

Westwood

ENVIRONMENTAL ASSESSMENT WORKSHEET

610 West

Brooklyn Park, Minnesota

February 4, 2015



Prepared For:



DORAN
COMPANIES

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ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW)

610 West, Brooklyn Park

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ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW)

610 West, Brooklyn Park

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at: <http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title:	<u>610 West, Brooklyn Park</u>	3. RGU:	<u>City of Brooklyn Park</u>
2. Proposer:	<u>Doran Companies</u>	Contact person:	<u>Todd Larson</u>
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4. Reason for EAW Preparation: (check one)

Required:

EIS Scoping Mandatory EAW

Discretionary:

Citizen Petition RGU Discretion Proposer Volunteered

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s): Part 4410.4300 Subp. 19.D.- Residential Development

5. Project Location

County: Hennepin County, Minnesota

City/Township: Brooklyn Park

PLS Location (¼, ¼, Section, Township, Range): T119, R21, S8

Watershed (81 major watershed scale): Mississippi River (Metro) #20

GPS Coordinates: 45.131173,-93.364842 (Project Center)

Tax Parcel Numbers: 08-119-21-14-0052 (Offsite parcel 08-119-21-41-0006 will contain stormwater pond).

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project; **See Exhibit 1.**
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and **See Exhibit 2.**
- Site plans showing all significant project and natural features. Proposed Site Plan (**Exhibit 3**) and Pre-construction site plans (**Exhibits 4-8**).

6. Project Description

- a. *Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).*

The 610 West residential development is proposed on approximately 10.85 acres of primarily agricultural land in Brooklyn Park. The project proposes 520 apartment units within four separate buildings. Planned building amenities include a 20,000 square foot clubhouse with golf simulator, game and fitness room, pool and sauna. The project proposes 216 surface and 505 underground parking stalls.

- b. *Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.*

Doran Companies is proposing construction of a multi-family residential development on approximately 10.85 acres of land. Stormwater ponding for the project will be accomplished on a separate parcel of land immediately to the south as previously identified in the Liberty Oaks Subdivision EAW. The proposed project is located in Section 8 of T119, R21, City of Brooklyn Park, Hennepin County, Minnesota (Exhibits 1 & 2), and is generally located on the southeast quadrant of Oak Grove Parkway and Hampshire Avenue North.

Project development will convert approximately 10.85 acres of agricultural fields, woodlands, and grasslands to streets, sidewalks, surface parking, apartment and clubhouse buildings, swimming pools, landscaped courtyards, and stormwater ponding as shown on the Proposed Site Plan (**Exhibit 3**). Land use within the site will include construction of up to 520 apartment units within four separate four-story buildings. A number of the apartments within each building are proposed with direct-entry at street level. A 20,000 square foot club house building is also proposed between the two southern apartment buildings and with direct access to those buildings. The club house will likely contain amenities such as a game room, golf simulator, pool, hot tub, sauna, media room, fitness center, and club room with small kitchenette. The northern two apartment buildings will contain open-air courtyards. Amenities within the courtyards will likely include community gardens, pools, fire pits, sand volleyball, putting greens, and bocce ball courts.

Private streets will service the development with ingress and egress from Oak Grove Parkway and 96th Lane North; the project will provide 216 surface parking stalls and 505 underground parking stalls. Each of the four apartment buildings will be served by City of Brooklyn Park sanitary sewer and water systems. No on-site sewage systems and no private wells are proposed.

The project is well positioned and within walking distance to Target's northern campus, an LA Fitness, Cub Foods and trail connections to Oak Grove Park. The project is also conveniently located along the 610 corridor, and near a future Bottineau Light Rail Transit line stop.

The project will be constructed in two phases, with the first phase expected to begin in summer 2015. Full build-out is anticipated by 2018; however, construction timing will ultimately depend upon market conditions. It is anticipated that construction will entail moving approximately 70,000 cubic yards of soil. The majority of the 10.85-acre site will be graded for streets and building pads. An additional 1-2 acres will be graded on the parcel to the south for stormwater ponding. Construction dewatering will be conducted on an as-needed and permitted basis to install sanitary sewer, municipal water, and storm sewer. Best Management Practices will be implemented during and after construction to protect water quality and reduce the potential for soil erosion and sedimentation.

Public and private infrastructure improvements will need to be constructed in association with this development. These include, but are not limited to, internal roadways, sidewalks, stormwater systems, electrical and telephone lines, and sanitary sewer and water supply systems.

Connection to the municipal water supply is proposed along 96th Lane North at the two existing watermain stubs. Municipal sanitary sewer service will be achieved through an existing connection at the southeast corner of the project area, and an additional, constructed connection north of Oak Grove Parkway along 96th Lane North. This connection would require boring under Oak Grove Parkway, a jacking pit in the public roadway, and reconstruction of the road after the sanitary sewer pipe and manhole are installed. Approximately 0.8-acres of stormwater ponding is proposed on an offsite 5.7-acre parcel immediately south of the 610 West project area, with stormwater discharging to an existing stormwater pond located south of the LA Fitness facility and eventually draining to the highway right-of-way ditch.

Impacts related to public improvements directly associated with the proposed development project are discussed throughout this document.

c. Project Magnitude

Total Project Acreage	10.85-acre main project area; ~0.8-acre stormwater pond proposed on offsite 5.7-acre parcel to the south.
Linear project length	N/A
Number and type of residential units	520 Attached
Commercial building area (in square feet)	20,000 s.f. – club house
Industrial building area (in square feet)	N/A
Institutional building area (in square feet)	N/A
Other uses – specify (in square feet)	N/A
Structure height(s)	Apartments: Four floors and approximately 45' above grade. Proposed apartments to be situated above a day lighted basement parking garage.

- d. *Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.*

The purpose of the 610 West residential development project is to meet the demand for additional market-rate apartment units within the City of Brooklyn Park, and to meet the revised comprehensive plan guidance for this area (City Resolution #2014-234). The approved resolution designates parcel 08-119-21-14-0052 as medium/high density residential uses (**Appendix A**). Surveys conducted prior to council action on the comprehensive plan amendments indicated the desire for reduced commercial use in the area and the addition of higher density residential uses to support existing retail and commercial. The survey also found that there is a market for new, up-scale apartments in Brooklyn Park. The project will be designed and built by a private entity, Doran Companies.

- e. *Are future stages of this development including development on any other property planned or likely to happen? Yes No.*
If yes, briefly describe future stages, relationship to the present project, timeline, and plans for environmental review.

There are currently no planned future stages of the 610 West residential development project.

- f. *Is the project a subsequent stage of an earlier project? Yes No.*
If yes, briefly describe the past development, timeline, and any past environmental review.

The 610 West residential development project is a subsequent stage of an earlier development project. The Liberty Oaks Subdivision and Park Place Promenade projects were previously reviewed under an EAW process in 2005 (Exhibit 1). A Negative Declaration for the projects was approved by the City of Brooklyn Park on April 18, 2005.

The portion of the project area currently being evaluated by Doran Companies was analyzed in 2005. Under that review, the 610 West project area was planned for approximately 108,000 square feet of commercial/retail with surface parking and stormwater ponding.

Due to market conditions over the past 9 years, the Park Place Promenade retail projects have not developed to the densities previously reviewed and contemplated under the original EAW process. That project was approved for a total of 284 attached housing units, 86 detached housing units, and 425,000 square feet of commercial/retail space. The portion of the project that has been constructed to date (based on Google Earth imagery) is approximately 233 attached housing units, 86 detached housing units, and 217,400 square feet of commercial/retail.

Because the proposed project exceeds 375 attached units, an EAW is required under Minnesota Rules 4410.4300, Sub. 19.

7. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

Existing cover types and percentages were estimated using recent aerial photography as summarized in **Table 7.1** and on **Exhibit 4**. Table 7.1 also includes estimated cover types after development.

Table 7.1. Estimated Before and After Cover Types

Land Cover	Before (acres)	After (acres)
Wetland	0.0	0.0
Deep water/streams	0.0	0.0
Wooded/Forest	0.57	0.0
Brush/Grassland	0.69	0.0
Cropland	9.59	0.0
Lawn/landscaping	0.0	5.05
Impervious Surface	0.0	5.80
Stormwater Pond	0.44	0.0
Other	0.0	0.0
Totals	10.85	10.85

If Before and After totals are not equal, explain why: Totals are equal and estimated from available land cover mapping.

The 610 West project would replace existing land cover with high-density, multi-family housing, associated parking, internal streets and landscaping. Off-site open space to the south will be used to accommodate an infiltration basin for the project. The proposed infiltration basin will be approximately 0.8-acre in size.

8. Permits and Approvals Required

List all known local, state, and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing, and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 8.1. Permits and Approvals Required

Unit of Government	Type of Application	Status
City of Brooklyn Park	EAW Negative Declaration	To be applied for
City of Brooklyn Park	Concept Plan Approval	To be applied for
City of Brooklyn Park	Conditional Use Permit	To be applied for
City of Brooklyn Park	Preliminary Plat Approval	To be applied for
City of Brooklyn Park	Final Plat Approval	To be applied for
City of Brooklyn Park	Grading Permits	To be applied for
City of Brooklyn Park	Building Permits	To be applied for
City of Brooklyn Park	Storm Water Management Plan Approval	To be applied for
City of Brooklyn Park	Municipal Water Connection Permit	To be applied for
City of Brooklyn Park	Sanitary Sewer Connection Permit	To be applied for
Metropolitan Council	Sanitary Sewer Connection Permit	To be applied for

Unit of Government	Type of Application	Status
Mn/DOT	Drainage Approval	To be applied for
Minnesota Department of Health	Water Main Extension Approval	To be applied for
West Mississippi Watershed Management Commission	Letter of No Wetland Determination/Exemption	Received
U.S. Army Corps of Engineers	Letter of No Jurisdictional Wetland	Received
Minnesota DNR Division of Waters	Water Appropriation Permit (if needed)	To be applied for
Minnesota Pollution Control Agency	NPDES/SDS General Permit	To be applied for
Minnesota Pollution Control Agency	Sanitary Sewer Extension Approval	To be applied for
Minnesota SHPO	Historic/Archeological Clearance	Received

Note: The project proposer will apply for and receive applicable permits prior to project construction.

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19

9. Land Use

a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

Existing land use within and adjacent to the site is depicted on **Exhibit 5**. Currently, a majority of the site is used as agricultural land and includes a narrow tree line along the northern property edge. A 345kV electrical transmission line runs from east to west along the southern property boundary.

Adjacent land use consists of park, open space and residential development to the north, commercial development to the east and southwest, Highway 610 and agricultural land to the south, and the Target Corporate Campus and an overflow parking lot to the northwest and west, respectively. The 2030 Comprehensive Plan categorizes land use on the site as Community Commercial; the current use of the property is vacant.

Parks, Trails, Prime and Unique Farmlands

No parks or trails exist within the site, but Oak Grove Park and Rush Creek Regional Trail are located to the north. Four other parks are within one mile of the site and include Noble and Zane Sports Parks, Trinity Gardens Park and Brooklyn Acres Park.

According to the USDA-NRCS Web Soil Survey, approximately half of the site consists of “farmland of statewide importance” and the other is categorized as “not prime farmland”.

Areas within approximately ½ mile of the site also consist of a relatively even mix of “not prime farmland” and “farmland of statewide importance”.

- ii. *Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.*

The city of Brooklyn Park 2030 Comprehensive Plan (October 2011) designates the site for Community Commercial business use, which is typically large retail, office and service uses located on a highway or freeway.

In December 2014, the Brooklyn Park City Council passed a resolution approving an amendment to the 2030 Comprehensive Plan that would create three new land use categories and allow for land use changes on vacant land in the area surrounding Zane Avenue and Oak Grove Parkway (City Resolution #2014-234). This area includes the subject property. The resolution has been submitted to the Metropolitan Council for approval. Details of the resolution are included in **Appendix A**.

As a result of this amendment, the subject property was assigned a new Medium/High Density Residential (MH) land use which allows for seven or more units per acre with no limit on maximum units per acre subject to Multi-Family Design Guidelines, site design, compatibility with surrounding uses and the City Approval process. The parcel to the south that will accommodate the stormwater pond was provided a new Flex Use (F) designation.

The city of Brooklyn Park has established development staging categories to encourage development first in areas of the city that have existing sewer and water available to the site and have reasonable existing access to adequate public roads. The city utilizes four categories, green, yellow, red, and blue, with blue being those properties with the least feasible access to sewer and water, and to adequate public roads. The site is located in a green zone, so the project is in a priority development area for the city because of existing infrastructure.

The site is located within the Highway 610 Corridor Special Issue Area. Special Issue Areas are areas in the city that have undergone land use studies and are called out in the city Comprehensive Plan to create a resource to guide future development in these special areas. During 2006, the city undertook a special land use study of the area around the Highway 610 corridor with the intent to review and modify existing land uses. The resulting vision for the corridor is partially described by the MX and MX-1 land use designation which calls for mandatory master plans, minimum building heights, and quality architecture and aesthetics which serve to set the stage for development in the area (2030 Comprehensive Plan). Based on the Comprehensive Plan, the Highway 610 Corridor approved land use for the site is a commercial business use.

The site is located within the jurisdiction of the West Mississippi River Watershed Management Commission (WM WMC). The Commissions' purpose is to preserve and use natural water storage and retention in the West Mississippi watershed to meet Surface Water Management Act goals. The WM WMC works jointly with the Shingle Creek WMC because many of the communities within the WM WMC are also within the Shingle Creek WMC (3rd Generation Watershed Management Plan). The Shingle Creek and West Mississippi Watershed Management Commissions (SCWM WMC) manage their activities in accordance with the SCWM WMC Third Generation Watershed Management Plan.

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.*

The site is located in the Town Center Zoning District established to create high quality, comprehensively designed commercial and residential neighborhoods. The district establishes architectural and site design standards to contribute to the quality and stability of the community (Brooklyn Park City Code). Different types of development are encouraged in the Town Center District that encourages pedestrian-oriented design in housing, business, transportation, and public spaces. All developments in this district must conform to the 2030 Comprehensive Plan and the 1999 Northern Area Master Plan (as amended and updated). The Town Center District is one of six special districts identified by the City of Brooklyn Park (August 2013 City of Brooklyn Park Zoning Map; **Exhibit 6**). Additional review of development plans are required for locations within the Town Center Special District and are considered on the following basis:

- (1) Conformance to Comprehensive Plan,
- (2) Coordination with development of adjacent parcels, and
- (3) Quality of site and architectural design.

According to FEMA Floodplain mapping (accessed December 2014), the project is located within Flood Panel 2701520001C. Based on these maps, there are no areas of the site within a 100-year floodplain but the north part of the site is located within a 500-year floodplain (**Exhibit 7**).

There are no known wild and scenic rivers, critical areas, designated shorelands, or agricultural preserves within the project area. The site is approximately 2 miles from the Mississippi River.

- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.*

Properties to the north, east and south also fall within the Town Center (TC) Special District. Parcels west of the site are part of the Target Corporate Campus Planned Unit Development, which is comprised of mixed residential and commercial land uses. Areas to the south are zoned as Business Park.

The proposed project is compatible with existing land use and planned land uses in the area as it offers high-density, multi-family housing that is compatible with the office, commercial, and mixed land uses in this area as contemplated by the City's Comprehensive Plan and recent amendments.

The proposed high density residential use for the site is consistent with the current zoning map and allowable uses, with a conditional use permit, within the Town Center Zoning District. With the recent resolution amending the land use for the subject property, the proposed project is consistent with the City's 2030 Comprehensive Plan.

The project will provide a high quality, high density, multi-family housing option within an area of concentrated employment and other complementary uses.

- c. *Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.*

With the recent resolution to amend the 2030 Comprehensive Plan, no incompatibilities are anticipated between the proposed project and the designated land use.

10. Geology, soils and topography/land forms:

- a. *Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.*

Minnesota and U.S. Geological Survey data for the site area indicates that bedrock geology underlying the site consists of St. Lawrence Formation, a light gray to yellowish-gray and pale yellowish-green, dolomitic, feldspathic siltstone with interbedded very fine-grained sandstone and shale (M-194 Bedrock Geology of the Twin Cities Ten-county Metropolitan Area, Minnesota-Mossler, John H. (2013). This formation is 38 to 59 feet (12 to 18 meters) thick and is thinnest in outcrops along the St. Croix River. Bedrock elevations in this area are around 700-750 mean sea level (msl) which is 100 to 200 feet below the ground surface in the project area. The site is not located in a karst region and no karst features such as sinkholes, springs, and stream sinks were identified within one mile of the site based on Karst Feature Inventory Points from the University of Minnesota, Department of Geology and Geophysics.

Prior to project construction, geotechnical soil borings will be evaluated for the site area. Braun Intertec is currently completing soil borings at the project area to inform site design. Soil boring data will be provided to the City as part of the development review process, and can be made available for review, if requested, during the comment period of this EAW. The geotechnical borings will be used to determine whether limitations exist on the site and what, if any, effect the site may have on potential geological features. If identified during site-specific studies, subsequent site designs will incorporate the necessary mitigation measures to address geologic features, as necessary.

- b. *Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.*

The Soil Survey Geographic (SSURGO) digital database for Hennepin County (USDA NRCS, Accessed 2014) indicates that three mapped soil units occur on the site. The mapped units are D20A-Isan sandy loam, 0-2% slopes, D21A-Isan sandy loam, depressional, 0-1% slopes and D25A-Soderville loamy fine sand, terrace, 0-3% slopes (**Exhibit 8**). All three of these mapped soil units are nearly level soils dominated by sandy loams or loamy sand soils. According to the SURRGO Web Soil Survey, interpretations for specific uses are not available and onsite investigation is recommended. Soil boring data will be used to determine if there are site specific soil limitations and what, if any, soil corrections might be needed for the site.

The estimated volume of soils to be moved on the site for both phases is approximately 70,000 cubic yards. Site grading will encompass the entire project area which is approximately 10.85 acres.

Contour mapping from the MnDNR MNTPOPO online mapping tool indicates surface topography in the site area is flat, with elevations ranging from 875 to 876 feet above mean sea level. There are no naturally occurring steep slopes on the site.

Erosion and sedimentation control BMPs related to stormwater runoff are discussed in greater detail within Item 11.b.ii.

NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 10.

11. Water Resources

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
 - i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The 610 West development lies within the Middle Mississippi Watershed, which drains to the Mississippi River. The Minnesota Department of Natural Resources (MN DNR) Public Water Inventory Map (PWI), the 2014 update of the National Wetland Inventory (NWI) Map, and the National Hydrography Dataset (NHD) were reviewed. One NWI-mapped wetland is depicted within the site (Exhibit 7). The MN DNR PWI and NHD dataset mapping did indicate one watercourse and eleven waterbodies within one mile of the site; none of the waterbodies or watercourses are named waters. NWI mapping indicates no wetlands within the project area.

A Wetland Delineation conducted in 2002, and confirmed by the US Army Corps of Engineers, the Minnesota Department of Natural Resources and the West Mississippi Management Commission, determined no wetlands exist on the site. Wetland delineation approval documents are included in **Appendix B**.

On February 2, 2015, Westwood Professional Services, on behalf of the project proposer, contacted representatives from the U.S. Army Corps of Engineers and the West Mississippi Watershed Management Commission to confirm the findings of previous wetland work on the project area. Both agencies responded in writing on February 4, 2015 that they concur with the previous finding of no wetlands on the subject property.

Impaired Waters

According to the 2012 Minnesota impaired waters inventory and the MPCA's impaired waters viewer (IWAV), no impaired watercourses or waterbodies are located within the site. The nearest impaired water is the Mississippi River (07010206-509), located approximately 2 miles north and

east of the project area. The Mississippi River (last inspected 2011) is impaired for Mercury and PCB in fish tissue and fecal coliform.

- ii. *Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.*

Three aquifers provide the majority of public ground water supply in Hennepin County, the Prairie Du Chien-Jordan, Franconia-Ironton-Galesville, and Mt. Simon-Hinckley. Although groundwater needs are not anticipated, the Prairie Du Chien-Jordan Aquifer would likely provide ground water appropriations for the 610 West project, if needed, as it lies below the center of the Twin Cities.

Groundwater elevations within the vicinity of the site are between 840 to 860 feet above sea level based on the Geologic Atlas of Hennepin County, Minnesota (1989) C-4, Plate 5. Topographic mapping indicates that elevations on the site range from approximately 875 to 876 feet above mean sea level. Consequently, the maximum depth to groundwater is estimated at about 36 feet and the minimum depth to groundwater is estimated at 15 feet below grade.

No new water wells are planned for the project. The Minnesota Geological Survey's (MGS) County Well Index (CWI) indicates there are no registered wells within the project Site. Other Unique Well numbers identified nearby, but outside, the site area include: 255192-BP Old Irrigation Well, 255218-Unlabeled Irrigation Well, 568758-MW-3, 636290 and 636291-City of Brooklyn Park.

The site is not located within a Minnesota Department of Health Wellhead Protection Area.

- b. *Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.*

- i. *Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.*

- 1) *If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.*

The types of wastewater produced by the 610 West project will be typical of a high-density residential development. No on-site municipal or industrial wastewater treatment is anticipated, or planned, and no pre-treatment of wastes from this development is proposed.

Sanitary Waste Estimates

Estimated sanitary wastewater generation from the 610 West project is approximately 146,259 gallons/day. Usage is based on the planned 520 units and the Metropolitan Council 2015 Sewer Availability Charge (SAC) Procedure Manual.

The above estimates are based on the following calculations:

- 520 residential units at 274 gallons per unit per day = 142,480 gal/day
- Approximately 8,600 sq. ft. of Game Room/Entertainment Space at 274 gallons per 2,060 sq. ft. per day = 1,144 gal/day
- Approximately 6,000 sq. ft. gym with 4 showers at 274 gallons per 1,030 sq. ft. per day = 1,596 gal/day
- Approximately 2,100 square feet of Pool Facilities at 274 gallons per 900 square feet = 639 gal/day
- 3,500 gross sq. ft. of office space at 274 gallon per 2,400 sq. ft. per day = 400 gal/day

Estimated Total Residential Sanitary Wastewater Generation = 146,259 gal/day or 53.4 MGY.

Sewer System Connection and Capacity

The site is located in the City of Brooklyn Park's Sanitary Sewer District W3, which is served by the Elm Creek Interceptor. According to the City of Brooklyn Park's 2030 Comprehensive Plan, the Elm Creek Interceptor extends west to Maple Grove from the CAB Interceptor at 101st Avenue and Noble Avenue in the north central part of Brooklyn Park. The diameter of this interceptor ranges from 42 inches to 54 inches. The area within Brooklyn Park served by this interceptor is generally the area north of T.H. 610 that is not served by the CAB Interceptor.

Wastewater from the area is served by the Metropolitan Wastewater Treatment Plant. The Metropolitan Wastewater Treatment Plant, which has a current capacity of 251 million gallons per day, is located near the Mississippi River in St. Paul, MN. The plant is an advanced secondary treatment facility with chlorination and dechlorination steps, ultimately discharging to the Mississippi River.

According to the City's 2030 Comprehensive Plan, Part 6-Utilities (October 2011), the Brooklyn Park sanitary sewer system was originally constructed as combined sanitary and stormwater system. However, the sewer system is now used solely for sanitary purposes and thus has excess capacity to handle the anticipated growth of sewage volume to 23.2 billion gallons by the year 2030. The Metropolitan Plant has the capacity to handle the volume and composition of the sanitary waste discharged from the site.

The proposed sanitary services would be connected to the City's sewer system located along 96th Lane North. In discussions with the City of Brooklyn Park, the development is expected to tie into the city's sanitary sewer in two locations in the 8 inch sanitary sewer running along 96th Lane North. The site has one sanitary sewer stub presently serving the site at the southeast corner. In discussion with the City of Brooklyn Park, the city has recommended an additional service to the site from 96th Lane north of the site. Exhibit 3 identifies the proposed connection locations. It should be noted that the northern sanitary sewer connection would require boring under Oak Grove Parkway, a jacking pit in the public roadway, and reconstruction of the road after the sanitary sewer pipe and manhole are installed.

- 2) *If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.*

Wastewater discharge will not be to a subsurface sewage treatment system (SSTS).

- 3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.*

Wastewater discharge is not to surface water. No effects are anticipated to surface or groundwater as treatment will go to the Metropolitan Waste Water Treatment Plant.

- ii. *Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.*

Pre-Construction Site Runoff

Currently, stormwater runoff is from the vacant land on the site and is not treated. Given the project area is currently undeveloped, it is reasonable to assume that a small portion of stormwater leaves the site as runoff. Runoff primarily drains away from the site to the south into the ditch along Highway 610, and leaves the site via overland flow. A stormwater pond exists southeast of the project area and services the development located directly north (LA Fitness, Cub Foods). Some local runoff into this pond from the site is also likely.

Construction Stormwater and Erosion Control BMPs and Permitting

Brooklyn Park, as a large MS4 (Municipal Separate Storm Sewer System) city, is required by federal and state law to obtain and implement a NPDES Stormwater permit administered by the MPCA. MS4s are required to develop and implement a stormwater pollution prevention plan program (SWPPP), and submit an annual report to the MPCA.

To obtain a building permit for the project, the applicant must obtain approval from the City for a Stormwater Management Plan, which among other measures, would require temporary BMPs to treat stormwater runoff prior to discharge to the MS4 infrastructure.

Because the project will involve disturbance of more than one acre of land, application for coverage under the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Permit will be submitted to the MPCA prior to initiating earthwork on the site. This permit is required for discharge of stormwater during construction activity and requires that Best Management Practices (BMPs) be used to control erosion, and that erosion controls be inspected after each rainfall event. Erosion control practices that will be implemented on the site include, but are not limited to:

1. Silt fence and other erosion control features installed prior to initiation of earthwork and maintained until viable turf or ground cover is established on exposed areas.

2. Street-level inlet protection.
3. Periodic street cleaning and installation of a rock construction entrance to reduce tracking of dirt onto public streets.
4. Stabilization of exposed soils, phased with grading, and
5. Use of sod and landscaping to stabilize exposed surface soils after final grading.

Erosion control plans must be reviewed and accepted by the City of Brooklyn Park prior to project construction. Because the above BMPs will be implemented during and after construction, potential adverse effects from construction-related sediment and erosion on water quality will be minimized. Stormwater treatment facilities would also be designed and implemented to meet City, Watershed and MPCA requirements.

Post-Construction Site Runoff

After construction, most of the stormwater runoff will come from rooftops, sidewalks, and parking areas. It is expected that the post-construction runoff volumes will increase compared to current conditions, but that runoff rates and volumes will be controlled by the proposed stormwater treatment system.

The water quality of the stormwater runoff from the site will be improved by rate control and sedimentation facilities. Because the project is creating 1 acre or more of new impervious surface, the MPCA post-construction stormwater management requirement of the NPDES permit will also apply to this project. The project will be treated by a single stormwater retention basin located immediately offsite to the south. The basin will be about 0.8-acre in size and is planned as a dry, infiltrating pond. The pond will be designed to meet the 1" per hour infiltration requirements of the West Mississippi Watershed Management Commission.

Given the stormwater treatment facilities planned for the site, it is anticipated that the proposed project will provide an overall improvement by reducing rates of runoff and treating runoff waters prior to entering the public storm sewer system.

- iii. *Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.*

Connection to a public water supply system

The project would have no impact on sole source aquifers. Water will be supplied to the development via the Brooklyn Park municipal water supply system (Brooklyn Park Water Works).

The City of Brooklyn Park provides drinking water to its residents from a groundwater source: 14 wells ranging from 213 to 617 feet deep draw water from the Quaternary Water Table, Jordan, Quaternary Buried Artesian, Franconia-Ironton-Galesville, and Franconia-Mt. Simon aquifers (2013 City of Brooklyn Park Drinking Water Report http://www.brooklynpark.org/assets/1/7/2013_Annual_Water_Report_City_of_Brooklyn_Park_MN.pdf). The City of

Brooklyn Park obtains water from the Mississippi River for potable consumption under the MN DNR's water appropriations permit (No. 1976-6046). The permit allows a total system pumping capacity of 3,560 million gallons per year (MG/Y). According to DNR Water Appropriation Records as of 2011, the city reported pumping 3,395 MG/Y (average 55.0 million gallons per day).

Based on the assumption that consumption is approximately 110 percent of wastewater generation, estimated water usage from the site (Waste water generation is discussed in detail in Section 11-b-i above) will be approximately 160,885 gallons/day. Consequently, potable water supplies are adequate to meet the needs of the project without modifications to the existing system.

The proposed fire protection and domestic water services would be supplied from an 8-inch existing water main located along 96th Lane North and looped through the site. The site will be connected to the existing watermain in two separate locations as shown on Exhibit 3. Discussions with the City of Brooklyn Park indicate that adequate water supply and pressure is available to meet the needs of the proposed development.

Dewatering

It is unknown at this time whether construction dewatering will be necessary for utility installation. If groundwater is encountered during utility installation, it will be discharged to temporary sediment basins, screened and discharged, or otherwise managed in coordination with City Staff. If construction dewatering and pumping from the proposed development becomes necessary, permits from the MN DNR and the Metropolitan Council will be obtained. If the quantities exceed the 10,000-gallon per day or 1,000,000 gallons per year thresholds, a DNR Water Appropriation Permit will be obtained. However, it is not anticipated that construction dewatering or pumping from the proposed development will be extensive or continue long enough to require a permit from the DNR.

iv. Surface Waters

- a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.*

No water resources are located within the site; therefore, the project will not involve alterations of wetlands. A wetland delineation conducted in 2002, and confirmed by the US Army Corps of Engineers, the Minnesota Department of Natural Resources and the West Mississippi Management Commission, determined no wetlands exist on the site. This finding was re-confirmed in writing by the wetland regulatory agencies on February 4, 2015.

- b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and*

indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

Best Management Practices to avoid or minimize erosion and sedimentation during construction will be described in the project SWPPP, and deployed as needed. No physical effects or alterations to surface waters are anticipated as a consequence of site development given no surface waters are located within the project boundary or within close proximity.

12. Contamination/Hazardous Materials/Wastes

- a. *Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.*

A majority of the project site is agricultural land, which has been the consistent use historically. The parcel immediately to the south of the project area is open space, consisting of an open grassy area that includes a portion of a stormwater pond at its southeast corner. Prior to 2005, this parcel was also used for agricultural purposes.

A Phase I Environmental Site Assessment (ESA) was conducted on the subject property by Wenck Associates, Inc. in December 2014 (**Appendix C**). Based on the findings and conclusions of this Phase I ESA, no Recognized Environmental Conditions (REC's), Controlled Recognized Environmental Conditions (CREC's), or Historic Recognized Environmental Conditions (HREC's) were identified associated with the subject property. The presence of a piezometer in the middle of the subject property was noted as part of this Phase I Report.

The site was also reviewed using the Minnesota Pollution Control Agency's (MPCA) *What's In My Neighborhood* (WIMN) online tool. This tool is used to find information about environmental permits issued by the MPCA, registrations and notifications required by the MPCA, and investigation of potentially contaminated properties undertaken by the MPCA and its partners.

Results of this search found no records associated with the site. Records for areas within approximately ¼ mile of the site consisted of air and industrial or construction stormwater permits, underground storage tank registrations, and listings for small and large quantity hazardous waste generators. None of the records indicated a violation or listed information indicative of environmental contamination. No records were identified through the WIMN tool that would be indicative of the presence of soil or groundwater contamination, dumps, closed landfills, or leaking or abandoned storage tanks on or around the site.

The site was assessed in a Phase I Environmental Site Assessment (ESA) conducted around 2004 for the Liberty Oaks Subdivision property which included approximately 110 additional acres north of

97th Avenue. Some recognized environmental conditions (REC's) were identified around a farmstead in the north part of the Liberty Oaks property. These REC's were associated with underground and above-ground storage tanks (UST's and AST's) and the potential presence of asbestos in the farmstead building materials. This previous Phase I ESA did not identify REC's associated with the part of the property that represents the current 610 West project.

The National Pipeline Mapping System (NPMS) Public Map Viewer was accessed in December 2014 to determine the presence of hazardous liquid or natural gas pipelines on or adjacent to the site. Based on the NPMS mapping, there is one Hazardous Liquid Pipeline named the Sauk Center-Roseville system operated by the Nustar Pipeline Operating Partnership, L.P. which is located approximately 0.60 miles south of the project. The NPMS indicates the commodity type as non-HVL (Highly Volatile Liquid) product. No other gas transmission or hazardous liquid pipelines were identified by the NPMS on or adjacent to the site.

- b. *Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.*

No significant volume of solid waste is anticipated to be generated or stored during construction of the project. Construction activities will generate wastes typical of residential development operations. The contractor will dispose of wastes generated at the site in an approved method by using commercial dumpsters and disposing construction wastes at an MPCA-permitted landfill. The contractor will minimize and mitigate adverse effects from the generation of solid waste from demolition and construction activities by recycling construction waste that can be recycled, when feasible. No storage of significant volumes of solid waste is anticipated with the construction of the project.

Following project construction, solid waste generation will be typical of occupied residential developments of this size and will mostly consist of residential waste materials. Additional amounts of solid waste generation will likely be generated from amenities proposed as part of the project including the club room and office spaces, but these amounts are anticipated to be negligible. The majority of the solid waste generated will include materials such as paper, organics, plastics, and "other wastes" which includes materials such as appliances, furniture and textiles.

According to the Metropolitan Solid Waste Management Policy Plan 2010-2030 (MPCA, 2011), the Minnesota per capita rate for waste generation is 1.06 tons per person per year. The following residential solid waste generation rate estimates were based, in part, on 2010 City of Brooklyn Park census data which indicate that the average number of persons per household is 2.91. The proposed project consists of 520 residential units. To calculate the estimated amount of waste generated for the project, the household occupant number (2.91) was multiplied by the number of units (520) and then multiplied by 1.06 tons per person per year. Using these figures, the proposed development could generate approximately 1,604 tons of solid waste per year.

A source recycle/separation plan for the project will be implemented in accordance with city requirements. Mixed municipal solid waste not recycled would either be incinerated at the Hennepin County Energy Recovery Center or hauled to a sanitary landfill. Participation in the recycling program by future residents of the Project is expected to reduce costs for solid waste trucking and disposal, and generally minimize and mitigate adverse effects from the generation and storage of

solid waste. Storage of significant volumes of solid waste is not anticipated with the operation of the project.

- c. *Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.*

It is not anticipated that construction of the proposed project will require usage or storage of significant amounts hazardous materials. Hazardous materials such as fuels (small quantities stored above ground) and specific construction materials would be on site during construction and stored and handled in conformance with state and federal regulations to prevent accidental spill or release. Builders and contractors are responsible for proper management of hazardous materials utilized during construction. The contractor will minimize and mitigate adverse effects from the use and storage of hazardous materials by developing a spill prevention plan for the project and recycling hazardous materials that can be recycled.

Operation of the project is not anticipated to require the use or storage of significant amounts of hazardous materials aside from typical household cleaners, building maintenance products, and chemicals necessary to maintain on-site swimming pools and hot tubs.

Following construction, the project would likely have emergency generators that would serve as a back-up source of electricity during power failures. The generators would be designed with internal, above-ground fuel tanks.

- d. *Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.*

Outside of the materials described above, the project is not anticipated to generate or require the storage or disposal of hazardous wastes during construction or operation. Consequently, potential environmental effects from hazardous wastes, and measures to avoid, minimize, or mitigate adverse effects from the generation/storage of hazardous waste (including source reduction and recycling) have not been considered.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

- a) *Describe fish and wildlife resources as well as habitats and vegetation on or near the site.*

Westwood used data and imagery available through USGS, the MN DNR, and Google Earth to conduct a desktop analysis of cover types, habitats, and wildlife resources. The site, identified in the City of Brooklyn Park 2030 Comprehensive Plan as part of the Highway 610 Corridor and zoned Town Center District, is currently a combination of undeveloped agricultural land and open space with a portion of a stormwater pond. The site is bounded on the north by Oak Grove Parkway, beyond which is Oak Grove Park and Rush Creek Regional Trail. East of the site is a large

commercial development and to the south is Highway 610. Hampshire Avenue bounds the site along the west side; further west is approximately 10 acres of overflow parking for the Target Corporate Campus.

Natural communities that would have been on the site historically have been significantly altered by nearly 100 years of farming and human development. As a result of these historical land uses, many of the wildlife species that would otherwise occur have declined or been extirpated. The project site does not include habitat types that are unique or rare in this area, and the low vegetative diversity of the habitat generally supports few wildlife species.

Wildlife on the site is likely limited to species that have adapted to disturbed open land and cropland habitats such as meadow voles, pheasant, meadowlark, field sparrow, red and gray fox, and white-tailed deer.

The most significant wildlife and habitat resource near the site is Oak Grove Park and Rush Creek Regional Trail located north of Oak Grove Parkway. Oak Grove Park provides over 80 acres of woodland and wetland habitat, contains portions of several MNDNR Public Waters, and includes an intermittent stream that connects to the Mississippi River approximately 2 miles east of the site. The woodlands likely provide habitat and cover for species commonly found in the upper Midwest such as woodcock, thrushes, blue jays, woodpeckers, chipmunks, gray squirrels, cottontail rabbits, and raccoon. The lakes and stream within the park also provide potential fish habitat.

- b) *Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-NA) and/or correspondence number (ERDB- **20150181**) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.*

Westwood submitted a data request to the Minnesota Natural Heritage Information System (NHIS) on December 12, 2014 for a review of rare features on or near the project site that may not be accounted for in our mapping and database search. The response letter from the DNR, dated January 7, 2015, is provided in **Appendix D**. The NHIS response letter indicates, based on the query, that Blanding's turtles have been reported from the vicinity of the project and may be adversely affected. Recommendations were provided for avoiding and minimizing potential impacts to Blanding's turtles (see attached Blanding's Turtle Fact Sheet).

Westwood reviewed the MNDNR Regionally Significant Ecological Areas (RSEA) for resources on and around the site. There are no RSEA's indicated within the site. The closest RSEA is consistent with a portion of Oak Grove Park north of the project area and extends west, then south over an area approximately ½ mile west of the site.

- c) *Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.*

Project development will convert existing cropland and developed open space into a high-density residential development. The common species that use the site will likely be displaced by the development. Some limited developed open space will remain after project development and could still serve as usable habitat for common species. Similar cropland and developed open space land uses are located adjacent to the site that could be utilized by displaced species.

Based on the NHIS database, there are no rare features on the site and the current habitat is unlikely to support rare species or features.

The Blanding's turtle, a state-listed threatened species, is unlikely to utilize the project area. Preferred nesting habitat for Blanding's turtle are wetland areas with adjacent open areas and sandy soils. While open areas with sandy soils are present on the site, there are no wetlands within the project area and travel to the closest wetlands would require traversing major roadways and impervious surface in all directions. Blanding's turtle are also unlikely to utilize the site for overwintering habitat as there are no deep marshes or ponds on or near the site. For these reasons it is unlikely development of the project area will have an adverse effect on rare features in the area.

The project proposer understands that the introduction and spread of invasive weed species from project construction and operation requires consideration. The risk for the spread of invasive species as a result of the project is unlikely because the site is surrounded by roadways and high-intensity commercial development. While roadways can serve to transport invasive species, the construction and operation activities proposed for the site do not represent a greater risk for invasive species introduction, transport, and spread than existing activities on adjacent lands such as roadside mowing, agriculture, and landscape maintenance. If large areas of invasive species develop during construction and operation of the project, they will be controlled by the applicant in accordance with local and state invasive and noxious weed regulations.

14. Historic properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

A database search request was made to the Minnesota State Historic Preservation Office (SHPO) who conducted a search of the Minnesota Archaeological Inventory and Historic Structure Inventory for the project area (**Appendix E**). Based on their review, no previously recorded archaeological sites, historic structures, or traditional cultural properties were identified in the database for the project area. Multiple historic structures have been identified within one mile of the project area, but will not be impacted by the proposed project. None of the inventoried structures have currently been evaluated as eligible for listing on the National Register of Historic Places. Additionally, background research was conducted at the MN SHPO and the MN Office of the State Archaeologist. No other previously recorded archaeological sites or historic properties were identified at, or immediately adjacent to, the project area.

15. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

There are no scenic views or vistas located on or near the property, and no non-routine impacts or visual nuisances are anticipated. The proposed residential land use is consistent with other established uses in the area, and therefore will not create a significant change in visual aesthetics. The architectural and site design of the project will be in keeping with the design standards set forth for the Town Center Zoning District.

16. Air

- a. *Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.*

The natural gas heating and cooling systems proposed for the buildings are expected to consist of individual furnace/air conditioning systems. Emissions from the heating and cooling units will be typical of other buildings in the Town Center District. No adverse impacts to air quality are expected as a result of the project.

- b. *Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.*

Increased traffic will generate a relatively small corresponding increase in carbon monoxide levels and other vehicle-related air emissions. The project is expected to have a negligible impact on air quality. Consequently, baseline air quality monitoring, or predictive air quality modeling, has not been contemplated at this time, and no measures to mitigate air quality impacts have been considered. It is anticipated that siting residential units near office and retail uses will promote other modes of transportation such as walking, bicycle riding, and mass transit for overall emission reductions.

Construction of the Bottineau LRT is expected to begin in 2017, with a proposed stop at West Broadway and Brooklyn Boulevard. The Bottineau LRT, when completed as early as 2019, will provide additional mass transit options for future residents and should function to reduce overall vehicle emissions in the area.

- c. *Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.*

Project construction and occupancy is not expected to generate objectionable odors or dust. Odors and dust generated during construction and occupancy will meet the requirements of the MPCA and applicable local regulations. Minor odors generated during construction will be typical of those associated with the construction process, such as exhaust from diesel and gasoline powered construction equipment. The construction process is expected to generate some dust, but it is not anticipated that fugitive dust will be generated in objectionable quantities. During mass grading and construction, contractors will follow best management practices to reduce dust emissions. Suppression of airborne dust by application of water will be implemented if significant fugitive dust generation occurs that is greater than expected during normal construction practices.

The nearest receptors to the proposed project include LA Fitness and Cub Foods east of the site, Target's Corporate Campus northwest of the site and residential homes to the northeast.

17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

The Brooklyn Park Code of Ordinances and MPCA Noise Pollution Control Section requirements regulate noise levels within the city for construction and operation (mechanical noise) at project sites. Construction and operation of the project will be required to comply with these noise requirements, including hours of construction equipment operation. It is anticipated that noise levels will temporarily increase locally during project construction, but are expected to return to intensities and levels consistent with the existing Town Center District environment. Noise levels on and adjacent to the site will vary considerably during construction depending on the pieces of construction equipment being operated simultaneously, the percent of time in operation, and the distance from the equipment to the receptors. The nearest receptors to the proposed project are LA Fitness and Cub Foods east of the site, Target's Corporate Campus northwest of the site and residential homes to the northeast. Planned landscaping of the project will help to minimize and mitigate the effects of any negligible noise generated from the project following construction. Noise levels following construction are anticipated to be consistent with other sources within the Town Center District and in conformance with city and state noise standards.

18. Transportation

- a. *Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.*

1. Existing and Proposed Additional Parking Spaces –

The existing land use is agricultural on the parcel. There are no existing parking spaces on the parcel.

The proposed land uses and corresponding parking supply proposed for this site include:

- a. 520 high density residential units – 505 underground parking spaces
 - b. 216 surface stalls
- Total parking supply proposed for this site = 505 + 216 = 721 parking spaces

Therefore the proposed additional parking spaces would be approximately 721, comprised mostly of underground parking or at-grade parking stalls to serve the high-density dwelling units.

2. Estimated Total Average Daily Traffic Generated –

The table below shows the total average trip generation for the site as being approximately 3,274 trips per day.

Table 18.1. Trip Generation Summary

Type	Land Use	ITE Code	Size		Weekday		AM peak		PM Peak	
					Enter	Exit	Enter	Exit	Enter	Exit
Residential	Apartment	220	520	units	1637	1637	52	207	197	106
TOTAL					3,274		259		303	

3. Estimated Maximum Peak Hour Traffic Generated and Time of Occurrence –

The table above shows the trip generation for AM and PM Peak Hours. The estimated maximum peak hour traffic will be generated in the PM Peak Hour (303 trips/hour).

4. Indicate source of trip generation rates used in the estimates –

Source: Trip Generation Manual, Ninth Edition, Institute of Transportation Engineers, Washington, DC, 2012.

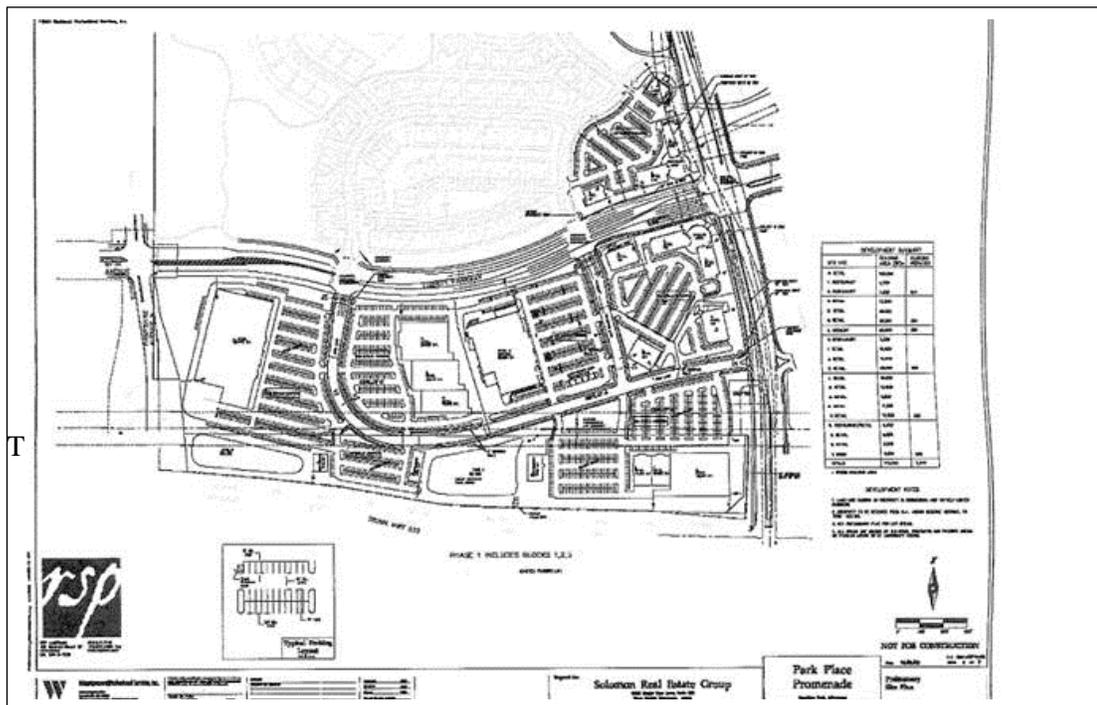
5. Availability of Transit and/or Other Alternative Transportation Modes –

Currently, the only available transit at or adjacent to this site is Minneapolis Express Route 765 of the Metro Transit. This route provides A.M. Peak (6:25 A.M. to 8:46 A.M.) transit service northbound from 11th Street South & Marquette Avenue South in downtown Minneapolis to the Target North Campus via Highway 252. This route also provides P.M. Peak (3:37 P.M. to 6:09 P.M.) transit service southbound from the Target North Campus (just to the west of the project site) to Highway 252, to the 73rd Avenue Park & Ride, and then to 11th Street South & Marquette Avenue South in downtown Minneapolis.

Future additional transit opportunities are being considered. The locally preferred alternative alignment for the Bottineau Transitway has been adopted into the region’s Transportation Policy Plan by the Metropolitan Council. That alignment will bring light rail service less than one mile to the west of the Liberty site. The timeline of the project is dependent on many factors; however the Bottineau Transitway could be in operation as early as late 2019.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project’s impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation’s Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance,

A traffic impact study was conducted in May 2005 for Liberty Oaks Subdivision, which includes the site considered here (see Appendix of this document). At that time, there were a variety of uses proposed for the development, including single-family detached housing, townhouse/condominiums, attached senior housing, retail uses, a supermarket, as well as high-turnover sit-down restaurants and a fast food restaurant with drive-through window.

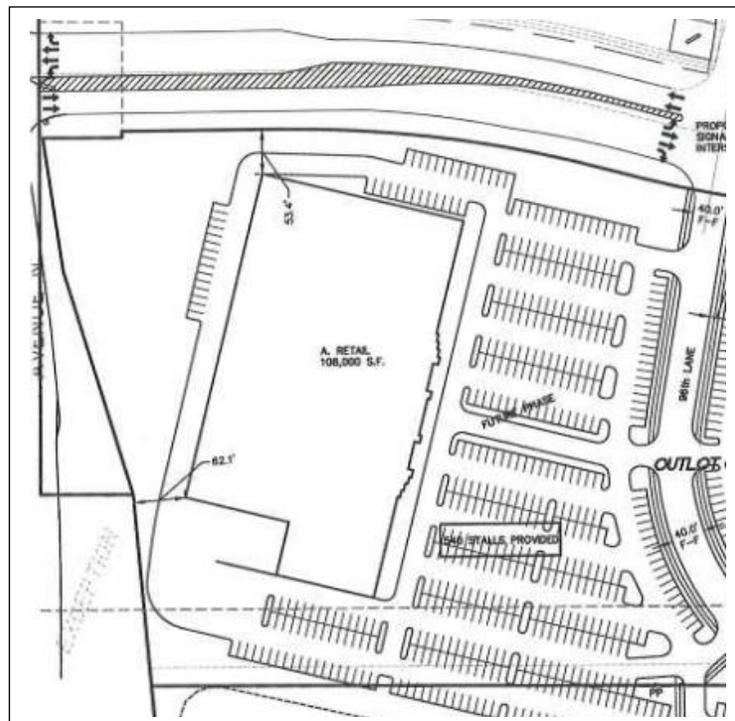


The table below, taken from the 2005 traffic study, shows nearly 335,000 square feet of retail spread across the entire site.

**Table 6
Trip Generation**

Land Use	Dev. Units	Trips						Daily Total
		A.M. In	A.M. Out	A.M. Total	P.M. In	P.M. Out	P.M. Total	
Single-Family Detached Housing	86	16	48	64	55	32	87	823
Residential Condominium/Townhouse	147	11	54	65	51	25	76	861
Senior Housing -- Attached	137	5	6	11	9	6	15	477
Retail	334,500	210	134	344	602	652	1,254	14,363
Supermarket	71,100	141	90	231	379	364	743	7,269
Restaurant -- High-Turnover (Sit-down)	15,000	90	83	173	100	64	164	1,907
Fast Food Restaurant with Drive-Through Window	4,400	119	115	234	79	73	152	2,183
Gross Trip Generation		592	530	1,122	1,275	1,216	2,491	27,883
15% Reduction for Multi-Purpose Trips		-84	-63	-147	-174	-173	-347	-3,858
Reduction for Internal Site Trips		-11	-43	-54	-35	-34	-69	-1,816
25% Reduction for Pass-bys		-108	-87	-195	-239	-236	-475	-475
Net New Trips		389	337	726	827	773	1,600	21,734

The area now under consideration is the parcel on the far west end of this former Liberty Oaks site. It is the space formerly comprising the large big box and parking area just to the east of Hampshire, but not including the area shown as Pond B adjacent to 610. The retail space comprised 108k sq. ft. of big box and 540 parking stalls (see below).



The previous traffic study categorized the retail as ITE Code 820 “Shopping Center”. By researching the 7th Edition of the ITE Trip Generation report (that was in use at the time of the 2005 study), the rate for weekday trips (42.94 trips/1000 sq. ft.), and the calculation matches up with the 14,363 trips projected.

If one were to apply those rates solely to the 108,000 sq. ft. of retail at the western end of the development, the parcel would generate 4,638 trips/day; 104 trips in AM Peak Hour; and, 401 trips in the PM Peak Hour.

To model the high-density residential use proposed currently, the 9th Edition of the ITE Trip Generation Manual was used to determine traffic estimates for Code 220 “Apartment” uses. The estimated number of trips for the 500 units utilizes the rate of 6.65 trips/unit/weekday, which calculates to 3,458 trips/day. By applying peak hour rates, there would be 265 trips in the A.M. Peak Hour and 322 trips in the P.M. Peak Hour.

The ITE Trip Generation Handbook, Third Edition, however, recommends the use of the fitted curve equation to calculate traffic volumes for this case, not the rate. Therefore, by applying the appropriate equations for high-density residential, the 610 West development will generate **3,274 trips per day; or 259 trips in the A.M. Peak Hour and 303 trips in the P.M. Peak Hour.**

There are slight differences between the trip generation results using the rates for high-density residential versus the fitted curve equation. The currently proposed high-density residential use will generate fewer total weekday trips and fewer P.M. Peak Hour trips than would the previous retail use at the site. Nevertheless, the residential use will generate more A.M. Peak Hour trips than the retail use because the retailer would typically be closed between 7-9 A.M.

Regarding the project’s impacts on the regional transportation system, the planned development and its roadway system will for the most part fit within the access management guidelines established by the City of Brooklyn Park and by Hennepin County.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

There are several ways the 610 West development will minimize or mitigate project related transportation effects:

- Limited access
- Adjacent to transit opportunities
- Provide full access off of local street and only right-in/right-out access off of Oak Grove Boulevard.
- Encourage tenants and guests to use alternate forms of transportation.

Full recommendations and conclusions can be found in the **Appendix F** – Traffic Impact Study.

19. Cumulative potential effects: (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

- a. *Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.*

It is anticipated that the project will be constructed in two phases, with the first phase expected to begin in summer 2015. Full build-out is anticipated by 2018; however, construction timing will ultimately depend upon market conditions.

Changes in regional land use in Brooklyn Park from open space, rural and agricultural land uses to more urbanized uses is expected to have a cumulative impact on the area in general. Cumulative effects of this and future projects on natural resources and infrastructure are expected to be roughly proportional to the impacts discussed in this EAW, or somewhat greater if future projects are developed at a higher density. The City of Brooklyn Park has planned for future growth and development in this particular area as part of its 2030 Comprehensive Plan (2011), Surface Water Management Plan, Water Supply and Distribution Plan, Sanitary Sewer Plan, and Transportation Plan. These efforts will ensure that the cumulative impacts of future growth and development to the environment, and to the City's service capacity, are anticipated and mitigated.

- b. *Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.*

The project proposer does not currently own or have options on adjacent lands. However, the remaining undeveloped lands surrounding the proposed project area will either need to undergo an update to the Liberty Oaks Subdivision EAW (2005), or prepare a new review as part of a development approval.

The City of Brooklyn Park keeps a current interactive map of development projects. According to this map, there are 10 recently approved projects, and 11 projects that are currently under construction. Several of the projects that are currently under construction are close to the proposed project. Those projects include the Olympus Surgical Technologies America facility, Prairie Care, Northcross Business Park, 610 Commerce Center and Wickford Village.

Because many of the above projects and available lots develop based on market drivers and conditions, the timing of future development can, and likely will, fluctuate. However, land adjacent to the project site is eventually expected to develop, per the City's Comprehensive Plan, thereby converting existing open space and agricultural lands to residential and commercial uses. The City of Brooklyn Park's 2030 Comprehensive Plan (2011), and recent amendments surrounding Zane Avenue and Oak Grove Parkway, anticipates and guides the intensity of development within the city and directs necessary infrastructure improvements to support the planned development.

Parcels to the south of the proposed project area are currently undeveloped and zoned Town Center District, which is guided for mixed and multi-use buildings including retail and service businesses, medium and high-density housing, and professional offices. In keeping with the city's comprehensive plan, these parcels are expected to develop in the future to similar uses. Undeveloped parcels immediately surrounding the proposed development site contain similar land uses and land features as the project site. Existing land cover on surrounding undeveloped properties is primarily agricultural, with wooded tree lines, and small pockets of untilled grasslands.

- c. *Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.*

The proposed project will result in minor tree removal and conversion of agricultural lands to non-agricultural uses. Consequently, cumulative impacts to natural resources are anticipated to be minimal.

Development of surrounding parcels will also result in cumulative impacts to city infrastructure such as roads, sewer, and water. These cumulative impacts have been thoughtfully contemplated and addressed in the city's 2030 Comprehensive Plan (2011), Surface Water Management Plan, Water Supply and Distribution Plan, Sanitary Sewer Plan, and Transportation Plan. In addition, as surrounding properties develop, they will be evaluated under Minnesota Environmental Policy Act (MEPA) rules, as necessary, and will need to adhere to guidelines presented in the city's approved zoning and comprehensive plans.

Mitigation for anticipated minor cumulative impacts in the area will include pretreating stormwater and controlling stormwater rates, providing adequate municipal facilities such as potable water and wastewater treatment, and providing appropriate traffic-related improvements. These provisions will help minimize potential cumulative effects of past developments and future developments within the region. Given the nature of potential cumulative effects, the evaluation of available and relevant information, and mitigation efforts proposed, the potential for significant environmental effects due to these cumulative effects appears minor.

20. Other potential environmental effects:

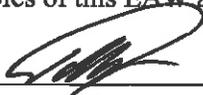
If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

No other additional environmental effects are anticipated as a result of this project. Potential environmental effects have been addressed in Items 1 through 19.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature  _____

Date 2-6-2015

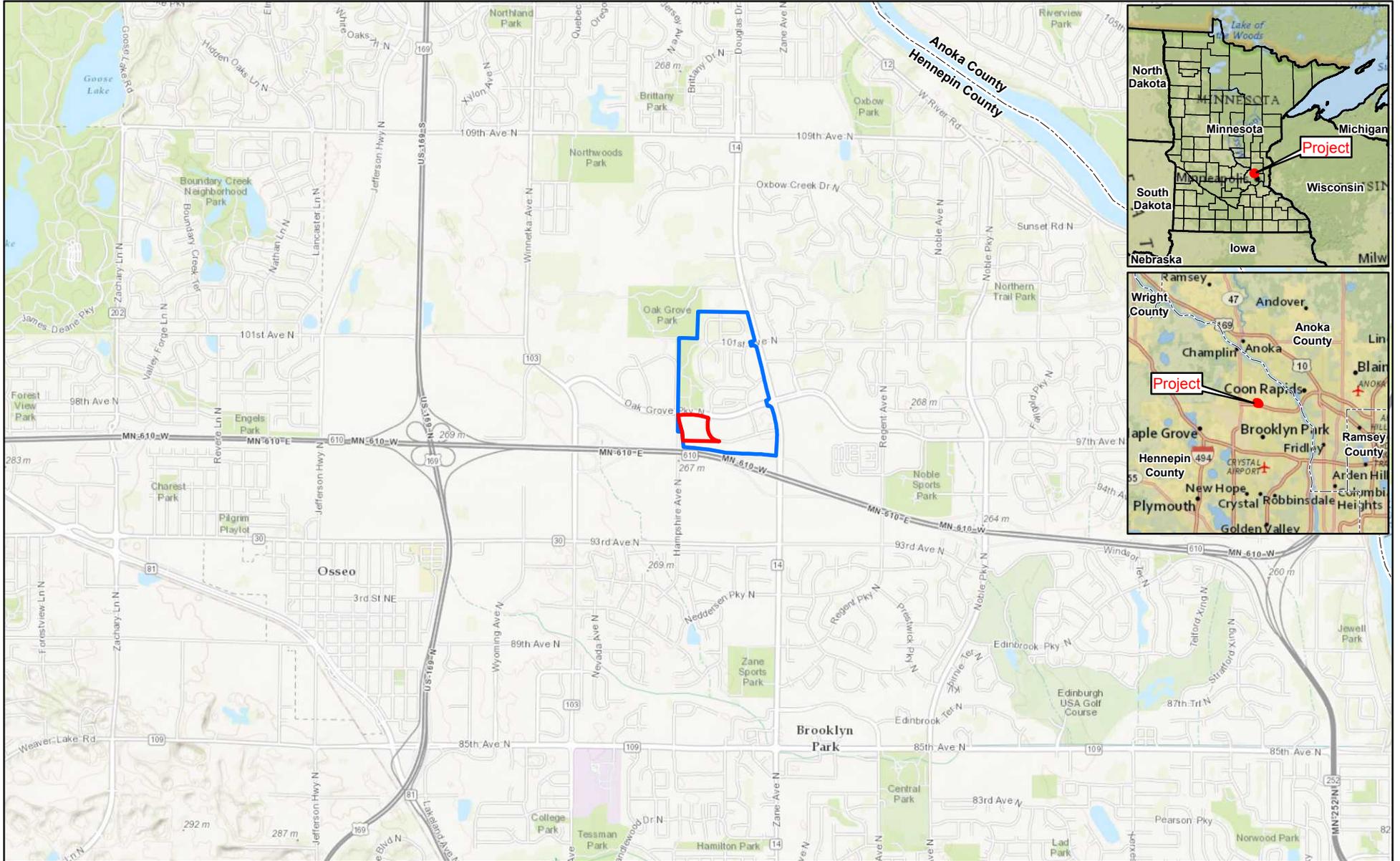
Title: Todd Larson, Senior Planner, City of Brooklyn Park

Exhibits 1 - 8

610 West EAW, Brooklyn Park
Hennepin County, Minnesota

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© 2015 Westwood Professional Services, Inc.



Data Source(s): Westwood (2014); ESRI WMS Topographic and National Geographic Imagery (Accessed 2014); MN-DOT (2003).

Legend

- Project Boundary
- Liberty Oaks EAW Boundary (2005)
- County Boundary



610 West EAW

Brooklyn Park, Minnesota

Site Location

EXHIBIT 1

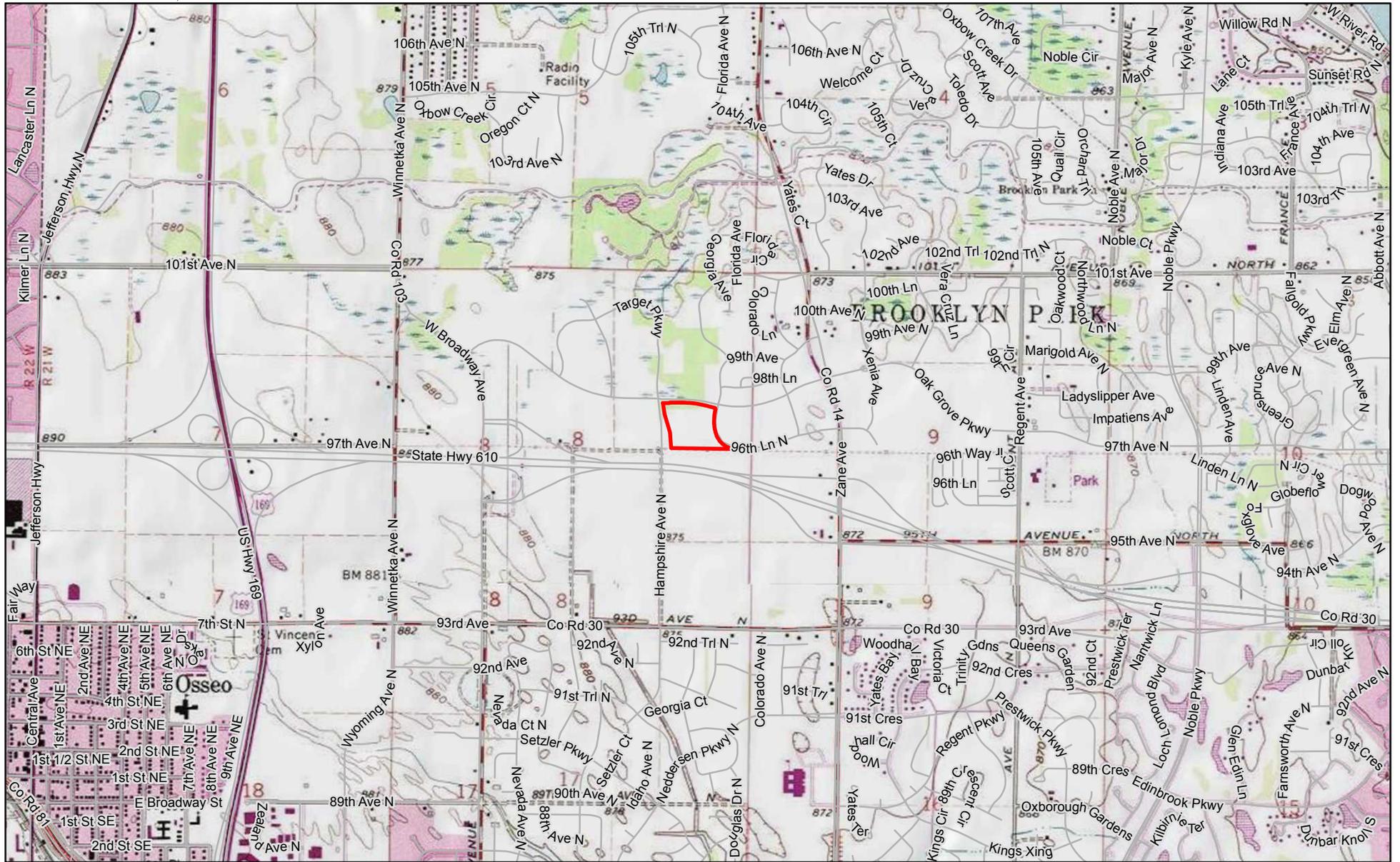


Westwood

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344

PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150

www.westwoodps.com



Data Source(s): Westwood (2014); ESRI (2013); National Geographic Society, i-cubed (2013).

Legend

-  Project Boundary
-  Road



610 West EAW

Brooklyn Park, Minnesota

USGS Topography



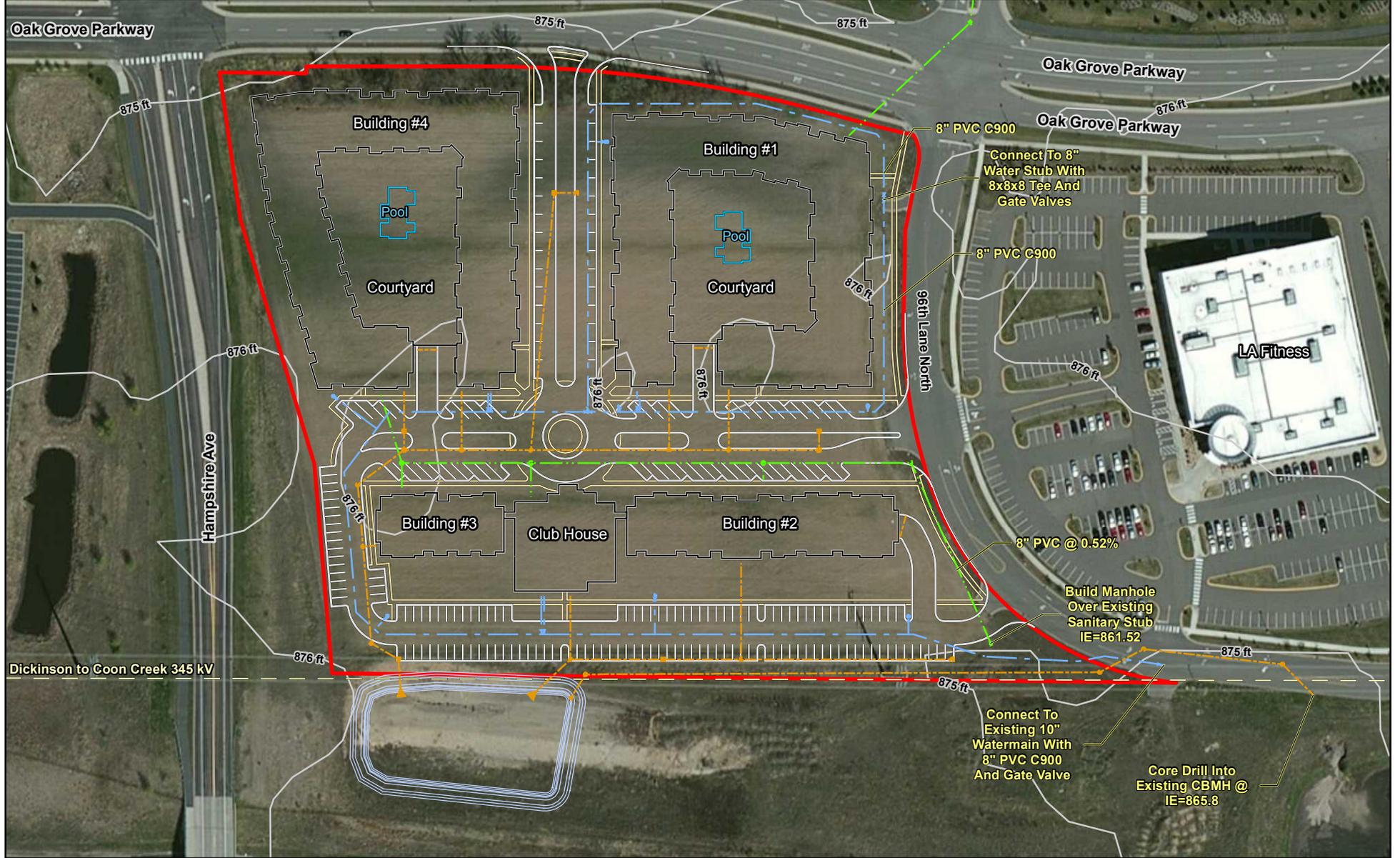
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TOLL FREE 1-888-937-5150

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EXHIBIT 2



Data Source(s): Westwood (2014); ESRI WMS World Imagery (Accessed 2014); ESRI (2013).

Legend

- Project Boundary
- 1ft Contour
- Curb and Gutter Line
- Parking Lot Line
- Sidewalk Line
- Transmission Line
- Proposed Sanitary Sewer Line
- Proposed Storm Sewer Line
- Proposed Water Main Line
- Building
- Pond Contour
- Pool

610 West EAW

Brooklyn Park, Minnesota

Proposed Site Plan

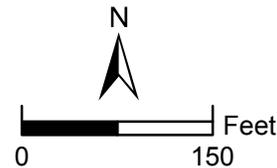
EXHIBIT 3



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Data Source(s): Westwood (2014); ESRI WMS World Imagery (Accessed 2014); ESRI (2013).

Legend

- Project Boundary
- Cultivated Crop (9.59 acres)
- Grassland (0.69 acres)
- Woodland (0.57 acres)



610 West EAW

Brooklyn Park, Minnesota

Cover Types

EXHIBIT 4



Westwood

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www.westwoodps.com



Data Source(s): Westwood (2014); National Geographic Society, i-cubed (2013); ESRI (2013).

Legend

- Project Boundary
- Road



610 West EAW

Brooklyn Park, Minnesota

Adjacent Land Use

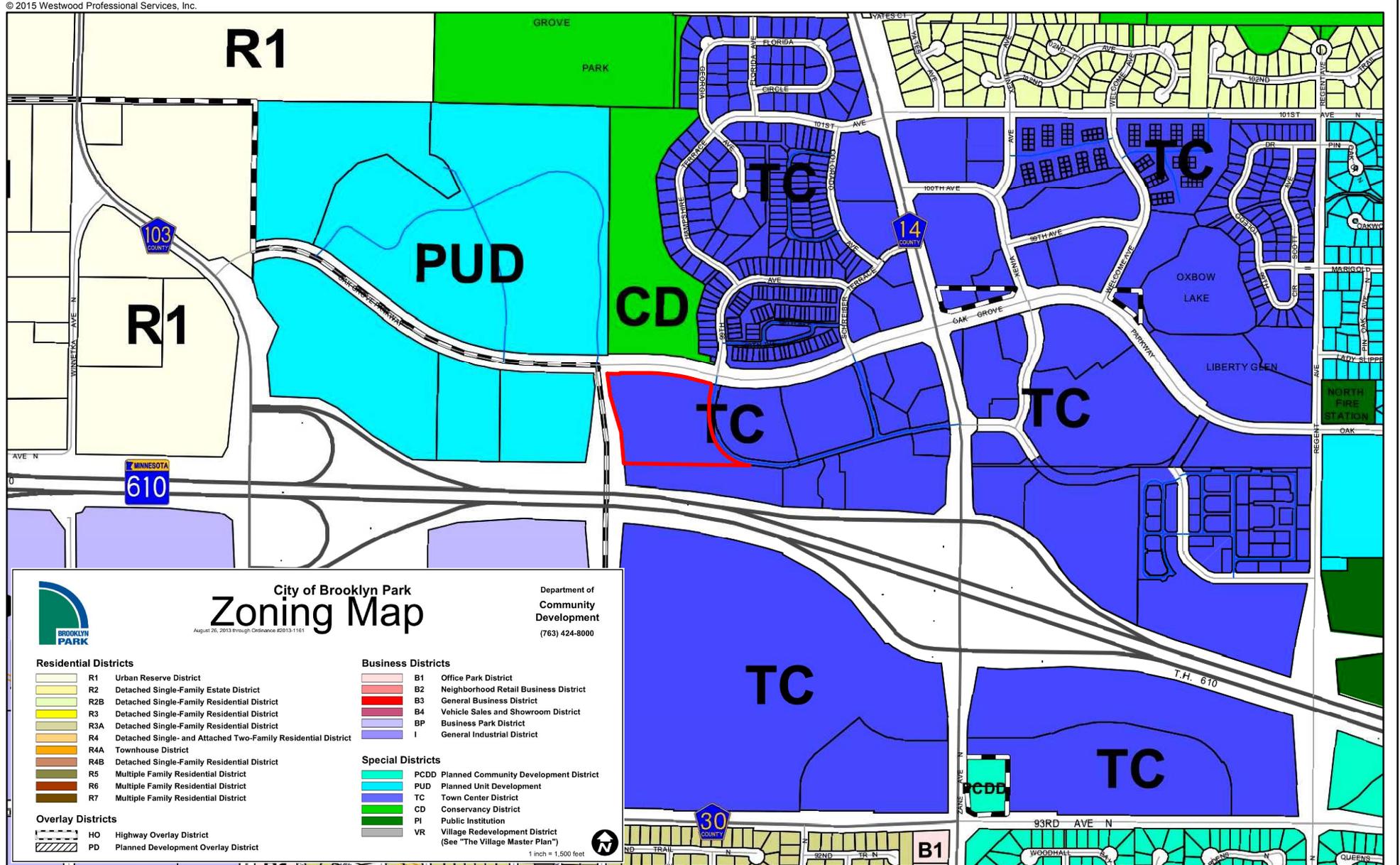


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Westwood





City of Brooklyn Park
Zoning Map
August 26, 2013 through Ordinance 2013-1161

Department of
Community
Development
(763) 424-8000

<p>Residential Districts</p> <ul style="list-style-type: none"> R1 Urban Reserve District R2 Detached Single-Family Estate District R2B Detached Single-Family Residential District R3 Detached Single-Family Residential District R3A Detached Single-Family Residential District R4 Detached Single- and Attached Two-Family Residential District R4A Townhouse District R4B Detached Single-Family Residential District R5 Multiple Family Residential District R6 Multiple Family Residential District R7 Multiple Family Residential District <p>Overlay Districts</p> <ul style="list-style-type: none"> HO Highway Overlay District PD Planned Development Overlay District 	<p>Business Districts</p> <ul style="list-style-type: none"> B1 Office Park District B2 Neighborhood Retail Business District B3 General Business District B4 Vehicle Sales and Showroom District BP Business Park District I General Industrial District <p>Special Districts</p> <ul style="list-style-type: none"> PCDD Planned Community Development District PUD Planned Unit Development TC Town Center District CD Conservancy District PI Public Institution VR Village Redevelopment District (See "The Village Master Plan")
---	--

1 inch = 1,500 feet

Data Source(s): Westwood (2014); ESRI WMS World Imagery (Accessed 2014); ESRI (2013).

Legend

Project Boundary



610 West EAW

Brooklyn Park, Minnesota

Zoning Map



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Data Source(s): Westwood (2014); ESRI WMS World Imagery (Accessed 2014); ESRI (2013); U.S. Fish and Wildlife Service (2013); Ducks Unlimited (2013); U.S. Department of Agriculture, Natural Resources Conservation Service (2010); MN-DNR (2008 & 2009); USGS NHD Dataset (2013); FEMA (2010); U.S. Geological Survey (2011).

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TOLL FREE 1-888-937-5150

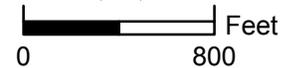
www.westwoodps.com



Westwood

Legend

- Project Boundary
- NHD Flowline
- MN DNR Minor Watershed Boundary
- MN DNR Public Waterbody
- 500-Year FEMA Floodplain
- NWI Wetland
- NHD Waterbody

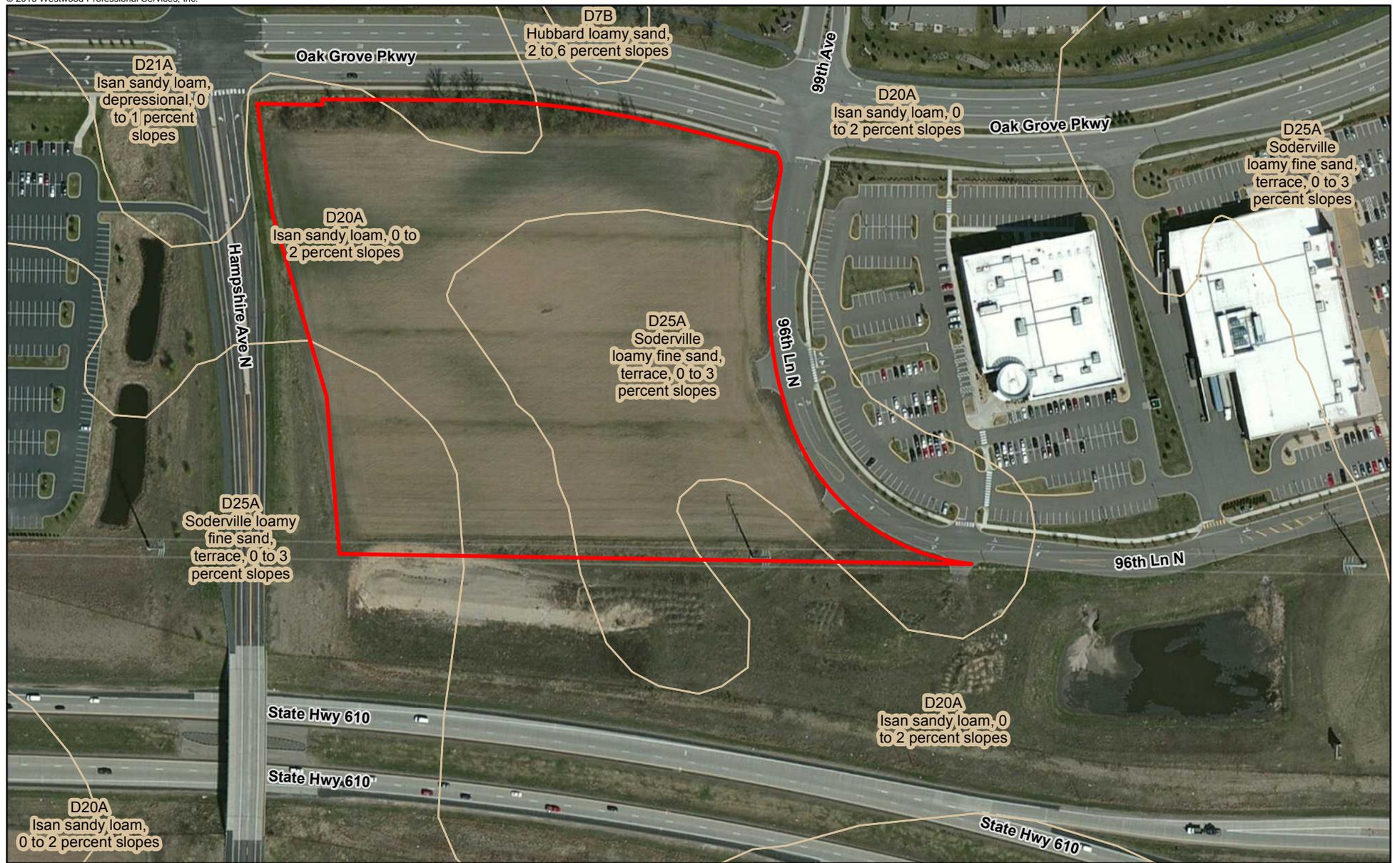


610 West EAW

Brooklyn Park, Minnesota

Water Resources

EXHIBIT 7



Data Source(s): Westwood (2014); ESRI WMS World Imagery (Accessed 2014); ESRI (2013); U.S. Department of Agriculture, Natural Resources Conservation Service (2010).

Legend

-  Project Boundary
-  NRCS Soil



610 West EAW

Brooklyn Park, Minnesota

NRCS Soils

EXHIBIT 8



Westwood

Westwood Professional Services, Inc.
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Eden Prairie, MN 55344

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www.westwoodps.com

Appendix A

Comprehensive Plan Amendment Resolution

610 West EAW, Brooklyn Park
Hennepin County, Minnesota

RESOLUTION #2014-234

RESOLUTION APPROVING THE COMPREHENSIVE PLAN AMENDMENT
INCLUDING NEW LAND USE DEFINITIONS AND LAND USE CHANGES ON VACANT LAND
IN THE AREA SURROUNDING ZANE AVENUE AND OAK GROVE PARKWAY

BE IT RESOLVED by the City Council of the City of Brooklyn Park, the Comprehensive Land Use Plan is hereby amended by creating three new land use categories and changing the property designations as outlined below:

Commercial (C)

Designation for parcels that may include any uses as outlined in the NSC, NC, or CC land uses as defined in the 2030 Comprehensive Plan.

Flex Use (F)

Designation for parcels that could develop with a variety of uses. The use will be based on how the surrounding land is developed and what market forces deem most appropriate for the site. Uses are limited to Office/Limited Business (O/LB) as defined in the 2030 Comprehensive Plan, and C and MH as defined in this amendment.

Med/High Density Residential (MH)

Designation for parcels that are intended to support housing uses. The housing must be seven or more units per acre with no limit on maximum units per acre subject to, Multi-Family Design Guidelines, site design, compatibility with surrounding uses and City approval process.

That land north of Highway 610 in the Zane Avenue/Oak Grove Study Area:

<u>Property Identification Numbers (PID)</u>	<u>Change</u>
0811921140052	CC to MH
0811921410006	CC to F
0911921320014	CC to C
0911921320017	CC to C
0911921220067	NC to C and F
0911921210095	NC to C
0911921210005	NC to MH
0911921210006	NC to MH
0911921210007	NC to MH
0911921120005	NC to MH and Park

0911921240009
0911921240007
0911921240006
0911921240008
0911921130003
0911921310005
0911921310006

CC to C
CC to C
CC to C
CC to HM
M to HM
CC to F
CC to C

BE IT FURTHER RESOLVED that the above action is not intended to impact the City Council's ability to make land use decisions for other nearby parcels of land.

The foregoing resolution was introduced by Council Member Jordan and duly seconded by Council Member Crema.

The following voted in favor of the resolution: Jordan, Mata, Crema, Gates, Knight and Lunde.

The following voted against: None.

The following was absent: Trepanier.

Where upon the resolution was adopted.

ADOPTED: November 17, 2014

JEFFREY JONEAL LUNDE, MAYOR

CERTIFICATE

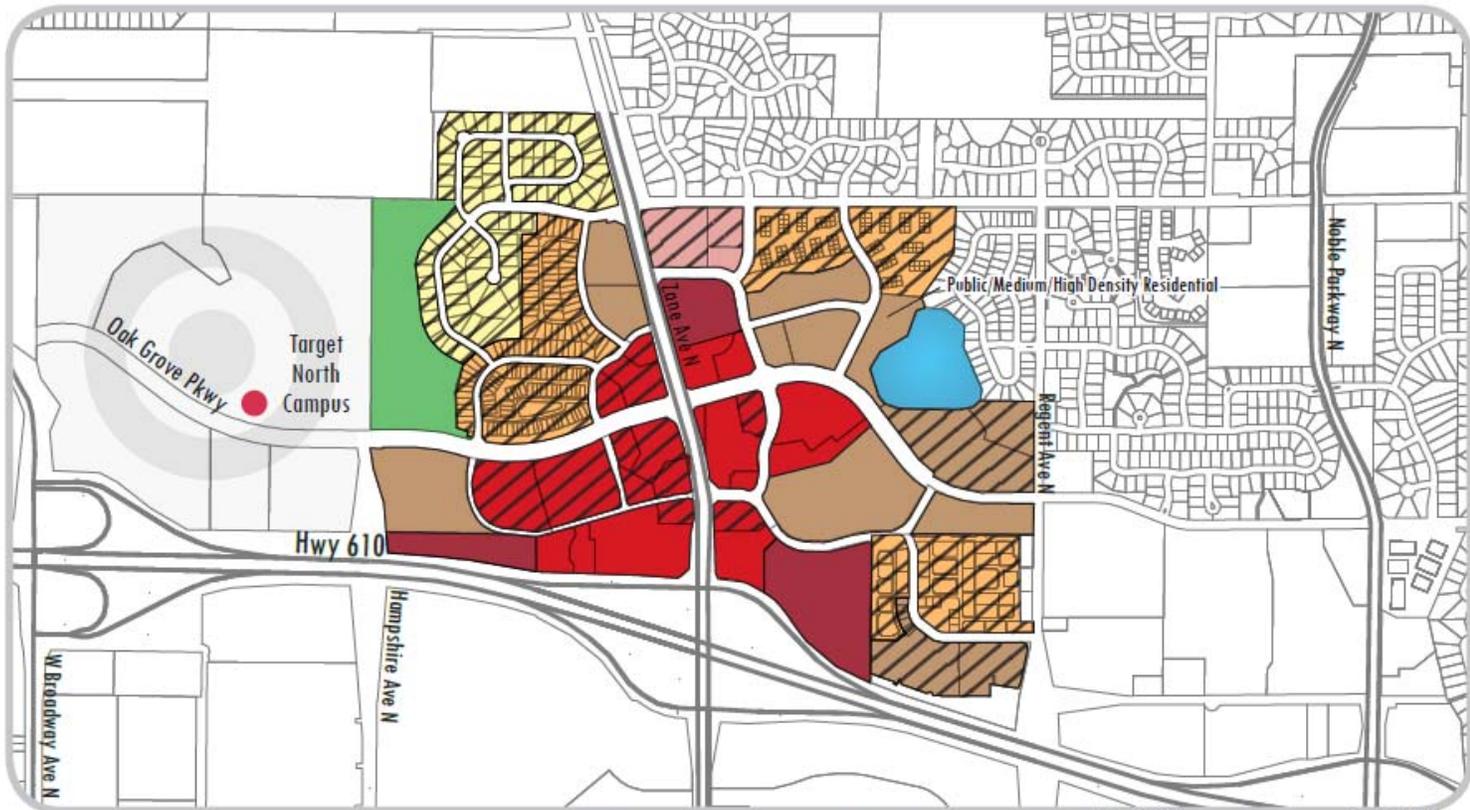
STATE OF MINNESOTA
COUNTY OF HENNEPIN
CITY OF BROOKLYN PARK

I, the undersigned, being the duly qualified City Clerk of the City of Brooklyn Park, Minnesota, hereby certify that the above resolution is a true and correct copy of the resolution as adopted by the City Council of the City of Brooklyn Park on November 17, 2014.

WITNESS my hand officially as such Clerk and the corporate seal of the City this 18th day of November 2014.

(SEAL)

DEVIN MONTERO, CITY CLERK



BROOKLYN PARK Highway 610 Corridor
Land Use Recommendation

- | | |
|--|--|
|  Commercial |  Flex Use |
|  Office/Limited Business |  Park |
|  Low Density Residential |  Developed |
|  Medium Density Residential | |
|  Med/High Density Residential | |

Job #193600545
September 19, 2014
0 0.25 0.5mi

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Appendix B

Wetland Decision Notices

610 West EAW, Brooklyn Park
Hennepin County, Minnesota



Minnesota Department of Natural Resources
DNR Waters - Metro, 1200 Warner Road, St. Paul, MN 55106-6793
Telephone: (651) 772-7910 Fax: (651) 772-7977

September 20, 1999

PETERSON ENVIRONMENTAL

SEP 23 1999

Mr. Ronald Peterson, President
Peterson Environmental Consulting, Inc.
1355 Mendota Heights Road, Suite 100
Mendota Heights, MN 55120-1112

RE: DAYTON HUDSON NORTH CAMPUS, PUBLIC WATERS WETLAND NO. 27-
251W & 27-204P, CITY OF BROOKLYN PARK, HENNEPIN COUNTY

Dear Mr. Peterson:

As we discussed in our August 5, 1999 meeting with Kenny Horns of HGA, Inc., at the site of the proposed project in the north half of section 8, T119N-R21W, I observed no part of the public waters basins extending south into the project boundary. Therefore, no public waters work permits would be required. The public waters basins 27-251W and 27-204P are mapped into the property, but have decreased in size due to disappearing hydrology.

Thank you for the opportunity to comment. Please feel free to call if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Tom Hovey".

Tom Hovey
Area Hydrologist

DNR Information: 612-296-6157, 1-800-766-6000 • TTY: 612-296-5484, 1-800-657-3929

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October 1, 2002

Mr. David Weetman
Westwood Environmental Services, Inc.
7599 Anagram Drive
Eden Prairie, MN 55344

SUBJECT: Schreiber Wetland Areas

On September 27, 2002 the West Mississippi Watershed Management Commission inspected the Schreiber property located in the City of Brooklyn Park. The Schreiber property is a parcel bounded on the west by property owned by Target Corporation, on the south by farmland, on the east by Zane Avenue and on the north by farmland.

The National Wetland Inventory (NWI) map indicates two different types of wetland areas on the property: (1) emergent, seasonally flooded, partially drained, and (2) forested deciduous, seasonally flooded, partially drained.

Westwood Professional Services, Inc. performed an initial delineation of the site. However, field analysis indicated that the NWI areas are non-wetland due to lack of wetland hydrology. These areas did not have saturated soils (even after two days of rain), significant mottling of the soil in the upper 6-12 inches, nor standing water present to depths of 40" below grade. The observed plant communities also did not indicate wetland characteristics with species such as Canada thistle, common buckthorn, prickly ash, and raspberry present. Reed canary grass was the only dominant wetland vegetation present.

Following inspection, the Commission concurs with Westwood Professional Services, Inc. in that though wetlands may have been present on the property years ago, wetlands are not currently present. Draining of the land for agriculture and construction of a Target Corporation stormwater pond may have caused the wetlands in question to be drained.

Please give me a call if you need further assistance.

Sincerely,
MWH

Todd Shoemaker, E.I.T.



DEPARTMENT OF THE ARMY

**ST. PAUL DISTRICT, CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS CENTRE
190 FIFTH STREET EAST
ST. PAUL, MN 55101-1638**

REPLY TO
ATTENTION OF:

November 21, 2002

Construction-Operations
Regulatory (03-01064-JJY)

David Weetman
Westwood Professional Services, Inc.
7599 Anagram Drive
Eden Prairie, Minnesota 55344

Dear Mr. Weetman:

We have reviewed the information in the wetland delineation report for the Schreiber property. The project site is in NE 1/4 Sec. 8, T. 119N., R. 21W., Hennepin County, Minnesota.

The work proposed at the location stated is not within the regulatory jurisdiction of the Corps of Engineers. No work will be done in a navigable water of the United States, and no dredged or fill material will be discharged in any water of the United States, including wetlands. Therefore, a Department of the Army permit is not required to do this work.

This letter is valid only for the project referenced above. If any change in design, location, or purpose is contemplated, contact this office to avoid doing work that may be in violation of Federal law. PLEASE NOTE THAT THIS CONFIRMATION LETTER DOES NOT ELIMINATE THE NEED FOR STATE, LOCAL, OR OTHER AUTHORIZATIONS, SUCH AS THOSE OF THE DEPARTMENT OF NATURAL RESOURCES OR COUNTY.

The decision regarding this action is based on information found in the administrative record which documents the District's decision-making process, the basis for the decision, and the final decision.

If you have any questions, contact Joseph J. Yanta in our St. Paul office at (651) 290-5362. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert S. Whiting".

Robert S. Whiting
Chief, Regulatory Branch

U.S ARMY CORPS OF ENGINEERS - ST. PAUL DISTRICT
REGULATORY BRANCH

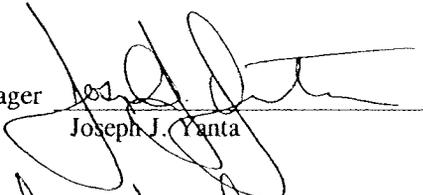
BASIS FOR DETERMINATION OF SECTION 404 JURISDICTION

Applicant:

File Number: **200301064**

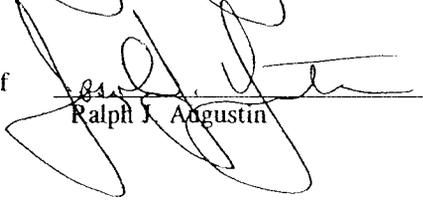
- A. Property referenced in the attached correspondence contains an area of water/wetland areas considered to be a water of the United States because the area:
- 1. is currently used, has been used in the past, or may be susceptible to use in interstate or foreign commerce, i.e., navigable waters of the United States. [328.3(a)(1)]
 - 2. is interstate waters. [328.3(a)(2)]
 - 3. is an area the use, degradation, or destruction of which could affect interstate or foreign commerce. [328.3(a)(3)]
 - a. is or could be used by interstate or foreign travelers for recreation or other purposes.
 - b. has fish or shellfish that are or could be taken and sold in interstate or foreign commerce.
 - c. is or could be used for industrial purposes by industries in interstate commerce.
 - 4. is an impoundment of waters/areas otherwise defined as waters of the United States. [328.3(a)(4)]
 - 5. is connected to or adjacent to a tributary of any waters/areas identified under paragraphs (1) through (4) of 33 CFR 328.3(a). [328.3(a)(5)]
 - 6. contains wetlands or waters adjacent to waters/areas defined as waters of the U.S in paragraphs (1) through (5) in 33 CFR 328.3 (a). [328.3(a)(7)].
- B. The property referenced in the attached contains no water/wetland areas that meet any of the criteria described above and therefore is not subject to Corps of Engineers jurisdiction under Section 404 of the Clean Water Act.

Project Manager


Joseph J. Yanta

Date Nov 21, 2002

 Section Chief


Ralph J. Augustin

Date Nov 21, 2002

Wetlands are identified and delineated using the methods and criteria established in the Corps of Engineers Wetland Delineation Manual (87 Manual). Generally, wetlands are determined by the occurrence of hydrophytic vegetation, hydric soils and wetland hydrology.

WEST MISSISSIPPI WATERSHED MANAGEMENT COMMISSION

3235 Fernbrook Lane, Plymouth, MN 55447
Telephone (763) 553-1144 · Fax (763) 553-9326

July 21, 2004

Mr. David Weetman
Westwood Professional Services, Inc.
7599 Anagram Drive
Eden Prairie, MN 55344

SUBJECT: Oak Grove Park Wetland Determination

Westwood Professional Services, Inc. (Westwood) submitted a "Request for Effective Drainage Confirmation" to the West Mississippi Watershed Management Commission (WM WMC) on June 28, 2004. The report documented the lack of wetland indicators on the site and requested the WM WMC to concur with the findings.

Oak Grove Park is located in the City of Brooklyn Park at the northwest quadrant of Zane Avenue and 101st Avenue (see attached map). The National Wetland Inventory (NWI) map indicates wetlands on the property. In addition, the Hennepin County Soil Survey classifies a portion of the site with Isan and Seeleyville & Markey soil types, both of which are hydric.

Westwood provided monitoring data on four different dates in four different locations over approximately 14 months. No water and/or saturation were found in each of the four monitoring locations to a depth of 36" on each of the four site visits. (Water and/or saturation are required above 12" to meet wetland hydrology criteria.) Westwood also documented that the area received above-average precipitation preceding each of their site visits.

Todd Shoemaker of Wenck Associates, Inc. (representing the WM WMC) visited the site with David Weetman of Westwood on June 16, 2004. Mr. Weetman excavated several soil pits and did not find adequate water to satisfy wetland hydrology criteria. Mr. Shoemaker observed wetland vegetation near all sample points.

Mr. Shoemaker observed soil mottles within pits excavated near sample points TP-2, TP-3, and TP-4. However, Mr. Weetman and Mr. Shoemaker reasoned that the mottles were probably the result of past mottling given the lack of water found during Westwood monitoring.

Following inspection, the Commission concurs with Westwood that though wetlands may have been present on the property years ago, wetlands are not currently present.

Please give me a call if you need further assistance.

Sincerely,
Wenck Associates, Inc.

Todd Shoemaker, E.I.T.

Cc: Judie Anderson, JASS

Attachment

David Weetman

From: Yanta, Joseph J MVP [joseph.j.yanta@mvp02.usace.army.mil]
Sent: Thursday, August 05, 2004 10:28 AM
To: 'David Weetman'
Subject: RE: Oak Grove Park - Brooklyn Park

Yes. It came in about a week ago. Although I have not given it a file number yet, I concur with you and the WMWMC that there are no jurisdictional wetlands on the site.

I will try to get you a letter next week.

-----Original Message-----

From: David Weetman [mailto:david.weetman@westwoodps.com]
Sent: Thursday, August 05, 2004 9:48 AM
To: Joe Yanta (E-mail)
Subject: Oak Grove Park - Brooklyn Park

Hi Joe-

Did you receive the packet from me on this site north of the Schreiber piece in Brooklyn Park?

Thanks-
David

David M. Weetman
Westwood Professional Services, Inc.
7599 Anagram Drive
Eden Prairie, MN 55344
Phone: (952) 906-7419
Fax: (952) 937-5822
E-mail: david.weetman@westwoodps.com

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Appendix C

Wenck Phase I ESA

610 West EAW, Brooklyn Park
Hennepin County, Minnesota

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Phase I Environmental Site Assessment



Schreiber Parcel
*Hampshire Ave. N and Oak Grove Pkwy
Brooklyn Park, Minnesota*

Prepared for:

DORAN DEVELOPMENT, LLC

7803 Glenroy Road, Suite 200
Bloomington, MN 55439

Prepared by:

WENCK ASSOCIATES, INC.

1800 Pioneer Creek Center
P.O. Box 249
Maple Plain, Minnesota 55359-0249
(763) 479-4200

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Appendix G: Well Records
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1.0 Summary

Wenck Associates, Inc. (Wenck) was authorized by Doran Development, LLC (Doran) to conduct this Phase I Environmental Site Assessment (ESA) of the Schreiber Parcel located southeast of the intersection of Hampshire Avenue North and Oak Grove Parkway, Brooklyn Park, Hennepin County, Minnesota (the Subject Property). The Subject Property consists of a 10.85-acre vacant lot. Access to the Subject Property is from 96th Lane North. The Subject Property location is depicted in **Figure 1**. A Site Detail Map of the Subject Property is included as **Figure 2**.

This ESA was conducted in accordance with the American Society for Testing and Materials (ASTM) Phase I Environmental Site Assessment Process, Designation E-1527-13, which satisfies standards and practices set forth in 40 CFR Part 312 – Standards for Conducting All Appropriate Inquiry (AAI Rule) for the purposes of meeting the all appropriate inquiries provisions necessary to qualify for certain landowner liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601(35)(B).

Wenck understands that Doran is considering purchasing the Subject Property. The conclusions contained in this report have been made to assist Doran in evaluating environmental conditions at the present time at the Subject Property.

This ESA has revealed no evidence of recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) in connection with the Subject Property.

Although not considered a REC, CREC, or HREC; this ESA has revealed the following item that constitutes environmental business risk:

- Wenck observed a 2-inch diameter PVC piezometer (observation well) near the center of the Subject Property. No unique well number was available for the piezometer and the Subject Property Owner representative, Mr. Bill Schreiber, is not aware of the contractor that installed the piezometer or the purpose of the piezometer. According to the Minnesota Department of Health, a well must be in use, be under a maintenance permit, or be sealed by a licensed contractor.

2.0 Introduction

2.1 PURPOSE

Wenck was authorized by Doran to conduct this Phase I Environmental Site Assessment (ESA) of the Schreiber Parcel located southeast of the intersection of Hampshire Avenue North and Oak Grove Parkway, Brooklyn Park, Hennepin County, Minnesota (the Subject Property). The Subject Property consists of a 10.85-acres vacant lot. Access to the Subject Property is from 96th Lane North. The Subject Property location is depicted in **Figure 1**. A Site Detail Map of the Subject Property is included as **Figure 2**.

Wenck understands that Doran is considering purchasing the Subject Property. The conclusions contained in this report have been made to assist Doran in evaluating environmental conditions at the present time at the Subject Property. In addition, the report is intended to satisfy the requirements of “all appropriate inquiry... consistent with good commercial or customary practice” referenced in the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601(35)(B).

2.2 SCOPE

This ESA was prepared in accordance with the ASTM Phase I Standards and AAI Rule to identify, to the extent feasible and in accordance with the processes described herein; recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions in connection with the Subject Property.

As defined in ASTM E 1527-13, the term recognized environmental condition (REC) means “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to a release to the environment; (2) under conditions of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.”

As defined in ASTM E1527-13, the term controlled recognized environmental condition (CREC) means “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.”

As defined in ASTM E1527-13, the term historical recognized environmental condition (HREC) means “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.”

A summary of the general scope of work for this project is described in the following tasks:

- **Task I. Records Retrieval and Review of Records:** Wenck obtained publicly available, practically reviewable and reasonably ascertainable federal, state, county, and city information about the Subject Property and other properties within minimum established search distances of the Subject Property. These sources were searched for any information about recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions or business-related environmental risks relative to the Subject Property. This search reviewed Superfund sites; waste treatment, storage, and disposal facilities regulated under RCRA; spills or discharges of hazardous substances, toxic materials, or petroleum products; and known or recorded landfills; well databases; etc.
- **Task II. Site Reconnaissance:** Wenck visually inspected the Subject Property to evaluate the Subject Property for any recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions and business-related environmental risks. The structures and grounds of the Subject Property were observed for filling, subsidence, unusual land or surface forms, colorations, odors, indications of any dumping, and evidence of suspect environmental features on the Subject Property such as tanks, drains, drywells, etc. Observations pertaining to adjacent property use were also recorded where such observations pertained to recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions or business-related environmental risks relative to the Subject Property.
- **Task III. Interviews of People with Knowledge of the Subject Property:** Wenck interviewed people with knowledge of the history of the Subject Property and of the surrounding properties. Interviews were completed in order to obtain information pertaining to recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions relative to the Subject Property. Interviewees included the Subject Property owner(s) and occupant(s), as well as local government officials.

Data gathered in the course of performing the above three tasks was used in concert to determine if information from one source indicated the need for additional information from another source.

- **Task IV. Reporting:** Wenck completed this Phase I ESA by combining the information retrieved through data searches with the observations that were made during the Subject Property reconnaissance and interviews. Photographs were taken to document the overall status and current use of the Subject Property and specific areas of concern.

Any deviations from the scope described in the ASTM Phase I Standards are identified in Section 2.3.

2.3 DEVIATIONS

No intentional deviations from the ASTM Phase I Standards were made in preparing this report.

2.4 LIMITATIONS AND EXCEPTIONS

The results of this study, performed by Wenck, are based on the scope of work defined in Section 2.2, subject to any project-specific limitations or project-specific additional non-scope considerations described herein.

As is the case with any investigation of finite scope, this review is intended to reduce, but cannot eliminate, the uncertainty regarding the potential for recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions in connection with the Subject Property. Therefore, the possibility of the presence of some localized substances that may be classified as hazardous cannot be ruled out completely. However, it is Wenck's opinion that the conditions observed at the Subject Property are representative of existing conditions at the time of the site reconnaissance.

2.5 SIGNIFICANT ASSUMPTIONS

Wenck assumes that Doran has provided accurate information that will assist Wenck in determining appropriate inquiry, including but not limited to actual knowledge, previously prepared reports, environmental cleanup liens, and title review information. In addition, Wenck assumes, for the purposes of the site reconnaissance, adequate information has been provided to accurately establish the physical boundaries of the real property being evaluated.

2.6 SPECIAL TERMS AND CONDITIONS

The purpose of this report is to aid in the environmental assessment of the Subject Property and not to evaluate the structural condition of the buildings or other features of the Subject Property.

Wenck has performed its work in a manner consistent with the care and skill ordinarily exercised by members of the environmental profession. The conclusions contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted engineering practices at this time and location. Wenck does not offer any form of warranty or guarantee that the Subject Property contains no hazardous substances, pollutants or contaminants.

Wenck assumes no responsibility for the accuracy of information that was obtained from other sources, including, without limitation, regulatory and government agencies, persons knowledgeable about the Subject Property, persons knowledgeable about adjacent properties, and vendors of public practice.

2.7 USER RELIANCE

This report has been prepared solely for the information and use of Doran. Others wishing to rely on the findings of this report, not having a contractual relationship with Wenck, do so without permission and at their own risk. Our professional recommendations made to the addressee(s) are exclusive to that party's disclosed intended or proposed consideration with respect to the Subject Property at the present time.

3.0 Site Description

3.1 SITE INFORMATION

The Subject Property is located in a commercial/industrial and agricultural area in the City of Brooklyn Park, Minnesota.

Site Address/Location	Address: Southeast of the intersection of Hampshire Ave. N. and Oak Grove Parkway		City: Brooklyn Park	
	County: Hennepin		State: Minnesota	
	Township: 119 North	Range: 31 West	Section: 8	
Property Information	Size: 10.85 acres			
	Property Identification Number: 08-119-21-14-0052			
Improvements	The Subject Property is a vacant lot.			
Building Information	Size: NA		Year of Construction: NA	
	Description: NA			
Use of the Property	Current Use: The Subject Property is an agricultural field.			
	Past Use: The Subject Property has been used since at least 1937 as an agricultural field.			
Ownership and Operation of the Property	Current Ownership & Operation: The Subject Property is owned by Schreiber T's LLC.			

The Subject Property location is depicted in **Figure 1**. A Site Detail Map showing the Subject Property is provided in **Figure 2**.

3.2 CURRENT USE OF ADJOINING PROPERTIES

The following land uses were noted on adjoining properties:

Direction	Description
North	Oak Grove Parkway and a wooded lot owned by the City of Brooklyn Park
South	Power-line easement, and vacant land with Highway 610 beyond
East	96 th Lane North and LA Fitness Center
West	Hampshire Ave. N. and the Target Corporation

3.3 PHYSICAL SETTING

3.3.1 Topography

The Subject Property is generally level and is at an elevation of approximately 880 feet above mean sea level. Site surface drainage is to the northeast. Historic development may have included grading or filling of the Subject Property to improve the location for construction and drainage.

3.3.2 Geology

Published references describe the surficial geology at the Subject Property as upper terrace deposits of sand, gravelly sand and loamy sand, overlain by thin deposits of silt, loam, or organic sediment (University of Minnesota, 1989).

Surficial bedrock in the vicinity of the Subject Property consists of the St. Lawrence and Franconia Formations (University of Minnesota, 1989).

3.3.3 Hydrogeology

The general direction of regional groundwater flow in the area of the Subject Property is presumed to be to the northeast toward the Mississippi River (University of Minnesota, 1989). Local conditions may vary due to surface water features, perched groundwater conditions or artificially created drainage systems.

4.0 User Provided Information

4.1 TITLE RECORD INFORMATION

A title commitment record for the Subject Property was not provided to Wenck during preparation of this Phase I ESA, and a title search was not within the scope of this ESA.

4.2 USER QUESTIONNAIRE

User provided information includes a copy of the ASTM User Questionnaire completed by Mr. Curtis Martinson, Director of Business Development for Doran. The following sections include the information obtained from the completed User Questionnaire, which is included in **Appendix A**.

4.2.1 Environmental Liens or Activity and Use Limitations

No independent review of environmental liens was undertaken by Wenck as a part of this scope of work. No activity and use limitations were disclosed to Wenck during preparation of this ESA.

4.2.2 Specialized Knowledge

Mr. Martinson is not aware of previous environmental reports or specialized knowledge of environmental contamination for the Subject Property.

4.2.3 Commonly Known or Reasonably Ascertainable Information

Mr. Martinson is not aware of commonly known or reasonable ascertainable information regarding the potential for environmental contamination at the Subject Property.

4.2.4 Valuation Reduction for Environmental Reasons

No valuation reduction for environmental reasons was disclosed at the outset of this study.

4.3 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

Mr. Bill Schrieber is the Subject Property owner representative and provided access to the Subject Property.

4.4 REASON FOR PERFORMING PHASE I ESA

This Phase I ESA is being performed as a component of due diligence activities and to determine whether *recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions* affect the Subject Property.

5.0 Records Review

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Wenck requested and reviewed a search of files from federal and state databases from GeoSearch™ for the Subject Property (the GeoSearch™ Radius Report). Files were searched from Federal and State environmental records databases within minimum search distances as specified in the ASTM Phase I Standards, and the GeoSearch™ Radius Report included a more extensive database list than those minimally identified as required by the ASTM Phase I Standards. A summary of the sites identified in the GeoSearch™ Radius Report are discussed below, along with information regarding the significance of the listing for the Subject Property. The GeoSearch™ Radius Report, which contains more information regarding database descriptions and search distances, is included in **Appendix B**.

5.1.1 Subject Property

The Subject Property was not identified on the following reviewed regulatory databases in the GeoSearch™ Radius Report.

5.1.2 Surrounding Properties

Additional mapped sites of regulatory interest identified within the search radii defined by the ASTM Phase I Standards, as identified in the GeoSearch™ Radius Report, include the following:

Number of Sites	Regulatory Database	Comments
2	Resource Conservation and Recovery Act - Generator Facilities (RCRAGR05) sites	Listings are not considered to represent RECs for the Subject Property based on type of database, location relative to the Subject Property, violations status, and/or regulatory status.
3	Registered Storage Tank (UAST) sites	UAST sites are not necessarily indicative of a release or a material threat of release, therefore, these listings are not considered a threat to soil, groundwater and/or soil vapor conditions at the Subject Property, and, therefore, are not considered to represent RECs for the Subject Property. Registered Leaking UAST site is discussed below.
1	Registered Leaking Storage Tank (LUAST) sites	The nearest LUAST site identified was the Astra Ventures Inc. Property site (MPCA Leak Site file 16586) is located slightly over ¼ mile southeast of the Subject Property. A release of gasoline was reported in September 2006. Groundwater contamination has been reported in association with the

Number of Sites	Regulatory Database	Comments
		<p>release, and the file was granted regulatory closure by the MPCA in December 2006.</p> <p>Based on regulatory status of this LUAST listing and the information provided in the GeoSearch Radius Report, this listing is not considered a threat to soil, groundwater and/or soil vapor conditions at the Subject Property, and, therefore, is not considered to represent RECs for the Subject Property.</p>
1	Petroleum Brownfields Program (PBF) site	The PBF database lists Petroleum Brownfield Program sites with Development Response Action Plans. This listing is not considered to represent a REC for the Subject Property based on location and distance relative to the Subject Property and regulatory status.

No unmapped sites were identified in the GeoSearch™ Radius Report.

Wenck did not review State/County/City files for these database listings because sufficient information was available from other sources to determine the potential for RECs, CRECs, and/or HRECs relative to the Subject Property.

5.2 ADDITIONAL RECORD SOURCES

Additional record sources may be consulted when, in the judgment of the Environmental Professional, such additional records are reasonably ascertainable, sufficiently useful, accurate and complete, and are generally obtained pursuant to good commercial and customary practice. Such records may include local brownfield lists, or other local lists similar to those federal, state and tribal lists. Such sources may include local health or environmental departments, fire departments, planning departments, building permit or inspection departments, and other local pollution, water quality or utility companies.

5.2.1 Hennepin County Tax Information

Hennepin County property records were researched for the Subject Property. The Hennepin County parcel tax information is included as **Appendix C**. Since the Subject Property is vacant agricultural land, there are no hazardous waste records on file at the County for the Subject Property.

5.2.2 Brooklyn Park Records Review

Wenck contacted the City of Brooklyn Park regarding building, inspection, environmental, and fire records for the Subject Property. The City informed Wenck that the Subject Property is agricultural and that there are no environmental records, fire records, or building records for the Subject Property on file with the City.

5.3 HISTORICAL USE INFORMATION

5.3.1 Aerial Photographs

Aerial photographs were reviewed from 1937, 1940, 1947, 1953, 1957, 1966, 1969, 1979, 1984, 1991, 1997, 2000, 2003, 2008, and 2013. The aerial photographs are presented in **Appendix D**.

Year	Description
1937-1997	In 1937 through 1997 aerial photographs the Subject Property appears to be vacant and/or agricultural cropland. Surrounding, adjacent sites appear to consist of vacant and/or agricultural cropland.
2000	In the 2000 aerial photograph the Subject Property appears to be vacant and/or agricultural cropland. A four-lane highway is located south of the Subject Property. A road appears to be under construction to the west of the Subject Property. Adjacent properties to the north and east appear to be vacant and/or cropland.
2003	In the 2003 aerial photograph the Subject Property appears to be vacant and/or agricultural cropland. A four-lane highway is located south of the Subject Property. A paved road is located to the west of the Subject Property. Adjacent properties to the north and east appear to be vacant and/or cropland. Development is visible to the northwest of the Subject Property.
2008-2013	In the 2008 aerial photograph the Subject Property appears to be vacant and/or agricultural cropland. A four-lane highway is located south of the Subject Property. A paved road and a parking area beyond the road are located to the west of the Subject Property. A commercial development is located to the east of the Subject Property. The adjacent properties to the north appears to be vacant and/or cropland.

5.3.2 City Directories

City directories were not available for the Subject Property and surrounding properties.

5.3.3 Historical Maps

The Anoka, Minnesota USGS 15-minute series topographic map dated 1902 and 1955; and the Coon Rapids, Minnesota USGS 7.5-minute series topographic maps dated 1955, 1967, 1972, 1980, 1993, and 2013 show the area of the Subject Property.

There are no structures or other items shown on the Subject Property on the maps.

Additionally, real estate atlases for the years 1856, 1873, 1898, 1913 and 1914 were reviewed. According to the maps, the Subject Property has been in the Schreiber family since at least 1873.

The historical maps are included as **Appendix E**.

5.3.4 Fire Insurance Maps

According to Historical Information Gatherers, Inc. (HIG), fire insurance map coverage is not available in the research materials searched for the Subject Property.

5.4 PREVIOUS ENVIRONMENTAL REPORTS

No previous environmental reports have been prepared for the Subject Property.

6.0 Site Reconnaissance

6.1 SUBJECT PROPERTY OBSERVATIONS

Wenck staff Adam Zobel conducted a site reconnaissance on December 22, 2014. Mr. Zobel was unaccompanied during the site reconnaissance. Wenck staff visually observed the Subject Property to identify current land use, obtain evidence of past uses, and to identify surface characteristics of the Subject Property for the presence of recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions. Subject Property photographs are included in **Appendix F**.

The site reconnaissance consisted of visually observing the Subject Property. Wenck staff observed (from the Subject Property boundaries) the adjoining properties for evidence of RECs, CRECs, and HRECs, and for indications of past and current land use.

As noted in Section 3.1, the Subject Property consists of vacant agricultural land.

Electric, gas, telephone, and municipal storm and sanitary sewer service would be available to future development at the Subject Property. Wenck observed a main power-line along the southern boundary of the Subject Property.

6.1.1 Materials Management

Wenck observed no evidence of materials management at the Subject Property.

6.1.2 Solid and Hazardous Waste Management

Wenck observed no evidence of solid or hazardous waste generation at the Subject Property.

6.1.3 Aboveground and Underground Storage Tanks (ASTs/USTs)

Wenck observed no evidence of former or existing ASTs/USTs at the Subject Property.

6.1.4 Interior and Exterior Surface Observations

Wenck observed ponded water on the northeast corner of the Subject Property. Wenck did not observe other evidence of soil subsidence, surface staining, pooled liquids, stressed vegetation, fill soil piles, debris piles on the Subject Property.

6.1.5 Pits, Sumps, Oil-Water Separators, and Floor Drains

Wenck did not observe any pits, sumps, oil-water separators, or floor drains on the Subject Property at the time of the site reconnaissance.

6.1.6 Wastewater and Stormwater Discharge Systems

Wenck observed municipal storm sewer drains along Oak Grove Parkway.

6.1.7 Wells, Drywells, and Lagoons

Wenck did not observe the presence of domestic water wells, drywells or lagoons on the Subject Property. Wenck observed a peizometer at the middle of the Subject Property. The piezometer consists of a 2-inch diameter PVC pipe with a cap. No casing was built around the PVC well and no unique well number was observed on the peizometer. According to the GeoPlus Water Well Report two water wells are present adjacent to the Subject Property, one to the south and one to the northwest, within one-eighth of a mile from the Subject Property. The GeoPlus Water Well Report is attached in **Appendix G**.

6.1.8 Polychlorinated Biphenyls (PCBs) and Oil-Containing Equipment

Wenck did not observe the presence of any transformers or potentially PCB-containing equipment on the Subject Property at the time of the site reconnaissance.

7.0 Interviews

7.1 INTERVIEW WITH SUBJECT PROPERTY POTENTIAL BUYER

Date of Interview: December 22, 2014
Name: Mr. Curtis Martinson
Affiliation: Director of Business Development
Telephone Number: 952-288-2006

Wenck interviewed Mr. Martinson regarding the Subject Property. Mr. Martinson stated that Doran is interested in acquiring the Subject Property. Mr. Martinson stated that he is not aware of any environmental issues with the Subject Property. Mr. Martinson stated that he is aware of the piezometer located on the Property.

7.2 INTERVIEW WITH LOCAL FIRE DEPARTMENT

Date of Interview: December 23, 2014
Name: Mr. Bill Schreiber
Affiliation: Property Owner Representative
Years familiar with Subject Property: 1960's
Telephone Number: 651-260-0817

Mr. Bill Schreiber indicated that the Subject Property has been in his family since approximately 1867. He stated that Subject Property has always been farmland. Mr. Schreiber informed us that he is not aware of any chemical or petroleum tanks, leaks or spills at the Subject Property and is not aware of any herbicide, pesticide, and/or fertilizer releases at the Subject Property related to the farming operations. He stated that a piezometer is located near the center of the Subject Property. Mr. Schreiber is not aware of the well contractor, well owner, installation date, or monitoring details regarding the piezometer. Mr. Schreiber is not aware of any irrigation or domestic water wells on the Subject Property. Mr. Schreiber is not aware of any imported fill or dumping on the Subject Property.

8.0 Evaluation

8.1 DATA GAPS

Historical information was reviewed back to 1856. With the exception from 1980 to 1991, there were no data gaps greater than five to ten years from 1937 through 2013.

The interview, historical maps, city directories, aerial photographs, and previous environmental reports provide generally good corroborating information that allows an understanding of historical Subject Property use. A research summary is included as **Appendix H**.

Wenck considers the evaluation of the presence of recognized environmental conditions, controlled recognized environmental conditions, and historical recognized environmental conditions to be complete, based on the lack of identified changes in land use during the periods affected by any data gaps of more than five years. Therefore, we do not recommend additional investigation relative to the resolution of those data gaps, as we do not believe it would materially affect our conclusion.

8.2 REVEALED FINDINGS AND OPINIONS

Wenck was authorized by Doran to conduct this Phase I ESA of the Schreiber Parcel located southeast of the intersection of Hampshire Avenue North and Oak Grove Parkway, Brooklyn Park, Hennepin County, Minnesota (the Subject Property). The Subject Property consists of 10.85-acre vacant lot. Access to the Subject Property is from 96th Lane North.

Records indicate that the Subject Property has only been used for vacant and/or agricultural use. One piezometer for measuring groundwater levels was observed in the middle of the Subject Property. Wenck observed no indication of hazardous materials, waste generation or dumping at the Subject Property. Mapped sites of regulatory interest revealed within the GeoSearch™ Radius Report are not considered RECs, HRECs, or CRECs.

8.3 CONCLUSIONS

Wenck performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of the ASTM Phase I Standards and in accordance with the All Appropriate Inquiry Rule (40 CFR Part 312) of the property and improvements of the property located to the northeast of the intersection of Hampshire Avenue North and Oak Grove Parkway in Brooklyn Park, Hennepin County, Minnesota. Any exceptions to, or deletions from, the ASTM Phase I Standards are described in Section 2.3 and Section 2.4 of this report.

This ESA has revealed no evidence of RECs, CRECs, or HRECs in connection with the Subject Property.

Although not considered a REC, CREC, or HREC; this ESA has revealed the following item that constitutes environmental business risk:

- Wenck observed a 2-inch diameter PVC piezometer (observation well) near the center of the Subject Property. No unique well number was available for the piezometer and the Subject Property Owner representative, Mr. Bill Schreiber, is not aware of the contractor that installed the piezometer or the purpose of the piezometer. According to the Minnesota Department of Health, a well must be in use, be under a maintenance permit, or be sealed by a licensed contractor.

9.0 Non-Scope Considerations

Assessments of potential environmental issues or conditions at the Subject Property that may relate to commercial real estate activities, but were not part of this scope of work include the following:

- Asbestos Survey
- Radon Gas Survey
- Lead-Based Paint Assessment
- Lead in Drinking Water Evaluation
- Wetland Delineation
- Regulatory Compliance Audit
- Cultural and Historic Resources Review
- Industrial Hygiene Review
- Health and Safety Assessment
- Ecological Resources Evaluation
- Endangered Species Survey
- Indoor Air Quality Evaluation
- Mold Investigation
- High Voltage Power Lines Assessment

This list is not intended to be all-inclusive and is not intended to imply significance of further investigation into these non-scope items.

10.0 References

American Society for Testing and Materials, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13*, West Conshohocken, PA, 2013.

University of Minnesota, *Geologic Atlas, Hennepin County, Minnesota*, 1989.

Other materials referenced in this report are included in the Appendices.

11.0 Signature Page

We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in 312.10 of 40 CFR Part 312, and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by:



Alicia Dowdy
Environmental Scientist

Reviewed by:



Adam P. Zobel
Senior Environmental Project Manager

12.0 Qualifications

Company Experience

WENCK ASSOCIATES, INC. is a full-service environmental consulting firm that specializes in providing comprehensive environmental, regulatory, and safety guidance for our client's real estate asset protection, redevelopment and development needs. Collectively, Wenck offers our clients over 25 years of experience, depth of technical and regulatory knowledge and expertise in the following service areas:

- Environmental Assessment Services (Phase I and II)
- Site Preparation/Planning Services
- Integrated Site Remediation and Risk-based Response Actions
- Storage Tank Removal, Replacement and Compliance
- Stormwater Management Plans and Permitting (NPDES requirements, etc.)
- Wetlands Delineation and Mitigation
- Environmental Permitting and Compliance
- Asbestos and Lead Identification and Abatement
- Voluntary Cleanup Programs and Guidance on Public Funding Mechanisms for Brownfield Redevelopment
- Indoor Air Quality Assessment
- Facility Layout Review for Environmental and Safety Efficiency
- Environmental Impact Assessments (EIA) and Statements (EIS), Environmental Assessment Worksheets (EAW), Alternative Urban Areawide Review (AUAR)
- Traffic Engineering
- Pollution Prevention Plans
- Greenhouse Gas Services

Wenck strives to provide our clients with strategic, high quality and cost-effective services that are customized to their specific needs. For more extensive information on the services we provide please refer to www.wenck.com.

Individual Bios

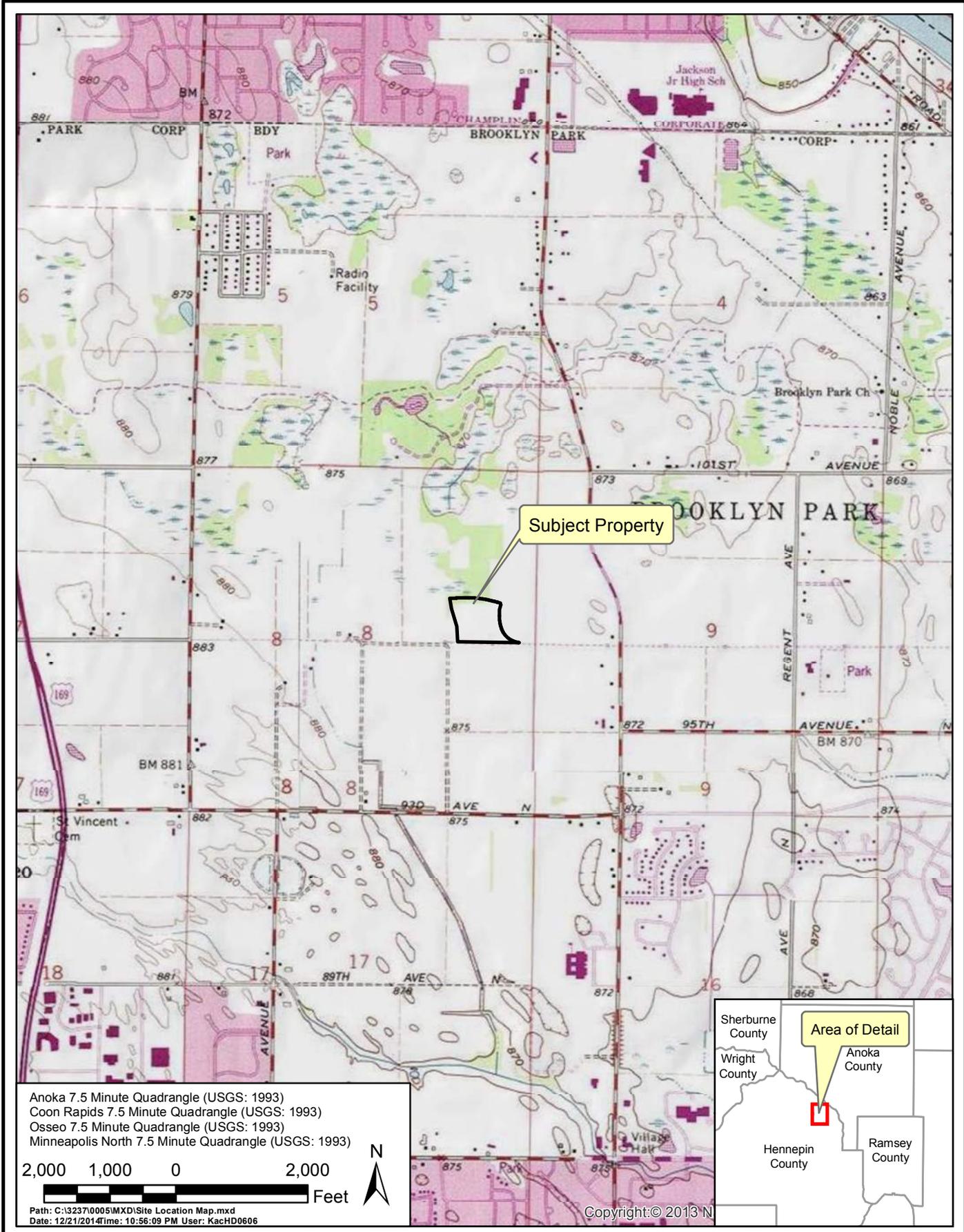
Alicia Dowdy

Ms. Dowdy is an Environmental Scientist at Wenck Associates, Inc. She has over 10 years of experience in the environmental field, including environmental review, wetlands, and managing oil and gas projects for the State of Alaska. Ms. Dowdy has degrees in Plant Biology and Ecology, Evolution, and Behavior from the University of Minnesota, Twin Cities.

Adam Zobel

Mr. Zobel is an Environmental Project Manager within the Real Estate Resources Group at Wenck Associates, Inc. He has 12 years of environmental consulting experience assisting clients with transaction-based environmental due diligence, brownfield redevelopment, petroleum and non-petroleum release investigations, and remediation. Mr. Zobel holds a Bachelor of Arts in Biology with a Concentration in Business Management Studies from St. Olaf College in Northfield, Minnesota.

Figures



Anoka 7.5 Minute Quadrangle (USGS: 1993)
 Coon Rapids 7.5 Minute Quadrangle (USGS: 1993)
 Osseo 7.5 Minute Quadrangle (USGS: 1993)
 Minneapolis North 7.5 Minute Quadrangle (USGS: 1993)

2,000 1,000 0 2,000
 Feet

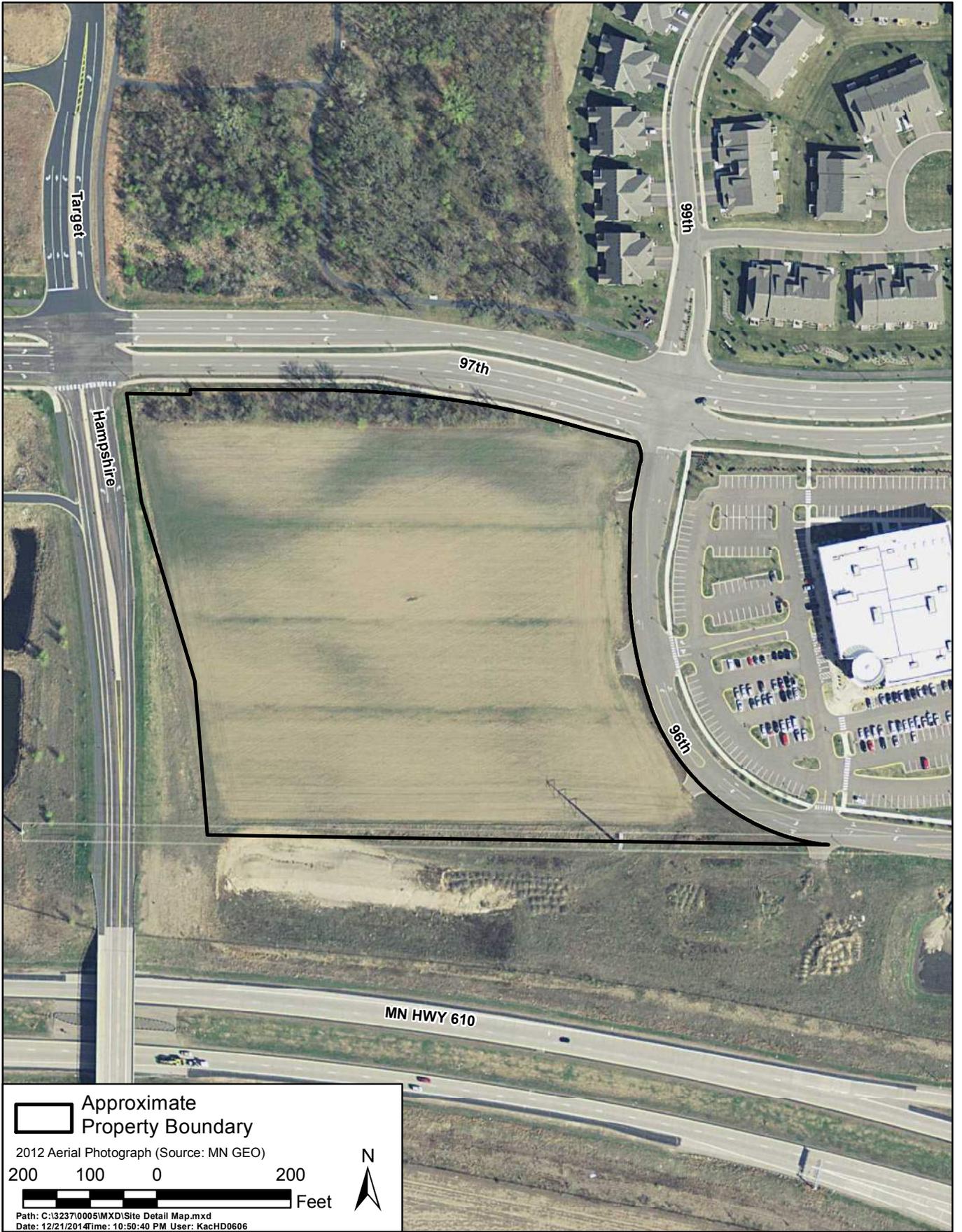
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 Date: 12/21/2014 Time: 10:56:09 PM User: KacHD0606

Copyright: © 2013 N

DORAN COMPANIES
 Site Location Map

Wenck
 Engineers - Scientists
 Business Professionals
 www.wenck.com
 1800 Pioneer Creek Center
 Maple Plain, MN 55359-0429
 1-800-472-2232

DEC 2014
 Figure 1



DORAN COMPANIES

Site Detail Map


Engineers - Scientists
Business Professionals
www.wenck.com

Wenck

1800 Pioneer Creek Center
Maple Plain, MN 55359-0429
1-800-472-2232

DEC 2014

Figure 2

Appendix A

User Questionnaire

ALL APPROPRIATE INQUIRY USER QUESTIONNAIRE

Property Description/Address: 10.85 acre Schreiber Parcel, Brooklyn Park, MN

This questionnaire must be completed by the person or entity for whose benefit the investigation is being conducted (the "User" of the report) and given to the environmental consultant. No investigation is required to complete this questionnaire; it should be completed with whatever information the User has at this time.

1. Environmental cleanup liens. Are you aware of any environmental cleanup liens on the property that are filed or recorded under federal, tribal, state or local laws?

Yes Explain: _____

X No

2. Activity and land use limitations (AULs). Are you aware of any AULs, such as engineering controls (e.g., vapor controls, asphalt caps, etc.), land use restrictions or institutional controls (e.g., recorded notices of contamination) that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Yes Explain: _____

X No

3. Specialized knowledge or experience. Do you have any specialized knowledge or experience related to the property or nearby properties that might indicate the presence or actual or potential contamination at the property? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge or the chemicals and processes used by this type of business?

Yes Explain: _____

X No

4. Relationship of the purchase price to fair market value. (a) Does the purchase price being paid for this property reasonably reflect the fair market value of the property? *Note: An appraisal is not required. Also, while the User must make this determination, the User is not required to disclose it.*

X Yes

No Explain: _____

Purchase price has not been determined.

We have made or will make this determination, but do not wish to disclose it.

(b) If you conclude that there is a difference between the purchase price and fair market value, could the lower purchase price be attributable to contamination that is known or believed to be present at the property? *Note: Whether or not disclosed to the consultant, if the purchase price is*

less than fair market value, the User should document the explanation for the difference, in writing, and retain the explanation.

Yes Explain: _____

No

We have made or will make this determination, but do not wish to disclose it.

5. Commonly known or reasonably ascertainable information. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional identify conditions indicative of releases or threatened releases? Examples: Do you know of past uses of the property that could have resulted in contamination? Do you know of any spills or other chemical releases that have taken place at the property? Do you know of any environmental cleanups that have taken place at the property?

Yes Explain: _____

X No

6. Obvious presence or likely presence of contamination. Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes Explain: _____

X No

Questionnaire completed by:

Signature: _____

Name: _____

Title: _____

Date: _____


Curtis Martinson
Director of Business Development
12/22/14

Appendix B

GeoSearch™ Radius Report

Radius Report

[Satellite view](#)

Target Property:

Schreiber Parcel

**Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, Hennepin County, Minnesota 55445**

Prepared For:

Historical Information Gatherers

Order #: 44729

Job #: 97802

Project #: 1410894

Date: 12/18/2014

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Target Property Summary	1
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Unlocatable Summary	27
Environmental Records Definitions	29
Unlocatable Report	See Attachment
Zip Report	See Attachment

Disclaimer

This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquires Rule (40 CFR §312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal, state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR §312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.

The information provided in this report was obtained from a variety of public sources. GeoSearch cannot ensure and makes no warranty or representation as to the accuracy, reliability, quality, errors occurring from data conversion or the customer's interpretation of this report. This report was made by GeoSearch for exclusive use by its clients only. Therefore, this report may not contain sufficient information for other purposes or parties. GeoSearch and its partners, employees, officers And independent contractors cannot be held liable For actual, incidental, consequential, special or exemplary damages suffered by a customer resulting directly or indirectly from any information provided by GeoSearch.

Target Property Summary

Schreiber Parcel

**Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, Hennepin County, Minnesota 55445**

USGS Quadrangle: **Coon Rapids, MN**

Target Property Geometry: **Area**

Target Property Longitude(s)/Latitude(s):

**(-93.366494, 45.132240), (-93.366343, 45.131422), (-93.366279, 45.130241), (-93.362374, 45.130272),
(-93.363060, 45.130605), (-93.363425, 45.131074), (-93.363490, 45.131589), (-93.363275, 45.132043),
(-93.364777, 45.132300), (-93.366494, 45.132240)**

County/Parish Covered:

Hennepin (MN)

Zipcode(s) Covered:

Minneapolis MN: 55443, 55445

State(s) Covered:

MN

***Target property is located in Radon Zone 1.**

**Zone 1 areas have a predicted average indoor radon screening level greater than 4 pCi/L
(picocuries per liter).**

This report may have unlocatable records. Please see the Unlocatables Report, attached to this file.

Database Findings Summary

FEDERAL LISTING

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	0	0	TP/AP
BIENNIAL REPORTING SYSTEM	BRS	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	TP/AP
EPA DOCKET DATA	DOCKETS	0	0	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0	0	TP/AP
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSMN	0	0	TP/AP
FACILITY REGISTRY SYSTEM	FRSMN	0	0	TP/AP
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR05	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	0	0	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR05	0	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	PADS	0	0	TP/AP
PERMIT COMPLIANCE SYSTEM	PCSR05	0	0	TP/AP
RCRA SITES WITH CONTROLS	RCRASC	0	0	TP/AP
CERCLIS LIENS	SFLIENS	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	SSTS	0	0	TP/AP
TOXICS RELEASE INVENTORY	TRI	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	0	0	TP/AP
NO LONGER REGULATED RCRA GENERATOR FACILITIES	NLRRCRAG	0	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR FACILITIES	RCRAGR05	2	0	0.1250
HISTORICAL GAS STATIONS	HISTPST	0	0	0.2500
BROWNFIELDS MANAGEMENT SYSTEM	BF	0	0	0.5000
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION & LIABILITY INFORMATION SYSTEM	CERCLIS	0	0	0.5000
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0	0	0.5000
NO FURTHER REMEDIAL ACTION PLANNED SITES	NFRAP	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT	0	0	0.5000
OPEN DUMP INVENTORY	ODI	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	DNPL	0	0	1.0000
DEPARTMENT OF DEFENSE SITES	DOD	0	0	1.0000
FORMERLY USED DEFENSE SITES	FUDS	0	0	1.0000

Database Findings Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	0	0	1.0000
NATIONAL PRIORITIES LIST	NPL	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	PNPL	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	0	0	1.0000
RECORD OF DECISION SYSTEM	RODS	0	0	1.0000
SUB-TOTAL		2	0	

Database Findings Summary

STATE (MN) LISTING

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
PERMITTED AIR FACILITIES	AIRS	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	TP/AP
FEEDLOTS	FEEDLOT	0	0	TP/AP
SPILLS LISTING	PCASPILLS	0	0	TP/AP
SOLID WASTE UTILIZATION PROJECTS	SWUP	0	0	TP/AP
TIER TWO FACILITY LISTING	TIERII	0	0	TP/AP
WATER DISCHARGE PERMITS	WDP	0	0	TP/AP
BULK STORAGE PERMITS	BULKSTORAGE	0	0	0.2500
REGISTERED DRYCLEANING FACILITIES	CLEANERS	0	0	0.2500
SITES WITH INSTITUTIONAL CONTROLS	IC	0	0	0.2500
PERMITTED BY RULE LANDFILLS	PBRLE	0	0	0.2500
REGISTERED STORAGE TANKS	UAST	3	0	0.2500
AGRICULTURAL SPILLS LISTING	AGSPILLS	0	0	0.5000
CONCENTRATED ANIMAL FEEDING OPERATIONS	CAFO	0	0	0.5000
CLOSED LANDFILLS	CLF	0	0	0.5000
AGRICULTURAL CONTINGENCY SITES	CONTINGENCIES	0	0	0.5000
REGISTERED LEAKING STORAGE TANKS	LUAST	1	0	0.5000
PETROLEUM BROWNFIELDS PROGRAM SITES	PBF	1	0	0.5000
POTENTIAL VOLUNTARY INVESTIGATION AND CLEANUP PROGRAM SITES	PVICP	0	0	0.5000
STATE ASSESSMENT SITES	SAS	0	0	0.5000
SITE RESPONSE SECTION DATABASE	SRS	0	0	0.5000
OPEN SOLID WASTE FACILITIES	SWF	0	0	0.5000
UNPERMITTED DUMP SITES	UNPERMDUMPS	0	0	0.5000
VOLUNTARY INVESTIGATION AND CLEANUP PROGRAM SITES	VICP	0	0	0.5000
CONTAMINATED SOIL TREATMENT FACILITIES	CSTF	0	0	1.0000
SUPERFUND SITE INFORMATION LISTING	SF	0	0	1.0000
SUB-TOTAL		5	0	

Database Findings Summary

TRIBAL LISTING

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	USTR05	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	LUSTR05	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	ODINDIAN	0	0	0.5000
INDIAN RESERVATIONS	INDIANRES	0	0	1.0000
SUB-TOTAL				
		0	0	
TOTAL				
		7	0	

Locatable Database Findings

FEDERAL LISTING

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200		NS	NS	NS	NS	NS	0
BRS	0.0200		NS	NS	NS	NS	NS	0
CDL	0.0200		NS	NS	NS	NS	NS	0
DOCKETS	0.0200		NS	NS	NS	NS	NS	0
EC	0.0200		NS	NS	NS	NS	NS	0
ERNSMN	0.0200		NS	NS	NS	NS	NS	0
FRSMN	0.0200		NS	NS	NS	NS	NS	0
HMIRSR05	0.0200		NS	NS	NS	NS	NS	0
ICIS	0.0200		NS	NS	NS	NS	NS	0
ICISNPDES	0.0200		NS	NS	NS	NS	NS	0
MLTS	0.0200		NS	NS	NS	NS	NS	0
NPDES05	0.0200		NS	NS	NS	NS	NS	0
PADS	0.0200		NS	NS	NS	NS	NS	0
PCSR05	0.0200		NS	NS	NS	NS	NS	0
RCRASC	0.0200		NS	NS	NS	NS	NS	0
SFLIENS	0.0200		NS	NS	NS	NS	NS	0
SSTS	0.0200		NS	NS	NS	NS	NS	0
TRI	0.0200		NS	NS	NS	NS	NS	0
TSCA	0.0200		NS	NS	NS	NS	NS	0
NLRRCRAG	0.1250		0	NS	NS	NS	NS	0
RCRAGR05	0.1250		2	NS	NS	NS	NS	2
HISTPST	0.2500		0	0	NS	NS	NS	0
BF	0.5000		0	0	0	NS	NS	0
CERCLIS	0.5000		0	0	0	NS	NS	0
LUCIS	0.5000		0	0	0	NS	NS	0
NFRAP	0.5000		0	0	0	NS	NS	0
NLRRCRAT	0.5000		0	0	0	NS	NS	0
ODI	0.5000		0	0	0	NS	NS	0
RCRAT	0.5000		0	0	0	NS	NS	0
DNPL	1.0000		0	0	0	0	NS	0
DOD	1.0000		0	0	0	0	NS	0
FUDS	1.0000		0	0	0	0	NS	0
NLRRCRAC	1.0000		0	0	0	0	NS	0
NPL	1.0000		0	0	0	0	NS	0
PNPL	1.0000		0	0	0	0	NS	0
RCRAC	1.0000		0	0	0	0	NS	0

Locatable Database Findings

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
RODS	1.0000		0	0	0	0	NS	0
SUB-TOTAL			2	0	0	0	0	2

Locatable Database Findings

STATE (MN) LISTING

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRS	0.0200		NS	NS	NS	NS	NS	0
CDL	0.0200		NS	NS	NS	NS	NS	0
FEEDLOT	0.0200		NS	NS	NS	NS	NS	0
PCASPILLS	0.0200		NS	NS	NS	NS	NS	0
SWUP	0.0200		NS	NS	NS	NS	NS	0
TIERII	0.0200		NS	NS	NS	NS	NS	0
WDP	0.0200		NS	NS	NS	NS	NS	0
BULKSTORAGE	0.2500		0	0	NS	NS	NS	0
CLEANERS	0.2500		0	0	NS	NS	NS	0
IC	0.2500		0	0	NS	NS	NS	0
PBRLF	0.2500		0	0	NS	NS	NS	0
UAST	0.2500		1	2	NS	NS	NS	3
AGSPILLS	0.5000		0	0	0	NS	NS	0
CAFO	0.5000		0	0	0	NS	NS	0
CLF	0.5000		0	0	0	NS	NS	0
CONTINGENCIES	0.5000		0	0	0	NS	NS	0
LUAST	0.5000		0	0	1	NS	NS	1
PBF	0.5000		0	1	0	NS	NS	1
PVICP	0.5000		0	0	0	NS	NS	0
SAS	0.5000		0	0	0	NS	NS	0
SRS	0.5000		0	0	0	NS	NS	0
SWF	0.5000		0	0	0	NS	NS	0
UNPERMDUMPS	0.5000		0	0	0	NS	NS	0
VICP	0.5000		0	0	0	NS	NS	0
CSTF	1.0000		0	0	0	0	NS	0
SF	1.0000		0	0	0	0	NS	0
SUB-TOTAL			1	3	1	0	0	5

Locatable Database Findings

TRIBAL LISTING

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
USTR05	0.2500		0	0	NS	NS	NS	0
LUSTR05	0.5000		0	0	0	NS	NS	0
ODINDIAN	0.5000		0	0	0	NS	NS	0
INDIANRES	1.0000		0	0	0	0	NS	0

SUB-TOTAL			0	0	0	0	0	0
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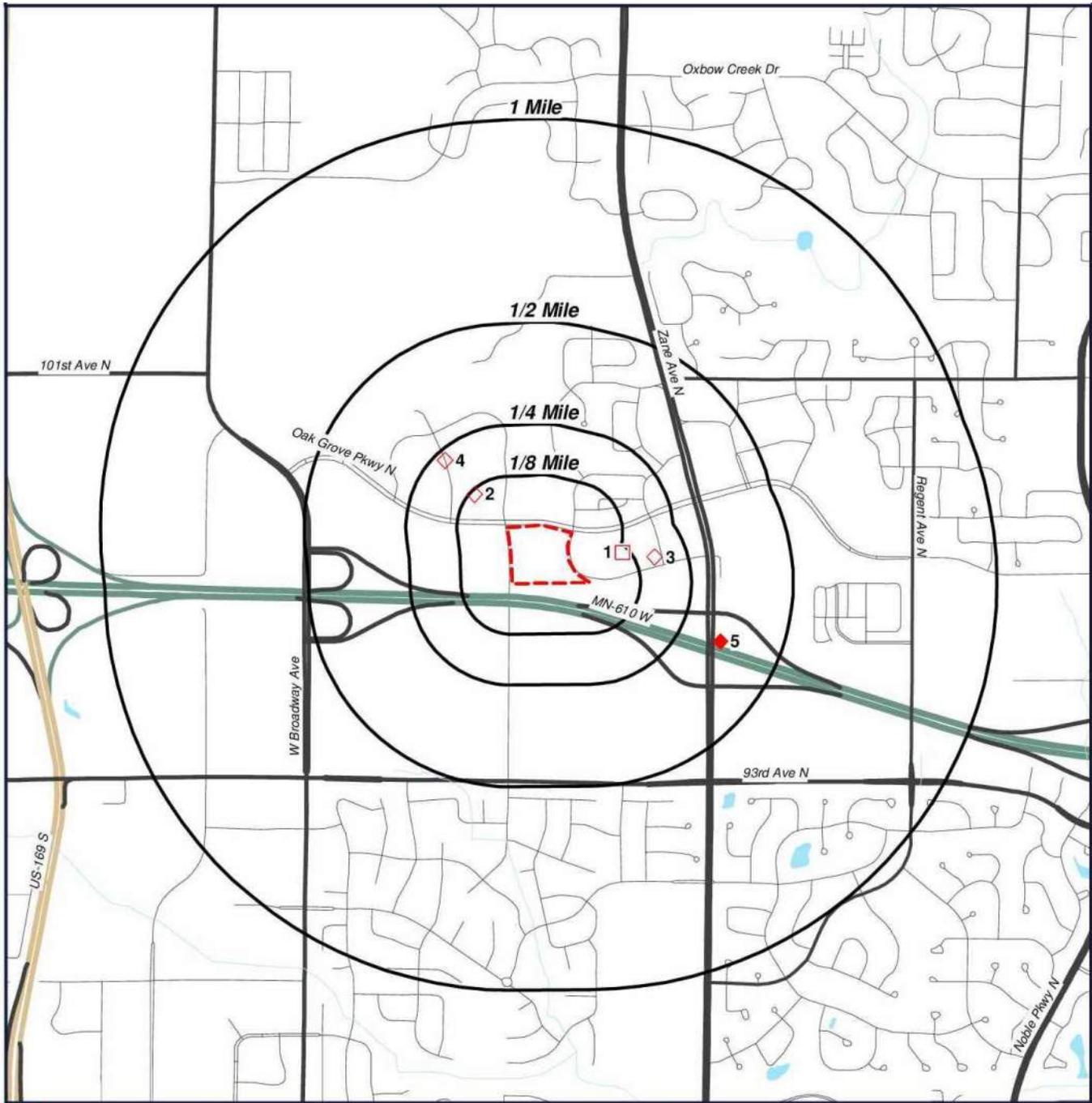
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NOTES:

NS = NOT SEARCHED

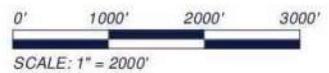
TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

Radius Map 1



- Target Property (TP)
- RCRAGR05
- UAST
- LUAST

Schreiber Parcel
Hampshire Avenue North/Oak
Grove Parkway
Brooklyn Park, Minnesota
55445



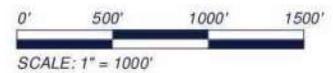
[Click here to access Satellite view](#)

Radius Map 2



- Target Property (TP)
- RCRAGR05
- UAST
- LUAST

Schreiber Parcel
Hampshire Avenue North/Oak
Grove Parkway
Brooklyn Park, Minnesota
55445



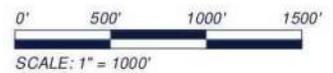
[Click here to access Satellite view](#)

Ortho Map



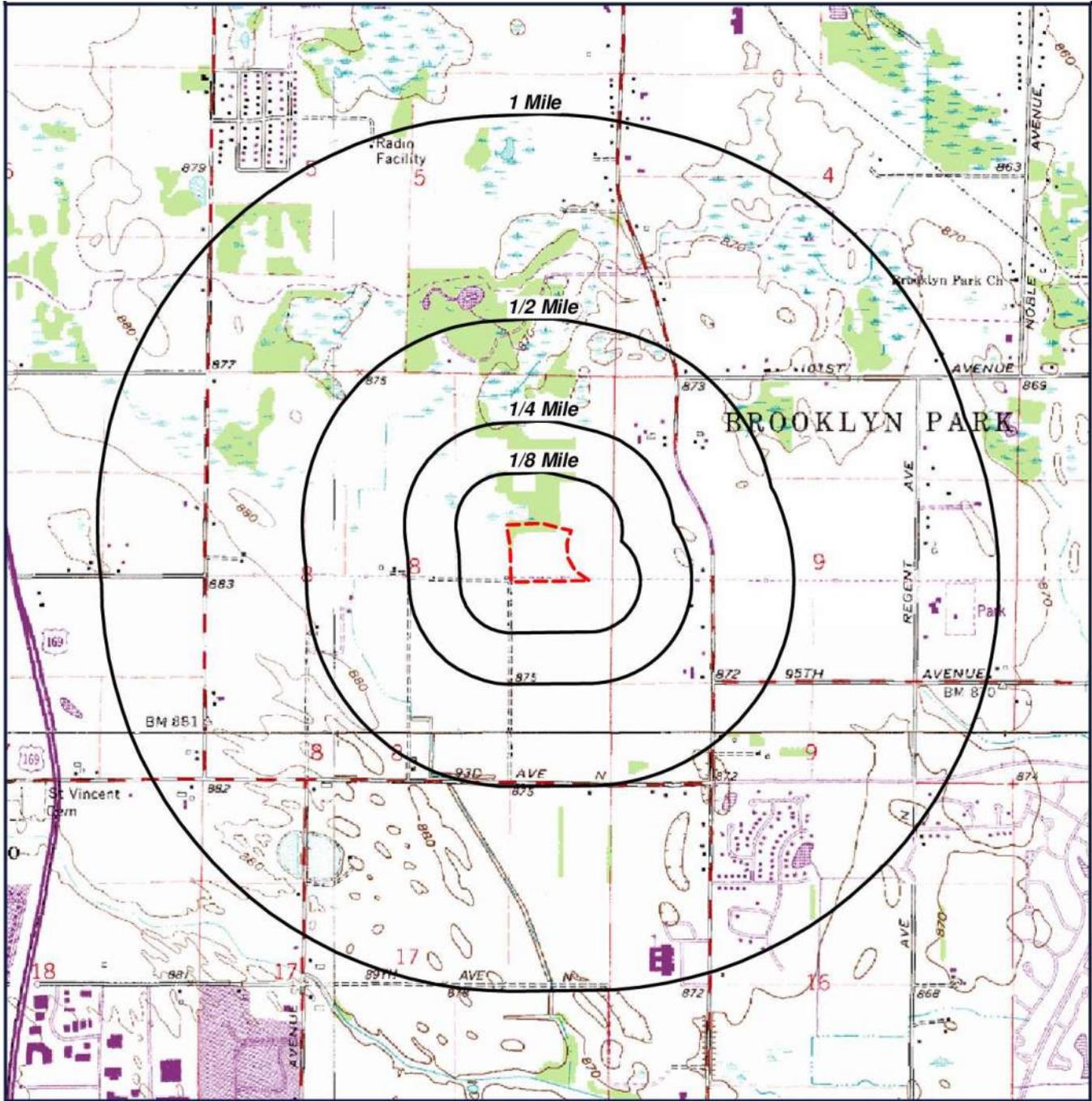
- Target Property (TP)
- RCRAGR05
- UAST
- LUAST

**Quadrangle(s): Coon Rapids
Schreiber Parcel
Hampshire Avenue North/Oak
Grove Parkway
Brooklyn Park, Minnesota
55445**



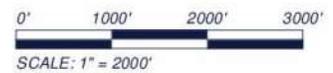
[Click here to access Satellite view](#)

Topographic Map



 Target Property (TP)

**Quadrangle(s): Coon Rapids
Schreiber Parcel
Hampshire Avenue North/Oak
Grove Parkway
Brooklyn Park, Minnesota
55445**



[Click here to access Satellite view](#)

Report Summary of Locatable Sites

Map ID#	Database Name	Site ID#	Distance From Site	Site Name	Address	City, Zip Code	PAGE #
1	RCRAGR05	MNS000144717	0.12 E	CUB FOODS 1654	9655 COLORADO LN N	BROOKLYN PARK, 55445	15
1	RCRAGR05	MNS000135624	0.12 E	CUB 31684	9655 COLORADO LN N	BROOKLYN PARK, 55445	17
2	UAST	121839	0.12 NW	TARGET TECHNOLOGY BACKUP	6900 TARGET PKWY N	BROOKLYN PARK, 55445	19
3	UAST	124338	0.18 E	HOLIDAY STATIONSTORE #701	9605 COLORADO LN	BROOKLYN PARK, 55443	21
4	UAST	121758	0.23 NW	TARGET STORES NORTH CAMPUS DISTR	7000 TARGET PKWY	BROOKLYN PARK, 55443	23
4	PBF	244345PBF	0.23 NW	TARGET OPERATIONS	7000 TARGET PKWY N	BROOKLYN PARK, 55445	26
5	LUAST	16586	0.36 SE	ASTRA VENTURES INC PROPERTY	HIGHWAY 610 AND ZANE AVE	BROOKLYN PARK, 55443	27

Resource Conservation & Recovery Act - Generator Facilities (RCRAGR05)

MAP ID# 1

Distance from Property: 0.12 mi. E

FACILITY INFORMATION

EPA ID#: MNS000144717

NAME: CUB FOODS 1654

ADDRESS: 9655 COLORADO LN N

BROOKLYN PARK, MN 55445

CONTACT NAME: BOB DENINNO

CONTACT ADDRESS: PO BOX 20 DEPT 72405

BOISE ID 837260020

CONTACT PHONE: 208-395-4790

NON-NOTIFIER: NOT A NON-NOTIFIER

DATE RECEIVED BY AGENCY: 04/16/2009

OWNER TYPE: NOT REPORTED

OWNER NAME: NOT REPORTED

OPERATOR TYPE: PRIVATE

OPERATOR NAME: CUB FOODS CORPORATE OFFICE

CERTIFICATION

CERTIFICATION NAME:

BOB DENINNO

CERTIFICATION TITLE:

PROJECT MANAGER DEPT 72405

CERTIFICATION SIGNED DATE:

04/17/2007

INDUSTRY CLASSIFICATION (NAICS)

44719 - OTHER GASOLINE STATIONS

SITE HISTORY (INCLUDES GENERATORS AND NON-GENERATORS)

DATE RECEIVED BY AGENCY: 04/16/2009

NAME: CUB FOODS 1654

GENERATOR CLASSIFICATION: LARGE QUANTITY GENERATOR

CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR** LAST UPDATED DATE: **02/17/2010**

SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**

TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**

TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**

NON TDSFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**

CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**

UNDERGROUND INJECTION: **NO**

MIXED WASTE GENERATOR: **NO**

UNIVERSAL WASTE DESTINATION FACILITY: **NO**

RECYCLER: **NO**

TRANSFER FACILITY: **NO**

TRANSPORTER: **NO**

USED OIL FUEL BURNER: **NO**

ONSITE BURNER EXEMPTION: **NO**

USED OIL PROCESSOR: **NO**

FURNACE EXEMPTION: **NO**

USED OIL FUEL MARKETER TO BURNER: **NO**

USED OIL REFINER: **NO**

SPECIFICATION USED OIL MARKETER: **NO**

USED OIL TRANSFER FACILITY: **NO**

USED OIL TRANSPORTER: **NO**

COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS - **NO EVALUATIONS REPORTED** -

VIOLATIONS - **NO VIOLATIONS REPORTED** -

ENFORCEMENTS - **NO ENFORCEMENTS REPORTED** -

HAZARDOUS WASTE

**Resource Conservation & Recovery Act - Generator Facilities
(RCRAGR05)**

- NO HAZARDOUS WASTE INFORMATION REPORTED -

UNIVERSAL WASTE - NO UNIVERSAL WASTE REPORTED -

CORRECTIVE ACTION AREA - NO CORECTIVE ACTION AREA INFORMATION REPORTED -

CORRECTIVE ACTION EVENT - NO CORECTIVE ACTION EVENT REPORTED -

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Resource Conservation & Recovery Act - Generator Facilities (RCRAGR05)

MAP ID# 1

Distance from Property: 0.12 mi. E

FACILITY INFORMATION

EPA ID#: MNS000135624

NAME: CUB 31684

ADDRESS: 9655 COLORADO LN N
BROOKLYN PARK, MN 55445

CONTACT NAME: BOB DENINNO

CONTACT ADDRESS: PO BOX 20 DEPT 72405
BOISE ID 837260020

CONTACT PHONE: 208-395-4790

NON-NOTIFIER: NOT A NON-NOTIFIER

DATE RECEIVED BY AGENCY: 04/29/2008

OWNER TYPE: NOT REPORTED

OWNER NAME: NOT REPORTED

OPERATOR TYPE: PRIVATE

OPERATOR NAME: SUPERVALU INC

CERTIFICATION

CERTIFICATION NAME:

BOB DENINNO

CERTIFICATION TITLE:

PROJECT MANAGER DEPT 72405

CERTIFICATION SIGNED DATE:

04/30/2007

INDUSTRY CLASSIFICATION (NAICS)

44511 - SUPERMARKETS AND OTHER GROCERY (EXCEPT CONVENIENCE) STORES

SITE HISTORY (INCLUDES GENERATORS AND NON-GENERATORS)

DATE RECEIVED BY AGENCY: 04/29/2008

NAME: CUB 31684

GENERATOR CLASSIFICATION: LARGE QUANTITY GENERATOR

CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR** LAST UPDATED DATE: **02/17/2010**

SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**

TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**

TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**

NON TDSFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**

CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**

UNDERGROUND INJECTION: **NO**

MIXED WASTE GENERATOR: **NO**

UNIVERSAL WASTE DESTINATION FACILITY: **NO**

RECYCLER: **NO**

TRANSFER FACILITY: **NO**

TRANSPORTER: **NO**

USED OIL FUEL BURNER: **NO**

ONSITE BURNER EXEMPTION: **NO**

USED OIL PROCESSOR: **NO**

FURNACE EXEMPTION: **NO**

USED OIL FUEL MARKETER TO BURNER: **NO**

USED OIL REFINER: **NO**

SPECIFICATION USED OIL MARKETER: **NO**

USED OIL TRANSFER FACILITY: **NO**

USED OIL TRANSPORTER: **NO**

COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS - **NO EVALUATIONS REPORTED** -

VIOLATIONS - **NO VIOLATIONS REPORTED** -

ENFORCEMENTS - **NO ENFORCEMENTS REPORTED** -

HAZARDOUS WASTE

**Resource Conservation & Recovery Act - Generator Facilities
(RCRAGR05)**

- NO HAZARDOUS WASTE INFORMATION REPORTED -

UNIVERSAL WASTE - NO UNIVERSAL WASTE REPORTED -

CORRECTIVE ACTION AREA - NO CORECTIVE ACTION AREA INFORMATION REPORTED -

CORRECTIVE ACTION EVENT - NO CORECTIVE ACTION EVENT REPORTED -

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Registered Storage Tanks (UAST)

MAP ID# 2

Distance from Property: 0.12 mi. NW

SITE INFORMATION

ID: 121839

NAME: TARGET TECHNOLOGY BACKUP

ADDRESS: 6900 TARGET PKWY N
BROOKLYN PARK, MN 55445
HENNEPIN COUNTY

TANK INFORMATION

TANK NUMBER: 001

REGISTRATION DATE: 01/03/2002

TANK CAPACITY: 10000

TANK STATUS: THE TANK IS ACTIVE AND BEING USED.

STORED PRODUCT: DIESEL

ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF STI-P3.

TANK CORROSION PROTECTION: THE PIPING HAS ANODE CATHODIC PROTECTION.

PIPE CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.

PIPE MATERIAL TYPE: PIPING MATERIAL IS FIBERGLASS/PVC/SYNTHETIC/RUBBER

SECONDARY CONTAINMENT TANK TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.

SECONDARY CONTAINMENT PIPE TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.

TANK DISPENSER TYPE: THE TANK HAS A SUBMERSIBLE TYPE DISPENSER.

PIPE SPILL CONTAINMENT: YES

TANK RELEASE DETECTION MEASURES

DAILY STICKING: NONE

TIGHTNESS TEST: NONE

MANUAL TANK GAUGING: NONE

AUTOMATIC TANK GAUGING: YES

SOIL VAPOR MONITORING: NONE

GROUNDWATER MONITORING: NONE

INTERSTITIAL MONITORING: NONE

RECONCILIATION (SIR) TANK LEAK DETECTION: NONE

STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: NONE

RELEASE DETECTION OTHER: NONE

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: NONE

ANNUAL TIGHTNESS TEST: NONE

VAPOR MONITORING: NONE

GROUND WATER MONITORING: NONE

INTERSTITIAL MONITORING: YES

THREE-YEAR TIGHTNESS TEST: NONE

EUROPEAN SUCTION: NONE

OTHER RELEASE DETECTION: NONE

STATISTICAL INVENTORY RECONCILIATION (SIR): NONE

OVERFILL PROTECTION

NONE INDICATED: NONE

BALL FLOAT: NONE

AUTOMATIC SHUTOFF DEVICE: YES

TYPE UNKNOWN: NONE

ALARM: NONE

Registered Storage Tanks (UAST)

INTEREST TYPE:

LAST UPDATE:

DELETED TANK SITE

09/14/06

WEBSITE LINK:

http://cf.pca.state.mn.us/programs/lust_pTanks2.cfm?site=121839&pg=TS

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Registered Storage Tanks (UAST)

MAP ID# 3

Distance from Property: 0.18 mi. E

SITE INFORMATION

ID: 124338

NAME: HOLIDAY STATIONSTORE #701

ADDRESS: 9605 COLORADO LN
BROOKLYN PARK, MN 55443
HENNEPIN COUNTY

TANK INFORMATION

TANK NUMBER: 001

REGISTRATION DATE: 02/21/2008

TANK CAPACITY: 20000

TANK STATUS: THE TANK IS ACTIVE AND BEING USED.

STORED PRODUCT: E-10 - 10% ETHANOL & 90% GAS

ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF FIBERGLASS

TANK CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THIS TANK.

PIPE CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.

PIPE MATERIAL TYPE: PIPING MATERIAL IS FIBERGLASS

SECONDARY CONTAINMENT TANK TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.

SECONDARY CONTAINMENT PIPE TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.

TANK DISPENSER TYPE: THE TANK HAS A SUBMERSIBLE TYPE DISPENSER.

PIPE SPILL CONTAINMENT: YES

TANK RELEASE DETECTION MEASURES

DAILY STICKING: NONE

TIGHTNESS TEST: NONE

MANUAL TANK GAUGING: NONE

AUTOMATIC TANK GAUGING: YES

SOIL VAPOR MONITORING: NONE

GROUNDWATER MONITORING: NONE

INTERSTITIAL MONITORING: YES

RECONCILIATION (SIR) TANK LEAK DETECTION: YES

STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: NONE

RELEASE DETECTION OTHER: NONE

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: YES

ANNUAL TIGHTNESS TEST: NONE

VAPOR MONITORING: NONE

GROUND WATER MONITORING: NONE

INTERSTITIAL MONITORING: NONE

THREE-YEAR TIGHTNESS TEST: NONE

EUROPEAN SUCTION: NONE

OTHER RELEASE DETECTION: NONE

STATISTICAL INVENTORY RECONCILIATION (SIR): NONE

OVERFILL PROTECTION

NONE INDICATED: NONE

BALL FLOAT: YES

AUTOMATIC SHUTOFF DEVICE: NONE

TYPE UNKNOWN: NONE

ALARM: NONE

Registered Storage Tanks (UAST)

TANK INFORMATION

TANK NUMBER: 002
REGISTRATION DATE: 02/21/2008
TANK CAPACITY: 24000
TANK STATUS: THE TANK IS ACTIVE AND BEING USED.
STORED PRODUCT: DIESEL
ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF FIBERGLASS
TANK CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THIS TANK.
PIPE CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.
PIPE MATERIAL TYPE: PIPING MATERIAL IS FIBERGLASS
SECONDARY CONTAINMENT TANK TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.
SECONDARY CONTAINMENT PIPE TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.
TANK DISPENSER TYPE: THE TANK HAS A SUBMERSIBLE TYPE DISPENSER.
PIPE SPILL CONTAINMENT: YES

TANK RELEASE DETECTION MEASURES

DAILY STICKING: NONE
TIGHTNESS TEST: NONE
MANUAL TANK GAUGING: NONE
AUTOMATIC TANK GAUGING: YES
SOIL VAPOR MONITORING: NONE
GROUNDWATER MONITORING: NONE
INTERSTITIAL MONITORING: YES
RECONCILIATION (SIR) TANK LEAK DETECTION: YES
STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: NONE
RELEASE DETECTION OTHER: NONE

OVERFILL PROTECTION

NONE INDICATED: NONE
BALL FLOAT: YES
AUTOMATIC SHUTOFF DEVICE: NONE
TYPE UNKNOWN: NONE
ALARM: NONE

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: YES
ANNUAL TIGHTNESS TEST: NONE
VAPOR MONITORING: NONE
GROUND WATER MONITORING: NONE
INTERSTITIAL MONITORING: NONE
THREE-YEAR TIGHTNESS TEST: NONE
EUROPEAN SUCTION: NONE
OTHER RELEASE DETECTION: NONE
STATISTICAL INVENTORY RECONCILIATION (SIR): NONE

INTEREST TYPE:

LAST UPDATE:

TANK SITE

12/08/11

WEBSITE LINK:

http://cf.pca.state.mn.us/programs/lust_pTanks2.cfm?site=124338&pg=TS

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Registered Storage Tanks (UAST)

MAP ID# 4

Distance from Property: 0.23 mi. NW

SITE INFORMATION

ID: 121758

NAME: TARGET STORES NORTH CAMPUS DISTR

ADDRESS: 7000 TARGET PKWY

BROOKLYN PARK, MN 55443

HENNEPIN COUNTY

TANK INFORMATION

TANK NUMBER: 001

REGISTRATION DATE: 03/25/2009

TANK CAPACITY: 5000

TANK STATUS: THE TANK IS ACTIVE AND BEING USED.

STORED PRODUCT: FUEL OIL

ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF FIBERGLASS

TANK CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THIS TANK.

PIPE CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.

PIPE MATERIAL TYPE: PIPING MATERIAL IS FLEXIBLE

SECONDARY CONTAINMENT TANK TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.

SECONDARY CONTAINMENT PIPE TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.

TANK DISPENSER TYPE: THE TANK HAS A SUCTION TYPE DISPENSER.

PIPE SPILL CONTAINMENT: YES

TANK RELEASE DETECTION MEASURES

DAILY STICKING: NONE

TIGHTNESS TEST: NONE

MANUAL TANK GAUGING: NONE

AUTOMATIC TANK GAUGING: YES

SOIL VAPOR MONITORING: NONE

GROUNDWATER MONITORING: NONE

INTERSTITIAL MONITORING: NONE

RECONCILIATION (SIR) TANK LEAK DETECTION: NONE

STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: NONE

RELEASE DETECTION OTHER: NONE

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: NONE

ANNUAL TIGHTNESS TEST: NONE

VAPOR MONITORING: NONE

GROUND WATER MONITORING: NONE

INTERSTITIAL MONITORING: YES

THREE-YEAR TIGHTNESS TEST: NONE

EUROPEAN SUCTION: NONE

OTHER RELEASE DETECTION: NONE

STATISTICAL INVENTORY RECONCILIATION (SIR): NONE

OVERFILL PROTECTION

NONE INDICATED: NONE

BALL FLOAT: NONE

AUTOMATIC SHUTOFF DEVICE: YES

TYPE UNKNOWN: NONE

ALARM: NONE

Registered Storage Tanks (UAST)

TANK INFORMATION

TANK NUMBER: 1
REGISTRATION DATE: NOT REPORTED
TANK CAPACITY: 5000
TANK STATUS: THE TANK STATUS IS PENDING.
STORED PRODUCT: DIESEL
ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF FIBERGLASS
TANK CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THIS TANK.
PIPE CORROSION PROTECTION: CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.
PIPE MATERIAL TYPE: PIPING MATERIAL IS FLEXIBLE
SECONDARY CONTAINMENT TANK TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.
SECONDARY CONTAINMENT PIPE TYPE: SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.
TANK DISPENSER TYPE: NOT REPORTED
PIPE SPILL CONTAINMENT: NOT REPORTED

TANK RELEASE DETECTION MEASURES

DAILY STICKING: NONE
TIGHTNESS TEST: NONE
MANUAL TANK GAUGING: NONE
AUTOMATIC TANK GAUGING: NONE
SOIL VAPOR MONITORING: NONE
GROUNDWATER MONITORING: NONE
INTERSTITIAL MONITORING: NONE
RECONCILIATION (SIR) TANK LEAK DETECTION: NONE
STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: NONE
RELEASE DETECTION OTHER: NONE

OVERFILL PROTECTION

NONE INDICATED: NONE
BALL FLOAT: NONE
AUTOMATIC SHUTOFF DEVICE: NONE
TYPE UNKNOWN: NONE
ALARM: NONE

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: NONE
ANNUAL TIGHTNESS TEST: NONE
VAPOR MONITORING: NONE
GROUND WATER MONITORING: NONE
INTERSTITIAL MONITORING: NONE
THREE-YEAR TIGHTNESS TEST: NONE
EUROPEAN SUCTION: NONE
OTHER RELEASE DETECTION: NONE
STATISTICAL INVENTORY RECONCILIATION (SIR): NONE

TANK INFORMATION

TANK NUMBER: 002
REGISTRATION DATE: 03/25/2009
TANK CAPACITY: 2500
TANK STATUS: THE TANK IS ACTIVE AND BEING USED.
STORED PRODUCT: FUEL OIL
ABOVE OR UNDERGROUND: UNDERGROUND

TANK & PIPE CONSTRUCTION

TANK MATERIAL TYPE: THE TANK IS MADE OF FIBERGLASS

Registered Storage Tanks (UAST)

TANK CORROSION PROTECTION: **CATHODIC PROTECTION IS NOT NEEDED FOR THIS TANK.**

PIPE CORROSION PROTECTION: **CATHODIC PROTECTION IS NOT NEEDED FOR THE PIPING.**

PIPE MATERIAL TYPE: **PIPING MATERIAL IS FLEXIBLE**

SECONDARY CONTAINMENT TANK TYPE: **SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL TANK.**

SECONDARY CONTAINMENT PIPE TYPE: **SECONDARY CONTAINMENT CONSISTS OF A DOUBLEWALL PIPE.**

TANK DISPENSER TYPE: **THE TANK HAS A SUCTION TYPE DISPENSER.**

PIPE SPILL CONTAINMENT: **YES**

TANK RELEASE DETECTION MEASURES

DAILY STICKING: **NONE**

TIGHTNESS TEST: **NONE**

MANUAL TANK GAUGING: **NONE**

AUTOMATIC TANK GAUGING: **YES**

SOIL VAPOR MONITORING: **NONE**

GROUNDWATER MONITORING: **NONE**

INTERSTITIAL MONITORING: **NONE**

RECONCILIATION (SIR) TANK LEAK DETECTION: **NONE**

STATISTICAL INVENTORY RECONCILIATION (SIR) REPORT DATE: **NONE**

RELEASE DETECTION OTHER: **NONE**

PIPING RELEASE DETECTION MEASURES

AUTOMATIC LINE LEAK DETECTORS: **NONE**

ANNUAL TIGHTNESS TEST: **NONE**

VAPOR MONITORING: **NONE**

GROUND WATER MONITORING: **NONE**

INTERSTITIAL MONITORING: **YES**

THREE-YEAR TIGHTNESS TEST: **NONE**

EUROPEAN SUCTION: **NONE**

OTHER RELEASE DETECTION: **NONE**

STATISTICAL INVENTORY RECONCILIATION (SIR): **NONE**

INTEREST TYPE:

TANK SITE

WEBSITE LINK:

http://cf.pca.state.mn.us/programs/lust_pTanks2.cfm?site=121758&pg=TS

OVERFILL PROTECTION

NONE INDICATED: **NONE**

BALL FLOAT: **NONE**

AUTOMATIC SHUTOFF DEVICE: **YES**

TYPE UNKNOWN: **NONE**

ALARM: **NONE**

LAST UPDATE:

09/20/11

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Petroleum Brownfields Program Sites (PBF)

MAP ID# 4

Distance from Property: 0.23 mi. NW

FACILITY INFORMATION

GS ID: 244345PBF

NAME: TARGET OPERATIONS

ADDRESS: 7000 TARGET PKWY N

BROOKLYN PARK, MN 55445

COUNTY: HENNEPIN

OWNER: TARGET CORP

WATERSHED: MISSISSIPPI RIVER - TWIN CITIES

LATITUDE: 45.12619486

LONGITUDE: -93.37995692

COORDINATE COLLECTION METHOD: DIGITIZED - MAP TOOL

FACILITY DETAILS

ID: 3070

ACTIVITY NAME: PROPOSED TARGET CAMPUS

ACTIVE?: NO

SITE SIZE: NOT REPORTED

LEAK SOURCE: NOT REPORTED

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Registered Leaking Storage Tanks (LUAST)

MAP ID# 5

Distance from Property: 0.36 mi. SE

SITE INFORMATION

GS ID: 16586*LUAST

LEAK ID: 16586

NAME: ASTRA VENTURES INC PROPERTY

ADDRESS: HIGHWAY 610 AND ZANE AVE
BROOKLYN PARK, MN 55443

RELEASE DISCOVERED: 07/11/06

RELEASE REPORT: 09/20/06

CONDITIONAL CLOSURE DATE: NOT REPORTED

COMPLETE SITE CLOSURE DATE: 12/05/06

CONTAMINATED SOILS REMAINING: UNKNOWN

OFFSITE CONTAMINATION: UNKNOWN

PRODUCT RELEASED: DIESEL

WEBSITE LINK:

http://cf.pca.state.mn.us/programs/lust_pResults2.cfm?leak=16586&pg=LS

GROUND WATER

DRINKING WATER CONTAMINATION: NOT REPORTED

FREE PRODUCT OBSERVED: NOT REPORTED

FREE PRODUCT THICKNESS: NOT REPORTED

GROUNDWATER CONTAMINATION: YES

CLEANUP ACTIONS

- NO CLEANUP ACTIONS REPORTED

INTEREST TYPE:

LAST UPDATE:

LEAK SITE

09/22/06

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Unlocatable Summary

This list contains sites that could not be mapped due to limited or incomplete address information.

No Records Found

Environmental Records Definitions - FEDERAL

AIRSAFS Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance.

BRS Biennial Reporting System

VERSION DATE: 12/31/11

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

CDL Clandestine Drug Laboratory Locations

VERSION DATE: 04/14/14

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

DOCKETS EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

EC Federal Engineering Institutional Control Sites

VERSION DATE: 05/21/14

This database includes site locations where Engineering and/or Institutional Controls have been identified as part

Environmental Records Definitions - FEDERAL

of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

ERNSMN Emergency Response Notification System

VERSION DATE: 11/09/14

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

FRSMN Facility Registry System

VERSION DATE: 09/30/14

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

HMIRSR05 Hazardous Materials Incident Reporting System

VERSION DATE: 10/28/14

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 5. Region 5 includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

ICIS Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 10/20/14

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.

Environmental Records Definitions - FEDERAL

ICISNPDES Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 08/01/12

In 2006, the Integrated Compliance Information System (ICIS) - National Pollutant Discharge Elimination System (NPDES) became the NPDES national system of record for select states, tribes and territories. ICIS-NPDES is an information management system maintained by the United States Environmental Protection Agency's Office of Compliance to track permit compliance and enforcement status of facilities regulated by the NPDES under the Clean Water Act. ICIS-NPDES is designed to support the NPDES program at the state, regional, and national levels.

MLTS Material Licensing Tracking System

VERSION DATE: 01/30/13

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements.

NPDES05 National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Information in this database is extracted from the Water Permit Compliance System (PCS) database which is used by United States Environmental Protection Agency to track surface water permits issued under the Clean Water Act. This database includes permitted facilities located in EPA Region 5. This region includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. The NPDES database was collected from December 2002 until April 2007. Refer to the PCS and/or ICIS-NPDES database as source of current data.

PADS PCB Activity Database System

VERSION DATE: 07/01/14

The PCB Activity Database System (PADS) is used by the United States Environmental Protection Agency to monitor the activities of polychlorinated biphenyls (PCB) handlers.

PCSR05 Permit Compliance System

VERSION DATE: 08/01/12

The Permit Compliance System is used in tracking enforcement status and permit compliance of facilities controlled by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act and is maintained by the United States Environmental Protection Agency's Office of Compliance. PCS is designed to support the NPDES program at the state, regional, and national levels. This database includes permitted facilities located in EPA Region 5. This region includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Environmental Records Definitions - FEDERAL

RCRASC RCRA Sites with Controls

VERSION DATE: 05/23/14

This list of Resource Conservation and Recovery Act sites with institutional controls in place is provided by the U.S. Environmental Protection Agency.

SFLIENS CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete.

SSTS Section Seven Tracking System

VERSION DATE: 12/31/09

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. ("Production" includes formulation, packaging, repackaging, and relabeling.)

TRI Toxics Release Inventory

VERSION DATE: 12/31/13

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

TSCA Toxic Substance Control Act Inventory

VERSION DATE: 12/31/06

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured, imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and

Environmental Records Definitions - FEDERAL

importer site.

NLRRCRAG

No Longer Regulated RCRA Generator Facilities

VERSION DATE: 10/09/14

This database includes RCRA Generator facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly generated hazardous waste.

Large Quantity Generators: Generate 1,000 kg or more of hazardous waste during any calendar month; or Generate more than 1 kg of acutely hazardous waste during any calendar month; or Generate more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month; or Generate 1 kg or less of acutely hazardous waste during any calendar month, and accumulate more than 1kg of acutely hazardous waste at any time; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulated more than 100 kg of that material at any time.

Small Quantity Generators: Generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or Generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

Conditionally Exempt Small Quantity Generators: Generate 100 kilograms or less of hazardous waste per calendar month, and accumulate 1000 kg or less of hazardous waste at any time; or Generate one kilogram or less of acutely hazardous waste per calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

RCRAGR05

Resource Conservation & Recovery Act - Generator Facilities

VERSION DATE: 10/09/14

This database includes sites listed as generators of hazardous waste (large, small, and exempt) in the RCRAInfo system. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). This database includes sites located in EPA Region 5. This region includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Large Quantity Generators: Generate 1,000 kg or more of hazardous waste during any calendar month; or Generate more than 1 kg of acutely hazardous waste during any calendar month; or Generate more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month; or Generate 1 kg or less of acutely hazardous

Environmental Records Definitions - FEDERAL

waste during any calendar month, and accumulate more than 1kg of acutely hazardous waste at any time; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulated more than 100 kg of that material at any time.

Small Quantity Generators: Generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or Generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

Conditionally Exempt Small Quantity Generators: Generate 100 kilograms or less of hazardous waste per calendar month, and accumulate 1000 kg or less of hazardous waste at any time; or Generate one kilogram or less of acutely hazardous waste per calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste; or Generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, or acutely hazardous waste during any calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

HISTPST Historical Gas Stations

VERSION DATE: 07/01/30

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

BF Brownfields Management System

VERSION DATE: 10/01/14

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment.

CERCLIS Comprehensive Environmental Response, Compensation & Liability Information System

VERSION DATE: 10/25/13

CERCLIS is the repository for site and non-site specific Superfund information in support of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This United States Environmental Protection Agency database contains an extract of sites that have been investigated or are in the process of being investigated for potential environmental risk.

Environmental Records Definitions - FEDERAL

LUCIS Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

NFRAP No Further Remedial Action Planned Sites

VERSION DATE: 10/25/13

This database includes sites which have been determined by the United States Environmental Protection Agency, following preliminary assessment, to no longer pose a significant risk or require further activity under CERCLA. After initial investigation, no contamination was found, contamination was quickly removed or contamination was not serious enough to require Federal Superfund action or NPL consideration.

NLRRCRAT No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 10/09/14

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

ODI Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An "open dump" is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

RCRAT Resource Conservation & Recovery Act - Treatment, Storage & Disposal Facilities

VERSION DATE: 10/09/14

This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste in the RCRAInfo system. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS).

DNPL Delisted National Priorities List

VERSION DATE: 10/25/13

Environmental Records Definitions - FEDERAL

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

DOD Department of Defense Sites

VERSION DATE: 12/01/05

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

FUDS Formerly Used Defense Sites

VERSION DATE: 06/01/14

The 2012 Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not all properties currently have polygon data available. **DISCLAIMER:** This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.

NLRRCRAC No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 10/09/14

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

NPL National Priorities List

VERSION DATE: 10/25/13

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

Environmental Records Definitions - FEDERAL

PNPL Proposed National Priorities List

VERSION DATE: 10/25/13

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

RCRAC Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 10/09/14

This database includes hazardous waste sites listed with corrective action activity in the RCRAInfo system. The Corrective Action Program requires owners or operators of RCRA facilities (or treatment, storage, and disposal facilities) to investigate and cleanup contamination in order to protect human health and the environment. The United States Environmental Protection Agency defines RCRAInfo as the comprehensive information system which provides access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS).

RODS Record of Decision System

VERSION DATE: 07/01/13

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

Environmental Records Definitions - STATE (MN)

AIRS Permitted Air Facilities

VERSION DATE: 09/08/14

This database contains facilities with air permits issued by the by the Minnesota Pollution Control Agency. These permits identify the units at each facility that generate air pollutants and, where applicable, the limits on those emissions. In some cases a permit may also authorize construction or modification of a facility.

CDL Clandestine Drug Laboratory Locations

VERSION DATE: 09/08/14

This listing of clandestine methamphetamine laboratories is provided by the Minnesota Department of Health. Each meth lab, spill or dump is a potential hazardous waste site, requiring assessment and remediation by experienced and qualified personnel. Former meth lab sites are being cleaned (or remediated) in many Minnesota communities. In these communities, the cleanups are being guided by city and county ordinances, local housing laws, and Minnesota Statute 145A, the Public Health Nuisance Statute.

FEEDLOT Feedlots

VERSION DATE: 09/08/14

Feedlots may be small farms or large-scale commercial livestock operations. They are places where animals are confined for feeding, breeding or holding. The Minnesota Pollution Control Agency (MPCA) and its county partners place requirements on how manure is managed at feedlots, so that it does not contaminate nearby surface water and groundwater.

PCASPILLS Spills Listing

VERSION DATE: 09/01/14

The Minnesota Pollution Control Agency's Emergency Response Team maintains this listing of reported petroleum product, hazardous substance, and/or other spills.

SWUP Solid Waste Utilization Projects

VERSION DATE: 09/08/14

According to the Minnesota Pollution Control Agency, a solid waste utilization project uses certain wastes in a new way to recycle the material instead of putting it into a landfill. An example is using tires to create furniture. The beneficial use of waste products saves landfill capacity for materials that do not have alternative uses. By using solid waste, individuals and organizations can reduce disposal costs, or even generate profit through the sale of materials that have a beneficial use.

TIERII Tier Two Facility Listing

VERSION DATE: 12/31/13

Environmental Records Definitions - STATE (MN)

The Minnesota Department of Public Safety's Emergency Planning and Community Right-to-Know Act Program (EPCRA) maintains this listing of Tier Two facilities which store hazardous chemicals on-site. These facilities subject to EPCRA reporting submit Tier II forms which provide information such as the Material Safety Data Sheet (MSDS) chemical or common name, emergency contact information, approximate amount of chemical stored, along with the location of the chemical at the facility.

WDP Water Discharge Permits

VERSION DATE: 09/08/14

This Minnesota Pollution Control Agency (MPCA) database includes the following types of water permits: Construction Stormwater Permits, Construction Stormwater Site Subdivisions, Industrial Stormwater Permits, MS4 Projects, and Wastewater Dischargers. A construction stormwater permit is designed to limit pollution during and after construction by controlling the erosion associated with construction activities. A construction stormwater site subdivision is a site where a construction project with an existing stormwater permit has been sub-divided into smaller parcels. Industrial stormwater permits are designed to limit the amount of harmful contaminants that reach surface water and groundwater, by requiring good practices for storing and handling materials. A Municipal Separate Storm Sewer System (MS4) is a system of conveyances - such as gutters, ditches, city streets and storm drains - which is used as a path for stormwater. Regulated MS4s cover large areas, and are owned or operated by a public entity such as a city, county, township, watershed district or university. A wastewater discharger is a facility that generates or treats wastewater for discharge onto land or into water.

BULKSTORAGE Bulk Storage Permits

VERSION DATE: 07/03/14

The Minnesota Department of Agriculture's Licensing Information System (LIS) lists individuals or companies who hold licenses, certificates and/or permits required by state law and regulated by the Department. This database only contains those LIS licenses related to anhydrous ammonia storage facilities and bulk pesticide/fertilizer storage facilities. Please note the data is real time and therefore constantly changing.

CLEANERS Registered Drycleaning Facilities

VERSION DATE: 10/05/10

The Minnesota Pollution Control Agency maintains this listing of registered dry cleaning facilities.

IC Sites with Institutional Controls

VERSION DATE: 07/14/14

Institutional controls are defined by Minnesota Statute, Section 115B.02, subdivision 9a, as legally enforceable restrictions, conditions, or controls on the use of real property, ground water, or surface water located at or adjacent to a facility where response actions are taken that are reasonably required to assure that the response actions are protective of public health or welfare or the environment. Institutional controls include restrictions,

Environmental Records Definitions - STATE (MN)

conditions, or controls enforceable by contract, easement, restrictive covenant, statute, ordinance, or rule, including official controls such as zoning, building codes, and official maps. An affidavit required under section 115B.16, subdivision 2, or similar notice of a release recorded with real property records is also an institutional control.

PBRLF Permitted By Rule Landfills

VERSION DATE: 09/08/14

According to the Minnesota Pollution Control Agency, a landfill that is permitted by rule is not required to obtain an individual solid waste permit if it meets certain eligibility criteria. However, it must comply with waste management rules and regulations. Landfills may be permitted by rule if they have a small capacity and/or operate for a short period of time.

UAST Registered Storage Tanks

VERSION DATE: 09/01/14

The Registered Storage Tanks Database provides information on aboveground and underground storage tanks registered with the Minnesota Pollution Control Agency. Owners of USTs and ASTs with a capacity of 500 gallons or more which contain petroleum or hazardous substances must notify the MPCA of the existence of these tanks. Tanks not subject to notification include farm and residential motor fuel tanks less than 1,100 gallons; heating oil tanks less than 1,100 gallons; flow-through process tanks; septic tanks; and agricultural chemical tanks.

AGSPILLS Agricultural Spills Listing

VERSION DATE: 07/11/14

This list of reported spill incidents is provided by the Minnesota Department of Agriculture (MDA). The MDA is the lead agency for response to, and cleanup of, agricultural chemical contamination (pesticides and fertilizers) in Minnesota. The MDA has grouped these spills into three categories: Old Emergencies, Small Spills and Investigations, and Investigations Boundaries. Old Emergencies represent emergencies which were closed prior to March 1, 2004. These files and the locations plotted have not been reviewed for accuracy and completeness. Small Spills and Investigations represent the location of small spills and investigations, which were closed after March 1, 2004. Investigation Boundaries represent the approximate extent of large spills and other types of facility investigations. Facility Investigations are further subdivided into the following program areas: Awaiting Prioritization Investigation files of known or potential agricultural chemical contamination that are waiting to be prioritized; Prioritized Investigation files of known or potential agricultural chemical contamination that have been prioritized and are awaiting activation; Comprehensive Facility Investigation / MERLA Investigation files of known or potential agricultural chemical contamination that have been activated in MDA's Comprehensive Facility Investigation Program or are active Superfund sites under MDA's oversight; AgVIC Investigation files of known or potential agricultural chemical contamination that have enrolled in the MDA's Agricultural Voluntary Investigation and Cleanup (AgVIC) Program; and Agricultural Chemical Emergency Response Investigation files that were reported as emergency spills of agricultural chemicals and are large enough in size to be represented by a polygon.

Environmental Records Definitions - STATE (MN)

CAFO Concentrated Animal Feeding Operations

VERSION DATE: 07/01/14

A Concentrated Animal Feeding Operation (CAFO) is any feeding operation with a capacity of 1,000 or more animal units according to federal animal unit calculations. The Minnesota Pollution Control Agency can also define a facility with less than 1,000 animal units as a CAFO on a case-by-case basis, depending on site conditions, and if manure or process wastewater is directly discharged to waters of the state. Facilities that are CAFOs must comply with both federal regulations and state rules. Two or more feedlots under common ownership are considered a single facility if they adjoin each other or use the same manure storage or disposal system.

CLF Closed Landfills

VERSION DATE: 09/08/14

The Minnesota Pollution Control Agency Closed Landfill Program (CLP) is a voluntary program established by the legislature in 1994 to properly close, monitor, and maintain Minnesota's closed municipal sanitary landfills. Any MPCA-permitted mixed-municipal solid waste landfill that stopped accepting mixed municipal solid waste (MMSW) by April 9, 1994, and demolition debris before May 1, 1995, can qualify for application to this program.

CONTINGENCIES Agricultural Contingency Sites

VERSION DATE: 07/11/14

The Minnesota Department of Agriculture (MDA) Incident Response Unit (IRU) is the state lead agency for the investigation and remediation of incidents involving agricultural chemicals (pesticides and fertilizer). This MDA IRU database includes sites with a soil or ground water contingency, deed restriction, local ordinance, restrictive covenant or deed affidavit in place. The accuracy of these sites can be variable. In most cases, the site boundaries should be considered as only representing the vicinity of the soil or ground water contingency area or plume.

LUAST Registered Leaking Storage Tanks

VERSION DATE: 09/01/14

The Minnesota Pollution Control Agency maintains this listing of leaking aboveground and underground storage tanks. Tank owners are required to immediately report a leak or spill of more than five gallons of petroleum, or any amount of a hazardous substance, from any tank or piping. All leaks and spills from USTs and ASTs and associated piping must be cleaned up to protect the environment and public health.

PBF Petroleum Brownfields Program Sites

VERSION DATE: 09/08/14

This listing of Petroleum Brownfield sites, including those with Development Response Action Plans dated between 2008 and 2012, is provided by the Minnesota Pollution Control Agency (MPCA). The Petroleum

Environmental Records Definitions - STATE (MN)

Brownfields Program (formerly VPIC) provides the technical assistance and liability assurance needed to facilitate and expedite the development, transfer, investigation and/or cleanup of property that is contaminated with petroleum. Even after cleanup or MPCA file closure most properties will have contamination remaining. State law requires that persons properly manage contaminated soil and water they uncover or disturb - even if they are not the party responsible for the contamination. Property owners, purchasers or developers of property where contaminated soil or water might be encountered may include provisions - called "response actions" - in development plans describing how petroleum contaminated soil and water will be managed if encountered. For some properties, special construction might be needed to prevent the further spreading of the contamination and/or to prevent petroleum vapors from entering buildings or utility access shafts.

PVICP Potential Voluntary Investigation and Cleanup Program Sites

VERSION DATE: 07/14/14

This listing of Potential Voluntary Investigation and Cleanup Program sites is provided by the Minnesota Pollution Control Agency. These potential sites have not yet entered into the VIC Program until an application has been received at the MPCA.

SAS State Assessment Sites

VERSION DATE: 09/08/14

State Assessment sites are places that Minnesota Pollution Control Agency (MPCA) Site Assessment staff have investigated because of suspected contamination. The sites investigated include abandoned industrial properties, small commercial businesses and publicly-owned land. (Note that petroleum-contaminated sites are investigated by MPCA Tanks and Leaks staff.) These sites may be referred to the Site Assessment program by the Voluntary Investigation and Cleanup (VIC) program, the Petroleum Remediation program, Minnesota Duty Officer reports or citizen complaints. Site Assessment staff do an initial assessment, and then determine if further action is needed. If a site poses a threat to human health or the environment, it is referred to CERCLIS, Superfund, RCRA Cleanup or VIC.

SRS Site Response Section Database

VERSION DATE: 07/14/14

The Minnesota Pollution Control Agency (MPCA) is involved in remediation activities through various programs. Remediation is the process of cleaning up pollution in the soil, water or air. The pollution can result from an accidental spill or from activities that occur over a long time. This MPCA database includes remediation sites from the Superfund, Voluntary Investigation and Cleanup, Brownfields, Resource Conservation and Recovery Act, Tanks, Landfills, and Emergency Response Programs.

SWF Open Solid Waste Facilities

VERSION DATE: 09/08/14

Open landfills are regulated by Minnesota Rules 7001 and 7035. They actively accept, under the terms and conditions of a Minnesota Pollution Control Agency permit, certain types of wastes for disposal. They are part of

Environmental Records Definitions - STATE (MN)

a larger and integrated collection of open solid waste management facilities that process, transfer and receive waste for disposal in Minnesota. Open landfills fall into several categories, which include: demolition, industrial, mixed municipal and municipal waste combustor ash.

UNPERMDUMPS Unpermitted Dump Sites

VERSION DATE: 09/08/14

Unpermitted dump sites are landfills that never held a valid permit from the Minnesota Pollution Control Agency (MPCA). Generally, these dumps existed prior to the permitting program established with the creation of the MPCA in 1967. These dumps are not restricted to any type of waste, but were often old farm or municipal disposal sites that accepted household waste. State assessment staff have investigated many of these dump sites.

VICP Voluntary Investigation and Cleanup Program Sites

VERSION DATE: 07/14/14

The Voluntary Investigation and Cleanup (VIC) Program site listing is provided by the Minnesota Pollution Control Agency. This program encourages timely property transactions by reducing potential health or environmental risks from contamination and promoting the redevelopment of these properties.

CSTF Contaminated Soil Treatment Facilities

VERSION DATE: 09/08/14

Contaminated soil treatment facilities are places that the Minnesota Pollution Control Agency (MPCA) has approved or permitted to take petroleum-contaminated soils from leak sites and provide treatment through a number of different processes. The processes include thermal treatment (usually by roasting soils at high temperatures), composting, or thin-spreading soils and allowing natural microorganisms to biodegrade the petroleum.

SF Superfund Site Information Listing

VERSION DATE: 07/14/14

The Minnesota Pollution Control Agency's Superfund Program identifies, investigates and determines appropriate cleanup plans for abandoned or uncontrolled hazardous waste sites where a release or potential release of a hazardous substance poses a risk to human health or the environment. Superfund does not deal with Resource Conservation and Recovery Act (RCRA) sites or petroleum storage tank releases.

Environmental Records Definitions - TRIBAL

USTR05 Underground Storage Tanks On Tribal Lands

VERSION DATE: 11/04/13

This database, provided by the United States Environmental Protection Agency (EPA), contains underground storage tanks on Tribal lands located in EPA Region 5. Region 5 includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

LUSTR05 Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 11/06/13

This database, provided by the United States Environmental Protection Agency (EPA), contains leaking underground storage tanks on Tribal lands located in EPA Region 5. Region 5 includes the following states: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

ODINDIAN Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

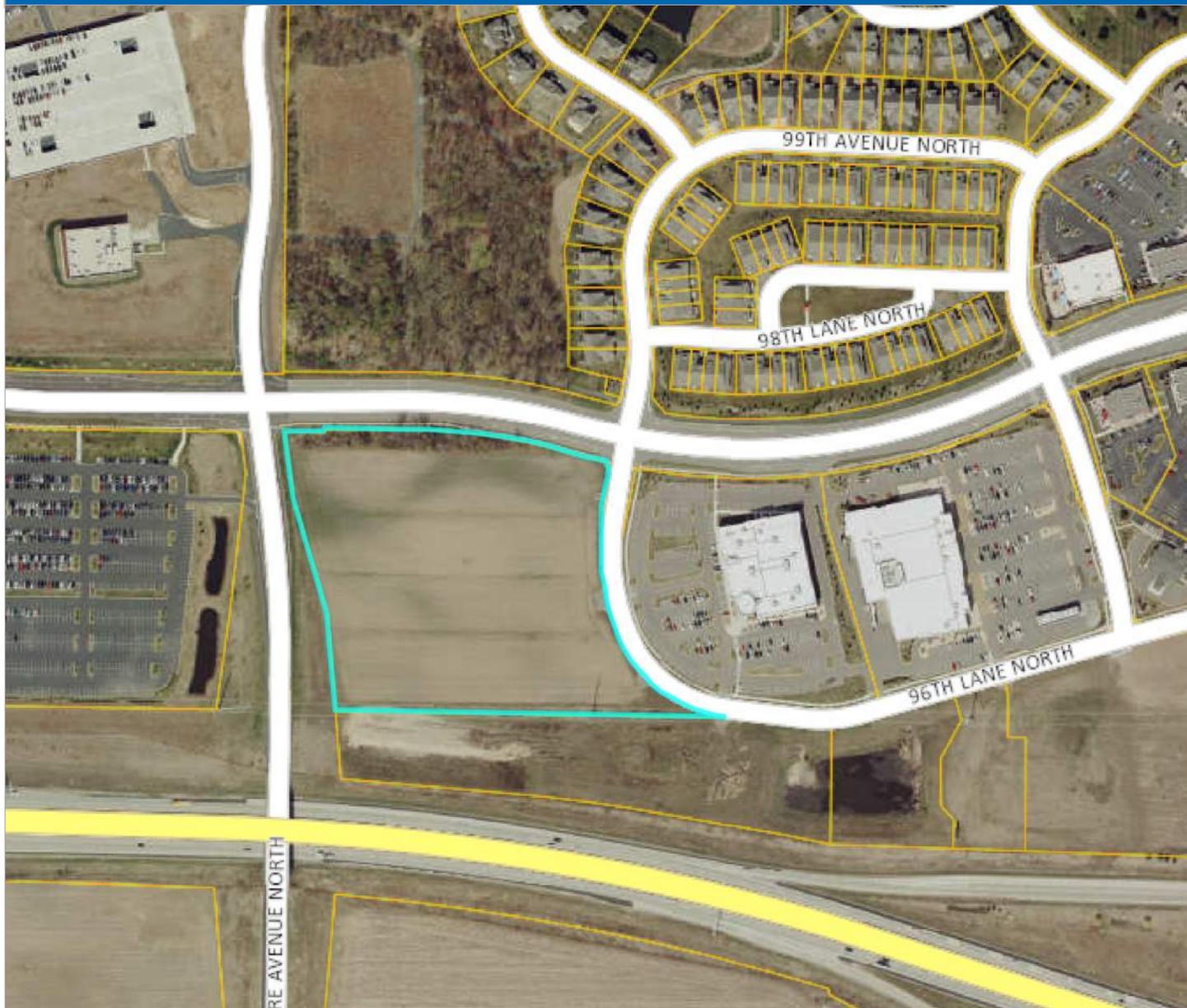
INDIANRES Indian Reservations

VERSION DATE: 01/01/00

The Department of Interior and Bureau of Indian Affairs maintains this database that includes American Indian Reservations, off-reservation trust lands, public domain allotments, Alaska Native Regional Corporations and Recognized State Reservations.

Appendix C

County Tax Assessor Records



<p>Parcel ID: 08-119-21-14-0052</p>	<p>A-T-B: Abstract</p>	<p>Map Scale: 1" ≈ 400 ft. Print Date: 12/19/2014</p> 
<p>Owner Name: Schreiber T's Llc</p>	<p>Market Total: \$71,700</p>	
<p>Parcel Address: 48 Address Unassigned Brooklyn Park, MN 00000</p>	<p>Tax Total: \$1,035.37 (Payable: 2014)</p>	
<p>Property Type: Farm</p>	<p>Sale Price:</p>	
<p>Home-stead: Non-Homestead</p>	<p>Sale Date:</p>	<p>This map is a compilation of data from various sources and is furnished "AS IS" with no representation or warranty expressed or implied, including fitness of any particular purpose, merchantability, or the accuracy and completeness of the information shown.</p>
<p>Parcel Area: 10.85 acres 472,781 sq ft</p>	<p>Sale Code:</p>	<p>COPYRIGHT © HENNEPIN COUNTY 2014 </p>



Appendix D

Aerial Photographs



Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



2013

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



2008

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



2003

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



2000

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1997

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1991

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1984

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1979

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1969

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1966

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1957

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1953

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1947

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1940

HIG Project # 1410894

Client Project # 3237

Approximate Scale 1:6000 (1"=500')





historicalinfo.com

Schreiber Parcel
Hampshire Avenue North/Oak Grove
Parkway
Brooklyn Park, MN



1937

HIG Project # 1410894

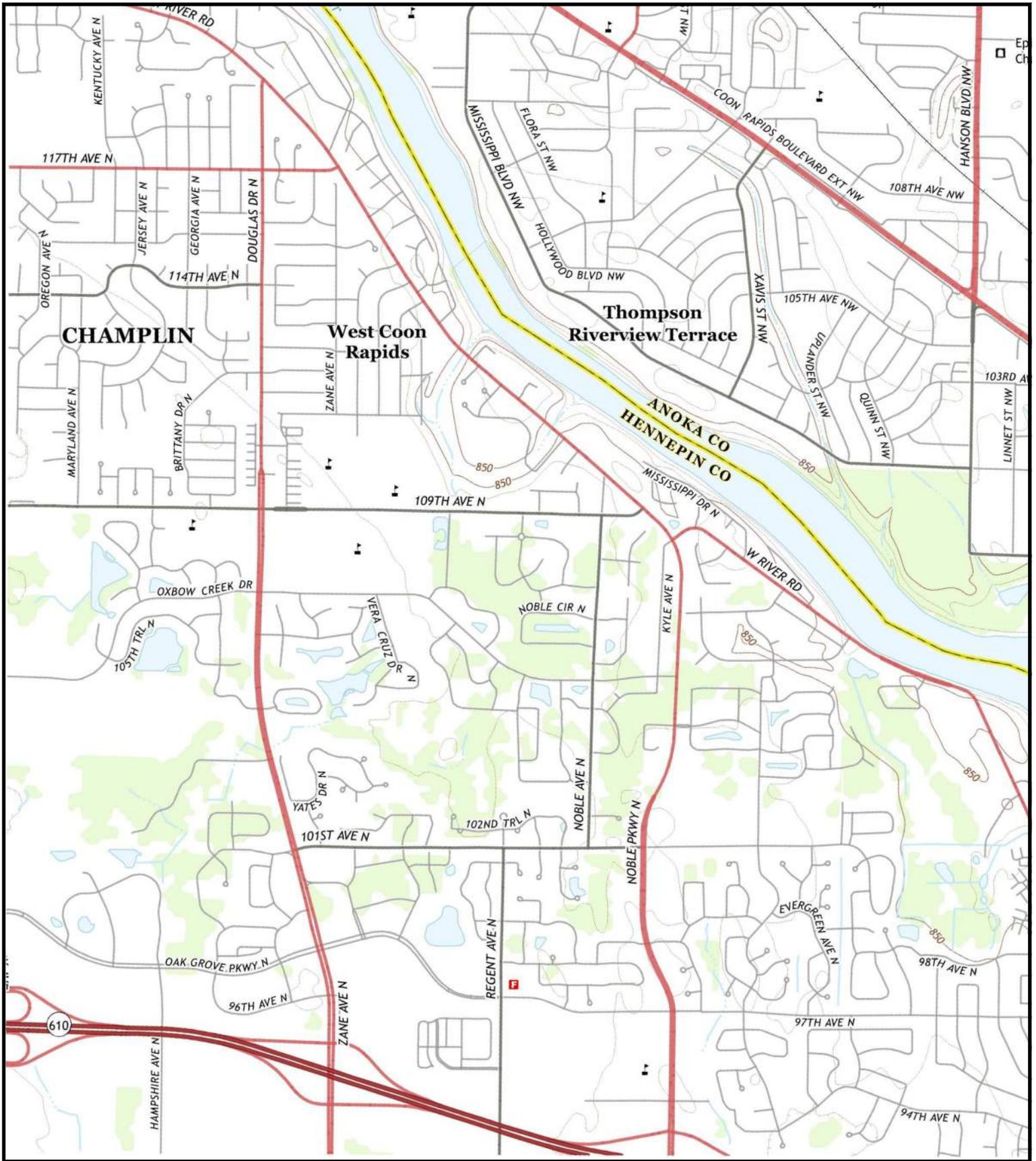
Client Project # 3237

Approximate Scale 1:6000 (1"=500')



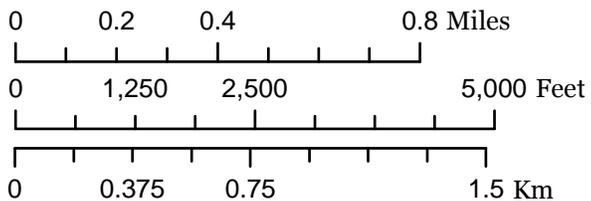
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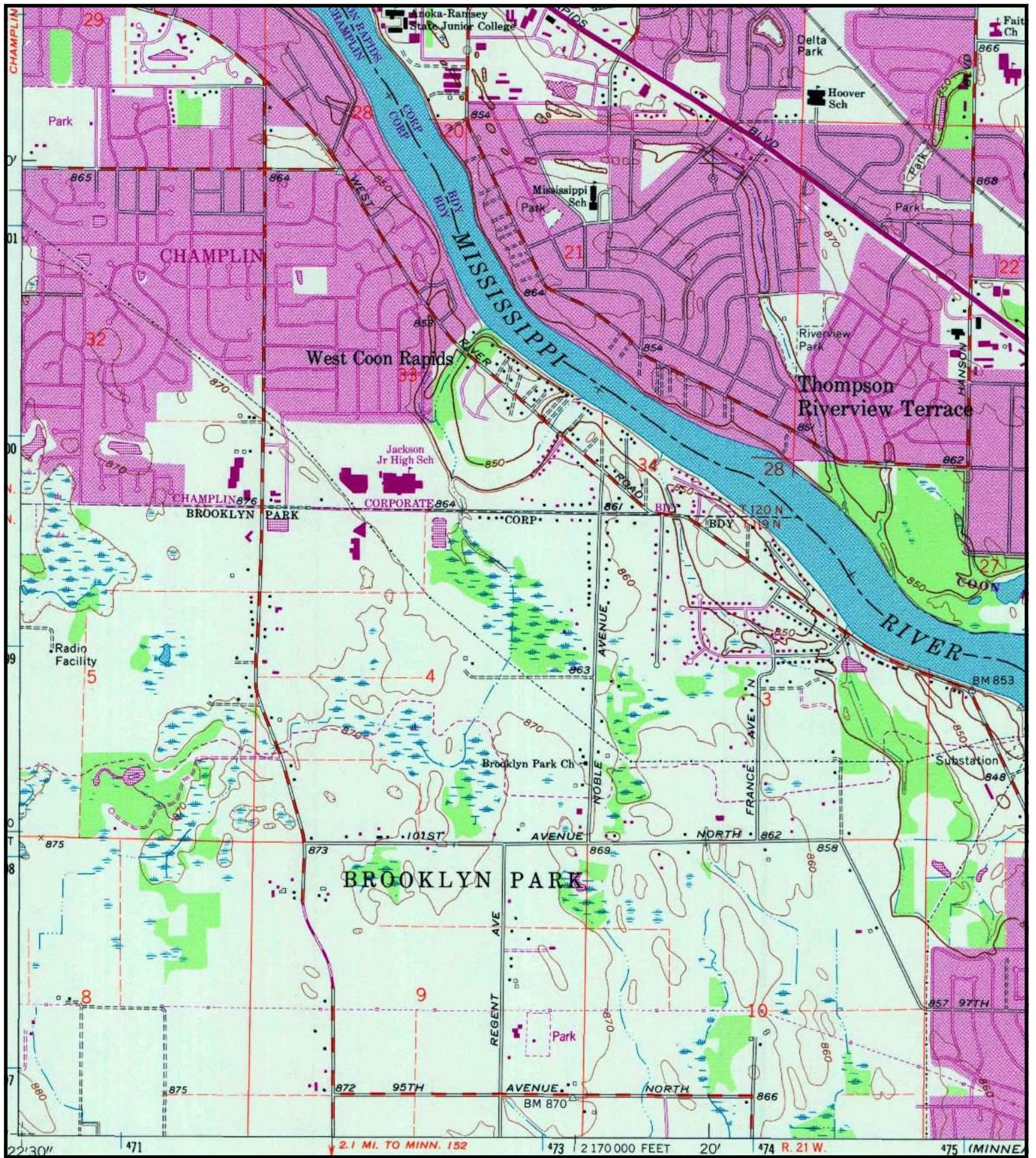
Historical Maps



2013

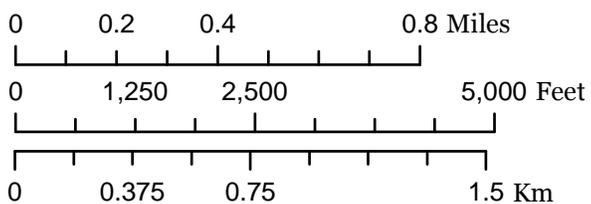
Coon Rapids, Minnesota Quadrangle
USGS 7.5 Minute Topographic Map

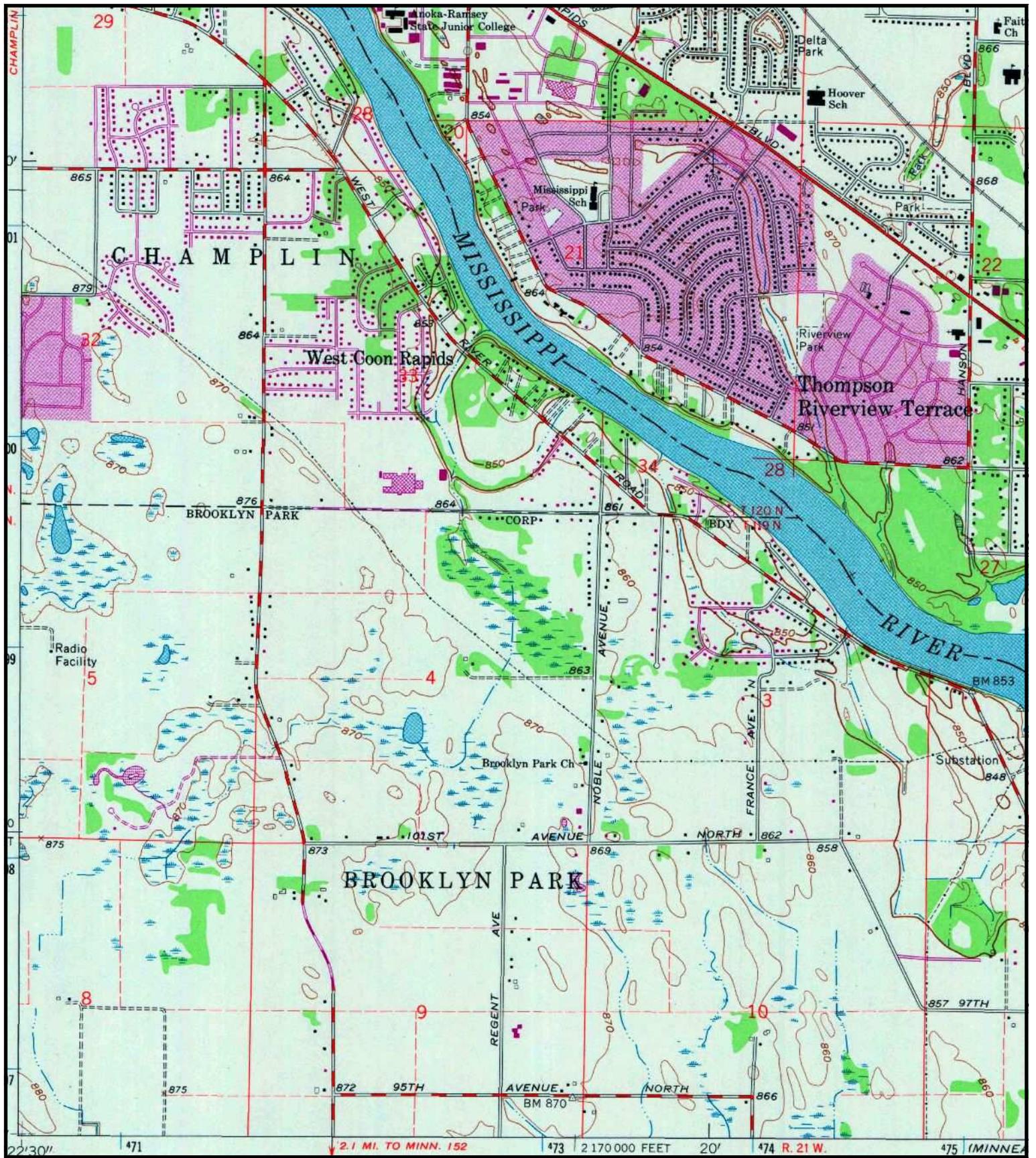




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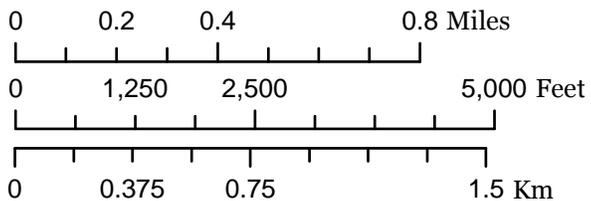
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USGS 7.5 Minute Topographic Map

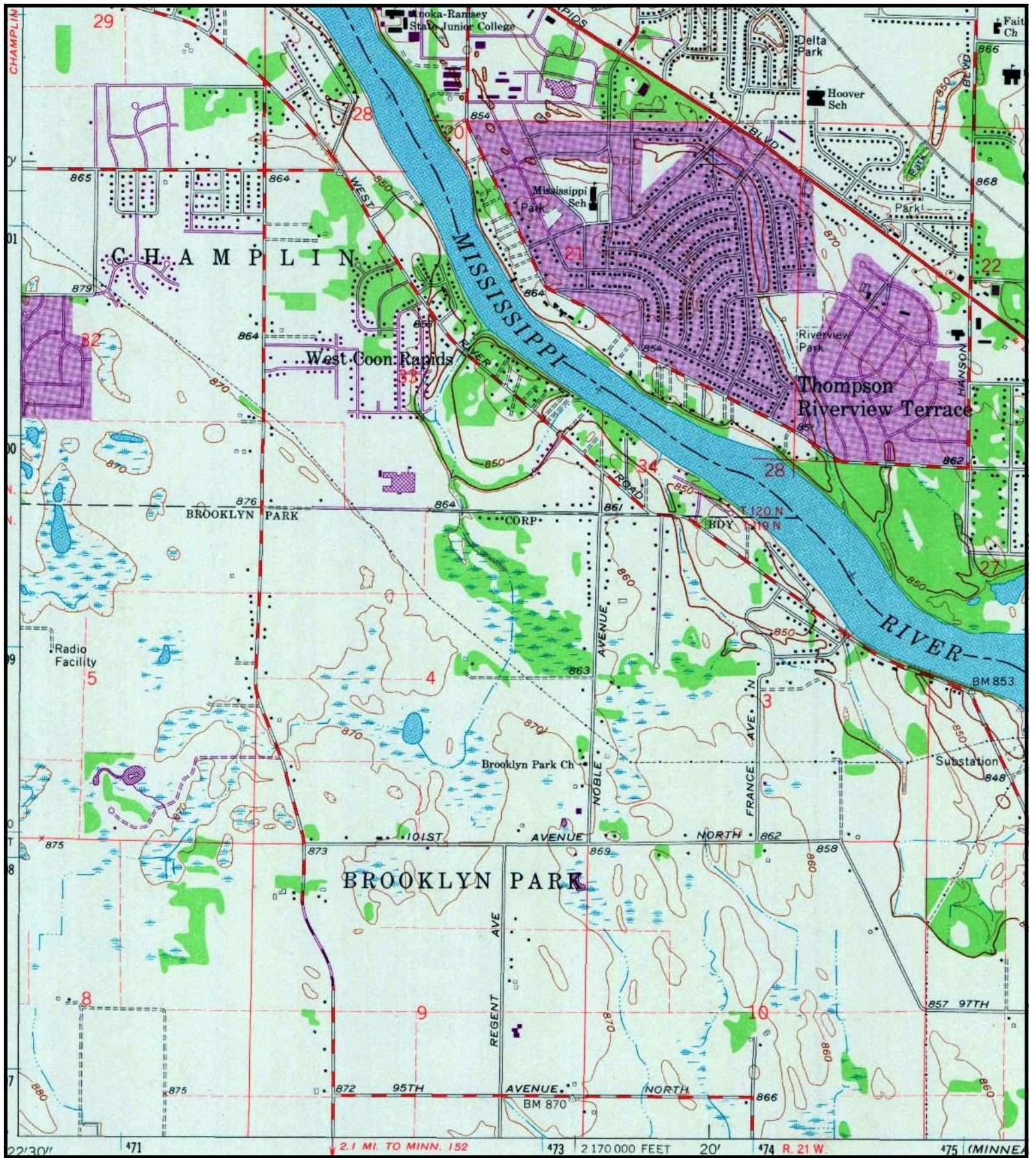




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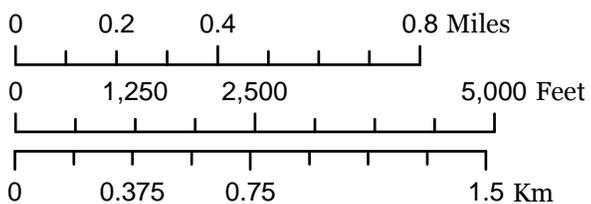
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USGS 7.5 Minute Topographic Map

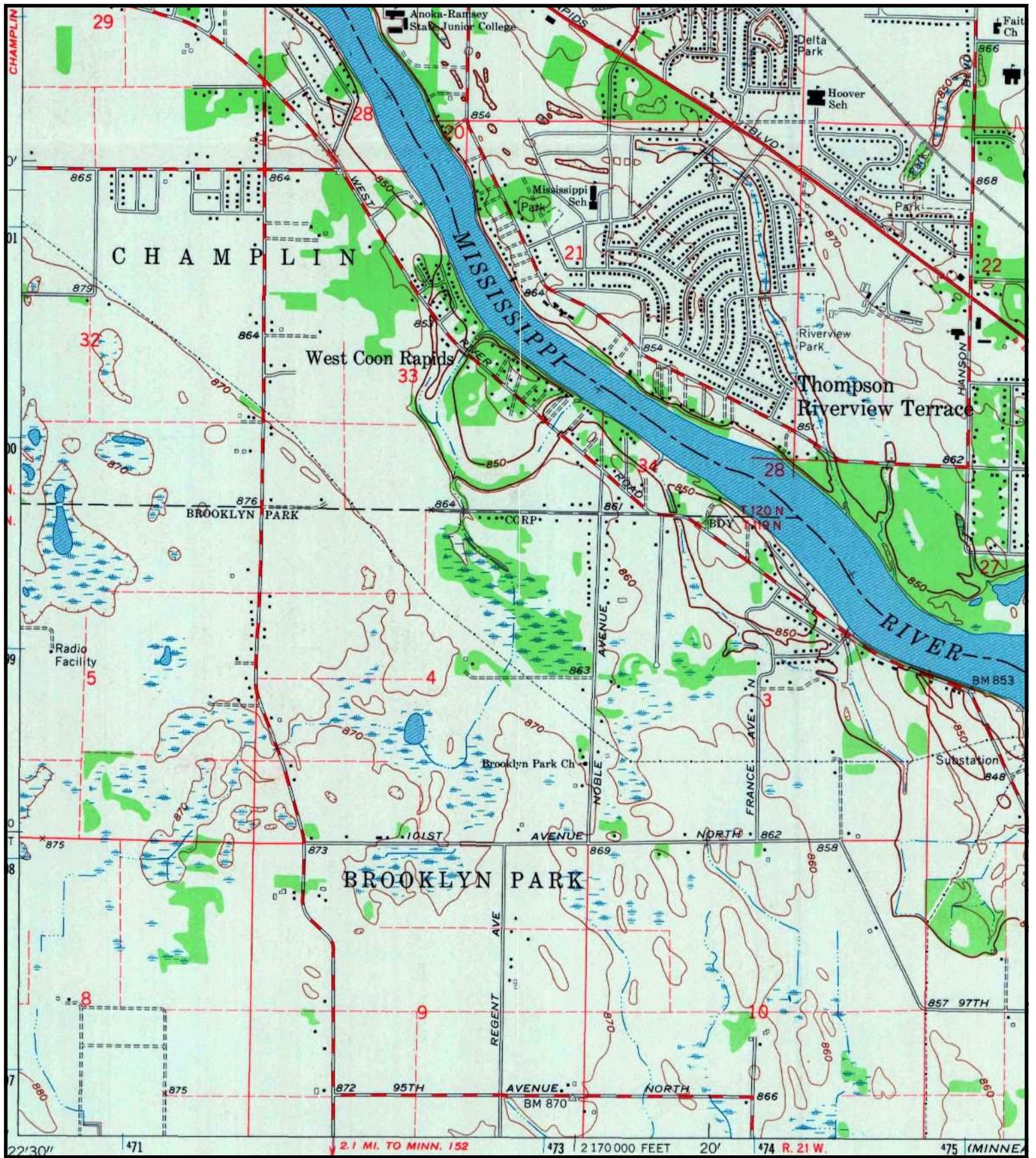




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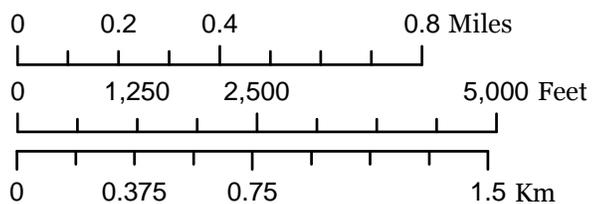
Coon Rapids, Minnesota Quadrangle
USGS 7.5 Minute Topographic Map

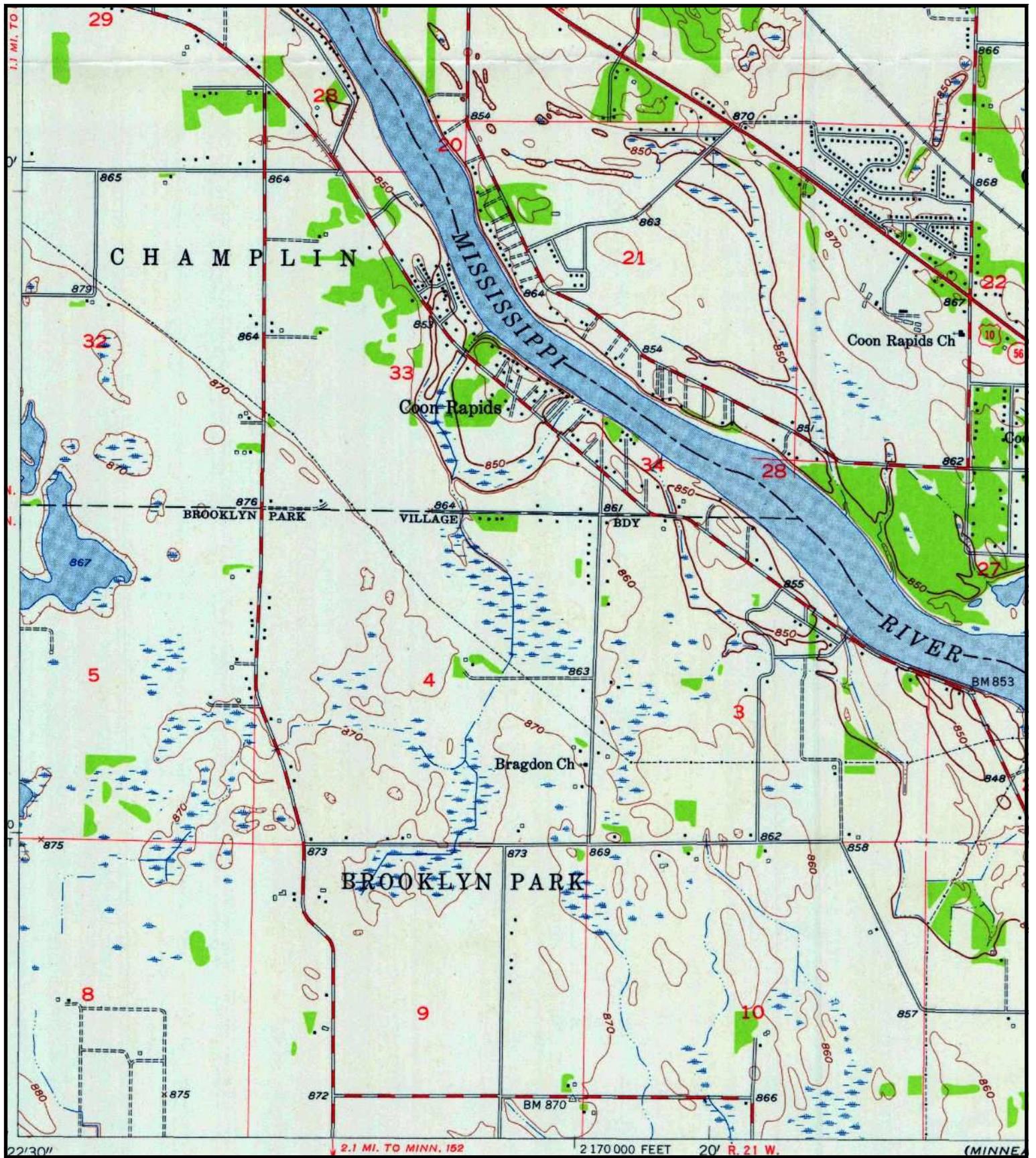




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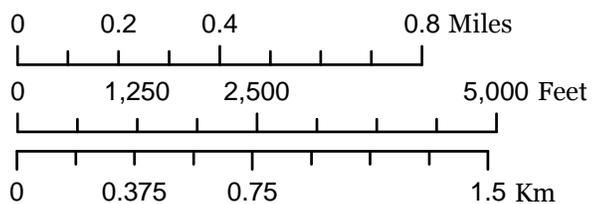
Coon Rapids, Minnesota Quadrangle
USGS 7.5 Minute Topographic Map

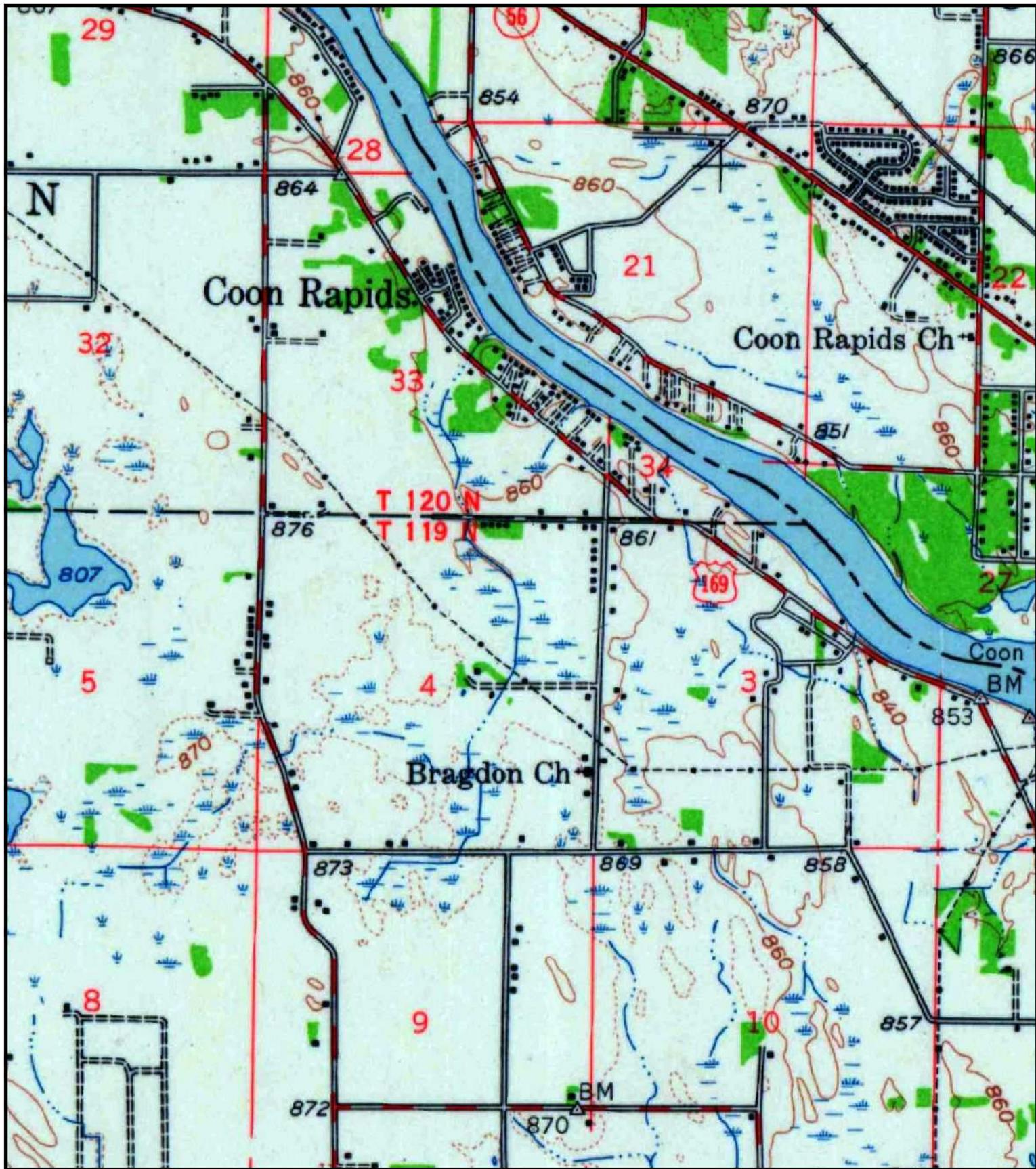




1955

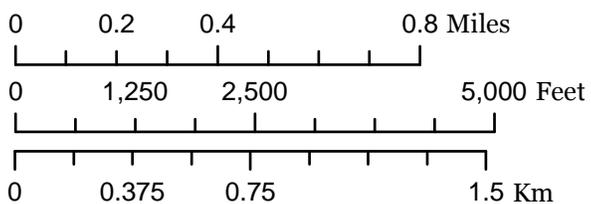
Coon Rapids, Minnesota Quadrangle
USGS 7.5 Minute Topographic Map

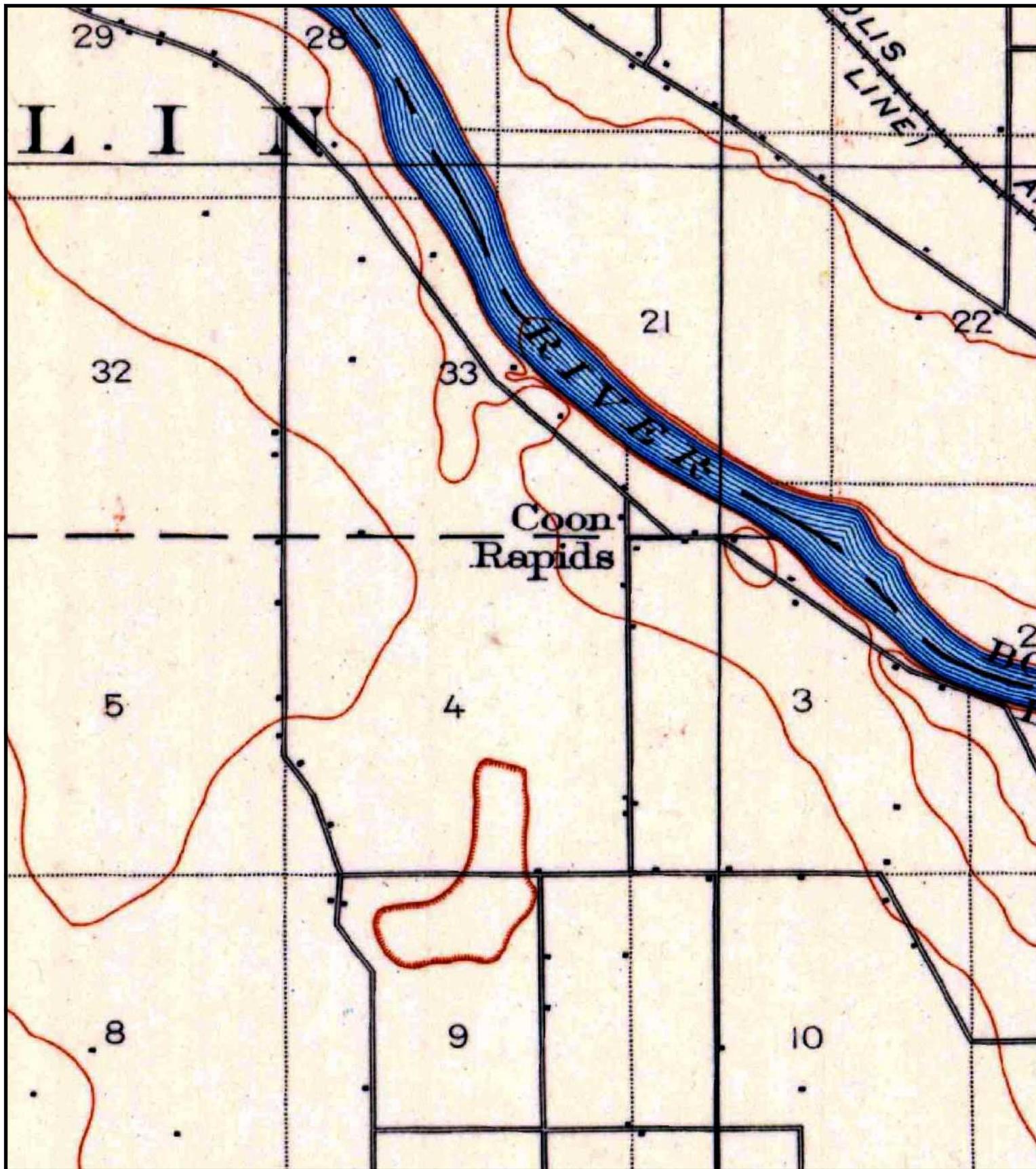




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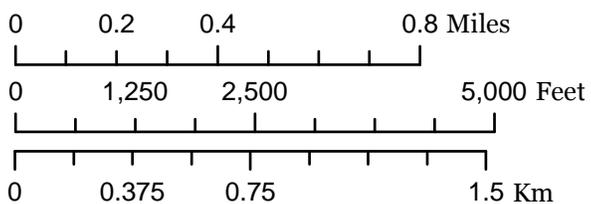
Anoka, Minnesota Quadrangle
USGS 15 Minute Topographic Map





1902

Anoka, Minnesota Quadrangle
 USGS 15 Minute Topographic Map

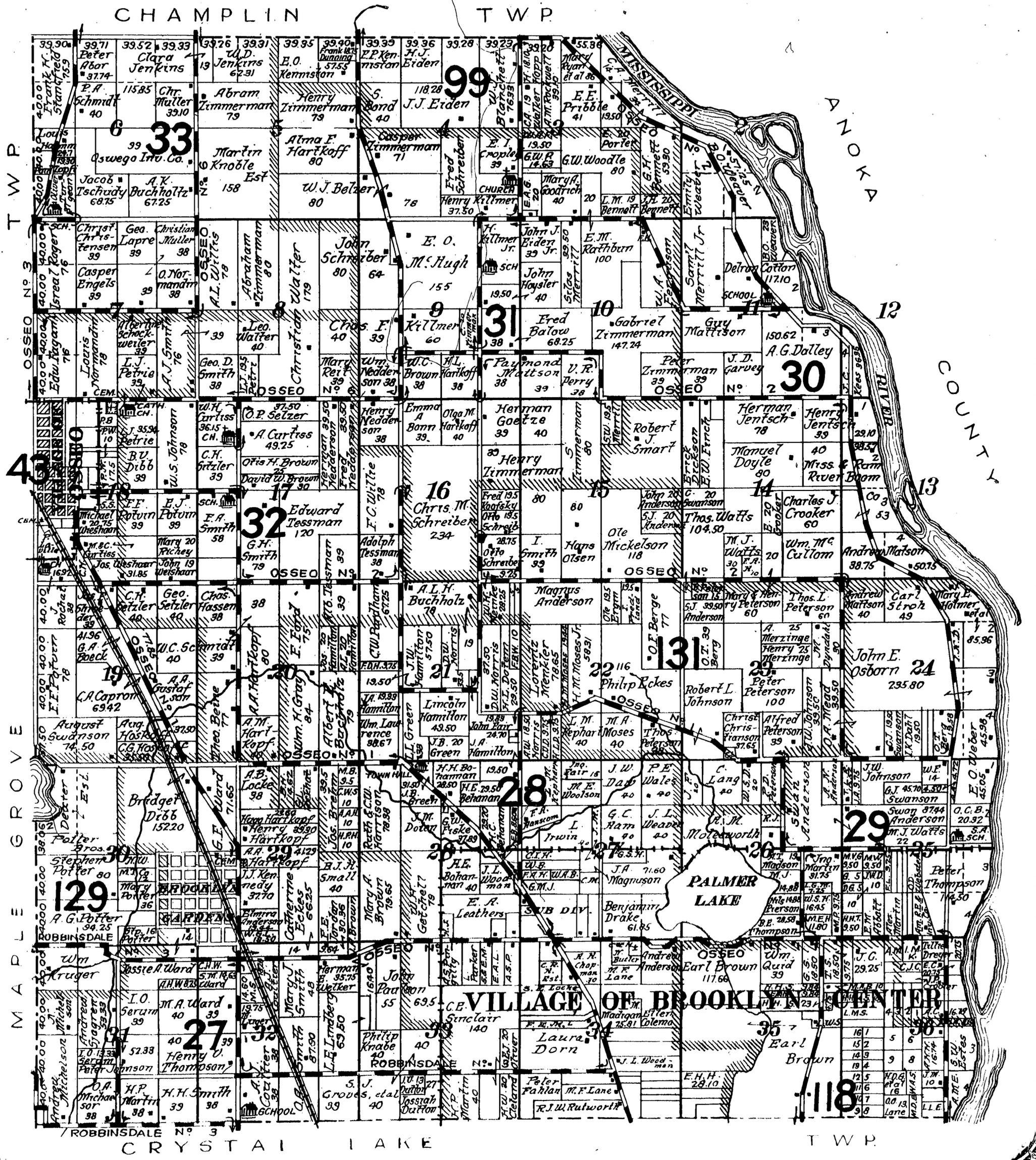


MAP OF BROOKLYN

Scale 2 inches to one mile

Township 119 North
Range 21 West of the 4th P.M.
HENNIPIN COUNTY
MINNESOTA.

- REFERENCES:
- Rail Road ———
 - Wagon Road ———
 - Corp. Line ———
 - Creek ———
 - School Districts ———
 - School ———
 - Church ———
 - Houses ———
 - Cem. ———



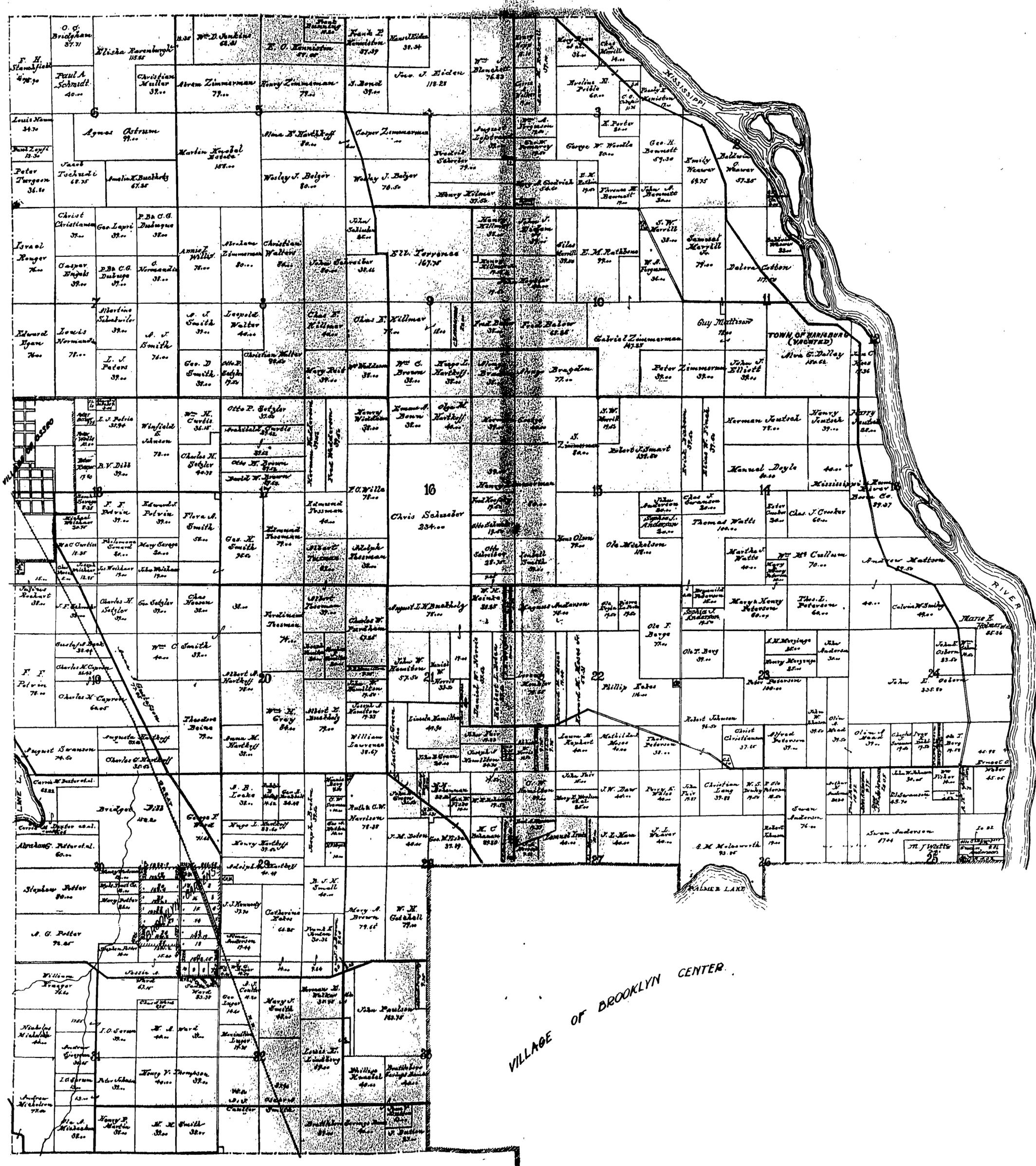
OSSEO No. 3
TWP. N. 3
OSSEO No. 2
OSSEO No. 1
OSSEO No. 4
OSSEO No. 5
OSSEO No. 6
OSSEO No. 7
OSSEO No. 8
OSSEO No. 9
OSSEO No. 10
OSSEO No. 11
OSSEO No. 12
OSSEO No. 13
OSSEO No. 14
OSSEO No. 15
OSSEO No. 16
OSSEO No. 17
OSSEO No. 18
OSSEO No. 19
OSSEO No. 20
OSSEO No. 21
OSSEO No. 22
OSSEO No. 23
OSSEO No. 24
OSSEO No. 25
OSSEO No. 26
OSSEO No. 27
OSSEO No. 28
OSSEO No. 29
OSSEO No. 30
OSSEO No. 31
OSSEO No. 32
OSSEO No. 33
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OSSEO No. 39
OSSEO No. 40
OSSEO No. 41
OSSEO No. 42
OSSEO No. 43
OSSEO No. 44
OSSEO No. 45
OSSEO No. 46
OSSEO No. 47
OSSEO No. 48
OSSEO No. 49
OSSEO No. 50

CRYSTAL LAKE TWP.

ROBBINSDALE No. 3

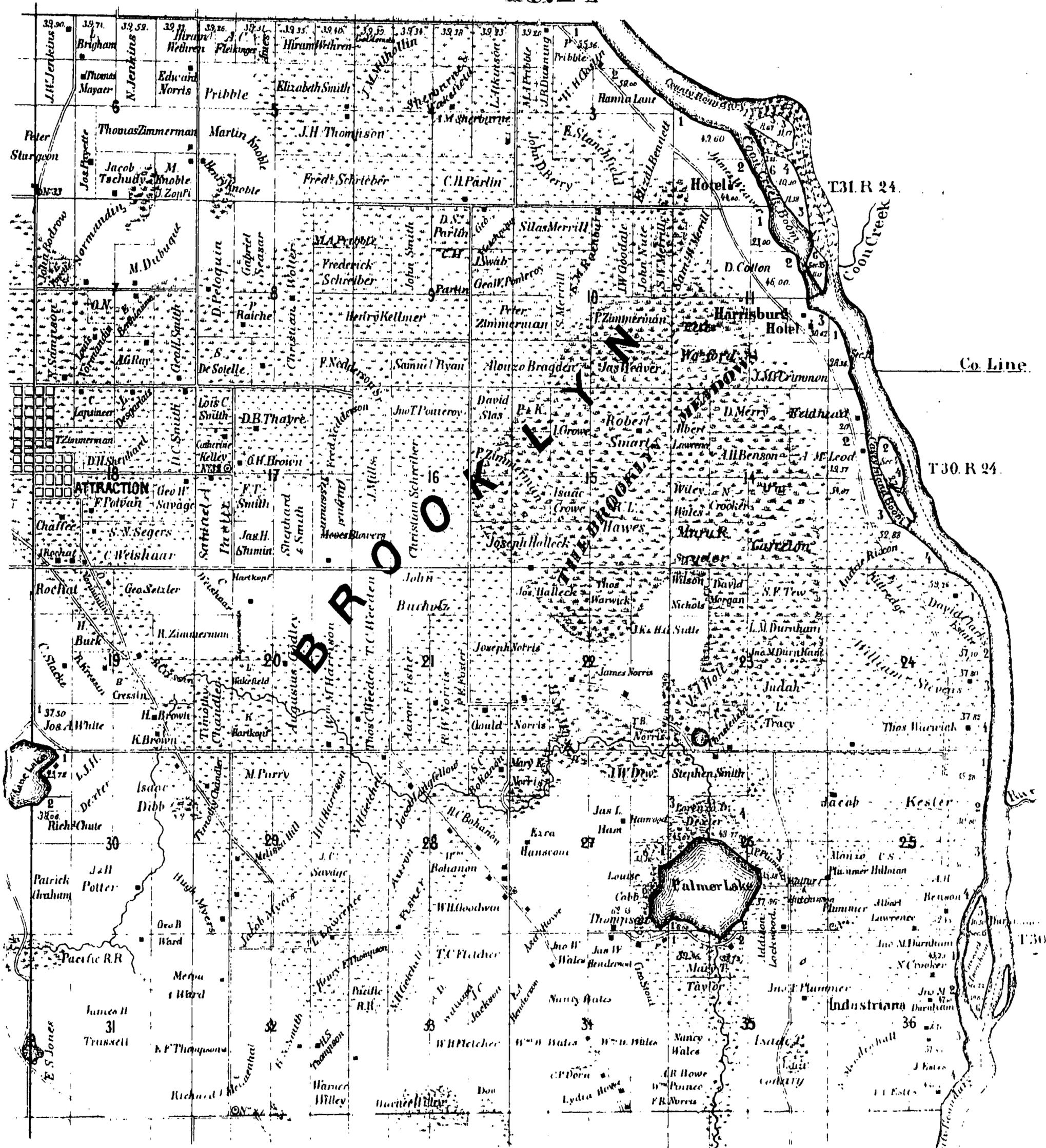
PLAT OF BROOKLYN

Township 119 N., Range 21 W.

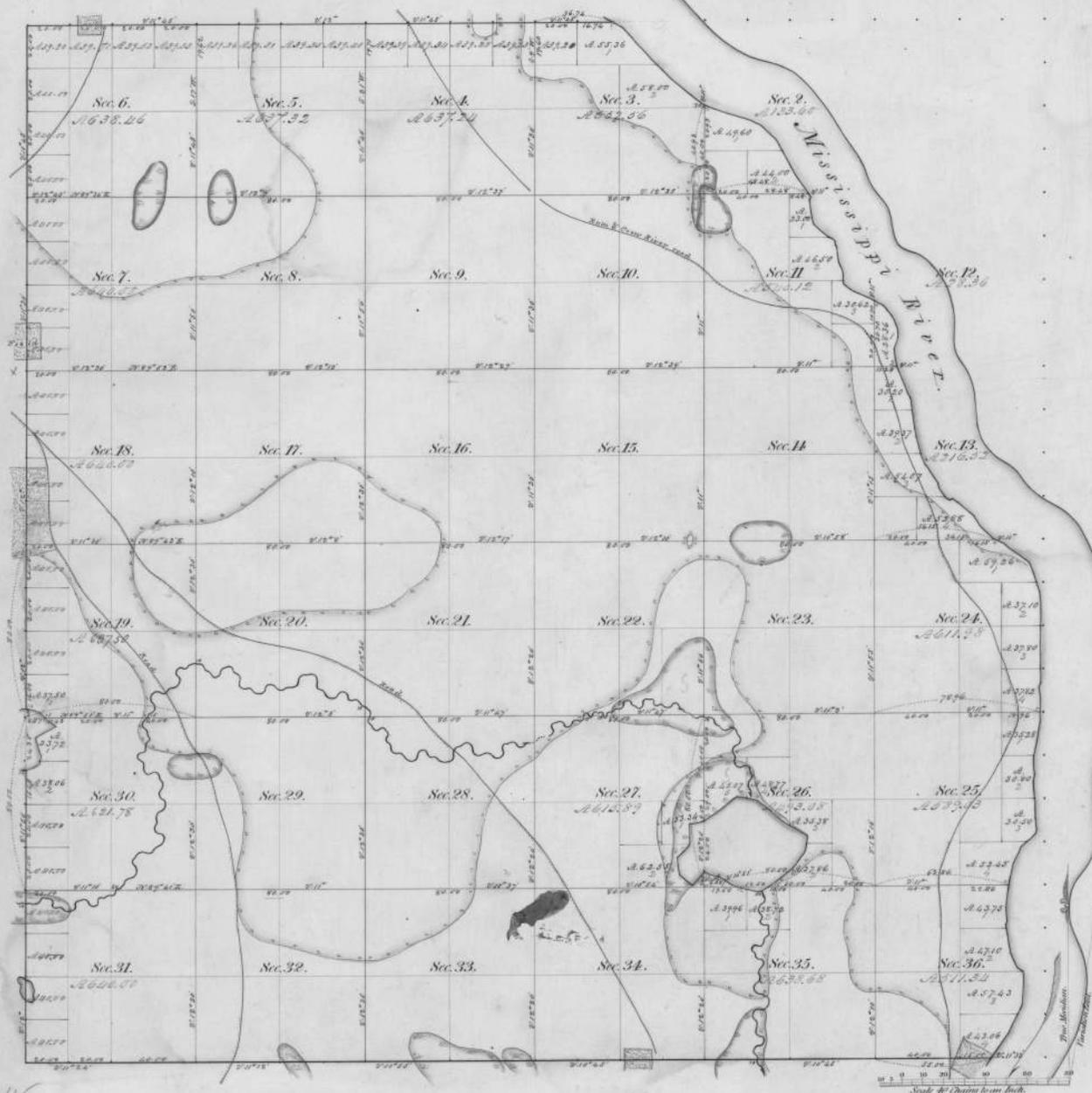


VILLAGE OF BROOKLYN CENTER.

T.119 R.21



Township N^o 119 N., Range N^o 21 West of the 5th Mer.



Boundaries of Mississippi River & Lake.					
Posts	Courses	Dist ^s	Posts	Courses	Dist ^s
Mississippi River					
	South	2.50	S 15° N.	4.00	
	do	4.00	S 55° N.	3.50	
	South	23.00	S 65° N.	3.00	
1	S 15° E	6.90	S 20° E	2.00	16 S 45° N 1.00
	S 45° E	11.90	S 0° E	5.20	
	S 15° E	12.50	S 0° E	3.25	1016 Crs. 7.00
2	S 15° E	9.00	S 0° N.	2.75	Total 9 78.59
	S 70° E	5.00	S 75° N.	6.50	
	S 75° E	17.00	S 75° N.	5.00	
	S 60° E	4.00	S 75° N.	9.75	
	S 65° E	9.10	South	9.00	
	S 60° E	2.00	S 75° N.	5.00	
	S 65° E	1.00	S 0° E	9.20	
	S 60° E	2.00	S 0° N.	2.75	
3	S 35° E	10.00	S 75° E	9.00	
	do	2.00	S 80° N.	1.60	
	do	1.00	S 75° N.	7.50	
	S 75° E	4.50	S 65° N.	5.00	
	S 75° E	6.10	S 70° N.	5.00	
	S 105° E	12.50	S 75° N.	11.00	
	S 125° E	2.50	S 0° E	6.00	
	S 10° E	7.75	S 112° N.	3.00	
	S 25° E	3.00	S 11° E	10.00	
	S 0° E	2.25	S 81° E	6.00	
	S 75° E	2.75	S 59° E	3.20	
	S 65° E	5.00	S 45° E	17.50	
	S 65° E	1.00	S 25° N.	12.75	
4	S 75° E	11.50	S 35° N.	3.00	
	do	2.00	S 36° N.	2.00	
	do	3.00	taken in Sec. 20 & 27 1855		
	S 25° E	4.00	S 75° E	19.00	
	S 75° E	2.00	S 75° E	10.00	
	S 75° E	2.00	S 65° E	15.00	
	S 75° E	2.00	S 75° E	15.00	
5	S 75° E	1.00	S 1° N.	6.00	
	S 75° E	1.00	S 35° N.	9.50	
	S 75° E	16.00	S 35° N.	12.50	
	S 75° E	4.50			
	S 75° E	9.00	S 10° N.	4.50	
	S 75° E	9.00	S 75° N.	3.00	
	S 75° E	5.00	S 75° N.	3.90	
	S 75° E	2.00			
	S 75° E	75	S 75° N.	3.50	
	S 35° E	9.75	S 50° N.	9.00	
	S 70° E	1.50	S 75° N.	5.50	
	S 75° E	6.50	S 75° N.	6.50	
	S 75° E	1.00	S 75° N.	6.50	
	S 61° E	10	S 60° N.	8.50	
	S 47° E	1.30	S 61° N.	7.00	
	S 65° E	2.00	S 75° N.	7.00	
	S 75° E	1.20	S 35° E	9.00	
	S 65° E	9.00	S 1° N.	9.00	
	S 65° E	3.00	S 75° N.	5.00	
	S 65° E	5.25			
6	S 75° E	1.50	taken in Sec. 19 & 30.		
	S 75° E	1.70	S 75° E	4.00	
	S 66° E	6.90	S 65° E	3.15	
	S 65° E	1.75	S 65° E	3.00	
	S 75° E	11.50			
	S 65° E	8.00	S 66° E	7.00	
	S 65° E	6.00	S 64° N.	10.50	
	S 65° E	4.00	S 17° E	9.00	

45

Total number of Acres 20263.24

Surveys Designated.	By Whom Surveyed	Date of Contract.	Amount of Survey M. Ch ^s Lk ^s	When Surveyed.	When Changed in the Sur. Genl. Ac ^t
Township lines.	John Ryan	July 12 th 1854	15. 11. 74	May - 1855	
Subdivisions.	Harold Wood	June 7 th 1855	54. 41. 21	July - 1855	

The above Map of Township N^o 119 N., of Range N^o 21 West, 5th Principal Meridian, Minnesota, is strictly conformable to the field notes of the survey thereof on file in this Office which have been examined and approved.

Surveyor General's Office
Duluth, July 11th 1856

Harold Wood
Sur. Genl.

Appendix F

Site Photographs



1: View from SW corner facing north



2: View from NW corner facing east



3: Storm drain in Oak Grove Parkway



4: Power line along south side with Hwy 610



5: Piezometer at the middle of the site



6: LA Fitness to east



7: Ponded water on the NE corner of the site



8: East side from SE facing north

Appendix G

Well Records

GeoPlus Water Well Report

[Satellite view](#)

Target Property:

Schreiber Parcel

**Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, Hennepin County, Minnesota 55445**

Prepared For:

Historical Information Gatherers

Order #: 44729

Job #: 97803

Project #: 1410894

Date: 12/18/2014

Table of Contents

<i>Target Property Summary</i>	1
<i>Database Findings Summary</i>	2
<i>Locatable Database Findings</i>	4
<i>Waterwell Map</i>	6
<i>Report Summary of Locatable Sites</i>	7
<i>Environmental Records Definitions</i>	41

Disclaimer

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Target Property Summary

Schreiber Parcel

**Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, Hennepin County, Minnesota 55445**

USGS Quadrangle: **Coon Rapids, MN**

Target Property Geometry: **Area**

Target Property Longitude(s)/Latitude(s):

**(-93.366494, 45.132240), (-93.366343, 45.131422), (-93.366279, 45.130241), (-93.362374, 45.130272),
(-93.363060, 45.130605), (-93.363425, 45.131074), (-93.363490, 45.131589), (-93.363275, 45.132043),
(-93.364777, 45.132300), (-93.366494, 45.132240)**

County/Parish Covered:

Hennepin (MN)

Zipcode(s) Covered:

Minneapolis MN: 55443, 55445

State(s) Covered:

MN

***Target property is located in Radon Zone 1.**

**Zone 1 areas have a predicted average indoor radon screening level greater than 4 pCi/L
(picocuries per liter).**

Database Findings Summary

FEDERAL LISTING

<i>Database</i>	<i>Acronym</i>	<i>Locatable</i>	<i>Unlocatable</i>	<i>Search Radius (miles)</i>
UNITED STATES GEOLOGICAL SURVEY NATIONAL WATER INFORMATION SYSTEM	NWIS	3	0	0.5000
SUB-TOTAL		3	0	

Database Findings Summary

STATE (MN) LISTING

<i>Database</i>	<i>Acronym</i>	<i>Locatable</i>	<i>Unlocatable</i>	<i>Search Radius (miles)</i>
MINNESOTA COUNTY WELL INDEX REGISTRY	CWIWELLS	29	0	0.5000
SUB-TOTAL		29	0	
TOTAL		32	0	

Locatable Database Findings

FEDERAL LISTING

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
NWIS	0.5000		0	0	3	NS	NS	3
SUB-TOTAL			0	0	3	0	0	3

Locatable Database Findings

STATE (MN) LISTING

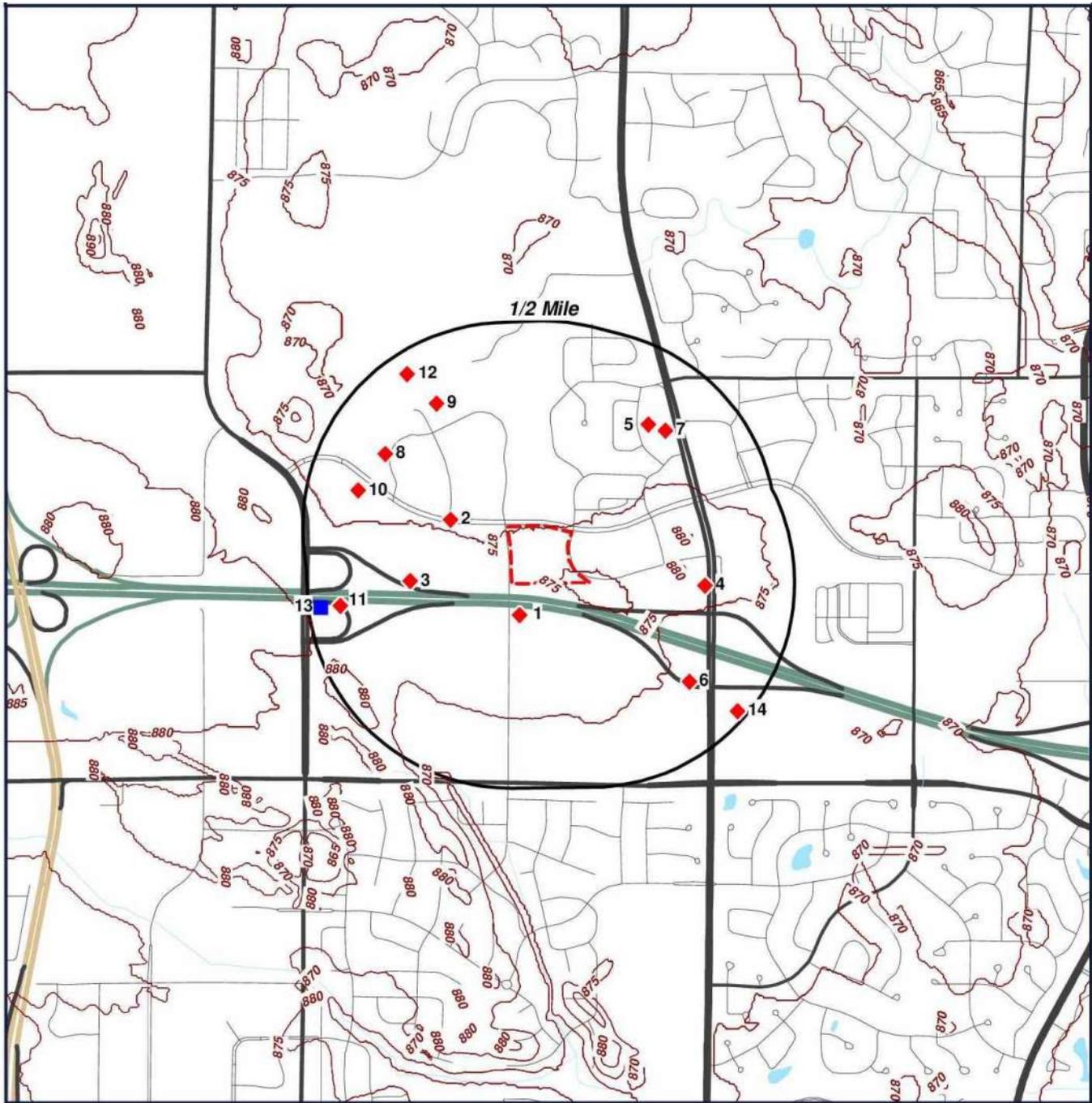
Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
CWIWELLS	0.5000		2	14	13	NS	NS	29
SUB-TOTAL			2	14	13	0	0	29
TOTAL		0	2	14	16	0	0	32

NOTES:

NS = NOT SEARCHED

TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

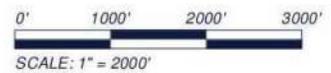
Waterwell Map



- Target Property (TP)
- CWIWELLS
- NWIS

Schreiber Parcel
Hampshire Avenue North/Oak
Grove Parkway
Brooklyn Park, Minnesota
55445

CONTOUR LINES REPRESENTED IN FEET



[Click here to access Satellite view](#)

Report Summary of Locatable Sites

Map ID#	Database Name	Site ID#	Distance From Site	Site Name	Address	City, Zip Code	PAGE #
1	CWIWELLS	0000686291	0.08 S	BROOKLYN PARK OB-1	HAMPSHIRE AV	BROOKLYN PARK, 55443	9
1	CWIWELLS	0000686290	0.08 S	BROOKLYN PARK TW-1	8300 NOBLE AV	BROOKLYN PARK, 55443	10
2	CWIWELLS	0000255192	0.15 W	B.P. OLD IRRIGATION WELL		BROOKLYN PARK, 55443	11
3	CWIWELLS	0000644532	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	12
3	CWIWELLS	0000644528	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	13
3	CWIWELLS	0000644529	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	14
3	CWIWELLS	0000644530	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	15
3	CWIWELLS	0000644531	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOK PARK	16
3	CWIWELLS	0000644533	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	17
3	CWIWELLS	0000644534	0.25 SW	RYAN COMPANIES	7000 97TH AV	BROOKLYN PARK	18
3	CWIWELLS	0000688273	0.25 SW	PROTEIN DESIGN LABS	9450 WINNETKA AV	BROOK PARK	19
3	CWIWELLS	0000688274	0.25 SW	PROTEIN DESIGN LABS	9450 WINNETKA AV	BROOKLYN PARK	20
3	CWIWELLS	0000688276	0.25 SW	PROTEIN DESIGN LABS	9450 WINNETICA AV	BROOKLYN PARK	21
3	CWIWELLS	0000688325	0.25 SW	PROTEIN DESIGN LABS	9450 WINNETKA AV	BROOKLYN PARK	22
3	CWIWELLS	0000553834	0.25 SW	CITY OF BROOKLYN PARK	COUNTY 3 & BROADWAY	WYOMING	23
3	CWIWELLS	0000688324	0.25 SW	PROTEIN DESIGN LABS	9450 WINNETKA AV	BROOKLYN PARK	24
4	CWIWELLS	0000568758	0.29 E	MW-3	320 WASHINGTON AV	HOPKINS, 55343	25
5	CWIWELLS	0000717881	0.33 NE	SCHRIEBER, BILL	10001 ZANE AV	BROOKLYN PARK, 55443	26
6	CWIWELLS	0000255218	0.35 SE	9501 ZANE AVE. I.W.	9501 ZANE AV	BROOKLYN PARK	27
7	CWIWELLS	0000511873	0.36 NE	SCHREIBER, BILL	10001 ZANE AV	BROOKLYN PARK, 55443	28
7	CWIWELLS	0000457827	0.35 NE	SCHRIEBER, BILL	10001 ZANE AV	MINNEAPOLIS, 55	29
8	CWIWELLS	0000768986	0.36 NW	TARGET CORP.	7000 TARGET PK	BROOKLYN PARK, 55445	30
8	CWIWELLS	0000768985	0.36 NW	TARGET CORP.	7000 TARGET PK	BROOKLYN PARK, 55445	31
9	CWIWELLS	0000795184	0.36 NW	TARGET CORP	7000 TARGET PK	BROOKLYN PARK, 55445	32
10	CWIWELLS	0000255193	0.38 W	B.P. DEEP IRRIGATION WEL		BROOKLYN PARK, 55443	33
11	CWIWELLS	0000154192	0.43 SW	DUSBABEK, STEVE	7430 93RD AV	BROOKLYN PARK, 55445	34
11	NWIS	00604255	0.43 SW	119N21W08CABACD01 000015419			35
11	CWIWELLS	0000147123	0.46 SW	SMITH, LES	7450 93RD AV	BROOKLYN PARK, 55445	36
12	NWIS	00604768	0.46 NW	119N21W05DCCCCC01 000022460			37
12	CWIWELLS	0000224602	0.46 NW	BROOKLYN PARK TW-4		BROOKLYN PARK, 55445	38
13	NWIS	00604243	0.46 SW	119N21W08CABDBB01 000014712			39

Report Summary of Locatable Sites

[14](#) CWIWELLS 0000439743 0.49 SE SNYDER, KEITH 9709 ZANE AV BROOKLYN PARK [40](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 1](#)

Distance from Property: 0.08 mi. S

FACILITY INFORMATION

UNIQUE ID: **0000686291**

WELL NAME: **BROOKLYN PARK OB-1**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.365716000**

LATITUDE: **45.129177000**

DEPTH DRILLED: **85.00**

ELEVATION: **875.00**

DATE DRILLED: **12/10/2008**

REMARKS:

- NO REMARKS REPORTED

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 1](#)

Distance from Property: 0.08 mi. S

FACILITY INFORMATION

UNIQUE ID: **0000686290**

WELL NAME: **BROOKLYN PARK TW-1**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.365874000**

LATITUDE: **45.129178000**

DEPTH DRILLED: **405.00**

ELEVATION: **875.00**

DATE DRILLED: **12/12/2008**

REMARKS:

M.G.S. NO. 4885.

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 2](#)

Distance from Property: 0.15 mi. W

FACILITY INFORMATION

UNIQUE ID: **0000255192**

WELL NAME: **B.P. OLD IRRIGATION WELL**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.369330000**

LATITUDE: **45.132545000**

DEPTH DRILLED: **104.00**

ELEVATION: **875.00**

DATE DRILLED: **//0**

REMARKS:

GAMMA LOGGED 3-8-2000.

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644532**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **46.00**

ELEVATION: **0.00**

DATE DRILLED: **05/08/2000**

REMARKS:

PIT 4' BELOW GRADE

CASING BOTH PLASTIC AND STEEL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644528**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **62.00**

ELEVATION: **0.00**

DATE DRILLED: **05/02/2000**

REMARKS:

CASING IS BOTH PLASTIC AND STEEL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644529**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **47.00**

ELEVATION: **0.00**

DATE DRILLED: **05/03/2000**

REMARKS:

PIT 4' BELOW GRADE

CASING IS STEEL AND PLASTIC

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644530**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **64.00**

ELEVATION: **0.00**

DATE DRILLED: **05/05/2000**

REMARKS:

PIT 4' BELOW GRADE

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Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644531**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOK PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **46.00**

ELEVATION: **0.00**

DATE DRILLED: **05/05/2000**

REMARKS:

PIT 4' BELOW GRADE

CASING IS BOTH PLASTIC AND STEEL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644533**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **35.00**

ELEVATION: **0.00**

DATE DRILLED: **06/04/2000**

REMARKS:

PIT 4' BELOW GRADE

CASING BOTH PLASTIC AND STEEL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000644534**

WELL NAME: **RYAN COMPANIES**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **47.00**

ELEVATION: **0.00**

DATE DRILLED: **06/06/2000**

REMARKS:

PIT 4' BELOW GRADE

CASING IS BOTH PLASTIC AND STEEL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000688273**

WELL NAME: **PROTEIN DESIGN LABS**

CITY/STATE/ZIP: **BROOK PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **29.00**

ELEVATION: **0.00**

DATE DRILLED: **02/04/2003**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000688274**

WELL NAME: **PROTEIN DESIGN LABS**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **29.00**

ELEVATION: **0.00**

DATE DRILLED: **02/05/2003**

REMARKS:

- NO REMARKS REPORTED

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000688276**

WELL NAME: **PROTEIN DESIGN LABS**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **28.00**

ELEVATION: **0.00**

DATE DRILLED: **01/30/2003**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000688325**

WELL NAME: **PROTEIN DESIGN LABS**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **35.00**

ELEVATION: **0.00**

DATE DRILLED: **05/16/2003**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 3](#)

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000553834**

WELL NAME: **CITY OF BROOKLYN PARK**

CITY/STATE/ZIP: **WYOMING MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **39.00**

ELEVATION: **0.00**

DATE DRILLED: **10/10/1997**

REMARKS:

WELL SEALED 10-10-1997 BY D0001

ORIGINAL USE DW - DEWATERING WELL

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 3

Distance from Property: 0.25 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000688324**

WELL NAME: **PROTEIN DESIGN LABS**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.371355000**

LATITUDE: **45.130360000**

DEPTH DRILLED: **19.00**

ELEVATION: **0.00**

DATE DRILLED: **05/14/2003**

REMARKS:

- NO REMARKS REPORTED

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 4

Distance from Property: 0.29 mi. E

FACILITY INFORMATION

UNIQUE ID: **0000568758**

WELL NAME: **MW-3**

CITY/STATE/ZIP: **HOPKINS MN 553438468**

LONGITUDE: **-93.356575000**

LATITUDE: **45.130217000**

DEPTH DRILLED: **30.00**

ELEVATION: **872.30**

DATE DRILLED: **02/06/1996**

REMARKS:

WELL FOR THE ELM CREEK INTERCEPTOR.

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 5

Distance from Property: 0.33 mi. NE

FACILITY INFORMATION

UNIQUE ID: **0000717881**

WELL NAME: **SCHRIEBER, BILL**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.359432000**

LATITUDE: **45.135915000**

DEPTH DRILLED: **112.00**

ELEVATION: **871.00**

DATE DRILLED: **06/28/2005**

REMARKS:

- NO REMARKS REPORTED

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 6](#)

Distance from Property: 0.35 mi. SE

FACILITY INFORMATION

UNIQUE ID: **0000255218**

WELL NAME: **9501 ZANE AVE. I.W.**

CITY/STATE/ZIP: **BROOKLYN PARK MN**

LONGITUDE: **-93.357381000**

LATITUDE: **45.126822000**

DEPTH DRILLED: **121.00**

ELEVATION: **872.00**

DATE DRILLED: **//0**

REMARKS:

GAMMA LOGGED 7-16-1999.

WELL WAS CLEANED OUT BY ASSOCIATED WELL CO. TO 121 FEET. SCREENED 101-121.

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 7](#)

Distance from Property: 0.36 mi. NE

FACILITY INFORMATION

UNIQUE ID: **0000511873**

WELL NAME: **SCHREIBER, BILL**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.358549000**

LATITUDE: **45.135910000**

DEPTH DRILLED: **105.00**

ELEVATION: **873.00**

DATE DRILLED: **11/14/1989**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 7](#)

Distance from Property: 0.35 mi. NE

FACILITY INFORMATION

UNIQUE ID: **0000457827**

WELL NAME: **SCHRIEBER, BILL**

CITY/STATE/ZIP: **MINNEAPOLIS MN 55**

LONGITUDE: **-93.358582000**

LATITUDE: **45.135685000**

DEPTH DRILLED: **129.00**

ELEVATION: **0.00**

DATE DRILLED: **07/08/1981**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 8

Distance from Property: 0.36 mi. NW

FACILITY INFORMATION

UNIQUE ID: **0000768986**

WELL NAME: **TARGET CORP.**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55445**

LONGITUDE: **-93.372592000**

LATITUDE: **45.134875000**

DEPTH DRILLED: **40.00**

ELEVATION: **0.00**

DATE DRILLED: **11/04/2013**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 8

Distance from Property: 0.36 mi. NW

FACILITY INFORMATION

UNIQUE ID: **0000768985**

WELL NAME: **TARGET CORP.**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55445**

LONGITUDE: **-93.372592000**

LATITUDE: **45.134875000**

DEPTH DRILLED: **40.00**

ELEVATION: **0.00**

DATE DRILLED: **11/04/2013**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 9

Distance from Property: 0.36 mi. NW

FACILITY INFORMATION

UNIQUE ID: **0000795184**

WELL NAME: **TARGET CORP**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55445**

LONGITUDE: **-93.370022000**

LATITUDE: **45.136657000**

DEPTH DRILLED: **85.00**

ELEVATION: **0.00**

DATE DRILLED: **05/29/2013**

REMARKS:

- NO REMARKS REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 10

Distance from Property: 0.38 mi. W

FACILITY INFORMATION

UNIQUE ID: **0000255193**

WELL NAME: **B.P. DEEP IRRIGATION WEL**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55443**

LONGITUDE: **-93.373944000**

LATITUDE: **45.133575000**

DEPTH DRILLED: **340.00**

ELEVATION: **875.00**

DATE DRILLED: **//0**

REMARKS:

GAMMA LOGGED 3-8-2000.

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 11

Distance from Property: 0.43 mi. SW

FACILITY INFORMATION

UNIQUE ID: 0000154192

WELL NAME: DUSBABEK, STEVE

CITY/STATE/ZIP: BROOKLYN PARK MN 55445

LONGITUDE: -93.374899000

LATITUDE: 45.129709000

DEPTH DRILLED: 75.00

ELEVATION: 877.00

DATE DRILLED: 11/20/1978

REMARKS:

- NO REMARKS REPORTED

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**United States Geological Survey National Water Information System
(NWIS)**

MAP ID# 11

Distance from Property: 0.43 mi. SW

REPORTING AGENCY: MINNESOTA GEOLOGICAL SURVEY, MN

SITE NUMBER: 450747093222901

STATION NAME: 119N21W08CABACD01 0000154192

SITE TYPE: WELL

LATITUDE: 45.129687070 LONGITUDE: -93.374952500

DATE DRILLED: NOT REPORTED

WELL DEPTH: 75 FEET

HOLE DEPTH: 75 FEET

LOCAL AQUIFER: NOT REPORTED

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Minnesota County Well Index Registry (CWIWELLS)

[MAP ID# 11](#)

Distance from Property: 0.46 mi. SW

FACILITY INFORMATION

UNIQUE ID: **0000147123**

WELL NAME: **SMITH, LES**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55445**

LONGITUDE: **-93.375406000**

LATITUDE: **45.129456000**

DEPTH DRILLED: **85.00**

ELEVATION: **877.00**

DATE DRILLED: **03/11/1978**

REMARKS:

- NO REMARKS REPORTED

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**United States Geological Survey National Water Information System
(NWIS)**

MAP ID# 12

Distance from Property: 0.46 mi. NW

REPORTING AGENCY: MINNESOTA GEOLOGICAL SURVEY, MN

SITE NUMBER: 450816093221601

STATION NAME: 119N21W05DCCCCC01 0000224602

SITE TYPE: WELL

LATITUDE: 45.137742660 LONGITUDE: -93.371341400

DATE DRILLED: NOT REPORTED

WELL DEPTH: 120 FEET

HOLE DEPTH: 120 FEET

LOCAL AQUIFER: NOT REPORTED

[Back to Report Summary](#)

Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 12

Distance from Property: 0.46 mi. NW

FACILITY INFORMATION

UNIQUE ID: **0000224602**

WELL NAME: **BROOKLYN PARK TW-4**

CITY/STATE/ZIP: **BROOKLYN PARK MN 55445**

LONGITUDE: **-93.371479000**

LATITUDE: **45.137696000**

DEPTH DRILLED: **120.00**

ELEVATION: **873.00**

DATE DRILLED: **05/23/1973**

REMARKS:

M.G.S. NO. 883.

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**United States Geological Survey National Water Information System
(NWIS)**

MAP ID# 13

Distance from Property: 0.46 mi. SW

REPORTING AGENCY: MINNESOTA GEOLOGICAL SURVEY, MN

SITE NUMBER: 450746093223101

STATION NAME: 119N21W08CABDBB01 0000147123

SITE TYPE: WELL

LATITUDE: 45.129409290 LONGITUDE: -93.375508100

DATE DRILLED: 1978-03-11

WELL DEPTH: 85 FEET

HOLE DEPTH: 85 FEET

LOCAL AQUIFER: GLACIAL BURIED SAND AND/OR GRAVEL

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Minnesota County Well Index Registry (CWIWELLS)

MAP ID# 14

Distance from Property: 0.49 mi. SE

FACILITY INFORMATION

UNIQUE ID: **0000439743**

WELL NAME: **SNYDER, KEITH**

CITY/STATE/ZIP: **BROOKLYN PARK**

LONGITUDE: **-93.354947000**

LATITUDE: **45.125776000**

DEPTH DRILLED: **90.00**

ELEVATION: **0.00**

DATE DRILLED: **06/21/1988**

REMARKS:

- NO REMARKS REPORTED

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Environmental Records Definitions - FEDERAL

NWIS

United States Geological Survey National Water Information System

VERSION DATE: 07/02/14

This USGS National Water Information System database only includes groundwater wells. The USGS defines this well type as: A hole or shaft constructed in the earth intended to be used to locate, sample, or develop groundwater, oil, gas, or some other subsurface material. The diameter of a well is typically much smaller than the depth. Wells are also used to artificially recharge groundwater or to pressurize oil and gas production zones. Additional information about specific kinds of wells should be recorded under the secondary site types or the Use of Site field. Underground waste-disposal wells should be classified as waste-injection wells.

Environmental Records Definitions - STATE (MN)

CWIWELLS

Minnesota County Well Index Registry

VERSION DATE: 02/25/14

The County Well Index (CWI) data system was developed by the Minnesota Geological Survey (MGS) and the Minnesota Department of Health (MDH) containing basic information for over 340,000 water-wells drilled in Minnesota. The data is derived from water-well contractors' logs of geologic materials encountered during drilling. Most of the records in CWI are for wells drilled since 1974, when the water-well construction code required drillers to submit records for wells drilled in the state to the MDH. CWI does contain data for some records obtained by the MGS through the cooperation of drillers and local government agencies for wells drilled before 1974.

Appendix H

Research Summary

HIG Research Summary

Site Location:
Schreiber Parcel
Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, MN

HIG Project #:
1410894
Research Summary
Completed:
12/18/2014



Historical
Information
Gatherers

Conducted For:
Wenck Associates, Inc.
1800 Pioneer Creek Center
Maple Plain, MN

This Research Summary identifies the products and services ordered from Historical Information Gatherers, Inc. (HIG) for the above referenced site location.

Aerial Photographs

Aerial Photographs taken in the years listed below were provided for the site location. Title blocks on each page list the year and scale of each aerial photograph.

1937, 1940, 1947, 1953, 1957, 1966, 1969, 1979, 1984, 1991, 1997, 2000, 2003, 2008, 2013

City Directory Pages

A search was conducted for directories that include coverage of the site area. This included researching one or more of the following: HIG's City Directory Collection, the Allen County (Indiana) Public Library's city directory collection, the Library of Congress Business Reference Services Collection and other miscellaneous online sources.

The following directories for the general site area were identified. The directories were reviewed at approximate 5 year intervals, subject to availability. A comma between date ranges indicates a gap of 10 years or more in the directories available for review.

Minneapolis Suburban 1956-1988

Minneapolis 1992-2012

The streets and address ranges researched were either requested at the time of ordering or were selected by HIG. For each street researched, the date range of the publications that included listings for the site and/or surrounding properties is provided below. Each city directory page provided includes the publication name and date at the top of the page.

Oak Grove Parkway (Out Of Range)

Other historical maps provided: 1856, 1873, 1898, 1913, 1914

Current parcel map provided.

Topographic Maps

USGS Topographic Maps published in the years listed below were provided for the site location. Title blocks on each page list the map title, year and scale of the publication.

1902, 1955, 1967, 1972, 1980, 1993, 2013

HIG Research Summary

Site Location:

Schreiber Parcel
Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, MN

HIG Project #:

1410894

Research Summary Completed:

12/18/2014



Historical
Information
Gatherers

Conducted For:

Wenck Associates, Inc.
1800 Pioneer Creek Center
Maple Plain, MN

GeoSearch (GS) Database Report with GeoPlus

The Preliminary GS Database Report was delivered via email shortly after ordering to provide the approximate locations of database listings in the site area. A final Database Report including detailed listing information as well as the FEMA, NWI and soils maps was issued after verification and correction of database listing locations. The GeoPlus water well report and, in certain states, a GeoPlus oil and gas well report were also issued.

FIM+ Maps

The HIG Historical Map Collection was searched for fire insurance maps, real estate atlases and similar maps for the site area.

No maps were identified for the site location in the HIG Historical Map Collection.

HIG Research Summary

Site Location:

Schreiber Parcel
Hampshire Avenue North/Oak Grove Parkway
Brooklyn Park, MN

HIG Project #:

1410894

Research Summary

Completed:

12/18/2014



Historical
Information
Gatherers

Conducted For:

Wenck Associates, Inc.
1800 Pioneer Creek Center
Maple Plain, MN

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Wenck

Engineers • Scientists
Business Professionals

Appendix D

DNR Natural Heritage Database Search

**610 West EAW, Brooklyn Park
Hennepin County, Minnesota**

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Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5109 E-mail: lisa.joyal@state.mn.us

January 7, 2015

Correspondence # ERDB 20150181

Ms. Kelly Kunst
Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344

RE: Natural Heritage Review of the proposed Doran Shrieber Property Development;
T119N R21W Section 8; Hennepin County

Dear Ms. Kunst,

As requested, the Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, the following **rare species may be adversely affected** by the proposed project:

- Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported from the vicinity of the proposed project and may be encountered on site. For your information, I have attached a Blanding's turtle fact sheet that describes the habitat use and life history of this species. The fact sheet also provides two lists of recommendations for avoiding and minimizing impacts to this rare turtle. **Please refer to the first list of recommendations for your project.** In addition, if erosion control mesh will be used, the DNR recommends that the mesh be limited to wildlife-friendly materials (see enclosed fact sheet). If greater protection for turtles is desired, the second list of additional recommendations can also be implemented.

The attached flyer should be given to all contractors working in the area. If Blanding's turtles are found on the site, please remember that state law and rules prohibit the destruction of threatened or endangered species, except under certain prescribed conditions. If turtles are in imminent danger they should be moved by hand out of harm's way, otherwise they should be left undisturbed.

- Please include a copy of this letter in any DNR license or permit application.

The Natural Heritage Information System, a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and project description provided on the NHIS Data Request Form. Please contact me if project details change or if an updated review is needed.

Furthermore, the Natural Heritage Review does not constitute review or approval by the Department of

Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. Additional rare features for which we have no data may be present in the project area, or there may be other natural resource concerns associated with the proposed project. For these concerns, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

A handwritten signature in black ink that reads "Lisa Joyal". The signature is written in a cursive, flowing style.

Lisa Joyal
Endangered Species Review Coordinator

enc. Blanding's Turtle Fact Sheet and Flyer
Wildlife Friendly Erosion Control

Environmental Review Fact Sheet Series

Endangered, Threatened, and Special Concern Species of Minnesota

Blanding's Turtle

(Emydoidea blandingii)

Minnesota Status: Threatened
Federal Status: none

State Rank¹: S2
Global Rank¹: G4

HABITAT USE

Blanding's turtles need both wetland and upland habitats to complete their life cycle. The types of wetlands used include ponds, marshes, shrub swamps, bogs, and ditches and streams with slow-moving water. In Minnesota, Blanding's turtles are primarily marsh and pond inhabitants. Calm, shallow water bodies (Type 1-3 wetlands) with mud bottoms and abundant aquatic vegetation (e.g., cattails, water lilies) are preferred, and extensive marshes bordering rivers provide excellent habitat. Small temporary wetlands (those that dry up in the late summer or fall) are frequently used in spring and summer -- these fishless pools are amphibian and invertebrate breeding habitat, which provides an important food source for Blanding's turtles. Also, the warmer water of these shallower areas probably aids in the development of eggs within the female turtle. Nesting occurs in open (grassy or brushy) sandy uplands, often some distance from water bodies. Frequently, nesting occurs in traditional nesting grounds on undeveloped land. Blanding's turtles have also been known to nest successfully on residential property (especially in low density housing situations), and to utilize disturbed areas such as farm fields, gardens, under power lines, and road shoulders (especially of dirt roads). Although Blanding's turtles may travel through woodlots during their seasonal movements, shady areas (including forests and lawns with shade trees) are not used for nesting. Wetlands with deeper water are needed in times of drought, and during the winter. Blanding's turtles overwinter in the muddy bottoms of deeper marshes and ponds, or other water bodies where they are protected from freezing.

LIFE HISTORY

Individuals emerge from overwintering and begin basking in late March or early April on warm, sunny days. The increase in body temperature which occurs during basking is necessary for egg development within the female turtle. Nesting in Minnesota typically occurs during June, and females are most active in late afternoon and at dusk. Nesting can occur as much as a mile from wetlands. The nest is dug by the female in an open sandy area and 6-15 eggs are laid. The female turtle returns to the marsh within 24 hours of laying eggs. After a development period of approximately two months, hatchlings leave the nest from mid-August through early-October. Nesting females and hatchlings are often at risk of being killed while crossing roads between wetlands and nesting areas. In addition to movements associated with nesting, all ages and both sexes move between wetlands from April through November. These movements peak in June and July and again in September and October as turtles move to and from overwintering sites. In late autumn (typically November), Blanding's turtles bury themselves in the substrate (the mud at the bottom) of deeper wetlands to overwinter.

IMPACTS / THREATS / CAUSES OF DECLINE

- loss of wetland habitat through drainage or flooding (converting wetlands into ponds or lakes)
- loss of upland habitat through development or conversion to agriculture
- human disturbance, including collection for the pet trade* and road kills during seasonal movements
- increase in predator populations (skunks, raccoons, etc.) which prey on nests and young

*It is illegal to possess this threatened species.

RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS

These recommendations apply to typical construction projects and general land use within Blanding's turtle habitat, and are provided to help local governments, developers, contractors, and homeowners minimize or avoid detrimental impacts to Blanding's turtle populations. **List 1** describes minimum measures which we recommend to prevent harm to Blanding's turtles during construction or other work within Blanding's turtle habitat. **List 2** contains recommendations which offer even greater protection for Blanding's turtles populations; this list should be used *in addition to the first list* in areas which are known to be of state-wide importance to Blanding's turtles (contact the DNR's Natural Heritage and Nongame Research Program if you wish to determine if your project or home is in one of these areas), or in any other area where greater protection for Blanding's turtles is desired.

List 1. Recommendations for all areas inhabited by Blanding's turtles.	List 2. Additional recommendations for areas known to be of state-wide importance to Blanding's turtles.
GENERAL	
A flyer with an illustration of a Blanding's turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.	Turtle crossing signs can be installed adjacent to road-crossing areas used by Blanding's turtles to increase public awareness and reduce road kills.
Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed.	Workers in the area should be aware that Blanding's turtles nest in June, generally after 4pm, and should be advised to minimize disturbance if turtles are seen.
If a Blanding's turtle nests in your yard, do not disturb the nest.	If you would like to provide more protection for a Blanding's turtle nest on your property, see "Protecting Blanding's Turtle Nests" on page 3 of this fact sheet.
Silt fencing should be set up to keep turtles out of construction areas. It is <u>critical</u> that silt fencing be removed after the area has been revegetated.	Construction in potential nesting areas should be limited to the period between September 15 and June 1 (this is the time when activity of adults and hatchlings in upland areas is at a minimum).
WETLANDS	
Small, vegetated temporary wetlands (Types 2 & 3) should not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer).	Shallow portions of wetlands should not be disturbed during prime basking time (mid morning to mid- afternoon in May and June). A wide buffer should be left along the shore to minimize human activity near wetlands (basking Blanding's turtles are more easily disturbed than other turtle species).
Wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.	Wetlands should be protected from road, lawn, and other chemical run-off by a vegetated buffer strip at least 50' wide. This area should be left unmowed and in a natural condition.
ROADS	
Roads should be kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles need to cross).	Tunnels should be considered in areas with concentrations of turtle crossings (more than 10 turtles per year per 100 meters of road), and in areas of lower density if the level of road use would make a safe crossing impossible for turtles. Contact your DNR Regional Nongame Specialist for further information on wildlife tunnels.
Roads should be ditched, not curbed or below grade. If curbs must be used, 4 inch high curbs at a 3:1 slope are preferred (Blanding's turtles have great difficulty climbing traditional curbs; curbs and below grade roads trap turtles on the road and can cause road kills).	Roads should be ditched, not curbed or below grade.

ROADS cont.	
Culverts between wetland areas, or between wetland areas and nesting areas, should be 36 inches or greater in diameter, and elliptical or flat-bottomed.	Road placement should avoid separating wetlands from adjacent upland nesting sites, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details).
Wetland crossings should be bridged, or include raised roadways with culverts which are 36 in or greater in diameter and flat-bottomed or elliptical (raised roadways discourage turtles from leaving the wetland to bask on roads).	Road placement should avoid bisecting wetlands, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details). This is especially important for roads with more than 2 lanes.
Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.	Roads crossing streams should be bridged.
UTILITIES	
Utility access and maintenance roads should be kept to a minimum (this reduces road-kill potential).	
Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.	
LANDSCAPING AND VEGETATION MANAGEMENT	
Terrain should be left with as much natural contour as possible.	As much natural landscape as possible should be preserved (installation of sod or wood chips, paving, and planting of trees within nesting habitat can make that habitat unusable to nesting Blanding's turtles).
Graded areas should be revegetated with native grasses and forbs (some non-natives form dense patches through which it is difficult for turtles to travel).	Open space should include some areas at higher elevations for nesting. These areas should be retained in native vegetation, and should be connected to wetlands by a wide corridor of native vegetation.
Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1 st and before June 1 st).	Ditches and utility access roads should not be mowed or managed through use of chemicals. If vegetation management is required, it should be done mechanically, as infrequently as possible, and fall through spring (mowing can kill turtles present during mowing, and makes it easier for predators to locate turtles crossing roads).

Protecting Blanding's Turtle Nests: Most predation on turtle nests occurs within 48 hours after the eggs are laid. After this time, the scent is gone from the nest and it is more difficult for predators to locate the nest. Nests more than a week old probably do not need additional protection, unless they are in a particularly vulnerable spot, such as a yard where pets may disturb the nest. Turtle nests can be protected from predators and other disturbance by covering them with a piece of wire fencing (such as chicken wire), secured to the ground with stakes or rocks. The piece of fencing should measure at least 2 ft. x 2 ft., and should be of medium sized mesh (openings should be about 2 in. x 2 in.). It is *very important* that the fencing be **removed before August 1st** so the young turtles can escape from the nest when they hatch!

REFERENCES

- ¹Association for Biodiversity Information. "Heritage Status: Global, National, and Subnational Conservation Status Ranks." NatureServe. Version 1.3 (9 April 2001). <http://www.natureserve.org/ranking.htm> (15 April 2001).
- Coffin, B., and L. Pfannmuller. 1988. Minnesota's Endangered Flora and Fauna. University of Minnesota Press, Minneapolis, 473 pp.

REFERENCES (cont.)

- Moriarty, J. J., and M. Linck. 1994. Suggested guidelines for projects occurring in Blanding's turtle habitat. Unpublished report to the Minnesota DNR. 8 pp.
- Oldfield, B., and J. J. Moriarty. 1994. Amphibians and Reptiles Native to Minnesota. University of Minnesota Press, Minneapolis, 237 pp.
- Sajwaj, T. D., and J. W. Lang. 2000. Thermal ecology of Blanding ' s turtle in central Minnesota. *Chelonian Conservation and Biology* 3(4):626-636.

CAUTION



BLANDING'S TURTLES

MAY BE ENCOUNTERED IN THIS AREA

The unique and rare Blanding's turtle has been found in this area. Blanding's turtles are state-listed as Threatened and are protected under Minnesota Statute 84.095, Protection of Threatened and Endangered Species. Please be careful of turtles on roads and in construction sites. For additional information on turtles, or to report a Blanding's turtle sighting, contact the DNR Nongame Specialist nearest you: Bemidji (218-308-2653); Grand Rapids (218-327-4518); New Ulm (507-359-6033); Rochester (507-206-2820); or St. Paul (651-259-5772).

DESCRIPTION: The Blanding's turtle is a medium to large turtle (5 to 10 inches) with a black or dark blue, dome-shaped shell with muted yellow spots and bars. The bottom of the shell is hinged across the front third, enabling the turtle to pull the front edge of the lower shell firmly against the top shell to provide additional protection when threatened. The head, legs, and tail are dark brown or blue-gray with small dots of light brown or yellow. A distinctive field mark is the bright yellow chin and neck.

**BLANDING'S TURTLES DO NOT MAKE GOOD PETS
IT IS ILLEGAL TO KEEP THIS THREATENED SPECIES IN CAPTIVITY**

SUMMARY OF RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS TO BLANDING'S TURTLE POPULATIONS

(see Blanding's Turtle Fact Sheet for full recommendations)

- This flyer should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.
- Turtles that are in imminent danger should be moved, by hand, out of harm's way. Turtles that are not in imminent danger should be left undisturbed to continue their travel among wetlands and/or nest sites.
- If a Blanding's turtle nests in your yard, do not disturb the nest and do not allow pets near the nest.
- Silt fencing should be set up to keep turtles out of construction areas. It is critical that silt fencing be removed after the area has been revegetated.
- Small, vegetated temporary wetlands should not be dredged, deepened, or filled.
- All wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.
- Roads should be kept to minimum standards on widths and lanes.
- Roads should be ditched, not curbed or below grade. If curbs must be used, 4" high curbs at a 3:1 slope are preferred.
- Culverts under roads crossing wetland areas, between wetland areas, or between wetland and nesting areas should be at least 36 in. diameter and flat-bottomed or elliptical.
- Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.
- Utility access and maintenance roads should be kept to a minimum.
- Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.
- Terrain should be left with as much natural contour as possible.
- Graded areas should be revegetated with native grasses and forbs.
- Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1st and before June 1st).

Wildlife Friendly Erosion Control

Wildlife entanglement in, and death from, plastic netting and other man-made plastic materials has been documented in birds (Johnson, 1990; Fuller-Perrine and Tobin, 1993), fish (Johnson, 1990), mammals (Derraik, 2002), and reptiles (Barton and Kinkead, 2005; Kapfer and Paloski, 2011). Yet the use of these materials continues in many cases, without consideration for wildlife impacts. Plastic netting is frequently used for erosion control during construction and landscape projects and can negatively impact terrestrial and aquatic wildlife populations as well as snag in maintenance machinery resulting in costly repairs and delays. However, wildlife friendly erosion control materials do exist, and are sold by several large erosion control material companies. Below are a few key considerations before starting a project.

Know Your Options

- Remember to consult with local natural resource authorities (DNR, USFWS, etc.) before starting a project. They can help you identify sensitive areas and rare species.
- When erosion control is necessary, select products with biodegradable netting (natural fiber, biodegradable polyesters, etc.).
- DO NOT use products that require UV-light to biodegrade (also called, "photodegradable"). These do not biodegrade properly when shaded by vegetation.
- Use netting with rectangular shaped mesh (not square mesh).
- Use netting with flexible (non-welded) mesh.



Woven 100% natural fiber erosion control materials being utilized along a central Minnesota stream. ©MN DNR, Nick Proulx

Know the Landscape

- It is especially important to use wildlife friendly erosion control around:
 - Areas with threatened or endangered species.
 - Wetlands, rivers, lakes, and other watercourses.
 - Habitat transition zones (prairie – woodland edges, rocky outcrop – woodland edges, steep rocky slopes, etc.).
 - Areas with threatened or endangered species.
- Use erosion mesh wisely, not all areas with disturbed ground necessitate its use. Do not use plastic mesh unless it is specifically required. Other erosion control options exist (open weave textile (OWT), rolled erosion control products (RECPs) with woven natural fiber netting).



Fish trapped and killed by welded-plastic square erosion control mesh improperly placed along a small central Minnesota stream. Photo courtesy of Ben Lowe.

Protect Wildlife

- Avoid photodegradable erosion control materials where possible.
- Use only biodegradable materials (typically made from natural fibers), preferably those that will biodegrade under a variety of conditions.
- Wildlife friendly erosion control material costs are often similar to conventional plastic netting.



Plains Gartersnake trapped and killed by welded-plastic square erosion control mesh placed along a newly installed cement culvert in southern Minnesota. ©MN DNR, Carol Hall



A small vole that was strangled and killed by plastic erosion control material with welded and square mesh. Photo taken in southern Minnesota and provided courtesy of Tom Jessen.



Literature Referenced

- Barton, C. and K. Kinkead. 2005. Do erosion control and snakes mesh? Soil and Water Conservation Society 60:33A-35A.
- Derraik, J.G.B. 2002. The pollution of the marine environment by plastic debris: a review. Marine Pollution Bulletin 44:842-852.
- Fuller-Perrine, L.D., and M.E. Tobin. 1993. A method for applying and removing bird-exclusion netting in commercial vineyards. Wildlife Society Bulletin 21:47-51.
- Johnson, S.W. 1990. Distribution, abundance, and source of entanglement debris and other plastics on Alaskan beaches, 1982-1988. Proceedings of the Second International Conference on Marine Debris 331-348.
- Kapfer, J. M., and R. A. Paloski. 2011. On the threat to snakes of mesh deployed for erosion control and wildlife exclusion. Herpetological Conservation and Biology 6:1-9.

Appendix E

State Historic Preservation Office Correspondence

**610 West EAW, Brooklyn Park
Hennepin County, Minnesota**

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From: Thomas Cinadr <thomas.cinadr@mnhs.org>
Sent: Tuesday, December 16, 2014 6:52 AM
To: Ryan Grohnke
Subject: Re: Database search - Doran
Attachments: Historic.rtf

THIS EMAIL IS NOT A PROJECT CLEARANCE.

This message simply reports the results of the cultural resources database search you requested. The database search produced results for only previously known archaeological sites and historic properties. Please read the note below carefully.

No archaeological sites were identified in a search of the Minnesota Archaeological Inventory and Historic Structures Inventory for the search area requested. **A report containing the history/architecture properties identified is attached.**

The result of this database search provides a listing of recorded archaeological sites and historic architectural properties that are included in the current SHPO databases. Because the majority of archaeological sites in the state and many historic architectural properties have not been recorded, important sites or structures may exist within the search area and may be affected by development projects within that area. Additional research, including field survey, may be necessary to adequately assess the area's potential to contain historic properties.

Properties that are listed in the National Register of Historic Places (NRHP) or have been determined eligible for listing in the NRHP are indicated on the reports you have received. The following codes on the reports you received are:

NR – National Register listed. The properties may be individually listed or may be within the boundaries of a National Register District.

CEF – Certified Eligible to the National Register findings are usually made during the federal review process, these properties have been evaluated as being eligible for listing in the National Register.

SEF – Staff eligible findings to the National Register are properties that have been determined eligible by SHPO staff.

DOE – Determination of Eligibility is made by the National Park Service and typically refers to properties deemed eligible but the owner objects to the listing.

CNEF – Certified Not Eligible to the National Register. SHPO has begun to record properties that have been evaluated as **not eligible** for listing in the National Register. If the box on the form has a check the property has been determined to be **not eligible**.

Properties without **NR, CEF, SEF, DOE, or CNEF** designations in the reports you received may not have been evaluated and therefore no assumption to their eligibility can be made.

If you require a comprehensive assessment of a project's potential to impact archaeological sites or historic architectural properties, you may need to hire a qualified archaeologist and/or historian. If you need assistance with a project review, please contact Kelly Gragg-Johnson in Review and Compliance @ 651-259-3455 or by email at kelly.graggjohnson@mnhs.org.

The Minnesota SHPO Survey Manuals and Database Metadata can be found at <http://www.mnhs.org/shpo/survey/inventories.htm>

SHPO research hours are 8:30 AM – 4:00 PM Tuesday-Friday.

The Office is closed on Mondays.

Tom Cinadr

Survey and Information Management Coordinator
Minnesota State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. West
St. Paul, MN 55102

651-259-3453

On Mon, Dec 15, 2014 at 9:57 AM, Ryan Grohnke <Ryan.Grohnke@westwoodps.com> wrote:

Tom,

Could you please do a database search for the following location?

Hennepin County

Township 119

Range 21

Sections 4, 5, 6, 7, 8, 9, 16, 17, 18

Thank you,

Ryan P. Grohnke

Cultural Resources Field Director/Project Manager

Westwood Professional Services

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DIRECT 952-906-7403

MOBILE 612-209-3352

MAIN 952-937-5150

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Confidentiality Statement:

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History/Architecture Inventory

PROPERTY NAME	ADDRESS	Twp	Range	Sec	Quarters	USGS	Report	NRHP	CEF	DOE	Inventory Number
COUNTY:	Hennepin										
CITY/TOWNSHIP:	Brooklyn Park										
Palmer House	10232 Zane Ave.	119	21	4	SW-NW-SW	Coon Rapids	HE-2001-1H				HE-BPC-001
Palmer House		119	21	4	SW-NW-SW	Coon Rapids	HE-88-1H				HE-BPC-001
Palmer House		119	21	4	SW-NW-SW	Coon Rapids	HE-2001-10H				HE-BPC-001
Schreiber Farmstead	9933-10001 Zane Ave. N.	119	21	9	S-NW-NW	Coon Rapids	HE-2001-10H				HE-BPC-002
Schreiber Farmstead		119	21	9	S-NW-NW	Coon Rapids	HE-2001-1H				HE-BPC-002
Schreiber Farmstead		119	21	9	S-NW-NW	Coon Rapids	HE-94-08H				HE-BPC-002
farmhouse	7925 93rd Ave. N.	119	21	18	NE-NE-NE	Osseo	HE-88-1H				HE-BPC-010
Miller Farmstead	9248 Broadway W.	119	21	17	NW-NE-NW	Osseo	HE-94-08H				HE-BPC-011
Miller Farmstead		119	21	17	NW-NE-NW	Osseo	HE-2001-6H				HE-BPC-011
Miller Farmstead		119	21	17	NW-NE-NW	Osseo	HE-2001-10H				HE-BPC-011
barn	9124 Regent Ave. N.	119	21	16	SW-NE-NE	Minneapolis North	HE-88-1H				HE-BPC-012
Zavadil Farmstead	4500 95th Ave. N.	119	21	9	SE-NE-SE	Coon Rapids	HE-94-08H				HE-BPC-013
Zavadil Farmstead		119	21	9	SE-NE-SE	Coon Rapids	HE-2001-6H				HE-BPC-013
Zavadil Farmstead		119	21	9	SE-NE-SE	Coon Rapids	HE-2001-10H				HE-BPC-013
farmhouse	9800 Regent Ave. N.	119	21	9	SW-SE-NE	Coon Rapids	HE-88-1H				HE-BPC-014
schoolhouse	9900 Regent Ave. N.	119	21	9	NW-SE-NE	Coon Rapids	HE-88-1H				HE-BPC-015
schoolhouse		119	21	9	NW-SE-NE	Coon Rapids	HE-2001-10H				HE-BPC-015
schoolhouse		119	21	9	NW-SE-NE	Coon Rapids	HE-2001-6H				HE-BPC-015
farmhouse	5032 101st Ave.	119	21	4	SW-SE-SE	Coon Rapids	HE-88-1H				HE-BPC-016
farmhouse		119	21	4	SW-SE-SE	Coon Rapids	HE-2001-6H				HE-BPC-016
farmhouse		119	21	4	SW-SE-SE	Coon Rapids	HE-2001-10H				HE-BPC-016
Bragdon Church	10255 Noble Ave. N.	119	21	4	NE-SE-SE	Coon Rapids	HE-88-1H				HE-BPC-017

PROPERTY NAME	ADDRESS	Twp	Range	Sec	Quarters	USGS	Report	NRHP	CEF	DOE	Inventory Number
COUNTY:	Hennepin										
CITY/TOWNSHIP:	Brooklyn Park										
Bragdon Church	10255 Noble Ave. N.	119	21	4	NE-SE-SE	Coon Rapids	HE-2001-6H				HE-BPC-017
Bragdon Church		119	21	4	NE-SE-SE	Coon Rapids	HE-2001-10H				HE-BPC-017
Albert Tessman Farmstead	6508 85th Ave. N.	119	21	17	S-SE-SE	Minneapolis North	HE-2001-10H				HE-BPC-020
Albert Tessman Farmstead		119	21	17	S-SE-SE	Minneapolis North	HE-2001-6H				HE-BPC-020
Albert Tessman Farmstead		119	21	17	S-SE-SE	Minneapolis North	HE-88-1H				HE-BPC-020
Edmund Tessman Farmstead	6716 85th Ave.	119	21	17	SE-SW-SE	Minneapolis North	HE-88-1H				HE-BPC-021
Edmund Tessman Farmstead		119	21	17	SE-SW-SE	Minneapolis North	HE-2001-10H				HE-BPC-021
Edmund Tessman Farmstead		119	21	17	SE-SW-SE	Minneapolis North	HE-2001-6H				HE-BPC-021
Adolph Tessman Farmhouse	6108 85th Ave.	119	21	16	SW-SW-SW	Minneapolis N	HE-2001-6H				HE-BPC-023
Adolph Tessman Farmhouse		119	21	16	SW-SW-SW	Minneapolis N	HE-88-1H				HE-BPC-023
Adolph Tessman Farmhouse		119	21	16	SW-SW-SW	Minneapolis N	HE-2001-10H				HE-BPC-023
farmhouse	9309 Winnetka Ave.	119	21	18	NE-NW-NE	Osseo	HE-2001-6H				HE-BPC-037
farmhouse		119	21	18	NE-NW-NE	Osseo	HE-2001-10H				HE-BPC-037
District 33 School	9024 101st Ave. N	119	21	6	SW-SE-SW	Anoka	HE-2001-10H				HE-BPC-038
District 33 School		119	21	6	SW-SE-SW	Anoka	HE-2001-6H				HE-BPC-038
High Line Driving Range Office	off Co. Hwy. 610	119	21	7	SE-SE-NW	Anoka	HE-94-08H				HE-BPC-040
Greg Peterson Farmhouse	9016 97th Ave. N.	119	21	7	SW-SE-NW	Anoka	HE-94-08H				HE-BPC-041
Greeninger House	8400 97th Ave. N.	119	21	7	SE-SW-NE	Anoka	HE-94-08H				HE-BPC-042
William Berg House	8316 97th Ave. N.	119	21	7	SE-SW-NE	Anoka	HE-94-08H				HE-BPC-043
Larue Foss House	7450 93th Ave. N.	119	21	8	NW-NE-SW	Anoka	HE-94-08H				HE-BPC-045
Sutherland House	7440 93th Ave. N.	119	21	8	NW-NE-SW	Anoka	HE-94-08H				HE-BPC-046
Dusbabek House	7430 93th Ave. N.	119	21	8	NW-NE-SW	Coon Rapids	HE-94-08H				HE-BPC-047
Wittinger House	7460 93th Ave. N.	119	21	8	SW-SE-NW	Coon Rapids	HE-94-08H				HE-BPC-048
Gray House	off Co. Rd. 30	119	21	8	SE-SE-NW	Coon Rapids	HE-94-08H				HE-BPC-049

PROPERTY NAME	ADDRESS	Twp	Range	Sec	Quarters	USGS	Report	NRHP	CEF	DOE	Inventory Number
COUNTY: Hennepin											
CITY/TOWNSHIP: Brooklyn Park											
Douglas Nobbe House	9501 Zane Ave. N.	119	21	9	SE-NW-SW	Coon Rapids	HE-94-08H				HE-BPC-052
Russell Nobbe House	9545 Zane Ave. N.	119	21	9	SE-NW-SW	Coon Rapids	HE-94-08H				HE-BPC-053
Schrunk/Sharp House	9601 Zane Ave. N.	119	21	9	NE-NW-SW	Coon Rapids	HE-94-08H				HE-BPC-054
Nobbe House	9625 Zane Ave. N.	119	21	9	NE-NW-SW	Coon Rapids	HE-94-08H				HE-BPC-055
Schneider House	10032 Winnetka Ave. N.	119	21	8	NW-NW-	Anoka	HE-94-08H				HE-BPC-056
Walton House	10225 Winnetka Ave. N.	119	21	6	NE-SE-SE	Anoka	HE-94-08H				HE-BPC-058
house	10225 Noble Ave. N	119	21	4	NE-SE-SE	Coon Rapids	HE-2001-10H				HE-BPC-073
house		119	21	4	NE-SE-SE	Coon Rapids	HE-2001-6H				HE-BPC-073
Smith, John, Farmstead	9900 Zane Ave.	119	21	9	SE-NW-NW	Coon Rapids	HE-2001-10H				HE-BPC-077
Smith, John, Farmstead		119	21	9	SE-NW-NW	Coon Rapids	HE-2001-1H				HE-BPC-077
Wolter Farmhouse and Outbuildings	8400 93rd Ave. N	119	21	7	SE-SW-SE	Osseo	HE-2001-6H				HE-BPC-079
Wolter Farmhouse and Outbuildings		119	21	7	SE-SW-SE	Osseo	HE-2001-10H				HE-BPC-079
Brookly Park Training and Community Center (Bldg 2001)	5500 85th Ave. N	119	21	16		Minneapolis North					HE-BPC-132
CITY/TOWNSHIP: Osseo											
house	16 5th St. N.	119	21	18	SW-NW-NW	Osseo					HE-OSC-001
house	232 Broadway	119	21	18	NE-NW-SW	Osseo					HE-OSC-003
Osseo Press and News	200 Central Ave.	119	21	18	NW-SW-NW	Osseo					HE-OSC-004
Alan's Flower & Gift Shop	NE corner Central Ave. & 6th St. N	119	21	18	NW-NW-	Osseo					HE-OSC-007
Osseo Vacuum	608 Central Ave.	119	21	18	NW-NW-	Osseo					HE-OSC-008
house	616 Central Ave.	119	21	18	SW-NW-NW	Osseo					HE-OSC-013
Burlington Northern Depot	xxx Central Ave.	119	21	18	NW-NW-SW	Osseo					HE-OSC-014
house	100 Central Ave.	119	21	18	SW-SW-NW	Osseo					HE-OSC-015

PROPERTY NAME	ADDRESS	Twp	Range	Sec	Quarters	USGS	Report	NRHP	CEF	DOE	Inventory Number
COUNTY:	Hennepin										
CITY/TOWNSHIP:	Osseo										
church	101 Broadway E.	119	21	18	SW-SW-NW	Osseo					HE-OSC-021
house	108 Broadway E.	119	21	18	NW-NW-SW	Osseo					HE-OSC-022
house	125 Broadway E.	119	21	18	SW-SW-NW	Osseo					HE-OSC-023
house	317 1st Ave. E.	119	21	18	NW-SW-NW	Osseo					HE-OSC-024
house	375 1st Ave. E.	119	21	18	NW-SW-NW	Osseo					HE-OSC-025
house	309 1st Ave. E.	119	21	18	NW-SW-NW	Osseo					HE-OSC-026
house	221 1st Ave. E.	119	21	18	NW-SW-NW	Osseo					HE-OSC-028
house	133 1st St. SE	119	21	18	NW-SW	Osseo					HE-OSC-032
Action T.V.	124 CR 81 N SVC Rd. E	119	21	18	NW-SW	Osseo					HE-OSC-033
house	100 Broadway St. E	119	21	18	NW-SW	Osseo					HE-OSC-034
Auto Building	111 1st St. SE	119	21	18	NW-SW	Osseo					HE-OSC-035
commercial building	209 CR 81 Service Rd. W	119	21	18	NW-SW	Osseo					HE-OSC-036
Industrial Building	325 CR 81 Service Rd. W	119	21	18	SW-SW	Osseo					HE-OSC-037
Commercial Building	334 CR N. 81 SVC Rd. E	119	21	18	SE-SW	Osseo					HE-OSC-038
Commercial Building	338 CR N. 81 SVC Rd. E	119	21	18	SE-SW	Osseo					HE-OSC-039
house	332 6th Ave. SE	119	21	18	SE-SW	Osseo					HE-OSC-040
Commercial Building	337 CR 81 Service Rd. W	119	21	18	SE-SW	Osseo					HE-OSC-041
Industrial Building	417 CR 81 Service Rd. W	119	21	18	SE-SW	Osseo					HE-OSC-042
house	340 6th Ave. SE	119	21	18	SE-SW	Osseo					HE-OSC-043
Automobile Repair Shop	125 1st St. SE	119	21	18	NW-SW	Osseo					HE-OSC-044
Filling Station	408 3rd St. SE	119	21	18	SE-SW	Osseo					HE-OSC-045
Strip Mall	300 5th Ave. SE	119	21	18	SE-SW	Osseo					HE-OSC-046
commercial building	409 CR 81 Service Rd. W	119	21	18	SE-SW	Osseo					HE-OSC-047
house	116 2nd Ave. SE	119	21	18	NW-SW	Osseo					HE-OSC-057

PROPERTY NAME	ADDRESS	Twp	Range	Sec	Quarters	USGS	Report	NRHP	CEF	DOE	Inventory Number
COUNTY:	Hennepin										
CITY/TOWNSHIP:	Osseo										
house	225 5th Ave. SE	119	21	18	NE-SW	Osseo					HE-OSC-060
Triplex	241 5th Ave. SE	119	21	18	NE-SW	Osseo					HE-OSC-061
house	224 4th Ave. SE	119	21	18	NE-SW	Osseo					HE-OSC-062
Strip Mall	257 5th Ave. SE	119	21	18	NE-SW	Osseo					HE-OSC-063
house	132 2nd Ave. SE	119	21	18	NW-SW	Osseo					HE-OSC-064
house	124 2nd Ave. SE	119	21	18	NW-SW	Osseo					HE-OSC-065

Appendix F

Traffic Impact Study

610 West EAW, Brooklyn Park
Hennepin County, Minnesota

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Traffic Impact Study for
610 West

10.85 Acre Parcel in Southwest Corner of
Oak Grove Parkway & 96th Lane North
Brooklyn Park, Minnesota

Prepared for:

Doran Development, LLC
7803 Glenroy Road
Suite 200
Bloomington, MN 55439

Prepared by:

Westwood Professional Services
7699 Anagram Drive
Eden Prairie, MN 55344
(952) 937-5150

Project Number: 0004897.00
Date: 01/19/2015

Traffic Impact Study for
610 West
Brooklyn Park, MN

January 19, 2015

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: _____ Stephen J. Manhart _____

Signature: _____


Date: 01/19/2015 License # 22428

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1.0 Executive Summary

Doran Development, LLC, has proposed the construction of a 520-unit high density residential development on 10.48 acres of vacant land in the southwest corner of Oak Grove Parkway and 96th Lane North in Brooklyn Park, MN.

This parcel, now called 610 West, was once part of a larger project called Park Place Promenade in the Liberty Oaks development. In May 2005, Westwood Professional Services conducted a traffic study that included a variety of uses proposed for this development, including single-family detached housing, townhouse/condominiums, attached senior housing, retail uses, a supermarket, as well as high-turnover sit-down restaurants and a fast food restaurant with drive-through window.

The area now under consideration is the parcel on the far west end of this former Liberty Oaks site. It is the space formerly proposed as a large big box retail store and parking area just to the east of Hampshire, but not including an area adjacent to TH 610. The retail space comprised 108,000 sq. ft. of big box retail and 540 parking stalls.

By comparing the traffic generated by the new use with the traffic projected by the former use, the currently proposed high-density residential use will generate fewer total weekday trips and fewer P.M. Peak Hour trips than would the previous retail use at the site. Nevertheless, the residential use will generate more A.M. Peak Hour trips than the retail use because the retailer would typically be closed between 7-9 A.M.

Westwood also tested the intersection of Oak Grove Parkway and 96th Lane North for level of service and signal warrants. Under existing conditions, the intersection performs at LOS-A through each peak hour and signalization is not warranted at Oak Grove Parkway and 96th Lane.

Westwood then projected the trip generation for the site, distributed the trips based on existing and projected traffic patterns. Westwood assumed traffic patterns for the year after full build-out (2019). From this analysis, it is projected that the intersections will remain as LOS-A for each peak hour in the BUILD condition. Further, signalization will not be warranted at Oak Grove Parkway and 96th Lane.

2.0 Introduction

Doran Development, LLC, has proposed the construction of a 520-unit high density residential development on 10.48 acres of vacant land in the southwest corner of Oak Grove Parkway and 96th Lane North in Brooklyn Park, MN (see Figure 2.1).

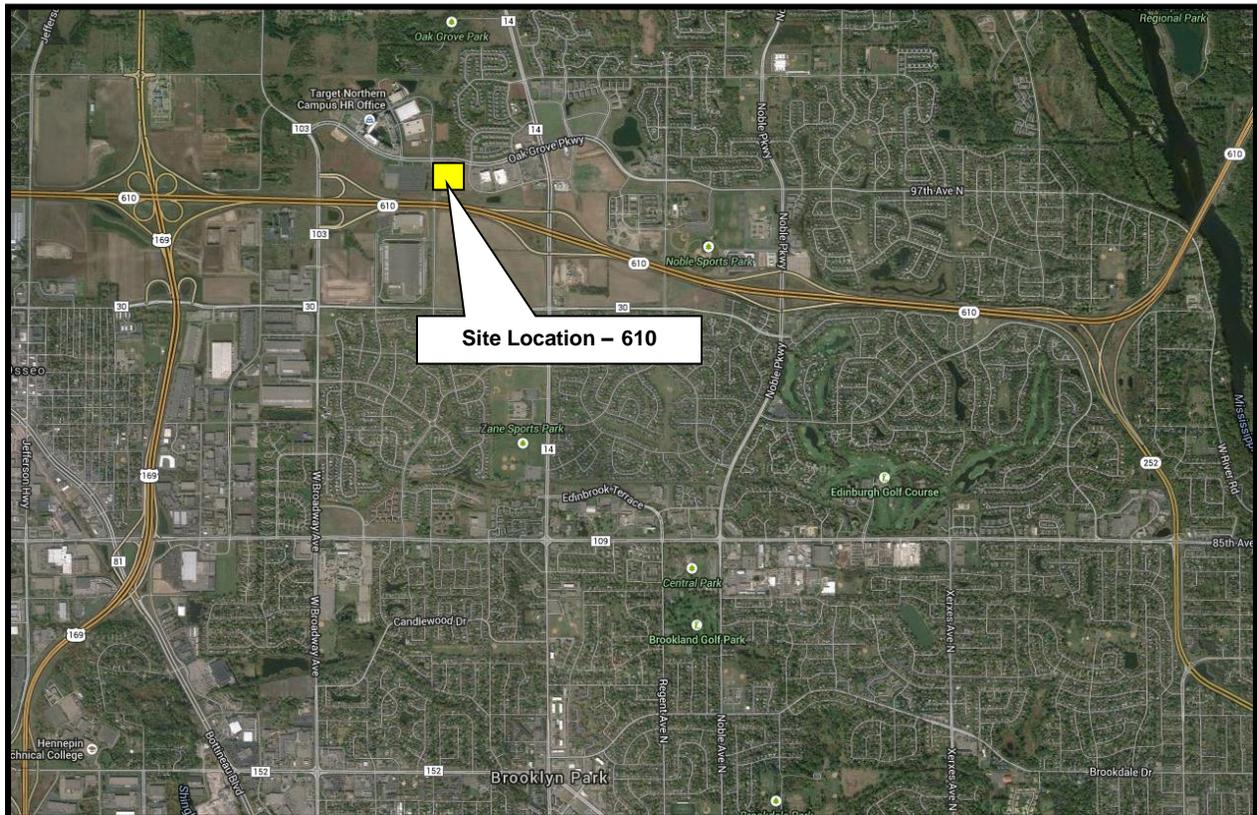


Figure 2-1: Site Location Map (Source: Google Maps)

This parcel, now called 610 West, was once part of a larger development called Liberty Oaks Subdivision (see Figure 2.2). In May 2005, Westwood Professional Services conducted a traffic study that included a variety of uses proposed for this development, including single-family detached housing, townhouse/condominiums, attached senior housing, retail uses, a supermarket, as well as high-turnover sit-down restaurants and a fast food restaurant with drive-through window.

The area now under consideration is the parcel on the far west end of this former Park Place Promenade site. It is the space formerly proposed as a large big box retail store and parking area just to the east of Hampshire, but not including an area adjacent to TH 610. The proposed retail space comprised 108,000 sq. ft. of big box retail and 540 parking stalls.

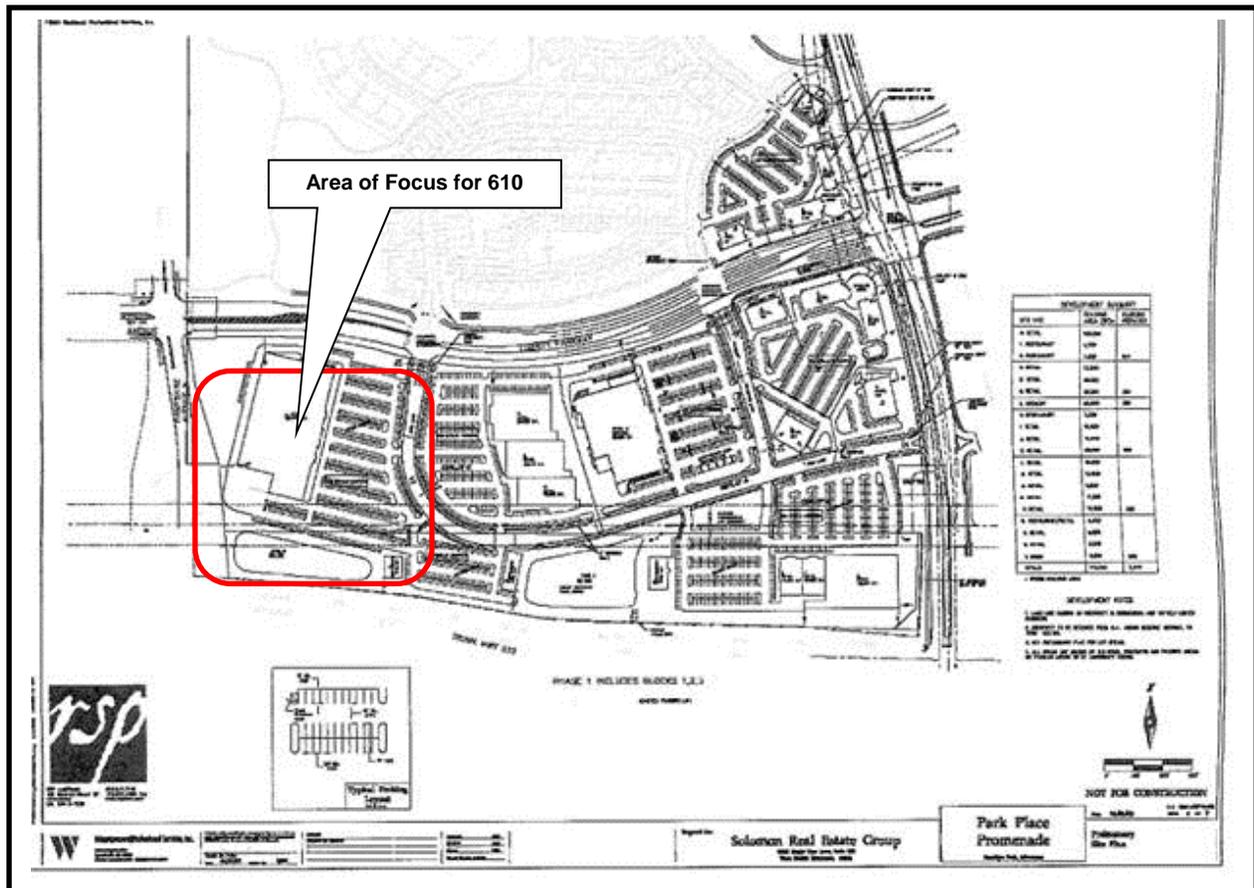


Figure 2-2: Former Park Place Promenade Site Layout (Source: Traffic Impact Study for Liberty Oaks Subdivision, Brooklyn Park, MN, Updated May 4, 2005, Westwood Professional Services, Inc.)

The new layout consists of 520 high-density residential units (see Figure 2-3). The units are proposed to include surface and underground parking for residents and guests. The total number of parking underground stalls will be 505. The total number of surface stalls will be 216. Therefore, the total number of parking stalls for the site will be 721 stalls.

From a traffic access perspective, the site will be served by the full-access primary entrance off of 96th Lane North. There is proposed a right-in/right-out only access from Oak Grove Parkway. There is a minor full-access driveway onto 96th Lane at the southeast corner of the site.

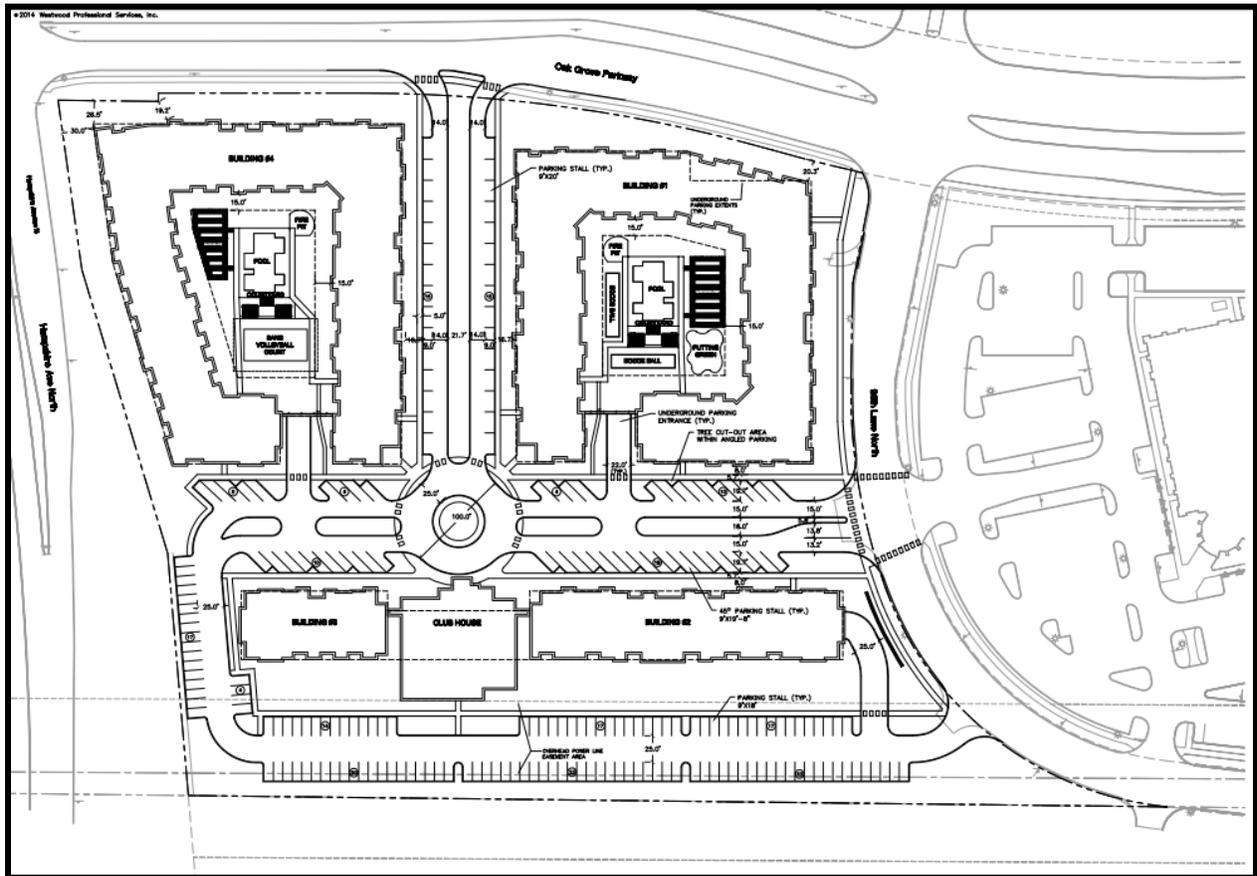


Figure 2-3: 610 West Site Layout (Source: Westwood Professional Services, Inc.)

3.0 Existing Condition

Currently, the site exists as 10.85 acres of undeveloped land. Figure 3.1 shows the area in relation to the existing roadways and development in the area. A LifeTime Fitness Center lies directly to the east of the proposed 610 West site. Further to the east, other retail uses have been built.

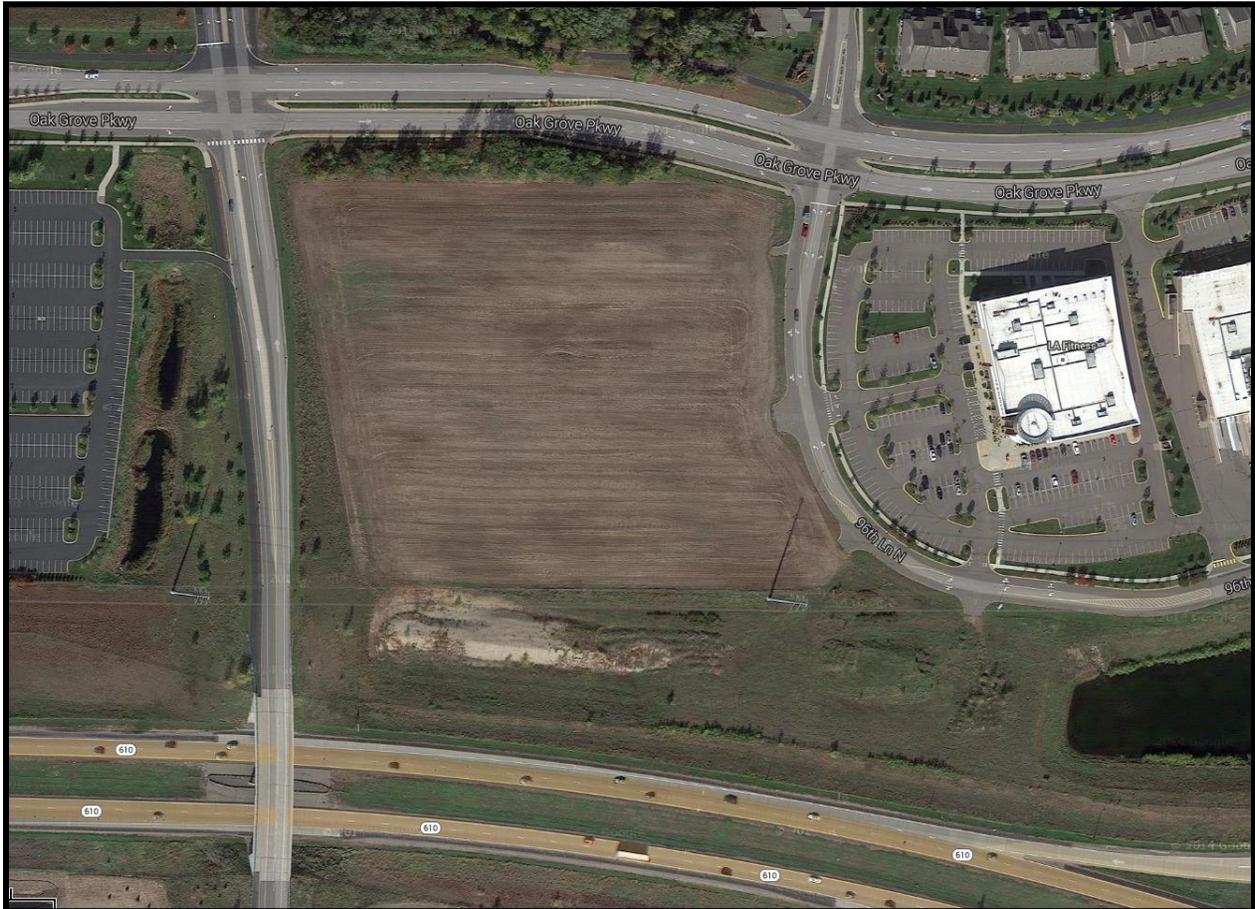


Figure 3-1: Undeveloped 610 West Parcel (Source: Google Maps)

To the north and northeast of this site lies parkland and townhouses. To the northwest of this site lies the Target North Campus, which provides administrative support for Target stores throughout the United States. The 150-acre campus includes multiple buildings for 7,000 employees and is expected to take several years to fully complete.

In December 2014, Westwood conducted turning movement counts at the intersection of Oak Grove Parkway and 96th Lane North. Figure 3-2 shows the A.M. and P.M. Peak Hour turning movement counts at the intersection.

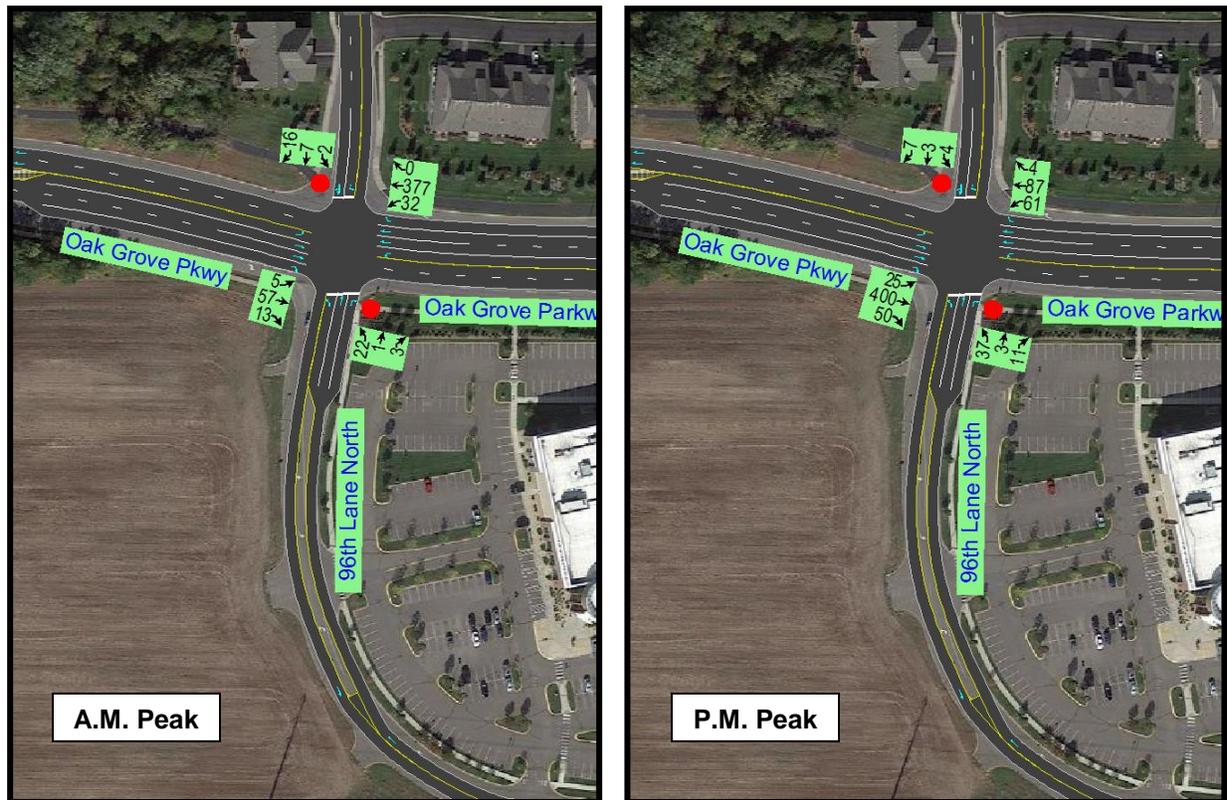


Figure 3-1: Existing Peak Hour Turning Movement Counts – Oak Grove Parkway and 96th Lane North, Brooklyn Park, MN (Source: Westwood Professional Services, December 2014)

In addition, 24-hour counts were conducted for the roadways in December 2014. The weekday average daily two-way traffic (ADT) on Oak Grove Parkway west of 96th Lane North is 4,940 veh/day. The weekday average daily two-way traffic (ADT) on Oak Grove Parkway east of 96th Lane North is 4,738 veh/day. The weekday average daily two-way traffic on 99th Street N. north of Oak Grove Parkway is 477 veh/day.

The intersection of Oak Grove parkway and 96th Lane North is controlled by side street stop. Left and right turn lanes are provided along Oak Grove Parkway at the intersection with 96th Lane North. Turn lanes have also been provided along both side street approaches to Oak Grove Parkway.

The 610 West side currently is shown with three access points off of 96th Lane North. There is a main access that aligns with the access to LifeTime Fitness to the east. There is a minor full access driveway at the southeast corner of the site. Lastly, there is a right-in-only access into the site off of 96th Lane just to the south of the intersection with Oak Grove Parkway.

3.1 Existing Traffic Operation

Westwood conducted an analysis of the traffic operation for the existing condition at the intersection of Oak Grove Parkway and 96th Lane North.

Operational Analysis Methodology

Traffic operations for the AM and PM peak hour conditions within the study area were analyzed using the industry-standard *Synchro/SimTraffic Version 9* software package, which uses the data and methodology contained in the 2010 Highway Capacity Manual (2010 HCM), published by the Transportation Research Board. The software model was calibrated to replicate existing conditions as accurately as possible before being used to assess future conditions.

The operating conditions of transportation facilities, such as traffic signals, stop-controlled intersections and roundabouts, are evaluated based on the relationship of the theoretical capacity of a facility to the actual traffic volumes on that facility. Various factors affect capacity, including travel speed, roadway geometry, grade, number and width of travel lanes, and intersection control. The current standards for evaluating capacity and operating conditions are contained in the 2010 HCM. The procedures describe operating conditions in terms of a Level of Service (LOS). Facilities are given letter designations from A, representing the best operating conditions, to F, representing the worst. Generally, Level of Service D (LOS-D) represents the threshold for acceptable overall intersection operating conditions during a peak hour.

At intersections, Levels of Service are assigned differently for signalized or unsignalized intersections (which include Two-Way Stop Control [TWSC], All-Way Stop Control [AWSC] and Roundabouts). For signalized intersections, Level of Service is calculated by taking the total Intersection Delay and converting it to a letter grade as shown in the left side of Table 3.1. For an unsignalized intersection, Level of Service is calculated by taking the Intersection Delay and converting it to a letter grade, as shown in the right side of Table 3.1. While similar, the signalized control delay totals are higher than that of unsignalized intersections. In any condition, when the LOS by Volume to Capacity Ratio exceeds 1.0, the LOS is always F.

Table 3.1: Level of Service vs. Control Delay – Signalized and Unsignalized Intersections (TWSC, AWSC & Roundabouts)

<u>TWSC, AWSC & Roundabouts</u>		<u>Signalized Intersections</u>	
LOS by Volume to Capacity Ratio (≤ 1)*	Control Delay per Vehicle (Seconds)	LOS by Volume to Capacity Ratio (≤ 1)*	Control Delay per Vehicle (Seconds)
A	≤ 10	A	≤ 10
B	>10 and ≤ 15	B	>10 and ≤ 20
C	>15 and ≤ 25	C	>20 and ≤ 35
D	>25 and ≤ 35	D	>35 and ≤ 55
E	>35 and ≤ 50	E	>55 and ≤ 80
F	>50	F	>80

Source: 2010 Highway Capacity Manual, published by the Transportation Research Board.

(* NOTE: When LOS by Volume to Capacity Ratio >1.00 , LOS is F.)

Under the 2010 HCM, common movements are included into lane groups. Control Delay is then determined for each lane group and Levels of Service are based on this Control Delay. For each lane group, Control Delay is quantified by number of seconds. Control Delay is measured by comparison with the uncontrolled condition. It is the difference between the travel time that would have occurred in the absence of the intersection control, and the travel time that results because of the presence of the intersection control. Levels of Service are then based on the control delay per vehicle.

The acceptable Level of Service threshold for a particular movement at an intersection depends on both the priority assigned to that movement and its traffic volume. In general, the higher the priority and the higher the traffic volume, the more stringent the acceptable threshold will be. For example, the acceptable threshold for a high-priority/high-volume rural movement might be C, while LOS F on a low-priority/low-volume urban movement might be appropriate.

For two-way stop-controlled intersections, a key measure of operational effectiveness is the side street LOS. Since the mainline traffic does not have to stop, the majority of delay is attributed to traffic from the side-street/minor approaches. Long delays and poor LOS can sometimes result on the side street, even if the overall intersection is functioning well, making it a valuable design criterion. As the side-street/minor approach delay approaches and exceeds 60 seconds per vehicle, drivers may divert to another route or become impatient and accept gaps in the mainline traffic that are less than acceptable/safe gaps resulting in the potential for traffic safety concerns. Therefore, depending on priority and traffic volume, acceptable side-street LOS can range from D to F. Side streets can operate at LOS F without the intersection warranting a change in traffic control.

A final fundamental component of operational analyses is a study of vehicular queuing, or the line of vehicles waiting to pass through an intersection. An intersection can operate with an acceptable Level of Service, but if queues from the intersection extend back to block entrances to turn lanes or accesses to adjacent land uses, unsafe operating conditions could result.

In reporting Levels of Service, the information from the signalized intersection analysis comes directly from the *Synchro 9* and *SimTraffic 9* reports (found in the Appendix). Intersection Levels of Service are reported based on the Control Delay calculated for the overall intersection and for each critical movement as determined by *SimTraffic 9*.

For queuing, SimTraffic reports found in the Appendix list the Mean Queue, the 95th Percentile and the Maximum Queue Lengths that are generated after five runs. In this report, the 95th Percentile Queue Length is used to discern adequate lengths of turn lanes. The 95th Percentile Queue Length refers to that length of queue that has only a five-percent probability of being exceeded during an analysis period. This is the standard factor used to determine optimal turn lane lengths.

Existing Operational Results

Traffic operation of study area roadways in the Existing Condition are shown in Table 3.2. Results of the analysis contained in the table below indicate that the study area intersections operate at acceptable overall LOS for 2014 existing peak hours.

Table 3.2: Results of Year 2014 Existing Analysis – AM and PM Peak Hours

Intersection	Intersection		Critical Approach			
	Intersection Control Delay	Overall Intersection LOS	Approach	Lane Group Delay	Lane Group LOS	95th Percentile Queue Length
A.M. PEAK HOUR						
Oak Grove Pkwy & 96th Lane N.	0.8 sec	LOS-A	EB Left	4.7 sec	LOS-A	19 ft.
			EB Thru	0.2 sec	LOS-A	n.a
			EB Right	0.0 sec	LOS-A	n.a
			NB Left	6.2 sec	LOS-A	40 ft.
			NB Right	2.3 sec	LOS-A	11 ft.
			WB Left	2.0 sec	LOS-A	13 ft.
P.M. PEAK HOUR						
Oak Grove Pkwy & 96th Lane N.	1.3 sec	LOS-A	EB Left	1.8 sec	LOS-A	16 ft.
			EB Thru	0.3 sec	LOS-A	n.a
			EB Right	0.1 sec	LOS-A	n..a
			NB Left	10.4 sec	LOS-B	55 ft.
			NB Right	8.6 sec	LOS-A	24 ft.
			WB Left	3.1 sec	LOS-A	37 ft.

Source: Westwood Professional Services, December 2014.

Existing Traffic Control

Using these operational results, it appears that the existing side-street stop condition functions acceptably. Nevertheless, Westwood did test the intersection for signal and all-way stop warrants. Under existing traffic conditions, the intersection was warranted for neither signalization nor all-way stop operation.

4.0 Former Development Plan

A traffic impact study was conducted in May 2005 for Liberty Oaks Subdivision, which included the 610 West site now proposed (see Appendix of this document). At that time, there were a variety of uses proposed for the development, including single-family detached housing, townhouse/condominiums, attached senior housing, retail uses, a supermarket, as well as high-turnover sit-down restaurants and a fast food restaurant with drive-through window.

The table below, taken from the 2005 traffic study, shows nearly 335,000 square feet of retail spread across the entire site.

Table 4.1: Previous Lane Use and Trip Generation Assumptions (Source: Liberty Oaks Traffic Study, Westwood Professional Services, May, 2005)

Land Use	Dev. Units	Trips						Daily Total
		A.M. In	A.M. Out	A.M. Total	P.M. In	P.M. Out	P.M. Total	
Single-Family Detached Housing	86	16	48	64	55	32	87	823
Residential Condominium/Townhouse	147	11	54	65	51	25	76	861
Senior Housing -- Attached	137	5	6	11	9	6	15	477
Retail	334,500	210	134	344	602	652	1,254	14,363
Supermarket	71,100	141	90	231	379	364	743	7,269
Restaurant -- High-Turnover (Sit-down)	15,000	90	83	173	100	64	164	1,907
Fast Food Restaurant with Drive-Through Window	4,400	119	115	234	79	73	152	2,183
Gross Trip Generation		592	530	1,122	1,275	1,216	2,491	27,883
15% Reduction for Multi-Purpose Trips		-84	-63	-147	-174	-173	-347	-3,858
Reduction for Internal Site Trips		-11	-43	-54	-35	-34	-69	-1,816
25% Reduction for Pass-bys		-108	-87	-195	-239	-236	-475	-475
Net New Trips		389	337	726	827	773	1,600	21,734

The area now under consideration as 610 West is the parcel on the far west end of this former Liberty Oaks site. It is the space formerly comprising the large big box and parking area just to the east of Hampshire, but not including the area shown as Pond B adjacent to 610. The retail space comprised 108k sq. ft. of big box and 540 parking stalls (see below).

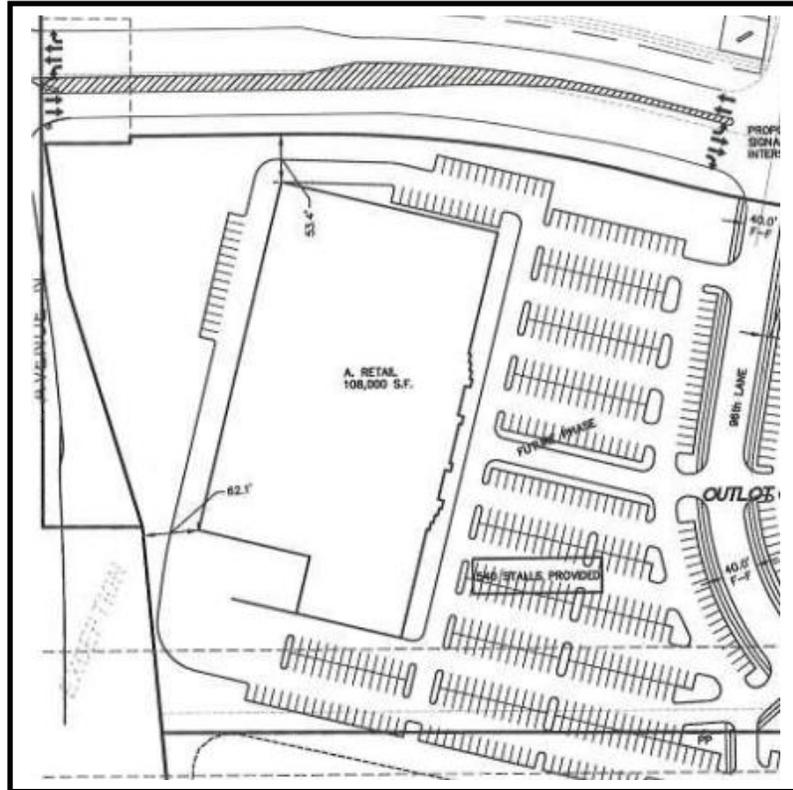


Figure 4-1: Former Site Plan of 610 West Development Area (Source: Westwood Professional Services, May 2005)

The previous traffic study categorized the retail as ITE Code 820 “Shopping Center”. By researching the 7th Edition of the ITE Trip Generation report (that was in use at the time of the 2005 study), the rate for weekday trips (42.94 trips/1000 sq. ft.), and the calculation matches up with the 14,363 trips projected.

If one were to apply those rates solely to the 108,000 sq. ft. of retail at the western end of the development, the parcel would generate **4,638 trips/day; 104 trips in AM Peak Hour; and, 401 trips in the PM Peak Hour.**

5.0 610 West Development Plan

To model the high-density residential use proposed currently, the 9th Edition of the ITE Trip Generation Manual was used to determine traffic estimates for Code 220 “Apartment” uses. The estimated number of trips for the 520 units utilizes the rate of 6.65 trips/unit/weekday, which calculates to 3,458 trips/day. By applying peak hour rates, there would be 265 trips in the A.M. Peak Hour and 322 trips in the P.M. Peak Hour.

The ITE Trip Generation Handbook, Third Edition, however, recommends the use of the fitted curve equation to calculate traffic volumes for this case, not the rate. Therefore, by applying the appropriate equations for high-density residential, the development will generate **3,274 trips per day; or 259 trips in the A.M. Peak Hour and 303 trips in the P.M. Peak Hour** (see Table 5.1).

Table 5.1: 610 West Lane Use and Trip Generation Assumptions

Type	Land Use	ITE Code	Size		Weekday		AM peak		PM Peak	
					Enter	Exit	Enter	Exit	Enter	Exit
Residential	Apartment	220	520	units	1637	1637	52	207	197	106
TOTAL					3,274		259		303	

There are slight differences between the trip generation results using the rates for high-density residential versus the fitted curve equation. The currently proposed high-density residential use will generate fewer total weekday trips and fewer P.M. Peak Hour trips than would the previous retail use at the site. Nevertheless, the residential use will generate more A.M. Peak Hour trips than the retail use because the retailer would typically be closed between 7-9 A.M.

These trips have been assigned and distributed throughout the access points onto the roadway network (see Figure 5.1).

The 2005 Liberty Oaks study had shown a capacity analysis of the intersection at Liberty Parkway (now known as Oak Grove Parkway) and 96th Lane. The study concluded that the A.M. Peak Hour level of service was LOS-A, while the P.M. Peak Hour recorded LOS-B.

Therefore, because the Liberty Oaks traffic impact at the intersection of Oak Grove Parkway and 96th Lane North was LOS-B or better under the previous development scenario, and because this development is less intense, it is concluded that the traffic impact of the 610 West development will also be less intense. This is shown to be true in Tables 5.2 and 5.3 for AM and PM Peak Hours respectively.



Figure 5-1: 2019 Build Peak Hour Turning Movement Count Projections – Oak Grove Parkway and 96th Lane North, Brooklyn Park, MN

Table 5.2: Results of Year 2019 Build Analysis – AM Peak Hour

Intersection	Intersection		Critical Approach			
	Intersection Control Delay	Overall Intersection LOS	Approach	Lane Group Delay	Lane Group LOS	95th Percentile Queue Length
A.M. PEAK HOUR						
Oak Grove Pkwy & 96th Lane N.	2.8 sec	LOS-A	EB Left	5.9 sec	LOS-A	14 ft.
			EB Thru	1.6 sec	LOS-A	n.a
			EB Right	1.2 sec	LOS-A	n.a
			NB Left	11.0 sec	LOS-B	75 ft.
			NB Right	2.6 sec	LOS-A	15 ft.
			WB Left	2.2 sec	LOS-A	19 ft.
Oak Grove Pkwy & R/RO	0.4 sec	LOS-A	EB Right	1.3 sec	LOS-A	n.a
			NB Right	1.0 sec	LOS-A	n.a
96th Lane & Main Access	1.1 sec	LOS-A	EB Left	5.4 sec	LOS-A	46 ft.
			EB Right	3.5 sec	LOS-A	21 ft.
			NB Left	2.1 sec	LOS-A	n.a.
			SB Right	0.4 sec	LOS-A	n.a.
96th Lane & South Access	1.0 sec	LOS-A	EB Left	6.5 sec	LOS-A	46 ft.
			EB Right	3.0 sec	LOS-A	n.a.
			NB Left	0.5 sec	LOS-A	n.a.
			SB Right	0.1 sec	LOS-A	n.a.

Table 5.3: Results of Year 2019 Build Analysis – PM Peak Hour

Intersection	Intersection		Critical Approach			
	Intersection Control Delay	Overall Intersection LOS	Approach	Lane Group Delay	Lane Group LOS	95th Percentile Queue Length
P.M. PEAK HOUR						
Oak Grove Pkwy & 96th Lane N.	0.8 sec	LOS-A	EB Left	4.7 sec	LOS-A	19 ft.
			EB Thru	0.2 sec	LOS-A	n.a
			EB Right	0.0 sec	LOS-A	n.a
			NB Left	6.2 sec	LOS-A	40 ft.
			NB Right	2.3 sec	LOS-A	11 ft.
			WB Left	2.0 sec	LOS-A	13 ft.
Oak Grove Pkwy & R/RO	0.4 sec	LOS-A	EB Right	1.3 sec	LOS-A	n.a
			NB Right	1.0 sec	LOS-A	n.a
96th Lane & Main Access	1.1 sec	LOS-A	EB Left	5.4 sec	LOS-A	41 ft.
			EB Right	3.5 sec	LOS-A	25 ft.
			NB Left	2.1 sec	LOS-A	24 ft.
			SB Right	0.4 sec	LOS-A	n.a.
96th Lane & South Access	1.0 sec	LOS-A	EB Left	6.5 sec	LOS-A	41 ft.
			EB Right	3.0 sec	LOS-A	n.a.
			NB Left	0.5 sec	LOS-A	n.a.
			SB Right	0.1 sec	LOS-A	10 ft.

Access

The previous development plan showed three access points into the development from 96th Lane. For the 610 West development site, the northerly right-turn-only access has been removed from the plan. The other two existing access points will provide full access to and from 96th Lane North.

A third access to the site is proposed. A right-in/right-out only access is proposed to the north directly off of Oak Grove Parkway midway between 96th Lane North and Hampshire Avenue North. While not strictly complying with access management guidelines, the right-in/right-out access will provide ingress and egress for the site without adding traffic to the intersections along 96th Lane. The operational analyses in Tables 5.2 and 5.3 show no impact to the through movements along Oak Grove Parkway by allowing the right-in/right-out access

Traffic Control

Westwood assessed the traffic control needs for the intersection of Oak Grove Parkway and 96th Lane N in the Build Condition. Westwood tested the intersection for signal and all-way stop warrants. Under 2019 Build traffic conditions, the intersection was warranted for neither signalization nor all-way stop operation. The existing side-street stop condition is recommended for continued traffic control at the intersection.

Conclusions

The findings of this analysis indicate that the currently proposed high-density residential use will generate fewer total weekday trips and fewer P.M. Peak Hour trips than would the previous retail use at the site. Nevertheless, the residential use will generate more A.M. Peak Hour trips than the retail use because the retailer would typically be closed between 7-9 A.M.

The former Liberty Oaks development traffic impact at the intersection of Oak Grove Parkway and 96th Lane North was LOS-B or better under the previous development scenario. The 610 West development is less intense than the Liberty Oaks development for this site, Therefore, it is concluded that the traffic impact of the 610 West development will also be less intense. This is shown to be true in Tables 5.2 and 5.3 for AM and PM Peak Hours respectively.

No signal warrants were met for the Build condition at Oak Grove Parkway and 96th Lane N.

The right-in/right-out access at Oak Grove Parkway does not unduly impact the through traffic flow. The access will lessen the demand at the other site access points onto 96th Lane N.

Recommendations

From a trip generation and traffic operational perspective, the 610 West development is less intense than the previous retail development proposed as part of the Liberty Oaks development, and therefore, should be allowed.

It is recommended that the side-street stop control be retained at the intersection of Oak Grove Parkway and 96th Lane N.

It is recommended from a traffic access and operational perspective, that a right-in/right-out access be allowed onto Oak Grove Parkway.

References Cited

“Traffic Impact Study for Liberty Oaks Subdivision, Brooklyn Park, MN”, Updated May 4, 2005, prepared by Westwood Professional Services, Inc., Eden Prairie, MN.

Trip Generation, 7th Edition, Institute of Transportation Engineers, Washington DC, 2003

Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, Washington, DC, 2012

Trip Generation Handbook, Third Edition, Institute of Transportation Engineers, Washington, DC, 2014

Appendices

Appendix A: Signal Warrant Worksheets (Existing and 2019 Build Conditions)

Appendix B: Synchro/SimTraffic Performance and Queuing Results

Appendix C: “Traffic Impact Study for Liberty Oaks Subdivision, Brooklyn Park, MN”,
Updated May 4, 2005, prepared by Westwood Professional Services, Inc.

Project: 610 West, Brooklyn Park, MN
 Scenario: Existing Condition

Westwood Professional Services

TRAFFIC SIGNAL WARRANT ANALYSIS

Intersection: Oak Grove Pkwy & 96th Ln N

Brooklyn Park

Location: Brooklyn Park, MN
 Population: 78,000
 County: Hennepin
 Date: 1/8/15

	Speed	Approach	Name	Lanes
	40	Major App1:	Eastbound Oak Grove Parkway	4
	40	Major App3:	Westbound Oak Grove Parkway	4
0.70 Factor? Yes	30	Minor App2:	Northbound 96th Lane N	2
Ex. Signal? No	30	Minor App4:	Southbound 99th Avenue N.	2

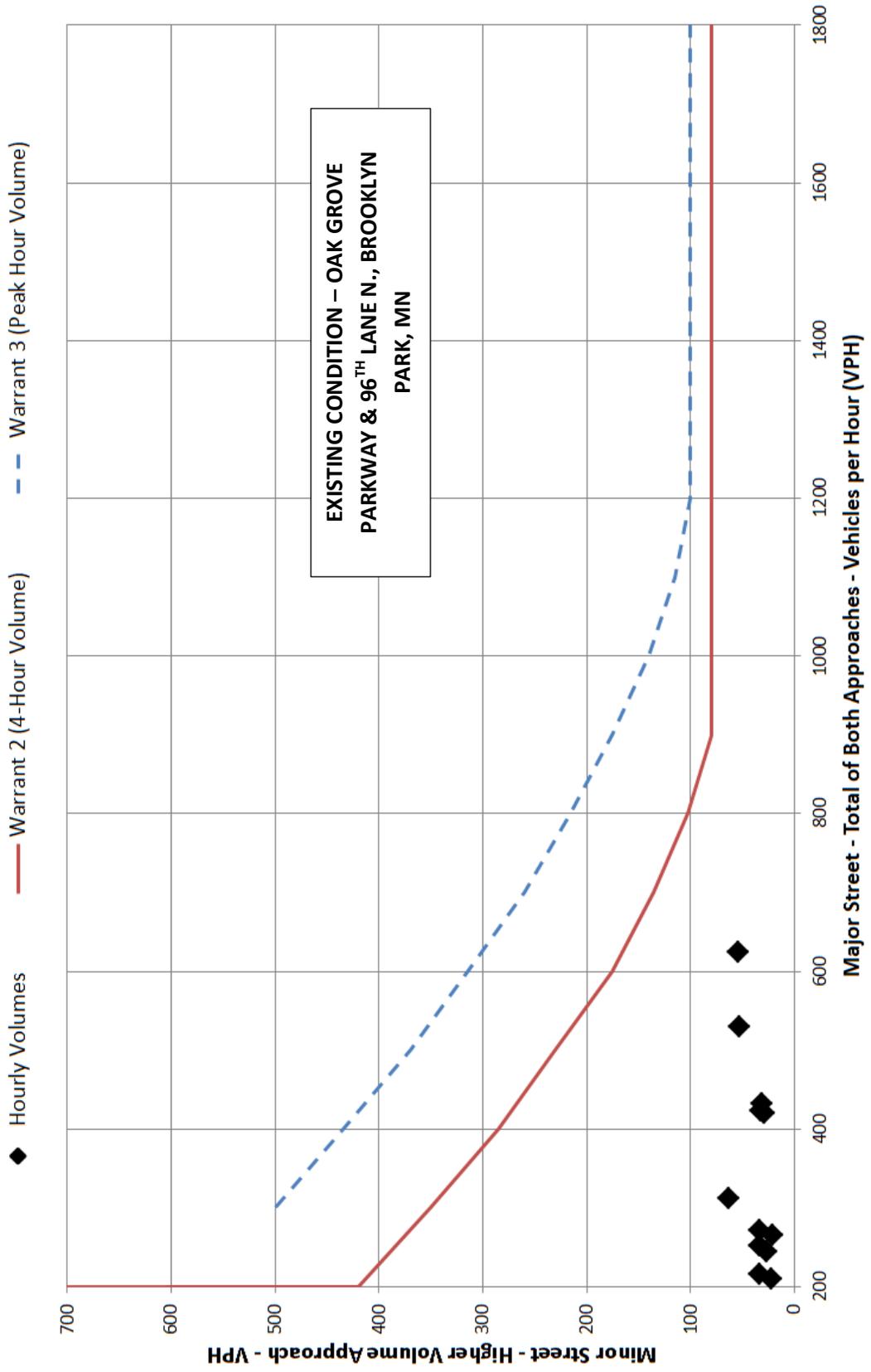
Notes: 0.70 factor applied (if approach speed is greater than 40 mph).
 0.70 factor applied (located within built-up area of isolated community less than 10,000 pop).
 Shaded cells indicate peak hour projections.
 Non-shaded cells indicate estimated off-peak projections based on assumed hourly variation.
 Right turn volumes excluded.

Hour:	Volumes:			Minor		Meets Warrant #:					
	App. 1	Major App. 3	Total	App. 2	App. 4	1A	1B	1C	2	3	7
12:00 AM	11	0	11	6	0	-	-	-	-	-	-
1:00 AM	22	3	25	1	0	-	-	-	-	-	-
2:00 AM	4	2	6	0	0	-	-	-	-	-	-
3:00 AM	4	2	6	0	0	-	-	-	-	-	-
4:00 AM	9	8	17	1	0	-	-	-	-	-	-
5:00 AM	27	106	133	5	1	-	-	-	-	-	-
6:00 AM	41	170	211	23	10	-	-	-	-	-	-
7:00 AM	84	336	420	23	29	-	-	-	-	-	-
8:00 AM	65	358	423	33	13	-	-	-	-	-	-
9:00 AM	80	164	244	27	12	-	-	-	-	-	-
10:00 AM	84	106	190	32	14	-	-	-	-	-	-
11:00 AM	144	108	252	34	10	-	-	-	-	-	-
12:00 PM	129	143	272	34	12	-	-	-	-	-	-
1:00 PM	118	99	217	34	8	-	-	-	-	-	-
2:00 PM	173	93	266	21	11	-	-	-	-	-	-
3:00 PM	338	94	432	32	15	-	-	-	-	-	-
4:00 PM	484	141	625	54	13	-	-	-	-	-	-
5:00 PM	370	161	531	53	12	-	-	-	-	-	-
6:00 PM	180	133	313	64	13	-	-	-	-	-	-
7:00 PM	81	107	188	55	12	-	-	-	-	-	-
8:00 PM	89	73	162	46	10	-	-	-	-	-	-
9:00 PM	37	49	86	32	5	-	-	-	-	-	-
10:00 PM	30	26	56	13	2	-	-	-	-	-	-
11:00 PM	11	9	20	15	0	-	-	-	-	-	-
	2615	2491	5106	638	202						

		Hours Met:	Hours Required:	Result:
Warrant 1A	(8-Hr. Minimum Volumes)	0	8	Not satisfied
Warrant 1B	(8-Hr. Interruption of Continuous Traffic)	0	8	Not satisfied
Warrant 1C	(80% of both 1a and 1b)	0	8	Not satisfied
Warrant 2	(4-Hour Volumes)	0	4	Not satisfied
Warrant 3	(Peak Hour Volumes)	0	1	Not satisfied
Warrant 7	(80% of Warrant 1 + 5 crashes)	0	8	Not satisfied

Warrant 2 and 3 Detail

4-Hour Volume and Peak Hour Volume Warrants



Project: 610 West, Brooklyn Park, MN
 Scenario: 2019 BUILD Condition

Westwood Professional Services

TRAFFIC SIGNAL WARRANT ANALYSIS

Intersection: Oak Grove Pkwy & 96th Ln N

Location: Brooklyn Park, MN
 Population: 78,000
 County: Hennepin
 Date: 1/8/15

	Speed	Approach	Name	Lanes
	40	Major App1:	Eastbound Oak Grove Parkway	4
	40	Major App3:	Westbound Oak Grove Parkway	4
0.70 Factor? Yes	30	Minor App2:	Northbound 96th Lane N	2
Ex. Signal? No	30	Minor App4:	Southbound 99th Avenue N.	2

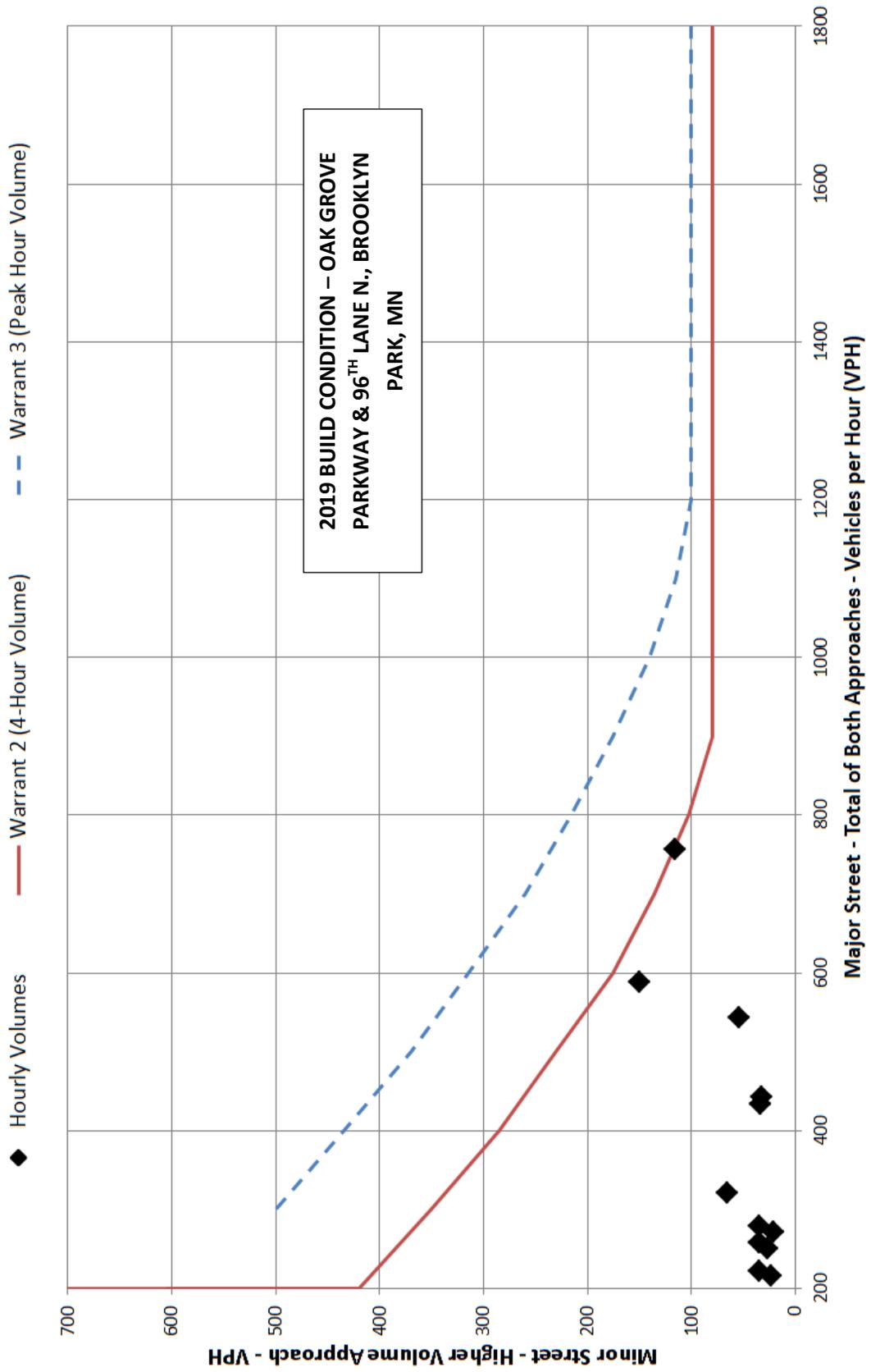
Notes: 0.70 factor applied (if approach speed is greater than 40 mph).
 0.70 factor applied (located within built-up area of isolated community less than 10,000 pop).
 Shaded cells indicate peak hour projections.
 Non-shaded cells indicate estimated off-peak projections based on assumed hourly variation.
 Right turn volumes excluded.

Hour:	Major			Minor		Meets Warrant #:					
	App. 1	App. 3	Total	App. 2	App. 4	1A	1B	1C	2	3	7
12:00 AM	11	0	11	6	0	-	-	-	-	-	-
1:00 AM	23	3	26	1	0	-	-	-	-	-	-
2:00 AM	4	2	6	0	0	-	-	-	-	-	-
3:00 AM	4	2	6	0	0	-	-	-	-	-	-
4:00 AM	9	8	17	1	0	-	-	-	-	-	-
5:00 AM	28	109	136	5	1	-	-	-	-	-	-
6:00 AM	42	174	216	24	10	-	-	-	-	-	-
7:00 AM	134	454	588	150	25	X	-	-	-	-	X
8:00 AM	67	367	434	34	13	-	-	-	-	-	-
9:00 AM	82	168	250	28	12	-	-	-	-	-	-
10:00 AM	86	109	195	33	14	-	-	-	-	-	-
11:00 AM	148	111	258	35	10	-	-	-	-	-	-
12:00 PM	132	147	279	35	12	-	-	-	-	-	-
1:00 PM	121	101	222	35	8	-	-	-	-	-	-
2:00 PM	177	95	273	22	11	-	-	-	-	-	-
3:00 PM	346	96	443	33	15	-	-	-	-	-	-
4:00 PM	523	234	757	116	14	-	X	-	-	-	X
5:00 PM	379	165	544	54	12	-	-	-	-	-	-
6:00 PM	185	136	321	66	13	-	-	-	-	-	-
7:00 PM	83	110	193	56	12	-	-	-	-	-	-
8:00 PM	91	75	166	47	10	-	-	-	-	-	-
9:00 PM	38	50	88	33	5	-	-	-	-	-	-
10:00 PM	31	27	57	13	2	-	-	-	-	-	-
11:00 PM	11	9	21	15	0	-	-	-	-	-	-
	2755	2752	5508	841	203						

		Hours Met:	Hours Required:	Result:
Warrant 1A	(8-Hr. Minimum Volumes)	1	8	Not satisfied
Warrant 1B	(8-Hr. Interruption of Continuous Traffic)	1	8	Not satisfied
Warrant 1C	(80% of both 1a and 1b)	0	8	Not satisfied
Warrant 2	(4-Hour Volumes)	0	4	Not satisfied
Warrant 3	(Peak Hour Volumes)	0	1	Not satisfied
Warrant 7	(80% of Warrant 1 + 5 crashes)	2	8	Not satisfied

Warrant 2 and 3 Detail

4-Hour Volume and Peak Hour Volume Warrants



3: Oak Grove Pkwy Performance by movement

Movement	WBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.1	0.1

6: 96th Lane North & Oak Grove Pkwy/Oak Grove Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Del/Veh (s)	4.7	0.2	0.0	2.0	0.1	6.2	6.1	2.3	4.3	12.9	2.6	0.8

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.2

Intersection: 3: Oak Grove Pkwy

Movement

Directions Served
 Maximum Queue (ft)
 Average Queue (ft)
 95th Queue (ft)
 Link Distance (ft)
 Upstream Blk Time (%)
 Queuing Penalty (veh)
 Storage Bay Dist (ft)
 Storage Blk Time (%)
 Queuing Penalty (veh)

Intersection: 6: 96th Lane North & Oak Grove Pkwy/Oak Grove Parkway

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	L	T	R	L	TR
Maximum Queue (ft)	27	27	50	20	19	25	26
Average Queue (ft)	4	2	20	1	2	1	15
95th Queue (ft)	19	13	40	7	11	8	35
Link Distance (ft)				458		204	204
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300	300	100		100		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 0

3: Oak Grove Pkwy Performance by movement

Movement	WBT	All
Denied Del/Veh (s)	0.0	0.0
Total Del/Veh (s)	0.0	0.0

6: 96th Lane North & Oak Grove Pkwy/Oak Grove Parkway Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	1.8	0.3	0.1	3.1	0.1	0.0	10.4	8.6	2.2	11.7	7.1	2.5

6: 96th Lane North & Oak Grove Pkwy/Oak Grove Parkway Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.3

Total Network Performance

Denied Del/Veh (s)	0.1
Total Del/Veh (s)	1.6

Intersection: 3: Oak Grove Pkwy

Movement

Directions Served
 Maximum Queue (ft)
 Average Queue (ft)
 95th Queue (ft)
 Link Distance (ft)
 Upstream Blk Time (%)
 Queuing Penalty (veh)
 Storage Bay Dist (ft)
 Storage Blk Time (%)
 Queuing Penalty (veh)

Intersection: 6: 96th Lane North & Oak Grove Pkwy/Oak Grove Parkway

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	L	T	R	L	TR
Maximum Queue (ft)	27	47	66	23	19	27	26
Average Queue (ft)	3	11	25	3	9	2	7
95th Queue (ft)	16	37	55	15	24	13	25
Link Distance (ft)				458		204	204
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300	300	100		100		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 0

3: Oak Grove Pkwy Performance by movement

Movement	EBT	WBL	WBT	WBR	NBR	SBL	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	3.7	0.1	0.1
Total Del/Veh (s)	0.1	2.0	0.1	0.2	3.3	6.3	0.7

6: 96th Lane & Oak Grove Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	5.9	1.6	1.2	2.2	0.2	11.0	10.3	2.6	8.9	4.1	2.8

14: RI/RO Access & Oak Grove Pkwy Performance by movement

Movement	EBT	EBR	WBT	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	1.2	0.4	0.1	1.1	0.4

15: RI/RO Access Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Del/Veh (s)	1.4	2.1	1.9	1.2	4.3	4.4	1.9

17: Main Access & 96th Lane Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	2.4	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.8	2.2	1.2	0.5	0.4	0.7	1.6

20: Performance by movement

Movement	WBL	WBR	NBL	NBR	SEL	SER	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	0.1	4.8	2.5	0.1	0.1	1.8

Total Network Performance

Denied Del/Veh (s)	0.3
Total Del/Veh (s)	5.0

Intersection: 3: Oak Grove Pkwy

Movement	WB	NB	SB
Directions Served	L	R	L
Maximum Queue (ft)	24	31	29
Average Queue (ft)	3	12	16
95th Queue (ft)	16	37	39
Link Distance (ft)			
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	330	170	270
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: 96th Lane & Oak Grove Pkwy

Movement	EB	WB	NB	NB	NB	SB
Directions Served	L	L	L	T	R	TR
Maximum Queue (ft)	29	28	112	20	15	26
Average Queue (ft)	2	4	41	1	5	13
95th Queue (ft)	14	19	75	9	15	33
Link Distance (ft)				309		204
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	300	300	100		100	
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 14: RI/RO Access & Oak Grove Pkwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 15: RI/RO Access

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 17: Main Access & 96th Lane

Movement

Movement	EB	EB
Directions Served	L	R
Maximum Queue (ft)	75	24
Average Queue (ft)	25	5
95th Queue (ft)	46	21
Link Distance (ft)	145	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 20:

Movement

Movement	NB
Directions Served	LR
Maximum Queue (ft)	51
Average Queue (ft)	25
95th Queue (ft)	46
Link Distance (ft)	671
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

3: Oak Grove Pkwy Performance by movement

Movement	EBT	WBL	WBT	WBR	NBR	SBL	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	4.2	0.1	0.2
Total Del/Veh (s)	0.2	1.6	0.1	0.2	3.1	6.8	0.7

6: 96th Lane & Oak Grove Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	2.4	0.4	0.4	5.2	0.1	0.0	23.1	3.1	2.9	18.6	11.1	4.2

6: 96th Lane & Oak Grove Pkwy Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	3.6

14: RI/RO Access & Oak Grove Pkwy Performance by movement

Movement	EBT	EBR	WBT	NBT	NBR	All
Denied Del/Veh (s)	0.2	3.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	0.2	1.3	0.5	0.1	1.0	0.4

15: RI/RO Access Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.9	3.1	1.5	2.0	4.4	2.2	4.4	2.9

17: Main Access & 96th Lane Performance by movement

Movement	EBL	EBT	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.4	0.2	3.5	2.1	0.3	0.9	0.4	1.1

20: Performance by movement

Movement	WBL	WBR	NBL	NBT	NBR	SEL	SET	SER	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.5	0.3	6.5	0.0	3.0	0.4	0.9	0.1	1.0

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	4.7

Intersection: 3: Oak Grove Pkwy

Movement	NB	SB
Directions Served	R	L
Maximum Queue (ft)	31	29
Average Queue (ft)	10	15
95th Queue (ft)	34	38
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	170	270
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: 96th Lane & Oak Grove Pkwy

Movement	EB	EB	WB	NB	NB	NB	SB	SB
Directions Served	L	R	L	L	T	R	L	TR
Maximum Queue (ft)	29	36	74	112	20	34	28	26
Average Queue (ft)	2	1	33	39	1	13	3	8
95th Queue (ft)	14	12	63	72	7	24	17	27
Link Distance (ft)					309		204	204
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300	300	300	100		100		
Storage Blk Time (%)				1				
Queuing Penalty (veh)				1				

Intersection: 14: RI/RO Access & Oak Grove Pkwy

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 15: RI/RO Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	31	30
Average Queue (ft)	2	1
95th Queue (ft)	15	10
Link Distance (ft)	154	354
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Main Access & 96th Lane

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	46	25	31
Average Queue (ft)	19	7	5
95th Queue (ft)	41	25	24
Link Distance (ft)	145		126
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		50	
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 20:

Movement	NB	SE
Directions Served	LR	LR
Maximum Queue (ft)	46	22
Average Queue (ft)	21	1
95th Queue (ft)	41	10
Link Distance (ft)	671	126
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

**Traffic Impact Study for
Liberty Oaks Subdivision
Brooklyn Park, Minnesota**

Updated May 4, 2005

Prepared by
Westwood Professional Services, Inc.

PROPOSED DEVELOPMENT AND STUDY AREA

The Liberty Oaks Development is a 172-acre project in the northwest quadrant of T.H. 610 and Zane Avenue (C.S.A.H. 14) in Brooklyn Park. The proposed development will include residential, commercial and open space uses. Appendix **Error! Reference source not found.** shows the site location map, and Appendix Figure A-2 shows the preliminary concept site plan.

Construction on the project is scheduled to start in mid-2005. The residential portion of the site is expected to be built out in two phases. The commercial portion of the project is also scheduled to begin construction in 2005 with an initial 2006 occupancy. Following occupancy of the first phase of commercial buildings, it is expected that the remaining retail parcels will develop quickly in a three- to four-year buildout.

The site will include approximately 370 housing units and 425,000 square feet of commercial space.

OVERVIEW

This report summarizes the traffic analysis conducted for the Liberty Oaks Development. The area around and including the Liberty Oaks site has been the subject of numerous transportation planning and traffic engineering studies over the last several years. These studies, listed in Table 1 below, included very thorough analyses of Zane Avenue from the T.H. 610 ramp terminals to 101st Avenue. Subsequent to those studies, designs were prepared for the upgrade of Zane Avenue. The reconstruction of Zane to a major, six-lane roadway has been completed in the past year. The current report builds upon and, where applicable, updates those previous studies. Throughout this report, several references will be made to the previous studies as data and assumptions from those studies were utilized in the current study effort.

Table 1
Previous Study Area Reports

Report	Prepared by	Prepared for	Date
Northwest Operations Center Traffic Study	SRF Consulting Group, Inc.	Target Corporation	10/15/99
Town Center Area Traffic Study – City Project No. M-1343	SRF Consulting Group, Inc.	City of Brooklyn Park	8/24/01
Technical Memorandum – Town Center Traffic Study – Schreiber Land Use Scenarios	SRF Consulting Group, Inc.	City of Brooklyn Park	3/20/02

The general analysis area for this study includes Zane Avenue from the T.H. 610 ramp terminals to 101st Avenue North, the major internal site roadways and intersections, and the intersection of 93rd Avenue and Hampshire Avenue. (Study area components are described in more detail later in this report.)

The Environmental Assessment Worksheet (EAW) prepared for this project, submitted January 28, 2005, documented that the current plans for Liberty Oaks will generate fewer peak hour trips than had been forecasted in previous planning studies for the six-lane design of Zane Avenue. With lower forecasted peak hour generation to the external roadway network, it is assumed that the conclusions and decisions reached in previous efforts continue to hold relative to external

roadway and intersection issues. Accordingly, in this study major emphasis is directed not toward the external areas but primarily on the internal operations and site plan features together with their interactions with Zane Avenue.

Intersections analyzed for this study include:

- Zane Avenue (C.S.A.H. 14) & 101st Avenue N.
- Zane Avenue (C.S.A.H. 14) & 99th Avenue N. (right in / right out)
- Zane Avenue (C.S.A.H. 14) & Liberty Parkway (97th Avenue N.)
- Zane Avenue (C.S.A.H. 14) & 95th Avenue N. (right in / right out)
- Zane Avenue (C.S.A.H. 14) & T.H. 610 North Ramps
- Zane Avenue (C.S.A.H. 14) & T.H. 610 South Ramps
- Liberty Parkway (97th Avenue N.) & Colorado Lane
- Liberty Parkway (97th Avenue N.) & 96th Lane
- Liberty Parkway (97th Avenue N.) & Hampshire Avenue (97th Avenue N.)

Also included in this study is analysis of the intersection of Hampshire Avenue (97th Avenue N.) & 93rd Avenue North.

Analysis Timeframes

The long-term time horizon used for this analysis is 20 years from now, or year 2025. The Liberty Oaks project is expected to be complete by 2011 (or sooner). By 2025 the development will be mature and likewise, the overall City of Brooklyn Park is expected to be essentially fully developed.

In addition to the 2025 full build-out scenario, an interim scenario (year 2007) with only the first phase of commercial and residential uses was addressed. The specific results of the analyses are described later.

Report Organization

The remainder of this report contains sections describing:

- Existing Analysis
- Traffic Forecast and Trip Assignment Methodology
- Traffic Analysis Results (Year 2025)
- Interim Analysis Results (Year 2007)
- Conclusions and Recommendations
- Appendices

EXISTING ANALYSIS

Zane Avenue Intersections

Zane Avenue (Hennepin County State Aid Highway 14) was recently reconstructed as a six-lane facility. At the present time, it carries very modest traffic volumes (approximately 10,000 vehicles per day) for its available capacity. Previous traffic studies for the area conducted analyses of existing conditions for various locations. The existing conditions analyses were updated to 2005 conditions for this study.

New A.M. and P.M. peak period turning movement counts were conducted in April 2005 for the intersection of Zane Avenue and 101st Avenue. For the T.H. 610 Ramps, the 2001 counts conducted by SRF for the 2001 Town Center Area Traffic Study were increased by a 3.0% per year growth rate. (See Appendix Figure A-3 for the source counts. Appendix Figure A-3 and Figure A-4 show the 2005 A.M. and P.M. traffic volumes.) Table 2 below shows the Level of Service for these intersections.

Table 2
Existing Capacity Analysis
Zane Avenue North / C.S.A.H. 14

Location	Control Type / Critical Movement	A.M. Peak Hour	P.M. Peak Hour
		Delay / L.O.S.	Delay / L.O.S.
Zane Ave. N. & 101st Ave. N.	Stop Sign / Westbound	16.9 / C	19.5 / C
Zane Ave. N. & Hwy. 610 North Ramps	Signal / NA	11.0 / B	11.6 / B
Zane Ave. N. & Hwy. 610 South Ramps	Signal / NA	8.7 / A	7.3 / A

When Zane Avenue was reconstructed, a traffic signal was installed at 97th Avenue in anticipation of its near-term eventual need. A signal was not installed at 101st Avenue at that time, although it has been generally thought that as volumes increase in the corridor, the 101st intersection would become signalized. Using count data collected in April 2005, the peak hour signal warrant was analyzed for this intersection. As shown on Appendix Figure A-6 for the busiest hour, the intersection currently does not meet the peak hour warrant. A signal at this location will likely not be justified until the Zane Avenue corridor and/or side street volumes rise or a significant accident experience develops.

Hampshire Avenue & 93rd Avenue

An intersection which was not previously examined, 93rd Avenue and Hampshire Avenue, was added to the analysis area for this study because it may experience a meaningful increase in volumes with construction of Liberty Oaks retail uses with their likely O-D pattern to residential areas southwest of the intersection.

On March 21 and 22, the City of Brooklyn Park conducted peak hour turn movement counts at the intersection of 93rd Avenue and Hampshire Avenue. These counts are summarized in the Appendix (see Appendix Figure A-6). Presently the intersection of 93rd and Hampshire is

controlled by stop signs for the north-south direction; 93rd Avenue traffic proceeds without stopping.

Table 3 summarizes the lane arrangements that are available for movements at the intersection.

Table 3
Intersection Geometry
93rd Avenue/Hampshire Avenue

Northbound	Left-Through, Right
Southbound	Left-Through, Right
Eastbound	Left-Through, Right
Westbound	Left-Through, Right

With the counted volumes and the lane configurations, stop sign level of service calculations were conducted for the A.M. and P.M. peak hour periods. As shown in Table 4 below, the critical southbound movements presently operate at Level of Service B in both the A.M. and P.M. peak hours. (Synchro capacity analysis reports are included in Appendix B.)

Table 4
93rd Avenue & Hampshire Avenue
Existing Stop Sign Analysis
Critical Movement LOS ⁽¹⁾

Analysis Year	Critical Movement	A.M. Peak Hour	P.M. Peak Hour
		Delay / L.O.S.	Delay / L.O.S.
2005 Existing	Southbound	11.7 / B	11.9 / B

⁽¹⁾ Delay and LOS were determined using HCM 2000 methodologies in Synchro and are given for the critical movement of the intersection.

TRAFFIC FORECAST & TRIP ASSIGNMENT METHODOLOGY

Trip Generation

The trip generation for the proposed development was determined based on the standard trip generation rates contained in the publication Trip Generation, 7th Edition (Institute of Transportation Engineers, 2003). Trip generation data is provided in Table 5.

Table 5
Trip Generation Rates

Land Use	I.T.E. Code	Rate Per	Daily Rate	A.M. Peak Hour			P.M. Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out
Single-Family Detached Housing	210	DU	9.57	0.75	25	75	1.01	63	37
Residential Condominium/Townhouse	230	DU	5.86	0.44	17	83	0.52	67	33
Senior Housing -- Attached	252	DU	3.48	0.08	45	55	0.11	61	39
Retail	820	KSF	42.94	1.03	61	39	3.75	48	52
Supermarket	850	KSF	102.24	3.25	61	39	10.45	51	49
Restaurant -- High-Turnover (Sit-down)	932	KSF	127.15	11.52	52	48	10.92	61	39
Fast Food Restaurant with Drive-Through Window	934	KSF	496.12	53.11	51	49	34.64	52	48

The A.M. and P.M. peak hour trip totals include traffic entering and exiting the site. Based on the rates listed in Table 5, together with reductions from the resulting gross trip generation for multi-purpose, internal and pass-by trips, there will be 345 net trips entering and 326 net trips exiting the site during the A.M. peak hour, and 793 net trips entering and 738 net trips exiting the site during the P.M. peak hour.

The trips listed in Table 6 represent "gross" trip generation. Trip reductions were applied to the gross trip generation to produce the forecast of new trips to the external roadways.

Because of the mixed-use nature of this development, with both commercial and residential uses, there is an opportunity for certain trips to be accomplished on-site. Using the procedures and parameters outlined in the ITE Trip Generation Handbook (March 2001), an estimate was made of the magnitude of internal trips likely to occur within the site. The actual calculation of those trips is shown on Appendix Figure A-7.

In addition to the internal trips, reductions were also applied for multi-purpose trips to the commercial land uses of 15% and for pass-by trips of 25% of the trips remaining after the other reductions were taken.

These reductions are based on data published in the March 2001 ITE Trip Generation Handbook for the types of land uses in this development and are consistent with those used in the 2001 and 2002 SRF Town Center traffic studies.

Table 6
Trip Generation

Land Use	Dev. Units	Trips						Daily Total
		A.M. In	A.M. Out	A.M. Total	P.M. In	P.M. Out	P.M. Total	
Single-Family Detached Housing	86	16	48	64	55	32	87	823
Residential Condominium/Townhouse	147	11	54	65	51	25	76	861
Senior Housing -- Attached	137	5	6	11	9	6	15	477
Retail	334,500	210	134	344	602	652	1,254	14,363
Supermarket	71,100	141	90	231	379	364	743	7,269
Restaurant -- High-Turnover (Sit-down)	15,000	90	83	173	100	64	164	1,907
Fast Food Restaurant with Drive-Through Window	4,400	119	115	234	79	73	152	2,183
Gross Trip Generation		592	530	1,122	1,275	1,216	2,491	27,883
15% Reduction for Multi-Purpose Trips		-84	-63	-147	-174	-173	-347	-3,858
Reduction for Internal Site Trips		-11	-43	-54	-35	-34	-69	-1,816
25% Reduction for Pass-bys		-108	-87	-195	-239	-236	-475	-475
Net New Trips		389	337	726	827	773	1,600	21,734

Trip Generation Comparisons to Previous Studies

In 2002 the City of Brooklyn Park undertook a series of planning studies for what was then called the Town Center Area, part of which is now known as the Liberty Oaks project. The land use scenarios utilized for "Comp Plan Amended Scenario" (the selected option for analysis and roadway design) in the 2002 traffic analyses included the land uses shown in Table 7:

Table 7
"Comp Plan Amended Scenario" Land Uses

Land Use	Units
Townhomes	259 DU
General Office	510,000 s.f.
Retail	455,000 s.f.

Table 8 shows the differences in net trip generation between the former and current analysis scenarios. As shown in the table, the A.M. peak hour net trip generation with the proposed project is 25% lower than that analyzed in previous studies, and the P.M. peak hour generation is 8% lower. The daily generation with the current land use assumptions is 2% higher due to the nature of retail uses, which generate traffic over the course of the entire day, as opposed to the office use, which has high A.M./P.M. peaks and more limited mid-day traffic generation.

Table 8
 Net Trip Generation Comparison
 (before Reduction for Pass-by and Internal Trips)⁽¹⁾

Scenario	A.M. Peak Hour	P.M. Peak Hour	Daily
"Comp Plan Amended"	1,300	2,338	23,576
Current	974	2,145	24,028
Percent Difference	-25%	-8%	+2%

⁽¹⁾ Previous studies did not publish resulting trip generation with pass-by and internal trips

Trip Distribution

Appendix Figure A-8 shows the trip distribution used for the site. This distribution was based on the previous studies done for the area. Those studies covered an area both west and east of Zane Avenue. Because the Liberty Oaks property is situated west of Zane, it is likely that the distribution for its commercial uses will be skewed slightly more to the south and west to capture more traffic from residences in those areas than had been assumed for the broader area traffic studies.

Traffic Assignment Process

The 2025 traffic forecast comprised several elements:

- Assignment of "internal" Liberty Oaks traffic that stays within the development (i.e., movements between commercial and residential uses on-site)
- Assignment of the "external" Liberty Oaks traffic to the surrounding roadway system
- Assumed full expansion of the Target Northwest Operations Center to its ultimate employee count of 6,000. It is currently at about 1,500 employees
- Assumed full build out of the Town Center and nearby properties on the east side of Zane Avenue
- Background traffic growth of 1.5% per year until 2012 and then 3.0% per year thereafter until 2025
-

The process used to develop 2025 traffic volumes is discussed in detail in Appendix Figure A-9)

Appendix Figure A-10 and Figure A-11 depict the A.M. Peak Hour and P.M. Peak Hour site-generated volumes (excluding internal and multi-purpose trips). Appendix Figure A-12 and Figure A-13 depict the total A.M. and P.M. Peak Hour forecasted volumes.

TRAFFIC ANALYSIS RESULTS

External Roadway System

Using the traffic forecasts summarized in Appendix Figure A-12 and Figure A-13, Year 2025 intersection analyses were conducted for the study area intersections. Table 9 presents the results of the analyses for Zane Avenue. These results indicate that in 2025 the Zane Avenue intersections will have the capacity to accommodate the projected traffic volumes in the area

with Level of Service D or better operations at the individual intersections and with no projected queuing problems between intersections.

The previous studies (for year 2022 conditions) reported worse levels of service for the T.H. 610 ramp terminals. It is beyond the scope of the current study to fully assess how the previous analysis results were determined. However, it is noted that the current analyses employed thorough signal timing and optimization techniques, current versions of signal timing analysis programs (updated since 2002) and the use of lead/lag phasing to best progress platoons of vehicles through the system with a minimum of overall delay. Furthermore, due to decrease in land use intensity on the Liberty Oaks site, the overall area trip generation is projected to be somewhat less than previously envisioned. Synchro capacity analysis reports are included in Appendix B.

Table 9
Capacity Analysis of Signalized Intersections on
Zane Avenue North
Year 2025 – Full Development

Location	A.M. Peak Hour	P.M. Peak Hour
	Delay / L.O.S.	Delay / L.O.S.
Zane Ave. N. & 101st Ave. N.	11.1 / B	12.2 / B
Zane Ave. N. & 97th Ave. N. / Liberty Pkwy.	37.0 / D	41.2 / D
Zane Ave. N. & Hwy. 610 North Ramps	17.2 / B	52.4 / D
Zane Ave. N. & Hwy. 610 South Ramps	17.8 / B	32.1 / C

Year 2025 analyses were also conducted for the intersection of 93rd Avenue and Hampshire. (See 2025 forecast volumes, Appendix Figure A-14.) As shown in Table 10 below, by 2025, with growth in general background traffic and new development, this intersection would be at LOS E without either a geometric upgrade or signalization. With signalization, this intersection would operate at a high level of service.

Table 10
93rd Avenue & Hampshire Avenue
Full Development Stop Sign Analysis
Critical Movement LOS ⁽¹⁾

Analysis Year	Critical Movement	A.M. Peak Hour	P.M. Peak Hour
		Delay / L.O.S.	Delay / L.O.S.
2025 Full Development	Southbound	17.0 / C	44.5 / E

⁽¹⁾ Delay and LOS were determined using HCM 2000 methodologies in Synchro and are given for the critical movement of the intersection.

Internal Roadway System & Site Circulation

The traffic operations along Liberty Parkway west of Zane Avenue are a critical element in the functioning of the overall site plan. It is imperative that operations in this area do not impede access to the commercial areas and do not cause congestion-related impacts that could cascade to Zane Avenue. To assess these situations, more extensive analyses were conducted for this internal element.

The general planning by the City of 97th Avenue / Liberty Parkway for its entire length has called for two through lanes in each direction together with right and left turn lanes at significant intersections. Based on the traffic movements projected within Liberty Oaks and a review of operations, it is recommended that at Colorado Lane (the first internal intersection west of Zane Avenue) Liberty Parkway should have two westbound to southbound left turn lanes. West of Colorado, the volumes along Liberty Parkway drop and there is not a need for a double left turn westbound to southbound at 96th Lane.

Based on reviews and comments made by City staff, the internal site layouts were modified to provide for safer operations at the Colorado Lane and 96th Lane intersections with Liberty Parkway. Specifically, another northbound lane was added at each intersection (each leg now has one left turn lane, one through lane and one right turn lane) and the main entrances into the shopping areas were relocated to the south.

Appendix Figure A-15 and **Error! Reference source not found.** show the proposed lane arrangement of Liberty Parkway from Hampshire Avenue to 96th Lane and from Colorado Lane to Zane Avenue.

Table 11 and Table 12 show the detailed traffic analysis results for the Liberty Parkway key internal intersections. (Synchro capacity analysis reports are included in Appendix B.)

Table 11
Capacity Analysis of Signalized Intersections
on 97th Avenue North / Liberty Parkway
Year 2025 - Full Development

Location	A.M. Peak Hour	P.M. Peak Hour
	Delay / L.O.S.	Delay / L.O.S.
97th Ave. N. / Liberty Pkwy. & 96th Lane	5.1 / A	11.0 / B
97th Ave. N. / Liberty Pkwy. & Colorado Lane	8.8 / A	16.8 / B

Table 12
Queue Results for Signalized Intersections
on 97th Avenue North / Liberty Parkway
Year 2025 - Full Development

Location	Movement	Available Storage Length ⁽¹⁾	95th Percentile Queue Length ⁽¹⁾	
			A.M. Peak Hour	P.M. Peak Hour
Zane Ave. N. & 97th Ave. N. / Liberty Pkwy.	EBL	200	61	151
97th Ave. N. / Liberty Pkwy. & Colorado Lane	WBL	200	71	171
	NBR	270 ⁽²⁾	49	75
97th Ave. N. / Liberty Pkwy. & 96th Lane	WBL	200	27	120
	NBL	300 ⁽²⁾	46	88

⁽¹⁾ Storage lengths and queue lengths measured in feet per lane

⁽²⁾ Approximate distance from stop bar to first full access opening

Zane Avenue Access

The site plan features a full intersection access at Liberty Parkway / Zane Avenue, together with right in / right out access points located approximately 630 feet north and 725 feet south of the Liberty Parkway centerline. The site plan does not currently include exclusive southbound right turn lanes at the partial access points. If the access points are ultimately allowed by the County, it is expected that right turn lanes would be provided. The volumes projected to use these partial access points are shown in Appendix Figure A-16 and Figure A-17. To analyze the ability of these volume levels to turn in and out at these points, a SimTraffic computer animation was developed for both the A.M. and P.M. peak hours for 2025 conditions. Observations of the simulations show that with the projected volumes and spacing, these movements can be safely and effectively accommodated along Zane Avenue.

Interim Analysis & Signal Warrant Analysis

Initial construction will begin on-site in mid-2005. The first retail uses are expected to open in 2006. An initial analysis was conducted to assess conditions for one year after opening of the first retail uses. (See Appendix Figure A-16 and Figure A-17 for 2007 A.M. and P.M. Peak Hour volume projections.) With the first phase of retail uses, approximately 160,600 square feet of retail space, generally on the east side of the site, will be open. Also, at this time Liberty Parkway would be open to Hampshire, thereby providing an eastern access route for the current employment base (about 1,500 employees) at the Target Operations Center. (For the initial analysis, it was assumed that no development would be in place on the Town Center property east of Zane.)

Signal warrants were analyzed during the approximately four-year period in which the commercial area of Liberty Oaks is expected to develop. The difference in trip generation for the initial development and full development was divided evenly between the four years, and a year by year analysis of signal warrants was conducted. For this interim analysis it was

assumed that the Target Operations Center employment stayed at its current level. Growth in the volumes to/from Target would accelerate the date at which signal warrants may be met.

Liberty Parkway / Colorado Lane

The key location for an interim operations analysis is at the intersection of Liberty Parkway / Colorado Lane. An analysis was conducted to see if this intersection could operate with two-way stop sign control under the initial conditions. (Although ultimately this intersection will have two left turn lanes westbound to southbound, for the initial stop sign analysis it was assumed that in such a condition, only one left turn lane would be open.) The results of the interim analysis, shown in Table 13, show that the intersection would not function adequately with stop sign control, and it is recommended that a signal be installed upon initial site opening. Based on the planned phased growth of the commercial area, it is projected that the Peak Hour signal warrant would be met within three years of initial site opening (i.e., by 2009). (See Appendix Figure A-18.)

Table 13
Critical Movement Analysis
on 97th Avenue North / Liberty Parkway
Year 2007 - Interim Scenario

Location	Critical Movement	A.M. Peak Hour	P.M. Peak Hour
		Delay / L.O.S.	Delay / L.O.S.
97th Ave. N. / Liberty Pkwy. & Colorado Lane	NBLT	13.5 / B	45.0 / E
	SB	13.9 / B	95.9 / F
97th Ave. N. / Liberty Pkwy. & 96th Lane	NBLT	11.1 / B	14.7 / B
	SB	11.0 / B	13.3 / B

Liberty Parkway / 96th Lane

The commercial uses surrounding the intersection of Liberty Parkway / 96th Lane will not be in place at the beginning of the site occupancy. With initial volumes, this intersection will function well with side street stop-sign control, as shown on Table 13. Furthermore, as shown in Figure A-21, upon site opening the intersection will be far from meeting the peak hour signal warrant. Future signalization of this intersection will likely not be warranted or needed until volumes along Liberty Parkway grow due to increased employment at the Target Operations Center or changes occur in roadway connections to the west that draw more through traffic onto Liberty Parkway.

CONCLUSIONS & RECOMMENDATIONS

Based on the traffic analyses conducted for this study, the following recommendations are presented:

1. To ensure effective operations along Zane Avenue in the future, the signal operations should be optimized with the flexibility to implement lead/lag phasing. This will allow development of the most effective progression bands for the corridor at minimum system delay.
2. The intersection of Zane Avenue and Liberty Parkway will have a very large eastbound to southbound right turn volume (in a double right turn lane). To maximize efficiency and capacity at this intersection, it is recommended that the current signal be modified to include an eastbound right turn phase that can "overlap" with the northbound to westbound left turn phase. The overlap (i.e., right turn arrow) will allow right turning traffic to more expeditiously enter Zane Avenue during more periods of the signal cycle.
3. Similar to the point above, the intersection of Colorado and Liberty Parkway also features a high right turn volume (in a single lane) that could benefit from a right turn lane overlap signal phase. At this intersection, it is the northbound to eastbound right turn that should have the overlap phase.
4. The intersection of Liberty Parkway and Colorado Lane should include a double left turn lane for the westbound to southbound direction. This is an enhanced design feature over what is typically included along the length of Liberty Parkway / 97th Avenue at individual site intersections.
5. On Liberty Parkway between Colorado Lane and Zane Avenue a critical factor in effective operations is the avoidance of queue spillbacks in the left turn bays. The westbound approach to Colorado and the eastbound approach to Zane will both feature double left-turn lanes. Allowing for stop bar placement and tapers on these back-to-back left-turn bays, there are about 400 feet available. It is recommended that the 400 feet of left turn bay length be split evenly between the westbound and eastbound directions.
6. Because of the important nature of the traffic operations along Liberty Parkway between Colorado and Zane, it is recommended that the signal at Colorado be constructed with a high number of detectors to provide the flexibility for effective signal operations. For example, due to the importance of avoiding queue spillbacks in the westbound left-turn lanes, back detectors should be implemented.

It is also noted that this intersection will not be near capacity. The projected level of service in the P.M. peak hour in 2025 is LOS "C". In the future, there will be a great amount of flexibility in how the signal timing is established for this intersection. The westbound left-turn movement can be favored in the allocation of intersection green time without harming capacities for the other intersection movements. In addition, the signals along Liberty Parkway (at Zane Avenue, Colorado Lane, 96th Lane and Hampshire Avenue) should be interconnected to allow for coordinated movements as a potential operations strategy.

7. The internal site intersection of Liberty Parkway and Colorado Lane should be signalized upon initial site development. With the opening of Liberty Parkway to Hampshire and the diversion of Target Operations Center traffic to Liberty, along with new development traffic, stop sign operation at this intersection would experience LOS E/F service. Additionally, as more Liberty Oaks commercial sites come on-line, the need for the signal will soon become even greater. The intersection of Liberty Parkway and 96th Lane will not need to be signalized until a sufficient amount of development in the western portion of the site has been implemented and additional employees are present at the Target Operations Center.
8. The intersection of Zane Avenue and 101st Avenue does not meet signal warrants with current counts. Based on the forecasts prepared for Liberty Oaks, it appears that the volumes on the east leg will remain higher than the volumes on the west leg even after Liberty Oaks is fully occupied. As volumes increase in the Zane Avenue corridor, the City and County should monitor this location to determine if volume or delay warrants are met and to see if prior to that time any accident experience develops that would generate the justification for a traffic signal.

APPENDIX A

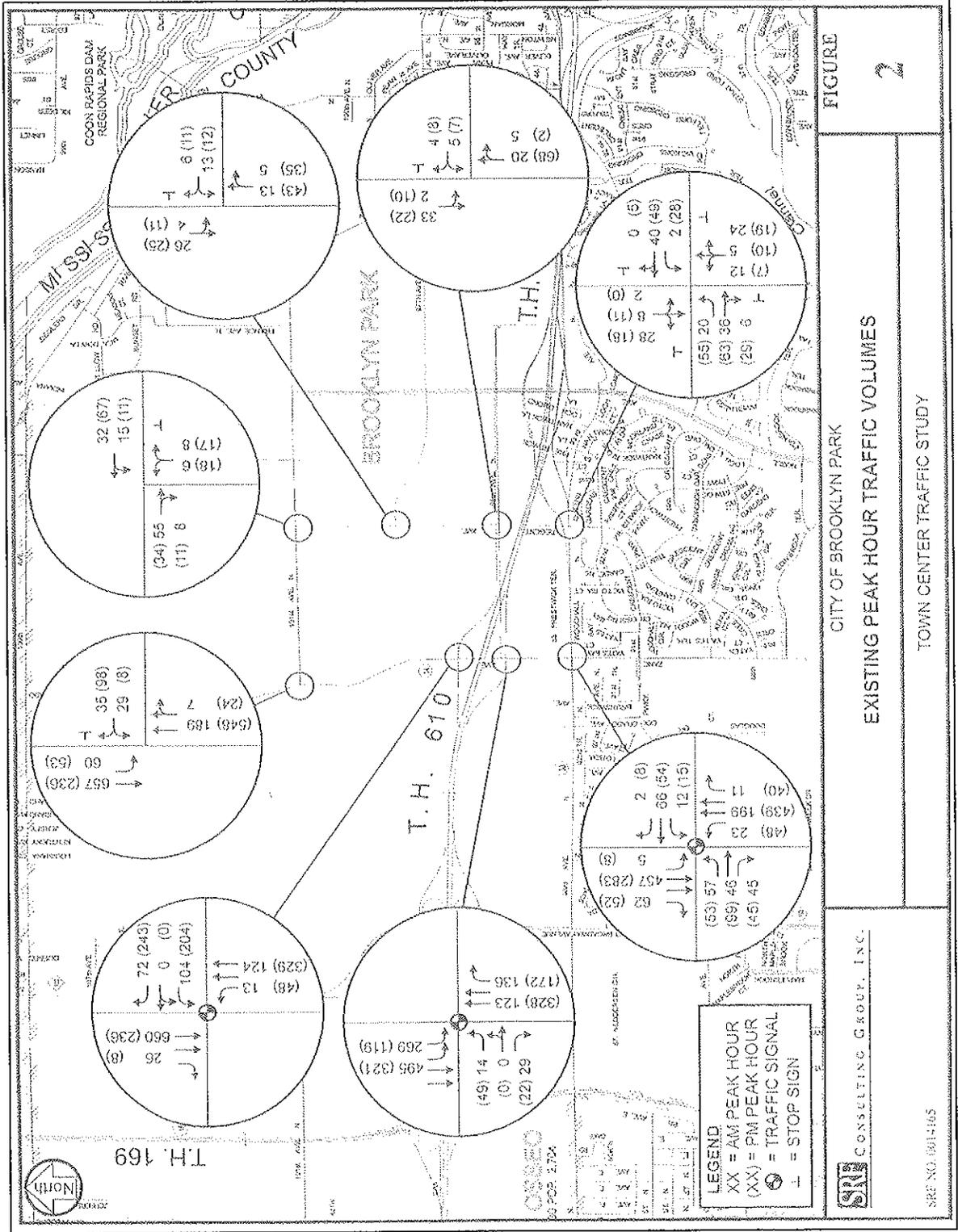
Error! Reference source not found.	Site Location Map
Figure A-2	Preliminary Concept Site Plan
Figure A-2	2001 Existing A.M. & P.M. Peak Hour Turning Movement Counts, SRF Town Center Area Traffic Study, August 24, 2001
Figure A-3	2005 Existing A.M. Peak Hour Traffic
Figure A-4	2005 Existing P.M. Peak Hour Traffic
Figure A-5	Warrant 3 – Peak Hour Graph, Zane Avenue / 101 st Avenue
Figure A-6	Existing A.M. & P.M. Peak Hour Turning Movement Counts, 93rd Avenue & Hampshire Avenue
Figure A-7	Internal Trips Reduction Calculations
Figure A-8	Site Trip Distribution
Figure A-9	2025 Traffic Assignment Process
Figure A-10	2025 Full Development A.M. Peak Hour Site-Generated Traffic
Figure A-11	2025 Full Development P.M. Peak Hour Site-Generated Traffic
Figure A-12	2025 Full Development A.M. Peak Hour Traffic
Figure A-13	2025 Full Development P.M. Peak Hour Traffic
Figure A-14	2025 Full Development A.M. & P.M. Peak Hour Traffic, 93rd Avenue & Hampshire Avenue
Figure A-15	Proposed Lane Arrangement, Liberty Parkway from Hampshire Avenue to 96 th Lane
Error! Reference source not found.	Proposed Lane Arrangement, Liberty Parkway from Colorado Lane to Zane Avenue
Figure A-16	2007 Partial Development A.M. Peak Hour Traffic
Figure A-17	2007 Partial Development P.M. Peak Hour Traffic
Figure A-18	Warrant 3 – Peak Hour Graph, Liberty Parkway / Colorado Lane
Figure A-19	Warrant 3 – Peak Hour Graph, Liberty Parkway / 96 th Lane

APPENDIX B

Synchro Capacity Analysis Reports:

- 2005 A.M. & P.M. Peak Hours
- 2007 A.M. & P.M. Peak Hours
- 2025 A.M. & P.M. Peak Hours

Figure A-2
 2001 Existing A.M. & P.M. Peak Hour Turning Movement Counts
 SRF Town Center Area Traffic Study, August 24, 2001



FIGURE

2

CITY OF BROOKLYN PARK
 EXISTING PEAK HOUR TRAFFIC VOLUMES
 TOWN CENTER TRAFFIC STUDY

SRF CONSULTING GROUP, INC.

SRF NO. 0014165

Figure A-3
2005 Existing A.M. Peak Hour Traffic

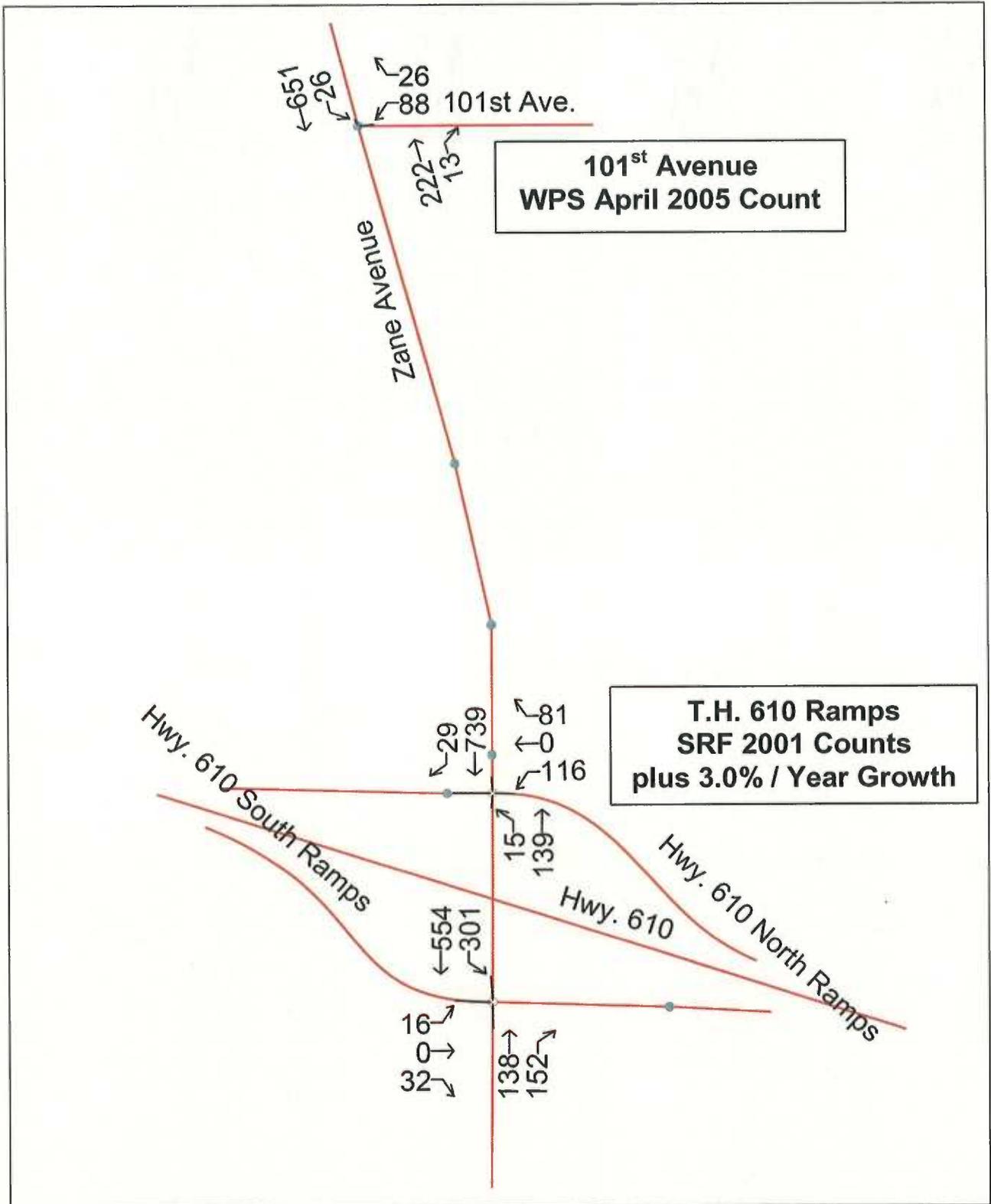


Figure A-4
2005 Existing P.M. Peak Hour Traffic

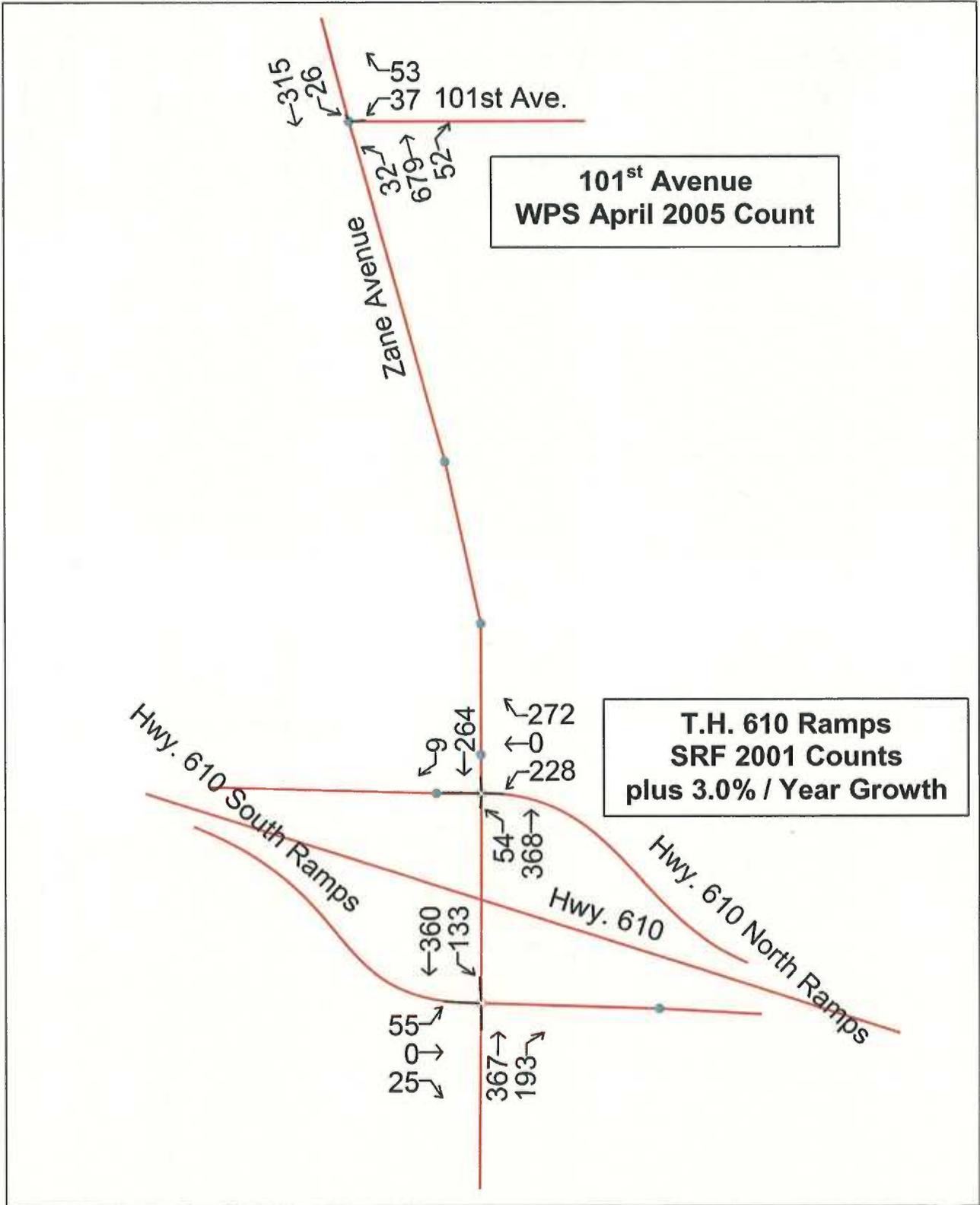
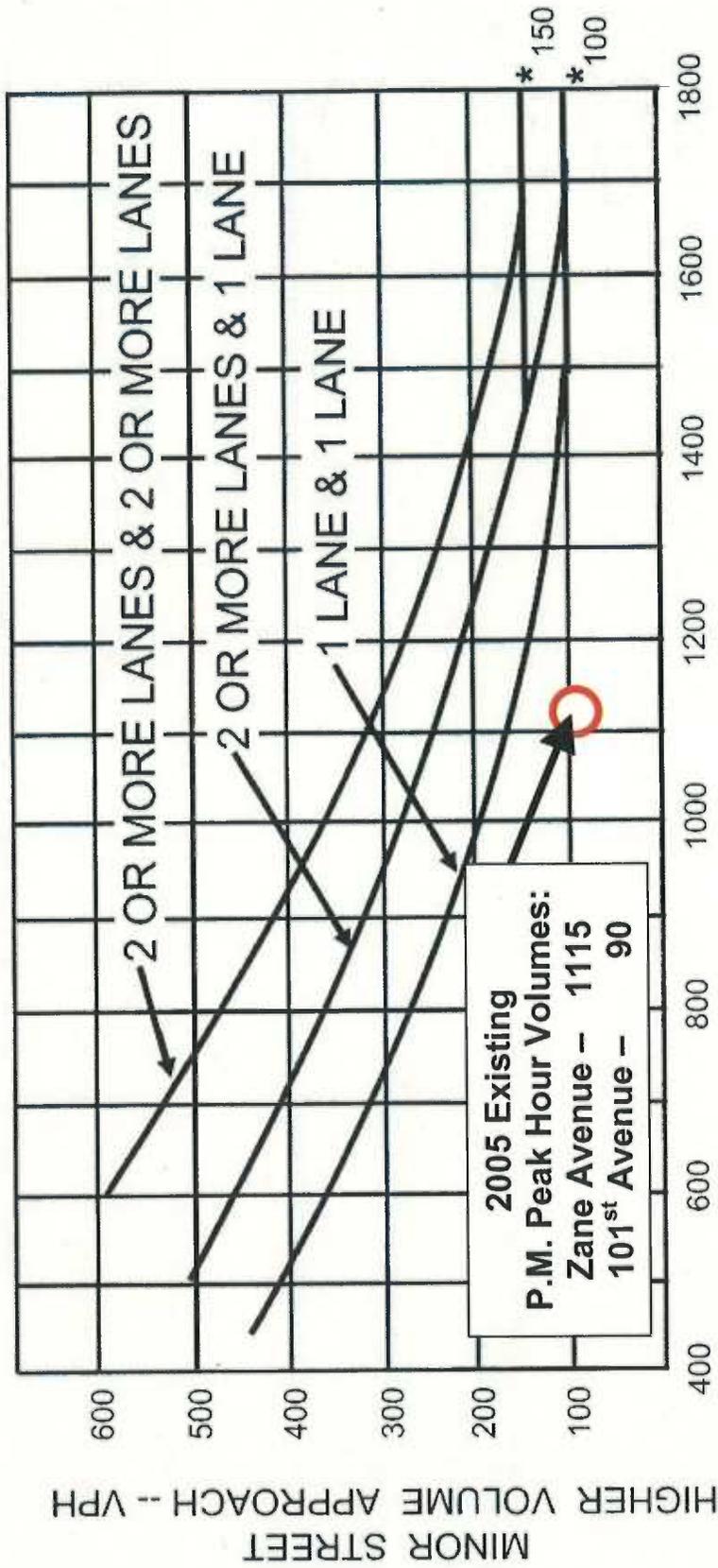


Figure A-5
 Signal Warrant Analysis
 Zane Avenue / 101st Avenue
 Does Not Meet Warrant 3 – Peak Hour in 2005 Existing Conditions

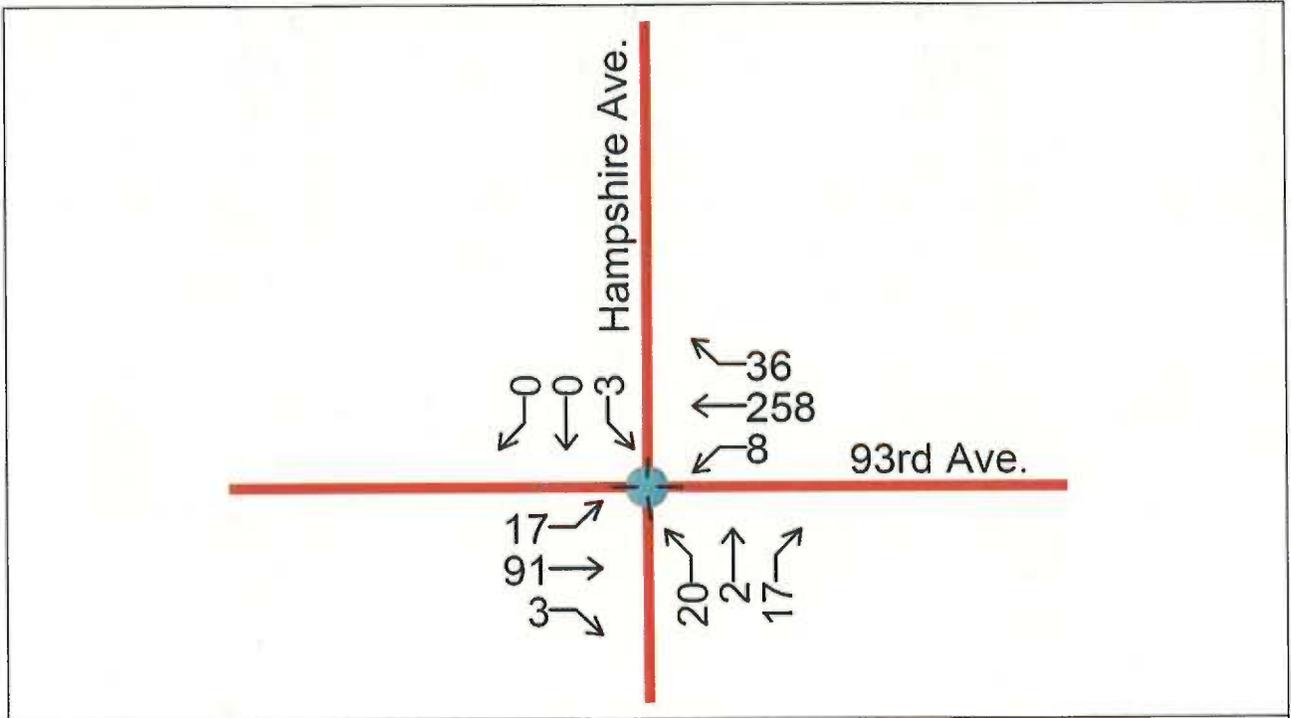


MAJOR STREET -- TOTAL OF BOTH APPROACHES -- VEHICLES PER HOUR (VPH)

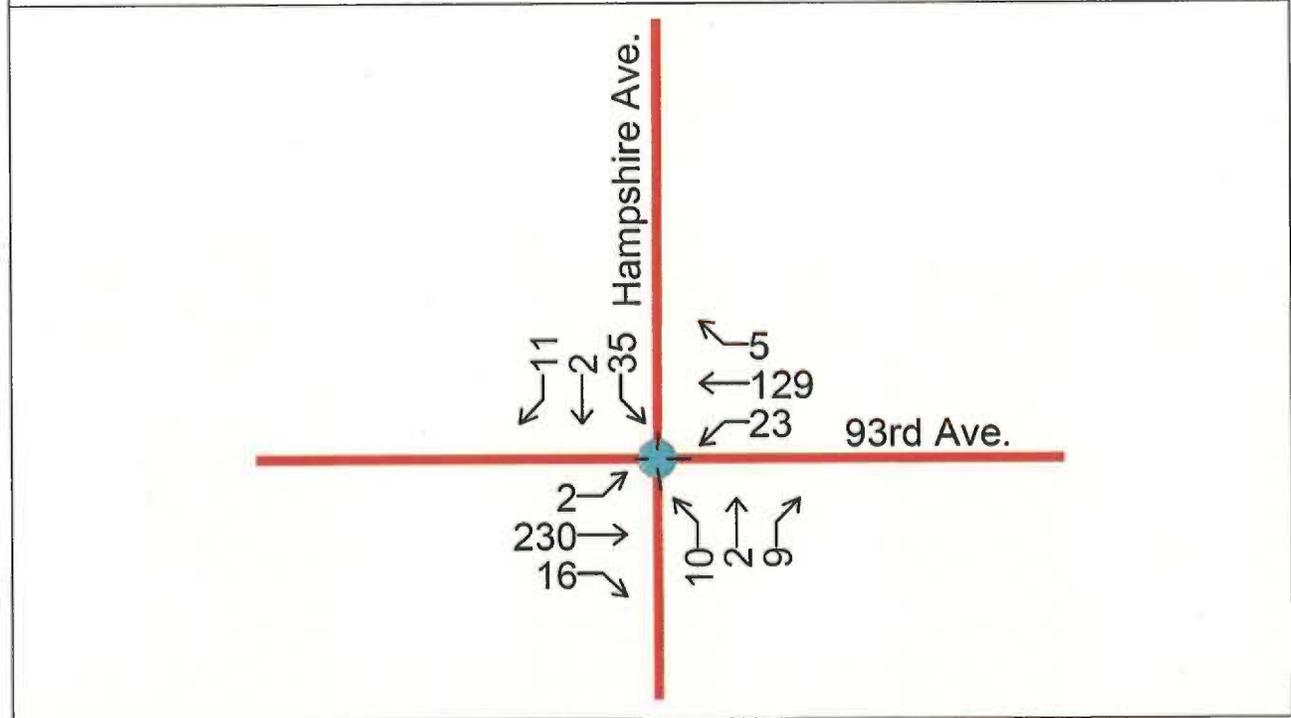
*NOTE: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-3. Warrant 3 - Peak Hour

Figure A-6
 Existing A.M. & P.M. Peak Hour Turning Movement Counts
 93rd Avenue & Hampshire Avenue



A.M. Peak Hour



P.M. Peak Hour

Figure A-7
Internal Trips Reduction Calculations

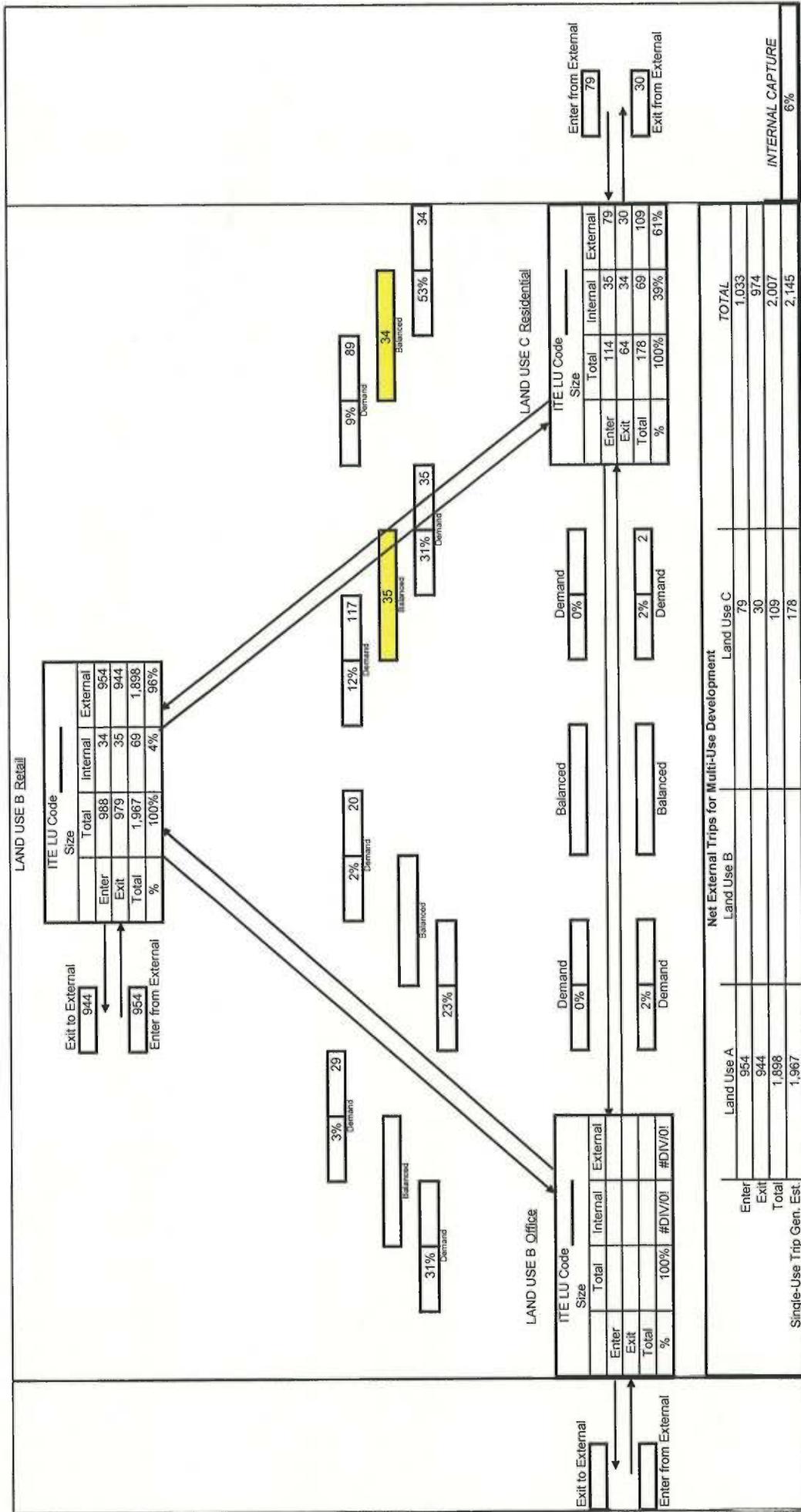
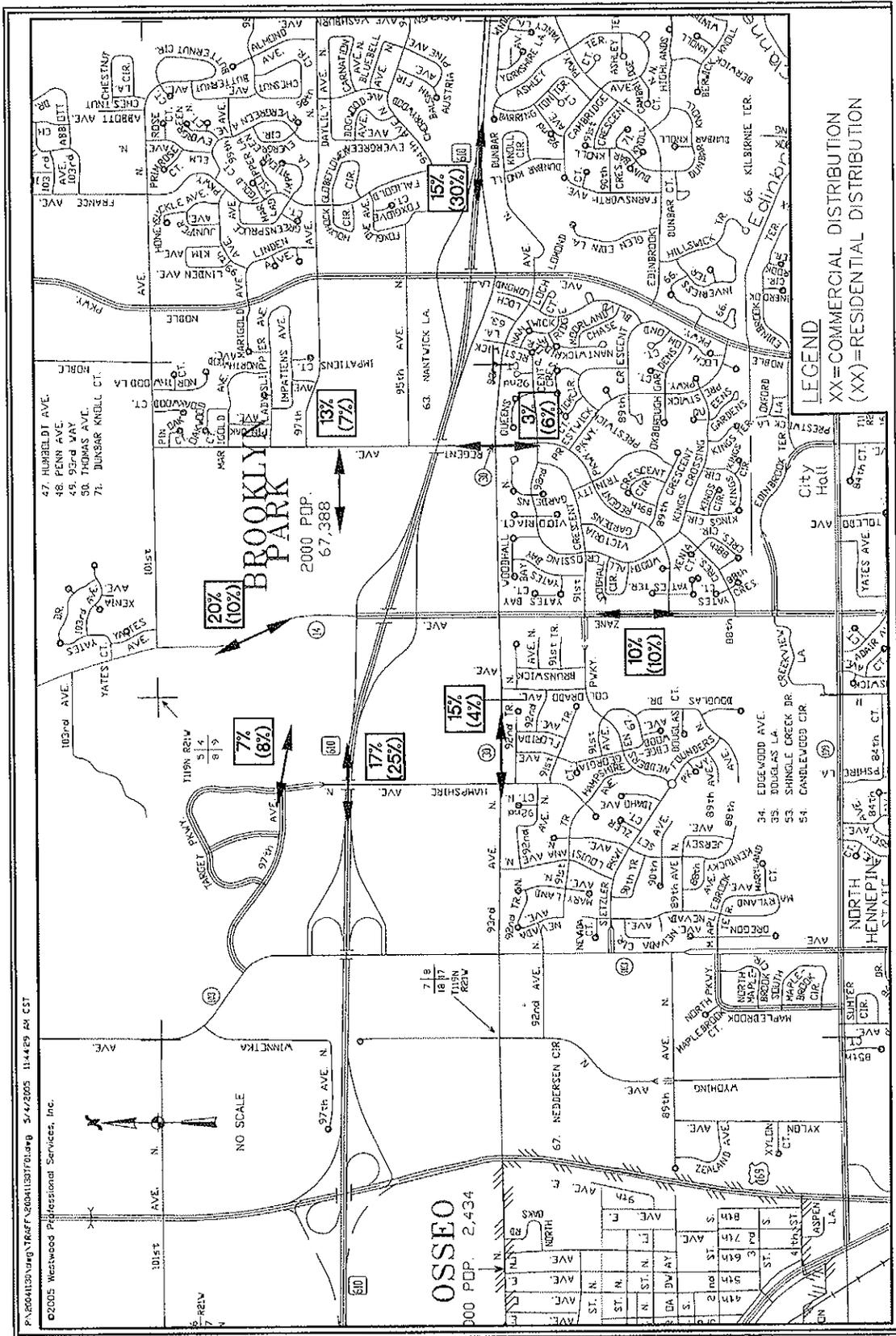


Figure A-8
Site Trip Distribution



P:\2004120\map\TRAF\F\200411371701.dwg 5/4/2005 11:44:29 AM CST
 ©2005 Westwood Professional Services, Inc.

Figure A-9 2025 Traffic Assignment Process

The 2025 A.M. and P.M. traffic forecasts were developed using the following process:

- Subtract traffic projections for full expansion of the Target Northwest Operations Center from the 2022 Comprehensive Plan – Amended Full Development projections published in the SRF 2002 Technical Memorandum to produce the Schreiber site ins and outs projected for full development of the site using the land uses proposed at that time
- Subtract SRF Schreiber site ins and outs from the SRF 2022 full development to produce a database containing:
 - 2022 background traffic (i.e., 2001 existing traffic, with growth of 3.0% per year to 2012 and 1.5% to 2022)
 - Town Center full development
 - Full expansion of the Target Northwest Operations Center
- Produce “2025 Baseline” volumes by applying a 1.5% per year growth rate to the 2022 Baseline for Zane Avenue north-south through volumes and the T.H. 610 ramp entrances and exits
- Develop trip generation projections for Schreiber site using the current proposed land uses
- Adjust the 2025 Baseline volumes as follows:
 - Apply passby adjustments to Zane Avenue
 - Assign Internal and multi-purpose trips within the Liberty Oaks development
- Assign external Liberty Oaks traffic to Zane Avenue and Liberty Parkway / 97th Avenue

Figure A-10
2025 Full Development A.M. Peak Hour Site-Generated Traffic

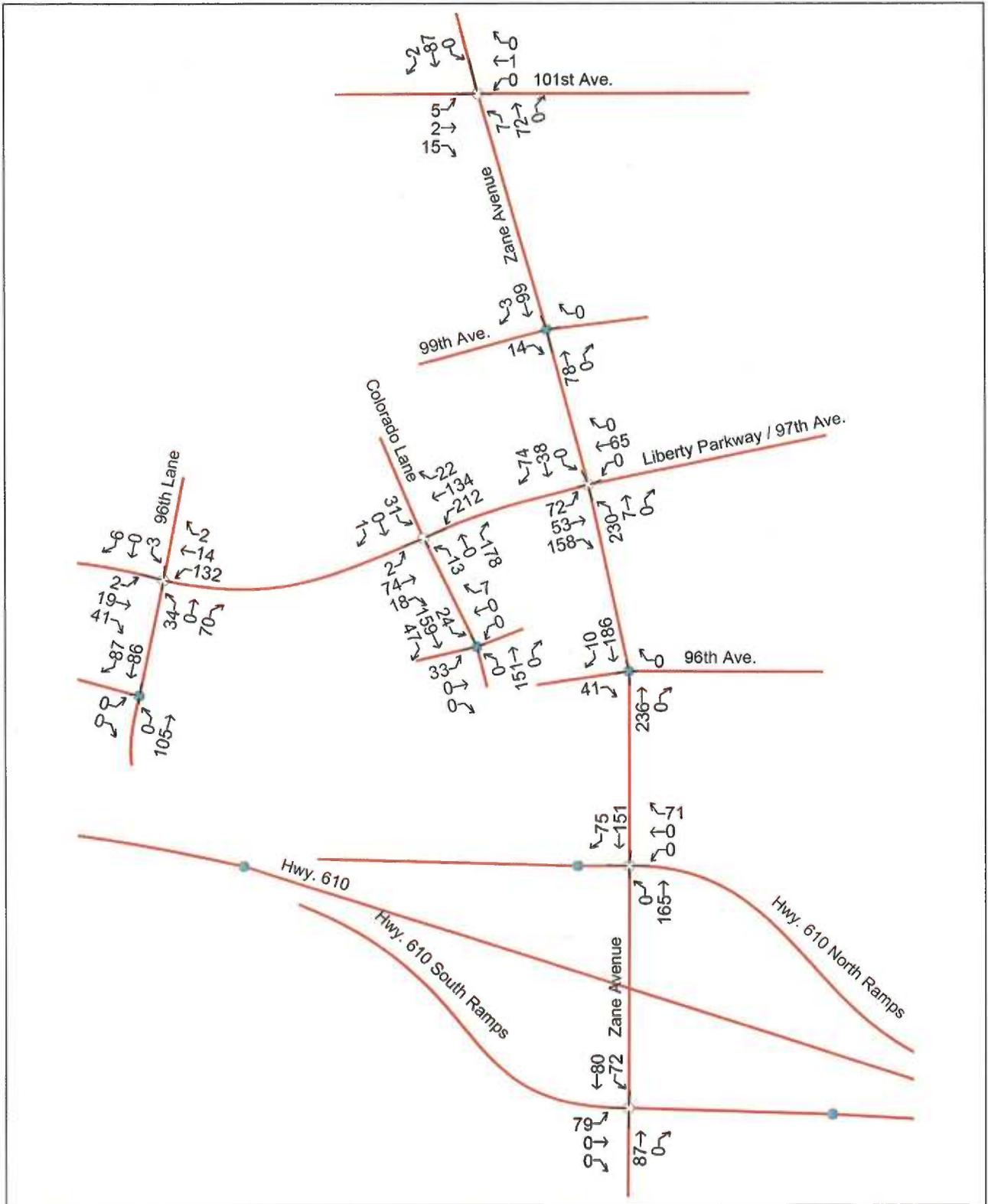


Figure A-11
2025 Full Development P.M. Peak Hour Site-Generated Traffic

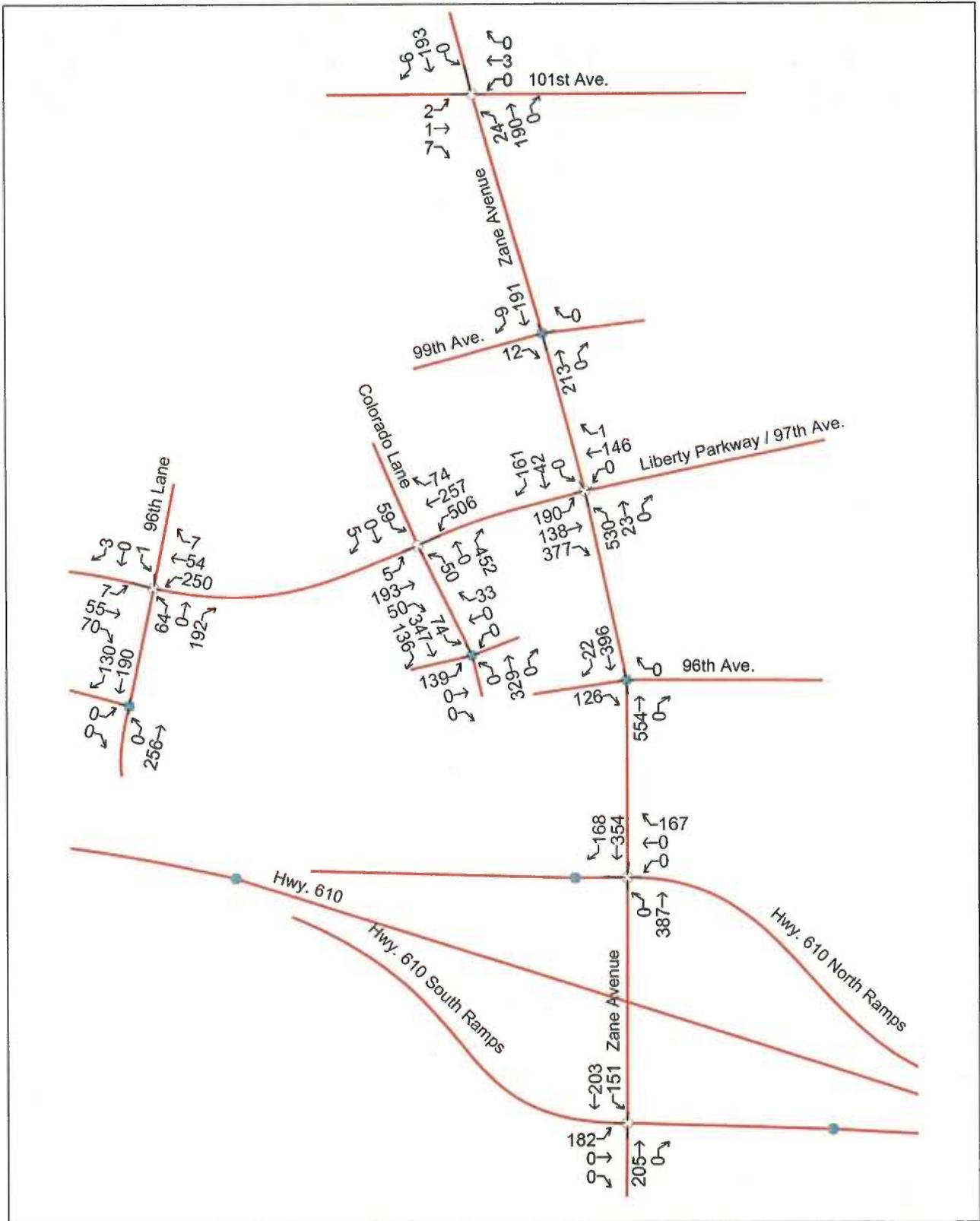


Figure A-12
2025 Full Development A.M. Peak Hour Traffic

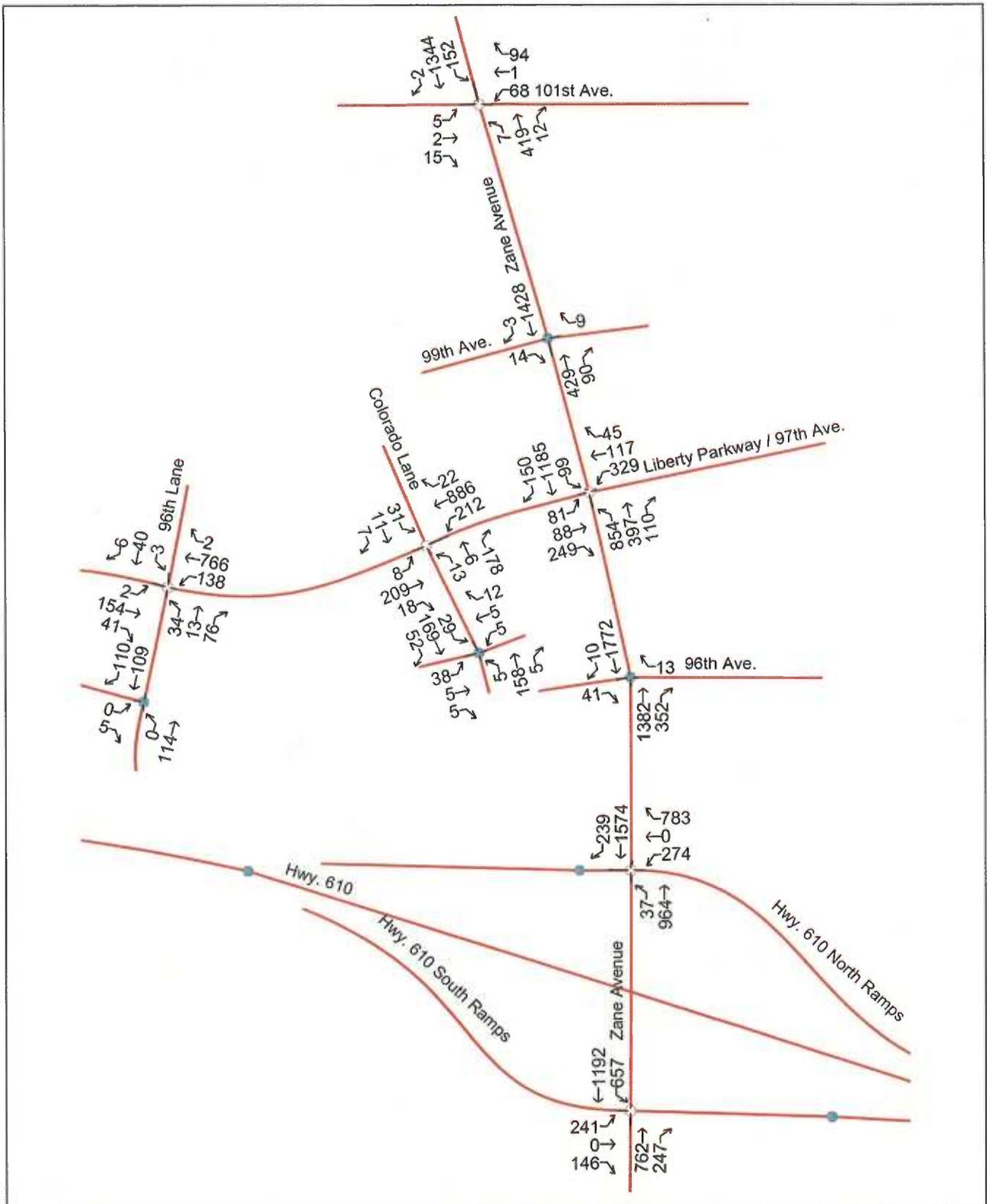


Figure A-13
2025 Full Development P.M. Peak Hour Traffic

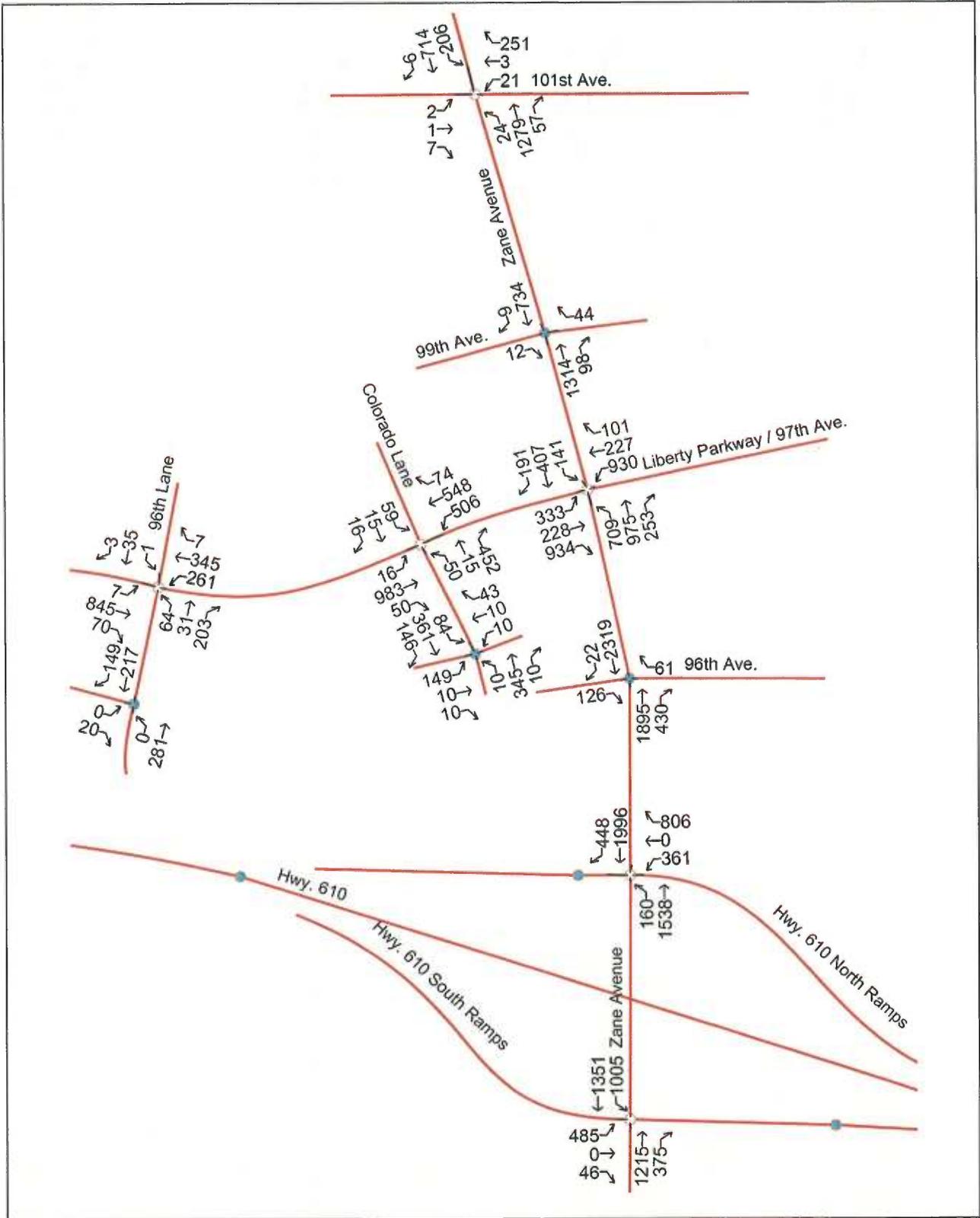
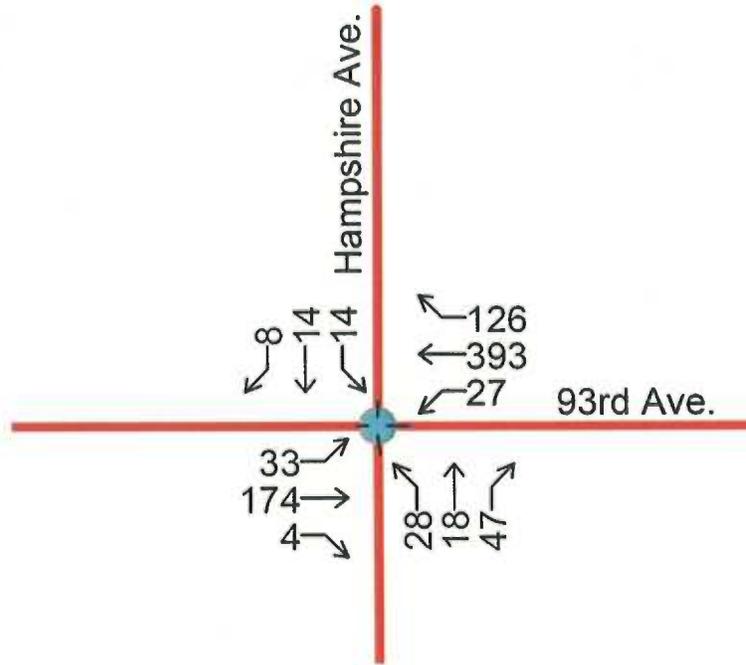
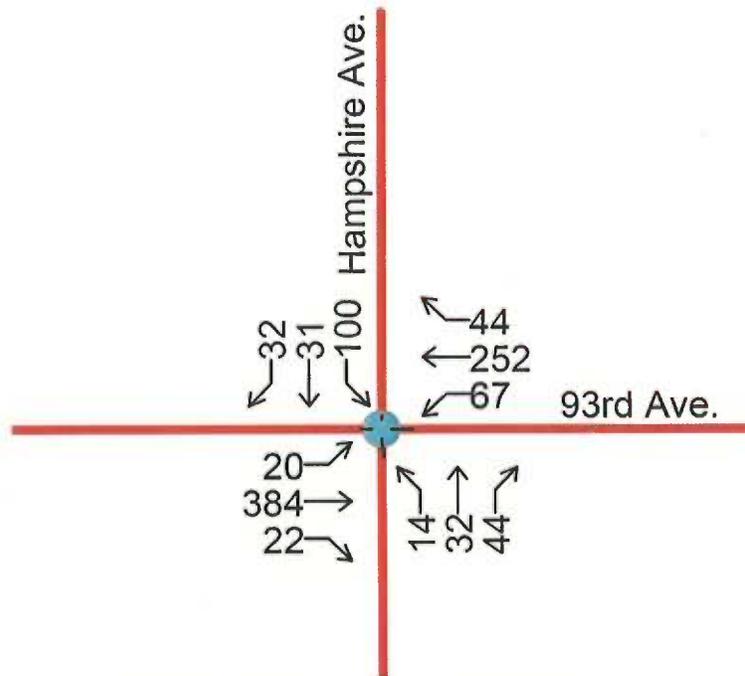


Figure A-14
 2025 Full Development A.M. & P.M. Peak Hour Traffic
 93rd Avenue & Hampshire Avenue



A.M. Peak Hour



P.M. Peak Hour

Figure A-15
Proposed Lane Arrangement
Liberty Parkway from Hampshire Avenue to 96th Lane

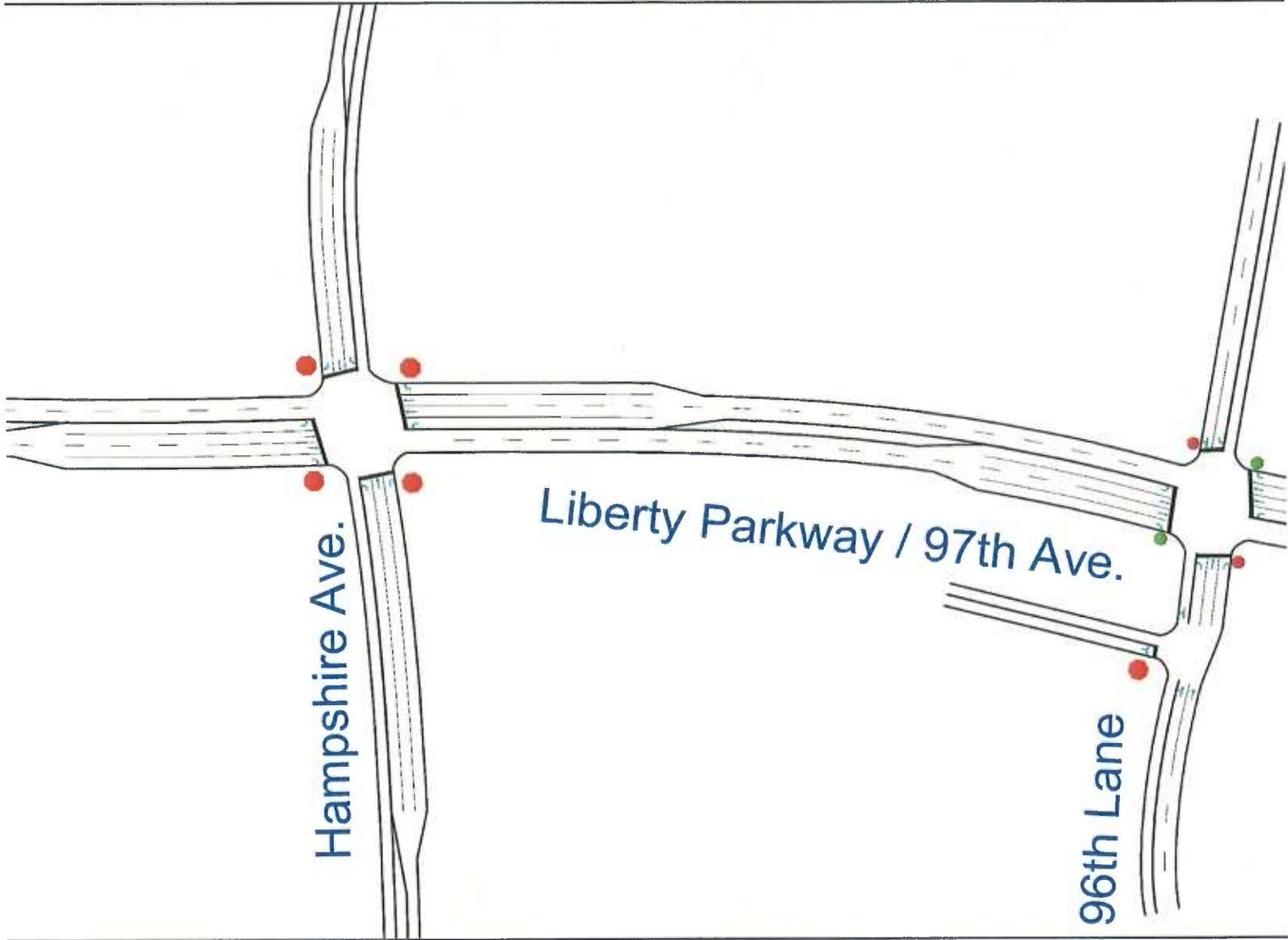


Figure A-16
2007 Partial Development A.M. Peak Hour Traffic

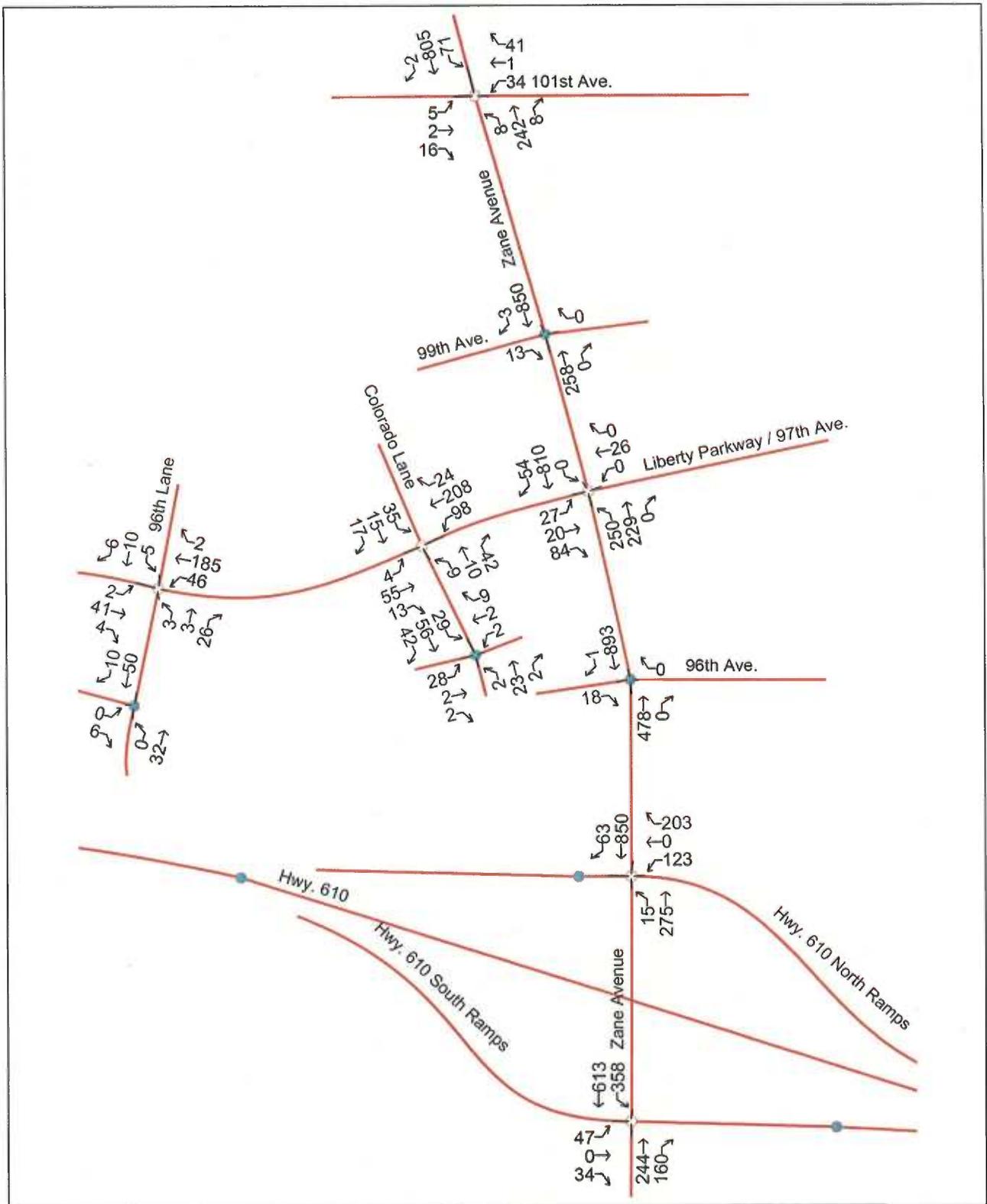


Figure A-17
2007 Partial Development P.M. Peak Hour Traffic

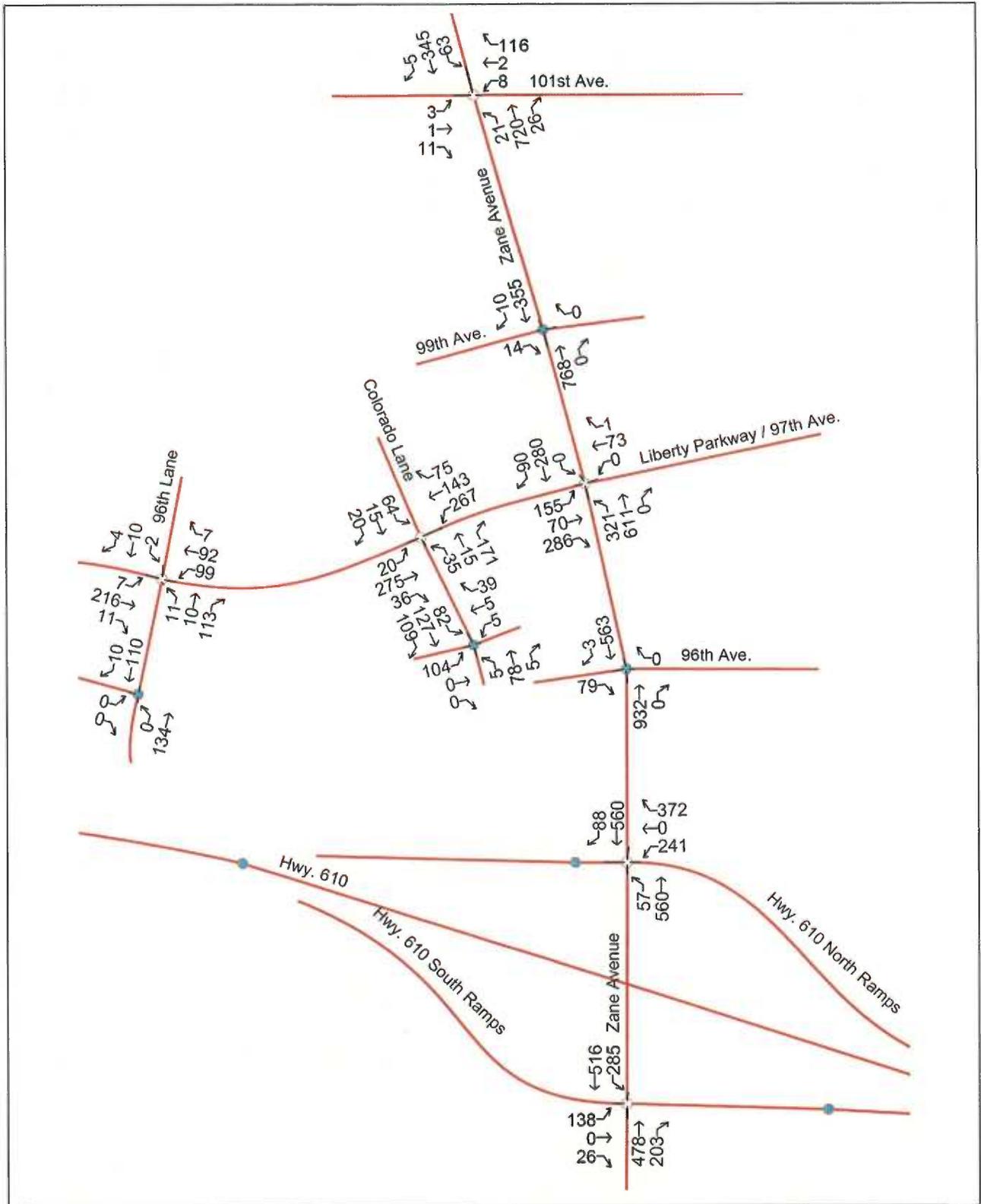
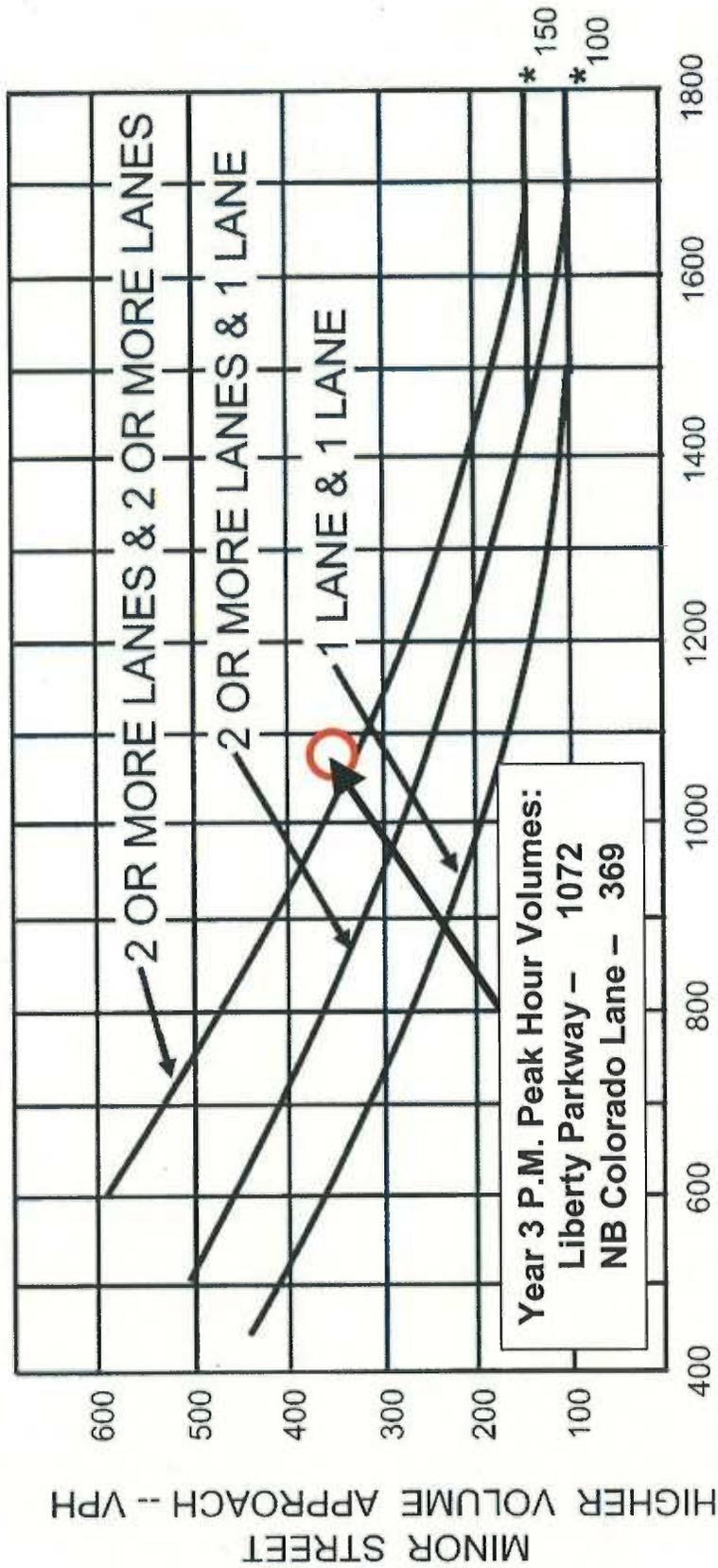


Figure A-18
 Signal Warrant Analysis
 Liberty Parkway / Colorado Lane
 Meets Warrant 3 – Peak Hour in Year 3

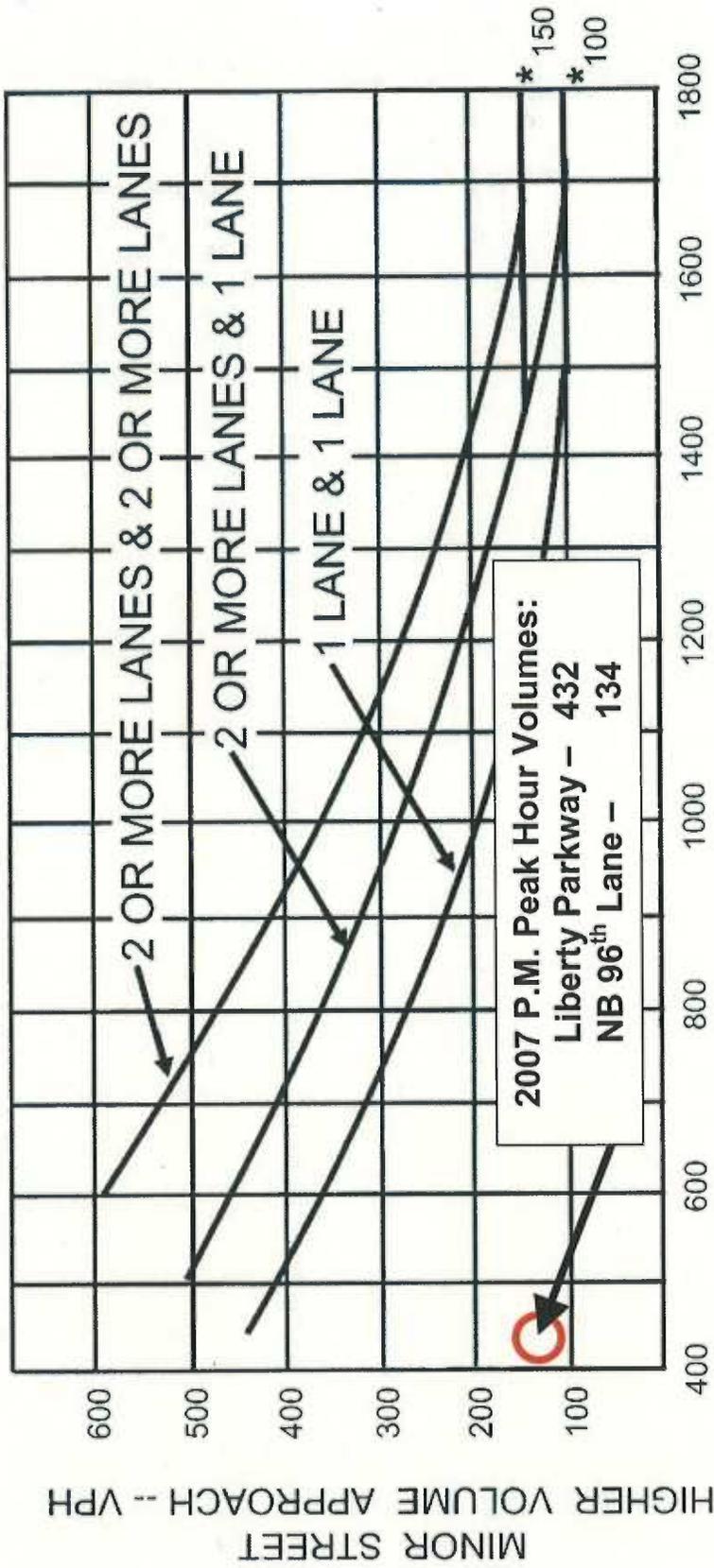


MAJOR STREET -- TOTAL OF BOTH APPROACHES -- VEHICLES PER HOUR (VPH)

*NOTE: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-3. Warrant 3 - Peak Hour

Figure A-19
 Signal Warrant Analysis
 Liberty Parkway / 96th Lane
 Does Not Meet Warrant 3 – Peak Hour in Year 2007



MAJOR STREET -- TOTAL OF BOTH APPROACHES -- VEHICLES PER HOUR (VPH)

*NOTE: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-3. Warrant 3 - Peak Hour

Appendix G

Comments Received

610 West EAW, Brooklyn Park
Hennepin County, Minnesota



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

March 18, 2015

Mr. Todd Larson
City of Brooklyn Park
City Hall
5200 85th Avenue North
Brooklyn Park, MN 55443

Re: 610 West, Brooklyn Park Environmental Assessment Worksheet

Dear Mr. Larson:

Thank you for the opportunity to review and comment on the Environmental Assessment Worksheet (EAW) for the 610 West, Brooklyn Park project (Project) located in Brooklyn Park, Minnesota. Minnesota Pollution Control Agency (MPCA) staff has reviewed the EAW and have no comments at this time.

We appreciate the opportunity to review this project. **Please provide the notice of decision on the need for an Environmental Impact Statement.** Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EAW, please contact me at 651-757-2482.

Sincerely,

A handwritten signature in blue ink that reads "Kevin Kain".

Kevin Kain
Planner Principal
Environmental Review Unit
Resource Management and Assistance Division

KK:bt

cc: Dan Card, MPCA, St. Paul



Minnesota Department of Transportation
Metropolitan District
Waters Edge Building
1500 County Road B2 West
Roseville, MN 55113

March 5, 2015

Todd Larson, Senior Planner
City of Brooklyn Park
Brooklyn Park City Hall
5200 85th Avenue
Brooklyn Park, MN 55443

SUBJECT: 610 West EAW
MnDOT Review # EAW15-003
Northeast quadrant of TH 610 and Hampshire Blvd
Brooklyn Park, Hennepin County
Control Section 2771

Dear Mr. Larson:

Thank you for the opportunity to review the 610 West Environmental Assessment Worksheet. The Minnesota Department of Transportation (MnDOT) has reviewed the EAW and has the following comments:

Water Resources:

A MnDOT drainage permit is required to ensure that current drainage rates to MnDOT right of way will not be increased. The drainage permit application, including the information below, should be submitted to:

Minnesota Department of Transportation
Metropolitan District - Permit Office
1500 W. County Road B-2
Roseville, MN 55113

The following information must be submitted with the drainage permit application:

- 1) A grading plan showing existing and proposed contours,
- 2) Drainage area maps for the proposed project showing existing and proposed drainage areas. Any off-site areas that drain to the project area should also be included in the drainage area maps. The direction of flow for each drainage area must be indicated by arrows,
- 3) Drainage computations for pre and post construction conditions during the 2, 10, 50 and 100 year rain events, and

An electronic copy of any computer modeling used for the drainage computations

For questions concerning this comment, please contact Brian Kelly (651-234-7536 or brian.kelly@state.mn.us) in MnDOT Metro District's Water Resources Section.

Traffic:

Please consider options to move the pond farther away from TH 610. The pond appears to be outside the clear zone, but it is on the outside of a curve on a high speed freeway.

For questions on this comment, please contact Chad Erickson (651-234-7806 or chad.erickson@state.mn.us), MnDOT's Metro West Area Traffic Engineer.

Review Submittal Options:

MnDOT's goal is to complete the review of plans within 30 days. Submittals sent in electronically can usually be turned around faster. There are four submittal options. Please submit either:

1. One (1) electronic pdf. version of the plans. MnDOT can accept the plans via e-mail at metrodevreviews.dot@state.mn.us provided that each separate e-mail is under 20 megabytes.
2. Three (3) sets of full size plans. Although submitting seven sets of full size plans will expedite the review process. Plans can be sent to:

MnDOT – Metro District Planning Section
Development Reviews Coordinator
1500 West County Road B-2
Roseville, MN 55113

3. One (1) compact disc.
4. Plans can also be submitted to MnDOT's External FTP Site. Please send files to: <ftp://ftp2.dot.state.mn.us/pub/incoming/MetroWatersEdge/Planning> Internet Explorer doesn't work using ftp so please use an FTP Client or your Windows Explorer (My Computer). Also, please send a note to metrodevreviews.dot@state.mn.us indicating that the plans have been submitted on the FTP site.

If you have any questions concerning this review, please feel free to contact me at (651) 234-7793.

Sincerely,



Michael J. Corbett, PE
Senior Planner

Copy sent via E-Mail:

Curt Martinson, Doran Companies

Ramankutty Kannankutty, Area Engineer

Brian Kelly, Water Resources

Nancy Jacobson, Design

Buck Craig, Permits

Doug Nelson, Right-of-Way

Chad Erickson, Traffic Engineering

Clare Lackey, Traffic Engineering

Russ Owen, Metropolitan Council

STATE HISTORIC PRESERVATION OFFICE

March 5, 2015

Mr. Todd Larson
City of Brooklyn Park
City Hall, 5200 85th Ave N
Brooklyn Park, MN 55443

RE: EAW – 610 West, Brooklyn Park – Multifamily Housing Development at SE Corner of Oak Grove Parkway and Hampshire Avenue North
Brooklyn Park, Hennepin County
SHPO Number: 2015-1265

Dear Mr. Larson:

Thank you for the opportunity to review and comment on the above project. 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.

Based on our review of the project information, we conclude that there are **no properties** listed in the National or State Registers of Historic Places, and no known or suspected archaeological properties in the area that will be affected by this project.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36CFR800, Procedures of the Advisory Council on Historic Preservation for the protection of historic properties. If this project is considered for federal assistance, or requires a federal permit or license, it should be submitted to our office by the responsible federal agency.

Please contact our Compliance Section at (651) 259-3455 if you have any questions regarding our review of this project.

Sincerely,



Sarah J. Beimers, Manager
Government Programs and Compliance

March 12, 2015

Todd Larson, Senior Planner
City of Brooklyn Park
5200 85th Ave N.
Brooklyn Park, MN 55443

RE: City of Brooklyn Park 610 West Environmental Assessment Worksheet (EAW)
Metropolitan Council Review No. 21360-1
Metropolitan Council District 2 (Lona Schreiber)

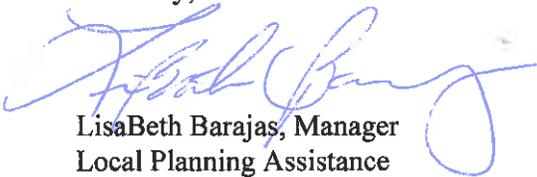
Dear Mr. Larson:

The Metropolitan Council received an EAW for the 610 West project in Brooklyn Park on February 11, 2015. This EAW proposes to build the 610 West residential development on approximately 10.85 acres of primarily agricultural land in Brooklyn Park. The project proposes 520 apartment units within four separate buildings. The project area is generally located on the southeast quadrant of Oak Grove Parkway and Hampshire Avenue North.

The staff review finds that the EAW is complete and accurate with respect to regional concerns and raises no major issues of consistency with Council policies. An EIS is not necessary for regional purposes.

This concludes the Council's review of the EAW. The Council will take no formal action on the EAW. If you have any questions or need further information, please contact Annalee Garletz, Principal Reviewer, at 651-602-1330.

Sincerely,


LisaBeth Barajas, Manager
Local Planning Assistance

cc: Curt Martinson, Director of Business Development, Doran Companies
Crystal Sheppeck, MHFA
Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Lona Schreiber, Metropolitan Council District 2
Keith Buttleman, Environmental Services
Annalee Garletz, Sector Representative and Principal Reviewer
Raya Esmaeili, Reviews Coordinator
Paul Hanson, GIS

N:\CommDev\LPA\Communities\Brooklyn Park\Letters\Brooklyn Park 2015 610 West EAW 21360-1.doc



**Hennepin County Public Works
Strategic Planning & Resources Department**

701 Fourth Avenue South, Suite 400
Minneapolis, Minnesota 55415-1843

Phone: 612-348-4077
Fax: 612-348-9710
www.hennepin.us

March 11, 2015

Mr. Todd Larson
City of Brooklyn Park
5200 85th Ave N
Brooklyn Park, MN 55443

Re: Comments to the 610 West Apartments Environmental Assessment Worksheet, as posted by the Environmental Quality Board February 16, 2015

Dear Mr. Larson:

This letter provides Hennepin County's comments to the Environmental Assessment Worksheet (EAW) and Traffic Impact Study completed for the proposed 610 West Apartments residential development south of Oak Grove Parkway between 96th Lane and Hampshire Avenue North in Brooklyn Park.

Question 18: Transportation and 610 West Traffic Impact Study:

- The proposed 520 unit high density residential development is proposed in the southeast quadrant of Oak Grove Parkway and Hampshire Avenue. This is a less intensive use of the land than previously proposed (big box retail). Therefore, the trips generated by the development and impacts to the roadway system are also less.
- The EAW included a traffic operations analysis for the Oak Grove Parkway/96th Lane intersection. Although from the county perspective, the proposed development is not anticipated to have significant traffic impacts on the county roadway network, it should be noted that significant changes are anticipated near the Oak Grove Parkway/West Broadway Avenue (CR 103) intersection to the west. The locally preferred Bottineau LRT alignment, along with other potential development and proposed roadway changes, the section of West Broadway Avenue between the TH 610 Ramps and Winnetka Avenue will be a high priority for Hennepin County to maintain acceptable traffic operations and safely accommodate additional transportation modes.

I appreciate your consideration of Hennepin County comments at this time and look forward to your response. If you have any questions, please contact me a 612-348-5714 or david.jaeger@hennepin.us.

Sincerely,

David Jaeger
Manager, Environmental Policy

Cc: Jim Grube, Director of Transportation
Debra Brisk, Assistant County Administrator
Alene Tchourumoff, Director of Strategic Planning and Resources