SOUTHWEST
Green Line LRT Extension

Phase I Archaeological Investigation

Southwest Light Rail Transit

Hennepin County, Minnesota

CH2M HILL, Inc.—Project No. 474576

SDEIS Areas: Eden Prairie Segment

Archaeological Potential Area C

September 2014

METROPOLITAN COUNCIL

PHASE I ARCHAEOLOGICAL INVESTIGATION FOR THE PROPOSED SOUTHWEST LRT PROJECT, HENNEPIN COUNTY, MINNESOTA

SDEIS Area: Eden Prairie Segment
Archaeological Potential Area C

CH2M Hill, Inc. Project No. 474576
SHPO File No. 2009-0080
106 Group Project No. 1695

Prepared for:
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Southwest LRT Project Office
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Management Summary

The Metropolitan Council contracted with The 106 Group Ltd. (106 Group) to complete a Phase I archaeological investigation of a 6.8-acre location within the proposed adjustments to the Locally Preferred Alternative (LPA) for the Southwest Light Rail Transit (LRT) Project (Green Line Extension; formerly referred to as the Southwest Transitway Project) Eden Prairie segment reviewed in the Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS). This area of higher archaeological potential (Area C) was one of three areas of archaeological potential identified within Eden Prairie during a Phase 1a archaeological investigation completed in 2013 (Halvorsen and Bring 2014).

In October 2013, archaeologists from the 106 Group performed pedestrian survey and subsurface testing of Area C and no archaeological material was recovered. Therefore, no additional archaeological investigations are recommended for this area.

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1 Introduction

During October of 2013, The 106 Group Ltd. (106 Group) conducted a Phase I archaeological investigation of an area with high archaeological potential (Area C) along the Eden Prairie Segment, a portion of the proposed adjustments to the Locally Preferred Alternative (LPA) for the Southwest Light Rail Transit (LRT) Project reviewed in the Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS). The proposed Southwest LRT project consists of the construction of an approximately 15.8-mile proposed light rail alignment that will operate from downtown Minneapolis through the southwestern suburban cities of St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, passing in close proximity to the city of Edina. This proposed project is receiving funding from the Federal Transit Administration (FTA) and, therefore, must comply with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act of 1966, as amended (Section 106).

The Draft Environmental Impact Statement (Draft EIS) for the project was published in October of 2012, with a public comment period concluding on December 31, 2012. The Minnesota Department of Transportation (MnDOT) Cultural Resources Unit (CRU) is acting on behalf of the FTA for many aspects of the Section 106 process. Therefore, Metropolitan Council has consulted with the MnDOT CRU to determine an appropriate area of potential effect (APE) and scope of cultural resources investigations for the project (see the Southwest LRT Research Design, Attachment A).

This report provides the results for the Phase I archaeological survey of Area C, a 6.8-acre area of higher archaeological potential along the Eden Prairie Segment reviewed in the Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS). Area C is one of three areas of archeological potential that were previously identified during the Phase 1a archaeological investigation completed for the Supplemental Draft EIS areas (Halvorsen and Bring 2014). The area of archaeological potential (Area C) is located in Hennepin County, Minnesota (Attachment B: Figure 1; Table 1).

Table 1. Legal Description of Sections Crossed by the Current Survey Area

County	Township	Range	Sections
Hennepin	116	22	14

1.1 Areas Reviewed, Research Design, and Data Collection

In the *Phase 1a Archaeological Investigation for the Proposed Southwest LRT Project, Hennepin County, Minnesota: SDEIS Areas: Eden Prairie Segment, Hopkins Operations and Maintenance Facility, and St. Louis Park/Minneapolis Segment* (Halvorsen and Bring 2014) report it was recommend that three areas (Areas A, B, and C) within the Eden Prairie segment of the Supplemental Draft EIS APE be investigated further due to their high archaeological potential. Historical plat maps, aerial photographs, and topographic maps were examined during the Phase 1a investigation to identify areas of high archaeological potential. Maps and aerial photographs were also reviewed to identify areas of previous ground disturbing activities that are likely to have destroyed archaeological sites, if they existed, thereby eliminating such areas from further study. No other areas of archaeological potential were identified within the Supplemental Draft EIS APE for archaeological resources.

The one area of high archaeological potential that is the subject of this investigation, Area C, is a 6.8-acre wooded area located along the southern shore of Lake Idlewild between Eden Road to the east and Prairie Center Drive to the west (Attachment B: Figure 1). Historical aerial photographs (1937-1971) indicate that this location was a historically vacant wooded area with very little development other than a small building, which appears to have been constructed sometime between 1971 and 1992. No structures were identified on historical plat maps (Wright 1873, Dahl 1898, Westby 1913), Trygg historical maps (1966), or historical

aerial photographs prior to 1992; therefore, this location was identified as having low potential for post-contact archaeological resources. However, because there has been minimal development in this area, and due to the close proximity to Lake Idlewild, this location has high potential for precontact and contact period archaeological resources; therefore, shovel testing was recommended. A review of historical aerials (1937-1971) indicated that the area surrounding Lake Idlewild to the west and southwest was either previously disturbed by road construction (western edge), or was likely filled in sometime after 1971 (southwestern edge); therefore, those areas were considered to have low potential for intact archaeological resources and are not included in the area of archaeological potential (Halvorsen and Bring 2014).

1.2 Archival Research

Archival research was conducted during the previous Phase 1a archaeological investigation (Halvorsen and Bring 2014). During that investigation, background research was conducted among the State Historic Preservation Office (SHPO) site files for information on previously identified archaeological sites and on cultural resources surveys previously conducted within the APE. In addition, to provide a broader context for the area, previously identified archaeological sites located within one mile (1.6 kilometers [km]) of the APE were also reviewed. Multiple documentary sources were consulted including aerial photographs, historical plat maps, and USGS topographic maps. In addition, early land surveyor notes as represented by the Trygg maps were reviewed to determine potential contact period and post-contact archaeology resources (Trygg 1966). Research indicates that there have been no previous cultural resources surveys within Area C.

Map collections consulted included the Sanborn maps at the Hennepin County Library, the collections of the Minnesota Historical Society, and the Borchert Map Library at the University of Minnesota. In addition, digital maps from the U.S. Geological Survey (USGS) were consulted as well as General Land Office (GLO), and Trygg historical maps (1966).

1.3 Archaeological Field Data Collection

Field data collection adhered to the requirements of the scope of work, and guidelines of the Minnesota Office of the State Archaeologist (OSA), the SHPO, and the MnDOT CRU.

Access to the Eden Prairie segment was secured through a right of entry permit for five days of archaeological survey and subsurface testing on the property. Pedestrian survey was performed over the entire area at 15-meter (m) intervals. The ground surface was observed for archaeological materials and confirmation of archaeological potential. Areas covered in asphalt, with structures, or having a slope of more than 20 degrees were noted and photographed.

Shovel tests were performed every 15 m in areas of moderate to high potential with low ground visibility. Areas of low potential including areas where the ground slope was greater than 20 degrees, wetlands, and disturbed ground, were not shovel tested. Shovel tests were approximately 40 centimeters (cm) wide and reached depths of between 40 and 100 cm below the surface (cmbs).

In areas with the highest archaeological potential (on top of ridges and around the lake), augers were used in the base of each shovel test. The auger was used because the soils were compact and the shovel could not excavate past 60 cmbs. Auger tests were excavated to 100-110 cmbs.

All soils from shovel tests and augering were screened through ¼ inch hardware mesh screen. Soil colors, texture, and depths were recorded for each shovel test. Survey data were recorded through standardized forms and the crew leader's daily log. Recorded information included: test locations and methods of testing; depths of each shovel test, thickness of excavated soil layers; soil textures, inclusions (both natural and cultural); and soil color according to Munsell color charts.

Locations of shovel tests and photographs were documented on a handheld Trimble Geoexplorer XT GPS unit. No archaeological material was identified during the survey.

2 Cultural and Historical Context

2.1 Environmental Setting

The environmental setting has been presented in *Phase 1a Archaeological Investigation for the Proposed Southwest Corridor Transitway Project, Hennepin County, Minnesota* (Harrison and Madson 2010).

2.2 Precontact Context

The precontact and contact period contexts have been presented in *Phase 1a Archaeological Investigation for the Proposed Southwest Corridor Transitway Project, Hennepin County, Minnesota* (Harrison and Madson 2010).

2.3 Historical Context

Historical contexts for the project have been previously created for the Phase 1a archaeological studies, Phase I and II architecture/history investigations, and the previous Phase I archaeological survey (Arnott 2012; Goodson 2010, 2012; Harrison and Madson 2010; Harrison et al. 2012; Roise et al. 2012; Schmidt and Vermeer 2010).

3 Survey Results

Archaeologists from the 106 Group conducted an archaeological pedestrian survey and subsurface testing October 7-12, 2013, in an area of high archaeological potential (Area C) along the Supplemental Draft EIS Eden Prairie Segment. Anne Ketz, M.A., RPA, served as principal investigator and Jason Rufledt, B.A., served as crew leader (see Attachment C for a full list of personnel).

3.1 Area C

3.1.1 Existing Conditions

The 6.8-acre area south of Idlewild Lake was assessed as possessing high potential for archaeological resources during the previous Phase 1a archaeological investigation (Halvorsen and Bring 2014). The area contains two modern buildings with many utilities running underground to both buildings and a series of paved trails. One building appears to be a park maintenance structure. The other building is a large glass-enclosed pavilion. There is a slope bordering the lake on the north side of the property, as well as slopes just to the west of the main building and on the east and west sides of the parcel.

3.1.2 Results

The entire 6.8-acre area (Area C) was pedestrian surveyed and a total of 36 shovel tests were excavated. No archaeological material was recovered and no archaeological features were identified. Shovel tests were difficult to excavate due to the dry compact soils. Due to these compact soils, tests by the lake were excavated with an auger extended from the bottom of shovel tests starting between 40-60 cmbs and reaching to 100-110 cmbs. The average depth for shovel tests was 66 cmbs and consisted of three soil layers. The first soil layer ranged from 10YR 2/2 to a 10 YR 3/3 sandy loam. The second soil layer ranged from 10YR 4/3 to 10YR 5/4 compact sand. The third soil layer ranged from 10YR 5/4 to 10YR 5/6 very compact sand.

Shovel tests in areas along the edge of Area C were full of gravel fill material and the soils were mottled indicating disturbed ground. These shovel tests had two soil layers. The first soil layer ranged from 10YR 2/2 to 10YR 3/3 sandy loam. The second soil layer was a 10YR 5/4 mottled with 10YR 2/2 to 10YR 3/3 sand with gravel fill.

4 Results and Recommendations

Archaeological potential Area C has undergone modern construction of two buildings and walking paths, including many utilities running underground to both buildings, resulting in many portions of the area being disturbed. In the areas where soils are not disturbed, no archaeological material or features were found. Due to the absence of archaeological resources and the presence of disturbed soils confirmed by subsurface testing, no further archaeological investigation is recommended in this area.

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Attachment A
Research Design

Southwest Transitway:
A Research Design for Cultural Resources
12 February 2010, updated 16 March 2010, 2 April 2010

Prepared by
Charlene Roise, Hess, Roise and Company
Christina Harrison, Archaeological Research Services
Mike Justin, Mike Madson, and Joe Trnka, HDR Engineering

INTRODUCTION

The Hennepin County Regional Rail Authority is proposing to construct the Southwest Light Rail Transit (SWLRT) facility, linking the Intermodal Station in downtown Minneapolis with the central business area in suburban Eden Prairie. The line is located within the cities of Minneapolis, St. Louis Park, Hopkins, Minnetonka, and Eden Prairie.

The Federal Transit Administration (FTA) has determined that the proposed project is an undertaking as defined by the National Historic Preservation Act (NHPA) and is subject to the provisions of Section 106 of the NHPA. Section 106 requires that federal agencies take historic properties into account as part of project planning. The Cultural Resources Unit (CRU) of the Minnesota Department of Transportation (MnDOT) is acting on behalf of FTA for many aspects of the Section 106 review process for SWLRT. The FTA has also determined that the SWLRT is subject to the National Environmental Policy Act (NEPA) and a Draft Environmental Impact Statement (DEIS) is being prepared by Hennepin County under the direction of the FTA.

Through the NEPA scoping process, four build alternatives were identified. To streamline subsequent analysis, these alternatives were divided into five segments. The following table, which was included in the draft "Southwest LRT Technical Memorandum No. 9: Environmental Evaluation" (September 9, 2009), outlines the segments that are associated with each of the alternatives:

Alternative	*Segments*
LRT 1A	1, 4, A
LRT 3A	3, 4, A
LRT 3C-1 (Nicollet Mall)	3, 4, C-1 (Nicollet Mall)
LRT 3C-2 (11^{th}/12^{th} Street)	3,4, C-2 (11^{th}-12^{th} Streets), C-2A (Blaisdell Avenue), C-2B (1^{st} Avenue)

Segment 1 extends northeast from a station in Eden Prairie at TH 5 along a former rail corridor owned by the Hennepin County Railroad Authority (HCRRA) to a station at Shady Oak Road, on the border between Minnetonka and Hopkins.

Segment 3 creates a new corridor, running east from a station at Mitchell Road in Eden Prairie and turning northerly to terminate at the Shady Oak Station.

Segment 4 follows an existing rail corridor east-northeasterly from the Shady Oak Station through Hopkins and Saint Louis Park to the West Lake Station in Minneapolis, near that city's western border.

Segment A continues northeast from the West Lake Station, mostly using an existing rail corridor, to the Intermodal Station on the western edge of downtown Minneapolis.

Segment C also begins at the West Lake Station, traveling east along a former rail corridor (now the Midtown Greenway), north along one of several alternative courses under and on city streets, to and through downtown Minneapolis, and ultimately ending at the Intermodal Station or South Fourth Street. (For the purpose of this cultural resources assessment, all of the "C" variations will be considered as a single group.)

It should be noted that the above segments overlap at three points: the Shady Oak Station, the West Lake Station, and the Royalston/Intermodal Stations. When the results of the cultural resource surveys are sorted by segment, there will be redundancy in the findings at these three points. This redundancy is inevitable if the effects of each segment are to be analyzed. When a single alternative is selected, it will be necessary to eliminate duplicated properties to obtain an accurate representation of the effects of that alternative.

PROPOSED METHODOLOGY FOR ARCHAEOLOGICAL RESOURCES SURVEY

Christina Harrison, Archaeological Research Services
Mike Justin and Mike Madsen, HDR Engineering

This work plan outlines a program to identify archaeological properties which meet the criteria of the National Register of Historic Places in the project's area of potential effect (APE), to be used in assessing potential effects to those properties. Three primary tasks comprise the work plan. First, in order to provide a uniform assessment of available data across the five project segments discussed in the DEIS, the project team will prepare a report (by project segment within a broad APE) to include: results of the literature search, an archaeological probability assessment, and a field survey strategy (Task 1). It is expected that a limited amount of field investigation/sampling may occur as part of this task depending upon the weather. Second, an archaeological inventory/evaluation of the selected alternative will be completed, using a refined APE based on proposed construction (Task 2). Finally, a report of the field investigations of the selected alternative and an assessment of effects will be prepared (Task 3).

Task 1 will involve archaeologists from both HDR and ARS. Support will be provided, as needed, by Hess Roise research staff as well as by geomorphologists and other paleoenvironmental experts provided by HDR. Division of responsibilities will partly depend on what survey needs are identified by the background research, but primary responsibility for precontact and contact period archaeology will rest with Christina Harrison (ARS) and Michael Justin (HDR), and for historic archaeology with Michael Madson (HDR). The personnel for Tasks 2 and 3 are pending.

The survey will be conducted in accordance with all federal, state, and local requirements, including the Minnesota Field Archaeology Act and the Minnesota Private Cemeteries Act.

Area of Potential Effect (APE)

The APE for archaeological resources is generally defined as the anticipated limits of construction activities. At this stage in the project development, factors influencing those limits have not yet been fully identified. The APE, starting with a broad area at first, will be refined as the engineering design advances.

For Task 1, the APE for the literature search and probability assessment will be based, as appropriate, on the project limits as defined in the project engineering drawings used to prepare the DEIS. This will include the full width of existing railroad right-of-way corridors as well as the area within 100 feet on either side of the current engineering alignments. The APE near station areas also includes any undeveloped and/or vacant property within 500 feet that could potentially be utilized for construction/development activities. Depending on the station location, these may include open, green spaces (particularly in suburban areas) and paved parking lots (particularly in urban areas).

If the literature search/probability assessment identifies potentially significant historic features or high probability areas immediately adjacent to the above-referenced APE parameters, and if the significance of potential sites in these areas is expected to relate to National Register criteria A, B, and/or C, the APE for the field strategy for the Phase I-II survey may be adjusted to include these locations.

During Task 2, the APE will be reviewed in light of more detailed engineering plans. Throughout the design phase of the project, the adequacy of the APE will be periodically evaluated and expanded or retracted as necessary as project elements are added or modified. The survey report specified in Task 3 will provide a clear delineation of the surveyed APE, including all additions, so that the adequacy of survey efforts can be readily determined when project changes are proposed.

It should be noted that, generally, the APE for archaeological resources is a smaller area located within the APE for history/architecture resources.

Task 1. Report of Archival Review/Site Probability/Field Strategy

This task will uniformly represent the readily available information across the five project segments discussed in the DEIS. In general the report will be a desktop analysis of existing archaeological research data supplemented by a discussion of probability for previously unidentified archaeological properties. Field inspections may be utilized to confirm existing conditions, particularly to inform the discussion on field survey strategies.

The desktop analysis will utilize documents on file at the State Historic Preservation Office (SHPO) and the Office of the State Archaeologist (OSA). Historic maps and aerial photographs, local histories, and other archival information on file at the Minnesota Historical Society, the Borchert Map Library (at the University of Minnesota), and local libraries and historical societies may also be reviewed.

The task will review:

- archaeological survey reports on file at SHPO, OSA and other repositories in order to establish what segments of the project routes have already been inventoried according to current standards;
- known archaeological sites and/or (if applicable) recommendations/confirmations of NRHP eligibility;
- relevant USGS topographic maps and soil surveys as well as any Mn/Model information and other environmental and paleoenvironmental data pertinent to the assessment of pre-contact archaeological site probability, including land use histories;
- Historic maps and aerial photographs to identify localities with historic-period archaeological site potential.

A preliminary field review will be conducted. The survey team will document visible indications of topographic and hydrological features as well as past and current land use with concomitant loss of soil integrity. The information from field observations will be combined with the data gathered during the archival review to propose archaeological site probability along the five segments.

Pre-contact and historic-period contexts will be briefly reviewed, with a focus to inform the discussion of site types and assessment of probability. The probability assessment will be organized by the five project segments (1, 3, 4, A, and C). For each of the five segments the report will include:

- a general description of the APE;
- a discussion of previous surveys and previously identified sites;
- a discussion of historic site types and the associated conditions that may indicate a historic property;
- a discussion of archaeological probability (for pre-contact/contact period and historic-period), and;
- a survey strategy and methods, including specific places targeted for field investigation.

The survey strategy for precontact and contact period evidence will be guided by Native American and early Euro-American settlement and land use patterns identified by previous archaeological investigations in the vicinity including, for example, the 1992-1994 city-wide cultural resource survey of Eden Prairie, the corridor surveys conducted for Trunk Highway 212 and Trunk Highway 12, and a number of smaller scale compliance surveys conducted within the Nine Mile, Minnehaha and Purgatory Creek watersheds.

The results of Task 1 will be summarized in the DEIS.

Task 2. Inventory/Evaluation (Phase I-II) Survey

For the Inventory/Evaluation survey, the APE will be refined to reflect the updated engineering design. That refined APE will be surveyed in a manner consistent with the recommendations presented in the Task 1 report. Field methods outlined in the Minnesota SHPO and MnDOT CRU guidelines will be generally followed; any exception, as well as more detail specific to the existing conditions along each segment, will have been documented in the Task 1 report.

In the case of precontact/contact period Native American evidence, the field sampling will involve standard methods for identification and the preliminary assessment of horizontal and vertical site dimensions, integrity, and National Register potential. In addition, the survey may utilize targeted geomorphological testing and analysis in areas likely to feature deeply buried archaeological evidence.

Artifacts will be collected and analyzed in a manner consistent with contemporary standards. Artifacts from private property will be collected with written permission of the landowner. Historic period artifacts will only be collected if they appear to represent a potentially significant archaeological property.

Archaeological sites determined to have National Register potential will then require more comprehensive Phase II formal testing. As the Phase I review more than likely will have identified a wide range of site types associated with highly varied environmental settings and precontact to historic period contexts, the scope, research questions, field and analytic needs will be more appropriately defined at that stage of the investigation.

Task 3. Analysis and Reporting

A technical report of the Phase I and Phase II investigations, including the methodology, field work results, and recommendations, will be prepared in accordance with the guidelines of MnDOT's CRU, the Secretary of the Interior's Standards for Identification and Evaluation, and other applicable state and federal guidelines. This includes submittal of Geographic Information Systems (GIS) data per the CRU guidelines. All sites documented during the survey will be recorded on new or updated Minnesota Archaeological Site Forms.

Collected artifacts will be processed and analyzed in compliance with the survey guidelines of the SHPO and the Mn/DOT CRU. Artifacts will be curated at an approved facility as stipulated in the consultant's archaeology license.

PROPOSED METHODOLOGY FOR HISTORY/ARCHITECURE RESOURCES SURVEY

Charlene Roise, Hess, Roise and Company

Area of Potential Effect (APE)

Generally, the APE for history/architecture resources extends 300 feet on either side of the centerline of the alignment of each corridor. Around each station, the APE includes property within a quarter-mile radius. This area addresses anticipated project-related infrastructure work and reasonably foreseeable development.

The APE is illustrated in maps of the five project segments. Exceptions to the parameters outlined above include the following:

- The APE for the Intermodal Station (in segments A and C) includes all property within the boundaries adopted for the "Downtown Minneapolis Transit Hub" Environmental Screening Report (October 28, 2009 review draft) prepared for Hennepin County by Kimley-Horn and Associates. The area shown in the report is extended northeast of Washington Avenue to and across the Mississippi River to include the first tier of properties on Nicollet Island, to provide adequate APE coverage for the three-block potential station area and related developments such as rail storage yards. This area addresses infrastructure work associated with the SWLRT project as well as cumulative effects related to the development of the Intermodal station. (See below for discussion about splitting responsibility for survey of this area between the SWLRT project and the Intermodal Station project.)

- The APE for the 4th Street, 8th Street, 12th Street, Harmon Place, Hawthorne Avenue, Lyndale, and Uptown Stations (in segment C) includes the adjacent blocks in all directions from the station. This area is proposed for the stations in the more densely-built urban area, in comparison to the larger quarter-mile radius for other stations in outlying areas.

- The APE for the proposed tunnel area under Blaisdell, Nicollet, or First Avenues, including the 28th Street and Franklin Stations (in segment C), extends from one-half block west of Blaisdell Avenue to one-half block east of First Avenue. If this alternative is selected, the APE may need to be expanded in light of the design and construction methods for the tunnel.

- Along some portions of the corridor, the 300 foot APE may be extended to take into account visual effects. For example, if the 300 foot area comprises open space, and a row of buildings is located beyond, these buildings may be included in the APE.

- In some station areas, there are known areas of project related work and/or anticipated development outside of the quarter-mile radius, and these areas are included in the APE. This includes areas in downtown Hopkins.

The APE may also be adjusted if a field surveyor recommends that the project may affect a property or properties not included in the established APE boundaries.

As project planning proceeds, additional factors will be assessed to determine if there are other effects (direct, visual, auditory, atmospheric, and/or changes in use) which could require an expansion of the above APE. These factors include:

- Noise analysis, including areas where the use of bells and whistles is anticipated.
- Vibration analysis, including vibration related to project construction and operations.
- The specific locations of project elements, including operations/maintenance facilities, park-and-ride facilities, traction power substations, signal bungalows, and other infrastructure.

Survey Approach

Survey Zones

The project cuts through a number of distinct communities, each with a unique history. As a result, these communities, which share similar physical and historical characteristics, can serve as a framework for conducting the survey. The survey will be organized around the following zones (related project segments and stations are listed in parenthesis):

- Eden Prairie (Segments 1 and 3; Highway 5, Highway 62, Mitchell Road, Southwest Station, Eden Prairie Town Center, Golden Triangle, City West Stations)
- Minnetonka (Segments 1 and 3; Rowland, Opus, Shady Oak Stations)
- Hopkins (Segment 4; Shady Oak, Hopkins, Blake Stations)
- Saint Louis Park (Segment 4; Louisiana, Wooddale, Beltline Stations)
- Minneapolis west residential, including parts of Bryn Mawr, Lowry Hill, East Isles, Kenwood, Cedar-Isles-Dean, and West Calhoun neighborhoods (Segments A and C; West Lake, 21st Street, Penn Stations)
- Minneapolis south residential/commercial, including parts of the Stevens Square/Loring Heights, Whittier, Lowry Hill East, East Isles, and Cedar-Isles-Dean neighborhoods and the Midtown Greenway (Segment C; Uptown, Lyndale, 28th Street, Franklin Stations)
- Minneapolis downtown north of I-94 (Segment C; 12th Street, 8th Street, 4th Street, Harmon Place, Hawthorne Avenue Stations)
- Minneapolis industrial (Segments A and C; Van White, Royalston Stations)
- Minneapolis warehouse (Segments A and C; Intermodal Station)

In addition, there are four railroad corridors that traverse these community boundaries. These corridors will be considered as four individual zones. The corridors (by historic names) are:

- Minneapolis and Saint Louis Railway (Chicago and North Western Railway). Part of the main line is in the APE (Segments 1, 4, A and C). A segment of this line between downtown Minneapolis and Merriam Junction has recently been evaluated by the Surface Transportation Board as not eligible to the National Register; however, the SHPO did not concur with this finding. The line will be further evaluated, focusing on the section within the APE.
- Chicago, Milwaukee and Saint Paul Railway (Milwaukee Road), Benton Cutoff. Part of the CM&SP Benton Cutoff is in the APE (Segments 4, A, and C). Except for the Chicago, Milwaukee and Saint Paul Railroad Grade Separation Historic District, which is listed in the National Register, the Benton Cutoff has previously been determined as not eligible to the National Register by the Federal Highway Administration, with concurrence by the SHPO.
- Saint Paul and Pacific Railway (Great Northern Railway). Part of the main line is in the APE (Segment A). This line will be evaluated.
- Minneapolis, Northfield and Southern Railway. Part of the Auto Club-Luce Line Extension of the MN&S is in the APE (Segment 4). This line has been previously evaluated by Mn/DOT CRU, and the Auto Club-Luce Line Extension has been recommended as not eligible to the National Register. This determination has not been submitted to SHPO for concurrence. The Mn/DOT CRU evaluation will be summarized and incorporated into this survey by reference.

All of the above lines, including those which have been evaluated as not eligible, will be inventoried and evaluated to identify any railroad related features in the APE that are potentially significant in their own right. The statewide railroad context developed by Mn/DOT CRU will serve as a basis for evaluation of railroad resources.

The survey of the above thirteen zones will be completed by three consultants. Hess Roise will complete the surveys for the five zones in Minneapolis, Mead & Hunt will complete the surveys for St. Louis Park, Hopkins, Minnetonka, and Eden Prairie, and Summit Envirosolutions will complete the surveys for the four railroad zones. Each consultant will prepare a report for the Phase I-II survey of the zones completed. An overall summary, integrating the survey results from all thirteen zones, will be prepared for the analysis of effects, within the framework of the five project segments.

The survey will include properties built in 1965 and earlier. Although National Register guidelines use a 50-year cut-off for eligibility (except for properties of exceptional importance), adopting a 45-year cut-off for this survey provides 5 years for project planning before the survey becomes outdated.

NOTE ON RESPONSBILITY FOR SURVEYS IN THE INTERMODAL STATION AREA: There is an overlap of the APEs for the SWLRT project and the Intermodal Station project (currently in the planning stage). The SWLRT survey effort will complete survey work for only

a portion of the SWLRT APE in the vicinity of the Intermodal Station, including where SWLRT construction is anticipated. The remainder of this area will be surveyed as part of the planning for the Intermodal Station project. The survey results from the Intermodal Station survey will be included in the consideration of cumulative effects as part of the SWLRT Section 106 review. (See map for the division of survey responsibilities in this portion of the SWLRT APE.)

Phase I Survey (Reconnaissance Survey)

The primary goal of Phase I is to identify properties that appear to have the potential to qualify for the National Register and merit further analysis. This will eliminate from further consideration any properties that have little or no potential to meet National Register criteria. The Phase I survey will also verify that properties already listed or officially determined eligible for listing in the National Register still retain integrity.

Literature Search

The literature search will focus on areas within the APE, with broader contextual information procured as needed. The literature search will begin by collecting existing reports and research for each zone. Maps, atlases, and other information that can provide specific information about property within the APE for archaeology will be a high priority. Additional research will be conducted for specific areas, and occasionally on specific properties, as appropriate. The literature search will produce:

- A working set of research files, including maps and related materials, for each zone. A copy of these files will be provided to the archaeological team.
- For each zone, a brief context (perhaps with subcontexts) will be developed that is approximately two to five pages in length and comprises a brief narrative, an annotated list of relevant property types, and a preliminary period of significance. (This assumes that extensive narrative contexts will not be developed during this phase.) A similar context will also be prepared for each railway, focusing specifically on segments in the APE. These contexts will also be provided to the archaeological team.

Fieldwork

A project-specific inventory form will be developed. Prior to the onset of fieldwork, a draft inventory form will be submitted to the client for review and approval.

The Hennepin County property database provides building construction dates for tax parcels. These dates will be assumed to be generally reliable for properties erected in the last half of the twentieth century, and will therefore be used to eliminate properties built after 1965 from the survey. During fieldwork, however, surveyors will be observant of properties eliminated from the inventory to identify:

- Inaccuracies: Properties not included in the survey that appear to date from 1965 and earlier (in other words, instances where the county date appears to be incorrect);
- Incomplete data: Properties not included in the survey that contain multiple buildings or other features, where the county date may refer to a newer feature—but older features are also present;
- Exceptional properties: Properties dating from 1966 or later that might be of exceptional importance.

Fieldwork will be conducted by zones. The methodology for each zone is as follows:

- Using information from the Hennepin County database, surveyors will be provided with a spreadsheet listing all properties in the zone built in 1965 or earlier. In addition to the address and year built, the spreadsheet will include the property's use and the name of the owner and taxpayer. The survey will include properties listed or officially determined eligible for listing in the National Register (including those in historic districts) to verify that they retain integrity. Map books will be prepared for reference in the field.
- Surveyors will conduct site visits for each property, recording observations from public rights-of-way with field notes and digital photographs. At a minimum, surveyors will record information on noteworthy features and the property's integrity. Using the data categories for functions and uses outlined in the National Register bulletin *How to Complete the National Register Registration Form*, and with reference to the context information for each zone, the surveyor will suggest data categories that seem the most appropriate for evaluating the property's National Register potential. The surveyor will also provide a preliminary recommendation—and a justification for that recommendation—stating that 1) the property does not appear to be eligible for the National Register, or 2) the property should be evaluated in Phase II.
- All field surveyors will meet the Secretary of the Interior's Professional Qualifications Standards.

Deliverables for Phase I survey

- For each zone:
    - Synopsis for each zone, including the context and property type information.
    - Table of surveyed properties including recommendations for intensive level survey, with justification.
    - Inventory form (2 copies) for each property in the APE built in 1965 or earlier. In addition to the data collected in the field, the inventory forms will incorporate information on the property's location (UTM reference, township/range/section) from the county database. At least one color digital photograph of the property will be included on each form. (NOTE: For properties which go to a Phase II evaluation, the same survey form should incorporate the evaluation information.)
    - Map of zone with properties recommended for intensive-level survey identified.

Phase II Survey (Intensive)

The goal of Phase II is to evaluate properties, as recommended in Phase I, to determine which meet the criteria of the National Register of Historic Places. As with Phase I, the work will be organized by zones.

Literature Search

The literature search will focus on individual properties and districts that have potential to meet National Register criteria. To provide a framework for evaluating some properties, it may be necessary to expand the context synopses developed in Phase I to address specific physical areas, eras, and/or property types.

Fieldwork

Additional field work may be needed to evaluate the physical characteristics of individual properties and districts. It might be necessary to obtain permission to enter some properties for this evaluation—if, for example, there is the potential for a significant interior space, or if a parcel is large and contains a number of buildings and these buildings cannot be adequately evaluated from the public right-of-way, aerial photographs, or other means.

Deliverables for Phase II survey

- For each zone:
    - Table of Phase II properties, including recommendations on eligibility.
    - More detailed inventory form, including the narrative evaluation of eligibility, for each property included in this phase.
    - Map of zone, showing properties that appear to qualify for the National Register identified, along with listed and previously determined eligible properties.
- A Phase I-II survey report (for all zones completed by the same consultant) conforming to Mn/DOT CRU Architecture/History Report requirements and other applicable federal and state guidelines.

At the conclusion of all Phase II history/architecture survey work, a consolidated summary/table incorporating the work from all thirteen zones will be prepared for the analysis of effect. This summary will be organized by the five project segments.

Attachment B
Figures

Due to the sensitive nature of the information they contain these maps will not be provided except by request to the Metropolitan Council

Attachment C
Project Personnel

106 GROUP LIST OF PERSONNEL

Project Manager	Jennifer Bring, B.A.
Principal Investigator, Archaeology	Anne Ketz, M.A., RPA
Field Archaeologists	Erika Malo, B.S. Jason Rufledt, B.A.
Graphics and GIS	Nathan Moe, B.A.