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MPCA, HAZARDOUS
WASTE DIVISION

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MPCA, HAZARDOUS
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A. Introduction

A.1. Objective

On March 23, 1993, Braunn Intertec Environmental, Inc. (Braunn Intertec) received written authorization from Mr. John Bruhn of the Minneapolis Community Development Agency to conduct a phase I environmental site assessment of the 4.5-acre parcel located at 21st Avenue South and East 29th Street, Minneapolis, Minnesota (*Site*). The objective of this assessment was to evaluate the *Site* for indications of existing and potential environmental hazards.

A.2. Scope of Services

The services provided for this project consisted of the following:

- a review of selected physiographic and geologic information with regard to the *Site* and surrounding area;
- a review of current and previous land-use activities at the *Site*;
- a review of selected federal and state regulatory files for information regarding existing and potential environmental hazards at and near the *Site*; and
- a reconnaissance to visually evaluate the *Site* for indications of existing and potential environmental hazards.

This Phase I Environmental Site Assessment report was prepared based on the results of these activities.

A.3. Site Description

The *Site* is located within the southwest quarter of Section 36, of Township 29 North and Range 24 West, in the city of Minneapolis, Hennepin County, Minnesota. At the time of this assessment, the *Site* consisted of an approximately 4.5-acre parcel comprised of vacant city blocks. The *Site* was bordered on the north by the Chicago, Milwaukee and Saint Paul Rail Road tracks; on the west by 20th Avenue South; on the south by 29th Street; and on the east by additional vacant land. A *Site* location map and *Site* Sketch are attached in Appendices A and B, respectively.

B. Site Geology

The unconsolidated sedimentary deposits in the vicinity of the *Site* are Holocene and Pleistocene upper terrace deposits. These deposits contain sand, gravelly sand, and loamy sand, overlain by thin deposits of silt, loam, or organic sediment (Meyer and Hobbs, 1989). The unconsolidated sedimentary deposits in the vicinity of the *Site* range in thickness from 50 feet to 150 feet (Bloomgren, et al., 1989).

The uppermost bedrock unit in the vicinity of the *Site* consists of the middle-Ordovician Platteville and Glenwood Formations (Olsen and Bloomgren, 1989). The Platteville Formation consists of fine-grained limestone containing thin shale partings near the top and base, underlain by green, sandy shale of the Glenwood Formation.

According to leaksite reports provided by the MPCA, the groundwater flow direction in the vicinity of the *Site* is to the northwest. Published geologic and hydrologic information indicate that the regional groundwater flow direction within the unconsolidated sedimentary deposits in the vicinity of the *Site* is eastward, toward the Mississippi River (Kanivetsky, 1989a). The general groundwater flow direction within the uppermost bedrock aquifer (Prairie du Chien-Jordan) in the vicinity of the *Site* is also eastward, toward the Mississippi River valley (Kanivetsky, 1989b).

The *Site*-specific groundwater flow direction was not determined during this assessment. Additional field investigation, beyond the Scope of Services for this assessment would be required to determine this information.

C. Land-Use History

Information regarding past and present land-use activities at the *Site* was obtained from the following sources:

- Sanborn Fire Insurance Company Atlases;
- R. L. Polk & Company City Directories;
- aerial photographs;
- Minnesota Geological Survey Water Well Database; and
- *Site* representatives.

C.1. Sanborn Fire Insurance Company Atlases

Braun Intertec reviewed Sanborn Fire Insurance Company (Sanborn) Atlases at the Minnesota Historical Society for information pertaining to the *Site*. Sanborn maps for the city of Minneapolis dated 1912 and 1912 (updated to 1942) were reviewed and are attached in Appendix C.

The 1912 Sanborn map indicated that approximately 24 residential structures and associated garages were located on the *Site*. In addition, two smaller unidentified structures were also located on the southeastern portion of the *Site*. All of the structures observed were located on 22nd Avenue South, Layman Avenue, 21st Avenue South and 29th Street East. Surrounding land use was primarily vacant city lots. A railroad corridor was evident at the northern boundary of the *Site*.

On the 1912/42 Sanborn map, approximately 28 residential structures were located on the *Site*. A large commercial facility was located on the northeastern portion of the *Site*, with apparent address listings of 2810 and 2818 22nd Avenue South. Another unlabeled apparent commercial building was located at 2818 Layman Avenue South. However, this building appeared to be an extension of the facility located at 2810 and 2818 22nd Avenue South.

A "Minneapolis General Electric Company Pole Yard" was located adjacent to the northwest corner of the *Site* and was listed at approximately 2811 20th Avenue South. Also located adjacent to the western portion of the *Site* was a "Foundry Shop" listed at 2831 20th Avenue South. Located south of the "Foundry Shop," and apparently off-*Site*, were a "Pattern Shop," another "Foundry," and a "Chemical Manufacturing" building located at the northeast corner of the East 29th Street and 20th Avenue South intersection. Surrounding land use was also commercial and residential on the 1912/42 Sanborn map.

C.2. R. L. Polk & Company City Directories

Braun Intertec reviewed R. L. Polk & Company City Directories at the Minnesota Historical Society for information pertaining to the *Site*. Our research included a review of available Minneapolis City Directories dated 1931, 1941, 1953, 1962, 1971, 1981/82 and 1990, including listings for 20th, 21st, 22nd, Layman and Hiawatha Avenues South and 29th Street East in Minneapolis. Copies of occupant listings from the city directories reviewed are attached in Appendix D.

The 1962, 1971 and 1981/82 city directories listed "Peerless Machine Products - machine shop " at 2828 21st Avenue South. Other listings for the location of the *Site* appeared to remain residential or vacant.

The 1990 city directory listed no apparent occupants for the location of the *Site*.

Layman Avenue South

The 1931, 1941, 1953, 1962, 1971 and 1981/82 city directories listed six to eight apparent private residences and "vacant" listings at the location of the *Site*.

The 1990 city directory listed no apparent occupants for the location of the *Site*.

Hiawatha Avenue South

In the 1931 city directory, an apparent private residence was listed for the location of the *Site* at 2846 Hiawatha Avenue South. Listed at 2800 and 2802 Hiawatha Avenue South were "Long, Ray - filling station" and "Minn Oil & Refining Company," respectively. These two address listings were off-*Site*, but the Refining Company may have extended onto the *Site*.

The 1941 city directory listed "Bareco Oil Company" and "Schultz, Gust A. - filling station" at 2800 Hiawatha Avenue South. An apparent private residence was listed at 2846 Hiawatha Avenue South.

Only one apparent private residence was listed at the location of the *Site* in the 1953 city directory.

The 1962 city directory listed "Crook & Hanley Inc. - duplicating machines" at 2850 Hiawatha Avenue South and an apparent private residence at 2846 Hiawatha Avenue South.

In the 1971, 1981/82 and 1990 city directories, no listings for the location of the *Site* were evident.

29th Street East

The 1931, 1941, 1953, 1962, 1971 and 1981/82 city directories listed from four to six apparent private residences for the location of the *Site*.

The 1990 city directory listed no apparent occupants for the location of the *Site*.

C.3. Aerial Photographs

Braun Intertec obtained aerial photographs dated 1940, 1945, 1953, 1957, 1964, 1987 and 1990 from the University of Minnesota Wilson Library. We reviewed the aerial photographs for indications of former land uses at and in the vicinity of the *Site*. Copies of selected aerial photographs are attached in Appendix E.

On the 1940 aerial photograph, at least seven large aboveground storage tanks were located adjacent to the railroad tracks and located on the northern portion of the *Site*. An apparent commercial building was also located at the northern portion of the *Site*, east of the aboveground storage tanks on 22nd Avenue south. The remaining portions of the *Site* appeared to be private residences and vacant lots.

On the 1945 aerial photograph, the aboveground storage tanks previously noted on the *Site* were no longer evident. The building previously noted on 22nd Avenue had been expanded westward to Layman Avenue. Another apparent commercial building was evident on the northern portion of the *Site* between Layman Avenue and 21st Avenue. Remaining land use on the *Site* appeared to remain residential and vacant lots.

On the 1953 aerial photograph, the commercial building previously noted on the northern portion of the *Site* had been expanded westward along the railroad tracks. An additional apparent commercial building was also observed on the western side of 22nd Avenue South. An additional apparent commercial building was also observed on the northwestern portion of the *Site* on 21st Avenue South. Remaining land use on the *Site* appeared to remain primarily residential. Located near the northeast border of the *Site* on Hiawatha Avenue was an apparent gas station. This apparent gas station, however, appeared to be located off-*Site*.

On the 1957 and 1964 aerial photographs, the *Site* appeared to remain the same as the 1953 aerial photograph, except for the addition of an apparent commercial building located at the southeast corner of the *Site* on 29th Street East.

On the 1980 aerial photograph, two apparent commercial buildings were evident on the western side of Layman Avenue. In addition, an apparent commercial building was located on the northwestern portion of the *Site*, west of 21st Avenue. Apparent truck trailers appeared to be stored north of this building. Residential houses were evident on the southern and southwestern portions of the *Site*. All other areas of the *Site* appeared to be vacant.

On the 1990 aerial photograph, the *Site* appeared to be vacant. No structures were observed on the *Site*. The truck trailers, parked on the northwestern portion of the *Site*, were still evident.

C.4. Minnesota Geological Survey Water Well Database

The Minnesota Geological Survey (MGS) maintains a limited database of water well records called the Minnesota County Well Index (MCWI). Not all private water wells are listed in that database. Our review of the MCWI database revealed no documentation of water wells on the *Site*.

D. Regulatory Information

Regulatory information for this Environmental Property Assessment report was obtained from the Minnesota Pollution Control Agency (MPCA), the Minneapolis Pollution Control Division (MPCD), and the Hennepin County Department of Environmental Management (HCDEM).

D.1. MPCA File and Database Evaluation

Braun Intertec requested the MPCA to conduct a file evaluation of the *Site* (site located northeast of the 20th Avenue South and 29th Street East intersection, Minneapolis, Minnesota 55407). A copy of the letter addressed to Braun Intertec from the MPCA regarding the results of the file evaluation is attached in Appendix F.

D.1.a. MPCA Regulated Waste and Property Evaluation Databases. As part of the file evaluation, MPCA staff reviewed the following sources for listings of verified and potential waste problem sites at and within 1 mile of the *Site*:

- United States Environmental Protection Agency (USEPA) National Priorities List (NPL);
- USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS);
- MPCA Permanent List of Priorities (PLP);
- MPCA Regulatory Compliance, Hazardous Waste Enforcement Log;
- MPCA List of Permitted Solid Waste Facilities;

- MPCA Hazardous Waste Permit Unit Project Identification List;
- MPCA 1980 Metropolitan Area Waste Disposal Site Inventory;
- MPCA 1980 Statewide Open Dump Inventory Maps; and
- MPCA Property Transfer Technical Review List.

In the file evaluation response letter, the MPCA indicated that they have no listings in the above sources under the exact address given for the *Site*. However, the MPCA's file evaluation indicated that the following seven sites are located within approximately 1 mile of the *Site*:

- Soo Line Marshalling Yards, southwest of 26th Avenue South and East 26th Street South, Minneapolis;
- AT&T Technologies, Inc., 3100 East 28th Street, Minneapolis;
- Police Station-Third Precinct, East Lake Street and Minnehaha Avenue, Minneapolis;
- Minneapolis South Side Transfer (SW-41), vicinity of 20th Avenue South and 29th Street intersection, Minneapolis;
- Smith Foundry, 1855 East 28th Street, Minneapolis;
- Hiawatha Metalcraft, 2631 31st Avenue South, Minneapolis; and
- Ford Deep Rock, north side of East 28th Street, between 29th Avenue South and 27th Avenue South, Minneapolis.

The Soo Line Marshalling Yards site is located 1/8 mile east of the *Site* and is listed on the USEPA CERCLIS. The CERCLIS is the U.S. EPA's national listing of actual and potential hazardous waste sites nationwide. According to information provided by the MPCA, the Soo Line Marshalling Yards site encompasses approximately 100 acres and was originally used by the Milwaukee Road and more recently by the Soo Line Railroad as a rail car switching yard, repair and storage shops, and loading and unloading docks. Locomotive refueling operations

in the northern portion of the Soo Line site have resulted in the spillage of diesel fuel and possibly other substances. Coal tar derivatives, commonly used for wood treating, and heavy metals have been found in soil and groundwater in the southeast corner of the Soo Line site. In general, gasoline, No. 6 fuel oil and other petroleum products have been detected in the soils throughout the *Site*.

According to MPCA file information, the groundwater flow in the vicinity of the Soo Line Marshalling Yards site is generally to the west-northwest. Based on the location of the Soo Line Marshalling Yards site relative to the *Site*, the groundwater flow direction in the vicinity of the Soo Line Marshalling Yards site according to the MPCA file information, and the regional groundwater flow direction in the vicinity of the *Site* (see *Site* Geology section), it appears possible that groundwater contamination associated with the Soo Line Marshalling Yards site would have an adverse impact on the quality of groundwater beneath the *Site*.

The AT&T Technologies, Inc. site is located approximately 3/4 mile east of the *Site* and is listed on the USEPA CERCLIS. According to information provided by the MPCA, a pre-purchase investigation of the AT&T Technologies, Inc. site was performed in 1989. The investigation encountered Trichloroethylene (TCE) and Polynuclear Aromatic Hydrocarbons (PAHs) in the groundwater and soil.

Based on the location of the AT&T Technologies, Inc. facility relative to the *Site* and the regional groundwater flow in the vicinity of the AT&T Technologies, Inc. *Site*, it appears unlikely that groundwater contamination associated with the AT&T Technologies, Inc. site would have an adverse impact on the quality of groundwater beneath the *Site*.

The Police Station-Third Precinct site is located approximately 1/3 mile southeast of the *Site* and is listed on the USEPA CERCLIS. According to information provided by the MPCA, coal tar contamination was encountered in soil borings performed at the Police Station site in 1984. A source for the contamination has not been determined.

Based on the location of the Police Station-Third Precinct site relative to the *Site* and the regional groundwater flow in the vicinity of the Police Station-Third Precinct site, it appears unlikely that groundwater contamination associated with the Police Station-Third Precinct site would have an adverse impact on the quality of groundwater beneath the *Site*.

The Minneapolis South Side Transfer (SW-41) is located within 1/4 mile west of the *Site* and is listed on the MPCA List of Permitted Solid Waste Facilities. The MPCA List of Solid Waste Facilities is a listing of facilities and areas in the state which have been issued permits for the handling or disposal of solid waste. This list is updated periodically as additional information becomes available. Braun Intertec reviewed information regarding the Minneapolis Southside Transfer Station provided by the MPCA. No documentation of permit violations or any reported incidents were found in the file.

The Smith Foundry is located less than 1/8 mile north of the *Site* and is listed on the MPCA 1980 Metropolitan Area Waste Disposal Site Inventory. The Inventory is a compilation of information from various sources regarding open dumps. The most common source of the information was visual observation and field review. Most open dumps were placed into operation prior to establishment of a solid waste regulatory program at the MPCA. A large number of these sites were either closed prior to development of the current solid waste regulatory program or were not closed in accordance with current MPCA solid waste rules. Thus, in most cases, there is little specific information regarding the types and quantities of materials disposed of in open dumps, and it is therefore, not possible to determine the potential impact on the environment from these sites based solely on the information contained in the Inventory.

No further information was provided by the MPCA regarding the Smith Foundry. However, based on the location of the Smith Foundry facility relative to the *Site* and the general groundwater flow direction in the vicinity of the *Site* (see *Site* Geology section), it appears unlikely that groundwater contamination associated with the Smith foundry site (if groundwater contamination exists) would have an adverse impact on the quality of groundwater beneath the *Site*.

The Hiawatha Metalcraft site, located approximately 2/3 mile northeast of the *Site*, and the Ford Deep Rock site, located approximately 1/2 mile east of the *Site*, are listed on the MPCA Property Transfer Voluntary Cleanup Program Database. The MPCA Property Transfer Technical Review Database is a registry of properties at which voluntary investigation has been or is being conducted, with MPCA staff providing technical review of the investigation and any necessary remedial activities. A number of these properties have been investigated and cleaned up or found not to require any cleanup work. No further information regarding these sites was readily available from the MPCA.

However, based on the location of the Hiawatha Metalcraft facility and the Ford Deep Rock facility relative to the *Site* and the general groundwater flow direction in the vicinity of the *Site* (see *Site* Geology section), it appears unlikely that groundwater contamination associated with these sites (if present) would have an adverse impact on the quality of groundwater beneath the *Site*.

D.1.b. MPCA Air Quality Database. The MPCA's file evaluation also included a review of their database of facilities with air quality permits. A copy of this listing is attached in Appendix F. Braun Intertec did not identify listings in the database under the title or location given for the *Site*. However, Braun Intertec identified Smith Foundry Company located at 1855 East 28th Street, north of the *Site* as a permitted facility on the list. No further information was readily available from the MPCA regarding this facility.

D.1.c. MPCA Hazardous Waste Information Management System. The MPCA has included a list of Large Quantity Hazardous Waste Generators in Minneapolis. This list is also attached in Appendix F. No listings for the location of the *Site* or facilities located adjacent to the *Site* were included in the List.

D.1.d. MPCA Underground Storage Tank Information System.

The MPCA file evaluation also included a review of their Underground Storage Tank Information System database, which contains information about underground storage, leaks, and spills of petroleum products and hazardous substances. Made available by the MPCA, and attached in Appendix F, are:

- a list of registered storage tanks in the 55406 and 55407 zip code areas;
- a list of leaking underground storage tanks (MPCA City Leaksite List) reported within the 55406 and 55407 zip code areas; and
- a list of hazardous-substance and petroleum-product spills (MPCA Spills and Leak Report Log) that have occurred in Minneapolis and that were reported to the MPCA.

Please note, however, that many sites on the MPCA Spills and Leak Report Log are recorded without specific addresses. Therefore, not all sites can be precisely located.

According to the MPCA, no underground storage tank installations, leaking underground storage tanks, or spills of hazardous substances or petroleum products have been reported under the titles or addresses given for the *Site*. However, Braun Intertec has identified the following facilities on the MPCA City Leaksite List or the MPCA Spills and Leak Report Log located within 1/4 mile of the *Site*:

- City of Minneapolis, Southside Transfer Station, 2850 20th Avenue South, Leaksite No. 5482;
- Clark Oil Company, 1901 East Lake Street, Minneapolis, Leaksite No. 683 and Spillsite No. 4924;
- Chicago-Milwaukee Corporation/Rollins Oil, 2000-2020 28th Street East, Minneapolis, Leaksite No. 1583;

In addition, previous letters received from the MPCA have indicated two MPCA leaksites (numbers 3802 and 0544) are listed at the Soo Line Marshalling Yards located on the east side of Hiawatha Avenue from the *Site*. However, the Soo Line Marshalling Yards site is listed as a USEPA CERCLIS site and is discussed in Section D.1.a.

The City of Minneapolis, Southside Transfer Station (MPCA Leaksite No. 5482) is located within 1/8 mile west of the *Site* and was reported to the MPCA on June 4, 1992. According to information provided by the MPCA, a 10,000-gallon underground fuel oil storage tank was removed after it failed a tank tightness test. The tank was located on the north side of the transfer station building. According to the MPCA, 1.5 cubic yards of contaminated soil were removed along with the tank. No groundwater was encountered during excavation. The MPCA information indicated that a leak had developed near the top of the tank and that approximately 2 gallons of fuel oil was released.

Based on the information provided by the MPCA, it appears unlikely that groundwater contamination has occurred at the Southside Sanitation Leaksite. Therefore, it is unlikely that contamination associated with this Leaksite would have an adverse impact on the quality of groundwater beneath the *Site*.

The Clark Oil Company (MPCA Leaksite No. 683 and MPCA Spillsite No. 4924) is located 1/8 mile southwest of the *Site* and was reported to the MPCA on April 24, 1989. According

to information provided by the MPCA, an unknown amount of petroleum was released from leaking underground storage tanks on the Clark Oil Property. Investigation of the Leaksite indicated that a plume of contaminated groundwater was detected flowing west from the Leaksite. The MPCA required soil venting and groundwater pumping as remedial activities at the Leaksite. Groundwater monitoring data from a November 1992 report indicated that petroleum-contaminated groundwater still exists beneath the Clark Oil Site.

Based on the location of the Clark Oil Leaksite and Spillsite relative to the *Site* and the observed groundwater flow direction in the vicinity of the Clark Oil Leaksite and Spillsite, it appears unlikely that groundwater contamination associated with the Clark Oil Leaksite and Spillsite site would have an adverse impact on the quality of groundwater beneath the *Site*.

The Chicago-Milwaukee Corporation/Rollins Oil (MPCA Leaksite No. 1583) is located northeast of the *Site*, north of and adjacent to East 28th Street and was reported to the MPCA on August 29, 1989. According to information provided by the MPCA, four 25,000-gallon aboveground fuel oil storage tanks and one 17,000-gallon aboveground gasoline storage tank were located on the Leaksite until 1987. A Remedial Investigation was performed at the Leaksite in 1991 by DPRRA, Inc. The DPRRA report, dated January 14, 1992, indicated that gasoline was present on the groundwater at the Leaksite. The report indicated that groundwater flow at the Leaksite was to the northwest. The report also indicated that gasoline contamination diminishes significantly to the southwest, in the direction of the *Site*.

Based on the groundwater flow direction indicated in the DPRRA, Inc. report at the location of the Leaksite and the location of the Chicago-Milwaukee Corporation/Rollins Oil Leaksite relative to the *Site*, it appears unlikely that groundwater contamination associated with the Chicago-Milwaukee/Rollins Oil Leaksite would have an adverse impact on the quality of groundwater beneath the *Site*.

D.2. City of Minneapolis File Information

Braun Intertec contacted officials with the City of Minneapolis Department of Regulatory Services (City) for information pertaining to the *Site*. The City maintains a limited amount of file information for specific addresses within the city of Minneapolis. The supervisor of the Minneapolis Pollution Control Division (MPCD) was asked to provide information regarding current and past land-use activities at the following facilities and addresses previously located on the *Site*:

- Bareco Oil Company, Harry A., Brown & Company Metal Dealers and Sol Kronick & Sons, junk dealers, 2800-2818 22nd Avenue South;
- Abco Precast, OK Manufacturing Company, Inc., and State Highway Department, 2824 22nd Avenue South;
- Peerless Machine, 2828 21st Avenue South; and
- 2800-2810 Hiawatha Avenue South.

According to the MPCD, only files for 2828 21st Avenue South and 2810 22nd Avenue South were available. A copy of the two file evaluation letters addressed to Braun Intertec from the MPCD regarding the results of the file evaluation are attached to this report in Appendix G.

The MPCD's review of Minneapolis Pollution Control files has indicated no records of Company, Complaint or Equipment files for either the 2828 21st Avenue South or 2810 22nd Avenue South addresses.

The MPCD's review of Minneapolis Fire Prevention files has indicated no records of filling stations, liquid petroleum installations, bulk storage plants or dry-cleaning plants for either 2828 21st Avenue South or 2810 22nd Avenue South addresses.

The MPCD's review of Inspections Division files has indicated no records of Permit History Cards, Current Permits, or Oil Burner Archives for either of the 2828 21st Avenue South or 2810 22nd Avenue South addresses.

The MPCD had no records of underground storage tanks for either of the 2828 21st Avenue South or 2810 22nd Avenue South addresses.

D.3. Hennepin County Department of Environmental Management

Braun Intertec reviewed the Hennepin County Environmental Management Department (HCCEMD) list of hazardous waste generators, disposers and transporters for listings at the *Site*. No permitted generators, disposers or transporters were listed for the location of the *Site*. However, the following facility is located adjacent to the western boundary of the northwestern portion of the *Site* and is listed as a licensed hazardous waste generator:

- Dalsin, John & Sons, 2827 20th Avenue South.

Tank record
for 2800
22nd Ave
(MPCD)

The HCDEM file information reviewed by Braun Intertec indicated that the Dalsin and Son, Inc. maintenance shop, located adjacent to the *Site*, is a permitted generator of hazardous waste. The facility was inspected by the HCDEM in November 1992. No violations were noted in the HCDEM report regarding that inspection.

E. *Site* Reconnaissance

A reconnaissance of the *Site* was conducted on April 5, 1993 by a Braun Intertec Environmental Scientist. At the time of the reconnaissance, the *Site* consisted of an approximately 4.5-acre parcel comprised of vacant city blocks. The *Site* was bordered on the north by the Chicago, Milwaukee and Saint Paul Rail Road tracks; on the west by 20th Avenue South; on the south by 29th Street; and on the east by additional vacant land. A *Site* sketch and *Site* photographs are attached in Appendices B and H, respectively.

At the time of our reconnaissance, a concrete slab foundation and associated concrete and bituminous parking areas were evident on the southeastern portion of the *Site*. Located in the concrete slab foundation were apparent waste/sewer pipes. No noticeable odors were emanating from these pipes.

Located on the northwestern portion of the *Site* (on the east side of Dalsin & Sons) were storage trailers, solid waste including lumber, paper, tires, and other miscellaneous debris; and an apparent foundation.

Located in the middle of the *Site* on the east side of Layman Avenue was an asphalt parking area with piles of plowed snow and miscellaneous solid waste debris, including paper, plastic and wood. Two pole-mounted electrical transformers were located east of the dirt alley, located east of the bituminous parking lot. No evidence of leaks or spills of transformer fluids were evident in association with the electric transformers.

Located along Layman Avenue were numerous concrete entrances to apparent former driveways. Located west of Layman Avenue was an area of scattered wood debris.

F. Conclusions

F.1. On-Site Concerns

Our research has indicated that the following facilities were formerly located on the *Site*:

- at least 28 residential dwellings
- Bareco Oil Company, 2800-2828 22nd Avenue South;
- Minn Oil & Refining Company, 2802 Hiawatha Avenue South;
- various scrap metal and junk dealers at 2810 22nd Avenue South;
- a concrete manufacturing company at 2824 22nd Avenue South; and
- a machine shop at 2828 21st Avenue South;

During our research and on-*Site* observations, we did not encounter specific documentation of the storage of petroleum products or hazardous materials in association with the facilities formerly located at the *Site*. However, our review of the 1940 aerial photograph indicated that at least seven, large aboveground storage tanks were identified on the northern portion of the *Site* in association with the Bareco Oil facility.

F.2. Off-Site Concerns

Our research suggests that the Soo Line Marshalling Yards Site, located on the east side of Hiawatha Avenue from the *Site*, may have impacted the soils and groundwater beneath the *Site*. According to information provided by the MPCA, the Soo Line Marshalling Yards site is located 1/8 mile east of the *Site* and is listed on the USEPA CERCLIS. Coal tar derivatives, commonly used for wood-treating, and heavy metals have been found in soil and groundwater in the southeast corner of the Soo Line site. According to MPCA file information, the groundwater flow in the vicinity of the Soo Line Marshalling Yards site is to the northwest.

In addition, our research has indicated that the following facilities were previously listed as being located adjacent to the *Site*:

- a filling station located at 2800 Hiawatha Avenue South;
- Crook and Hanley - duplicating machines, 2850 Hiawatha Avenue South;
- foundries located at 2831-2833 and 2847-49 20th Avenue South; and
- chemical manufacturing facility located at 2859 20th Avenue South.

The *Site* is located in an area where historic and current land use is suspected to have had or known to have associated groundwater contamination. Therefore, it may be possible that groundwater beneath the *Site* has been contaminated by other yet unidentified off-*Site* sources.

The experience of Braun Intertec with regulatory authorities has been that they have not looked to the owners of a *Site* for remediation of contaminated groundwater that came from an off-site source. However, Braun Intertec is unable to predict, and expresses no opinion, as to whether regulatory authorities will maintain past or present policies regarding contaminated groundwater remediation.

F.3. Recommendations

Based on the previous commercial land-use activities at and in the vicinity of the *Site* and the apparent aboveground petroleum product storage tanks previously located on the *Site*, Braun Intertec recommends that an environmental subsurface investigation be completed at the *Site* to evaluate the potential for encountering contaminated soil and groundwater.

Our research and on-*Site* observations have also indicated that at least 28 private residences (in addition to the commercial operations noted above) were previously located at *Site*. Although Braun Intertec did not encounter documentation indicating that water wells, septic systems or underground storage tanks were formerly or are currently located at the *Site*, it is possible that water wells, septic systems, and/or underground storage tanks were installed in association with the former buildings. If not properly abandoned, a water well or septic system can act as a conduit for surface contamination to reach local groundwater. If not properly removed, underground storage tanks can cause contamination of soils and groundwater at the *Site*. If, during future development of the *Site*, water wells and/or septic systems are encountered, Braun Intertec recommends that they be abandoned in accordance with the regulations set forth by the Minnesota Department of Health. In addition, if underground storage tanks are encountered during future development at the *Site*, Braun Intertec recommends the storage tanks be properly removed and the excavations monitored for potential soil and groundwater contamination.

G. Assessment Limitations

The conclusions submitted in this report are based on our review of available *Site* history information, selected federal, state and local regulatory information, and our *Site*

reconnaissance efforts conducted for this project. The Scope of Services for this project did not include the conduct of soil borings, the installation of groundwater monitoring wells or the laboratory analyses of soil samples or groundwater samples. In addition, the Scope of Services for this project did not include an evaluation of the *Site* for the compliance with environmental regulations; or the presence of radon, urea formaldehyde, or PCBs.

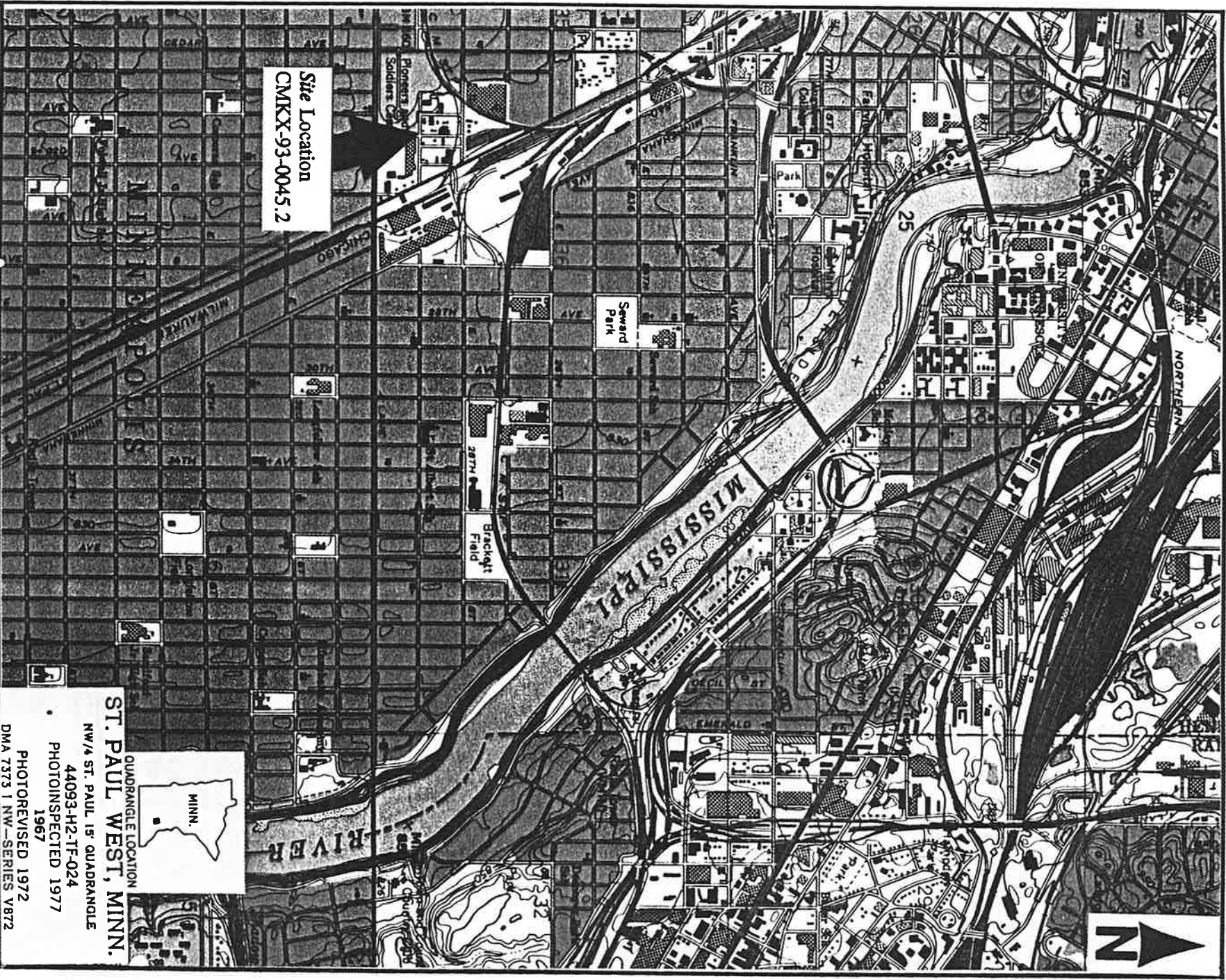
In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same locality. No other warranty is made or intended.

H. References

- Bloomgren, Bruce A., Jane M. Cleland, and Bruce M. Olsen, 1989, Depth to Bedrock and Bedrock Topography, in Balaban, N. H., ed., Geologic Atlas - Hennepin County, Minnesota: Minnesota Geological Survey, County Atlas Series, Atlas C-4, Plate 4, scale 1:100,000.
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Appendix A

Site Location Map



Site Location
CMKX-93-0045.2

Seward
Park

Brackley
Field



QUADRANGLE LOCATION
ST. PAUL WEST, MINN.
NW/4 ST. PAUL 15' QUADRANGLE
44093-H2-1F-024
PHOTOINSPECTED 1977
1967
PHOTOREVISED 1972
DMA 7373 I NW-SERIES V872

INT	DATE	SHEET
DRAWN BY: SAK	5-7-83	
APP'D BY:		CF
JOB NO. CMKX-83-0045.2		
DWG. No.	FIGURE#	
SCALE 1:24,000		

BRAUN
INTERTEC

Site Location Map
Phase I Environmental Site Assessment
4.5 Acre Parcel
21st Avenue and East 29th Street
Minneapolis, Minnesota

Appendix B

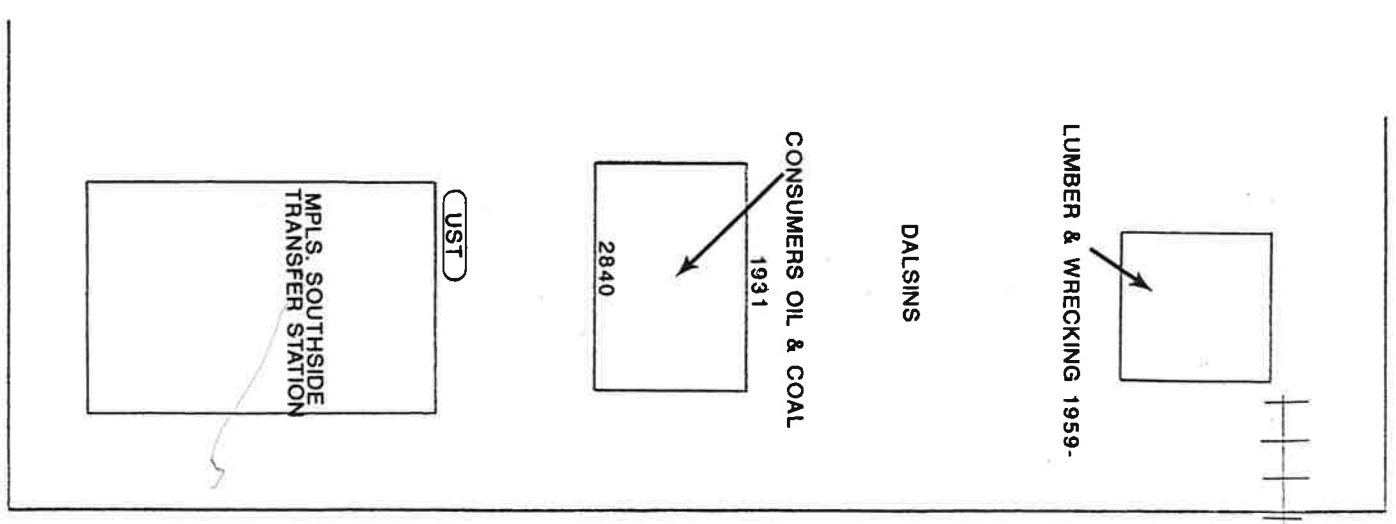
Site Sketch

MPCA - SMITH FOUNDRY SITE (7) ('AIR STUFF')

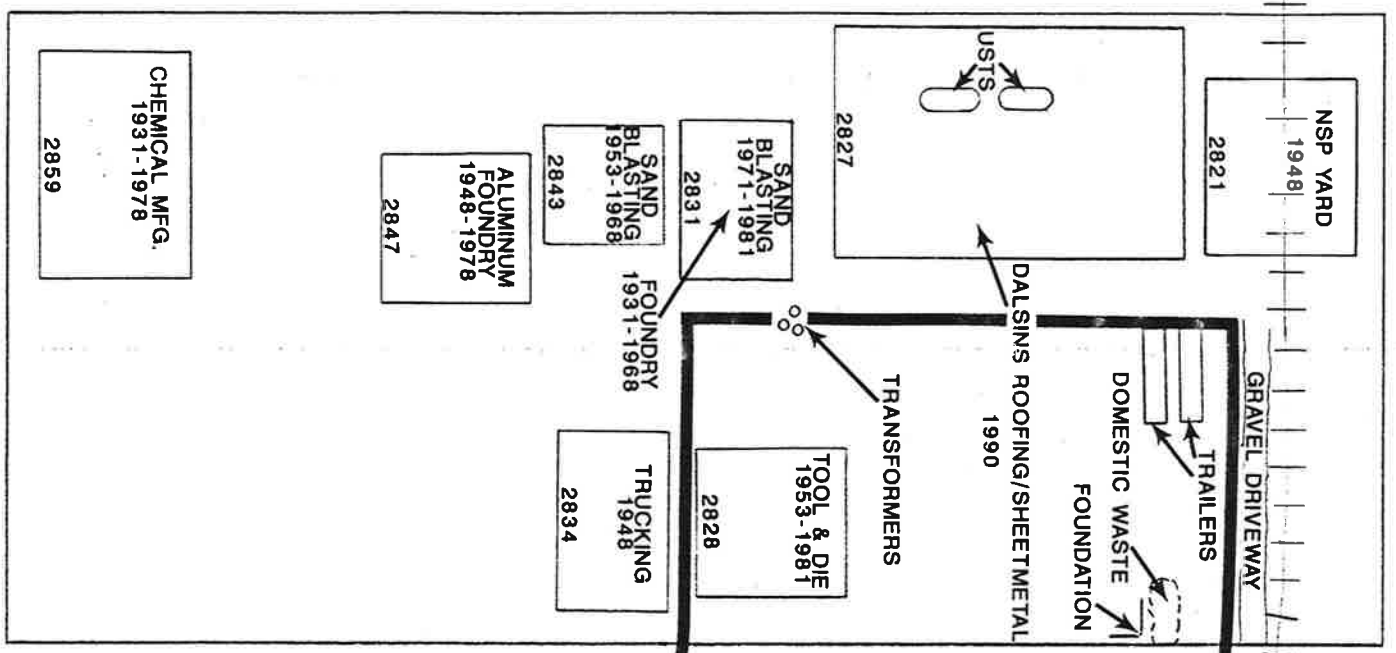
ROLLINS OIL LEAKSITE
2000-2020

28TH STREET EAST

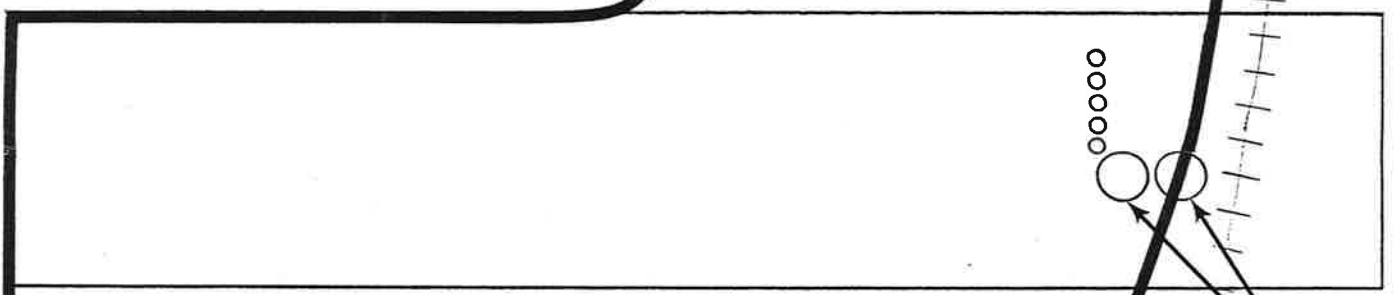
MPCA - SOO LINE
MARSHALLING YARDS SITE



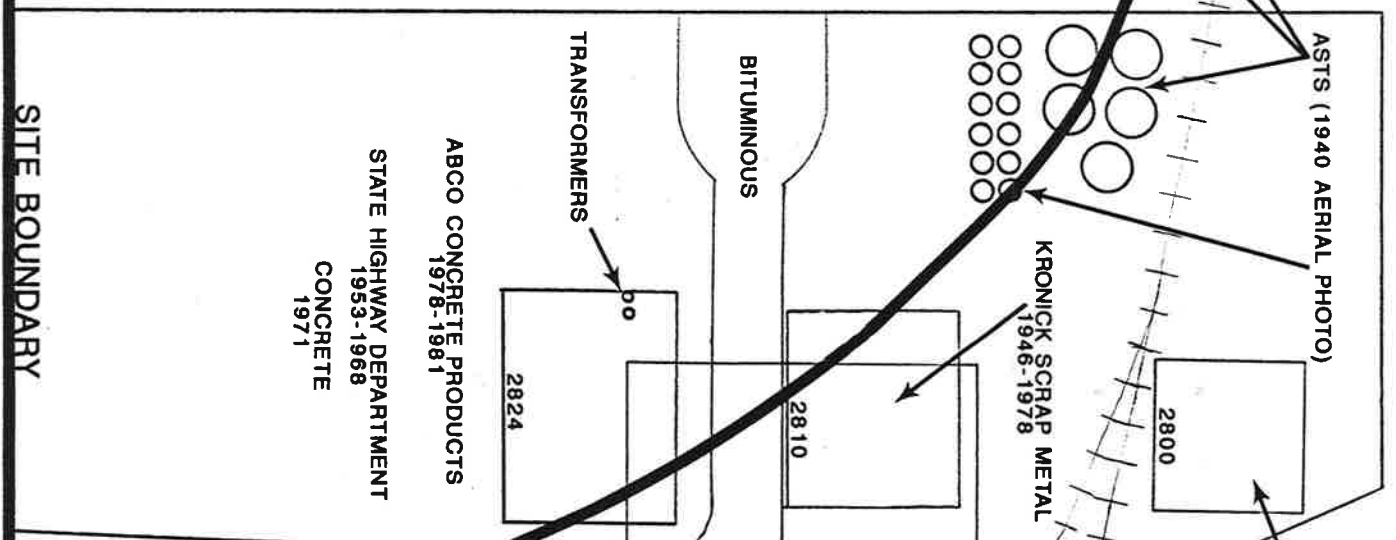
20TH AVENUE SOUTH



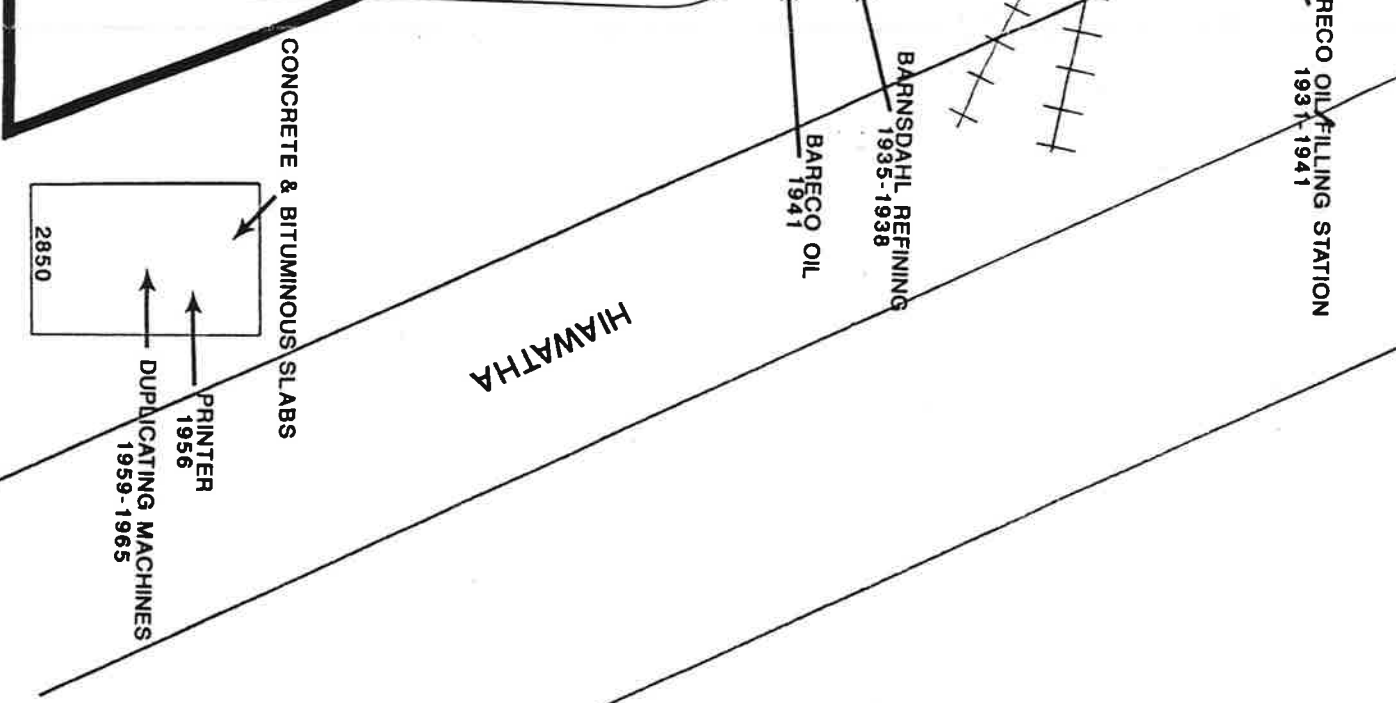
21ST AVENUE SOUTH



LAYMAN



22ND AVENUE SOUTH



HIAWATHA

29TH STREET EAST

CLARK OIL LEAKSITE (1 BLOCK)

CEMETERY

STRIP MALL

