



Fort Snelling Light Rail Transit and Upper Post Master Plan

February, 2011

**Hennepin County
Department of Housing, Community Works,
and Transit**



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Prepared for:

Hennepin County

**Department of Housing, Community Works,
and Transit**

Prepared by:

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Acknowledgements

Fort Snelling Task Force Stakeholders and Partners

The Fort Snelling Light Rail Transit and Upper Post Master Plan is based on significant collaboration between Hennepin County and Fort Snelling property owners, government agencies, Native American groups, and interested non-profit organizations that comprise the Fort Snelling Task Force Stakeholders and Partners.

Fort Snelling Task Force Stakeholders and Partners

Boy Scouts of America – Northern Star Council	Minnesota Historical Society (MHS)
Friends of Fort Snelling	Minnesota State Historic Preservation Office (SHPO)
Friends of the Mississippi River	Minnesota Air National Guard Foundation
General Services Administration (GSA)	National Park Service – U.S. Dept. of the Interior
Hennepin County	National Trust for Historic Preservation (NTHP)
Lower Sioux Indian Community	Native American Community Development Institute (NACDI)
Metropolitan Council	Prairie Island Indian Community
Metro Transit	Preservation Alliance of Minnesota (PAM)
Metropolitan Airports Commission (MAC)	Sentence to Serve Program
Minneapolis Park and Recreation Board	Shakopee Mdewakanton Sioux Community
Minnesota Congressional Delegation	U.S. Department of Veterans Affairs
Minnesota House of Representatives	U.S. Army Reserve – 88th Regional Readiness Command (RRC)
Minnesota Senate	U.S. Air Force Reserve
Minnesota Department of Employment and Economic Development (DEED)	U.S. Naval Reserve Readiness
Minnesota Department of Natural Resources (DNR)	
Minnesota Department of Transportation (MnDOT)	

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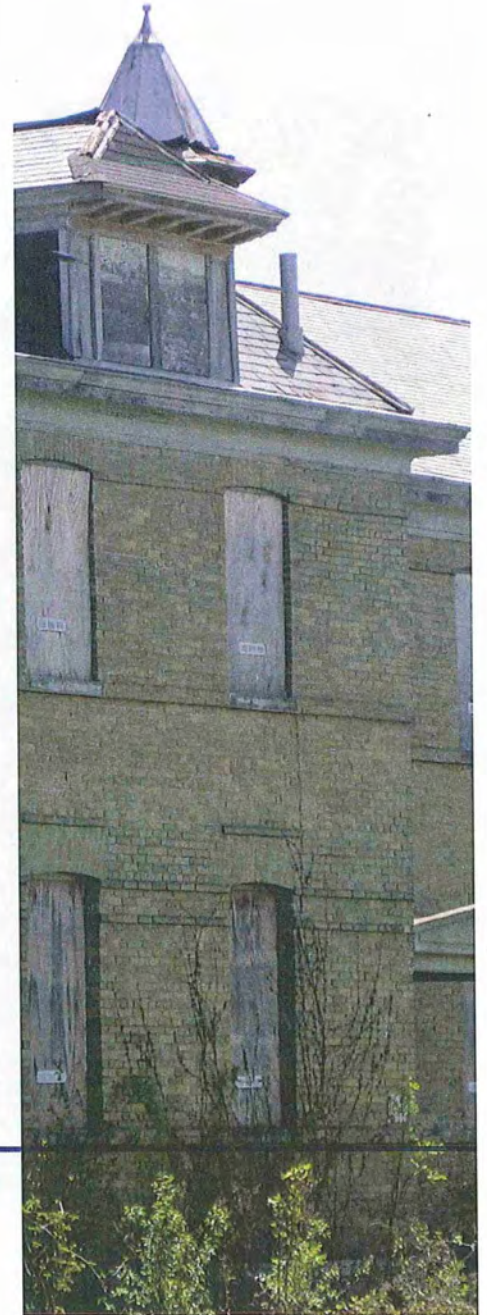
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Executive Summary





Barracks building along Taylor Avenue

Executive Summary

Fort Snelling is located in Hennepin County, on a bluff high above the confluence of the Mississippi River and the Minnesota River. Established in the early 1820s, with subsequent construction continuing well into the mid-1900s, Fort Snelling and the confluence area embrace the overlapping histories of Native Americans, explorers, settlers, and the military.

After World War II, Fort Snelling was decommissioned by the U.S. Army in 1946, but the federal government retained ownership. Fort Snelling became a National Landmark in 1960. In 1961, Fort Snelling State Park was established. The Upper Bluff area was placed on the National Register of Historic Places as a Landmark District in 1966. The Minnesota Historical Society began restoring and reconstructing the original fort in 1966, opening it in the late 1970s as a seasonal living-history museum. In 1971 the area east of Bloomington Road was turned over to the Minnesota Department of Natural Resources with the stipulation that it can be used only for recreational purposes. The land parcels west of Bloomington Road are owned primarily by the U. S. Department of Veterans Affairs.

Today this 233-acre area contains many remaining buildings, structures, and landscapes of historic value. Also, this area is served by light rail transit service which presents an unparalleled opportunity to address the long-term use and disposition of these properties.

The Fort Snelling Light Rail Transit and Upper Post Master Plan envisions the preservation, restoration, and reuse of all 45 remaining historic buildings. This Plan also describes areas where additions to historic buildings and new construction are allowed.

Over the last several years, since the establishment of an LRT station at Fort Snelling, Hennepin County and its partners have begun the process of stabilizing the historic buildings, gaining a better

understanding and appreciation of the significance of the historic resources, both buildings and landscapes, and collaborating to develop this Master Plan to accelerate revitalization.

This Master Plan articulates a vision and goals, and presents development policies and urban design guidelines, a restoration and redevelopment program, an economic impact strategy, and an infrastructure plan. It also contains a potential program for phasing of



The Minnesota Historical Society operates "Historic Fort Snelling" as a living-history museum.

development activities. But the key to success – beyond new uses, design standards, and strategies – is developing project champions who will cooperate around that shared vision, with the commitment to act and make the vision a reality.

To revitalize Fort Snelling as a new sustainable community of transit-oriented development, new institutional frameworks and partnerships are needed. Implementation of this Master Plan needs leadership. Implementation needs elected decision-makers to look twenty-five to fifty years ahead, and act decisively now to increase the pace and scope of strategic interventions.

The most critical action the involved parties must take is the creation of a new governance structure that brings together the major stakeholders into a contractual relationship that enables them to think and act collectively. This new governance body should have the capability to balance costs and revenues in implementing a redevelopment plan for private development and public infrastructure. This new governance body, development authority, and development review and approval authority should be assertive, entrepreneurial, enthusiastic, and even experimental, in pursuit of investment and partners to honor Fort Snelling's diverse history, to realize its promise, and to optimize its opportunities.

Overall Development Concept

Transit-oriented districts must have small blocks (2-4 acres) connected by street patterns that shorten walking distances between destinations. Where large blocks exist, publicly-accessible pedestrian pathways should be created to ensure more frequent connections through blocks and to break up the scale. Common areas that function as public park/public use and “private” open space areas are required adjacent to certain rehabilitation/redevelopment sites. All of these blocks and



Transit-oriented development could bring additional transit users to the Fort Snelling LRT station, as well as bringing additional people and new activity to the Upper Post and West District.



Over the last five years, Sentenced-to-Serve work crews have carried out emergency stabilization and “mothballing” of Upper Post historic buildings.

Fort Snelling Vision Statement

Reuse, restoration, and redevelopment at Fort Snelling will help all Minnesotans regain a sense of identity with their own origins, as well as honor and respect the contributions made by Native Americans, explorers, and settlers who occupied and visited the lands, and the soldiers who trained at this site who served their country.

Revitalization will maximize transit use and follow transit-oriented development principles to integrate new uses and buildings within an historic fort in a unique setting, one that reflects the passage of time and context for the future.

Goals

1. Reflect the shared histories of the Fort Snelling-River Confluence Area.

Reflect the evolution of Fort Snelling and honor the overlapping histories of the Native Americans, explorers, settlers, and military and the lands at the confluence of the Mississippi River and Minnesota River. Use these histories as the foundation for establishing a site interpretation and learning environment in restoration and revitalization initiatives, and for programming future uses, activities, and events.

2. Maximize transit use and create a vibrant LRT District and Fort Snelling community.

Facilitate reuse, restoration, and new development that maximize transit use and that demonstrate the tremendous potential of the area to serve all Minnesotans. Blend culture, commerce, workplaces, educational facilities, residences, civic uses, tourism/ lodging, and other uses that complement Fort Snelling's heritage resources. Establish a strong sense of identity and belonging that fosters stewardship and an integrated community of choices, diversity, and vitality.

3. Create an inviting park-like regional destination.

Establish vibrant, pedestrian- and transit-oriented precincts of historic and new buildings in a setting that respects the historic landscape, and expands public access and enjoyment. Complement the development framework with a cultural tourism and visitor program of historically accurate, educational, and entertaining events and activities. Use open space and green linkages to bring amenity and identity to each area of Fort Snelling.

4. Seek economic and environmental sustainability in reuse, restoration, and redevelopment.

Create a governance authority and an

economic structure that facilitate and generate momentum for market-driven transit-oriented development investment. Seek financial self-sustainability by balancing restoration, development costs, and operational/maintenance budgets with revenue generators that support the vision. Create a development and infrastructure program that facilitates sustainable design and energy efficiency, and motivates sustainable lifestyles. Integrate job training into restoration initiatives.

open space areas need to be linked by paths and corridors to ensure a pedestrian-oriented environment that supports transit use.

The unity of the three districts depends in large measure on a plan that recognizes and “brings forward” the development pattern of a military post, prescribes a new complementary pattern for the largely vacant lands adjacent to the LRT station, and identifies an open space network that links these areas. The overall development concept presented here is therefore an extension and modification of the original rectilinear design plan of the Upper Post. This overall development concept provides the framework to create an interdependent community of users and visitors.

The Master Plan places a high priority on providing multiple opportunities for development to increase transit ridership while

facilitating the rehabilitation/reuse of the historic buildings at Fort Snelling. How these opportunities are maximized depends on the different physical contexts of each of the three Fort Snelling districts.

***LRT Station Area Triangle:
Maximize transit ridership through
redevelopment.***

The LRT Station Area Triangle, with no historic buildings and large un-built areas, offers the best opportunity for high density mixed use and a model for transit-oriented development.

The overall approach to redevelopment in the 48-acre LRT Station Area Triangle is to reorganize and re-plot the area into a village of development zones for new development of a mix of complementary uses at medium-to-high densities, with several new blocks to be phased

in, including a new park and public plaza, all served primarily by the LRT station, structured parking ramps, and on-street parking.

***West District and Upper Post:
Restore and expand buildings to
provide flexibility for reuse.***

The West District’s wide variety of building types and sizes, as well as outdoor spaces, and its proximity to the LRT station, offer diverse opportunities for new activities and investment as a transition area of new and old buildings at moderate densities.

The Upper Post area, with its many large historic buildings and exceptionally large park-like and recreational open spaces, presents intriguing options for uses and events that could help interpret the larger area’s rich history.

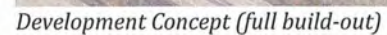
Land Use Summary (acres)							
District	Total Area	Development Area	Right-of-Way	Public Park	Hist. Open Space	Parking Structures	Exclusions
LRT Triangle	47.9	34.9	6.3	3.7	0.1	2.9	0.0
West District	43.9	25.2	2.7	1.2	1.4	0.0	13.3
Upper Post	141.0	51.3	13.3	62.0	14.5	0.0	0.0
	232.8	111.4	22.3	66.9	16.0	2.9	13.3

Development Summary (square feet)			
District	Acres	Historic bldgs/additions	Total Development
LRT Triangle	34.9		2,264,845
West District	45.5	159,435	525,330
Upper Post	126	355,717	490,297
			3,795,624

The Master Plan provides multiple opportunities for increased transit ridership, new development, and reuse/restoration of Fort Snelling’s Upper Post and West District historic buildings.

Overlap in district boundaries of the West District and the Upper Post results in totals for district areas and development zones that do not match.

Fort Snelling Light Rail Transit and Upper Post Master Plan



Preliminary Open Space Zones

One of the goals of the Master Plan is to create an inviting park-like regional destination.

High quality public spaces are needed to facilitate the transformation of Fort Snelling from an abandoned military base into a vibrant mixed-use community supportive of increased transit use.

The continued recreation use of the former polo fields, restoration of the Parade Grounds, the Fred Wells Tennis and Education Center, the Boy Scouts' Robert S. Davis Base Camp, and the creation of new public park spaces in the LRT Triangle and West District will connect Fort Snelling back to the life of the region. Complementary private open spaces, required as part of the reuse and redevelopment process, are needed to ensure that the total Fort Snelling area has an integrated and connected open space system. Done well, this open space system will contribute to Fort Snelling becoming a special place that will bring people and vitality.

Therefore, the ongoing investment in the physical fabric of Fort Snelling is essential to the attraction of private investment capital for historic building reuse and restoration and new redevelopment.



Preliminary Open Space Zones

Recommendations

These recommendations for next steps needed to implement the Master Plan are made to the Hennepin County Board of Commissioners and staff of the Department of Housing, Community Works, and Transit. These recommendations are the highest priority actions to be taken in the face of an ill-defined future marketplace.

To maximize transit use and transit-oriented development potential, and to enable Fort Snelling's historic resources to move from stabilization to reuse and revitalization, the following actions must be taken immediately:

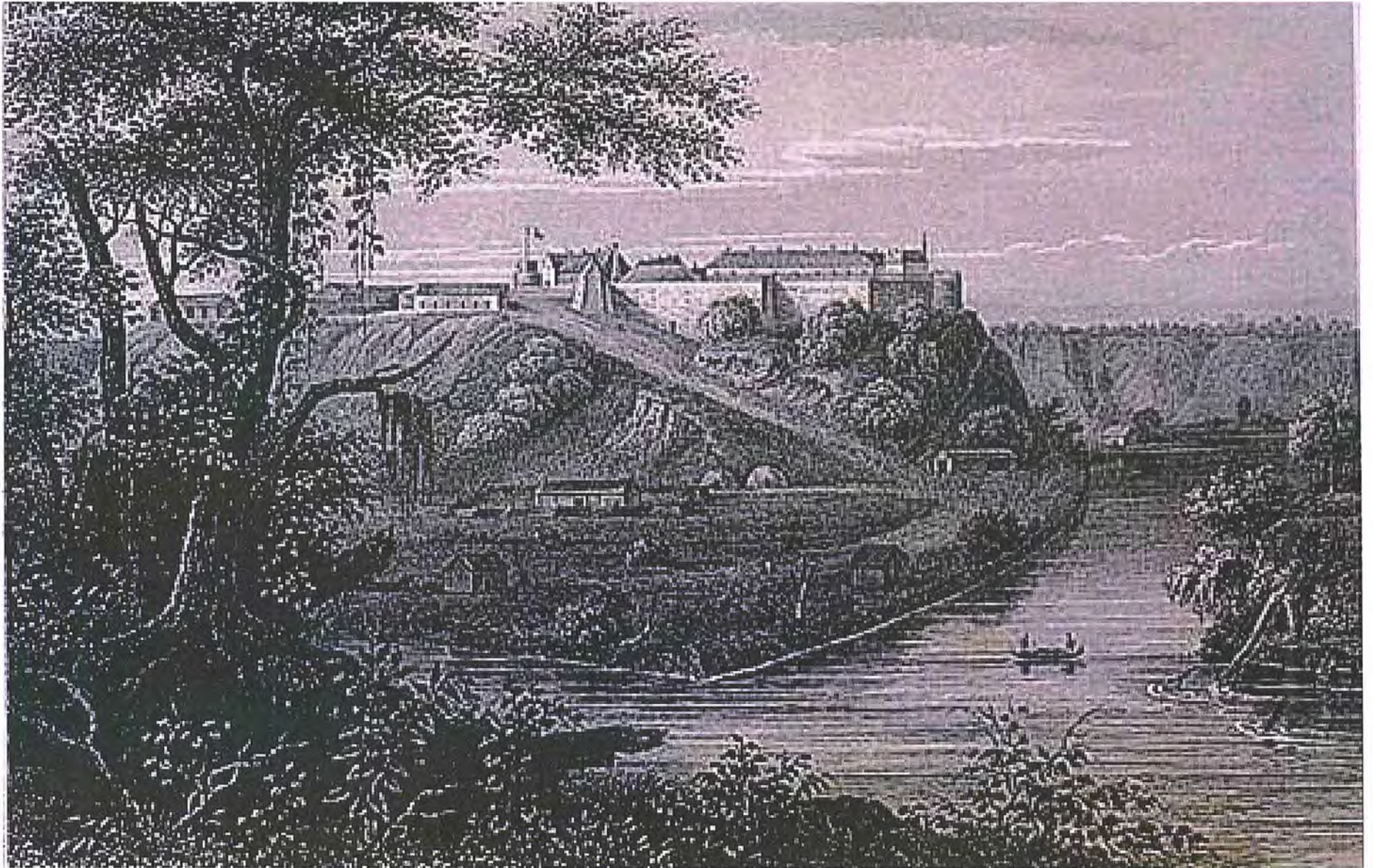
1. Adopt the Fort Snelling Light Rail Transit and Upper Post Master Plan to maximize transit use and guide revitalization of Fort Snelling.
2. Continue historic building stabilization.
3. Create a joint powers agreement, and set a 2-year timetable for the establishment of a new permanent governance structure, consolidation of land ownership, creation of a development authority, and creation of a development review and approval authority for Fort Snelling.
4. Conduct an ALTA/ACSM land title survey on the LRT Triangle District, the West District, and the Upper Post
- to document existing ownership and easements and to facilitate the right-of-way needs for immediate pedestrian and bicycle connection designs.
5. Complete the Program for Preservation and Utilization (PPU) to expand the range of permitted uses in Fort Snelling's historic districts.
6. Implement early initiatives to "jump start" an increase in awareness of and access to Fort Snelling, including:
 - » Formal adoption of street names and addresses for all Fort Snelling properties.
 - » Development of a preliminary public relations and branding strategy with an initial focus on recreational opportunities and cultural tourism.
 - » Improvements to signage and other wayfinding mechanisms.
 - » Improvements to bike access and facilities.
7. Prepare an Alternative Urban Areawide Review (AUAR) to prepare Fort Snelling's three restoration and redevelopment districts for redevelopment investment and activity.
8. Prepare an Airport Land Use Compatibility Plan.
9. Prepare a Phase 1 Environmental Site Assessment for the entire Fort Snelling district to assess recognized environmental conditions.
10. Prepare a 5-year strategic implementation program including:
 - » Consolidation of land and infrastructure ownership under one entity,
 - » Incentives to maximize transit use and transit-oriented development, especially in the area described as the LRT Station Area Triangle,
 - » Schedule for transportation and infrastructure improvements,
 - » Formal marketing/public outreach partnership and program for visitor and tourism promotion, focused on multi-cultural engagement and visitor amenities and services, and
 - » Business plan for the long-term management of publically-accessible historic assets.
11. Continue to engage the National Trust for Historic Preservation, the Preservation Alliance of Minnesota, and other national and local partners experienced in adaptive reuse and use of national and local tax credit programs within historic districts.

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Chapter 1

Introduction





Anonymous neg 857: Fort Snelling (engraving, 1855) (Minnesota Historical Society)

Chapter 1 | Introduction

Preamble

Located on a bluff high above the confluence of the Mississippi River and the Minnesota River, Fort Snelling occupies 233 acres in Hennepin County. With the first buildings constructed in the early 1820s, and subsequent construction continuing into the mid- 1900s, Fort Snelling and the confluence area embrace the overlapping histories of Native Americans, explorers, settlers, and the military.

Today the area contains many remaining buildings, structures, and landscapes of historic value. Also, this area is served by light rail transit service, presenting an unparalleled opportunity to address the long-term use and disposition of these properties.



Aerial view of the Lower Post ("Historic Fort Snelling") in the foreground, and the Upper Post in the background, at the confluence of the Mississippi River and the Minnesota River. (Image from the Metropolitan Design Center Image Bank. © Regents of the University of Minnesota. All rights reserved. Used with permission.)

The project study area (see Figure 1.1) comprised the following:

- » LRT Station Area Triangle
- » West District
- » Upper Post
- » Lower Post ("Historic Fort Snelling")

This Master Plan seeks to maximize transit use and provides specific development guidance for primarily the first three areas noted above. The Lower Post or "Historic Fort Snelling" as it is known today is owned, maintained, and administered by the Minnesota Historical Society. This Master Plan proposes no changes to the ownership or operations status of "Historic Fort Snelling."



Figure 1.1 Fort Snelling Light Rail Transit and Upper Post Master Plan study area (prepared by Hennepin County Department of Housing, Community Works & Transit)

This Master Plan establishes an overall framework to unite all four physical components of the area, delineates desired future land uses and development intensity, proposes an economic impact strategy, and describes overall infrastructure and service needs. A primary focus of the Master Plan is to facilitate transit-oriented development that supports an increase in ridership at the Fort Snelling LRT station. The Master Plan also provides a guide for all of the stakeholders to reach out to the development community and other potential partners who can bring investment funds to bring new life to the Fort Snelling area.

This Master Plan reflects transit-oriented development principles. It also is based on the mission of the Hennepin County Department of Housing, Community Works, and Transit to build and strengthen communities by developing quality, affordable housing and creating healthy-built environments that provide transportation choices and community connections, attract investment and create jobs. And, this Master Plan helps to implement the Active Living Hennepin County Vision and Complete Streets Policy.

What is Transit-Oriented Development?

The Metropolitan Council states that the premise for transit-oriented development (TOD) is simple: by concentrating jobs and housing and daily conveniences around transit, and by developing land use patterns that support transit, people will use their cars less and will walk and ride transit more.

Transit-oriented development refers to projects and developments which are shaped by transit in terms of density, parking, and building orientation in comparison to conventional development. Successful TOD reinforces the community and the transit system, and exhibits a compact and efficient use of available space, rather than auto-oriented sprawl. TOD contains a diversity and mix of uses with daily conveniences and transit at the center. The pedestrian-friendly physical design encourages walking, bicycling, and access by people with physical disabilities. The spatial extent of TOD is the maximum comfortable walking distance, roughly ¼ mile to ½ mile.

Active Living Hennepin County Vision

Active Living is a way of life that integrates physical activity into daily routines, through activities such as biking, walking, and/or taking transit. Its mission is to plan, provide, and promote active living environments and opportunities for everyone.

Hennepin County Complete Streets Policy

The Hennepin County Complete Streets Policy pledges that the County will enhance safety, mobility, accessibility, and convenience for all corridor users including pedestrians, bicyclists, transit riders, motorists, commercial and emergency vehicles, and for people of all ages and abilities by planning, designing, operating, and maintaining a network of Complete Streets. The Policy states that, given the diversity of the natural and built environment in Hennepin County, flexibility in accommodating different modes of travel is essential in balancing the needs of all corridor users. The County will implement Complete Streets in such a way that the character of the project area, the values of the community, and the needs of all users are fully considered. Developing Complete Streets will be a County priority on all corridors, including those that provide connections or critical linkages between activity centers and major transit connections.

Purpose of the Master Plan: A Revitalization Framework

The intent of this Master Plan is to provide a vision for future reuse and to define a framework of concepts and ideas that will be further refined in future phases of planning and detailed analysis of specific development proposals. More specifically, the purpose of the Master Plan is to:

- 1. Prepare an LRT station area redevelopment plan that supports increased transit ridership through transit-oriented development and site improvements, and provides the foundation for creating a community and an exciting destination for visitors.*
- 2. Establish a Fort Snelling area vision and a guide for conservation and change, for reuse and revitalization that embraces a narrative that showcases the overlapping histories of Native Americans, explorers, settlers, soldiers.*
- 3. Provide an economically sustainable development program for the whole area to blend historic preservation with adaptive reuse and new construction while accommodating the critical role that the spaces between the buildings and open spaces must play in attracting investment.*

- 4. Integrate economic development and market perspectives to ensure market sensitivity and responsiveness.*
- 5. Incorporate recommendations for preservation, reuse, and redevelopment noted in previous historic context studies on the West District and Upper Post.*
- 6. Establish an overall development framework that:*
 - Unites the area internally and connects it to adjacent areas*
 - Identifies potential reuse and development areas*
 - Establishes an overall general site plan*
 - Delineates desired future land uses and development intensity*
 - Describes the desired development and landscape character*
- 7. Describe transportation and infrastructure needs.*
- 8. Outline options for development review and approval process.*
- 9. Provide clear action steps and implementation recommendations.*

Existing Station Area Conditions

The Fort Snelling LRT Station lies just southeast of the TH 55/TH62 Interchange, along Minnehaha Avenue. To north lies the City of Minneapolis, VA Medical Center, and Minnehaha Park. To the northeast is the 1820s Lower Post. To the east lie large surface parking lots, the Bishop Whipple Building (GSA), the MnDOT Central Services Building, and the 46 historic buildings and landscapes that comprise the West District and Upper Post of Fort Snelling. To the south lie the Minneapolis-St. Paul International Airport and Fort Snelling National Cemetery. To the west lie several military installations. The lands adjacent to the LRT station are fairly flat, gently sloping eastward toward the Fort Snelling State Park and the Minnesota River valley. The LRT station itself sits at the same elevation as the land surrounding it, and provides a covered center platform with tracks running to either side. See Figure 1.2: Regional Context.

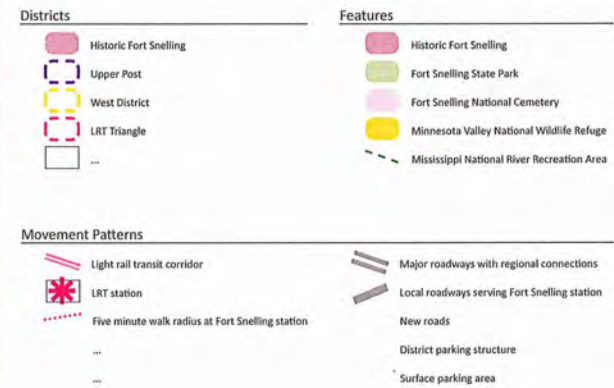
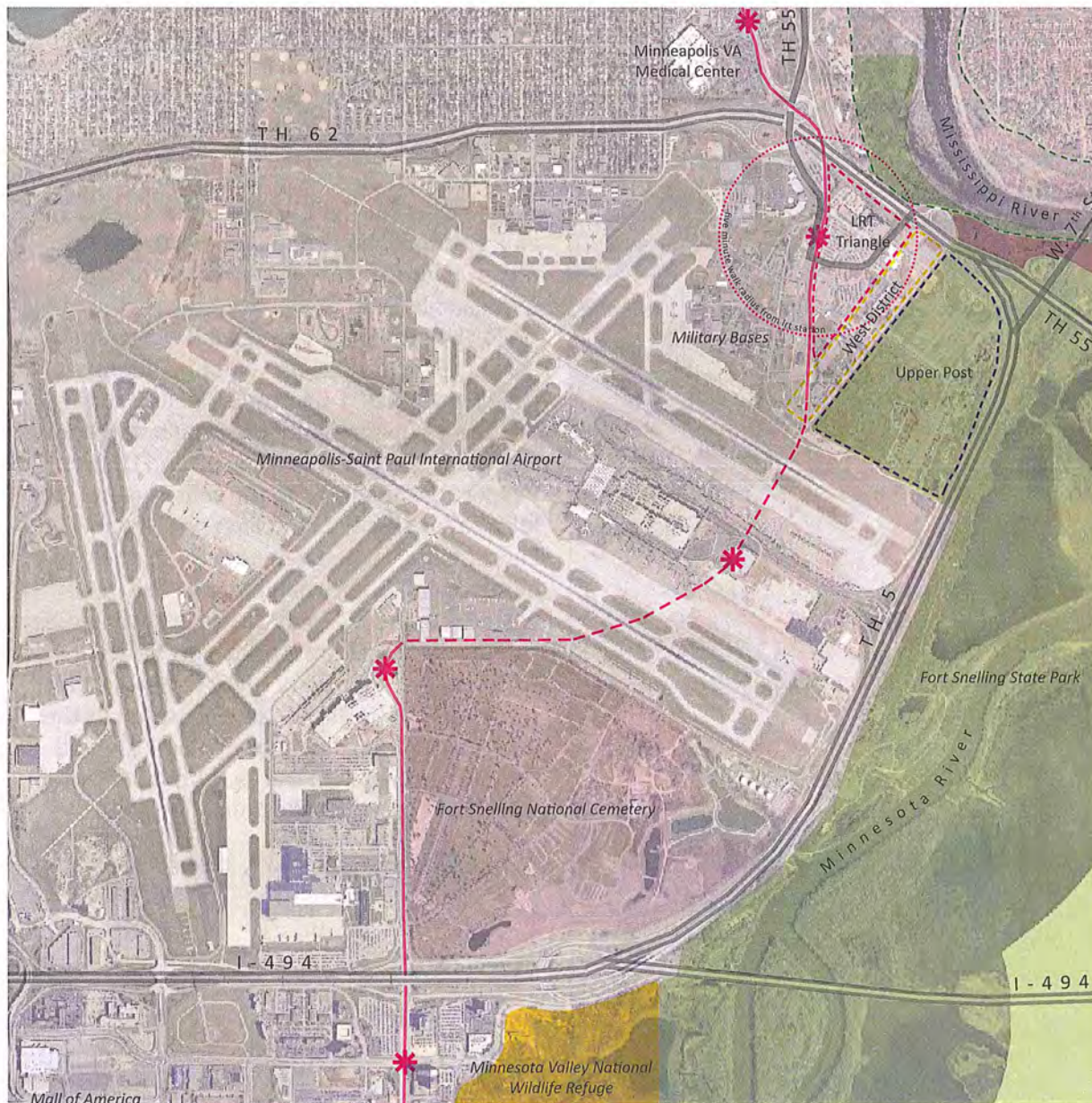


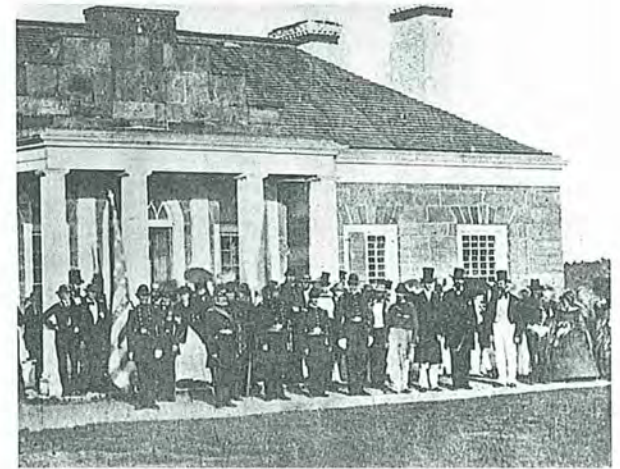
Figure 1.2 Regional context of Fort Snelling Light Rail Transit and Upper Post Master Plan

Early History of Fort Snelling

Fort Snelling was built during 1820-1825 to protect fur traders and white settlers, and to control exploration and trade in the area. Prior to that time, Native Americans lived in the river confluence area, which has very high spiritual importance for them as their place of origin and where their spirits pass through upon death. In 1805, at this location, the Dakota leaders signed a treaty (ratified in 1808) through which the U.S. government purchased 100,000 acres.

The fort remained in use through the creation of the Minnesota Territory, Dakota-U.S War, the Civil War, Spanish-American War, Mexican Expedition, and both World War I and World War II.

In the 1880s through 1907, the military constructed administrative buildings, living quarters, stables, connected paddocks, training facilities, recreation facilities, and a hospital in an area to the south and west of the original fort, now known as the Upper Post. Soldiers trained at Fort Snelling for the Civil War, Spanish-American War, and World War I.



Officers of the 1st Minnesota Volunteers, standing in front of the Commandant's Quarters, 1861. (Minnesota Historical Society)



Fort Snelling from two miles downstream. Painting by Seth Eastman, 1846-1848. (Minnesota Historical Society)



Postcard of the Barracks, 1900. (Minnesota Historical Society)

From 1918 through 1939 the Fort became known as the “Country Club” of the Army. A golf course, officers’ club, streetcars to both cities, military shows and polo games, demonstrations by the trick horse “Whiskey,” and the largest game preserve of any U. S. military installation made it a popular post for soldiers. Also, during the 1930s a supply depot was established at the Fort Snelling to support Civilian Conservation Corps (CCC) camps, part of the Works Progress Administration (WPA), in an effort to pull America out of the Great Depression.

During the 1940s more than 600,000 soldiers were processed through Fort Snelling for World War II. During this time a military intelligence language school was established at the Upper Post. More than 6,000 linguists, mostly Nisei (Japanese-Americans), were trained and graduated.



WPA workers rebuilding wall, 1939. (Minnesota Historical Society)

After World War II, Fort Snelling was decommissioned by the U.S. Army in 1946, but the federal government retained ownership (Veterans’ Administration).

Fort Snelling became a National Landmark in 1960. In 1961, Fort Snelling State Park was established. The Upper Bluff was placed on the National Register of Historic Places as a Landmark District in 1966. The West District is an adjunct part of the Upper Bluff, and is also on the National Register of Historic Places but currently not a Landmark. The West District is also a State Historic District.

The Minnesota Historical Society began restoring and reconstructing the original fort in 1966, opening it in the late 1970s as a seasonal living-history museum. In 1971 the area east of Bloomington Road (known as Area J – Upper Post) was turned over to the Minnesota Department of Natural Resources



Japanese-American translators training at the Military Intelligence Service Language School at Fort Snelling, 1945. (Minnesota Historical Society)

(DNR) with the stipulation that it can be used only for recreational purposes. The historic land parcels west of Bloomington Road (for the purposes of this study referred to as the West District) are owned primarily by the U.S. Department of Veterans Affairs, and several others.

Today, the restored and reconstructed Lower Post (“Historic Fort Snelling”) and the visitor center is operated by the Minnesota Historical Society, with a focus on a reenactment of fort life in the 1840s, but also including information about other historical events at the fort and in the general area. The West District and Upper Post have 46 extant buildings, vacant and in various states of disrepair.



A full living history program is provided at the Lower Fort, complete with demonstrations of historic crafts.

More Recent Activities

In 2006, the National Trust for Historic Preservation listed Fort Snelling as one of America's 11 Most Endangered Historic Places, bringing national attention to the site.

Also in 2006, in response to the decision to relocate the 88th U.S. Army Reserve Regional Readiness Command from Fort Snelling to Fort McCoy, Wisconsin, Hennepin County used a Base Realignment and Closure (BRAC) planning grant to develop a framework for (1) retraining and re-employing workers dislocated as a result of BRAC realignment, (2) assessing the economic issues of reusing Fort Snelling facilities and lands, and (3) bringing together stakeholders and technical staff to guide the work plan activities. This BRAC grant award provided resources to do a preliminary assessment of real estate, ownership, historic preservation issues, utility service, and site security issues, as well as establish a Fort Snelling Task Force of property owners, government agencies, and other parties with interest in the Upper Bluff area.

Also in 2006, Hennepin County staff conducted fact-finding missions to several historic forts around the country that have redeveloped or are beginning reuse and redevelopment after a base closure. (See Chapter 2 for lessons learned from those fort visits.)

From 2006 through 2010, Hennepin County, in coordination with the Minnesota DNR, used Sentence to Serve work crews to undertake emergency stabilization and "mothballing" of the Upper Bluff buildings. Funding sources included Hennepin County funds, Minnesota DNR funds, State bond funds, and a National Park Service's Save America's Treasures grant.

Also between 2006 and 2010, historic context studies were carried out for the Upper Post and the West District (that portion of the Upper Post that lies west of Bloomington Road). These studies considered and built on previous investigations into reuse and development character of the Upper Bluff area. A National Trust for Historic Preservation/Johanna Favrot Fund grant funded the Upper Post study, and a Minnesota Historical Society Legacy Grant funded the West District study.

In 2009, the Preservation Alliance of Minnesota gave Hennepin County and the Minnesota Department of Natural Resources its Stewardship Award for Fort Snelling building stabilization. Sharing the award was Miller Dunwiddie Architecture for its historic contexts research and advice on preservation methods and techniques.

In 2009, Hennepin County used Federal Transit Administration (FTA) funds to engage a consultant team led by Cornejo Consulting (with LHB, Inc. and Kimley-Horn and Associates, Inc.) to prepare this Fort Snelling

Light Rail Transit and Upper Post Master Plan. Other consultant firms contributing to the study were McComb Group, Ltd., Miller Dunwiddie Architecture, Hess, Roise, and Company, and WSB and Associates, Inc.



Over the past three years, Hennepin County's Sentence-to-Serve program has initiated emergency stabilization and exterior repairs for critical structures. This work was funded by a variety of grants matched with funds from Hennepin County and the Minnesota Department of Natural Resources.

In addition, various studies and reports were completed by University of Minnesota students that explored options and opportunities. All of this work has been reviewed and, where appropriate, “brought forward” into the Master Plan.

Today, however, there remain several unresolved issues that continue to frustrate and block moving forward with a coherent and coordinated revitalization program for the Fort Snelling area. Among them are use restrictions; a multiplicity of owners; leases and easements; a lack of rehabilitation funds; overlapping governmental jurisdictions, responsibilities, and regulations; and no local zoning or other official development controls that regulate property use or development. Despite Fort Snelling’s prime location – adjacent to the Minneapolis-St. Paul International Airport and the Veterans Administration Medical Center, between Minneapolis and St. Paul, and a station on the state’s first light rail route – without new users for Fort Snelling’s many vacant buildings, they will not survive to tell the site’s long role in American history. And without redevelopment near the light rail transit station, full revitalization of the larger Fort Snelling area will not occur.

Ownership and Reuse Issues

Fort Snelling is located in an unincorporated area of Hennepin County. There are over a dozen different parties that own, lease, and/or have jurisdictional control over portions of the areas included in the Fort Snelling Light Rail Transit and Upper Post Master Plan. The largest area, the Upper Post, is owned by the State of Minnesota Department of Natural Resources (DNR), which it obtained through the Federal “Lands to Parks” property disposal program. The Quit Claim Deed restricts future use to “public park or recreation uses.”

These ownership and jurisdictional issues have thwarted reuse, restoration, and redevelopment. These issues will continue to impede revitalization unless and until they are simplified to provide clearer lines of authority with the power to act more comprehensively in support of a Master Plan for the entire area.

See Figure 1.3: Fort Snelling Area Property Ownership Map, Figure 1.4: Fort Snelling Historic Districts Map, and Figure 1.5: West District and Upper Post Existing Building Identification Map.

Multiplicity of owners

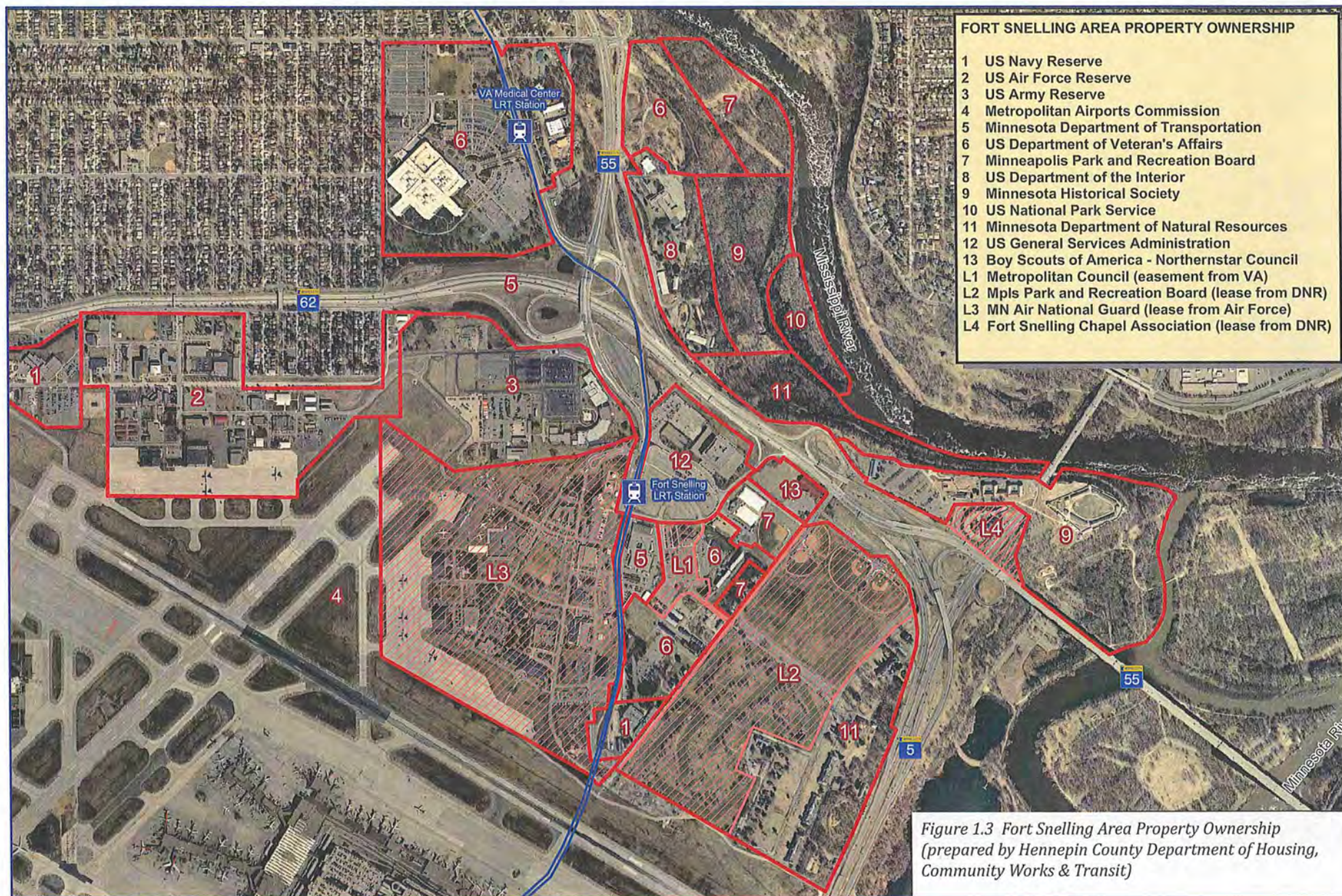
Hennepin County owns and maintains two roadways on the Upper Post. The balance of the Fort Snelling area is owned and/

or leased by seven different governmental entities (Minnesota DNR, GSA, VA, U.S. Navy, Minneapolis Park and Recreation Board, Metropolitan Council/Metro Transit, and MnDOT), and a private non-profit organization (Boy Scouts).

The current patchwork of ownership and use situation for the balance of the Fort Snelling area is as follows:

The LRT Station Area Triangle and West District:

1. The General Services Administration (GSA) owns and manages the Bishop Whipple Building which houses 39 different federal agencies. The 7-story main building is undergoing full repair and rehabilitation, including a new geothermal heating and cooling system, and is scheduled to be reoccupied in 2014. A new smaller building is being constructed on the site to serve a new user, the federal Immigration and Customs Enforcement (ICE) agency.
2. Metro Transit owns the light rail station and transit corridor which total 1.3 acres. Metro Transit also has a “permanent easement” from the U.S. Department of Veterans Affairs for land which they have developed into two large commuter park-and-ride lots which total 7.3 acres.



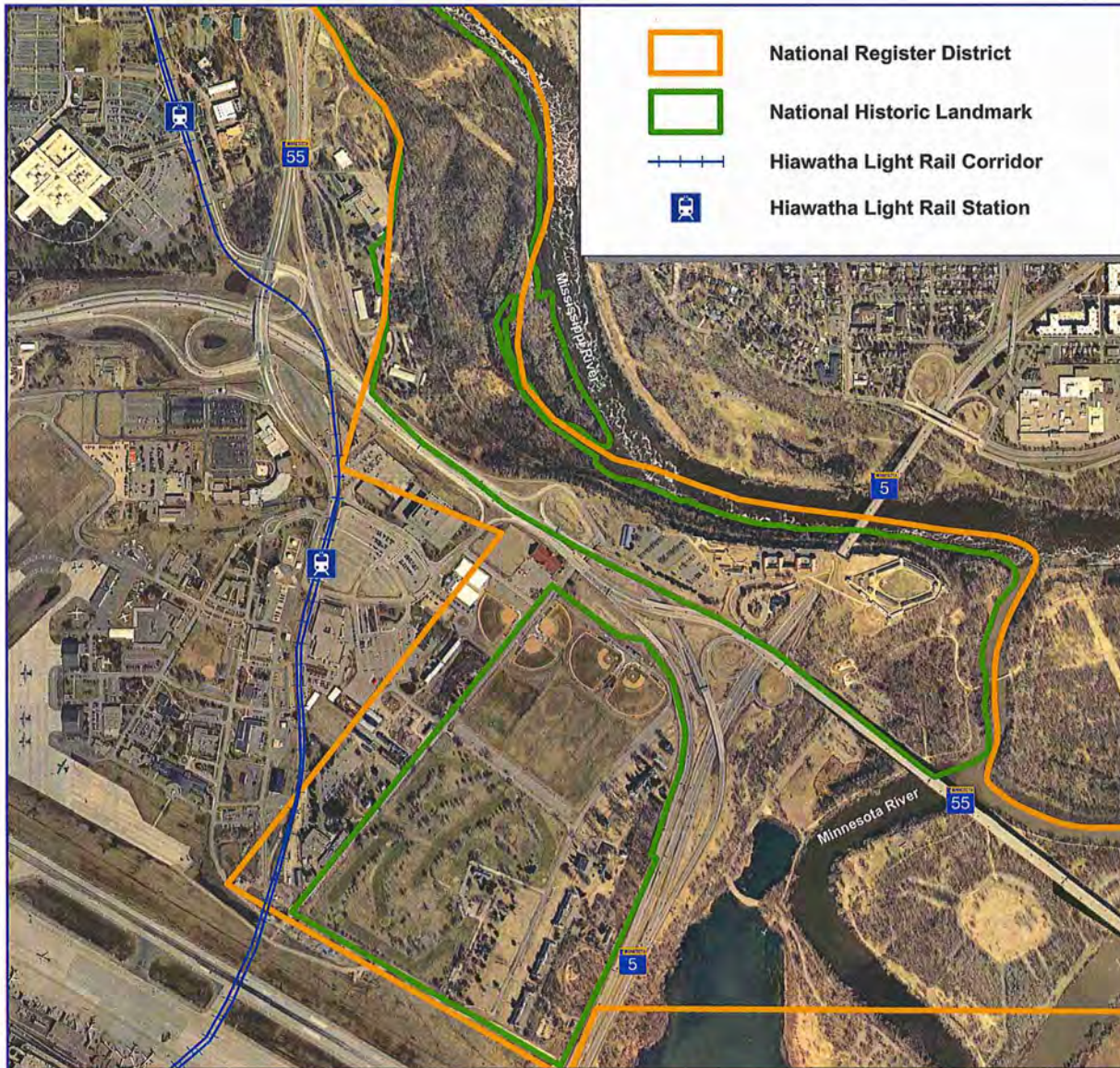


Figure 1.4 Fort Snelling Upper Post and Surrounding Area Historic Districts (prepared by Hennepin County Department of Housing, Community Works & Transit)

3. Minnesota Department of Transportation (MnDOT) owns and operates the Central Services Building (a maintenance facility) on a 7.7-acre site adjacent to the LRT track corridor.
4. U.S. Department of Veterans Affairs owns several historic buildings and properties, using them primarily for storage.
5. The Minneapolis Parks and Recreation Board owns several properties: (a) the Fred Wells Tennis and Education Center (which operates on a lease), and (b) properties used temporarily for a wood-chipping operation.



The MnDOT property consists of a maintenance and repair facility and outdoor vehicle storage.

6. The Northern Star Council of the Boy Scouts of America has renovated the 28,000 sq. ft. former Cavalry Drill Hall (Building 201) into a training facility for youth (Boy Scouts' Robert S. Davis Base Camp), and plans to add a new 46,000 sq. ft. office building. They own their 6-acre site.
7. The U.S. Navy Reserve owns and operates the Naval and Marine Corps Center, a training facility. Exploratory studies are underway by the U. S. Naval Reserve to possibly expand their operations at this location, which may involve building and site expansions.

The Upper Post:

1. The Minnesota Department of Natural Resources (DNR) owns the whole 141-acre Upper Post. DNR officials have indicated a desire to turn over these lands to another entity, as this type of property does not relate well to their central mission of conservation of natural resources and provision of outdoor recreation opportunities in a natural setting.
2. The DNR leases the area that was formerly the Polo Grounds, the Parade Grounds, and golf course to the Minneapolis Parks and Recreation Board for recreation purposes, i.e., golf course and ballfields for soccer and

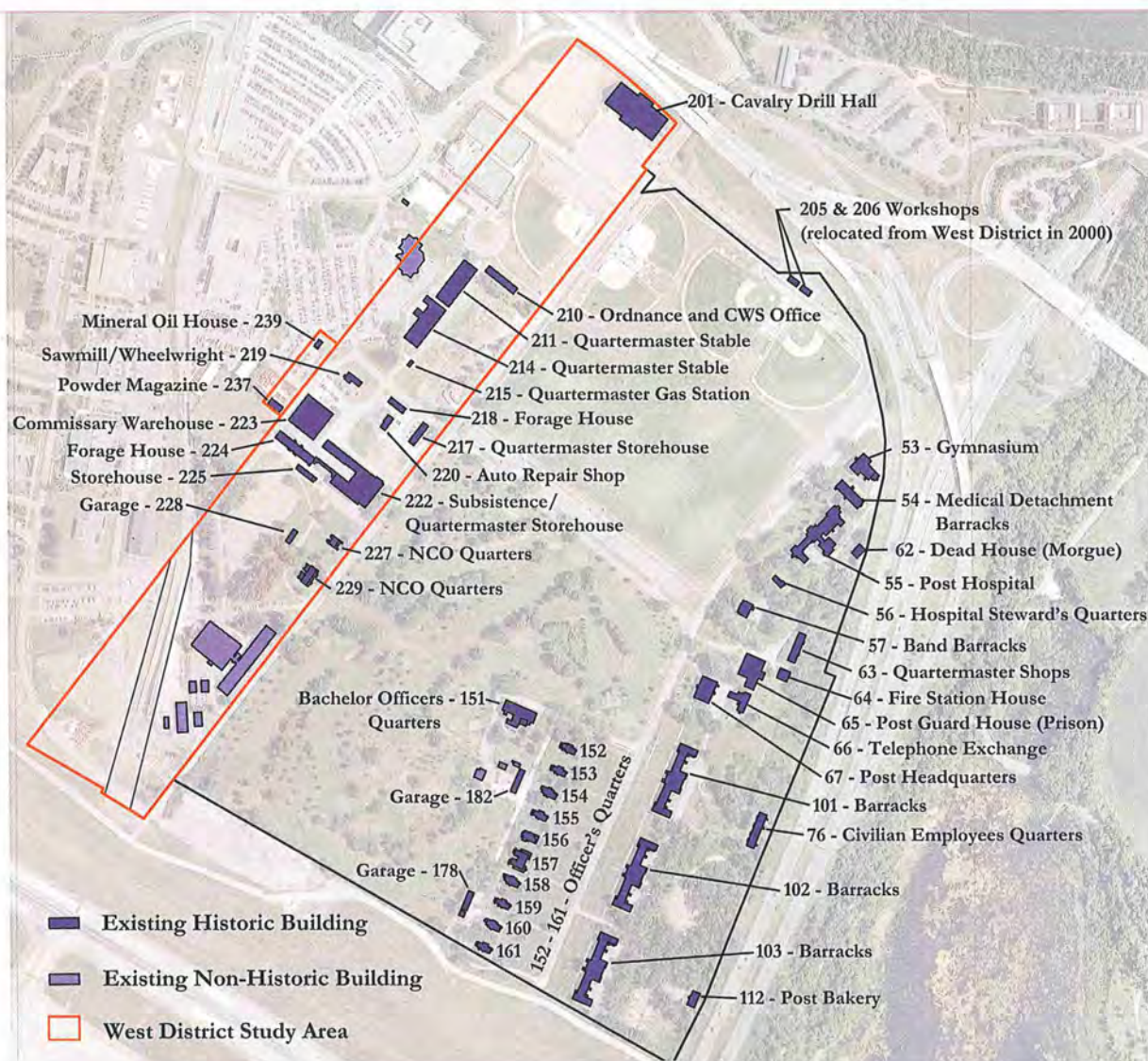


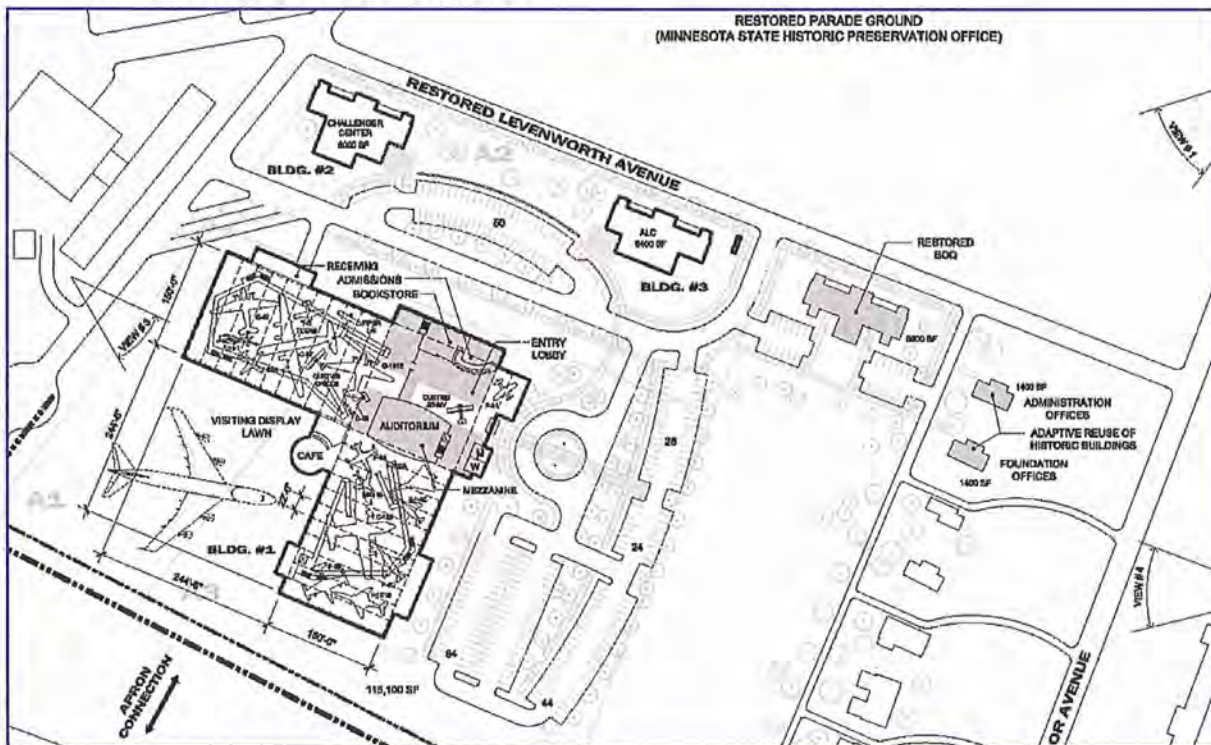
Figure 1.5 Existing buildings in the Upper Post and West District (prepared by Miller Dunwiddie Architecture)

softball. There are about 19 years left on the lease.

3. The 20-acre portion of the Golf Course that lies south of Leavenworth Avenue up to the MSP Airport boundary has been studied by the Minnesota National Air Guard Foundation for potential future use as the Minnesota Air and Space Museum. Their current proposal calls for the restoration of two buildings on Officers Row and

the Bachelor Officers Quarters, the construction of three new buildings, and the development of associated outdoor display spaces. The other 11 historic buildings west of Taylor Avenue are not included in this proposal and would remain vacant. The Minnesota National Air Guard Foundation has received preliminary approval from the National Park Service for their plans, but no further action has been taken.

4. The roughly 32-acre area to the east of Taylor Avenue contains the historic former barracks buildings, administrative buildings, hospital, and gymnasium. These historic buildings are unused and remain vacant, boarded up, and secured. Some exterior restoration activity is taking place there at selected buildings. That stabilization work is being carried out by Hennepin County with Sentence to Serve crews. Much more stabilization needs to be done to prevent further deterioration and collapse of these structures.



This site plan illustrates the extensive development plan for the proposed Minnesota Air and Space Museum. (drawing courtesy of COLLABORATIVE Design Group)

Multiplicity of approval authorities

There is no central development review and approval authority. However, the area is included in the Mississippi National River and Recreation Area (MNRRA), the Minneapolis/St. Paul International Airport Zoning, Federal Aviation Authority (FAA) airspace review, and Minnesota Environmental Review Program. Also, portions of these areas are designated as National Historic Landmark District, National Register Historic Districts, and/or Minnesota State Historic Districts. Therefore, reuse, repair, restoration, and rehabilitation of historic buildings must be reviewed by the National Park Service (NPS) and the Minnesota State Historic Preservation Office.

Planning Approach

The planning approach to this study recognized that a Master Plan for Fort Snelling should create an opportunity for all Minnesotans to regain a sense of identity with their own origins. The past, and the place that is Fort Snelling, is not frozen in time. The Master Plan suggests an action-oriented reuse program that creates new value and meaning.

The location of the light rail station in the far northwestern portion of the site, at the seam that unites the historic Upper Post/West District/LRT Station Area with the currently active military reserve posts (Navy, Army, and Air Force), Minnesota Air National Guard facility, and the GSA Building, presents an unparalleled opportunity. The Master Plan envisions historic fort buildings with new uses, new buildings, and the integration of historic landscapes with new parks and open spaces in a unique setting with references to the stream of time rather a setting that never changed.

To guide change towards a coherent whole that reveals and interprets the history of Fort Snelling, the design process was driven by multiple views about how this site should be used, how history should be interpreted, and how to create a high quality public place. The challenge was to enable all participants in the planning process to unfold the many layers of history not linearly but comprehensively.

This approach also recognized that the multiplicity of owners, the existence of deed restrictions and easements on some of the parcels, and the number of agencies that have statutory responsibilities and/or review authority over the site pose challenges for the future successful use and development of the site. However, these factors also have the potential to facilitate partnerships between public and private interests. Together, they can better garner funding, long-term commitment, undertake redevelopment, and determine a workable governance structure and a development review process and authority.

The Master Plan work recognized and built upon the previous and concurrent historic context research on the West District and Upper Post. Two studies were relied upon most heavily:

- » Fort Snelling West District – Historical Context Study and Development Guidelines (Miller Dunwiddie Architecture and Hess, Roise and Company, April, 2010). See Appendix 1.
- » Fort Snelling Upper Post Open Space and Landscape Development Guidelines (Miller Dunwiddie Architecture et al., Summer, 2008). See Appendix 2.



Ridership at the Fort Snelling LRT station has grown from 7,500 annually at its inception in 2004-2005 to 13,000 in 2009.

Public Outreach Process

The public outreach process included several methods to confirm project goals, to receive and review background and technical information, and to share information and build consensus. Primary stakeholders included government agencies, Native American representatives, historic preservation enthusiasts and others that recognize the historic and cultural importance of the Fort Snelling area. These public outreach methods included:

- » Stakeholder Interviews
- » Community Open Houses
- » Workshops
- » Staff Advisory Committee Meetings
- » Task Force Meetings

The main messages from the public outreach process were:

1. **Create an accurate and honest narrative and portrayal of all peoples who have lived or served at this site.** In the redevelopment, there should be museums and cultural institutions that have interpretation programs that honor the accurate history of the Native peoples at this location, the

history of the early European/Euro-American explorers and settlers, the establishment of Fort Snelling and other military activities of the early 1820s, the Civil War, WWI, WW II and after. The history of this area includes the 1862 Dakota-U.S. War which led to the internment of 1,200 Dakota within a concentration camp at Fort Snelling. The interpretation of all of the historical events in and around Fort Snelling will benefit from consideration of various perspectives including that of indigenous peoples, European whites, the Japanese-Americans who trained at Fort Snelling during WW II, and the over 600,000 inductees who were processed at Fort Snelling and sent overseas during WW II.

2. **Build on the uniqueness of the Fort Snelling LRT Station and its context.** Other Hiawatha line LRT stations have residential and commercial contexts that provide both origin and destination transit riders. The Fort Snelling LRT station is used primarily by park-and-ride patrons commuting to jobs in downtown Minneapolis, the MSP Airport, or at the University of Minnesota, and less so by employees of the GSA (Whipple) Building and adjacent /nearby U.S. military installations and by patrons to downtown Minneapolis sporting

and entertainment events. The direct connections to the airport and the Mall of America, and to the historic lower post, need to be considered and built upon. With the future connection of the Hiawatha LRT line to the Central Corridor LRT line, there will be LRT connection between the Fort Snelling LRT station and the State Capitol and downtown St. Paul.



*Dakota boy at Fort Snelling prison compound, 1863.
(Minnesota Historical Society)*

3. **Parking lots provide a redevelopment opportunity to maximize transit use.** The park-and-ride lots and the GSA lot could be replaced by parking ramps and the land redeveloped for transit-oriented uses to benefit the community-at-large. The LRT service runs both ways, and more should be done to strengthen Fort Snelling as a destination for different types of users throughout the year.

4. **Preserve the whole area, all the remaining buildings.** Too many buildings have already been lost. Save the remaining buildings, restore them, and find new uses for them.

5. **Redevelopment should be bold and establish a special place of historic preservation and new development.** Consider a rich mix of uses, incorporating housing, office, cultural,

recreation, training and educational facilities, youth and adult sports, and museums.

6. **Create special attractions and events for visitors.** Suggestions included a new air and space museum, Dakota cultural museum, language center, and educational/training facility, Seth Eastman museum, WW II museum, Boy Scout urban base camp, athletes' village,



Architect's rendering of the main building for the Minnesota Air and Space Museum proposed by the Minnesota Air National Guard Historical Foundation. (rendering courtesy of COLLABORATIVE Design Group)



The Northern Star Council of the Boy Scouts of America recently completed their Robert S. Davis Base Camp, a renovation of the 28,000 square foot historic Cavalry Drill Hall (Building 201), for both indoor and outdoor program activities on the 6.5 acre site.

community college, youth hostel, U.S. Veterans center, and an equestrian facility.

7. **Connect elements and attractions within the site and nearby.** The different components of the site are a significant distance from each other and from the LRT station. Re-establish a circulation system emulating the old trolley service to attract and accommodate a potential workforce for reused historic buildings. Connect LRT to bike and walking trails. Make connections between the LRT station

and Upper Post and Minnehaha Park, Coldwater Spring, the Sibley House Historic Site, Fort Snelling State Park Visitor Center, and the Lower Post.

8. **Create a governance organization to carry out the Master Plan.** Create a joint powers agreement between the landowners and regulating agencies for administration of the area. Create a clear development review process to facilitate successful collaborations. Resolve and simplify land ownership issues.



Minnehaha Creek flows into nearby Minnehaha Park, which is within easy bicycling distance from Fort Snelling.



Coldwater Spring was a fresh water source for early Native Americans and European and American explorers.

How to Use this Plan

This Master Plan consists of a series of interrelated chapters that together present an overall vision for the larger Fort Snelling area. They work collectively to chart a course for change and investment for the Fort Snelling LRT Station Area and the historic building and landscape resources that comprise the larger West District, Upper Post, and the Lower Fort.

This Plan provides clear development policy direction, an infrastructure plan, and implementation recommendations, including an economic development framework and options for governance and a development review and approval authority.

This Plan is not a blueprint. Rather, this Plan is a framework and guide for decision-making. Implementation will require strong leadership and a consultative and collaborative approach with the development community, lenders, governmental entities, foundations, and others.

To maximize the benefit of this Plan, it should be used to:

- » Guide the governance bodies when they:
 - Communicate the vision for Fort Snelling's future;
 - Make development, transportation,

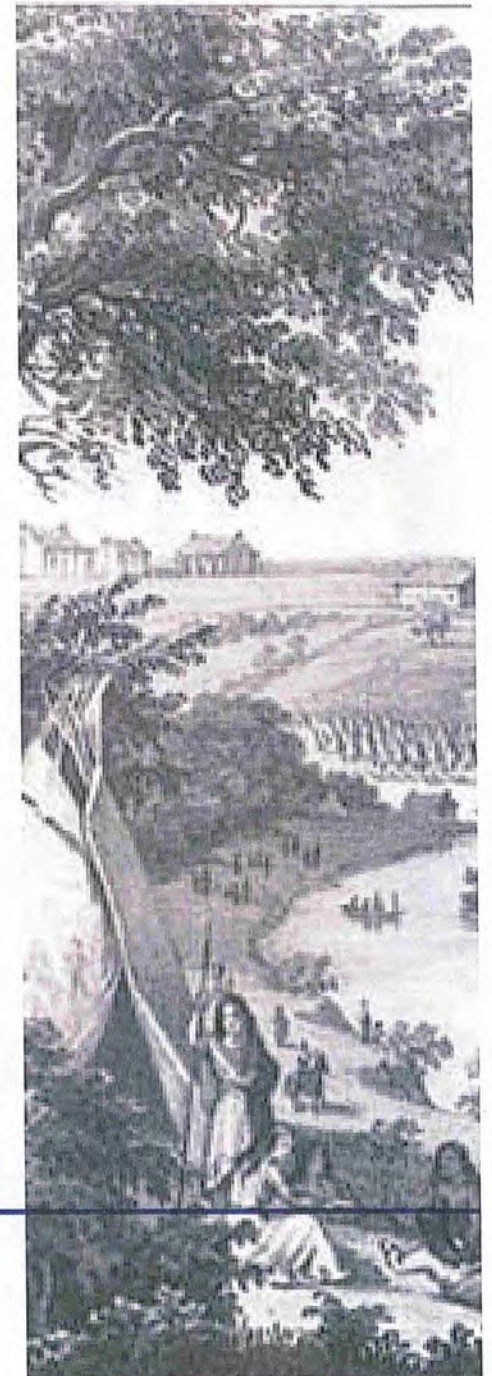
transit, and infrastructure decisions;

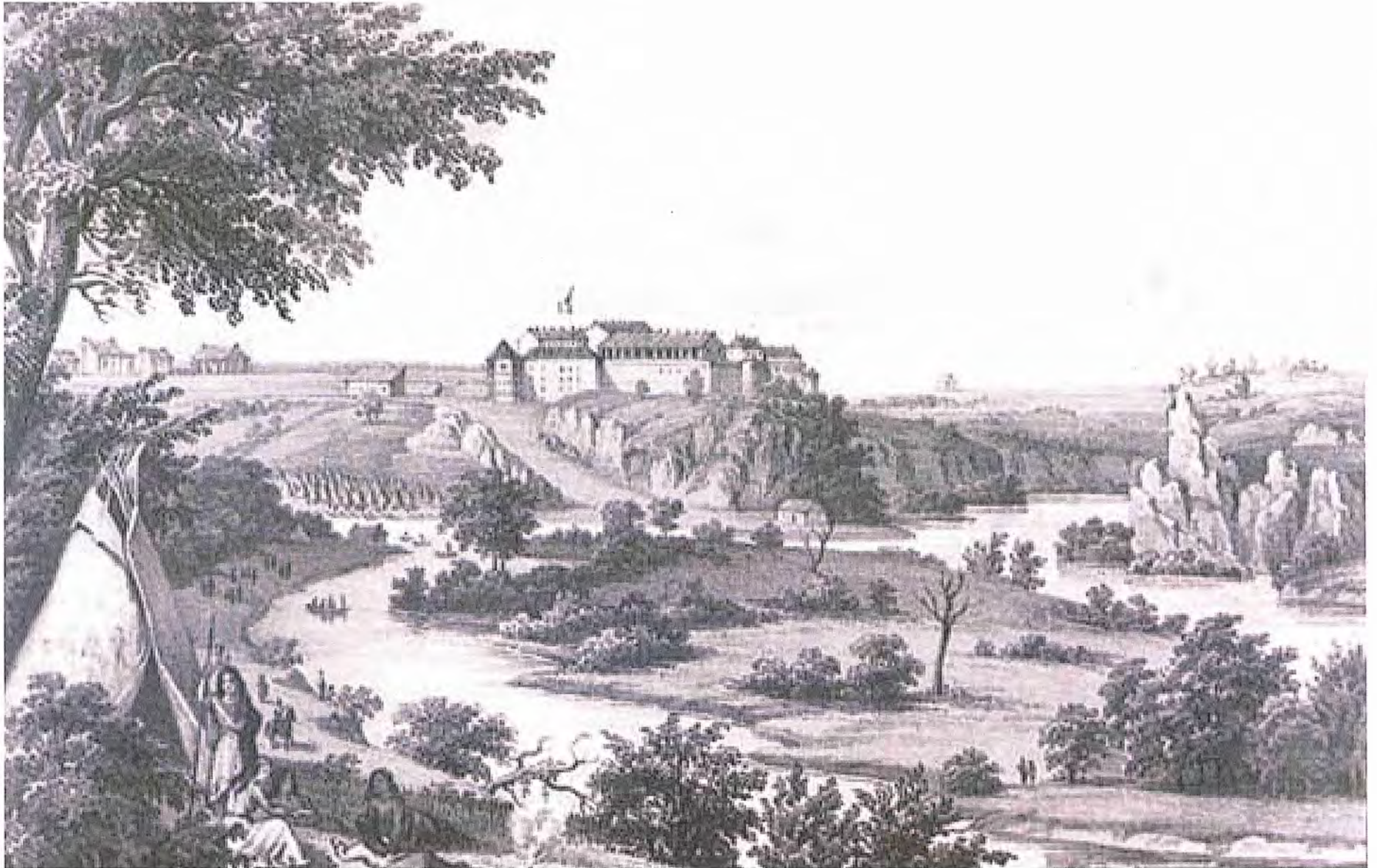
- Buy, sell or lease land;
- Budget and initiate capital improvements;
- Establish and/or change regulatory methods;
- » Guide developers and potential investors when they:
 - Determine potential property use;
 - Analyze possible land use changes throughout the Fort Snelling area;
 - Analyze future infrastructure improvements;
 - Make improvements and investments to their own properties;
 - Acquire property, negotiate leases, and coordinate their development plans with Master Plan goals, development policies, and design guidelines.

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Chapter 2

Vision and Goals





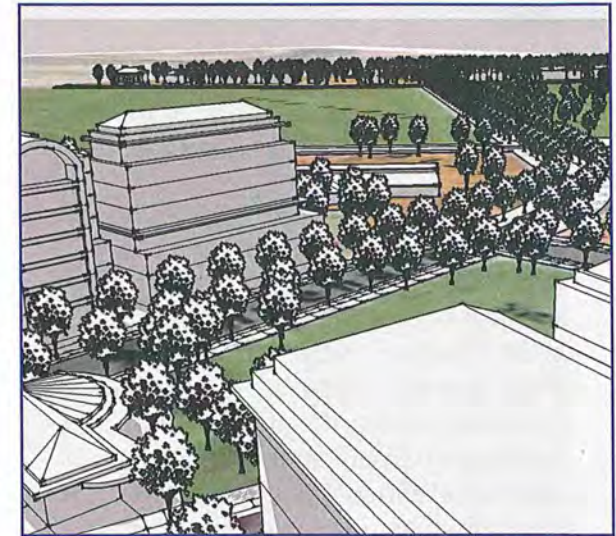
Henry Lewis neg 30508: Fort Snelling (photo, 1856) (Minnesota Historical Society)

Chapter 2 | Vision and Goals

Chapter 2 presents a vision for the Fort Snelling area and articulates broad goals to provide the foundation for detailed development policies and urban design guidelines. This chapter also expresses the challenges and opportunities with Fort Snelling revitalization, and the lessons learned from fort conversions elsewhere.

Introduction

During the planning process, an overall vision was developed to maximize transit use, guide the preservation, reuse, and redevelopment at the Fort Snelling LRT station, West District, and Upper Post area, as well as enhance the connections to the Lower Post. This vision and accompanying goals are intended to guide all Fort Snelling changes and investments throughout the evolution of this important place. Together they chart the way for the creation of a new community of people, activity, buildings, landscape, and sustainable transit-oriented development.



Minnehaha Avenue forms a strong connection between the Upper Post and the LRT Triangle.

Fort Snelling Vision Statement

Reuse, restoration, and redevelopment at Fort Snelling will help all Minnesotans regain a sense of identity with their own origins, as well as honor and respect the contributions made by Native Americans, explorers, and settlers who occupied and visited the lands, and the soldiers who trained at this site who served their country.

Revitalization will maximize transit use and follow transit-oriented development principles to integrate new uses and buildings within an historic fort in a unique setting, one that reflects the passage of time and context for the future.

Goals

1. Reflect the shared histories of the Fort Snelling – River Confluence Area.

Reflect the evolution of Fort Snelling and honor the overlapping histories of the Native Americans, explorers, settlers, and military and the lands at the confluence of the Mississippi River and Minnesota River. Use these histories as the foundation for establishing a site interpretation and learning environment in restoration and revitalization initiatives, and for programming future uses, activities, and events.

2. Maximize transit use and create a vibrant LRT District and Fort Snelling community.

Facilitate reuse, restoration, and new development that maximize transit use and that demonstrate the tremendous potential of the area to serve all Minnesotans. Blend culture, commerce, workplaces, educational facilities, residences, civic uses, tourism/lodging, and other uses that complement Fort Snelling's heritage resources. Establish a strong sense of identity and belonging that fosters stewardship and an integrated community of choices, diversity, and vitality.

3. Create an inviting park-like regional destination.

Establish vibrant, pedestrian- and transit-oriented precincts of historic and new buildings in a setting that respects the historic landscape, and expands public access and enjoyment. Complement the development framework with a cultural tourism and visitor program of historically accurate, educational, and entertaining events and activities. Use open space and green linkages to bring amenity and identity to each area of Fort Snelling.

4. Seek economic and environmental sustainability in reuse, restoration, and redevelopment.

Create a governance authority and an economic structure that facilitate and generate momentum for market-driven transit-oriented development investment. Seek financial self-sustainability by balancing restoration, development costs, and operational/maintenance budgets with revenue generators that support the vision. Create a development and infrastructure program that facilitates sustainable design and energy efficiency, and motivates sustainable lifestyles. Integrate job training into restoration initiatives.



View of Building 222 – Subsistence/Quartermaster Storehouse today. It is owned by the Veterans Administration and used for storage. This combination of buildings of several vintages has spaces offering many options for reuse.



View of Building 67 – Post Headquarters today. All windows were covered in plywood and entry points were secured in 2008. Masonry repairs were initiated in 2010.



The former polo grounds have been reconstructed as playing fields for softball and soccer.

Challenges and Opportunities

Several questions were considered within the context that both Hennepin County and the Metropolitan Council seek development around the Hiawatha-line light rail stations that supports increased transit ridership. Other important considerations included the proximity of historic buildings and landscape and the fact that only the area to the east of the LRT station could be considered for redevelopment due to the presence of secured military facilities to the west. These questions exhibit the range of challenges. These are addressed in the balance of this report.



The Fred Wells Tennis and Education Center is a non-profit organization offering tennis instruction and facilities.

What is the national context for reused historic military forts? What models or lessons can be applied here?

What makes this location different from other Hiawatha-line LRT station areas?

What development intensity/activities will maximize transit use and ridership?

What are the big reuse and development issues at this particular site and LRT station area?

How can redevelopment investment be linked to historic preservation and reuse?

What is needed to mitigate the negative impacts of airport noise?



Officers' Row houses, as well as the three barracks buildings, border the MSP International Airport.

How can revitalization best honor Native American history at the confluence of the Mississippi River and Minnesota River?

How can development uses and activities best articulate and commemorate the shared Native American, explorer, settler, and military histories of Fort Snelling?

How can development weave new uses, restored and new buildings, and open spaces into a regional park-like destination?

How can the composite of uses, buildings, and spaces work together to become a vibrant community?

How much new development can and should be permitted and where?

How can building restoration, new development, and infrastructure installation be phased so that all of it can be market responsive and economically sustainable?

How can a development review and approval process be created that integrates standards for historic reuse and rehabilitation and standards for new development, and that recognizes the jurisdictional purview of the National Park Service, Minnesota State Historic Preservation Office, and other agencies?

How can job training be incorporated into labor-intensive building and landscape restoration activities?

Lessons Learned from Fort Conversions Elsewhere

In May of 2006, Hennepin County staff conducted a fact-finding mission to former U.S. military forts that have or are in the process of redeveloping after a base closure has taken place. Forts that were visited were Fort Mason and Fort Baker in the San Francisco Bay area, Fort Vancouver, and Fort Worden in Washington, and Fort Sheridan, Illinois. Also, Hennepin County officials carried out discussions with representatives at Fort Monroe, Virginia.

The following themes and messages were drawn from that research:

- » **Revitalized forts create economic growth.** Transforming former military facilities to civilian uses has been and can continue to be a strong stimulus to local economic growth.
- » **Public-private partnerships are needed.** Strong public and private sector leadership is needed to initiate the process and maintain momentum over many years. Success requires cohesiveness and a common sense of purpose. Establish a central decision-making and governance authority.

- » **Vision with flexibility in methods is critical.** Have a bold and strong vision, and a clear set of goals, but exercise flexibility in implementing your master plan. A master plan can never fully anticipate future market conditions nor can it be infallible in its underlying assessments of what constitutes good land use, density, traffic impacts, etc. View the master plan as a living document that remains true to its foundation principles but whose methods can be adapted and revised to accomplish its goals.

- » **Embrace a wide variety of uses.** Consider a wide variety of potential complementary uses for reusing historic buildings and for new uses in new development. This diversification is a strength that will also bring a wide range of people, energy, and investment.
- » **Illustrate historical evolution of fort.** Through events, activities, and other programming, ensure that there is attractive public access, enjoyment, and appreciation of the history of the people, activities, buildings, landscapes



Building 298 – Schoolhouse is Fort Worden’s largest building, with 10 rooms for workshops and nearby open areas for outdoor activities for people of all ages.

of these early military forts. Highlight the role these former military facilities play in community identity and cultural understanding of an area's historical beginnings.

- » **Prepare sites for development investment.** Invest in needed infrastructure. Make sites marketable. Make the dream tangible through actual site work and activities and events that bring people to the base or fort.
- » **Respect context and conserve history of the place.** Build around what already exists, and don't pursue possibilities that are dramatically different. Historic buildings in historic

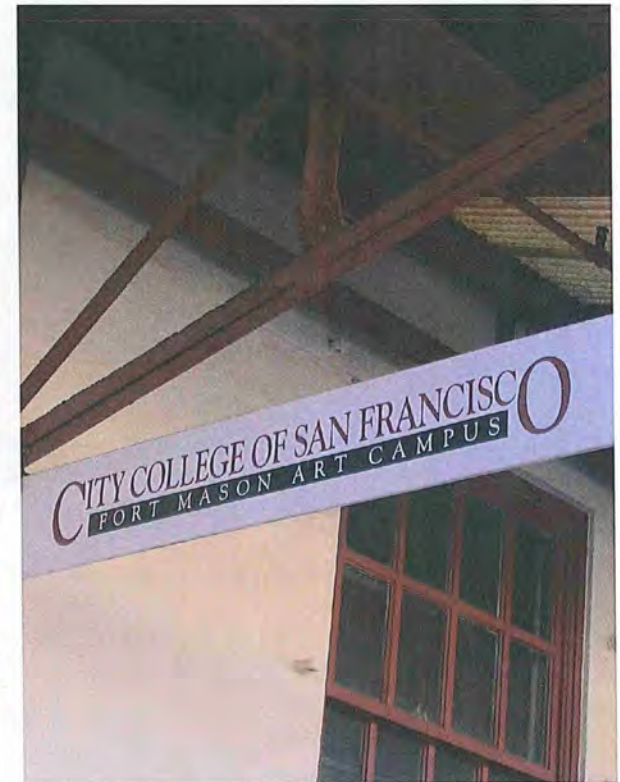
settings have a sense of place and atmosphere that possess tangible and intangible factors that go beyond creating an inviting place to live, work, and play. Work to create a seamless transition from historic buildings to new construction.

- » **Establish a substantial financing mechanism.** Identify current and potential assets and revenue streams, and leverage both. Be creative in finding funding sources. Access and use public sector funds to leverage private sector investment. Review and update your financing model often, and refine it as circumstances change.

- » **Do extensive community outreach to make your vision materialize.** Build consensus on the vision and confidence in your program, and use this to gain partners in financing and building.



The Fort Baker Healing Arts Center complements the reuse of the historic buildings as a residential conference center.



The City College of San Francisco at Fort Mason offers art and crafts classes and business courses for artists.

Possible Models for Fort Snelling Reuse



Fort Mason's revitalization provides many performing and visual arts venues.

Fort Mason Center, San Francisco, California

Situated on 13 waterfront acres, Fort Mason was converted into a cultural center with over 40 nonprofit organizations leasing space in nine Mission Revival buildings with a total of 300,000 square feet of space. This space includes classrooms, five permanent museums, six theatres, galleries, meeting rooms, offices, performance spaces and pavilions, exhibition hall, and a large conference center.



Fort Baker's major tenant is Cavallo Point Lodge, a conference center that serves the San Francisco Bay area. The Lodge, consisting of 68 historic and 74 contemporary rooms, blends historic conservation with adaptive reuse and new construction.

Fort Baker, San Francisco, California

Encompassing 335 acres, Fort Baker has been developed into the Fort Baker Retreat and Conference Center, including a healing arts center and spa. The National Park Service entered into a partnership with the Fort Baker Retreat Group through a 60-year lease agreement to create Cavallo Point Lodge, including the renovation of 18 existing fort buildings for reuse as guest lodging, dining facilities, cooking school, as well as event, conference and retreat spaces. New guest accommodation has also been constructed. Parking is kept to the fringes of the main lodge, with a shuttle bus network to connect visitors to nearby Sausalito and other destinations.

Possible Models for Fort Snelling Reuse (continued from previous page)



Fort Vancouver historic buildings have been adapted for a variety of office, retail, restaurants and other uses that are open to the public.

Fort Vancouver, Washington

The Vancouver National Historic Reserve encompasses 366 acres on the banks of the Columbia River in Vancouver, Washington. The historic district encompasses 49 acres and 42 buildings. Reuse of historic buildings includes an air museum, galleries, offices, restaurant, a folk art center, a reconstructed Hudson's Bay Company village, and residences.



Fort Worden State Park and Conference Center has a variety of meeting rooms, accommodations, and recreational opportunities. This is a view of Building 210 – The Commons, a 20,000 sq. ft. new building which has a dining hall and four separate meeting and dining spaces.

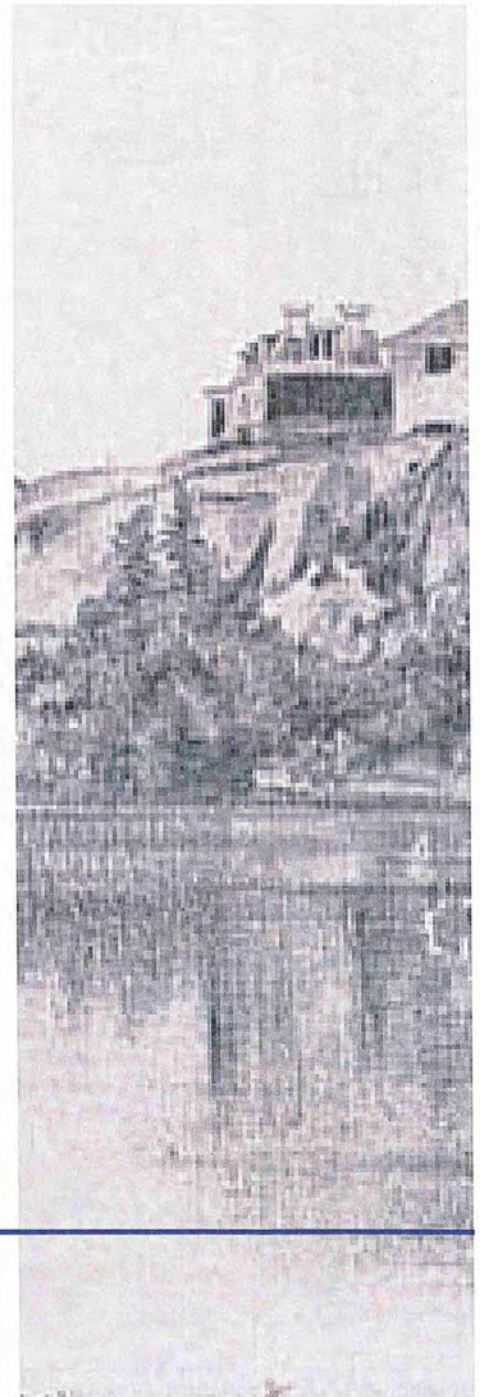
Fort Worden, Port Townsend, Washington

With 433 acres and 228 buildings, Fort Worden State Park and Conference Center, in partnership with Centrum, a non-profit arts and education organization, conducts conferences, workshops, festivals, exhibitions, and a residential arts and performance program. Facilities include dining and meeting rooms, a theater, 33 vacation homes, and dormitories.

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Chapter 3

Development Policies and Urban Design Guidelines





Bertha W. Davidson neg 39324: Fort Snelling, Minn. (graphite, 1860) (Minnesota Historical Society)

Chapter 3 | Development Policies and Urban Design Guidelines

Chapter 3 articulates the rationale for the different approaches to development in the three Fort Snelling districts, and presents development policies and urban design guidelines.

Introduction

People have choices about where to live, where to work, where to recreate, and where to learn. People have lifestyle choices. The revitalization of Fort Snelling must facilitate a special and unique life experience. Fort Snelling's competitive advantage should be that it is even more attractive, more exciting, and more convenient, yet equally safe and secure, than that offered elsewhere in the Twin Cities metro area.

The Master Plan development policies should function as the guiding framework that focuses and frames the development planning among the landowners, the governance bodies, and potential investors/developers.



This mixed-use development in NE Minneapolis provides a grocery store, pharmacy, residential condominiums, and structured parking along a major transit route linking downtown and the University of Minnesota.



Pedestrian weather protection, outdoor seating, and a mid-block pedestrian connection characterize this mixed-use project in Seattle a block away from a light rail transit station.

Transit-oriented districts include:

A distance that can be walked in five to ten minutes, corresponding to approximately $\frac{1}{4}$ to $\frac{1}{2}$ mile from the transit station. This distance encourages pedestrian movement, provided that the environment is convenient and safe for pedestrians.

A nearby core area that includes a mix of land uses oriented to transit services and facilities, with physical and visual amenities that encourage transit use.

Both housing and employment that achieve specified levels of density or intensity that support, and are supported by, transit.

Design standards that improve the quality of the environment and apply to building and site design, as well as signage, pedestrian connections and other streetscape improvements.

A program for vehicular access to the station that does not undermine the character of the area and avoids interference with pedestrian connections.

Approach to the Future Level of Development

The Fort Snelling Light Rail Transit and Upper Post Master Plan places a high priority on providing multiple opportunities for development that increase transit ridership while facilitating the rehabilitation and reuse of the historic buildings at Fort Snelling. How these opportunities are maximized depends on the different individual physical contexts of each of the three Fort Snelling districts. How these contexts shaped the approach to revitalization is explained below.

LRT Station Area Triangle: Maximize transit ridership through redevelopment

The LRT Station Area Triangle, with no historic buildings and large un-built areas, offers the best opportunity for high density mixed use and a model for transit-oriented and transit-supportive development.

The approach to redevelopment in the 48-acre LRT Station Area Triangle is to reorganize and re-plot the area into a village of development zones with a mix of complementary uses at medium-to-high densities on several new blocks, including a new park and public plaza, all served by the LRT station, structured parking ramps, and on-street parking.

The 7-story Bishop Whipple Building, owned and managed by the GSA, is being renovated. The surface parking lot serving the Whipple Building will be excavated to install underground geothermal wells. This surface parking lot will be reconstructed and redesigned to provide more pedestrian orientation and amenity. Long-term, this parking lot could be replaced with redevelopment if a district energy facility is created to serve a larger area of Fort Snelling and that could replace the GSA-focused facility.

No change is proposed for the Fred Wells Tennis and Education Center which provides needed and desired recreation facilities and programs currently and would be an asset and amenity for future users of a revitalized Fort Snelling area.

Non-transit supportive uses should be relocated, and new infill development should occur on those sites such as medium to high density mixed-use development that supports and benefits from transit service. The MnDOT Central Services Building has no functional reason for its Fort Snelling location, and could be relocated if a suitable alternative location and relocation funding could be secured. The Fort Snelling Club, a low-density one-story building with surface parking, could be relocated into a ground floor of higher density redevelopment with structured parking.



The Bishop Whipple Federal Building (GSA) houses 39 different federal agencies, including Veterans Affairs, U. S. Fish and Wildlife Service, and the Department of Homeland Security. Currently there are about 1,800 employees working at this facility.



The focus of the renovation of the Whipple Federal Building will be on making the building more energy efficient through replacement of its mechanical systems.



The Fort Snelling Club (Building 89) is a private restaurant-bar-banquet facility.



The LRT South Lot for park-and-ride commuters could be redeveloped for a mix of uses as well as a new parking ramp structure serving new development and commuters.

Because of the proximity of the LRT station, development in this area could have fewer accessory parking spaces than normally required for development. Also, if the station area is to evolve into a pedestrian-friendly environment supportive of transit use, then so too must its surface park-and-ride lots. While these facilities are necessary in both the short-term to build ridership, they seriously inhibit intense mixed-use development around the station area due to their size and location. Therefore, there should be phased consolidation of surface parking into new ramp structures at several locations.



This NCO Quarters (Building 229 formerly used as a fourplex residence), as well as the adjacent NCO duplex (Building 227), could accommodate a variety of uses.

West District and Upper Post: Restore and expand buildings to provide flexibility for reuse

The West District's wide variety of building types and sizes, as well as outdoor spaces, and its proximity to the LRT station, offer diverse opportunities for new activities and investment as a transition area of new and old buildings at moderate densities.

The Upper Post area, with its many large historic buildings and exceptionally large park-like and recreational open spaces, presents intriguing options for uses and events that could help interpret the larger area's rich history.



The interior of the Quartermaster Stable (Building 211) retains much of its integrity, with dramatic spaces that could be used for artistic and/or institutional displays.

All remaining contributing historic buildings located within the Fort Snelling National Historic Landmark District and National Register and State Historic District should be preserved. More than 45 buildings are proposed to remain and be reused in the West District and Upper Post. The Northern Council of the Boy Scouts of America has restored Building 201 – former Cavalry Drill Hall for reuse as the Robert S. Davis Base Camp with a curriculum that includes youth leadership training and physical training. Historically-significant landscapes and viewsheds should also be preserved. Additions and some new buildings may be permitted in the West District and Upper Post areas.



This 20,400 sq. ft. Bachelor Officers' Quarters (Building 151) could be renovated for residential, office, or public/institutional uses.

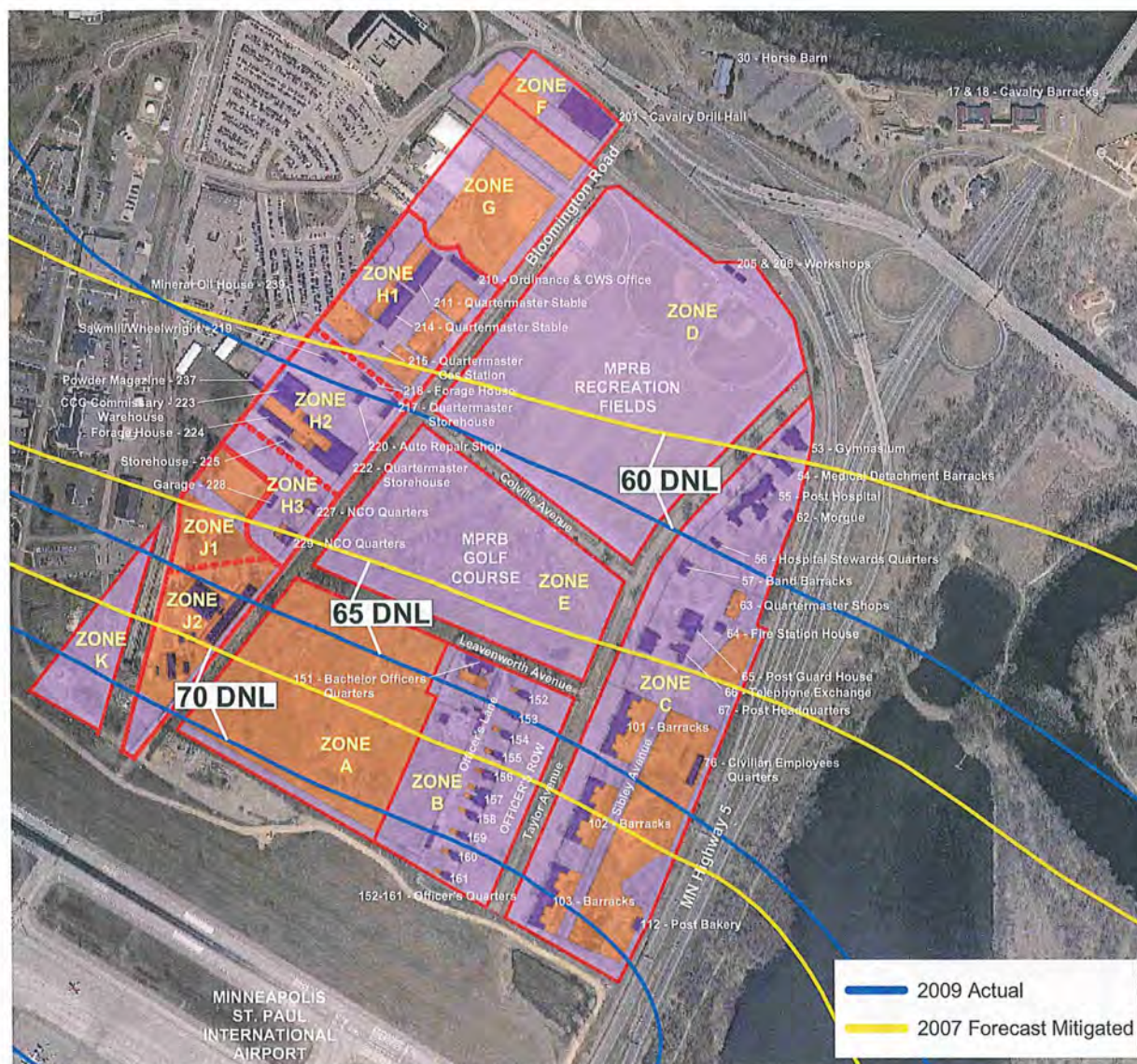
Airport Noise: Mitigate its negative effects for all uses

Fort Snelling is located adjacent to the Minneapolis-St. Paul Airport. Noise from planes taking off and landing is a perceived and real issue that will influence the variety of uses, activities, and buildings at a revitalized Fort Snelling. A primary effect of aircraft noise is its tendency to drown out or “mask” speech, making it difficult to carry on a normal conversation. Research has indicated that whenever intrusive noise exceeds approximately 60 dB day/night noise level (DNL) indoors, there will be interference with speech communication. Fort Snelling properties above the 60 dB DNL contour include West District Treatment Zones H2, H3, J1, J2, and K and nearly all of the buildings in the Upper Post Development Zones.



MSP runways are adjacent to Fort Snelling's Upper Post. It is expected that airport activity will continue to grow in the future. Noise mitigation will need to be addressed in reuse and redevelopment.

The Metropolitan Airports Commission (MAC) discourages residential uses at Fort Snelling. Sound mitigation will be an important aspect for the reuse of any of the available developable property at Fort Snelling. Buildings at the Upper Post do not qualify for any noise mitigation funding programs of the Metropolitan Airports Commission. Under the Consent Decree arising out of a noise mitigation court case, the MAC is required to do noise mitigation out to the 2007 “forecasted” contour. The MAC is also required to produce an “actual” contour each year out to 2014. The 2009 contour is smaller as a result of fewer operations and quieter aircraft. However, as the airport activity continues to grow into the future, the “actual” impact will likely grow with it, but it will be a function of activity and aircraft mix. See Figure 3.1: MSP Airport Noise Exposure Map.



Development Policies

Land Uses, Activities, and Development Intensity

Except where specifically noted, the following development policies apply broadly to the entire Fort Snelling area. These policies recognize the travel behavior of residents and other users close to transit and appropriately plan for local-serving retail demand, the need for pedestrian and bicycle infrastructure, and reduced parking demand.

1. **Attract and accommodate a wide variety of transit-supportive uses in the LRT Station Area Triangle, the West District, and the Upper Post.** Be flexible in the vertical and horizontal mixing of uses within buildings. Seek out uses that foster two-way travel. Create destination magnets of complementary building uses and area activities.

Historic buildings and new development should accommodate a variety of uses, including employment and business development, meeting spaces, cultural-museums, residential, hospitality, lodging, education and training, institutions, medical, fitness-health-recreational, entertainment, artists' studios, and child care. Encourage uses

that help to reconnect with and recall the interesting multi-layered history of the Fort Snelling area. Promote new retail and service uses that complement and serve the area.

2. **Establish a Fort Snelling LRT Station Area activity center.** Create an activity center of mutually-supportive uses around the LRT station, an engaging public place, one that “announces” the uniqueness of this historic area and is a focus for the whole area.
3. **Promote a dense and compact urban district throughout Fort Snelling.** Create medium-high density infill and redevelopment within the LRT Station Area Triangle. Facilitate



The 2 ½ story former Post Hospital (Building 55) with over 51,000 sq. ft. gross floor area is one of the largest historic buildings at Fort Snelling. Its size and variety of indoor spaces could accommodate a wide range of uses.

the rehabilitation of existing historic buildings in the West District and Upper Post as well as additions and new development where appropriate while ensuring that the historic open spaces and landscape character is retained.

Employment densities should be at least 200 employees per net acre to support transit and other desired services in the area.

Residential densities should be at least 30 units per net acre in a wide variety of building and ownership types, offering a spectrum of housing opportunities to help accelerate absorption rates in a changing housing market.



The plaza between the Hennepin County Government Center and Minneapolis City Hall provides a variety of welcoming amenities for pedestrians to gather and enjoy the mix of new and old buildings near the LRT station.

4. **Increase the amount and availability of land for new development.** It is important to have development near the LRT station that will generate walk-on users of transit. This can be facilitated by reducing the amount of land near the LRT station that is devoted to surface parking. Initiate the transition from this LRT station being oriented primarily to commuters to functioning more as a mixed-use center/cultural park destination.
5. **Increase public access and enjoyment.** Stimulate compatible cultural resource visitor use, tourism, and recreational activities and events, especially through creative programming of the significant areas of open landscaped areas, lease agreements with major tenants, and property management guidelines. Create formal partnership to plan and carry out events.
6. **Preserve historic assets.** Continue to stabilize and secure the historic buildings in the West District and Upper Post areas to increase their attractiveness for restoration and reuse.
7. **Encourage uses that enhance historic character but also provide flexibility for the future.** Promote building reuse plans and new building designs



This aerial illustrates the large amount of land devoted to surface parking, especially in the LRT Station Area Triangle.

that facilitate multi-purpose buildings whose uses can be adapted over time.

8. **Provide a park and open space system.** A network of new and historic green spaces, linked by sidewalks and paths, would unify and organize Fort Snelling into an easily understood orientation system that facilitates community building, socializing, walking, biking, and transit use. See Urban Design policies below.

Transportation Access, Connections, Mobility, and Parking

The development policies in this section address vehicle, bicycle, and pedestrian use in the Fort Snelling area. They adhere to and are consistent with Hennepin County's Active Living and Complete Streets policies.

1. **Maximize light rail transit ridership to and from the Fort Snelling station.** Encourage travel in both directions throughout every day. Work with Metro Transit, developers, owners, lessees, and event organizers on incentives that promote transit use.
2. **Improve access from regional roadways.** If feasible in the long-term, re-establish Minnehaha Avenue through the LRT Station Area Triangle and West District to Bloomington Road.

3. **Support multiple transportation modes.** Encourage walking, bicycling, and transit by making these modes of travel attractive, convenient, and safe. Minimize pedestrian/vehicle conflicts. Create internal bike lanes or paths.
4. **Create a wayfinding system.** Use distinctive streets signs, informational signage, and other methods to facilitate public access, orientation, and enhancement of the user experience for visitors, workers, and other users.
5. **Provide and improve pedestrian and bicycle connections to nearby major attractions.** Connect the LRT station/ West District/Upper Post areas to the Lower Post, Fort Snelling State Park, Coldwater Spring, Minnehaha Park, City



The City of Minneapolis sponsors the Nice Ride bike sharing program to encourage more people to cycle recreationally and as an alternative to the car for commuting.

- of Mendota, Sibley House and environs, and the MSP International Airport.
6. **Form an interconnected network of existing and new streets.** Reuse existing streets and establish new streets and connections to create smaller pedestrian-oriented block sizes. Provide multiple options for navigation. Include curbside parking, sidewalks, bikeways, street trees and lighting to encourage a safe motorized and non-motorized environment. Promote convenient and direct connection to and from the LRT station.
7. **Adjust traditional parking standards to take transit usage into account.** Encourage shared and structured parking. Consider placing a cap on the



This plaza in Guadalajara, Mexico, is designed so that pedestrians are guided to the nearby transit station.

amount of surface parking that may be developed. Encourage the “un-bundling” of the price of housing/office development and parking. Encourage the provision and use of short-term on-street parking.

8. **Provide ample, convenient, and secure bicycle parking and storage facilities.** Bicycle parking is an integral part of a multi-model strategy.
9. **Provide structured parking ramps.** Meet two-thirds of the parking demand for private development through structured parking, to be leased to surrounding development in the LRT Triangle. The balance of the demand should be met either on-site or by transit passes.



Curbside parking at Mendota Heights Village is provided for short-term visits by retail customers.

10. **Require TOD Parking Management Plans.** Require developments to prepare parking management strategies including car sharing, promotion of increased transit use, and reduction in vehicle use and parking fees.

11. **Provide parking for visitors in convenient locations throughout the LRT Station Area, West District, and the Upper Post.** Facilitate the creation of a few smaller visitor parking lots connected by landscaped walkways. Permit on-street parking for convenience for customers of retail and service establishments, and to provide a buffer between pedestrians and traffic.

12. **Establish a circulator shuttle service.** Connect the LRT Station Area, West



This parking ramp, designed to fit into its context, contains retail use on the ground floor with five levels of parking.

District, Upper Post, and the Lower Post ("Historic Fort Snelling"), and nearby related historic sites.

Economic Development and Sustainability Strategy

1. **Collaborate with private sector to reduce risk and maximize public benefits.** Strengthen predictability and reduce development project risk through participation of both private and public sectors in the design and financing of joint development projects. Create a decision-making structure to work with developers during financial analysis of projects to balance development costs, investment returns, and public benefits.



The Minnesota Transportation Museum has several older buses that could be refurbished for Fort Snelling shuttle service.

2. **Link revenues from new development to fund restoration activities.** Leverage new development and property-tax-paying (or equivalent) uses to obtain revenue to facilitate the reuse and rehabilitation of historic structures and landscapes, as well as to fund needed infrastructure.
3. **Institute a development review and approval decision-making process that has clarity, flexibility, and timeliness.** Ensure that it recognizes that revitalization of the Fort Snelling area will involve continuously adaptive activity in an evolving marketplace. The decision-making framework should stimulate review, refinement, and revision rather than adherence to a fixed set of rules that defy challenge.
4. **Establish decision-making and management structures for governance, undertaking development, road and utility capital improvements, operations, maintenance, repair, and replacement.** As discussed earlier in this report, revitalization of Fort Snelling needs strong leadership, clear decision-making structures, and an active, adequately-funded work program.

5. **Consider “interim developments” that will maintain the long term vision.** Use “temporary” uses to attract more people to Fort Snelling, and to facilitate learning more about the area’s history and potential.
6. **Publicize and market Fort Snelling’s opportunities.** Develop and implement a public relations and branding strategy. A strong communications effort requires an understanding of Fort Snelling’s position in the larger marketplace of real estate, historic sites, event venues, and locational advantages. Undertake message development and a tactical campaign to attract interest and investment in Fort Snelling’s revitalization. The marketing program should be strategic to ensure that its scope, reach, and targeted



This small coffee shop on a temporary plaza serves visitors and nearby office workers in downtown Vancouver, Canada.

audiences will shape programs that will sustain Fort Snelling as a destination and as a community.

7. **Create a formal partnership to plan and carry out events.** A joint effort should be structured to attract new visitors and to extend the stay of existing visitors. The recreational aspects of the area could be marketed early and be used to position Fort Snelling as a leisure destination while the cultural attractions are being enhanced and developed.
8. **Keep focused on the long term vision.** Consider timely plan re-assessments, and adjustments, to facilitate small, incremental development opportunities which still sustain the vision and contribute to long term goals.



Temporary games and other similar activities can animate public open space.

9. **Phase-in public improvements.** Institute a strategic program of staged public improvements and infrastructure commensurate with the level of development and activities.
10. **Investigate the feasibility of a district energy system.** The campus of historic existing buildings and new development could be ideal for a district energy system for space heating, domestic hot water heating, and air conditioning. Consider the feasibility of a stationary vacuum system for waste and recyclables, as part of a larger investigation into energy efficiency for the whole site or portions of the Fort Snelling area. Maximize utilization of facilities and buildings (historic and new) and design for flexibility to reduce cost, energy, and environmental impacts of materials, in accordance with the State of Minnesota Sustainable Building Guidelines.

Urban Design Guidelines

The urban design guidelines provide more specific direction to developers and governance bodies in site planning and in the design of individual development projects in the three districts as well as guidance to Fort Snelling's governance bodies in overall site planning throughout Fort Snelling. These urban design guidelines are organized as follows:

- » LRT Station Area Triangle Development Character
- » West District Development Character
- » Upper Post Development Character
- » Landscape and Public Realm Character

Urban Design: LRT Station Area Triangle Development Character

The urban design guidelines in this section address the creation of new development zones, the siting of buildings, building form, placement, and orientation, and open space form, role, and location, as well as the need for new public space.

These urban design guidelines address the challenges of restoration and infill in a broader historic cultural landscape. They are not intended to require particular architectural features or dictate architectural style. They

Oodena Celebration Circle, Winnipeg, Manitoba, Canada

The confluence of the Assiniboine River and the Red River of the North has long been a gathering location for the pan-tribal councils of the Dakota, Cree, and Ojibwe. The French and British explorers, settlers, and governments erected a series of trading posts and military forts there as well. Today, that area is called The Forks, a 56-acre cultural, entertainment, and shopping site. In 2003, The Forks North Portage Corporation opened its newest park/public plaza called the "Oodena Celebration Circle" as a reminder of the human history at the site and to commemorate the spirit of the place. It also pays tribute to the culture and traditions of the aboriginal peoples in Winnipeg and throughout the province of Manitoba.

Similarly, the history of Native Peoples at the confluence of the Mississippi River and the Minnesota River near Fort Snelling could be recalled in such a distinctive manner as well.



do not cite precise dimensions or specify precise land uses in certain locations. Instead, they allow for flexibility and creativity, a range of design options, while adhering to the fundamentals of transit-oriented development. They discourage the mimicry of historical features. Rather, they encourage a continuum and a generational continuity.

The guidelines acknowledge that developers and designers will want to make design statements, but the guidelines advise that they should do so within the framework of the built and landscape heritage we inherit and pass on.

1. **Create an LRT Station civic square and a new park-commons in the LRT Station Area Triangle.** Establish a gateway/sense of arrival, open space focal point for new development, and



The Southwest Station provides an all weather enclosed building for transit patrons, bicycle parking, plaza, plantings, walkways, and restaurants.

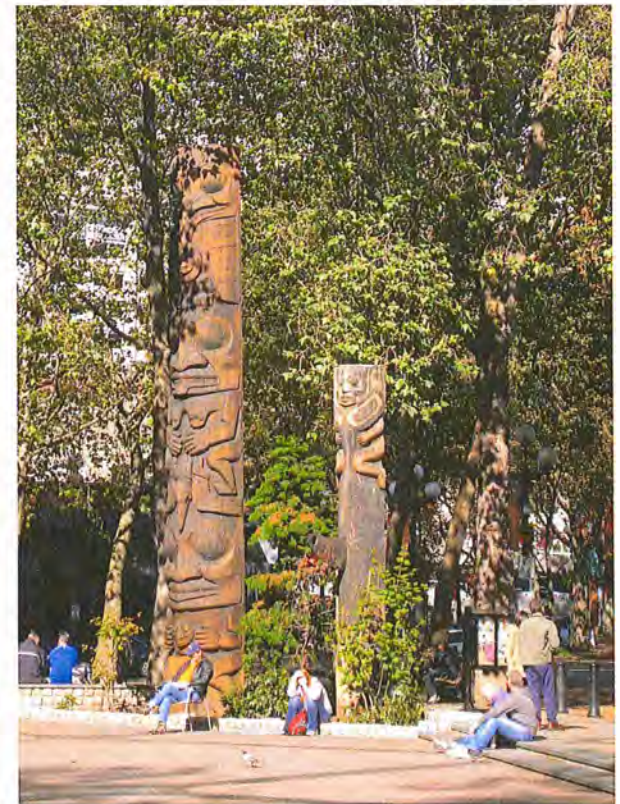
community gathering spaces, within a cluster of high quality, compatible new buildings. Within this gateway space, or in some other appropriate location in the Fort Snelling area, create a special public art installation that commemorates the importance of this location to both Native Americans and European/Euro-Americans historically and to all Minnesotans today.

2. **Create compact development.** Organize the Fort Snelling community around a hierarchy of block sizes, parks and public spaces, and integrate pedestrian and cycling “short cuts” to provide multiple public and private ways that link directly to transit and shorten walking distances between destinations.



A mix of condo and rental apartments, as well as townhomes, in Northeast Minneapolis provides a range of housing choices connected by sidewalks to a transit route.

3. **Reinforce historic context.** Recognize and reinforce the historic location, buildings, and development/landscape pattern of the West District and Upper Post areas in the LRT Station Area Triangle, through extensions of the roadway grid, open space networks, building morphology, materials usage, public art, and even place names.



The Haida totem poles in Seattle's Pioneer Square District remind visitors of the Native American heritage of the Pacific Northwest.

4. **Seek to harmonize contemporary architectural building designs and materials with adjacent and nearby historic buildings.** Establish a distinctive form and character for the whole Fort Snelling which accommodates new of-its-own-time architecture that is compatible with the historic buildings and landscape of Fort Snelling's West District and Upper Post. Maintaining visual continuity does not mean there is no possibility for change. Variety, invention, and change are all possible within the bounds of a consistent and visual tradition.
5. **Locate and orient buildings to promote pedestrian convenience.** Locate buildings close to each other and close to the street/sidewalk.



This mixed-use building in Ottawa, Canada, uses traditional materials as part of a modern design aesthetic in an older neighborhood near a bus rapid transit station.



Richfield's Woodlake Centre provides pedestrian amenities on the front façade with windows and a setback for outdoor dining, linking this activity to the sidewalk environment.

6. **Preserve historic views and create new ones.** Design building massing and location to minimize disruption of significant views from and to existing developments and public places. In addition, provide new views in new developments.
7. **Establish density and height gradients.** Permit higher densities and heights nearer the LRT station, and lower densities and heights nearer the West District. Permit and promote building heights of 4-8 stories, up to 100 feet, in the LRT Station Area Triangle to facilitate a compact and clustered urban character. Step back buildings at the fourth or fifth floors to maintain a more pedestrian scale along the sidewalks and streets.



The upper floors of this mixed-use building in St. Paul step back from the street to provide a less massive presence for sidewalk pedestrians.

8. **Promote continuity between uses and new built forms, rehabilitation/additions, parks, public places and pathways.** Integrate all areas through the street pattern, ground plane design, and overall building forms.
9. **Re-establish a grid of streets.** Construct new streets in the LRT Station Area Triangle, and re-construct existing streets that reinforce and, where possible, reconnect the historic street pattern. Use this fine-grained street network to reduce the need for wider streets, to enhance wayfinding, and to establish clear and more direct routes for pedestrians and bicyclists.
10. **Leave room to grow.** Site new buildings on land parcels to accommodate possible future intensification.



The front yards of these barracks buildings (Buildings 101, 102, and 103) must remain open. To the rear a large area is designated for additions and infill redevelopment.

Urban Design: Introduction to both West District and Upper Post areas

The following guidelines explain where and how additions and new construction may be permitted in these two historic districts. The urban design guidelines for both the West District and the Upper Post recognize the fact that redevelopment of the historic buildings and open spaces may require some additional incentives to make that goal financially feasible. To that end, the 2008 and 2010 historic context studies by Miller Dunwiddie Architecture reviewed the buildings and open spaces of each Development or Treatment Zone to determine how and where new development could appropriately take place to provide the additional density that may be necessary. Each of the zones in the West District and the Upper Post have areas identified as being favorable for new development, ranging from minimal changes limited to improving the accessibility of existing buildings to larger areas of open land available for new construction. See Figure 3.2 West District Treatment Zones and Upper Post Development Zones.

These historic context studies emphasize that these areas of new development be somehow linked to the reuse and restoration of historic buildings, so that those entities utilizing them can take advantage of development of some open space areas to help make the total project feasible. Further, the studies cautioned that one or two parties should not be given rights

to the most developable land, leaving others to struggle with the rehabilitation of the historic buildings without financial enhancements.

Ultimately, any new development or rehabilitation in the West District and Upper Post will be judged and interpreted against the Secretary of the Interior's Standards for Rehabilitation (National Park Service), the overarching document upon which the West District and Upper Post Guidelines were developed. The Standards are ten basic principles created to help preserve the distinctive character of a historic building and its site, while allowing for reasonable changes to meet new needs. These Standards will be subject to interpretation by reviewers on a case-by-case basis as appropriate to specific development proposals. These Standards are listed in Appendix 3.



The Secretary of the Interior's Standards for Rehabilitation

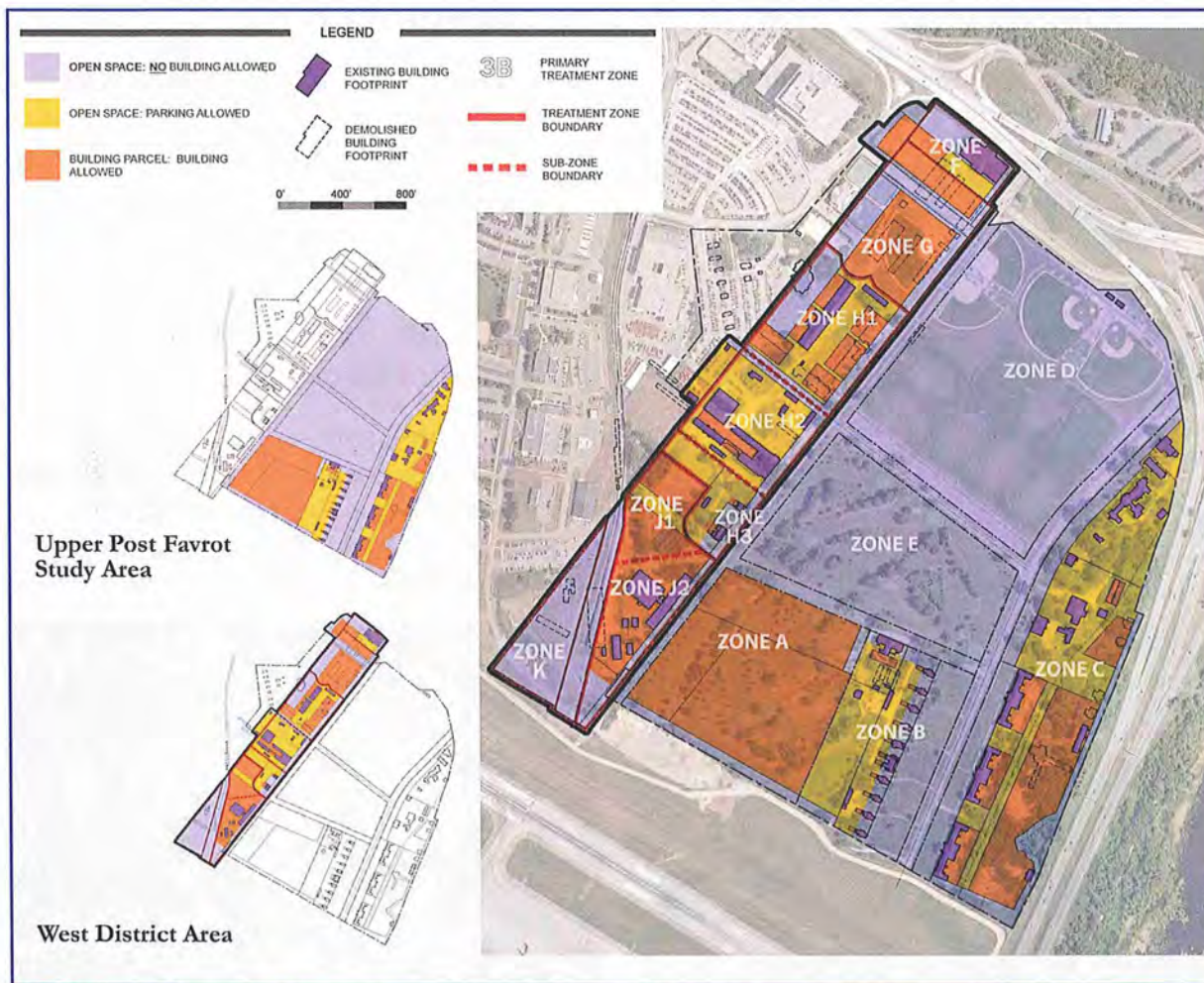


Figure 3.2 West District and Upper Post Treatment Zones

Urban Design: West District Development Character

The West District was historically the support area of the fort and currently houses a mix of historic and non-historic buildings, open space, and parking lots.

In April, 2010, on contract to Hennepin County, Miller Dunwiddie Architecture and Hess, Roise and Company completed the Fort Snelling West District – Historical Context Study and Development Guidelines report which chronicles the history of the Upper Post, focusing on the what was the quartermaster's area, and evaluates the potential for reuse and redevelopment in the area of Fort Snelling west of Bloomington Road. This study was supported by a Legacy Grant from the Minnesota Historical Society. See Appendix 1.



The Subsistence/Quartermaster Storehouse (Building 222) is a combination of several buildings built in 1904, 1905, 1914, and 1935.

The first section of that report summarizes the history of the site, the historic character of the West District, as well as providing specific information about each building. Historic zones are established based on the historic use of the site, their coherence of scale, period of construction, and circulation.

The second section of that report identifies the “contributing” West District historic buildings, open spaces, and landscapes that should be retained, as well as potential new areas for development. It specifically addresses where new development could take place and the siting, massing, density, and other characteristics of such new development. Development Guidelines are provided which identify the Treatment Zones of the West District and describe within each zone the location and extent of reuse, additions, and new construction allowed. The remaining sections of the Development Guidelines provide information about how the rehabilitation and new construction may occur. The Development Guidelines are organized into seven sections:

- » Treatment Zones
- » Rehabilitation Guidelines
- » New Construction Guidelines
- » Landscape Guidelines
- » Health and Safety Guidelines

- » Sustainable Design Guidelines
- » Property Management During Development

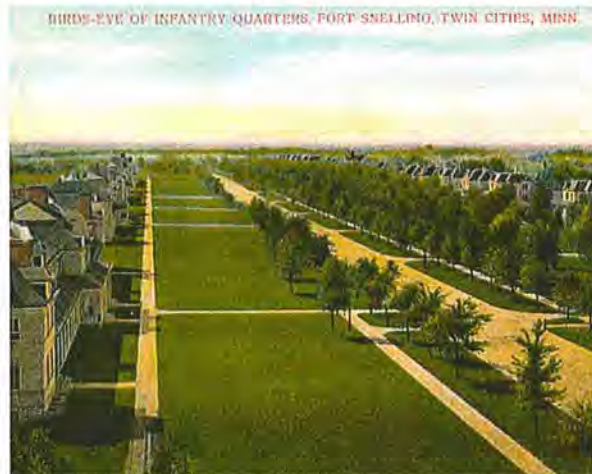
The Treatment Zones provide information and guidance for the following:

- » Existing historic buildings
- » Current use of the site
- » Allowable building re-use/additions
- » Allowable new construction, building placement, density, and setbacks
- » Allowable building height and materials

- » Street presence
- » Existing historic landscape/features
- » Allowable land uses
- » Parking strategies
- » Streetscape/landscape standards

Urban Design: Upper Post Development Character

Beginning in the 1870s, the Upper Post was developed to the south of the Lower Fort as the new headquarters of the Department of the Dakota. There are only 26 surviving buildings in a campus-like landscape of ordered open



This 1908 postcard, drawn from an 1895 photo, shows the engineered precision of the open lawns in front of the barracks at Fort Snelling, as well as the canopy of parkland tree plantings in front of the officers' row houses.



The former Polo Grounds, now leased to the Minneapolis Park and Recreation Board, was historically open space and is currently used for a variety of sports. No development should occur in this area, including additional parking lots.

spaces (Parade Grounds, Polo Grounds, Golf Course, and formal front lawns for the Officers Row homes and Cavalry Barracks).

In the summer of 2008, on contract to Hennepin County and the Minnesota Department of Natural Resources, Miller Dunwiddie Architecture et al. completed the Fort Snelling Upper Post Open Space and Landscape Development Guidelines. This study was supported by a National Trust for Historic Preservation Johanna Favrot grant. See Appendix 2.

That report contains historic context information, site maps, and specifically addresses the landscape and open space features to be retained, where new



Pioneer Square in Portland, which is a central location for their MAX light rail transit system, is also a key venue for community events, hosting large-scale concerts and cultural festivals.

development could take place, and the siting, massing, density, and other characteristics of such new development.

The Development Zones are organized by the following Site Development Standards categories:

- » Allowable land uses
- » Building use and additions
- » Building placement, density, and setbacks
- » Building height and materials
- » Parking strategies



This sidewalk in front of the former Administration Building (Building 67) on Taylor Avenue is part of a larger pedestrian walkway system that connects most of the historic buildings at Fort Snelling.

- » Street presence
- » Streetscape/landscape standards

Urban Design: Landscape and Public Realm Character

1. **Create identity through design and development of parks and the public realm.** Establish parks and a high amenity public realm throughout the LRT Station Triangle, West District, and Upper Post areas that promotes multiple opportunities for social interaction as well as special spaces for retreat and solitude. Treat the public realm so that through improvements in signage, sidewalks, street art, and unique styles of lighting, signage, and other amenities, community identity and community social life are established and maintained and overall area orientation is enhanced.
2. **Create an amenity-rich walking and cycling environment.** Use parks and public open spaces as central organizing features, with connections to adjacent areas with foot and bicycle paths. Layout streets to facilitate pedestrian and bicycling movement, with emphasis on direct routes to and from the light rail station. Prepare an interconnected pedestrian and bike path network plan, with recommended design



The design of High Line Park in New York City's former Meatpacking Historic District retained portions of railroad tracks that recall its industrial heritage. The High Line corridor also provides fixed and movable seating.

specifications, so that site plans for specific development sites can respond to the network rather than the other way around.

3. **Provide visible, direct pedestrian paths between activity generators and the transit station and circulator bus stops.** Encourage people to enjoy the street by making the experience a pleasant one, with changing patterns and opportunities for chance meetings. Where possible, orient pedestrian routes to a landmark or focal point to facilitate orientation and wayfinding. Provide weather protection as part of waiting areas at the transit station and in building projections, porches, colonnades or arcades, building awnings, and use of landscaping elements. Provide seating, shelter, and lighting along walkways. Create pedestrian ways in parking lots through grade changes, differences in materials, and/or landscaped islands. Ensure that sidewalks linking to the LRT station are wide and smooth enough for wheelchairs and strollers, and lined with trees, lights, and wayfinding signs to improve orientation and safety.
4. **Create a wayfinding system.** Provide orientation, directional information, and destination identification. Develop a wayfinding system comprising indoor

and outdoor signage, markers, map kiosks, and other wayfinding design elements to help direct transit users to and from the transit station, and to help people find other destinations and understand the continuity of the street, sidewalk, and path network.

5. **Locate parking to maximize place-making.** Ensure that parking does not detract from the desired overall image by placing it internal to the block, ideally within ramp structures, inside buildings, or underground. Parking structures are essential to achieve higher densities in transit-oriented development, but not at the expense of pedestrian amenity and convenience.
6. **Discourage surface parking lots.** Where surface parking is permitted, locate it at the rear of buildings and not between the public right-of-way and the functional front of the building.
7. **Minimize vehicle crossings over primary pedestrian routes.** Design and locate parking areas, driveways, and internal roads to avoid interruption of pedestrian routes where possible.

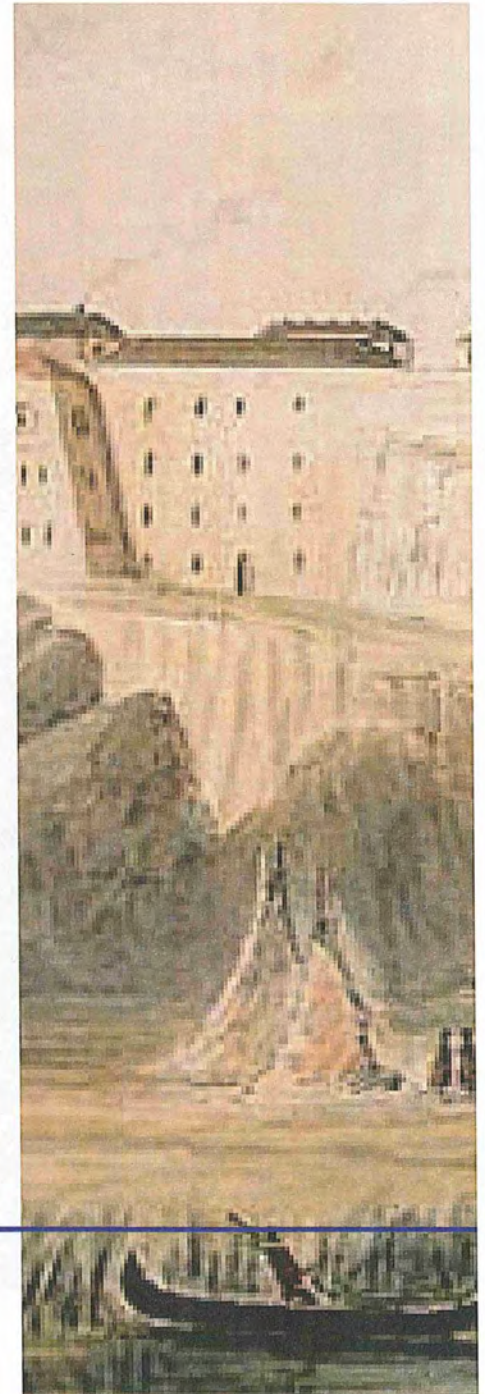


This walkway in Madrid connects parks, museums, restaurants, and transit, all in a tree-lined corridor with benches, decorative lighting, and other pedestrian amenities.

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Chapter 4

Overall Development Concept





F. Jackson neg 10288: Fort Snelling, Upper Mississippi (watercolor, 1857) (Minnesota Historical Society)

Chapter 4 | Overall Development Concept

Chapter 4 summarizes the development potential of the LRT Station Area Triangle, the West District, and the Upper Post. Maps are provided to suggest how development opportunities could be realized over time, as well as a map that delineates preliminary open space zones. Also, illustrations are provided to showcase the possibilities associated with reuse/restoration, infill, and bold new transit-oriented development.

Introduction

Several key urban design elements are required to work in tandem to create an integrated development plan:

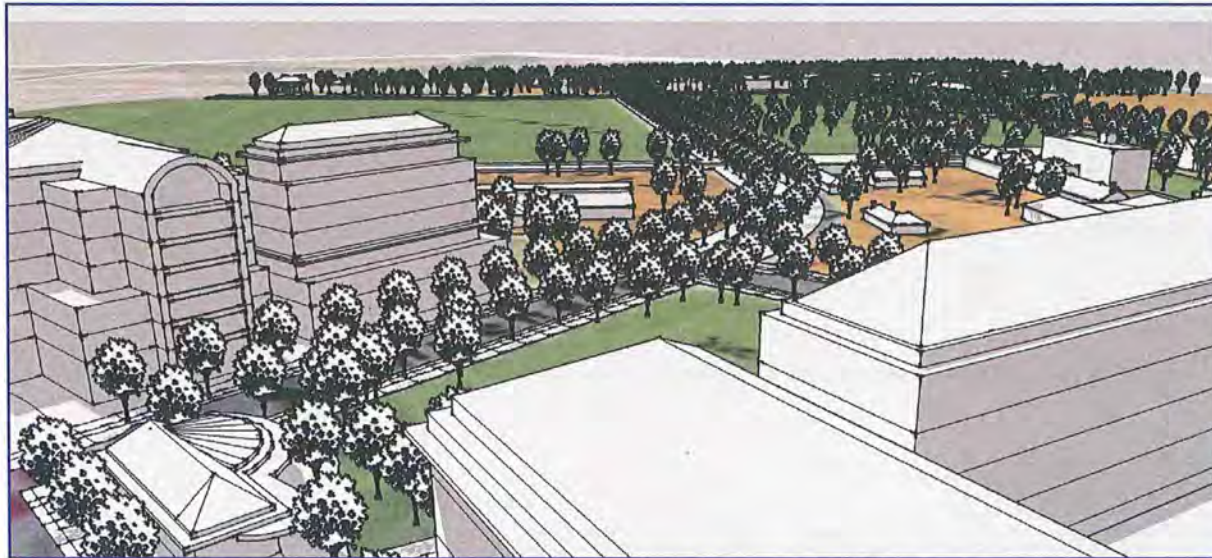
1. Block Patterns
2. Open Space
3. Access and Circulation
4. Transitions
5. Connections off-site

These urban design elements, working in concert with the complementary and transit-

supportive mix of uses to maximize transit use, can also unify and reconnect the larger Fort Snelling area.

Transit-oriented districts must have small blocks (2-4 acres) connected by street patterns that shorten walking distances between destinations. Where larger blocks exist or are unavoidable, publically-accessible pedestrian easements and pathways should be created to ensure more frequent connections through blocks and to break up the scale. Common areas that function as public park/public use and “private” open space areas are required adjacent to certain rehabilitation/redevelopment sites. All of these blocks and open space areas need to be linked by paths and corridors to ensure a pedestrian-oriented environment that supports transit use.

The unity of the three districts depends in large measure on a new plan that recognizes and “brings forward” the development pattern of a military post, prescribes a new complementary pattern for the largely vacant lands adjacent to the LRT station, and identifies an open space network that links these areas. The overall development concept presented here is therefore an extension and modification of the original rectilinear design plan of the Upper Post. This overall development concept provides the framework for creating a new interdependent community of users and visitors.



Proposed development at LRT Triangle, looking south along Minnehaha Avenue toward Administration Building

Development Areas

The three distinct areas for development comprise the Fort Snelling LRT and Upper Post Master Plan area total 232.8 acres. They are:

- » LRT Station Area Triangle
- » West District
- » Upper Post

Development Potential Summary

New construction in the LRT Station Area Triangle and in the historic districts, and adaptive reuse of existing buildings and any expansions or additions in Fort Snelling's West District and Upper Post, will depend on several factors: market demand, construction costs, and user space needs. These factors are discussed in Chapter 5 Economic Development.

The following tables outline the development potential for all development zones in the three districts. See also Figures 4.1, 4.2, 4.3, 4.4, and 4.5 for illustrative plans to depict the evolution of restoration, selective infill in appropriate areas, and new redevelopment construction activities.

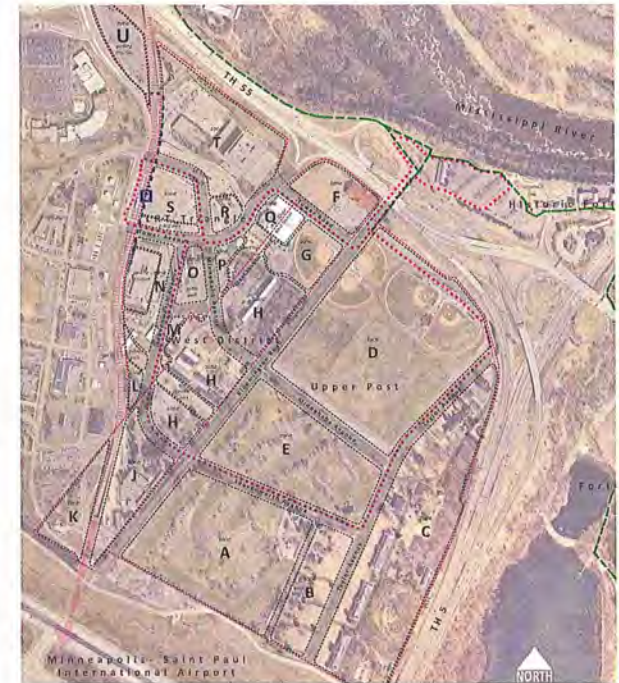


Figure 4.1 Development zones

Land use District	Total area		Development area		Right-of-way		Public park		Historic open space		Parking Structures		Exclusions	
	square feet	acres	square feet	acres	square feet	acres	square feet	acres	square feet	acres	square feet	acres	square feet	acres
LRT Triangle	2086550	47.9	1414550	34.9	344000	6.3	159900	3.7	4000	0.1	164100	2.9	0	0.0
West District	1912284	43.9	1099804	25.2	117480	2.7	52000	1.2	63000	1.4	0	0.0	580000	13.3
Upper Post	6141960	141.0	2234628	51.3	577500	13.3	2700720	62.0	631450	14.5	0	0.0	0	0.0
Total area		232.8		111.4			22.3				16.0		2.9	13.3
Percent of total area		100%		48%			10%				7%		1%	6%

Notes

LRT Triangle area calculated from Concept Plan

West District area provided by Miller Dunwiddie Architects (calculated area is 2042525 square feet)

Upper Post area provided by Miller Dunwiddie Architects (calculated area is 6327975 square feet)

Public park includes areas designated as public spaces

Historic open space includes areas set aside from development that may or may not be accessible to the public and where parking will not be permitted

Exclusions in the West District includes that portion of the district that includes the LRT tracks/tunnel and areas within the secure perimeter of the military base

Development area for each zone is calculated as the "Total area less the sum of (Right-of-way plus Public park plus Historic open space plus Exclusions)"

Development area in the LRT Triangle includes non-building area on a portion of each parcel, perhaps according to the "percent cover" in the chart below

Development area in the West District includes non-building area which must be retained as open space (which may be used for parking) according to the Fort Snelling West District - Historical Context Study and Development Guidelines

Development area in the Upper Post includes non-building area which must be retained as open space (which may be used for parking) according to the Fort Snelling Upper Post - Historical Context Study and Development Guidelines

Rights-of-way in the LRT Triangle are calculated at 80 feet wide (4300 linear feet); in the West District and Upper Post, rights-of-way are calculated at 66 feet wide (1780 linear feet in West District, 8750 linear feet in Upper Post).

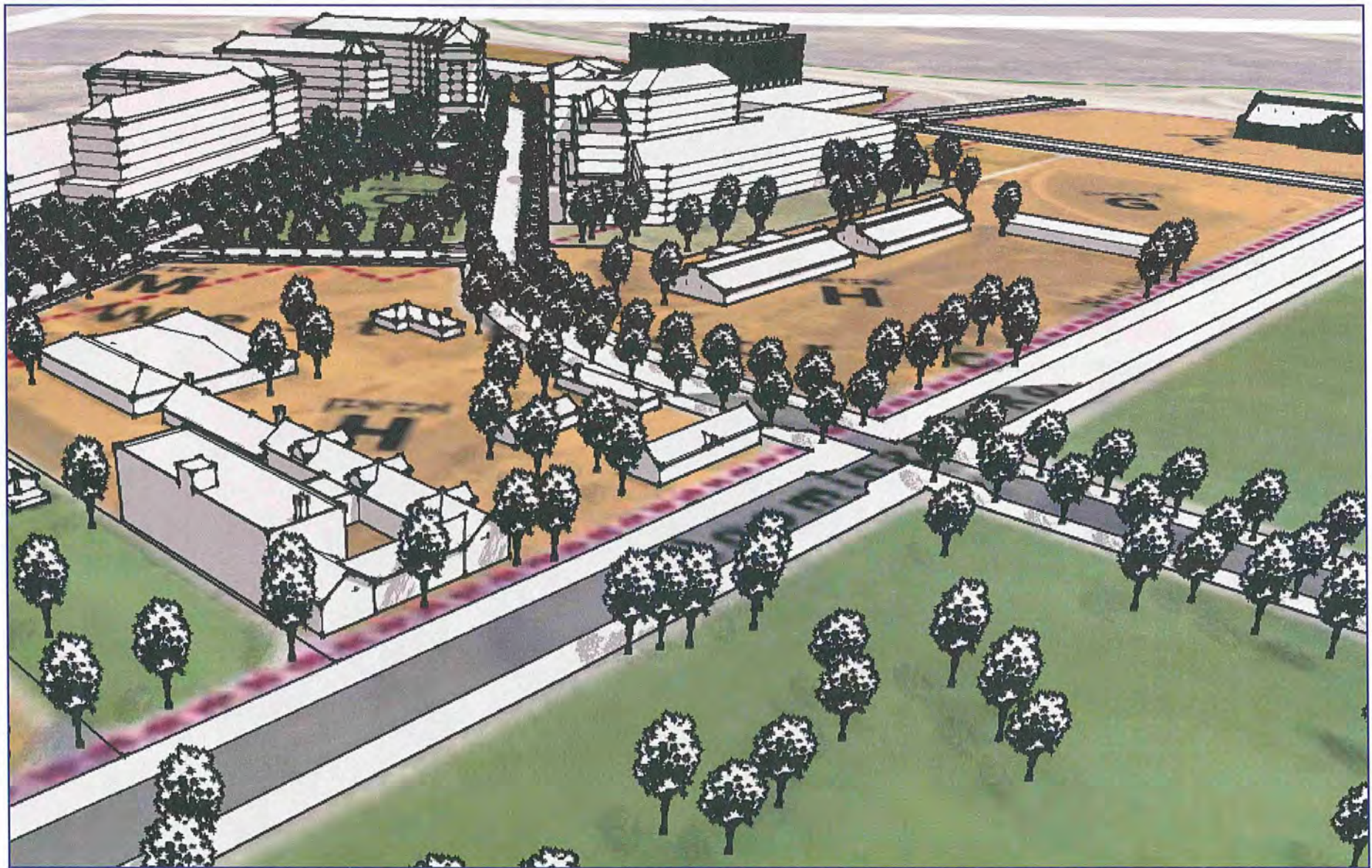
Development potential District	Zone	Historic bldgs/addn		New development				Total Development	
		acres	square feet	site area	percent cover	floors	square feet		square feet
LRT Triangle	L	1.3		58031	50%	3	87047	new develop on a portion of LRT parking	87047
	M	0.7		32426	20%	2	12970	new develop on a portion of LRT parking, small tight parcel	12970
	N	3.0		128935	60%	7	541527	new develop on exist MnDOT	541527
	O	2.1		93500	4%	1	3273	new develop on a portion of LRT parking (in new park)	3273
	P	1.2		52424	50%	7	183484	new develop on parking at Fort Snelling Club	183484
	Q	1.2		51970			0	no develop, exist tennis center	0
	R	1.3		57097	50%	4	114194	new develop on exist GSA parking	114194
	S	3.4		148512	60%	7	623750	new develop on exist GSA parking	623750
	T	17.1		745050			698600	no develop, exist GSA building	698600
	U	3.5		154330			0	no develop, create LRT parking structure	0
Total zone area, LRT Triangle		34.9							Total, LRT Triangle 2264845
West District	F	3.0	28000				51307		79307
	G	9.0	0				81854		81854
	H	19.4	129005				124054		253059
	J	9.9	0				268115		268115
	K	4.2	0				0		0
	other	0.0	2430				0		2430
Total zone area, West District		45.5	159435				525330		Total, West District 684765
Upper Post	A	20.1	0				369444		369444
	B	13.8	75332				0		75332
	C	31.9	280385				120853		401238
	D	40.6	0				0		0
	E	19.6	0				0		0
Total zone area, Upper Post		126.0	355717				490297		Total, Upper Post 846014
Total development, all districts, including redevelopment of GSA parking lots									3795624
Total development, all districts, NOT including redevelopment of GSA parking lots									3057679
Notes Overlap in district boundaries at the West District and Upper Post results in totals for district area and development zones that do not match. In the Fort Snelling West District - Historical Context Study and Design Guidelines, areas for rights-of-way were not distinguished from areas for development parcels. In the Fort Snelling Upper Post - Open Space and Landscape Development Guidelines areas for rights-of-way were not distinguished from areas for development parcels. Calculations for new development in the West District and Upper Post are provided in the Fort Snelling West District - Historical Context Study and Design Guidelines and the Fort Snelling Upper Post - Historic Context Study and Design Guidelines Zones A, B, and C in the Upper Post include areas defined as Historic Open Space which are designated as "no-build" areas in the Fort Snelling Upper Post - Open Space and Landscape Development Guidelines									



The Parade Ground and Polo Grounds at the Upper Post (foreground) are linked to the West District and the LRT Triangle by Minnehaha Avenue.



A central common space forms a focus for development in the LRT Triangle and recalls the significant open space and building relationships found in the Upper Post.



Portions of the West District and its stock of historic buildings, with new development at the LRT Triangle focused on its central common space.

Figure 4.2 Development Concept (full build-out)

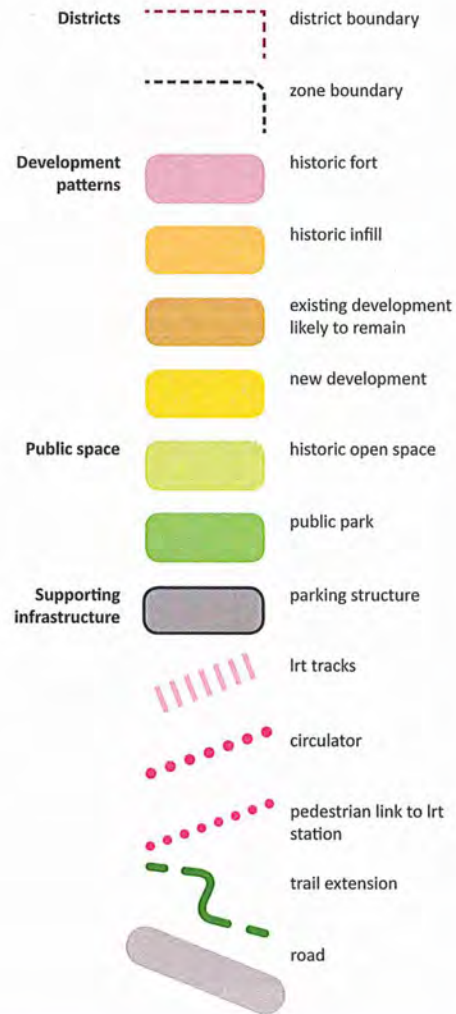




Figure 4.3 Near-Term Development Opportunities

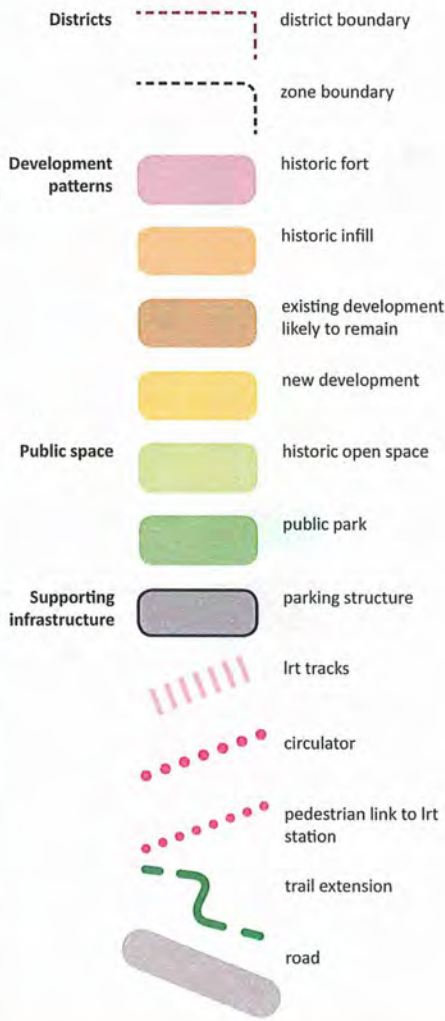


Figure 4.4 Medium-Term Development Opportunities

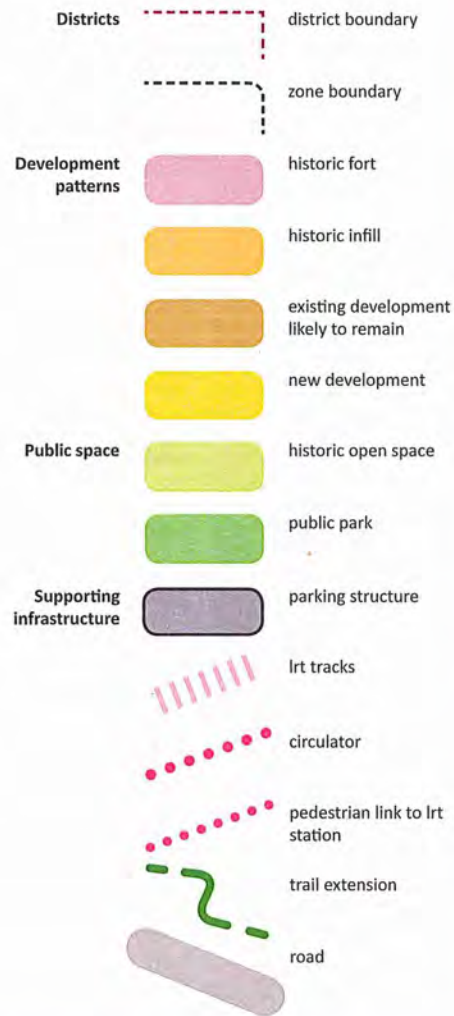
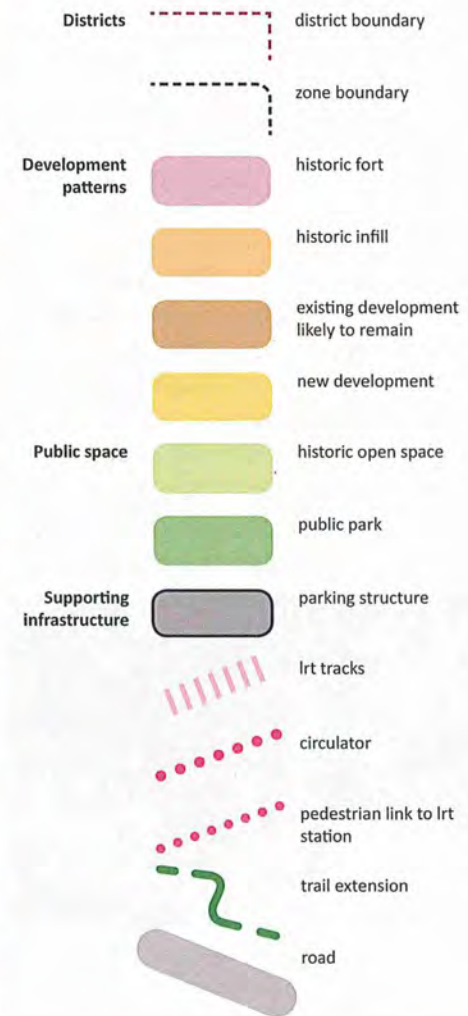




Figure 4.5 Long-Term Development Opportunities



Preliminary Open Space Zones

One of the goals of the Master Plan is to create an inviting park-like regional destination.

High quality public spaces are needed to facilitate the transformation of Fort Snelling from an abandoned military base into a vibrant mixed-use community supportive of increased transit use.

The continued recreation use of the former polo fields, restoration of the Parade Grounds, the Fred Wells Tennis and Education Center, the Boy Scouts' Robert S. Davis Base Camp, and the creation of new public park spaces in the LRT Triangle and West District will connect Fort Snelling back to the life of the region. Complementary private open spaces, required as part of the reuse and redevelopment



This linear park in front of the Prado Museum in Madrid has paths, benches, and public art, and historical markers that attract visitors and residents.

process, are needed to ensure that the total Fort Snelling area has an integrated and connected open space system. Done well, this open space system will contribute to Fort Snelling becoming a special place that will bring people and vitality.

Therefore, the ongoing investment in the physical fabric of Fort Snelling is essential to the attraction of private investment capital for historic building reuse and restoration and new redevelopment.

The proposed parks and open spaces at Fort Snelling total 82.9 acres and comprise two categories:

- » New parks and public open space total 66.9 acres.
- » The historic open space landscapes total 16.0 acres



Minneapolis' Loring Greenway provides a canopied path connecting a park, residential area, a business/hotel/restaurant precinct, and the Nicollet Mall transit corridor.



The lawn areas in front of the former homes on Officers Row and the Barracks Buildings should remain as open space (no buildings allowed). Boulevard trees should be planted along Taylor Avenue, and front yard landscaping should be reestablished, consistent with historical documents.



Formal paths and landscaping define spaces for walking and contemplation in Loose Park in Kansas City, Missouri.

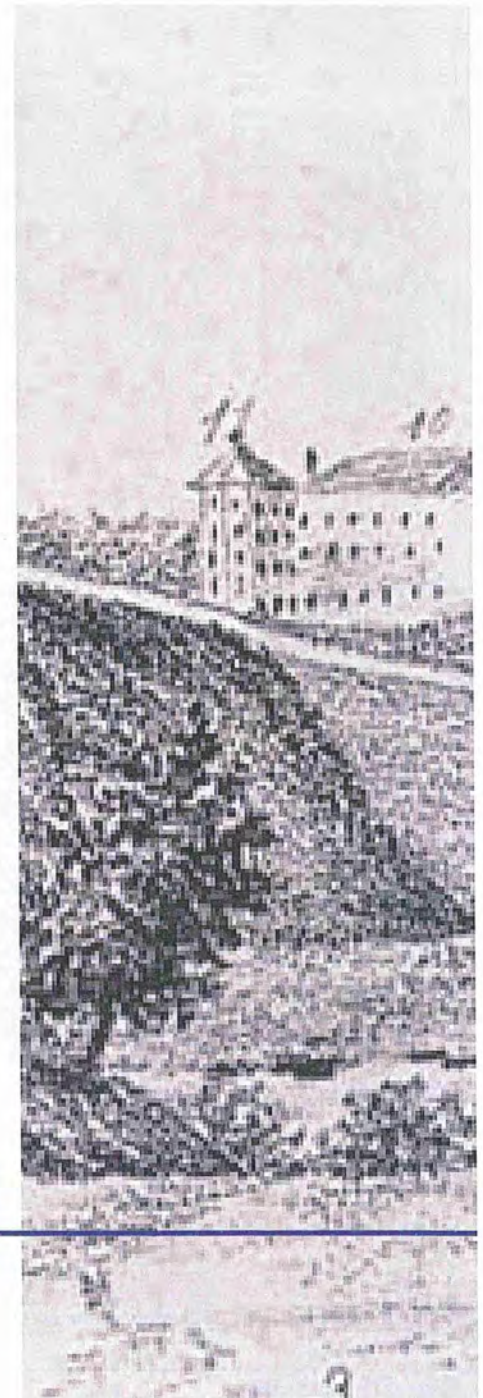


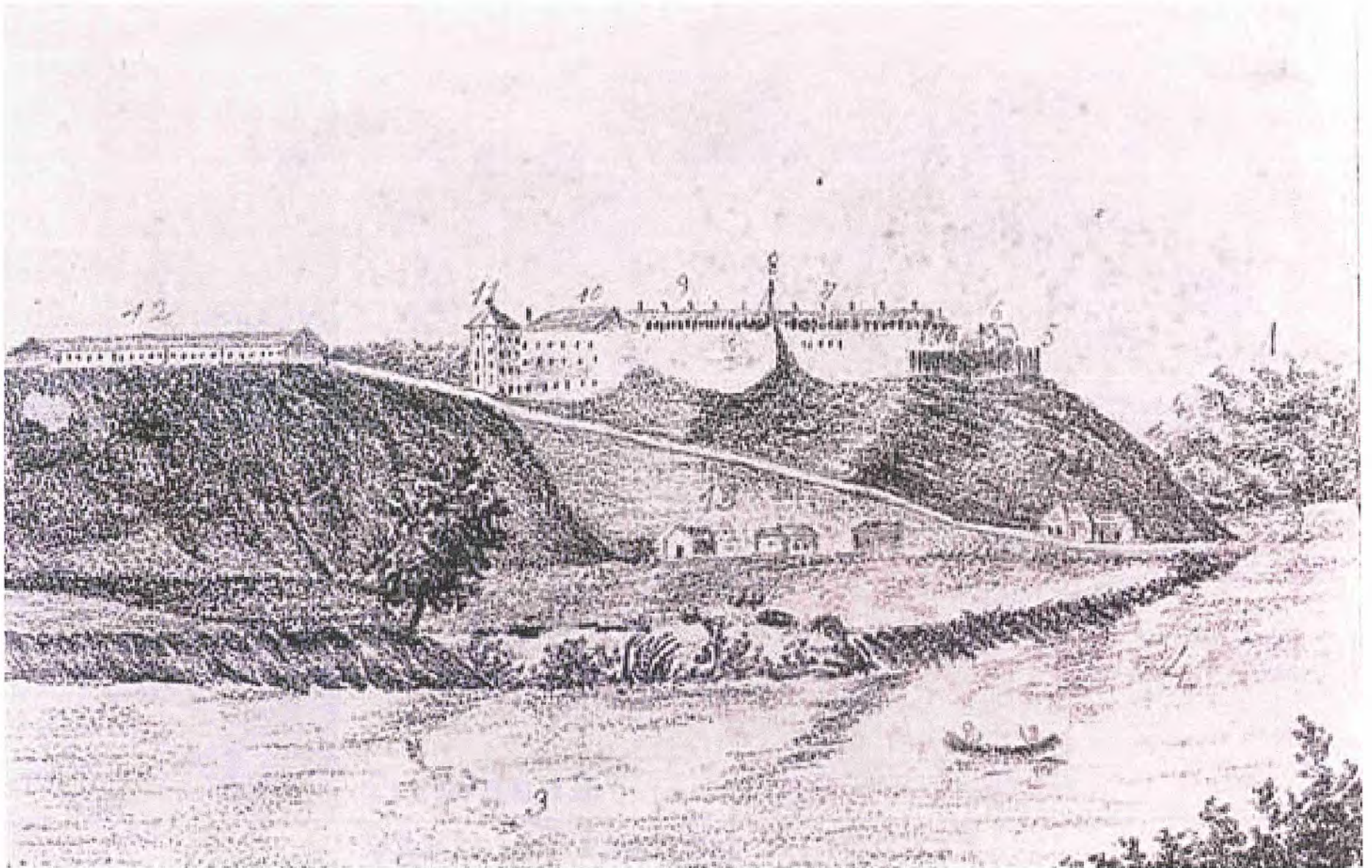
Figure 4.6 Preliminary Open Space Zones

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Chapter 5

Economic Impact Strategy





Seth Eastman neg 875: Fort Snelling near Falls of St. Anthony (graphite, 1833) (Minnesota Historical Society)

Chapter 5 | Economic Impact Strategy

Chapter 5 provides information, analysis, and recommendations on Fort Snelling development potential, adaptive reuse issues and costs, an economic development framework, and organization structure to move forward. Chapter 5 was prepared by McComb Group, Ltd.



Miller Dunwiddie Architecture completed a comprehensive analysis of Upper Post and West District historic buildings.

Introduction

As an objective, Fort Snelling must be economically self-sustaining. Reuse and redevelopment must generate revenue sufficient to offset capital costs and the costs of operations and maintenance.



Figure 5.1 Development zones in Fort Snelling's Upper Post, West District, and LRT Triangle

Development Potential

Background

Master plans prepared for Fort Snelling provide for adaptive reuse of existing historic buildings, new construction, vacant land in the historic area, and transit-oriented development in the vicinity of the LRT station. Fort Snelling and the LRT Triangle are shown on Figure 5.1.

Adaptive reuse of existing buildings at Fort Snelling and any new construction or additions to existing buildings will be dependent on a host of factors including market demand, construction costs, and space needs of the ultimate end user. Miller Dunwiddie Architecture (MDA) has prepared an excellent analysis of the Fort Snelling historic buildings, characteristics, and appropriate development to occur either as additions to existing historic buildings or freestanding buildings. The permitted new construction is a ceiling on the amount of new space that can be added, but not necessarily an accurate reflection of what will actually be constructed. Aside from their historic character and related guidelines, the existing buildings at Fort Snelling present adaptive reuse challenges related to room size, floor plate size, bay sizes, window openings, and a host of other characteristics unique to older buildings.

Gross building area of existing buildings and permitted new construction at Fort Snelling's Upper Post and West District are summarized in Table 1. The Upper Post and West District have a total of 375,050 square feet of gross building area. To facilitate adaptive reuse, some of these buildings have adjacent areas of permitted new construction totaling 140,101 square feet. Permitted new construction is over one million square feet of gross building area. Existing gross building area and permitted new construction total over 1.5 million square feet.

Past and present development has already reduced the total amount of development that could occur in these two districts. Planned developments, if they are built, could also reduce the total amount of potential development.

The Minneapolis Park and Recreation Board constructed a ball field on Zone G, which could have accommodated 60,574 square feet of buildings if it were not a ball field. This recreation use has reduced the current potential for new construction. The Minneapolis Park and Recreation Board owns a portion of Zone H-1 which has been designated for 98,397 square feet of new development.

The Boy Scouts of America have renovated the former Drill Hall and plans to add a new building and other site improvements to Zone F and portions of Zone G. This development

UPPER POST, WEST DISTRICT, AND LRT TRIANGLE DEVELOPMENT POTENTIAL						
EXISTING BUILDINGS AND PERMITTED NEW CONSTRUCTION						
(Gross Building Area)						
Zone	Existing Buildings				New Buildings	Total
	Number	Square Feet	Permitted New Additions	Total		
Upper Post						
A	0	-	-	-	369,444	369,444
B	12	47,560	27,772	75,332	-	75,332
C	13	185,450	94,935	280,385	120,853	401,238
Total Upper Post	25	233,010	122,707	355,717	490,297	846,014
West District						
F	1	28,000	-	28,000	51,307	79,307
G	0	-	-	-	81,854	81,854
H1	4	32,530	8,894	41,424	98,397	139,821
H2	9	71,080	-	71,080	25,657	96,737
H3	3	8,000	8,501	16,501	-	16,501
J	0	-	-	-	268,115	268,115
Other	2	2,430	-	2,430	-	2,430
Total West Area	19	142,040	17,394	159,435	525,330	684,765
Total	44	375,050	140,101	515,152	1,015,627	1,530,779
Less						
Minneapolis Park & Rec.	0	-	-	-	158,971	158,971
Boy Scouts	1	28,000	-	28,000	72,587	100,587
MN Air & Space Museum	1	13,600	12,372	25,972	369,444	395,416
Subtotal	2	41,600	12,372	53,972	601,002	654,974
Area Remaining	42	333,450	127,729	461,180	414,625	875,805
LRT Triangle						
Office	0	-	-	-	828,301	828,301
Grand Total	42	333,450	127,729	461,180	1,242,926	1,704,106
Source: Miller Dunwiddie Architecture, LHB, Inc., and McComb Group, Ltd.						

Table 1 Upper Post, West District, and LRT Triangle Development Potential; Existing buildings and permitted new construction

utilizes the 28,000 square foot Drill Hall, which is less than the permitted new construction 72,587 square feet for a total reduction of 100,587 square feet.

The Minnesota Air National Guard Historical Foundation has proposed a Minnesota Air & Space Museum that would utilize a 13,600 square foot historic building (the Bachelor Officers Quarters) and new construction would utilize all of Zone A that has been designated for 369,444 square feet in the master plan. Zone A is currently part of a golf course operated by the Minneapolis Park and Recreation Board, which has a lease with 19 years remaining.

After adjusting for these existing and proposed developments, the amount of permitted new construction is cut in half, two historic buildings totaling 41,600 square feet will have been renovated, and 12,372 permitted new additions will not be constructed. This reduces the potential amount of adaptive reuse and permitted new construction to less than 900,000 square feet. Based on reasonable historic absorption rates for similar development, this space could be absorbed over a 13- to 14-year period.

Master planning for the LRT Triangle envisions a transit-oriented development with about 800,000 square feet of office space. This will require relocation of a Mn/DOT facility and building a parking ramp to accommodate

LRT riders. This indicates that the amount of adaptive reuse and new development is over 1.7 million square feet. If the Minnesota Air & Space Museum does not proceed, the amount of adaptive reuse and new development potential increases to about 2.0 million square feet of gross building area.

Reuse of Historic Buildings in Upper Post and West District

The Upper Post and West District of Fort Snelling comprise a small community with four major functions: administration, residential, military support, and open space and recreation. Administrative functions, including a medical center were located in 12 buildings at the northeast corner of the Fort, generally north of Leavenworth Avenue and east of Taylor Avenue. Residential functions were located generally south of Leavenworth Avenue flanking Taylor Avenue at the southeast corner of the Fort. Military support operations (cavalry, artillery, and quartermaster) were located west of Bloomington Road extending from the northern border to the southern site border. Recreation and open space was located in the center of the zone including polo grounds, parade grounds, and golf course.

Adaptive reuse presents challenges in accommodating a new use within an existing building. McComb Group has conducted adaptive reuse market analysis and/or financial feasibility for over 50 buildings elsewhere and

has encountered these challenges in virtually all of these engagements. The following comments represent observations based on our previous experience and review of MDA reports that evaluate adaptive reuse potential and new developments that are likely to occur on the Upper Post and West District areas of Fort Snelling.

The primary challenge with adaptive reuse is finding current uses with the contemporary space needs that fit in an older building. Most contemporary building uses are built around modules of space that efficiently produce either office space, residential units, or some other form of contemporary use. Historic buildings were generally built to accommodate uses that existed in the past with slightly different space modules which influenced the placement of columns and demising walls. In many cases, the existing buildings and the space modules for current uses do not mesh well with the floor plates and column spacing of older buildings. This results in inefficient floor plans and wasted space. Historic buildings adapt most easily to new uses that are similar to the former use. The former homes on Officers Row are likely to be suitable for residential use today. Similarly, administrative buildings that contained offices may be suitable for offices today. Buildings designed as stables and warehouses may present greater or lesser adaptive reuse challenges, depending on the requirements of eventual users.

Upper Post

There are two general areas of the Upper Post that have been identified for new construction—Zone A and portions of Zone C. Zone B and a portion of Zone C are recommended for adaptive reuse.

Zone A

Zone A is leased to the Minneapolis Park and Recreation Board (MPRB) and is a portion of the golf course. Zone A consists of three zones that are recommended for a maximum of 369,444 square feet of permitted new construction, as shown Table 2. The Minnesota Air National Guard Historical Foundation has proposed to build about 157,300 square feet in Zone A and renovate Building 151 (13,600 square feet) for a total of 170,900 square feet. If the Minnesota Air & Space Museum were to proceed, it leaves unused 212,144 square feet of permitted new construction in Zone A and a 12,372 square foot permitted addition to Building 151. The status of this proposal is uncertain. MPRB representatives indicate that they have not been contacted by the Minnesota Air National Guard Historical Foundation about building on their leased land. If the Minnesota Air & Space Museum does not proceed, this zone would be available for other development. Zone C permitted new construction is located along the eastern edge of the Upper Post and will be described in connection with buildings in that area.

FORT SNELLING UPPER POST DEVELOPMENT POTENTIAL						
EXISTING BUILDINGS AND PERMITTED NEW CONSTRUCTION (Gross Building Area)						
Bldg/Parcel	Building	Square Feet	Existing Buildings		Permitted New Buildings	Total
			Permitted New Additions	Total		
Zone A						
A.1					44,736	
A.2					59,344	
A.3					265,364	
Subtotal			-	-	369,444	369,444
Zone B						
151/B.1	Bachelor Officers Quarters	13,600	12,372	25,972		
152	Officers Quarters	2,800	1,400	4,200		
153	Officers Quarters	2,800	1,400	4,200		
154	Officers Quarters	3,200	1,400	4,600		
155	Officers Quarters	2,880	1,400	4,280		
156	Officers Quarters	2,880	1,400	4,280		
157	Officers Quarters	6,700	2,800	9,500		
158	Officers Quarters	3,200	1,400	4,600		
159	Officers Quarters	2,800	1,400	4,200		
160	Officers Quarters	3,200	1,400	4,600		
161	Officers Quarters	2,800	1,400	4,200		
T-175	Club House	700		700		
T-178				-		
T-182				-		
Subtotal		47,560	27,772	75,332	-	75,332
Zone C						
53	Gymnasium	10,500		10,500		
54	Medical Detachment Barracks	11,800		11,800		
55	Post Hospital	29,150		29,150		
56	Hospital Stewards Quarters	1,800		1,800		
57	Band Barracks	5,600		5,600		
62	Dead House (Morgue)	1,600		1,600		
63	Quartermasters Shops			-	8,000	
64	Fire Station House	3,600		3,600		
65	Post Guard House (Prison)	8,500		8,500		
66	Telephone Exchange	4,900		4,900		
67	Post Headquarters	12,600		12,600		
Subtotal		90,050	-	90,050	8,000	98,050
101	Barracks	29,200		29,200		
102	Barracks	29,200		29,200		
103	Barracks	29,200		29,200		
C.1w			94,935	94,935		
Subtotal		87,600	94,935	182,535	-	182,535
C.1e					27,443	
76	Civilian Employees Quarters	5,900		5,900		
112	Post Bakery	1,900		1,900		
C.2				-	70,570	
C.3				-	14,840	
Subtotal		7,800	-	7,800	112,853	120,653
Total Upper Post		233,010	122,707	355,717	490,297	846,014
Source: Miller Dunwiddle Architecture.						

Source: Miller Dunwiddie Architecture.

Table 2 Fort Snelling Upper Post Development Potential, existing buildings and permitted new construction

Zone B

Zone B was primarily a residential district consisting of Officers Row and Building 151. Building 151 was formally the Bachelors Officers Quarters and may be part of the Minnesota Air & Space Museum development. If not part of this development, it could be renovated for office or housing. Buildings 152 through 161 were single family homes formally occupied by Fort officers. These buildings range in size from 2,800 feet to building 157 with 6,700 square feet, which appears to be a multi-family dwelling. Each of these buildings, except 157, is approved for a 1,400 square foot two-level addition. Building 157 is approved for a 2,800 square foot addition. Buildings 152



The former homes on Officers Row could be reused for either residential or office uses.

to 161 in Zone B contain 33,260 square feet of usable area in ten buildings and a permitted new construction of 15,400 square feet. Since these buildings were residential in the past, continued residential use may require fewer improvements to continue as residential use. If the buildings are reused as single family homes, attached garages could be constructed. These buildings would also be suitable for offices of small business enterprises typically of the type that occupy executive office parks. This would likely require a larger adaptive reuse expenditure. For small corporate offices, additional space may be needed on a case by case basis. Building T175 (Club House) has 700 square feet of gross building area with no permitted new construction.



The former Quartermaster Shops (Building 63) is slated for demolition.

Zone C

The portion of this zone north of Leavenworth Avenue contained administrative and medical center buildings for the Fort including Post Headquarters, Post Hospital, Gymnasium, Band Barracks, and other support facilities. There is no permitted new construction in this area except to replace the Quartermaster Shops (Building 63), which is to be demolished and replaced with up to 8,000 square feet of gross building area. This area contains 90,050 square feet of gross building area ranging in size from 1,600 square feet to 29,150 square feet for the Post Hospital. Adaptive reuse of these buildings will need to be approached on a building by building basis with uses that can adapt to the physical characteristics of each building.

Buildings 101, 102 and 103 are former barracks buildings with 29,200 square feet each. Adaptive reuse for these buildings could be either residential or office depending on how the Officers Row buildings area reused. For residential use, it may be necessary to add two levels of additional space to the original buildings to create attractively sized living units. It is unlikely that the full 142,403 square feet of permitted space would be needed or desirable. The C-1w area adjacent to these buildings is approved for 142,403 square feet on three levels. Based on the adjacent buildings, two levels with 94,935 square feet seems more reasonable. If these buildings

were to be utilized for office space, the floor plate could undoubtedly be larger, but it's unlikely that three floors would be built or that the full amount of permitted land coverage would be utilized. The existing buildings in this area total 87,600 square feet. The likely new construction is less than 94,935 square feet.

Zones C.1e, C.2, and C.3 are all located along the bluff overlooking the Minnesota River Valley. These zones are excellent residential locations. There are two existing buildings in this area: Building 76, former Civilian Employees Quarters; and Building 112, former Post Bakery. The Post Bakery has 1,900 gross square feet above ground and the Civilian Employee Quarters has 5,900 square feet for a total of 7,800 square feet. Buildings 76 and 112 occupy prominent sites on the bluff line overlooking the Minnesota River Valley in locations that can not be replicated today. The views from these buildings must be spectacular. Depending on their size and window spacing, they could be suitable for residential or office use. This area is also permitted for 27,443 square feet of new construction in a one-level building. For residential use, this would be about 13 ramblers or about 20 1,300 square foot patio homes. Office development could take any form that was suitable to the proposed user. Zone C.2 is approved for permitted construction of 70,570 square feet in a two-level building. If the use is residential, this could be developed in two buildings of about 35,000 square feet each with about 30 units.

Office development could consist of two buildings of approximately the same size.

Zone C.3 is permitted for 14,840 square feet of gross building area on two levels. This zone could either be office or residential in one building with two levels to maximize views of the river valley.

The area along the east boundary of the Upper Post appeared to have six structures located north of Building 76. The footprint of these structures appears to be similar to a single family home. These may have been two-level structures as all of the other residential structures have two floors.

The Upper Post contains 233,010 square feet of space 25 existing buildings. Additions of up to 122,707 are permitted to the former residential buildings. New building construction of 490,297 square feet is permitted with 369,444 allocated to Zone A where the Minnesota Air & Space Museum has been proposed. Total permitted development is 846,014 square feet. If the Minnesota Air & Space Museum were to proceed, only 476,570 square feet of development would be possible.

West District

The West District includes Zones F, G, H, and J comprising the area utilized for military support including cavalry, artillery, and quartermaster facilities. This area, in many ways, is similar to an industrial area

with buildings formerly associated with transportation, warehousing, and maintenance. Building size and permitted new construction in the West District is contained in Table 3.

Zone F contains the Cavalry Drill Hall, which has been renovated by the Boy Scouts of America Northstar Council for use as a base camp. New construction on the site will be approximately 46,780 square feet, which will occur on portions of Zones F.1, F.2, and G.1. These three zones have permitted new construction of 72,587 which is 25,807 square feet larger than actual utilization. This project completes redevelopment of these zones.

Zone G was utilized by artillery and no buildings remain. Zone G.1 was incorporated in the previous Boy Scout development. Zone G.2 is designated for new construction of 60,574 square feet. However, this area is currently occupied by a Minneapolis Park and Recreation Board ball field and does not appear to be available for development. This reduces permitted new buildings by 60,574 square feet.

Zone H.1 contains four existing buildings including Quartermaster Shops, Stables, and a small Gas Station. The existing buildings comprise about 32,530 square feet of gross building area, which are approved for new additions of 8,894 square feet. Buildings 211 and 214 were formally stables with a hay loft on the second level. The hay loft appears usable, but does not have any windows other

FORT SNELLING WEST DISTRICT DEVELOPMENT POTENTIAL

EXISTING BUILDINGS AND PERMITTED NEW CONSTRUCTION (Gross Building Area)

Bldg/Zone	Building	Existing Buildings			Permitted New Buildings	Total
		Square Feet	Permitted New Additions	Total		
Zone F						
201	Cavalry Drill Hall	28,000	-	28,000	-	-
F.1		-	-	-	8,509	-
F.2		-	-	-	42,798	-
Subtotal		28,000	-	28,000	51,307	79,307
Zone G						
G.1		-	-	-	21,280	-
G.2		-	-	-	60,574	-
Subtotal		-	-	-	81,854	81,854
Zone H1						
210	Quartermaster Shops	4,300	-	4,300	-	-
211/H1.1	Quartermaster Stables	13,060	4,779	17,839	-	-
214/H1.2	Quartermaster Stables	14,870	4,115	18,985	-	-
215	Quartermaster Gas Station	300	-	300	-	-
H1.3		-	-	-	23,974	-
H1.4		-	-	-	25,322	-
H1.5		-	-	-	23,360	-
H1.6		-	-	-	25,740	-
Subtotal		32,530	8,894	41,424	98,397	139,821
Zone H2						
217	Quartermaster Storehouse	2,740	-	2,740	-	-
218	Forage House	1,740	-	1,740	-	-
219	Sawmill	1,810	-	1,810	-	-
220	Post Exchange	1,540	-	1,540	-	-
222	Quartermaster Storehouse 1904	12,900	-	12,900	-	-
222	Quartermaster Warehouse 1935	24,500	-	24,500	-	-
223	Commissary Warehouse	17,760	-	17,760	-	-
224	Forage House	6,470	-	6,470	-	-
H2.1		-	-	-	25,657	-
225	Storehouse	1,620	-	1,620	-	-
Subtotal		71,080	-	71,080	25,657	96,737
Zone H3						
227/H3.1	NCO Quarters	2,000	2,560	4,560	-	-
228	Garage	2,000 *	-	2,000 *	-	-
229/H3.2	NCO Quarters	6,000	5,941	11,941	-	-
Subtotal		8,000	8,501	16,501	-	16,501
Zone J						
J1.1		-	-	-	49,206	-
J1.2		-	-	-	218,910	-
Subtotal		-	-	-	268,115	268,115
Other						
237	Powder/Magazine	1,800	-	1,800	-	-
239	Mineral Oil House	630	-	630	-	-
Subtotal		2,430	-	2,430	-	2,430
Total West District		142,040	17,394	159,434	525,330	684,765
Total		375,050	140,101	515,151	1,015,627	1,530,779

* Recommended for demolition.

Table 3 Fort Snelling West District Development Potential, existing buildings and permitted new construction

than former skylights in the center of the building. Modest additions are permitted to these buildings. In addition, there are four other zones, H1.3 through H1.6, which are approved for new construction totaling 98,397 square feet in two-story buildings. Zones H1.3, H1.4 and H1.5 are located on land owned by the Minneapolis Park and Recreation Board that is currently being used to convert trees into wood chips. This land is not currently available for development. This area is approved for 72,656 square feet of permitted new construction that cannot occur until the wood chipping operation is relocated and the land acquired for development.

Zone H2 contains nine existing structures, primarily warehouses, of various size that were utilized for operations. The existing buildings contain 71,080 gross square feet and permitted



Removing the ceiling and reopening the windows in the roof monitor of the Quartermaster Stable (Building 214) would enhance the interior and provide more flexibility and options for reuse.

additions would add 25,657 square feet in a one-level infill structure nestled between Buildings 222, 223, and 224.

Zone H3 includes two residential structures of 2,000 and 6,000 square feet. Permitted expansions to these buildings (227 and 229) are 2,560 square feet and 5,941 square feet, respectively. Building 228 is recommended for demolition.

Zone J consists of two vacant parcels of land (J1.1 and J1.2) that are approved for permitted construction of 268,115 square feet.

Other Buildings

Two buildings, Building 237 (Powder/Magazine) and Building 239 (Mineral Oil House), are located outside the historic district just west of Zone H2. These buildings comprise a total of 2,430 square feet with no permitted new additions.

West District buildings contain 142,040 square feet of above ground gross building area. An additional 17,394 square feet of additions to these buildings is permitted. Permitted new construction is 525,330 square feet. Existing buildings and permitted new construction total 684,765 square feet.

LRT Triangle

The LRT Triangle is a 47.9-acre area on the east side of the LRT Station and ROW that

is master planned as a transit-oriented development. The LRT Triangle is currently occupied by the GSA's Whipple Building and its two parking lots, LRT commuter park-and-ride surface parking lot, and Mn/DOT facilities. Development in this area would require relocating the Mn/DOT facilities and building new parking garages to serve the LRT Station on Mn/DOT land to the north. The GSA intends to retain their parking lot to serve the Whipple Building that is currently being renovated.

Master planning for the LRT Triangle has organized that area into four blocks excluding the GSA zone. The master plan envisions office, institutional, and support commercial uses. These buildings are master planned for over 800,000 square feet of office space, as shown in Table 4. This office space could easily be accommodated in four to six office buildings of varying size. Market demand at the time of development will determine building size.

Zone	Stories	Office Sq. Ft.
L	3	87,047 *
M	2	12,970
N	7	541,527
O	1	3,273
P	7	183,484
Total		828,301

* May represent more than one building.
Source: LHB, Inc.

Table 4 Fort Snelling LRT Triangle Master Plan

Development Summary

The Upper Post is likely to attract the most initial interest from end users if they can be marketed at competitive rents. The freestanding permitted new construction locations will be the easiest to develop. Future plans for Zone A should be determined since it is the largest vacant zone in the Upper Post.

Adaptive reuse of Officers Row for residential uses will likely be easiest and least expensive to accomplish. Adding attached garages would improve marketability. If Officers Row goes residential, the Barracks building could be converted to rental units, which may require an addition to the building's east side to achieve proper unit depth. If Officers Row evolves as an office location, garages may be needed for business executives. In this event, the Barracks buildings could also be adapted to office use. Those buildings that most easily adapt to new uses will likely develop more rapidly.

The West District is more challenging. The historic buildings appear to be less easy to reuse and their condition gives the area a dilapidated appearance. Non-residential uses will adapt most easily to these buildings. New construction is likely on vacant sites.

The LRT Triangle is well located and is an attractive office location. The LRT service will increase its attractiveness as the LRT system expands throughout the Twin Cities metro area.

Adaptive Reuse Issues

Buildings in the Upper Post and West District pose adaptive reuse potential, but require significant investment to adapt to new uses. Adapting these buildings to uses similar to or compatible with their former use is expected to be most economical. Adapting these buildings to different uses could be more expensive, but cannot be determined without examining “as built” drawings. Adaptive reuse difficulty for each building has been rated based on exterior examination of building size, window size and spacing, existing interior photographs, and an examination of existing “as built” drawings. Buildings rated 1 are considered to be the easiest to adapt to a contemporary use. Buildings rated 2 are considered to be more difficult to adapt; and buildings rated 3 are the most difficult to adapt. These ratings consider the types of uses that would be suitable for a building and the likelihood of attracting a tenant that could utilize the building.

Adaptive reuse potential for Upper Post buildings is contained in Table 5. Based on the above qualifications, it appears that most buildings have high adaptive reuse potential for either office or residential use. Four buildings—Post Hospital, Fire Station House, Post Guard House, and Dead House—may be more difficult to adapt to a new use. Overall, 82 percent of the existing building area is rated to have high adaptive reuse potential.

Adaptive reuse potential of West District buildings is more challenging, as shown in Table 6. Much of the difficulty for these buildings relates to their floor size and/or window spacings that limit the uses for some purposes. The Cavalry Drill Hall, which was renovated by the Boy Scouts of America, is not

included in this tabulation. Adaptive reuse potential is high for six buildings representing 27.6 percent of the building area. Seven buildings are rated 2 and are considered more difficult for adaptive reuse. These buildings total 41,670 square feet or 29.3 percent. Four buildings are considered to be most difficult for adaptive reuse. It’s difficult to envision adaptive reuse of the Powder/Magazine and Mineral Oil House.

Bldg/Zone	Name	Square Feet	Reuse Rating
Zone B			
151/B.1	Bachelor Officers Quarters	13,600	1
152	Officers Quarters	2,800	1
153	Officers Quarters	2,800	1
154	Officers Quarters	3,200	1
155	Officers Quarters	2,880	1
156	Officers Quarters	2,880	1
157	Officers Quarters	6,700	1
158	Officers Quarters	3,200	1
159	Officers Quarters	2,800	1
160	Officers Quarters	3,200	1
161	Officers Quarters	2,800	1
T-175	Club House	700	1
Subtotal		47,560	
Zone C			
53	Gymnasium	10,500	1
54	Medical Detachment Barracks	11,800	1
55	Post Hospital	29,150	2
56	Hospital Stewards Quarters	1,800	1
57	Band Barracks	5,600	1
62	Dead House (Morgue)	1,600	2
64	Fire Station House	3,600	2
65	Post Guard House (Prison)	8,500	2
66	Telephone Exchange	4,900	1
67	Post Headquarters	12,600	1
Subtotal		90,050	
101	Barracks	29,200	1
102	Barracks	29,200	1
103	Barracks	29,200	1
Subtotal		87,600	
76	Civilian Employees Quarters	5,900	1
112	Post Bakery	1,900	1
Subtotal		7,800	
Total Upper Post		233,010	

Table 5 Fort Snelling Upper Post Adaptive Reuse Potential, existing buildings (gross square feet)

Bldg/Zone	Name	Square Feet	Reuse Rating
Zone F			
201	Cavalry Drill Hall	28,000	*
Zone H1			
210	Quartermaster Shops	4,300	2
211/H1.1	Quartermaster Stables	13,060	1
214/H1.2	Quartermaster Stables	14,870	1
215	Quartermaster Gas Station	300	2
Subtotal		32,530	
Zone H2			
217	Quartermaster Storehouse	2,740	2
218	Forage House	1,740	2
219	Sawmill	1,810	1
220	Post Exchange	1,540	1
222	Quartermaster Storehouse 1904	12,900	3
222	Quartermaster Warehouse 1935	24,500	2
223	Commisary Warehouse	17,760	3
224	Forage House	6,470	2
225	Storehouse	1,620	2
Subtotal		71,080	
Zone H3			
227/H3.1	NCO Quarters	2,000	1
229/H3.2	NCO Quarters	6,000	1
Subtotal		8,000	
Other			
237	Powder/Magazine	1,800	3
239	Mineral Oil House	630	3
Subtotal		2,430	
Total West District		142,040	

Table 6 Fort Snelling West District Adaptive Reuse Potential, existing buildings (gross square feet)

Adaptive Reuse Costs

Adaptive reuse costs of historic Fort Snelling buildings are contained in Table 7 and total about \$77.9 million for the Upper Post and \$33.8 million for the West District. Hard construction costs are based on cost estimates that were originally prepared in 1998, contained in Fort Snelling State Park "Upper Bluff" Reuse Study, prepared by Thomas R. Zahn & Associates. In 2006, these cost estimates were revised by MDA in an update of the 1998 report. Rehabilitation costs are estimated to have increased by 20 percent since 2006 by MDA. In the four years since 2006, further deterioration is likely to have occurred. In situations where those costs included basements and attics, the estimated cost was used for the above grade building area. Where there were no basements or attics, the costs were increased by 25 percent to estimate 2010 costs. Hard costs for both the Upper Post and West District are estimated at about \$80.4 million. These costs should be considered preliminary since 12 years have elapsed since the original cost estimates were prepared. Hard construction cost estimates were utilized to estimate construction costs of building in the West District.

Soft costs and financing costs typically associated with buildings of this type were estimated by McComb Group and total \$31.2 million bringing total development costs for

the historic buildings to \$111.7 million. These buildings are eligible for Federal and Minnesota Historic Tax Credits of 20 percent of eligible development costs. Historic Tax Credits apply to most, but not all, development costs and are sold to taxpayers that can use them to offset Federal and Minnesota income taxes. Net proceeds from these sales vary. To be conservative, it is estimated that sales proceeds would be 80 percent of total estimated Historic Tax Credit. Historic Tax Credit proceeds were estimated at about \$39.6 million, which represents 35 percent of estimated development costs.

Economic Development Framework

The Upper Fort property was transferred by deed from the Federal government to the Minnesota Department of Natural Resources in 1971 with the requirement that the property be used for recreational purposes. The Minneapolis Park and Recreation Board lease of the former golf course, parade grounds, and polo field is consistent with this requirement. The deed permitted "concession agreements" with non-governmental entities.

ESTIMATED UPPER POST AND WEST DISTRICT ADAPTIVE REUSE DEVELOPMENT COSTS			
(In Thousands of Dollars)			
Item	Upper Post	West District	Total
Gross Building Area (sq. ft.)	233,010	111,610	344,620
Usable Area (sq. ft.)	186,408	89,288	275,696
Hard Construction Costs	\$ 56,278	\$ 24,167	\$ 80,445
Soft Costs	19,641	8,814	28,455
Financing Costs	1,974	857	2,831
Total Development Cost	\$ 77,893	\$ 33,838	\$ 111,731
Estimated Historic Tax Credit			
Federal	\$ 13,824	\$ 6,000	\$ 19,824
Minnesota	13,824	6,000	19,824
Total	\$ 27,648	\$ 12,000	\$ 39,648
Net Development Cost	\$ 50,245	\$ 21,838	\$ 72,083

Source: McComb Group, Ltd.

Table 7 Estimated Upper Post and West District Adaptive Reuse Development Costs

This did not result in restoration of historic buildings and they continued to deteriorate. The “recreational purposes” requirement has proven to be a detriment to reuse. In fact, the Quartermaster Shops was allowed to collapse.

Upper Post buildings have been mothballed to prevent deterioration; a new roof and masonry repair have been completed on the Post Guard House. Most West District buildings and land are owned by the US Department of Veterans Affairs. The Minneapolis Park and Recreation Board owns two zones with no historic structures. The Cavalry Drill Hall, owned by the Boy Scouts of America, has been renovated. In the 39 years since the Upper Post property was transferred to the DNR, none of the Upper Post buildings have been restored. The West District buildings, owned by the Veterans Administration, have been used for storage, but have seen little or no investment.



Sentence to Serve crews replaced the roof on the rear of the Post Guard House (Prison, Building 65) and have completed masonry repairs.

The preliminary estimated redevelopment cost of about \$112 million demonstrates the challenges presented by reusing the historic buildings. It also indicates why little restoration has occurred to date. Historic restoration of deteriorated buildings is very expensive. The economic development framework contains a strategy to capitalize on the location of Fort Snelling and the LRT Triangle to generate revenues to support the costs of redevelopment.

Master planning for Fort Snelling’s Upper Post and West District and the LRT Triangle create an adaptive reuse framework for the historic buildings, development parameters for vacant land, and creation of transit supportive development in the LRT Triangle. Implementation of the master plan will begin by transferring the Upper Post and West District portion to a Joint Powers Agreement.

Organizational structure of the Joint Powers Agreement provides that representatives of Hennepin County, State of Minnesota DNR, Veterans Affairs, National Park Service, Minneapolis Park and Recreation Board, and Minnesota Historical Society participate in a Joint Powers Agreement to provide interim organizational management, as shown in Figure 5.2. The anticipated life of the Joint Powers Agreement is two years, unless terminated sooner.

Fort Snelling is an unincorporated area

in Hennepin County and has no formal government organization. It is proposed that an entity with municipal powers be formed (Village of Fort Snelling) to provide government and municipal services. This entity would be responsible for governing the Upper Post, West District, and the LRT Triangle. This could be controlled by Hennepin County. The Village of Fort Snelling would be responsible for all municipal operations including planning and zoning, administration, and services. Most of these services could be purchased by contract from other parties.

The Village of Fort Snelling would create a non-profit development corporation, Fort Snelling Development Co. (FSDC), which would have Economic Development Authority (EDA) powers and serve as a public/private partnership with the ability to facilitate development within the Village of Fort Snelling. This would include operations related to development, land leases, and operating parking garages to serve development within the area. This organization would provide a governmental structure to perform municipal operations and assist with development. The FSDC would provide the opportunity to inject private sector expertise in the redevelopment effort through both board members and contracts with private sector entities to pursue adaptive reuse and development activities at Fort Snelling. This is a very simplified outline of the possible organizational approach to Fort Snelling, and can be refined in the future.

Economic Development Strategy

The objective of the economic development strategy is to capitalize on Fort Snelling's location and the LRT station to stimulate adaptive reuses of historic buildings and development on vacant lands and capture economic value created by these developments to finance redevelopment of historic buildings. As shown in Table 7, this activity needs to generate about \$72.0 million cash to be invested in redeveloping the historic buildings. Development of the vacant land in the Upper Post, West District, and redevelopment of the LRT Triangle can provide the financial resources to redevelop the historic buildings.

To accomplish this objective, the Upper Post and West District land and historic buildings should be transferred to an owner with an organizational structure that will permit reuse by a wide variety of entities. This new organization will be accepting responsibility for preserving and redeveloping historic buildings, most of which are seriously deteriorated. By accepting responsibility for redeveloping these historic buildings, the new owner will be burdened with significant and expensive duties and obligations. These must be offset by the rights and privileges of real estate ownership.

Real estate ownership vests an owner with rights (commonly referred to as the bundle of rights or bundle of sticks). These include the right to use, sell, lease, enter, give it away, or do all or none of the above. These rights are limited by government limitations, typically zoning. The rights and privileges associated with the ownership of real estate are offset by duties and obligations of real estate ownership. The balance between rights and privileges and duties and obligations is shown in Figure 5.3.

For Fort Snelling historic properties, the rights and privileges are limited to use, lease, and enter. The duties and obligations imposed on the owner are more extensive than for typical real estate and include maintain, preserve, conserve, enhance, respect historical character, and asset management responsibilities. These obligations will be performed according to the rules of the National Park Service and Minnesota Historical Society. The restricted rights and privileges and expanded duties and

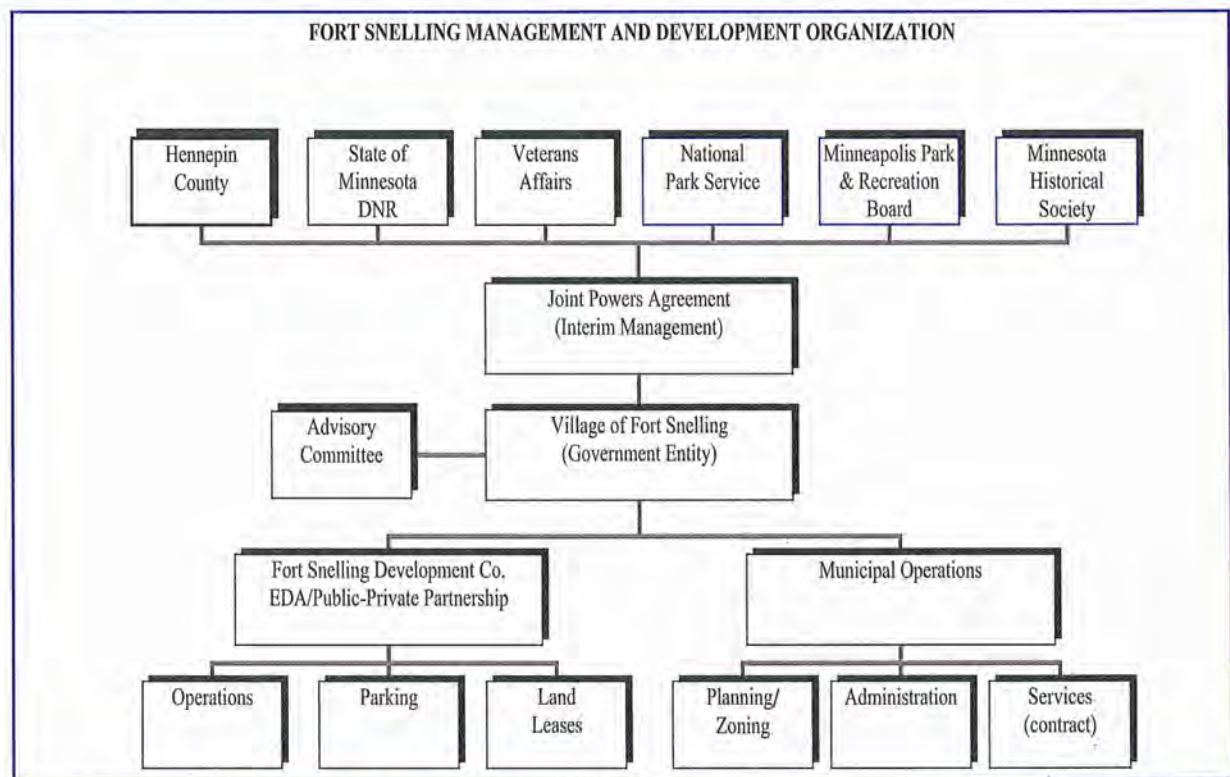


Figure 5.2 Fort Snelling Management and Development Organization

obligations create development challenges that limit reuse options and increase costs.

This creates the need for an approach that will transfer the Fort Snelling properties owned by the DNR and US Department of Veterans Affairs to a new entity that will have the authority, powers, and resources necessary to accomplish both reuse and historic preservation.

Development on vacant lands in the Upper Post, West District, and LRT Triangle can provide the financial resources to subsidize redevelopment and adaptive reuse of the historic buildings. The LRT Triangle is master planned for about 800,000 square feet of office space and there is potential for an additional 750,000 square feet on the Upper Post and West District. Office development that has occurred in the southwest quadrant of I-494 and TH-100, a similarly well located area, is summarized in the sidebar on the next page.

The value creation strategy described below is designed to provide revenues to restore the historic buildings utilizing these resources:

- » leasing land at market rents to new developments;
- » constructing publically owned parking garages to serve the needs of new developments;
- » utilizing tax increments from new developments.

Annual revenues derived from these sources can be used to pay debt service on bonds issued to support redevelopment activities. An example of how this would work is shown in Table 8. Tenants in office buildings pay net rent, common area maintenance (CAM), and property taxes, which is commonly known as occupancy costs. In the typical suburban office building, the net rent is functionally allocated to pay for land, building, and a parking garage. In this example, the net rent of \$20.00 per square foot consists of \$2.00 per square foot for land

or 10 percent of rent, \$14.50 per square foot for the building structure, and \$3.50 per square foot for the parking garage. In the situation proposed for Fort Snelling, the building developer would lease the land at market rent assumed to be \$2.00 per square foot of building area. He would also borrow money to build the building, and would collect rent for that cost. Since the parking would be provided by the public sector, he would not need to charge rent to cover the parking garage. As a result, the net rent for the building in this example, would be \$16.50. CAM would also be allocated between the building owner and the public sector. At the present time, CAM covers exterior common area, interior common area, and maintenance and operation of the parking garage. In the Fort Snelling example, the building owner would charge his tenants for interior common area or \$6.55 per square foot, exterior common area would be paid to the governmental entity, but pass through to the building tenants. CAM associated with the parking garage would be included in the parking charge paid by building tenants. Property taxes would be paid on land and building in the amount of about \$4.38, but there would be no property taxes on the parking garage because it is owned by the public. The purpose in separating the parking garage from the office building ownership is to:

1. assure the building owner that there is sufficient parking to serve the needs of his tenants, their employees, and visitors; and

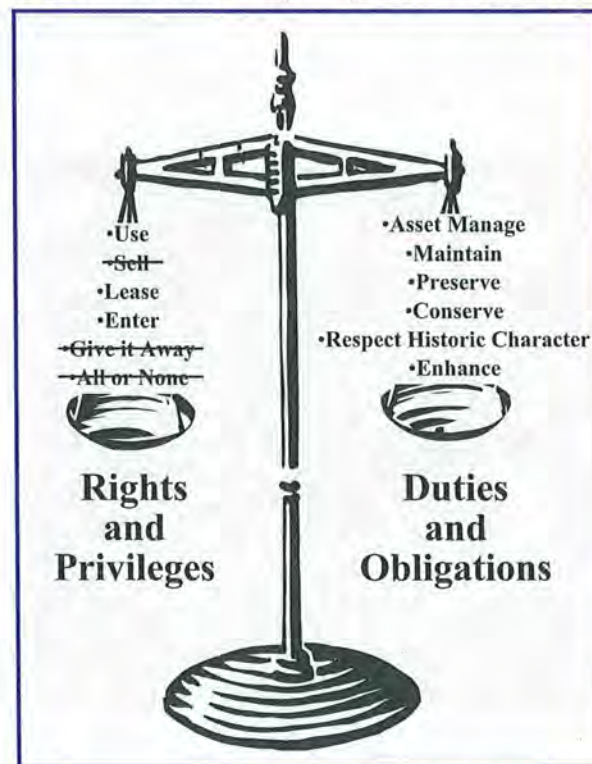


Figure 5.3 Balance of Fort Snelling real estate interests

OFFICE DEVELOPMENT COMPARABLE

The locational characteristics of the LRT Triangle area are similar to the southwest quadrant of I-494 and TH-100 in Bloomington, as shown in the figure to the right.

Major development in this 81.8-acre area began in 1973 with construction on several small office buildings, some of which have been demolished and replaced by larger building. The next phase of development began in 1983, as shown in the table to the right, with the subsequent construction of five office buildings by 2000 with a total of 1,638,043 square feet.

These buildings were absorbed over a 20-year period indicating average annual absorption of 80,902 square feet per year. The portion of the I-494/TH-100 area south of the dotted line in the figure consists of an estimated 35 acres and is fully developed with 1,994,110 square feet of rentable area. This is an estimated density of 1.3 square feet per square foot of land area.

OFFICE BUILDINGS SOUTHWEST QUADRANT OF I-494 AND TH-100

Building Name	Stories	RBA	Year Built
8201 Norman Center Dr.	5	82,017	1973
Nommandale Oaks	2	53,000	1975
Nommandale Oaks	2	36,000	1979
8300 Tower	12	281,552	1983
8400 Tower	18	421,000	1985
8500 Tower	24	484,290	1988
Norman Pointe I	7	210,000	1999
8000 Tower	12	241,201	2000
Norman Pointe II	10	322,000	2007
8200 Tower	11	274,050	2009
Norman Pointe III	10	330,000 *	2011
Norman Pointe IV	10	322,000 *	2011
Total		3,057,110	

* Planned.

Source: McComb Group, Ltd.



Southwest quadrant of I-494 and TH-100 interchange in Bloomington, Minnesota.

2. to permit the ownership entity to create programs to stimulate LRT ridership on the part of employees and visitors.

Revenues created by this arrangement are summarized in Table 9 for an office building with 200,000 square feet of rentable area and a market rent of \$20.00 per square foot. Land lease revenue is \$2.00 per square foot or \$400,000 annually. Parking land lease revenue is estimated at \$200 per stall for 700 parking spaces based on 3.5 stalls per 1,000 square feet of rentable area. Tax increments are estimated at \$2.90 per square foot for the office building resulting in revenues of \$580,000 annually. These sources of revenue total \$1,120,000. Deducting administrative fees and costs, estimated at 15 percent, from this amount results in a capitalized value of \$14.8 million using a 6.4 percent debt constant for municipal bonds. This is about \$75 for each square foot of rentable area. Parking rent of \$900 per stall results in \$630,000 which capitalizes to over \$8.3 million. This example can be adapted to other types of buildings to be located in either the LRT Triangle or vacant land on the Upper Post and West District.

Revenues from land leases and tax increments can be used to support renovation costs of the historic buildings. Two funds are anticipated:

1. Historic Adaptive Reuse Fund to fill the gap between renovation cost and economic value; and

2. Noise Mitigation Fund to cover the cost of additional sound proofing due to proximity to the airport. The cost is estimated at \$25 per square foot.

Redevelopment of historic Upper Post and West District buildings will cost significantly more than can be supported by rents and operating income of the buildings. This is demonstrated by preliminary cash flow statements (Table 10) for two Upper Post buildings: Post Headquarters and Officers Row #153 that were prepared to demonstrate economic value of rehabilitated buildings. Using Post Headquarters as an example, gross building area is 12,600 square feet and effective rentable area is estimated at 10,080 square feet. Assuming four parking spaces per 1,000 square feet, the building would need approximately 40 parking spaces, which would be leased from the public sector. Rental revenue is estimated at \$10 per square foot net and parking rent is estimated at \$75 per stall per year. Adding CAM reimbursement and property taxes increases rental revenue to \$173,251, which is reduced by a five percent vacancy rate to slightly less than \$165,000. Operating expenses include land rent, parking rent, exterior and interior CAM, and property taxes. Management fee is estimated at four percent of total revenue, deducting a structural reserve results in operating expenses of \$90,711. Net operating income is \$73,877.

Capitalizing net operating income at 9.0

percent results in a economic value of about \$820,000. A mortgage amount of 70 percent of economic value results in a requirement for \$245,000 of equity. Debt service on the permanent mortgage assuming a 7.5 percent mortgage interest rate with a 30-year amortization is \$48,242 leaving cash flow of

\$25,635. The cash on cash return on equity is about 10.5 percent.

Similar calculation for Officer's ROW Building 153 results in an economic value of about \$182,000. The supportable mortgage is \$127,400 resulting in equity of \$64,600. Cash on cash return on equity is also 10.5 percent.

CLASS A OFFICE BUILDING DEVELOPMENT FUNCTIONAL RENT ALLOCATION

Item	Total	Allocation		
		Land	Building	Parking
Total Rent				
Net	\$ 20.00	\$ 2.00	\$ 14.50	\$ 3.50
CAM	7.55	0.25	6.55	0.75
Taxes	5.63	0.85	3.53	1.25
Occupancy Cost	\$ 33.18	\$ 3.10	\$ 24.58	\$ 5.50

Source: McComb Group, Ltd.

Table 8 Class A Office Building Development, functional rent allocation

CLASS A OFFICE BUILDING REVENUE GENERATION

Item	Annual Revenue	Capitalized Value @ 6.4%*
Rentable Area (Sq. Ft.)	200,000	
Market Rent	\$ 20.00	
Annual Cash Flows		
Land Lease @ \$2.00 per sq. ft.	\$ 400,000	\$ 5,300,000
Parking Land Lease @ \$200/stall	140,000	1,850,000
Tax Increment @ \$2.90 per sq. ft.	580,000	7,700,000
Subtotal	\$ 1,120,000	\$ 14,850,000
Parking		
Parking Rent \$900 x 700 stalls	\$ 630,000	\$ 8,350,000

* Less administrative fees and costs.

Table 9 Class A Office Building Revenue Generation

PRELIMINARY CASH FLOW STATEMENT
UPPER POST BUILDINGS

Item	Post Headquarters	Officers Row #153
Gross Building Area	12,600	2,800
Effective Rentable Area	10,080	2,240
Parking Spaces	40	9
Rental Revenue	\$ 100,800	\$ 22,400
Parking Rent	3,000	675
CAM Reimbursement	47,779	10,618
Property Tax Reimbursement	21,672	4,816
Total	\$ 173,251	\$ 38,509
Less Vacancy (5%)	(8,663)	(1,925)
Total Revenue	\$ 164,588	\$ 36,584
Expenses		
Land Rent	\$ 10,080	\$ 2,240
Parking Rent	3,000	675
Exterior CAM	13,507	3,002
Interior CAM	34,272	7,616
Property Taxes	21,672	4,816
Management Fee	6,584	1,463
Structural Reserve	1,646	365
Total	\$ 90,761	\$ 20,177
Net Operating Income	73,827	16,407
Less Debt Service	(48,242)	(10,689)
Cash Flow	25,585	5,718
Return on Equity	10.46 %	10.47 %
Economic Value @ 9%	\$ 820,855	\$ 182,288
Say	820,000	182,000
Mortgage Amount	575,000	127,400
Equity	245,000	64,600

Source: McComb Group, Ltd.

The economic value of each building when deducted from redevelopment costs, as shown in Table 11, determines the gap between the cost of adaptive reuse and the economic value. Using the Post Headquarters building as an example, building renovation cost is estimated at over \$4.1 million. Building economic value, based on its income potential, is estimated at \$820,000 leaving a shortfall of \$3.3 million. Federal and state historic tax credits total \$1,252,630 leaving a gap of over \$2.0 million. This gap would be filled by a payment of \$1.7 million from the Historic Adaptive Reuse Fund and a Noise Mitigation payment of \$315,000.

The Post Headquarters, when completed and occupied, would generate land and building lease revenue of \$10,080 and parking lease revenue of \$3,000. Exterior CAM costs are estimated at \$13,507, which is payment toward maintenance of parking and landscaping. Property taxes are estimated at \$21,672 of which \$14,608 represent estimated tax increments. The summary section of Table 11 contains the impact of the Post Headquarters. Lease payments and tax increment revenues are estimated at \$27,688. Deducting a fee of 15 percent for administrative fees and other costs leaves \$23,535 of revenue available for debt service. Capitalizing this amount at 6.4 percent results in a capital value of \$367,700. Thus, revenues from operation of the Post Headquarters building offsets about 11 percent of the economic shortfall.

Table 10 Preliminary Cash Flow Statement, Upper Post Buildings

Based on analysis to date, preliminary results of the economic strategy can be estimated, shown in Table 12. Redevelopment costs for 42 Upper Post and West District buildings are estimated at about \$112 million. Preliminary estimates economic value (based on extrapolating estimates for Post Headquarters and Officers Row #153) is \$22.4 million leaving a shortfall of about \$89.3 million. Federal and Minnesota Tax Credits are estimated to contribute \$42.6 million toward redevelopment costs, leaving a gap of about \$47.0 million.

Value capture revenue sources are derived from rehabilitated historic buildings and new buildings. Annual land and building lease revenues and tax increments from historic buildings are estimated at \$868,400. Capitalized value of these payments is about \$11.5 million. New office buildings (assuming that at least 800,000 square feet are constructed) will yield an estimated \$4.7 million in land and parking lease payments and tax increments. Capitalized value of these payments is about \$62.4 million. Value capture sources total over \$73 million compared to an estimated gap of about \$47 million.

The cost and revenue estimates contained in this memorandum are preliminary and need to be verified by refining development costs, and preparing possible development timing scenarios for historic buildings and new construction to determine how value capture cash flow will compare to need to fund

ADAPTIVE REUSE ECONOMICS TYPICAL UPPER POST BUILDINGS		
Item	Post Headquarters	Officers Row 153
Redevelopment Economics		
Building Renovation cost	\$ 4,119,800	\$ 909,700
Building Economic Value	820,000	182,000
Short Fall	\$ 3,299,800	\$ 727,700
Federal Historic Tax Credit	626,315	138,319
State Historic Tax Credit	626,315	138,319
Gap	\$ 2,047,170	\$ 451,062
Historic Adaptive Reuse Fund	1,732,170	381,063
Noise Mitigation Fund	315,000	70,000
Annual Cash Flows		
Land Lease Revenue	\$ 10,080	\$ 2,240
Parking Lease Revenue	3,000	675
Exterior CAM	13,507	3,002
Property Taxes	21,672	4,816
Tax Increment	14,608	3,246
Summary		
Capital Payments		
Land Lease	\$ 10,080	\$ 2,240
Parking Lease	3,000	675
Tax Increment	14,608	3,246
Subtotal	\$ 27,688	\$ 6,161
Less: Admin. Fees and Costs*	(4,153)	(924)
Subtotal	\$ 23,535	\$ 5,237
Capitalized Value @6.4%	\$ 367,700	\$ 81,800
* Administrative fees and costs are estimated at 15 percent of capital payments. Source: McComb Group, Ltd.		
Note: This table is designed to illustrate financial concepts. The dollar amounts are only examples and do not reflect an actual or proposed development.		

Table 11 Adaptive Reuse Economics, Typical Upper Post Buildings

SUMMARY		
PRELIMINARY ECONOMIC DEVELOPMENT STRATEGY		
SWAG ESTIMATES		
(In Thousands of Dollars)		
Item		Dollars
Historic Building Adaptive Reuse		
Redevelopment Cost		\$ 111,732
Estimated Economic Value		22,400
Short Fall		\$ 89,332
Historic Tax Credits		
Federal		\$ 21,306
Minnesota		21,306
Subtotal		\$ 42,612
Gap		\$ 46,720
Value Capture		
Historic Buildings		
Land and Building Lease	275,700	
Tax Increment	592,700	
Subtotal	868,400	
Less: Admin Fee and Costs @ 15%	(130,260)	
Subtotal	738,140	
Capitalized at 6.4%		\$ 11,500
New Office Buildings		
Office Building Land Rent	\$ 1,600	
Parking Garage Land Rent	720	
Tax Increment	2,380	
Subtotal	\$ 4,700	
Less: Admin. Fee and Costs @ 15%	(705)	
Total	\$ 3,995	
Capitalized at 6.4%		\$ 62,400
Total Value Capture Sources		\$ 73,900
Source: McComb Group, Ltd.		

adaptive reuse costs. Analysis conducted to date demonstrates that the combination of economic value, historic tax credits, and value capture revenue sources is sufficient to cover the cost of rehabilitating the historic buildings on a preliminary basis. Further financial analysis should be conducted to estimate financial feasibility of the other 40 buildings. In addition, annual estimates of costs, revenues, and cash flows should be estimated taking into consideration timing of new developments and associated revenue flows along with costs of requirements of building rehabilitation. This analysis provides an indication of development timing and short-term capital needs.

Exterior Restoration

Adapting the historic building to new uses is expensive; so is the cost of not reusing the buildings. The public purpose appears to save the buildings. At this time, demolition does not appear to be an option. If the buildings are to remain, they will require a significant investment to keep them from further deterioration and improve their appearance.

MDA estimated the exterior rehabilitation cost of Upper Post buildings at \$13.6 million in 2006. Inflation and deterioration have increased this amount by about 20 percent to \$16.4 million in 2010. Extrapolating these costs to the West District buildings results in an additional cost of \$5.7 million, for a total of about \$22.0 million. Due to the historic nature

Table 12 Summary, Preliminary Economic Development Strategy, SWAG Estimates

and character of the buildings, a 10 percent contingency is included. Since this work must be approved by the National Park Service and/or the Minnesota Historical Society, 10 percent has been allocated for supervision and design consulting. The total cost of exterior building restoration is about \$26.8 million.

Implementation

The economic development framework is proposed as a way to relieve the State of Minnesota and Federal government of the duties and obligations of ownership by transferring the Upper Post, West District, and properties in the LRT Triangle to a new governmental entity through a Joint Powers Agreement. These properties would be transferred free and clear of any financial obligations. In return for being relieved of its duties and obligations of ownership, the State of Minnesota and Federal Government should take steps necessary to permit implementation of the economic development framework. This would include the following actions:

1. Completion of a Program for Preservation and Utilization (PPU) for the Upper Post to facilitate adaptive reuse, redevelopment, and governance for property owned by the Minnesota Department of Natural Resources (DNR).
2. Transfer the Upper Post from the National Park Service Lands-to-Park Program to Historic Surplus Property Program.
3. The State of Minnesota will transfer the Upper Post land and buildings owned by the DNR to the Joint Powers Agreement entity.

4. The Federal Government will also transfer the land and buildings owned by the Veterans Administration to the Joint Powers Agreement entity, and provide that the Veterans Administration pay rent for the West District buildings that they occupy.
5. The State of Minnesota will relocate the Mn/DOT facilities in the LRT Triangle within a reasonable time period (three years), and transfer that land to the Joint Powers Agreement entity.
6. The State of Minnesota will cooperate with the Metropolitan Council to obtain Federal Funds to build an LRT commuter parking garage on the north LRT parking lot located on Mn/DOT property north of the LRT station.
7. The Federal Government will provide funds to build the LRT commuter parking garage to free up land for transit-oriented development in the LRT Triangle.

In addition, the State of Minnesota and Federal Government will make a cash contribution (amount to be determined) to fund start-up operation of the Joint Powers Agreement entity. This approach provides the Joint Powers Agreement entity with long-term resources to implement the Fort Snelling Master Plan. The Joint Powers Agreement entity will have long-term revenue sources from:

- » Lease revenues from long-term land leases of historic buildings and new buildings at Fort Snelling.
- » Lease revenues from long-term land leases for buildings in the LRT Triangle.
- » Tax increment from renovated historic buildings and new developments.
- » Cash flow from parking structures to serve employees working in the LRT Triangle.

Revenues from these sources will fund construction of needed infrastructure, historic adaptive reuse costs that exceed historic tax credits, airport noise mitigation costs, and other programs to be determined later.

Implementing the economic development framework value creation strategy will generate the revenues needed to preserve historic resources and development of vacant land. Revenues from the value creation strategy will be used for historic preservation, adaptive reuse, grants, noise mitigation grants, infrastructure improvements, and other activities yet to be determined.

Implementing the Fort Snelling Master Plan presents a multitude of challenges presented by deteriorated historic buildings located in a National Landmark District, State Historic District, laws, and regulations related to rehabilitation and reuse, and restrictions on

property use and sale. Adaptive reuse costs of the historic buildings are estimated at over \$77 million or \$263 per square foot after Historic Tax Credits indicating that additional financial assistance will be required to return these buildings to productive use. Development in the LRT Triangle can be used as part of a value creation strategy to redevelop both historic Fort Snelling and the LRT Triangle. This strategy has several inter-related components.

- » **Land Lease.** Federal regulations governing the Upper Post and West District require that land be leased. Land in the LRT Triangle will also be leased to developers. Land lease revenue will provide a long-term revenue source.
- » **Common Areas.** All land that is not part of a building pad site will be common area owned by the authority or government unit. This includes access, roads, parking, sidewalks, public park and open space, and building grounds. The common area will be operated and maintained by the Authority.
- » **Parking.** Parking garages and parking lots for employees and visitors will be owned and operated by the Joint Venture Authority, and will be leased or rented to building owners, employees, or other users. This will provide a long-term revenue source and will make

it possible to implement programs to increase transit ridership.

- » **Public Development Authority.** A governmental entity will be required to implement the value creation strategy and perform municipal functions for the Fort Snelling properties: Upper Post, West District, and LRT Triangle. This entity will have the governmental powers necessary to own land and lease it to developers. It would have powers to maintain common areas in the Upper Post, West District, and LRT Triangle.

Municipal Functions

Development of the Fort Snelling area and its historic buildings will require a host of municipal services including police, fire, inspections, administration, and public works, to name a few. There will need to be an entity to provide or contract for these services.

The organizational model for management and maintenance of Fort Snelling is the regional mall consisting of department stores owned by the individual stores or in many cases leased from the developer who owns the mall building and the underlying land. Using this model, the Fort Snelling land and its historic buildings would be owned by the municipality. Land for new buildings would be leased to developers at market value for land as a portion of building value. This model envisions that

only the building pad would be leased to the developer. The rest of the development site would be common area. Parking for buildings would be provided in surface lots or parking structures. Parking would be available for the building tenants by license agreement, the fee for which would be designed to recover the cost of building the parking ramps. Municipal ownership of the parking supply would enable building owners to be assured of available parking for their employees and at the same time adjust parking supply to reflect the impact of employees arriving by transit. This is advantageous to the developer in that they would only be responsible for leasing, operating, and maintaining his building with the exterior common area and parking the responsibility of another party.

In the shopping center analogy, the developer, or mall owner, collects rent from each of the department stores for the value of the land they occupy and the parking that they utilize. The department stores are responsible for all of the costs associated with operating their store. They are also charged for exterior common area maintenance and also pay property taxes on their building and land. This same model can be adapted to Fort Snelling.

In the case of a new building, land would be leased at market rates as a proportion of building value to a developer. The developer would build his building, lease it and operate

it and pay property taxes to the governmental agencies. The grounds and roadways surrounding his building would all be part of the common area. His proportionate share of common area costs would be charged to the office building and paid by the building's occupants in the same way that they currently pay exterior common area costs.

Existing historic buildings could be structured in a manner similar to the tenant spaces in the shopping center mall building. In the retail industry, tenant spaces are generally leased to a retailer in plain vanilla shell condition. In the shopping center, this means that the walls are sheet rocked and primed. Electricity, plumbing, HVAC service is brought to the space, but none of the utility distribution is included.

Maintenance

The owner of Fort Snelling properties will inherit maintenance responsibilities for the Fort Snelling grounds and its historic buildings. This includes all activities commonly referred to as common area maintenance in the real estate industry as well as maintenance of the historic structures. The master plan guidelines for the Upper Post and West District presume a 10 to 20 percent building coverage. This means over 80 percent of the Fort's area is devoted to common area, road right-of-way, open space, or parking which must be maintained.

Summary

Adaptive reuse of the historic buildings is financially feasible if the Economic Development Strategy is implemented. Redevelopment of the buildings will create about \$65 million in economic value and historic tax credits or about 58 percent of the cost. The value creation strategy will provide the remaining funds needed to rehabilitate the historic buildings. The estimated cost to restore the exteriors of the buildings, with no potential reuse, is estimated at about \$26.8 million, which does not include annual caretaking and security costs.

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Chapter 6

Transportation and Infrastructure Framework





Seth Eastman neg 12698: Indians spearing fish three miles below Fort Snelling (watercolor, 1846-1848) (Minnesota Historical Society)

Chapter 6 | Transportation and Infrastructure Framework

Chapter 6 provides an overview of information gathered, data collected, analyses, and recommendations related to transportation and other Fort Snelling infrastructure.

Introduction

Access to, within, and from Fort Snelling will be a critical factor in the successful revitalization of the area. For a forwardly designed plan, access will need to take the form of many modes: transit, vehicular, pedestrian and bicycle. All of these modes serve Fort Snelling, but all these modes can be improved upon and integrated into the plan. Wayfinding and navigation through the area, with clear signage, entry features, and a well designed roadway and pedestrian walkways, will be needed to make this a successful district.



The Minnehaha Falls trolley line was extended to Fort Snelling in 1905. The Twin Cities Rapid Transit Company operated the free-of-charge Fort Snelling Shuttle until 1952.

Transportation and Access

The Fort Snelling project study area is very well served by state trunk highways and the regional transportation network. The site is surrounded by trunk highway and is served by two major interchanges. It also has the Fort Snelling LRT Station on the Hiawatha LRT line, which provides great access to an expanding transit network and MSP International Airport. Transit will be discussed in greater detail later in this chapter.

Trunk Highway 55 (TH 55 or Hiawatha Avenue) defines the northeasterly boundary of the



Currently, the Fort Snelling LRT Station serves primarily commuters to Minneapolis. Transit-oriented development near this station could bring additional transit users for employment, housing, education, and events.

project study area and includes a full freeway interchange at Trunk Highway 62 (TH 62 or the Crosstown) and a full freeway interchange at Bloomington Road. These interchanges provide the primary vehicular access to Fort Snelling. TH 55 connects the site to the City of Minneapolis to the north and the Mendota Bridge and northern Dakota County to the south. Mn/DOT noted that the Bloomington Road/TH 55 interchange does not meet current geometric standards for interchanges, but there are no planned capacity or access improvements proposed in the project study area according to Mn/DOT's 20-Year Plan (2030).

The southeasterly boundary of the project study area is defined by Trunk Highway 5 (TH 5) and the TH 5/ TH 55 interchange at the west end of the Mendota Bridge. Westbound TH 5 has direct ramp access to Fort Snelling and Bloomington Road. Eastbound TH 5 traffic must use TH 55 westbound to Bloomington Road to access Fort Snelling. TH 5 connects the site to the City of St. Paul to the east and the I-494 corridor to the west. Mn/DOT also noted that the TH 5/TH 55 interchange does not meet current geometric standards for interchanges, but there are no planned improvements according to Mn/DOT's 20-Year Plan (2030).

At the northwesterly end of the project study area is TH 62 and the TH 62 / TH 55 interchange. TH 62 is an east/west freeway which provides access to Interstate 35W

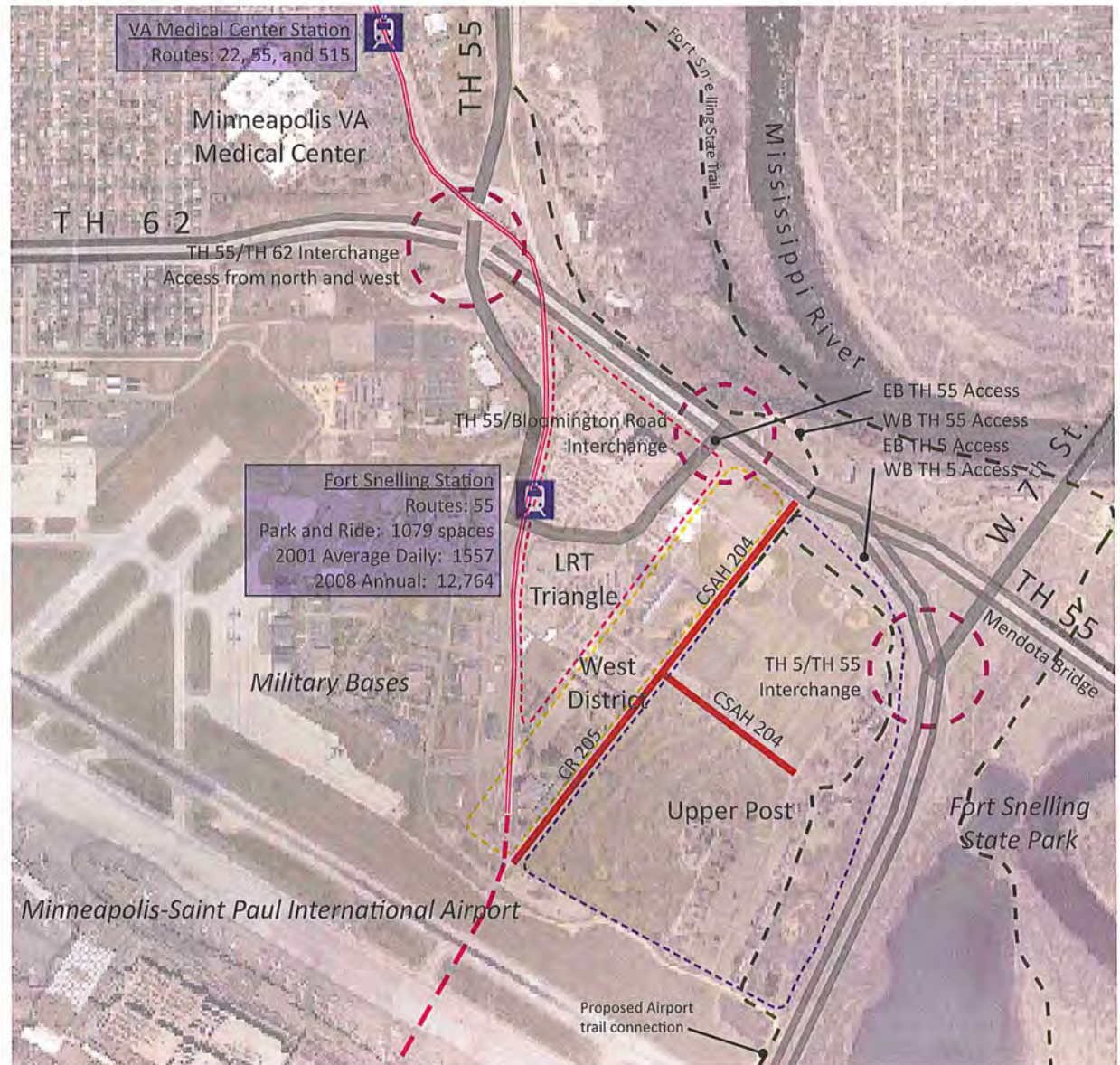


Figure 6.1 Transportation Access and Trails

and areas to the west. This interchange was completed in the 2004, concurrent with the completion of the Hiawatha LRT line.

The Metropolitan Airports Commission (MAC) has recently completed its Long Term Comprehensive Plan for MSP International Airport. As part of that plan, MAC will be studying the TH 5 corridor from the TH 5/TH 55 interchange on the east to I-494 on the west. The primary purpose of this planning work is to evaluate the interchanges at Glumack Drive, Post Road and 34th Avenue based on the long range forecasts. It is unlikely that this planning will result in any changes that impact the Fort Snelling project study area.

Interchange Capacity

Although well served by the regional transportation network, the success of redevelopment of the Fort Snelling project study area will be, in part, dependent on the capacity of the two primary access points – the TH 62/ TH 55 interchange and the Bloomington Road/TH 55 interchange.

For this study, a cursory interchange capacity analysis was performed. This analysis was not based on a specific redevelopment plan, but rather the development potential of the project study area. Ramp counts were obtained from MnDOT to determine the baseline and to determine the current distribution to each interchange. Trip generation was prepared based on the high range of development potential and at full build-out. These trips were distributed to the two intersections and the WB TH 5 ramp to Bloomington Road, assuming that the current distribution, 80% to the TH 62 / TH 55 interchange and 20% to the Bloomington Road / TH 55 interchange and WB TH 5 ramp. This distribution is due to the fact that the current land uses, the GSA building and Metro Transit's Park and Ride Lot, are located near the TH 62 / TH 55 interchange.

Using the high range development potential, a total of 25,291 trips are forecast, with an AM peak hour of 2,521 and a PM peak hour of 2,997. These trips were distributed and added

to the baseline AM and PM peak hour volumes of each ramp or loop to determine a forecast AM and PM peak hour volume. The forecast volume of each ramp or loop was compared to the theoretical capacity of that ramp or loop to come up with a volume/capacity ratio.

All loops and ramps of these two interchanges perform below capacity with the exception of the eastbound TH 55 loop at the TH 62 / TH 55 interchange. This loop is forecast to have a volume/capacity ration (v/c) of 2.2. Clearly this volume will need to be managed. As redevelopment occurs south and east of this interchange, and as an internal street network is built, the distribution of trips will take advantage of the excess capacity of the Bloomington Road / TH 55 interchange.

The result of this cursory interchange analysis is that the current interchanges can accommodate the proposed high range of development potential for the Fort Snelling project study area. Some traffic management will be required to relieve some movements at the TH 62 / TH 55 interchange and take advantage of the excess capacity of the Bloomington Road / TH 55 interchange.

A more comprehensive traffic impact analysis will be required, either as a part of an Alternative Urban Area Review (AUAR) environmental review process, or as individual site development plans are proposed. This analysis will take into account

a more detailed trip generation analysis; a more detailed distribution model; an internal roadway network; and intersection operations analysis. This will also result in a more comprehensive interchange capacity analysis.

Internal Street Network and Circulation

Internal vehicular circulation within the Fort Snelling project study area is very unclear. The Master Plan will attempt to improve that circulation and wayfinding by improving the internal street network.

Existing Street Network

Hennepin County owns and maintains two internal, existing roadways in the Fort Snelling study area: Bloomington Road (County State Aid Highway (CSAH) 204 east of Minnehaha Avenue and County Road (CR) 205 west of Minnehaha, sometimes referred to as Old Highway 100) between TH 55 and the Airport boundary; and Minnehaha Avenue (CSAH 204), between Bloomington Road and Taylor Avenue.

Hennepin County has expressed a desire to turn back those roadways and relinquish the maintenance responsibilities.

At the east end of Minnehaha Avenue is existing Taylor Avenue. Taylor Avenue runs north-south, from the MnDOT right-of-way to the Airport Boundary. This currently provides access to the Fort Snelling Golf Course and the parking lots of Neiman Sports Fields. It is not clear if the Minneapolis Park Board or the DNR maintains this roadway.

Reconstructed Hiawatha Avenue runs from the TH 62/TH 55 interchange south to the southerly at-grade crossing of the Hiawatha LRT line and east until it turns into existing Tower Avenue. Tower Avenue connects with the eastbound exit and eastbound entrance ramp from TH 55. Existing Tower Road runs between Tower Avenue and Bloomington Road and was reconstructed as part of the Nieman



Hennepin County owns and maintains portions of CSAH 204 and CR 205 at Fort Snelling.

Existing Roadway	Right-of-Way	Existing Roadway Width	Ownership
Bloomington Road (CSAH 204 and CR 205) (TH 55 to MSP Airport boundary)	66 feet	36 feet	Hennepin County
Minnehaha (CSAH 204 or Colville Avenue) (Bloomington Road to Taylor Avenue)	?	24 feet	Hennepin County
Taylor Avenue	?	36 feet	DNR
Leavenworth Avenue	?	20 feet +/-	DNR
Tower Avenue	?	30-36 feet +/-	GSA
Tower Road	?	36 feet +/-	MPRB
Federal Drive	?	Varies	GSA

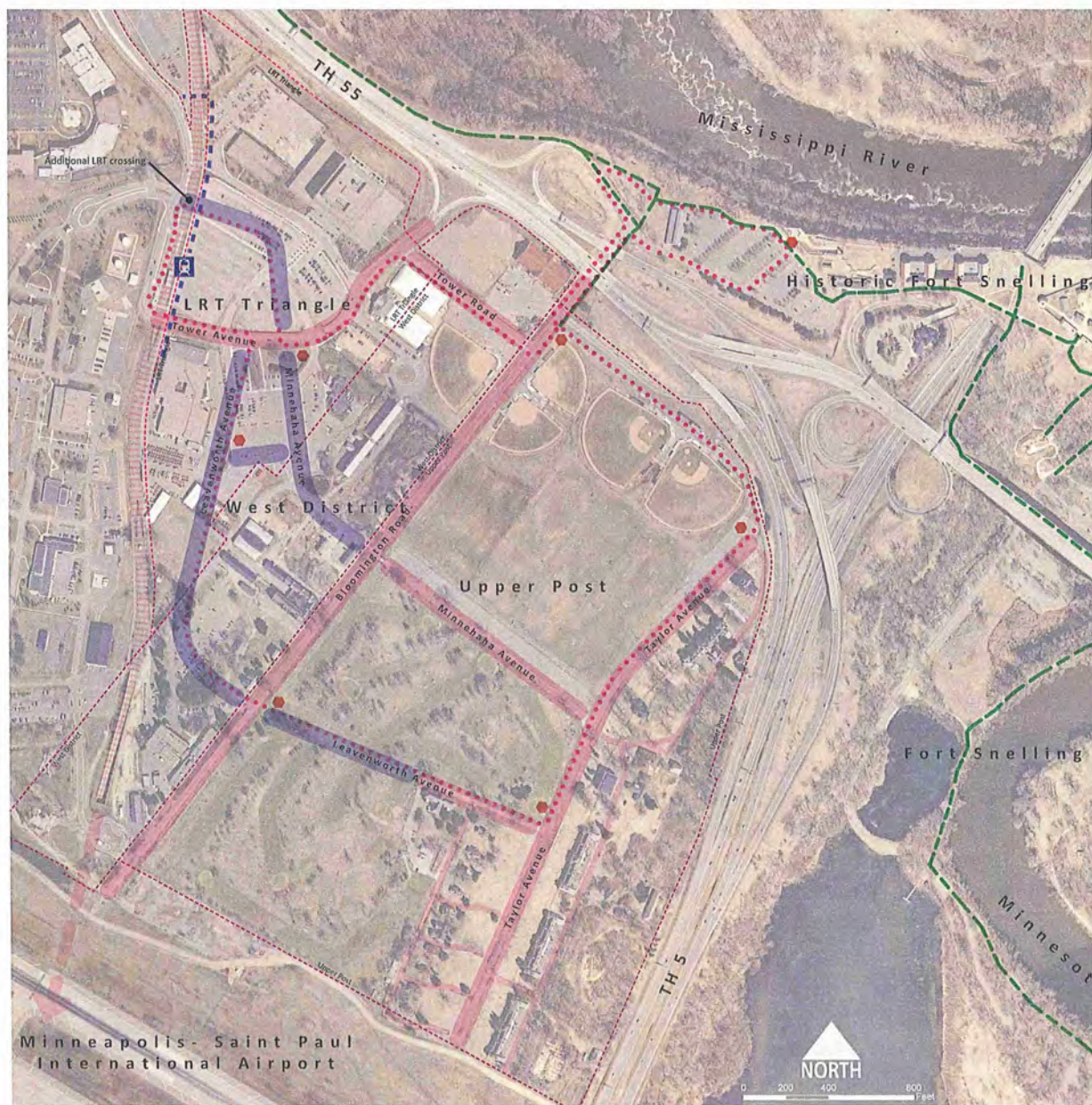


Figure 6.2 Internal Street Network and Internal Circulator



Existing signage at Fort Snelling is oriented primarily to the car. More complete, more pedestrian-oriented, and more aesthetically appropriate signage and wayfinding markers are needed.

Sports Field improvements in the early 2000s. It is not clear who maintains these roadways.

There are a number of un-named streets and drive lanes that provide access and circulation to the West District, MnDOT's Central Services Building, the Whipple Building, and Metro Transit's Park and Ride Lot. These street names and addresses will need to be formally and officially adopted. In doing so, the wayfinding and addressing of properties will be significantly improved. The municipal government generally assigns street names to new streets. Most municipal governments have a street naming convention that is followed. They often work with a committee that includes emergency responders and the Post Office on street naming and addressing.

See Figure 6.2 for proposed street names for existing and proposed new streets.

At the western end of Bloomington Road there is a construction gate that provides construction access for MAC to the Air Operations Area of MSP International Airport. This has been used by MAC contractors for construction access to the east side of the Airport, including the 30R/12L runway and Terminal 1 apron projects. MAC has used and proposes to continue to use Bloomington Roadway for this construction access. The design of Bloomington Road improvements will need to take into consideration the potential for this heavy construction traffic.

Proposed Improvements to the Street Network

Much of what this Master Plan is calling the LRT Station Area Triangle and the West District had functioned as the services and storage area for Fort Snelling. The LRT Station Area Triangle open areas and surface parking lots are intended to be redeveloped with new construction at medium to high densities, while the West District service and storage buildings are intended to be renovated and expanded. The West District is intended to include new construction in the form of low-density infill buildings or additions that are compatible with the existing historic buildings. In terms of the internal street network and circulation, existing street rights of way and alignments

should be preserved and reused where possible. New street connections should be constructed following historic alignments such as the Minnehaha Avenue corridor through what are now surface parking lots. The urban design planning work carried out as part of this Master Plan calls for new streets to be located to create smaller, more walkable blocks in the LRT Station Area Triangle Area and the West District. These new streets and streetscapes should form an interconnected network to provide multiple options for vehicles, pedestrians, and bicycles.

Several street improvements should be undertaken:

Leavenworth Avenue - Taylor Avenue to Bloomington Road

This new segment of street will restore a vacated roadway to its original alignment. The alignment is very visible through the existing golf course and will create the westerly boundary for the restored Parade Grounds. The street section will be a two-way, two-lane rural section without parking that will resemble the historic street section. A broad sidewalk to accommodate pedestrian and bicycles is proposed for the south side. The Fort Snelling Upper Post Development Guidelines require that appropriate boulevard trees be planted along Leavenworth to be consistent with historical documents.



Leavenworth Avenue in front of the Bachelor Officers' Quarters should be extended the full length of the former Parade Grounds to Bloomington Road.

Leavenworth Avenue - Bloomington Road to Tower Avenue

This new street segment extends north of Bloomington Road to create the framework for the West District and the LRT Triangle District. The street section will be a two-way, two-lane section with parallel parking on each side for a total width of 40 feet. The proposed right-of-way will be 80 feet, resulting in broad, 20-foot boulevards. These broad boulevards will be designed to accommodate pedestrians and bicycles, and improve the circulation through the area.

Minnehaha Avenue - Bloomington Road to a New LRT Crossing

This new street segment extends the current Minnehaha Avenue alignment north, though the West District and creates a framework for the LRT Triangle District. The alignment approximates an original roadway that was vacated to construct the Metro Transit South Park and Ride Lot. A new at-grade crossing north of the Fort Snelling LRT Station is proposed. This new crossing will provide relief for the single crossing that currently exists south the LRT Station. The street section will be a two-way, two-lane section with parallel parking one each side for a total width

Proposed Roadway	Right-of-Way	Roadway Width		Ownership
Bloomington Road (CSAH 204 and CR 205) <i>(TH 55 to MSP Airport boundary)</i>	66 feet	40 feet	Reconstruct/Historic	? (HC turnback?)
Minnehaha (CSAH 204 or Colville Avenue) <i>(Bloomington Road to Taylor Avenue)</i>	60 feet	24 feet	Reconstruct/Historic	? (HC turnback?)
Minnehaha Avenue <i>(Bloomington Road to New LRT Crossing)</i>	80 feet	40 feet	New	?
Leavenworth Avenue <i>(Bloomington Road to Tower Avenue)</i>	80 feet	40 feet	New	?
Leavenworth Avenue <i>(East of Bloomington Road)</i>	60 feet	24 feet	Reconstruct/Historic New	?
Taylor Avenue	60 feet	40 feet	Reconstruct	?
Tower Avenue	80 feet	40 feet	Reconstruct	?
Tower Road	?	36 feet +/-	No change	?
Secondary Road	60 feet	40 feet	New	?

of 40 feet in an 80-foot right-of-way. At intersections, the parking will be restricted to allow for opposing left turn lanes. The 20-foot boulevards will be designed to accommodate pedestrians and bicycles, and improve the circulation through the area.

The GSA owns the land through which the Minnehaha Avenue extension is proposed to be constructed north of Federal Way. This land is currently used as a parking lot for employees of the adjacent Whipple Federal Building. As part of the current renovation of the Whipple Building, the GSA will install geothermal wells on this site and reconstruct the parking lot above them. Therefore, this proposed extension of Minnehaha Avenue through this area must be viewed as a long-term objective.



Bike Boulevards, where cars and bicyclists are required to share the road, are becoming more common throughout the Twin Cities.

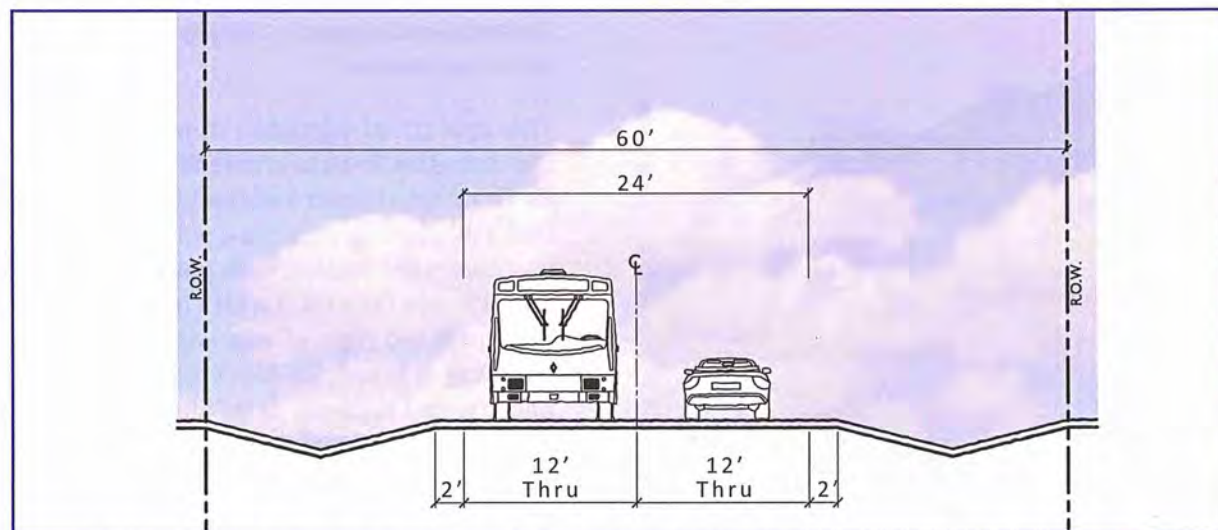


Figure 6.3 Leavenworth Avenue (Taylor Avenue to Bloomington Road); Minnehaha Avenue (Taylor Avenue to Bloomington Road)

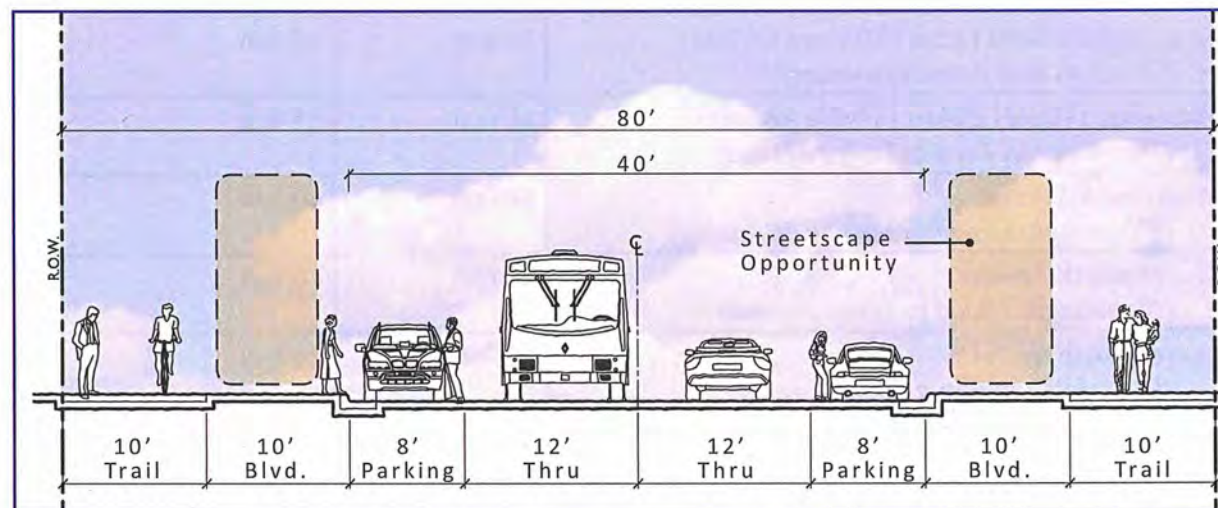


Figure 6.4 Leavenworth Avenue (Bloomington Road to Tower Avenue); Minnehaha Avenue (Bloomington Road to new LRT crossing)

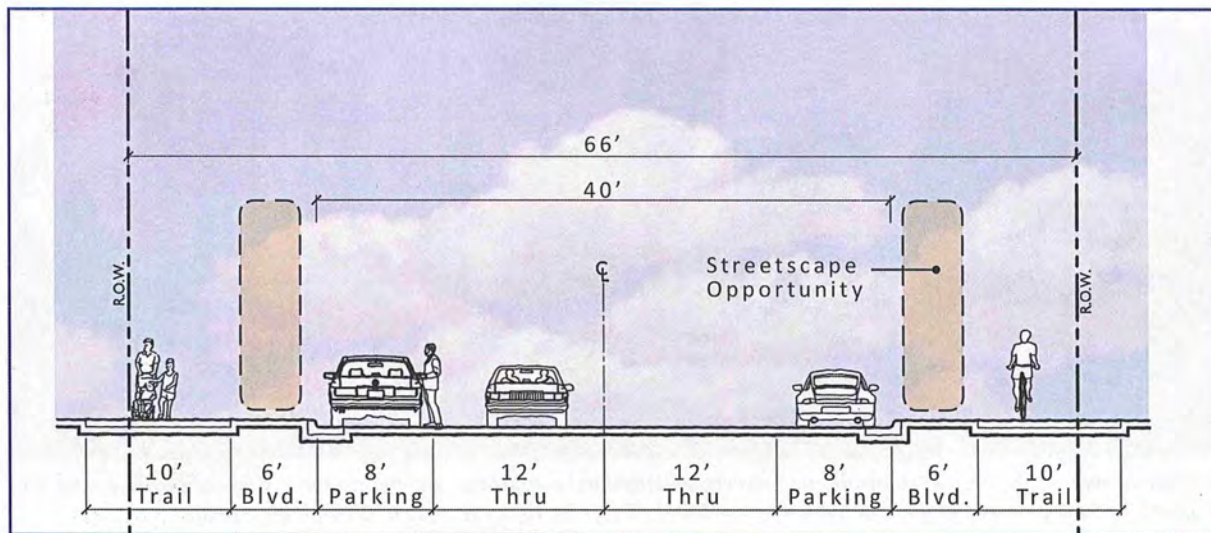


Figure 6.5 Bloomington Road

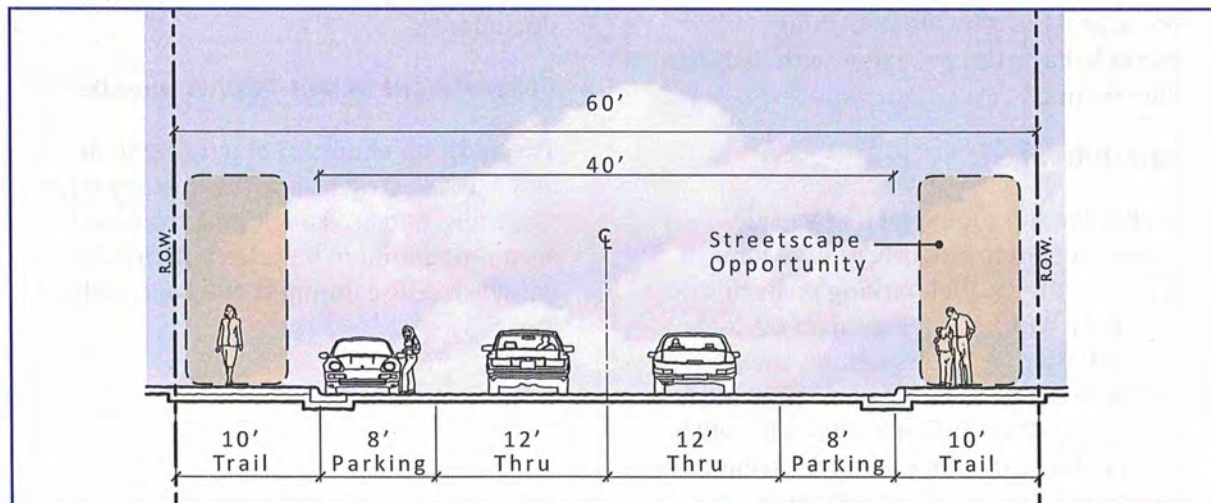


Figure 6.6 Taylor Avenue; Secondary Street

A number of smaller, secondary street segments are proposed in the LRT Triangle District that will define the development blocks. These street sections will be two-way, two-lane sections with parallel parking on each side for a total width of 40 feet. The proposed right-of-way will be 60 feet, resulting in 10-foot boulevards with sidewalks.

Bloomington Road

Bloomington Road should be historically reconstructed to a two-way, two-lane section with parallel parking one each side for a total width of 40 feet in a 66-foot right-of-way. At intersections, the parking will be restricted to allow for opposing left turn lanes. The 8-foot boulevards will be designed to accommodate pedestrians and bicycles, and improve the circulation through the area. The Fort Snelling Upper Post Development Guidelines require that appropriate boulevard trees be planted along Bloomington Road to be consistent with historical documents.

Minnehaha Avenue, from Taylor Avenue to Bloomington Road

Minnehaha Avenue, from Taylor Avenue to Bloomington Road, should be reconstructed to a two-way, two-lane rural section without parking that will resemble the historic street section. A broad sidewalk to accommodate pedestrian



Existing infrastructure, such as sidewalks and streets, will need to be upgraded and maintained. New sidewalks are needed in some locations such as along Minnehaha Avenue (CSAH 204) from Taylor Avenue to Bloomington Road.

and bicycles is proposed on the north side. The Fort Snelling Upper Post Development Guidelines require that appropriate boulevard trees be planted along Minnehaha to be consistent with historical documents.

Taylor Avenue

Taylor Avenue should be historically reconstructed to a two-way, two-lane section with parallel parking on each side for a total width of 40 feet in an 60-foot right-of-way. At intersections, the parking will be restricted to allow for opposing left turn lanes. The 10-foot boulevards will be designed to accommodate pedestrians and improve the circulation through the area. The Fort Snelling Upper Post Development

Guidelines require that appropriate boulevard trees be planted along Taylor Avenue to be consistent with historical documents.

General right-of-way improvements

The addition of on-street parking to new and existing streets, improved pedestrian sidewalks and crossings, and improved accommodation of bicycles will provide passive traffic calming to the Fort Snelling area.

Pedestrian Sidewalks and Bikeways

Current pedestrian circulation within the Fort Snelling project study area is poor. Sidewalks begin and end, with much of the pedestrian circulation occurring in streets and drive lanes. As noted above, the Master Plan proposes to improve pedestrian and bicycle access and circulation with improvements to the internal street network. The reconstructed and new streets should try to include pedestrian sidewalks and pedestrian crossings. The Master Plan creates smaller, more walkable blocks. Pedestrian-scaled, mid-block pathways



Sidewalks, such as this one along Taylor Road in front of the former Barracks, are in poor condition.

are proposed within the LRT Station Triangle Area and the West District to provide multiple options for walking to and from the Fort Snelling LRT Station to other destinations.

One of the biggest impacts on pedestrian and bicycle access and circulation at Fort Snelling should be the improvement of access under TH 55. The underpass provides access to and from the LRT Station to the Lower Fort, as well as access to Minnehaha Park to the north and Fort Snelling State Park and the Mendota Bridge to the south. The existing underpass, which is part of the TH 55 interchange, should be improved, with widening of the pedestrian and bicycle trail, improved crossings east and west of the underpass, and improved lighting.



This sidewalk which goes under TH 55 is unattractive and not adequate for a shared pedestrian and bicyclist pathway.

A sidewalk needs to be added for pedestrian access to the Lower Fort. The bike trail connections need to be designed to be off-road because of the volume of vehicular traffic using these freeway entrance ramps and approaches.

Within the Fort Snelling district, bike trails will be incorporated in the roadway section, or combined with sidewalks off-road, similar to some parts of the Grand Round system. Bike use could be facilitated by the installation of a bike-sharing station as part of the Nice Ride Minnesota Program. Bike use could also be encouraged with safe and covered bike storage.

The Fort Snelling Project study area is well served with connections to regional and

Figure 6.7 Proposed Bikeway concept



state trails. These major trails include the Hiawatha Trail along TH 55 with connections to Minnehaha Park and Minnehaha Falls; the Fort Snelling Trail along lowlands of the Mississippi River gorge; the trail network within the Fort Snelling State Park; the trail on the Mendota Bridge with connections to the Dakota County Regional Trail; and the proposed Minnesota Valley State Trail along the Minnesota River within the Minnesota Valley National Wildlife Refuge. MAC's Long Term Comprehensive Plan for MSP International Airport includes a bike trail connection from TH 55 through Fort Snelling to Terminal 1 (Lindbergh Terminal). Improved connection under TH 55 to these trail connections and improved wayfinding should be pursued.

Transit (LRT and Circulator Shuttle)

LRT Transit

Metro Transit's Hiawatha Light Rail line became operational in 2004 and included a station at the west edge of the Fort Snelling study area. The Fort Snelling LRT Station was designed initially to support to Metro Transit's Park and Ride Lot, and to a lesser degree, provide transit options for the GSA's Whipple Building and the current uses at Fort Snelling. There are no connections to other Metro Transit routes at this station.

The Fort Snelling LRT Station has about 1550 daily users for a total of about 12,800 annual users. The South and North Park and Ride Lots have a combined capacity of 1073 spaces. The utilization of these spaces is at about 80%. Park and Ride users at this lot are scattered throughout the south metro, but come primarily from northern Dakota County.

Metro Transit is committed to this station for park and ride and has a long range plan to construct a 1500-space parking ramp at Fort Snelling. The Master Plan proposes that 500 spaces could be accommodated within the ramps for the LRT Triangle District and very proximate to the LRT Station. The balance, 1000 spaces, would be accommodated in a new ramp constructed at the North Park and Ride Lot, near the TH 62/TH 55 interchange.



The Nice Ride Minnesota bike-sharing program was started in 2010 in Minneapolis and has plans to expand throughout the Twin Cities over the next few years.



Surrey and bike rentals are available at nearby Minnehaha Park in Minneapolis.



The Fort Snelling LRT Station is located at the northwestern edge of Fort Snelling, adjacent to the GSA parking lot.

Improved pedestrian access from the new ramp to the LRT Station would be constructed.

The development of a transit-oriented community at Fort Snelling will drive additional use and ridership of the Hiawatha LRT line. This use expands as the transit options and system expands. Similarly, easy access to this LRT station creates value for development. As the depth and breadth of the transit system increases, the value to the development increases.

The success of transit serving the Fort Snelling study area is dependent on the expansion of the system that interfaces with the Hiawatha LRT line. A strength of the line is access to MSP International Airport, providing an intermodal connection to the rest of the country and the world. The Mall of America Transit Station provides access to 14 different regular bus, express, and MVRTA routes and is the terminus of the Cedar BRT route. Other Hiawatha LRT Stations, including the VA Hospital station, have local bus connections to all of Minneapolis. In the near future, the Interchange in downtown Minneapolis will provide connections to Central Corridor, Southwest Corridor, and North Star Commuter Rail Corridor.

Internal Circulator

The Fort Snelling area is large, with parts that are difficult to reach. There is a need to move visitors from the LRT Station to other parts of

the Fort Snelling area, including the Historic Fort and the Fort Snelling State Park Visitor Center. Therefore, there should be internal circulator service. The circulator would be free and serve as a redevelopment amenity. It could be an attraction, like a replica of a historic bus from the period of significance. The circulator would be paid for by a district-wide user fee, assessed or shared among benefitting users.

The route should start and end at the Fort Snelling LRT Station. The circulator should operate at no more than 20-minute headway. The route could circulate with fixed stops at Officers Row, Nieman Sports Complex, Boy Scout Base Camp, the Historic Fort, and the Whipple Building. An hourly route could extend to Fort Snelling State Park.

To promote use, Metro Transit indicated that a privately operated circulator could have a Metro Transit route number, schedule, and appear on their system map.



Several buses from the 1950s are stored at the Minnesota Transportation Museum that could be used for the internal circulator.

Parking and Loading

A benefit of a transit-oriented development is the reduced need for parking. Proximity to the Fort Snelling LRT station, and that access to an expanding transit system, reduces the need to provide parking for residential and non-residential land uses. Also, as discussed below, a comprehensive transportation demand management plan would also reduce the need for parking.

There should be centralized, "district" parking facilities. These district facilities would be managed and would be paid for by the users. The size of the facilities would allow them to be efficient and a diversity of land uses would allow for shared use. The "district" parking facilities could be governed so that they provide parking up to a certain ratio, with the user providing any additional parking it feels it needs within its development. As



The Visitor Center at Fort Snelling State Park is open all year.

stated previously, there should be an internal circulator that would loop through the district, providing additional transit to areas that are too far or too time-consuming to walk. The circulator would reduce the need to drive to other areas of the district, reduce internal trips, and reduce the need for additional parking.

The proposed improvements to the internal street network include the addition of on-street parking. In commercial areas the LRT Station Triangle Area, the on-street parking should be high turnover, with parking limits of no more than 2 hours. In the West District and Lower Post, these on-street parking spaces should be factored into the required spaces, thereby reducing the need of off-street parking.

In addition to the automobile parking, bike parking stations should be located throughout the Fort Snelling district. A weather-protected bike parking facility should be constructed at the Fort Snelling LRT Station.



The Fort Snelling Park-and-Ride lots are used by commuters and patrons of events in downtown Minneapolis, such as Twins, Vikings, and Timberwolves fans.

Transportation Demand Management

To manage the number of parking spaces that are required at Fort Snelling, to manage the amount of traffic that circulates internally to the site, and to manage traffic volumes at the two interchanges, a comprehensive transportation demand management plan should be implemented.

Transportation demand management strategies may include:

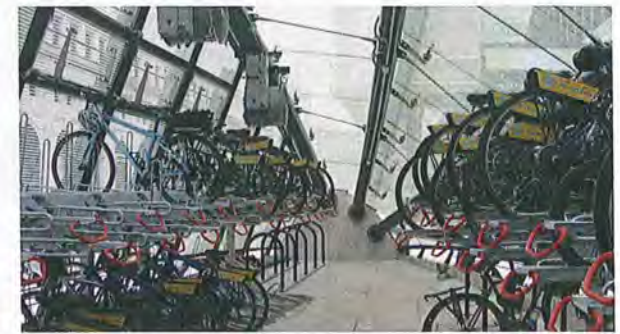
- » Guidelines that require office employers to offer programs that reduce single-occupancy vehicles – carpooling, preferential, and free parking for carpools, nominal parking fees to encourage transit and carpooling, incentives to use LRT and other transit,



This parking ramp in Portland provides commercial uses on the ground floor with four levels of parking.

company vehicles for employee use, and bike lockers and showers to encourage year-round bike travel.

- » Guidelines that allow the marketplace to determine individual users parking requirements with incentives to reduce parking demand.
- » The “district” parking ramps could provide parking up to a certain ratio (e.g. 2.0 spaces per 1000 GSF), with the user providing any additional parking it feels it needs at its cost.
- » Guidelines that require a shared parking analysis for mixed-use developments.
- » Residential ownership and lease terms that provide incentives to reduced the number of vehicles and thereby trips.
- » In commercial areas, provide on-street, high turnover parking spaces.



This covered bike station serves Union Station on the Washington, DC Metro.

- » Encourage Hour Car, Zip Car, or other shared car plans on-site.
- » Bicycle storage areas for year-round bike travel.
- » Clear and convenient access to regional bike trails.
- » An internal circulator that will allow easy, timely access to other uses in the Fort Snelling area and to the Fort Snelling LRT Station, thereby reducing internal trips and parking spaces.

Sewer and Water

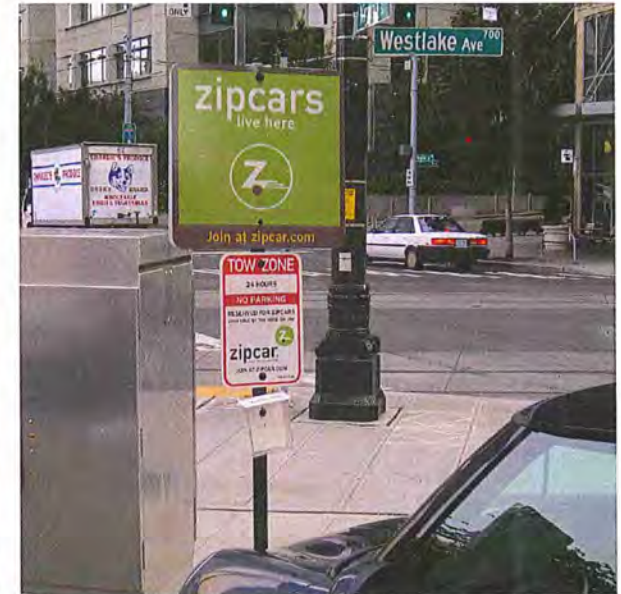
Sewer

Hennepin County retained WSB and Associates to assess the storm and sanitary sewer in the Upper Post and West District areas. Many of these sewer laterals had not been active for many years and needed to be cleaned in order to televise and assess the condition. WSB prepared the “Fort Snelling Upper Post Utility Assessment”, dated October 19, 2010. This report is available from Hennepin County Housing, Community Works and Transit Office.

The general conclusion of the assessment was that the sanitary system was in relatively good condition. With spot repair and rehabilitation, the system has the capacity to serve the Fort Snelling Upper Post and West District areas redevelopment. The storm sewer system in the Upper Post area is in poor condition and severely undersized for redevelopment. The report recommends a new storm sewer system that is adequately sized for the redevelopment and meets the current requirements of the Lower Minnesota River Watershed District (LMRWD) and the National Pollutant Discharge Elimination System (NPDES) general permit. In addition to the assessment, WSB generated



The 28th Avenue Park-and-Ride Ramp is an example of the type and scale of ramp that could be located on the North Lot at the Minnehaha Avenue entrance to Fort Snelling.



Car-sharing is another transportation option, an urban planning and development innovation that provides a more sustainable alternative to car ownership.

a cost estimate to bring these utilities back into service. A similar assessment study is being considered for the LRT Station Area Triangle.

The Fort Snelling study area is served by the Fort Snelling Interceptor (often referred to as the War Department Tunnel). This interceptor was recently transferred from MAC to the City of Minneapolis for ownership and maintenance. The Fort Snelling Interceptor is located south and east of Fort Snelling. The interceptor has significant capacity to serve this area.

There is a 24" VCP trunk sanitary sewer pipe that runs along the southside of Bloomington Road that was built by MAC with the Lindbergh Terminal in the 1960's. MAC owns and maintains this line. This trunk line was slip-lined in 2001 as part of major runway and terminal improvements. This trunk line is at or near capacity, so is not available for Fort Snelling redevelopment. MAC has developed a bypass to the southerly 15" and 18" trunk sanitary sewer that runs along the southerly Airport boundary and along Highway 5 to the Fort Snelling Interceptor.

The Upper Post area is served by this 15" and 18" trunk sanitary sewer that runs along the southerly boundary. This trunk sanitary sewer is maintained by MAC, but ownership is not clear. The West District is served by an 8" trunk sanitary sewer that runs along the north side of Bloomington Road. This trunk line ties into MAC's 24" trunk sanitary sewer at TH 55.

It is not clear who owns and maintains this line. It is unclear at this point how the LRT Triangle District and the GSA building are currently served with sanitary sewer.

Storm sewer serving the Fort Snelling study area is limited. There are no ponds or visible storm water management facilities. Bedrock is relatively shallow, which may have influenced the amount of drainage to storm sewer and ponding when this was developed. Bloomington Road is drained by a storm sewer in the roadway that appears to outfall into the TH 55 right-of-way. The Upper Post area drains to two storm sewer systems that outfall into the TH 5 right-of-way to the south. It is unclear how LRT Triangle District is served with storm sewer and how this discharges from the site.

The Fort Snelling project study area is located within the Lower Minnesota River Watershed District (LMRWD) boundary. Since the area is unincorporated, project review would be conducted by the LMRWD Board. A Runoff Management Plan would have to be prepared, addressing storm water rate control and water quality requirements based on the receiving water body. Note that the LMRWD prefers to see regional storm water management facilities over on-site facilities.

The Fort Snelling project study area should adopt a comprehensive storm water management plan that meets the LMRWD requirements, but also does the following:

- » Limits the amount of additional impervious areas added to site with incentives to manage the amount of additional surface parking, promote pervious or porous materials, and promote green roofs on new construction
- » Reduce storm water volume and improve water quality by requiring on-site retention of initial rainfall events through bioinfiltration swales, rain gardens, and underground infiltration systems



Seattle manhole covers demonstrate how infrastructure elements and public art can reinforce historic area identity as well as assist in wayfinding.

- » Where bedrock is shallow, require surface or underground biofiltration systems
- » Utilize the street right-of-way for storm water management of adjacent development – infiltration or filtration systems under the pavement
- » Meets the requirements of the National Pollutant Discharge Elimination System (NPDES) general permit.

Water

Water to the Fort Snelling area is supplied by the City of Minneapolis Water Department with a complete 12" loop through the site. The water system in the LRT Triangle, West District and the Upper Post was updated by the Water Department for the Minneapolis Park Board in 2001 for the Nieman Sports Field improvements. The Park Board made arrangements with all property owners and assessed the cost to each benefitting property owner. The Water Department built the system or took over some segments of private water main. There is a web of 6" and 8" water main throughout the site that provides both domestic and fire protection. The City of Minneapolis Water Department owns, maintains, permits connections, and bills for these services. It is not clear if the water main is within easements as it crosses the many different ownership parcels or if is permitted

by separate agreement. The system was sized in anticipation of redevelopment of the Fort Snelling district.

Private Utilities

The LRT Triangle and West Districts are served by Xcel Energy electrical and CenterPoint Energy gas. In the Upper Post, with the exception of the Nieman Sports Complex, the electrical, gas, and telephone services have been abandoned.

District Energy

The revitalization of Fort Snelling offers an opportunity to explore sustainable methods of providing energy to existing and new development. District energy refers to the production and distribution of energy using cogeneration or combined heat and power, district heating, district cooling, or the storage of thermal or electric energy. A district energy study is being conducted for the nearby South Loop Master Plan in the City of Bloomington. The Metropolitan Airports Commission is involved in that study and has expressed interest in electrical energy. Fort Snelling should explore energy management strategies that take advantage of the campus-like nature of its land and buildings, the likelihood of centralized governance structure, and the interest in district energy.

Infrastructure Ownership and Maintenance

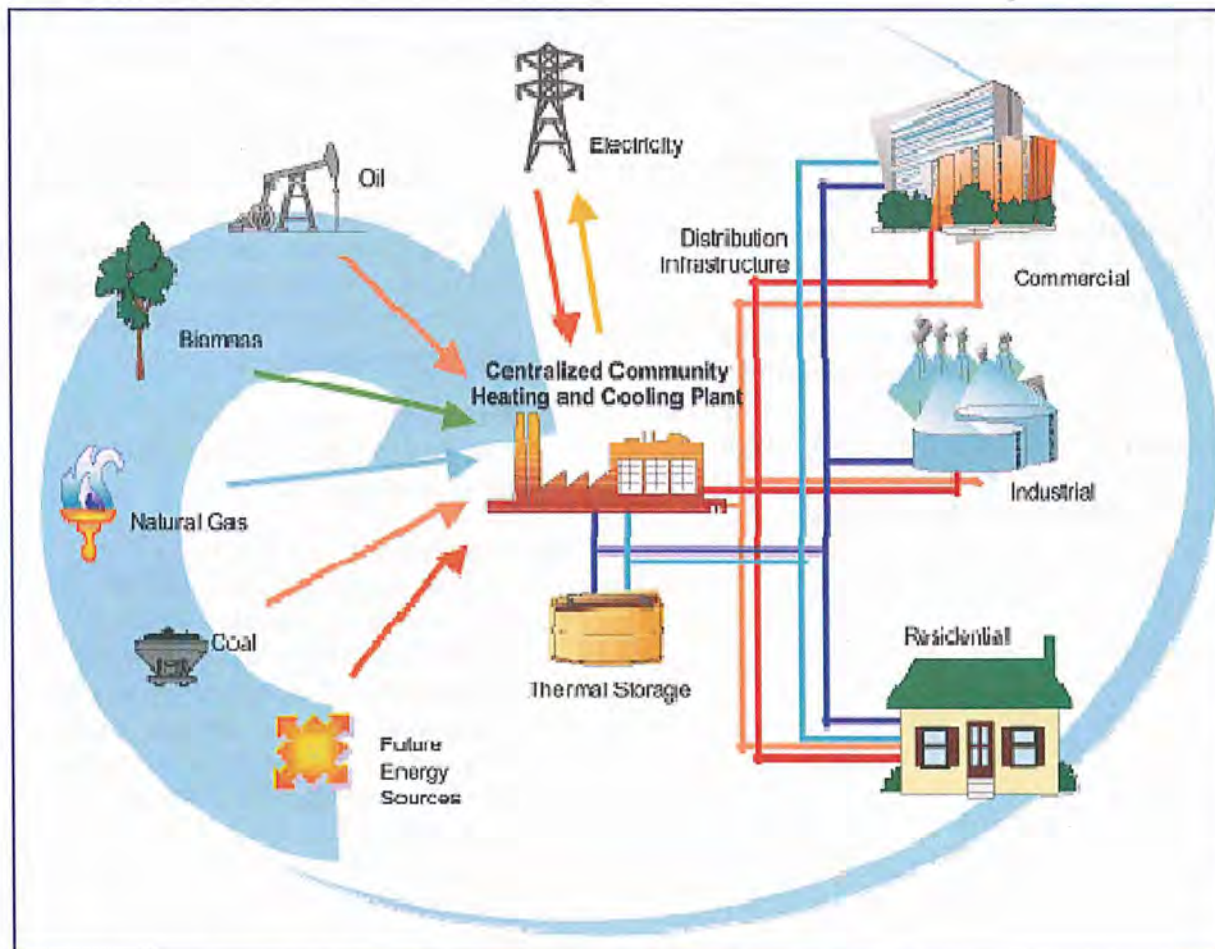
As noted above, Minneapolis owns and maintains the Fort Snelling Interceptor. MAC owns and maintains the 24" trunk sanitary sewer that runs along Bloomington Road and the 15" and 18" trunk sanitary sewer that runs along TH 5. The sanitary sewer system in the Upper Post area is owned, but not maintained, by the DNR. The remainder of the sanitary sewer in the West District and the LRT Triangle District is presumably owned and maintained by the VA and the GSA.

The storm sewer in Bloomington Road is owned and maintained by Hennepin County. The storm sewer in the Upper Post area is owned, but not maintained, by the DNR. It is not clear who owns or maintains the storm sewer in the remainder of the study area.

The water system at Fort Snelling is owned and maintained by the City of Minneapolis Water Department. It is unclear if this system exists in easements or by agreement.

Clearer ownership and maintenance responsibilities are required for the district. The governance structure for Fort Snelling should include a unified infrastructure ownership structure that allows that entity to levy user fees to build, improve, and maintain the sanitary sewer and storm

water management systems in the district. The governance structure would provide for a process for the City of Minneapolis Water Department to own, maintain, permit connections, and bill for its current and expandable system.



District energy heating and cooling cycle. Source: International District Energy Association

Environmental Review

Environmental Review

A thorough environmental assessment has not been conducted for the Fort Snelling study area. The use of this area as a military base is cause to suspect that environmental impacts are possible.

Hennepin County Environmental Services conducted a preliminary review of historical data of the West District in 2009. Based on this information, petroleum products, paint, and maintenance chemicals have been used or stored in the West District and the potential for releases of these and other chemicals could have occurred. Two former gas stations exist on the site and two petroleum releases have been noted. Historical records also note two deep water wells. Based on this cursory environmental review, Hennepin County Environmental Services recommends that a Phase I Environmental Site Assessment be performed for the West District. If a recognized environmental condition (REC) is determined, a more detailed Phase II Environmental Site Assessment may be required. A Phase I Environmental Site Assessment should be performed for the entire Fort Snelling Project study area.



Building 215—former gas station (top) and Building 220—former auto service building (bottom) both have a history that includes the use of petroleum products and maintenance chemicals.

Environmental Entitlement Process

Redevelopment of the Fort Snelling project study area will be required to meet the Minnesota Environmental Review program pursuant to Minnesota Statutes 116D.04 and 166D.045 and the administrative rules adopted by the Environmental Quality Board as Minnesota Rules, Chapter 4410, Parts 4410.0200 to 4410.7070.

Because the redevelopment is not a distinct project and will likely be a series of sequential projects with incremental impacts over a period of time, the Alternative Urban Areawide Review (AUAR) may be the best environmental review process. The AUAR process reviews one or several development scenarios, including a worst case development scenario. The AUAR essentially pre-reviews specific projects within a larger geographical area and defines a mitigation plan.

Transportation and Infrastructure Implementation Actions

The following are recommended implementation actions, listed in priority order:

1. Conduct an ALTA/ACSM survey on the LRT Triangle District, the West District, and the Upper Post to document existing ownership and easement rights and to facilitate the right-of-way needs for immediate pedestrian and bicycle connection designs.
2. Prepare an Alternative Urban Areawide Review (AUAR) to prepare the district for redevelopment.
3. The governance structure for Fort Snelling should include a unified infrastructure ownership structure that includes fees to build, improve, and maintain the sanitary sewer and storm water management systems in the district. The governance structure should permit the City of Minneapolis Water Department to own, maintain, expand, permit connections, and bill for its current water distribution system.
4. Prepare a Phase 1 Environmental

Site Assessment for the entire district to assess recognized environmental conditions.

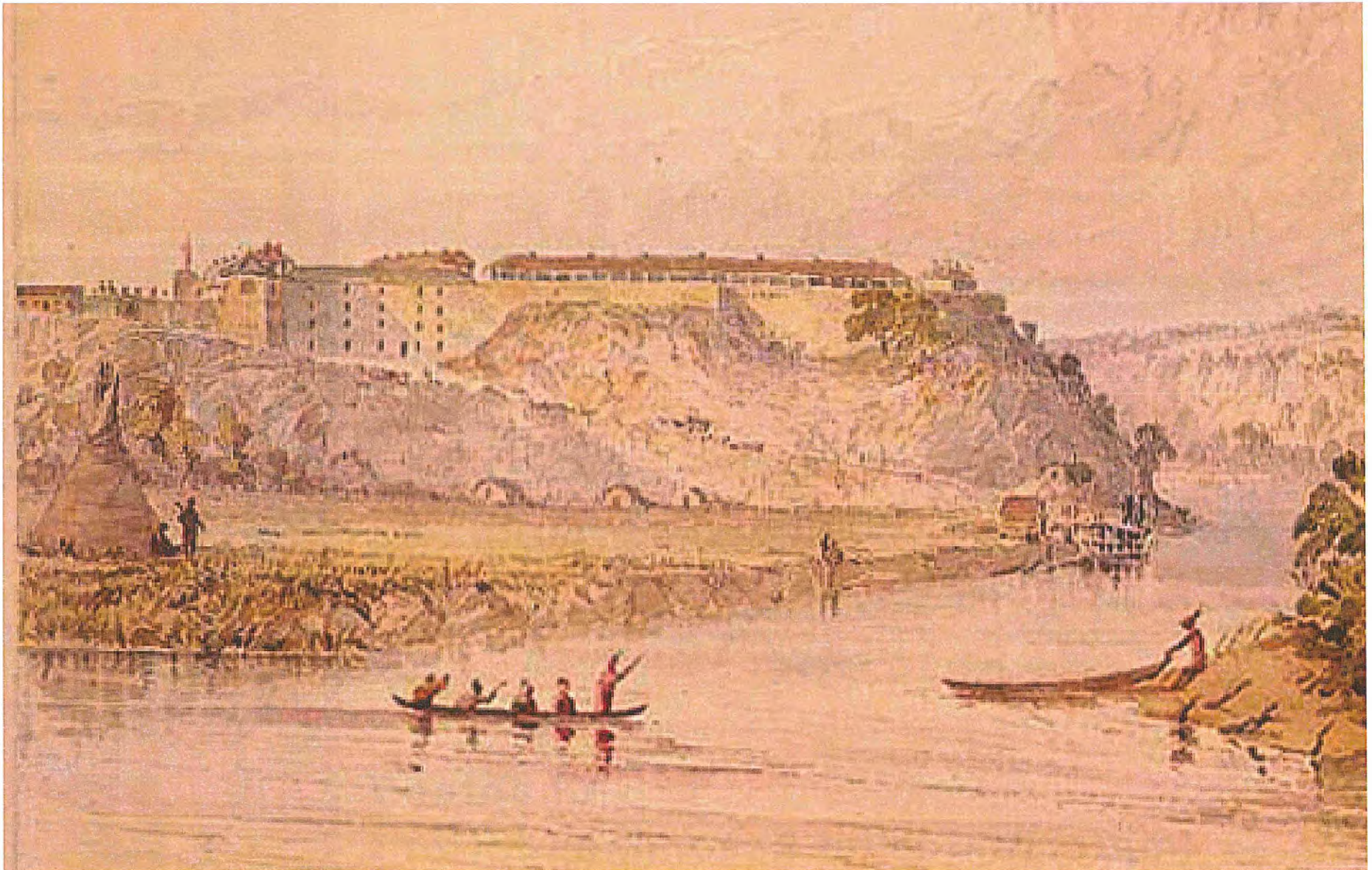
5. Improve the pedestrian and bicycle connections under TH 55.
6. Adopt street names for existing and proposed street and determine addresses for all Fort Snelling properties. Establish a wayfinding signage program and a historical interpretive marker plan.
7. Implement a comprehensive transportation demand management plan, with special emphasis on incentives to increase transit use.
8. Construct/reconstruct the following roadway connections in accordance with access requirements of development activity:
 - » Reconstruct Bloomington Road.
 - » Reconstruct Minnehaha Avenue from Taylor Avenue to Bloomington Road.
 - » Reconstruct Taylor Avenue.
 - » Construct Minnehaha Avenue from Bloomington Road to Tower Avenue.
 - » Reconstruct Leavenworth Avenue from Taylor Avenue to Bloomington Road.
 - » Construct Leavenworth Avenue from Bloomington Road to Tower Avenue.
 - » Construct Minnehaha Avenue from Tower Avenue to LRT crossing north of the existing Fort Snelling LRT station.
9. Implement an internal circulator bus route.
10. Adopt WSB and Associates recommendations for sanitary and storm sewer improvements including:
 - a. Repair and rehabilitation of the sanitary system in the Upper Post and West District areas
 - b. Remove the existing and develop a new storm sewer system that meets current sizing and regulatory requirements
11. Explore energy management strategies, including a district energy approach, for the district.

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Chapter 7

Implementation Recommendations





Seth Eastman neg 12702: Fort Snelling in 1848. Head of Navigation (watercolor, 1848) (Minnesota Historical Society)

Chapter 7 | Implementation Recommendations

Chapter 7 proposes a path to implementation and strategies for moving forward to realize the vision and achieve the goals outlined in Chapter 2. This chapter also addresses the ownership issue, provides options for a governance structure, options for a development review and approval authority, and a potential program for phasing of development activities. It concludes with implementation recommendations.

Introduction: A Path to Implementation

The challenges of Fort Snelling revitalization are many. Not really disregarded but often slightly ignored, Fort Snelling has looked less like an unrealized opportunity than a burdensome terrain.

Over several decades, residents of the Minneapolis-St. Paul metro area have witnessed the gradual decline of the Fort Snelling area. Fort Snelling is the first thing visitors see when they leave MSP Airport by rental car, taxi, or transit. As the saying goes, “You get one chance to make a first impression.” When these visitors make their way into the Minneapolis-St. Paul, the first thing they see is a group of boarded up, neglected, and deteriorating old buildings.

Fort Snelling’s historic buildings and landscapes need restoration and new uses and users. The area around the LRT station needs redevelopment, activities, and people. The reasons people give when they are asked why they have selected a particular area to live or to work are to get a specific job or to follow friends or to be at the center of activities at a special place. Communities are all about people, not just the infrastructure.

Over the last several years, since the establishment of an LRT station at Fort Snelling, Hennepin County and its partners have begun the process of stabilizing the historic buildings, gaining a better understanding and appreciation of the significance of the historic resources, both buildings and landscapes, and collaborating to develop this Master Plan to accelerate revitalization.



Examples of mixed-use projects that respond positively to Fort Snelling’s Master Plan goals and development policies for the LRT Station Area Triangle.

This Master Plan articulates a vision and goals, and presents development policies and urban design guidelines, a restoration and redevelopment program, an economic impact strategy, and an infrastructure plan. But the key to success – beyond new uses, design standards, and strategies – is developing project champions who will cooperate around that shared vision, with the commitment to act and make the vision a reality. To revitalize Fort Snelling as a new sustainable community of transit-oriented development, new institutional frameworks and partnerships are needed. Implementation of this Master Plan needs leadership. Implementation needs elected decision-makers to look twenty-five to fifty years ahead, and act decisively now to increase the pace and scope of strategic interventions.

The most critical action the involved parties must take is the creation of a new governance structure that brings together the major stakeholders into a contractual relationship that enables them to think and act collectively. This new governance body should have the capability to balance costs and revenues in implementing a redevelopment plan for private development and public infrastructure. This new governance body, development authority, and development review and approval authority, should be assertive, entrepreneurial, enthusiastic, and even experimental, in pursuit of investment and partners to honor Fort Snelling's diverse history, to realize its promise, and to optimize its opportunities.



Much of the repair work on Fort Snelling's historic buildings has focused on roof repair and masonry repair.

Strategies for Moving Forward

1. Adoption of a Master Plan as a beginning, not an end. It must serve as a guide that is firm on its goals, but has flexible methods to respond to the continuous adaptive activity of the larger marketplace.
2. Creation of a formal, centralized, and funded governance structure that consolidates ownership of lands and infrastructure.
3. Creation of a development authority.
4. Resolution of development review and approval issues and impediments, and creation of a development review and approval authority to provide predictability to potential investors.
5. Implementation of methods to maximize transit use and transit-oriented development.
6. Outreach to the development and investment communities, including Native American tribes, to create partnerships for individual activities and projects.
7. Outreach to Native Americans and other

stakeholders to create partnerships for shared programming and events.

8. Adoption and implementation of an economic development framework that identifies revenue streams to fund needed capital improvements to infrastructure as well as revenue sources that offset the financial impact of operations and maintenance costs.
9. Installation of transportation and other infrastructure to facilitate and support mixed-use restoration and redevelopment.
10. Continued investment in historic building stabilization, restoration, and reuse.
11. Expansion of public access, use, and enjoyment.
12. Provision of broad public input opportunities, including active engagement of Federally Recognized Indian Tribes.
13. Creation of a broad Historic Interpretive Plan that identifies the braided themes/stories that together describe the continuum of history at Fort Snelling.

Ownership and Governance

For the historic buildings and landscapes and the areas adjacent to the Fort Snelling Light Rail Transit station to realize their full development potential, the current cumbersome and dysfunctional institutional arrangements with respect to ownership and governance need to be changed.

Consolidation of Ownership

As described in Chapter 5 Economic Impact Strategy, redevelopment in the LRT Station Area Triangle, and redevelopment of the vacant land in the West District and the Upper Post can provide the resources to restore and reuse the historic buildings. To accomplish this objective, the West District and Upper Post land and historic buildings should be transferred to a new owner with an organizational structure that will permit reuse by a wide variety of entities. Lands in the LRT Station Area Triangle should also be transferred to that same owner.

Options for Governance Structure

Currently Fort Snelling has no governance structure. In 2006 Hennepin County and the Minnesota DNR stepped forward to convene a Fort Snelling Task Force to oversee efforts to restore and revitalize Fort Snelling. These efforts included securing the historic building resources, initiating an overall Master Plan

for facilitating transit-oriented development to support increased transit ridership at the Fort Snelling station. The Task Force also identified the need for a new governance structure. Chapter 5 Economic Impact Strategy discusses the need for a new organizational or governance structure in detail.

With the completion of this draft Master Plan, the interested parties need to move forward with a Joint Powers Agreement comprising the major landowners, (Hennepin County, Minnesota Department of Natural Resources, Veterans Administration, Minneapolis Park and Recreation Board), and regulatory agencies (National Park Service, Minnesota Historical Society).

The primary tasks for the Joint Powers partners will be:

1. to adopt and begin implementation of the Master Plan,
2. to develop consensus on and draft legislation to establish the most appropriate organizational and ownership structure for the long-term preservation and protection of the historic resources and to manage and dispose of properties,
3. to oversee completion of a Program for Preservation and Utilization and transfer certain properties to the Historic Surplus Program to expand the

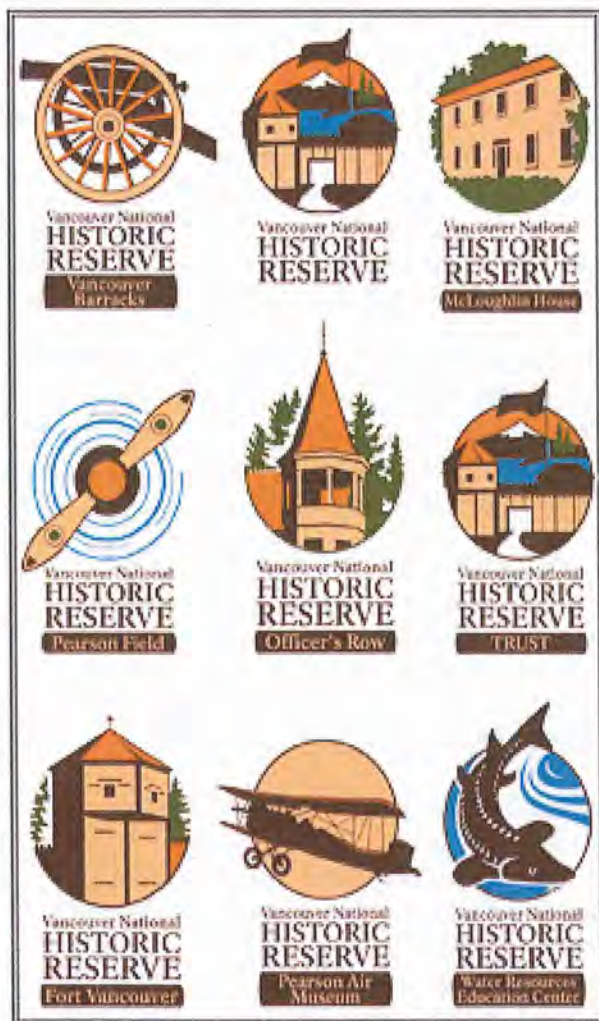
types of permitted uses allowed in the historic areas,

4. to solicit qualified developers and facilitate appropriate new uses, new activities, and new redevelopment to maximize transit use and transit-oriented development, and
5. to work in partnership with Federally Recognized Indian Tribes to advance the goals of the Joint Powers Agreement.

The next step would be to develop consensus on evolution of the Joint Powers partners to either:

1. a Federally-authorized Historic Reserve with cooperative management plan or programmatic governing agreement among the parties that lays out common principles, defines respective responsibilities and relationships, provides a framework for decision-making, and establishes standards and programs for future activities, or
2. an entity that is a municipality or has the powers of a municipality, possibly the Village of Fort Snelling as recommended in Chapter 5, along with a newly-incorporated Fort Snelling Development Corporation to serve as a public-private partnership with the ability to facilitate development within the Village of Fort Snelling.

The new governance entity must have strong support from the stakeholders, clear lines of decision-making authority, and adequate capitalization. This entity must have a level of immunization against traditional ways of doing government business. It must be independent, but accountable, able to make decisions quickly, and have the capacity to respond opportunistically to market conditions. There must be adequate staffing to implement the Master Plan over several years.



This graphic illustrates the logos of the many facilities within the Fort Vancouver National Historic Reserve which is a legislated partnership between the National Park Service, the City of Vancouver, the US Army Reserve and the Washington State Department of Archeology and Historic Preservation for the management, preservation, and protection of the Fort Vancouver National Historic Site.

Reuse, Redevelopment, and Development Approval

In addition to the lack of a governing authority for Fort Snelling, four other major issues have been impeding reuse, restoration, and redevelopment:

1. Legal prohibitions on other than recreation uses in historic structures and landscapes.
2. Airport noise and airport-related use and development restrictions.
3. Lack of a public development authority.
4. Lack of a development review and approval authority.

These issues are discussed below, and a resolution for each is proposed.

Removal of Restrictions on Uses: Need for a Program for Preservation and Utilization (PPU)

In 1971 the Upper Post (referred to as the Upper Bluff area at that time) was transferred by deed to the State of Minnesota Department of Natural Resources (DNR) through the Federal Lands to Parks Program. The Quit Claim Deed contained specific requirements that the property be used for "public park or

recreational purposes." The deed allows the DNR to enter into "concession agreements" with non-governmental parties to provide facilities and services relating to public park or public recreation programs. These and other restrictions of the Federal Lands to Parks Program, and the fact that the Upper Post is state property, involve unique and challenging legal issues for the redevelopment and reuse.

Over the past several years, Hennepin County, the State DNR, and the National Park Service (NPS) have been in discussions regarding the need to change this status to the Historic Surplus Program which allows more flexibility in allowable uses, including commercial use.

Owners receiving properties from either Federal property disposal program must comply with the terms of the transfer in perpetuity, although the terms can be amended



Fort Snelling's 141-acre Upper Post historic resources are currently restricted to recreation use under the Lands to Parks Program property disposal program which poses significant barriers to economic reuse.

by mutual agreement. The National Park Service is willing to work with the State to change the deed in order to expand the reuse options. This deed change will also require the approval of the General Services Administration (GSA).

Under the Historic Surplus Property Program, the terms for expanded use possibilities are established in a legally-binding document called a Program for Preservation and Utilization (PPU). The PPU specifically addresses the treatment and use of historic property, and provides a plan for financing the preservation and maintenance of the property.

The PPU must be approved by both the National Park Service and the Minnesota State



Building 152, one of the houses in Officers Row, could greatly benefit from the flexibility in potential uses afforded in the Historic Surplus Property Program.

Historic Preservation Office, and it becomes a binding element of the deed. Any revenue-producing activities must be compatible with the historic property and must meet the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Proposed actions on these historic resources should have no "adverse effects" according to definitions found in Section 106 of the National Historic Preservation Act.

It is imperative that the Program for Preservation and Utilization (PPU) be initiated and completed immediately.

Aircraft Land Use Compatibility Plan

As described in Chapter 3, the location of Fort Snelling adjacent to the Minneapolis-St. Paul International Airport poses aircraft noise and land use compatibility issues. It was noted that whenever intrusive noise exceeds approximately 60 dB day/night noise level (DNL) indoors, there will be interference with speech communication. However, understanding the implications of DNL values is widely acknowledged as difficult. According to a Government Accounting Office (GAO) report entitled "Aviation and Environment 2000", despite the widespread use of quantitative compatibility thresholds, computation measures, and procedures for determining land use compatibility, developing

a compatible interface between airports and the surrounding land use has not gone smoothly. That report suggests that, because each airport and its surrounding jurisdictions are unique, the value of providing specific noise components, criteria, and wordings is limited. Therefore, that report recommends that noise ordinance language be crafted uniquely for and by each airport and its local jurisdiction.

Aircraft noise is one of several airport-related issues affecting land use and development. There are also safety and airspace issues such as height of buildings and structures, and visual obstructions including lights.

Therefore, a detailed Airport Land Use Compatibility Plan should be prepared for use in site and development plan review and approval for Fort Snelling redevelopment.

Public Development Authority

As discussed in Chapter 5 Economic Impact Strategy, there is a need for a legal entity to not only own land, but also to lease it to developers and enter into joint development projects. This entity could be responsible for common area maintenance, management of the parking (ramps and surface lots), and programs to increase transit ridership. This public development authority could also have the power to sell bonds to raise capital for redevelopment activity.

Development Review and Approval Authority

As noted previously, Fort Snelling is located in an unincorporated area of Hennepin County. There are no governmental land use and development regulations (zoning, subdivision, etc.), nor is there a development review and approval authority. Construction work to date at the Upper Post has been reviewed by State of Minnesota Code Officials because it is a State property. Recent and current work at the Boy Scouts' Building 201 was also reviewed by State Code officials because of the lack of other governing authority. Upcoming renovation work at the Bishop Whipple Building – GSA will be reviewed by federal officials.

Due to Ft. Snelling's proximity to the MSP Airport, any development would have to comply with the airport zoning review (primarily with respect to building height/airspace obstruction issues) and the Federal Aviation Authority (FAA) airspace review.

Also, rehabilitation, additions, and new development in the Upper Post and West District areas will be judged and interpreted first with regard to the guidelines in (1) the Fort Snelling Upper Post Open Space and Landscape Development Guidelines and (2) the Fort Snelling West District – Historical Context Study and Development Guidelines, and then ultimately against the National Park Service Secretary of the Interior's Standards

for Rehabilitation, the overarching document upon which these two guideline reports were developed. The procedure under which development proposals will be reviewed will be an NPS Federal Section 106 review process and may, depending on the financing arrangements proposed development, also include a Historic Preservation Tax Credit review at both the Federal and State levels. All reviews will be initiated with and coordinated through the State Historic Preservation Office (SHPO) of the Minnesota Historical Society.

This Master Plan establishes preliminary development standards for uses, buildings, and spaces in the LRT Triangle. Until or unless a new governmental structure is created at Fort Snelling that also designates Building Code and Development Permit Review to another entity, development reviews in the LRT Triangle will likely be done by the State of Minnesota Building Code officials.

This fragmented and sequential development review process will not produce the desired revitalization of Fort Snelling. An integrated development review and approval process for Fort Snelling is needed to coordinate decision-making, to streamline and expedite the needed deliberations, and ultimately to provide timely and responsive decisions. There is a need to establish an overall development review and approval authority to evaluate and approve future rehabilitation and redevelopment proposals against the Master Plan vision and

development policies, and where appropriate, historic district guidelines as well.

There are two different types of development review and approval systems:

1. Rule-based: Zoning Code, with regulations based on policies in a Comprehensive Plan.
2. Discretion-based: Development Master Plan with review based on application of design guidelines or a form-based code which incorporates a degree of discretionary choices.

The unpredictability of the pace of growth and change in the Twin Cities metro area, the reality of continually changing needs and demands of potential users, the uncertainty of development financing, and the complex issues surrounding the reuse of historic resources call for flexibility, adaptability, and responsiveness. A new authority with a streamlined review and approval process is required to enable investors and developers to not only adhere to development and design guidelines but also to facilitate their flexibility to respond to and capture the market.

The creation of a vibrant, sustainable community at Fort Snelling requires a development review and approval process that goes beyond the consideration of sequential individual building designs and compliance with zoning requirements. The recommended

regulatory framework would employ innovative and cooperative site planning through a comprehensive, highly discretionary, consultative process that:

- » Engages both public and private sectors at multiple levels,
- » Uses the design guidelines primarily as a generative tool to provide architects and developers with direction and encouragement for producing designs which will meet user needs and make positive contributions to surrounding development parcels and open spaces.
- » Goes from large-scale and conceptual to specifics in stages,
- » Identifies and resolves issues early at each stage,
- » Builds consensus through negotiation,
- » Issues development permits, building permits, and certificates of occupancy.

This process would be similar to, but go beyond, a planned unit development (PUD) rezoning process used by many municipalities.

This recommended development review and approval process would require the public and private sectors to join forces early in the development proposal process for an actual design exercise, prior to submission of a development permit application. This process

would also involve the administrative authority having more discretion than in a highly regulatory traditional zoning system.

Therefore, Master Plan implementation would greatly benefit from the establishment of a new Development Approval Board, with discretionary powers in accordance with the criteria outlined above. The responsibilities and scope of authority would need to be determined with the input of all parties of the joint powers board, with special consideration of the regulatory purview granted to the National Park Service through Federal legislation, as well as the MSP Airport Zoning Review and the FAA airspace review processes.



Three adjacent buildings in the Minneapolis Historic Mills District illustrate the type of development review and approval challenges facing Fort Snelling: the Mill City Museum is historic and restored; a residential condo with ground floor restaurant is new and contextual in scale, some materials, but not in style; and the Guthrie Theatre is contextual in scale, but not in materials or style. All three complement each other in terms of use and overall contribution to the emerging neighborhood.

Phasing of Development Activities

Many actions and activities are needed to launch a successful and sustained revitalization. The highest priority initiatives are included in the final Recommendations. The remainder is listed below. The new governance organization should review and assign relative priorities to them. Ultimately, they should become part of a long-term strategic implementation program.

Early Phase: Reuse and Redevelopment

1. Facilitate the completion of early signature uses:
 - » Minnesota Air and Space Museum
 - » Sentence to Serve office in Building 65 (Post Guard House)
2. Prepare a park and public open space preservation and development plan.
3. Begin the process to “free up” lands for redevelopment by creating new consolidated and shared parking structures on current surface parking lots.
4. Enhance transit use and connections for existing users/occupants near LRT

station and Lower Post (including GSA, military, Boy Scouts, Fred Wells Tennis Center, and Fort Snelling Club).

Early Phase: Visitor and Tourism Promotion

1. Publicize Master Plan and its implementation activities.
2. Prepare a broad Fort Snelling Historic Interpretive Plan that identifies educational methods and programs that explain the following themes:
 - » How the natural environment shaped human history, and how human endeavors affected the natural landscape at the confluence of the Mississippi River and Minnesota River;
 - » How European and Euro-American colonization irremediably altered thousands of years of use and occupation of these lands by Native Americans;
 - » How the military history of Fort Snelling reflects the evolving response of our nation to an ever-changing array of threats from within and from foreign powers.
3. Expand public access and enjoyment:
 - » Active recreation and sports (softball and soccer games)
 - » Military and veterans' parades, band concerts, and events
 - » Native American events
 - » Festivals, concerts, performances, plays, fairs, movies, and exhibits
 - » Historic commemorative events
 - » Summer program of arts and education
 - » Community gardens
 - » Landscaping around stabilized, but still unused buildings
 - » Interactive exhibit at Lower Post Visitor Center
 - » Promotional events at the Boy Scouts Base Camp.



Visitors leaving the former home of Dred Scott and his family at Fort Snelling. Dred and Harriet Scott were slaves who had filed suit to gain their freedom and lost their case at the U.S. Supreme Court in the 1857.



Military retirement ceremony at Fort Snelling's Lower Fort.

4. Develop comprehensive wayfinding and historic interpretative marker program for visitor orientation and education.
5. Prepare Walking Tour Programs
 - » Create self-guided walking tours.
 - » Conduct regular National Historic District guided walking tours (National Park Service, Minnesota Historical Society, Preservation Alliance of Minnesota).
2. Create an operational endowment for special events and maintenance of public places and other infrastructure.
3. Prepare 10-year capital project priorities.
4. Prepare 10-year operational and program priorities.
5. Prepare 25-year capital project priorities.

Next Phases

1. Mount a capital campaign to support full restoration and build-out.



Preservationists and others on a guided tour of Fort Snelling's Upper Post conducted by the Preservation Alliance of Minnesota.

Recommendations

These recommendations for next steps needed to implement the Master Plan are made to the Hennepin County Board of Commissioners and staff of the Department of Housing, Community Works, and Transit. These recommendations are the highest priority actions to be taken in the face of an ill-defined future marketplace.

To maximize transit use and transit-oriented development potential, and to enable Fort Snelling's historic resources to move from stabilization to reuse and revitalization, the following actions must be taken immediately:

1. Adopt the Fort Snelling Light Rail Transit and Upper Post Master Plan to maximize transit use and guide revitalization of Fort Snelling.
2. Continue historic building stabilization.
3. Create a joint powers agreement, and set a 2-year timetable for the establishment of a new permanent governance structure, consolidation of land ownership, creation of a development authority, and creation of a development review and approval authority for Fort Snelling.
4. Conduct an ALTA/ACSM land title survey on the LRT Triangle District, the West District, and the Upper Post

to document existing ownership and easements and to facilitate the right-of-way needs for immediate pedestrian and bicycle connection designs.

5. Complete the Program for Preservation and Utilization (PPU) to expand the range of permitted uses in Fort Snelling's historic districts.
6. Implement early initiatives to "jump start" an increase in awareness of and access to Fort Snelling, including:
 - » Formal adoption of street names and addresses for all Fort Snelling properties.
 - » Development of a preliminary public relations and branding strategy with an initial focus on recreational opportunities and cultural tourism.
 - » Improvements to signage and other wayfinding mechanisms.
 - » Improvements to bike access and facilities.
7. Prepare an Alternative Urban Areawide Review (AUAR) to prepare Fort Snelling's three restoration and redevelopment districts for redevelopment investment and activity.
8. Prepare an Airport Land Use Compatibility Plan.

9. Prepare a Phase 1 Environmental Site Assessment for the entire Fort Snelling district to assess recognized environmental conditions.

10. Prepare a 5-year strategic implementation program including:
 - » Consolidation of land and infrastructure ownership under one entity,
 - » Incentives to maximize transit use and transit-oriented development, especially in the area described as the LRT Station Area Triangle,
 - » Schedule for transportation and infrastructure improvements,

- » Formal marketing/public outreach partnership and program for visitor and tourism promotion, focused on multi-cultural engagement and visitor amenities and services, and
- » Business plan for the long-term management of publically-accessible historic assets.

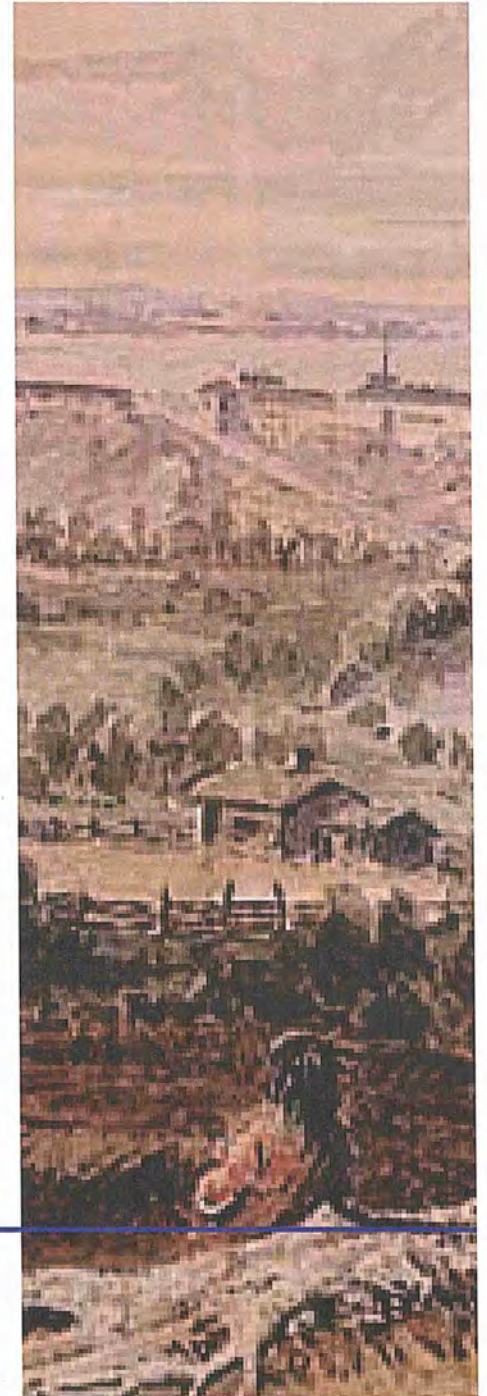
11. Continue to engage the National Trust for Historic Preservation, the Preservation Alliance of Minnesota, and other national and local partners experienced in adaptive reuse and use of national and local tax credit programs within historic districts.



Governors' Conference at Fort Snelling, 1974. (Minnesota Historical Society)

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Appendices



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Appendix 1 | Fort Snelling West District – Historical Context Study and Development Guidelines

Fort Snelling West District – Historical Context Study and Development Guidelines

(Miller Dunwiddie Architecture and Hess Roise and Company, April, 2010)

<http://www.hennepin.us/files/HennepinUS/Housing%20Community%20Works%20and%20Transit/Community%20Development/Economic%20Development/Fort%20Snelling/Fort%20Snelling%20West%20District%20Report-REVISED-2010-0714.pdf>

Fort Snelling West District - Historical Context Study and Development Guidelines

Prepared by Miller Dunwiddie Architecture and Hess, Roise and Company



Appendix 2 | Fort Snelling Upper Post Open Space and Landscape Development Guidelines

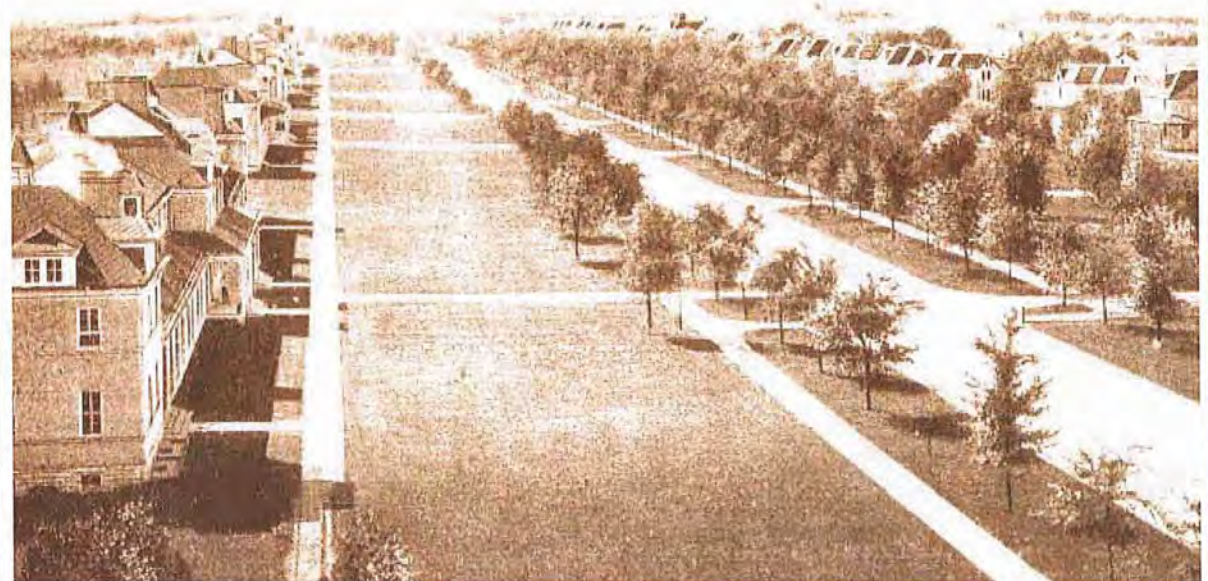
Fort Snelling Upper Post Open Space and Landscape Development Guidelines

(Miller Dunwiddie Architecture, et al., Summer, 2008)

<http://www.hennepin.us/files/HennepinUS/Housing%20Community%20Works%20and%20Transit/Community%20Development/Economic%20Development/Fort%20Snelling/Upper%20Post%20FINAL%20Lo%20Res%20web%20version.pdf>

Fort Snelling Upper Post Open Space & Landscape Development Guidelines

Summer 2008



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Appendix 3 | Secretary of the Interior's Standard for Rehabilitation

Secretary of the Interior's Standards for Rehabilitation

"Rehabilitation" is defined as "the 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 and features of the property which are significant to its historic, architectural, and cultural values."

The Standards (U. S. Department of Interior regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction. The Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
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 architectural elements from other buildings, 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, color, texture, and other visual qualities 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. The surface cleaning of structures, 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 architectural features to protect the historic 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.

Appendix 4 | Regulations regarding Development near Airports

Regulations regarding Development near Airports

Excerpt from *Airport Cooperative Research Program (ACRP) Report 27: Enhancing Airport Land Use Compatibility Volume 1(2010)*.

This section includes federal statutes, ACs, and CFRs, relevant to land use compatibility and provides a summarization of the primary regulations. The sources noted below are not meant to be an all-inclusive list, but rather a general summary and overview of resources relating to planning and design.

AC 70/7460-1K Change 2, Marking and Lighting. This AC works within the requirements of FAR Part 77. A sponsor proposing any type of construction or alteration of a structure that may affect the National Airspace System is required to submit FAA Form 7460-1 "Notice of Proposed Construction or Alteration." This form should then be sent to the Obstruction Evaluation Service (OES) of the FAA.

AC 70/7460-2K, Proposed Construction or Alteration of Objects that May Affect the Navigable Airspace. This AC provided information regarding the erection or alteration of an object on or near an airport that may affect the navigable airspace as required in FAR Part 77. In addition, this AC explains the process by which to petition for

discretionary review, thereby providing the FAA the opportunity to:

- » Recognize potential hazards and minimize the effects to aviation.
- » Revise published data and/or issue a Notice to Airmen (NOTAM).
- » Recommend appropriate marking and lighting to make objects visible.
- » Depict obstacles on aeronautical charts.

AC 150/5070-7, Airport System Planning Process. This document outlines the development of effective airport system planning. Developing an airport system plan provides guidance and establishes a balanced integrated system of public-use airports. The airport system planning process should be consistent with state or regional goals that involve examining the relationship between airports and aviation user requirements. Once these relationships are established, the airport system planning process should result in the identification, preservation, and enhancement of both the current and future aviation demand. This AC provides a detailed outline for the development of an acceptable airport system plan.

FAA AC 150/5190-4A, Model Zoning Ordinance to Limit Height of Objects Around Airports. Language that can be used by local land use jurisdictions to implement and enforce

the provisions of FAR Part 77 are found in this AC. The wording provided is advisory only and, except with regard to the technical description of the airspace surfaces, is often modified by individual jurisdictions.

FAA AC 150/5300-13 Change 14, Airport Design. This AC provides the basic standards and recommendations for airport design. The most recent update provides expanded information regarding new approach procedures for RPZs, threshold-siting criteria, and new instrument approach categories. The criteria contained in this document are the primary spatial standards for on-airport development.

Form 7460-1, Proposed Construction of Alteration of Objects that May Affect the Navigable Airspace and Form 7460-2, Supplemental Notice of Actual Construction or Alteration. Form 7460-1 & Form 7460-2 are required for development proposed in proximity to any public-use airport to assess each proposed or temporary construction in the vicinity of the airport. The FAA conducts an aeronautical study and issues a determination to the airport sponsor. The determination identifies whether or not the proposed development is a hazard to flight. It is imperative that local planners be aware of the various critical safety considerations when developing around airports. These forms can be found online at www.oaaaa.faa.gov and they must be submitted at least 30 days prior to the

date the construction or alteration is to begin. FAA will evaluate the proposed development and provide a finding regarding the potential of the development to be a hazard to air navigation. One of three specific findings can be expected: no hazard, hazard or potential hazard. If a potential hazard is found, the FAA may request additional information to further assess the potential impact. This process is merely a notification procedure and provides an opportunity for the FAA to comment on potential development. Unfortunately, the FAA does not have any regulatory power to deny the development; it may only comment on the expected impact of a proposed development. Limitation of a potential development is the sole responsibility of the local community.

Form 7480-1, Notice of Landing Area Proposal. This form works in conjunction with FAR Part 157, which requires a 90-day notification prior to any construction, alteration, deactivation, or change to the use of an airport. Notice is required for the following:

- » Construct or otherwise establish a new airport or activate an airport;
- » Construct, realign, alter, or activate any runway, or other aircraft landing or takeoff area of an airport;
- » Construct, realign, alter, or activate a taxiway associated with a landing or takeoff area on a public-use airport;
- » Deactivate, discontinue using, or abandon an airport or any landing or takeoff area for a period of one year or

more;

- » Deactivate, abandon, or discontinue using a taxiway associated with a landing or takeoff area on a public-use airport;
- » Change to status of an airport from private-use to an airport open to public or from public-use to another status;
- » Change status from instrument flight rules (IFR) to visual flight rules (VFR) or VFR to IFR; and
- » Establish or change any traffic patterns or traffic pattern altitude or direction.

FAR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airport. This part provides guidelines, procedures, and standards that shall be used in determining what effect construction, alteration, activation, or deactivation of an airport will have on the safe and efficient use of the navigable airspace by aircraft. Part 157 applies to civil and joint-use airports that do not receive federal funding.

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