treatment Selection*

The process for making treatment decisions is the same for landscapes as it is for other historic resources. It requires a keen understanding of the property's history, significance, and existing condition. Though the exact process of preserving a historic landscape may vary from individual site to site, it generally involves four major steps: 1. undertaking historical research; 2. inventorying the landscape's features and recording their existing condition; 3. conducting a site analysis to ascertain the landscape's evolution; and 4. selecting an appropriate treatment.

1. Historical research is essential prior to beginning work on a landscape. The landscape's historic period(s) and their relative significance are revealed through information that is gathered from a variety of sources such as historical photos, plans, nursery records, household records, personal correspondence, and oral histories. Articles found in historic journals and magazines as well as other published sources such as treatises and texts may also provide information about the landscape's history.

2. Inventory and documentation of the landscape provides a detailed record of the existing materials and features and their condition. This survey should include drawings to scale, photographs, and narrative text, and may also include videotaping.

3. Analysis of the site provides a basis for understanding the landscape's change over time. This is accomplished by comparing the landscape's current features, materials, spaces, and overall organization to those that, as authenticated by earlier research and inventory, existed during its historic period(s).⁹ Based on an understanding of the evolution, these character-defining features may be attributed to specific time frames. Treatment options for the overall landscape may now be weighed.

4. The selection of a treatment for the landscape determines the type and scope of work for each project, i.e., the extent of repair and replacement to historic features and materials. The type and scope of work, in turn, determine how the entire property will exist in time in relationship to the user, viewer or visitor. Decisions made at this step will determine how the history of the property will be perceived. Although the treatments are interrelated, usually one primary treatment is selected for a property. The *Secretary of the Interior's Standards for Historic Preservation Projects* guide the treatment of historic properties and include the following treatments, as applied to landscapes:¹⁰

Protection and Stabilization provide temporary, often emergency measures to prevent deterioration or failure without altering the landscape's historic character. These measures are generally considered preparatory to the other treatments.

⁹ For a discussion of integrity as it applies to registration, consult *National Register Bulletin 18* on designed historic landscapes and *National Register Bulletin 30* on rural historic (vernacular) landscapes.

¹⁰ Note that these paraphrase the treatment definitions. For the official definitions, consult Appendix C.

Preservation maintains the form, materials, and features of the landscape as it has evolved over time, acknowledging its growth, loss, and change.

Rehabilitation retains the landscape as it has evolved historically by maintaining and repairing historic features, while allowing additions and alterations for contemporary and future uses.

Restoration depicts an appearance that existed during the landscape's most significant period by removing later additions, and rebuilding or replanting earlier features.

Reconstruction re-creates a vanished or non-surviving landscape with new materials.

As noted, each treatment is different in type and degree of intervention and the goals planned for interpreting the landscape. The key to choosing and implementing an overall treatment strategy is understanding the significance, integrity, historic character, and character-defining features of the property before any treatment work is proposed. By carefully selecting and applying the right treatment, we can ensure that landscapes are preserved as a physical record of history.

Many factors influence what type of treatment work is undertaken. These include the physical condition and historical significance of the property, as well as educational or programmatic objectives, maintenance considerations, contemporary or future needs, and funding.

The implementation of physical work is undertaken once an overall treatment objective has been selected. This may require a detailed evaluation of the condition of individual spaces, features, and materials necessary to determine their individual treatment work needs. In the case of rehabilitation, alterations, new additions, or alternative uses are appropriate along with repair and replacement of existing historic features and materials. The result of this analysis will lead to a comprehensive plan for the retention, repair, or updating of the landscape including design and construction specifications.

Ongoing maintenance and management are necessary regardless of the treatment objective. Due to the dynamic nature of plant material, a plan for ongoing maintenance should address periodic replacement of diseased, deteriorated, dying, or over-scaled vegetation. Thus, any plan for preserving a historic landscape should include a developed maintenance and management component which addresses both cyclical and long-term maintenance needs.

Using the Guidelines for the Treatment of Historic Landscapes

These Guidelines are modelled after the *Guidelines for Rehabilitating Historic Buildings*, published in 1983. They are intended to assist property owners, developers, landscape architects, preservation professionals, Federal managers, and others apply the *Secretary of the Interior's Standards for Historic Preservation Projects* specifically to historic landscapes. The Guidelines should be consulted during the planning of treatment projects since they provide general and technical recommendations. Together with the Standards, they provide a model process.

The Guidelines are intended to assist in applying the Standards generally to a wide range of historic landscapes. As a result, the Guidelines do not provide site-specific advice or address unusual circumstances. For example, they cannot tell an owner or landscape architect which features of a particular landscape are important to its historic character and therefore must be retained, or which features may be altered if necessary for a new use. This careful case-by-case decision making is best accomplished by seeking assistance from qualified historic landscape preservation professionals in the planning stage of the treatment process.

The Guidelines pertain to variety of types of historic landscapes, including designed historic landscapes, vernacular historic landscapes, and landscapes which provide the setting for other historic resources such as buildings, structures, or objects. Regardless of the type of landscape, these properties are resources that are significant to American history or prehistory such as those that meet the criteria for listing on the National Register of Historic Places. Approaches, treatments, techniques, and solutions which are consistent with the *Secretary of the Interior's Standards* are found in the "Recommended" column of the Guidelines, while approaches which could adversely affect the property's historic character are described in the "Not Recommended" column.

Individuals using the Guidelines should first determine the appropriate treatment following a thoughtful preservation planning process described in the previous chapter. Then, follow the "Recommended" examples listed in each set of guidelines for technical advice related to the chosen treatment. Five sets of guidelines address a variety of landscape features as well as factors which relate to the historic property as a whole. Guidelines are included for Protection and Stabilization, Preservation, Rehabilitation, Restoration, and Reconstruction. Each set of guidelines is, in turn subdivided into features: topography, vegetation, natural systems, circulation, water features, furnishings and objects, structures, and views and spatial organization. Issues related areas surrounding the historic landscape (surroundings/setting), as well as code considerations are included following the Reconstruction Guidelines. For an overview of the structure and hierarchy of the Guidelines, please consult Appendix B.

Historic Landscape Features

Landscapes are composed of a number of features and their components which individually or collectively contribute to its historic character. They include small-scale elements such as individual fountains or statuary, as well as patterns of fields and forest which define the spatial character of the landscape. The following text describes the features which define the character of historic landscape, for which guidelines have been written. Each set of guidelines (for protection and stabilization, preservation, rehabilitation, restoration, and reconstruction) include the following features:

Topography, the shape of the ground, is a character-defining feature of the landscape. Topography may occur naturally or be manipulated through human activity. Landforms may contribute to the creation of outdoor spaces, serve a functional purpose, or provide visual interest.

Vegetation features may be an individual plant, as in the case of a specimen oak tree, or groups of plants such as a hedge, alley, forest, agricultural field, or planting bed. Vegetation may be evergreen or deciduous trees, shrubs, or ground covers, and include both woody and herbaceous plants. Vegetation may derive its significance from historical associations, horticultural or genetic value, or aesthetic or functional qualities. It is the primary component of the constantly changing character of the landscape. The treatment of historic landscapes must recognize the continual process of growth, seasonal change, maturity, decay, death, and replacement of vegetation. Vegetation derives its character from form, color, texture, bloom, fruit, fragrance, and scale.

Many designed and vernacular landscapes derive their character from a human response to **natural systems**. As a result, historic landscapes may contain associations of both cultural and natural features. The significance of these natural resources may be derived from their cultural associations or they may have importance for their inherent ecological values. Natural resources often form systems, which are interdependent on one another and may extend well beyond the boundary of the historic property. These systems include geology, hydrology, plant and animal habitats, and climate. Many natural systems such as wetlands or rare species fall under local, state, and Federal regulations. Soil and subsurface geology play an important role in shaping the character of the land and environment and may affect the landscape's ability to support vegetation, water features, or structures. Similarly, hydrology including both surface water and subsurface aquifers, affect the property and may be affected by alterations to the landscape. Climate and site-specific microclimates cause variation in natural vegetation and have an important affect on both natural and historic landscapes. Finally, many landscapes provide habitat for important plant and animal species and natural communities. Some of these biotic resources are particularly susceptible to disturbances caused by changes in landscape management. Since natural resource protection is a specialized field distinct from historic landscape preservation, specialized expertise may be required to address specific issues or resources found on the property. Thus, natural systems are an integral part of historic landscape and should be considered and protected in any preservation treatment.

Circulation features include roads, parkways, drives, trails, walks, paths, parking areas, and canals. These features may occur individually or be linked to form networks or systems. The character of circulation features is defined by attributes such as alignment, surface treatment, width, edge, grade, materials, furnishings, view/vistas, walls, signs, and infrastructure.

Landscape **structures** are non-habitable, constructed features unlike buildings which have walls and roofs and are generally habitable. Structures may be significant individually or they may simply contribute to the historic character of the landscape. They include walls, terraces, arbors, gazebos,

folies, stadiums, tennis courts, playground equipment, plazas, greenhouses, cold frames, steps, bridges, and dams. Buildings found in historic landscapes include but are not limited to, residences, gate houses, barns, visitor centers, inns or hotels, and cabins. The placement and arrangement of buildings and structures, whether designed or not, are important to the character of the landscape. These guidelines emphasize the relationship between buildings, structures, and the historic landscape. For additional and specific guidance related to the treatment of historic buildings, please consult the *Guidelines for Rehabilitating Historic Buildings*.

Site furnishings and objects are small-scale elements in the landscape that may be functional, decorative, or both. They include benches, lights, fixtures, signs, drinking fountains, trash receptacles, fences, tree grates, clocks, flagpoles, sculpture, monuments, memorials, planters, and urns. They may be movable, seasonal, or permanently installed. Site furnishings and objects occur as singular items or in groups of similar or identical features. They may be designed or built for a specific site, available through a catalog, or created as vernacular pieces associated with a particular region or cultural group. They may be significant in their own right as works of art or as the work of a master.

Water features may be aesthetic as well as functional components of the landscape. They may be linked to the natural hydrologic system or may be fed artificially. Their associated water supply, drainage, and mechanical systems are important components of water features. Water features include fountains, pools, cascades, irrigation systems, ponds or lakes, streams, or aqueducts. The attributes of water features include shape (form), sound, edge and bottom condition/material, water level or depth, movement or flow, reflective qualities, water quality, and associated plant or animal life. Special consideration may be required due to the seasonal changes in water such as variations in water table, precipitation, and freezing.

Spatial relationships are the three-dimensional organization and pattern of spaces in a landscape, like the arrangement of rooms in a house. They may have evolved for visual or functional purposes and includes **views** within the landscape itself. Spatial organization is created by a variety of smaller scale elements, some which intentionally form visual links or barriers such as fences and hedgerows; others which less intentionally create spaces and visual connections in the landscape such as topography and open water. The organization of these elements define and create spaces in the landscape. The functional and visual relationship between these spaces is integral to the character of the historic property. Individually or collectively, these features form the spatial relationships of the landscape. These individual features must in turn be treated as they relate to the spatial organization of the property as a whole, not just in isolation.

The environment or **surroundings** in which a historic landscape occurs, whether an urban neighborhood or rural area, contributes to its historic character and should be considered in any treatment project. This larger **setting** may contain components or features which relate to the significance and historic character of the property, but are located generally outside the individual parcel or National Register boundary. These elements include adjacent lands, views, watersheds, transportation/circulation corridors, land use patterns, streetscape, and natural systems all of which may contribute to the historic character of the property.

Treatments

Initial, or temporary, measures of protection or stabilization may be required for individual features before more substantial treatment work can be implemented. These measures guard the existing condition of a property or its features by preventing further deterioration, loss, or attack, or to shield it from danger or injury. In landscapes, protection may include fencing or closing an area of the landscape to secure the habitat of a rare or endangered species, as well as other actions required to prevent continued damage from human or natural causes such as vandalism, weather, and fire. Stabilization re-establishes the strength of a structurally unsafe or damaged or deteriorated property or feature while retaining the essential form as it exists at present. This treatment is often used for buildings or landscape structures such as gazebos or dams, threatened with structural failure due to severe deterioration or damage. Stabilization can also be applied to individual trees requiring extreme cabling or staking due to a structural weakness in the trunk or limbs resulting from pests, storm damage, or age. For entire landscapes, stabilization may involve reinforcing earth, water features, or vegetation after natural disasters such as earthquakes, hurricanes, or flood. In this case, the historical value of the damaged features should be considered before emergency procedures are implemented. Both protection and stabilization may be temporary in nature, required to solve immediate threats to the condition of the landscape or feature and are appropriate regardless of the interpretive objective for the property.

Preservation calls for retaining and maintaining the materials, features, and spaces which characterize the property. Replacement of historic materials is as limited as possible. This "retain and repair" approach acknowledges a property's history in the broadest sense, within its past history of growth, loss, and change. This treatment includes ongoing and cyclical maintenance activities, such as pruning or mowing, masonry cleaning and re-pointing, resurfacing paths or roads with appropriate materials, and removing volunteer or invasive plant material. The purpose of this treatment is the retention of the property's existing form and materials. In addition to ongoing maintenance projects, preservation may include the repair of the existing historic materials and features but does not allow for substantial replacement of vanished features.

The goal of rehabilitation is also to retain the historic character of a property, but this treatment allows for alterations and additions that are necessary for contemporary use. Rehabilitation allows for improvements to a historic property, that makes possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical or cultural values. Thus, all of the basic principles that apply to preservation also apply to rehabilitation.

In landscapes, rehabilitation a common treatment, since it allows for change necessary to satisfy the present-day demands. For example, when a formerly private property is adapted for public use, it may require the addition of new features such as parking, visitor centers, and other public facilities. These new additions must be carefully designed and located so that the historic character of the property is retained, and the new design is compatible with and distinguishable from the historic features.

Restoration differs from preservation and rehabilitation since it may involve the removal of later historic features, or the addition of missing historic features in order to depict the appearance of the landscape at a specific earlier period. This treatment is used to illustrate a narrow period in the landscape's history, not its history as evolved. As a result, materials or features that relate to a later period of significance may be removed or substantially altered. Therefore, restoration is a



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127



H30(424)

MAY 20 1992

Dear Colleague:

In 1990, the Preservation Assistance Division began the process of reviewing and revising the Secretary of the Interior's Standards for Historic Preservation Projects. In late August 1990, a draft was circulated within the NPS and to State Historic Preservation Officers for comment; a number of comments were received and evaluated in early 1991. Based on this evaluation, direction of the original revision was modified to reflect reviewer suggestions that the revised Standards be broadened in scope to include *all* property types, including--but not emphasizing--landscapes.

Attached for your review and comment is the draft, the Secretary of the Interior's Standards for the Treatment of Historic Properties (Rev. 1992). In addition to a change in title, the standards for acquisition have been eliminated. Protection and stabilization have been integrated into the standards for preservation. As a result, there are now four sets of treatment standards instead of seven: preservation, rehabilitation, restoration, and reconstruction.

It should be noted that the rehabilitation standards published in 36 CFR Part 67 (Tax Certification regulations) specifically apply to buildings; the rehabilitation standards in the Secretary of the Interior's Standards for the Treatment of Historic Properties apply to all properties, not just buildings. As a result, the word "property" has been substituted together with other minor word changes that seemed too narrowly focused. Revisions to all of the guidelines that accompany the treatment standards will be undertaken once the language of the standards has been made final.

Please provide comments on the attached draft by July 3, and return to H. Ward Jandl, Chief, Technical Preservation Services Branch, Preservation Assistance Division, National Park Service, P.O. Box 37127, Washington, D.C. 20013-7127. We look forward to hearing from you.

Sincerely,

Chief, Preservation Assistance
Division

Enclosures

Draft

Guidelines for the Treatment of Historic Landscapes

Guidelines for Rehabilitation
TOPOGRAPHY

Guidelines for Rehabilitation

Rehabilitation encourages improvements to a historic property that make possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical or cultural values. Archeological investigations may be required prior to replacement of missing historic features or projects involving new construction. In rehabilitation, the entire history of the landscape is retained for interpretation.

Topography: *the shape, slope, elevation, and contour of landforms and groundplane*

Recommended

Researching the history of the landscape as whole, and in particular, the design, construction, and character of the topography including its shape, slope, elevation, and contour.

Inventorying and documenting the existing condition of the topography, including any immediate or potential repair needs.

Preserving natural and designed grades through a program of cyclical maintenance.

Preventing incremental deterioration of topographic features through proper drainage, access and erosion control, and good soil management practices.

Repairing, i.e. replacing a deteriorated or missing portion of an existing topographic feature with the same material, or using substitute materials that match the historic form, shape, color, and texture. For example, replacing stone boulders on a subsided hillside.

Not Recommended

Undertaking work on or that affects the topography of the property without researching the entire landscape.

Undertaking repair work or new construction on topographic features without adequately inventorying and documenting their condition, resulting in their alteration or loss.

Failing to maintain drainage systems which results in erosion or damage to landforms.

Failing to provide proper drainage and erosion and access control thereby allowing topographic features to deteriorate.

Replacing an entire hillside when it could have been repaired by replacing base materials and topsoil.

Recommended

Replacing in kind a topographic feature that is extensively deteriorated – if the overall form and detailing are still evident – using the physical evidence as a guide. For example, regrading a bank using an aggregate base to provide additional structural stability. Substitute materials need to convey the same visual appearance.

Not Recommended

Removing a topographic feature that is not repairable and not replacing it or introducing a topographic feature that does not convey the same visual appearance. For example, changing stepped terracing to a curved slope.

In addition to maintenance and repair work, the following types of work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Designing and constructing a new topographic feature when the historic feature is missing. For example, regrading terraces, berms, or other landforms that have vanished. It may accurately duplicate the missing historic feature using historical, pictorial, and physical documentation; or be a new design that is compatible with the size, scale, form, shape, color, texture of the historic topography.

Creating a false historical appearance because the replaced topographic feature is based on insufficient documentation.

Introducing a new topographic feature that is incompatible in size, scale, form, color, and texture.

Alterations and Additions for the New Use

Designing new features such as parking when required for the new use so that they are as unobtrusive as possible and assure the preservation of character-defining topographic features.

Constructing new additions in such a way that severely alters the historic grade of the landscape.

Placing new construction in areas that are important for their designed topography which results in the loss of the historic shape. For example, locating a new building in a naturalistic garden that retains its historically designed and constructed landform.

Levelling a character-defining hill for parking.

Recommended

Providing new circulation including universal access, such as paths, if required for the new use, in a manner which preserves the historic character of the topography.

Designing and constructing drainage systems for a new playfield or pavilion.

Not Recommended

Failing to consider topography when locating new paths, resulting in steeply sloped, unsafe ramps and walkways or damage to important landforms.

Failing to provide proper drainage from new features which results in erosion and damage to topographic features.

Vegetation: *trees, shrubs, groundcovers, hedges, allees, fields, forests, planting beds*

Recommended

Researching the history of the landscape as a whole, and in particular, the history, location, species composition, and character of the vegetation.

Inventorying and documenting the existing condition of the vegetation including specimen trees, hedges, allees, forests, fields, planting beds, shrubs, or ground covers as well as any existing or potential threats.

Evaluating the condition of vegetation features to determine appropriate maintenance practices and frequency of activities. For example, reviewing turf conditions to determine the need for soil aeration, pest management, or fertilizing.

Retaining the appropriate form, arrangement, species and character of vegetation through regular and cyclical maintenance. For example, mowing a field at historically appropriate intervals, or maintaining the appropriate height and shape of a hedge through pruning.

Replanting annual vegetation on an appropriate maintenance schedule and with suitable plant materials. For example replacing plants in annual beds each spring with historically accurate species or sowing field crops such as winter wheat in the fall.

Propagating character-defining vegetation in order to retain the historic genetic stock.

Not Recommended

Undertaking treatment work on or that affects vegetation without researching the landscape in its entirety.

Removing deteriorated vegetation without evaluating the varying condition of individual plants.

Undertaking work on vegetation in a haphazard fashion without carefully planning maintenance activities.

Failing to maintain character-defining vegetation so that they are damaged or lost.

Allowing vegetation to grow beyond its intended design scale which alters the character of the landscape.

Planting annuals where they were never used historically so that as a result, an inaccurate historic appearance is presented.

Failing to propagate character-defining vegetation so that important genetic stock is lost and dying historic vegetation cannot be replaced.

Recommended

Preserving a vegetation feature through the limited replacement in kind of extensively deteriorated or missing individual plants where surviving prototypes remain. For example, replacing an individual tree in a hedge or replacing a perennial in a border. If exact historic species have been lost from cultivation or are unavailable, substitute species may used as long as it conveys the same growth habit, form, and foliage and bloom characteristics as the historic plant.

Replacing vegetation in the same location, that is too diseased or deteriorated to recover, with plants propagated from the original or with the same species or cultivar acquired from a nursery or other source.

Not Recommended

Allowing a historic vegetation feature to be lost, thus changing the character of the landscape.

Replacing a deteriorating vegetation feature with inappropriate plant material so that an inaccurate historic appearance is conveyed.

Allowing a vegetation feature to be lost because periodic replacement of deteriorating plants was not undertaken.

Replacing parts of a vegetation feature with inappropriate substitute material when appropriate replacements are available through propagation or nursery stock.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Historic Features

Replanting vegetation when the historic vegetation is missing. For example, replanting a new hedge. It may accurately duplicate the missing historic vegetation feature using historical, pictorial, and physical documentation; or be a new features which is compatible in size, growth habit, form, foliage, and bloom characteristics with the historic vegetation feature.

Rejuvenating historically active agricultural fields by improving soil or site conditions and establishing alternative crops.

Creating a false historical appearance because the replaced vegetation feature is based on insufficient documentation.

Introducing a new vegetation feature that is incompatible in growth habit, form, foliage, and bloom characteristics.

Replanting inactive agricultural fields with trees and shrubs rather than an alternative crop which results in the loss of a character-defining field.

Recommended

Planting replacement trees in an alternative location when the historic trees are missing because the original location is technically or environmentally unsuitable. For example, planting a replacement tree farther from a historic building to eliminate moisture damage to both structure and vegetation. The new location should be as close to the original as possible.

Alterations and Additions for the New Use

Adding vegetation features to screen new construction that are compatible with the historic character of the landscape.

Not Recommended

Replanting replacement trees in an alternative location when the original location is usable or conversely, locating replacement trees in a historic location that is environmentally unsuitable so that damage to the tree or nearby features occurs.

Planting new vegetation in a character-defining vista, open field, or lawn which results in the loss of the feature.

Natural Systems: *geology, hydrology, wildlife habitats, and climate*

Recommended

Researching the history of the landscape as whole and, in particular, its natural systems.

Inventorying and documenting the location, extent, and existing conditions of natural resources and systems including geology, hydrology, plant and animal habitats that support character-defining features, or are important for their natural resource values.

Providing routine and cyclical maintenance of natural systems. For example, clearing silt from a natural hydrologic system.

Preserving, i.e. replacing, a deteriorated, threatened, or missing component of a natural system. For example, introducing an animal species to re-balance the dynamics of a natural habitat.

Replacing in kind a natural feature that is extensively deteriorated – if the overall form and detailing are still evident – using the physical evidence as a guide. For example, replacing a portion of a wetland in its historic configuration using appropriate plant and animal species.

Evaluating the carrying capacity of the natural system before beginning any rehabilitation work to prevent overtaxing, depletion, or destruction of the resources through construction activities or changes in use.

Consulting local, state, and federal regulations before beginning any construction project to ensure that natural systems are adequately considered and protected.

Not Recommended

Undertaking treatment work on or that affects natural systems without researching the landscape in its entirety.

Undertaking treatment work without adequately inventorying and documenting the natural systems on the historic property, which results in their damage, alteration or loss.

Allowing a natural system to be damaged by a lack of maintenance.

Failing to replace lost components or manage an ongoing threat to a natural habitat so that the dynamics of the natural resources are continuously damaged.

Removing a deteriorated wetland and not replacing it; or replacing it with a new water feature that does not convey the same visual appearance or ecologic function.

Failing to consider the carrying capacity of the natural resources in the landscape, resulting in damage by changes or increases in human use.

Recommended

Not Recommended

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Replacing a natural feature when the historically-occurring feature is missing. For example, replacing a small geologic feature such as a glacial erratic. It may accurately duplicate the missing natural feature using historical, pictorial, and physical documentation; or be a new features which is compatible in size, scale, form, material, and color with the historic landscape.

Rejuvenating inactive natural habitats, by replacing key food plants, managing vegetation, and re-introducing important animal species.

Alterations and Additions for the New Use

Evaluating the terrain, vegetation, and wildlife before introducing new intensive uses such as off-road vehicles or mountain bikes.

Locating and constructing new additions or site features in such a way that does not cause an adverse effect to natural systems such as constructing new parking lots in areas that are not environmentally sensitive.

Using fencing, hay bales, or other methods to delineate wetlands and protect them during adjacent construction.

Providing boardwalks or other alternatives to prevent degradation of a dune system or other sensitive substrate by public use.

Creating a false historical appearance because the replaced natural feature is based on insufficient documentation.

Introducing a new natural feature that is incompatible with the historic landscape.

Introducing intensive uses into environmentally sensitive areas which causes an adverse affect on important natural features such as wildlife.

Filling in a wetland in order to locate and construct new site features such as playfields.

Allowing heavy equipment, debris, contaminated run-off, or other activities to damage sensitive natural wetlands during or after new construction.

Circulation: roads, paths, parkways, drives, trails, and walks

Recommended

Not Recommended

Researching the history of the landscape as whole, and in particular, its circulation systems.

Inventorying and documenting the existing condition of the circulation features such as roads, paths, parkways, drives, trails, walks, parking areas, and canals, as well as their alignment, surface treatment, width, edge, grade, materials, furnishings, views/vistas, walls, signs, and infrastructure.

Identifying related features which define, enclose, or support historic roads and paths and therefore contribute to the character of the circulation system such as bridges, walls, fences, hedgerows, rocks, borders, curbs, gutters, ditches, and embankments.

Retaining the historic spatial and functional relationship of the road corridor by maintaining the massing of adjacent vegetation, vistas, or other associated features such as towpaths.

Retaining and maintaining street trees or other plantings which contribute to the character of circulation features.

Retaining historic curbs, edge walls or other edge materials during resurfacing by maintaining the historic height or finish elevation of the road or path grade.

Temporarily removing historically important materials or features such as cobbles, curbs, and manhole covers during road or path repair and storing them carefully until they can be reinstalled.

Repairing the historic surface materials on a road or path.

Undertaking treatment work on or that effects circulation systems without researching the landscape in its entirety.

Undertaking treatment work without adequately inventorying and documenting the circulation system which results in their damage or loss.

Failing to inventory and document the features that support historic circulation systems which could, as a result, result in their removal.

Failing to maintain adjacent features which define the spatial character of the circulation system. For example, allowing volunteer plant materials to obscure a character-defining view from a historic road or path.

Failing to maintain character-defining vegetation along historic roads or paths which results in their damage or loss.

Removing or paving over historic edge materials or adding additional height or thickness of paving that alters the relationship between road surface and edge materials.

Adding additional height or thickness of paving that alters the relationship between road surface and edge materials.

Recommended

Repairing utilities or furnishings associated with the road or path such as lights, drainage systems, or retaining walls.

Repairing edge treatments such as curbs, gutters, ditches, embankments, and retaining walls associated with the historic road or path.

Repairing a circulation feature through the limited replacement in kind -- or with a compatible substitute material -- of extensively deteriorated parts where there are surviving prototypes. For example, replacing a light fixture or curb section. If using historic materials is infeasible, substitute materials may be used if they convey the same visual appearance.

Replacing in kind an entire circulation feature that is too deteriorated to repair -- if the overall form and detailing are still evident -- using the physical evidence as a guide. For example, replacing a deteriorated brick garden path or gravel driveway. Substitute materials may be used if they convey the same visual appearance.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Replacing circulation features when the historic feature is missing. For example, replacing a missing path, road, drive, or turn-around. It may accurately duplicate the missing road or path based on historical, pictorial, and physical documentation; or be a new feature which is compatible in size, scale, form, shape, material and color of the historic landscape.

Not Recommended

Patching with materials that do not match the historic surface such as repairing a brick walk with asphalt.

Removing deteriorated circulation features when they could have been repaired.

Adding replacement lights, curbs, edge barriers that do not match the prototype feature. For example, replacing a deteriorated street lamp with a historic-looking light that never existed along the historic street.

Replacing a deteriorated path, drive, or road with surface materials that do not convey the same visual appearance. For example, replacing a gravel drive with asphalt.

Creating a false historical appearance because the replaced circulation feature is based on insufficient documentation.

Re-establishing a missing road or path in a new configuration. For example, replacing a straight garden path that is missing with a curvilinear one.

Recommended

Alterations and Additions for the New Use

Reusing character-defining circulation features as the landscape is upgraded for contemporary needs.

Retaining the historic surface materials in the new use. If the historic surface material is too deteriorated to repair or absent, use a replacement material that matches the old in color, texture, and composition.

Retaining the width, edge conditions, alignment, and associated features of the road or path when it is upgraded for a new use.

Adding drainage culverts or ditches for erosion or run off control with new features that are visually compatible with the historic character of the road or path and are as unobtrusive as possible.

Placing new utilities underground or sited in such a way that does not damage historic features and is not visually intrusive.

Controlling and limiting new access points and additional intersections. For example, limiting new curb cuts and driveways.

Adding an appropriately sloped ramp to provide universal access along a historic path in such a way that does not alter the character of the historic path.

Not Recommended

Adding new roads, paths, or parking areas when the historic could have been reused.

Resurfacing historic brick or cobblestone paths with asphalt or concrete.

Widening a historic carriage road to accommodate automobiles which changes the character of the road system.

Changing a curvilinear road system to a geometric form by change curving intersections to right angles.

Constructing new telephone or electrical service wires above ground in such a way that adversely affects the character of the historic circulation system.

Adding new driveways and intersections along a historic parkway so that the character of the road is diminished.

Adding universal access by paving over steps in a historic path, or by regrading a character-defining slope to accommodate a new path.

Water Features: *fountains, pools, cascades, irrigation systems, ponds or lakes, streams, or aqueducts*

Recommended

Researching the history of the landscape as a whole and, in particular, its water features.

Inventorying and documenting the water features such as fountains, pools, cascades, irrigation systems, ponds or lakes, streams, or aqueducts and their shape, form, sound, edge and bottom condition/material, water level or depth, movement or flow, reflective qualities, water quality, and associated plant or animal life.

Maintaining the water feature by performing cyclical maintenance of the drainage and mechanical system to remove mineral deposits.

Cleaning the stone, masonry, or metal materials or parts of the water feature using the gentlest means possible to maintain the attributes of the water feature. For example, use non-abrasive, non-toxic, non-destructive methods and materials to clean a pool or fountain.

Retaining the water level, flow, and reflective qualities of the water feature. For example, removing leaves and litter from reflecting pools or repairing leaks which may lead to changes in water level or flow, or through cyclical dredging of a settling pool.

Repairing features associated with the water feature such as edging, electrical and water systems, drainage systems, vegetation, or ornamental sculpture.

Not Recommended

Undertaking treatment work on or that effects circulation systems without researching the landscape in its entirety.

Undertaking protection and stabilization work without adequately inventorying and documenting the circulation systems on the historic property which results in their damage.

Failing to adequately maintain the systems of a water feature so that it ceases to operate or function properly.

Using abrasive techniques such as sandblasting to clean a historic stone fountain.

Adding lighting to a water feature which was never lit historically which changes the reflective qualities of the water feature.

Changing the water level.

Removing a deteriorated water feature when it could have been repaired.

Recommended

Repairing a water feature through the limited replacement in kind -- or with a compatible substitute material -- of extensively deteriorated or missing parts where there are surviving prototypes. For example, replacing a fountain section or circulating pump. If using historic materials is infeasible, substitute materials may be used if they convey the same visual appearance.

Replacing in kind an entire water feature that is too deteriorated to repair -- if the overall form and detailing are still evident -- using the physical evidence as a guide. For example, replacing a garden pool or entire irrigation system that replicates the deteriorated feature. Substitute materials may be used if they convey the same visual appearance.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Replacing water features when the historic feature is missing. For example, replacing a missing reflecting pool, fountain or irrigation system. It may accurately duplicate the missing historic furnishing or object based on historical, pictorial, and physical documentation; or be a new feature which is compatible in size, scale, form, shape, material and color of the historic landscape.

Alterations and Additions for the New Use

Placing and constructing new water features necessary for the new use that are compatible with the historic character of the landscape and are designed to be distinguishable from the historic features.

Not Recommended

Adding replacement components such as edge materials, light fixtures, or vegetation that do not match the prototype feature. For example, replacing a deteriorated boulder pond edge with concrete curbing.

Replacing a deteriorated fountain, pool, stream, canal, or irrigation feature using materials that do not convey the same visual appearance. For example, replacing a metal fountain with one made of concrete.

Creating a false historical appearance because the replaced water feature is based on insufficient documentation.

Adding a historic water feature from another property or a reproduction which creates a false historic appearance.

Adding a new water feature that dominates the historic landscape. For example, installing a fountain or swimming pool in a character-defining meadow or garden.

Furnishings and Objects: *benches, lights, signs, drinking fountains, trash receptacles, fences, tree grates, clocks, flagpoles, sculpture, monuments, memorials, planters, and urns*

Recommended

Researching the history of the landscape as a whole, and in particular, its site furnishings and objects.

Inventorying and documenting the existing conditions of site furnishings and objects and their materials such as metal, stone, masonry, or wood.

Establishing a maintenance program for site furnishings and objects.

Cleaning or repairing furnishings or objects using non-destructive methods. Maintenance actions may require temporarily removing the feature and returning it later may be appropriate.

Repairing deteriorated parts of site furnishings and objects such as the ornamental details on a sculpture or sections of a fence.

Repairing a site furnishing or object through the limited replacement in kind -- or with a compatible substitute material -- of extensively deteriorated or missing parts where there are surviving prototypes. For example, replacing the seat of a historic wood bench. If using historic materials is infeasible, substitute materials may be used if they convey the same visual appearance.

Replacing in kind, an entire furnishing or object that is too deteriorated to repair -- if the overall form and detailing are still evident using the physical evidence as a guide. For example, replacing a light standard, bench, or clock that replicates the deteriorated feature. Substitute materials may be used if they convey the same visual appearance.

Not Recommended

Undertaking treatment work on or that affects site furnishings and objects without researching the landscape in its entirety.

Undertaking treatment work without adequately inventorying and documenting site furnishings and objects which results in their damage or loss.

Cleaning furnishings and objects using destructive or damaging techniques such as sandblasting.

Removing a deteriorated site furnishing or object when it could have been repaired.

Adding replacement components such as arms, bases, fixtures, or ornamental details that do not match the prototype furnishing or object. For example, replacing a section of wooden fence with chain link.

Replacing a deteriorated bench, light, sign, fence, urn, or sculpture using new materials that do not convey the same visual appearance. For example, replacing a deteriorated iron fence with split rail.

Replacing a missing element from a statue, such as a classical garden statue, when the original was installed in a damaged condition.

Recommended

Not Recommended

Repairing damage to site furnishings and objects when the damage itself is associated with an important historic event. For example, repairing Civil War bullet holes in grave markers.

Adding historic-looking or reproduction-design furnishings such as lights and benches that never existed in the landscape.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Replacing site furnishings and objects when the historic feature is missing. For example, replacing a missing bench, light, or sculptural element. It may accurately duplicate the missing historic furnishing or object based on historical, pictorial, and physical documentation; or be a new feature which is compatible in size, scale, form, shape, material and color of the historic landscape.

Acquiring missing site furnishings and objects that are located in other areas and replacing them in their historic location.

Alterations and Additions for the New Use

Installing new site furnishings and objects, if necessary for the new use, as long as their design, placement, and quantity does not alter the character of the landscape. For example, carefully placing contemporary designed light fixture along a path, necessary for pedestrian safety in a historic town common.

Creating a false historical appearance because the replaced furnishing is based on insufficient documentation.

Introducing a new furnishing such as a new streetlight that is incompatible in size, scale, form, shape, material and color.

Replicating historic furnishings such as benches in areas of the landscape where they never existed.

Acquiring site furnishings from other historic properties that never existed in the landscape, thus creating a false historic appearance and damaging the other historic property.

Introducing new furnishings or objects such as statues, cannons, or memorials that intrude into the landscape and therefore diminish its historic character.

Guidelines for Rehabilitation
FURNISHINGS AND OBJECTS

Recommended

Retaining and continuing to use historic site furnishings and objects as long as continued use is not detrimental to their preservation. Special consideration should be given when handling pieces of exceptional artistic or associative significance.

Not Recommended

Reusing historic statues, objects, funerary markers or other features that are significant works of art, which results in damage from vandalism, weather, or human use.

Guidelines for Rehabilitation
STRUCTURES

Structures: *walls, terraces, arbors, gazebos, follies, stadiums, tennis courts, playground equipment, plazas, greenhouses, cold frames, steps, bridges, and dams*¹³

Recommended

Researching the history of the landscape as a whole, and in particular, its structures.

Inventorying and documenting the existing condition of the landscape structures and their materials such as wood, masonry, stone, and metal.

Evaluating the property's structures and adjacent landscape features to ensure retention of their historical relationship.

Establishing a maintenance program for site structures.

Cleaning or repairing site structures using non-destructive methods. Maintenance actions may require temporarily removing the feature, such as a gazebo or arbor, and returning it later may be appropriate.

Repairing deteriorated parts of site structures such as the window frames in a greenhouse or the horizontal members in a trellis.

Repairing a landscape structure through the limited replacement in kind -- or with a compatible substitute material -- of extensively deteriorated or missing parts where there are surviving prototypes. For example, replacing a pergola column, a step in a terrace, or a gazebo roof. If using historic materials is infeasible, substitute materials may be used if they convey the same visual appearance.

Not Recommended

Undertaking treatment work on or that affects structures without researching the landscape in its entirety.

Undertaking treatment work without adequately inventorying and evaluating the historic property's structures, which results in their damage or loss.

Removing, moving, or altering structures which changes the historic relationship between landscape features or accelerates deterioration of the landscape.

Failing to adequately maintain site structures so that they are damaged or lost.

Cleaning site structures using destructive or damaging techniques such as sand blasting.

Removing a deteriorated site structure such as a retaining wall when it could have been repaired.

Adding replacement parts to site structures such foundations, columns, footings, roofs, or decorative details that do not match the prototype structure. For example, replacing a section of brick wall with concrete.

¹³ The *Guidelines for the Treatment of Historic Landscapes* primarily addresses non-habitable landscape structures such as those listed above. For detailed guidance related to historic buildings, please consult the *Guidelines for Rehabilitating Historic Buildings*.

Recommended

Replacing in kind an entire landscape structure that is too deteriorated to repair -- if the overall form and detailing are still evident -- using the physical evidence as a guide. For example, replacing a deteriorated stone wall, footbridge, arbor, or coldframe that replicates the deteriorated feature. Substitute materials may be used if they convey the same visual appearance.

Not Recommended

Replacing a deteriorated wall, terrace, arbor, gazebo, bridge, or greenhouse using new materials that do not convey the same visual appearance. For example, replacing a deteriorated wooden footbridge with a stone footbridge.

Adding historic-looking structures such as terraces, walls, or steps that never existed on the property.

Removing deteriorated historic recreation features and replacing them with contemporarily designed new play equipment when the historic feature could have been repaired and reused.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Rebuilding site structures when the historic feature is missing. For example, rebuilding a missing wall, step, arbor, or outbuilding. It may accurately duplicate the missing historic structure based on historical, pictorial, and physical documentation; or be a new feature which is compatible in size, scale, form, shape, material, and color with the historic landscape.

Retaining the placement and arrangement of historic structures and buildings while adapting the landscape to a new use.

Creating a false historical appearance because the replaced structure is based on insufficient documentation.

Introducing a new structure or building such as a barn or retaining wall that is incompatible in size, scale, form, shape, material, and color with the historic landscape.

Building historic-looking structures such as gazebos and bandstands that never existed on the property.

Moving buildings onto the site which creates a false historic appearance and diminishes the historic character of the property.

Recommended

Alterations and Additions for the New Use

Designing, locating and constructing new structures and buildings, if necessary for the new use, in areas of the landscape that do not contribute to its historic character.

Designing and constructing drainage systems for new buildings and structures that protect both the structure and landscape features.

Not Recommended

Constructing a new visitor's center in a character-defining lawn.

Placing new playground equipment, tot lots, or backstands in designed meadows, so that the historic character of the park is diminished.

Allowing run-off from a new structure to erode the adjacent ground, damaging the landscape and its features such as paths, landform, and vegetation.

Spatial Organization: *views, vistas, and landscape spaces*

Recommended

Researching the history of the landscape as a whole, and in particular, its overall design and organization including views, vistas, and spaces.

Inventorying and documenting the existing condition of the spaces, views, and vistas of the landscape as well as the features which define them such as hedgerows, walls, fences, fields, forests, water, topography, circulation, and structures.

Evaluating the property's spaces, views, and vistas and their associated landscape features to ensure retention of their historical relationship.

Retaining important visual connections between spaces or "outdoor rooms" within the landscape by maintaining hedges, roads, trails, and topography which contribute to these visual relationships.

Retaining historic views through the control or removal of invasive or volunteer plant material or by pruning vegetation that has grown and obscured the historic view.

Not Recommended

Undertaking treatments on or that affect landscape spaces, views, or vistas without researching the landscape in its entirety.

Undertaking treatment work without adequately inventorying and evaluating the historic property's views, vistas, and spaces resulting in their damage, alteration, or loss.

Removing, moving, or altering features which define the spaces in the landscape, thus changing the historic visual relationship between features.

Altering the visual connections that are important to the spatial character of the landscape by removing key paths, constructing walls, or by planting up key openings in hedges.

Changing existing spatial divisions of the landscape such as topographic changes or vertical elements such as vegetation features, fences, or walls that contribute to its historic character.

Creating new spatial divisions such as walls, fences or vegetation that screen historic views or alter the historic spatial relationship in the landscape.

Failing to adequately maintain, control, or remove volunteer or invasive plant material which blocks or obscures the historic view or vista.

Recommended

Retaining the historic spatial divisions through a program of cyclical maintenance of features and materials which create visual definitions such as fences, walls, and vegetation.

Retaining landscape spaces, views, or vistas through the limited replacement in kind -- or with a compatible substitute material -- of extensively deteriorated or missing parts of the space or by adding vertical features which define the view or space, where there are surviving prototypes. For example, replacing a deteriorated wall that creates a character-defining garden room. If using historic materials is infeasible, substitute material may be used if they convey the same visual appearance.

Replacing in kind an entire landscape space or view that is too deteriorated to be preserved - if the overall form and detailing are still evident -- using the physical evidence as a guide. For example, clearing an open field that is rapidly changing into second growth woodland. Substitute materials may be used if they convey the same visual appearance.

In addition to maintenance and repair, the following work may be appropriate. It is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be undertaken after the preservation concerns listed above have been addressed.

Design for Missing Features

Replacing a spatial feature when the historic feature is missing. For example, opening a historic vista or re-planting a woodland. It may accurately duplicate the missing historic feature using historical, pictorial, and physical documentation; or be a new feature which is compatible in size, form, scale, materials, and color with the historic landscape.

Not Recommended

Altering the features and materials which create visual and spatial relationships in the landscape which results in the loss of important pattern, organization, or sequences.

Adding replacement features to the landscape such as walls, hedges, fences, or structures that do not match the prototype element. For example, replacing a section of a space defining hedge with a brick wall.

Replacing a deteriorated landscape space using new groundplane and vertical materials that do not convey the same visual appearance.

Creating a false historical appearance because the replaced space or vista is based on insufficient documentation.

Introducing a new open field or woodland that is incompatible in scale with the historic character of the landscape.

Recommended

Re-establishing historic views that are no longer present based on historic documentation. For example, clearing vegetation that has obscured a vista along a historic carriage road or by planting vegetation that historically framed the view.

Alterations and Additions for the New Use

Designing, locating, and constructing new additions in such a way that does not adversely affect the historic views within the landscape.

Designing, locating, and constructing new features in areas of the landscape that do not impede on the spatial character of the landscape such as building major parking areas or visitor centers out of the primary visual sequences of the landscape.

Screening views whose original focal point has been lost such as vistas obscured by adjacent development.

Removing elements which detract from the historic spatial character of the landscape such as recent monuments or recreation facilities added after the period of significance that do not contribute to the historic character or significance of the property.

Not Recommended

Clearing vegetation to reveal a historic vista without adequate documentation that results in a false historic appearance.

Locating new additions in areas that block views important to the historic character of the landscape.

Placing or designing new additions in such a way that affects the spatial relationships of the landscape such as constructing a new visitor center in a character-defining open lawn.

Screening important views which alters the spatial character of the landscape.

H. Storm Water Control Studies, Medical Campus

H. STORMWATER CONTROLS STUDIES, MEDICAL CAMPUS

The following meeting minutes and graphics were compiled for a February 28, 1994 meeting regarding stormwater controls for the Medical Campus. Below is the agenda for this meeting. The results of this meeting have been implemented in the District Plan, Sub Area 1.

To: Parkland Committee
Re: Stormwater Meeting
From: Guy Wood
Date: 2/28/94

SUGGESTIONS REGARDING STORMWATER

1. Endorse concept regarding need to retain water on site.
2. Determine how much water the committee feels is appropriate to retain.
Range: 2 yr. - 100 yr. storm.
3. Take action to decide whether:
 - a. Whether pumping from north to south is an acceptable alternative.
 - b. Whether storage under buildings is an acceptable alternative.
4. Endorse site of Power Plant as retention basin for southern portion of Commons.
5. Endorse several alternative locations for norther retention facilities, so that as the medical campus sub-area planning proceeds, we have a range of options to choose from to best balance environmental protection, stormwater management and development. The committee would continue to have an opportunity to review and make recommendations as this process moves forward.

MINUTES

Parkland Planning Committee
February 28, 1994

Call to Order, 4:05 p.m., Conference Room, Building 50-A

Attendance: Dan Tholen, Coordinator, GTCRC
Margaret Dodd, Traverse City Parks
Paul Benington, G.T. Regional Land Conservancy
Lew Coulter, G.T. Soil Conservation
Lee Wilson, Garfield Township
Jack Hood, GTCRC
Guy Wood, GTCRC
Suzanne Antosh, GTCRC
Carl Groesbeck, Kids Creek Development

Guests: Maureen Templeton, G.T. Drain Commission
Carol Hale, GTCRC
Tom Cyr, Kids Creek Development
Andrew McPhee, Kids Creek Development
Clyde Johnson, Gosling Czuback Engineering
Jim Page, Hanson, Kruger, Page Landscape Architects
Christopher L. Groesbeck, VOA

I. Minutes from January 18, 1994 not discussed.

II. Carl Groesbeck and consultants expanded the presentation of the wetland and stormwater runoff issue. All possible water will be shed to the power plant retention area; this will include two areas that currently drain to the north, around Munson hospital or through the 24" drain. Maps identified the portions of the Commons that will be served by the proposed retention areas.

Elevation cross-sections and area maps showed various configurations of the developed area, with different locations for different retention facilities. Goals are:

- Follow the county ordinance and best management practices.
- Correct current situation where stormwater is not treated and runoff sheds directly into Kids Creek.
- Minimize impact on lawn and wetlands.

Presenters noted the following:

- The total amount of impervious surface in the subregion will change very little, though location of surfaces will change.
- The nature of any surface runoff will change because of the decrease in exposed parking areas.
- Until 25 years ago, this was agricultural land. The historic use was farming, and the wetland is a new feature.
- Flood plain effects still need to be investigated. The removal of Elmwood St. is thought to be adequate compensation for any flood plan or wetland impact.

Ms. Templeton had three suggestions:

- i. Document the existing situation with volume of untreated stormwater and pollutant load. This will make it easier to determine the net impact on the wetlands.
- ii. Negotiate the level of stormwater protection needed. Some developments plan for a 25-storm, which would reduce the marsh/pond areas considerably. Also, it is not clear that any new stormwater abatement is necessary, since the impervious surface area will not be increased.
- iii. Make sure there will be no impact on the flood plain.

The committee agreed on the following:

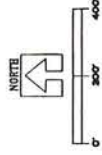
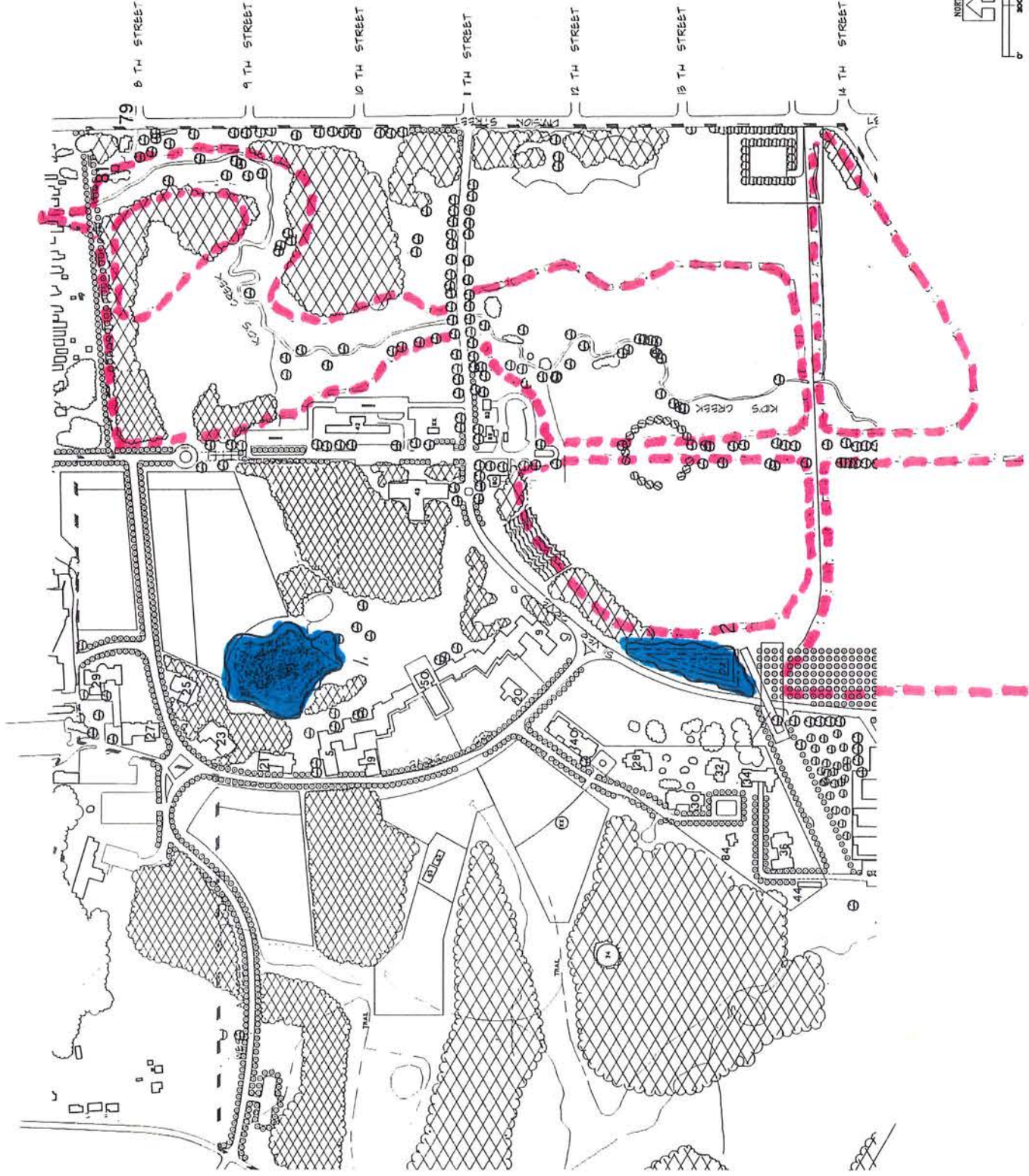
1. Follow best management practices and correct the current inadequacies in stormwater management.
2. Retain the stormwater on the site; do not pump runoff and do not store water underground.
3. Stay out of the wetlands as much as possible.
4. Preserve the historic lawn.

The committee expressed preference for a combined option, with dry swales wherever possible, use of the area now covered by Building 42 parking, and design for a smaller storm.

The committee suggested that an accurate estimate of the current volume of runoff and pollutant load would be needed. There should be separate estimates for runoff into the streams and into the wetlands. This would be a baseline for assessing impact on wetlands and the flood plain, for any particular stormwater management plan.

- II. The committee recommends to the GTCRC that they become partners in the Grand Traverse Bay Watershed Initiative.
- III. The committee discussed the possible location for a power substation on the commons land, in an area near Division and 14th Street. This would be instead of parcel XX. The committee was open to the possibility, but had the following thoughts:
 - No overhead wires.
 - Consider other nearby sites (e.g., across Silver Lake Road).
- IV. The inventory proposals have not been changed since the drafts that were endorsed by the committee. The city, developer, and Garfield have not met to discuss funding. The inventory should be conducted in the spring.
- V. Next meeting: March 16, 4:00, Conference Room 50-A.

Meeting adjourned at 6:00.



STORMWATER RETENTION CONCEPT "INITIAL"

INITIAL CONCEPT

STORM BASINS IN TWO LOCATIONS

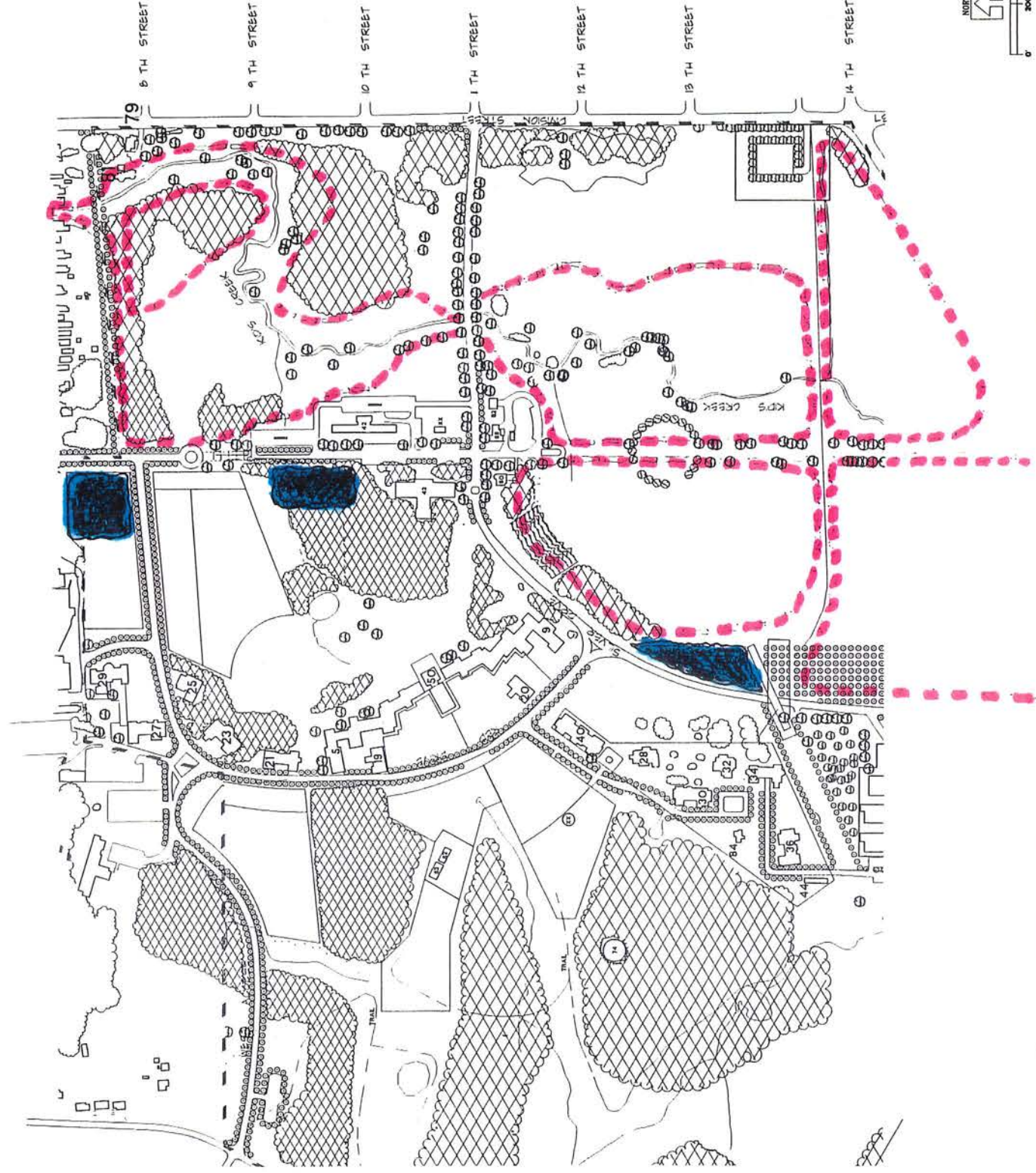
1) THE FRONT LAWN EAST OF

BLOG 50

2) POWER PLANT SITE

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FEBRUARY 28, 1994

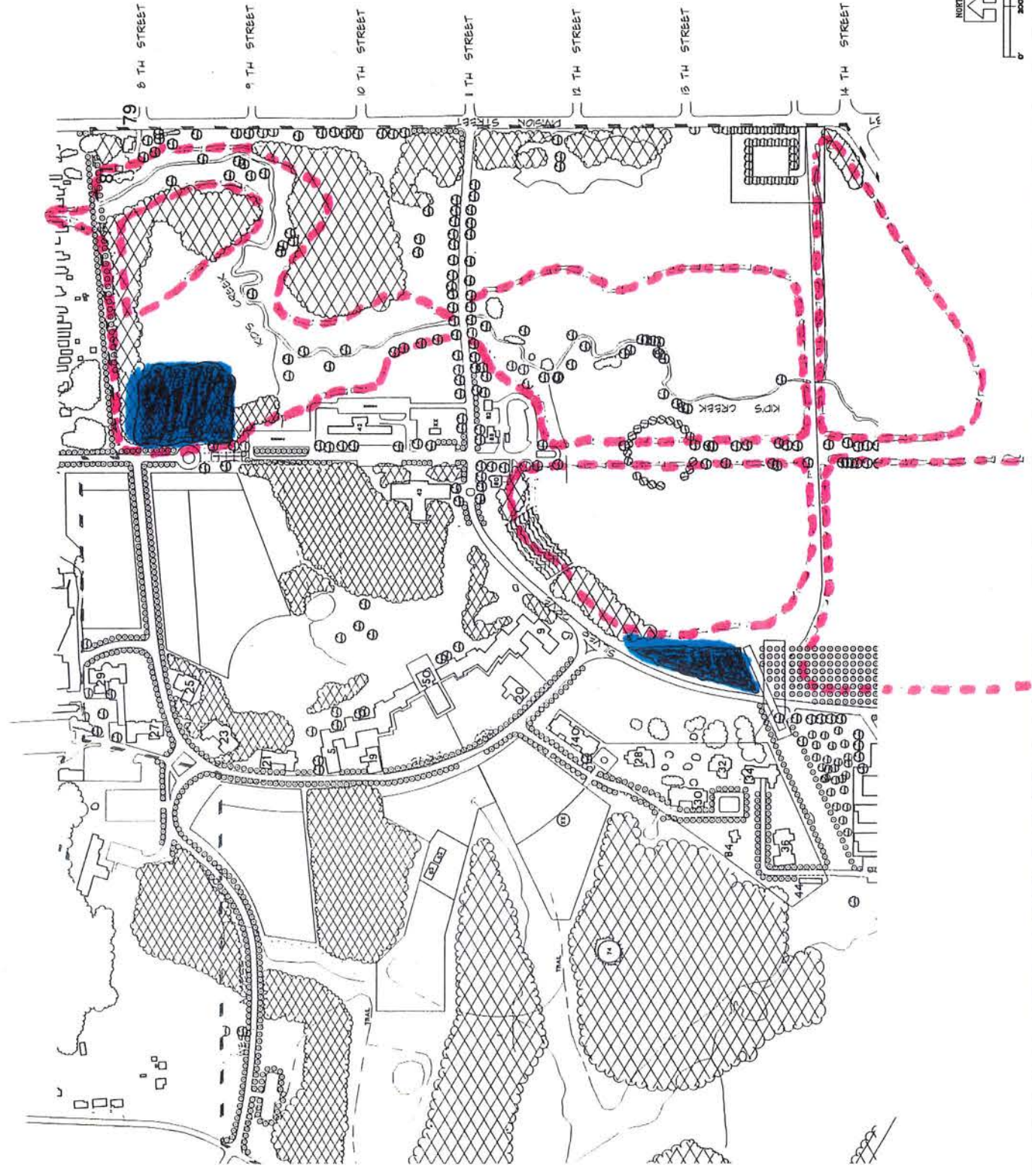


STORMWATER RETENTION CONCEPT "A"

EXISTING CONDITIONS
SIZE OF STORMWATER BASINS
REQUIRED FOR 24 HOURS OF
RETENTION FOR 100 YEAR STORM
WITH LOCATION WEST OF ELMWOOD
BASIN SLOPE 5:1

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STORMWATER RETENTION CONCEPT "B"

EXISTING CONDITIONS:
SIZE OF STORMWATER BASINS
REQUIRED FOR 24 HOUR RETENTION
OF A 100 YEAR STORM LOCATED
ON THE EAST SIDE OF ELWOOD
BASIN SLOPE 5:1

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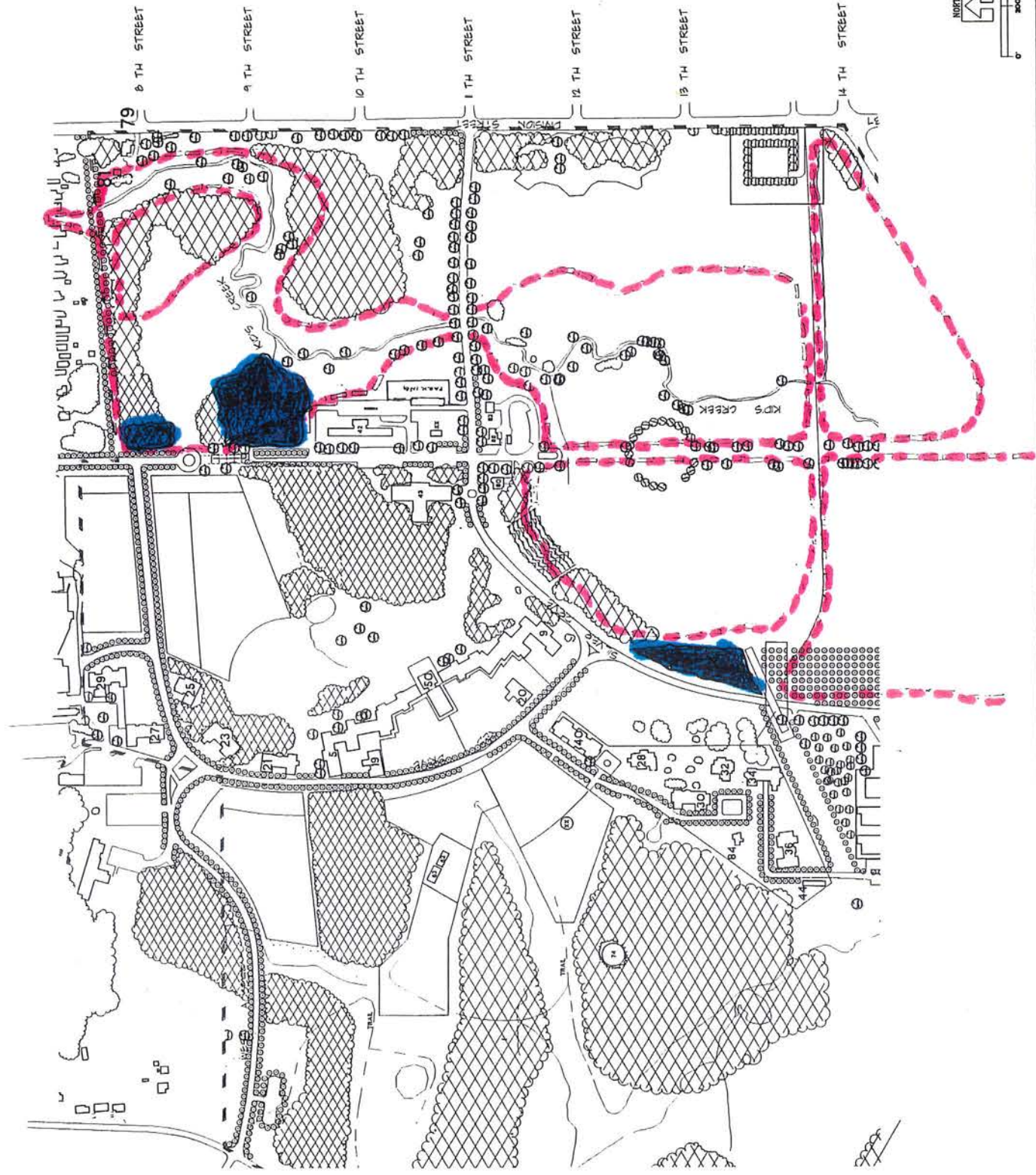
STORMWATER RETENTION CONCEPT 'C'

PROPOSED DEVELOPMENT

SIZE OF STORMWATER BASINS
REQUIRED FOR 24 HOUR RETENTION
OF A 100 YEAR STORM LOCATED
EAST OF ELMWOOD
BASIN SLOPE 5:1

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STORMWATER RETENTION CONCEPT "D"

PROPOSED DEVELOPMENT

SIZE OF BASIN FOR A 100 YEAR STORM

24 HOUR RETENTION LOCATED ON THE

STATE OFFICE BUILDING NORTH PARKING

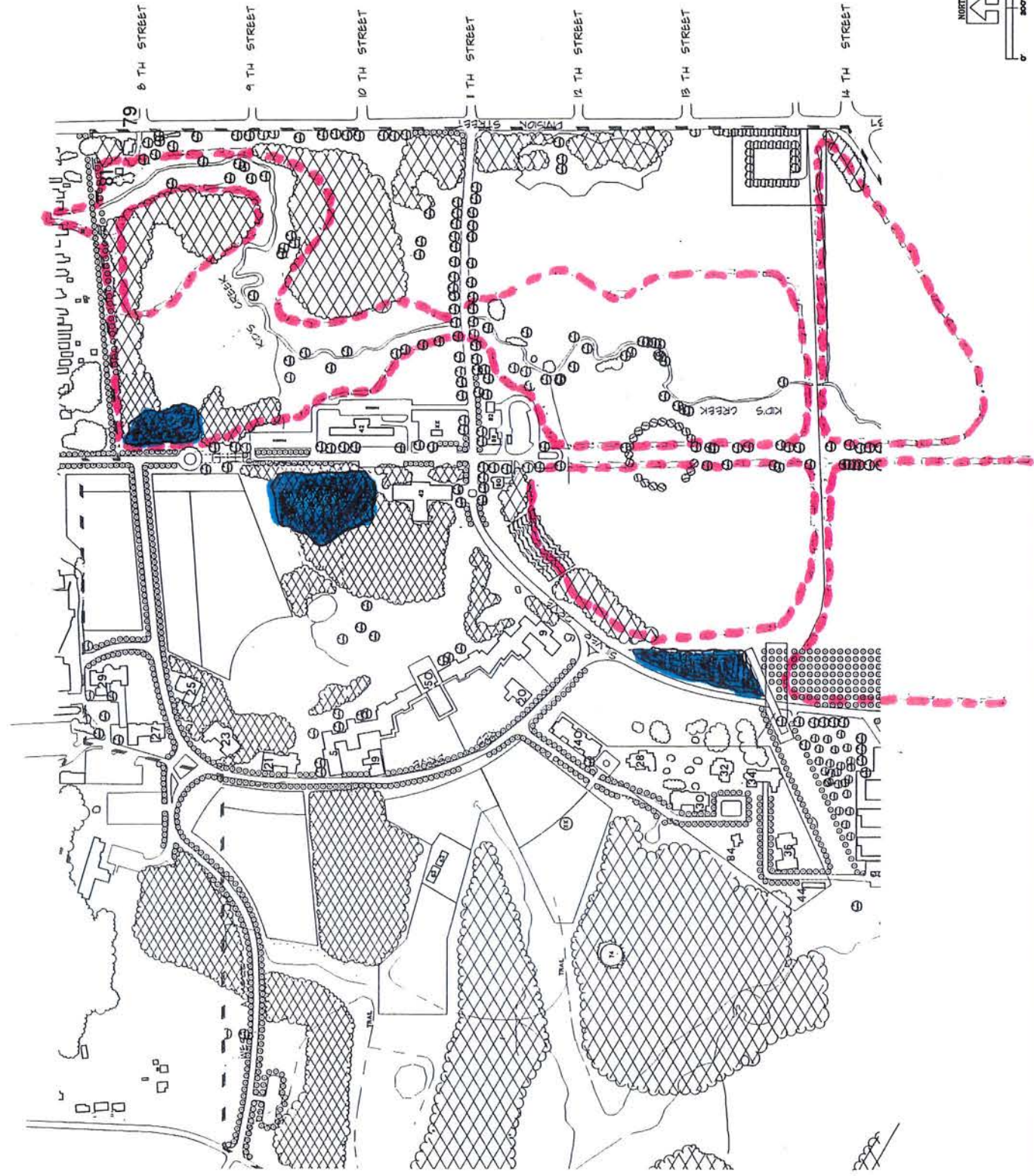
LOT. AN ADDITIONAL BASIN EAST OF

ELMWOOD AT NORTHEAST BOUNDARY IS

REQUIRED BASIN SLOPE 5:1

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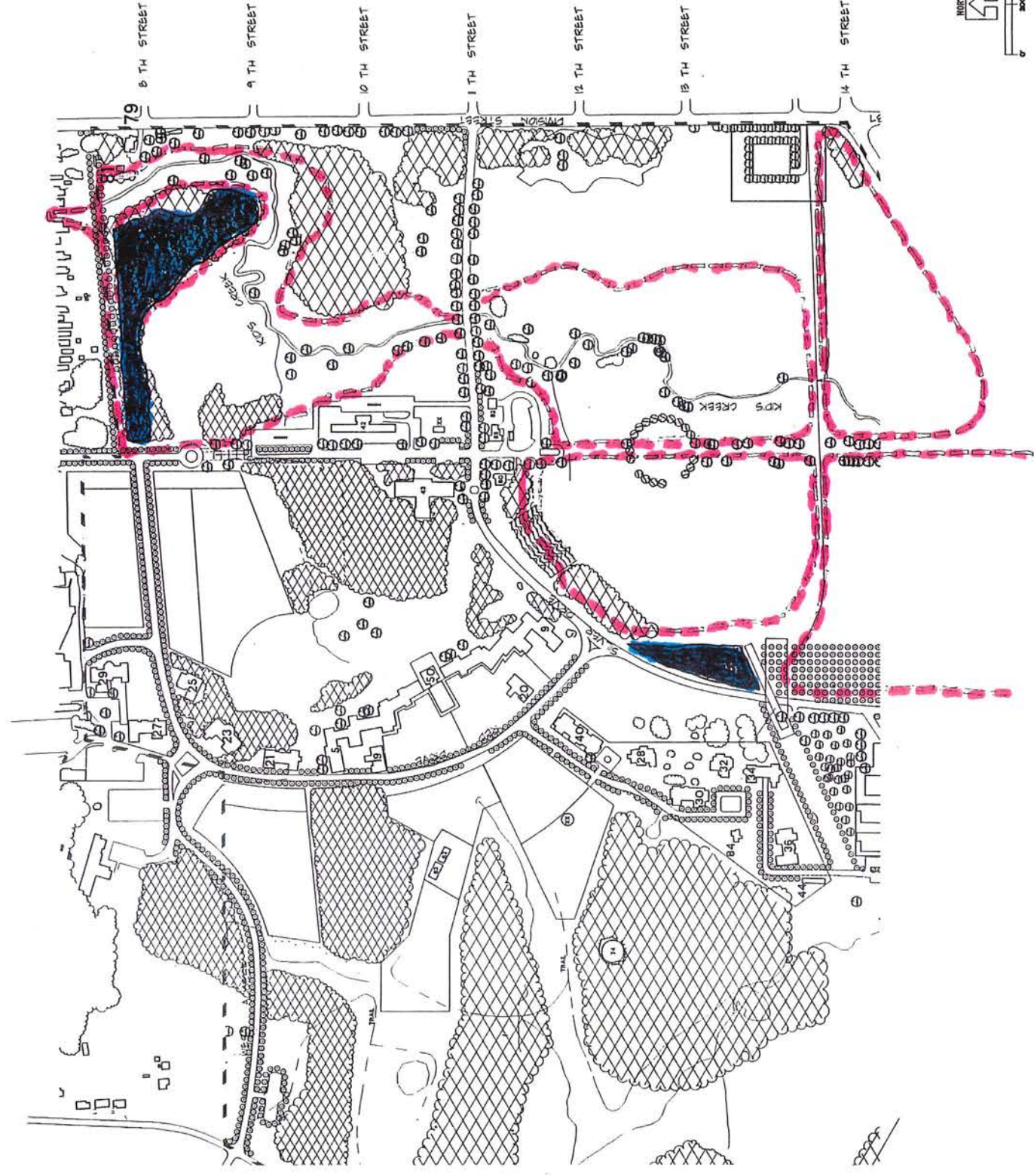
STORMWATER RETENTION CONCEPT 'E'

PROPOSED DEVELOPMENT:

SIZE OF BASIN REQUIRED TO
 RETAIN STORMWATER 24 HOURS
 FOR A 100 YEAR STORM. 2 LOCATIONS
 FOR MEDICAL CAMPS; SMALLER
 BASIN EAST OF ELWOOD AND LARGER
 BASIN LOCATED WEST OF ELWOOD
 IN HISTORIC LAWN. BASIN SLOPE 5:1

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FEBRUARY 28, 1994



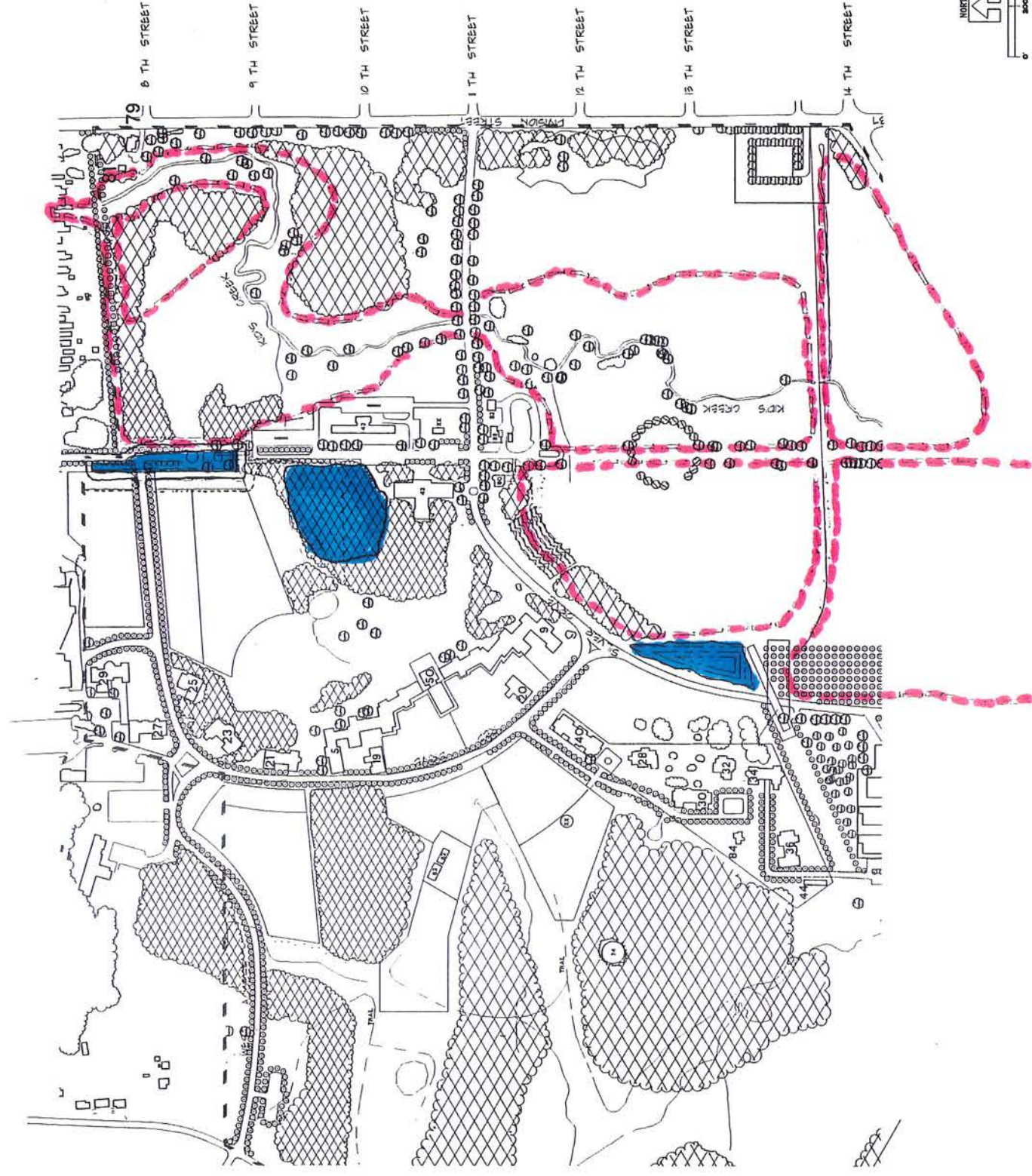
STORMWATER RETENTION CONCEPT 'F'

PROPOSED DEVELOPMENT

- : CONSTRUCTION OF RETENTION BASIN
- : IN UPLAND AREA ABOUT 700 FEET
- : EAST OF ELMWOOD FOR 24 HOUR
- : RETENTION OF 100 YEAR STORM.
- : CREATION OF FEED CANAL REQUIRED
- : TO CONVEY WATER. BASIN SLOPE 5:1

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FEBRUARY 28, 1994

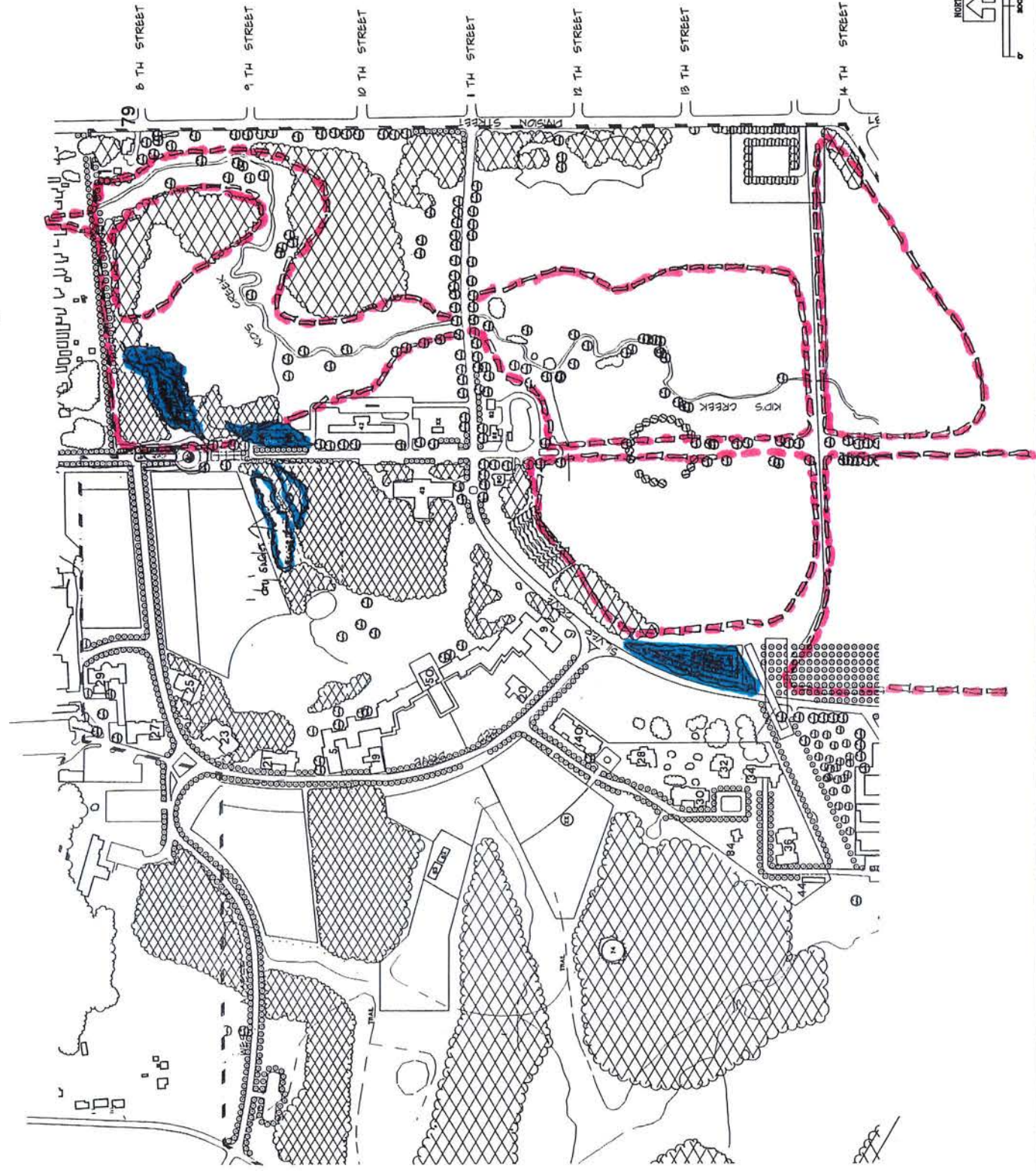


STORMWATER RETENTION CONCEPT "G"

PROPOSED DEVELOPMENT
 SIZE OF BASINS REQUIRED TO
 RETAIN STORMWATER 24 HOURS
 FOR A 100 YEAR STORM 2 LOCATIONS
 FOR MEDICAL CAMPUSES; SMALLER BASIN
 IN "BOULEVARD" OF REDESIGNED ELMWOOD
 AND BASIN LOCATED WEST OF ELMWOOD
 IN HISTORIC LAWN. BASIN SLOPE 5:1
 EXCEPT FOR BOULEVARD.

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FEBRUARY 28, 1994



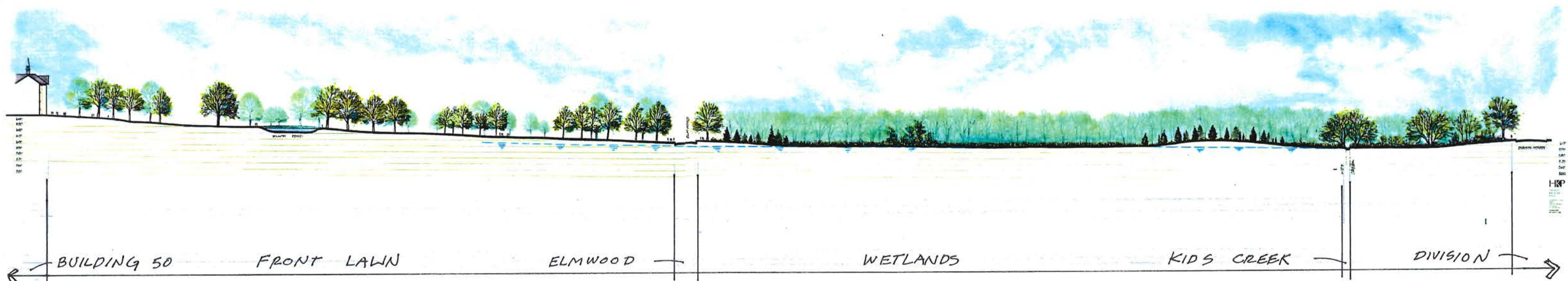
STORMWATER RETENTION CONCEPT "H"

PROPOSED DEVELOPMENT

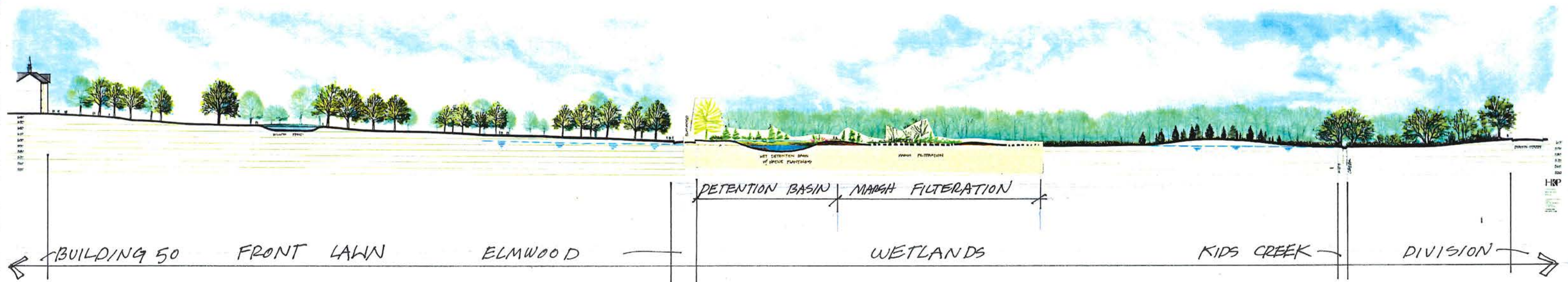
- CONSTRUCTION OF SERIES OF
- STORMWATER CONTROLS TO MINIMIZE
- IMPACT ON WETLANDS EAST OF ELMWOOD.
- CONTROLS INCLUDE SWALES AND DIVERSITY
- IN LAWN AND PLANTING DESIGNED TO
- MINIMIZE VISUAL AND PHYSICAL IMPACT,
- RETENTION BASIN IN CENTER OF
- NEWLY DESIGNED ELMWOOD ITS
- BOULEVARD AND SMALL DETENTION
- BASIN IN WETLAND ONLY IF NECESSARY.
- DESIGN FOR 24 HOUR RETENTION
- OF 25 YEAR STORM.

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HKP LANDSCAPE ARCHITECTS

FEBRUARY 28, 1994



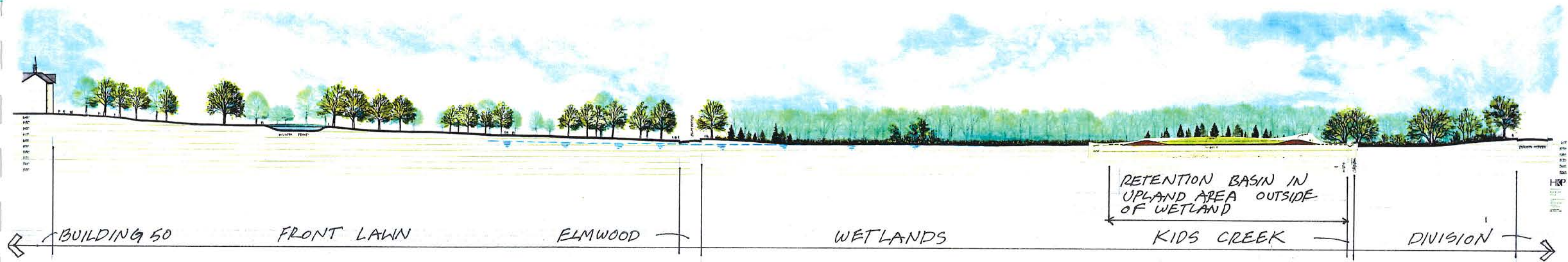
SITE SECTION - EXISTING
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA, HRP, GOSLING CZUBAK FEBRUARY 1994



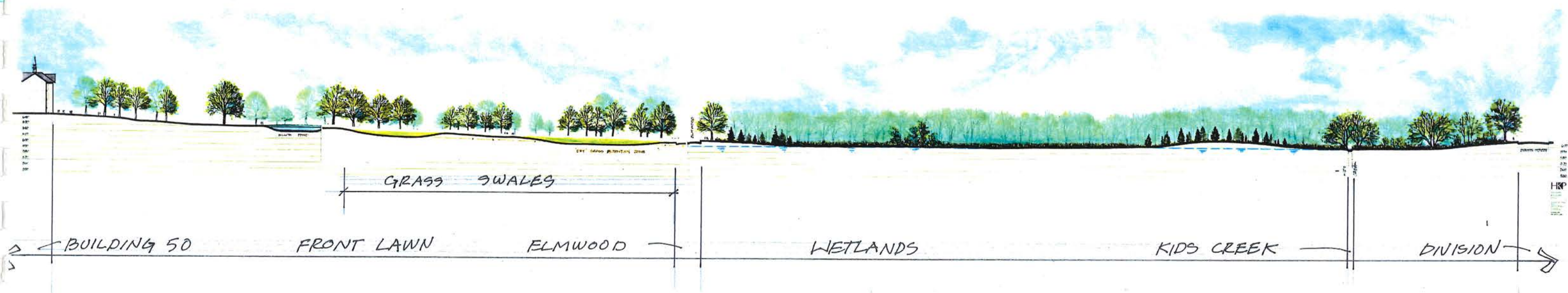
SITE SECTION CONCEPT "C"
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA, H&P, GOSLING CZUBAK FEBRUARY 1994



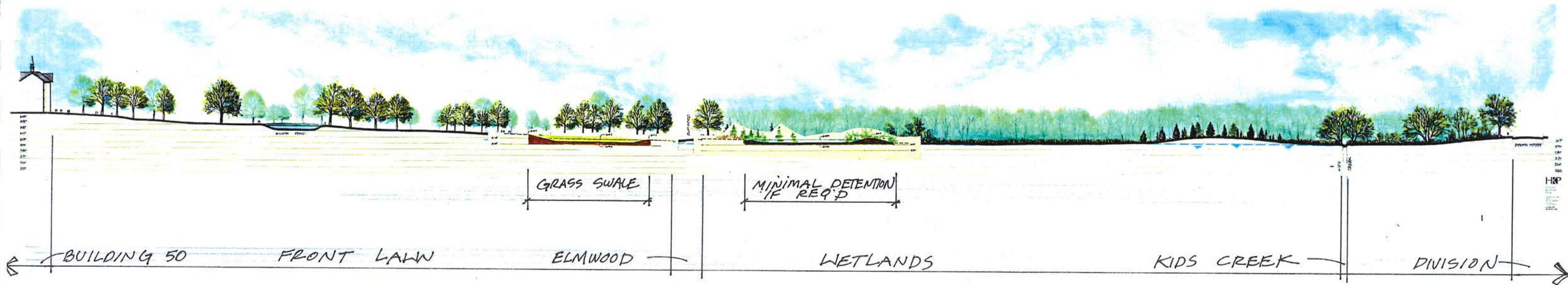
SITE SECTION - CONCEPT "E"
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA, HKP, GOSLING CZUBAK FEBRUARY 1994



SITE SECTION CONCEPT "F"
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA , HKP , GOSLING CZUBAK FEBRUARY 1994



SITE SECTION - CONCEPT "H"
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA, HKP, GOSLING CZUBAK FEBRUARY 1994



SITE SECTION - CONCEPT "H"
MEDICAL CAMPUS STORMWATER CONTROLS STUDIES
VOA, H&P, GOSLING CLUBAK FEBRUARY 1994

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