



University of Minnesota On-Campus Football Stadium

Final Environmental Impact Statement

University of Minnesota

SEH No. A-UOFMN0501.00

February 13, 2006

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**FINAL ENVIRONMENTAL IMPACT STATEMENT
For
UNIVERSITY OF MINNESOTA FOOTBALL STADIUM**

**University of Minnesota Twin Cities Campus
Hennepin County, Minnesota**

RGU and Proposer: Regents of the University of Minnesota

**RGU Contact: Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455
612.625.6665
bswanson@umn.edu**

Abstract: The University of Minnesota has prepared a Final Environmental Impact Statement (EIS) for a new 50,000 seat open air on-campus football stadium, including site and associated public infrastructure improvements within the City of Minneapolis in Hennepin County, Minnesota. The Stadium Project is located on the existing Huron Boulevard parking lots, in close proximity to Mariucci Arena and the Williams Arena/Sports Pavilion complex.

The Draft EIS comment period opened on October 24, 2005 and extended through November 23, 2005. A Draft EIS public meeting was held on November 10, 2005.

The comment period deadline for the Final EIS is February 27.

Approved for Issuance for Public Comment:

2/6/06
Date


Vice President for University Services

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Executive Summary

The University of Minnesota has prepared a Final Environmental Impact Statement (Final EIS) for a new 50,000 seat open air on-campus football Stadium, including site and associated public infrastructure improvements within Minneapolis in Hennepin County, Minnesota (hereafter referred to as the Stadium Project). The Stadium Project is located on the existing Huron Boulevard parking lots, in close proximity to Mariucci Arena and the Williams Arena/Sports Pavilion complex.

Prior to preparation of the Final EIS, a Draft EIS, a Scoping Decision Document (SDD), and a Scoping Environmental Assessment Worksheet (SEAW) were prepared for the Project. Visit www1.umn.edu/stadium/environmental_review.html to view these documents.

The alternatives evaluated in this Final EIS include the Build (Stadium Project) condition and No-Build condition. The subject areas analyzed include:

- Traffic and Parking
- Noise (Traffic, Game, and Concert)
- Air Quality
- Infrastructure and Utilities
- Surface Water Quantity and Quality
- Environmental Contamination
- Geologic Hazards and Soils
- Social, Community, and Economic Effects
- Visual Impacts
- Construction-Related Impacts
- Cumulative Effects

Public and agency comments received during the Draft EIS comment period are included in the Final EIS along with responses to those substantive comments. In addition, the analysis in the Final EIS has been modified to reflect the substantive issues raised through the comment process.

Measures which the University will implement to mitigate the adverse impacts identified in the Final EIS analysis include:

- Traffic and Parking – Establish an Event Transportation Manager position and prepare a Travel Demand Management Plan (TDM) to include provisions for managing traffic, parking, transit, and pedestrian issues.
- Concert Event Noise – No concerts after 10:00 pm, require line-array speaker technology and noise monitoring during events, and initially no concerts larger than 15,000 attendees. A noise test of actual conditions will be conducted to determine the attendance parameters required to ensure compliance with State noise standards.
- Surface Water Quantity and Quality – Minimize impervious surfaces and implement practical best management practices including level spreaders, bioretention basins, and underground storage/cisterns.
- Environmental Contamination – Prepare a Response Action Plan and Site Redevelopment Construction Contingency Plan in coordination with the MPCA.
- Social and Community – In addition to the mitigation for traffic and parking impacts, the University will implement and enforce student and fan behavior policies and procedures.
- Construction Related Impacts – A range of measures have been developed to address construction period issues related to noise, dust, erosion, community impacts, business impacts, traffic, and parking.

Section 4.0 of the Final EIS, details the mitigation measures summarized above.

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List of Preparers

Agency/Organization and Name	Final Environmental Impact Statement Responsibility
University of Minnesota	
Brian Swanson	University Project Manager, Purpose and Need, Review of EIS
Harvey Turner	Capital Planning and Project Management – Review of EIS
Ken Larson	University General Counsel Office – Review of EIS
Mike Denny	Capital Planning and Project Management – Review of EIS
Jan Morlock	Public Involvement and Community Relations
Scott Ellison	University Athletics Department – Review of EIS
Gray Plant Mooty	
Tom Johnson	Review of EIS and legal compliance
Rick Kubler	Environmental Contamination and Response Action
SEH	
Kelly Bettendorf	Consultant Project Manager
Chris Hiniker	Public Involvement, Document Coordinator
Brad Kovach	Stadium infrastructure and utilities, Document assembly
Jennifer Andrews	Socio-Economic analysis
Ken Taillon	Stadium lighting
Kent Peterson	Event noise
Nancy Marshall	Word processing
Tammy Orf	Word processing
Candis Nord-Sheptak	Graphics
SRF	
Beth Bartz	Transportation and Infrastructure technical coordinator
Mike Monahan	Transportation Improvements Analysis
Patrick Corkle	Traffic Operations Analysis
Jonathon Erlich	Air Quality Analysis
Jeremy Monahan	Noise Modeling Analysis
Brett Danner	Noise Modeling Analysis
Lisa Goddard	Water Quality, Storm water Design
Wenck and Associates	
Joe Otte	Project Manager, Project Site Investigation
Dan Sola	Hydrogeologist, Project Site Investigation
Steve Menden	Environmental Scientist
Crawford Architects	
David Murphy	Stadium concept design
Brian Powers	Stadium concept design
Hines	
David Spillman	Document Review

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Glossary

The terminology defined below is used throughout the document. The glossary is provided to assist the reader in better understanding the meaning of these key words and the overall context of the document.

Affected Environment - The social, natural, and economic character of the area potentially affected by a proposed action.

Air Toxics – Hazardous air pollutants that are known or suspected to cause serious health effects or adverse environmental effects.

Alternatives – A set of options to achieve a desired outcome.

No-Build Alternative – The option of taking no action. The No-Build serves as a baseline for assessing the relative effects of the Build Alternative(s).

Board of Regents – The 12-member Board of Regents is the governing body of the University of Minnesota. The legislature elects one regent from each of Minnesota's eight congressional districts and four from the state at large. One of the four at-large regents must be a University student at the time of election. The president of the University is ex-officio president of the Board.

Carbon Monoxide – is a gas composed of one carbon and one oxygen atom (CO). CO is a noxious by-product of internal combustion engines.

CAL3QHC – Is a versatile dispersion model for predicting carbon monoxide (CO) levels near transportation corridors.

Central Corridor Transit Project – This regional transportation project will involve either enhanced bus, bus rapid transit (BRT), or light rail transit (LRT) improvements extending between downtown Minneapolis and downtown St. Paul. The BRT and LRT alignments extend through the University Campus along Washington and University Avenues and include a proposed station in the Stadium Village area.

Cumulative Effect – The impact on the environment which results from the incremental impact of a proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

dBA - Is the symbol for a sound level measured on an A-weighted scale. The A-weighted scale gives more weight to those frequencies that are audible to the human ear and discounts those frequencies outside the band of frequencies audible by the human ear.

Enhanced Acoustic Software for Engineers (EASE) – A common computer noise analysis model used for acoustical research and alignment of public address systems.

Environmental Impact Statement (EIS) – A review process mandated in Minnesota law to assess the potential for significant environmental effects of a proposed action. The EIS provides information about the extent of the potential environmental impacts and how they may be avoided or minimized. An EIS is comprised of Draft and Final documents intended for government decision-makers who must approve the project, as well as the project proposer and the public.

Environmental Protection Agency (EPA) – The EPA leads the nation's environmental science, research, education, assessment, and regulation efforts.

Federal Highway Administration (FHWA) – FHWA is charged with managing the nation’s highway system. While state, local, and tribal governments own most of the nation’s highways, FHWA provides financial and technical support for constructing, improving, and preserving the system.

Groundwater – Subsurface water that fills available openings in rock or soil materials.

L₁₀ Noise Level – A sound level that exceeds Minnesota State Noise Standards for 10 percent of the time for a one-hour period.

L₅₀ Noise Level – A sound level that exceeds Minnesota State Noise Standards for 50 percent of the time for a one-hour period.

Level of Service – A measure of delay and operating conditions defined by the Highway Capacity Manual and ranges from A (good operating conditions) to F (heavy congestion).

Line Array – A way to configure speakers that enables better control over how sound emanates.

Major Event – Major events are considered to be ticketed uses with attendance greater than what would occur at the University today. A major event would have an attendance greater than approximately 15,000 people including any concurrent attendance at existing University venues.

Minor Event – Minor events are considered to ticketed uses with an attendance equal to or less than what would occur at the University today. A minor event would have an attendance less than approximately 15,000 people including any concurrent attendance at the existing University venues.

MINNNOISE – The MINNNOISE model is a Mn/DOT modified version of the FHWA's Optima/Stamina model. The model is used to predict noise levels from road projects and to assist with the development of noise barriers.

Minnesota Environmental Review Program – The program is authorized by the Minnesota Environmental Policy Act (MEPA) and the rules promulgated pursuant to MEPA. Its purpose is to avoid and minimize damage to Minnesota’s environmental resources caused by public and private actions. The program requires certain types of proposed projects to undergo special review procedures prior to obtaining approvals and permits otherwise needed.

Minnesota Environmental Quality Board (MEQB) – State agency that adopts environmental review rules, monitors their effectiveness, and revises rules/regulations as appropriate. The MEQB provides technical assistance to interpret and apply these rules.

Minnesota Pollution Control Agency (MPCA) - A State agency whose purpose is to protect Minnesota's environment through monitoring environmental quality and enforcing environmental regulations.

Mississippi Watershed Management Organization – MWMO is an organization dedicated to improving the quality of water and the overall quality of life in the Mississippi Watershed. The MWMO provides for the long-term management of its water and associated land resources through the development and implementation of projects, programs, and policies that respect ecosystem principles and reflect changing community values.

Mitigation – Mitigation includes: (a) avoiding the impacts altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impacts by repairing, rehabilitating, or restoring the affected environment; (d) reducing or

eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

MOBILE6 – A computer model used for predicting emissions of Hydrocarbons (HC), Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Carbon Dioxide (CO₂), Particulate Matter (PM), and toxics from cars, trucks, and motorcycles under various conditions.

National Ambient Air Quality Standards (NAAQS) – As part of the Clean Air Act, amended 1990, the EPA is required to set NAAQSs for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards: Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; and secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

National Collegiate Athletic Association (NCAA) – A voluntary organization through which the nation's colleges and universities govern their athletics programs. It comprises more than 1,250 institutions, conferences, organizations and individuals committed to the best interests, education and athletics participation of student-athletes.

National Pollutant Discharge Elimination Systems (NPDES) – The NPDES is part of a national program for issuing, modifying, revoking, reissuing, terminating, monitoring and enforcing water discharge permits, and imposing and enforcing pretreatment requirements, in accordance with the Clean Water Act.

Nationwide Urban Runoff Program – From 1978 through 1983, the EPA conducted a comprehensive study of urban runoff called the Nationwide Urban Runoff Program (NURP). This study provided a better understanding of the nature of urban pollutants from various urban land uses. This study focused primarily on monitoring runoff from residential, commercial, and industrial land and clearly presents information on the magnitude and variety of pollutants encountered in the urban environment. NURP today provides standards and guidelines for conveying, storing and treating storm water runoff.

Nitrogen Dioxide – NO₂ is a reddish-brown gas with a pungent and irritating odor. It transforms in the air to form gaseous nitric acid and toxic organic nitrates. NO₂ plays a role in atmospheric reactions that produce ground-level ozone, a major component of smog.

Nitrogen Oxides – NO are a mixture of gases that are composed of nitrogen and oxygen. Two of the most toxicologically significant nitrogen oxides are nitric oxide and nitrogen dioxide; both are nonflammable and colorless. Nitrogen oxides are released to the air from the exhaust of motor vehicles, the burning of coal, oil, or natural gas.

Noise Area Classification (NAC) – A classification system based on the land use activity at the location of a noise receptor and sets the noise standards applicable to that land use activity.

Noise Receptor – Represents a potentially sensitive land use (residential property, park, school, hospital) where existing and/or forecast noise levels are monitored or modeled.

Ozone – Ozone is a bluish gas that is harmful to breathe. Ozone absorbs a band of ultraviolet radiation called UVB that is particularly harmful to living organisms. The ozone layer prevents most UVB from reaching the ground.

Particulate Matter – Particulate matter is composed of small solid and liquid particles suspended in the ambient air.

Peak Hour – One hour period of the day when traffic volumes are at their highest level.

Project Site – The area of proposed improvements including the Stadium building, surrounding plazas, and related infrastructure (roads, parking, and utilities).

Responsible Governmental Unit – The government unit responsible for conducting the environmental review process, usually the unit with the greatest authority over the project as a whole.

Runoff – The portion of the rainfall that is not absorbed by the ground, vegetation, or lost by evaporation, or that may find its way into receiving water bodies by surface flow.

Scoping – The process of identifying a full range of actions, alternatives, and impacts to be considered in an EIS.

Scoping Decision Document – This document identifies the Stadium Project alternatives dismissed from further consideration and the alternatives to be carried forward in the EIS. The SDD also helps to clarify and focus on the potentially significant environmental issues which will be analyzed in the EIS.

Scoping Environmental Assessment Worksheet (SEAW) – A document providing basic information about a proposed project that may have potential for significant environmental effects. The SEAW is prepared by the RGU to determine which alternatives will be carried forward into the Draft EIS and which social, economic, and environmental impact categories will be studied in the EIS.

Stadium – This term refers to the proposed Stadium building.

Stadium Project – This term refers to the overall undertaking defined and assessed in the EIS. The Stadium Project includes planning for, designing, constructing, and operating the proposed action, along with site and associated public infrastructure improvements.

STAMINA 2.0 – This federally accepted computer program is used for predicting highway traffic noise. It is utilized in project development to forecast the effect of traffic-generated noise on surrounding land uses and to assess mitigation measures such as noise barrier walls.

Storm Water Pollution Prevention Plan – A SWPPP is used to maximize the potential benefits of pollution prevention and sediment and erosion control measures. The SWPPP contains strategies and requirements for minimizing runoff, erosion, and sedimentation during times of construction and throughout the life of a project.

Synchro/SimTraffic Model – A computer software model that evaluates existing and forecast traffic operations given a set of parameters (traffic volumes, roadway type, intersection geometry, speeds, etc.) for an identified area.

Transmission Loss – The accumulated decrease in acoustic intensity as an acoustic pressure wave propagates outwards from a source. As the acoustic wave propagates outwards the intensity of the signal is reduced with increasing range due to spreading and attenuation.

Travel Demand Management – A group of strategies used to manage and reduce travel demand on the existing transportation system. Strategies may include transit services (buses or LRT), car-pooling, and non-automobile-based transportation (walking, biking), traffic control officers, traffic message signs/boards, and temporary (event periods) modifications to the local road network.

Volatile Organic Compounds – Volatile organic chemicals (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects.

Wet Detention Basin – A storm water control structure that provides both retention and treatment of contaminated storm water runoff typically referred to as a pond. The pond consists of a permanent pool of water into which storm water runoff is directed. Runoff from each rain event is detained and treated in the pond until it is displaced by runoff from future storm events. By capturing and retaining runoff, wet detention basins control both storm water quantity and quality.

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University of Minnesota On-Campus Football Stadium

Final Environmental Impact Statement

1.0 Purpose and Need

This Final Environmental Impact Statement (EIS) incorporates by reference the Draft EIS published in October 24, 2005. Furthermore, this document incorporates the comments received during the 30-day Draft EIS public comment period that extended until November 23, 2005. Section 7.0 includes a detailed presentation of the comments received along with the process followed for addressing the substantive issues raised in the comments. In summary, the most frequent comments and subsequently most substantial modifications reflected in this Final EIS pertain to the following topic areas:

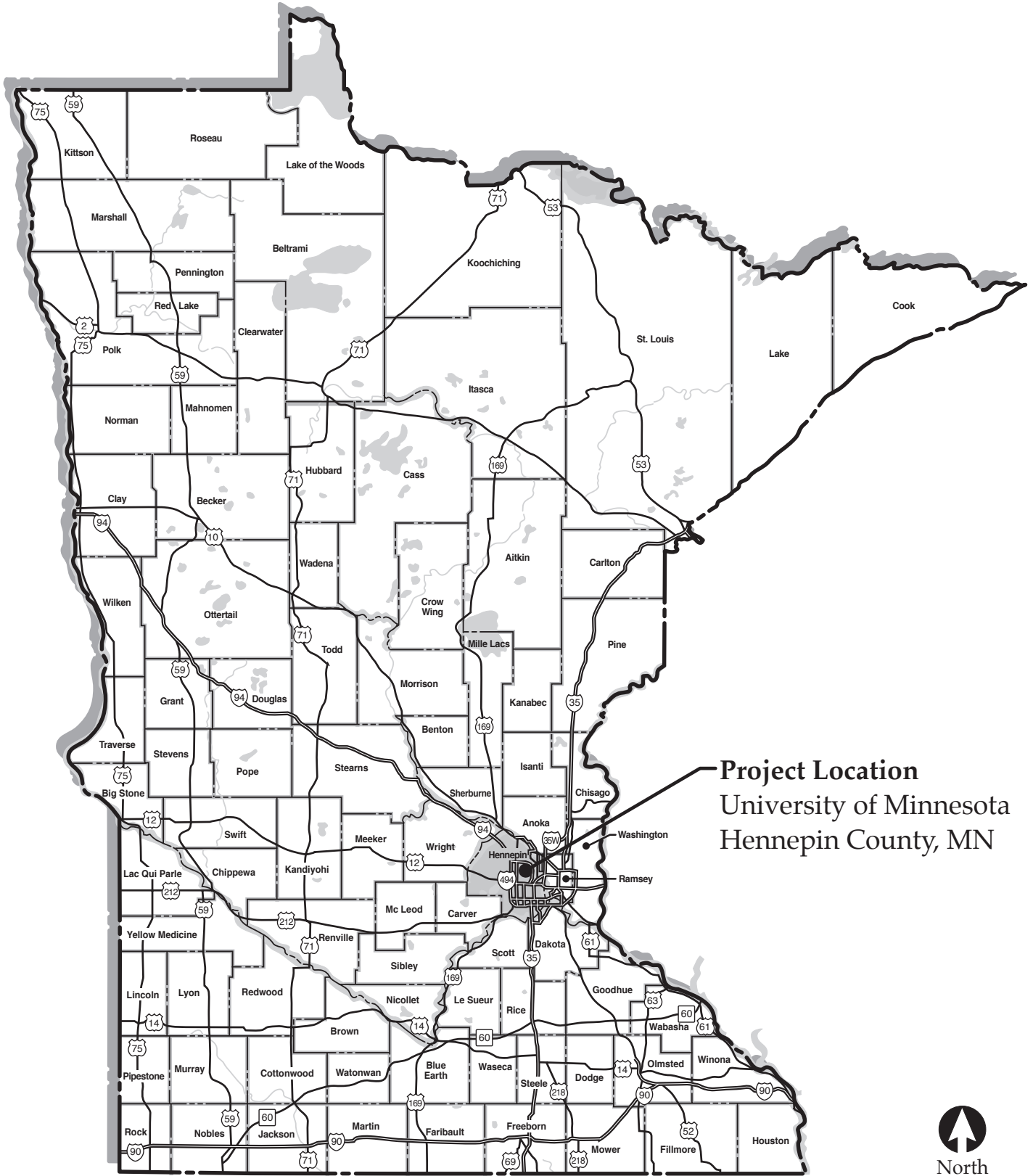
- Anticipated Types and Frequency of Use
- Mitigation/Good Neighbor Fund
- Stadium Advisory Committees
- Traffic
- Parking
- Concert Event Noise
- Student and Fan Behavior

1.1 Proposed Action

The University of Minnesota has prepared a Final Environmental Impact Statement (EIS) for a new 50,000 seat open air on-campus football stadium, including site and associated public infrastructure improvements proposed by the University within the City of Minneapolis in Hennepin County, Minnesota (Figures 1 and 2). The project is hereinafter referred to as the Stadium Project or Project.

The Stadium Project is proposed for the University's Huron Boulevard parking lots, in close proximity to Mariucci Arena and the Williams Arena/Sports Pavilion complex (Figure 3). The specific elements of the Stadium Project are discussed in Section 2.2.1.

The Board of Regents of the University of Minnesota was designated by the Minnesota Environmental Quality Board (MEQB) as the Responsible Governmental Unit (RGU) for the Project. The Final EIS will meet the requirements of Minnesota Rules 4410.0200 to 4410.7070 (MEQB rules), which govern the Minnesota Environmental Review Program.



Project Location
 University of Minnesota
 Hennepin County, MN

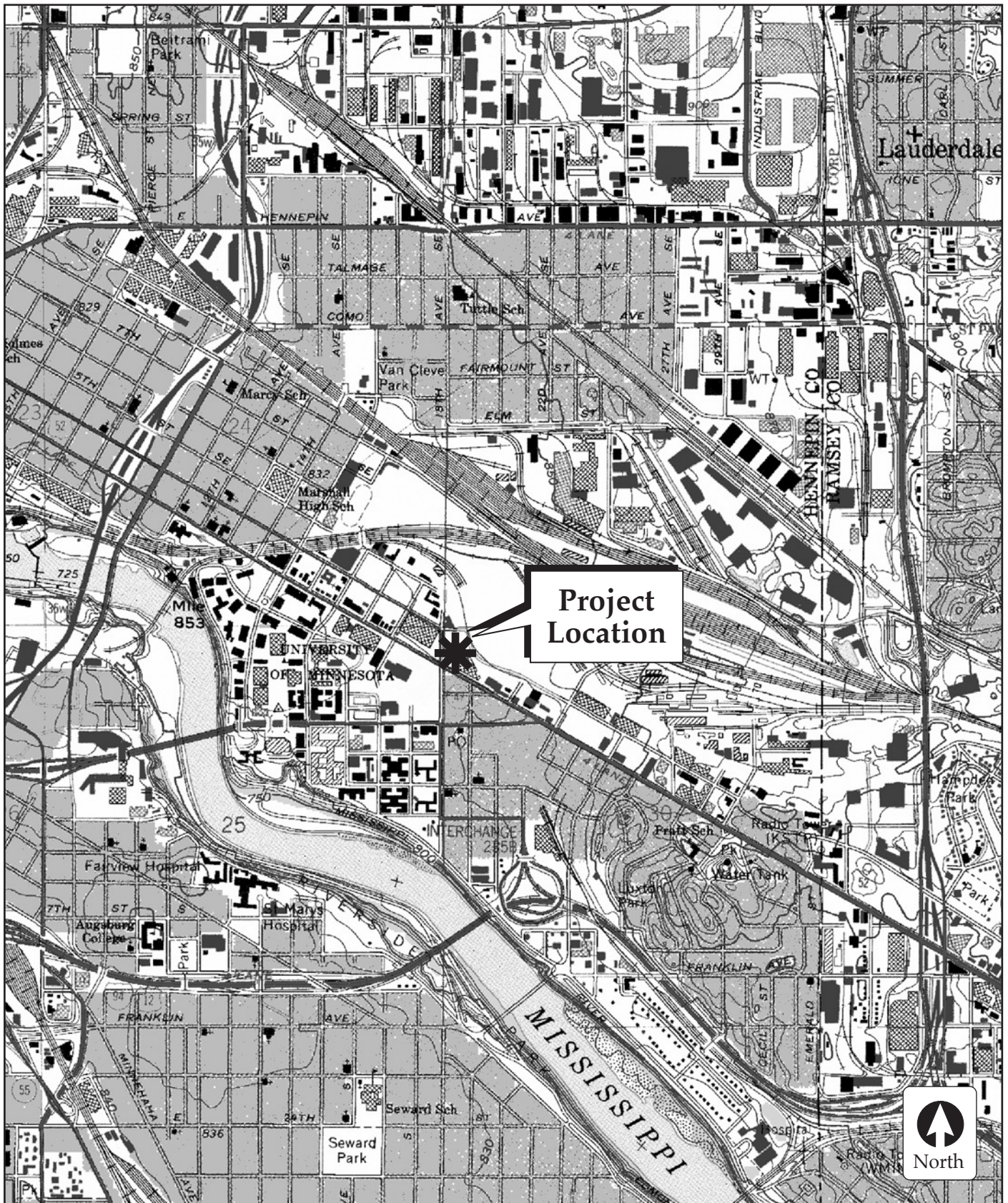


Football Stadium - Final EIS
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Figure 1

State/County Location Map

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Figure 2
 USGS Location Map

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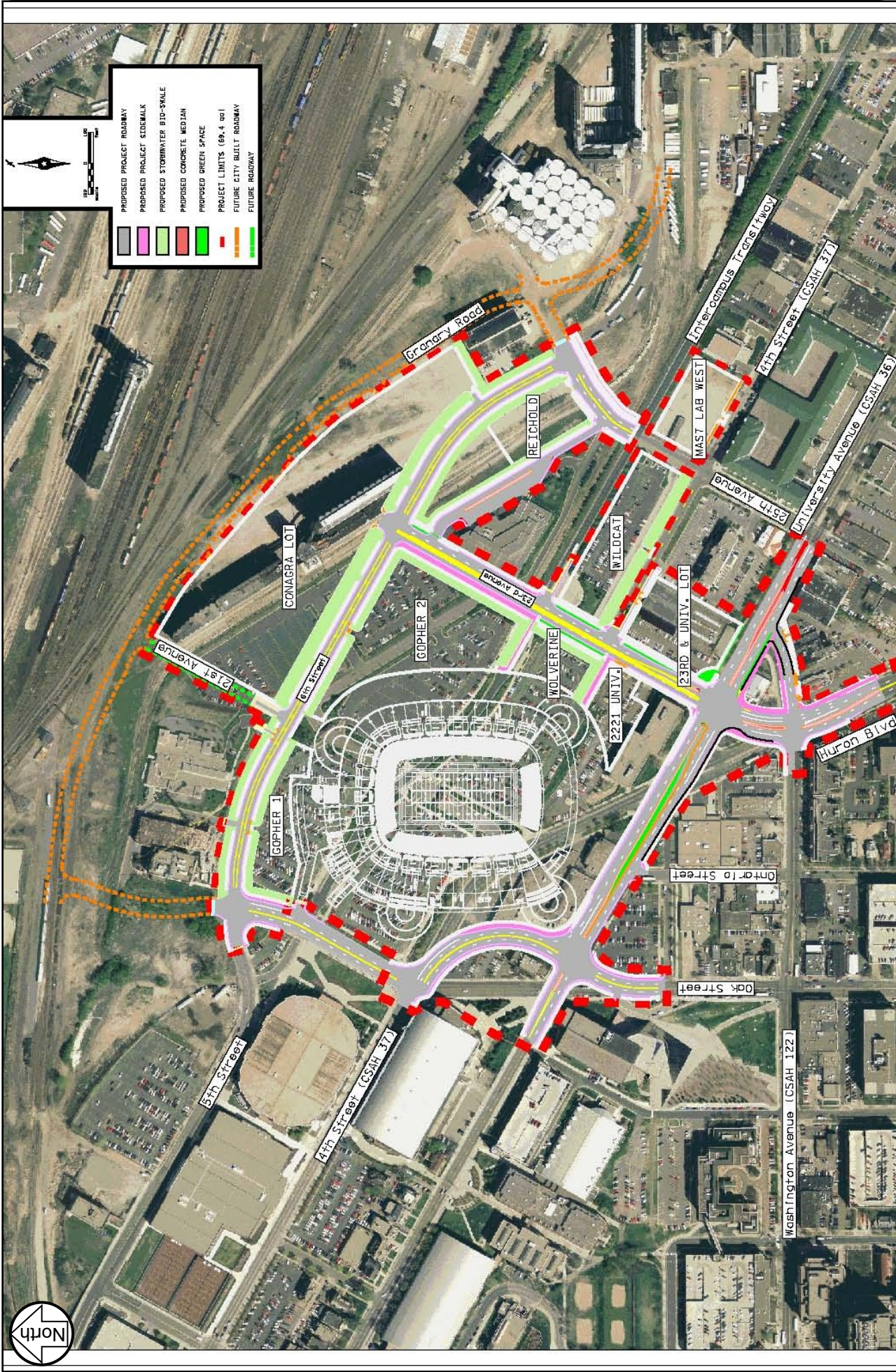


Figure #3
 Proposed Roadway Geometrics
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1.2 Purpose of the EIS

As defined by the MEQB, the primary purpose of an EIS is to provide information about the extent of environmental impacts associated with a proposed project and how those impacts may be avoided or minimized. Intended primarily for government decision-makers who must approve the project, the information is used by the proposer and public as well.

Prior to preparation of the Final EIS, a Draft EIS, a Scoping Decision Document (SDD), a companion Scoping Environmental Assessment Worksheet (SEAW), and a Stadium Feasibility Study were prepared for the Project. Visit www1.umn.edu/stadium/environmental_review.html to view these documents.

The Feasibility Study evaluated Stadium Project alternatives and preliminarily screened site conditions, regional implications, and some Stadium Project needs. The Feasibility Study established that an on-campus setting is required and preference was given to site the Stadium within the Sports and Recreation District of the campus that is identified in the University Campus Master Plan.

The purpose of the SDD was to identify the issues and alternatives for in-depth examination in the EIS. A draft SDD was published and circulated with the SEAW on March 28, 2005. Comments on both documents were accepted through April 27, 2005. The public comment period also included a public scoping meeting held on April 13, 2005. Comments received during the scoping period were responded to and included in a response to comments document in the SDD.

A Draft EIS was then prepared that analyzed the potential social, economic, and environmental impacts associated with the build and no-build alternatives and determine how they may be avoided or minimized. The EIS is not a means to approve or disapprove a project, but is simply a source of information to guide approval decisions. The Draft EIS was published in the MEQB Monitor and circulated on October 24, 2005, which also marked the beginning of a 30-day comment period. A Draft EIS public hearing was held on November 10, 2005 and the official comment period closed on November 23, 2005.

1.3 Need for the Proposed Action

“The University of Minnesota is first and foremost dedicated to our academic mission to teach, conduct research, and provide public service. An on-campus stadium can serve that mission by allowing us to better connect students, alumni, and friends with the academic life and purpose of the U. When they attend home games, they will see and feel the pulse of the surrounding campus.”

Robert Bruininks, President
University of Minnesota

The University of Minnesota has played collegiate football for 123 years. For 100 of those years, the University played football on the Minneapolis campus. In 1982, the University football team moved to the Hubert H.

Humphrey Metrodome (“Metrodome”) in downtown Minneapolis. Memorial Stadium, the University’s on-campus football stadium, was subsequently demolished. The University is now proposing to construct a replacement stadium and to return Gopher football to the Minneapolis Campus.

Intercollegiate athletics is an integral part of the University of Minnesota and the culture of the State of Minnesota. In the U.S. model for higher education, and in particular for those institutions that serve as land grant universities, a curriculum, a library, a faculty, and students are not enough to make a college or university. Rather, the institutions embrace the greater collegiate experience, which includes such factors as serving the diverse needs of the state’s citizens; a commitment to a beautiful residential campus; coming together in community through spectator sports and other campus events, pageantry and ceremonies; campus legends, symbols, language, songs, and extracurricular activities including intramural, club, and varsity athletics; and building loyal relationships with alumni. The Board of Regents and the State of Minnesota have a long history of supporting the academic/athletics partnership that forms a significant part of the collegiate experience at the University of Minnesota.

Intercollegiate Athletics’ Blueprint for the Future

Intercollegiate Athletics at the University of Minnesota has developed and adopted a strategic plan built on its mission, value, and vision. These are outlined below:

- Athletics’ Mission – To serve as a window to the University, in an environment of integrity and equity that enables student-athletes to achieve excellence in their academic and athletic pursuits.
- Athletics’ Values – A confident and humble pride. Integrity in words and deeds. Respect for dignity of all stakeholders. Loyalty built on honest and trusting relationships.
- Athletics’ Vision – Becoming the model Division I-A program in the country.

The plan also sets out five strategic objectives designed to help the department achieve its mission and vision.

An On-Campus Football Stadium

An on-campus football stadium is one of Intercollegiate Athletics’ primary strategic objectives for long-term success of the department and fulfillment of its mission. While there are many reasons for returning Gopher football to campus, five themes arise repeatedly:

- The Gopher football team belongs on-campus. The University has the State’s only Division I-A football team. Nearly every Division I-A team in the country plays in an on-campus Stadium, and all but one other Big Ten team does so. The Stadium also would serve as a new home for the University marching band and a place for recreational sports and other University events.

-
- The University is best served in its own on-campus facility. The University and the professional sports teams have very different missions, values, and visions for their organizations. From a facility perspective, for example, the Minnesota Vikings want a professional sports and entertainment complex that would likely be twice as large and cost twice as much as a campus stadium. Sharing a facility has and would likely continue to leave the University of Minnesota as a second-class tenant with all of the associated scheduling and use issues. In addition, a campus stadium would generate about \$3.5 million more each year in revenue to support Intercollegiate Athletics programs than it currently receives from playing at the Metrodome.
 - Gopher football faces a lease expiration. The University's lease at the Metrodome expires at the end of the 2011 season. In addition, the future of the Metrodome is unknown since both of the major professional sports tenants have indicated they do not want to play in the Metrodome past 2011.
 - The University can not support the Metrodome on its own. If the University were to become the only tenant in the Metrodome, it would cost the University an estimated \$7 million a year to operate the facility, excluding the cost of any capital improvements. The annual subsidy required to keep the University in the Metrodome is similar to what the State of Minnesota is being asked to contribute toward a new Gopher stadium.
 - The Stadium would foster University pride and build community. Home games played off-campus in a professional sports facility such as the Metrodome are away games. Returning to campus would rekindle the camaraderie of the true collegiate football experience.

For these reasons, and many others, the University has chosen to pursue a new on-campus football stadium.

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2.0 Project Alternatives

2.1 Scoping Process and Alternatives

The MEQB rules require EIS studies to include at least one alternative of each of the following categories or provide a description of why no alternative is included in the EIS (Part 4410.2300 subpart (G) of the Minnesota Environmental Review Rules).

- Alternative sites
- Alternative technologies
- Modified designs or layouts
- Modified scale or magnitude
- Alternatives that incorporate reasonable mitigation measures identified through comments received during the scoping process

An alternative may be excluded from the EIS analysis when it does not meet the underlying purpose or need for the Project, it would likely not have any significant environmental benefit compared to the proposed project, or another alternative, of any type, that will be analyzed in the EIS would likely have similar environmental benefits, but substantially less adverse economic, employment, or sociological impacts (Minnesota Rules part 4410.2300, subpart G).

2.1.1 Alternative Sites

The No-Build Alternative (described in Section 2.2.2) is the only site alternative addressed in the EIS. This alternative assumes continued use of the Metrodome as the University football stadium. Additional off-campus site alternatives will not be investigated due to the Project purpose and need to bring University football games back to an on-campus location.

The University discussed the issue of site selection in the Stadium Feasibility Study, Environmental Assessment Worksheet, and Scoping Decision Document. The analysis presented in the EIS is consistent with both the Project purpose and the Scoping Decision Document. An on-campus location is absolutely critical to the purpose and success of the Stadium Project. The criteria considered in selecting a location for the proposed Stadium included, in addition to being large enough to accommodate a stadium, the ability to enhance campus life, complement the University's existing athletics facilities, promote the orderly growth of campus, and provide maximum accessibility for patrons. There is no alternate location for an on-campus stadium that is reasonable and prudent.

2.1.2 Alternative Technologies

Practical technology alternatives to constructing a football stadium do not exist and, therefore, are not evaluated in the EIS.

2.1.3 Modified Designs or Layouts

Design alternatives and layouts for the Stadium were evaluated and screened from further consideration during the Stadium Feasibility Study.

The University used five criteria to guide the development of the campus location where the proposed Stadium will be built. These criteria include:

- Create an urban campus with a unique sense of place.
- Plan for efficient and orderly campus growth.
- Provide and encourage environmentally friendly transportation.
- Design for long-term sustainability.
- Coordinate with the planning efforts for adjacent developments and projects.

With or without the proposed Stadium, the University believes that these criteria are best met by the road and Central Corridor transit alignment shown in Figure 3 and that any modified design or layout would have similar, if not worse, environmental affects. Numerous options for placing a stadium in alternative locations on the site were explored during Joint-Use University of Minnesota – Minnesota Vikings stadium analysis, the University of Minnesota Stadium Feasibility Study, and the on-going stadium district preliminary engineering.

2.1.4 Modified Scale or Magnitude Alternatives

Scale and project magnitude were defined and addressed in the Stadium Feasibility Study. The selected scale and magnitude parameters incorporated into the proposed Stadium Project meet the purpose and need requirements. Additional scale and magnitude alternatives are not addressed in the EIS.

2.1.5 Alternatives That Incorporate Reasonable Mitigation Measures

The Preferred Alternative defined below incorporates the reasonable mitigation measures identified through the public comment process to address the adverse impacts associated with the Stadium Project.

2.2 Alternatives Considered

Two alternatives are considered and addressed in the EIS. The first is the Preferred Alternative (“Stadium Project”), which includes all the elements as described in Section 2.2.1 below including reasonable mitigation measures. The second alternative is the No-Build Alternative and assumes the Stadium Project is not constructed and Gopher football continues to be housed in the Metrodome (see Section 2.2.2).

2.2.1 Preferred Alternative

Stadium

The University proposes to construct an open-air stadium with a horseshoe-shaped bowl and a traditional collegiate “look and feel.” The proposed stadium is intended to complement the campus environment and meet all of the revenue and fan amenity requirements of a modern Division I-A collegiate football stadium. Based on a preliminary market analysis, advice from industry experts, and visits to other stadiums, the University intends to construct a stadium with approximately 50,000 general admission seats, premium amenity seating, and all of the typical support services found in a

modern stadium including, but not limited to, space for home and visiting teams, media, food service and concessions, and the University marching band.

Stadium Project

The Stadium Project refers to the Stadium and the urban design, landscaping, transportation, and parking improvements, infrastructure, and utility improvements required for the Stadium to function and to fit into the campus and surrounding community. The Stadium Project includes the mitigation measures presented in Section 3.0 and summarized in Section 4.0.

Project Site

The University's Huron Boulevard parking lot complex is the proposed site for the new Stadium. This site (as defined in Figure 3) is in close proximity to existing major athletics venues, including the Williams Arena/Sports Pavilion and Mariucci Arena. This site meets the criteria outlined in 2.1.1 and 2.1.3.

Security Considerations

In addition, security considerations have also played a major role in defining the Stadium Project. State and local officials have been consulted. The primary focus of planning efforts to date have related to the setbacks of the Stadium from public roadways. There are a number of other issues that will be addressed as the design of the Stadium proceeds.

Anticipated Types and Frequency of Use

An important issue to consider when assessing the environmental effects of the Stadium Project is the frequency of Stadium use and the potential for different types and scale of use. The University has determined that the use of the Stadium will be governed by the policy statements in the following paragraphs.

Decisions regarding the use of the Stadium will follow the Board of Regents policy on Campus and Facility Usage (Adopted July 9, 2004). Relevant portions in this policy state that, "University campuses and facilities exist to meet the needs of the institution and further its teaching, research, and outreach mission.", and that "University facilities are not for general use by non-University entities." In cases where University facilities are "more particularly suited for specific purposes than are other non-University facilities that may be available" or where, "the purposes of non-University entities may coincide with or complement those of the University", the President can allow external users access to University facilities. This policy also allows for uses which "contribute to the physical and cultural development of students supplementary to formal course work."

The University remains committed to the statement that, "First and foremost, the Stadium will serve as the game day venue for the University of Minnesota's football team." The funding plan for the Stadium does not rely on any revenue from non-football events and the University is not interested in using the Stadium as a general commercial venue for non-university

related events. Other regional facilities exist to accommodate these types of events.

To better define how the University will use the proposed Stadium, potential uses have been broken into the three broad categories outlined below. This categorization distinguishes between activities (non-ticketed uses) and events (ticketed uses).

- Low Impact Activity – The University envisions using the Stadium for a wide range of routine and low impact activities. These non-ticketed uses would include such things as indoor and outdoor marching band rehearsal, recreational sports, banquets, conferences, career fairs, and tours. These uses would occur throughout the year and at various times of the week. If there is a reasonable possibility that attendance will exceed 15,000, the use will be ticketed and treated as a Major Event (see below).
- Major Event – Major events are ticketed uses of the Stadium with attendance greater than what currently occurs at on-campus venues at the University. Such an event would have an attendance greater than approximately 15,000 people. Gopher football games will be considered a Major Event. The University does not foresee hosting more than twelve Major Events including Gopher Football in any given year. Because of the obvious conflicts with weekday classes and general commuter traffic it will be the University’s policy and practice to hold Major Events on weekends. It is also the policy and preference of the Big Ten to play football on weekends. Major Events on weekdays are unforeseen at this time. In the 20 plus years since the University has played “home” football games at the Metrodome, the Gophers have played only five weeknight home games. All five of these events were the result of scheduling conflicts with the Minnesota Twins.

As the owner of the proposed Stadium, the University will have great control in scheduling Major Events. If at some presently unforeseen point in the future the opportunity arises to use the Stadium for a major regional event (e.g., the Olympic Festival) that would require weekday use, the University will work closely with the Stadium Area Advisory Group, Event Management Advisory Committee, and other affected/interested parties to mitigate adverse impacts. These committees and their roles are defined in the Stadium Advisory Committees section below.

- Minor Event – Minor Events are ticketed uses of the Stadium with an attendance equal to or less than currently occurring at existing University on-campus venues. A Minor Event has an attendance less than approximately 15,000 people. Minor Event uses would include such things as State High School League tournaments, celebrity speakers, and marching band competitions. Minor Events will occur at a frequency similar to current non-intercollegiate athletics use of the University’s athletic venues (approximately eight times per year).

The University has not ruled out the possibility that it may from time to time hold amplified music events (i.e. concerts) in the Stadium. All concerts will be subject to the Major and Minor Event restrictions. Further details regarding scheduling restrictions for concert events are included in 7.2.6.

In making a decision as to whether or not to permit any given event, as well as in planning and scheduling such events, the University will consider the potential for noise, traffic, parking, and other adverse impacts on the surrounding community. The University decision-making will be governed by the current and proposed University policies, as well as applicable laws and regulations.

2.2.2 No-Build Alternative

The No-Build Alternative assumes the Metrodome continues to be used as the University football stadium. The description will be based on the existing University use of the Metrodome and will make projections based on this use to identify the effects and impacts of the No-Build Alternative.

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3.0 Affected Environment and Environmental Consequences

The subject areas presented and analyzed in Section 3.0 were identified in the SEAW and SDD for inclusion in the EIS.

3.1 Transportation and Parking

The transportation analysis prepared for this EIS includes traffic operations for intersections and parking facilities located around the East Bank Campus and the St. Paul Campus/State Fairgrounds. Impacts to transit infrastructure are identified. Analysis of transit, pedestrian and bicycle needs is also presented and potential management strategies are identified.

Proposed roadway improvements associated with the Stadium Project, as well as mitigation measures have been coordinated with Cities of Minneapolis, St. Paul, and Falcon Heights; Hennepin County; Ramsey County; Metro Transit; the State Agricultural Society (Minnesota State Fair); and Minnesota Department of Transportation staff.

Changes to the Draft EIS discussion of the Project's transportation and parking impacts include the following:

- Clarifications regarding proposed local roadway construction and realignment
- Additional traffic operations analysis for Minor Events at the Stadium
- Additional information regarding non-University owned parking
- Incorporation of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005, and Supplements One and Two dated January 31, 2006, to provide further explanation of scenarios analyzed, analysis methodology and data collected. The memorandum is available on the University of Minnesota Stadium website: www1.umn.edu/stadium.
- Clarification regarding the proposed SCOOT (Split, Cycle, Offset, Optimization Technique) traffic signal operations system in Minneapolis
- Additional minor clarifications and corrections

The traffic operations analysis includes 18 scenarios for varying time periods and roadway configurations. A complete discussion of the scenarios analyzed is presented on page 3-4 of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, prepared by SRF Consulting group, dated September 7, 2005, and incorporated by reference into the Final EIS. The analysis includes:

- Existing traffic operations during weekday peak hours without any sports event
- Weekday and Saturday Williams (basketball) Arena events (presented as baseline of current sports event conditions)

-
- Anticipated weekday peak hour traffic operations with proposed roadway improvements.
 - Saturday afternoon traffic conditions with and without a Major Event (Saturday is the most likely timeframe for Gopher football games)
 - Saturday afternoon traffic conditions with a Minor Event
 - Weekday evening Minor Event
 - Concurrent events at different venues on the University East Bank Campus or State Fairgrounds

The proposed weekday and Saturday scenarios were each evaluated for the year the Stadium opens (year 2009) to assess impacts of roadway realignments needed for the Stadium Project as well as the traffic impacts of Stadium events. A future forecast year after the proposed opening of the Central Corridor line (year 2030) was also analyzed to assess long-term traffic impacts and the potential influence of transit ridership. For both of these years, the No-Build (existing roadways) condition was evaluated along with the Build (completion of the proposed roadways and Stadium) condition. For the Saturday scenarios, both peak arrival and departure time frames were analyzed.

3.1.1 Affected Environment

The area of potential traffic impacts was determined by examining the routes event traffic would use to access parking locations. Parking facilities include University parking on the East Bank Campus and remote parking at the St. Paul Campus/State Fairgrounds. Analysis of the East Bank Campus includes access to and from TH 280, I-35W and I-94. Analysis at the St. Paul Campus/State Fairgrounds focused on the main roadways leading to the campus including Snelling Avenue, Larpenteur Avenue, Cleveland Avenue and Como Avenue.

The number and location of intersections that were analyzed vary across the scenarios to reflect changes in roadway configuration (Build vs. No-Build). Analysis of the background conditions focused primarily on the intersections that will be modified or impacted by the proposed roadways alignments. The event analysis at the East Bank Campus focused primarily on those intersections impacted by the arrival traffic (University Avenue [CSAH 36] from 10th Avenue to 17th Avenue) or by departure traffic (4th Avenue from 10th Avenue to 15th Avenue).

Intersection operations analysis results identify a Level of Service (LOS) indicating the quality of traffic flow through an intersection. Intersections are given a ranking from LOS A through LOS F. LOS A indicates the best traffic operation, with vehicles experiencing minimal delays. LOS F indicates an intersection where demand exceeds capacity, or a breakdown of traffic flow. LOS A through D are generally considered acceptable by drivers. LOS E indicates that an intersection is operating at, or very near its capacity and that vehicles experience substantial delays.

The Project Site lies within a fully developed urban roadway network. Figure 3 provides a map of this roadway network. Fourth Street (CSAH 37), which lies immediately to the south of the proposed Stadium, provides a significant westbound one-way connection to Interstate 35W to the west. University Avenue (CSAH 36) provides the paired eastbound connection from I-35W. Huron Boulevard, which proceeds south from the Project Site, provides a connection to Interstate 94.

The Project Site currently contains 2,615 parking spaces in surface lots which are used for multiple University functions including daytime classroom activities and events at Williams Arena, Mariucci Arena, and Northrup Auditorium. These parking spaces are also used during the Minnesota State Fair (10 days prior to Labor Day each year) as a remote parking facility.

The East Bank campus is served by general Metro Transit bus service, as well as a University-operated transit service within and between the East Bank, West Bank and Saint Paul campuses. A bus-only Intercampus Transitway (shown on Figure 3) connects the East Bank and Saint Paul campuses.

For the purposes of this analysis, signal operations timing has been optimized for all intersections. This optimization is one of the benefits anticipated from the SCOOT (Split, Cycle, Offset, Optimization Technique) signal control system planned by the City of Minneapolis for their intersections¹. SCOOT is an adaptive traffic signal control system which responds automatically to traffic fluctuations using real-time traffic data. The main benefits of the SCOOT system is that it works well with heavy vehicular flows, complex travel patterns, and unpredictable traffic volume variations as are found with event traffic. This system is currently used in the area surrounding the Target Center in downtown Minneapolis. The SCOOT system is not anticipated for intersections in St. Paul.

While optimization of current signal timing assumed for the traffic analysis could be provided through SCOOT, a similar level of optimization can also be accomplished with the existing signal control systems in place in both Minneapolis and St. Paul. Regardless of the timing of SCOOT implementation, the University will work with the Cities of Minneapolis, St. Paul and Falcon Heights as well as Hennepin and Ramsey Counties to determine an event signal timing plan to maximize efficiency of the existing traffic control system.

¹ While the City of Minneapolis has planned for implementation of the SCOOT system in 2011, full funding is not yet available for the project. The University is working with the City of Minneapolis to ensure the timely implementation of the SCOOT system. The University has agreed to pay a portion of the required local cost share. The University is also prepared to advance fund the federal portion of the project, with the proper legal assurances of being repaid, to ensure that SCOOT is in place at Stadium opening.

Current Weekday Peak Hour Conditions

The intersections within and surrounding the Project Site currently operate at acceptable Levels of Service (LOS A-D) during both weekday afternoon peak periods and Saturday afternoons. Please refer to pages 5-9 of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005 for details of the existing conditions level of service analysis.

Current Sports Event Conditions: Weekday and Saturday Basketball Event

The analysis of a basketball event at Williams Arena with the existing roadways was conducted to provide a baseline of current conditions for a University of Minnesota sports event. Year 2009 (rather than 2005) analysis was selected to be consistent with the analysis time period analyzed for the Stadium year of construction.

The following assumptions were used to estimate the event trips for a year 2009 basketball game at Williams Arena.

- The analysis assumes a capacity event of 14,625 persons
- 15 percent of the attendees (2,200) walk, bike or ride regional transit to/from the Arena
- The remaining 85 percent (12,425) travel via automobile
- Vehicle occupancy of the event traffic is assumed to be 2.5 persons per vehicle
- Therefore, 4,970 vehicle trips are assumed for a basketball game
- 65 percent (3,230) arrive prior to the game during the “peak” hour being analyzed
- 85 percent (4,225) depart after the game during the “peak” hour being analyzed
- All parking is accommodated on the East Bank Campus

The assumptions for a Saturday event include a noon start time and a 2:30 p.m. ending time. The weekday start time was 7:00 p.m. and the ending time was 9:30 p.m. Table 1 presents the results of this analysis which is summarized as follows:

Year 2009 No-Build Roadway Weekday Basketball Event – Arrival Peak Hour (6:00 – 7:00 p.m.)

Three intersections are expected to operate poorly (LOS E-F) during the arrival peak hour for a weekday basketball game in 2009. These intersections are University Avenue (CSAH 36) at the I-35W northbound off-ramp, Oak Street at University Avenue (CSAH 36) and Huron Boulevard at University Avenue (CSAH 36). These intersections operate poorly because of the additional event traffic using University Avenue (CSAH 36) and the high existing background volumes.

Year 2009 No-Build Roadway Weekday Basketball Event – Departure Peak Hour (9:30 – 10:30 p.m.)

All intersections are expected to operate at an acceptable level of service during the departure peak hour for a weekday basketball game. The acceptable levels of service for this scenario are mainly due to the lower background volumes at the time of departure and improved signal timing. Based on current field observations for a basketball game, poor levels of service and queuing can occur along 4th Street (CSAH 37).

Year 2009 No-Build Roadway Saturday Basketball Event - Arrival Peak Hour (11:00 a.m. – 12:00 p.m.)

All intersections are expected to operate at an acceptable level of service during the arrival peak hour for a Saturday basketball game. The acceptable levels of service for this scenario are mainly due to the lower background volumes at the time of departure and the improved signal timing.

Year 2009 No-Build Roadway Saturday Basketball Event - Departure Peak Hour (3:30 -4:30 p.m.)

Two intersections are expected to operate poorly on the East Bank Campus during the departure peak hour for a Saturday basketball game. The intersection at 4th Street (CSAH 37)/10th Avenue will operate poorly due to vehicles trying to access I-35W. The poor performance at the 4th Street (CSAH 37)/Oak Street intersection is caused by the heavy volume leaving parking lots on the East Bank.

**Table 1
2009 Williams Arena (Basketball) Event Analysis
Level of Service Results**

Int #	Intersection	2009 Weekday		2009 Saturday	
		Arrival (6:00-7:00 p.m.)	Departure (9:30-10:30 p.m.)	Arrival (11:00-Noon)	Departure (2:30-3:30 p.m.)
Intersections on the East Bank Campus					
1	15th Ave. / Como Ave.	B	B	B	B
2	15th Ave. / Rollins				
3	15th Ave. / 5th St.		A		B
4	17th Ave. / 5th St.				
5	I-35W SB Off-Ramp / 4th Street (CSAH 37).	B	B	A	C
6	I-35W NB On-Ramp / 4th Street (CSAH 37)		A		B
7	10th Ave. / 4th Street (CSAH 37)		D		E
8	13th Ave. / 4th Street (CSAH 37)		B		C
9	14th Ave. / 4th Street (CSAH 37)		C		C
10	15th Ave. / 4th Street (CSAH 37)		C		C
11	17th Ave. / 4th Street (CSAH 37)	C	D	B	C

**Table 1
2009 Williams Arena (Basketball) Event Analysis
Level of Service Results**

Int #	Intersection	2009 Weekday		2009 Saturday	
		Arrival (6:00-7:00 p.m.)	Departure (9:30-10:30 p.m.)	Arrival (11:00-Noon)	Departure (2:30-3:30 p.m.)
13	Oak St. / 4th Street (CSAH 37)	B	C	B	F
14	25th Ave. / 4th Street (CSAH 37)				
15	I-35W SB On-Ramp / University Avenue (CSAH 36)	D	B	C	D
16	I-35W NB Off-Ramp / University Avenue (CSAH 36)	E		C	
17	10th Ave. / University Avenue (CSAH 36)	C		C	
18	11th Ave. / University Avenue (CSAH 36)	C		C	
19	14th Ave. / University Avenue (CSAH 36)	C		C	
20	15th Ave. / University Avenue (CSAH 36)	B		B	
21	17th Ave. / University Avenue (CSAH 36)	C		C	
23	Oak St. / University Avenue (CSAH 36)	E	D	C	D
24	Huron Blvd. / University Avenue (CSAH 36)	E	A	C	B
25	Washington Avenue (CSAH 122) / University Avenue (CSAH 36)	C	C	B	A
26	25th Ave. / University Avenue (CSAH 36)		B		C
27	27th Ave. / University Avenue (CSAH 36)	C	B	C	B
28	Malcolm Ave. / University Avenue (CSAH 36)				
29	Bedford Rd. / University Avenue (CSAH 36)				
30	TH 280 SB Off-Ramp / University Avenue (CSAH 36)	C	C	B	B
31	TH 280 NB On-Ramp / University Avenue (CSAH 36)	C	C	B	C
32	TH 280 SB On-Ramp / Franklin Ave.		B		B
33	TH 280 NB Off-Ramp / Franklin Ave	B		B	
34	Church St. / Washington Avenue (CSAH 122)	C	B	C	C
35	Union St. / Washington Avenue (CSAH 122)		B		B
36	Harvard St. / Washington Avenue (CSAH 122)	C		C	

Table 1
2009 Williams Arena (Basketball) Event Analysis
Level of Service Results

Int #	Intersection	2009 Weekday		2009 Saturday	
		Arrival (6:00-7:00 p.m.)	Departure (9:30-10:30 p.m.)	Arrival (11:00-Noon)	Departure (2:30-3:30 p.m.)
37	Oak St. / Washington Avenue (CSAH 122)	C	C	B	C
38	Huron Blvd. / Washington Avenue (CSAH 122)	C	B	C	B
39	Oak St. / Delaware / St.				
40	25th Ave. / Delaware St.				
41	Huron Blvd. / Essex St.	A	A	A	A
42	Fulton St. / Oak St.				
43	Erie St. / Fulton St.				
44	Fulton St. / Huron Blvd.	B	B	A	B
45	27th Ave. / Essex St.				
46	27th Ave. / East River Road / Franklin Ave.	D	B	C	C
47	5th St. / Oak St.				
48	Huron Blvd. / U of M Parking Entrance				
49	23rd Ave. / University Avenue (CSAH 36)				
Shaded entry denotes intersections not analyzed under this scenario, but are included here to facilitate comparison with intersection analysis under other scenarios analyzed. Bold items indicate poor levels of service.					

3.1.2 Environmental Consequences

Impacts resulting from the Stadium Project were assessed for potential impacts to roadway network operations during the afternoon peak hour (without a Major Event), during arrival and departure times for Saturday afternoon Minor and Major Events, and a Minor Event during a weekday evening. This analysis assesses the impacts associated with the No-Build Alternative and draws comparisons and conclusions with regard to differences between the No-Build and Build conditions.

Operation of Proposed Roadway Realignments During Weekday Peak Hours (No Stadium Event)

The intent of this analysis is to determine how well the proposed roadways operate under typical weekday evening (4:30-5:30 p.m.) volumes. The proposed roadway network (see Figure 3) was compared to the existing roadway network (baseline) with year 2009 and 2030 forecast volumes.

The most significant changes to the Final EIS proposed roadway network are the removal of Huron Boulevard from Washington Avenue (CSAH 122) to 4th Street (CSAH 37) and the realignment of Oak Street between University Avenue (CSAH 36) and 4th Street (CSAH 37). This will result in a new

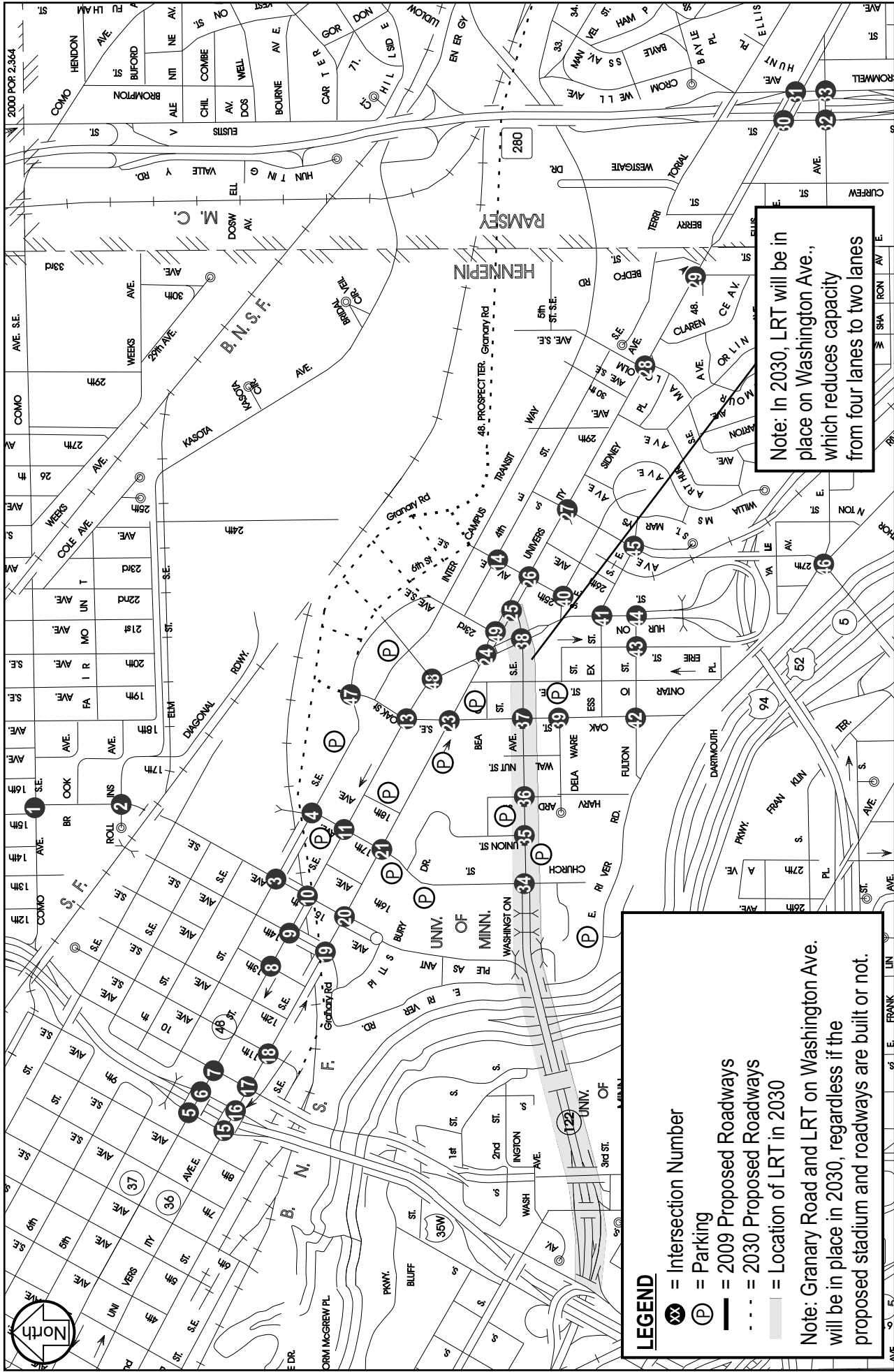
signalized intersection at University Avenue (CSAH 36)/23rd Avenue/Huron Boulevard. University Avenue (CSAH 36) will become a two-way roadway between 23rd Avenue and Oak Street with two westbound lanes on University Avenue (CSAH 36) turning right on realigned Oak Street to continue on 4th Street (CSAH 37). The former University Avenue (CSAH 36)/Washington Avenue (CSAH 122) full intersection will become a right-out only to eastbound University Avenue (CSAH 36).

To develop year 2009 baseline volumes, existing volumes were increased by one percent per year at the suggestion of the City of Minneapolis. The growth factor recognizes the fully developed character of the University of Minnesota and surrounding neighborhoods, but allows for additional traffic from redevelopment activities within Southeast Minneapolis, as well as overall increases in regional traffic. The year 2030 forecast volumes were developed using the Metropolitan Council's Regional Forecast Model. The model includes the effects of the Central Corridor line and reduced roadway capacity of Washington Avenue (CSAH 122), the SEMI redevelopment project, Granary Road, other programmed local roadway improvements and anticipated growth in population and employment (such as the planned Clinical District Improvements). Please refer to page five of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005, for details regarding travel demand forecasts generated through use of the regional model. Traffic volumes can be found in the appendix of the memorandum.

The operations analysis was completed for those intersections anticipated to be affected by the proposed roadway changes. Intersections analyzed are shown on Figures 4, 5, and 6. The intersections were analyzed using the Synchro/SimTraffic software.

The scenarios analyzed include:

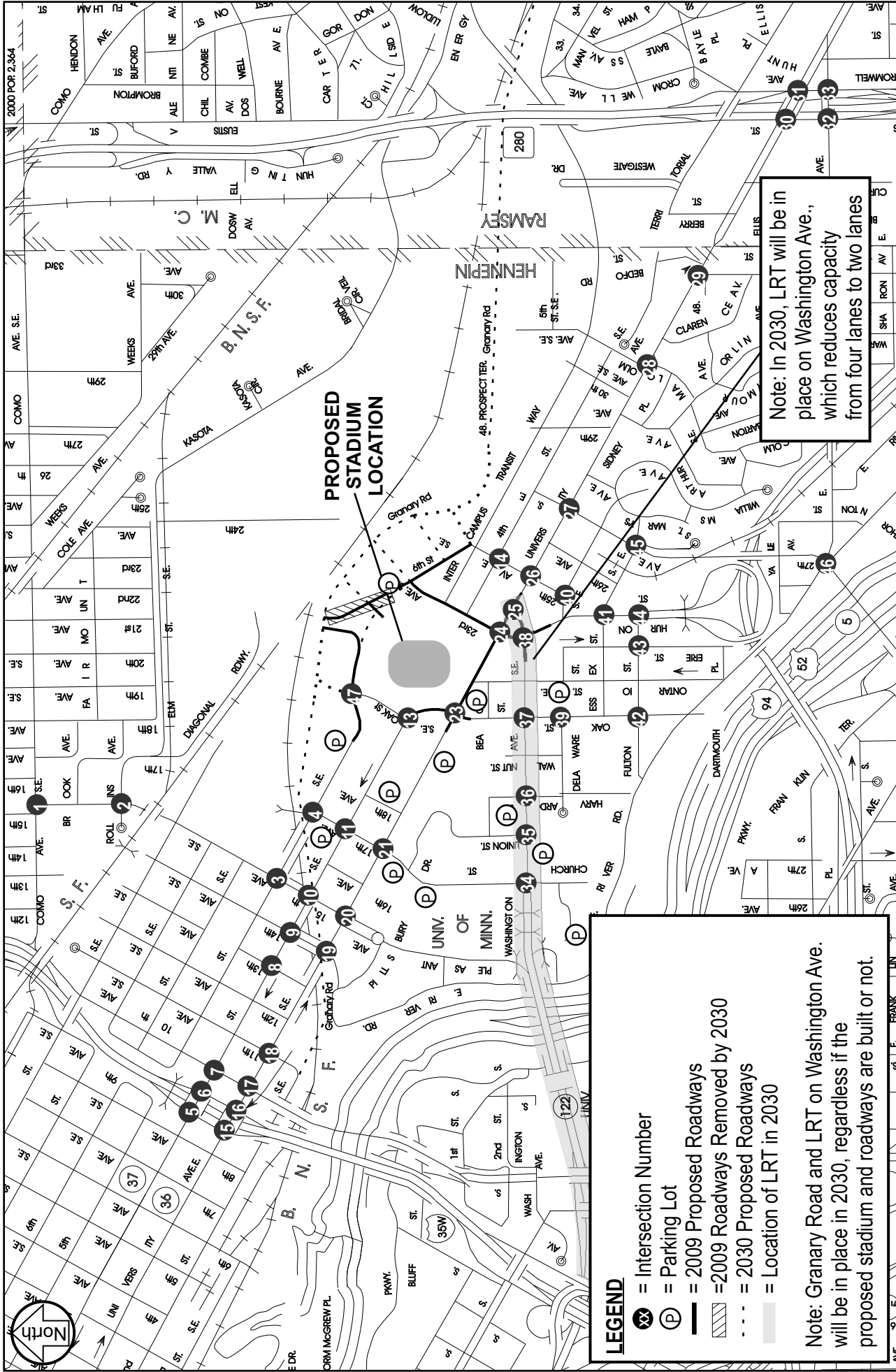
- Year 2009 No-Build Roadway (no improvement to the roadway system) – Weekday P.M. Peak Hour (4:30-5:30 p.m.)
- Year 2009 Build Roadway (proposed Stadium Project improvements to the roadway system) – Weekday P.M. Peak Hour (4:30-5:30 p.m.)
- Year 2030 No-Build Roadway – Weekday P.M. Peak Hour (4:30-5:30 p.m.)
- Year 2030 Build Roadway – Weekday P.M. Peak Hour (4:30-5:30 p.m.)



Football Stadium - Final EIS

University of Minnesota

Intersections Analyzed for No Build Roadway Conditions
 Figure #4
 JANUARY 2006



Note: In 2030, LRT will be in place on Washington Ave., which reduces capacity from four lanes to two lanes

LEGEND

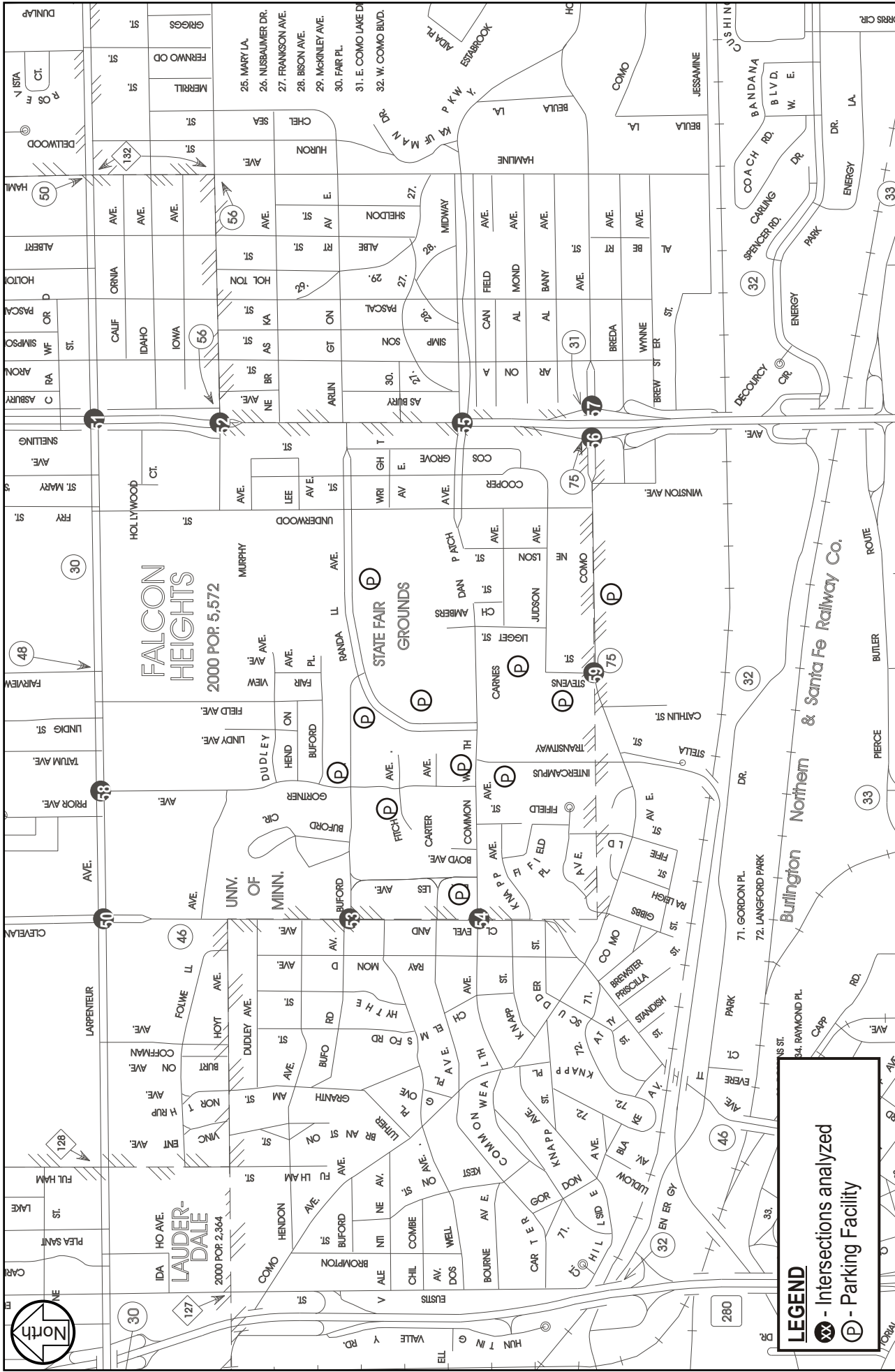
- ⊗ = Intersection Number
- Ⓟ = Parking Lot
- = 2009 Proposed Roadways
- ▨ = 2009 Roadways Removed by 2030
- - - = 2030 Proposed Roadways
- ▬ = Location of LRT in 2030

Note: Granary Road and LRT on Washington Ave. will be in place in 2030, regardless if the proposed stadium and roadways are built or not.



Football Stadium - Final EIS
 University of Minnesota

Figure #5



Football Stadium - Final EIS
University of Minnesota

Figure #6
No Build and Build Intersections Analyzed on St. Paul Campus
 JANUARY 2006

LEGEND
 XX - Intersections analyzed
 P - Parking Facility

The analysis results for these conditions are summarized in Table 2 for the existing (No-Build) and proposed roadway network (Build).

**Table 2
Weekday P.M. Peak Hour Conditions
Level of Service Results**

Intersections	4:30 – 5:30 p.m., No Events			
	Year 2009		Year 2030*	
	No-Build Roadway	Build Roadway	No-Build Roadway	Build Roadway
Oak St./4th Street (CSAH 37)	B	C	B	C
University Avenue (CSAH 36)/Oak St.	C	C	C	C
University Avenue (CSAH 36)/Huron St.	B	n/a	B	n/a
University Avenue (CSAH 36)/Huron St./23rd Ave.	n/a	C	n/a	E
University Avenue (CSAH 36)/Washington Avenue (CSAH 122)	B	n/a	C	n/a
University Avenue (CSAH 36)/25th Ave.	B	B	C	D
Washington Avenue (CSAH 122)/Huron St.	C	C	C	D
Washington Avenue (CSAH 122)/Oak St.	C	C	C	C
n/a intersection does not exist or becomes right-in/right-out				
* Year 2030, under No-Build and Build conditions, includes the addition of Granary Road and the Central Corridor line on Washington Avenue (CSAH 122)				
Bold items indicate poor Levels of Service				

As shown in the above table, all intersections will operate at an acceptable level of service (LOS D or better) with the No-Build roadway network in 2009 and 2030. For the Build roadway scenario, the proposed roadway network will operate at acceptable levels of service in year 2009; however, by year 2030, the new intersection of University Avenue (CSAH 36)/Huron Boulevard/23rd Avenue is expected to operate poorly. The poor operations at this intersection result from the heavy westbound left-turn volumes from University Avenue (CSAH 36) to Huron Boulevard.

Additional analysis was completed to determine the geometrics required to accommodate the forecasted year 2030 traffic volumes for typical weekday pm peak hour at the new University Avenue/Huron Boulevard/23rd Avenue intersection. The geometrics include: Northbound; dual left-turn lanes and a thru-right lane, Eastbound; a left-turn lane, two through lanes and a right-turn lane, Southbound; a left-turn lane, a through lane and a through-right lane, Westbound; dual left-turn lanes, a through lane and a through-right lane. Analysis indicated that this intersection would operate at a LOS D with these improvements.

Saturday Afternoon Major Stadium Event: 2009 and 2030

The No-Build scenario assumes no changes to the existing roadways and no Stadium event taking place. This scenario was analyzed to compare with the Gopher football game analysis, in order to determine the impacts a Major Event will have on the local roadway network.

The following assumptions were used to estimate the number of vehicle, pedestrian, and transit trips for a football game at the Stadium under the Build scenario.²

- The analysis assumes a capacity event of 50,000 persons
- 15 percent of the attendees (7,500) walk, bike or ride transit to/from the Stadium
- The remaining 85 percent (42,500) travel via automobile
- Vehicle occupancy of the event traffic is assumed to be 2.7 persons per vehicle.
- Therefore, 15,700 new vehicle trips are assumed for a football game
- 65 percent (10,200) arrive prior to the game during the “peak” hour being analyzed
- 75 percent (11,800) depart after the game during the “peak” hour being analyzed
- Parking is located on the East Bank, West Bank, St. Paul Campus and State Fairgrounds
- Traffic is distributed to the regional roadways using current Gopher football season ticket holder zip codes
- Remote parking on the University of Minnesota St. Paul Campus and State Fairgrounds will be utilized (further discussion provided in Section 3.1.3).

By year 2030, the Central Corridor line is expected to be in place. Based on the Central Corridor Plans, the line is assumed to run along Washington Avenue (CSAH 122) (either in a tunnel or on the surface) and reduce the roadway capacity from four lanes (two in each direction) to two lanes (one in each direction). Based on current use of the Hiawatha LRT line for Metrodome events, it is estimated that 2,000 to 2,500 people will use the Central Corridor line to access a football game at the proposed Stadium. Some of the event attendees assumed to be bus users in 2009 would switch to the Central Corridor line by 2030.

The trip generation information applies only to event ticket holders, not the Stadium staff, vendors, media, players, marching band, etc. Stadium support staff is currently estimated to be fewer than 500 individuals. Coaching staff and players will be bussed from the University’s practice facility to the game site. Parking areas for the press have been provided adjacent to the Stadium. Facility and concessions staff will be directed to park remotely and shuttle to the Stadium. It is anticipated that entry points for all of these users will be located along the west or Oak Street side of the Stadium.

² Assumptions are based on data from other football stadium traffic analyses conducted around the country and other established modeling standards.

Traffic Impacts for 2009 Saturday Conditions (Major Event)

It is expected that most home football games will be played on Saturday afternoons; therefore, the traffic impacts related to a Saturday football game were analyzed and compared to the No-Build conditions. The departure peak hour volumes for a football game under the Build Scenario are considered a worse condition than arrivals. Arrival traffic tends to build gradually while departure traffic is more concentrated. The Saturday event analysis included a noon start time and a 3:30 p.m. ending time. Due to fairly consistent levels of background traffic throughout a Saturday afternoon and evening, an event with a late afternoon or evening start time would result in similar traffic patterns.

The scenarios analyzed for 2009 Saturday conditions were:

- No-Build Roadways, No Stadium Event – Arrival Peak Hour (11:00 a.m.-noon)
- Build Roadways, Major Event – Arrival Peak Hour (11:00 a.m.-noon)
- No-Build Roadways, No Stadium Event – Departure Peak Hour (3:30-4:30 p.m.)
- Build Roadways, Major Event– Departure Peak Hour (3:30-4:30 p.m.)

The analysis results for Saturday conditions are summarized in Table 3.

**Table 3
2009 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00 a.m.-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
Intersections on East Bank Campus					
1	15th Ave. / Como Ave.	B	B	B	C
2	15th Ave. / Rollins				
3	15th Ave. / 5th St.			B	D
4	17th Ave. / 5th St.				
5	I-35W SB Off-Ramp / 4 th Street (CSAH 37)	A	D	B	D
6	I-35W NB On-Ramp / 4 th Street (CSAH 37)			B	E
7	10th Ave. / 4th Street (CSAH 37)			B	F
8	13th Ave. / 4th Street (CSAH 37)			B	C
9	14th Ave. / 4th Street (CSAH 37)			B	C
10	15th Ave. / 4th Street (CSAH 37)			B	E
11	17th Ave. / 4th Street (CSAH 37)	B	C	B	F
13	Oak St. / 4th Street (CSAH 37)	B	C	B	D
14	25th Ave. / 4th Street (CSAH 37).				
15	I-35W SB On-Ramp / University Avenue (CSAH 36)	B	D	B	D
16	I-35W NB Off-Ramp / University Avenue (CSAH 36)	B	F		
17	10th Ave. / University Avenue	B	E		

**Table 3
2009 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00 a.m.-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
	(CSAH 36)				
18	11th Ave. / University Avenue (CSAH 36)	A	C		
19	14th Ave. / University Avenue (CSAH 36)	B	D		
20	15th Ave. / University Avenue (CSAH 36)	B	E		
21	17th Ave. / University Avenue (CSAH 36)	B	E		
23	Oak St. / University Avenue (CSAH 36)	B	E	B	F
24	Huron Blvd. / University Avenue (CSAH 36)	B	C	B	C
25	Washington Avenue (CSAH 122) / University Avenue (CSAH 36)	A	A	A	A
26	25th Ave. / University Avenue (CSAH 36)			B	D
27	27th Ave. / University Avenue (CSAH 36)	B	C	B	B
28	Malcolm Ave. / University Avenue (CSAH 36)				
29	Bedford Rd. / University Avenue (CSAH 36)				
30	TH 280 SB Off-Ramp / University Avenue (CSAH 36)	B	B	B	B
31	TH 280 NB On-Ramp / University Avenue (CSAH 36)	B	C	B	C
32	TH 280 SB On-Ramp / Franklin Ave.			B	B
33	TH 280 NB Off-Ramp / Franklin Ave.	B	C		
34	Church St. / Washington Avenue (CSAH 122)	A	C	B	C
35	Union St. / Washington Avenue (CSAH 122)			B	C
36	Harvard St. / Washington Avenue (CSAH 122)	B	C		
37	Oak St. / Washington Avenue (CSAH 122)	B	C	B	C
38	Huron Blvd. / Washington Avenue (CSAH 122)	B	B	B	B
39	Oak St. / Delaware / St.				
40	25th Ave. / Delaware St.				

**Table 3
2009 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00 a.m.-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
Intersections on East Bank Campus cont.					
41	Huron Blvd. / Essex St.	B	B	B	C
42	Fulton St. / Oak St.				
43	Erie St. / Fulton St.				
44	Fulton St. / Huron Blvd.	B	F	B	C
45	27 th Ave. / Essex St.				
46	27th Ave. / East River Road / Franklin Ave.	C	D	B	D
47	5th St. / Oak St.				
48	Huron Blvd. / U of M Parking Entrance				
49	23rd Ave. / University Avenue (CSAH 36)				
Intersections on St. Paul Campus/State Fairgrounds					
50	Cleveland Ave. / Larpenteur Ave.	B	C	B	C
51	Snelling Ave. / Larpenteur Ave.	C	E	C	C
52	Hoyt Ave. / Snelling Ave.	B	B	B	B
53	Buford Ave. / Cleveland Ave.	B	B	B	B
54	Commonwealth Ave. / Cleveland Ave.	A/A ¹	C/F	A/F	A/C
55	Dan Patch Ave. / Snelling Ave.	B	B	B	B
56	Como Ave. / Snelling SB Off-Ramp	A/A	A/A	A/A	A/B
57	Como Ave. / Snelling NB Off-Ramp	A/A	C/E	A/A	A/A
58	Gortner Ave. / Larpenteur Ave.	A	C	B	C
59	Stevens St. / Como Ave.	A/A	A/A	A/A	A/A
<p>Shaded areas denote intersections not analyzed under this scenario, but are included here to facilitate comparison with intersection analysis under other scenarios analyzed.</p> <p>Bold items indicate poor levels of service.</p> <p>¹ X/X indicates "Overall Level of Service / Worst Approach to Intersection"</p>					

Results for the No-Build roadway, no event condition analysis indicate that all key intersections will operate at an acceptable level of service C or better in year 2009 during the hours anticipated as peak arrival and departure times on Saturday. A number of intersections are expected to operate at LOS E or worse during Saturday events under the Build scenario. A summary of the operations analysis results for a Saturday football event follows:

Year 2009 Build Roadway Saturday Major Event: Arrival Hour

Six of the intersections analyzed on the East Bank Campus are expected to operate poorly (LOS E or F) during the arrival peak hour for a Saturday football game in 2009.

The main impacts on the East Bank Campus are the University Avenue (CSAH 36)/4th Street (CSAH 37)/I-35W interchange area, the University Avenue (CSAH 36)/Oak Street intersection, the Huron Boulevard/Fulton Street intersection and access to the parking ramps where there are large turning movement volumes and pedestrian conflicts. Poor levels of service (LOS E and F) at the I-35W northbound off-ramp, 10th Avenue, 15th Avenue, 17th Avenue and Oak Street intersections along University Avenue (CSAH 36) are primarily due to excessive queuing from the high volume of vehicles traveling east to parking locations. The intersection of Huron Blvd/Fulton Street is essentially the I-94/Huron ramp intersection since this interchange is unique and does not have typical ramp intersections. The intersection of Huron Blvd/Fulton Street operates at LOS F during event arrival due to the high volume of vehicles making a northbound left-turn to access the Oak Street parking ramp. It should be noted that traffic will not queue from Huron Blvd. onto I-94 during event arrival.

Three intersections are expected to operate poorly at the St. Paul Campus/State Fairgrounds during the arrival period. These intersections include Snelling Avenue/Larpenteur Avenue, Commonwealth Avenue/Cleveland Avenue and Como Avenue/Snelling Avenue northbound off-ramp. The intersection of Snelling Avenue/Larpenteur Avenue operates close to capacity with everyday traffic and the additional event traffic from the north and east will cause this intersection to operate poorly during an event. Event traffic accessing the Fairgrounds parking lots on Commonwealth Avenue from the north and south on Cleveland Avenue will cause added delay for background vehicles on Commonwealth Avenue. The Como Avenue/Snelling Avenue northbound off-ramp will operate poorly due to the high volume of northbound left-turning vehicles.

Year 2009 Build Roadway Saturday Major Event Departure Hour

Five intersections on the East Bank are expected to operate poorly during the departure peak hour for a Saturday football game. All intersections on the St. Paul Campus are expected to operate adequately during departure times as shuttles will effectively meter the departure flow.

Four out of the five East Bank campus intersections that will experience problems are along 4th Street (CSAH 37), including the critical intersection of 10th Avenue near the I-35W interchange, the I-35W northbound on-ramp, 15th Avenue and 17th Avenue. The intersections along 4th Street (CSAH 37) operate poorly due to the large volumes on 4th Street (CSAH 37) destined to I-35W and the queues spilling back from 10th Avenue. The intersection at University Avenue (CSAH 36)/Oak Street will operate poorly due to the high volume of vehicles leaving the parking area near the Stadium and the interaction with pedestrians.

Traffic Impacts for 2030 Saturday Conditions (Major Event)

The year 2030 forecast volumes were developed using the Metropolitan Council's Regional Forecast Model. The model includes the effects of the Central Corridor line, the SEMI redevelopment project, Granary Road, and

other local improvements and future developments³. Consistent with current planning for the Central Corridor line (either at-grade or in a tunnel), analysis assumptions included reduction of Washington Avenue capacity to two lanes. The following scenarios were analyzed:

- No-Build Roadways, No Stadium Event – Arrival Peak Hour (11:00 a.m.-noon)
- Build Roadways, Major Event – Arrival Peak Hour (11:00 a.m.-noon)
- No-Build Roadways, No Stadium Event – Departure Peak Hour (3:30-4:30 p.m.)
- Build Roadways, Major Event – Departure Peak Hour (3:30-4:30 p.m.)

The analysis results for 2030 Saturday event conditions are summarized in Table 4. A summary of the operations analysis results for a Saturday football event follows:

**Table 4
2030 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
Intersections on East Bank Campus					
1	15th Ave. / Como Ave.	B	B	B	C
2	15th Ave. / Rollins				
3	15th Ave. / 5th St.			B	F
4	17th Ave. / 5th St.				
5	I-35W SB Off-Ramp / 4th Street (CSAH 37)	B	D	B	B
6	I-35W NB On-Ramp / 4th Street (CSAH 37)			C	D
7	10th Ave. / 4th Street (CSAH 37)			B	F
8	13th Ave. / 4th Street (CSAH 37)			A	D
9	14th Ave. / 4th Street (CSAH 37)			B	F
10	15th Ave. / 4th Street (CSAH 37)			B	E
11	17th Ave. / 4th Street (CSAH 37)	B	C	B	F
13	Oak St. / 4th Street (CSAH 37)	B	C	B	F
14	25th Ave. / 4th Street (CSAH 37)				
15	I-35W SB On-Ramp / University Avenue (CSAH 36)	B	D	B	E
16	I-35W NB Off-Ramp / University Avenue (CSAH 36)	B	F		
17	10th Ave. / University Avenue (CSAH 36)	B	D		
18	11th Ave. / University Avenue (CSAH 36)	B	C		

³ Please refer to page 5 of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005, incorporated by reference into this Final EIS, for details regarding travel demand forecasts generated through use of the regional model.

**Table 4
2030 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
19	14th Ave. / University Avenue (CSAH 36)	B	C		
20	15th Ave. / University Avenue (CSAH 36)	B	C		
21	17th Ave. / University Avenue (CSAH 36)	B	C		
23	Oak St. / University Avenue (CSAH 36)	B	E	B	F
24	Huron Blvd. / University Avenue (CSAH 36)	B	C	B	C
25	Washington Avenue (CSAH 122) / University Avenue (CSAH 36)	A	A	A	A
26	25th Ave. / University Avenue (CSAH 36)			B	C
27	27th Ave. / University Avenue (CSAH 36)	B	C	B	B
28	Malcolm Ave. / University Avenue (CSAH 36)				
29	Bedford Rd. / University Avenue (CSAH 36)				
30	TH 280 SB Off-Ramp / University Avenue (CSAH 36)	B	B	B	B
31	TH 280 NB On-Ramp / University Avenue (CSAH 36)	B	C	B	B
32	TH 280 SB On-Ramp / Franklin Ave.			B	B
33	TH 280 NB Off-Ramp / Franklin Ave.	B	C		
34	Church St. / Washington Avenue (CSAH 122)	A	C	A	C
35	Union St. / Washington Avenue (CSAH 122)			A	B
36	Harvard St. / Washington Avenue (CSAH 122)	B	B		
37	Oak St. / Washington Avenue (CSAH 122)	B	C	C	B
38	Huron Blvd. / Washington Avenue (CSAH 122)	B	B	B	B
39	Oak St. / Delaware / St.				
40	25th Ave. / Delaware St.				
41	Huron Blvd. / Essex St.	B	B	B	B
42	Fulton St. / Oak St.				
43	Erie St. / Fulton St.				
44	Fulton St. / Huron Blvd.	B	F	B	C
45	27th Ave. / Essex St.				
46	27th Ave. / East River Road / Franklin Ave.	C	D	C	F
47	5th St. / Oak St.				
48	Huron Blvd. / U of M Parking Entrance				
49	23rd Ave. / University Avenue (CSAH 36)				

**Table 4
2030 Saturday Conditions (Major Event) Level of Service Results**

Int #	Intersection	11:00-Noon		3:30-4:30 p.m.	
		No-Build, No Event	Build, Major Event	No-Build, No Event	Build, Major Event
Intersections on the St. Paul Campus/State Fairgrounds					
50	Cleveland Ave. / Larpenteur Ave.	C	C	B	C
51	Snelling Ave. / Larpenteur Ave.	C	F	C	D
52	Hoyt Ave. / Snelling Ave.	A	A	B	D
53	Buford Ave. / Cleveland Ave.	B	C	B	B
54	Commonwealth Ave. / Cleveland Ave.	A/A ^{1/}	F/F	A/A	B/E
55	Dan Patch Ave. / Snelling Ave.	C	B	B	B
56	Como Ave. / Snelling SB Off-Ramp	A/A	A/A	A/B	B/B
57	Como Ave. / Snelling NB Off-Ramp	A/B	F/F	A/B	A/B
58	Gortner Ave. / Larpenteur Ave.	A	B	A	C
59	Stevens St. / Como Ave.	A/A	A/A	A/A	A/A
<p>■ These intersections not analyzed under this scenario, but are included here to facilitate comparison with intersection analysis under other scenarios analyzed.</p> <p>Bold items indicate poor levels of service.</p> <p>¹ X/X indicates “Overall Level of Service / Worst Approach to Intersection”</p>					

Year 2030 No Build Conditions

Results for the No-Build roadway, no event condition indicate that all key intersections will operate at an acceptable level of service C or better in year 2030 during the hours anticipated as peak arrival and departure times on Saturday.

Year 2030 Build Roadway Saturday Major Event Arrival

During the arrival peak hour for a Saturday Major Event, traffic operation results anticipated for Year 2030 are similar to those of Year 2009. Year 2030 background traffic is higher than 2009; however, with the addition of Granary Road to the north of the Stadium, some of the event traffic that would access the Stadium via University Avenue (CSAH 36) will be diverted to Granary Road. This diversion will reduce traffic on University Avenue (CSAH 36), and improve operations along that roadway. The University Avenue (CSAH 36) intersections at the I-35W northbound off ramp and at Oak Street are expected to perform poorly, as is the Fulton Street/Huron Boulevard intersection. The intersection of Huron Blvd/Fulton Street operates at LOS F during event arrival due to the high volume of vehicles making a northbound left-turn to access the Oak Street parking ramp. Under year 2030 conditions, the traffic volume on Huron Blvd. will be higher than year 2009, due to loss of capacity on Washington Avenue from the proposed Central Corridor line.

At the St. Paul Campus, the three poor performing intersections identified for 2009 emerge again in 2030. They are Snelling/Larpenteur, Commonwealth/Cleveland, and the Como Avenue/Snelling Avenue northbound off-ramp.

Year 2030 Build Roadway Saturday Major Event Departure

Traffic operations during the departure peak hour for a Saturday football game at the Stadium in year 2030 are similar to year 2009 operations, with an additional four intersections expected to operate poorly. The additional four are (1) 15th Avenue at 5th Street, (2) 14th Avenue at 4th Street (CSAH 37), (3) Oak Street at 4th Street (CSAH 37), and (4) the 27th Avenue, West River Road and Franklin Avenue intersection. Higher background traffic for year 2030 will marginally increase delays on all roadways. Poor operations for three of the four additional intersections are due to increased queuing problems along 4th Street (CSAH 37). The five-legged intersection of 27th Avenue/East River Road/Franklin Avenue operates poorly primarily because of the increase in background traffic.

Saturday Minor Event: 2009

Analysis of a Minor Event on a Saturday, with the proposed roadways, was conducted to determine the impacts to the local roadway system. The analysis results for a Saturday Minor Event are summarized in Table 5.

Year 2009 Build Roadway Saturday Minor Event: Arrival Hour

All of the intersections analyzed are expected to operate at acceptable levels during the arrival peak hour for a Saturday Minor Event in 2009.

Year 2009 Build Roadway Saturday Minor Event: Departure Hour

Three of the intersections analyzed are expected to operate poorly (LOS E or F) during the departure peak hour for a Saturday Minor Event in 2009. The intersection at 4th Street (CSAH 37)/10th Avenue is expected to operate poorly due to vehicles trying to access I-35W. The intersection of Oak Street/University Avenue (CSAH 36) is expected to operate poorly LOS F) during the departure peak hour due to conflicts between the high volume of pedestrians and vehicles, as well as the addition of the westbound approach for the proposed configuration. The intersection of University Avenue/Huron Boulevard/23rd Avenue is expected to operate at LOS F due to the high volume of southbound rights as well as queuing from the upstream intersection of Oak Street/University Avenue. It should be noted that for a Major Event, vehicles exiting the Stadium parking lot will not be routed southbound on 23rd Avenue due to the shuttle bus staging area. There will be no shuttling for Minor Events, therefore vehicles were permitted to exit at this location for this analysis. (To improve operations, vehicles should not be permitted to make a southbound right at this location during an event departure.)

**Table 5
2009 Saturday Conditions (Minor Event) Level of Service Results**

Int #	Intersection	2009 Minor Event Arrival	2009 Minor Event Departure
1	15th Ave. / Como Ave.	B	B
2	15th Ave. / Rollins		
3	15th Ave. / 5th St.		B
4	17th Ave. / 5th St.		
5	I-35W SB Off-Ramp / 4th Street (CSAH 37)	A	C
6	I-35W NB On-Ramp / 4th Street (CSAH 37)		B
7	10th Ave. / 4th Street (CSAH 37)		E
8	13th Ave. / 4th Street (CSAH 37)		C
9	14th Ave. / 4th Street (CSAH 37)		C
10	15th Ave. / 4th Street (CSAH 37)		C
11	17th Ave. / 4th Street (CSAH 37)	B	C
13	Oak St. / 4th Street (CSAH 37)	B	C
14	25th Ave. / 4th Street (CSAH 37)		
15	I-35W SB On-Ramp / University Avenue (CSAH 36)	C	D
16	I-35W NB Off-Ramp / University Avenue (CSAH 36)	C	
17	10th Ave. / University Avenue (CSAH 36)	C	
18	11th Ave. / University Avenue (CSAH 36)	C	
19	14th Ave. / University Avenue (CSAH 36)	C	
20	15th Ave. / University Avenue (CSAH 36)	B	
21	17th Ave. / University Avenue (CSAH 36)	C	
23	Oak St. / University Avenue (CSAH 36)	D	F
24	Huron Blvd. / University Avenue (CSAH 36)	C	F
25	Washington Avenue (CSAH 122) / University Avenue (CSAH 36)	A	C
26	25th Ave. / University Avenue (CSAH 36)		C
27	27th Ave. / University Avenue (CSAH 36)	C	B
28	Malcolm Ave. / University Avenue (CSAH 36)		
29	Bedford Rd. / University Avenue (CSAH 36)		
30	TH 280 SB Off-Ramp / University Avenue (CSAH 36)	B	B
31	TH 280 NB On-Ramp / University Avenue (CSAH 36)	B	C
32	TH 280 SB On-Ramp / Franklin Ave.		B
33	TH 280 NB Off-Ramp / Franklin Ave.	B	
34	Church St. / Washington Avenue (CSAH 122)	C	C
35	Union St. / Washington Avenue (CSAH 122)		B
36	Harvard St. / Washington Avenue (CSAH 122)	C	
37	Oak St. / Washington Avenue (CSAH 122)	C	D
38	Huron Blvd. / Washington Avenue (CSAH 122)	C	D
39	Oak St. / Delaware / St.		
40	25th Ave. / Delaware St.		
41	Huron Blvd. / Essex St.	A	B
42	Fulton St. / Oak St.		
43	Erie St. / Fulton St.		

**Table 5
2009 Saturday Conditions (Minor Event) Level of Service Results**

Int #	Intersection	2009 Minor Event Arrival	2009 Minor Event Departure
44	Fulton St. / Huron Blvd.	A	A
45	27th Ave. / Essex St.		
46	27th Ave. / East River Road / Franklin Ave.	C	C
47	5th St. / Oak St.		
48	Huron Blvd. / U of M Parking Entrance		
49	23rd Ave. / University Avenue (CSAH 36)		

 These intersections not analyzed under this scenario, but are included here to facilitate comparison with intersection analysis under other scenarios analyzed.
Bold items indicate poor levels of service.
¹ X/X indicates "Overall Level of Service / Worst Approach to Intersection"

Weekday Evening Major Events

The University of Minnesota On-Campus Football Stadium Draft EIS presented information regarding intersection operations under Weekday Evening Major Event conditions. Subsequent to the publishing of the Draft EIS, the University has modified its approach to major weeknight events and events are no longer reasonably foreseeable given the University's proposed Stadium use policies. See Section 2.2.1 for additional discussion of this topic.⁴

Weekday Evening Minor Event: 2009

Analysis of a Minor Event on a weekday, with the proposed roadways, was conducted to determine the impacts to the local roadway system. The analysis results for a Weekday Minor Event are summarized in Table 6.

Year 2009 Build Roadway Weekday Minor Event: Arrival Hour

The intersection of I-35W NB Off-Ramp/University Avenue (CSAH 36) is expected to operate poorly (LOS E) during the arrival peak hour due to the high volume of northbound right-turn vehicles exiting I-35W.

Year 2009 Build Roadway Saturday Minor Event: Departure Hour

The intersection of Oak Street/University Avenue (CSAH 36) is expected to operate poorly (LOS F) during the departure peak hour due to conflicts between the high volume of pedestrians and vehicles, as well as the addition of the westbound approach for the proposed configuration.

⁴ Results of Weekday Major Event analysis can continue to be found in the *University of Minnesota On-Campus Football Stadium Transportation Analysis Technical Memorandum* dated September 7, 2005 and *Supplement One* of that Memorandum dated January 31, 2006.

**Table 6
2009 Weekday Conditions (Minor Event) Level of Service Results**

Int #	Intersection	2009 Minor Event Arrival	2009 Minor Event Departure
1	15th Ave. / Como Ave.	B	B
2	15th Ave. / Rollins		
3	15th Ave. / 5th St.		A
5	I-35W SB Off-Ramp / 4th Street (CSAH 37)	B	B
6	I-35W NB On-Ramp / 4th Street (CSAH 37)		A
7	10th Ave. / 4th Street (CSAH 37)		D
8	13th Ave. / 4th Street (CSAH 37)		B
9	14th Ave. / 4th Street (CSAH 37)		C
10	15th Ave. / 4th Street (CSAH 37)		C
11	17th Ave. / 4th Street (CSAH 37)	C	D
13	Oak St. / 4th Street (CSAH 37)	C	C
14	25th Ave. / 4th Street (CSAH 37)		
15	I-35W SB On-Ramp / University Avenue (CSAH 36)	D	B
16	I-35W NB Off-Ramp / University Avenue (CSAH 36)	E	
17	10th Ave. / University Avenue (CSAH 36)	C	
18	11th Ave. / University Avenue (CSAH 36)	C	
19	14th Ave. / University Avenue (CSAH 36)	C	
20	15th Ave. / University Avenue (CSAH 36)	B	
21	17th Ave. / University Avenue (CSAH 36)	C	
23	Oak St. / University Avenue (CSAH 36)	D	F
24	Huron Blvd. / University Avenue (CSAH 36)	C	C
25	Washington Avenue (CSAH 122) / University Avenue (CSAH 36)	A	A
26	25th Ave. / University Avenue (CSAH 36)		B
27	27th Ave. / University Avenue (CSAH 36)	C	B
28	Malcolm Ave. / University Avenue (CSAH 36)		
29	Bedford Rd. / University Avenue (CSAH 36)		
30	TH 280 SB Off-Ramp / University Avenue (CSAH 36)	C	C
31	TH 280 NB On-Ramp / University Avenue (CSAH 36)	C	C
32	TH 280 SB On-Ramp / Franklin Ave.		B
33	TH 280 NB Off-Ramp / Franklin Ave.	B	
34	Church St. / Washington Avenue (CSAH 122)	C	B
35	Union St. / Washington Avenue (CSAH 122)		B
36	Harvard St. / Washington Avenue (CSAH 122)	C	
37	Oak St. / Washington Avenue (CSAH 122)	D	C
38	Huron Blvd. / Washington Avenue (CSAH 122)	D	B
39	Oak St. / Delaware / St.		
40	25th Ave. / Delaware St.		
41	Huron Blvd. / Essex St.	B	A
42	Fulton St. / Oak St.		

**Table 6
2009 Weekday Conditions (Minor Event) Level of Service Results**

Int #	Intersection	2009 Minor Event Arrival	2009 Minor Event Departure
43	Erie St. / Fulton St.		
44	Fulton St. / Huron Blvd.	B	B
45	27th Ave. / Essex St.		
46	27th Ave. / East River Road / Franklin Ave.	D	B
47	5th St. / Oak St.		
48	Huron Blvd. / U of M Parking Entrance		
49	23rd Ave. / University Avenue (CSAH 36).		
<p>■ These intersections not analyzed under this scenario, but are included here to facilitate comparison with intersection analysis under other scenarios analyzed.</p> <p>Bold items indicate poor levels of service.</p> <p>¹ X/X indicates "Overall Level of Service / Worst Approach to Intersection"</p>			

Other Transportation Modes

Transit Infrastructure: Bus Service

The existing transit stops located in the Huron Boulevard parking lots along the Transitway will be displaced by the Stadium Project. Current plans call for rerouting the Transitway buses along a new segment of 6th Street to 23rd Avenue Southeast, with a new transit stop located adjacent to the Stadium. Buses would continue south on 23rd Avenue to Washington Avenue (CSAH 122).

The Stadium Project and proposed new roadway configuration will have minimal impact on regional bus routes (Routes 16 and 50) and bus facilities. Only one bus stop, along northbound Oak Street at 4th Street, will require relocation due to reconstruction of Oak Street in that area. It is anticipated that the stop will be relocated to the new segment of Oak Street or just across the intersection of 4th Street. No other regional routes or facilities are affected by the Project. The University will work with Metro Transit and the City of Minneapolis to identify alternate on-street bus layover locations.

The expected LOS for key intersections in the area at year of opening (2009) indicates there should not be any significant delays during the weekday peak hours that would adversely affect bus operations. Further, the additional travel distance created by roadway realignments will not result in significant impacts to existing bus routes. The EIS analysis indicated the potential for poor operating conditions at the University Avenue and Huron Boulevard intersection during weekday PM peak hours in year 2030.

During Stadium events, traffic control officers will be deployed at critical locations around the Stadium to direct traffic movements as needed during heavy flow periods. These officers will be instructed to clear any problems that might occur as quickly as possible to allow for quick bus passage through the area.

Planned Transit Infrastructure: Central Corridor

The Central Corridor station location is being coordinated as part of the Stadium Project. The schedule for the Central Corridor is not set, but current plans anticipate construction by year 2013. The Stadium footprint conflicts with the proposed Central Corridor alignment. Alternative alignments and stations are being evaluated. These alternatives include the Central Corridor Draft EIS alignment, three at-grade alignments and an alternative tunnel alignment.

Event Transit Services

It is expected that many transit service options will be available during football games. These include Metro Transit and regional transit service, private charter service, shuttle service from the St. Paul Campus/State Fairgrounds parking areas, shuttle service from the West Bank Campus parking areas, and, eventually, Central Corridor service.

The shuttle bus service between the Stadium and the St. Paul Campus/State Fairgrounds assumes round trip time for the buses is 25 minutes and the bus capacity is 100 passengers. Previous discussions have occurred with Metro Transit about the availability of articulated buses for this service. The number of shuttle passengers is 9,600 for a Saturday game.

The number of buses required depends on the amount of time service will be provided. The departure of game patrons will have a higher intensity than the arrival, and therefore more frequent bus service may be desired at that time. For a Saturday game, 16-20 buses will be required. Please refer to Tables 13 and 14 on page 36 of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical* dated September 7, 2005, for calculations used to determine the number of shuttle busses needed and number of passengers expected.

Current project plans provide on-street parking along the north side of University Avenue (CSAH 36) between Oak Street and 23rd Avenue. During a Major Event, this parking area will become a bus drop-off area for charters. West Bank Campus shuttle service will have a drop-off/pick-up at the University parking ramp on the south side of University Avenue (CSAH 36) near the Alumni Center.

Pedestrians and Bicycles

Given that the University is characterized by relatively high pedestrian and bicyclist use and activity, significant attention will be paid in the design of the pedestrian facilities to be included in the proposed Project. Current plans include a 100-foot wide pedestrian-only promenade around the northern and eastern edges of the Stadium linking the Stadium and the parking areas. This promenade will link to radial pedestrian walkways serving the parking areas and providing access to the transit loading sites and adjoining streets. The width of the walkways will be such to accommodate the flow and queuing requirements from the transit stops and connecting street crosswalks.

The University of Minnesota Transitway Trail would eventually be realigned alongside the City of Minneapolis Granary Road when that project is built.

The City has not currently programmed funding for that project. Until that time, the bike route will share 23rd Avenue and 6th Street around the Stadium site, connecting with the existing 5th Street bike route west of Oak Street.

During football events, it will be essential to, as much as possible, maintain separation between pedestrians and vehicles. Around the Stadium and the adjacent parking areas, bollards, landscaping and curbs will be used to provide that separation. Any locations where pedestrians and vehicles will intersect will have a clearly delineated pedestrian crossing zone. Within the parking areas, traffic control personnel will be utilized to direct traffic to maximize pedestrian safety.

Attendees arriving by shuttle buses will unload directly onto pedestrian walkways connected to Stadium entrances. This flow of pedestrians will not need to interact with the people coming from the parking areas.

During events, pedestrian wayfinding and flow will be a significant issue. A significant number of pedestrians will be arriving/departing from the transit stop area. Staging areas will be constructed around the transit stops. Within the Project Site new plazas will be created around the Stadium and the Oak Street Plaza on the east end of Williams Arena will be expanded. Larger sidewalks and crosswalks will also be provided with the Project Site. This includes widening the walk on the northeast quadrant of Williams Arena. An estimate of the pedestrian routing based on the assumptions for a football game at the Stadium is shown in Figure 7.

The origin of the pedestrian volumes shown in Figure 7 is as follows:

- 5th Street west of the Stadium – U of M Lot 37
- 4th Street (CSAH 37) west of the Stadium – U of M Lot 36, Fourth Street Ramp, Dinkytown residents, fraternities, and sororities
- University Avenue (CSAH 36) west of the Stadium – University Avenue (CSAH 36) Ramp, Nolte Center Garage, Church Street Garage, Washington Avenue (CSAH 122) Ramp, Mayo Clinic Ramp, East River Road Parking Garage, Sanford Hall and Comstock Hall.
- University Avenue (CSAH 36) West Bank bus staging area – spectators bussed to the Stadium from various locations on the West Bank
- Oak Street to the south of the Stadium
- University Avenue (CSAH 36) south of the Stadium – drop-off location for transit (non-shuttle)
- Huron Boulevard south of the Stadium – Stadium village residents
- University Avenue (CSAH 36) east of the Stadium – Residents that live east of the Stadium.

- East of the Stadium – spectators bussed to the Stadium from the St. Paul Campus/State Fairgrounds.
- Northwest of Stadium – pedestrians from the Stadium parking lots.

Pedestrian paths and cross walks will be sized to accommodate pedestrian flow during events and to provide for efficient pedestrian management strategies.

3.1.3 Parking Analysis

Parking analysis does not assume any event parking in residential areas near the University’s East Bank Campus, St. Paul Campus or the State Fairgrounds. The parking supply that will be utilized during Gopher football games includes the University controlled parking lots on the East and West Banks, and parking spaces at the St. Paul Campus/State Fairgrounds. Please refer to Figures 5-7 (pages 12-14) of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* prepared by SRF Consulting group, dated September 7, 2005, for maps detailing parking locations on East Bank, West Bank and St Paul Campus. All of the available U of M controlled parking spaces will be used on the East and West Bank Campus.

Project Site Parking Supply

The Stadium Project would impact the existing parking at Building 2221 (a University building located to the east of the proposed Stadium) and the surface lots east of Williams Arena. These lots currently provide 2,615 parking spaces. After reconfiguring these lots for the Stadium and other associated construction, approximately 1,241 of the existing spaces would remain on the Project Site. Additional surface parking spaces will be constructed on the Project Site to provide a total of 2,898 parking spaces. The capacity of current and proposed parking lots is shown in Table 7.

**Table 7
Proposed Project Site Parking**

Parking Location	Number of Parking Spaces	
	Existing	Proposed
Gopher, Badger, Wolverine, Hawkeye, Buckeye Lots	2,376	1,077
2221 University - Surface and Ramp	239	164
Wildcat	185	336
Mast Lab West	–	165
23rd Avenue and University Avenue (CSAH 36)	101	252
Con Agra and Reichold parcels	–	904
Total	2,901	2,898

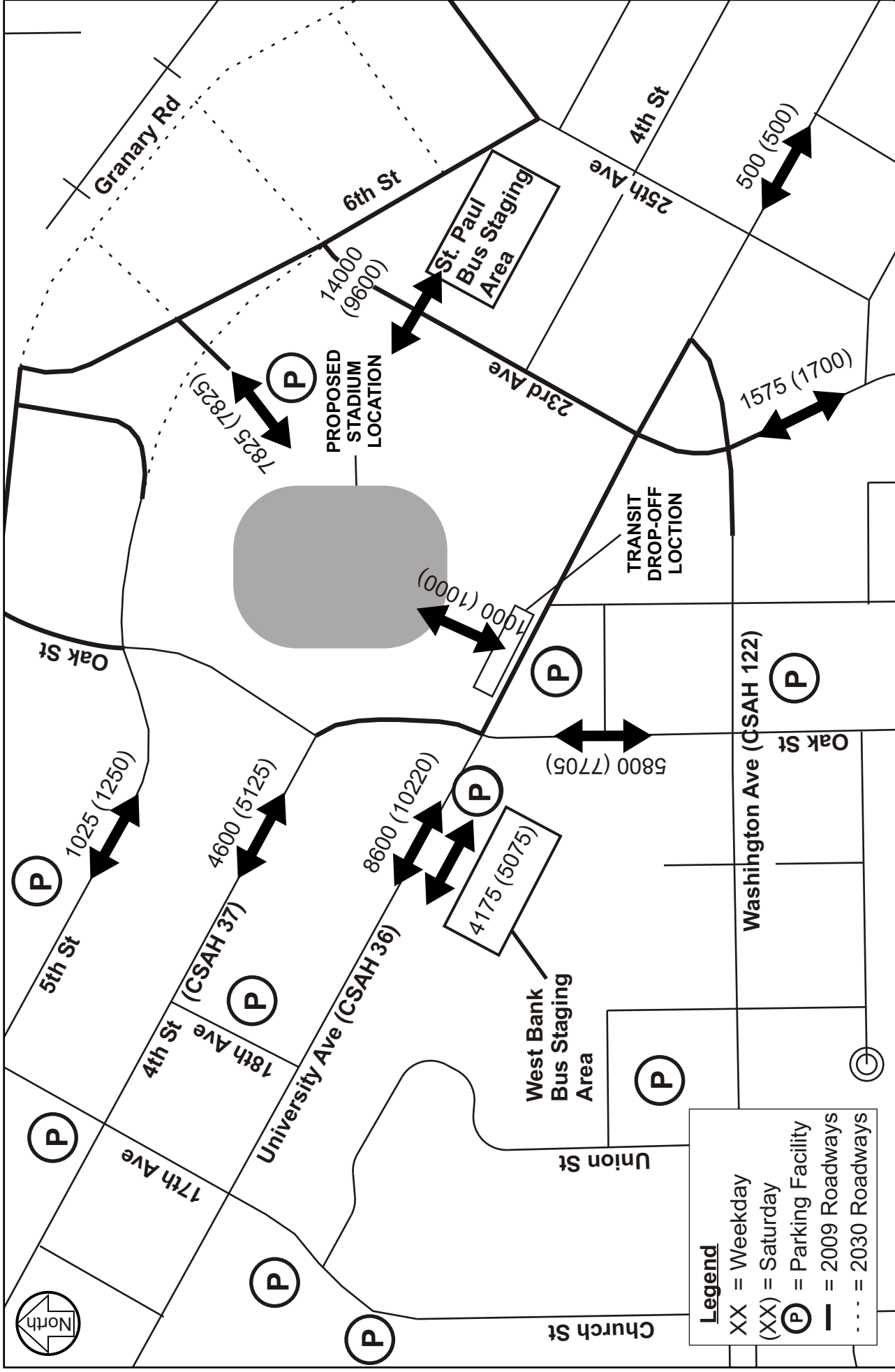


Figure #7
 Pedestrian Routing During Football Event
 JANUARY 2006

Football Stadium - Final EIS
 University of Minnesota



It was determined that 85 percent of the University of Minnesota controlled parking would be available for a Saturday football game. The parking lots adjacent to the Stadium and at the State Fairgrounds are assumed to have 100 percent of the spaces available. The total spaces available are estimated to be 23,412.

For a football event, a total parking demand of 15,700 vehicles is estimated. The utilization of spaces is shown in Table 8.

**Table 8
Parking Utilization For Saturday Event**

Location	Available Parking Supply	Number of Spaces Used
		Football Event
Project Site	2,898	2,898
Remaining U of M - East Bank	7,416	7,416
U of M – West Bank	1,878	1,878
U of M St. Paul / State Fairgrounds	11,220	3,549
Total	23,412	15,741

Shuttle service will be provided between the Stadium and the St. Paul Campus/State Fairgrounds to transport off-site parkers. This will be a quick trip (10- to 12-minute trip) by using the existing Transitway. Additionally, shuttle service will be provided between the West Bank Campus and the Stadium.

As shown in Table 8, Saturday Major Events at the Stadium will require all of the available parking on the East and West Bank Campus and the remaining parking will need to be provided at the St. Paul Campus/State Fairgrounds.

Shuttle service will be provided between the Stadium and the St. Paul Campus/State Fairgrounds as well as between the West Bank Campus and the Stadium.

Neighborhood Parking Concerns

The capacity exists to park all event traffic in University parking facilities and this will be the University’s goal. Parking in residential areas, either on-street or on residential property is not desired as it detracts from efficient traffic flow and creates undesired impacts on area residents.

However, in an effort to understand the management, and possibly regulatory effort needed to discourage parking in residential neighborhoods, a study of on-street parking supply was conducted to better understand the locations and capacity of areas where this could be an issue.

Residential areas most likely to be affected by Stadium event users looking for parking spaces will be within a ¼ mile radius of the Stadium itself or within ¾ mile radius of the shuttle bus stops on the St. Paul Campus which translates into a 19-minute walk. After accounting for additional distance required to traverse along block faces and in some cases to go around obstacles like major structures, the actual time required to reach the

destination from the outermost areas within the ¾ mile ring will easily exceed 20 minutes. Given that there is a surplus supply of available parking inside of this ring for Stadium event users, it can be surmised that few, if any, Stadium users will want to park beyond the ¾ mile ring.

In order to understand potential neighborhood parking concerns in greater detail, the University, in December 2005, conducted an evaluation of parking supply (University controlled, commercial, and public on-street) that is potentially available for Stadium events within a ¾ mile walk radius of the proposed Stadium and the transit stops on the St. Paul campus. This analysis was completed for both the East Bank campus and the St. Paul campus. This analysis is documented in Supplement 2 to the *University of Minnesota On-Campus Football Stadium Transportation Analysis Technical Memorandum* dated January 31, 2006. Figures 8 and 9 show the on-street parking areas within ¾ mile of the Stadium and St. Paul Campus transit stops that permit parking for at least a three-hour duration on Saturdays.

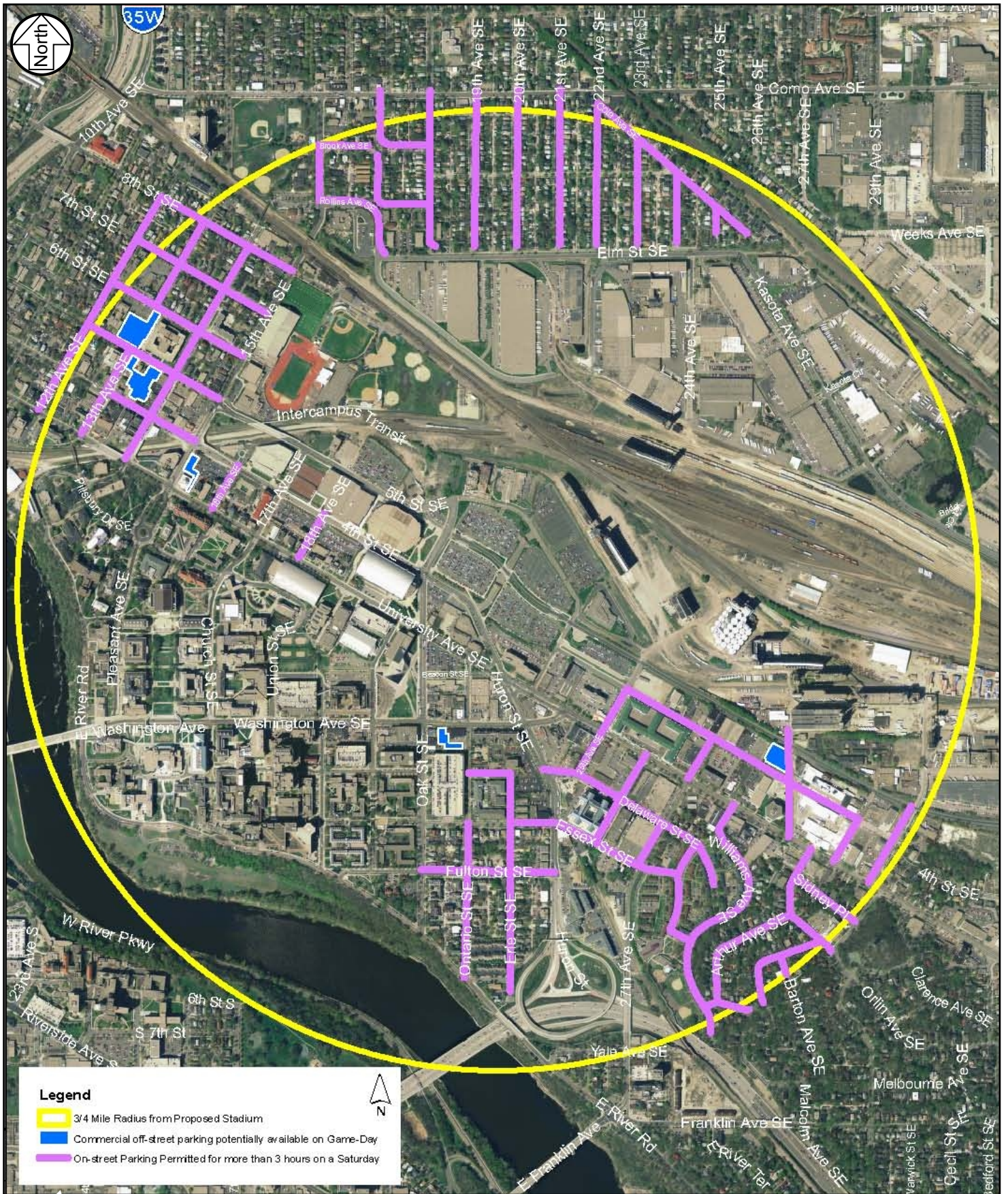
Based on the field review, it is estimated that the potential on-street parking supply with duration of at least three-hours on a Saturday within ¾ mile of the Stadium is 2,160 spaces and within ¾ mile of the St. Paul Campus transit stops is 2,510 spaces. These estimates are based on the length of each block where parking is permitted and assuming 25 feet per vehicle on average across the block to account for no parking areas around the block edges, hydrants and bus stops. Much of the area west of Cleveland Avenue near the St. Paul Campus is a critical parking area, with parking requiring a permit, but that requirement is currently in affect Monday through Friday. No estimate has been made on the utilization of parking in these areas on a Saturday by residents and guests.

3.1.4 Mitigation Measures

Non-Event Weekday Conditions: Mitigation Commitments

Traffic analysis showed comparable weekday non-event traffic flow for the Build and No-Build scenarios with the exception that, by year 2030, the new intersection of University Avenue (CSAH 36)/Huron Boulevard/23rd Avenue is expected to operate poorly by that time, although it exhibits acceptable operations in year 2009. The poor operations at this intersection result from the heavy westbound left-turn volumes from University Avenue (CSAH 36) to Huron Boulevard. To mitigate for this impact, the following intersection improvements are proposed:

- To improve the intersection LOS to D or better, an additional westbound left-turn lane is required. Therefore the geometrics at the intersection would include: Northbound; dual left-turn lanes and a thru-right lane, Eastbound; a left-turn lane, two through lanes and a right-turn lane, Southbound; a left-turn lane, a through lane and a through-right lane, Westbound; dual left-turn lanes, a through lane and a through-right lane.

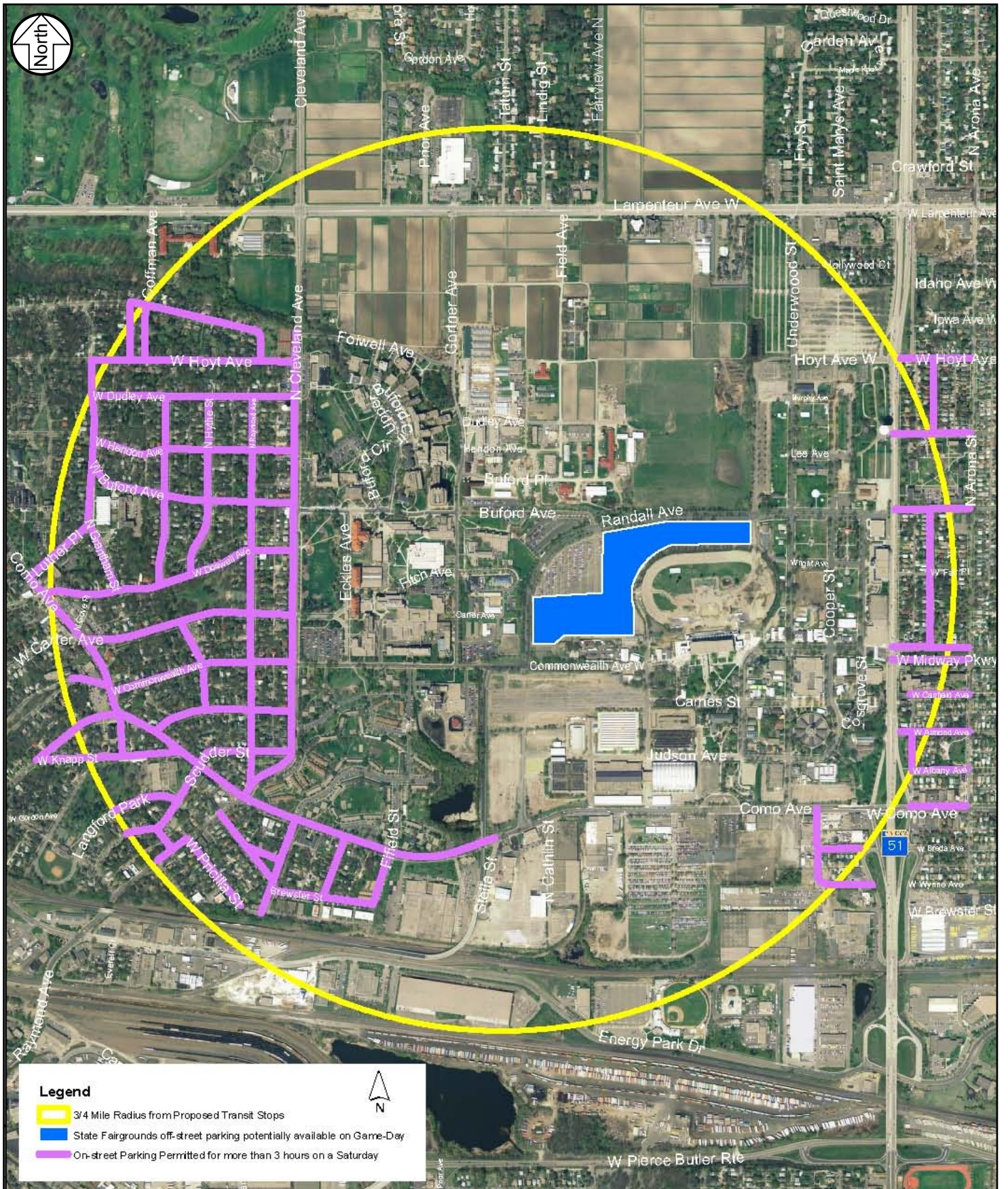


Football Stadium - Final EIS
University of Minnesota

Non-University Controlled Parking Supply - East Bank

Figure #8

February 2006



Football Stadium - Final EIS
University of Minnesota

Non-University Controlled Parking Supply - St. Paul
 February 2006

Figure #9

Major Stadium Events: Mitigation Commitments

Physical improvements to area roadways needed to improve intersection operations to a LOS D or better during Major Event conditions would require substantial roadway and/or intersection widening that would incur both significant cost and property impacts. Given the infrequent nature of Major Events at the Stadium, improvements of this type were considered neither cost effective nor prudent.

Instead, Major Event mitigation commitments will focus on pre-planning activities and event day traffic management efforts to reduce traffic volumes, disperse traffic volumes over time, facilitate efficient traffic flow, and minimize traffic impacts to other geographic areas. Specifically, the University commits to the following:

1. Establish a University Event Transportation Manager Position

The University of Minnesota will create a University Event Transportation Manager position to coordinate transportation and parking activities for all Major Events. This position will have the following responsibilities:

- Oversee development and implementation of a Travel Demand Management (TDM) Plan.
- Facilitate meetings of the Event Management Advisory Committee (described below) to coordinate inter-agency activities
- Participate in meetings of the SAAG to better understand and respond to concerns of the surrounding neighborhoods.
- Work with the Athletic Department and other University departments to manage traffic flows and parking demands.

2. Develop an Event Travel Demand Management (TDM) Plan

The Travel Demand Management Plan will be developed in cooperation with the Cities of Minneapolis, St. Paul and Falcon Heights, Ramsey County, Hennepin County, Metro Transit, the State Agricultural Society (Minnesota State Fair), and Mn/DOT to identify specific strategies and protocols to reduce traffic volumes and manage traffic flows. The TDM Plan will identify specific agency roles and responsibilities. At a minimum, the University commits to the following elements as the framework for the TDM Plan:

Traffic Management:

- Developing an optimized event signal timing plan with the agencies responsible for operating signals at key intersections including the Cities of Minneapolis, St. Paul and Falcon Heights, Ramsey County, Hennepin County and Mn/DOT.
- Coordinating with Mn/DOT to manage event traffic on the regional system during Major Event arrival and departure periods. The University Event Transportation Manager will be responsible to work with Mn/DOT to monitor traffic on the freeways (I-94, I-35W,

TH 280) using Mn/DOT staff and traffic cameras, and then manage flows as conditions warrant. In particular, the interchange areas of I-35W/University Avenue/4th Street, I-35W/Washington Avenue, I-94/Huron Boulevard and TH 280/University Avenue will be observed. The Mn/DOT VMS (variable message signs) system will be used to direct traffic and provide information to balance the flows among the interchanges. The VMS may also be used to notify the public of the expected increase in traffic prior to events, and specific roadway incidents.

- Using static, portable and permanent variable message signs to guide traffic to appropriate local roadway route to access parking facilities during arrival and guide traffic to the regional system during departure.
- Employing traffic control personnel at access points to the large parking areas and at key intersections which are expected to have high pedestrian activity. The objective of the traffic control officers is not to direct vehicular traffic, but to prevent pedestrians from overtaking the roadway or vehicles from blocking intersections.
- Employing traffic control personnel at access points to the large parking areas and at key intersections which are expected to have high pedestrian activity. The objective of the traffic control officers is not to direct vehicular traffic, but to prevent pedestrians from overtaking the roadway or vehicles from blocking intersections.
- Communicating recommended ingress and egress routes via a wide variety of media including distributing an event transportation guide for attendees, including event information into existing University communications with the surrounding community, providing information on the University web page and/or provide traffic advisory information during pre- and post-game radio broadcasts
- Dispersing traffic volumes during arrival and departure periods through pre- and post-game activities

Parking Management (University of Minnesota facilities):

- Using traffic control officers, static signs, portable and permanent variable message signs, and/or Intelligent Transportation Systems (ITS) technology to efficiently direct traffic to available parking facilities
- Improving communications to ticket holders regarding available parking facilities through a variety of means including distributing parking information and/or parking assignments for all ticket holders.
- Establishing a priority parking assignment system for season ticket holders.
- Creating bundled ticket and parking packages.

-
- Positioning parking egress traffic control personnel where needed

Parking Management (Off-Campus)

- Working with law enforcement in adjacent municipalities to enforce existing ordinances and regulations.
- Coordinating with the SAAG to identify areas of particular concern.

Transit Management:

- Positioning parking egress traffic control personnel where needed
- Planning for efficient bus staging areas in relation to the Stadium (scheduled Metro Transit, charter, and shuttle)
- Promoting the use of the Central Corridor line when available
- Installing directional and informational signage to transit facilities

Pedestrian Management:

- Directing pedestrians with signage, barriers, and traffic control officers at critical points near the proposed Stadium to ensure safety and facilitate efficient traffic flow
- Clearly marking pedestrian walkways to the Stadium

3. Manage University Event Scheduling

A capacity Stadium event (50,000 attendees) will consume a large portion of the available parking on both the East Bank and West Bank Campus and a substantial number of spaces at the St. Paul Campus/State Fairgrounds. Therefore, scheduling of other events at Williams Arena, Mariucci Arena, or Northrup Auditorium concurrent with a capacity Stadium event will be avoided.

4. Assemble Stadium Advisory Committees

Event Management Advisory Committee (EMAC):

The University will create the EMAC to identify, coordinate and advise on Major Event planning and operations. The EMAC will also be responsible for developing and implementing adaptive parking and transportation mitigation techniques. The EMAC will include representatives from the University (including Athletics, Public Safety, Facilities Management, Parking and Transportation, Media Relations), representatives from adjacent municipalities, the Minnesota State Fair, MetroTransit, the Department of Transportation, Hennepin County, and Ramsey County. The committee will meet before home football games and other Major Events and as required at other times of the year. The committee will be ongoing.

Stadium Area Advisory Group (SAAG:)

The University will continue to convene a community group to provide advice and feedback on the impacts and opportunities associated with Major Events at the proposed Stadium. The group will be constituted in a

manner similar to the existing SAAG, which is charged with providing feedback to the University during the planning, development, and construction phase of the Stadium. The reconstituted SAAG will include representatives of the recognized citizen participation neighborhood organizations, business associations, and municipalities adjacent to the Twin Cities Campus. The committee will serve as a means for regular, sustained, and meaningful consultation. The SAAG will meet between home football games and other Major Events and as required at other times of the year. The SAAG will be on-going. Expenditures from the Mitigation/Good Neighbor Fund will be coordinated with the SAAG.

Effectiveness of Mitigation Measures

Evaluating many of the individual mitigation measures with quantitative results would be very difficult, therefore state of the art practices for managing travel to events have been developed. The Federal Highway Administration has published a document titled Managing Travel for Planned Special Events, dated September 2003 which covers many aspects of planning, operation, mitigation strategies and management for travel to an event.

The document summarizes the benefits of proactive management of travel for planned special events. These benefits include reduced traffic congestion, improved mobility, improved travel safety, forming partnerships and building trust, promotion of interagency coordination, improved resource utilization, and incorporation of new procedures, plans and practices into typical weekday operations.

The document states to accomplish these benefits regional planning and coordination is needed, and use of event specific travel management. Many of the concepts from this document have been included in the framework for the TDM Plan.

Major Stadium Events: Additional Considerations

In addition to the commitments listed above, the University will continue consideration of the following issues as Stadium plans and the TDM Plan are developed:

TDM Plan

- Providing transit advantages to minimize trip time
- Installing temporary barricades for local streets not intended to be used by event traffic
- Provide a Traffic Signal System Operator to monitor and adjust central computer traffic signal timing during Major Events.
- Provide incentives for transit, carpooling, biking or walking to reduce both traffic and parking demand generated by Stadium events. Potential incentives for inclusion in the TDM Plan include, but are not limited to discounted transit pass for season ticket holders (through Metro Transit), Metro Transit game-day service partnerships, on-site bicycle storage

facilities, preferential parking location for carpools and promotion of charter bus services.

Off-campus Parking Management

Since parking for a Major Event can be accommodated in University-controlled facilities, no parking mitigation measures have been incorporated into the Preferred Alternative. Instead, a variety of techniques will be examined in cooperation with the SAAG to restrict on-street parking by Stadium event users once the University has the opportunity to examine the nature of off-campus parking post-stadium opening. Opportunities for on-street parking management to be discussed with the SAAG include:

- Extension of the existing critical parking area west of Cleveland Avenue near the St. Paul Campus to include Saturdays from September through November.
- For areas east of Snelling Avenue, restrict parking along these streets during game days with temporary signage. This is similar to the parking ban during the State Fair run in this area.
- Around the Stadium in Minneapolis, establish critical parking areas to help manage potential issues. This would require City and neighborhood agreeing agreements on the program specifics, the extent of the area, time periods of enforcement and number of residential and guest permits issued. Permanent or temporary signs indicating the program enforcement period, weekdays and/or Saturdays from September through November, would need to be installed.
- Other techniques identified through discussions with the SAAG and surrounding communities.

It is recommended that the first few events at the Stadium be monitored to see what, if any, problems emerge and then implement the appropriate level of response to the degree of the problem. Establishment of extensive permit parking programs can be quite expensive and requires cooperation from residents and a significant commitment of enforcement resources. Prior to establishing broad-reaching programs, the partners should observe the extent of any problems and enact a pre-determined response.

Minor Stadium Event Considerations

Events similar in attendance numbers, parking requirements and traffic generated to Minor Stadium Events occur on a regular basis at Williams Arena and Mariucci Arena. The University does not anticipate impacts beyond those currently experienced for these events as a result of Minor Events held at the proposed Stadium. The University will consider implementation of Major Event strategies as appropriate, particularly regarding traffic flow on local streets, to minimize and reduce anticipated transportation impacts.

3.1.5 Concurrent Events

State Fair Use of the University of Minnesota Parking

The State Fair and the University of Minnesota have a 10-year lease agreement that expires in January 2012, which provides the Fair access to 3,917 parking spaces at the University during weekends of the Fair. Of the total spaces, 550 are located away from the Stadium Site at Como Avenue/29th Avenue and another 171 are provided at Lot 36 along 4th Street (CSAH 37). The remaining spaces are provided at the lots currently within the Stadium Site.

Following construction of the Stadium Project, a total of 2,898 replacement parking spaces will be provided inside the Project Site, a decrease of 298 spaces from the number currently available. Prior to the opening of the Stadium, the lease with the State Fair will either need to be renegotiated to provide for fewer spaces for use by the Fair or additional spaces would need to be provided by the University at other University controlled parking areas to reach the current lease total.

Gopher Football Game During State Fair Event

In some years the first home Gopher Football game of the season occurs during the Minnesota State Fair. This is a result of the University's practice of trying to schedule three of its four non-conference football games at home. This practice is expected to continue when the University moves from the Metrodome to the proposed on-campus Stadium.

When home football games occur on a Saturday during the Minnesota State Fair the University will not be able to use the State Fairgrounds for remote Stadium parking. Likewise it will not be possible for the Minnesota State Fair to utilize the east bank campus parking supply currently specified in its lease agreement with the University. Such an occasion will require adjustments to the existing lease agreement (currently scheduled to terminate in 2012) and careful management of the parking situation in order to allow both events to proceed.

To mitigate the impacts of a Gopher Football game occurring concurrently with the Minnesota State Fair, the University will develop a travel management framework including, but not limited to the following:

- The University will work, to the extent practicable, to limit the number of home games played during the Minnesota State Fair.
- The University will not schedule any other major events in the Stadium during the Minnesota State Fair.
- The University will not play a home football game on campus during the Minnesota State Fair until adjustments are made to the existing lease, and sufficient transportation and parking plans are in place.
- The University will not schedule its inaugural game in the proposed new Stadium during the Minnesota State Fair.

-
- Alternative parking will be made available in downtown Minneapolis, regional parking reservoirs, or other such locations. Shuttle bus service will be provided from these remote parking locations. Shuttle bus service for both the University of Minnesota and the Minnesota State Fair will continue to make use of the University's transitway and other regional routes.
 - The University, through its Event Transportation Manager, will work closely with the State Agricultural Society, the Stadium Event Management Committee, and the Stadium Area Advisory Group to manage the combined parking and transportation situation. As with other parking and transportation issues identified in this document the University will take a flexible approach, consulting frequently with local government, state agencies and community organizations, to respond appropriately to actual conditions and changing circumstances.

Full season football schedules are projected approximately five years out, although schedules are only finalized approximately seven months before the start of the next season. The current projected football schedule shows a home football game during the Minnesota State Fair in 2009. If the Stadium opens in 2009 the University will reschedule the game that conflicts with the Minnesota State Fair.

Stadium Events During Weekday Class Sessions

The possibility exists for the University to schedule Minor Events at the Stadium during time periods when classes are in session on the East Bank Campus. Such events might be athletic, civic or entertainment in nature.

Since parking is almost always fully utilized on the East Bank Campus during regular class periods, the University will not schedule any Minor Events at the Stadium unless sufficient parking can be identified. One option might be utilizing remote parking and shuttle bus service.

3.2 Noise

This section has been organized to present noise impacts associated with vehicular traffic and Stadium events (both game events and concert events). Following the description of the affected environment, the environmental consequences, and mitigation measures are presented separately for the traffic noise and event conditions.

3.2.1 Affected Environment

Sound is described as varying pressures, from low to high, which are induced by disturbances in the air. These pressures present themselves in the form of periodic waveforms and are measured in cycles per second (cps). When these varying pressures reach the human ear, they are converted by our eardrums and brain, to sound. To describe how much pressure (loudness) these waves apply to the eardrum, we use sound pressure level (spl), which are commonly measured in decibels (dB). The decibel is a logarithmic/ratio description given to sound loudness as the human hear is quite sensitive to very quiet sounds, and of course, those very loud. Decibels, in their logarithmic function, can then be broken down accordingly:

- +/-1dB change in loudness= no noticeable change in loudness
- +/-3dB change in loudness= just perceptible threshold difference in loudness
- +/-6dB change in loudness= a clearly noticeable difference in loudness
- +/-10dB change in loudness= twice (or half) change in loudness
- +/-20dB change in loudness= a fourfold (4x) change in loudness

To approximate the way that an average person hears sound, an adjustment, or weighting, of the high- and low pitched sounds is made. The adjusted sound levels are stated in units of “A weighted decibels” (dBA).

Noise is defined as any unwanted sound. Common noise levels from various indoor and outdoor sources are listed in Table 9.

**Table 9
Noise Level Comparisons**

Sound Pressure Level dB(A)	Noise Source
140	Jet Engine (at 75 feet)
130	Jet Aircraft (at 300 feet)
120	Rock and Roll Concert
110	Pneumatic Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Noise is variable and it is therefore best measured and regulated using statistical descriptors. These descriptors are denoted as L_x, with the x indicating a percentage of a time period that a noise level is exceeded. In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10 percent and 50 percent of the time during the hours of the day and/or night that have the heaviest traffic. These noise levels are identified as the L₁₀ and L₅₀ levels, respectively. For example, an L₁₀ value of 65 decibels means that the noise level was at or greater than 65 decibels during 10 percent of the measurement period (i.e., more than 6 minutes per hour). The measured time period is typically one hour for traffic noise assessment.

Minnesota State Noise Regulations

Minnesota has developed noise standards for daytime and nighttime hours. The Minnesota Pollution Control Agency (MPCA) is the governmental regulatory agency responsible for implementing regulations controlling noise

in Minnesota. The MPCA defines daytime as 7 a.m. to 10 p.m. and nighttime from 10 p.m. to 7 a.m. (Minnesota Rules 7030.0020 Subp. 10).

Minnesota Statute 116.07, Subd. 2a. exempts from noise standards all city, township and county roads. Roads with full access control and roads within the cities of Minneapolis and St. Paul are not exempt. Because the Stadium is located within the City of Minneapolis, the roads near the Stadium are not exempt from State noise standards. State noise standards are defined in Minnesota Rules 7030.0040. For residential land uses (identified as Noise Area Classification 1), the Minnesota State noise standards are as follows:

7030.0050 Noise Area Classification (NAC)1 (Household Units)

Daytime	<u>L</u> ₁₀ 65dBA	<u>L</u> ₅₀ 60dBA
Nighttime	<u>L</u> ₁₀ 55dBA	<u>L</u> ₅₀ 50dBA

Minnesota Rules identify exceptions to the land uses included in each classification. For example, Minnesota Rules 7030.0050 Subp. 3.B states that for buildings in NAC 1 (residential land uses), the standards for NAC 2 (commercial land uses) shall be applied if the following conditions are met:

1. The building is constructed in such a way that the exterior to interior sound level attenuation is at least 30 dBA;
2. The building has year-round climate control (i.e., air conditioning); and
3. The building has no areas or accommodations that are intended for outdoor activities.

This exception applies to apartment units and U of M dormitories that have climate control and no outdoor gathering areas intended for outdoor activities. For these residences, the daytime and nighttime state noise standards are 70 dBA (L₁₀) and 65 dBA (L₅₀).

There are also MPCA standard testing procedures that must be followed in order to establish accuracy and consistency. These procedures contain, but are not limited to:

1. Measurement of noise conditions with a certified and calibrated Sound Level Meter as per ANSI certification.
2. Calibration of Sound Level Meter before, and after measurement with approved and certified calibrator.
3. Measurement readings not to be any less than for a one hour period.
4. Measurements must be made away from reflective surfaces as to not influence readings (reflections can increase sound pressure level readings).
5. Measurement device must be, at a minimum, 3-feet from the ground.

Measurements may not be made when environmental (wind, rain) conditions exist so that results are invalidated due to ambient environmental noise.

Finally, there is no spectral component to these measurements. That is, although humans hear many varying tones, low to high, measurements are averaged broadband readings containing no frequency (tonal) descriptors.

3.2.2 Traffic Noise – Environmental Consequences

This analysis quantifies the potential traffic noise impacts associated with both the No-Build and Build conditions resulting from increased traffic levels. The analysis is based on a detailed model that considers traffic patterns/routes and the location of sensitive receptors.

Identification of Traffic Noise Modeling Receptors

Traffic noise modeling was completed for 10 receptors throughout and adjacent to the U of M East Bank Campus. Eight of the 10 receptors were residential properties, and represent a range of housing types including single family houses, apartments, and U of M dormitories. The other two receptors selected on the U of M East Bank Campus were a church and park/open space. In addition, traffic noise modeling was completed for three receptors adjacent to the U of M St. Paul Campus/State Fairgrounds. These receptors are located along the three primary roadways (Cleveland Avenue; Larpenteur Avenue; Snelling Avenue) adjacent to the U of M St. Paul Campus/State Fairgrounds and approximate impacts to all residential uses along these streets as vehicle volumes are consistent within these segments. The selection of noise monitoring and modeling receptors was based on advice from MPCA.

The traffic noise modeling locations are shown in Figures 10 and 11. Table 10 provides additional information regarding the noise modeling receptors, including distance of the receptor from the Stadium for receptors located near the East Bank Campus.

**Table 10
University of Minnesota On-Campus Stadium
Traffic Noise Analysis Receptor Locations**

Receptor ID	Receptor Type	Receptor Location (approximate)	Approximate Distance from Stadium Site ⁽²⁾
U of M East Bank Campus			
R1 15 th Ave/Brock Ave	Residential (single-family)	15th Avenue and Brook Avenue (Como Neighborhood)	3,700 feet
R2 Elm St/20 th Ave	Residential (single family)	Elm Street and 20th Avenue (Como Neighborhood)	2,700 feet
R3 15 th Ave/7 th St	Residential (single family)	15th Avenue and 7th Street (Marcy Holmes Neighborhood)	2,950 feet
R4 ⁽¹⁾ 4 th St/12 th Ave	Residential (apartment)	12th Avenue and 4th Street (Marcy Holmes Neighborhood)	4,100 feet
R5 University Ave/13 th Ave	Church (University Baptist Church)	University Avenue (CSAH 36) and 13th Avenue	3,800 feet
R6	Residential	University Avenue (CSAH 36) and	1,400 feet

**Table 10
University of Minnesota On-Campus Stadium
Traffic Noise Analysis Receptor Locations**

Receptor ID	Receptor Type	Receptor Location (approximate)	Approximate Distance from Stadium Site⁽²⁾
University Ave/Oak St	(fraternity house)	Oak Street	
R7 ⁽¹⁾ Washington Ave/Walnut St	Park/Open Space	Washington Avenue (CSAH 122) and Oak Street (University Alumni Center)	1,350 feet
R8 Oak St/Delaware St	Residential (dormitory)	Oak Street and Delaware Street	1,850 feet
R9 Oak St/Fulton St	Residential (apartment)	Oak Street and Fulton Street	2,250 feet
R10 Huron Blvd/Essex St	Residential (single family)	Huron Street and Essex Street (adjacent to Prospect Park Neighborhood)	2,300 feet
U of M St. Paul Campus/State Fairgrounds			
R11 Cleveland Ave/Carter Ave	Residential (single family)	Cleveland Avenue and Carter Avenue	NA
R12 Larpenteur Ave/Tatum St	Residential (single family)	Larpenteur Avenue between Talum Avenue and Undig Street	NA
R13 Snelling Ave/Fair Pl	Residential (single family)	Snelling Avenue between Arlington Avenue and Fair Place	NA
⁽¹⁾ Receptors identified for noise monitoring activities. ⁽²⁾ Distance from receptors to the Stadium is listed for receptors on the U of M East Bank Campus only. NA Not applicable.			

Monitoring of Existing Noise Levels

Noise monitoring is commonly performed during noise studies to measure existing noise levels at select receptor locations. Existing noise levels can be used as a “baseline” against which future scenarios can be compared. In addition, when studying future noise levels projected with computer models, monitored noise levels for existing conditions are compared to modeled noise results for existing conditions to validate the computer modeling techniques and results.

Two monitoring site locations (shown on Figure 10) were chosen to represent areas of outdoor human activity (i.e., residential yards, parks). Noise levels were monitored during the weekday daytime peak hour of 4:30 p.m. to 5:30 p.m. on July 14, 2005 and July 18, 2005.

Noise levels were also monitored north of the Project Site along Kasota Avenue during the weekday p.m. peak hour as part of this noise analysis. Receptor R2 (see Figure 10) is adjacent to one of the sites identified as part of the traffic noise analysis. Results of noise monitoring at this location are presented with the noise monitoring results.

Football Stadium Final EIS



University
of Minnesota

Figure 10

Traffic and Event Noise Analysis

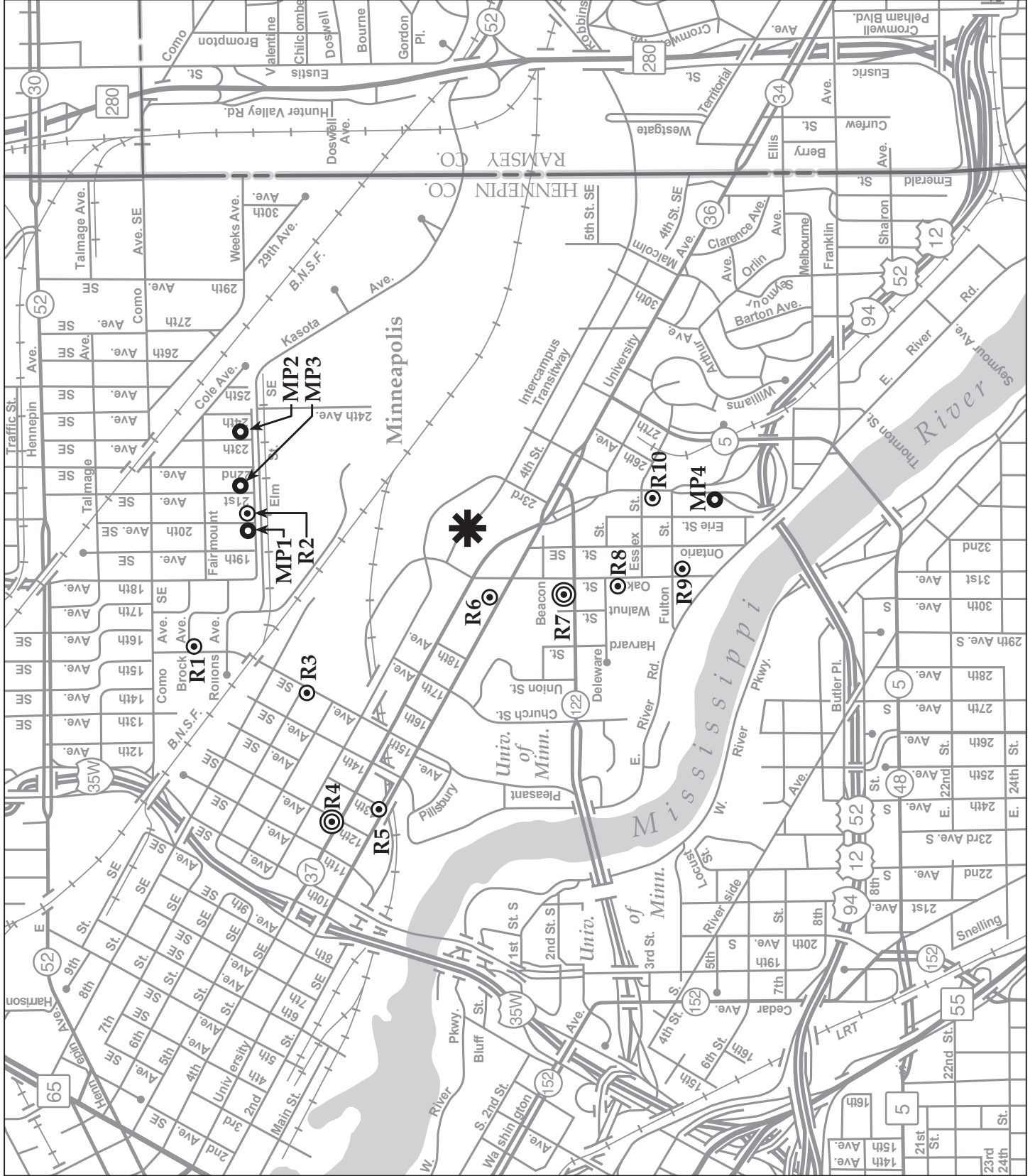
Legend

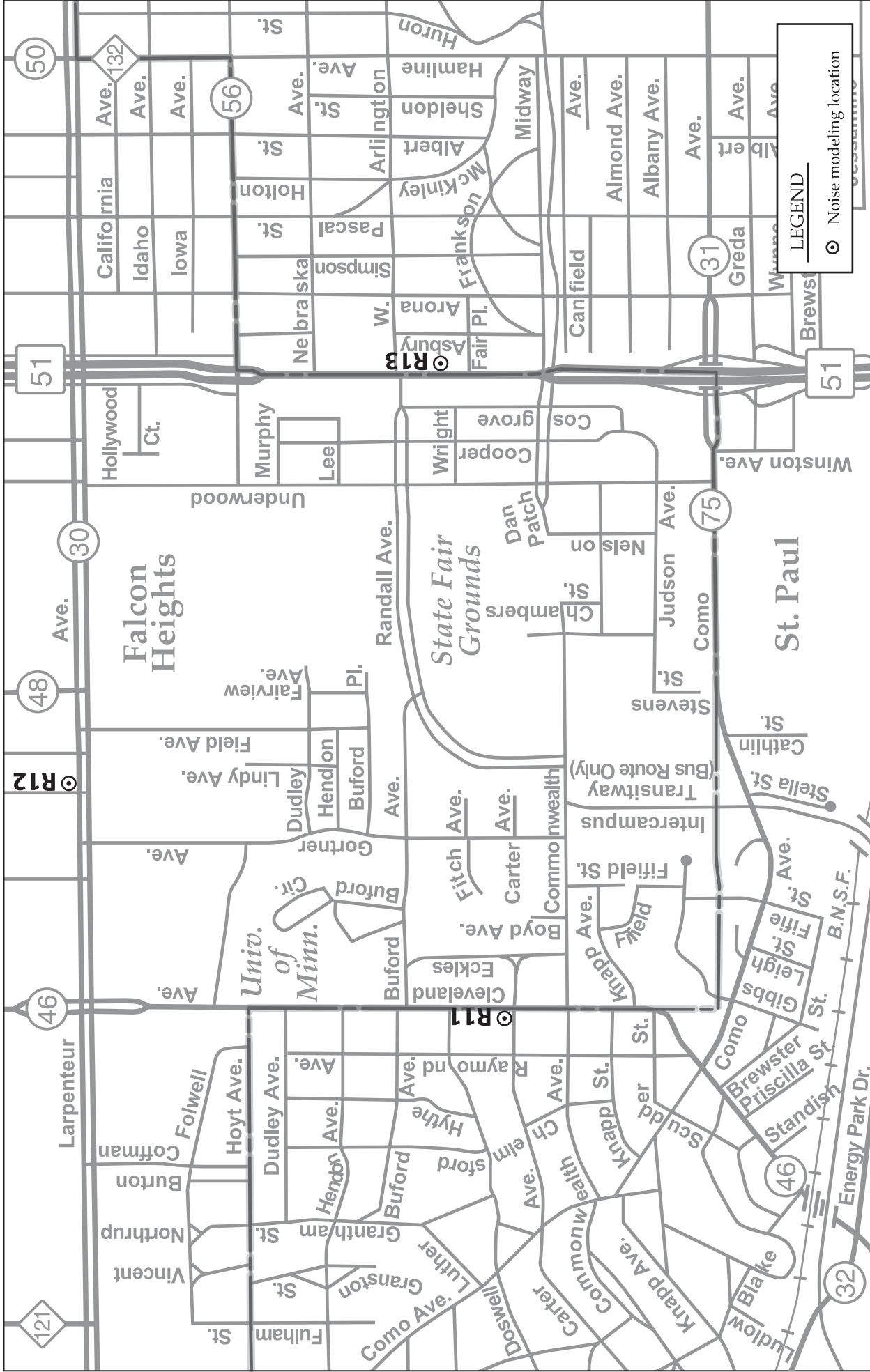
- ⊙ Traffic Monitoring and Modeling Location
- ⊙ Traffic Noise Modeling Location
- Event Noise Monitoring and Modeling Location



North

February 2006





Football Stadium - Final EIS
 University of Minnesota

Figure 11

Traffic Noise Analysis-St.Paul Campus/State Fairgrounds

Monitoring methods used in this study comply with Minnesota guidelines. Monitoring equipment consisted of a Larson-Davis Model 700 dosimeter, a tripod, and wind screen. No noise monitoring was conducted when wind speeds exceeded 10 miles per hour (mph) or when wet roadway conditions were present. A trained noise monitoring technician was present at each monitoring session for the entire session to ensure correct operation of the instrumentation, gather data on the physical environment near the monitoring location, and to perform vehicle traffic counts.

Traffic Noise Modeling Scenarios

The traffic noise analysis was completed for existing conditions and for future (year 2009 and year 2030) No-Build (i.e., no on-campus Stadium) and Build (defined as completion of the Stadium Project) conditions. The following describes the scenarios under which the traffic noise analysis was completed.

Most home football games will be played on a Saturday afternoon. Therefore, the traffic noise impacts of having a Saturday football game was analyzed and compared to existing Saturday traffic noise, future No-Build traffic noise on Saturday afternoons, and state noise standards. The assumption for a football event was a noon start time and a 3:30 p.m. ending for the games; therefore, only State daytime noise standards would apply. The traffic volume for the departure of a football game is considered a worse-case condition due to the intensity of the departing volume. The traffic noise analysis was completed with departure traffic only.

Modeling of the existing (year 2005) weekday p.m. peak (4:30 p.m. to 5:30 p.m.) was completed to facilitate comparison of future football event traffic with traffic noise levels during the highest traffic periods. Modeling of the existing (year 2005) Saturday afternoon (3:30 p.m. to 4:30 p.m.) conditions was completed to facilitate comparison with future football event traffic noise.

The No-Build condition considered future (year 2009 and year 2030) traffic noise on the adjacent existing roadway network without the Stadium Project. This modeling was completed to facilitate a comparison between future football event traffic noise with estimated future traffic noise without the construction of the Stadium.

The following is a summary of the different scenarios considered for the traffic noise analysis:

- Existing conditions (year 2005) – p.m. peak hour traffic (4:30 p.m. to 5:30 p.m.)
- Existing conditions (year 2005) – Saturday afternoon (3:30 p.m. to 4:30 p.m.)
- No-Build scenario (year 2009) – Saturday afternoon (3:30 p.m. to 4:30 p.m.)

-
- No-Build scenario (year 2030) – Saturday afternoon (3:30 p.m. to 4:30 p.m.)
 - Build scenario (year 2009) – Saturday afternoon football game – departure traffic (3:30 p.m. to 4:30 p.m.)
 - Build scenario (year 2030) – Saturday afternoon football game – departure traffic (3:30 p.m. to 4:30 p.m.)

Noise Modeling

Noise levels were modeled using the STAMINA 2.0 computer software model developed by the Federal Highway Administration (FHWA) for use in estimating traffic-generated noise. Modeling utilized the regional version of STAMINA 2.0, (MINNOISE), which was adjusted by the Minnesota Department of Transportation (Mn/DOT) to reflect conditions in Minnesota and regional sound energy coefficients for heavy truck noise. Data input into the STAMINA 2.0 (MINNOISE) noise model included existing (year 2005), No-Build (year 2009 and year 2030) and Build (year 2009 and year 2030) traffic volumes, mix of vehicle types, speeds, roadway alignments, receptor locations, and surrounding topography. This model accounts for noise generated by vehicles only, not through the behavior of the vehicle's driver or occupants.

As described above, noise modeling was completed for existing conditions (year 2005) and for future (year 2009 and year 2030) No-Build and Build conditions. Existing weekday and Saturday p.m. traffic movement counts were collected in May 2005 while University of Minnesota classes were in session. Forecast year 2009 and year 2030 traffic volumes were used to model both No-Build and Build future traffic noise levels. Traffic noise levels were modeled for both the L₁₀ and L₅₀ levels for daytime p.m. peak traffic hours, Saturday afternoon hours, and Saturday event daytime departure traffic hours.

The mix of vehicle types (percent of trucks and cars) used in the noise modeling was 3 percent medium trucks and 1 percent heavy trucks. The medium/heavy truck percentage was assumed for the model based on field observations during noise monitoring activities.

Vehicle speeds were assumed to be posted roadway speed limits. For a majority of the evaluated roads this is 30 mph. However, during heavy traffic congestion on local streets during the peak p.m. hour, combined with pedestrian movements, it may not be possible for vehicles to reach the posted speed limits between intersections. Therefore, the use of the posted speed limit represents a worst-case scenario of vehicle speeds during the p.m. peak hour.

Results

Results of the traffic noise modeling are presented in Tables 11 through 15. Both L₁₀ and L₅₀ daytime projected noise levels are listed for each receptor location for existing conditions, No-Build conditions, and Build conditions. Applicable state standards for residential locations are listed below each column of results.

Noise Monitoring Results

Modeled noise levels are generally consistent with noise levels measured at the two receptor locations (R4 and R7) where noise monitoring was performed. Monitored traffic noise levels (L_{10} and L_{50}) are within 2 dBA of modeled traffic noise levels at Receptor R4. Monitored traffic noise levels (L_{10} and L_{50}) are also within 2 dBA of modeled traffic noise levels at Receptor R7 (see Table 11).

Modeled traffic noise levels are also consistent with noise levels measured near receptor R2 where noise monitoring was performed for the traffic noise analysis. Monitored noise levels near Receptor R2 were 61 dBA (L_{10}) and 55 dBA (L_{50}). These monitored levels are within 2 dBA and 1 dBA, respectively, of modeled L_{10} and L_{50} noise levels for Receptor R2.

Noise Modeling Results

Existing Weekday (year 2005):

Table 11 illustrates that the NAC-1 noise levels currently exceed State daytime noise standards at 6 of the 10 noise modeling receptors on the U of M East Bank Campus (L_{10} 67 dBA to 72 dBA) and 2 of the 3 noise modeling receptors on the U of M St. Paul Campus/State Fairgrounds (L_{10} 67 dBA to 74 dBA). L_{10} noise levels for those receptors below State daytime noise standards range between 63 dBA and 65 dBA. L_{50} noise levels for those receptors below State daytime noise standards range between 54 dBA and 60 dBA.

Existing Saturday (year 2005):

Noise levels currently exceed state daytime noise standards at 4 of the 13 noise modeling receptors during a Saturday afternoon. Daytime noise levels for a Saturday are consistently lower across all modeled receptors for a Saturday afternoon compared to the weekday p.m. peak hour. This is the result of lower traffic volumes on the weekends compared to the weekday p.m. peak hour (Table 11).

No-Build (year 2009 and year 2030):

Traffic noise levels are not estimated to increase, in general, when comparing existing (year 2005) Saturday conditions to year 2009 No-Build conditions. Most all receptors experienced no change in dBA (L_{10}) or a minor increase (1 dBA; L_{50} noise levels). The amount of background traffic growth from year 2005 to year 2009 is not great enough to result in any substantial increase in traffic noise (Table 12).

Under year 2030 No-Build conditions, increases in traffic noise (1 to 2 dBA) are predicted at most receptors compared to existing Saturday conditions. Noise levels exceed state daytime noise standards at 4 of the 13 modeling receptors under these conditions. One receptor (Receptor R8) is predicted to experience a 3 dBA (L_{10}) increase in noise levels, although both L_{10} and L_{50} noise levels at this receptor are still below state daytime standards (Table 12). Noise increases of 3 dBA are barely perceptible to most people.

Table 11
University of Minnesota On-Campus Football Stadium
Traffic Noise Results Existing Conditions (Weekday P.M. Peak Hour and Saturday P.M.)

Receptor	Monitored ⁽¹⁾⁽²⁾		Weekday Existing Year 2005 ⁽²⁾⁽³⁾		Saturday Existing Year 2005 ⁽²⁾⁽⁴⁾	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀
U of M East Bank Campus						
R1 15 th Ave/Brook Ave			67	59	64	53
R2 Elm St/20 th Ave			63	54	55	44
R3 15 th Ave/7 th St			67	59	64	54
R4 ⁽¹⁾ 4 th St/12 th Ave	70	66	72	65	69	60
R5 University Ave/13 th Ave			67	60	65	57
R6 University Ave/Oak St			69	61	67	57
R7 ⁽⁴⁾ Washington Ave/Walnut St	63	60	63	58	61	54
R8 ⁽⁴⁾ Oak St/Delaware St			65	56	61	51
R9 Oak St/Fulton St			63	55	59	49
R10 Huron Blvd/Essex St			69	62	66	57
U of M St. Paul Campus/State Fairgrounds						
R11 Cleveland Ave/Carter Ave			63	56	60	51
R12 Larpenteur Ave/Tatum St			67	60	65	57
R13 Snelling Ave/Fair Pl			74	67	72	65
State Standards	65	60	65	60	65	60
⁽¹⁾ Noise monitoring is complete to measure existing noise levels at select receptors and to validate computer modeling techniques and results. ⁽²⁾ Bold numbers are above state standards. ⁽³⁾ Existing weekday traffic noise levels were modeled during the p.m. peak traffic period (4:30 p.m. to 5:30 p.m.). ⁽⁴⁾ Existing Saturday (Sat.) traffic noise levels were modeled during the afternoon period of 3:30 p.m. to 4:30 p.m. ⁽⁵⁾ State daytime noise standards for these receptors are 70 dBA (L ₁₀) and 65 dBA (L ₅₀).						

Table 12
University of Minnesota On-Campus Football Stadium
Traffic Noise Results No-Build Year 2009 And 2030 (Saturday pm)

Receptor	Existing Sat. Year 2005 ⁽¹⁾⁽²⁾		No-Build Saturday Year 2009 ⁽¹⁾⁽³⁾		Change Between Existing Sat. and No-Build Year 2009		No-Build Saturday Year 2030 ⁽¹⁾⁽³⁾		Change Between Existing Sat. and No-Build Year 2030	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀
U of M East Bank Campus										
R1 - 15 th Ave/Brook Ave	64	53	64	54	0	+1	64	54	0	+1
R2 - Elm St/20 th Ave	55	44	55	44	0	0	56	45	+1	+1
R3 - 15 th Ave/7 th St	64	54	64	54	0	0	65	55	+1	+1
R4 ⁽¹⁾ - 4 th St/12 th Ave	69	60	69	60	0	0	70	62	+1	+2
R5 - University Ave/13 th Ave	65	57	65	57	0	0	65	57	0	0
R6 - University Ave/Oak St	67	57	67	58	0	+1	67	58	0	+1
R7 ⁽⁴⁾ - Washington Ave/Walnut St	61	54	61	55	0	+1	62	55	+1	+1
R8 ⁽⁴⁾ - Oak St/Delaware St	61	51	62	52	+1	+1	65	56	+3	+4
R9 - Oak St/Fulton St	59	49	59	49	0	0	60	51	+1	+2
R10 - Huron Blvd/Essex St	66	57	66	57	0	0	67	58	+1	+1
U of M St. Paul Campus/State Fairgrounds										
R11 - Cleveland Ave/Carter Ave	60	51	60	51	0	0	61	52	+1	+1
R12 - Larpenteur Ave/Tatum St	65	57	65	58	0	+1	66	59	+1	+1
R13 - Snelling Ave/Fair Pl	72	65	72	66	0	+1	73	67	+1	+2
State Standards	65	60	65	60	-	-	65	60	-	-
<p>⁽¹⁾ Bold numbers are above state standards.</p> <p>⁽²⁾ Existing Saturday (Sat.) traffic noise levels were modeled during 3:30 p.m. to 4:30 p.m., the anticipated departure period for future football events.</p> <p>⁽³⁾ No-Build condition = Saturday afternoon (3:30 p.m. to 4:30 p.m.) period; existing roadway system; no campus event traffic.</p> <p>⁽⁴⁾ State daytime noise standards for these receptors are 70 dBA (L₁₀) and 65 dBA (L₅₀).</p>										

Table 13
University of Minnesota On-Campus Football Stadium
Traffic Noise Results Build Year 2009 And 2030 (Saturday pm Football Event Departure Traffic)

Receptor	Existing Sat. Year 2005 ⁽¹⁾⁽²⁾		Build Year 2009 ⁽¹⁾⁽³⁾ Saturday Departure		Change Between Existing Sat. and Build Year 2009 Saturday Departure		Build Year 2030 ⁽¹⁾⁽³⁾ Saturday Departure		Change Between Existing Sat. and Build Year 2030 Saturday Departure	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀
U of M East Bank Campus										
R1 - 15 th Ave/Brook Ave	64	53	66	56	+2	+3	66	56	+2	+3
R2 - Elm St/20 th Ave	55	44	58	48	+3	+4	58	48	+3	+4
R3 - 15 th Ave/7 th St	64	54	67	58	+3	+4	67	59	+3	+5
R4 ⁽¹⁾ - 4 th St/12 th Ave	69	60	72	67	+3	+7	72	66	+3	+6
R5 - University Ave/13 th Ave	65	57	66	59	+1	+2	67	60	+2	+3
R6 - University Ave/Oak St	67	57	67	58	0	+1	69	61	+2	+4
R7 ⁽⁴⁾ - Washington Ave/Walnut St	61	54	63	58	+2	+4	63	58	+2	+4
R8 ⁽⁴⁾ - Oak St/Delaware St	61	51	62	52	+1	+1	63	54	+2	+3
R9 - Oak St/Fulton St	59	49	60	51	+1	+2	61	52	+2	+3
R10 - Huron Blvd/Essex St	66	57	69	62	+3	+5	69	62	+3	+5
U of M St. Paul Campus/State Fairgrounds										
R11 - Cleveland Ave/Carter Ave	60	51	62	54	+2	+3	63	55	+3	+4
R12 - Larpenteur Ave/Tatum St	65	57	65	58	0	+1	66	59	+1	+2
R13 - Snelling Ave/Fair Pl	72	65	72	66	0	+1	73	67	+1	+2
State Standards	65	60	65	60	-	-	65	60	-	-
⁽¹⁾ Bold numbers are above state standards. ⁽²⁾ Existing Saturday (Sat.) traffic noise levels were modeled during 3:30 p.m. to 4:30 p.m., the anticipated departure period for future football events. ⁽³⁾ Build condition = Saturday football event departure traffic period (3:30 p.m. to 4:30 p.m.); proposed new roadway network around the Stadium. ⁴⁾ State daytime noise standards for these receptors are 70 dBA (L ₁₀) and 65 dBA (L ₅₀).										

Table 14
University of Minnesota On-Campus Football Stadium
Traffic Noise Results Change Between Existing Weekday pm Peak Traffic
And Build Saturday Football Event Departure Traffic

Receptor	Existing Year Weekday 2005 ⁽¹⁾⁽²⁾		Build Year Saturday 2009 ⁽¹⁾⁽³⁾		Change Between Existing Weekday and Build Year 2009		Build Year 2030 ⁽¹⁾⁽³⁾		Change Between Existing Weekday and Build Year 2030	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀
U of M East Bank Campus										
R1 - 15 th Ave/Brook Ave	67	59	66	56	-1	-3	66	56	-1	-3
R2 - Elm St/20 th Ave	63	54	58	48	-5	-6	58	48	-5	-6
R3 - 15 th Ave/7 th St	67	59	67	58	0	-1	67	59	0	0
R4 ⁽¹⁾ - 4 th St/12 th Ave	72	65	72	67	0	+2	72	66	+0	+1
R5 - University Ave/13 th Ave	67	60	66	59	-1	-1	67	60	0	0
R6 - University Ave/Oak St	69	61	67	58	-2	-3	69	61	0	0
R7 ⁽⁴⁾ - Washington Ave/Walnut St	63	58	63	58	0	0	63	58	0	0
R8 ⁽⁴⁾ - Oak St/Delaware St	65	56	62	52	-3	-4	63	54	-2	-2
R9 - Oak St/Fulton St	63	55	60	51	-3	-4	61	52	-2	-3
R10 - Huron Blvd/Essex St	69	62	69	62	0	0	69	62	0	0
U of M St. Paul Campus/State Fairgrounds										
R11 - Cleveland Ave/Carter Ave	63	56	62	54	-1	-2	63	55	0	-1
R12 - Larpenteur Ave/Tatum St	67	60	65	58	-2	-2	66	59	-1	-1
R13 - Snelling Ave/Fair Pl	74	67	72	66	-2	-1	73	67	-1	0
State Standards	65	60	65	60	-	-	65	60	-	-

(1) **Bold** numbers are above state standards.

(2) Existing weekday traffic noise levels were modeled during the p.m. peak traffic period (4:30 p.m. to 5:30 p.m.).

(3) Build condition = Saturday football event departure traffic period (3:30 p.m. to 4:30 p.m.); proposed new roadway network.

(4) State daytime noise standards for these receptors are 70 dBA (L₁₀) and 65 dBA (L₅₀).

Table 15
University of Minnesota On-Campus Football Stadium
Traffic Noise Impact Summary Table

	Existing Weekday p.m. (year 2005) ⁽¹⁾	Existing Saturday p.m. (year 2005)	No-Build Saturday p.m. (year 2009) ⁽²⁾	No-Build Saturday p.m. (year 2030) ⁽²⁾	Build Event Saturday p.m. (year 2009) ⁽³⁾	Build Event Saturday p.m. (year 2030) ⁽³⁾
U of M East Bank Campus						
Receptors Over State Daytime Standards (L ₁₀)	6	3	3	3	6	6
Receptors Over State Daytime Standards (L ₅₀)	5	0	0	1	2	3
U of M St. Paul Campus/State Fairgrounds						
Receptors Over State Daytime Standards (L ₁₀)	2	1	1	2	1	2
Receptors Over State Daytime Standards (L ₅₀)	1	1	1	1	1	1
⁽¹⁾ Existing traffic noise levels were modeled during the weekday p.m. peak period (4:30 p.m. to 5:30 p.m.). ⁽²⁾ No-Build modeled traffic noise levels for a Saturday afternoon. ⁽³⁾ Build modeled traffic noise levels include Stadium departure traffic for a Saturday afternoon football event.						

Build (year 2009 and year 2030):

The Build condition (Saturday football game departure traffic; year 2009) is predicted to result in traffic noise increases of 0 to 5 dBA (L_{10} and L_{50}) compared to existing Saturday afternoon conditions. Noise levels exceed state daytime standards (L_{10} and L_{50}) at 7 of the 13 modeling receptors under year 2009 Build conditions (see Table 13).

Generally speaking, noise levels associated with year 2009 Saturday event departure traffic are slightly less than those experienced under existing (year 2005) weekday p.m. peak hour traffic (0 to 6 dBA) (Table 14). At most modeled receptors, the decrease in traffic noise between year 2009 Build conditions and existing weekday peak hour conditions would not be perceptible by most people (Table 13). At Receptors R2, R8, and R9, which are located away from major through streets (e.g., Huron Boulevard; Washington Avenue; University Avenue), the decrease in traffic noise during year 2009 Build conditions compared to existing weekday peak hour conditions would be barely perceptible by most people (Table 13).

Noise levels at one receptor, Receptor R4 (located along 4th Street SE (CSAH 37) (see Figure 8), is estimated to increase by 5 dBA (L_{10}) to 10 dBA (L_{50}) compared to existing (year 2005) Saturday afternoon conditions (Table 13). The year 2009 Build condition traffic noise levels at Receptor R4 are also 3 to 5 dBA greater than existing weekday p.m. peak hour traffic noise levels (Table 13). Noise levels are predicted to increase at Receptor R4 to this magnitude because of the high traffic volumes departing the Stadium and using 4th Street SE (CSAH 37) to access I-35W. However, this increase assumes all traffic will be traveling the posted speed (30 mph) along 4th Street SE (CSAH 37) between I-35W and the Project Site. Because of the traffic congestion anticipated on 4th Street SE (CSAH 37), which would correspondingly result in lower travel speeds, it is possible that actual noise levels will be lower than predicted noise levels.

Year 2030 Build condition (Saturday football game departure traffic) results in traffic noise levels 2 to 5 dBA greater than existing Saturday conditions (Table 13). Noise levels exceed State daytime standards (L_{10} and L_{50}) at 8 of the 13 modeling receptors under year 2030 Build conditions (Table 13). Traffic noise increases from year 2009 Build Conditions to year 2030 Build conditions results from background traffic growth. Noise levels associated with year 2030 Saturday event departure traffic are similar to those experienced under existing (year 2005) weekday p.m. peak hour traffic (Table 14).

Similar to year 2009 Build conditions, year 2030 Build conditions are estimated to increase noise by 5 to 9 dBA at Receptor R4 along 4th Street SE (CSAH 37) compared to existing (year 2005) Saturday afternoon conditions, a result of high traffic volumes utilizing 4th Street SE (CSAH 37) to access I-35W.

3.2.3 Traffic Noise-Mitigation

As noted in the earlier background section, roads within the cities of Minneapolis, St. Paul, and Falcon Heights are not exempt from state noise standards. Existing traffic noise levels at a number of receptor locations

currently exceed state noise standards. With one exception, construction of the Stadium Project will not result in increases in traffic noise during a Saturday football game compared to existing weekday p.m. peak hour traffic noise. Further, up to 12 Major Events per year will minimally increase the number of days this noise level is increased from 260 days per year to 272 days per year. Additionally, noise mitigation through walls or berming would likely not be either feasible or effective in this situation as residential uses are located close to streets, and many breaks in the barriers would be required for cross streets and driveway access. Therefore, no traffic noise mitigation (e.g., construction of noise barriers) is proposed.

3.2.4 Event Noise – Environmental Consequences

The *University of Minnesota Football Stadium Event Noise Analysis Technical Memorandum*, dated February 10, 2006, is incorporated by reference into this Final EIS and is available for review on the University of Minnesota Stadium web site: www1.umn.edu/stadium.

The scope of the event noise analysis includes three scenarios: Scenario 1 assesses game noise conditions; Scenario 2 assesses Minor Concert Event noise conditions, and Scenario 3 assesses Major Concert Event conditions.

Noise Monitoring

The analysis included onsite noise monitoring within the closest sensitive receptors (homes) in the Southeast Como Neighborhood directly north of the Stadium and the residences south of Washington Avenue (CSAH 122) correlated with standard noise loss calculations. The noise monitoring locations were selected due to their direct sight lines to the Stadium and also those that may be shielded by manufacturing facilities located between the residence and the Stadium Site. Four locations were selected and were monitored during what the MPCA considers “day” conditions and also “nighttime” conditions. The background noise levels were used to represent existing conditions, assist in calibrating the model, and compute future noise levels.

An EASE (Enhanced Acoustic Software for Engineers) model was also constructed to determine noise transmission outwards from the Stadium from potential public address (PA) systems and a combination of simulated crowd noise peaking at 103dBA in all areas of audience seating and concert noise peaking at 115 dBA 40 feet in front of the stage (+/-6dB). For crowd noise, this level was determined to be 92dBA at the outside base of the Stadium during peak levels and correlates with previous measurements from outdoor stadiums such as Pro Player Stadium (formerly Joe Robbie Stadium) in Miami, FL., and the former Mile High Stadium in Denver, CO. Concert noise is discussed further under Scenarios 2 and 3.

The MPCA metrics of L₁₀ and L₅₀ were calculated using the peak (92dBA) at the Stadium foundation for L₁₀ analysis and a reduced level of 82dBA was used to calculate L₅₀ values, or more common levels attributable to average game conditions.

Four monitoring points were chosen to represent residential areas. These were located at the closest residences representing areas as described by the

MPCA as NAC-1. Additional locations were considered in the scope of monitoring. These areas included Marcy Holmes, Prospect Park, and Cedar-Riverside. However, each of these areas was excluded because of distance.

A trained noise monitoring technician was present at each monitoring session for the entire session to ensure correct operation of the instrumentation and gather data on the physical environment near the monitoring location. On all monitoring occasions, weather conditions were recorded and were within the tolerances for measurement as set forth by the MPCA. A summary of each receptor site including site characteristics and monitoring procedures are summarized below. The sites are illustrated as MP 1 – MP 4 on Figure 8.

Monitoring Point One (MP 1), 20th Ave. SE

Monitoring at this location was performed for one hour between 4:02 and 5:02 p.m., on June 22, 2005 and represented traffic rush hours of daytime monitoring. This location was also monitored on the evening of July 7th and 8th between 11:10 p.m. and 12:11 a.m. (July 8th). Based on the noise monitoring conducted for this project, noise levels are currently below state noise standards for MP 1. Results for both daytime and nighttime monitoring events are presented in Table 16.

Monitoring Point Two (MP 2), 21st Ave. SE

This monitoring location was located one block directly east of MP 1. Attempts were made to locate monitoring locations within direct line of sight of the Stadium location however, this proved difficult and ultimately, this location was chosen due to its proximity to an operating manufacturing facility immediately across Elm Street and Kasota Avenue in an attempt to monitor existing noise for this residential area.

Monitoring at MP 2 was performed during evening rush hour (5:13-6:13 p.m.), which is presumably the loudest during a 24-hour period, and again between 9:46 and 10:47 p.m. Results for both monitoring events are presented in Table 16. Noise levels at MP 2 meet MPCA maximum levels for daytime values, and exceed the nighttime L_{50} values by 3dB.

Monitoring Point Three (MP 3), 23rd Ave. SE

The third monitoring location was located two blocks east of MP 2 and represents the eastern most monitoring location. This location was partially shielded from the Stadium in the form of a large apartment complex located immediately south and across Elm Street and Kasota Avenue. Daytime monitoring was performed during the afternoon rush hour (6:23-7:24 p.m.) and nighttime monitoring was conducted between 10:59 p.m.-12:02 a.m. Results for both monitoring events are presented in Table 16. Monitoring results at MP 3 exhibit high noise levels during the early evening rush hours, which exceed daytime State standards in both the L_{10} and L_{50} . This is logically attributed to the heavy truck traffic apparent along Kasota Ave. The L_{50} metric was also exceeded during evening hours.

Monitoring Point Four (MP 4), Erie St. SE

The fourth monitoring location is approximately 2,200 feet south of the Stadium. Monitoring at this location was performed during the weekday and from 6:36-7:37 p.m., representing “daytime” hours as defined by the MPCA,

and again from 10:01-11:01 p.m. representing “nighttime” hours. Results for both monitoring events are presented in Table 16. Daytime levels at MP 4 were measured to be within the State noise standards however, it is noted that noise levels may not be at their highest, or during times when the greatest number of commuters are leaving after work. Nighttime levels were within state standards for the L₁₀, and outside of state standards for the L₅₀. This is attributed to the low-level constant highway noise from nearby I-94.

Scenario 1 - Modeled Game Day Crowd Noise

Projected Noise Loss

As discussed above, an EASE model was used because it factors in distance, temperature, humidity, and absorption, which allows for an indication of sound transmission and loss over distance outside of the Stadium and to the receptors.

The projected noise levels are considered “worse case” given the estimated value 92dB, 10-feet from the base of the Stadium, during high crowd noise events (106dB in the audience area) such as a home team score. This level will be used in projecting L₁₀ values at the four receptors. A reduced level, representing 82dB, or a “halving” of crowd noise will be used in this analysis to represent our L₅₀ values, or those times when the crowd noise is reduced due to general game time progression.

**Table 16
Game Event Noise Analysis – Monitored Noise Levels**

Monitoring Point (MP)	Daytime		Nighttime	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀
MP 1	61dBA	55dBA	52dBA	50dBA
MP 2	63dBA	58dBA	55dBA	53dBA
MP 3	66dBA	62dBA	54dBA	53dBA
MP 4	57dBA	51dBA	54dBA	52dBA

Shaded cells represent monitored noise levels that exceed state standards.

To calculate noise loss over distance, 3dB per doubling of distance was subtracted within the Stadiums “nearfield” and 6dB loss per doubling of distance was used beyond the “nearfield”. The “nearfield” represents the area where multiple independent noise sources can be recognized. Outside the “nearfield”, the Stadium generated noise acts as a single source.

Projected Decibel Addition

When combining two like noise sources, the resultant noise level is not the sum of the two sources, but rather two noise sources will result in a 3dB addition to the over-all level. If a noise level of 50 decibels is introduced into a similar noise environment of 50 decibels, the resultant level would be measured as 53dB. This is due to the logarithmic nature of the decibel. Additionally, if a lower level, say 47 decibels, is introduced into a 50-decibel environment, the resultant level would be measured at approximately 52 decibels.

Table 17 details the existing and modeled noise levels for both daytime and nighttime conditions at each of the four monitoring points.

**Table 17
Game Event Noise – Noise Modeling Results**

Receptors	Existing	Existing	Modeled Crowd Noise		dB Addition		Resultant	Resultant
	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀	L ₁₀	L ₅₀
MP 1 (Day)	61dBA	55dBA	55dB	45dB	1dB	0.4dB	62dB	55.4dB
MP 2 (Day)	63dBA	58dBA	55dB	45dB	0.6dB	0.2dB	63.6dB	58.2dB
MP3 (Day)	66dBA	62dBA	52dB	41dB	0.2dB	0dB	66.2dB	62dB
MP 4 (Day)	57dBA	51dBA	56dB	46dB	2.6dB	1.2dB	59.6dB	52.2dB
MP 1 (Night)	52dBA	50dBA	55dB	45dB	1dB	2.4dB	53dB	52.4dB
MP 2 (Night)	55dBA	53dBA	55dB	45dB	3dB	1.7dB	58dB	54.2dB
MP 3 (Night)	54dBA	53dBA	52dB	45dB	1.4dB	1.7dB	55.4dB	54.7dB
MP 4 (Night)	54dBA	52dBA	56dB	46dB	2.2dB	1dB	56.2dB	53dB

■ Shaded values indicate noise levels above state noise standards.

In assessing the results included in Table 17, the following can be concluded regarding game noise conditions:

- Game conditions generate noise level increases that are below the human hearing perception of change (>3dB).
- The differences in noise levels are not classified as substantial (>5dB).
- Game conditions result in new exceedances of nighttime MPCA noise standards at MP1, MP2, MP3, and MP4.

Scenario 2 – Modeled Concert Noise – Minor Event

To assess potential noise impacts from a Minor Concert Event at the Stadium, mid- to large concert speaker systems were placed into the acoustical model to calculate these, more focused, sources of sound into adjacent neighborhoods. The scenario models a concert with approximately 15,000 people.

The model assumed directing the sound system speakers into the northern bowl of the Stadium. This would allow for seating and standing on the field itself, and seating in the northern bowl.

Concert speakers were modeled and arrayed facing northward and hung between 30 and 60 feet in the air to approximate a large musical touring speaker system.

The acoustical model used for this analysis is tied to distance (40 feet in front of the stage) and assumes 115 dBA which reflects conditions for a broad range of concert types. As noted in Table 9, the MPCA defines rock concerts as 120 dBA. This is a generalized value not tied to a specific distance.

The EASE model does not account for insertion and transmission loss (TL) due to obstructions (Stadium bowl and buildings). It is understood, however, that sound is stopped by concrete structures, though some amount will “spill” over the bowl. As a correction for this, the typical transmission loss values were halved giving a more accurate representation of potential transmission path. This represents a conservative estimate of the amount of noise “spill” over the bowl’s edge.

Additionally, calculated crowd noise during concert events was also factored into the over-all concert noise level. This was accomplished using a decibel addition factor as previously described. Results of the concert noise analysis at the four monitoring points are detailed in Table 18.

**Table 18
Modeled Minor Concert Event Noise**

Receptors	Existing		Modeled Minor Concert and Crowd Noise		Adjusted TL for Concrete @ 2kHz	Resultant Level		Decibel Change from Existing Conditions	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀		L ₁₀	L ₅₀	L ₁₀	L ₅₀
MP 1 (Day)	61dBA	55dBA	72dB	69dB	23dB	61.2dB	55.4dB	.2dB	.4dB
MP 2 (Day)	63dBA	58dBA	74dB	71dB	23dB	63.2dB	58.4dB	.2dBA	.4dBA
MP 3 (Day)	66dBA	62dBA	72dB	69dB	23dB	66dB	62dB	0dB	0dB
MP 4 (Day)	57dBA	51dBA	50dB	47dB	23dB	57dB	51dB	0dB	0dB
MP 1 (Night)	52dBA	50dBA	72dB	69dB	23dB	53.8dB	51.4dB	1.8dB	1.4dB
MP 2 (Night)	55dBA	53dBA	74dB	71dB	23dB	57.4dB	54.2dB	2.4dB	1.2dB
MP 3 (Night)	54dBA	53dBA	72dB	69dB	23dB	55.4dB	53.8dB	1.4dB	.8dB
MP 4 (Night)	54dBA	52dBA	50dB	47dB	23dB	54dB	52dB	0dB	0dB

Shaded values indicate noise levels above state noise standards.

The results of the analysis as summarized in Table 18, indicate the following with respect to noise conditions at the representative monitoring points:

- Increased noise levels attributable to concerts are below the human hearing perception of change (>3dB).
- The differences in noise levels are not classified as substantial (>5dB).
- The concert noise conditions result in new exceedances of nighttime noise standards at MP1, MP2, and MP3.

Scenario 3 – Modeled Concert Noise – Major Event

Applying a capacity crowd (50,000) and doubling the size of the speaker system closely approximates noise generated when considering major attractions at the proposed Stadium.

With the addition of more speakers, sound levels measured at a distance of 40’ from the stage lip, have increased to a maximum pressure level of 119dB.

This is more closely related to the MPCA designation of “Rock Concert” within their published tables (see Table 9). Levels of this magnitude are not commonplace with the exception of certain times when both the crowd and music levels are loud enough as to obstruct communication between individuals. While these levels have been measured during actual concert events, their duration is usually short and not experienced during 80% of a concert’s duration. Therefore, the analysis in this section conservatively states maximum potential noise levels during a Major Event and the impact on surrounding neighborhoods.

The crowd noise was factored into the analysis by adding the noise levels predicted throughout the Stadium during a capacity sporting event. The speaker and crowd noise are combined by decibel addition, reduced due to Transmission Loss through barriers and obstructions, and then calculated according to distance to the receptors. Results of the Major Concert Event analysis are presented in Table 19.

**Table 19
Modeled Major Concert Event Noise**

Receptors	Existing		Modeled Major Concert Event & Crowd Noise		Adjusted TL for Concrete @ 2kHz	Resultant Level		Decibel Change from Existing Conditions	
	L ₁₀	L ₅₀	L ₁₀	L ₅₀		L ₁₀	L ₅₀	L ₁₀	L ₅₀
MP 1 (Day)	61dBA	55dBA	82dB	79dB	23dB	63.8dB	58.2dB	2.8dB	3.8dB
MP 2 (Day)	63dBA	58dBA	84dB	81dB	23dB	66.2	61dB	3.2dB	3.2dB
MP 3 (Day)	66dBA	62dBA	82dB	79dB	23dB	67dB	63dB	1dB	1dB
MP 4 (Day)	57dBA	51dBA	70dB	67dB	23dB	59.8dB	52.6dB	2.8dB	1.6dB
MP 1 (Night)	52dBA	50dBA	82dB	79dB	23dB	60.5dB	57.5dB	8.5dB	7.5dB
MP 2 (Night)	55dBA	53dBA	84dB	81dB	23dB	62.8dB	59.2dB	7.8dB	6.2dB
MP 3 (Night)	54dBA	53dBA	82dB	79dB	23dB	60.5dB	58.6dB	6.5dB	5.6dB
MP 4 (Night)	54dBA	52dBA	70dB	67dB	23dB	56.6dB	53.6dB	2.6dB	1.6dB

Shaded values indicate noise levels above state noise standards.

The results of the analysis, as summarized in Table 19, indicate the following with respect to noise conditions at the representative monitoring points:

- Increased noise levels attributable to Major Concerts Events are above the human hearing perception of change (>3dB).
- The differences in noise levels during nighttime conditions are classified as substantial (>5dB).
- The concert noise conditions result in new exceedances of nighttime noise standards at MP1, MP2, MP3, and MP4.

-
- The concert noise conditions result in new exceedances of daytime noise standards at MP2.

3.2.5 Event Noise- Mitigation

Game Events

No mitigation is required.

Concert Events

MPCA standards reflect overall sound levels and not tonal data because the MPCA does not take tonal data into consideration when monitoring for noise pollution. Frequencies higher in the spectrum have a greater overall reduction due to their smaller wavelengths, while lower frequencies travel around and through obstructions more efficiently. It is these lower frequencies at 250Hz and below, that are of greater concern. Concert noise level complaints and annoyance throughout neighborhoods predominantly stem from low frequency, higher volumes.

There are options for controlling low frequency sound. One relatively simple option includes using “Line Array” speaker settings. Within the past 10 years, speaker technology has progressed to include what are typically called line-arrays in concert settings. Line array is a general description pertaining to how sound, emanating from speakers, radiates and decays from the fashion in which speakers are hung.

A standard hanging cluster of speakers, such as is typical in most concert settings, have a specific vertical and horizontal radiation. One might think of the horizontal radiation pattern affecting the Stadium seating from left to right, and vertical radiation effecting seating from in front of the stage, to the top of the seating in the Stadium bowl.

With standard hanging clusters, ones that do not meet line-array criteria, sound lacks control in both the vertical and horizontal fashion. This becomes an ever increasing problem as the lower frequencies (and longer wavelengths) are introduced. Standard cluster speaker arrays have great difficulty controlling (aiming, focusing) lower frequencies to the desired location and can travel over and out of a Stadium bowl.

Line-arrayed speaker systems however, use the complex interference created by the close proximity of the speaker cabinets, and the vertical line in which they are hung, to cancel frequencies above and below the line-array speaker cluster. This is not “new” technology as any speaker, placed in close proximity to another will have a “summing” effect in some frequencies, and a “cancellation” effect in others. Due to inexpensive PC and hardware speaker processing this interaction can be put to work for the benefit of concert sound.

Typical speaker systems have a loss over distance of sound more closely resembling the Inverse Square Law of transmission; that is, 6dB loss per doubling of distance. Line-Arrays, due to their focused nature, have a loss over doubling of distance more closely resembling 3-4dB, delivering sound more efficiently over longer distances. It is the focusing ability of Line-Arrays that will offer greater benefit to a concert event in that they result in

less “spill” over the rim of the Stadium bowl. On average, line-arrays can offer attenuation improvements as follows:

- 6-10dB: 4 kHz and above
- 3-6dB: 4kHz-250 Hz
- 3dB: 250Hz and below

With careful specification of speaker systems and speaker aiming angles which will limit the amount of spill over the Stadium bowl, noise levels during concert events occurring between 7AM and 10PM can be reduced substantially, both in the high and low frequency range.

Minor Concert Event Mitigation

Noise levels in adjacent residential areas, during Minor Concert Events result in additional nighttime standard exceedances. The University will implement the following measures to mitigate these impacts:

- The University will specify in contractual agreements use of Line-Array systems for concert audio and that the vertical coverage pattern of any cluster component not aim over the bowl's edge.
- Specify in contractual agreements that noise levels must be monitored at the closest residential receptors during the concerts to ensure compliance with State standards. Continuation of this program will be considered after the first year of operation.
- Require concerts to end before 10:00 p.m.

Major Concert Events Mitigation

The analysis concludes that additional noise standard violations will occur for both the daytime and nighttime conditions. As a result, in addition to the measures described for Minor Concert Event, the University has committed to the following:

- Initially, the University will not schedule Major Concert Events.
- When the Stadium is complete, the University will conduct a noise test to determine actual noise levels experienced in the surrounding areas.
- The results of this noise test will be used to determine whether Major Concert Events should be allowed and if so, the parameters for such concerts so as to avoid new noise standard exceedances.
- Major Concert Events will not occur on weeknights

By implementing these mitigation measures, Stadium events violating State noise standards will be avoided. However, it is recognized that concerts, in all probability, will be heard. It is the excessive concert noise over and above state standards which is being examined with regard to mitigation and control.

3.2.6 No-Build Alternative – Event Noise

With the No-Build Alternative, game day and concert events would not occur at the Project Site. As a result, there are no adverse noise impacts associated with the No-Build conditions.

3.3 Air Quality

3.3.1 Vehicle Related Air Emissions

The scope and methods of the air quality analysis performed for the Stadium Project were developed during a meeting with Minnesota Pollution Control Agency (MPCA) air quality staff on June 2, 2005.

Motorized vehicles affect air quality by emitting airborne pollutants. Changes in traffic volumes, traffic patterns, and roadway locations affect air quality by changing the number of vehicles, changing traffic congestion conditions, and changing where vehicles travel. The Environmental Protection Agency (EPA) uses six "criteria pollutants" as indicators of air quality and has established National Ambient Air Quality Standards (NAAQS) for each of them. The NAAQS represent maximum concentrations above which adverse effects on human health may occur. The criteria pollutants are ozone, particulate matter, nitrogen dioxide, lead, sulfur dioxide, and carbon monoxide.

Affected Environment

The air quality impacts from this project are analyzed by addressing six criteria air pollutants regulated by EPA. Potential impacts resulting from these pollutants are assessed by comparing projected concentrations to NAAQS. However, the EPA requires project-level quantitative analysis for carbon monoxide. Each of the six pollutants is discussed below.

Ozone

Ozone is not emitted directly from vehicles but is formed through the reaction of volatile organic compounds (VOC) and nitrogen oxides (NO_x) (which can be emitted from transportation sources), and its formation is influenced by a complex relationship of chemical precursor concentrations, meteorological conditions and regional influences on background concentrations.

The EPA has classified the Twin Cities as an attainment area (i.e. an area determined to be within acceptable levels) in regard to ozone levels and, therefore, does not require a quantitative ozone analysis for this project.

Particulate Matter

Fine particles with very small diameters can move like gases and can be transported hundreds of miles from their source. Larger particles do not remain suspended and tend to settle out of the air relatively near their source.

Motor vehicles can influence particulate matter concentrations on a local scale by directly emitting fine particles and from wind turbulence that causes particles to be mixed into the air. On a regional scale, vehicular traffic can influence particle concentrations through emission of precursor compounds (nitrogen oxides, sulfur oxides and VOCs) as well as direct emissions.

Vehicle related particulate matter tends to be smaller than 2.5 microns⁵. Widespread PM_{2.5} monitoring began in Minnesota in 1999. The State of Minnesota is currently in attainment of recently enacted PM_{2.5} standards.

Based on the relatively low ambient concentrations observed in Minnesota and the lack of accepted analysis methodology, EPA and MPCA do not require project level modeling for particulate matter.

Nitrogen dioxide (Nitrogen oxides)

Nitrogen oxides, or NO_x, are the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Nitrogen dioxide (NO₂) levels in the Twin Cities metropolitan area currently meet state and federal standards.

Based on the relatively low ambient concentrations of NO_x in Minnesota and the long-term trend of reduction in NO_x emissions, it is unlikely that NO_x standards will be approached or exceeded. Because of these factors, a specific analysis of nitrogen dioxide was not undertaken for this project.

Lead

Due to the phase out of leaded gasoline, lead is no longer a pollutant associated with vehicular emissions.

Sulfur Dioxide

Emissions of sulfur dioxide result largely from stationary sources (i.e. refineries, power plants, mills). Vehicular emissions are not a significant source of ambient sulfur dioxide.

Carbon Monoxide

Carbon monoxide (CO) is the traffic-related pollutant that is of most concern on a project level scale. The MPCA has established State standards (or maximum permissible concentrations) for CO of 30 parts per million (ppm) for a 1-hour period (average concentration), and 9 ppm for an 8-hour period (average concentration). The MPCA 1-hour standard is more stringent than the federal standard of 35 ppm.

The Twin Cities region is currently an attainment area for CO. The attainment status is contingent upon the implementation of measures to assure that CO concentrations remain below standards. The contingency stipulates that future CO concentrations be modeled for proposed transportation projects. In compliance with this stipulation, for this study, air quality analyses of worst-case conditions were performed to estimate the effect of the Stadium Project on future CO concentrations at nearby key intersections (or “hot spots”).

Environmental Consequence

The effect of the Stadium Project on air quality was examined through analysis of the predicted impact on CO concentrations. To assess CO concentration changes, background concentrations were measured and

⁵ Particulate matter (PM) is categorized by the size of particles being measured. For example, the PM_{2.5} value is the measurement of particles smaller than 2.5 microns in a particular volume of air.

adjusted for future background traffic growth and changes in vehicle emissions. Potential CO impacts on air quality were analyzed with respect to intersection conditions for the Build Alternative. Air quality modeling for the Stadium Project was performed for the years 2009 and 2030, which were selected to be consistent with the traffic and noise analyses and included anticipated increases in traffic volumes due to area redevelopment and event traffic, as well as regional background growth. Forecast 2009 and 2030 traffic data and design concept layouts were used to model future CO concentrations. The analysis year methods and procedures and the scope of the analysis were chosen based on guidance from the MPCA.

Air quality modeling was performed using the most current versions of EPA CO emission (MOBILE 6) and dispersion modeling (CAL3QHC) software. All methods and procedures used in the air quality analyses are generally accepted by the EPA and MPCA as approved for industry standard analytical methods.

The modeling assumptions used in this analysis included the following:

- Cruising Speed Posted speed limits⁶
- Cold Start Percentage 20.6 percent for all traffic⁷
- Hot Start Percentage 27.3 percent for all traffic
- Speed Class: Arterial, posted speed limits
- Traffic Mix: National default
- Traffic Age Distribution: MPCA data
- Wind Speed 1 meter/second
- Temperature: -8.8 degrees Celsius
- Wind Direction 36 directions at 10 degree increments
- Surface Roughness 108 centimeters
- Atmospheric Stability Class D
- 8-Hour Persistence Factor 0.7
- Fuel Program Conventional Gasoline East
- Fuel Reid Vapor Pressure 9.0 lbs/square inch
- Oxygenated Fuels Ethanol with 2.7 percent oxygen content

Background Carbon Monoxide Concentrations

Background CO concentrations are needed for air quality analysis purposes to represent conditions without the influence of nearby vehicles. By definition, the background CO concentration in any particular area is that concentration which exists independently of direct contributions from nearby traffic. The background concentrations are added to intersection-scale modeled results to yield predicted CO levels.

Background CO concentrations for the analysis documented in this study were determined from CO monitoring conducted by MPCA at two permanent monitors from January 1, 2004 to December 31, 2004. The monitors are located at 528 Hennepin Avenue in Minneapolis and 1008 University Avenue (CSAH 36) in St. Paul. An average background

⁶ While traffic is congested, delays caused by congestion on arterials are considered in the CAL3QHC queuing model.

⁷ Mobile 6 Default Parameter

concentration weighted by distance (2 miles to the Minneapolis site, 4 miles to the St. Paul site) was used in the analysis. The measured background (2004 existing) concentrations were adjusted for year 2009 and 2030 to account for traffic growth. To represent worst-case conditions, no background reduction factor to account for future emissions control improvements was used; this will overestimate ambient background CO concentrations. Results of background CO monitoring and the adjustment calculations are presented in Table 20.

Table 20
Background Carbon Monoxide Concentrations

	2009		2030	
	1-Hour	8-Hour	1-Hour	8-Hour
MPCA Monitor, 528 Hennepin Avenue, Minneapolis, MN				
2004 background CO concentration (ppm)	3.3	2.2	3.3	2.2
Background traffic growth	1.05	1.05	1.30	1.30
Emissions factor reduction	1.0	1.0	1.0	1.0
Adjusted background CO concentration (ppm)	3.5	2.3	4.3	2.8
MPCA Monitor, 1008 University Avenue, St. Paul, MN				
2004 background CO concentration (ppm)	6.1	3.8	6.1	3.8
Background traffic growth	1.05	1.05	1.30	1.30
Emissions factor reduction	1.0	1.0	1.0	1.0
Adjusted 2009 background CO concentration (ppm)	6.4	4.0	7.9	4.9
Weighted Average Background Concentration	4.4	2.9	5.5	3.5
CO = Carbon Monoxide ppm = parts per million				

Intersection Carbon Monoxide Analysis

Carbon monoxide concentrations were calculated for years 2009 and 2030 for the Build Alternative under two worst-case scenarios and at four worst-case intersections with the highest levels of congestion under each scenario. Intersections for the analysis were selected based on input and concurrence from MPCA. Two general goals were considered when selecting intersections: to compare air quality impacts from each of the scenarios and to assess whether air quality standards would be exceeded by any of the scenarios.

Two scenarios were selected for analysis based on their representing the highest traffic levels, and therefore the highest traffic-related carbon monoxide emissions. The scenarios selected were Build Weekday PM Peak Hour (4:30 PM-5:30 PM, no event) and Build Weekday Event (6:00 PM-7:00 PM, Football Game) Arrival. Traffic analysis results for this scenario can be found in Supplement One to the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*.

Intersections were selected for analysis by determining which intersections operated at lowest levels of service under each scenario. The four worst operating intersections were identified in each analysis year under each scenario. Intersections showing a better level of service for a particular scenario typically have less of an air quality impact.

Carbon monoxide concentrations near the intersections were projected using forecasted traffic volumes, current intersection geometrics, optimized signal timing, emission levels from the EPA MOBILE 6 model, and dispersion modeling using the EPA model CAL3QHC.

The sidewalk averaging technique was used to calculate intersection worst-case CO concentrations at all intersections. The modeling “sidewalks” are located adjacent to each approach leg and departure leg at the traffic signal. Each sidewalk location is represented by two receptors: one receptor 10 meters from the intersection and one receptor 50 meters from the intersection. In this method, the CO concentrations from the two receptors are averaged. The worst case wind direction (of the 36 directions modeled) for each pair of sidewalk receptors was used to determine the maximum concentration for each pair of sidewalk receptors. The reported result is the maximum concentration for all of the sidewalks.

The intersection CO modeling results are shown in Table 21 for all analysis years and scenarios. The CO concentrations provided represent background CO concentrations plus modeled intersection CO concentrations.

Discussion and Conclusions

Intersection-level CO modeling was performed for the four worst operating intersections in each scenario. Modeling results show predicted one hour average CO concentrations ranging from 7.5 to 10.5 ppm in 2009 and from 6.1 to 7.1 ppm in 2030. Predicted eight-hour CO concentrations range from 4.9 to 7.1 ppm in 2009 and from 4.0 to 4.7 in 2030. Improvements in fuel and vehicle technology, combined with fleet turnover, combine to produce lower emission rates in 2030 than in 2009; this can result in lower predicted CO concentrations in 2030 than in 2009 despite higher traffic levels. Based on these results, concentrations of CO will be below the State one-hour standard of 30 ppm and the State eight-hour standard of 9 ppm.

Mitigation

Results of CO modeling performed for the Stadium Project show that the project would not cause an exceedance of CO standards. Based on the qualitative assessment presented at the beginning of this section, the project will not cause exceedances of the other criteria pollutants. As a result of these conclusions, no mitigation measures are proposed.

**Table 21
Carbon Monoxide Modeling Results (listed in parts per million)**

Scenario	Intersection	1-Hour	8-Hour	Wind Direction	State Standard
2009 Build (Roadway improvements only)	Oak St./University Ave.	7.1	4.8	340	30/9
	23 rd Ave./University Ave.	6.7	4.5	130	30/9
	Oak St./4 th St.	6.4	4.3	170	30/9
	Huron Blvd./Washington Ave.	6.5	4.3	60	30/9
2030 Build (Roadway improvements only)	Oak St./University Ave	6.5	4.3	140	30/9
	23 rd Ave./University Ave.	6.8	4.5	310	30/9
	25 th Ave./University Ave.	6.4	4.2	130	30/9
	Huron Blvd./Washington Ave.	6.1	4.0	320	30/9
2009 Weekday Event	I-35W SB On-Ramp/University Ave.	9.9	6.7	100	30/9
	I-35W NB Off-Ramp/University Ave.	10.1	6.8	10	30/9
	10 th Ave./University Ave.	10.5	7.2	310	30/9
	Oak St./University Ave.	9.7	6.6	310	30/9
2030 Weekday Event	I-35W SB On-Ramp/University Ave.	9.5	6.4	100	30/9
	I-35W NB Off-Ramp/University Ave.	9.4	6.3	280	30/9
	10 th St./University Ave.	9.7	6.5	310	30/9
	27 th Ave./East River Rd./Franklin Ave.	7.5	4.9	130	30/9

3.3.2 Stationary Source Air Emissions

Environmental Consequences

Heat to the Stadium is proposed to be supplied from the University's Central Heating Plant. The Stadium will connect to an existing steam line in the Oak Street corridor. The relatively minor heating requirements of the Stadium will represent an inconsequential increase in emissions from the Heating Plant.

Mitigation Measures

No mitigation is required.

3.3.3 No-Build Alternative

Carbon monoxide emissions increase during congested conditions due to more idling vehicles. As detailed in Section 3.1, traffic operations under a No Build scenario are less congested than under the Build scenario. Therefore, carbon monoxide emissions under a No Build scenario are anticipated to be less than under the Build scenario. As concentrations of CO for the Build scenario will be below the State one-hour and eight-hour standards, concentrations of CO for the No Build scenario are also anticipated to be below the State standards.

3.4 Infrastructure and Utilities

3.4.1 Affected Environment

As a parking lot, the Stadium Project Site is not currently well served by campus and municipal utilities. The Site has storm sewer and electrical service sufficient for its existing use. However, adequate municipal utilities (storm sewer, sanitary sewer, and water), University utilities (district steam), as well as private utilities (gas and electric) lie beneath streets adjacent to the Project Site.

3.4.2 Environmental Consequences

Stadium

Utility and infrastructure impacts were addressed for both the Stadium and the surrounding Project Site.

Water and Wastewater

Based on information from other similar facilities, the Stadium at capacity (50,000 people) will generate the following water and waste water volumes:

Water: 1,250 gallons per minute

Sewer: 1,375 average gallons per minute peaking at 3,000 gallons per minute

The sewer flow rate of 1,375 GPM is the average design flow rate during a capacity event. The anticipated total flow associated with an event can be calculated by multiplying the average rate (1375 gpm) by the average duration of the event (180 minutes). This would result in an anticipated flow of 247,500 gallons. Sewer flow at other times would be based on the usage required to maintain the facility. This flow would be negligible relative to the flow during an event. Existing utility infrastructure is adequate to meet the Stadium needs.

Refuse Generation

Based on experience from similar stadium operations, it can be expected that approximately 0.7 pounds of refuse will be generated per seat. Assuming a 50,000-person event, approximately 35,000 pounds of refuse will be generated. Some percentage (to be determined) of that will be recyclables, mostly 20-ounce plastic beverage bottles. Several options for trash management will be considered during detailed design including compactors and dumpsters on-site, bundling and recycling of paper and cardboard, recycling of bottles, cans and plastics, plus refrigerated storage for perishable trash from kitchens. Trash pickup will occur during regular intervals of operation with a concentrated pick-up after an event.

Electricity

The stadium feasibility study concluded that while connections will need to be made to existing utility lines, the electrical distribution system will not need to be upgraded or expanded. Existing utility infrastructure is adequate to meet the Stadium needs.

Steam

The stadium feasibility study concluded that while connections will need to be made to existing steam utility lines, the steam distribution system will not need to be upgraded or expanded. Existing utility infrastructure is adequate to meet the Stadium needs.

Communications

The stadium feasibility study concluded that while connections will need to be made to existing phone and fiber optics lines the distribution system will not need to be upgraded or expanded. Existing infrastructure is adequate to meet the Stadium needs.

Storm Water

Storm water management is addressed in Section 3.5.

Impacts Resulting From Stadium Construction Activities

The proposed Project Site occupies Huron Boulevard right-of-way north of University Avenue (CSAH 36)and east of Oak Street. Public sanitary and storm water utilities lie within this right of way. The Stadium will connect to existing sanitary sewer lines. Existing lines will be abandoned or relocated. A new stormwater management system will be implemented in conjunction with the Stadium.

Impacts Resulting From Roadway Realignment Activities

Roadway realignments proposed in association with the Stadium Project include Huron Boulevard between Washington and University Avenues and Oak Street between University Avenue (CSAH 36)and Fourth Street. Substantial sanitary, storm water and steam utilities lie within these street right-of-ways. At this time it is anticipated that surface areas formerly occupied by these street segments will be reconstructed for plaza and open space use and relocation of these utilities is not anticipated.

Project Site

Impacts to Utilities Resulting from Stadium Construction Activities

The proposed Project Site occupies Huron Boulevard right-of-way north of University Avenue (CSAH 36)and east of Oak Street. Public sanitary and storm water utilities lie within this right of way. The Stadium will connect to existing sanitary sewer lines. A new storm water management system will be implemented in conjunction with the Stadium. No impacts to uses outside the Project Site are anticipated.

Impacts to Utilities Resulting from Roadway Realignment Activities

Roadway realignments proposed in association with the Stadium Project include Huron Boulevard between Washington and University Avenues and Oak Street between University Avenue (CSAH 36)and Fourth Street. Substantial sanitary, storm water and steam utilities lie within these street right-of-ways. At this time it is anticipated that surface areas formerly occupied by these street segments will be reconstructed for plaza and open space use and relocation of these utilities is not anticipated.

3.4.3 Mitigation

No adverse effects have been identified, therefore, no mitigation measures are needed.

3.4.4 No-Build Alternative

No changes to the existing infrastructure and utility systems would occur with the No-Build Alternative.

3.5 Surface Water Quantity and Quality

3.5.1 Affected Environment

The Project Site sits entirely within the City of Minneapolis and within an area regulated by the Mississippi Watershed Management Organization. Assumptions made in the development of these numbers include:

- Local roadway improvements proposed with the Stadium project as shown in Figure 3.
- The Reichold and Con-Agra properties were considered 100% impervious given that any gravel areas likely have a high degree of compaction after years of heavy traffic use.
- Conversion of the parcel immediately east of 25th Avenue S.E. between the Intercampus Transitway and 4th Street S.E. to street level parking will occur with this Project. This parcel was also assumed 100% impervious; currently it appears to be a vacant lot with a surface of gravel or bare ground.
- As the reconstruction of Oak Street S.E. will not impact the existing plaza, the Mariucci Arena plaza on Oak Street will not be substantially reconstructed as part of the Stadium Project.
- All other surface cover types were based upon those apparent in a May 2004 air photo.
- Analysis assumes management of storm water resulting from the Stadium Project only. If greater efficiencies can be achieved through coordination with all redevelopment activities occurring simultaneously with the Stadium project (e.g., Minneapolis SEMI redevelopment), the University will consider coordinated efforts if timing and financial resources allow.

In the existing condition, storm water runoff generated from the Project Site drains through one of two outfalls to the Mississippi River. Roughly 1/3 to 1/2 of the Project Site drains to the Oak Street trunk line, which is located on the Project's west edge, and continues down Oak Street until it reaches the River in a tunnel. The remainder of the Project Site drains to the Bridal Veil Creek tunnel system, which runs down 25th Avenue S.E. and Huron Street to the east of the Project. Runoff from the Project Site enters the system via storm sewer on 23rd Avenue S.E., University Avenue (CSAH 36) S.E., and Huron Street S.E. This tunnel system is explained further in the section below describing Bridal Veil Creek. See Figure 12 for a diagram of the

Project Site, the existing drainage patterns, and significant features of the existing storm water system.

Special Features

Bridal Veil Creek

Originally, a small creek or gully draining a large swampy area north and east of the Project Site, Bridal Veil Creek currently is enclosed within a series of culverts, storm drains, and tunnels. The Creek discharges to the Mississippi River at two locations: via the Bridal Veil Falls near the Franklin Avenue bridge in Minneapolis and via a 96-inch outfall roughly 500 feet upstream of the falls. An existing flow splitter located immediately to the east of the Project Site on the Intercampus Transitway, near 26th Avenue S.E., maintains low flows to the Falls and routes larger flows to a tunnel system south of the Project Site on Huron Street S.E. While the Bridal Veil Creek tunnel was implemented to correct capacity problems and allow for future development in the old rail yards and the University of Minnesota, Minneapolis Public Works has calculated that projected developments in the Bridal Veil Creek sub-watershed will eventually exceed the design capacity of this particular storm sewer system⁸.

Hennepin County has recently completed a preliminary investigation into the feasibility of daylighting a portion of this Creek. The associated report describes the history of the Creek, previous plans relating to the Creek, and alternative implementation strategies.⁹

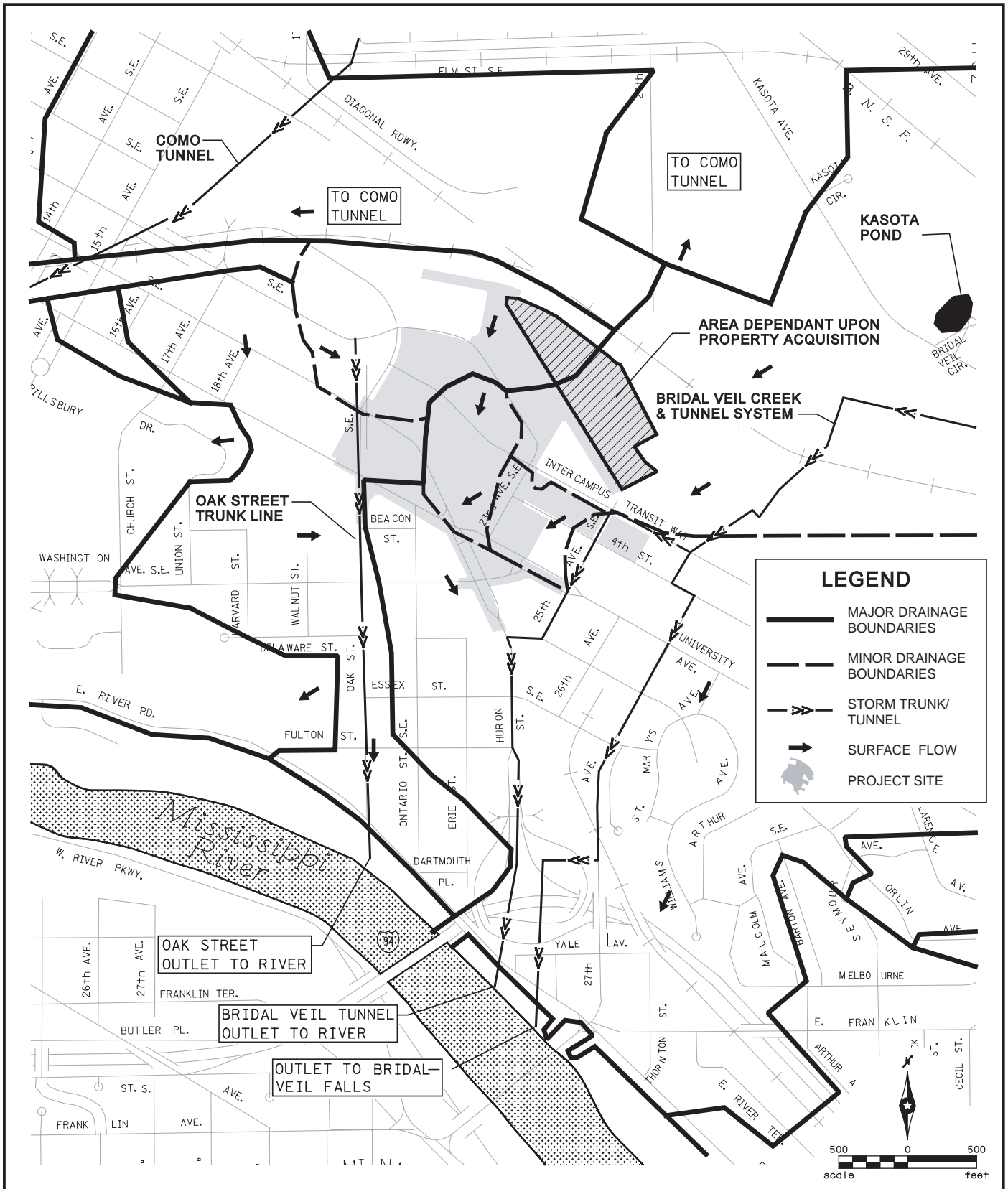
Lake Pepin

Lake Pepin, a downriver segment of the Mississippi River that receives storm water from the Stadium site, has been identified as an impaired water for excess nutrients (eutrophication) and turbidity (chlorophyll-a) by the Minnesota Pollution Control Agency. A process is underway to establish appropriate goals for phosphorus (a primary pollutant associated with eutrophication) and chlorophyll-a concentrations for the lake. Because the Stadium site already contributes to the Lake Pepin impairment, the proposed Stadium Project may not be required to reduce existing levels of the pollutants. However, it is the intent of the University to improve water quality of runoff from the site through a variety of innovative strategies appropriate to an urban setting.

⁸ Mississippi Watershed Management Organization (MWMO), Watershed Plan, June 2000, pp. 23 – 24.

⁹ Hennepin County, Daylighting Creeks in Hennepin County: Alternative Implementation Strategies for Daylighting Portions of Bassett Creek, Shingle Creek, and Bridal Veil Creek, April 15, 2005.

Support/5383 TOF Stadium/figures/Draft EIS/5383EIS/figure10_101705.eps



Football Stadium - Final EIS

University Of Minnesota

Figure # 12

Existing Drainage Patterns

The Southeast Minneapolis Industrial Area (SEMI)

The City of Minneapolis has developed a plan for the SEMI area, which is north and east of the Project Site and drains to the Bridal Veil Creek system. The Mississippi Watershed Management Organization (MWMO) sees this plan as a means to develop a regional storm water treatment system, in that it called for the acquisition of land by the City of Minneapolis for the creation of several large wetlands. These wetlands would create amenities for adjoining neighborhoods, while at the same time providing mechanisms to filter storm water runoff. The SEMI Wetland project would result in the retention of sediments and nutrients as well as alleviate the potential for localized flooding.¹⁰

SEMI plans may include a detention pond north of the future Granary Road near 25th Avenue S.E. The time line for implementation of this plan is unclear, and it is not anticipated that the pond capacity would incorporate the treatment needs for the Stadium Project.

Contaminated Areas

Several contaminated areas are located within the Project Site or immediately adjacent to it. As discussed in Section 3.6, the worst of the contamination is found at the north end of the Project Site, in the Buckeye Parking Lot immediately south of the Con-Agra parcel. Infiltration opportunities were minimized on the eastern portion of the Project Site to avoid disrupting the ecological equilibrium of the contaminant plume. Further, any storm water management devices would likely require an impermeable liner.

Regulatory Environment

The regulatory standards applicable to the University of Minnesota Stadium Project are found in the rules and regulations of the following governmental bodies:

- City of Minneapolis
- Mississippi Watershed Management Organization (MWMO)
- Hennepin County
- Minnesota Pollution Control Agency via the National Pollutant Discharge Elimination System (NPDES)
- University of Minnesota

The standards are typically applied to the receiving water body and govern the following:

- Wetlands/Protected Waters
- Water Quality
- Water Quantity
- Best Management Practices
- Pond Design/Outlet Structure Design
- Floodplains
- Erosion Control
- Storm Sewer and Culvert Crossings

¹⁰ MWMO, p. 72.

Table 22 presents relevant design and permitting criteria affecting the proposed Stadium Project. Note that as there are no designated floodplains, wetlands, or protected waters within the Project Site. Therefore, criteria relating to these resources have not been included in the table.

3.5.2 Environmental Consequences

While the Stadium Project design is not finalized, it is assumed that the amount of impervious surfaces will only slightly differ from that of the existing condition. For the purpose of this EIS, impervious surface following construction of the Stadium Project is assumed equal to that of the existing condition. Assumptions used in this determination include:

- Wide, vegetated areas will be included along all of the pedestrian areas within the parking lots mentioned above. Further, wide, vegetated areas will run along the face of the Stadium and within the pedestrian promenade for roughly 2/3 of its perimeter.
- Although the proposed playing field and areas immediately adjacent to the field will be artificial turf, these areas were considered pervious because the recommended turf system consists of a perforated “carpet” and fast-draining aggregate base.
- The plaza on the west and southerly perimeter of the Stadium was considered 100% impervious.
- Most of the wide, vegetated strip between the railroad tracks south of the Reichold/Con-Agra properties and the existing surface parking lots and the Integrated Waste Management Facility will remain.
- Smaller vegetated strips will ring the three parking lots planned for the blocks east of 23rd Avenue S.E. and south of the Intercampus Transitway.
- Any reconfiguration of the plaza on the east end of Mariucci Arena will maintain the current relationship of pervious to impervious surface.

Given the assumption that the impervious area of the Stadium Project will match that of the existing condition, the anticipated runoff volumes for various rainfall events are also anticipated to remain the same as follows:

Rainfall Event	Runoff Volume	
0.5-inch	2.3 acre-feet	Minimum NPDES requirement
1.25-inch	3.7 acre-feet	Typical bioretention basin design criteria
2.0-inch	7.5 acre-feet	Typical NURP pond design criteria (see below)

**Table 22
Regulatory Criteria for Storm Water Issues**

Entity	Surface Water Quantity	Surface Water Quality	Groundwater	Erosion And Sediment Control	Permitting
City of Minneapolis	<ul style="list-style-type: none"> ▪ Development should be planned in a manner to minimize runoff velocities, increases in peak flows, and to reduce and delay runoff volumes. ▪ Projects greater than 1 acre must be served by storm water facilities. ▪ To the greatest extent possible, use natural drainage ways and vegetated soil surfaces to maximize infiltration (except in the case of storm water hotspots). ▪ When development density, topographic features, and soil and vegetation conditions are not sufficient to adequately handle storm water runoff using natural features and vegetation, constructed facilities, or combinations of constructed facilities shall be used. 	<ul style="list-style-type: none"> ▪ Measures to achieve storm water management standards should be incorporated to the greatest extent possible. ▪ Storm water standards include: reduction of suspended solids in to the Mississippi River, controlled rate of discharge to streams and reduction of nutrients in storm water draining to lakes and wetlands. ▪ All storm water management facilities shall provide an access path capable of supporting light truck traffic. ▪ 70% TSS removal NURP standards. 		<ul style="list-style-type: none"> ▪ Construction projects shall not allow sediment deposits on adjacent properties, rights-of-way, public drainage systems, wetlands, or watercourses. ▪ Contractors must follow the City of Minneapolis' Manual of Standards, which includes the Erosion and Sediment Control Manual (Hennepin Conservation District) and Protecting Water Quality in Urban Area (MPCA) and all amendments. ▪ Any land disturbance covering more than 5000 sq. ft. or 500 cu. yd. of earth moved require an erosion and sediment control plan approved by the city engineer. ▪ Development should be planned in a manner to minimize disturbed areas and erosion potential. 	<ul style="list-style-type: none"> ▪ Land use and building permits will not be issued until a Storm water Management Plan has been approved. ▪ Unless otherwise noted, any activity requiring fill, excavation, storing, stockpiling or disposing of earth material requires an erosion and sediment control permit. ▪ Permits are valid the duration of the project or time period scheduled for the project, which ever is shorter, but never greater than 1 year. ▪ The permittee shall commence permitted activities within 180 days of the scheduled commencement date. ▪ The permittee shall complete work in the sequence shown on the plans.
Mississippi River Watershed Management Organization	<ul style="list-style-type: none"> ▪ Reduce the probability of flooding in intercommunity drainage systems (such as the Bridal Veil Creek/Kasota Pond system) by targeting flood-prone areas identified during the wet summers of the 1990s. 	<ul style="list-style-type: none"> ▪ Use MPCA BMPs, NURP, or similar criteria for all new wet detention basin design. ▪ Utilize grit chambers and detention ponds. ▪ Sump CBs, sump MHs, grit chambers, or other structural treatment devices should be cleaned at least 2 times per year. 	<ul style="list-style-type: none"> ▪ Protect and preserve groundwater quality by encouraging brownfield development... and projects that promote infiltration of 	<ul style="list-style-type: none"> ▪ Contractors must follow the guidelines found in the MPCA document Protecting Water Quality in Urban Areas. ▪ Construction projects should strive to achieve no adverse impact to receiving waters. ▪ Construction activities, 	<ul style="list-style-type: none"> ▪ The MWMO relies on the existing permitting and enforcement bodies its member communities (i.e., MWMO does not have permitting authority itself), but reserves the right to review and comment on plans that affect the quality and quantity of water within its

**Table 22
Regulatory Criteria for Storm Water Issues**

Entity	Surface Water Quantity	Surface Water Quality	Groundwater	Erosion And Sediment Control	Permitting
	<ul style="list-style-type: none"> ▪ The MWMO promotes storm water retention in new construction and redevelopment projects. ▪ Development and redevelopment projects greater than 5 acres shall implement on site storm water quantity and quality controls. ▪ Detention basin criteria: <ul style="list-style-type: none"> – Control peak discharge rate to match that of the pre-developed condition for the 1% (100-year) and 20% (5-year) frequency, 24-hour storm events. – Include access for maintenance of outlet structure and of the facility in general. – Emergency spillway shall handle the 1% - 4% (100-year to 25-year) frequency, 24-hour storm event. – Basin slopes above the NWL to be 1V:3H or flatter. 	<ul style="list-style-type: none"> ▪ Whenever practical, sites less than 5 acres should not route treated water directly into waters and wetlands, but into regional detention ponds. ▪ Quality of surface water runoff after development should be as high as or higher than it was prior to development. ▪ Detention basin criteria: <ul style="list-style-type: none"> – Permanent pool volume to be equal to the runoff generated from a 2" rainfall over the entire tributary area at its fully developed condition. ▪ For locations that are inappropriate for detention basin use, evaluate other techniques, such as: <ul style="list-style-type: none"> – Decrease total amount of impervious area and other site design improvements. – Install infiltration trenches. – Install storm water filters (also known as bio-retention areas). – Increase the frequency of street sweeping. 	<p>unpolluted water.</p> <ul style="list-style-type: none"> ▪ Quality of water infiltrated to the water table or aquifer after development should be as high as or higher than it was prior to development. 	<p>including redevelopment, shall follow the US EPA's rules for NPDES Construction Permits.</p>	<p>jurisdictional boundaries.</p>

**Table 22
Regulatory Criteria for Storm Water Issues**

Entity	Surface Water Quantity	Surface Water Quality	Groundwater	Erosion And Sediment Control	Permitting
Hennepin County	<ul style="list-style-type: none"> ▪ Use MPCA and NPDES criteria. ▪ County minimum standards must be followed for storm water runoff control from construction activities for sites greater than once acre or less than once acre if part of a larger common plan of development. 	<ul style="list-style-type: none"> ▪ Use MPCA and NPDES criteria. ▪ Use MPCA construction site BMP manual to select develop appropriate practices. 	<ul style="list-style-type: none"> ▪ Use MPCA and NPDES criteria. 	<ul style="list-style-type: none"> ▪ Use MPCA and NPDES criteria. ▪ County minimum standards must be followed for storm water runoff control from construction activities for sites greater than once acre or less than once acre if part of a larger common plan of development. 	<ul style="list-style-type: none"> ▪ Use MPCA and NPDES criteria.
Minnesota Pollution Control Agency via the NPDES Phase II permit program.	<ul style="list-style-type: none"> ▪ If 10 or more acres of disturbed soil drain to a common location, a sediment basin must be provided prior to runoff leaving the construction site and before entering surface waters. ▪ When steep slopes and erodible soils are present, even if less than 10 acres drain to one area, temporary sediment basins are encouraged, but not required. ▪ Detention basin criteria: <ul style="list-style-type: none"> – Provide volume for the 2-year, 24-hr storm per acre but never less than 1800 cu. ft. of storage per acre. – If no calculations are conducted, a pond volume of 3600 cu. ft. per acres is allowable. 	<ul style="list-style-type: none"> ▪ Storm water must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in wetlands causing significant adverse impacts to the wetlands. ▪ When above water quality volume can not be treated a maximum of 3 acres or 1% of project size, whichever is larger, can be treated by other means. ▪ Infiltration/Filtration systems should be sufficient to infiltrate or filter the ½" water quality volume in 48 hours with a reasonable chance of achieving 80% TSS removal. Methods include infiltration basins and trenches, rainwater gardens, sand filters, organic filters, bioretention areas, enhanced swales and dry storage ponds. ▪ See discussion under Surface Water Quantity for detention 	<ul style="list-style-type: none"> ▪ Contractors must follow the guidelines found in the MPCA document <u>Protecting Water Quality in Urban Areas.</u> 	<ul style="list-style-type: none"> ▪ Contractors must follow the guidelines found in the MPCA document <u>Protecting Water Quality in Urban Areas.</u> ▪ All exposed soil with a continuous positive slope within 200 ft of a surface water (including a storm water conveyance system) must have temporary erosion control or permanent cover for exposed soil areas as follows: <ul style="list-style-type: none"> – Steeper than 3:1, 7 days – 10:1 to 3:1, 14 days – Flatter than 10:1, 21 days ▪ Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems 	<ul style="list-style-type: none"> ▪ The development and implementation of a SWPPP is required ▪ The NPDES Permit is required for storm water discharges associated with construction activity and with small construction activity as defined in 40 C.F. R. part 122.26(b)(14)(x) and (b)(15). <ul style="list-style-type: none"> – Construction activity includes clearing, grading and excavation that disturbs land of 5 acres or more, and includes the disturbance of less than 5 acres of total land that is part of a larger common plan of development or sale if the larger common plan will disturb 5 acres or more. – Small construction activity includes clearing, grading and excavation that disturbs

**Table 22
Regulatory Criteria for Storm Water Issues**

Entity	Surface Water Quantity	Surface Water Quality	Groundwater	Erosion And Sediment Control	Permitting
MPCA (Cont)	<ul style="list-style-type: none"> - Permanent volume must have a depth greater than 3 ft but no greater than 10 ft. - Water quality volume is equal to ½" from new impervious surfaces created by the project for projects in which the ultimate development replaces pervious surfaces with one or more acres of accumulative impervious surface. - Water quality volume maximum discharge shall be no more than 5.66 cfs per acres of surface area of the pond at the water quality volume. - Outlets must provide stabilized emergency overflow and energy dissipation. - Include access for maintenance of outlet structure and of the facility in general. 	basin design criteria.		<p>and storm sewer inlets.</p> <ul style="list-style-type: none"> ▪ There shall be no unbroken slope length greater than 75 feet for slopes with a grade of 3:1 or steeper. ▪ Sediment control practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until final stabilization has been established. ▪ All storm drain inlets must be protected by appropriate BMPs. ▪ When temporary sediment basins are not attainable, equivalent sediment controls (sediment traps, silt fences, vegetative buffer strips, grit chambers, or any combination) are required. 	<p>land of 1 acre or more, and includes the disturbance of less than 1 acre of total land that is part of a larger common plan of development or sale if the larger common plan will disturb greater than 1 and less than 5 acres.</p> <ul style="list-style-type: none"> - This permit covers all areas of MN.

Table 22
Regulatory Criteria for Storm Water Issues

Entity	Surface Water Quantity	Surface Water Quality	Groundwater	Erosion And Sediment Control	Permitting
<p>University of Minnesota</p>	<ul style="list-style-type: none"> ▪ The university complies with MPCA and NPDES criteria via their MS-4 permit. ▪ Requires all new projects to reduce impacts on receiving waters with a goal of no net increase in volume or rate. 	<ul style="list-style-type: none"> ▪ The university complies with MPCA and NPDES criteria via their MS-4 permit. ▪ Storm water runoff is to be free of illicit discharge. ▪ Plan and design for the minimization of pollutants in post-construction storm water discharges. ▪ Ensure a reduction in the amount and type of pollution loading that: collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways. ▪ Post construction BMPs are to be incorporated in to construction documents. 	<ul style="list-style-type: none"> ▪ The university complies with MPCA and NPDES criteria via their MS-4 permit. 	<ul style="list-style-type: none"> ▪ The university complies with MPCA and NPDES criteria via their MS-4 permit. ▪ Ensure that erosion control measures are in place at all construction sites. ▪ All construction projects are required to have temporary erosion and sediment controls which are incorporated in to construction documents. ▪ Contractors must implement sediment and erosion control measures according to schedules and specifications in construction documents. ▪ The contractor is required to inspect BMPs effectiveness and correct any problems. Post construction BMPs are to be incorporated in to construction documents. 	<ul style="list-style-type: none"> ▪ The university complies with MPCA and NPDES criteria via their MS-4 permit.

Erosion and Sedimentation Issues

The Hennepin County Soil Survey shows that the Project Site is entirely urban land. This designation means that soil classification is not feasible. This includes the inability to classify development limitations, infiltration characteristics, and the erosivity of the soil.¹¹ However, it should be assumed that any redevelopment project has potential to result in erosion, leading to sedimentation problems downstream. In addition, redevelopment of existing industrial sites or sites with known or potential contamination could mobilize the pollutants. It should be noted that the MWMO consider streets as part of the storm water system, and as such, soil erosion from sites far from the Mississippi River can still enter the river. Eroded soils carry nutrients and contaminants, which can change both the chemical and physical properties of the downstream aquatic environment.¹²

The City of Minneapolis has implemented a new ordinance in an effort to reduce the problems of erosion and sedimentation for the Mississippi River. The MPCA through the NPDES program requires that projects over 1 acre in size utilize wet ponds or other devices that achieve 80% Total Suspended Solids (TSS) removal. Additionally, the MPCA manual Protecting Water Quality in Urban Areas: Best Management Practices for Dealing with Storm Water Runoff from Urban, Suburban and Developing Areas of Minnesota, describes various methods for controlling erosion during construction.

Groundwater Issues

Groundwater monitoring indicates that there are two groundwater layers in the Project Site. Groundwater in the upper, surficial layer is approximately 15 feet below existing ground surface. The lower, bedrock groundwater layer is roughly 25 feet lower than the surficial layer. As expected, the flow in both layers is generally to the southwest and toward the Mississippi River.

There are two dewatering programs in the vicinity of the Project Site. The first is a permanent program at the Civil Engineering Building and the second is at the General Mills remediation site north of the railroad tracks. Each may play a role in the measured groundwater levels. The dewatering at the Civil Engineering Building has been ongoing since its opening in 1983, and will continue for the lifetime of the building. Less is known about the dewatering at the General Mills site. However, dewatering at remediation sites is typically a long-term activity. Therefore, the affects of these projects on the groundwater levels at the Project Site are believed to be minimal.

Concept designs for the Stadium Project developed during the Feasibility Study indicated long-term dewatering is not anticipated. At this time, there are no anticipated impacts to groundwater levels due to the Stadium Project. Permanent dewatering requirements and subsequent impacts to groundwater will need to be confirmed during final design.

¹¹ MWMO, p. 11.

¹² MWMO, p. 43.

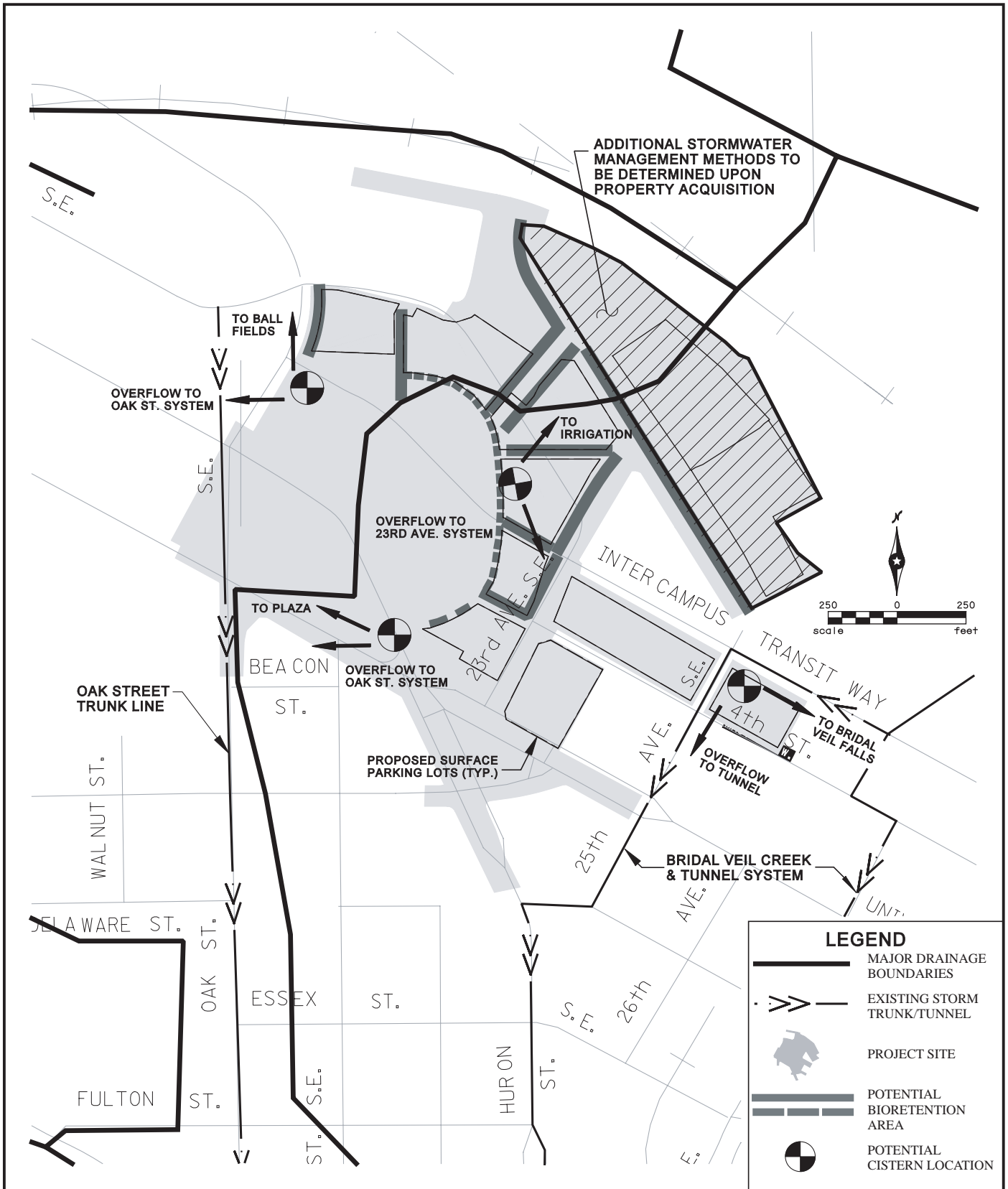
3.5.3 Mitigation

Given that the Project Site is completely impervious surface with no storm water treatment, any mitigation introduced by the Stadium Project will result in a net improvement over existing conditions.

The design of the storm water management system is still in process, however, the conceptual storm water management plan is illustrated in Figure 13. In order to manage the issues outlined in the previous section, the University will commit to the following mitigation measures.

- Minimize impervious surfaces – Reducing the amount of impervious surface reduces the amount of storm water runoff that will need to be managed by treatment devices. The nature of this Project and its need for significant hard surfaces to convey pedestrians and vehicles limits the ability to implement this strategy on a large scale basis. However, wherever practicable, runoff from impervious surfaces and from the Stadium gutter systems will be directed onto landscaped areas or other pervious surfaces to allow for some degree of infiltration, filtration, and rate attenuation. As Stadium designs progress, use of pervious pavers and other permeable surfaces will be considered where appropriate given pedestrian volumes and maintenance conditions.
- Level spreaders –Level spreaders will be considered for:
 - Discharge areas with erosion-resistant material (stabilized vegetation or a turf reinforcement mat).
 - Where sheet flow into bioretention basins is not possible and point discharges are not desirable.
 - Level spreaders will be used in conjunction with other BMPs.
- Bioretention basins – Bioretention will be used as storm water treatment for small storms. Treatment occurs via infiltration/filtration and plant uptake. Their primary design benefit is removal of total suspended solids (TSS), total phosphorous (TP), nitrogen, heavy metals, oil, and grease. These basins also provide some removal of floatables and attenuation for small storms. Bioretention basins are proposed surrounding many of the parking lots adjacent to the Stadium, within the pedestrian promenade, and adjacent to the railroad tracks.
- Underground storage/cisterns – will be used to provide temporary storage of storm water runoff in conjunction with other treatment devices. Cisterns would be used as part of a treatment train. This treated water could then be recycled for irrigation or for other purposes. Where feasible, the intent would be to design any underground storage units incorporated into this Project such that the treatment train system provides the rate control criteria of the MWMO.

Support/5383 TCF Stadium/figures/Draft EIS/5383EISFigure11_101705.eps



Football Stadium - Final EIS
University Of Minnesota

Figure # 13

Conceptual Stormwater Management Plan

Other measures still under investigation include wet detention basins, pervious pavers, and other permeable surfaces.

3.5.4 No-Build Alternative

With the No-Build Alternative, there would be no change to the existing storm water conditions. Furthermore, opportunities to potentially improve storm water runoff quality conditions would not be realized.

3.6 Environmental Contamination

3.6.1 Affected Environment

Contamination Investigation Area

The portion of the Project Site that was investigated for potential soil and groundwater impacts is illustrated in Figure 14. The area is less than the total Project Site in the EIS (illustrated in Figure 3). Specifically, the area investigated in coordination with the Minnesota Pollution Control Agency (“MPCA”) Site Response Section is approximately 36 acres, and is generally bounded by University Avenue to the south, Oak Street SE to the west, 5th Street NE to the north and 23rd Avenue SE to the east. Based on the fact that this 36-acre parcel of land was more or less in contiguous connection with the former Chicago and Northwestern Railroad Yards throughout the majority of its industrial history, it was determined to be appropriate to investigate the 36-acre property as a whole. Therefore, references within this section of the EIS to the investigation area will be specific to the 36-acre area defined above.

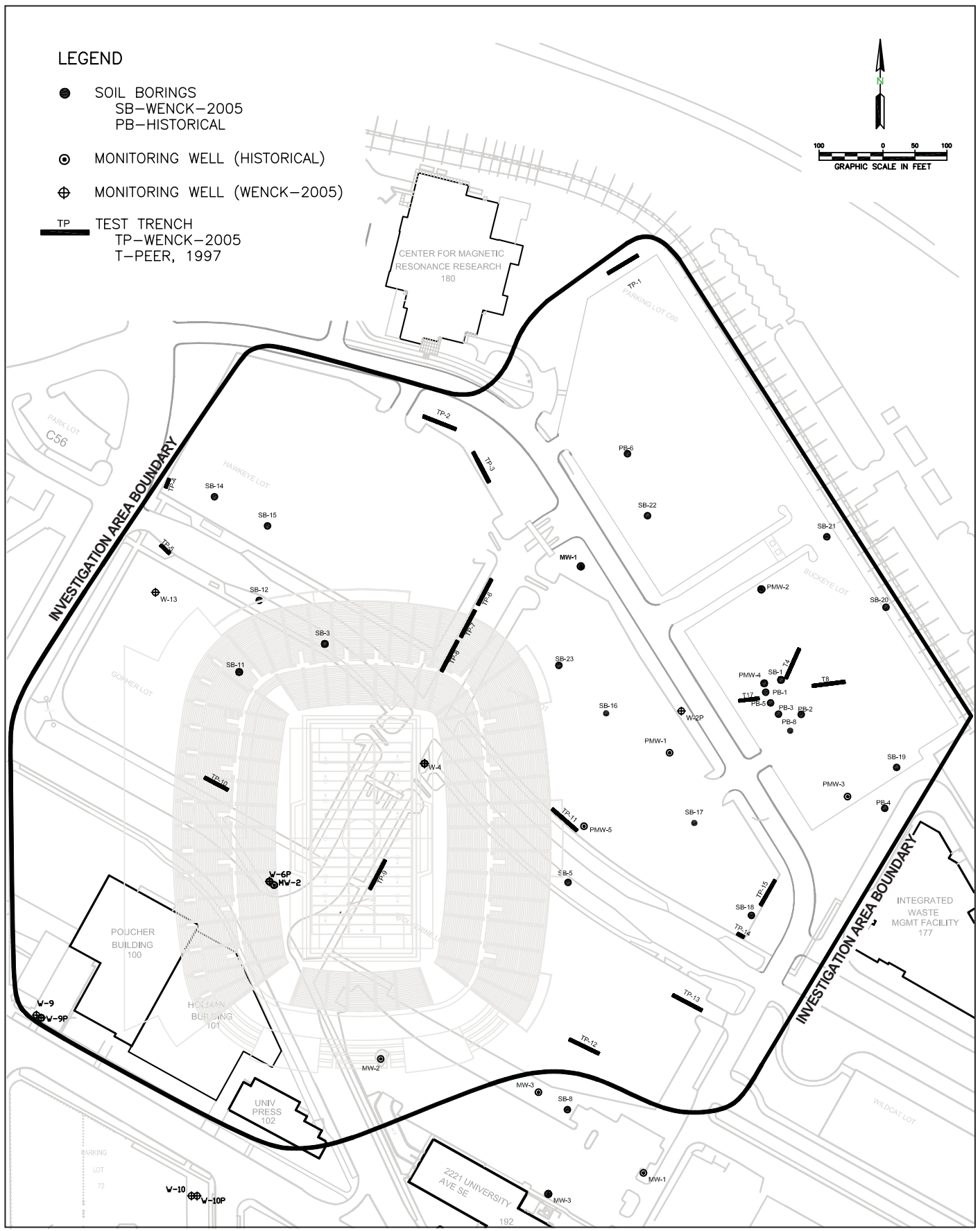
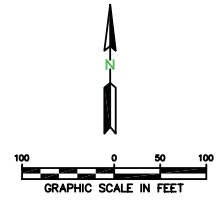
Historical Information Review

The investigation area has had a variety of past industrial uses, including a former wood treating facility, a rail yard, a bulk petroleum storage facility, a grain elevator and an asphalt plant, each of which pose concern related to past environmental practices and the potential for residual impacts. Previous environmental investigations have revealed impacts to soil and groundwater associated with at least two of these historical uses: the former bulk petroleum storage facility and the former wood treating facility. Limited investigations and response actions were previously implemented regarding certain areas of soil contamination associated with the bulk petroleum storage facility and wood treating facility.

Notwithstanding these past limited environmental investigations and response actions, potential risks associated with soil and groundwater impacts as a result of past industrial uses had not been systematically studied for the 36-acre investigation area as a whole. Therefore, after drawing from the existing historical information and past environmental studies, a comprehensive Subsurface Investigation Work Plan (“SIWP”) was developed for the investigation area soil and groundwater. The SIWP and associated sampling and analytical protocols were reviewed by the MPCA and approved on June 27, 2005. The fieldwork associated with the SIWP was completed in the investigation area during June, July and August 2005. The MPCA approved the Phase I Environmental Site Assessment and Subsurface Investigation Report (Wenck, October 2005) (“SIR”) on December 28, 2005. The report is available on the University of Minnesota website: www1.umn.edu/stadium.

LEGEND

- SOIL BORINGS
SB-WENCK-2005
PB-HISTORICAL
- ⊙ MONITORING WELL (HISTORICAL)
- ⊕ MONITORING WELL (WENCK-2005)
- TP TEST TRENCH
TP-WENCK-2005
T-PEER, 1997



The following summarizes the past industrial uses of the investigation area, significant findings of the Subsurface and prior investigations, response action alternatives, and a conceptual plan for addressing the identified historical environmental releases of hazardous substances, pollutants or contaminants in the investigation area in the context of the proposed Stadium Project.

Former Creosoting Facility

The former Republic Creosoting wood treating facility operated on a portion of the northeast part of the Chicago & Northwestern railroad yard from approximately 1903 to 1919. The facility occupied approximately 2.75 acres and included a creosote wood treating plant, a lumber processing plant, coal bins, storage buildings and railroad loading areas. Also associated with the Republic Creosoting facility were several large aboveground storage tanks. The tanks ranged in size from approximately 25,000-gallons to 100,000-gallons and were used to store creosote oil. The facility also had a settling basin where wood was treated with the creosote oil.

The former Republic Creosoting facility has been the subject of prior environmental investigations. Poly-nuclear aromatic hydrocarbons (“PAHs”) have been identified as being present in the area of the former wood treating operations. Common forms of PAHs include creosote, historically used as a wood preservative, and petroleum-distillate tars used for preparing bituminous pavements or roofing materials.

A voluntary response action was completed on a portion of the former wood treating facility in 1995. That response action, however, was limited to settling basin soils and did not address other historical creosote releases to soils or to groundwater associated with Republic Creosoting operations.

In 1997, Peer Environmental & Engineering Resources, Inc. conducted additional soil investigation involving a large number of test trenches in the area of the former creosoting facility and identified significant impacts still present in soil beyond the limits of the area of the settling basin soils that had been treated in 1995. Their investigation defined the extent of contamination in this area, so very limited additional soil investigation was conducted in this portion of the Site in 2005.

Former Bulk Petroleum Storage Facility

Standard Oil Company operated a bulk petroleum facility on the western portion of the study area from approximately the late 1800s through the mid-1960s. Between approximately 1912 and 1952, the facility reportedly included thirteen above-ground storage tanks (“ASTs”) ranging in size from 10’ in diameter by 10’-16’ tall to 50’ in diameter by 30’ tall. All ASTs were removed by approximately 1957.

Some soil and groundwater testing were previously conducted in the early 1990s on a portion of the former petroleum storage facility, which identified historical releases of petroleum. The University reported the release (Leak Site No. 6134) and conducted a limited soil excavation in the vicinity of Oak Street and 5th Street during roadway and utility improvements. In 1998, the

MPCA issued a Leak Site Closure Letter to the University as to this portion of the Investigation Area.

Former Rail Yard

A majority (approximately 23.8 acres) of the Investigation Area was formerly operated as a railroad yard by Chicago Great Western Railway Company from approximately the 1880s through the mid-1960s. According to an earlier Phase I Environmental Site Assessment, buildings associated with the railroad yard operations included lumber and tool sheds. The former Republic Creosoting wood treating facility (described in Section 3.7.2.1) was located in the northeast quadrant of the railroad property.

With the exception of the testing performed regarding the former wood treating facility, the railroad yard property had not been the focus of an environmental investigation until the Subsurface Investigation conducted in June through August 2005.

Former Grain Elevator Site

A grain elevator facility was operated in the southeast portion of the Investigation Area by various entities, including Interstate Grain Company, from approximately 1889 through 1966. The grain elevator and associated structures were raised at some point between 1966 and 1974. Based upon an earlier Phase I Environmental Site Assessment and other available reports, it does not appear that any environmental testing had been conducted with respect to the former grain elevator facility prior to the Subsurface Investigation undertaken in June through August 2005.

Former Asphalt Plant Site

An earlier Phase I Environmental Site Assessment describes an asphalt plant that was understood to have been located in the south central portion of the Investigation Area in the early 1900s. Very little historical information was identified relative to the former asphalt plant. Therefore, the reported area of the asphalt plant was investigated as part of the Subsurface Investigation.

Summary of Results of Subsurface Investigation

As noted above, several environmental studies had previously been conducted by the University and others regarding the Investigation Area and adjacent properties. Many of these past studies involved the collection of soil and groundwater samples. However, the Investigation Area as a whole had not historically been fully characterized until the Subsurface Investigation undertaken in June through August 2005. The focus of the Subsurface Investigation was to study previously uninvestigated portions of the Investigation Area, as well as completing the characterization of those portions of the Area for which past investigations had not produced sufficient documentation of site conditions.

The results of the previous studies and Subsurface Investigation are set forth in the SIR. The Subsurface Investigation involved the installation of fifteen test trenches, many of which were approximately 50 feet long, and all of which were approximately 10 feet deep. These test trenches allowed for the evaluation of subsurface fill and allowed for sampling of soil horizons that

were indicative of former land surface during earlier phases of Investigation Area use.

In addition, approximately twenty-two soil borings were advanced to varying depths (a number of selected boring locations were abandoned after drilling encountered limiting conditions, such as large boulders or former building foundation systems). Eight soil borings were completed as monitoring wells, four in the unconfined water table aquifer, and four in the bedrock aquifer in the Platteville limestone formation.

Approximately 140 soil samples were collected and submitted to an analytical testing laboratory for analysis. In general, the results of the analyses showed the vast majority of the impacts were below risk levels appropriate for industrial sites. No concerns were revealed with respect to pesticides or polychlorinated biphenyls. Groundwater impacts were localized, but generally within applicable drinking water criteria.

More specifically, the Subsurface Investigation identified the presence of PAHs and other creosote-related compounds in the soil and groundwater, elevated levels of heavy metals in soil, and weathered petroleum in soil and groundwater. Excluding the area of impacts identified by Peer in its 1997 investigation of the residual impacts from Republic Creosoting's operations, the concentrations of the major contaminants of concern (PAHs, lead and arsenic) were generally within ranges that would not require significant response action. For example, while lead levels ranged to a high of 2,100 parts per million ("ppm"), average concentrations were on the order of 130 ppm. The residential screening value, which is a Minnesota risk-based reference value below which additional investigation or cleanup is unnecessary, is 300 ppm. The industrial screening value is 700 ppm. These screening values are not cleanup goals, nor are they established by rule. Rather, they are guidance used for evaluating risk at sites where a release of hazardous substances, pollutants or contaminants has occurred. It should also be noted that levels of metals occur naturally in the environment, although generally at levels below established human health risk guidance. Different re-use scenarios (i.e., residential versus industrial) affect the level of exposure that is likely to occur over an extended period of time. For those reasons, the residential exposure scenario results in the most restrictive screening values.

Arsenic concentrations ranged to a high of 130 ppm in one sample, with an average of approximately 5 ppm. Historically, 10 ppm has been used as a residential screening value for arsenic, although this number was recently revised to 5 ppm as a residential guideline. PAHs were identified above detection limits in 55 out of 94 samples ranging up to a high of 13 ppm total benzo(a)pyrene equivalents, but only fourteen of the samples showed total benzo(a)pyrene equivalents above 2 ppm, the residential screening criteria. For comparison purposes, the industrial screening criterion is 3 ppm benzo(a)pyrene equivalents. It should be noted that the area of the Republic Creosoting facility was not extensively sampled in this phase of the investigation, and is known to have some very high levels of PAHs within the area of the former creosoting operations.

The analytical test for Diesel Range Organic compounds (“DRO”) is a way to measure petroleum hydrocarbon impacts from fuel oil or diesel fuel. DRO was detected above the method detection limit in eighty samples, at an average concentration of approximately 114 ppm, with a high of 2,500 ppm. While no cleanup standard has been established for DRO, ranges of approximately 100 ppm have been approved at other Minnesota sites undergoing cleanup with oversight from the MPCA’s cleanup programs. It should be emphasized that DRO was not detected above the method detection limit at 23 other sampling locations, so the actual average concentration of DRO found in the study area is actually less than 100 ppm, again, excluding the area of the former Republic Creosoting facility.

With respect to groundwater, samples were taken from a number of previously installed monitoring wells, as well as those installed by Wenck during this investigation. A second round of samples was collected to corroborate the first sampling event. In general, no contaminants were detected that exceeded Minnesota drinking water criteria in back-to-back rounds of sampling. Silver exceeded Minnesota’s Health Risk Limit (HRL) in one well in the first round of samples collected, and benzene exceeded the U.S. Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) in the follow-up round of sampling (however, benzene did not exceed the HRL in either sampling event). Finally, lead exceeded the EPA’s Health Based Value (HBV) from groundwater samples collected from bedrock wells. It is considered unlikely that the silver or lead detected in groundwater is related to on-site releases resulting from historical land use, since shallower wells in the Investigation Area did not reveal elevated levels of these metals. In summary, these findings are consistent with the above-described historical uses of the Investigation Area.

3.6.2 Mitigation Measures

The identified releases of hazardous substances, pollutants or contaminants will be addressed during redevelopment activities in a manner that is protective of public health and the environment, as determined by the MPCA. Specifically, a Response Action Plan (“RAP”) will be developed to address the identified impacts at the Site. It is anticipated that a significant portion of the impacted soils will be managed on-Site. The MPCA has determined that the contaminated soils associated with the former Republic Creosoting operations may remain in place, provided that the Stadium is constructed outside of the area of the creosote contamination and no dewatering of area soils is required as part of the Stadium Project.

A Site Redevelopment Construction Contingency Plan (“Contingency Plan”) will also be necessary to address any environmental impacts that may be identified during site preparation and redevelopment activities. The Contingency Plan will govern all site preparation, construction and other redevelopment-related construction affecting the subsurface, such as grading, pavement removal, utility work, storm water system construction, and foundation system construction. The Contingency Plan will also include air monitoring requirements, soil management and covering of soil stockpiles, storm water pollution prevention controls, and site worker health and safety issues.

The RAP and Contingency Plan will be developed and submitted to the MPCA for review and approval when detailed redevelopment plans have been prepared, including plans for Stadium siting, excavation and grading.

3.7 Geologic Hazards and Soils

3.7.1 Geotechnical Study

As previously detailed, the Project Site is a fully urbanized setting containing a mix of industrial, commercial, and institutional land uses. It has a long history of industrial use related to railroad activities. The Stadium will be constructed on a portion of the Project site currently used for surface parking.

Given the nature of the proposed Stadium Project, no adverse geologic impacts are anticipated as a result of Stadium operations. However, the potential exists for construction period vibration impacts from various activities including, but not limited to, pile driving and soil compaction. Section 3.10 provides additional details regarding construction-related impacts.

A more detailed assessment of possible geologic issues will be completed during the Stadium Project design phase when specifics regarding foundation types and construction techniques will be defined.

3.8 Social, Community, and Economic Impacts

3.8.1 Compatibility with Plans and Land Use Regulations

Affected Environment

Development and redevelopment on the Twin Cities campus is guided by the campus design framework set out in the University of Minnesota Twin Cities Campus Master Plan. The Master Plan is based on 11 guiding principals established by the Board of Regents and is intended to provide broad level guidance and policies for the Twin Cities campus. The Master Plan covers the key physical elements of the Twin Cities campus including buildings and facilities, open space, transportation, and other planning issues. The Master Plan divides the Twin Cities campus into 15 precincts and a corridor with specific guidelines established for each precinct. The Project Site is located within the Sports and Recreation Precinct where most of the campus sports entertainment and training facilities are concentrated.

In itself, the framework of the Master Plan was prepared to be sensitive and compatible with master and comprehensive planning efforts of surrounding communities and the Metropolitan Council including The Minneapolis Plan that identifies and defines the University campus as follows.

- University of Minnesota campus as an existing “growth center”: The Minneapolis Plan defines growth centers as thriving areas of mixed land use with transit opportunities and adequate transportation access for the movement of goods and people. The Plan estimates the University of Minnesota has the ability to provide an additional 7,000 to 10,000 new jobs and 750 to 2,000 new housing units over the next 20 years.
- University Avenue (CSAH 36) as a “community corridor”: Community corridors connect neighborhoods, carry a moderate volume of traffic, and have a primarily residential character, but support a mix of uses,

especially at key intersections. Balancing the needs of cars and pedestrians along these streets is a challenge that will increase as the area becomes more congested.

- Stadium Village (Washington Avenue (CSAH 122) and Oak Street) and Dinkytown (University Avenue (CSAH 36) and 14th Avenue) as “activity centers”: Activity centers are areas that attract visitors from around the region because of a concentration of activity including retail, commercial, entertainment, educational, and other cultural or public facilities.

Environmental Consequences

The Stadium Project is not subject to the adopted master or comprehensive plan of any jurisdiction outside of the University. However, the Stadium Project is consistent with the Minneapolis Plan because it will enhance the viability and character of the campus, it will improve the pedestrian infrastructure along and adjacent to University Avenue, and it will introduce additional activity for Stadium Village and Dinkytown businesses.

The University acknowledges that a conflict exists between the proposed Stadium Project and the proposed rail alignment outlined in Central Corridor Draft Environmental Impact Statement.

Mitigations Measures

No impacts have been identified, and no mitigation is proposed regarding compatibility with other plans.

With respect to the Central Corridor project, the University will continue to work with the proposers to support a transit line through campus that:

- maximizes access to the University and increases transit ridership;
- optimizes the overall efficiency of the transit system;
- avoids significant pedestrian/ vehicular/bicycle conflicts on and around campus;
- promotes a vibrant urban environment on and around campus;
- does not degrade the functionality of campus operations.

The Central Corridor project, however, is still a proposed project awaiting approval of its EIS and funding for preliminary engineering. As no final decisions have been made on either the mode of transportation (rail or bus) or on the overall alignment between downtown Minneapolis and downtown St. Paul it is premature to address any mitigation for potential additional system costs.

No-Build Alternative

The No-Build Alternative, which would keep University football at the Metrodome, is inconsistent with the University’s goal of bringing Gopher Football back to campus.

3.8.2 Social and Community Environment

Affected Environment

The University's East Bank campus and the communities nearby developed together, adjacent to and influenced by downtown Minneapolis, the milling district, the railroads, and the Mississippi River. In this part of the city, as on campus, many historic homes and industrial buildings have been preserved from the mid and late 19th Century. The residential neighborhoods include the grand old homes of the early industrial barons who built the city, and modest houses that were built for the people who worked in the mills and related industries.

Southeast Minneapolis today is home to a population of highly educated, civically engaged people who value living in a very high quality urban environment. They enjoy access to an array of natural and cultural amenities from downtown Minneapolis to downtown Saint Paul, with the river as a physical and symbolic connection.

The 1980s and 1990s saw a trend in single family homes being converted to rental units, many of which have been occupied by students seeking to live closer to campus. In the last five years, however, there has been a resurgence of interest in urban living on the part of empty nesters and young professionals, driving the development of several new for-sale, urban scale housing developments on land that was formerly used for industry. This trend is still playing out, with several Southeast Minneapolis redevelopments currently in the planning stage. The new residents will add to the social and economic mix in the neighborhoods near the campus.

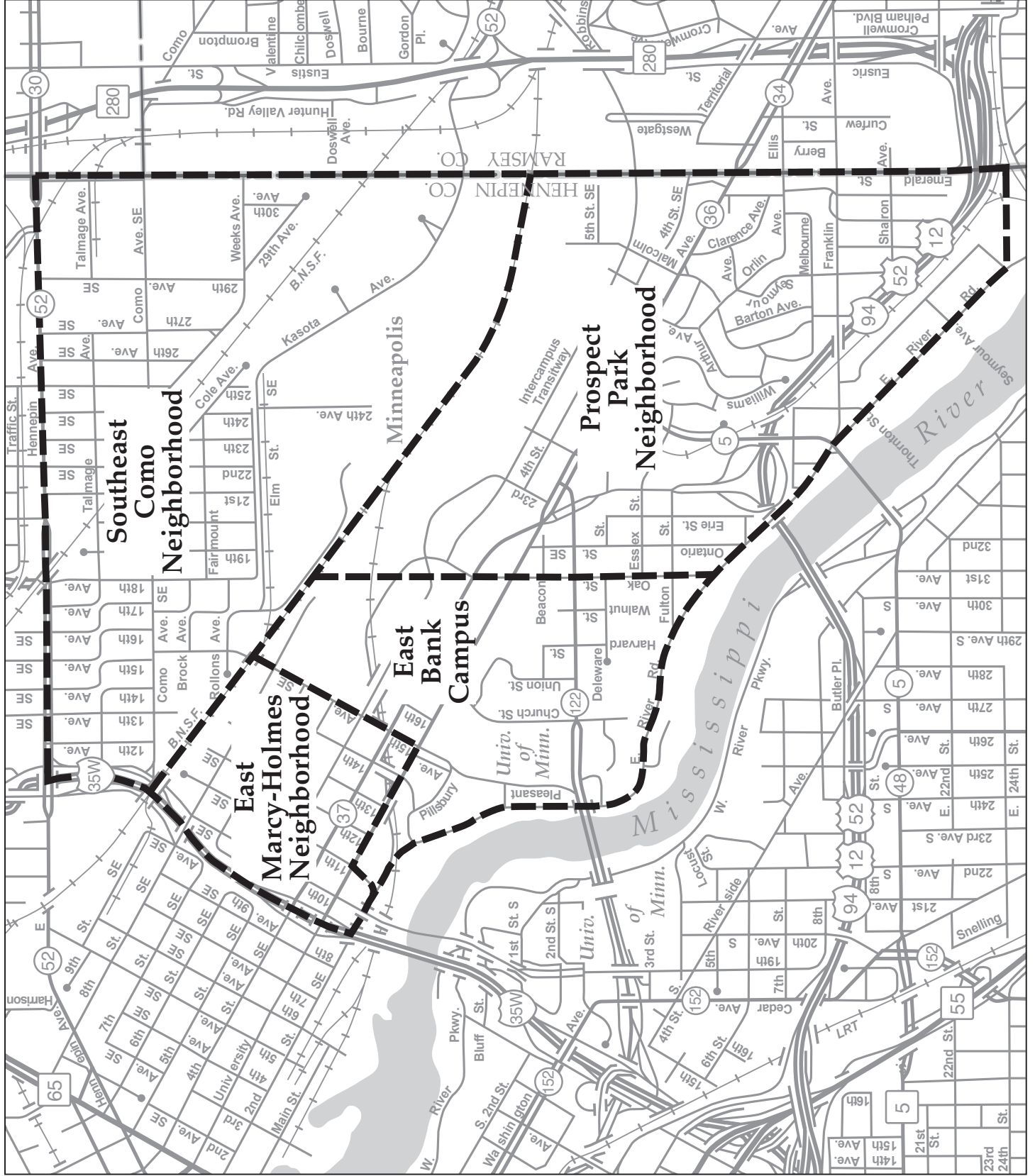
Data from the U.S. Census Bureau was collected for the University of Minnesota's East Bank Campus and surrounding neighborhoods to describe the population near the proposed Stadium. The neighborhoods selected include: East Marcy-Holmes, Prospect Park, and Southeast Como. Together, these define the Socio-Economic Study Area. The boundaries of each neighborhood are shown in Figure 15. The data collected is presented in Table 23.

The population in these neighborhoods has remained relatively stable. Even with the fully developed nature of these neighborhoods the high demand for housing from University students has contributed to an increased proportion of student age neighborhood residents. There has also been some additional residential development since the 2000 census was completed that may result in a slightly higher population today.

Today, more students live on or near the campus compared to when Memorial Stadium existed and the overall land use character remains relatively unchanged from when Memorial Stadium, which was a larger facility than the proposed Stadium, was operating.



Figure 15
East Bank
Campus
and Adjacent
Neighborhoods



University housing capacity since 1999 has increased from 4,568 to 6,308 students. Furthermore, surveys conducted by the University indicate that approximately 60 percent of students 20 years ago thought of themselves as commuters, while the remaining 40 percent said they lived on or close to campus. The most recent survey conducted indicated the reverse situation where 60 percent of students said they lived on or close to campus. This pattern reflects the University's attempts to become more of a residential campus as opposed to a commuter campus.

**Table 23
Population**

	University of Minnesota – East Bank	East Marcy-Holmes Neighborhood	Prospect Park Neighborhood¹	Southeast Como Neighborhood
2000 Population	4,007	3,497	6,326	5,496
1990 Population	4,047	3,674	5,306	5,407
% Change	-1.0%	-4.8%	19.2%	1.6%

Source: 1990 and 2000 U.S. Census Bureau Data

¹ The City of Minneapolis identifies Oak Street as the western boundary of the Prospect Park Neighborhood. Therefore, the Project Site, as well as other University buildings, are technically located within Prospect Park and the demographic information of these areas is included as part of the Prospect Park Neighborhood analysis.

Community resources include schools, churches, cemeteries, libraries, hospitals, and other public facilities that provide a service and/or benefit to the surrounding community. The University provides many community resources including educational facilities, libraries, sports arenas, cultural facilities, and others. The neighborhoods adjacent to the University also include a public library, numerous churches, and several parks.

The data presented above indicates that the Area defined for and addressed in this section is fully urbanized and has a relatively constant population with an established University affiliation and fairly large proportion of younger residents. Furthermore, the campus in general and the Project Site in particular are logical locations for a college football stadium and the surrounding neighborhoods are closely linked to the campus life and the day-to-day operations of the University.

Environmental Consequences – Event Day Operations

Major Events

The primary adverse social and community impacts anticipated with Major Events at the Stadium fall into three categories:

- Traffic – This topic has been previously addressed in Section 3.1.
- Parking – This topic has been previously addressed in Section 3.1.

Student and Fan Behavior – This topic was raised in numerous public comments on the Draft EIS and includes concerns related to alcohol, tailgating, and parties (see Section 7.2.7).

Minor Events:

Most of the social and community issues associated with Minor Events at the Stadium by definition will be equivalent to the existing or No-Build conditions. It is recognized that Minor Concert Events represent a change in event type from that which exists today, however, as detailed in Section 3.2.5, no additional adverse impacts are anticipated.

Mitigation Measures – Event Day Operations

Major Events:

In order to mitigate the adverse impacts outlined above, the University will do the following:

- Traffic – Mitigation outlined in Section 3.1.4.
- Parking – Mitigation outlined in Section 3.1.4.
- Student and Fan Behavior:
 - Guest Services/Ushers/Fan Ambassadors – The University will train game day staff to reinforce and support a responsible, welcoming, and family friendly environment.
 - Behavior Expectations and Stadium Rules – The University will develop clear behavior expectations and Stadium rules. These guidelines will be communicated to all ticket holders through e-mail, inserts in ticket envelopes, game day programs, public address announcements and regular media outlets.
 - Alcohol – Consistent with Regents policy, alcohol will be available only in accordance with applicable state laws and limited to suites, club seats, and other premium seating areas. The University will not allow intoxicated persons into the Stadium and will confiscate alcoholic beverages that are brought in.
 - Tailgating – Tailgating is part of the collegiate game day experience and the University anticipates that it will take place on game days. In order to limit the adverse impact of this activity, the University will provide locations on campus to accommodate this activity including designated parking lots and picnic sites. In consultation with the SAAG the University will develop reasonable tailgating policies for University controlled areas. These will include but not be limited to policies on sound amplification, cooking devices, and alcohol use. The University will ensure appropriate City and Regent authority to regulate and control tailgating outside designated areas.
 - Party Patrols – The University Police will work with the adjacent municipalities to increase police enforcement in adjacent neighborhoods on Major Event weekends. This increased enforcement will occur on Friday (pre-game) and Saturday (post-game) nights.
 - Litter – The University will provide and pick-up trash containers for use on and off-campus. The number and location of these containers

will be coordinated with the SAAG, adjacent municipalities, and adapted as necessary to reflect fan behavior.

In addition to the measures presented above, the University will establish a Mitigation/Good Neighbor Fund. The use of the funds will be coordinated through the SAAG as described in Section 7.2.3. Further details on the Mitigation/Good Neighbor Fund are provided in Section 7.2.2.

Minor Events:

No additional mitigation measures are required beyond those detailed in Section 3.2.5.

No-Build Alternative

The No-Build Alternative would not result in any additional event day social or community impacts.

Non-Event Operations

No significant adverse impacts are anticipated during non-event periods.

3.8.3 Economic Impacts

Affected Environment

The economy of the area surrounding the Project Site is centered on and supported by University students, staff, and other employees. Dinkytown and Stadium Village contain concentrations of retail, various services, restaurants, and other businesses designed to attract and serve students, staff and others associated with the University, along with residents of the surrounding neighborhoods.

Employment data from the U.S. Census was collected for the University and the previously defined adjacent neighborhoods. The data, presented in Table 24, indicates that educational services, retail, and accommodation and food services industries are the prominent employment sectors.

Environmental Consequences – Event Day Operations

Major Events

The economic impacts of Major Events will be both beneficial and adverse. Increased traffic and demand for parking on event days may negatively impact access to some local businesses. However, given the high proportion of businesses in food service retail trade, the increased number of people on event days will likely have a beneficial economic impact. The University is planning to develop programs to expand the fan experience before and after the football game which will provide additional opportunities for local businesses to attract patrons. To some degree, the change in economic activity will reflect a trade-off between potential decreased activity for those businesses closer to the Metrodome and increased activity for businesses closer to the new Stadium.

**Table 24
Employment by Industry**

	University of Minnesota – East Bank	East Marcy-Holmes Neighborhood	Prospect Park Neighborhood	Southeast Como Neighborhood
Agriculture, forestry, fishing and hunting	0 (0%)	32 (2.7%)	6 (0.2%)	12 (0.3%)
Mining	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Construction	20 (1.0%)	39 (3.3%)	69 (1.8%)	97 (2.9%)
Manufacturing	57 (2.9%)	56 (4.7%)	244 (6.2%)	282 (8.5%)
Wholesale trade	9 (0.5%)	0 (0%)	32 (0.8%)	82 (2.4%)
Retail trade	281 (14.1%)	102 (8.5%)	392 (10.0%)	312 (9.4%)
Transportation and warehousing	37 (1.9%)	27 (2.3%)	73 (1.9%)	73 (2.2%)
Utilities	0 (0%)	0 (0%)	16 (0.4%)	0 (0%)
Information	57 (2.9%)	69 (5.8%)	136 (3.5%)	99 (3.0%)
Finance and insurance	40 (2.0%)	24 (2.0%)	153 (3.9%)	144 (4.4%)
Real estate and rental and leasing	41 (2.1%)	11 (0.9%)	116 (3.0%)	27 (0.8%)
Professional, scientific, and technical services	86 (4.3%)	67 (5.6%)	315 (8.1%)	335 (10.1%)
Management of companies and enterprises	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Administrative and support and waste management services	59 (3.0%)	54 (4.5%)	57 (1.5%)	77 (2.3%)
Educational services	689 (34.7%)	346 (29.0%)	1,054 (26.9%)	949 (28.7%)
Health care and social assistance	98 (4.9%)	81 (6.8%)	488 (12.5%)	295 (8.9%)
Arts, entertainment, and recreation	117 (5.9%)	37 (3.1%)	174 (4.4%)	69 (2.1%)
Accommodation and food services	255 (12.8%)	196 (16.4%)	339 (8.7%)	296 (8.9%)
Other services (except public administrations)	115 (5.8%)	45 (3.8%)	157 (4.0%)	57 (1.7%)
Public administration	26 (1.3%)	7 (0.6%)	92 (2.4%)	103 (3.1%)
Source: U.S. Census Bureau, Census 2000				

Minor Events

The economic impacts associated with Minor Events at the Stadium will be equivalent to the existing or No-Build conditions.

Mitigation Measures – Event Day Operations

Major Events

No additional mitigation measures are proposed.

Minor Events

No additional mitigation measures are proposed.

No-Build Alternative

The No-Build Alternative would not result in any additional access, traffic, or parking impacts to businesses. However, with the No-Build Alternative, there would be no increase in patronage to businesses near the Project Site resulting from Stadium events.

Non-Event Operations

No significant adverse impacts are anticipated during non-event periods.

3.8.4 University Campus Impacts

Affected Environment

In 2004, the University of Minnesota Twin Cities Campus had an enrollment of approximately 51,000 students with approximately 16,000 faculty and staff. Numerous activities, including athletic events, lectures, exhibits, concerts, films, theater performances, and other student and campus activities, take place daily.

Environmental Consequences

The primary adverse impacts of the Stadium Project on the University campus are potential event conflicts (i.e., campus events) and accessibility for faculty and other campus users when the Stadium events occur. Faculty and other users coming to campus during a Saturday football game may experience traffic congestion and limited parking availability.

Mitigation Measures

No additional mitigation measures are proposed.

No-Build Alternative

Continuing Gopher football at the Metrodome under the No-Build Alternative would not enhance the connection between campus life and the football program. Students and other attendees would continue to drive or take transit from campus to downtown Minneapolis for football games and Gopher football would remain as one of few University events to take place off-campus.

3.9 Visual Impacts

3.9.1 Stadium Lighting

Environmental Consequences

An analysis of the impact of the proposed Stadium lighting system was conducted based on the available site and architectural data.

The proposed Stadium will be equipped with a high efficiency and directional lighting system necessary to illuminate the playing surface to levels that are appropriate for *Class I* level play. This level of play is characteristic of college and professional football stadiums of proposed seating capacity of over 5,000 and having requirements for television broadcasting. Light fixtures will be chosen and installed to minimize glare and “spill-out” of illumination during events.

Minimal lighting will be employed during non-event days for safety and security. Multiple tower structures will be built to support luminaries. It is currently anticipated that eight of these structures will be built. The anticipated height for these structures is in the range of 140 to 160 feet above the playing surface to the top of lighting structure.

This analysis took into consideration the proximity of the Stadium to nearby housing that may be affected by nighttime lighting spill. The closest residential structure is an apartment building approximately 1,100 feet south of the proposed 50-yard line. The other use considered is a hotel approximately 1,400 feet southwest of the proposed 50-yard line. Both

structures are located within a commercial area. The primary residential neighborhoods are outside the area of effect, and the fraternity houses along University Avenue will be screened by the Williams Arena/Sports Pavilion.

Lighting calculations generated as part of this evaluation indicate that at these locations, spill lighting levels from the proposed Stadium lighting system should not exceed existing light levels generated by adjacent street lighting. These existing light levels, combined with extraneous light from businesses, and the typical metropolitan area night-sky glow, will further diminish the perception of glare generated by the Stadium. Overall, the technical analysis concluded the lighting levels generated by the proposed Stadium lighting system would not adversely impact the surrounding uses.

Furthermore, the site for proposed construction is primarily illuminated parking lots for use by the University. Lighting levels generated by associated new parking areas will be similar to the lighting levels presently in place.

Mitigation

No mitigation is required.

3.9.2 Visual Compatibility

Environmental Consequences

The 2003 Stadium Feasibility Study describes the proposed design of the Stadium as follows:

The Stadium would be designed to reflect the look and feel of existing University buildings, consistent with good campus planning. The Stadium façade would incorporate an architectural technique that uses a clearly delineated base, middle, and top as means of visually dividing the exterior façade. This technique was used in the buildings on the historic Northrop Mall.

The Stadium would be designed and constructed to a standard that would ensure long-term sustainability, future flexibility, and an optimal life cycle cost, and to meet applicable University construction standards.

Based on conceptual design, the Stadium may use a natural or artificial stone base with stone detailing on building components close to pedestrian areas. The stone will transition to brick of an appropriate color and texture for the campus.

The west side tower structure would have a solid façade of stone, brick, glass, and steel. The north end zone and east side of the Stadium would have a more open concourse, making more selective use of the same materials. A brick and wrought iron fence would define the outer edge of the concourse on the east and south sides. Public entries would be marked with architectural treatments such as towers, canopies, integrated environmental graphics, and architectural lighting. Economical materials would be used for low visibility and nonpublic areas.

The concept plan for the proposed Stadium Project will result in beneficial visual and aesthetic improvements over existing conditions.

Mitigation

No mitigation is required.

No-Build Alternative

There would be no changes to the visual environment under the No-Build Alternative. Furthermore, the aesthetic benefits of the Stadium Project would not be realized with the No-Build Alternative.

3.10 Construction-Related Impacts and Mitigation

3.10.1 Odors, Dust, Noise, and Vibration Traffic

An urban construction project of the scale and duration being proposed has the potential to adversely impact the surrounding community if not properly managed.

This section of the EIS outlines potential environmental consequences and the mitigation measures the University will adopt to address any issues that arise during construction.

In addition to specific mitigation to address the construction-related impacts discussed below, the University will establish and publicize a telephone hot line that residents, businesses, and commuters can use to submit issues and concerns associated with construction activities.

Odors

Environmental Consequences

The potential for obnoxious odor and dust that may occur during the cleanup on the site will be analyzed and addressed in the Response Action Plan (RAP). There is a small portion of the site where the potential for creosote odor is likely if the area is physically excavated or disturbed. This area is on the northeast quadrant of the study area, and is approximately 1.3 acres (or approximately 200 feet by 300 feet). Dust is also likely during site cleanup and redevelopment construction activities.

Mitigation Measures

Air monitoring will be a necessary part of any approved remediation plan, and mitigation measures will be necessary if visible dust emissions are observed. If organic vapors are detectable downwind at the Project perimeter, mitigation measures may also be necessary. Conducting remediation activities during cold weather months (which is expected) will be helpful in reducing the potential for volatilization of organic vapors, and reducing the number of potential nuisance concerns.

Dust

Environmental Consequences

Fugitive dust will occur during grading and construction. Exposed soils on the Site may be susceptible to wind erosion. Dependent upon the wind and construction conditions, some nearby properties may be affected temporarily.

Mitigation Measures

During construction, the following dust control measures will be used as necessary:

- Minimize the period and extent of area being exposed at any one time.
- Spray construction areas with water.
- Minimize the use of vehicles on unpaved surfaces.
- Cover or spray materials and truck loads.

In addition, contractors will be required to keep public roads clean of any Stadium-related dirt and dust.

Construction Site Noise and Vibration

Environmental Consequences

Noise will be generated by construction equipment used in the construction of the Stadium and associated improvements. Noise levels and potential adverse effects due to construction activities will vary depending on the type of equipment, the location of the equipment, the duration of operations, and the time of operations. Table 25 shows noise levels generated by typical construction equipment.

**Table 25
Noise Levels of Typical Construction Equipment**

Equipment	Typical Noise Levels (dBA, at 50 feet)
Front Loaders	85
Backhoes, Excavators	80-85
Tractors, Dozers	83-89
Graders, Scrapers	85-89
Trucks	88
Concrete Pumps, Mixers	82-85
Cranes (movable-derrick)	83-88
Pile Driver (impact)	101
Forklifts	76-82
Pumps	76
Generators	81
Compressors	83
Pneumatic Tools	85
Jack Hammers, Rock Drills	98
Compactors	82
Drill Rigs	70-85
Source: Adapted from USEPA, "Noise from Construction Equipment and Operations", 1971.	

For comparison, the following table shows noise levels generated by some common sources.

Sound Pressure Level (dBA)	Noise Source
140	Jet Engine (at 75 feet)
130	Jet Aircraft (at 300 feet)
120	Rock and Roll Concert
110	Pneumatic Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Source: A Guide to Noise Control in Minnesota, MPCA

Pile driving is anticipated to generate the greatest potential for construction noise and vibration issues. Vibrations with high frequencies will occur during the installation of each driven pile. Depending on soil conditions, these vibrations will be noticeable up to a range of 100 feet to 250 feet of the source. The vibrations will disperse rapidly at distances above 250 feet with frequencies of vibration reaching zero at 500 feet to 700 feet depending on adjacent soil conditions.

Sound from the process of driving piles is typically measured in average decibels over an hourly time period. Acceptable ratings on other projects nationally where driven piles are utilized are in the 65 to 75 average db/hour range. At the moment of impact, up to 85 to 90 decibels can be produced.

Mitigation Measures

Requirements relating to limiting construction noise will be incorporated into all construction contracts. Two such provisions will be:

- Construction delivery and demolition equipment will be operated only during the hours of 7:00 am to 6:00 pm, Monday through Friday.
- Construction and demolition equipment will not be operated on Saturdays, Sundays, State and Federal Holidays or from 6:00 pm to 7:00 am without permission from Building Code Official.

Relative to the construction of foundation support systems for the Stadium Project, the project designers will investigate all appropriate footing systems in addition to a driven pile system, including but not limited to auger cast piles or mass concrete spread footings which would eliminate or significantly reduce the need for pile driving. If a driven pile system is determined to be the most appropriate system, additional mitigating measures will be implemented including but not limited to:

- Limiting the number of piling rigs that operate simultaneously.

-
- Meeting with commercial property owners and users within a 1,000-foot radius of the Stadium structure during the design process to gain an understanding of the operational requirements and restrictions of their facilities. A mitigation plan will be developed to address specific needs.
 - Perform a pre-construction inspection of all properties within a 1,000 feet radius of the Stadium structure to identify and document pre-construction conditions of each property with this radius.
 - Conduct monitoring of vibration and sound transmission during construction. Develop possible mitigation plans to address potential and unexpected impacts of construction on adjacent properties.
 - Conduct meetings during the design and construction phases of the project to inform and update property owners within a 1,000 foot radius of the Stadium structure regarding project status and upcoming activities.
 - Conduct post construction inspection of and meetings with all properties within a 1,000 foot radius on the Stadium structure to identify and document post-construction conditions of each property within this radius.

3.10.2 Construction Period Erosion and Sedimentation

Environmental Consequences

The potential for erosion during construction will exist as soils are disturbed by excavation and grading.

Mitigation Measures

Erosion and sedimentation of all exposed soils within the Project Site will be minimized by utilizing the appropriate Best Management Practices (BMPs) during construction. Implementation of BMPs during final construction greatly reduces the amount of construction-related sedimentation and helps to control erosion and runoff. Ditches, dikes, siltation fences, bale checks, sedimentation basins and temporary seeding will be utilized as temporary erosion control measures during construction grading. Temporary and permanent erosion control plans will be identified in the final site grading and construction plans for each stage as required by the NPDES permitting for construction sites in accordance with the MPCA and watershed erosion/sediment control standards. A SWPPP that includes erosion control and sediment management practices is required to be submitted in partial fulfillment of the NPDES permit. Erosion control measures will be in place and maintained throughout the entire construction period. Removal of erosion measures will not occur until all disturbed areas have been stabilized.

3.10.3 Construction Period Social and Economic Effects

Environmental Consequences

The Stadium Project is expected to generate both direct and indirect jobs to support construction-related activities. Existing residents and businesses may experience negative short-term impacts during construction resulting from access changes and detours.

Mitigation Measures

A construction staging plan will be completed during the design of the Stadium Project that will identify potential detours. This plan will attempt to limit disruptions to traffic patterns while maximizing directness of detoured routes, which will minimize short-term impacts on residents and businesses, as well as emergency services (police, fire, rescue) and transit services. Construction period impacts will be further mitigated through an active public information program focused on providing updates regarding construction activities and schedules as well as contacts for asking questions and submitting concerns.

3.10.4 Traffic and Parking

Environmental Consequences

The impacts of constructing the Stadium include the removal of existing roadways, parking, construction of new roadways/parking, and coordination of Stadium construction with roadway, utility, and other infrastructure construction.

Roadways

The new roadways proposed for the Stadium project are realignments or widenings of existing roadway segments. This work can be completed quickly, primarily between the end of spring classes and the beginning of fall classes. The main concern will be coordination with the Stadium Project work, in particular the Project Site excavation and clean-up.

Parking

Stadium construction will require removal of existing parking within the Stadium site and construction of new parking facilities to replace the lost parking. The primary concern will be with sequencing parking removal and construction without impacting University parking supply.

Transit

Stadium construction will initially require removal of the Transitway west of 23rd Avenue and routing the buses down 23rd Avenue to Washington Avenue.

Pedestrian and Bicycles

Existing pedestrian and bicycle routes thought and adjacent to the Stadium site will be affected during Stadium and roadway construction.

Construction Traffic

Additional traffic impacts may be created by the import and export of excavation material, construction material deliveries, construction equipment to the site as well as trash hauling from the site.

Mitigation Measures

The University will use the following mitigation measures to minimize impacts to transportation functions during Stadium construction:

Roadways

The roadway construction will occur in multiple phases. The initial phase of construction will include 23rd Avenue as well as 6th Street between Oak

Street and 23rd Avenue. The second phase requires completion of the new Huron Boulevard connection to University Avenue, the new Oak Street alignment between University Avenue and 4th Street, and University Avenue widening from Huron Boulevard to Oak Street. The next phase consists of moving traffic to the new or widened roadways and removal of existing Huron Boulevard between Washington and Oak Street and old Oak Street between University Avenue and 4th Street. This will allow the southwest portion of Stadium Project construction to proceed. Traffic will be maintained on existing Huron Boulevard, Oak Street, and University Avenue during construction. Only temporary lane closures will be needed.

Parking

A parking supply schedule will be developed to ensure adequate parking supply is available when needed for students and visitors. Student/visitor parking removed due to the construction of the Stadium will be replaced in new locations concurrent with its removal. Temporary parking will be evaluated including increased use of St. Paul Campus/State Fairgrounds lots. Construction of two proposed parking lots east of 23rd Avenue would begin prior to construction west of 23rd Avenue in order to make new parking spaces available as quickly as possible. Modification of existing lots will take place during the summer months between the end of spring classes and the beginning of fall classes when student parking needs are minimized.

Transit

Intercampus bus routes and stations will be accommodated throughout all phases of the Stadium construction.

Pedestrian and Bicycles

Pedestrian and bicycle traffic will be accommodated around the construction work area. Fencing and signing will guide pedestrians and bicyclists to trails, sidewalks and parking disrupted by the construction.

Construction Traffic

To mitigate the impacts of these activities, language will be placed in all construction contracts establishing additional mitigation requirements. Additional contractual requirements will include, but not be limited to:

- Trucks, construction equipment, or other vehicles delivering personnel, materials or other construction related items to the building site shall not be altered, modified or repaired in such a way as to cause the noise emitted from its operation to be increased above that emitted by the equipment as originally equipped by the manufacturer.
- All deliveries into or haul outs from the building site made by tandem axle trucks, articulated semi trucks or similar high load capacity vehicles will be required to be made via approved street routes from the regional interstate highways to the building site. Specifically:
 - From I-35W to the Project Site via University Avenue/4th Street
 - From I-94 to the Project Site via Huron Avenue
 - From Hwy 280 to the Project Site via University Avenue

The approved routes are subject to requirements and restrictions placed on these streets and roadways by the applicable governmental authorities.

- The use of local residential streets for access to the site for material and equipment deliveries will be prohibited unless it is allowed by the applicable regulations and ordinances, a specific need can be demonstrated, and written authorization is obtained in advance from the Stadium Project Manager.

Contract sanctions and/or fines will be imposed on contractors, vendors and suppliers found violating these requirements.

3.10.5 Construction Solid Waste, Hazardous Waste

Environmental Consequences

Solid and hazardous waste generated during construction will be managed by the general contractor or, where specified by contractual obligations, the subcontractors.

Mitigation Measures

To the extent feasible, waste generation will be minimized and wastes generated will be recycled or segregated to reduce the overall project cost and the cost of waste disposal. Landfills accepting solid wastes are required to ensure that the materials accepted are not prohibited by their permit; therefore, contractors will be required to certify their wastes are appropriate for disposal at the selected facilities, as is the case on all construction projects.

For those subcontractors generating specific hazardous waste streams, those subcontractors will be required to maintain generation, transportation and disposal records subject to review by the University or its assigns for up to six years beyond the date of generation. The University, at its option, may review the waste disposal practices of its contractors.

If solid wastes are encountered in the subsurface during construction (e.g., railroad tracks, demolition debris) those wastes will be managed by the construction contractor at the direction of the environmental consultant. The disposition of any excavated wastes will be specified by the MPCA-approved response plan and construction contingency plan.

3.10.6 Water Use and Dewatering During Construction

Environmental Consequences

The groundwater table elevation at the stadium site is generally between 10 and 14 feet below the surface. Recognizing this constraint, the preliminary plans for the Stadium call for the structure and playing field to be constructed above the water table. The University does not anticipate the need for extraordinary water use or dewatering during this portion of the construction project.

The choice of foundation system, which would extend below the structure and playing field, may require some dewatering. The specific foundation system will be identified through the design process. The project design team

will investigate all appropriate footing systems including but not limited to driven pile systems, auger cast piles, and mass concrete spread footings.

Mitigation Measures

Based on the current design concept, dewatering during construction is not anticipated. If dewatering were required during construction, based on groundwater data collected to date, no treatment would be necessary and groundwater could be discharged to the storm sewer system or ponded on-site and allowed to infiltrate. If dewatering is to occur as part of remedial construction activities, the University will obtain the necessary permits.

3.11 Cumulative Effects

3.11.1 Background

This section describes the potential for cumulative impacts, both direct and indirect, from the Stadium Project in combination with other past, present, and future actions.

A cumulative effect analysis takes into account other known or reasonably foreseeable actions and their potential impacts that are unrelated to the proposed action, except to the extent that their impacts may, in combination with the impacts from the proposed action, result in adverse impacts. Cumulative impacts are defined in Minnesota Rules 4410.0200 as the following:

Cumulative Impact: "... the impact on the environment that results from incremental effects of the project in addition to other past, present, and reasonably foreseeable future projects regardless of what person undertakes the other projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."

This cumulative effects analysis is structured around an 11-step process developed by the Council on Environmental Quality (CEQ).

3.11.2 Scoping for Cumulative Effects

Step 1 – Identify the significant effects associated with the proposed action and define the assessment goals

The goal of this assessment is to identify the cumulative effects on social, economic, and environmental resources that may result from construction and operation of the Stadium Project and other reasonably foreseeable projects in the Cumulative Effects Study Area as defined in Step 2 below. The assessment is based on information compiled for the EIS, as well as information available for the other projects identified in the SEAW/SDD.

The proposed action may affect several resources either directly or indirectly. However, the role of the cumulative effects assessment is to narrow the focus of the cumulative effect analysis to the most important issues. As a result, this analysis focuses on the primary issues called out during the scoping process that has the greatest potential for significant environmental impact. These include:

Transportation and Parking

The traffic and parking issues of particular concern include issues associated with event traffic operations and adequacy of parking supply for Stadium events and other uses.

Storm Water

Potential cumulative effects associated with storm water involve the collective changes in quantity and quality and their effect on the Mississippi River.

Economics

The potential cumulative economic effects include potential beneficial and adverse impacts on economic activity in the areas affected by the projects included in this assessment.

Step 2 – Establish the geographic scope for the analysis

The Cumulative Effects Study Area is defined as the East Bank Campus and immediately adjacent residential and commercial areas. While some degree of cumulative impacts may occur outside this Area, it was determined these impacts would be less significant in nature and all potentially significant cumulative effects would most likely occur within the defined study area.

Step 3 – Establish the time frame for the analysis

The year 2015 was defined as the time frame for the cumulative effects analysis. 2015 reflects the maximum time horizon for reasonably foreseeable projects.

Step 4 – Identify other actions affecting the resources, ecosystems, and human communities of concern

The May 2005 Final SDD identified eight projects that were deemed reasonably foreseeable and have the potential to interact with the Stadium Project so as to cause varying degrees of reasonably foreseeable cumulative effects. All of the identified projects are or have elements that are geographically proximate to the Project Site. Since completion of the Final SDD, the understanding of the eight projects has been enhanced, and it has been determined, as described in further detail below, that four of the projects do not have the potential to introduce or contribute to the cumulative effects of traffic, parking, economics, or storm water impacts. Furthermore, since completion of the Final SDD an additional project, the Medical Bioscience Building, has been defined in the most recent University Capital Plan for consideration of funding by the legislature. This project has been added to the assessment.

The original eight projects identified in the Final SDD, along with the newly proposed Medical Bioscience Building, are identified in Figure 16 and described below.

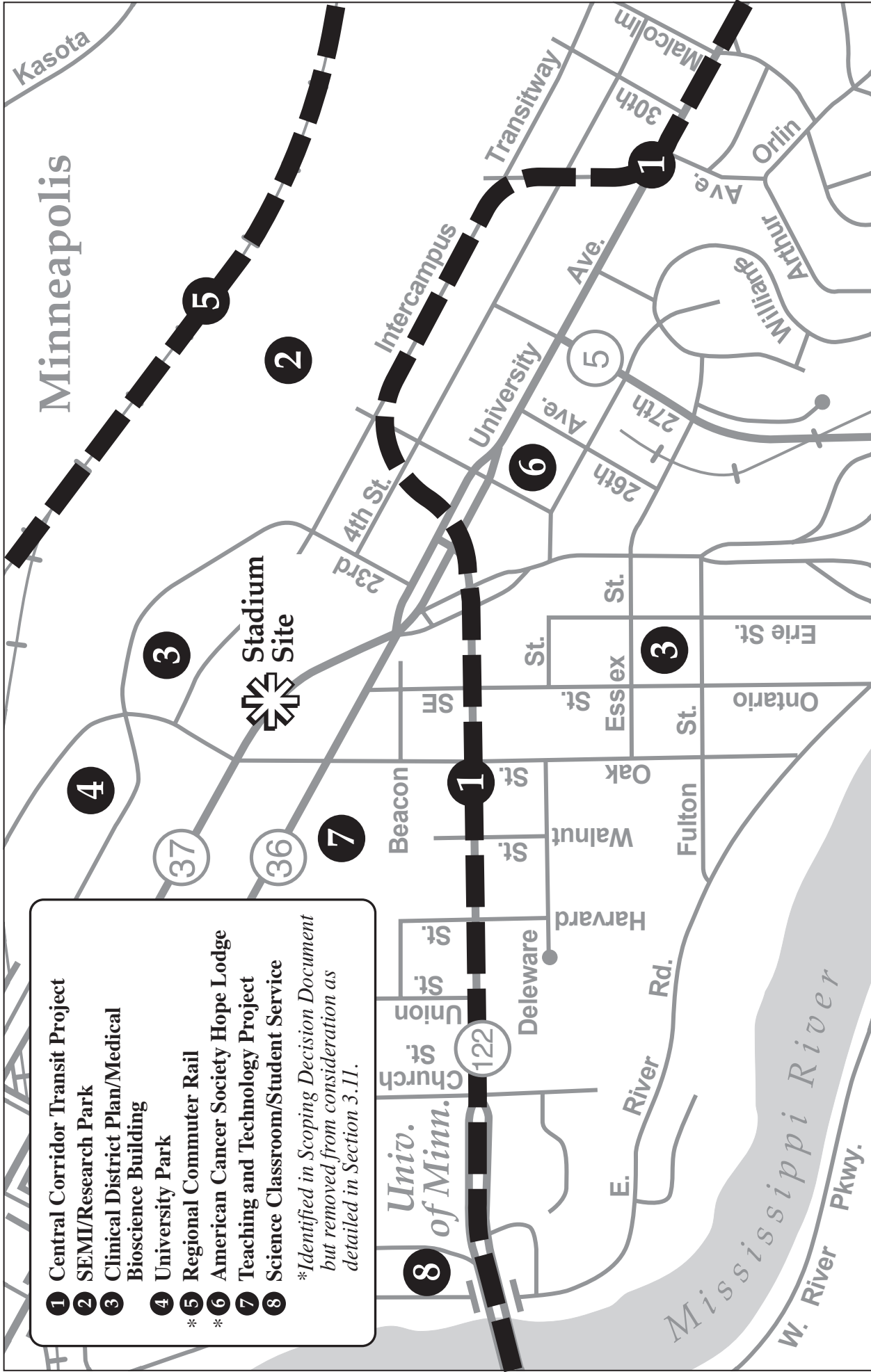
- Central Corridor Transit Project – This regional transportation project will involve either enhanced bus service, bus rapid transit (BRT), or LRT improvements in the 11-mile corridor extending between downtown Minneapolis and downtown St. Paul. The BRT and LRT alignments extend through the University of Minnesota Campus along Washington

Avenue (CSAH 122) and University Avenue (CSAH 36) and include a proposed station in Stadium Village.

- SEMI/Research Park Planning – This multi-phased City of Minneapolis redevelopment project is in various stages of design and implementation. The concept is to house private sector businesses that translate University innovations into marketable products and create jobs. It is also an opportunity to locate and establish technology-oriented businesses near the campus so that they can take advantage of University technology capabilities. New infrastructure including connections to an express bus line, bike trail system, new roads, and utility connections are also part of the plans.
- Clinical District Plan – This on-going joint planning effort between the University of Minnesota, Fairview Hospital, and the University of Minnesota Physicians is intended to address the long-term clinical facility needs of the three organizations. According to partnership documents, “The Clinical Sciences Campus Plan for the partnership will create the campus environment and healthcare facilities necessary to attain the partnership’s goal of local, regional, and international renown in patient care, research, and health professional education. The Clinical Sciences Campus Plan will, over the next 20 years, enable the partnership to lead the continuing evolution in health care, health professional education, and breakthroughs in clinical research and service...” While no specific, funded projects have emerged from the planning process the various partners have developed long-term goals of:
 - improving children’s hospital facilities
 - developing a new ambulatory care center
 - consolidating clinical laboratories
 - consolidating the School of Public Health

The partnership has recognized the need to synchronize Clinical District planning with broader efforts related to residence halls, student housing, transportation and parking, and the proposed Stadium.

- Medical Bioscience Building – This University of Minnesota project, if funded by the legislature, will construct a new medical research building for the Academic Health Center. This facility will include space for laboratories, offices, administrative support services. Research will be oriented to the basic sciences in such areas as cancer, immunology, and pharmacology, which do not require adjacency to the clinics and the hospital. In addition, Bio-safety level 3 (BSL3) laboratories for research on controlled substances will also be constructed. Utility infrastructure improvements and environmental cleanup necessary for the new building will also be undertaken with this project.



Football Stadium - Final EIS
 University of Minnesota

Figure 16

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- University Park – A University of Minnesota project to renovate and construct sports fields and facilities in the area of campus west of the Project Site and north of 5th Street SE. The park, which will be approximately 40 acres in size, will provide expanded recreation fields for the Department of Recreational Sports, training and competition areas for the Department of Intercollegiate Athletics, and areas for passive recreation for the entire University community. An all-weather sports bubble, intercollegiate baseball stadium, restrooms, service/maintenance, and other structures are also being considered for construction.

The park will be developed in accordance with the Sports Fields and Facilities Precinct Plan, approved by the Board of Regents in March, 2004. The Sports Fields and Facilities District Plan resulted from a process aimed at ensuring that fields and facilities for recreational sports and intercollegiate athletics on the Twin Cities campus meet the needs of the University community, while simultaneously enhancing the campus.

- Regional Commuter Rail – This consists of two commuter line projects extending from Big Lake to Hastings. The initial project is the Northstar line which will extend from Big Lake to downtown Minneapolis. The second project is the Red Rock line which will extend from downtown Minneapolis through St. Paul and on to Hastings passing adjacent to the north side of the Project Site. At this time, the Northstar line is the only segment projected to be operational by the 2015 analysis year. Since the Northstar project does not extend into any portion of the defined cumulative effects Study Area, the regional commuter rail projects will no longer be addressed in this assessment.
- American Cancer Society Hope Lodge – The Hope Lodge is a short-term residential facility designed to offer housing, counseling, and referral services to cancer patients at the University of Minnesota and Fairview – University Hospital. The facility is proposed to be constructed on the existing 81-room EconoLodge motel site. The Hope Lodge will include 44 rooms. Given the less intensive use of, the Hope Lodge compared to the current facility, including less parking demand and no additional impervious surface, it is anticipated there will be no adverse effects related to traffic, parking, economics, and storm water. As a result, the Hope Lodge will no longer be considered in the cumulative effects assessment.
- Teaching and Technology Project – This University project, still in the conceptual stage, will likely include offices, technology-enhanced classrooms, instructional labs, and flexible research labs for the Institute of Technology. Recent discussions within the University about the project have focused on the need for a new or significantly renovated building for the School of Physics and Astronomy. Given that this project represents a relocation of an existing use and no net gain in activity is anticipated, it is no longer being considered in the cumulative effects assessment.
- Science Classroom/Student Service – This University of Minnesota project, if funded by the legislature, will replace the current science

classroom building located across from the Wiesman Art Museum on Washington Avenue. The Science Teaching and Student Service Center will include large-scale science classrooms and University-wide student services such as academic counseling, career counseling, registration, and bursar services. This prominent, centrally located site has one of the highest concentrations of pedestrian traffic on the entire Minneapolis campus and provides convenient access to nearly all University student services and academic programs. The building will primarily accommodate existing University programs and activities in a more student-friendly format. This project is included in the University of Minnesota's 2006 legislative capital request. Given that this project represents a relocation of an existing use and no net gain in activity is anticipated, it is no longer being considered in the cumulative effects assessment.

In summary, the Central Corridor Transit, SEMI/Research Park Planning, Clinical District Plan and University Park projects are included, along with the Stadium Project, in this assessment.

3.11.3 Affected Environment

Due to the similarities and interrelation, the response to Steps 5 and 6 have been combined.

Step 5 – Characterize the resources, ecosystems, and human communities identified during scoping in terms of their response to change and capacity to withstand stress

Step 6 – Characterize the stresses affecting resources, ecosystems, and human communities and their relation to regulatory thresholds

The Cumulative Effects Study Area is and has been fully urbanized for more than 100 years. As such, natural resources, such as wetlands and woodlands, are non-existent except for the Mississippi River valley. Specifically, the area addressed in this assessment is a mix of institutional, industrial, commercial, and residential land uses. The institutional uses, including University educational, research, and health facilities are focused in and around the East Bank campus. The industrial land uses extend primarily along the Burlington Northern Santa Fe (BNSF) rail corridor. The commercial uses are focused in and around Dinkytown and Stadium Village. The residential development is focused in the East Marcy-Holmes, Southeast Como, and Prospect Park neighborhoods on the northwest, north, and southeast edges of the Study Area, respectively (see Figure 15). University housing is located to the south of the Project Site.

The Mississippi River, through the Twin Cities, is impacted by runoff generated by urbanized land use. The River is the ultimate receiving water body for all storm water runoff including the projects identified in this analysis. The NPDES permit, administered by the MPCA, focuses on minimizing the adverse affects of storm water runoff associated with urban development.

The commercial development throughout the Study Area is affected by numerous trends and forces including the regional economy, business competition, changing demographics, and changes in the transportation

system and traffic levels. Different commercial uses are affected at varying degrees by these forces and issues.

Step 7 – Define a baseline condition for the resources, ecosystems, and human communities

As documented in Section 3.8, data from the U.S. Census Bureau was collected for the University of Minnesota’s East Bank Campus and surrounding neighborhoods. The data is summarized by the previously defined neighborhoods below.

Neighborhood	Population	Employment
East Bank	4,007	1,987
East Marcy-Holmes	3,497	868
Southeast Como	5,496	2,352
Prospect Park	6,326	2,945

Due to the urbanized nature of the Study Area, it is assumed that by 2015 there will be no large scale development changes beyond that being addressed in this assessment. However, it is reasonable to expect continuing redevelopment at a smaller scale. The type and level of additional redevelopment is not anticipated to substantially change the current land use mix, population, housing, or employment levels in the Study Area.

Transportation and Parking

The baseline traffic and parking conditions are documented in Section 3.1. Overall, the Study Area transportation system experiences varying levels of congestion along the major corridors and at the major intersections during morning and afternoon peak hours. Without system improvements, these conditions will gradually degrade over time as background traffic levels increase.

The Project Site contains approximately 2,900 parking spaces. The parking supply will remain the same after the Stadium is constructed.

Storm Water

As documented in Section 3.5, existing storm water provisions are limited. In general, under current conditions, storm water runs off into the storm water collection system and is conveyed directly to the Mississippi River with no treatment.

Economics

A large portion of the overall economic activity in the Cumulative Effects Study Area is either directly or indirectly associated with the University of Minnesota. For purposes of this analysis, economic activity is defined as jobs, and consumer spending at businesses. With the projects included in this analysis it can be reasonably expected there will be a trend of continued economic growth in terms of new jobs and increased consumer spending associated with the new employment opportunities.

3.11.4 Environmental Consequences of Cumulative Impacts

Step 8 – Identify the important cause-and-effect relationship between human activities and resources, and human communities

Transportation and Parking

The development of the Stadium Project along with the other projects considered in this assessment will result in an overall intensification of land uses. Along with the redevelopment will be increased employment and economic activity. The effects of these changes are reflected in the traffic analysis in Section 3.1. The traffic analysis is based on the regional model which reflects the growth in traffic volumes anticipated with these projects.

If the Medical Bioscience Building is funded, the University will relocate any displaced parking spaces to an alternate location.

Storm Water

Given that the entire Study Area is and has been fully developed for many years, the projects included in the analysis will not substantially alter the quantity of storm water runoff generated in the Study Area.

Economics

Though it is not possible to predict precisely what changes in employment and business activity will occur as a result of the various projects being developed, it is reasonable to assume that some level of increased employment and economic activity will result over what would occur if these projects were not implemented.

Step 9 – Determine the magnitude and significance of cumulative effects

Transportation and Parking

The traffic analysis in Section 3.1 reflects the cumulative effects which result from implementing all the projects included in this assessment.

Overall, the analysis concludes with the reconfiguration of the roadway system as illustrated in Figure 3, no significant traffic impacts are anticipated in the year 2009 or the year 2030. Given this, it can be reasonably assumed that there will be no significant cumulative traffic effects for the year 2015 time frame assumed for the cumulative effects assessment.

Furthermore, no adverse cumulative parking effects are anticipated because the peak parking demand associated with the Stadium will occur on weekends, while the peak parking needs for the other projects included in this assessment occurs on weekdays.

Storm Water

Given that the majority of the Cumulative Effects Study Area is already impervious surface and that no substantial change to the amount of impervious surface is anticipated with any of the projects, no significant adverse storm water cumulative effects are anticipated. Furthermore, it is reasonable to conclude that the cumulative runoff conditions associated with implementation of all the projects considered in this assessment will represent more favorable conditions than those that currently exist. This conclusion is based on the understanding that the areas affected by each of

the projects are already urbanized and primarily impervious settings with little to no storm water treatment provisions. In contrast, the conditions following development/redevelopment will include some storm water provisions, thus improving the runoff quantity and quality as compared to the existing situation.

Economics

Assuming that overall local, regional, state, and national economic and market conditions will be similar to what exists today, it is reasonable to conclude that the overall economic environment of the Study Area would be improved with implementation of all the projects in this assessment. This conclusion is based on the understanding that collectively the projects will introduce transportation mobility and accessibility improvements and an increase in the number of jobs associated with both the University and new private businesses. In turn, these improvements, the increased employment, and overall increases in the level of activity will benefit service and retail businesses.

Step 10 – Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects

The assessment concludes that no significant adverse cumulative effects are anticipated. This conclusion is based on the understanding that the roadway, parking, and storm water mitigation measures are implemented. As a result, no additional or modified alternatives and mitigation measures will be considered.

Step 11 – Monitor the cumulative effects of the selected alternative and adopt management policies as necessary

This step is not applicable at this time since none of the projects have been implemented.

3.11.5 Conclusions

Cumulative effects to resources resulting from the proposed Stadium Project and the contribution of incremental effects from other past, present, and reasonably foreseeable future actions are not anticipated to be substantial. Specific BMPs to avoid and/or minimize potential cumulative effects will be identified during the permitting and approval processes for each of the projects, as applicable.

3.11.6 No-Build Alternative

Under the No-Build Alternative, it is assumed the remainder of the projects included in the assessment would be implemented. The environmental effects of these projects will be addressed to the extent they are subject to environmental review and permitting requirements.

3.12 Other Environmental Issues Assessed During Scoping

The following topics were adequately assessed in the Scoping EAW and were found to be not relevant or so minor they will not be addressed in the EIS. Each topic is listed below, with the EAW item number listed and a brief discussion of each topic.

-
- Fish, Wildlife, and Ecologically Sensitive Resources (EAW Item 11a) – The urban nature and lack of green space within and adjacent to the Project are such that important fish, wildlife or ecologically sensitive areas are lacking.
 - Threatened and Endangered Species (EAW Item 11b) – The Project Site is heavily urbanized and habitats for or occurrences of rare, threatened, or endangered species are not present. A review of the MNDNR Natural Heritage Information System database was reviewed, and none of these resources were identified within the Project Site or will be affected by the Stadium Project.

The Stadium Project is within the range of the bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Peregrinus falconus*), both federally protected species, but no known nesting areas for these species are within or immediately adjacent to the Project Site. Several peregrine falcon nesting areas are found within the core urban areas of the Twin Cities where they have a preference for nesting on tall structures and bridges. The Stadium could provide nesting habitat structures for a falcon pair. Peregrine falcons are site selective of nest sites, and hundreds of suitable structures are present throughout the metro, yet only several have nest sites. The probability that a nesting pair would establish a nest on the new Stadium structure is very low.

- Physical Impacts on Water Resources; Wetlands, Streams, Lakes (EAW Item 12) – There are no wetlands, streams, or lakes within or immediately adjacent to the Project Site, and no impacts to these resources are anticipated. Bridal Veil Creek was formerly located approximately 4,000 feet north of the Project, but was channelized and converted into a subgrade storm sewer. The creek is no longer present and is not listed in the Protected Waters Inventory by the MNDNR.
- Water Related Land Use Districts; Floodplains, Shoreland Zones (EAW Item 14) – The project will not affect and is not within a designated floodplain or Shoreland Zone.
- Water Surface Use (EAW Item 15) – This EAW item addresses the use (intake) or impacts from structures built in lakes or large water bodies, none of which are within or adjacent to this project. Nor will there be any docks, structures, or marinas associated with the Project.
- Receiving Water Bodies (EAW Item 17b) – There are no sensitive receiving water bodies within or immediately adjacent to the Project. Storm water management, watershed district, and Mississippi River related subjects are addressed in other sections of this EIS.
- Toxic of Hazardous Materials to be used on-site (EAW Item 20b) – The scoping documents adequately addressed this subject. Cleaning chemicals and a fuel tank for a generator will be stored and contained in accordance with the laws and regulations on these substances. Otherwise, the Project will not generate or utilize toxic or hazardous materials.

-
- Above or Below Ground Storage Tanks to be used on site (EAW Item 20c) – An above ground fuel tank may be included with a back up generator for the Stadium. The scoping documents recognized this tank will be designed, permitted, and implemented in accordance with the law and regulations on back up generator tanks of this nature. No other above or below-ground storage tanks will be present and the subject will not be addressed in the EIS.
 - Archaeological, Historical, or Architectural Resources; Prime or Unique Farmlands; Designated Parks, Recreation Areas, or Trails; Scenic Views or Vistas (EAW Item 25) – The Scoping Decision document concluded that none of these resources will be affected by the Stadium Project, or they have been adequately addressed through the Scoping process. However, to address a letter received from the Minnesota Historical Society, the following assessment has been added to the EIS.

Affected Environment

In a letter dated May 20, 2005, the Minnesota Historical Society identified the following historic resources within proximity of the Stadium Project Site:

- Station 19
- Fraternity Row Historic District
- Wabasha Screen Door Company
- Calumet Elevator
- Electric Steel Elevator
- Peteler Portable Railway Manufacturing Company
- McLaughlin Gormley King Company

Environmental Consequences

While the Stadium Project will require some reconfiguration of the parking associated with the Historic Station 19 property, the Stadium Project has been planned to avoid altering or otherwise impacting the Historic Station 19 building. The University is in communication with the current owners about the future ownership of Historic Station 19. The Fraternity Row Historic District, Wabasha Screen Door Company, Calumet Elevator, Electric Steel Elevator, and Peteler Portable Railway Manufacturing Company are all located outside of the Project area boundaries. The McLaughlin Gormley King Company building no longer exists.

Mitigation Measures

No mitigation is required, as the historic structure, Station 19, will remain fully intact.

4.0 Summary of Mitigative Measures

The purpose of this section is to summarize the mitigation measures that have been identified for addressing the adverse impacts of the Stadium Project. The measures are listed by each technical subject area as presented in Section 3.0.

4.1 Transportation and Parking

Non-Event Weekday Conditions: Mitigation Commitments

Traffic analysis showed comparable weekday non-event traffic flow for the Build and No-Build scenarios with the exception that, by year 2030, the new intersection of University Avenue (CSAH 36)/Huron Boulevard/23rd Avenue is expected to operate poorly by that time, although it exhibits acceptable operations in year 2009. The poor operations at this intersection result from the heavy westbound left-turn volumes from University Avenue (CSAH 36) to Huron Boulevard. To mitigate this impact, the following intersection improvements will be undertaken:

- To improve the intersection LOS to D or better, an additional westbound left-turn lane is required. Therefore the geometrics at the intersection will include: Northbound; dual left-turn lanes and a thru-right lane, Eastbound; a left-turn lane, two through lanes and a right-turn lane, Southbound; a left-turn lane, a through lane and a through-right lane, Westbound; dual left-turn lanes, a through lane and a through-right lane.

Major Stadium Events: Mitigation Commitments

Physical improvements to area roadways needed to improve intersection operations to a LOS D or better during Major Event conditions would require substantial roadway and/or intersection widening that would incur both significant cost and property impacts. Given the infrequent nature of Major Events at the Stadium, improvements of this type are considered neither cost effective nor prudent.

Instead, Major Event mitigation commitments will focus on pre-planning activities and event day traffic management efforts to reduce traffic volumes, disperse traffic volumes over time, facilitate efficient traffic flow, and minimize traffic impacts to other geographic areas. Specifically, the University will do the following:

1. Establish a University Event Transportation Manager Position

The University of Minnesota will create a University Event Transportation Manager position to coordinate transportation and parking activities for all Major Events. This position will have the following responsibilities:

- Oversee development and implementation of a Travel Demand Management (TDM) Plan.
- Facilitate meetings of the Event Management Advisory Committee (described below) to coordinate inter-agency activities
- Participate in meetings of the SAAG to better understand and respond to concerns of the surrounding neighborhoods.

-
- Work with the Athletic Department and other University departments to manage traffic flows and parking demands.

2. Develop an Event Travel Demand Management (TDM) Plan

The Travel Demand Management Plan will be developed in cooperation with the Cities of Minneapolis, St. Paul and Falcon Heights, Ramsey County, Hennepin County, Metro Transit, the State Agricultural Society (Minnesota State Fair), and Mn/DOT to identify specific strategies and protocols to reduce traffic volumes and manage traffic flows. The TDM Plan will identify specific agency roles and responsibilities. At a minimum, the University commits to the following elements as the framework for the TDM Plan:

Traffic Management:

- Developing an optimized event signal timing plan with the agencies responsible for operating signals at key intersections including the Cities of Minneapolis, St. Paul and Falcon Heights, Ramsey County, Hennepin County and Mn/DOT.
- Coordinating with Mn/DOT to manage event traffic on the regional system during Major Event arrival and departure periods. The University Event Transportation Manager will be responsible to work with Mn/DOT to monitor traffic on the freeways (I-94, I-35W, TH 280) using Mn/DOT staff and traffic cameras, and then manage flows as conditions warrant. In particular, the interchange areas of I-35W/University Avenue/4th Street, I-35W/Washington Avenue, I-94/Huron Boulevard and TH 280/University Avenue will be observed. The Mn/DOT VMS (variable message signs) system will be used to direct traffic and provide information to balance the flows among the interchanges. The VMS may also be used to notify the public of the expected increase in traffic prior to events, and specific roadway incidents.
- Using static, portable and permanent variable message signs to guide traffic to appropriate local roadway route to access parking facilities during arrival and guide traffic to the regional system during departure.
- Employing traffic control personnel at access points to the large parking areas and at key intersections which are expected to have high pedestrian activity. The objective of the traffic control officers is not to direct vehicular traffic, but to prevent pedestrians from overtaking the roadway or vehicles from blocking intersections.
- Communicating recommended ingress and egress routes via a wide variety of media including distributing an event transportation guide for attendees, including event information into existing University communications with the surrounding community, providing information on the University web page and/or provide traffic advisory information during pre- and post-game radio broadcasts

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- Dispersing traffic volumes during arrival and departure periods through pre- and post-game activities

Parking Management (University of Minnesota facilities):

- Using traffic control officers, static signs, portable and permanent variable message signs, and/or Intelligent Transportation Systems (ITS) technology to efficiently direct traffic to available parking facilities
- Improving communications to ticket holders regarding available parking facilities through a variety of means including distributing parking information and/or parking assignments for all ticket holders.
- Establishing a priority parking assignment system for season ticket holders.
- Creating bundled ticket and parking packages.
- Positioning parking egress traffic control personnel where needed

Parking Management (Off-Campus)

- Working with law enforcement in adjacent municipalities to enforce existing ordinances and regulations.
- Coordinating with the SAAG to identify areas of particular concern.

Transit Management:

- Positioning parking egress traffic control personnel where needed
- Planning for efficient bus staging areas in relation to the Stadium (scheduled Metro Transit, charter, and shuttle)
- Promoting the use of the Central Corridor line when available
- Installing directional and informational signage to transit facilities

Pedestrian Management:

- Directing pedestrians with signage, barriers, and traffic control officers at critical points near the proposed Stadium to ensure safety and facilitate efficient traffic flow
- Clearly marking pedestrian walkways to the Stadium

3. Manage University Event Scheduling

A capacity Stadium event (50,000 attendees) will consume a large portion of the available parking on both the East Bank and West Bank Campus and a substantial number of spaces at the St. Paul Campus/State Fairgrounds. Therefore, scheduling of other events at Williams Arena, Mariucci Arena, or Northrup Auditorium concurrent with a capacity Stadium event will be avoided.

4. Assemble Stadium Advisory Committees

Event Management Advisory Committee (EMAC):

The University will create the EMAC to identify, coordinate and advise on Major Event planning and operations. The EMAC will also be responsible for developing and implementing adaptive parking and transportation mitigation techniques. The EMAC will include representatives from the University (including Athletics, Public Safety, Facilities Management, Parking and Transportation, Media Relations), representatives from adjacent municipalities, the Minnesota State Fair, MetroTransit, the Department of Transportation, Hennepin County, and Ramsey County. The committee will meet before home football games and other Major Events and as required at other times of the year. The committee will be ongoing.

Stadium Area Advisory Group (SAAG:)

The University will continue to convene a community group to provide advice and feedback on the impacts and opportunities associated with Major Events at the proposed Stadium. The group will be constituted in a manner similar to the existing SAAG, which is charged with providing feedback to the University during the planning, development, and construction phase of the Stadium. The reconstituted SAAG will include representatives of the recognized citizen participation neighborhood organizations, business associations, and municipalities adjacent to the Twin Cities Campus. The committee will serve as a means for regular, sustained, and meaningful consultation. The SAAG will meet between home football games and other Major Events and as required at other times of the year. The SAAG will be on-going. Expenditures from the Mitigation/Good Neighbor Fund will be coordinated with the SAAG.

4.2 Concert Event Noise

Minor Concert Event Mitigation

Noise levels in adjacent residential areas, during Minor Concert Events result in additional nighttime standard exceedances. The University will implement the following measures to mitigate these impacts:

- The University will specify in contractual agreements use of Line-Array systems for concert audio and that the vertical coverage pattern of any cluster component not aim over the bowl's edge.
- Specify in contractual agreements that noise levels must be monitored at the closest residential receptors during the concerts to ensure compliance with State standards. Continuation of this program will be considered after the first year of operation.
- Require concerts to end before 10:00 p.m.

Major Concert Events Mitigation

The analysis concludes that additional noise standard violations will occur for both the daytime and nighttime conditions. As a result, in addition to the measures described for Minor Concert Event, the University has committed to the following:

-
- Initially, the University will not schedule Major Concert Events.
 - When the Stadium is complete, the University will conduct a noise test to determine actual noise levels experienced in the surrounding areas.
 - The results of this noise test will be used to determine whether Major Concert Events should be allowed and if so, the parameters for such concerts so as to avoid new noise standard exceedances.
 - Major Concert Events will not occur on weeknights

By implementing these mitigation measures, Stadium events violating State noise standards will be avoided. However, it is recognized that concerts, in all probability, will be heard. It is the excessive concert noise over and above state standards which is being examined with regard to mitigation and control.

4.3 Surface Water Quantity and Quality

Given that the Project Site is completely impervious surface with no storm water treatment, any mitigation introduced by the Stadium Project will result in a net improvement over existing conditions.

The design of the storm water management system is still in process, however, the conceptual storm water management plan is illustrated in Figure 13. In order to manage the issues outlined in the previous section, the University will commit to the following mitigation measures.

- Minimize impervious surfaces – Reducing the amount of impervious surface reduces the amount of storm water runoff that will need to be managed by treatment devices. The nature of this Project and its need for significant hard surfaces to convey pedestrians and vehicles limits the ability to implement this strategy on a large scale basis. However, wherever practicable, runoff from impervious surfaces and from the Stadium gutter systems will be directed onto landscaped areas or other pervious surfaces to allow for some degree of infiltration, filtration, and rate attenuation. As Stadium designs progress, use of pervious pavers and other permeable surfaces will be considered where appropriate given pedestrian volumes and maintenance conditions.
- Level spreaders –Level spreaders will be considered for:
 - Discharge areas with erosion-resistant material (stabilized vegetation or a turf reinforcement mat).
 - Where sheet flow into bioretention basins is not possible and point discharges are not desirable.
- Bioretention basins – Bioretention will be used as storm water treatment for small storms. Treatment occurs via infiltration/filtration and plant uptake. Their primary design benefit is removal of total suspended solids (TSS), total phosphorous (TP), nitrogen, heavy metals, oil, and grease. These basins also provide some removal of floatables and attenuation for small storms. Bioretention basins are proposed surrounding many of the

parking lots adjacent to the Stadium, within the pedestrian promenade, and adjacent to the railroad tracks.

- Underground storage/cisterns – will be used to provide temporary storage of storm water runoff in conjunction with other treatment devices. Cisterns would be used as part of a treatment train. This treated water could then be recycled for irrigation or for other purposes. Where feasible, the intent would be to design any underground storage units incorporated into this Project such that the treatment train system provides the rate control criteria of the MWMO.

Other measures still under investigation include wet detention basins, pervious pavers, and other permeable surfaces.

4.4 Environmental Contamination

The identified releases of hazardous substances, pollutants or contaminants will be addressed during redevelopment activities in a manner that is protective of public health and the environment, as determined by the MPCA. Specifically, a Response Action Plan (“RAP”) will be developed to address the identified impacts at the Site. It is anticipated that a significant portion of the impacted soils will be managed on-Site. The MPCA has determined that the contaminated soils associated with the former Republic Creosoting operations may remain in place, provided that the Stadium is constructed outside of the area of the creosote contamination and no dewatering of area soils is required as part of the Stadium Project.

A Site Redevelopment Construction Contingency Plan (“Contingency Plan”) will also be necessary to address any environmental impacts that may be identified during site preparation and redevelopment activities. The Contingency Plan will govern all site preparation, construction and other redevelopment-related construction affecting the subsurface, such as grading, pavement removal, utility work, storm water system construction, and foundation system construction. The Contingency Plan will also include air monitoring requirements, soil management and covering of soil stockpiles, storm water pollution prevention controls, and site worker health and safety issues.

The RAP and Contingency Plan will be developed and submitted to the MPCA for review and approval when detailed redevelopment plans have been prepared, including plans for Stadium siting, excavation and grading.

4.5 Social, Community, and Economic Effects

4.5.1 Compatibility with Plans

With respect to the Central Corridor project, the University will continue to work with the proposers to support a transit line through campus that:

- maximizes access to the University and increases transit ridership;
- optimizes the overall efficiency of the transit system;
- avoids significant pedestrian/ vehicular/bicycle conflicts on and around campus;

-
- promotes a vibrant urban environment on and around campus;
 - does not degrade the functionality of campus operations.

The Central Corridor project, however, is still a proposed project awaiting approval of its EIS and funding for preliminary engineering. As no final decisions have been made on either the mode of transportation (rail or bus) or on the overall alignment between downtown Minneapolis and downtown St. Paul it is premature to address any mitigation for potential additional system costs.

4.5.2 Social and Community

Mitigation Measures – Event Day Operations

Major Events:

In order to mitigate the adverse impacts outlined above, the University will do the following:

- Traffic – Mitigation measures outlined in Section 4.1.1.
- Parking – Mitigation measures outlined in Section 4.1.1.
- Student and Fan Behavior:
 - Guest Services/Ushers/Fan Ambassadors – The University will train game day staff to reinforce and support a responsible, welcoming, and family friendly environment.
 - Behavior Expectations and Stadium Rules – The University will develop clear behavior expectations and Stadium rules. These guidelines will be communicated to all ticket holders through e-mail, inserts in ticket envelopes, game day programs, public address announcements and regular media outlets.
 - Alcohol – Consistent with Regents policy, alcohol will be available only in accordance with applicable state laws and limited to suites, club seats, and other premium seating areas. The University will not allow intoxicated persons into the Stadium and will confiscate alcoholic beverages that are brought in.
 - Tailgating – Tailgating is part of the collegiate game day experience and the University anticipates that it will take place on game days. In order to limit the adverse impact of this activity, the University will provide locations on campus to accommodate this activity including designated parking lots and picnic sites. In consultation with the SAAG the University will develop reasonable tailgating policies for University controlled areas. These will include but not be limited to policies on sound amplification, cooking devices, and alcohol use. The University will ensure appropriate City and Regent authority to regulate and control tailgating outside designated areas.
 - Party Patrols – The University Police will work with the adjacent municipalities to increase police enforcement in adjacent neighborhoods on Major Event weekends. This increased

enforcement will occur on Friday (pre-game) and Saturday (post-game) nights.

- Litter – The University will provide and pick-up trash containers for use on and off-campus. The number and location of these containers will be coordinated with the SAAG, adjacent municipalities, and adapted as necessary to reflect fan behavior.

In addition to the measures presented above, the University will establish a Mitigation/Good Neighbor Fund. The use of the funds will be coordinated through the SAAG as described in Section 7.2.3. Further details on the Mitigation/Good Neighbor Fund are provided in Section 7.2.2.

Minor Events:

No additional mitigation measures are required beyond those detailed in Section 3.2.5.

4.6 Construction Related Impacts

4.6.1 Odors

Air monitoring will be a necessary part of any approved remediation plan, and mitigation measures will be necessary if visible dust emissions are observed. If organic vapors are detectable downwind at the Project perimeter, mitigation measures may also be necessary. Conducting remediation activities during cold weather months (which is expected) will be helpful in reducing the potential for volatilization of organic vapors, and reducing the number of potential nuisance concerns

4.6.2 Dust

During construction, the following dust control measures will be used as necessary:

- Minimize the period and extent of area being exposed at any one time.
- Spray construction areas with water.
- Minimize the use of vehicles on unpaved surfaces.
- Cover or spray materials and truck loads.

In addition, contractors will be required to keep public roads clean of stadium-related dirt and dust.

4.6.3 Noise and Vibration

Requirements relating to limiting construction noise will be incorporated into all construction contracts. Two such provisions will be:

- Construction delivery and demolition equipment will be operated only during the hours of 7:00 am to 6:00 pm, Monday through Friday.
- Construction and demolition equipment will not be operated on Saturdays, Sundays, State and Federal Holidays or from 6:00 pm to 7:00 am without permission from Building Code Official.

Relative to the construction of foundation support systems for the Stadium Project, the project designers will investigate all appropriate footing systems in addition to a driven pile system, including but not limited to auger cast

piles or mass concrete spread footings which would eliminate or significantly reduce the need for pile driving. If a driven pile system is determined to be the most appropriate system, additional mitigating measures will be implemented including but not limited to:

- Limiting the number of piling rigs that operate simultaneously.
- Meeting with commercial property owners and users within a 1,000-foot radius of the Stadium structure during the design process to gain an understanding of the operational requirements and restrictions of their facilities. A mitigation plan will be developed to address specific needs.
- Perform a pre-construction inspection of all properties within a 1,000 feet radius of the Stadium structure to identify and document pre-construction conditions of each property with this radius.
- Conduct monitoring of vibration and sound transmission during construction. Develop possible mitigation plans to address potential and unexpected impacts of construction on adjacent properties.
- Conduct meetings during the design and construction phases of the project to inform and update property owners within a 1,000 foot radius of the Stadium structure regarding project status and upcoming activities.
- Conduct post construction inspection of and meetings with all properties within a 1,000 foot radius on the Stadium structure to identify and document post-construction conditions of each property within this radius.

4.6.4 Erosion and Sedimentation

Erosion and sedimentation of all exposed soils within the Project Site will be minimized by utilizing the appropriate Best Management Practices (BMPs) during construction. Implementation of BMPs during final construction greatly reduces the amount of construction-related sedimentation and helps to control erosion and runoff. Ditches, dikes, siltation fences, bale checks, sedimentation basins and temporary seeding will be utilized as temporary erosion control measures during construction grading. Temporary and permanent erosion control plans will be identified in the final site grading and construction plans for each stage as required by the NPDES permitting for construction sites in accordance with the MPCA and watershed erosion/sediment control standards. A SWPPP that includes erosion control and sediment management practices is required to be submitted in partial fulfillment of the NPDES permit. Erosion control measures will be in place and maintained throughout the entire construction period. Removal of erosion measures will not occur until all disturbed areas have been stabilized.

4.6.5 Social and Economic Effects

A construction staging plan will be completed during the design of the Stadium Project that will identify potential detours. This plan will attempt to limit disruptions to traffic patterns while maximizing directness of detoured routes, which will minimize short-term impacts on residents and businesses, as well as emergency services (police, fire, rescue) and transit services.

Construction period impacts will be further mitigated through an active public information program focused on providing updates regarding construction activities and schedules as well as contacts for asking questions and submitting concerns.

4.6.6 Transportation and Parking

The University will use the following mitigation measures to minimize impacts to transportation functions during Stadium construction:

Roadways

The roadway construction will occur in multiple phases. The initial phase of construction will include 23rd Avenue as well as 6th Street between Oak Street and 23rd Avenue. The second phase requires completion of the new Huron Boulevard connection to University Avenue, the new Oak Street alignment between University Avenue and 4th Street, and University Avenue widening from Huron Boulevard to Oak Street. The next phase consists of moving traffic to the new or widened roadways and removal of existing Huron Boulevard between Washington and Oak Street and old Oak Street between University Avenue and 4th Street. This will allow the southwest portion of Stadium Project construction to proceed. Traffic will be maintained on existing Huron Boulevard, Oak Street, and University Avenue during construction. Only temporary lane closures will be needed.

Parking

A parking supply schedule will be developed to ensure adequate parking supply is available when needed for students and visitors. Student/visitor parking removed due to the construction of the Stadium will be replaced in new locations concurrent with its removal. Temporary parking will be evaluated including increased use of St. Paul Campus/State Fairgrounds lots. Construction of two proposed parking lots east of 23rd Avenue would begin prior to construction west of 23rd Avenue in order to make new parking spaces available as quickly as possible. Modification of existing lots will take place during the summer months between the end of spring classes and the beginning of fall classes when student parking needs are minimized.

Transit

Intercampus bus routes and stations will be accommodated throughout all phases of the Stadium construction.

Pedestrian and Bicycles

Pedestrian and bicycle traffic will be accommodated around the construction work area. Fencing and signing will guide pedestrians and bicyclists to trails, sidewalks and parking disrupted by the construction.

Construction Traffic

To mitigate the impacts of these activities, language will be placed in all construction contracts establishing additional mitigation requirements. Additional contractual requirements will include, but not be limited to:

- Trucks, construction equipment, or other vehicles delivering personnel, materials or other construction related items to the building site shall not be altered, modified or repaired in such a way as to cause the noise

emitted from its operation to be increased above that emitted by the equipment as originally equipped by the manufacturer.

- All deliveries into or haul outs from the building site made by tandem axle trucks, articulated semi trucks or similar high load capacity vehicles will be required to be made via approved street routes from the regional interstate highways to the building site. Specifically:
 - From I-35W to the Project Site via University Avenue/4th Street
 - From I-94 to the Project Site via Huron Avenue
 - From Hwy 280 to the Project Site via University Avenue

The approved routes are subject to requirements and restrictions placed on these streets and roadways by the applicable governmental authorities.

- The use of local residential streets for access to the site for material and equipment deliveries will be prohibited unless it is allowed by the applicable regulations and ordinances, a specific need can be demonstrated, and written authorization is obtained in advance from the Stadium Project Manager.

Contract sanctions and/or fines will be imposed on contractors, vendors and suppliers found violating these requirements.

4.6.7 Construction Solid Waste, Hazardous Waste

To the extent feasible, waste generation will be minimized and wastes generated will be recycled or segregated to reduce the overall project cost and the cost of waste disposal. Landfills accepting solid wastes are required to ensure that the materials accepted are not prohibited by their permit; therefore, contractors will be required to certify their wastes are appropriate for disposal at the selected facilities, as is the case on all construction projects.

For those subcontractors generating specific hazardous waste streams, those subcontractors will be required to maintain generation, transportation and disposal records subject to review by the University or its assigns for up to six years beyond the date of generation. The University, at its option, may review the waste disposal practices of its contractors.

If solid wastes are encountered in the subsurface during construction (e.g., railroad tracks, demolition debris) those wastes will be managed by the construction contractor at the direction of the environmental consultant. The disposition of any excavated wastes will be specified by the MPCA-approved response plan and construction contingency plan.

4.6.8 Water Use and Dewatering During Construction

Based on the current design concept, dewatering during construction is not anticipated. If dewatering were required during construction, based on groundwater data collected to date, no treatment would be necessary and groundwater could be discharged to the storm sewer system or ponded on-site and allowed to infiltrate. If dewatering is to occur as part of remedial construction activities, the University will obtain the necessary permits.

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5.0 Public Involvement

In November 2003, the Board of Regents of the University of Minnesota approved a set of guiding principles for the consideration of an on-campus Stadium, including the following principle related to the Stadium's compatibility with the surrounding environment.

UNIVERSITY AND NEIGHBORHOOD COMMUNITY / We will promote physical and programmatic integration with the Twin Cities campus community and adjacent neighborhoods.

This principal recognizes that a University on-campus Stadium must enhance campus life, while maximizing opportunities to support the University's teaching, research, and public service missions and that the Stadium must be designed, constructed, and operated in a manner that is compatible with the University campus environment, Master Plan, and the commercial and residential neighborhoods near the Project Site. The University will seek to accommodate and respect the community and neighborhood needs during the planning process.

In recognition of this principle, the University has and will continue to engage the University community, adjacent neighborhoods, local businesses, and other public agencies through various outreach efforts that have included the following:

- Public Meetings
- Draft EIS Public Hearing
- Stadium Area Advisory Committee
- Agency and Jurisdictional Coordination
- Project Web Site
- Media

5.1 Public Meetings

The University of Minnesota hosted two public meetings leading up the preparation and publication of the Draft EIS. The first was the preliminary scoping meeting held on March 1, 2005. This meeting afforded an opportunity for stakeholders to provide suggestions regarding the Project to the University prior to initiating the EIS process. The second public meeting was the April 13, 2005 Public Scoping Meeting. The scoping meeting focused on presenting the results of and receiving feedback on the Scoping EAW and Draft SDD.

5.2 Draft EIS Public Hearing

A public hearing was held on November 10, 2005. This meeting afforded an opportunity for stakeholders to provide comments on the Draft Environmental Impact Statement (EIS). A presentation was given that outlined the findings of the Draft EIS. An open house was conducted prior to public hearing where attendees were allowed to review study materials and ask questions to staff. Attendees were able to submit comments for the record through oral testimony to a court reporter or through submitting a comment card.

5.3 Stadium Area Advisory Group (SAAG)

The SAAG was organized and convened by the University of Minnesota to meet on a regular basis during the planning, design, and construction phases of the Stadium Project. The SAAG advises the University of Minnesota administration on issues related to anticipated impacts on or opportunities for communities adjacent to the campus as a result of the Stadium. The group is comprised of citizen participation neighborhood organizations, business associations, and municipalities adjacent to the Twin Cities Campus. The responsibilities of the members have included appointing a representative and providing timely and relevant comment. The responsibilities of the University have been to convene the group, arrange for meeting space, provide relevant and timely information, and consider the representatives' comments in decisions related to the Stadium Project.

The University also convened an internal University Stadium Advisory Group to provide representatives of the University community with information regarding the proposed Stadium, and to serve as a forum for these representatives to discuss issues, concerns, and provide feedback on the Project.

5.4 Agency and Jurisdictional Coordination

Through the planning process, the University has been coordinating with various agencies and jurisdictions to ensure the proper processes are followed and approvals requested. More importantly, the ongoing coordination and communication with these organizations provides valuable input and guidance through the project development process. Some of the organizations that have played important roles include:

- City of Minneapolis
- City of St. Paul
- City of Falcon Heights
- Hennepin County
- Ramsey County
- Minnesota Pollution Control Agency
- Minnesota Department of Transportation
- Minnesota Department of Natural Resources
- Metropolitan Council
- State Agricultural Society (Minnesota State Fair)

5.5 Project Web Site

An information project web site has been established on the World Wide Web at <http://www1.umn.edu/stadium>. The site provides a means for distributing available information and gathering input with an e-mail reply feature. The site is periodically updated to reflect project developments and to address new issues.

5.6 Media

The University recognizes the importance of the media in conveying project information to the public. University staff is in regular contact with the various local media outlets (newspaper, television, radio), and the media has attended the previously mentioned public meetings.

6.0 Permits and Approvals

The following permits and approvals are anticipated to be required for the Proposed Stadium Project. None of the permits or approvals listed will require preparation of a record of decision pursuant to Minnesota Rules 4410.2100, subpart 6D. In order to expedite the permitting and approval processes, coordination with the appropriate jurisdictions has and will continue to occur.

Government Agency	Potential Approval or Permit
State Minnesota Pollution Control Agency	Sanitary Sewer Extension Water Main Extension High Pressure Steam Connection NPDES Permit Response Action Plan (RAP)
Minnesota Department of Transportation	State Aid Approvals
Minnesota Department of Health	Water Installation Permit
Minnesota Department of Natural Resources	Dewatering Permit
State of Minnesota, State Building Code Division	Elevator Inspection Permit
Regional Metropolitan Council	Sewer Access Approval Water Access Approval Dewatering
Local City of Minneapolis	Traffic Signalization and Signs Utility Permits City Street Change Approvals Storm Water Permit Erosion Control Permit
Hennepin County	County Road Change Approvals
University of Minnesota	Building Permit and Code Compliance for Construction and Occupancy

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7.0 Response to Comments on the Draft EIS

7.1 Opportunities for Public Comment and Guidelines for Responding to Comments

The Draft EIS for the University of Minnesota Football Stadium Project was distributed in November 2005 to agencies and organizations on the official EQB distribution list, as well as additional agencies/organizations that had either requested a copy of the document and/or that could be affected by the proposed project. The comment period for the Draft EIS officially closed on November 23, 2005.

A public hearing to receive comments on the proposed project and Draft EIS was held as follows:

Thursday, November 10, 2005, 6:00 p.m. to 8:00 p.m.
University Lutheran Church of Hope
601 13th Avenue SE
Minneapolis, Minnesota

At the public hearing and meeting, an informational presentation was held to provide a Project update and a summary of the key issues and impacts addressed in the Draft EIS. Furthermore, an informational handout describing the proposed Project and the issues and impacts were made available to each attendee. All attendees were invited to provide comments through one of two ways: oral statements to a court reporter and/or through written comments.

- Written Statements: Attendees were invited to submit written comments on cards provided at the open house or in letter form. Comments could also be submitted via e-mail.
- Oral Statements: Statements were recorded by a certified court reporter during the public hearing.

A total of 223 written comments and 11 oral comments were received from private citizens, business representatives, interest groups, agencies, and other government entities during the comment period. All written and oral comments were incorporated into the Public Hearing Record for the Draft EIS.

Consistent with state environmental review rules, substantive comments are responded to in this Final EIS. Written responses have been provided for comments pertaining to analysis conducted for and documented in the Draft EIS. Additionally, responses have been prepared for statements noting incorrect or unclear information or content requirements.

A response was not provided for comments agreeing with the Draft EIS/project information, general opinions, statements of fact, or statements of preference. Section 7.2 presents a compilation of responses to those issue areas receiving the most comments. Finally, Section 7.3 presents copies of all government, agency, and organized interest group letters along with responses to the substantive comments provided in each.

Responses to comments provided by individual citizens are included within Section 7.2.

7.2 Responses to Frequent Comments

In reviewing the comments received several topic areas of common concern and feedback were evident. To facilitate a more clear and organized response, several categories encompassing common topic areas were defined and responses were drafted to address each. The topics are listed below and detailed in the remainder of Section 7.2.

- Anticipated Types and Frequency of Use
- Mitigation/Good Neighbor Fund
- Stadium Advisory Committees
- Traffic
- Parking
- Concert Event Noise
- Student and Fan Behavior

7.2.1 Anticipated Types and Frequency of Use

Numerous comments were received requesting additional information or clarification on how often and for what purposes other than for Gopher Football games the University intends to use the proposed Stadium.

The University remains committed to its original statement in the Draft EIS that, “First and foremost, the Stadium will serve as the game day venue for the University of Minnesota’s football team.” The funding plan for the Stadium does not rely on any revenue from non-football events and the University is not interested in using the Stadium as a general commercial venue for non-University related events. Other regional facilities exist to accommodate these types of events.

To better define how the University will use the proposed Stadium, potential uses have been broken into the four broad categories outlined below. This categorization distinguishes between activities (non-ticketed uses) and events (ticketed uses).

- Low Impact Activity – The University envisions using the Stadium for a wide range of routine and low impact activities. These non-ticketed uses would include such things as indoor and outdoor marching band rehearsal, recreational sports, banquets, conferences, career fairs, and tours. These uses would occur throughout the year and at various times of the week. If there is a reasonable possibility that attendance will exceed 15,000, the use will be ticketed and treated as a Major Event (see below).
- Major Event – Major events are ticketed uses of the Stadium with attendance greater than what currently occurs at on-campus venues at the University. Such an event would have an attendance greater than approximately 15,000 people. Gopher football games will be considered a Major Event. The University does not foresee hosting more than twelve Major Events including Gopher Football in any year. Because of the obvious conflicts with weekday classes and general commuter traffic it will be the University’s policy and practice to hold Major Events on weekends. It is also the policy and preference of the Big Ten to play

football on weekends. Major Events on weekdays are not foreseeable at this time. In the 20 plus years since the University has played “home” football games at the Metrodome, the Gophers have played only five weeknight home games. All five of these events were the result of scheduling conflicts with the Minnesota Twins.

As the owner of the proposed Stadium, the University will have great control in scheduling Major Events. If at some presently unforeseen point in the future the opportunity arises to use the Stadium for a major regional event (e.g. the Olympic Festival) that would require weekday use, the University will work closely with the Stadium Area Advisory Group, the Event Management Advisory Committee, and other interested parties to mitigate adverse impacts. These committees and their roles are defined in the Stadium Advisory Committees section below.

- **Minor Event** – Minor Events are ticketed uses of the Stadium with an attendance equal to or less than currently occurring at existing University on-campus venues. A Minor Event has an attendance less than approximately 15,000 people. Minor Event uses would include such things as State High School League tournaments, celebrity speakers, and marching band competitions. Minor Events will occur at a frequency similar to current non-intercollegiate athletics use of the University’s athletic venues (approximately eight times per year).

The University has not ruled out the possibility that it may from time to time hold amplified music events (i.e. concerts) in the Stadium. All concerts will be subject to the Major and Minor Event restrictions. Further details regarding scheduling restrictions for concert events are included in 7.2.6.

In making a decision as to whether or not to permit any given event, as well as in planning and scheduling such events, the University will consider the potential for noise, traffic, parking, and other adverse impacts on the surrounding community. The University decision-making will be guided by the current and proposed University policies, as well as applicable laws and regulations.

7.2.2 Mitigation/Good Neighbor Fund

Several comments made reference to the University’s proposal in the Draft EIS Section 3.8.2 to establish a funding source for community initiatives.

The University recognizes that constructing a new Stadium and returning Gopher Football to campus from downtown Minneapolis is going to have an impact on the neighborhoods adjacent to the University. The University is committed to working with surrounding residential and business areas to mitigate the impact of both the construction and the on-going operations of the Stadium. The cost of any mitigation measures undertaken as part of the Stadium construction will be paid for by the Stadium Project. Likewise, any on-going mitigation measures undertaken to address impacts directly resulting from Stadium events (including pre and post-game activities) will be paid from Athletic or Stadium operating funds. This funding commitment encompasses all mitigation measures outlined in the Final EIS.

The University also recognizes that at some point there are likely going to be inconveniences to the surrounding community that are not directly attributable to the Stadium or mitigatable by the University. The University will create a Mitigation/Good Neighbor Fund to provide funding for community initiatives. This funding is over and above any money required to cover the costs associated with mitigating the direct effects of the Stadium. The fund value will be set at \$800,000; of which up to \$300,000 is available during construction, with the balance to be deposited into a dedicated endowment fund to be managed by the University, for use after construction is completed. The use of the funds will be coordinated through the Stadium Area Advisory Group.

7.2.3 Stadium Advisory Committees

Several comments made reference to the University's proposal in the Draft EIS to convene two advisory bodies, an Event Management Advisory Committee (EMAC) with City, County and State agencies, and a Stadium Area Advisory Group (SAAG) with representatives of the adjacent communities. These groups are further described below.

Event Management Advisory Committee (EMAC)

The University will create the EMAC to identify, coordinate and advise on Major Event planning and operations. The EMAC will also be responsible for developing and implementing adaptive parking and transportation mitigation techniques. The EMAC will include representatives from the University (including Athletics, Public Safety, Facilities Management, Parking and Transportation, Media Relations), representatives from adjacent municipalities, the Minnesota State Fair, MetroTransit, the Department of Transportation, Hennepin County, and Ramsey County. The committee will meet before home football games and other Major Events and as required at other times of the year. The committee will be ongoing.

Stadium Area Advisory Group (SAAG)

The University will continue to convene a community group to provide advice and feedback on the impacts and opportunities associated with Major Events at the proposed Stadium. The group will be constituted in a manner similar to the existing SAAG, which is charged with providing feedback to the University during the planning, development, and construction phase of the Stadium. The reconstituted SAAG will include representatives of the recognized citizen participation neighborhood organizations, business associations, and municipalities adjacent to the Twin Cities Campus. The committee will serve as a means for regular, sustained, and meaningful consultation. The SAAG will meet after home football games and other Major Events and as required at other times of the year. The SAAG will be on-going. Expenditures from the Mitigation / Good Neighbor Fund will be coordinated with the SAAG.

7.2.4 Traffic

A large number of the comments identified concerns regarding traffic issues. Several common themes are identified below and a comprehensive discussion of the issues are provided.

In addition to these theme areas and in response to public comments, the University has established a framework for a Travel Demand Management (TDM) Plan. The Plan serves as the centerpiece for the overall traffic mitigation approach. The TDM Plan framework is detailed in Section 3.1.4.

Revisions to Proposed Local Roadway Reconstruction

In response to comments received by the City of Minneapolis and several neighborhood organizations, the proposed roadways around the Stadium have been changed to reflect the current status of planning for local roadway improvements in the area. Granary Road (previously shown to the north of the Stadium Site), in particular, was the subject of several comments as funding for this proposed roadway has not been secured, and there are disagreements between local communities regarding whether this roadway should be built. As proposed Granary Road is not required (nor is it precluded) by the Stadium Project; short extensions of existing streets are proposed as access to proposed parking areas. The currently proposed roadway network around the Stadium is shown in Figure 3. The changes include the removals of:

- Oak Street from 5th Street to Granary Road
- Granary Road from Oak Street to 6th Street
- Granary Road east of 25th Street
- 6th Street from Granary Road to 25th Avenue
- 25th Avenue from Granary Road to 6th Street

The changes include the addition/realignment of:

- 6th Street from Oak Street to 25th Avenue

These changes result in slightly different routing of trips to the Stadium site, but the changes have no significant impact on the year 2009/2010 intersection operations analysis.

The existing transitway from Oak Street to 23rd Avenue will be removed as indicated in the DEIS. The formal transitway will terminate at 23rd Avenue and campus buses will be routed along 23rd Avenue through the University Avenue intersection and onto Washington Avenue.

Management of the Regional Roadway System during Stadium Events

A number of comments from transportation agencies, neighborhood organizations, and the public raised concerns about impacts resulting from event traffic to the regional roadway system. These concerns do not address capacity of the regional system to accommodate the additional traffic volumes generated by Stadium events, but rather queuing from freeway ramp intersections with local streets potentially blocking traffic flow on the mainline freeway, or traffic exiting the regional system at less desirable access points causing unwanted diversion on local streets. The University of

Minnesota is committed, as part of the mitigation measures discussed in Section 3.1.4, to manage local roadway system traffic flow to minimize queuing impacts on freeway ramps, and to work with Mn/DOT through traffic monitoring and Variable Message Sign (VMS) technology to direct event attendees to appropriate freeway exits where they can be effectively directed to parking facilities. The University Event Transportation Manager will oversee pre-event planning and event day operations and be responsible for coordination with Mn/DOT. Event traffic will be monitored on the freeways (I-94, I-35W, TH 280) using Mn/DOT staff and traffic cameras, and traffic flows managed as conditions warrant.

In particular, the interchange areas of I-35W/University Avenue/4th Street, I-35W/Washington Avenue, I-94/Huron Boulevard and TH 280/University Avenue will be observed. The Mn/DOT VMS (variable message signs) will be used to direct traffic and provide information to balance the flows among the interchanges. The VMS may also be used to notify the general public of the expected increase in traffic prior to events. The same procedure used at the East Bank Campus should be used to direct traffic from the regional system to the St. Paul Campus and State Fairgrounds parking areas. The intent will be to quickly detect problem areas and respond by directing traffic to less congested areas to balance traffic volumes.

During the peak times, some traffic can be expected to use alternate routes to reach the parking areas, but that should be short in duration and relatively minor in volume as the routes will be quite indirect. The routes/intersections analyzed are the most direct access from the regional system to the public parking locations.

The details of the regional management activities will be included in a TDMP (travel demand management plan) to be developed for the Stadium. The plan will result from discussions between the University, Mn/DOT, Metropolitan Council, Hennepin County, Ramsey County, City of Minneapolis, St. Paul and Falcon Heights, and the State Fairgrounds regarding regional roadway management. The plan details will most likely be modified as experience from actual events is gained.

Diversion of Traffic to Residential Streets Due to Congestion

The most direct roadways from the regional roadway system to the campus area parking locations were the roadways/intersections analyzed in the Draft EIS. These roadways include University Avenue (east and west of the Stadium site), Huron Boulevard, Washington Avenue, 15th Street and to a lesser degree West River Road on the University East Bank Campus and Snelling Avenue, Larpenteur Avenue, Cleveland Avenue and Como Avenue in the City of Falcon Heights.

The goal during Stadium events is to have traffic along these main roadways flow as efficiently and safely as possible. Mn/DOT's regional VMS system will be used to re-direct traffic to alternate main routes if too much traffic is being concentrated on one roadway. Once on the local roadway system, signage and traffic control officers will be used to direct vehicles to the closest parking facility available. Staffing levels at the parking locations will be set to provide for quick exchange of money or verification of a parking

pass to get vehicles quickly into parking lots, thereby minimizing the impact on local roadways. Permanent variable message signs (VMS) and/or portable changeable message signs (CMS) may be located on some of the key access roadways to direct traffic to the appropriate parking facilities during arrival or regional access points during departure. The same signs can be used prior to events to alert the general public that an event will be occurring on a specified day and could also be available to be used for other campus events.

The TDMP (see Section 3.1.4) that will be prepared prior to Stadium opening will provide additional details of VMS/CMS and other sign locations, parking operations and traffic management activities to provide a positive experience for event attendees and the people in the surrounding areas. These items will be modified as needed based on actual experience from the events.

Minneapolis SCOOT

The SCOOT (Split, Cycle, Offset, and Optimizing Technique) system discussed in the Final EIS text (Section 3.1.1) would be a technological enhancement to the City's traffic signal system in the University campus area that allows dynamic automated adjustment to the traffic signal system in response to "real-time" information regarding traffic volumes and flow obtained from sensors imbedded in the roadway pavement or traffic-monitoring cameras. The SCOOT system would benefit daily traffic flow through the area during peak periods as well as facilitate management of event traffic.

Several comments expressed concern that the traffic operations was heavily reliant on the benefits of SCOOT to obtain the Levels of Service reported in the DEIS and that expected Levels of Service would decline if SCOOT were not in place. The computer models used to analyze future Levels of Service in, can only accommodate static signal timing schemes and so, in actuality, only capture a minor portion of the benefits of SCOOT's dynamic adaptation of signal timing. To the extent that SCOOT benefits are only captured to the point of optimized signal timing for peak periods, Levels of Service similar to those presented in the traffic analysis can also be accomplished with a well-coordinated signal timing system. Current experience with the SCOOT system currently installed in the area surrounding the Target Center in downtown Minneapolis suggest that additional benefits to traffic flow would be realized beyond the improved Levels of Service reported in this EIS should SCOOT be in place for any events held on the University campus.

While the City of Minneapolis has planned for implementation of the SCOOT system in 2011, full funding is not yet available for the project. The University is working with the City of Minneapolis to ensure the timely implementation of the SCOOT system. The University has agreed to pay a portion of the required local cost share. The University is also prepared to advance fund the federal portion of the project, with the proper legal assurances of being repaid, to ensure that SCOOT is in place at Stadium opening.

Use of Traffic Control Officers

Traffic control officers will be located at access points to parking facilities and at key intersections expected to have high pedestrian activity. The

objective of the traffic control officers is not to direct vehicular traffic, but to prevent pedestrians from over taking the roadway or vehicles from blocking intersections. Their objective is to ensure safe and efficient flow of vehicles and pedestrians. The exact locations for traffic control officers will be detailed in the TDMP, and will change as experience is gained from actual events.

Another use for traffic control officers could be at key locations in off-campus residential neighborhoods to ensure Stadium event related traffic is not diverted from primary routes. Neighborhood management activities will be coordinated with the neighborhood groups, city staff and police departments through the SAAG.

7.2.5 Parking

Several comments expressed concern regarding the likelihood of parking in the adjacent neighborhoods.

Neighborhood Parking Concerns

The capacity exists to park all event traffic in University parking facilities and this will be the University's goal. Parking in residential areas, either on-street or on residential property is not desired as it detracts from efficient traffic flow and creates undesired impacts on area residents.

However, in an effort to understand the management, and possibly regulatory effort needed to discourage parking in residential neighborhoods, a study of on-street parking supply was conducted to better understand the locations and capacity of areas where this could be an issue.

Residential areas most likely to be affected by Stadium event users looking for parking spaces will be within a $\frac{3}{4}$ mile radius of the Stadium itself or within $\frac{3}{4}$ mile radius of the shuttle bus stops on the St. Paul Campus which translates into a 19-minute walk. After accounting for additional distance required to traverse along block faces and in some cases to go around obstacles like major structures, the actual time required to reach the destination from the outermost areas within the $\frac{3}{4}$ mile ring will easily exceed 20 minutes. Given that there is a surplus supply of available parking inside of this ring for Stadium event users, it can be surmised that few, if any, Stadium users will want to park beyond the $\frac{3}{4}$ mile ring.

In order to understand potential neighborhood parking concerns in greater detail, the University, in December 2005, conducted an evaluation of parking supply (University controlled, commercial, and public on-street) that is potentially available for Stadium events within a $\frac{3}{4}$ mile walk radius of the proposed Stadium and the transit stops on the St. Paul campus. This analysis was completed for both the East Bank campus and the St. Paul campus. This analysis is documented in Supplement 2 to the *University of Minnesota On-Campus Football Stadium Transportation Analysis Technical Memorandum* dated January 31, 2006. Figures 8 and 9 show the on-street parking areas within $\frac{3}{4}$ mile of the Stadium and St. Paul Campus transit stops that permit parking for at least a three-hour duration on Saturdays.

Based on the field review, it is estimated that the potential on-street parking supply with duration of at least three-hours on a Saturday within $\frac{3}{4}$ mile of

the Stadium is 2,160 spaces and within ¼ mile of the St. Paul Campus transit stops is 2,510 spaces. These estimates are based on the length of each block where parking is permitted and assuming 25 feet per vehicle on average across the block to account for no parking areas around the block edges, hydrants and bus stops. Much of the area west of Cleveland Avenue near the St. Paul Campus is a critical parking area, with parking requiring a permit, but that requirement is currently in affect Monday through Friday. No estimate has been made on the utilization of parking in these areas on a Saturday by residents and guests.

A variety of techniques will be examined in cooperation with the SAAG to restrict on-street parking by Stadium event users. Opportunities for on-street parking management to be discussed with the SAAG include:

- Extension of the existing critical parking area west of Cleveland Avenue near the St. Paul Campus to include Saturdays from September through November.
- For areas east of Snelling Avenue, restrict parking along these streets during game days with temporary signage. This is similar to the parking ban during the State Fair run in this area.
- Around the Stadium in Minneapolis, establish critical parking areas to help manage potential issues. This would require City and neighborhood agreeing agreements on the program specifics, the extent of the area, time periods of enforcement and number of residential and guest permits issued. Permanent or temporary signs indicating the program enforcement period, weekdays and/or Saturdays from September through November, would need to be installed.
- Other techniques identified through discussions with the SAAG and surrounding communities.

It is recommended that the first few events at the Stadium be monitored to see what, if any, problems emerge and then implement the appropriate level of response to the degree of the problem. Establishment of extensive permit parking programs can be quite expensive and requires cooperation from residents and a significant commitment of enforcement resources. Prior to establishing broad-reaching programs, the partners should observe the extent of any problems and enact a pre-determined response.

7.2.6 Concert Event Noise

The University's statement that it may hold amplified music events (i.e. concerts) in the Stadium generated numerous comments.

Based on the analysis included in Section 3.2.4 and 3.2.5, the University is committing to the following management measures to mitigate the identified impacts.

Minor Concert

- Require concerts to end before 10:00 p.m.

-
- The University will specify in contractual agreements use of Line-Array systems for concert audio and that the vertical coverage pattern of any cluster component not to exceed, or aim, over the bowls edge.
 - Specify in contractual agreements that noise levels must be monitored at the closest residential receptors during the concerts to ensure compliance with state standards. Continuation of this program will be considered after the first year of operation.

Major Concert Events

- Initially, the University will not schedule Major Concert Events.
- When the Stadium is complete, the University will conduct a noise test to determine actual noise levels experienced in the surrounding areas.
- The results of this noise test will be used to determine the parameters for Major Concert Events.
- Major Concert Events will not occur on weeknights.

By implementing these mitigation measures, Stadium concert events violating state noise standards will be avoided. However, it is recognized that concerts, in all probability, will be heard. It is the excessive concert noise over and above state standards which is being examined with regards to mitigation and control.

7.2.7 Student and Fan Behavior

Numerous comments were received expressing concern about student and fan behavior off-campus resulting from events at the proposed Stadium. In response to these concerns the University has added a Student and Fan Behavior section to the Social and Community Environment section of the Final EIS. The information provided in that section is also presented below:

The University is committed to making the Stadium a "family friendly" environment on Gopher game days. As a step toward achieving this goal, the University will undertake the following activities:

- Guest Services/Ushers/Fan Ambassadors – The University will train game day staff to reinforce and support a responsible, welcoming, and family friendly environment.
- Behavior Expectations and Stadium Rules – The University will develop clear behavior expectations and Stadium rules. These guidelines will be communicated to all ticket holders through e-mail, inserts in ticket envelopes, game day programs, public address announcements and regular media outlets.
- Alcohol – Consistent with Regents policy, alcohol will be available only in accordance with applicable state laws and limited to suites, club seats, and other premium seating areas. The University will not allow obviously intoxicated persons into the Stadium and will confiscate alcoholic beverages that are being carried in.

-
- Tailgating – Tailgating is part of the collegiate game day experience and the University anticipates that it will take place on game days. In order to limit the adverse impact of this activity, the University will provide locations on campus to accommodate this activity including designated parking lots and picnic sites. In consultation with the SAAG the University will develop reasonable tailgating policies for University controlled areas. These will include but not be limited to policies on sound amplification, cooking devices, and alcohol use. The University will ensure appropriate City and Regent authority to regulate and control tailgating outside designated areas.
 - Party Patrols – The University Police will work with the adjacent municipalities to increase police enforcement in adjacent neighborhoods on Major Event weekends. This increased enforcement will occur on Friday (pre-game) and Saturday (post-game) nights.
 - Litter – The University will provide and pick-up trash containers for use on and off-campus. The number and location of these containers will be coordinated with the SAAG, adjacent municipalities, and adapted as necessary to reflect fan behavior.

7.3 Agency and Organizations Comments and Responses

Comment letters were received from the following governmental agencies and neighborhood organizations:

- City of Minneapolis
- City of St. Paul
- City of Falcon Heights
- Hennepin County
- Ramsey County Regional Railroad Authority
- Minnesota Department of Natural Resources
- Minnesota Department of Transportation
- Minnesota Historical Society
- Metropolitan Council
- Southeast Como Improvement Association
- St. Anthony Park Community Council
- Prospect Park East River Road Improvement Association
- Marcy Holmes Neighborhood Association

Copies of the comments received from citizens are included in Appendix B. The responses to the citizen comments are included within the material presented in Section 7.2.

The remainder of this section presents each of the comment letters listed above. The letters have been formatted to highlight the substantive comments for which responses have been assembled. The response to each highlighted comment is included on the back side of the comment letter. To the extent possible, the responses refer to revised sections of the document or the comprehensive responses included in Section 7.2.

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Agency and Organization Comment Letters

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**Department of
Public Works**
Klara E. Fabry, P.E.
City Engineer
Director

350 South 5th Street - Room 203
Minneapolis MN 55415

Office 612 673-2352
Fax 612 673-3565
TTY 612 673-2157

Date: December 23, 2005

To: Mr. Brian Swanson, Budget Officer
University of Minnesota, 335 Morrill Hall, 100 Church Street SE
Minneapolis, MN 55455
(via e-mail)

From: Klara A. Fabry, P.E., City Engineer, Director of Public Works

Cc: Greg Schroeder, P.E., Engineering Services Capital Improvement Coordinator
Rhonda Rae, P.E., Director of Engineering Services
(via e-mail)

Subject: City of Minneapolis Comments For U of M Football Stadium Draft EIS

Dear Mr. Swanson:

Enclosed with this e-mail are the City of Minneapolis comments on the October 24, 2005 University of Minnesota On-Campus Football Stadium Draft Environmental Impact Statement (EIS). Submission of the comments was authorized today by the City Council.

On November 22, draft comments were presented to the City of Minneapolis Transportation & Public Works Committee, which authorized submission of the draft comments to the University of Minnesota by the November 23, 2005 deadline. The comments were sent to you *via e-mail* on November 23. The Transportation & Public Works Committee also forwarded the item on to the City Council for approval of submission of final comments, and directed the Public Works Department to meet with other City of Minneapolis departments to further refine these comments prior to the Council's action.

From our discussions with University representatives, it is our understanding that you will accept the City's final comments after the formal November 23, 2005 Draft EIS Comment Deadline, provided our draft comments met that deadline.

In addition to refining the table of detailed comments, City of Minneapolis personnel summarized these detailed comments into the following five general comments to reflect our overall concerns with the Draft EIS and our concerns on the impacts the stadium project will have on City infrastructure and neighborhoods:

- 1) The EIS should identify the full range and frequency of known or likely activities or events (e.g., football, musical concerts, etc.) that are proposed to occur at the proposed stadium. The impacts should be identified and the appropriate mitigation be addressed.

A-S1

A-S1 See Section 7.2.1.

- | | |
|---|------|
| 2) The Draft EIS identifies the worst-case traffic congestion impacts, including air quality, for 2009 through 2030, but does not provide full solutions for mitigation of those impacts. Further traffic analysis should be conducted to address the full range of stadium events. | A-S2 |
| 3) The location, availability, convenience, cost and adequacy of parking spaces for the full range of stadium events should be identified and should include the impacts on traffic and the surrounding neighborhoods. | A-S3 |
| 4) The Draft EIS assumes that certain infrastructure improvements for the SEMI/University Research Park will be constructed by the City by 2009. Because these improvements are not currently funded or may have post-2009 construction dates, the Draft EIS should document analyses, impacts and mitigation should such infrastructure not be in place. | A-S4 |
| 5) The EIS should identify viable mitigation techniques to address community impacts, including but not limited to: noise, lighting, odors, hours of operation, and after-hours construction activities. | A-S5 |

We appreciate the opportunity to provide comments on the Draft EIS for the University of Minnesota's proposed stadium project and hope that resolution and incorporation of our comments into the Final EIS will identify and mitigate the impacts of this proposed project on City infrastructure and neighborhoods. If you have any questions, please contact Gregory Schroeder, P.E., the City of Minneapolis contact for this project, at greg.schroeder@ci.minneapolis.mn.us or at (612) 673-3718.

A-S2 The University has further defined the anticipated type and frequency of stadium uses and has strengthened the mitigation section of the Final EIS document. As part of the mitigation strategy the University will continue to work closely with the City of Minneapolis and other public entities to further minimize traffic and parking impacts. Mitigation of both major and minor events will require an adaptive and cooperative strategy between the City of Minneapolis and the University. See Sections 7.7.3, 7.2.4, and 7.2.5 for additional discussion of this issue.

The analysis of potential air quality concerns does not indicate any significant impacts or exceedances of state standards. No mitigation is proposed.

A-S3 Section 7.2.5 provides a more detailed discussion of parking strategies and potential neighborhood parking impacts.

A-S4 Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4, and presented in Figure 3.

A-S5 The University has strengthened the mitigation sections of the Final EIS document. Please reference Section 7.2.

**University of Minnesota Stadium
Final EIS Comments**

December 23, 2005

Comment Number	Section	Page	From Top of Page		Comment/Proposed Change/ Remark
			Paragraph	Line	
1					<p>On March 11, 2005 the Minneapolis City Council approved RESOLUTION 2005R-124 authorizing a Letter of Agreement between the City and the University of Minnesota regarding environmental review of a proposed Gopher Football Stadium. The Resolution is incorporated into these Draft EIS Comments by reference. Included in the Resolution were the following: The Board of Regents has affirmed guiding principles concerning a stadium, which include the principle to "promote physical and programmatic integration with the Twin Cities campus community and adjacent neighborhoods"; and that "any stadium on campus will be designed, constructed and operated in a manner that is compatible with the University campus environment, master plan and the commercial and residential neighborhoods near the stadium site;" and "the University will seek to accommodate and respect the community and neighborhood needs during the planning process;" and "in accordance with its commitment to an open and inclusive planning process, the University will engage in a dialogue about stadium options with the University community, adjacent neighborhoods, local businesses, and other public agencies." Further, the Resolution designated appropriate City staff to participate in the Technical Advisory Group, to in particular review the anticipated impacts on or opportunities for the City and adjacent communities arising from the stadium project and to share their analysis and suggestions with the University, particularly as it relates to parking, traffic flow, land use, transit, air quality, lighting, noise, identification of alternatives, game day activities and economic impact.</p>

A-1 No response required.

**University of Minnesota Stadium
Final EIS Comments**

December 23, 2005

Comment Number	Section	Page	From Top of Page		Comment/Proposed Change/ Remark
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2					On March 15, 2005 the City of Minneapolis and the University of Minnesota entered into a Letter of Agreement Regarding Environmental Review of Proposed Gopher Football Stadium. The Letter of Agreement is incorporated into these Draft EIS Comments by reference. Included in the Agreement are the following: Ensure that issues regarding the responsibility for infrastructure cost and construction are understood by the parties for the purposes of environmental review, the University will obtain the City's approval with respect to such items as changes to City streets and alterations and realignments of sanitary sewer, storm sewer and water line connections, the University will pay all infrastructure costs that result from its construction of the stadium in the event the proposed stadium project moves forward to construction, including the costs associated with improvements or changes to the physical infrastructure owned by the City, and the University will pay all City utility fees for the stadium site at standard rates as set pursuant to City Ordinance.
3	1.0 and 3.1	4 and 19		Figure 3, Figure 5	It is requested that the U of M re-look at the construction of temporary 6 th Street . West Granary is recognized in both the SEMI plan and the Stadium EIS as the long-term solution to providing access in this area. The University is about to acquire the Reichhold property, upon which much of West Granary is to be constructed. Minneapolis and the University should therefore be able to construct West Granary by the time the Stadium is completed.
4	1.2	4	Figure 3	key	Orange labeled street (Oak Street) indicates the city will construct a street in 2006. This is incorrect. The City and the University need to finalize the location and elevation of the Granary Road / Oak Street Intersection before any design can be initiated. The City currently has this intersection as a raised intersection to enable a bridge crossing over the railroad tracks to the North. This orange line should not be shown until agreement is obtained or shown as a future street.
5	1.2	4	Figure 3	key	Solid purple line identifies streets that the city will construct in 2006. This is incorrect. The City does not own the right-of-way for these proposed street locations and needs to obtain it. No right-of-way procedures have been started and no design can be finalized without the needed right-of-way. The solid purple line should be changed to show a proposed future location of Granary Road and 25th Avenue.

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- A-2** The University acknowledges the City of Minneapolis' authority over its streets, water mains, storm sewers and other municipally-owned infrastructure and will observe the City's requirements with respect to the use of these City facilities. Section 6.0 of the Final Environmental Impact Statement reflects this. However, to the extent the City of Minneapolis is suggesting that the University's construction and operation of a stadium on land owned by the University is subject to its building, zoning and licensing ordinances, we disagree and here express our view that the City of Minneapolis has no legal authority to enforce its ordinances against the University. See, *City of Minneapolis Commission of Civil Rights v. University of Minnesota*, 356 N.W.2d 841 (Minn. App. 1984).
- A-3** Assumptions regarding local street improvements have been revised and are discussed in FEIS Section 7.2.4, and presented in Figure 3.
- A-4** Assumptions regarding local street improvements have been revised and are discussed in FEIS Section 7.2.4, and presented in Figure 3.
- A-5** Assumptions regarding local street improvements have been revised and are discussed in FEIS Section 7.2.4, and presented in Figure 3.

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6	2.1.1	8	Alternative Sites		The EIS should include the rationale for the selection of this site for the stadium and the rationale why other sites were not analyzed as part of the EIS including the no-build alternative.	A-6
7	2.2.1	10	Anticipated Types and Frequency of Use		The City is aware of other, non-University related uses such as stadium-sponsor TCF's twice yearly option to use it for corporate events. The University needs to identify the full range and frequency of known or likely activities or events (i.e. football, musical concerts, etc.) that are proposed to occur at the stadium, determine when they will occur (month, weekday, weekend, noon, etc.), and conduct the relevant analyses to determine any impacts and propose appropriate mitigation.	A-7
8	3.0				The EIS does not include 2030 level of service results for a weekday football event. These should be included.	A-8
9	3.1	12	Transportation and Parking		The charts for 2009 Saturday games show the intersection at Oak and University degrading from a B-status to an E-status at game start, and degrading from a B-status to an F-status at game completion. Similar degradations occur at Fulton and Huron and 27th and E. River Road/Franklin. Twenty-one years later in 2030, the charts are very similar, indicating that negative traffic impacts to the neighborhood will continue far into the future. The EIS should identify ways to mitigate these impacts.	A-9
10	3.1	12	3/4	all	The overview presented of the 18 scenarios is not defined enough to gauge the entire depth of the analysis conducted. Please list the 18 scenarios to clarify.	A-10
11	3.1.1	12	last	2	The EIS should identify the full range and frequency of known or likely activities or events (i.e. football, musical concerts, etc.) that are proposed to occur at the proposed stadium. The impacts should be identified and the appropriate mitigation be addressed.	A-11
12	3.1.1	12	4	2	The Project was initially proposed to open in 2008 and thus requires a 2009 (one year after) traffic analysis. Since the Project timeline has been delayed to 2009 opening, then the traffic analysis needs to be conducted for 2010. This results in corrections throughout the EIS.	A-12

A-6 The University discussed the issue of site selection in the Stadium Feasibility Study, Environmental Assessment Worksheet, and Scoping Decision Document. The analysis presented in the EIS is consistent with both the project purpose and the Scoping Decision Document. As stated in the Draft EIS, “An on-campus location is absolutely critical to the purpose and success of the Stadium Project. The criteria considered in selecting a location for the proposed Stadium included, in addition to being large enough to accommodate a stadium, the ability to enhance campus life, complement the University’s existing athletics facilities, promote the orderly growth of campus, and provide maximum accessibility for patrons.”

A no-build alternative analysis is included in the Draft EIS.

A-7 The University’s contract with TCF Bank grants that TCF Bank has “*the right to hold up to three events of TCF’s choice (such as an employee/customer event, a charity event, or an annual job fair) at the Stadium during each Contract Year, rent-free, subject to availability as determined by the University in its sole discretion and prior approval. Potential usable rental space shall be comprised of the public spaces at the Stadium, including club room and designated suite[s], but does not include the playing field, locker rooms, and other private spaces. TCF will execute a use agreement on standard University terms and conditions (except for rental amount), and shall be responsible for all costs associated with the events.*”

“Availability” of the Stadium is to be determined by the University, and this determination can take into account factors including neighborhood and roadway impacts. The contractual exclusion of the playing field will serve to limit the size and impact of the event.

A-8 See Section 7.2.1.

A-9 Proposed mitigation measures were outlined in Draft EIS Section 3.1.4. A revised discussion of proposed mitigation for traffic congestion impacts is provided in Final EIS Section 3.1.4. In response to comments received, the Final EIS mitigation list provides for (changes/modifications from DEIS: 2030 weekday University/Huron, more discussion on balancing regional system, SCOOT). The University will work with the City of Minneapolis, Hennepin County, Metro Transit and Mn/DOT to develop an initial event traffic management plan, and will continue to work with these agencies to refine that plan based on event experiences.

A-10 A complete discussion of the scenarios analyzed is presented in Table 1 (page 4) of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005 incorporated by reference into the Final EIS.

A-11 See Section 7.2.1.

A-12 Minnesota EQB rules do not specify timelines for traffic analysis. It is correct that the proposed opening date for the Stadium has been adjusted from 2008 to 2009. The analysis presented for 2009 traffic operations represent anticipated traffic operations at the year of opening. There is no specific requirement for “year after opening” analysis.

However if a 2010 analysis was completed, background traffic volume growth for one year will have little to no impact on the traffic analysis. The event traffic itself is of a much greater magnitude than the yearly traffic growth.

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13	3.1.1	12	last	4/5	The sentence "Analysis of the East Bank Campus includes access to and from TH 280, I-35W and I-94." should be correctly stated to read "The East Bank Campus area analyzed in this EIS is bounded by TH 280, I-35W and I-94." Note -- the subsequent paragraphs detail the exact locations of analyses.	A-13
14	3.1.1	13	first	4/8	The "event" analysis focuses on arrival traffic. Not defining the event makes it impossible to determine whether departing traffic may be more critical. The EIS should define "Event" and the departing traffic analysis.	A-14
15	3.1.1	13	2	6/9	Please present the data/analysis that supports the state of existing Levels of Service.	A-15
16	3.1.1	13	5	1/3	Provide a statement as to why this analysis is needed (e.g. - to gauge the implications of the changed Project roadways on various existing traffic conditions.	A-16
17	3.1.1	13/14	last/first	bullet points	Bullet points 2,3,4,6 & 7 are stated with no basis of this assumption. The EIS should state the basis of these assumptions?	A-17
18	3.1.1	13/16	Basketball event section	all	Why is this info in Section 3.1.1 when other traffic analyses are located in Section 3.1.2?	A-18
19	3.1.1	14	2	1/3 & 12/13	The Draft EIS assumes a SCOOT system will be implemented prior to the Project opening. The traffic analysis relied heavily on SCOOT operations. The City anticipates the SCOOT system to be operational in 2011. Unless the Stadium Project advances the construction timetable of the SCOOT system, the EIS should analyze the traffic impacts and mitigation measures without reliance on the SCOOT system.	A-19
20	3.1.1	14	3	+	See Comment No. 19.	A-20
21	3.1.1	14	1	1	EIS notes that Saturday events use only daytime start times. In 2005 the Gophers had two evening games. Future media and school contracts could dictate evening games. The EIS should address this possibility.	A-21
22	3.1.1	14/15	pg 14 - 3 & 4, pg 15 - 1 & 2, Table 1	all	Intersections 13, 23, and 24 are three modified Project intersections, with unacceptable LOS E/F conditions. The EIS should identify how these three intersections will be mitigated to address these impacts.	A-22

- A-13** The existing EIS language more accurately reflects the nature of the University analysis.
- A-14** See Section 7.2.1 for further definition of events.
- The intent of this statement was to note that not all the same intersections are analyzed for arrival and departure, only intersections that will be impacted were analyzed for each.
- A-15** Please refer to pages 5-9 of the *University of Minnesota on-campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005 for details of the existing conditions level of service analysis. The memorandum is available at the University Stadium website: www.umn.edu/stadium.
- A-16** Traffic analysis presented in Draft EIS section 3.1.2 addresses the environmental consequences of the proposed Stadium construction and events held at this facility. The information provided in 3.1.1 relates to 2009 traffic under the No-Build Alternative.
- A-17** The assumptions used for the traffic analysis are based on different sources for similar uses, experience and judgement. The assumptions are within typical ranges for football games and therefore are reasonable for the analysis. The University will likely try to influence these assumptions by encouraging higher auto occupancy, use of walking and transit, and pre-and post-game events. The TDMP will determine and coordinate methods to reduce vehicular traffic volumes generally as well as reduce the intensity of the event traffic during pre- and post-game periods.
- A-18** See response to A-16.
- A-19** See Section 7.2.4.
- A-20** See Section 7.2.4.
- A-21** Traffic volumes on a Saturday do not tend to fluctuate throughout the day, so any start time on a Saturday will yield the same results as a game with a noon start time.
- A-22** Information regarding traffic operations for 2009 events at Williams Arena is presented to provide contextual information regarding a capacity event at an existing adjacent facility. As these impacts are not related to the proposed Stadium, discussion of mitigation in the EIS is inappropriate. However, proposed mitigation measures presented in DEIS Section 3.1.4 for the Stadium project would also facilitate traffic operations during events at other University of Minnesota facilities as well. The responsibilities of the proposed Event Transportation Manager would include all University Campus events.

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23	3.1.1	15 +	Tables 1-5		Based on presentations made to City staff, a pedestrian walk time assumption of 4 feet/sec was used. The EIS should use the City standard of 3.5 feet/sec based on the pedestrian mix and the actions taken by pedestrians at events.
24	3.1.2	16	1	varies	See comment No. 11.
25	3.1.2	17	1	all	The EIS should identify the other key roadway changes: 1) removal of the transitway and rerouting of buses, 2) removal of 5th Street/parking lot access roadway and 3) deletion of Washington from University to Huron. All of these need to be clearly stated and not inferred from the small Figure 3.
26	3.1.2	17	2	7/12	The last sentence cites "The model includes the effects of ..." The EIS should identify the methods and means to gauge whether the regional model includes the effects of all of these elements.
27	3.1.2	18/19	Figures 4/5	key	The solid black line indicates 2009 Proposed Roadways. The Oak Street, 25th Ave., and Granary Road sections are shown in solid black. Because the City has not funded these improvements and they may not be constructed in 2009 they should be shown as dashed lines.
28	3.1.2	19	figure 5	map	The intersections and parking labels are not aligned on the map.
29	3.1.2	21	1	5/8	How will the LOS E condition be mitigated?
30	3.1.2	21/22	last/first	bullet points	Bullet points 2,3,4,6 & 7 are stated with no basis of this assumption. The EIS should state the basis of these assumptions.
31	3.1.2	22	first	bullet points	Bullet points 8 & 9 cited assumptions for parking and traffic distribution. The EIS should present the data that support these statements and document the distribution.
32	3.1.2	22	2	3/4	The statement about 4 lanes to 2 lanes for Washington Avenue is accurate for portions west of Church Street (near the Washington Avenue Bridge and points west). What assumptions have been taken regarding Washington Avenue operations in 2030? The EIS should correct and provide more information.
33	3.1.2	22	3	5/6	The Draft EIS assumption is that all non-ticket holder stadium users will park remotely or be dropped off. Some individuals will park as close as possible and some will come with parking privileges. The EIS should consider this impact to the traffic and parking analyses.

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- A-23** It is our understanding that the City of Minneapolis typically uses 4 ft/sec as an average walking rate. Walk times for football games at the intersection in the vicinity of the stadium (Oak Street/University Avenue, Oak Street/4th Avenue, etc.) will need to be increased to accommodate the high volume of pedestrians. Pedestrian phasing and/or police officer will control pedestrian traffic at the intersections, so changing the assumed walk speed will not affect analysis results.
- A-24** See response to comment A-11.
- A-25** Please refer to Section 7.2.4, for a more detailed discussion of local roadways necessary for the proposed Stadium Project.
- A-26** Please refer to page 5 of the *University of Minnesota on-campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005, for details regarding travel demand forecasts generated through use of the regional model.
- A-27** Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4 and presented in Figure 3.
- A-28** Figure 5 has been corrected and appears in the Final EIS as Figure 5.
- A-29** In the Draft EIS, the intersection of University Avenue/Huron Boulevard/23rd Avenue is reported at LOS E under year 2030 pm peak hour conditions. To improve the intersection LOS to D or better, an additional westbound left-turn lane is required. Therefore the geometrics at the intersection would include: Northbound; dual left-turn lanes and a thru-right lane, Eastbound; a left-turn lane, two through lanes and a right-turn lane, Southbound; a left-turn lane, a through lane and a through-right lane, Westbound; dual left-turn lanes, a through lane and a through-right lane. The University is committed to making these improvements as part of the Stadium Project.
- A-30** See response to Comment A-17.
- A-31** Please refer to Figures 5-9 (pages 12-17) of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005, for maps showing parking locations on East Bank, West Bank and St Paul Campus and directional distribution for the East Bank and St. Paul Campus. The memo is available on the University Stadium website: www.umn.edu/stadium.
- A-32** LRT assumptions for Washington Avenue are consistent with Central Corridor Plans, which indicate that the LRT line would run along the center of Washington Avenue extending east to Huron Boulevard. Construction of LRT on Washington would reduce its capacity to two through lanes whether LRT is at-grade or in a tunnel. This reduced capacity on Washington Avenue was included in the 2030 analysis.
- A-33** Stadium support staff are currently estimated to be fewer than 500 individuals. Players will be bussed from the University's practice facility to the game site. Parking areas for the press have been provided adjacent to the stadium site. Facility and concessions staff will be directed to park remotely and shuttle to the stadium site.

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34	3.1.2 and 4.1	23-25; 118		11; 9	The traffic analysis for Saturday 2009 event conditions acknowledges that the various intersections will operate poorly and below an acceptable level of service. However, the mitigation proposed in Section 4.0 states that a Event Manager position will be established who will then use the bullet point list of mitigation strategies to try to solve the problem at that time. The mitigation strategies for traffic management section needs to give greater detail about how the application of those strategies will mitigate the negative traffic situation expected for the intersections listed above.
35	3.1.2	23	1	all	See comment No. 19.
36	3.1.2	23	table 3		The 11am-12 noon results at intersections 24, 38, & 41 are inconsistent given the quantity of both off-street and on-street parking in the vicinity. Likewise, the 3:30 to 4:30 pm results at intersections 41 & 44 are also inconsistent (i.e. Fulton/Huron will be LOS F inbound, but only LOS C outbound?). The EIS should reconcile and clarify these issues.
37	3.1.2	23	table 3		Future EIS sections present general mitigation to traffic impacts. However, these general mitigation impacts are not specific enough to gauge their value. Likewise, there are no goals set regarding what the intended mitigation/TDM measures will accomplish.
38	3.1.2	25	4	2/4	Even though Granary Road is in Met Councils 2030 plan and programmed by the city, it has not been funded. The EIS should include analysis and mitigation measures should Granary Road not be built.
39	3.1.2	27	table 4		The analysis for a Saturday event in 2009 and the traffic analysis for Saturday 2030 event conditions acknowledges that multiple intersections will operate poorly and below an acceptable level of service. However, key intersections such as the entrance and exit ramps from 4th Street SE to I-35W are shown to operate at an acceptable level of service. The text of the section states that the performance of these intersections is better in 2030 because future Granary Road will be a reliever of some of this traffic. Even though Granary Road is in the Met Council 2030 plan and programmed by the city it has not been funded. The EIS should include analysis and mitigation measures should Granary Road not be built by 2009.
40	3.1.2	27	table 4		See Comment No. 37.

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A-34 Greater detail regarding specific mitigation strategies cannot be presented at this time. A revised discussion of proposed mitigation for traffic congestion impacts is provided in FEIS Section 3.1.4. In response to comments received, the FEIS mitigation list provides for (changes/modifications from DEIS: 2030 weekday University/Huron, more discussion re: balancing regional system, SCOOT). The University will work with the City of Minneapolis, Hennepin County, Metro Transit and Mn/DOT to develop an initial event traffic management plan, and will continue to work with these agencies to refine that plan based on event experiences.

A-35 See Section 7.2.4, for a more detailed discussion of the proposed SCOOT improvements.

A-36 It is important to discourage patrons from driving through intersections adjacent to the stadium when possible, due to congestion and pedestrian conflicts. For purposes of this analysis, it was assumed that patrons would be directed to parking facilities prior to reaching the stadium based on their origin. For example, patrons exiting I-94 at Huron are directed west on Fulton to access the Oak Street parking ramp, rather than utilizing the Stadium parking lots. A combination of permanent and variable message signs, static sign and traffic control officers will be used to accomplish this task. This would greatly reduce the amount of congestion and conflict at intersections adjacent to the stadium. In addition, parking passes will be pre-sold for parking spaces at the Stadium.

The intersection of Huron Blvd/Fulton Street is essentially the I-94/Huron freeway off-ramp intersection since this interchange is unique and does not have typical ramp intersections. The intersection of Huron Blvd/Fulton Street operates at LOS F during event arrival due to the high volume of vehicles making a northbound left-turn to access the Oak Street parking ramp. Upon exit, vehicles can use Essex Street or Fulton Street to access Huron Blvd. The heavy movement at these intersections is the eastbound right-turn movement, which does not have as much conflicting traffic as the inbound northbound left-turn movement, resulting in a better LOS for departure conditions.

A-37 See response to Comment A-34.

A-38 Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4 and presented in Figure 3.

A-39 Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4 and presented in Figure 3.

A-40 See response to Comment A-34.

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41	3.1.2	27	table 4		It appears that a number of the intersections have improved LOS from 2009 to 2030 (i.e. intersection #5 goes from LOS D to B). While there is a general statement in the text about Granary Road providing some relief, it is not clear how such LOS improvement is being obtained given the expected traffic volume increases.	A-41
42	3.1.2	28	3	1/2	See comment No. 19.	A-42
43	3.1.2	29	1	5/6	Statements about number of vehicles cannot be confirmed from the presented analysis. Vehicle generation and distribution analysis should be included.	A-43
44	3.1.2	29	Table 5		For Weekday 2009 event conditions, the traffic analysis shows that the various intersections operate poorly and at unacceptable levels during a weekday football event. However, the mitigation proposed in Section 4.0 states that a Event Manager position will be established who will then use a bullet point list of mitigation strategies to try to solve the problem at that time. The mitigation strategies for traffic management section should be described along with their mitigation effectiveness.	A-44
45	3.1.2	29	Table 5		For intersection #6 I-35W/NB On-Ramp/4th Street SE, the level of service for the departure is listed at B. The level of service for arrival for this intersection for the Off-Ramp from I-35W is listed at F. The EIS should clarify why the level of service for the departure for the Off-Ramp to I-35W would not similarly be identified as poor.	A-45
46	3.1.2	31	Year 2009 Build Roadway Weekday Football Event Departure Peak Hour		This section states: "Scheduling of a game on a weekday will present significant transportation challenges due to the increase in delay and the impacts to the regional and local roadway systems. However, scheduling of a weekday event will be known at least a year in advance allowing adequate time to design and implement a customized traffic management plan". No identified mitigation plan is presented that will address these impacts. More mitigation details should be stated in the EIS.	A-46
47	3.1.2	31	Year 2009 Build Roadway Weekday Football Event		This section states "This plan will require a level of pre-planning effort similar to a Super Bowl or Final Four event..." The EIS should identify the Universities plans to hold weekday games.	A-47
48	3.1.2	31	3	2/3	The "involved cooperative efforts" should include the State Fairgrounds area agencies.	A-48

- A-41** The difference between the year 2009 and 2030 Saturday conditions level of service results are caused by a few factors, including the reduction in capacity on Washington Avenue (two through-lanes in each direction to one through-lane in each direction due to LRT), the addition of Granary Road (two-lane) and increase in background traffic. This led to the re-routing of event trips between year 2009 and 2030. Also, some intersections may have a “better” level of service, but the main reason would be the increase in volumes caused a more congested bottleneck intersection. This is the situation for the intersections on University Avenue between 10th Avenue and 17th Avenue during the Saturday football arrival hour. The intersection of I-35W northbound off-ramp/University Avenue is causing forced flow, so only so much traffic reaches the other intersections.
- A-42** See Section 7.2.4.
- A-43** Please refer to Tables 8 and 9 (pages 27 and 28) of the *University of Minnesota on-campus Football Stadium DEIS Transportation Analysis Technical Memorandum*, dated September 7, 2005, for parking utilization data for Saturday football and basketball events. Figures 8 and 9 (pages 16 and 17) provide directional distribution for the East Bank and St Paul Campus, respectively.
- A-44** See Section 7.2.4, Traffic.
- A-45** The intersection of 10th Ave and 4th Street (#7) is the choke point for departing vehicles trying to access I-35W via 4th street and meters the traffic that can get to the I-35W ramp interchange. While queuing along 4th Street is due to vehicles accessing the I-35W ramp intersections, the poor level of service is reflected at the upstream intersection of 10th Ave and 4th Street.
- A-46** See Section 7.2.1 regarding scheduling of weekday events.
- A-47** See Section 7.2.1 regarding scheduling of weekday events.
- A-48** The State Agricultural Society (Minnesota State Fair) has been involved in the on-going planning for the proposed Stadium.

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49	3.1.2	31	4/5	all	Numerous assumptions have been made as to where buses will or will not park or stage on area streets. The use of city streets for this purpose will require approvals and fees. Absent City approvals, bus parking should be located off-street in the U surface parking lots. More detailed bus parameters should be included to gauge their impact on the transportation system.
50	3.1.2	32	2	7/8	Shuttle passenger numbers are stated but no analysis is presented as to how they were calculated. This calculation should be included in the EIS.
51	3.1.2	32	3	1	It is unclear what the statement " The number of buses required depends on the amount of time service will be provided." means.
52	3.1.2	32	3	4/5	Bus numbers are stated but no analysis is presented as to how they were calculated. The calculation should be included in the EIS.
53	3.1.2	32	5	2	25th Street is 25th Avenue.
54	3.1.2	32	5	2	Long-term trail routing is based on Granary Road being built. The time line for construction of Granary Road is not certain. Please provide a trail route (interim or permanent) given that Granary Road may not be built by 2009.
55	3.1.2	33	2	8	Pedestrian routing assumptions are referred to but not documented. The EIS should include the assumptions.
56	3; 4	33; 118-119	3.1.3; 4.1		The parking analysis assumes that all persons arriving by car will park in the pay University parking system and not on neighborhood streets for free. Given that the total University parking system has approximately 23,000 spaces spread over multiple geographic locations, this may be an unrealistic assumption. Spillover parking is of great concern to the city and the adjacent neighborhoods. Section 3.13 states that the University will work with the city to enforce local ordinances regarding neighborhood parking. Section 4.0 Summary of Mitigative Measures does not address how spillover parking within the neighborhoods will be mitigated. The EIS should address this.
57	3.1.3	33	3.1.3	Table 6	904 proposed parking spaces are shown to be developed through potential property acquisitions. The location of the potential properties to be acquired are not specified. More detail on where the additional 904 spaces could be developed needs to be given in the EIS.

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- A-49** The University will finalize bus stop locations and bus parking locations during the design process. The University will obtain any necessary permits required to implement the final plan.
- A-50** Please refer to Tables 13 and 14 on page 36 of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005, for calculations used to determine the number of shuttle busses needed and number of passengers expected. The memo is available on the University Stadium website: www.umn.edu/stadium.
- A-51** A shorter period of shuttle service from remote parking areas to the Stadium site will require a greater number of bus vehicles to move the required number of attendees. Duration of shuttle service, including the number of buses to be used, will be determined in consultation with the Event Management Advisory Committee.
- A-52** See response to comment A-50.
- A-53** The correction has been noted.
- A-54** The University Transitway Trail is not proposed as part of the Stadium project. Construction of the trail is not required by, nor is it prohibited by, construction of the proposed stadium and associated roadways and parking lots. The trail is planned as an on-street facility on 6th Street until Granary Road is constructed.
- Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4, Traffic and presented in Figure 3.
- A-55** Additional information regarding pedestrian routing has been added to Final EIS Section 3.1.1, pages 42 and 43.
- A-56** Please refer to Section 7.2.5, for a more detailed discussion of neighborhood parking concerns.
- A-57** Distribution of parking spaces is shown in Final EIS Figure 3.

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58	3.1.3	33; 93	3.1.3; 3.81	1	Surface and ramp parking development is proposed along University Avenue SE to provide additional parking spaces for the stadium. University Avenue SE is a designated Community Corridor in the city's comprehensive plan and that calls for active commercial and residential uses along the corridor. Developing surface and ramp parking along the University Avenue SE corridor without other uses does not help to support a lively, pedestrian environment. Parking facilities should be designed to include attractive, commercial development so that the land use along the corridor provides activity, security and a pleasant pedestrian experience. All University parking facilities being developed for the stadium should incorporate the standards and requirements of Chapter 530 Site Plan Review, Minneapolis Zoning Code Ordinance.
59	3.1.3	33	all section 3.1.3		Stadium Village is a designated Activity Center and the hallmark of an Activity Center is having a wide range of housing, commercial, entertainment and office uses present in an area as well as mix of uses within buildings that encourage activity all day and into the evening. All development for the Stadium Village area, including the stadium, should incorporate a mix of uses to ensure that the area remains lively 365 days a year.
60	3.1.3	33	3	6/7	The EIS should address the following in more detail: 1) The location of parking; 2) The supply of parking; 3) Trip distribution data; and 4) The traffic volume data. -These will define the appropriate supporting data and assumptions prior to making any analyses, conclusions and recommendations on how traffic distributes and operates.
61	3.1.3	33	last	4	The Project site will add 1,657 spaces (2,898-1,241) to the site. These additional parking spaces are listed in Table 6, but do not show up on Figure 3. Table 6 presents various parking lot names that are unidentified in the EIS mapping. Table 6 also cites potential property acquisitions but indicates no locations. It is not clear if these parking spaces are within the Project limits or not. All parking assumptions and locations should be clearly identified in the EIS.
62	3.1.2	34	figure 7		Change the last phrase from "neighborhood parking" to "neighborhood on-street parking and unauthorized off-street parking lots." The pedestrian routings do not tally to 50,000 stadium seating capacity. Why is this?

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A-58 See response to Comment A-2.

A-59 Please refer to the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005, for additional data requested. The memo is available on the University Stadium website: www.umn.edu/stadium.

A-60 See response to Comment A-57.

Please refer to Figures 5-7 (pages 12-14) of the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005, for maps detailing parking locations on East Bank, West Bank and St Paul Campus. The memo is available on the University Stadium website: www1.umn.edu/stadium. The assumption for this scenario is that 85-percent of all University controlled parking spaces are available for the football game on Saturdays, except the U of M St Paul Campus/State Fairgrounds and at the stadium, which 100-percent of the spaces are available. All of the available U of M controlled parking spaces will be used on the East and West Bank campus.

A-61 The document text has been modified as noted.

A-62 The correct pedestrian volumes have been incorporated into Figure 7.

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63	3.1.3	35	1/2, Table 7, Table 8	all	See comment No. 59.	A-63
64	3.1.3	35	last	1	Change the last phrase from "shown in Table 8, a weekday football event" to "shown in Tables 7 and 8, a Saturday and weekday football events."	A-64
65	3.1.4	36	2	6/10	The EIS should clarify how the mitigation measures address the 2030 LOS problems.	A-65
66	3.1.4	36	between 2 & 3		No mitigation documentation is presented for the future roadway scenarios without a stadium football event that include other on campus events (e.g. basketball, hockey, Northrop Auditorium, etc.). Because the roadway system will be changed and Table 1 cites basketball impacts to three intersections, mitigation is needed to address the existing traffic to be accommodated on the modified roadway system. Likewise, no documentation is presented regarding the future roadway scenarios with a stadium non-football event.	A-66
67	3.1.4	36	3	title	See comment No. 11.	A-67
68	3.1.4	36	5	bullet 4	add the following to bullet #4 "City approvals/permits may be required."	A-68
69	3.1.4	36	5	bullet 5	The University may want to explore a web-based Event information source.	A-69
70	3.1.4	37	2	bullet 2	The University may want to consider combination event/transportation ticket purchases.	A-70
71	3.1.4	37	3	add new bullet 1	add "landscape and other design elements"	A-71
72	3.1.4 and 4.1	38, 39 and 120	Assemble Stadium Advisory Committee		On page 39 the document includes a suggestion that "For the first year of stadium operation, the University will create and periodically convene a group made up of representatives of the adjacent communities, to identify, and advise on, event-day community impacts." The University should establish a permanent stadium advisory group that will include representatives from the surrounding neighborhoods and the business community.	A-72
73	3.1.4	39	n/a	add new bullet	Add the following option under Saturday - East Bank that reads "A Traffic Signal System Operator should monitor and adjust the central computer traffic signal timing during the football and other events"	A-73
74	3.2.2	48	5	2	See comment No. 12.	A-74

- A-63** See response to Comment A-59.
- A-64** The document text has been modified as noted.
- A-65** See response to Comment A-29.
- A-66** Additional analysis has been completed for a 15,000 attendee event at the Stadium, assuming the modified roadway system. Analysis results are reported in Final EIS Section 3.1.4.
- A-67** See response to Comment A-11.
- A-68** The suggested text has been added to Section 3.1.4.
- A-69** The text under “Traffic Management” in Section 3.1.4 has been modified to read; “Communicating recommended ingress and egress routes via a wide variety of media including web-based sources.”
- A-70** The University will consider combined event and transportation ticket package.
- A-71** The Final EIS has been modified to incorporate the suggested change.
- A-72** See Section 7.2.3.
- A-73** A Traffic Signal System Operator will be included as part of the Event Travel Demand Management Plan.
- A-74** See response to Comment A-12.

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75	3.2.2	56	Build (year 2009 and year 2030)		Traffic noise modeling in this section makes the assumption that quantifying traffic noise impacts equates to counting automobiles. People may behave differently leaving a football game (yelling, honking, racing engines, loud car stereos with open windows) than they do driving home from work and that difference in behavior should to be considered in understanding noise impacts to the surrounding communities. The EIS should address this impact.	A-75
76	3.2.2	57	3/4	all	Noise analysis for a weekday football event should be addressed for two reasons: 1) an evening game departure time will be from 10-11 pm during the nighttime conditions when noise thresholds are lower and vehicle speeds should be higher due to less background traffic, and 2) the vehicle speeds can be reasonably estimated and placed in the noise modeling efforts to gauge the relative and comparative impacts to the posted speed analyses.	A-76
77	3.2.3	57	5	5/6	The Saturday football game traffic noise is compared to the weekday pm peak hour traffic noise. The appropriate comparison should be the No Build Saturday condition. The EIS should address this comparison.	A-77
78	3.2.3	57	Traffic Noise Mitigation	6, 7	The Draft EIS states that traffic will increase noise but that no mitigation will occur because it is only 8 days out of the year. This statement does not account for traffic generated from other uses of the stadium. The EIS should address traffic noise impacts of all known or likely stadium events.	A-78
79	3.2.4 Event - Noise	62			The Draft EIS notes that noise levels in adjacent residential neighborhoods during concert events will exceed State noise standards for both daytime and nighttime conditions. The Draft EIS suggests certain mitigation techniques but doesn't suggest operational rules or restrictions to ensure compliance with the State Noise Table. The EIS should address this impact.	A-79
80	3.2.5. Event Noise - Mitigation	63			Levels from Game Day and Concert noise are identified as exceeding State Standards. Mitigation of the noise is to "Line Array" the speaker settings. The Draft EIS does not clearly state the noise reductions that would be achieved with Line Array.	A-80

- A-75** The State does not have any policies regarding “impulsive noise” such as that produced by honking, shouting, and racing of engines. This is due to the limited duration and consistency of these noise sources.
- A-76** See Section 7.2.1.
- A-77** The comparison of 2030 Saturday event traffic noise and Saturday existing conditions is presented in Table 13 and page 57 of the Draft EIS. No Build 2030 Saturday conditions are presented in Table 12 of the Draft EIS and have been added to Section 3.2.2, Table 12 in the Final EIS.
- A-78** Section 7.2.1 defines the anticipated types and frequency of Stadium use. Noise analysis conducted for all major events would be consistent with the analysis presented.
- A-79** Sections 3.2.4 and 3.2.5 contain the revised noise analysis and mitigation measures.
- A-80** Line-array type speaker systems have consistently proven beneficial around the country for mitigating the radiation of sound out of a stadium and into the surrounding area. The approach of using more efficiently controlled speaker systems, coupled with the shielding characteristics of the stadium bowl, equate to reduced noise levels outside of the Stadium. Typical reductions associated with this technology are presented in Section 3.2.5.

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81	3.3	70	3		The EIS looked at the six major criteria pollutants from the standpoint of increased vehicular traffic. Only carbon monoxide required modeling, and the EIS concluded that CO concentrations will be below the state one hour and eight hour standards. It is not identified if traffic volume increases were related to stadium events or area growth. If traffic volume increases did not account for increases related to event traffic the result would be increased emission impacts for 1+ hours during arrival and departures. Traffic modeling that was done underestimated traffic volume by using attendance average of 14,625 versus average football game attendance of 47,352 that the University reported in 2001. Air quality impacts should account for event related traffic and should utilize attendance figures for the largest event attendance football. To assess for worst-case scenario, no background reduction factor was used for future emission control improvements. This same worst-case scenario should be used in calculations of CO levels at area intersections. The EIS notes, "improvements in fuel and vehicle technology...combine to produce lower emission rates in 2030 than in 2009." Using worst case scenario emissions rates will increase in 2030 as compared to 2009 if such improvements are not accounted for as a result of increased traffic from growth. Increases for emissions may result in non-attainment for CO during events.
82	3.4.2	72	5	all	Removal of 4th Street from University/Huron to Oak Street due to the Stadium building will result in, at least, the realignment of City electrical and stormwater utilities.
83	3.5 (all), 4.3		4,5,6,7,8,9	all	The stadium and SEMI/University Research Park stormwater management plans should be compatible and integrated. The EIS should address this.
84	3.5.1	72	8	1	The Correct title for Mississippi Watershed is "Middle Mississippi Watershed Management Organization".
85	3.5.2	76	8	1	The Draft EIS indicates the stadium project will match predevelopment stormwater conditions. The City goal is to improve upon the predevelopment condition and strongly encourages the University to adopt this goal for this project.

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A-81 Traffic volume increases used for the traffic operations analysis, which then provide input regarding delays for air quality analysis, included background traffic growth, increased traffic volumes for area redevelopment, and event related traffic.

Assumptions regarding improvements to vehicle emission rates over time is the “state of practice” approach to air quality modeling as recommended by the Minnesota Pollution Control Agency, and were used for the 2030 air quality analysis.

A-82 No response is required.

A-83 The University’s current plan is to manage its stormwater on University property, but will continue to work with the City of Minneapolis on this issue as the project progresses.

A-84 The title listed is correct according to the WMO website.

A-85 The Draft EIS states that the amount of impervious surface, and therefore runoff generated, will be similar to existing conditions. However, the University is proposing a number of BMP’s with the intent of water quality and quantity as described in FEIS Section 3.5.3.

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86	3.5.2	77	Table 21	Water Quantity	Add "No increase over pre-developed conditions for the 2, 10 and 100 year event using a curve (CN) 60. 100 year c=0.32, 10yr c=.20, 2 yr c = 0.10. Protecting Water Quality in Urban Areas calls for .10 to .20 depending on the soils."	A-86
87	3.5.2	77	Table 21	Water Quality	Add "70% TSS removal NURP Standards."	A-87
88	3.5.3	82			See comment No. 85. Refer to Chapter 54 for more stormwater standards.	A-88
89	3.5.3	83	3	1	Consider pervious or grass pavement as an alternate surface for providing emergency vehicles and pedestrians access as a means of reducing stormwater run off.	A-89
90	3.5.3	85	6	1	Underground Detention while effective as a means of obtaining water quality has high initial cost, and long-term maintenance cost which make this a less than best management practice. The City recommends using fewer underground storage units and more regional-type ponds. Integrating the ponds into the landscape can provide for an amenity while still achieving water quality.	A-90
91	3.5.4	86	10	1	See comment No. 85.	A-91
92	3.6.1	88	figure 12		This map does not provide enough background information to adequately define the investigation area boundary. Please add other elements such as streets, property lines, aerial photo, etc. that will allow for reviewing entities to comment.	A-92
93	3.6.1	89/90	89-all, 90-1/3	all	The former Creosoting Facility is discussed but is not located in description or in Figure 12. To better understand any impacts, please identify all of the former potential contamination facilities on Figure 12 so that reviewers can follow and comment.	A-93
94	3.6.1	92	3		Regardless of the approved course for action for addressing existing soil contamination the following should be addressed: 1). Air monitoring will occur on site for identified contaminants and dust. 2). Any impacted soils that are excavated will be covered to prevent storm water runoff. 3). Any grading or excavation through impacted soils will be done as to prevent any storm water from leaving the site to area storm drains.	A-94

- A-86** The University acknowledges the standards established by the City of Minneapolis and will continue to work toward achieving those standards to the degree possible.
- A-87** The document text has been modified as noted.
- A-88** See response to Comment A-85.
- A-89** As Stadium and Project Site designs progress, use of pervious pavers and other permeable surfaces will be considered where appropriate given pedestrian volumes and maintenance
- A-90** Underground detention is proposed as a means to reuse stormwater for other purposes, rather than as a treatment measure. Given the variety of demands placed on the project, standard NURP ponds are not feasible due to land supply constraints.
- A-91** See response to Comment A-85.
- A-92** Figure 14 in the Draft EIS lacked some detail due to the photo-duplication process. An improved Figure 14 is included in the Final EIS.
- A-93** Figure 14 has been modified to address this comment.
- A-94** Additional language has been added to Section 3.6 to address concern with respect to management of potentially contaminated soils during site redevelopment activities.

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95	3.6.1	92	3		It is suggested that a specific response action to ground pollution doesn't appear to be required. The basis for this conclusion however, isn't entirely clear. It was noted that the results of testing showed that a "vast majority" of the impacts were below risk levels appropriate for industrial sites. However, it would therefore appear that some are above the risk levels for industrial sites. Also, a stadium to hold spectators is not an industrial site. It was noted that arsenic concentrations ranged to a high of 130 ppm and that generally the screening value for residential use is 5 ppm. The EIS should provide rationale why no response action will be required.
96	3.8.1	93			The EIS should discuss how the stadium and related improvements are consistent with the Cities Comprehensive Plan.
97	3.8.2	96	Mitigation section		The University should be responsible for any event they sponsor or require any private event to restore the area to pre-event conditions such as provide clean-up of debris associated with the event, litter and debris from tailgating, litter and debris on area streets, etc. Any commercially provided food or concerts should obtain the necessary City permits.
98	3.8.2	97	Mitigation Fund		The EIS does not address how this figure was calculated or the adequacy of this amount.
99	3.9.1	100	5		The Draft EIS concludes that "Overall, the technical analysis concluded the lighting levels generated by the proposed stadium lighting system will not adversely impact the surrounding uses." It's not clear what the factual basis is for this conclusion nor what events are included. The EIS should address.
100	3.10.1	101			For construction activity that exposes contaminated soils or results in stockpiling of contaminated soils onsite the following mitigation measures should occur: 1). air monitoring for identified contaminants must occur. 2). Storm water runoff must be prevented from leaving the site and entering area storm drains, 3) soils may not be tracked offsite.

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A-95 A Response Action Plan ("RAP") is necessary to mitigate identified impacts. The RAP is expected to include a "manage-in-place" option. A Site Redevelopment Construction Contingency Plan ("Contingency Plan") will also be necessary to address any soil impacts at the Site not identified during the Site investigation activities.

The basis for the conclusion in the Draft EIS that most areas of the Site do not require response actions is based on the nature of the findings of the comprehensive Subsurface Investigation and prior investigations and studies of the Site. The Minnesota Pollution Control Agency Site Response Section ("MPCA") has now reviewed the Subsurface Investigation Report (Wenck, October 2005), and has determined that the investigation is complete, and that no further testing is presently required. As to groundwater impacts, based upon the results of the groundwater testing conducted as part of the Subsurface Investigation, the MPCA has determined that no specific groundwater response actions are necessary at the Site.

The MPCA concurs with the proposed approach of developing a RAP and Contingency Plan to address the impacts to site soil that have been identified through the environmental investigations to date, and any additional impacts that may be discovered during site preparation and construction activities. The RAP and Contingency Plan will be prepared and submitted to the MPCA for review and approval when detailed redevelopment plans have been prepared, including detailed plans for stadium siting, excavation and grading.

Site-specific soil cleanup goals for the Site will be set in consultation with MPCA. These cleanup goals will be based upon the contaminants involved and the ultimate disposition of the impacted soils (*e.g.*, managed in place or disposed off-site). Site screening levels were developed by the MPCA not to be used as "bright line" cleanup standards, but as tools for use in risk-based decision-making. While it is true the Project Site is not an industrial site, neither is it a residential site. Nor is it a good fit for the recreational land use screening levels that were developed with playgrounds or park spaces in mind. Because post-development exposures will be limited, and most visitors' time spent on site will also be limited, industrial screening levels are probably the most representative for the purposes of risk assessment. Nevertheless, site-specific cleanup goals will be developed in consultation with the MPCA. With that in mind, an occasional outlier data point does not by itself warrant removal, unless it is indicative of a "hot spot" requiring response actions. In the case of the 130 mg/kg arsenic sample in soil referenced in the comments to the Draft EIS, it should be noted that a split sample collected from the same location was less than the method detection limit, suggesting an isolated impact or anomaly. Still, as stated above, if areas of impacts are identified during construction, it is expected that limited removal actions will be conducted in accordance with the approved Contingency Plan.

A-96 The text in Section 3.8.1 has been modified to reflect the comment.

A-97 See Section 7.2.7.

A-98 See Section 7.2.2.

A-99 The text in Section 3.9.1 has been modified to reflect the comment.

A-100 See response to Comment A-94.

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101	3.10.1	103	3	15	The draft document talks about limiting the hours of operation for pile driving to the period from 7:00 a.m. to 9:30 p.m. and restricting it on Sunday. Minneapolis has restricted pile driving beginning at 6:00 p.m. and on Saturdays when it is taking place in a residential neighborhood. Please determined what pile driving will have an impact on residential neighborhoods, and what the appropriate restriction would be.
102	3.10.1	103			The EIS should define the hours for construction activities and determine the impacts on the neighborhoods and what mitigations are needed.
103	3.10.4	105/106	last/first	all	The rerouting of the Transitway after Project completion is not clear. Please define the Transitway's infrastructure and service changes.
104	3.10.4	106	2	all	See comment No. 54.
105	3.10.6	107			A permit is required from the City of Minneapolis for discharge to the City sewer systems (storm and sanitary).

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- A-101** The text in Section 3.10.1 has been modified to address this comment.
- A-102** The text in Section 3.10.1 has been modified to address this comment.
- A-103** Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4 and presented in Figure 3.
- A-104** See response to Comment A-54.
- A-105** The FEIS lists all permitting requirements in Section 6.0 and includes a stormwater permit from the City of Minneapolis.

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106	3.11.2	112			Appropriate sections in the Cumulative effects sections should be updated based upon earlier comments.	A-106
107	3.11.2	113			Minneapolis Storm water Management permits (MCO Chapter 54) requirements exist.	A-107
108	3.11.3	113	4	4/5	See SCOOT comment No. 19	A-108
109	3.11.4	114	5	1	See SCOOT comment No. 19	A-109
110	3.11.4		5	all	Table 2 cites LOS E in 2030 at one intersection without a Stadium football event. Also, there are no data provided that would suggest that a non-football event at the Stadium does not result in traffic and/or parking impacts. In addition, data are not presented to assess Granary Road's contribution to the 2030 traffic analyses.	A-110
111	4.2	121	2	33	The document notes that noise levels in adjacent residential neighborhoods during concert events will exceed State noise standards for both daytime and nighttime conditions. The document suggests certain mitigation techniques but doesn't suggest operational rules or restrictions to ensure compliance with the State Noise Table.	A-111
112	4.2	122			Specify in contractual agreements that concert staff are responsible for obtaining all appropriate permits (amplified sound, food, beverage, liquor, etc.)	A-112
113	4.3	122	5	15	While there may be a need for significant hard surfaces to convey pedestrians and vehicles, the document does not discuss alternative techniques for conveying pedestrians and vehicles without using 100% impermeable surfaces. This would include the use of pervious pavers, various kinds of gravel surfaces, and other surfaces for pedestrians, and in some cases, vehicles.	A-113
114	4.3	122	7	27	The document states that about runoff from impervious surfaces being directed into landscape and other pervious surfaces to allow for some degree of infiltration, filtration and rate attenuation. Discussion of the use of on-site retention basins, whether wet or dry, should be more extensive.	A-114
115	4.6.3	124			See comment No. 102. Hours of construction activity are limited M - F from 7 a.m. to 6 p.m. An after-hours work permit is required from the City of Minneapolis when construction or demolition equipment is to be operated within the city between the hours of 6:00 p.m. and 7 a.m.	A-115
116	4.6.4	124			Storm water runoff, erosion or tracking of soils from exposed or stockpiled contaminated soil should not be permitted.	A-116

- A-106** No modifications are required to the Cumulative Effect analysis and conclusions based on the comments received on the Draft EIS.
- A-107** Minneapolis requirements are acknowledged.
- A-108** See Section 7.2.4, for a more detailed discussion of the proposed SCOOT improvements.
- A-109** See Section 7.2.4, for a more detailed discussion of the proposed SCOOT improvements.
- A-110** Please see response to Comment A-29. See also Final EIS section 7.2.4 for further discussion of revised local roadway improvements.
- A-111** Refer to the response to Comment A-79.
- A-112** The University will specify noise regulations and requirements through contractual agreements with the concert vendors. See response to Comment A-58 regarding City of Minneapolis requirements.
- A-113** See response to Comment A-89.
- A-114** Additional details are not known at this time but will continue to develop as design progresses.
- A-115** The text in Section 3.10.1 has been modified to address this comment.
- A-116** Erosion control measures during construction, including those involving potentially contaminated soils will be addressed in the Storm Water Pollution Prevention Plan (SWPPP) and communicated to contractors through special provisions.

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117	4.6.8	125			Any discharged water must be permitted by the City of Minneapolis
118	6.0	129	chart	city section	Add "Lane Use Obstruction Permits" to the list
119	6	129			Add to local list water discharge and other.
120	General Comment				<p>On event days there will be more traffic, more noise, more parking congestion, more litter, etc. Below are some impact mitigation strategies and neighborhood improvement strategies that should be considered.</p> <p>Impact Mitigation Strategies:</p> <ul style="list-style-type: none"> o Early and on-going planning input into all proposed stadium uses o Strict guidelines for noise, light, traffic, air quality and other environmental impacts o University funds mitigation initiatives <ul style="list-style-type: none"> ▪ Parking stickers & signage ▪ Trash collection ▪ Part-time neighborhood stadium administrator/coordinator ▪ Game-day parking enforcement ▪ Stadium complaint hotline ▪ Ongoing mitigation fund <ul style="list-style-type: none"> o Annual funding linked to stadium revenues (ticket sales, concessions, parking, etc.) o Funds to be used for ongoing improvements and unforeseen mitigation requirements <p>o Ongoing neighborhood role in Stadium Management (Perhaps similar in makeup to SAAG committee)</p> <ul style="list-style-type: none"> ▪ Event calendar to be reviewed by neighborhood <p>o Incentives for using public transit such as including a bus coupon with each ticket and making on site parking expensive and preventing neighborhood or illegal parking</p> <p>Possible Mitigation/Improvement Strategies:</p> <ul style="list-style-type: none"> o Construction of a bridge linking 27th or 29th Street to Kasota Avenue o Funding for University Avenue strategic planning and development guidelines o Neighborhood/University collaboration in planning for Central Corridor LRT o Improvements to University Avenue streetscape o Aggressive stadium jobs program targeting area residents <ul style="list-style-type: none"> ▪ Could include both construction jobs & operations jobs o University sponsorship or collaboration on high-quality, market rate mixed-use development on University

A-117 See response to Comment A-2.

A-118 See response to Comment A-2.

A-119 See response to Comment A-2.

A-120 The University acknowledges the City of Minneapolis' list of potential mitigation techniques submitted for consideration. Several of the techniques have been incorporated into the Final EIS. The University looks forward to working with the City of Minneapolis through the Event Management Advisory Committee and other forums to maximize the benefits and further minimize any negative impact of major stadium events.

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121	General Comment				<p>We asked for additional detail or emphasis in four areas:</p> <ol style="list-style-type: none"> 1. Better Definition of the Project <ol style="list-style-type: none"> a. What activities or events in addition to Athletic events are proposed the stadium? b. What commercial activities are proposed as part of the stadium and how will these activities contribute to the EIS impacts (traffic, etc.) and how will they compete with or complement the nearby business districts? c. A better definition of the site of the stadium and parking areas. 2. A discussion of the relationship of the project to the goals and objectives of the Comprehensive Plan 3. Better analysis of the storm water impacts <ol style="list-style-type: none"> a. Rate of flow b. Quality of the runoff c. Quantity of the runoff 4. Detailed traffic analysis <ol style="list-style-type: none"> a. During multiple events and the various stadium events b. On the functioning of the 4th St. University pair especially at the Huron Blvd location c. At the connections with the interstate system.
122	General Comment				<p>The primary purpose of the stadium is athletic events, Bruininks' statement of need, pg 5. Other events are not described, only the Regent's policy to permit them, page 10, is offered. That policy provides no clarity about what the University is proposing or committing to hold for events. The EIS should identify the full range of known or likely activities or events.</p>
123	General Comment				<p>The Draft EIS goes on to discuss what happens when a major spectator event occurs outside the normal Saturday football game and occurs on a weekday, when the stadium could be used as an outdoor amphitheater for a concert event.</p> <p>The significantly increased negative impacts of moving from Saturday daytime Football spectator events to weekday concert events is illustrated for traffic and congestion in Tables 4 and 5 on pages 27 and 29, for Air Quality in Table 20 on page 70, parking and for noise in Tables 17 and 18 on pages 61 and 62. While not exceeding specific regulatory standards, they will be noticeable and will affect normal use and enjoyment in the surrounding neighborhoods.</p> <p>The University should consider an Event Management Advisory Committee with University, City, County and State agencies to develop traffic management strategies for all stadium events.</p>
124	General Comment				<p>It is the City of Minneapolis' understanding that the moving of State Aid Streets will be at the University of Minnesota cost including all penalties and paybacks.</p>

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A-121 No additional response is required.

A-122 See Section 7.2.1.

A-123 See Section 7.2.1.

A-124 No response is required.

**University of Minnesota Stadium
Final EIS Comments**

December 23, 2005

Comment Number	Section	Page	From Top of Page		Comment/Proposed Change/ Remark
			Paragraph	Line	
125	General Comment				Through the letter memorandum reached with the University in March regarding the stadium, the University agreed to fund the cost of all infrastructure that was necessitated by the stadium. The draft EIS assumes that certain infrastructure improvements for the SEMI/University Research Park will be constructed by the City by 2009. Because these improvements are not currently funded or may have a post 2009 construction date, the EIS should document analyses, impacts and mitigation should such infrastructure not be in place.
126	General Comment				The University plans to eventually construct additional research related buildings on property east of the MRI building that is now programmed for parking. Minneapolis recommends that the EIS recognize this probability and address how replacement parking and transit will be provided to meet Stadium events.
127	General Comment				The Draft EIS does not recognize a final alignment of the Central Corridor transit system. It in fact precludes implementation of the plan that is currently being evaluated. This issue must be resolved prior to approval of the EIS.

A-125

A-126

A-127

A-125 See response to Comment AS-4.

A-126 The University is currently proposing to construct a new biosciences research facility in the area of campus near the stadium. The planning for this facility has been done in conjunction with the stadium plan. No other facilities are currently proposed for the area near the stadium. If in the future other new facilities are constructed in the area of campus near the stadium the issue of parking for both events and general campus use will need to be addressed at that time.

A-127 The University acknowledges that a conflict exists between the proposed stadium plan and the proposed rail alignment outlined in Central Corridor Draft Environmental Impact Statement. The University is an advocate for, and an active participant in, the Central Corridor project. The University will continue to work with the Central Corridor to support a transit line through campus that:

- maximizes access to the University and increases transit ridership;
- optimizes the overall efficiency of the transit system;
- avoids significant pedestrian/ vehicular/ bicycle conflicts on and around campus;
- promotes a vibrant urban environment on and around campus;
does not degrade the functionality of campus operations.



CITY OF
FALCON HEIGHTS

2077 W. Larpenteur Avenue
Falcon Heights, MN 55113-5594

email: mail@ci.falcon-heights.mn.us
website: www.ci.falcon-heights.mn.us

Phone - (651) 792-7600
Fax - (651) 792-7610

November 10, 2005

Mr. Brian Swanson
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

Re: Draft Environmental Impact Statement

Dear Brian,

Thank you for the opportunity to comment on the Draft Environmental Impact Stadium for the University of Minnesota Football Stadium. Some of the critical issues for the city of Falcon Heights were identified in the draft and some were added during discussion at the November 1 SAG meeting.

The Draft projects the need for 3,549 parking spaces on the fairgrounds for Saturday games and 5,193 for a weekday event. Although the fairgrounds can accommodate over 11,000 parked cars during the State Fair, those cars do not all need to arrive or leave within a short time period. Since this would be the case for a football game, we expect that the traffic impact for football games will be much greater on Falcon Heights residents and businesses than the two weeks of the State Fair.

We request that the following issues be included in the implementation plans:

1. All possible entrances into the fairgrounds be open before and after the games with traffic control officers assigned to every entrance. | B-1

2. Post traffic control officers at all of the gates, and develop a plan to direct traffic to the next gate if it backs up at a certain location. The use of signage directing out-of-town attendees to parking will be essential. The State Fair has been very effective in marking their entrance and park-and-ride lots. | B-2

3. Traffic control officers be assigned to the intersection of Snelling and Larpenteur. Cars going north on Snelling Avenue present the greatest traffic challenge during the fair. These cars must make left turns onto Como or on Larpenteur to enter the fairgrounds at Underwood. In spite of our posting of "No U Turn" signs, drivers often try to make U turns into the southbound lanes of Snelling to use the Snelling entrance. This causes accidents and gridlock at that intersection. | B-3



B-1 For a Saturday game, most of the parking in this area will be provided at the St. Paul Campus (about 2,600 spaces) with the remainder located at the State Fairgrounds (about 950 spaces). Numbers being confirmed. The Fairgrounds spaces will be located as near as possible to the Campus to provide good access to the shuttle bus routes to the Stadium. Access to the fairgrounds spaces will most likely be provided from Snelling via Como Avenue and Dan Patch Avenue. Doing so will require a primary fairgrounds gate access at Underwood and Dan Patch to accommodate the expected parking demand.

As Stadium operations begin, traffic control officers will be positioned at many key locations around the St. Paul Campus and the State Fairgrounds to monitor traffic operations and direct movements as necessary to prevent gridlock. Once conditions are better understood, traffic control officers will be positioned at the most critical locations to ensure reasonable operating conditions.

B-2 As stated above, traffic control officers will initially be positioned at many key locations to direct movements. In addition, an overall regional traffic management plan will be developed before stadium opening to identify appropriate use of advisory signs to help manage traffic flows. The freeway system will utilize fixed location message signs to post advisories and roadways like Snelling Avenue will utilize portable message displays to provide basic parking information and direct flows.

B-3 Due to the size of the intersection of Snelling Ave. and Larpenteur, the use of police officers to control the intersection would not be beneficial and would pose safety concerns for the police in the intersection. It is recommended that an event signal timing plan be developed in cooperation with appropriate governmental agencies, to control this intersection, with a police officer at the intersection to prevent vehicles from stopping in the middle of the intersection and creating gridlock.

4. Do not utilize the Hoyt Gate. This causes enormous backups on Snelling Avenue northbound, and effectively eliminates access to the Hollywood Court neighborhood. We have had little success in addressing these issues during the State Fair. There simply is not adequate stacking room for northbound traffic, turning west into that gate. **B-4**
5. Price parking low enough so that game-day visitors will be encouraged to park on the Fairgrounds, and not in our surrounding residential neighborhoods. Also, consider utilizing a pre-paid parking sticker or other method, to be included with season ticket holder's information. This will make entrance to the grounds more efficient by limiting the number of the cars that will need to pay on-site when they arrive. **B-5**
6. Use of the shuttle bus service between the fairgrounds and the stadium be restricted to people who have parked cars at the fairgrounds or can prove they live in the neighborhoods surrounding the fairgrounds. **B-6**
7. We strongly endorse your plan to create an Event Management Advisory Committee with City, County and State agencies to discuss traffic and parking management strategies. We request that this committee meet after every home game during the first year after the Stadium opens, and quarterly thereafter to ensure that the various affected entities continue to communicate. **B-7**

Please let me know if you would like clarification or additional information concerning any of these recommendations.

Sincerely,



Sue Gehrz, Mayor

B-4 To eliminate northbound left-turns from Snelling Avenue onto Hoyt Avenue, variable message signs on Snelling Avenue, south of Como Avenue will direct northbound traffic to Como Avenue or Dan Patch Avenue. Use of the Hoyt Avenue access for southbound traffic may be considered as it does not create a conflict with through traffic on Snelling Avenue.

B-5 Parking prices will be set at reasonable levels to ensure parking occurs in desired locations. Some locations at the St. Paul Campus will most likely accommodate tail-gating activities so these will be very desirable spaces. Pre-selling parking spaces is expected at a number of locations on the East Bank Campus to ease traffic concerns and will be included for the St. Paul Campus if there is enough demand for such action. It is initially believed that most parking at the St. Paul Campus and the State Fairgrounds will be pay-on-entry.

Please refer to Section 7.2.5 and Section 3.1.3 of the FEIS for a more detailed discussion of neighborhood parking concerns.

B-6 It is the intention to provide shuttle bus service for just those people parking at the St. Paul Campus and State Fairgrounds and students living in the area. The University will work with the Event Management Advisory Committee to develop appropriate means to ensure the target audience is properly accommodated and that outsiders are discouraged or prohibited from using the shuttle system.

B-7 See Section 7.2.3.



CITY OF SAINT PAUL

Randy C. Kelly, Mayor

1000 City Hall Annex
25 West Fourth Street
Saint Paul, Minnesota 55102-1660
Fax: 651-292-7857

December 8, 2005

Mr. Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

Re: University of Minnesota On-Campus Football Stadium
Draft Environmental Impact Statement

Dear Mr. Swanson,

Thank you for the opportunity to review and comment on the University of Minnesota On-Campus Football Stadium Draft Environmental Impact Statement. My staff and I have reviewed the document and offer the following comments for your consideration:

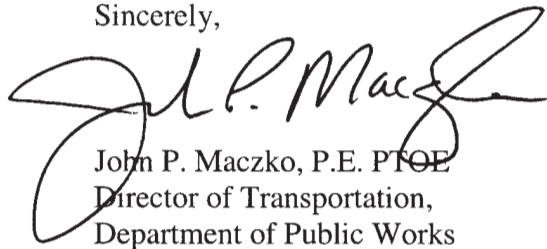
- The Draft EIS indicates that Granary Road will be extended to the east to Pierce Butler Road at some future date and includes this extension in the 2030 travel forecasts. You should be aware that this portion of Pierce Butler Road in Saint Paul is under consideration and being studied for feasibility, but currently there is no public commitment for this project. C-1
- The Draft EIS states that by 2009 the City of Minneapolis will have a SCOOT (Split, Cycle, Offset, Optimization Technique) signal control system installed at all of the analyzed intersections and that the model intersection signal timing was set to “optimized” in analysis. Fourteen of the intersections analyzed in the Draft EIS are located outside of Minneapolis and on signals operated by the City of Saint Paul or Ramsey County the SCOOT signal control system is not planned to be installed at these locations. What effect will this have on the outcome of the modeled results? C-2
- We believe Energy Park Drive and Raymond Avenue would be a likely corridor used to access the Saint Paul Campus/State Fairgrounds parking. Is there a reason why the intersections of Energy Park Drive/Kasota at TH 280, Energy Park Drive at Raymond and Como at Raymond were not included in the list of analyzed intersections? C-3
- The 2030 travel forecast indicates that many trips were diverted from University Avenue to Granary Drive. How many trips were diverted and what is the impact on University Avenue in 2030 if the connection to Pierce Butler is not available? C-4
- The City of Saint Paul should be added to any pre-planning weekday event discussed on page 31 of the Draft EIS. We believe Ramsey County and Falcon Heights should be included as well. C-5

- C-1** The proposed Stadium project neither requires nor precludes the construction of Granary Road. In response to comments received on this issue, clarification has been provided regarding local road improvements required for the Stadium project. Assumptions regarding local street improvements have been revised and are discussed in Final EIS Section 7.2.4, and presented in Figure 3.
- C-2** The intersection operations analysis was conducted with the assumption that a SCOOT system would not be available for the St. Paul/Ramsey County intersections. However, the analysis did optimize signal timing. If the Stadium is constructed, the University would work with the City of Saint Paul and Ramsey County to develop a signal timing plan to best manage event traffic.
- C-3** The directional distribution developed during travel demand forecasting anticipated minimal traffic from this direction. Therefore, these intersections were not selected from analysis. Please refer to the *University of Minnesota On-Campus Football Stadium DEIS Transportation Analysis Technical Memorandum* dated September 7, 2005, for details regarding travel demand forecasts and trip distribution. The memorandum is available at the University's Stadium website: www.umn.edu/stadium.
- C-4** In the 2030 model approximately 600 vehicles to/from the west of the stadium during event arrival and departure periods, and 200 vehicles to/from the east of the Stadium, were diverted from University Avenue to Granary Road. If Granary Road is not built by 2030, the 600 vehicles to/from the west would be distributed between University, Washington and Huron Avenues. The 200 vehicles to/from east would use University Avenue. Level of Service results for the intersections analyzed on these roadways would not significantly change if Granary Road is not built.
- C-5** See Section 7.2.3 on Stadium Advisory Committees.

- Would the installation of a signal at the Como/Snelling Northbound off-ramp solve the capacity problems at this intersection and if so should its installation be part of a mitigation measure? | C-6
- Are the potential property acquisitions to provide an additional 904 site parking spaces committed to as part of the stadium project? If not, would this impact the number of parking spaces that would need to be utilized at the Saint Paul Campus/State Fairgrounds location? | C-7
- Does the University have a plan as to how they will help prevent stadium users from parking in residential areas near the East Bank Campus? Will funding be available to provide necessary mitigating measures? | C-8
- Is it correct to assume that all costs associated with mitigating event day traffic, (traffic control officers for example) will be covered by the university? | C-9
- Decisions of the Stadium Advisory Committee will have a direct impact on the City of Saint Paul and therefore the City requests that it be a member of this committee. | C-10
- The City of Saint Paul should be added to the list participants for Weekday Evening Events discussed on page 39. We believe Ramsey County and the City of Falcon Heights should also be included. | C-11

Thank you again for the opportunity to review and comment on the Draft EIS. If you have any questions or need further input, feel free to contact me.

Sincerely,



John P. Maczko, P.E. PTOE
Director of Transportation,
Department of Public Works

CC: Nancy Haas
Councilmember Benanav
Ken Haider

- C-6** Due to low cross street volumes, traffic control officers would be more efficient for management of the northbound left turn movements from Snelling Avenue. Signalization of this ramp would also require signalization of the southbound ramp as well, and this level of cost is not justified by non-event traffic conditions.

- C-7** The University is committed to replacing all existing parking impacted by Stadium construction. At the time of the Draft EIS publication, purchase agreements were not completed for the property necessary to provide the replacement parking. These agreements have now been completed and proposed sites are indicated in Figure 3.

- C-8** Section 7.2.5 provides a more detailed discussion of parking strategies and potential neighborhood parking impacts.

- C-9** The University will assume all reasonable costs associated with managing (mitigating) event day traffic.

- C-10** The City of St. Paul will be invited to participate on the Event Management Advisory Committee (EMAC). See Section 7.2.3.

- C-11** See Section 7.2.3.



Hennepin County Transportation Department

1600 Prairie Drive
Medina, MN 55340-5421

763-745-7500, Phone
763-478-4000, Fax
763-478-4030, TDD
www.co.hennepin.mn.us

November 14, 2005

Mr. Brian Swanson
University of Minnesota
335 Morrill Hall
100 Church Street SE
Minneapolis MN 55455

Re: University of Minnesota On-Campus Football Stadium
Draft Environmental Impact Statement

Dear Mr. Swanson:

The purpose of this letter is to provide comments on the Draft EIS, dated October 24, 2005, for the University of Minnesota On-Campus Football Stadium. Our comments, which are limited to potential impacts to Hennepin County's roadway system, are as follows:

- Please modify the document text, tables and maps to include the Hennepin County road designations on 4th Street SE (CSAH 37), University Avenue (CSAH 36), and Washington Avenue (CSAH 122). The County should be included in the coordination effort for work on these roadways. D-1
- Table 2 on page 21 shows that, for the most part, the roadway system in the 2030 PM Peak operates at a satisfactory level of service. The only exception is University Avenue (CSAH 36) at Huron/23rd Street, which operates at a level of service E. Further design/analysis should be conducted to raise this intersection to a level of service D. D-2
- The future design during a football event shows a number of roadway capacity failures with level of service F in the vicinity of the stadium. The roadway system is generally not designed or expected to function without congestion during a limited number of events in the year. Continued effort should be made to mitigate/minimize these situations through event planning strategies. D-3

Thank you for the opportunity to comment on the Draft EIS. We look forward to continue to work with the University and the City of Minneapolis on this endeavor. If you have any questions regarding our comments, please contact me at 763-745-7507.

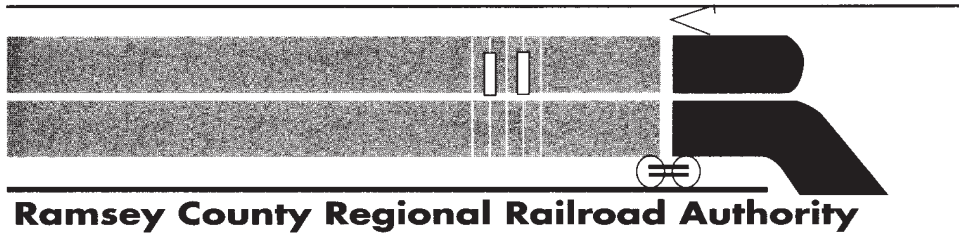
Sincerely,

James N. Grube, P.E.
Director of Transportation and County Engineer

JNG/jj

cc: Craig Twinem
Tom Johnson

- D-1** The text and graphics have been modified to reflect Hennepin County road designations.
- D-2** Please see response to Comment A-29.
- D-3** The University will work to mitigate / minimize these situations through promotion of travel demand management activities. These activities will include promoting the use of non-automobile-based transportation to Stadium events, encouraging greater ridesharing and use of on-campus strategies to spread out the vehicle flows before and after games.



665 Ramsey County Government Center-West, 50 West Kellogg Boulevard
St. Paul, Minnesota 55102 (651) 266-2760 / FAX (651) 266-2761

November 23, 2005

Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455
bswanson@umn.edu

Re: Comments on University Stadium DEIS

Dear Mr. Swanson:

The following comments relate to the Stadium projects potential effects on the Central Corridor Transit project. The Central Corridor project looks forward to continue working with the University of Minnesota as these important projects develop.

Comments on the DEIS are as follows:

- Several important existing bus routes serve this immediate area. Bus stop facilities for these routes should be accommodated, as they will provide essential transportation for this project near and long term. | E-1
- Because existing and bus rapid transit (BRT) option operate in mixed traffic in this area, there are potential speed and reliability problems related to increased traffic congestion. Measures should be taken to protect bus speed and reliability. | E-2
- The light rail transit (LRT) option exits a tunnel immediately south of the stadium. The LRT and southeast corner of the stadium conflict. | E-3
- The University has indicated that the stadium cannot be moved due to the need to preserve parking lots to the north and east for both current use and future development. Television broadcasting requires a generally north-south orientation for the stadium for optimal lighting vs shadows. | E-4
- At the request of the University, the Central corridor project has evaluated | E-5

E-1 The stadium project and proposed new roadway configuration will have very little impact on regional bus routes and facilities. Only one bus stop, along northbound Oak Street at 4th Street will need to be relocated due to reconstruction of Oak Street in that area. It is anticipated that the stop will be relocated to the new segment of Oak Street or just across the intersection at 4th Street. No other regional routes or facilities are affected by the project.

E-2 If BRT is constructed, it is expected to operate in mixed traffic along University Avenue and Washington Avenue in the vicinity of the Stadium. In doing so it will go through a number of intersections that were analyzed for year of opening as well as 2030 conditions. None of the intersections along this route are expected to experience significant problems during event peak arrival and departure hours during a Saturday event. This should allow for near normal operations for both existing bus service and potential BRT service.

As an added precaution, traffic control officers will be deployed at critical locations around the Stadium to direct traffic movements as needed during heavy flow periods. These officers will be instructed to clear any problems that might occur as quickly as possible to allow for quick bus passage through the area.

E-3 The University acknowledges that a conflict exists between the proposed Stadium plan and the proposed rail alignment outlined in Central Corridor Draft Environmental Impact Statement. The University is an advocate for, and an active participant in, the Central Corridor project. The University will continue to work with the Central Corridor to support a transit line through campus that:

- maximizes access to the University and increases transit ridership;
- optimizes the overall efficiency of the transit system;
- avoids significant pedestrian/ vehicular/bicycle conflicts on and around campus;
- promotes a vibrant urban environment on and around campus;
- does not degrade the functionality of campus operations.

The Central Corridor project, however, is still a proposed project awaiting approval of its EIS and funding for preliminary engineering. As no final decisions have been made on either the mode of transportation (rail or bus) or on the overall alignment between downtown Minneapolis and downtown St. Paul it is premature to address any mitigation for potential additional system costs.

In the Draft EIS the University outlines five themes used to guide the development of the campus district where the proposed stadium will be built. These themes include:

- Create an urban campus with a unique sense of place.
- Plan for efficient and orderly campus growth.
- Provide and encourage environmentally friendly transportation.
- Design for long-term sustainability.
- Coordinate with the planning efforts for adjacent developments and projects.

With or without stadium the University believes that these planning goals are best met by the alignment expressed in the University preferred alignment proposal. Numerous options for placing a stadium in alternative locations on the site were explored during Joint-Use University of Minnesota - Minnesota Vikings stadium analysis, the University of Minnesota Stadium Feasibility Study, and the on-going stadium district preliminary engineering.

E-4 No response required.

E-5 No response required.

lengthening the tunnel and changing the alignment. Projected additional costs to the Central Corridor to extend the tunnel are \$15 to \$20 million over the current budget.

E-5

- Extending the tunnel would also likely move the Stadium Village station to the east by one or two blocks. Ridership modeling of this option has not been done but it would appear to add walking distance for a majority of passengers using that station. As further development occurs to the east of the stadium, this problem would be reduced.
- Evaluation of an at-grade option for LRT is underway. At-grade operation could remove the stadium conflict but may impact other traffic flows in the area.
- Additional track and station capacity should be considered to accommodate passenger demands for major events.

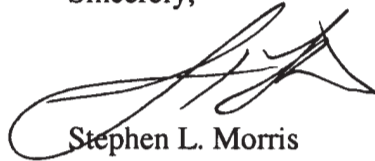
E-6

E-7

E-8

We appreciate the opportunity to comment on this DEIS and look forward to working with you in the future.

Sincerely,



Stephen L. Morris
Central Corridor Project Manager.

E-5 No response required.

E-6 No response required.

E-7 No response required.

E-8 The University's preferred alignment proposal includes space for additional track and rail car capacity to serve events.



Minnesota Department of Natural Resources

500 Lafayette Road
St. Paul, Minnesota 55155-40²⁵

November 23, 2005

Brian Swanson
University of Minnesota
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

RE: University of Minnesota On-Campus Football Stadium Draft Environmental Impact Statement

Dear Mr. Swanson:

The Department of Natural Resources (DNR) has reviewed the Draft Environmental Impact Statement (DEIS) for the proposed University of Minnesota On-Campus Football Stadium in the City of Minneapolis, Hennepin County, MN. We offer the following comments for your consideration.

Surface Water Quantity and Quality, Affected Environment (Section 3.5.1, page 72)

The DEIS should provide an evaluation of how the requirements regarding Total Maximum Daily Load (TMDL) may affect the design of the stormwater management system. Since runoff from the project will drain to the Mississippi River, consideration must be given to the protection and restoration of the water quality of Lake Pepin. The Minnesota Pollution Control Agency (MPCA) lists Lake Pepin as impaired for excess nutrients (eutrophication) and turbidity (chlorophyll-a). Phosphorus is the primary pollutant associated with the eutrophication of the lake. For more information on TMDLs, please review the MPCA website at <http://www.pca.state.mn.us>.

The Lake Pepin TMDL study is underway. The process will establish appropriate goals for phosphorus and chlorophyll-a concentrations for the lake. Because the project site already contributes to the Lake Pepin impairment, the proposed stadium may not be subject to significant reductions from existing levels. The redevelopment, however, presents an excellent opportunity for the University to evaluate and implement strategies for water quality improvements. These could include, but should not be limited to, on-site storage, stormwater re-use, and landscaping elements.

Thank you for the opportunity to review this document. We look forward to receiving your Final EIS. Please contact me with any questions regarding this letter.

Sincerely,

Matt Langan, Environmental Planner
Environmental Review Unit
Division of Ecological Services
(651) 259-5115

c: Tom Balcom, Joe Kurcinka, Wayne Barstad, Dan Stinnett, USFWS, Jon Larsen, EQB

ERDB#20050661-0003

D:\AA_OMBS\comment letters\112305_DraftEIS_UofMnFootballStadium.doc

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929



F-1 While Lake Pepin is considered an impaired water, there is not yet an implementation program for addressing the TMDL. As such, it is not possible to evaluate the impacts of the proposed project on this water body. The intent of the project is to meet the current rules and goals of the various regulatory agencies. See Table 22 for more detailed information. As described in Section 3.5.2, the project will incorporate a variety of innovative stormwater management strategies appropriate to an urban setting intended to improve water quality in the area, including reducing phosphorus levels.



Minnesota Department of Transportation

Metropolitan District

Waters Edge
1500 West County Road B-2
Roseville MN 55113-3174

November 21, 2005

Mr. Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street Southeast
Minneapolis, MN 55455

Subject: **University of Minnesota On-Campus Football Stadium**
Minnesota Department of Transportation (Mn/DOT) Review # DEIS 05-001
Northwest quadrant of University Avenue and Huron Boulevard (CSAH 14)
Minneapolis/Hennepin County
Close to TH I-35W
Mn/DOT Control Section # 2783

Dear Mr. Swanson:

Thank you for the opportunity to review the above-referenced Draft Environmental Impact Statement (DEIS). The Mn/DOT Metro District has reviewed the DEIS. Please incorporate these additional comments with those that were originally mailed to the City in our letter dated April 27, 2005 (Mn/DOT Review # EAW 05-010) Please address the following comments before any further development.

Traffic Engineering comments:

- In view of the anticipated substantial traffic impacts upon TH I-35W from the proposed stadium, Mn/DOT would like to see discussion and information on the proposed mitigation measures that will need to be implemented to increase the Level of Service on the TH I-35W freeway ramps at University Avenue and 4th Street. Such measures could include adding a Turn Lane, or extending a Turn Lane, etc. For questions on these points, please call Diane Colton, Mn/DOT Metro District Traffic Engineering, at (651) 582-1637.

| G-1

Permits comments:

- Any use of or work within or affecting Mn/DOT right of way requires a permit. Permit forms are available from MnDOT's utility website at www.dot.state.mn.us/tecsup/utility . Please direct any questions regarding permit requirements to Buck Craig (651-582-1447) of MnDOT's Metro Permits Section.

| G-2

- G-1** No minor improvements (e.g. turn lanes or signal improvements) are available to help facilitate traffic during an event at the I-35W interchange at University Avenue and 4th Avenue. Adding or lengthening exclusive turn lanes in this area for event traffic was evaluated and found to provide little benefit. Therefore, no cost-effective improvement, short of reconstructing the interchange, is available to improve operations at the ramp intersections. The use of variable message signs on the regional roadway network is recommended to balance traffic and guide them to TH 280 and I-94 when I-35W is congested. In addition, local traffic at cross streets to freeway off ramps will be specifically managed during events to facilitate efficient traffic flows and minimize queuing on freeway ramps.
- G-2** Permits will be obtained for any work within Mn/DOT right of way. All redesigned CSAH or MSA roadways will be consistent with State Aid rules and policies.

County State Aid Highway (CSAH) comments:

- As a reminder, Washington Avenue and University Avenue are CSAH Route 122 and CSAH Route 36, respectively, and Huron Boulevard is MSA Route 345. Any work on a CSAH or MSA route must meet State Aid rules and policies.
 - <http://www.dot.state.mn.us/stateaid/> shows or has links to the applicable forms and the Mn/DOT State Aid Manual.
 - Refer to the Mn/DOT State Aid Manual, Chapter 5-892.200 for information regarding standards and policies.
 - Please go to <http://www.revisor.leg.state.mn.us/arule/8820/> for information regarding State Aid Operations Rules Chapter 8820.
 - For driveway standards, the designer is directed to refer to the Mn/DOT Road Design Manual (English) Table 5-3.04A and Figure 5-3.04A for guidance and policies. Please contact Jim Deeny in our State Aid section at (651) 582-1389 with any additional questions.

As a reminder, please address all initial future correspondence for development activity such as plats and site plans to:

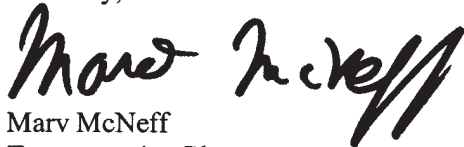
Development Review Coordinator
Mn/DOT - Metro Division
Waters Edge
1500 West County Road B-2
Roseville, Minnesota 55113

Mn/DOT document submittal guidelines require three (3) complete copies of plats and two (2) copies of other review documents including site plans.

Failure to provide three (3) copies of a plat and/or two (2) copies of other review documents will make a submittal incomplete and delay Mn/DOT's 30-day review and response process to development proposals. We appreciate your anticipated cooperation in providing the necessary number of copies, as this will prevent us from having to delay and/or return incomplete submittals.

If you have any questions, please feel free to contact me at 651-582-1462.

Sincerely,



Marv McNeff
Transportation Planner

Enclosures –Mn/DOT letter dated April 27, 2005

cc: Rob Wied, Hennepin County Survey Section
Bob Byers, Hennepin County Transportation Planning Section
Ms. Kelly Bettendorf, SEH, Vadnais Heights, MN



MINNESOTA HISTORICAL SOCIETY

State Historic Preservation Office

November 21, 2005

Mr. Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

Re: Draft EIS – University of Minnesota Football Stadium
Minneapolis, Hennepin County
SHPO Number: 2005-1594

Dear Mr. Swanson:

Thank you for the opportunity to review and comment on the above Draft EIS. It has been reviewed pursuant to the responsibilities given the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

We disagree with the statement about Archaeological, Historical, or Architectural Resources found on page 117 of the EIS. It is not clear at this point if historic resources will be affected by the project. Our letter of 20 May 2005 pointed out several issues related to the Fire Station #19 building that still need to be addressed. If adequate solutions to these issues are not identified and implemented, adverse effects to the building could occur. Our earlier letter also identified several other potential historic properties in the general area. Effects on these properties have not yet been addressed.

H-1

Contact Dennis Gimmestad at 651-205-4205 with questions or concerns.

Sincerely,

Britta L. Bloomberg
Deputy State Historic Preservation Officer

cc: James Litsheim, University Architect's Office
Greg Mathis, Minneapolis HPC

H-1 The topic of “Archaeological, Historical, or Architectural Resources; (Item 25)” was addressed in the EAW and screened from further analysis in the Scoping Decision Document.

The Stadium Project will not adversely impact any of the structures outlined in the Minnesota Historical Society letter of May 20, 2005. The Stadium Project has been planned to avoid impacting the Historic Station 19 building. The University is in communication with the current owners about the future ownership of the building. The Stadium Project will require some reconfiguration of the parking associated with the Historic Station 19 property. The Fraternity Row Historic District, Wabasha Screen Door Company, Calumet Elevator, Electric Steel Elevator, and Peteler Portable Railway Manufacturing Company are all located outside of the project area boundaries. The McLaughlin Gormley King Company building no longer exists.

November 23, 2005

Brian Swanson, University Project Coordinator
University of Minnesota
335 Morrill Hall
100 Church Street S. E.
Minneapolis, MN 55455

RE: Comments on University of Minnesota - Draft Environmental Impact Statement (DEIS) for Proposed University of Minnesota Football Stadium Project in the City of Minneapolis
Metropolitan Council District 8 (Lynnette Wittsack)
Metropolitan Council Referral File No. 19598-1

Dear Mr. Swanson:

Thank you for submitting a Draft Environmental Impact Statement (DEIS) for a proposed University of Minnesota football stadium to the Metropolitan Council for review. Metropolitan Council staff appreciates the opportunity we have been given to work with the University on this project over the past year. Our review finds that the DEIS is generally complete and accurate with respect to regional concerns and potential for significant environmental impact.

We continue to have concerns in the area of transportation, however. Council staff recommends that the following comments be addressed in the FEIS.

ROADWAYS

- **The Council is concerned about impacts on the regional highway system.** The EIS analyzes TH 280 and I-35W ramps, and shows backups in both locations. There is no analysis of LOS conditions at the I-94/Huron ramps, which provide the major access from I-94 to the U of M. The analysis done for the Huron/Essex and Huron/Fulton intersections, which are near the I-94 exit, shows a LOS F at Fulton. This presumably means the I-94 off ramp is also LOS F. (Inexplicably, the Huron/Essex ramp, which is only one block away from Fulton, shows LOS B.) The EIS should also include analysis of the freeways themselves. It is not clear that the mitigation measures shown in the EIS will be sufficient to allow the through traffic on these regional highways to continue operating at an acceptable LOS on event days.

I-1

BUS TRANSIT

- **The proposed “dog leg” between Washington and University via a short block on a new Huron Boulevard continues to be an issue.** Metro Transit staff raised concerns about this element of the stadium plan at a February, 2005 meeting between the University of

I-2

- I-1** The intersections of Huron/Fulton and Huron/Essex are essentially the I-94/Huron ramp intersections since this interchange is unique and does not have typical ramp intersections once you exit the freeway. The intersection of Huron/Fulton operates at LOS F due to the high volume of vehicles making a northbound left to access the Oak Street parking ramp. The northbound left-turn arrow would be green a significant amount of the time, to accommodate the volume of traffic. The intersection of Huron/Essex operates at LOS B because Essex is a one-way roadway that approaches Huron from the east and west, so there are no turns from Huron onto Essex, which reduces conflict points and increases LOS.

For year 2009, traffic will not queue from Huron Blvd. onto I-94 during event arrival. However, it is expected that queuing onto I-94 will occur for year 2030. Under year 2030 conditions, the traffic volume on Huron Blvd. will be higher than year 2009, due to loss of capacity on Washington Avenue from the proposed Central Corridor line. As stated in Section 3.1.4 and 7.2.4, the U of M will coordinate with MnDOT to manage the traffic for football games on the regional system. The intent will be to monitor traffic on the freeways I-94 using MnDOT traffic cameras. Variable message signs will be used to direct traffic to other locations to balance traffic if queuing occurs at the I-94/Huron Blvd. interchange.

- I-2** The proposed roadway system around the Washington, University and Huron confluence will not result in significant impacts to the operation of Routes 16 and 50. The added distance to travel because of the proposed roadway configuration will be about 200 feet for each bus direction. That added distance should not adversely affect running times or reliability.

The expected LOS for key intersections in the area at year of opening indicates there should not be any significant delays during the weekday peak hours. The Draft EIS contains information regarding pm peak hour LOS because it was identified as the worst case condition. The am peak hour volumes in the area are roughly 25 to 30 percent less than the pm peak volumes and delays would not be expected to occur.

The Draft EIS analysis did indicate the potential for poor operating conditions at the University Avenue and Huron boulevard intersection during weekday pm peak hours in year 2030. The condition is related to the anticipated volume of westbound to southbound left-turns from University Avenue. The Draft EIS design includes only a single left-turn lane in the area to minimize right of way requirements. A significant share of that volume is projected to continue southbound on Huron Boulevard. Alternative intersection designs do improve operations but also have an impact on nearby properties. The University will continue to work with the local agencies to identify the best options for time periods beyond year of opening. Those designs will incorporate more solid information from the proposed Central Corridor as to which opinion is finally selected and from the City of Minneapolis proposed SEMI development timetable and access needs.

Please see response to Comment A-29 concerning University Avenue/Huron Boulevard/23rd Avenue.

Minnesota, the City of Minneapolis, Hennepin County and Metro Transit staff. Although there was no traffic analysis available at that time, Metro Transit staff noted that traffic flow delays could be expected to have significant impacts on the running time, reliability and added operating costs for Routes 16 and 50. City of Minneapolis and Hennepin County staff shared this concern. The Level of Service (LOS) Results chart on page 21 for non-event weekdays shows a LOS E by 2030. The DEIS acknowledges that the intersection “is expected to operate poorly” because heavy westbound left-turn volumes from University to Huron Boulevard, but the mitigation section on p. 36 does not adequately address the problem. Council staff is concerned that both directions would operate poorly because of the short block, and although the morning peak hour was not addressed, since the afternoon was deemed “worst case” for analysis purposes, this design is also likely to cause problems in the morning peak hour.

I-2

- **The plan for bus layover facilities on the East Bank needs to be clarified.** The Figure #3 color photo of the project area shows the current bus layover facility next to 4th Street between 23rd and 25th Avenues as an “existing roadway to be removed with the stadium project.” The narrative on page 31 Transit Infrastructure states that the “Current project plans provide on-street parking along the north side of University Avenue between Oak Street and 23rd Avenue.” The Figure #7 map of Pedestrian Routing During Football Event shows a “St. Paul Bus Staging Area” near the current layover site. The Transit Management section of Page 37 describes “Planning for efficient bus staging areas in relation to the Stadium.”

I-3

- **Shuttle bus service:** Page 32 under *Transit Services* describes “previous discussions” with Metro Transit for a shuttle bus service between the Stadium and the Saint Paul Campus/State Fairgrounds using articulated buses. Council staff does not recall these discussions. The DEIS is silent on who would pay for this service.

I-4

- **Maintain bus stops.** Existing Metro Transit bus routes serving this immediate area include Routes 2, 6, 16, and 50, as well as routes operated by SW Metro and MVTA. Bus stop facilities for these routes should be maintained, as they will provide essential transportation for this project, particularly during special events.

I-5

- **Potential impact on bus service speed and reliability.** Because existing transit and the Central Corridor bus rapid transit (BRT) option operate in mixed traffic, there are potential speed and reliability problems related to increased traffic congestion in the vicinity of the proposed stadium. The FEIS should indicate what mitigation measures would be taken to protect bus speed and reliability of these regional services.

I-6

LIGHT RAIL TRANSIT

- **The southeast corner of the stadium appears to conflict with the proposed LRT tunnel portal.** The University has requested that the Central Corridor LRT traverse the campus below grade. This LRT option is proposed to exit a tunnel immediately south of the stadium. At the request of the University, the Central Corridor project has evaluated lengthening the tunnel and changing the alignment. Projected additional costs to the Central Corridor to extend the tunnel are \$15 to \$20 million over the current budget. The FEIS should address

I-7

- I-3** The University will work with Metro Transit and the City of Minneapolis to identify alternate on-street bus layover locations.
- I-4** The discussion with Metro Transit staff took place during the Joint-Use Football Stadium Pre-Design Study, published in December 2002 to confirm potential availability of the rolling stock within the region during weekend events. Actual availability of equipment and intended service provider will need to be confirmed prior to service start-up. The University will cover the full cost of providing any required shuttle service between the Stadium and the St. Paul Campus/State Fairgrounds.
- I-5** The Stadium Project and proposed new roadway configuration will have very little impact on regional bus routes and facilities. Only one bus stop, along northbound Oak Street at 4th Street will need to be relocated due to reconstruction of Oak Street in that area. It is anticipated that the stop will be relocated to the new segment of Oak Street or just across the intersection of 4th Street. No other regional routes or facilities are affected by the project.
- I-6** None of the intersections along the proposed BRT route are expected to experience significant problems during event peak arrival and departure hours during a Saturday event. This should allow for near normal operations for most of the existing bus services and potential BRT service.

As an added precaution, traffic control officers will be deployed at critical locations around the Stadium to direct traffic movements as needed during heavy flow periods. These officers will be instructed to clear any problems that might occur as quickly as possible to allow for quick bus passage through the area.

- I-7** The University acknowledges that a conflict exists between the proposed stadium plan and the proposed rail alignment outlined in Central Corridor Light Rail Transit (LRT) Draft Environmental Impact Statement. The University is an advocate for, and an active participant in, the Central Corridor LRT project. The University will continue to work with the Central Corridor to support a LRT line through campus that:
- maximizes access to the University and increases transit ridership;
 - optimizes the overall efficiency of the transit system;
 - avoids significant pedestrian/ vehicular/ bicycle conflicts on and around campus;
 - promotes a vibrant urban environment on and around campus;
 - does not degrade the functionality of campus operations.

The Central Corridor LRT project, however, is still a proposed project awaiting approval of its DEIS and funding for preliminary engineering. As no final decisions have been made on either the mode of transportation (Rail or Bus) or on the overall alignment between downtown Minneapolis and downtown St. Paul it is premature to address any mitigation for potential additional system costs.

In the Draft EIS the University outlines five themes used to guide the development of the campus district where the proposed stadium will be built. These themes include:

- Create an urban campus with a unique sense of place.
- Plan for efficient and orderly campus growth.
- Provide and encourage environmentally friendly transportation.
- Design for long-term sustainability.
- Coordinate with the planning efforts for adjacent developments and projects.

With or without stadium the University believes that these planning goals are best met by the alignment expressed in the University preferred alignment proposal. Numerous options for placing a stadium in alternative locations on the site were explored during Joint-Use University of Minnesota – Minnesota Vikings stadium analysis, the University of Minnesota Stadium Feasibility Study, and the on-going stadium district preliminary engineering.

Brian Swanson, University Project Coordinator

November 23, 2005

Page 3

this additional system cost and examine ways to mitigate this addition regional system cost, such as re-orientation of the stadium or movement of the stadium location to the north and east by a few hundred feet. Evaluation of a less costly, at-grade option for LRT is underway. At-grade operation could remove the stadium conflict but may impact other traffic flows in the area.

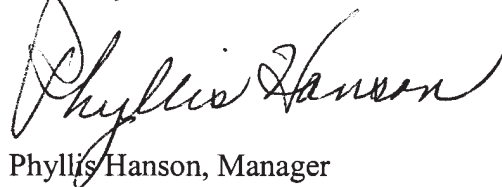
I-7

- **Additional track and station capacity** should be considered in the FEIS to accommodate passenger demands for major events.

I-8

The Metropolitan Council looks forward to continuing to work with the University on this project. If you have any questions or need further information, please contact Connie Kozlak, Manager, Systems Planning/Programming, Metropolitan Transportation Services at 651-602-1720; Adam Harrington, Manager, Route and System Planning, Service Development, Metro Transit, 612-349-7797; or Jim Uttley, AICP, principal reviewer at 651 602-1361.

Sincerely,



Phyllis Hanson, Manager
Local Planning Assistance

cc: Lynette Wittsack, Metropolitan Council District 8
Keith Buttleman, Environmental Services
Denise Engen, Sector Representative
Jim Uttley, Principal Reviewer
Cheryl Olsen, Reviews Coordinator

I-8 The University's preferred alignment proposal includes space for additional track and rail car capacity to serve events.

Brian Swanson
Office of Budget & Finance
335 Morrill Hall 100 Church Street SE
Minneapolis, Minnesota 55455

Dear Mr. Swanson:

The Southeast Como Improvement Association's (SECIA) Executive Committee would like to offer the following comments and observation on the Environmental Impact Statement for the University of Minnesota Football Stadium. SECIA's mission is to maintain and enhance the physical, social, and economic environment of our neighborhood.

The SECIA Executive Committee has several concerns involving the construction of this new stadium. First, we do not feel that the traffic study has done an adequate job of taking into account the congestion on streets and intersections in SE Minneapolis, especially on weekdays and in close proximity to Highway 280.

J-1

Second, we feel that parking issues will be far more severe in our neighborhood than indicated in the study. SE Como is already a virtual "parking lot" for students who commute to the U of M campus from the suburbs. The additional parking demands from events at the stadium will cause a hardship in our community, especially given that over 11% of our community is elderly, with many needing to park close to their homes. This is already an issue in SE Como and will only be exacerbated by the construction of the stadium.

J-2

Noise from the stadium is going to be an issue for residents of our neighborhood, especially those in the southern portion of SE Como. Any evening events will certainly be a severe nuisance and livability difficulty, especially as the noise threshold for the area is already above state guidelines.

J-3

Finally, the study fails to address the issues associated with tailgating, drinking, and post game celebrations. Other Big Ten Schools and major universities have cited these concerns as definitely impacting the livability of areas surrounding existing and planned stadiums. This might be the single largest decision that the University will make in regards to a direct impact on the surrounding neighborhoods, and to not at least have a discussion of the ramifications of tailgating and partying associated with new stadium is inexcusable.

J-4

- J-1** See Section 7.2.4.
- J-2** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- J-3** See sections 3.2.4 and 3.2.5 for the revised event noise analysis and mitigation commitments.
- J-4** See Section 7.2.7.

The SECIA Executive Committee strongly encourages a more in depth study of the traffic, parking, noise and tailgating/partying issues that will impact the neighborhoods surrounding the proposed University of Minnesota Gopher Stadium. We look forward to working with the University of Minnesota in constructing a new stadium that makes the most sense for everyone involved

Sincerely,

Lee Hibbard
SECIA President

11/18/2005

TO: Brian Swanson
University of Minnesota
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

FROM: Joan Menken
Southeast Como Improvement Association
SAGG Committee Representative

RE: EIS - University of Minnesota Stadium

Comments to be added to the record - public comment period open until November 23, 2005:

Traffic/Parking: Details and analysis of traffic patterns and flow are insufficient. Using the numbers in the EIS - 35W, T280, I94 and University Ave. are the major southeast routes into the stadium. The analysis clearly indicates (if not implies) University Ave will be severely impacted. At no point in the document does it discuss the intense future development along University Ave., including residential, commercial and industrial uses. What impact would a stadium have on a fully developed corridor? Where is the city in this discussion?

K-1

There is no substantial analysis of traffic impact on residential streets. Do you really believe 15th Ave. SE, Como Ave, E.Hennepin, 8th Street, Kasota/Elm will not be used? People do not subject themselves to endless traffic lines coming into the University, we have seen it for years.

K-2

The University should be the primary financier for the bridge to Granary Rd. If this would be a major benefit to stadium users, they should build it.

K-3

The parking analysis is incomplete and naive. Students and employees already know where to park free - city streets. Football patrons are no different. They generally know the area, what the quickest access and egress routes are and how far the walk will be to a game. Did anyone look at the current parking situation in SE

K-4

K-1 The traffic analysis for the proposed Stadium for the year 2030 includes anticipated development throughout the City including the SEMI area. Information maintained by the Metropolitan Council regarding future land uses is provided by each city within the region and reflects current local plans. The exact timetable and extent of the SEMI redevelopment is not know at this time but the City of Minneapolis has participated in reviewing the Stadium planning efforts thus far.

K-2 Traffic analysis for the proposed stadium assumed that all parking will take place in University controlled parking facilities, which would not impact the residential streets. See section 7.2.5 for discussion of neighborhood parking concerns.

See Section 7.2.4, for a discussion of traffic diversion to local streets due to congestion.

K-3 Please refer to Section 7.2.4, for a more detailed discussion of local roadways necessary for the proposed Stadium project.

K-4 Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.

Como area along 15th Ave SE, 17th Ave. SE, 18th Ave. SE. Como Ave., around Van Cleve Park or any street in Marcy/Holmes? They will park in the neighborhoods - they figured it out a long time ago.

K-4

Parking fees - Parking is clearly a revenue stream for the University. As a Gopher season ticket holder to women's basketball, we are paying \$9.00 per game now, more if more than one event overlaps another. Gopher football (50,000 ticket holders) *would* overwhelms already compromised systems at times. The off-site parking at the Minnesota State fairgrounds with bus fair included will have to be minimal to attract enough people to keep them off city streets.

K-5

Events- Basically, all the data centers around 6-8 football games a year. References to "superbowl" conditions speaks volumes. Events are a revenue streams, this could be a financial giant for the University. There is no plan. We are not to worry, the University will take into consideration all the issues and concerns raised by the community, businesses and the city. What leverage would we have? What is the University's policy on alcohol at events? Students tailgating in neighborhoods?

K-6

Environmental Issues - Air quality - NO PROBLEM. Idling cars, sportsbuses, backed up traffic, NO PROBLEM. Where is the data? Noise - the suggestion that new, high tech sound systems will mitigate noise in the surrounding neighborhoods is ridiculous. One soundstage on campus at this time is heard for hours in the Como neighborhood. Garbage - Who get's to clean up the mess after games. Is the University going to send out street sweepers and volunteers to clean our streets and yards after games? Will this be a city responsibility? Who pays for this service?

K-7

K-8

K-9

What are the options for contractors/haulers during construction? Which streets would be used? What hours? Who monitors?

K-10

Pile driving until 9:30 p.m. - no way. This activity it not acceptable after 6:00 p.m.

K-11

Mitigation - A traffic manager? An event manager? Police officers, traffic enforcers, parking police, party patrols should be a permanent fixture in this plan? Who pays for them - the University or Minneapolis taxpayers? Has the city of Minneapolis agreed to pay

K-12

- K-4** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- K-5** Pricing for any of the event parking areas has not been set at this time. Rates will need to be set at reasonable levels throughout the area to ensure parking occurs at intended locations. There is not expected to be any charge to users for the shuttle bus trip from remote parking.
- K-6** See Sections 7.2.1 and 7.2.7.
- K-7** Detailed analysis regarding vehicle-generated air quality concerns is presented in Section 3.3.1 of the Draft EIS and Section 3.3.1 of the Final EIS.
- K-8** Line-array type speaker systems have consistently proven beneficial around the country for mitigating the radiation of sound out of a stadium and into the surrounding area. The approach of using more efficiently controlled speaker systems, coupled with the shielding characteristics of the stadium bowl, equate to reduced noise levels outside of the stadium. Typical reductions associated with this technology are presented in Section 3.2.5.
- Additionally, it is not the intention of this noise study to guarantee that noise, or music from a concert, will not be heard. The human ear is capable of hearing different tones residing outside of normal day to day noise-even those well below official noise guidelines. Concerts, in all probability, will be heard. It is the excessive concert noise over and above state standards which is being examined with regards to mitigation and control.
- K-9** See Section 7.2.7.
- K-10** See Section 3.10.1.
- K-11** See Section 3.10.1.
- K-12** See Section 7.2.7.

for their services, which will be considerable? What control will the University assume for students living in the neighborhoods who invite all their friends into the city for not only the football game but all the before and after events? Will this be 24 hour service or just the two hours before and two hours after the games or concerts?

K-12

Permanent funding must be in place as part of the University's yearly budget to mitigate effects on neighborhoods and businesses. The funds would cover parking, traffic control, police cleanup, etc., as agreed to by the University and the neighborhoods.

K-13

A permanent committee will be put in place, with representatives from all neighborhoods to define and mitigate all issues arising from a stadium on campus.

K-14

General comments:

Why was a NO BUILD option not even considered?

What impact will an on-campus stadium have on the City of Minneapolis?

What effect will this have on future development on University Ave?

What are the cumulative effects from 2009-2030?

Will the University really live up to any agreements with the neighborhoods?

K-15

It is difficult to convince people there will be no impact or the University will put in place mitigation strategies to take care of the issues we raise. There experience say it won't happen, it is again just lip service. The parties will be in the neighborhood, alcohol will be a major issue, bringing in large groups of friends for the whole weekend will happen. The University is now bringing the problem directly to thier door steps. The city does not have the resources to address current problems, how realistic is it for people to believe the University will accept responsibility for the activity and aftermath on game or concert days?

K-16

K-12 See Section 7.2.7.

K-13 See Section 7.2.7.

K-14 See Section 7.2.3.

K-15 The Draft EIS does include an analysis of the no-build option.

K-16 See Section 7.2.7.

November 23, 2005

Brian Swanson
Office of Budget & Finance
335 Morrill Hall
100 Church St. SE
Minneapolis, MN 55455

Mr. Swanson and Consultants,

On behalf of the Environmental Committee I would like to submit the following comments regarding the scoping of the Environmental Impact Statement (EIS) for the University of Minnesota (U of M) Gopher Football Stadium. Some of the statements will reiterate points brought up at the Stadium Advisory Group meeting November 1st, 2005, and the subsequent public meeting at University Lutheran Church of Hope on November 10, 2005. We appreciate the opportunity to provide comments on a stadium proposal that will certainly impact the adjacent neighborhoods of Southeast Minneapolis.

While the document overall represents a comprehensive view of many environmental hazards it is short on analysis of certain key sections. Because the plans for the Stadium are not finalized it is difficult to comment on those sections that have some vagueness to them. With that in mind, below are the sections of the Environmental Impact Statement (EIS) and topics of local environmental significance that need to be more thoroughly addressed before a stadium would be built.

- Traffic & Parking
- Noise (event, concert, and construction)
- Construction issues
- Air Quality issues
- Other (Economic, Advisory role, etc...)

General comments

The EIS is a good faith effort to understand the environmental impacts of constructing a large football stadium on campus in an urbanized area that would supposedly be utilized six to eight times a year. The analysis does go beyond that very limited utilization to include concerts along with the potential for other large events. Individuals have stated, justifiably, that the whole process is flawed because exact utilization is undefined and that significant other community impacts are not included such as tailgating, partying after games, alcohol use/abuse by minors. Our comments will be

directed at specifics of this proposal to the extent possible. There are some very positive sections in this document where it is clear that initial feedback was considered from the neighborhoods. Specifically the water sections dealing with site runoff and control provide some thoughtful solutions such as bioretention basins, native plantings, and the use of cisterns to water vegetation on site are top shelf ideas and should be seriously considered if the stadium is built. Other sections are fairly Spartan in their analysis and in certain cases inadequately address concerns.

Findings of Error in Document

As with any large document errors do occur. We are highlighting some of the more noticeable ones below which represent factual or data/information errors.

- Figure 5, “Intersections analyzed for build roadways”, has intersection locations for #1 & #2 in the wrong place, they should be moved over one block west (Como Neighborhood). | L-1
- MP3 in table 18 “Modeled Concert Noise”, p. 62, appears to have a calculation error where the resultant level (66db) is equal to the existing level (66db) even with the addition of modeled concert noise (72 db). | L-2
- Section 5.4, p. 128 provides a website link, which may work by referring a person to the actual site listed here: <http://www1.umn.edu/stadium/> | L-3

Traffic & Parking

These are clearly top issues regarding neighborhood impacts and a stadium in the proposed location. This topic has been raised repeatedly in vocal and written comments throughout this process and the response and mitigation measures proposed so far have been very limited. Many of the intersections analyzed are already at capacity and are prone to failure. Several key intersections were not even evaluated for impacts. The traffic and subsequent congestion in the Como neighborhood and surrounding neighborhoods will adversely affect air quality and the livability of this community. | L-4

Along with traffic impacts come parking impacts. The streets in the Como neighborhood remain car lined most weekdays and that continues into the weekend. Students, visitors and sports fans routinely utilize the free street parking in this neighborhood for access to campus. We know this to be true for the Southeast neighborhoods of Marcy Holmes and Prospect Park also. Long-term residents can speak clearly to the concerns they have about additional parking pressures which will be placed on the neighborhoods in the future with or without a stadium.

L-1 Figure 5 has been modified to illustrate the proper locations for intersections #1 and #2.

L-2 The impacts in Table 18 were calculated based upon noise conditions assuming 15,000 attendees and a smaller touring sound system focused immediately in front of a proposed stage. These figures are derived by adding a smaller capacity crowd and sound system to derive sound pressure levels within the Stadium and approximately at the bowls northern edge (“Modeled Medium Concert and Crowd Noise”). This level then must be reduced to account for transmission loss through obstructions such as the bowl itself, buildings residing between the source and the receptor and loss over distance. A conservative transmission loss of 23dB was then subtracted from this level (“Adjusted TL for Concrete @2000Hz”) and then added to the ambient environment numbers (“Existing”). To perform this decibel addition, a standard decibel addition graph was used.

Thus, with a predicted level of 72dB within the Stadium and a subtraction of 23dB to account for barriers and distance, we derive at a level of 49dB at these receptors. Decibel addition of this level and the higher ambient level of 66dBA results in a net gain of 0dB at these receptors (17 dB difference between sources- off the scale). This is largely due to the higher measured levels at these receptors. Other receptors with lower ambient readings will be affected more greatly due to the lower baseline. Again, while it is not the intention of this noise analysis to predict that concerts will not be heard by receptors- human hearing is very sensitive to tonal changes in the environment- with an ambient level as high as 66dBA, a medium concert event is not predicted to elevate levels at these receptors given barriers and loss over distance.

L-3 The referenced web address has been corrected in Section 5.4.

L-4 See Section 7.2.4 for a discussion of traffic diversion to local streets due to congestion.

Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.

We request that the following topics receive attention in the final EIS:

1. Analysis of the freeway intersections of Kasota Ave and Hwy 280, Como Ave & Hwy 280, and Larpenteur Ave. and Hwy 280. Additional intersection for consideration: Interstate 35W and East Hennepin Ave. These intersections will be utilized if the University and Franklin Ave ramps become congested and go to failure, which is predicted in the EIS. Also, one of the traffic mitigation measures is to have signs telling drivers to use alternate routes. These are the alternate routes, so they should be looked at in the EIS. L-5
2. The intersection outside this office is rated at "F/F", 15th Ave & Rollins (Table 5, p. 29) for weekday events in 2009 as are most up and down 15th. The University Day Care building is across the street and Van Cleve Park is on the Northwest Corner. Children cross this intersection regularly going to and from the park. Parents traveling from the University would utilize this intersection to pick up their children from daycare. University vehicles also heavily utilize this intersection during the day. Having this residential intersection go to failure is viewed as unacceptable as it is the only route to enter the neighborhood from the south. L-6
3. The parking concerns will have to be evaluated more thoroughly as several novel suggestions were proposed at the public meeting. We recommend that the Stadium Advisory Group be involved in this process and the local neighborhoods/ business be solicited for their input on this specific topic. L-7
4. Transit and planned pay lots need more review. The assumption that all the people driving to the game will park in one of these pay lots, not close to the stadium, is unrealistic. L-8

Probably the best argument for the "no-build" option is on page 40 where it is stated that,

Football event parking that would normally be accommodated at the St. Paul Campus/Fairgrounds will be relocated to downtown Minneapolis. On Average, *there are approximately 30,000 to 40,000 parking spaces available downtown on weeknights and Saturday afternoons.*

Downtown is where the Metrodome is located and where the Gophers currently play. This location, according to the EIS, provides more than double the parking spaces under capacity assumptions for a Saturday afternoon football event (p. 21). This is without reference to the current light-rail transit (Hiawatha Line) that includes a Metrodome stop and is very popular with Gopher fans

- L-5** The use of variable message signs on the regional system will be used to balance and guide traffic to all interchanges on I-35W, I-94 and TH 280. See Section 7.2.4 for a more detailed discussion of regional system management.

- L-6** As stated in Section 3.1.5, weekday Stadium events are expected to be infrequent and will not disrupt the usual operations at the University Day Care Center. Should a weekday event occur, the University will prepare a unique traffic management plan customized to the conditions of that particular event to facilitate improved traffic flow.

- L-7** See Section 7.2.3.

- L-8** See Section for discussion of neighborhood parking concerns.

coming from outside the area which represents approximately 85% of the assumed population for games (p.21).

For the above reasons and others we believe that there should be more serious consideration of the consequences of an on campus stadium. Students, bikers, and pedestrians will all be severely and significantly impacted by building a stadium in this location as well as the residents living in the adjacent neighborhoods. The benefit from the stadium vehicle traffic to the community is unknown and unlikely. Given the fact that the Como neighborhood and others do not have large free parking lots to attract the 85% of the predicted attendees who will come by car it is uncertain if they will patronize any of the few establishments we have in the neighborhood. This topic will be further discussed under “Other, Social Community and Economic Impacts”.

Noise

With existing noise levels already identified above Minnesota State Standards (Tables 16 & 17, p. 60-61) it is understandable that this topic is of concern. The Stadium and traffic noise will most directly affect those on the south side of the Como neighborhood and who will be exposed to sound traveling to the north over the open expanse of the railway.

There will be additional noise issues during the construction and the most unacceptable would be to allow pile driving until the hours of 9:30 PM (p. 103). This would be in violation of existing City noise ordinances and out of line if the University desires to respect the rights of the adjacent property owners. Truck traffic and large vehicle traffic is also a concern cutting through the neighborhood. We recommend that they stay on approved high-volume and capacity rated routes.

L-9

Additional recommendations regarding noise issue:

1. Avoid holding concerts at the stadium. The EIS is billed as a Gopher Stadium to be used by the University’s football team, but it does not seem to make economic sense to build a stadium for such low utilization.
2. Work with the Stadium Advisory Committee and neighbors to resolve noise issues as they arise and work to mitigate the foreseen and unforeseen impacts.

L-10

L-11

The EIS does not include noise impacts of fans leaving the stadium after the Gophers win (desirable outcome). With the traffic stopped at all the intersections throughout Southeast the neighbors should

L-12

L-9 The text in Section 3.10.1 has been modified to address this comment.

L-10 See Section 7.2.1.

L-11 See Section 7.2.3.

L-12 See response to Comment A-75.

expect honking horns, loud yelling, and screeching tires from stop signs. The traffic and noise ordinances are designed to limit this type of behavior and in other situations it would certainly be ticketed as an offense. This should be acknowledged as a potential and significant noise impact of the stadium being built. Since it has not been identified, no mitigation has been suggested.

L-12

Construction issues

The most significant neighborhood impacts have already been identified under previous sections. They are truck traffic during construction and the noise associated with pile driving until 9:30pm, which would be a violation of City Noise ordinances. The recommendation to work with property owners within 1,000 feet should be extended to the adjacent neighborhood groups and business associations.

L-13

Air Quality issues

Arguably the most significant environmental impact the stadium will have on the local environment is the amount of traffic it will generate and the unwanted auto pollution associated with that traffic. This issue is not sufficiently addressed in the EIS even after specific requests for more detailed analysis. The Carbon Monoxide (CO) levels are addressed as the traffic-related pollutant of greatest concern but this is arguable. Several other key pollutants are not analyzed at all, two of which include:

1. Ozone impacts are not analyzed in this report even though it is shown that traffic congestion will occur. Currently, the Twin Cities is classified as in "attainment" for ozone, but the study should predict for 2009, when the stadium is actually built. We are in danger of losing our current EPA attainment classification in the metro and this has been stated publicly several times by the former commissioner and current deputy commissioner of the Minnesota Pollution Control Agency. Stating what pollution levels are now (without a stadium) is not adequate to evaluate the potential impacts of the stadium.
2. The same reasoning listed above extends to Nitrogen Dioxide (NO₂), which is directly emitted by autos/vehicles and which is a known ozone precursor. Stating that we currently meet standards in not an environmental analysis of future conditions and output from congested roadways caused by a stadium being built in the proposed location.

L-14

L-13 The text in Section 3.10.1 has been modified to address this comment.

L-14 The Twin Cities metro area is currently in an attainment area for ozone. As a result of this attainment status, no project-level ozone analysis is required for future projects. We cannot speculate on future attainment status, which is contingent on future measured ozone levels throughout the metro area and on regulations which may change.

Ozone concentrations in the lower atmosphere are influenced by a complex relationship of precursor concentrations, meteorological conditions and regional influences on background concentrations. As a result, the effect of a single project on ozone concentrations is extremely difficult to quantify without a comprehensive regional ozone modeling process.

The EIS addresses both the region's attainment status and the likely decrease of nitrogen dioxide (NO_x) emissions over time given improvements in tailpipe emissions in newer vehicles. Based on the relatively low ambient concentrations of NO_x in Minnesota (significantly below state standards) and the long-term trend of reduction in NO_x emissions, it is unlikely that NO_x standards will be approached or exceeded in the project area. Because of these factors, a specific analysis of nitrogen dioxide was not conducted for this project.

We were given some assurances in the April 13th, 2005 meeting that this item would receive more detailed analysis, but this has not been the case.

L-15

We would like to reiterate how important the traffic issues will be for the neighborhoods. Additionally, the City and State have banded together and are part of Clean Air Minnesota which is working to reduce impacts of ozone precursors (e.g. auto exhaust & NOx) so we will not fall out of attainment for ozone which would be costly to all area residents and businesses along with the increased health impacts completely avoided in the draft EIS.

Other

There are several other topic areas that receive only a limited review that will affect the neighborhood environment long-term. Some are identified below.

Surface Water runoff

Please strongly consider implementing options identified under section 3.5.3 “mitigation” which involves the use of Bioretention basins and Underground storage of water in cisterns. The runoff would be discharged into the Mississippi as identified and this section contains the most thought out mitigation measures in the whole EIS. It would be disappointing to not consider implementing these strategies if a stadium is built.

L-16

Social Community and Economic Impacts

It is unclear how a new stadium on campus will benefit the surrounding neighborhoods or their businesses at this time and unclear the benefits to the students other than higher tuition and more parking problems. The neighborhoods are far from static and the area is growing as identified and as referenced before parking issues are already at chronic levels in the neighborhoods. Studies have shown that people driving in vehicles will not stop at businesses if there is not adequate parking. Certainly there will be some additional walk-in customers that will patronize local businesses, but only if they parked in a location close by which will mean patrons parking in the limited existing free areas.

L-17

The precursory analysis of the Census data (section 3.8.2) results in limited interpretation that does not take into account the general shift in age or type of resident in the neighborhood. The total population has not changed much in number in past decades because these are built and established neighborhoods with similar roadways/infrastructure. There is not much room for expansion of

L-18

- L-15** In accordance with Section III.16 on page 10 of the May 2005 Final Scoping Decision Document, a detailed air quality analysis was conducted for the Draft EIS and is included in Section 3.3.
- L-16** Stormwater treatment options discussed under DEIS Section 3.5.3 are being seriously considered as design development proceeds for the project. Information regarding stormwater treatment measures under consideration can be found in FEIS Section 3.5.2.
- L-17** The Stadium, as noted in Section 3.8.2 and 3.8.3, is proposed to be located in an area of Minneapolis with an established University affiliation and a fairly large proportion of younger residents. The surrounding neighborhoods are closely linked to the campus life and to the day-to-day operations of the University. The increased number of people in the area on event days will increase the number of potential patrons to local businesses. The University will develop programming before and after the football games to provide additional opportunities for local businesses to attract patrons. Section 3.8.2 of the Final EIS document has been modified to include additional information on this topic.
- L-18** It is recognized and noted that the population totals in the areas assessed have not changed significantly over the past decades because they are fully developed in nature. It is further acknowledged that the demographics of the area are changing to include greater proportions of younger populations. Section 3.8.2 has been modified to recognize this trend.

either. More importantly, over the past few decades the age of the population has changed dramatically—shifting towards a population dominated by people aged 20 to 34. An example would be in 1960 population of children under 5 was 1008, in 2000 it was at 246 and contrast that with a population of people aged 20-24 in 1960 shifting to number of 2097 in the year 2000 (see below).

Table of Como Population based on US Census

Age	1960	2000
Under 5	1008	246
5 to 9	507	170
20 to 24	777	2097
25 to 34	1144	1346
35 to 44	596	463
55 to 59	240	114
60 to 64	224	76
65 to 74	366	137

This trend continues and also is evident in mobile people age 55-74, all of which have declined since 1960.

Most of the people in the emerging age group are renting and many either are students or former students. Almost 70% of the housing stock in the Como neighborhood is rental, and the percentages are even higher for the other two neighborhoods. This population group behaves differently than on more evenly distributed in age and has specific characteristics, some of which are very relevant to the stadium project. These include:

- The shift from owner-occupied single family homes to rental targeting young single adults results in more automobiles per dwelling (more cars parked on the streets)
- Younger adults tend to have more limited income, meaning that they and their friends would rather not pay for parking.
- They tend to be single and more active socially.
- They tend to be more physically mobile, walking and biking to events or taking transit.

This is something to keep in mind when considering impacts of traffic, parking and pedestrian issues in and around the Como neighborhood. Game day will have a different type of impact on the uniquely comprised neighborhoods around the stadium than a typical neighborhood.

Mitigation Fund

L-19 The trend toward younger population composition in the surrounding neighborhoods is viewed as a potentially beneficial affect given increased University affiliation (students) and enhanced probability for Stadium patronage. In addition, the younger population group may be less affected by some of the adverse impacts documented in Sections 3.8.2 and 3.8.3.

The establishment of a fund to deal with issues related to construction and ongoing operations of the stadium is a good idea. However, the initial amounts speculated (\$300,000 for construction issues, \$500,000 for all other issues) is inadequate. The types of solutions to traffic and or parking issues will likely far exceed the initial amounts and could likely be all consumed within the first year. A suggestion is that an on-going fund be established based on revenue from stadium operations, possibly in the range of 1-5% of projected annual revenues--used to address mitigation issues. This would be on top of the initial planned funds.

The University would likely be performing most of the mitigation measures on their property and under their complete authority and control. A fund of a couple of percent seems like a small amount to budget for these ongoing maintenance type issues that will arise.

Energy Impacts

We would encourage the University to pursue an on-site heating system remote from the Central Heating plant for two reasons.

1. The distance from the heating plant is great, and would likely be the furthest point currently connected. This would result in large heat loss (i.e. inefficiency) for the minimal heating/cooling needed for this facility.
2. The Central Heat plant relies on coal as a primary fuel source along with other carbon intense fuels like fuel oil. Currently the University is amending their Title V air permit to allow them to include biomass which is a loose definition including oat hulls.
3. The current plant has significant harmful air emissions including Mercury and lead along with NOx, SO₂, and CO₂.

Again this is a fantastic opportunity to install state of the art heating/cooling systems that could employ the use of active and passive solar systems. Solar thermal hot water heating systems are available and could be incorporated into the stadium design as well as photovoltaics to produce electricity on-site. This could save the University in energy costs now and in the future. Energy costs will continue to rise as limited fuel sources are depleted.

Current federal tax credits coupled with State rebates could drive the system costs down even more. Building a sustainable system would create goodwill and could enhance the visual impacts of the stadium along with being a working model for University students. Other campuses are engaging in similar projects and have demonstrated their commitment to keeping future costs (i.e. tuition) low by investing in efficient technologies today.

L-20 See Section 7.2.2.

Nearby Designated Parks

There remain at least three parks in the area which remain unmentioned in the EIS. They are listed as they were in the EAW:

1. Van Cleve Park (Como)
2. Luxton Park (Prospect Park)
3. Witches' Hat Tower (Prospect Park)

These resources will likely be unaffected if no one attends games at the proposed stadium, but that is not the planned scenario. Data is available, but anecdotally people do seem to still use parks on Saturdays during the day.

Cumulative Effects

Construction of the stadium in the proposed location will have adverse affects on the surrounding neighborhoods and it is not safe to say it will create more economic activity. We are unaware of any proximal business to the stadium demanding it be constructed and that Gopher football be moved from its current location at the Metrodome. It could be argued that many businesses downtown will be negatively affected by the Gophers vacating the Metrodome. It could also be argued that the Hiawatha Rail line (in it's infancy) would also be negatively affected by the decision to build a stadium on campus.

From the neighborhood perspective the results will be:

- Increased auto traffic and congestion to levels unknown
- Increased auto pollution to levels not described in the EIS
- Decreased parking available to current residents
- Increased potential for accidents between pedestrians and cars
- Increased construction noise and traffic
- Increased tuition costs for students in a non-academic pursuit
- Increased noise in general and potential for disorderly conduct including underage drinking
- Limited mitigation measures from to the University to deal with the problems once built.
- Increased likelihood the Metrodome will loose all of its sports team tenants resulting in an economic loss for the City of Minneapolis and its taxpayers.

L-21 No additional response is required. The issues raised in this comment have been addressed in previous comment responses and the Final EIS document.

The stresses to the human community currently outweigh any potential benefit that a proposed stadium could offer at this time. This hopefully will be considered when making decisions regarding cumulative effects.

Summary

Traffic, congestion, and pollution all negatively affect the Como neighborhood and disregard for these issues negatively impacts the livability of the entire area. As identified in the draft EIS these problems will be compounded if a stadium is built and especially if it is utilized beyond Gopher Football home games.

The Southeast Como Improvement Association and the Environment Committee wish that the neighborhood remain a vibrant and healthy place to live. We encourage measures that not only benefit the University but also enhance the surrounding community.

We thank you again for this opportunity to comment and look forward to working with the University through this process. We hope to provide necessary feedback that will assist the University and its consultants in making informed decisions regarding the stadium.

Sincerely,

Justin Eibenholz
Environmental Coordinator
Southeast Minneapolis Neighborhoods

P.S. I received a paper copy after all other parties on the Stadium Advisory Group received their copy and one day after the scheduled meeting. I was told that there was an address error, but previous correspondence had reached this address without event.

November 23, 2005

Stephanie Hankerson
Community Garden Organizer
SECIA - Southeast Como Improvement Association
837 SE 15th Ave Ave, Mpls., MN 55414

Brian Swanson
Office of Budget & Finance
335 Morrill Hall
100 Church St. SE
Minneapolis, MN 55455

Mr. Swanson and Consultants,

As SECIA staff, I will leave the bulk of the commenting on this issue to my colleague, Justin Eibenholtz. However in my capacity of Community Garden Organizer at SECIA, I am on the streets of SE Como working with neighbors at various Como garden sites. The important issue I can comment on in relation to the proposed stadium is traffic, traffic, traffic.

Presently, the neighborhoods near campus are besieged with university related vehicles. This includes private cars of students and employees of the University, but also fleet & cargo trucks that use 15th Ave SE & Como Ave SE in particular. At the intersection of Rollins & 15th, where SECIA's offices are, we see University marked vehicles pass at a rate near dozens/hr. We have tallied the number on occasion.

Without a doubt, a stadium will only increase the traffic burden on this area and thereby increase vehicle pollution associated with that traffic (and road wear). This issue must certainly be adequately addressed in the EIS, especially in relation to city and state ozone goals.

M-1

Further, the burden of University population parking their vehicles in Como is presently substantial and needs to be understood with the presence of a stadium. Residential streets play host to University commuters who either walk or bus from Como. This problem has only increased in recent years.

M-2

The nearby neighborhoods request from the University serious consideration of the livability issues that stem from current practices and from the addition of a campus stadium. We appreciate your attention.

Sincerely,

Steph Hankerson

Steph Hankerson
SECIA Community Organizer

M-1 Detailed analysis regarding vehicle-generated air quality concerns is presented in Section 3.3.1 of the EIS.

M-2 Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.



St. Anthony Park Community Council

November 23, 2005

Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455

Dear Mr. Swanson,

The St. Anthony Park Community Council appreciates the opportunity to share our concerns, questions, and comments regarding the Draft Environmental Impact Statement for a potential University of Minnesota Football Stadium. We understand the amount of hard work put into this document, but we feel that some items either overlook or underestimate the potential impacts to the neighborhood. As a neighborhood organization, it is our responsibility to inform neighbors of potential projects and represent their best interests in communications with fellow stakeholders, such as the University of Minnesota. We expect that the University will take into consideration these comments in an effort to create a University structure that respects the sensitive nature of our environment and the social and physical health of our neighborhood.

Along with our comments regarding the potential environmental impacts, the St. Anthony Park Community Council urges the University of Minnesota to remove the physical representation and textual references to Granary Drive as proposed, to extend into St. Paul at Robbins and T.H. 280 due to the ongoing objections of St. Anthony Park and conflicts with the District 12 Plan. We understand that this information was based off of the Met Council 2020 plan, but in the future there should be greater communication between the city leaders, planners, and neighborhoods to truly understand the impacts and implications of this proposed route.

Thank you for your time and consideration,

Nina Axelson
Community Organizer

C: Jan Morlock and Peg Wolff, University Relations
Councilperson Jay Benanav
Councilperson Paul Zerby

Attachment: EIS Comments from St. Anthony Park Community Council

N-1

N-1 Granary Road and the SEMI redevelopment are part of the long range plans of the City of Minneapolis at this time. Thus, the road was included in the analysis of 2030 conditions. The proposed Stadium project does not require the road to be in place in order to provide access to the Stadium.

Please refer to Section 7.2.4, Revisions to proposed roadway reconstruction, for a more detailed discussion of local roadways necessary for the proposed Stadium project.

**University of Minnesota On-Campus Football Stadium
Comments from St. Anthony Park Community Council – November 23, 2005**

Please direct any follow-up questions to Nina Axelson, Community Organizer at nina@sapcc.org
or 651-649-5992 or 890 Cromwell Avenue, St. Paul, MN 55114

1. Transportation and Parking

Granary Road

SAPCC urges the University of Minnesota to remove the physical representation and textual references to Granary Drive as proposed, in the UofM Campus Stadium EIS, to extend into St. Paul at Robbins and T.H. 280 due to the ongoing objections of St. Anthony Park and conflicts with the District 12 Plan.

N-2

Additionally, it is not clear how different the traffic results would be if Granary Road were not connected east of Highway 280. See 5th full paragraph page 32. See also last paragraph page 40. See 5th full paragraph page 114.

Traffic Flow

Traffic analysis assumes moderated flow for arrivals over several hours and high traffic flow for departures. This is based in part on the fact that many of the attendees that are in a support role need to be at the stadium long before a football fan. This overlooks the departure aspect of those same support personnel. See second full paragraph on page 22.

N-3

St. Paul U.M. Campus and State Fairgrounds. Local intersections were selected, but there were noticeable exceptions: (1) Como & Cleveland (Raymond); (2) Raymond & Energy Park Drive 3) T.H. 280 and Energy Park Drive 4) T.H. 280 and Como Avenue 5) T.H. 280 and Larpenteur. These intersections would be heavily used for traffic to and from the parking locations near the St. Paul U.M. Campus and the State Fairgrounds with or without attempts to transport fans via busses from centralized parking lots. See table 3 page 24.

N-4

Several intersections will have very poor Level of Service (LOS) ratings: # 51, 54, 57. See table 3 page 24, table 4 page 28, table 5 page 30 (weekday evening event). And this LOS applies to arrivals as well as departures. See first full paragraph page 25.

N-5

Weekday evening event parking assumptions on the St. Paul U.M. Campus fails to incorporate evening classes. See second full paragraph page 31.

N-6

SCOOT system for managing traffic volumes and traffic flow within Minneapolis. No such system is mentioned for traffic management in St. Paul. Additionally, there are concerns as to whether or not the SCOOT system will be ready for implementation soon enough. See page 23. See 5th full paragraph page 114.

N-7

Vehicle occupancy for football games is assumed to be 2.7 based on nationwide football stadium traffic analysis from around the country. See footnote 1 page 21. This is contrary to the 2.5 vehicle occupancy for basketball games. See bullet 2 page 14. We are curious if there has been a study in Minnesota for football traffic at the Metrodome since 1982?

N-8

N-2 Please refer to Section 7.2.4, for a more detailed discussion of local roadways necessary for the proposed Stadium project.

N-3 It is assumed that some of the support personnel will be departing the Stadium area during the peak hour. While this number is small (currently estimated under 500 vehicles), it is reflected in the assumed higher rate of departure in the traffic analysis.

The moderated arrival flow also reflects the fact that general event attendees tend to arrive over a long period of time, both as a matter of individual convenience as well as participate in pre-game activities. Departure traffic tends to concentrate at the end of the event. One traffic management strategy that will be used is the provision of post-game activities to help level the rate of departure.

N-4 See Section 7.2.4, for a discussion of traffic diversion to local streets due to congestion.

N-5 Anticipated poor traffic operations will be addressed through traffic management strategies discussed in EIS Section 3.1.4.

N-6 See Section 7.2.1 for discussion of weekday event scheduling.

N-7 See Section 7.2.4.

N-8 The University is not aware of any recent vehicle occupancy studies conducted at the Metrodome.

The traffic study assumes a stadium capacity of 50,000. There is not a contingency analysis for when the Stadium capacity is enlarged to 80,000. Football games (50,000) will consume “substantial number of spaces at the St. Paul Campus/State Fairgrounds.” See page 38.

N-9

Residential parking. Analysis assumes that non-designated parking areas (such as residential) will not be used. This may provide a margin of safety in ensuring that enough designated parking will be available, but it is not consistent to then assume that just because enough designated parking is available, that there will be no impacts in the residential streets. Analysis assumes that local cities will enforce neighborhood parking policies. This places an administrative and enforcement burden on the neighborhoods, not to mention the inconvenience of permit parking for residents. Although analysis recommends temporary barricades for local streets not intended to be used by event traffic, this may not be the appropriate solution to the neighbors. See 4th bullet page 36 and last paragraph page 33.

We anticipate parking in residential areas to become an issue in two specific areas. North St. Anthony will see increased parking from folks looking to ride the free shuttle from the St. Paul Campus. This area already has parking restrictions to deal with the number of students and faculty coming to campus, but additional restrictions may become a burden for residents. Additionally, some escalated restrictions could negatively impact the shopping area in North St. Anthony, which already struggles with a lack of parking. Although the University events would be infrequent, the impact of seven Saturday events could be devastating to this shopping district if not accounted for in planning.

N-10

Secondly, the shopping and residential district in South St. Anthony could be greatly burdened by an onslaught of parkers looking to ride the LRT. Although our neighborhood greatly anticipates the benefits of LRT, we would regret seeing a repeat of the burden placed on residents of South Minneapolis from the Hiawatha Line. Even with some areas seeing an increase in parking restrictions, there is still an onslaught of visiting cars accompanying every home game for the Twins and Vikings. Again, we urge you to work with our neighborhood to create a plan to prepare for this situation.

2. Sound.

Generally, the stadium is far enough away from our immediate area minimize affects by either football games or concert events. Generally, noise has a 6db decrease per doubling of distance. (See last paragraph page 63.) Most noise levels are measured at 50 feet. The distance from the stadium to our neighborhoods results in a significant decrease in noise. However we are concerned that only three noise sampling sites were chosen in St. Paul. See Figure 9 page 47.

N-11

Traffic sound will have an adverse effect at certain intersections. Although, the noise level on an event weekend will be slightly less than peak p.m. weekday traffic, it will be greater than on a non-event weekend. See table 14, page 54. See 4th and 6th full paragraphs page 56. See 1st and 2nd full paragraphs page 57.

N-12

No noise mitigation due to traffic is planned. (Last paragraph page 57.)

N-13

- N-9** The University is proposing to build a Stadium with a seating capacity of 50,000 people. While the stadium will be designed so as to not preclude an expansion there are no plans to expand the facility in the foreseeable future.
- N-10** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- If a Central Corridor LRT line is constructed, MetroTransit will need to address numerous and varied community impacts throughout the corridor. The University will work with MetroTransit and the local communities to minimize the impact of Stadium users riding LRT.
- N-11** The three noise modeling sites selected are representative of all residential receptors located along Snelling Avenue (R13), Larpenteur Avenue (R12) and Cleveland Avenue (R11). All residential uses along these street segments are expected to experience similar noise levels as traffic volumes are fairly consistent along these segments and residential uses are fairly similar in terms of their distance to the street.
- N-12** The observation that traffic sound will be greater during an event weekend day will be greater than on a non-event weekend day is correct.
- N-13** Given that increased vehicle traffic noise will occur only during events and not on a daily basis, no mitigation is planned.

3. Air Quality.

Traffic will adversely affect local air quality. Even with the increase in traffic volumes and congestion, concentrations of CO will be within MN State one-hour and eight-hour limits. Last paragraph page 70.

N-14

Due to the limited time to analyze the EIS and create comments, we additionally worked with neighboring communities, and would like to support Southeast Como Improvement Association in their concerns for air quality, particularly in regards to attainment status and ozone.

N-15

4. Surface Water Quality.

St. Paul was not included in this aspect of the study. We would like to be added to the final document in light of potential impacts to the Bridal Veil Watershed which is in our neighborhood. See Figure 10 page 74. See paragraph 3.5.1 page 72.

N-16

The affected area is nearly 100% urbanized and has been for 100 years. The impervious surface ratio before and after construction is expected to be approximately the same. See paragraph 3.5.2 page 76. With this said, we urge the University to adhere to its commitment to an environmentally progressive project. The University has a great opportunity to increase the level of groundwater infiltration and positively impact the watershed function in both cities.

N-17

5. Social and Community Environment.

The current draft fails to include St. Paul in the affected area. See Figure 13, page 95. We would like to see impacts to this neighborhood measured in the final draft.

N-18

Tailgating. This issue parallels the parking issue. It is expected that tailgating will be encouraged/condoned in designated parking areas. See last paragraph page 96. We would like to work with the University to develop a more detailed approach to mitigating this issue in the neighborhood, and would like the University to account for activity outside designated areas in the final draft.

N-19

6. Cumulative Effects.

Again, the current draft fails to include St. Paul in the cumulative effects section. We would like to see impacts to this neighborhood measured in the final draft. See 4th full paragraph page 108. See Figure 14 page 109.

N-20

- N-14** Air quality analysis results indicate that the project will not result in significant air quality impacts as one- and eight-hour carbon monoxide levels would remain under state limits.
- Detailed analysis regarding vehicle-generated air quality concerns is presented in Section 3.3.1 of the EIS.
- N-15** See response to Comment L-14.
- N-16** While both the project area and the St. Anthony Park neighborhood lie within the Bridal Veil Watershed, water within this watershed flows away from St. Anthony Park toward the project site and ultimately toward the Mississippi River. The stormwater analysis conducted for the project examined drainage within and away from the project site, which did not include the “upstream” area in St. Paul. As the project lies downstream up St. Anthony Park, no water quality or water quantity impacts to surface waters are anticipated in St. Anthony Park.
- N-17** As noted on in Section 3.5 of the FEIS the project will strive to incorporate a variety of innovative stormwater management strategies that are appropriate to the urban setting and the physical constraints of the site. Section 3.6 discusses the constraints surrounding the use of true infiltration practices in areas with known soil and groundwater contamination.
- N-18** As noted in Section III.18 of the Final Scoping Decision Document, the area of potential effect that was scoped for assessing social, community, and economic impacts included the East Bank Campus and immediately adjacent neighborhoods. These neighborhoods are further defined in Figure 13 of the Draft EIS. These neighborhoods were identified because of their proximity to the proposed Stadium. It was concluded that there was no potential for significant adverse effects associated with the Stadium Project outside these defined areas.
- N-19** See Section 7.2.7.
- N-20** The projects to be included in the cumulative effects assessment were identified in Section III.15 of the Final Scoping Decision Document. The project list was later refined as detailed in Section 3.11.2 of the Draft EIS. No reasonably foreseeable projects with the potential to effect or be affected by the Stadium Project were identified in St. Paul.



PPERRIA

Prospect Park and East River Road Improvement Association, Inc.

University of Minnesota On-Campus Football Stadium

Draft Environmental Impact Statement

"This plan will require a level of pre-planning effort similar to a SuperBowl or Final Four event..."

University of Minnesota On-Campus Football Stadium, Draft EIS p.31

"The development of the stadium project along with the other projects considered..will result in an overall intensification of land uses."

University of Minnesota On-Campus Football Stadium, Draft EIS p.114

"Noise levels in adjacent residential neighborhoods, during concert events...will exceed state noise standards for daytime and nighttime conditions."

University of Minnesota On-Campus Football Stadium, Draft EIS p.121

"Cumulative effects to resources resulting from the proposed Stadium Project and the contribution of incremental effects from other past, present, and reasonably foreseeable future actions are not anticipated to be substantial."

University of Minnesota On-Campus Football Stadium, Draft EIS p.115

Huh?

The Neighbors

Founded in 1901 - The Oldest Neighborhood Association in Minneapolis



PPERRIA

Prospect Park and East River Road Improvement Association, Inc.

A Response

Prepared by:

*Steve Banks, SAAG Representative,
Vice President, Prospect Park East River Road
Improvement Association (PPERRIA)*

Approved by:

*PPERRIA Executive Committee
Joseph Ring, President
Prospect Park East River Road Improvement
Association*



PPERIA

Prospect Park and East River Road Improvement Association, Inc.

To Whom It May Concern:

This letter is in response to the University of Minnesota On-Campus Football Stadium *Draft Environmental Impact Statement*. Its purpose is to respond to the draft EIS and to propose mitigation strategies that will diminish the negative impacts of the stadium on the Prospect Park East River Road neighborhood and other host communities:

We find the circulated draft of the University of Minnesota On-Campus Football Stadium *Draft Environmental Impact Statement* weak. It presents an unclear and internally conflicted description of the project, its uses, and its impacts on its host communities. The basic questions of who will use the new Stadium how often and for what are either not addressed, or are addressed through platitudinous policy statements such as "University campuses and facilities exist to meet the needs of the institution and further its teaching, research and outreach mission," immediately qualified by "the President can allow external users access to University facilities." (p. 10). As a document from which the University and host communities are to arrive at an understanding of likely environmental impacts and their mitigation strategies, it fails.

However, even given a strong document of this type, planning for mitigation strategies would be a daunting task. No one can possibly foresee all the possible environmental impacts of the stadium on our neighborhood over the 20 years the draft EIS purports to examine. Not simply how much traffic and how much noise, but how will University Avenue - and the rest of the Prospect Park East River Road neighborhood - be impacted? What kinds of development will be encouraged, and what kind discouraged? What will be the impacts on existing businesses? Will people be more or less inclined to live in our neighborhood, and what will be the result in terms of property values and property taxes? These and many other questions like them are unanswerable today.

O-1

O-1 See Section 7.2.1.

And because many of these questions represent complex, ever-evolving dynamics, we propose that rather than create and attempt to address a static set of mitigation measures, the University establish an ongoing **Stadium Area Advisory Group**, similar in constituency to the current **SAAG** and have that group provide oversight of stadium operations. Indeed, the Draft EIS proposes such a group for the first year of operations. It is our opinion that the group should continue to exist as a part of the ongoing operation of the stadium. Obviously specific questions regarding roles and responsibilities would need to be proposed and negotiated.

O-2

In terms of providing funding for mitigation measures, these funds should be generated as a percentage of stadium revenues. The **SAAG** would then receive grant proposals to address specific mitigation issues and fund those proposals with those revenues. Any group impacted by Stadium activities, including the surrounding neighborhoods, the surrounding business community, and the University itself would be welcome to apply for funding. The advantage of funding the mitigation strategies through stadium revenues, is that as Stadium activity and revenue increase, so likely will the need for mitigation measures.

O-3

A list of potential moderate-cost, high value measures for just the Prospect Park East River Road neighborhood might include:

- o Parking stickers & signage
- o Post-event trash collection
- o Neighborhood planning initiatives
- o Part-time neighborhood stadium administrator/coordinator
- o Stadium complaint hotline
- o University Avenue strategic planning and development guidelines
- o Improvements to University Avenue streetscape
- o Neighborhood appreciation activities
 - Reduced ticket prices at designated events for neighborhood residents
- o Historic District designation for Prospect Park neighborhood
- o Collaboration between University School of Education and Pratt School to provide student teachers and other support

O-2 See Section 7.2.3.

O-3 See Section 7.2.2.

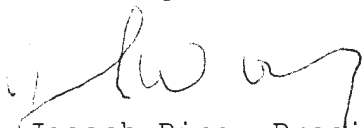
- o University-sponsored homeownership program for the Motley neighborhood
- o Aggressive stadium jobs program targeting Glendale residents
 - Could include both construction jobs & operations jobs
- o Collaboration initiatives to encourage development on University Avenue

Undoubtedly, other neighborhoods and affected groups could create similar lists very easily.

This strategy also allows the University greater freedom to drive revenue from the Stadium opportunistically. If the host communities benefit from stadium activities, there is likely to be less opposition to those activities.

Many, if not most, residents of the Prospect Park East River Road neighborhood support the idea of an on-campus stadium. However, there is broad concern that the Stadium will be built and operated at the expense of the neighborhood; that the problems of noise, traffic, parking, trash, errant behaviors, etc. will become our problem and that we will be left without adequate recourse. Unlike most people involved with the planning process for the new Stadium, the residents of this neighborhood will live with the results of our work as long as they live where they live. It is incumbent on the University of Minnesota as neighbor and good citizen to ensure that this neighborhood, and others, are well-protected from the impacts of this potentially very positive addition to campus life.

Best regards,



Joseph Ring, President
Prospect Park and East River Road improvement Association



MARCY HOLMES

HISTORIC NEIGHBORHOOD

MHNA
415 4th Avenue S.E.
Suite 209
Minneapolis, MN 55414
mhna@pro-ns.net
www.marcy-holmes.org
612-623-7633

November 20, 2005

Brian Swanson
University of Mn
355 Morrill Hall
100 Church St SE
Mpls, MN 55455

Dear Mr. Swanson,

Chris Wilson and I have been appointed by the MHNA Board of Directors to send you our organization's official comments. They are generally summarized below:

NO CONCERTS. This was always supposed to be a (6 -7) Gophers football stadium only with some U events like commencements. Never signed on for a concert venue.

TRAFFIC/PARKING in neighborhoods is not adequately addressed.

MITIGATION FUND is inadequate.

AIR QUALITY ISSUES not adequately addressed.

NEIGHBORHOOD IMPACTS are generally dismissed and they are hugely negative.

That said, here are our specific likes and dislikes:

We appreciate our being included in this process. In the future, we would like neighborhood reps to meet with University reps at least twice every season – 30 days prior so we can know what to expect and disseminate that info and 30 days after so we can review the season and recommend changes if needed.

We like the idea of the telephone hotline that takes public calls on problems associated with the stadium operations and construction.

Wherever possible, hire people from local neighborhoods.

TRAFFIC

How likely is it that the city's SCOOT system will be online by the time the stadium opens?

P-1

In any event, we would like police officers directing traffic at the intersections most likely to experience congestion before and after games. In our neighborhood, this would include University Ave and 35W before games and 4th Street at 15th Ave and 35 W after games. Also 8th St SE at East Hennepin and Second Street SE at Central.

P-2

Traffic at the E and F levels is dangerous. A traffic patrol officer at those intersections that can bypass the signals will not only speed along traffic but keep it out of neighborhood streets that may be seen as shortcuts.

P-3

Cars idling in congested traffic increase pollution.

"Local traffic only" signs on sawhorses posted at intersections to keep game day traffic out of neighborhoods on game days.

P-4

No construction truck traffic through neighborhood. Make sure trucks use 280, 4th or University where permitted. Suggest you send a letter to all contractors with a map of routes for trucks to use. Step up enforcement with fines during construction period.

P-5

PARKING

The off site (State Fair) parking and shuttle do not adequately address people who will be looking for free and closer parking spots in the neighborhood. The price/ convenience/ ambience of parking and shuttle bus must look **more** attractive to fans than parking in the neighborhood – price it for free or very low. Add incentives – amenities for tail gating there, discount coupons for before or after game restaurants in the area. Perhaps there could be a special Dinkytown/Stadium Village/ East Hennepin shuttle bus that takes fans to eat/drink in restaurants before/ after the games to thin out the crowds and departure/arrival times. Restaurant shuttle buses could also pick up people at light rail stations downtown.

P-6

Resident Parking Game Day only system set up in all of Marcy-Holmes. Signage through out the neighborhood recommended.

P-7

We are worried about the loss of student parking that occurs when stadium construction takes away the Transitway lots. Replacement parking should be in operation **BEFORE** the existing lots are torn down.

P-8

- P-1** See Section 7.2.4.
- P-2** See Section 7.2.4, for a discussion of traffic diversion to local streets due to congestion.
- P-3** See Section 7.2.4, for a discussion of traffic diversion to local streets due to congestion.
See Section 7.2.4 for a discussion of traffic diversion to local streets due to congestion.
- P-4** The University will work with the City of Minneapolis and the SAAG to develop appropriate strategies to address local neighborhood traffic and parking concerns. See Sections 7.2.4 and 7.2.5.
- P-5** The text in Section 3.10.1 has been modified to address this comment.
- P-6** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- P-7** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- P-8** The University will maintain, as much as possible, the same level of student parking that is currently available in the Transitway lots throughout and after Stadium construction. The construction activities will be staged in such a manner to maximize on and near-site parking availability.

Step up parking monitoring in the neighborhood re: parking on lawns. No toleration for yard parking. . Strict enforcement by police (not Inspections dept) including ticketing/towing for parking in yards

| P-9

TAILGATING

We like the idea of a tailgating plaza at the stadium as well. That way the U would be responsible for clean – up after the games.

Suggest a U crew combs the area after games to pick up trash – not just on U property.

| P-10

What is the policy on alcohol at games? Will there be a family section/ no alcohol served? If alcohol is served, will it be hard liquor or beer? Strong beer or 3/2 beer? If alcohol is served at games, will there be a cut –off period – as in baseball at the Metrodome – no sales after 3rd quarter? If alcohol is served, absolutely no “specials” - encourage responsible behavior and discourage over indulgence.

| P-11

MITIGATION FUND

Can you be more specific about the mitigation that might occur during construction?

| P-12

\$500,000 endowment for neighborhoods – how many neighborhoods does this cover? Is the money available the interest on the endowment - approx 24,000 per yr ?

| P-13

It is not helpful to the neighborhoods if part of the money is reserved/spent on sprucing up U of MN parking lots. Use a different funding source for that. Keep this fund for the neighborhoods.

| P-14

Increase the funding as it would be split between 5 and possible 6 neighborhoods.

| P-15

What is the process for accessing these funds?

| P-16

Increase scope of funding to include general operating for neighborhood groups. The time and effort spent on University issues is costly and other sources of funding are dwindling. 1 % of construction costs has a precedence in other cities.

| P-17

NOISE

“No pile driving until 9:30” pm as indicated in EIS. Construction schedule /noise should follow the city’s rules – 7 am – 5 pm weekdays only.

| P-18

- P-9** The University will work with the City of Minneapolis to enforce existing ordinances related to parking on lawns.
- P-10** See Section 7.2.7.
- P-11** See Section 7.2.7.
- P-12** See Section 7.2.2 and Section 3.10.1.
- P-13** See Section 7.2.2.
- P-14** See Section 7.2.2.
- P-15** See Section 7.2.2.
- P-16** See Section 7.2.2.
- P-17** See Section 7.2.2.
- P-18** See Section 3.10.1.

No concerts permitted. The noise levels that would occur in the neighborhoods are not acceptable. Confine concerts to Northrup or other on-campus sites.

| P-19

BEAUTIFICATION/SIGNAGE

We suggest banners lining the route from 35 W to stadium as a visual reinforcement of the preferred route. We suggest a gateway at 10th & University with landscaping, lighting, welcome signage and a reminder about respectful behavior in the neighborhood. Similar gateways at other neighborhood entry nodes. (such as 4th St and 10th Av SE)

Suggest putting up additional (maybe temporary) trash receptacles on major routes – especially at tailgating plaza, along 4th and University, and at the shuttle bus stops.

POLICE

In case of a team championship or particularly contentious match – what plans are in place to divert crowds from entering the neighborhoods? Additional police patrols – not just traffic cops - needed at all games.

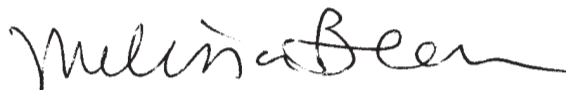
| P-20

Monitor underage drinking with patrols throughout the neighborhood on game days – daytime and nighttime.

| P-21

Thank you again for coming to our meeting last week and answering our questions.

Sincerely,



Melissa Bean
MHNA Executive Director

P-19 See Section 7.2.1.

P-20 See Sections 7.2.3 and 7.2.7.

P-21 See Section 7.2.7.

November 23, 2005

Mr. Brian Swanson
University Project Coordinator
335 Morrill Hall
100 Church Street SE
Minneapolis, MN 55455
bswanson@umn.edu

**RE: Draft Environmental Impact Statement
University of Minnesota On-Campus Football Stadium**

Dear Mr. Swanson:

I have reviewed the traffic and parking portions of the University of Minnesota On-Campus Football Stadium Draft Environmental Impact Statement, dated October 24, 2005. I offer the following comments:

Section 3.1.1:

The traffic analysis was based on “optimized” intersection signal timing, simulating the City’s SCOOT (Split, Cycle, Offset, and Optimizing Technique). The City has TEA 21 funds that would partially fund the SCOOT signal control system in 2008 at all analyzed intersections, but there is uncertainty whether the City has a local match. Would the analysis indicate reduced Level of Service at of each of the 49 East Bank Campus intersections analyzed if the traffic model did not optimize the intersection signal timing? If so, and I assume it would, what would these LOS be for both the 2009 Basketball Event Analysis and the 2009 Build Football Event.? Would the University contribute the local match to the City’s TEA 21 funding as a mitigative measure?

Q-1

Section 3.1.2:

Knowing that many of the analyzed intersections have a LOS of F during the 2009 Weekday Event, would the University schedule such an event? What strategies would be employed?

Q-2

Section 3.1.4:

One strategy in the Traffic Management Plan includes traffic control personnel at heavily congested locations. Would this include all intersections analyzed that operate at a LOS of E or less for a Football Event with the SCOOT system? Would these traffic control personnel manually operate the signal or manually control the intersection? How would the University pay for these traffic control personnel, most of whom would be Minneapolis Police Department employees?

Q-3

Will the Travel Demand Management Plan (TDMP) include goals that can be measured? The traffic analysis is based on an assumption that 15% of football event attendees will arrive via walking, biking or riding public transit. If that goal is not met, additional traffic and parking will result that is currently not planned for. The traffic analysis is based on the assumption that vehicle occupancy is 2.7 persons per car. If that goal is not met, additional traffic and parking will result. Will the TDMP have penalties or consequences if these goals are not met?

Q-4

- Q-1** See Section 7.2.4.
- Q-2** See Section 7.2.1. The University does not foresee holding major stadium events on weekdays.
- Q-3** See Section 7.2.4, for a discussion of traffic diversion to local streets due to congestion.
- Q-4** The University will develop a Travel Demand Management (TDM) Plan to address a number of transportation issues including traffic, parking, transit and pedestrian needs. The assumption of 15% of attendees coming to the game via walking, biking or transit should easily be met given current levels of student attendance, charter bus and regional transit use. The assumed vehicle occupancy of 2.7 persons per car appears reasonable based on other recent football stadium EIS work across the country. The University will promote non-automobile-based transportation to and from events to ensure reasonable levels are attained. If these levels are not met, the overall need for parking would increase at the St. Paul Campus/State Fairgrounds, but it is unlikely that the impacts would change significantly from those already presented.

It is not anticipated that the TDM Plan will contain strict penalties for not reaching these targets. Instead, the University will work with the Event Management Advisory Committee and the Stadium Area Advisory Group to identify conditions that require attention and to define appropriate responses.

Mr. Swanson
November 23, 2005
Page 2

Will the ITS dynamic signage, as mentioned in numerous locations as part of the mitigation plan, be permanently installed as a part of this project? If so, has any thought been given to locations that could be used more generally by the University for events other than football?

Q-5

What measures are proposed to keep neighborhood streets from becoming the free parking lot and tailgating areas for a Football Event? What is the proximity to the stadium where temporary barricades would be used to control traffic and parking on local streets. Areas of Marcy-Holmes are already used for parking for University games at the Metrodome.

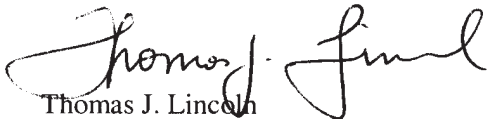
Q-6

Will the Stadium Event Management Advisory Committee include one representative of each of the three adjacent Minneapolis neighborhoods? These three neighborhoods, Marcy-Holmes, Como, and Prospect Park, will be impacted most by events at this stadium.

Q-7

Thank you for the opportunity to review and comment on this document. I generally support the move of U of M Football back to campus provided the public subsidy is reasonable and the event traffic and parking is addressed without burdening the surrounding neighborhoods. If you have any questions concerning this matter, please give me a call (612) 373-6430 or e-mail me at thomas_lincoln@urscorp.com.

Sincerely,



Thomas J. Lincoln
Secretary – Marcy-Holmes Neighborhood Association
510 7th Avenue SE
Minneapolis, MN 55414
H: (612) 379-4301
W: (612) 373-6430
thomas_lincoln@urscorp.com

- Q-5** The University will work with Mn/DOT, Hennepin County and the City of Minneapolis to identify the best locations for permanent signage installation – both static and dynamic messaging as well as portable event signage. This will ensure that targeted audiences receive proper information in a timely manner to help manage access to and from the campus, the Stadium and parking areas. The signage will be available for use for other University and area events.
- Q-6** Please refer to Section 7.2.5 for a more detailed discussion of neighborhood parking concerns.
- Q-7** See Section 7.2.3.

Appendix A

Acronyms

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List of Acronyms

AADT – Annual Average Daily Traffic
ADT – Average Daily Traffic
BMPs – Best Management Practices
BNSF – Burlington Northern Santa Fe
BRT – Bus Rapid Transit
BSL3 – Bio-safety Level 3
CAAA – Clean Air Act Amendments
CD – Compact Disc
CEQ – Council on Environmental Quality
cfs – Cubic Feet per Second
CO – Carbon Monoxide
cps – Cycle Per Second
CWA – Clean Water Act
dB – Decibels
dBA – A Weighted Decibels
DOD – Department of Defense
EASE – Enhanced Acoustic Software for Engineers
EAW – Environmental Assessment Worksheet
EIS – Environmental Impact Statement
EPA – Environmental Protection Agency
ESA – Environmental Site Assessment
FHWA – Federal Highway Administration
HAPs – Hazardous Air Pollutants
Hz -Hertz
ISL – Inverse Square Law
ITS – Intelligent Transportation Systems
kHz – Kilo Hertz
lbs - pounds
LOS – Level of Service
LRT – Light Rail Transit
MEPA – Minnesota Environmental Policy Act
MEQB – Minnesota Environmental Quality Board
MINNOISE – Minnesota Noise Model
Mn/DOT – Minnesota Department of Transportation
MNDNR – Minnesota Department of Natural Resources
MPCA – Minnesota Pollution Control Agency
mph – Miles Per Hour
MSHSL – Minnesota State High School League
MVM – Million Vehicle Miles
MWMO – Mississippi Watershed Management Organization
NAAQS – National Ambient Air Quality Standard
NAC – Noise Area Classification
NCAA – National Collegiate Athletic Association
NEPA – National Environmental Policy Act
NPDES – National Pollutant Discharge Elimination System
NO_x – Nitrogen Oxides
NO₂ – Nitrogen Dioxide
NRHP – National Register of Historic Places

NURP – Nationwide Urban Runoff Program
PA – Public Address
PM – Particulate Matter
ppm – Parts Per Million
RAP – Response Action Plan
RGU – Responsible Governmental Unit
SAAG – Stadium Area Advisory Group
SCOOT – Split Cycle Offset Optimization Technique
SDD – Scoping Decision Document
SEMI – Southeast Minneapolis Industrial Area
spl – Sound Pressure Level
SUVs – Sport Utility Vehicles
SWPPP – Storm Water Pollution Prevention Plan
TDM – Travel Demand Management
TL – Transmission Loss
TP – Total Phosphorous
TH – Trunk Highway
TSS – Total Suspended Solids
U of M – University of Minnesota
USGS – United States Geological Survey
VHT – Vehicle Hours Traveled
VMT – Vehicle Miles Traveled
VOC – Volatile Organic Compounds
WCA – Wetland Conservation Act

Appendix B

Citizen Comments on the Draft EIS

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Citizen Comments and November 10, 2005 Draft EIS Public Hearing Transcript

The following citizens provided comments on the Draft EIS. The comment letters, cards, and e-mails received from these individuals are included on the following pages. In addition, the public hearing transcript recording the oral statements provided by two of the listed individuals is also included in this appendix.

- Wendy Menken
- J. Gisslen Lee
- Sanne Magnan
- Julia Wallace
- Clare Johnson
- Monta Hayner
- Neil E. Simons
- Tom Devine
- Mike Posnick
- David W. Barnhart
- Doug Carlson
- Roger Huss
- Florence Littman
- Joseph Ring

11/21/2005

To: Brian Swanson
bswanson@umn.edu
From: Wendy Menken
Southeast Como
Re: Comments
University of Minnesota Football Stadium
Draft EIS

There are so many basic flaws built into this document that it seems almost foolish to focus on details. This may be a good example of a boiler-plate exercise in meeting the statute requirements but does nothing to truly measure and propose mitigations to potential impacts. It's not that the standardize concepts are bad, but they are basically flawed by the false or missing assumptions upon which they are based.

What is the proposed usage for this stadium? Six to eight football games and a couple of other events? Events with SuperBowl like stature and significant pre-planning needs? Concert events whose projected noise impact "will exceed state noise standards for daytime and nighttime conditions"?

Just how many events, of what type, what scope and what primary audience is the University planning. This is not clear – seemingly deliberately so – and therefore the rest of the document becomes riddled with flaws and unanswered questions.

For example, at the public meeting on November 10, it was stated that most of the planning was based upon the assumption that 85% percent of possible football attendees would be driving into the games from outside the area. This assumes that only 15% would be coming from nearby – effectively stating that there are no projections for growing student attendance. If there is no reason to believe that this scenario would change or that these suburbanites will also be the primary attendees at concerts or other planned events then maybe the rest of the assumptions in the EIS may be useful.

However, since the "President can allow external users access to University facilities", you are effectively admitting that there can and will be other types of activities - activities that will have their own unique audience and therefore unique dynamics. Even the one listed other possibility – concerts – have little to no alternative impact planning in this EIS where one has to assume that the primary target will be a student body audience which could dramatically shift the dynamics from those attending from outside to those from nearby.

But even just following along with the current basic assumptions in the EIS regarding football games, there are still numerous questions and concerns.

Keep in mind that while there seems to be an assumption that this stadium is not really being built for students, they will be a key player, either in the stadium or outside. This is a very unique dynamics that is not addressed at all in the EIS. All the issues that the University is

currently avoiding directly addressing can and will be amplified by stadium events. Students who will not choose to attend a football game will use the game as an excuse to have a football party in the community and watch the game on television. Thus your projected numbers of attendees is skewed because you are thinking only about those actually going to the stadium structure itself, not necessarily those who may be coming into the community.

Because of the audience, the duration of event planning must include extended time frames. Start early and stay late. Police coverage, behavior and alcohol management tactics must start hours before the game and continue hours after the games well into the next day. Before and after parties and tailgating will not necessarily be tied to a parking lot at the University and not necessarily timed in logical relation to the start and ending game times.

The neighborhoods will be absorbing an incredible amount of impacts regardless of the over-simplified “cumulative effects...are not anticipated to be substantial”. If this project does move forward there must be a true, committed effort to mitigate community concerns. The one year stadium committee proposal is weak at best and insulting at worst. There must be a standing stadium committee with community representation, some authority and embedded funding. I believe that the Prospect Park proposal outlining this idea and tying committee funding to revenue is a very solid suggestion.

The communities around the University are already heavily impacted by parking. The number of people who use our neighborhoods as their free parking lots grows steadily each year. Any event at the stadium will clearly add to this impact. Also, given that some of the nearest free parking will be over by Elm Street SE, there will also be the potential a large number of people crossing the main rail lines that divide Southeast Como from the University. This raises the possibility of injury to these stadium users.

I would suggest that the neighborhoods immediately adjacent to the stadium go to a permit only parking plan. That funding from the stadium is used to cover the required cost of the yearly permits for community residents so they won't have to pay for these permits themselves. That working with the City, we pilot a “paid” permit program that allows people to buy a temporary parking permit allowing them to park during the day within the designated community – even if they are not a resident – and that the revenue from these permits be passed onto the neighborhood organizations.

There is one piece that is not even addressed by the EIS yet is integral to the issues of Stadium mitigation. If you research any other University stadium the issues of alcohol and behavior management are at the top of the list of concerns. Universities are pulling alcohol sales, limiting tailgating, increasing law enforcement, all to address issues ranging from behavior in the neighborhoods, small scale damages, fighting to full scale riots. This should be a clearly defined, openly discussed and acknowledged element of any mitigation plan related to a new University stadium.

I would highly recommend that the University have a separate Alcohol and Behavior management and mitigation plan. This plan could include such items as:

- Clearly defined behavior expectations

- Aggressive advertising and marketing of expectations and consequences
- Publicly supporting and increasing the ticketing of offenders (“you will be ticketed, not warned”, zero tolerance)
- Sales management tactics (if alcohol will be sold – which I don’t recommend)
- Limiting sales of alcohol to one or two beers per individual (tickets?)
- Excluding people from future games if in violation
- Limiting tailgating – keep it localized
- Aggressively respond to calls in the communities
- Clearly define goals and criteria and be willing to disallow tailgating or alcohol sales if problems arise
- Add language to the Code of Conduct allowing for University sanctions for behavior related to game day

In addition I would highly recommend that the University have a companion plan to encourage the evolution towards more community oriented, family friendly and non-alcoholic participation in Stadium events. A couple years back a co-worker who is also a University alumni told me that he had decided to come back with his kids during homecoming because he remembered it as a fun time with the parade and the decorations down fraternity row. He said that he would never do that again and asked me if that was all they do is drink. He said the beer kegs, liquor bottles lining the balconies, the lack of any real attempt by the fraternity’s and the lack of any real family friendly activities spoke volumes. That homecoming was obviously only about drinking, partying and excessive alcohol consumption by a few and not about true participation by all.



"Brian Swanson"
<bswanson@umn.edu>

>
11/21/2005 10:10 AM

To: "Tom Johnson" <Thomas.Johnson@gpmlaw.com>, "Scott Ellison"
<ellis004@tc.umn.edu>, "Mike Denny" <DennyM@facm.umn.edu>,
"Ken Larson" <larso359@umn.edu>, "Kelly Bettendorf"
<kbettendorf@sehinc.com>, "Jan Morlock" <jam@tc.umn.edu>,
"Harvey Turner" <turnerh@facm.umn.edu>, "Chris Hiniker"
<chiniker@sehinc.com>, "Brad Kovach" <bkovach@sehinc.com>,
"Beth Bartz" <bbartz@srfconsulting.com>, "Joe Otte"
<jotte@wenck.com>

cc:

Subject: Fw: Draft EIS stadium comments for Brian Swanson

Another comment.

- Brian

----- Original Message -----

From: "stadium email" <stadium@tc.umn.edu>

To: "Brian Swanson" <bswanson@umn.edu>

Sent: Monday, November 21, 2005 8:05 AM

Subject: FW: Draft EIS stadium comments for Brian Swanson

> Here's one through that came through stadium@umn.edu. Ann

>

>

> ----- Forwarded Message

> From: "jenglee2001@yahoo.com" <jenglee2001@yahoo.com>

> Date: Mon, 21 Nov 2005 00:30:40 -0800 (PST)

> To: stadium@umn.edu

> Subject: Draft EIS stadium comments for Brian Swanson

>

> Monday, November 21, 2005

>

>

>

> Dear Mr. Swanson,

>

> Please add these comments to the official public
> record.

>

> I am a1995 alumna of the U of M. I have worked at
> the U and lived in the SE Minneapolis neighborhoods
> surrounding the U for nearly 15 years. I am not in
> favor of spending precious public dollars to build an
> on-campus U of M stadium as long as the Metrodome
> facility can adequately meet our football needs. I
> request that the "no-build" option in the EIS be
> chosen. I am concerned about the traffic, parking,
> noise, pollution and disorderly behavior problems that
> would be inherent to the proposed stadium at its
> current location.

>

> Sincerely,

> J. Gisslen Lee

> Minneapolis, MN 55419

>

>

>

>

>

Yahoo! FareChase: Search multiple travel sites in one click.

Brian Swanson

From: <magnan@tcq.net>
To: <bswanson@umn.edu>
Cc: <Paul.Ostrow@ci.minneapolis.mn.us>; <upres@umn.edu>; <cieslak@umn.edu>;
<secomo@secomo.org>; <nltickner@hotmail.com>
Sent: Wednesday, November 23, 2005 11:04 PM
Subject: Environmental Impact Statement - University of MN Stadium

November 23, 2005

Brian Swanson
University Project Coordinator
bswanson@umn.edu

Dear Mr. Swanson,

As a long time resident of SE Minneapolis and as a graduate of the University of Minnesota, I am writing to express my concern with the Draft Environmental Impact Statement (EIS) for the proposed open air stadium for the University of Minnesota.

Currently, there are traffic, noise and pollution problems in the University areas. The report did nothing to assure me that these would not be exacerbated by the addition of a stadium. The fact that the U would even contemplate an event during the State Fair did not indicate that anyone appreciated the impacts on surrounding neighborhoods!

Many of us have worked diligently to retain long term residents and students living peacefully together in the SE neighborhoods. While students are transient, families and long time residents contribute to the stability and livability of inner city neighborhoods. Lately, these relations have been strained with disrespect by students and landlords for long term neighbors. Your report indicates that the University will increase the strain with a stadium that adds more people, traffic, noise, and pollution into an already crowded space.

The University will need to do more to assure this SE land owner that the identified concerns in the EIS are being handled appropriately and mitigation strategies are being fully developed. Otherwise, you will lose the committed residents who make the University area an attractive and safe place for everyone to live, learn and play.

Thank you in advance for your attention to these issues.

Sincerely,

Sanne Magnan, MD, PhD
1022 26th Ave. SE
Minneapolis, MN 55414
magnan@tcq.net
612-331-2387 (H)
651-662-2852 (W)

11/28/2005

Brian Swanson

From: "stadium email" <stadium@tc.umn.edu>
To: "Brian Swanson" <bswanson@umn.edu>
Sent: Monday, November 28, 2005 9:52 AM
Subject: FW: Draft EIS comments

EIS comments

----- Forwarded Message

From: "julia wallace" <jwallace3@mn.rr.com>
Date: Mon, 28 Nov 2005 00:08:15 -0600
To: <stadium@umn.edu>
Subject: Draft EIS comments

Hello:

I attended the November 10 presentation on the stadium, and was able to discuss most of my questions and concerns with the staff there. I want to submit a few comments for the record.

As a relatively close neighbor, much of my concern is about the traffic and parking impacts. It seems as though those are quite well thought out for football. The traffic flow through the area will be problematic on game days, but the street design seems to be trying to accommodate people who simply want to get through the campus at those times. The one concern I have is that while University Avenue will be the main through street during games, it is also shown as a stop for shuttle buses. I think it would be better to move the game shuttle bus stops off of University.

Like many in the neighboring communities, I am concerned about the suggestion that the stadium may be used for concerts. There is very little information about the size or numbers of those concerts in the draft EIS. It is not clear whether those are somehow necessary to help pay for the stadium. If not, we hope there will be few of them. The implications for traffic and parking and could be serious.

Football patrons will come regularly, mainly in the daytime, and will be willing to make use of remote parking and shuttle buses as part of their football "experience." Many will want to celebrate before and after the game, which will help to spread out the traffic on game days. Concert patrons are quite different. They all want to come and leave at just the same time. And since outdoor concert patrons will not be "regulars" in the way that football fans are, they will be much less likely to use remote parking lots. They are likely to seek out free parking. This is sure to increase the problems of parking on neighborhood streets. Also, there is an assumption that concert fans for this kind of venue may be more unruly and disrespectful than football fans - the stadium probably would not host the kinds of concerts that are held in Northrop Auditorium..

I am a supporter of bringing football back to the campus. However, I didn't realize that might also bring rock concerts and other non-University events to my street. I hope we can get a good deal more information on that element of the plans.

11/28/2005

Thank you,

Julia Wallace
3212 4th St. SE

Julia F. Wallace
jwallace3@mn.rr.com

----- End of Forwarded Message

11/28/2005

November 21, 2005

Clare Johnson
W117 Centennial Hall
614 Delaware St. SE
Minneapolis, MN 55455

To:

Brian Swanson
University of Minnesota
335 Morrill Hall
100 Church St SE
Minneapolis, MN 55455

Comments on the U of M Football Stadium Draft EIS

Mr. Swanson,

The purpose of these comments is to provide a bit of student perspective with regard to the Environmental Impact Statement (EIS) for the proposed Gopher Football Stadium. As a student of the University of Minnesota, I feel as though too little of the EIS is directed toward the impact on the students at the University. Clearly, issues exist that affect the students, and due to the recorded increase of students living on campus, one would assume these issues would be more openly addressed.

At the public meeting on the 10th of November, the components of the EIS discussed were directed toward the audience of local home/ business owners and the impact of the stadium relative to their concerns. As a student on campus, my views are somewhat different than other meeting attendees, however, some of their concerns about noise level, traffic, etc. equate with concerns I have as a student and resident of the campus. Other concerns I hold that deviate from those of the neighboring residents are the topics of student transportation availability and the affects of the stadium's financial needs and success on University tuition. These issues affect not only the students, but all who plan on taking advantage of the new stadium's proposed features.

I am aware that many of the neighboring residents have addressed the issues of traffic and noise control which affect students and permanent residents similarly, therefore I would like to focus on transportation of students and the impact of the stadium's cost on tuition. Neither of the latter issues appears to be adequately addressed in the EIS. In the sections of the EIS "Economic impacts" (3.8.3) and "University Campus Impacts" (3.8.4), only one paragraph is devoted to these topics in either section. The EIS proposes the "worst case scenario," as was stated at the public meeting, regarding game day attendance. This included only information about individuals driving to the games. My concern lies in the disregard for students who may be coming from the West Bank or the St. Paul campus. There is adequate mention of shuttle services from the paid parking areas in either of these locations; however, student transportation is not clarified. If the plan is to have students on these shuttles as well as the parking customers, one must consider the detraction from the appeal of these remote parking areas for individuals who do not wish to be packed on a bus with a large group of students. In contrast, were students

required to fend for themselves to find transportation to and from the stadium events, this poses a possibility for a decline in student attendance.

If fewer students are going to the games, what, then, is the point of bringing Gopher football back to campus?

The topic of the impact on tuition may not be considered necessary in the EIS; however, in relation to the other financial information provided, clarifying where the “non-state” dollars are being drawn from would be very helpful. Explaining the differential cost benefits between the “build” and “no build” options, especially if the Gophers were to be the sole tenants of the Metrodome come 2011, would be useful as well. This information would most likely fall into the section of “Cumulative Effects” 3.11.6 “No-Build Alternative.” Only two sentences are dedicated to this section of the EIS and do not fulfill the expectations of its description.

Although the EIS is not necessarily directed toward a student audience, because they are an essential aspect of this college campus environment, more information regarding the impact on students should be taken into consideration. I appreciate this time given to comment and hope my input offers a helpful alternative perspective on the issue of the EIS.

Best regards,
Clare Johnson
University of Minnesota Student



"Brian Swanson"
<bswanson@umn.edu

>

11/09/2005 10:16 PM

To: "Tom Johnson" <Thomas.Johnson@gpmlaw.com>, "Scott Ellison" <ellis004@tc.umn.edu>, "Mike Denny" <DennyM@facm.umn.edu>, "Ken Larson" <larso359@umn.edu>, "Kelly Bettendorf" <kbettendorf@sehinc.com>, "Jan Morlock" <jam@tc.umn.edu>, "Harvey Turner" <turnerh@facm.umn.edu>, "Chris Hiniker" <chiniker@sehinc.com>, "Brad Kovach" <bkovach@sehinc.com>, "Beth Bartz" <bbartz@srfconsulting.com>, "Joe Otte" <jotte@wenck.com>, "Jessie Strader" <jstrader@UMN.EDU>

cc:

Subject: Fw: U of M stadium

Comment #1

We should talk about how to respond to these comments as I expect that people will expect an acknowledgement of their e-mail.

- Brian

----- Original Message -----

From: Monta Hayner

To: bswanson@umn.edu

Sent: Wednesday, November 09, 2005 7:51 PM

Subject: Re: U of M stadium

I really don't have time to read 160 page proposal. I live in Prospect Park Neighborhood. I have real concerns about a stadium. We already have trouble getting to other parts of SE when there is hockey or basket ball games. One time I was held up 40 minutes by a traffic jam on a friday evening because of an event at Williams Arena. The police officers were stopping traffic so people could cross the street not using the cross walk. They were not requiring the pedestrians to use the cross walks which would have allowed traffic to floww at rush hour (5:30 p. m.). We cannot turn into our neighborhood if we happen to come home when an event is being let out. University is so packed that we cannot make a left turn even at the lights because there is no left turn signals and the people leaving the event are not cutiouse enough to let us through the traffic.The parking for events is currently inadequit and over priced. We frequently have people parking in our neighborhood for such events.

Open stadiums create noise. The foot ball games will be noisy. Yes there are only 8 a year. How will you pay for a stadium with so little use. Probably concerts. This is not acceptable. There are three neighborhoods in the vacinity. These neighborhoods have many people who go to sleep at reasonable hour. We do not want the noise.

Please let me know how the proposal addresses these concerns specifically.

Monta Hayner



"Brian Swanson"
<bswanson@umn.edu

>

11/10/2005 09:57 AM

To: "Tom Johnson" <Thomas.Johnson@gpmlaw.com>, "Scott Ellison" <ellis004@tc.umn.edu>, "Mike Denny" <DennyM@facm.umn.edu>, "Ken Larson" <larso359@umn.edu>, "Kelly Bettendorf" <kbettendorf@sehinc.com>, "Jan Morlock" <jam@tc.umn.edu>, "Harvey Turner" <turnerh@facm.umn.edu>, "Chris Hiniker" <chiniker@sehinc.com>, "Brad Kovach" <bkovach@sehinc.com>, "Beth Bartz" <bbartz@srfconsulting.com>, "Joe Otte" <jotte@wenck.com>, "Jessie Strader" <jstrader@UMN.EDU>

cc:

Subject: Fw: No University Stadium!

Comment #2

----- Original Message -----

From: NESIMONS@aol.com

To: bswanson@umn.edu

Sent: Thursday, November 10, 2005 9:47 AM

Subject: No University Stadium!

Dear Brian Swanson,

In the *May Southeast Angle* (Southeast Minneapolis) article on a proposed on-campus stadium, I noticed the arrogance of some University of Minnesota spokespersons in choosing "will" instead of "would" in describing proposals. Also, the University talks about contributing a large amount of "University money". Where would "University money" come from? Aside from the really unlikely possibility that the University will use its publishing equipment for an illegal operation, it would seem that "University money" is really public money.

Amidst all of the arguments that the University of Minnesota has presented in support of an on-campus stadium, I have never noticed a reason given for tearing down the previous stadium in the early 1990's. I see no reason why the University shouldn't be held accountable for its original decision.

Neal E. Simons
Minneapolis



Comment Card
University of Minnesota Football Stadium
Draft EIS Public Meeting
November 10, 2005



Name:

TOM DEVINE

Address:

1515 UNIVERSITY AVE SE
- UOIA MEMBER

Comments:

LOOKS GOOD! THANK YOU
FOR INCLUDING ALL OF US -
WORK - WATER ISSUES HAVE
BEEN ADDRESSED
KEEP US POSTED ON BALANCE OF MEETINGS,
WHEN IS THE SPECIAL SESSION?



Comment Card
University of Minnesota Football Stadium
Draft EIS Public Meeting
November 10, 2005



Name:

MIKE POSNICK

Address:

2601 PRINCEDON AVE SO
Mpls 55416

Comments:

The plans look good. Very
happy with what I heard about ground water
+ traffic management, parking, + mass transit.
Go Gophers!



Comment Card
University of Minnesota Football Stadium
Draft EIS Public Meeting
 November 10, 2005



Name: David W. Barnhart / Prospect Park Properties

Address: 2800, 2812, 2929 University Ave SE

Mailing → P.O. Box 18536 Minneapolis MN 55414

Comments: My buildings are served by my surface parking lots which already get many students vehicle delay. During stadium events I will be overrun unless I build fences and have gates. I know from experience signs and "education" are not enough. Will the University or the mitigation fund pay for my fences, gates and access control?



Comment Card
University of Minnesota Football Stadium
Draft EIS Public Meeting
 November 10, 2005



Name: Doug Carlson UDIA/AMHNA

Address: 424 5th Ave SE
Mpls 55414

Comments: Great plan all around. Good parking and transit plan. I like the traffic flow. I would like to help in any way possible.



Comment Card
University of Minnesota Football Stadium
Draft EIS Public Meeting
 November 10, 2005

EIS FALL'05 002



Date: Thursday, Nov. 10th, 2005

Name:

Roger Huss (Semi Retired Asst. Director, U of M Parking and Transportation Services)

Address:

512-10th Ave SW
New Brighton, MN 55112 | Phone: 651-633-2932
E-Mail: rphuss@juno.com

Comments:

As the person who has overseen the shuttle bus service from the UofM to the Metrodome for the entire period the service has existed (1982 to 2005), I would encourage making sure the new shuttle service to the proposed stadium on campus uses full size transit coaches and/or articulated buses (not school buses or mini coaches). Also, make sure there are enough transit and/or articulated buses available for your needs from the bus company (or companies) you hire for the shuttle service. (For example, the bus company currently providing the service typically only has 18 transit and 4 articulated buses available)

Transcript of Proceedings - 11/10/1985
University of Minnesota - Football Stadium Draft E.I.S. - Public Meeting

Page 1

1 UNIVERSITY OF MINNESOTA
2 FOOTBALL STADIUM
3 DRAFT E.I.S. PUBLIC MEETING
4 NOVEMBER 10, 2005

ORIGINAL

5
6 MR. BRIAN SWANSON: I'd like to welcome
7 everybody tonight. My name is Brian Swanson, and
8 I've been coordinating the E.I.S. work for the
9 University. I'd like to introduce some folks from
10 the University who are here tonight. Joe Maturi, our
11 athletic director. Phil Aston, assistant athletic
12 director from Athletics. Kathy O'Brien, vice
13 president for University Services. I haven't seen
14 Fitz, but I think he's coming. John Steadland from
15 the Board of Regents office. Lynn Holleran from the
16 President's office. Jan Morlock and Peg Wolfe from
17 University Relations. And I think that, pretty much,
18 rounds out the University folks.

19 From our consultant staff, folks that have been
20 helping us put together the report: Chris Hiniker,
21 Kelly Bettendorf, Kent Peterson from F.D.H., Mike
22 Monahan, and Beth Bartz, and Pat Corkle from S.R.F.,
23 the traffic engineers, and then Joe Otte from the
24 Wenck and Associates, our environmental engineers, so
25 they're here to help answer questions when we get to

1 the question-and-answer part.

2 A quick overview of what we wanted to do
3 tonight. We're going to start with about a 20 to
4 30-minute presentation on the E.I.S. document. It's,
5 as you can probably see it, it's 160 pages. It's a
6 pretty thick document, and we want to just highlight
7 some of the key findings for folks who haven't had a
8 chance to read through it all on their own.

9 I'll kick off the presentation and then turn it
10 over to Chris who will, sort of, go into the details
11 of what was in the document. Following the
12 presentation, we'll have a question-and-answer
13 session. I think we've got a small enough crowd here
14 we can keep Q. and A. pretty informal. If you have a
15 question, just raise your hand. If we get a huge
16 turnout at the last minute, we may have to go to a
17 sign-up sheet, but I think we're probably pretty
18 good.

19 On the Q. and A., the question and answer is
20 not being recorded, so I would say that if you have a
21 comment that you want to officially enter into the
22 record, we have our court reporter here tonight who
23 can take your comments after the meeting or you're
24 welcome to submit comments in writing either on a
25 comment card, you can mail them in, you can E-mail

1 them in. We have addresses for those at the end of
2 the presentation.

3 It's important that you submit your comments to
4 us in writing or speaking so that we have those
5 comments in your own words. It's more meaningful if
6 you say it as opposed to us trying to interpret what
7 you're saying; and, also, a lot of the decisionmakers
8 on the project aren't here tonight, and having those
9 comments in your own words for them to read is an
10 important way for them to be informed about your
11 opinions.

12 To provide structure to the Q. and A., I think
13 what we're going to do at the end is just, sort of,
14 go back to the top of the presentation and work
15 through the issues in the document in the order that
16 we presented them. So, if you can just hold
17 questions till the end, I think that would be the
18 most useful.

19 And then, finally, I think during the
20 presentation what would be helpful for us is if you
21 think about, sort of, the quality analysis in the
22 E.I.S. and how those topics were addressed and then
23 what would be really helpful is, whether tonight or
24 in your comments, you give us suggestions for how you
25 think it would be most meaningful to mitigate the

1 issues that you saw in the presentation. Getting
2 suggestions from you on how to resolve any issues
3 that you think are important would be really
4 helpful.

5 So, with that, I will start into our
6 presentation, cover a couple of the basic slides at
7 the beginning, and then turn it over to Chris.

8 I think some of the beginning stuff is things
9 that people have seen before. The presentation will
10 cover the purpose and need of the project; quick
11 overview of the project, which is, pretty much, old
12 hat for a lot of folks; a little bit about the public
13 involvement we've engaged in tonight; and then I'll
14 turn it over to Chris to talk about the meeting
15 tonight, the project, the process and schedule, and
16 then the details of the draft E.I.S.

17 As you know, the goal of the project is to get
18 college football back on campus, that college
19 football, we really believe, belongs on campus as an
20 integral part of the university's programs, and that
21 an on-campus stadium is really the best for the
22 University in the long term.

23 Overview. We, really, always talk about the
24 project in three components: The site, the district,
25 and the stadium. The site being everything it takes

1 to prepare the site; the district, all the required
2 improvements up to the walls of the stadium; and then
3 the stadium itself being 50,000-seat, open-air
4 stadium, traditional collegiate-looking field.

5 The last time we got a group like this together
6 was when we were at the scoping stage of the
7 environmental assessment worksheet. We've been
8 trying to engage the public as we moved forward into
9 the process through public meetings, talking at the
10 neighborhood groups. We've had our stadium-area
11 advisory group. We've had a technical advisory
12 committee where we've worked with the staff from the
13 City of Minneapolis and the rail authority, Hennepin
14 county, and then tried to get word out about this
15 event, past events, and the project, in general,
16 through newspapers, television, radio, so that the
17 public was just -- folks had a general knowledge of
18 the project.

19 But I think I'll turn it over to Chris and give

20
21 an introduction to the document.

22

23

24

25 (Presentation not recorded.)

1 Official Comments

2

3 Comment No. 1

4 My name is Florence Littman, L-i-t-t-m-a-n, and
5 I live at 76 Clarence Avenue Southeast, and that's in
6 Prospect Park, so I'm in one of the neighborhoods
7 that would be greatly impacted and, also, impacted by
8 anything the University does.

9 The E.I.S. should have included what other
10 activities will be going on in the stadium. We've
11 been told, "Oh, don't worry, it's only eight games a
12 year." Well, that's true, but there's a lot of other
13 stuff going on and, probably, much, much more than
14 ever went on in the old stadium because this is going
15 to be a moneymaker. Are there going to be tractor
16 pulls there? Are there going to be revival meetings?
17 Are there going to be rock concerts? We don't know.
18 So it's very difficult to talk about mitigation
19 because we don't know what's going on there.

20 There are some parking ramps listed on one of
21 the maps. It doesn't appear, certainly doesn't say,
22 that these parking ramps will include any commercial
23 or residential or anything. There's going to be
24 tension between filling these parking ramps,
25 moneymakers, of course, and telling people to leave

1 their cars elsewhere. Parking makes money.

2 There's a proposed road, been proposed for
3 years, the early '90s, for Grainary Parkway. That's
4 supposed to connect to 280 and 35W. We feel that it
5 would certainly help to get some traffic off the
6 university. There isn't any money on the plan, any
7 funding for it. We would like to see that happen,
8 and we know, because we live there, that no matter
9 what happened, there's going to be more air
10 pollution, more traffic, more noise, more trash, more
11 people, more extreme behavior, and challenges of
12 every kind, predictable and unpredictable, that are
13 going to be harmful to our quality of life.

14 Therefore, we have to mitigate these challenges that
15 the neighborhood around the stadium are going to have
16 to face. We have -- the University should join with
17 us to mitigate the effects, and here we're talking
18 about mitigating effects that we don't even know
19 we're going to have and, also, to improve the
20 neighborhood. And a few suggestions, and these are
21 only a few of our written comments, we'll have many
22 more, to help us get Grainary Road. This will help
23 not only stadium traffic but the businesses that are
24 located there.

25 There's been talk about this neighborhood

1 impact and improvement fund, but it has to be linked
2 with stadium revenues or linked in some way. Now, if
3 it's linked with the stadium revenues, that means
4 that the stadium is used more and there's a greater
5 impact, there's more money to work on. If it's used
6 less, there's less money. And the decisions should
7 be made by the groups representing the University,
8 the City, and the neighborhood. The purse strings
9 cannot be held only by the University. There has to
10 be representatives of the University, City, and
11 neighborhood working together. There has to be an
12 ongoing committee, not the committee that's mentioned
13 in there that, possibly, might be in the first year.
14 There has to be an ongoing committee to help decide
15 what's going to go in that stadium. The University
16 cannot be the only one that decides what goes on
17 there because those that live and work in the
18 neighborhood bear the brunt of what goes on there.
19 So we have to be there, in on the decisionmaking as
20 to what will go on there, as to what events can
21 happen.

22 So we feel that the University is willing to
23 work with the neighborhoods in a way that they have
24 never worked before, and that includes, and I'm
25 listing three big things, there are lots of other

1 things, but help get Grainary Road, a neighborhood
2 impact fund that is really related to the impacts,
3 which is why it has to be related to what goes on.
4 It can't be a set amount of money because we don't
5 know. It's shared by many. There should be some
6 percentage of what's taken in at the stadium, and an
7 ongoing committee that really makes the decisions as
8 to what is happening there and asking for the
9 University to join with us and really work on this;
10 and, in that way, we feel we can help. We'll never
11 mitigate everything, but it will certainly make
12 things a lot better.

13

14 Comment No. 2

15 Joseph Ring

16 101 Melbourn Avenue SE

17 Minneapolis, MN 55414

18

- 19 1. Scoot traffic system is not funded so it cannot
20 be used in the E.I.S. for traffic assessments and
21 length-of-service estimates.
- 22 2. Grainary Road project is not funded and should
23 not be used in the E.I.S. except as a remediations
24 item with a plan for full funding.
- 25 3. The transportation section does not provide any

1 present use-trip counter or modeling for traffic.

2 4. The LOS rating for the intersections of
3 University-Cromwell, University-Eustis and
4 Franklin-Cromwell, Franklin-Eustis in the E.I.S. are
5 understated and do not agree with the Minneapolis
6 SEMI Traffic Plan (Page 28) and the University United
7 Transportation Impacts Study completed in January,
8 2005.

9 5. No other development sites on plans are taken
10 into consideration, such as Hubbard Properties, SEMI,
11 or 29th Street station plan, etc., to factor in
12 additional traffic and parking needs and volume.

13 6. The Economic Impacts section does not identify
14 what types of businesses and at what locations will
15 experience a negative impact by the stadium. This
16 section only outlines the beneficial impacts to those
17 types of businesses that will service the stadium
18
19 patrons.

20
21 7. No concerts are acceptable.

22

23

24

25

* * * * *

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