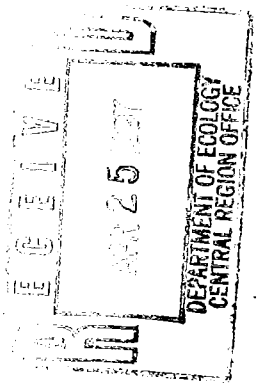

SITE HISTORY REPORT

NEW CITY CLEANERS
747 STEVENS DRIVE

RICHLAND, WASHINGTON

Prepared for

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April 23, 1997

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Project 40358-016.004 (01)

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TABLES AND ILLUSTRATIONS

1 INTRODUCTION

This Site History Report has been prepared in accordance with Section 3 of the Remedial Investigation Work Plan (Work Plan) for the New City Cleaners site (Site) in Richland, Washington (EMCON, 1997). The purpose of this report is to summarize pertinent site-specific and regional physical features, discuss site-specific historical use and management of hazardous materials, and present existing information on the degree and extent of contamination at the Site.

The Site is currently owned by Mr. and Mrs. Paul Haverluk of Richland, Washington. The Site consists of one parcel of land comprising approximately 0.5 acres, and a one-level cinder block structure used as a dry cleaning business.

2 FACILITY BACKGROUND

2.1 Geographic Setting

The Site is located at 747 Stevens Drive in the city of Richland, in Benton County, Washington (Figure 1). The Site consists of one parcel of land comprising approximately 0.5 acre, and a one-level cinder block structure used as a dry cleaning business.

The New City Cleaners property is located on the Richland, Washington, USGS 7.5-minute Topographic Quadrangle, in the northwest ¼ of the southwest ¼ of Section 11, Township 9 North, Range 28 East Willamette Meridian (Figure 1). The Site is located approximately ½ mile west of the Columbia River (Lake Wallula), at an elevation of approximately 365 feet above mean sea level. The Wellsian Way public water supply well field is located approximately ½ mile southwest of the Site. The Yakima River is located approximately 2 miles west of the Site.

The Site is situated on an alluvial terrace located near the confluence of the Yakima River with the Columbia River. The topographic map indicates that the Site is in an area that slopes very gently to the east-southeast toward the Columbia River and that approximately ¼ mile to the west is a higher terrace whose upper surface is approximately 50 feet higher than the Site.

Culturally, the Site is located generally southwest of the Richland city center with residential areas to the north, south, and west. The Site is currently bounded on the east by Stevens Drive, to the north by a vacant lot (former Rice Carpetland), and to the south by a maintenance facility for the Richland School District. A former railroad spur, identified as the Hanford Works Railroad, is located along the west property line. A drainage canal is located immediately west of the railroad spur and flows to the north. Across the drainage canal to the west is the parking lot and baseball field associated with Carmichael Junior High School and Columbia High School. Across Stevens Drive, east of the Site, is a retail shopping center (Albertsons) and service station (Conoco). Several of these features are shown on Figures 2 and 3.

The northern limit of the Wellsian Way public water supply well field is located approximately ¼ mile southwest of the Site.

2.2 Historical Setting

The Richland area was initially settled in the early 1900's. From that time until 1942, the area was primarily agricultural and undeveloped land. In 1942, the United States government established the Hanford Works in the area as part of the Manhattan Project, and the population grew from less than 1,000 to over 17,000 by 1943. Between 1942 and 1958, the federal government owned all property in the Richland area, with the exception of a few deeded properties that were owned prior to 1942. During that period, homes and businesses were rented from the federal government. In 1957, the federal government began selling properties to the tenants, and the city of Richland was later established in 1958 as an independent municipality.

The central administrative and maintenance area for the Hanford Works project was located approximately ¼ mile northeast of the Site, and was known as the "700 Area." The 700 Area contained approximately 40 buildings and occupied an area of approximately 20 acres. In addition to various offices, storage buildings, shops (automotive, paint, fabrication, electroplating, etc.), and the Hanford Laboratory, the 700 Area contained a coal-fired steam plant. Based on discussions between EMCON and site historians, Michele Gerber (Westinghouse Hanford Co.) and Mary Kay Campbell (Mack Tech Co.) (June, 1996), coal was supplied exclusively via the railroad spur which abuts the New City Cleaners site. Ms. Cambell also stated that shipments on that railroad spur were limited to coal for the 700 Area steam plant, and that other supplies for the maintenance shops were transported by other means.

Based on interviews between EMCON and with Mr. Haverluk, and records on file at the city of Richland Building Inspection Department, the Site was developed sometime between 1948 and 1957. Correspondence between Mr. Haverluk and Transamerica Insurance Company (July, 1992) indicate that the facility was constructed in 1949 or 1950. According to discussions with Ms. Campbell, the facility was constructed as part of the Hanford Works project and was noted in her records as a "cleaner." The earliest records at the city of Richland available for the Site are dated April 1957; however, no building permit was available for the initial Site development. The Site has been a dry cleaning facility since the early 1950s. as early as 1952/53 (Polk's City Directory)

Historical use of the property to the north of the Site includes use as a theater, coin shop, bookstore, and carpet store. Historical use of the property to the south of the Site since 1953 has included four auto dealership and service facilities, a tile company, and a maintenance facility for the Richland School District. Historical use of the property to the east has been the baseball field and parking for the high school; property to the west was formerly utilized as barracks as part of the Manhattan Project.

2.3 Site Ownership

History of ownership, based on a letter from Paul Haverluk to Transamerica Insurance Group (August, 1992), is as follows:

New City Cleaners was built about 1950 by Frank Bryant and Robert Holt. Mr. Haverluk was employed by them in 1965. Vernon Beall purchased the property and business in 1972. By 1975, Mr. Haverluk, Mr. Beall and two others, Ken Hokanson and Bill Lindholm, had become partners. In 1978, Mr. Haverluk, Mr. Hokanson and Mr. Lindholm, and their wives, purchased the property and business from Mr. Beall's estate and formed KPR Associates. Later, HLH, Inc. was formed. In 1982, Mrs. Lindholm and the estate of Mr. Lindholm were bought out by Mr. Hokanson and Mr. Haverluk. In 1984, Mr. Haverluk bought out Mr. Hokanson.

2.4 Geology and Hydrogeologic Characteristics

According to Reidel and Fecht (1994), the terrace underlying the Site is underlain by thick deposits of Quaternary glacial outburst flood deposits. The deposits are gravel, typically bedded, with grain sizes ranging from sand to boulders.

The Site is underlain by approximately 20 feet of fine, sandy silt. Beneath the silt is a layer of sandy gravel with cobbles, assumed to be approximately 40 feet thick based on a review of well logs on file at the Department of Ecology (Ecology) for various other sites in the area. Beneath the sandy gravel is a layer of clay of unknown thickness.

Groundwater is about 20 feet below ground surface. Groundwater flow direction on the vicinity of the Site has historically been variously reported by others to be to the northeast, east, and southeast, and south.

The groundwater flow direction in the vicinity of the Site is most likely influenced by pumping of the Wellsian Way well field and the elevation of Lake Wallula. Based on discussions between EMCON and Mr. Roger Wright, city of Richland environmental engineer (March, 1997), one or more wells in the Wellsian Way well field operated on a continual basis from the 1940s to August 1992, when well D-5 (located approximately 1-mile south of the Site) was shut down due to the presence of tetrachloroethene at concentrations up to 2.9 ppb. No water was extracted from the well field until December 1996, when D-5 was reactivated. Water is currently extracted from D-5 at a rate of approximately 1,100 gallons per minute, treated in a air stripping unit near Columbia High School, and supplies potable water to the city of Richland. All other wells in the well field are either capped or currently inactive. Well locations are shown on Figure 4.

Based on discussions between EMCON and Chung Yee of the Ecology, regional groundwater flow in the area is assumed to be generally in an easterly to northeasterly direction, toward the Columbia River, when the Wellsian Way wellfield is not operating.

Groundwater in the vicinity of the Site is assumed to flow to the southwest when the well field is operating, based on the assumed radius of influence and the location of the wellfield relative to the Site. This has not been verified with field data, however.

2.5 Records Review

2.5.1 Aerial Photographs

Historical aerial photographs of the Site were reviewed for evidence of past development or land disturbances on the property. Features described from the images are interpretive and are valid only for the date of the flight and index number. The following features relative to land use history were identified.

1948 - The Site and adjacent land to the north and south is undeveloped. Stevens Drive is shown as a major arterial. Across Stevens Drive, barracks associated with the 700 Area are shown. The Hanford Works Railroad spur is shown on the west side of the property, leading to the 700 Area. The school site is developed west of the railroad spur, and a baseball field is located directly adjacent to the rail spur. The drainage canal is shown, but is in a different location than the current configuration. The canal is situated east of the current location, bisecting the site and the adjoining Spectrum property, and crossing under the rail spur north of the site. The outfall of the drainage ditch into Lake Wallula is shown approximately 1 mile to the northeast of the site (National Aerial Resources, Benton County, 96.1159, SN# 122F, 5-23-48).

1979 - The Site and nearby properties are developed in a configuration generally consistent with the current conditions. The drainage canal has been relocated to the west, and the railroad spur has been abandoned. Adjacent properties are developed consistent with the current conditions (Precision Photography Laboratories, Benton County).

1991 - No significant changes are noted. The site and nearby properties are developed in a configuration consistent with current conditions (WSDOT Photography, Benton County).

2.5.2 Agency Files

The following agencies were contacted by EMCON for information regarding the Site and select surrounding properties as part of this review:

City of Richland Building Inspection Department - Building permits were checked for the subject site and the adjacent site (701 Stevens, former Spectrum property). Eight permits were on file for 747 Stevens Drive between April 1957 and April 1981. The permit record did not indicate the initial site development, as records were not maintained prior to the establishment of the city of Richland in 1957-1958. The majority of the permits were related to facility roofing and signage. According to the permits, the facility converted from oil heating to gas in 1981, potentially indicating that the 10,000-gallon bunker C UST was not operated between 1981 and 1992, when it was removed.

City of Richland Department of Planning and Development - No records were on file for the site.

City of Richland Department of Engineering and Utilities Services - A site plan showing utility services at and near the Site was obtained. The site plan identifies water, sanitary and storm sewer, electricity, gas, and phone lines beneath ground surface in the Stevens Drive right-of-way, east of the site. No major utilities or easements, indicating preferential conduits for contaminant migration, are shown within the Site. The site plan shows the Site as connected to the sanitary sewer from the southeast corner of the building and water service provided near the northeast corner of the building.

City of Richland Fire Department - Records on file for the Site include the Fire Marshall's report of the UST decommissioning at the site in 1992. No records of tank installation were in the file. According to the information in the file, two 1,650-gallon UST's reportedly containing solvent, one 500-gallon UST containing kerosene, and one 10,000-gallon UST containing bunker C fuel were removed from the site in 1992. The 1,650-gallon tanks are presumed to be the 1,200-gallon USTs formerly located near the southwest corner of the building.

Benton/Franklin County Health Department - No records were on file for the site, or for the site at 701 Stevens Drive, indicating that permitted drainfields or septic systems have not been operated at either site.

Washington Department of Ecology - Ecology's files for the subject Site and other sites within a ½-mile radius were obtained as part of the investigation. Relevant information has been included as appropriate in this report.

EMCON's subcontractor, Environmental Data Resources, Inc., performed a search of available environmental records for the site and surrounding properties within the ASTM 1527-94 search radius as follows:

The RCRIS large and small quantity generator lists were reviewed for sites within ¼-mile radius of the subject site. The subject site was found on the small quantity generator list as New City Cleaners, with an address of 747 Stevens Drive, and a US EPA ID No. WAD027332238. No other small quantity generators were found in the search area.

Ecology's Confirmed and Suspected Contaminant Sites List (CSCSL) was reviewed for sites within 1-mile radius of the subject site. The subject site was found on the CSCSL, identified as New City Cleaners, located at 747 Stevens Drive. No other listings were found within the search area.

The Washington Underground Storage Tank (UST) list was reviewed for sites that have registered USTs within ¼-mile of the subject site. Eight site listings were found within the search area, including the subject site, which was listed as New City Cleaners with an address of 747 Stevens Drive. Table 1 summarizes site, status, and location information for the eight UST listings.

Table 1

UST Listings Within a ¼-mile Radius

Site	Address	Dist. & Direction from Subject Site	Status
New City Cleaners	747 Stevens Dr.	Subject Site	3 Tanks removed
Neighbors Conoco	780 Stevens Dr.	< ¼ mi. N	3 Tanks operational
US Bank Facility	701 Stevens Dr.	Immediately S	4 Tanks removed
Downtown 66	1315 Lee Blvd.	< ⅛ mi. SE	3 Tanks operational
Grant Land Co.	1313 Gillespie St.	< ⅛ mi. S	7 Tanks; 2 removed, 2 temporarily closed, 2 closure in process, 1 closed in place
P & K Auto Service Inc.	1415 Gillespie St.	< ⅛ mi. SE	4 Tanks operational
Gene's Tune-Up (Closed Tri-City Oil)	1007 Lee Blvd.	Approx. ¼ mi. E	3 Tanks closed in place
Maintenance Shop	714 Thayer Dr.	Approx. ½ mi. W	2 Tanks; 1 removed, 1 closure in process

For the subject site, Ecology's UST list identifies 2 tanks in the 10,000- to 19,000-gallon capacity range and one tank in the 111- to 1,100-gallon capacity range, with an installation date of December 31, 1964, for all tanks. The Richland Fire Department has no record of the installation date, as records only go back to the early 1970's. Based on the Tank Removal Checklist completed by the UST removal contractor, K. Kaser of Kennewick, Washington and Mr. Haverluk, the two tanks near the southwest corner were 1,200-gallons in capacity. Additionally, 2 USTs were located near the northwest corner of the building, and contained bunker fuel and kerosene. The 2 USTs were 10,000- and 500-gallons in capacity.

The Washington Leaking Underground Storage Tank (LUST) list was reviewed for sites within a ½-mile radius of the subject site. Thirteen listings for eight sites were found within the search area, including the subject site, which was listed twice; once as New City Cleaners, and once as HLH, Inc. Both listings had the address 747 Stevens Drive. Table 2 summarizes site, status, and location information for the thirteen LUST listings.

Table 2

LUST Listings Within a ½-mile Radius

Site	Address	Distance/Direction from Subject Site	Status
New City Cleaners	747 Stevens Dr.	Subject Site	Not Reported
HLH Inc.	747 Stevens Dr.	Subject Site	Unknown
US Bank Facility	701 Sevens Dr.	Immediately S	Conducted
US Bank Facility	701 Sevens Dr.	Immediately S	Reported Cleaned Up
Downtown 66	1315 Lee Blvd.	< ⅛ mi. SE	Unknown
L & L Exxon	1315 Lee Blvd.	< ⅛ mi. SE	Not Reported
Grant Land Co.	1313 Gillespie St.	< ⅛ mi. S	Unknown
Grant Land Co.	1313 Gillespie St.	< ⅛ mi. S	Not Reported
Grant Land Co.	1313 Gillespie St.	< ⅛ mi. S	Unknown
Equipment Maintenance	1007 Lee Blvd.	Approx. ¼ mi. NE	In Progress
U. S. Dept. of Energy	825 Jadwin Ave.	Approx. ½ mi. E	Unknown
Maintenance Shop	714 Thayer Dr.	Approx. ½ mi. W	Conducted
Maintenance Shop	714 Thayer Dr.	Approx. ½ mi. W	Reported Cleaned Up

2.6 Waste Generation and Management

Historic management and handling of hazardous materials at the site is summarized below, based on a review of Ecology's files for the Site and interviews between EMCON and Mr. and Mrs. Haverluk (EMCON 1996,1997).

The dry cleaning process at the site used stoddard solvent, a petroleum-based fluid, as the primary cleaning agent from the time of site development (approximately 1950) until 1974 when an additional process using tetrachloroethene (perc) came into use. The stoddard solvent was stored in two underground storage tanks (USTs) located near the southwest corner of the building. The perc was delivered and stored on site in 55-gallon drums. The drums were stored outside of the building on a rack near the southwest corner of the property on the south fence line (Figure 3). The drum rack was moved inside the facility

in early 1975, following a release of an unknown quantity of perc to the ground. At the time of the release, a valve on a drum on the rack was observed to be open. Mr. Haverluk assumed the open valve was due to vandalism. Students from the adjacent school had been observed walking through the area prior to the observation of the open valve.

Waste generated from the stoddard solvent process included filtrate cake from a filter system using diatomaceous earth and/or carbon canisters from an in-line, continuous filtering process. Wastes generated from the perc process also included filtrate cake from a centrifugal filter system and carbon canisters from an in-line, continuous filtering process. According to Mr. Haverluk, waste generated as part of the dry cleaning process prior to the early 1980s was typically placed in the on-site dumpster and taken to the local landfill for disposal. Mr. Haverluk also noted that stilling was seldom used to reclaim either the stoddard solvent or perc during the period of his ownership and operation; on-site filtering was the preferred operation. Mr. Haverluk stated that, when generated, the still bottoms were typically placed in the dumpster.

Since the early 1980s, all process wastes have been handled under a contract with a waste handling and disposal firm (e.g., Safety Kleen). Mineral spirits are currently delivered to the site in 55-gallon drums and stored in a locked shed behind the main building. Perc is delivered to the site in 5-gallon containers and stored inside the building. The US EPA ID No. for the Site is WAD027332238. Based on a 1994 Form 2, Washington State Notification of Dangerous Waste Activities Report, on file with Ecology, waste types identified for the Site include mineral spirits and perchlorethylene. The Small Quantity Generators list identifies the wastes as spent halogenated solvents and other state-regulated wastes.

Activities which potentially resulted in hazardous substance releases to the ground at the site include:

- Overfilling of the USTs during deliveries (see Section 4.1 for UST description);
- Leakage from garbage dumpsters of fluids associated with filters and still bottoms placed in the dumpster for disposal;
- Semi-annual cleaning of interior equipment, involving moving the equipment to various locations behind the building and rinsing with water; and
- Occasional servicing and cleaning of carpet cleaning equipment behind the building. It is not known what hazardous materials, if any, are associated with this activity.

3 LOCAL MONITORING WELL NETWORKS

Information on file with Ecology, including well logs, for sites within a ½ mile radius of the Site have been reviewed to identify locations of groundwater supply and monitoring wells. These locations are briefly discussed below. Figure 4 shows the locations of these sites. Table 3 summarizes the information.

707 Stevens Drive. This address is directly south and adjacent to the Site. It is identified in agency files as the location of the US Bank acility, and is also known as the former Spectrum property and now the Richland School District maintenance facility. The buildings were formerly used by auto dealerships as well as a service station. USTs containing gasoline, waste oil, diesel, and bunker oil, were removed in 1992. Five groundwater monitoring wells were installed at the site later in 1992. Groundwater was encountered at approximately 10 to 12 feet and was inferred to flow in a generally easterly direction. Since 1992, two monitoring wells closets to the New City Cleaners site have been decommissioned; groundwater elevations are proposed to be monitored in the remaining wells as part of the RI for the Site.

George A. Grant, 1333 Gillespie. This site is located approximately ¼-mile south of the New City Cleaners. Between May 1992 and June 1993, seven USTs were removed from this site. The majority of the tanks contained petroleum hydrocarbons as diesel and gasoline. Based on discussions between EMCON and Mr. Yee of Ecology, at least one of the tanks contained mineral spirits and perc. Ecology's files indicate that a release of unknown quantity occurred from a tank at the Site. Analysis of the product in the tank on May 22, 1993, indicated perc at a concentration of 190,000 µg/kg. According to Ecology's files, one groundwater well was installed at the site in April 1993. The well was installed to a depth of 20 feet bgs. Water was encountered at approximately 10 feet bgs.

Wellsian Way Well Field. This well field is comprised of several wells, installed in the 1940s, that serve as water supply wells for the city of Richland. The wellfield is located west of Wellsian Way beginning immediately west of New City Cleaners, and extends approximately 1 mile to the south. Only one well (D-5) has been in service since 1988. The use of D-5 was discontinued in August 1992, upon the discovery of chlorinated solvents (as PCE) at concentrations up to 2.9 µg/L. D-5 is located approximately 1 mile to the south of the site. D-5 was reactivated in December 1996. Studies by the city of Richland indicated groundwater in the impacted aquifer flows generally from north to south.

Other water supply wells in the Wellsian Way well field are shown on Figure 2, and include D-4, D-12, D-14, D-13, D-2 and D-15. Wells D-4 and D-14 are currently inactive. Well D-13 is slated to be abandoned (property to be sold) and replaced with a new well in a location 500 feet to the north. Wells D-12 and D-15 are capped. Well D-2 is an active irrigation well located approximately 300 feet west of the Site. Subsequent to the water sampling performed in D-5 in 1992, additional samples were collected from all wells in May 1993. The analyses identified PCE in wells D-5 (12 µg/L), D-4 (17 µg/L), and D-14 (49 µg/L). VOCs were not detected in any other wells at the time of sampling.

The city of Richland installed five groundwater monitoring wells (MW-1 through MW-5, Figure 4), in various locations near the southern property line of the George A. Grant site. Based on discussions between EMCON and Eric Damberg, city of Richland environmental engineer (April, 1997), a report on the installation and sampling of the wells was not prepared. The wells are thought to be installed to approximately 30-feet bgs. No other information was available.

City of Richland Maintenance Shops, 1300 Mansfield (former 700 Area). This property is located approximately 900 feet north of the Site. Eleven groundwater monitoring wells were installed at this site between 1992 and 1993. Groundwater was encountered at approximately 8 to 10 feet bgs. Roger Wright, city of Richland environmental engineer, stated the gradient at this facility was relatively flat. Primary contaminants at the site include petroleum hydrocarbons as diesel and gasoline.

Former Chevron Station, 1323 Lee Blvd. This property is located approximately 400 feet southeast of the Site. It was an active service station from as early as 1952, or before, to 1972. The property was vacant from 1972 to 1976. All USTs were removed. Three groundwater monitoring wells were installed at the site in August, 1994. Groundwater was encountered at approximately 6 to 8 feet bgs. The gradient was to the north-northeast. Analyses of groundwater samples identified the presence gasoline-related petroleum hydrocarbons.

Time Oil Service Station, 500 Geo. Washington Way. This site is located slightly more than ½-mile east of the New City Cleaners Site. In June 1993, four monitoring wells were installed at the service station site. The well logs do not indicate the depth to groundwater.

Richland Medical Arts, 750 Swift Blvd. This property is located approximately 1500 feet northeast of the Site. Three groundwater monitoring wells were installed at this site in 1994. Groundwater was encountered at approximately 8 to 10 feet below the site. The inferred hydraulic gradient at this facility is unknown.

Catholic Church, Swift Blvd. This property is located approximately 1500 feet northwest of the Site. A 130-foot irrigation well was installed at this facility in 1979. Static water was measured in the well at 9 feet bgs. No other information was available in Ecology's files.

4 NATURE AND EXTENT OF CONTAMINATION

This section describes the nature and extent of known contamination at the Site, based on investigations performed by others at the site prior to March 1997. Also included is a discussion of conditions observed at the site in April and August 1996, during a site reconnaissance by EMCON.

4.1 UST Removals and Additional Investigations

Based on the Washington State UST permanent closure checklist completed by Dale Nichols of K. Kaser Company, Inc., two 1,200-gallon USTs were removed from the site on April 21, 1992. The tanks were identified as ID #1 and #2 on the checklist. The checklist also indicated that PCE (perc) was the last substance stored in the tanks; however, based on interviews with Mr. Haverluk, PCE was reportedly never stored in the tanks. During an interview on June 11, 1996, Mr. Nichols indicated that he assumed PCE was the last substance in the USTs, but was not sure. In addition to the two 1,200-gallon USTs, one 10,000-gallon UST, reportedly containing bunker C fuel, and one 500-gallon UST, containing unknown substances, were removed from the site at the same time. No checklists were in the file for these tanks, however. Tank removal records on file with the Richland Fire Department identify the contents of the 500-gallon UST as kerosene.

Based on a letter dated April 21, 1992, from Arthur D. Klym, attorney for Mr. Haverluk, to Thomas Lindley, attorney for Spectrum Properties (former owner of property at 701 Stevens Drive), regarding operation of the 1,200-gallon USTs, one of the tanks ceased operating in 1984 and the other tank ceased operating in 1991. Tank contents were identified as petroleum solvent.

The following information related to the history and operation of USTs at the site is based on a review of correspondence between Mr. Haverluk and Transamerica Insurance Company (July, August, 1992):

- All USTs were installed at the time of site development.
- The 10,000-gallon UST was decommissioned in 1978.

- Both 1,200-gallon USTs and the 10,000-gallon UST were observed to have holes at the time of removal. The locations and sizes of the holes were not documented, however.

As part of the UST removal work at the New City Cleaners site, soil and groundwater samples were collected from the UST excavations and other locations. Based on the findings of the assessments, the following hazardous substances were identified in soil and groundwater beneath the site: trichloroethene (TCE); PCE; benzene; toluene; ethylbenzene; total xylenes; 1,2-dichloroethene; 1,2-dichloroethane; and total petroleum hydrocarbons (TPH).

Stockpiled soil (approximately 75 to 100 cubic yards), reportedly associated with the UST removals and additional investigations during April 1992, remain on plastic sheeting behind the building. The stockpiles occupy the majority of the area behind the building. A small stockpile (approximately 10 cubic yards) of broken asphalt is near the northwest corner of the site. A minor amount of debris, including plastic sheeting, steel wire, and wood pallets is located on the southern property line behind the building.

Table 4 presents existing data generated by previous investigations at the site (Technico, 1992; Novatech, 1992). Figure 3 shows the general locations where existing data were collected. Exact sampling locations are not known. The analyses performed were soil and groundwater volatile organic compound analyses (EPA Methods 8260 and 624), and TPH by EPA Method 418.1.

Prior to and concurrent with UST removal activities at the New City Cleaners site, an environmental investigation was underway at the adjacent site to the south (former Spectrum property), now owned by the Richland School District. The Spectrum investigation involved the removal of four USTs and the installation of five groundwater monitoring wells. Groundwater samples collected from those wells in 1991 and 1992 indicated the presence of PCE and TCE at concentrations exceeding MTCA Method A cleanup levels.

4.2 Site Reconnaissance

The Site was visited by a representative of EMCON on April 4 and August 13, 1996, to visually identify possible sources or evidence of contamination related to hazardous materials at and near the site, and to interview Mr. Haverluk and others in the area with knowledge of local history related to environmental matters affecting the site and neighboring properties. The following observations were made:

The Site is level, comprising approximately 0.5 acres, and is located on the west side of Stevens Drive (Figure 1). The ground surface is paved in the front (east side) of the building; the remainder of the site is unpaved with gravel, sparse grasses, and weeds

exposed at the surface. A wood fence extends from the south side of the building to the southern property line, and a cyclone fence extends west along the southern property line from the wood fence to the southwest property corner.

Stockpiled soil (approximately 75 to 100 cubic yards), reportedly associated with the UST removals and additional investigations during April 1992, remains onsite on plastic sheeting behind the building. The stockpiles occupy the majority of the area behind the building. A small stockpile (approximately 10 cubic yards) of broken asphalt was noted near the northwest corner of the site. A minor amount of debris, including plastic sheeting, steel wire, and wood pallets was noted on the southern property line behind the building. No obvious signs of cisterns, cesspools, drywells, or electrical transformers were noted.

5 POTENTIAL SOURCES, PATHWAYS AND RECEPTORS

Historic operations and previous investigations performed at New City Cleaners have been reviewed to develop a conceptual understanding of the Site. A summary of potential sources, potential release mechanisms, and potential routes of exposure is presented in Figure 5 and provides a preliminary conceptual site model. This model will be revised in conjunction with the findings of the remedial investigation.

Primary contaminant sources identified for the Site are the USTs and the drum storage rack area, and operational activities associated with their use (i.e., filling, dispensing). Additional sources may include drippage from garbage dumpsters and from equipment cleaning activities.

Potential migration pathways are depicted on Figure 5 and include migration from soil to air, from soil to groundwater, and from groundwater to surface water (drainage ditch). Potential receptors include site workers and trespassers.

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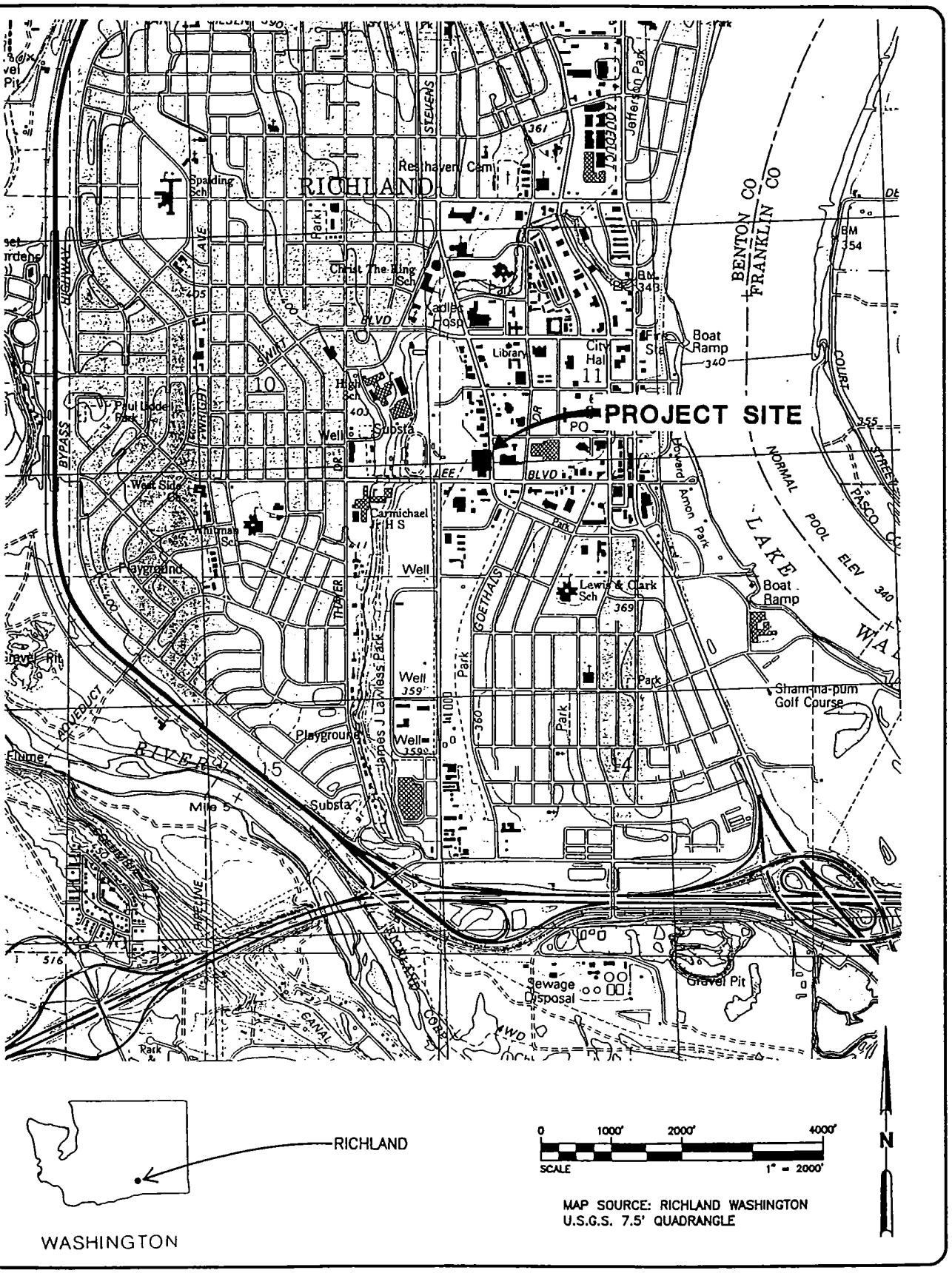
Washington Department of Ecology. Review of available files for sites and well logs within ½ mile of New City Cleaners Site.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

FIGURES



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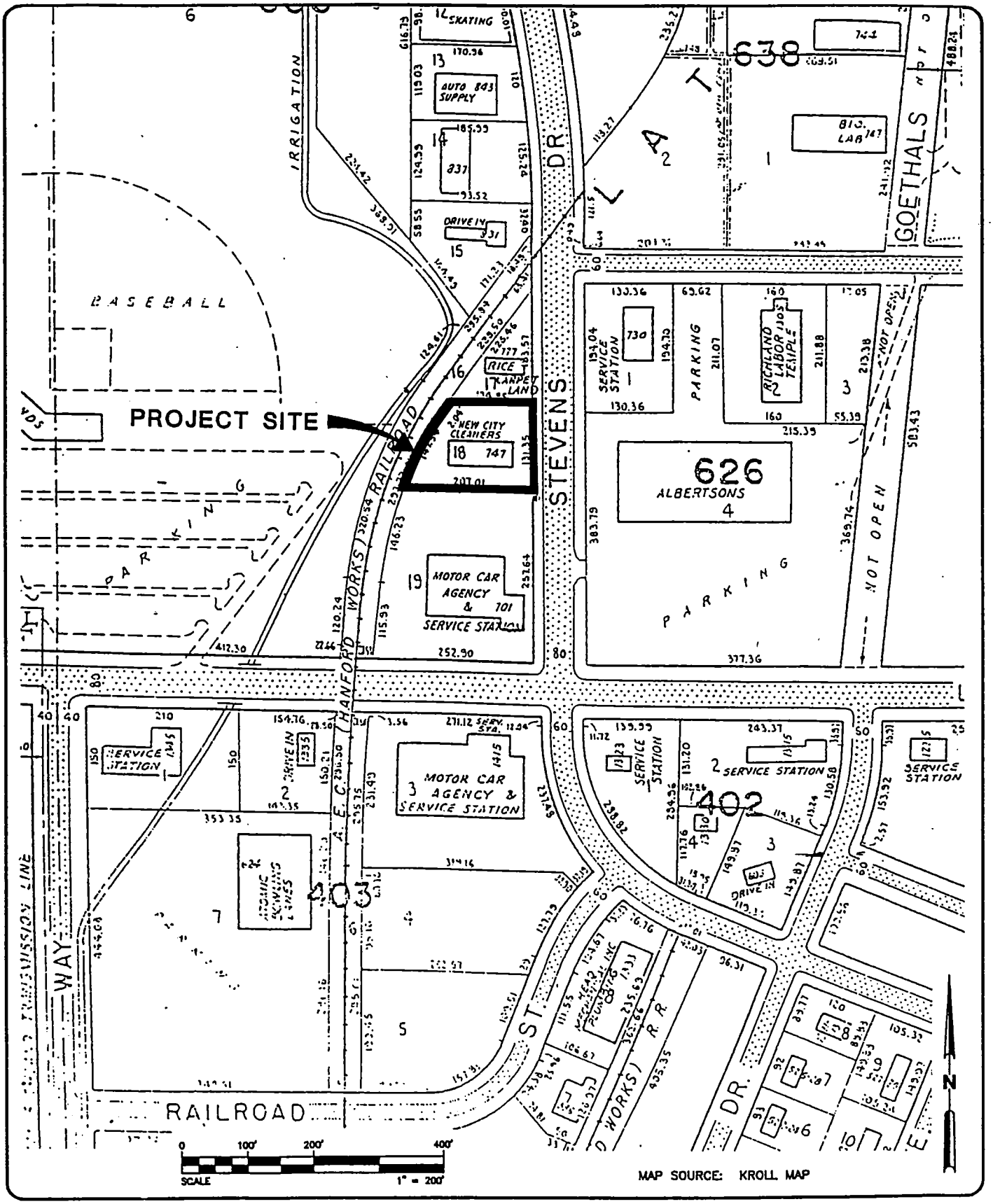
SITE LOCATION MAP

FIGURE
1
PROJECT NO.
40358-001.002

1:1 8-28-96 G:\DWG\0358\001\FIG-1.DWG



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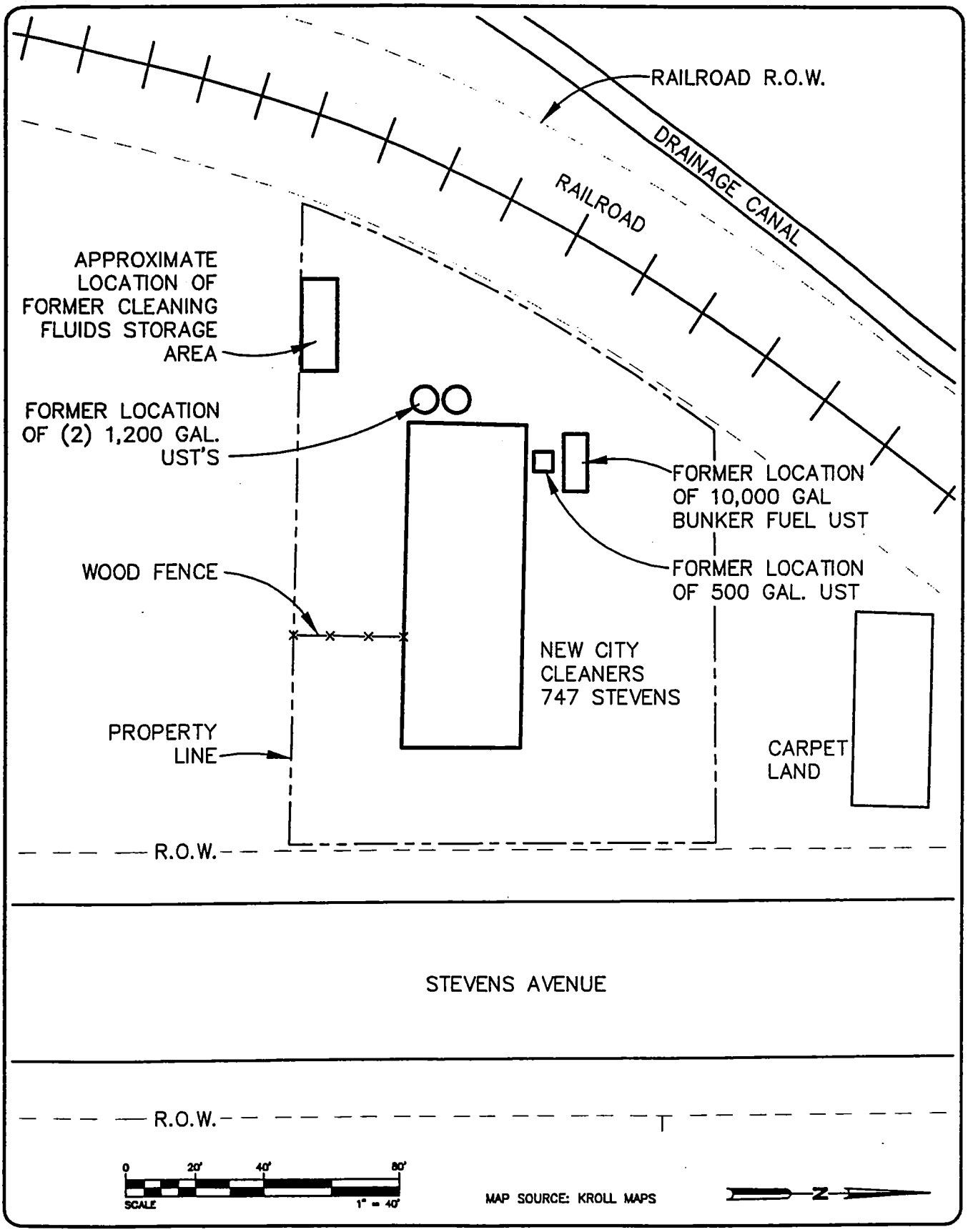
SITE VICINITY PLAN

FIGURE
2
PROJECT NO.
40358-001.002

1:1 8-28-96 G:\DWG\0358\001\FIG-2.DWG



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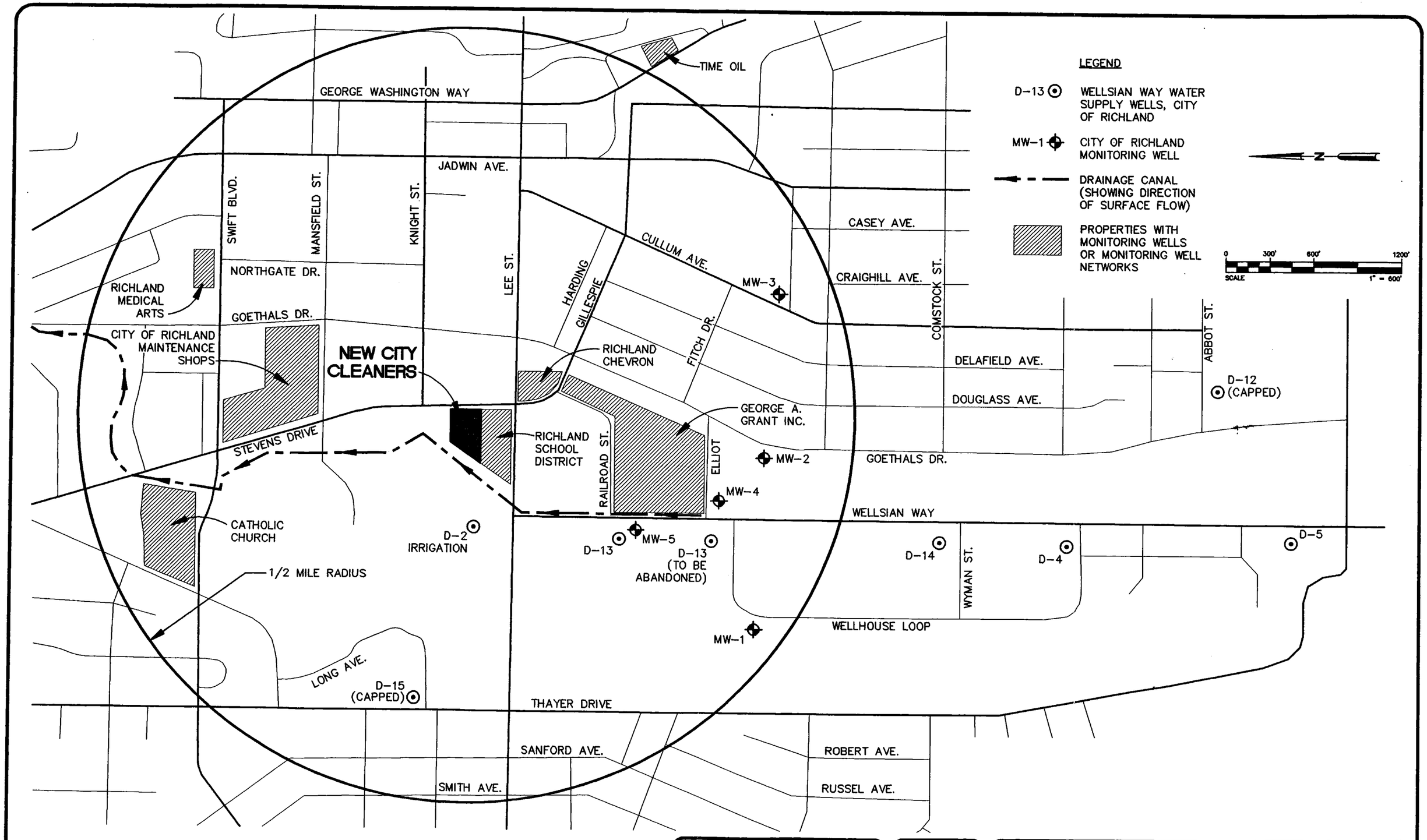
SITE PLAN

FIGURE
3
PROJECT NO.
40358-001.002

1:1 8-28-96 G:\DWG\0358\001\FIG-3.DWG



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HISTORICAL REVIEW
MONITORING WELL NETWORKS

FIGURE
4
PROJECT NO.
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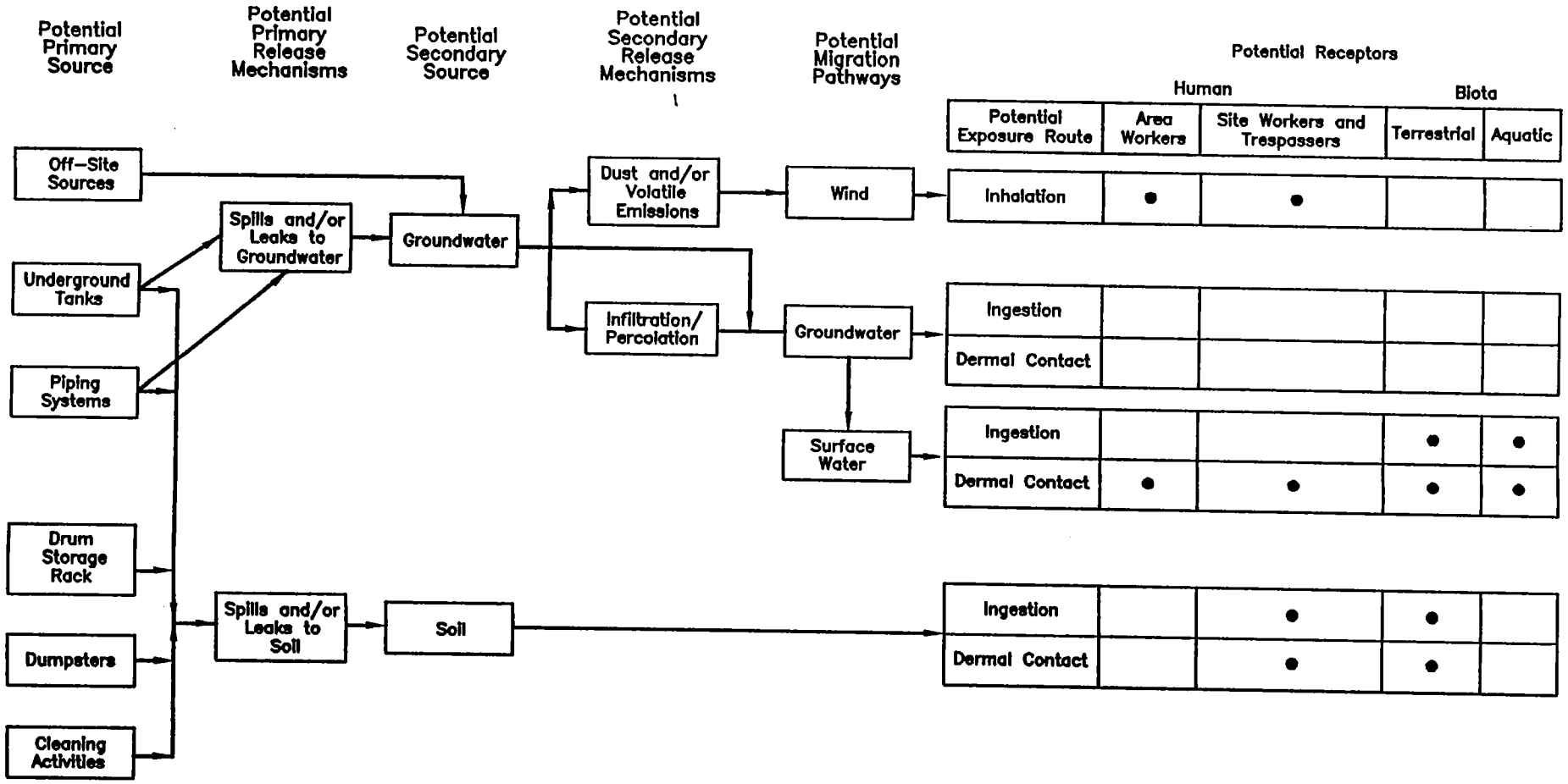
1:1 4-17-97 G:\DWG\0358\016\FIG-1.DWG



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REV.
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PROJECT NO.
40358-016.004

Figure 5
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PRELIMINARY CONCEPTUAL SITE MODEL

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