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BACKGROUND

The Conrail Site in this Focus Area 1 has been underutilized for many years since the closing of the rail switching yard and train maintenance facilities. A development attempt by the "Port Authority of Cincinnati and Hamilton County" in 1984 has been aborted. The Conrail Site is currently leased to two inter-modal rail-truck, sea container operations. These operations exist with minimum improvements to raw land. These operations provide extremely low jobs per acre and no contribution to the viability of improvement of the community.

The recent approval of Riverfront Development, including new sports stadiums, will force displacement of the existing produce industry located on the western riverfront along Second Street, Plum Street, south of Second Street and also Central Avenue. This industry is vital to the Cincinnati Region and the City of Cincinnati. Aggressive economic development proposals from Northern Kentucky and surrounding Ohio communities have been offered as locations to the produce industry. The produce industry has indicated the following five critical issues:

- Clear truck access from I-75 and I-71 is essential. Improvements to US Route 50 and other roadways are essential.
- Adequate land area to permit long term growth.
- Comparable incentive packages to Kentucky and surrounding Ohio communities.
- An environmentally clean site suitable for a food oriented business.
- Immediate neighborhood surrounding the site is compatible with a food oriented business.

The State of Ohio, City of Cincinnati, Dept. of Economic Development and Cincinnati Highway Division plan to improve River Road, US Route 50, west of the Sixth Street Viaduct to the Conrail Site at Fairbanks Avenue. Improvements to River Road and associated other roadways are essential to the success of the Urban Renewal Plan and improved utilization of the Conrail Site.

The City of Cincinnati Department of Economic Development has been very active in collecting space requirements and operations requirements from the produce dealers. This plan meets those requirements. Financial information has been
provided to all interested produce dealers to allow them to make an informed decision.

The intent of this plan is to retain the existing industrial businesses and river terminals along Southside Avenue and encourage additional industrial development. Scrap recovery operations are a conditional use in RF3 zoning. As such, any expansion to these uses will be subject to zoning review.

The Conrail site provides a viable site to relocate the produce industry from Riverfront West and allow it to expand. This relocation within the City of Cincinnati will retain 575 jobs with a possible expansion to 650 jobs in the next 3-5 years and thereby foster economic development in the Conrail and Vicinity Urban Renewal Plan area and also reduce conditions of blight and deterioration.
EXECUTIVE SUMMARY

Focus Area 1 contains approximately 168 acres. The Conrail Site contains approximately 65 acres and was developed in 1924 as a railroad switching yard with a "Round House" maintenance facility. Since the railroad stopped operations, the site has been used as an intermodal shipping container storage and transfer depot, using a marginal truck access off River Road at Illinois Avenue. The site is generally level at an elevation of 495.5. This is at the flood level of 1997. The flood waters remained south of the railroad tracks during this recent flood. The 100 year flood plain is 498.8 about 3 feet above the site. However, produce buildings require truck dock height of 4 feet which will locate the operating floors above 100 year flood level.

Existing zoning is M-2, RF-2, RF-3 and R-5 (T). Refer Exhibit B for zoning map. All existing and proposed uses conform to the existing zoning. However, two scrap recovering operations are "conditional industrial uses" as described in Section 1449-308 of Cincinnati Zoning Code. No zoning changes are required or suggested.

A collaborative process has been used to gather requirements from the produce dealers. All dealers were asked to respond to a questionnaire to determine their existing building areas, future building requirements, number of truck docks, number of parking places, on site truck storage and rail car unloading spots. Refer to Exhibit "I" for summary of requirements.

The communities of Riverside and Sedamsville were consulted as plans were developed. An alternate proposal for use of the Conrail Site by Scrap Recovery Operators was proposed and studied. After public meetings with the Riverside and Sedamsville communities, the plans were revised to respond to community concerns. City Council reviewed and approved the recommendations by Economic Development to begin negotiations with the Produce Industry for relocation to the Conrail Site on May 21, 1997.

Existing businesses along Southside Avenue were interviewed at their locations. All businesses expressed a desire to remain in their current locations. In general, these businesses have modest plans for improvements and some growth. Uni-Ven has recently experienced a change in ownership and are not sure of their long term continued operation at this location. In general, vacant
and underutilized property is controlled by existing business for their long range plans. This plan will allow and encourage existing businesses to remain in operation for the long term with future growth.

The Conrail Site contains an easily developable 60-acre plateau. Primary access to the site will be a new service road located west of Mt. Echo, south of River Road running north of the existing railroad tracks. A secondary access to the site will be a new entrance directly from River Road located west of Fairbanks and east of Illinois. A new traffic signal will provide safe ingress and egress from the site.

River Road improvements from the Sixth Street Viaduct (Waldvogel Viaduct) west to Fairbanks Avenue are planned. Exhibit “F” indicates these projects and their anticipated phasing. Improvements will include widening of roadway to provide lane widths to meet current standards, change in roadway alignment to eliminate the “S” turn where residential properties are located on the south side and provide local lane for parking along the north side. This improvement will require acquisition of property and demolition of structures along the south side of River Road.

In addition to improving existing River Road, a new roadway located south of River Road along the north side of the railroad is proposed. This roadway will extend from the “S” turn westward to the Conrail site entrance under the Southside Avenue bridge. This roadway will provide access to the Conrail Site and also relieve traffic from River Road during the construction period for improving existing River Road.

The Conrail Site and Vicinity Urban Design Plan, Exhibit “H” indicates a service road along the north side of the site with land parcels extending south to the railroad. All utilities will be located in an easement with the service road. Land parcels are subdivided to locate buildings containing space and site requirements in accordance with Exhibit H. Size of parcels and location of dealers may vary as negotiations develop with produce dealers.

Conclusion and Recommendation:
This plan has been developed using City of Cincinnati resources and staff from the Department of Economic Development, Architecture and Urban Design, City Planning, Public Works/Engineering, Traffic, Law and Real Estate Division. Baxter Hodell Donnelly Preston, a Cincinnati Architectural and Planning Consultant, provided planning and development services.
The communities, existing business and produce dealers have been consulted and actively participated throughout the process.

The plan maximizes the density of the Conrail site in order to accommodate existing and future expansion needs of the produce industry. Existing businesses located along Southside Avenue will remain and are consistent with this Urban Renewal Plan.

All public improvements and City actions contemplated by this plan are conditioned on subsequent appropriation of funds by City Council, sufficient for implementation.

Immediate approval of this plan is vital to retaining the Produce Industry by providing a developable relocation site to allow the Riverfront Developments to proceed.
Chapter 725 of the Cincinnati Municipal code states that there are blighted and deteriorating areas within the City that are harmful to the "public health, safety, morals and general welfare of the residents". By determining that an area is blighted and deteriorating, the City may attempt to eliminate such conditions by urban renewal. This determination also allows the spending of public money and the acquiring of private property to achieve the stated goal of improving the City. This plan identifies the 65 acres Conrail site as the major redevelopment opportunity. The Conrail site is the only site identified for public acquisition and development assistance. Other development within the urban renewal boundary will be done by private property owners. Eminent domain is not anticipated as an implementation tool for additional development within the urban renewal boundary.

In order to expend funds for urban renewal, the City must first prepare an Urban Renewal Plan which defines the area which is blighted or deteriorating, state the reasons for defining the areas of blight or deterioration, and recommend a certain course of action to redevelop or rehabilitate the area. When City Council approves the plan, thereby declaring the subject area to be an Urban Renewal Area, the City Administration is formally authorized to carry out the activities recommended in the plan.

Council approved purchase of the Conrail Site March 12, 1997. Purchase was executed March 13, 1997. The site is located approximately three miles west of downtown along US 50, River Road. The urban renewal area is located south of River Road, north of the Ohio River. The eastern limit is the Southside Bridge over CSX and Central of Indiana Railroads. The western limit is Idaho Street. The existing Urban Renewal Boundary is shown in Exhibit A.

An eligibility study for the Conrail Site was performed in May of 1997 to determine if Conrail Site Urban Renewal area qualified as a blighted or deteriorated area as defined by Chapter 725. The findings of the study found at least 50 percent of the total number of structures distributed throughout the area meet the blighted area criteria with three or more factors and vacant parcels with two or more factors.

Additionally, at least 25 percent of the structures distributed throughout the area are deteriorated or deteriorating; or the public improvements are in the general state of deterioration.

Accordingly, the Conrail Site and Vicinity Plan area qualifies as a blighted area as defined by Chapter 725. The City of Cincinnati declares through the formal adoption of this plan by ordinance of City Council that the Conrail Site and Vicinity Urban Renewal Plan is an urban renewal area under Chapter 725 of the City of Cincinnati Municipal Code. (See Pages 25-33, Blight Study, for this document).
BOUNDARY DESCRIPTION

Situate, in the City of Cincinnati, Hamilton County, State of Ohio, and being more particularly described as follows:

Beginning at a point in the centerline of River Road, said point being the point of intersection with the northwardly extension of the centerline of Idaho Street, thence northeasterly along the centerline of River Road and continuing in an eastwardly direction along said centerline to the point of intersection with the northwardly extension of the northeast parcel line of Parcel 113, Plat Book 152, Page 42, HCAP; thence southwesterly along said parcel line of said parcel to the point of intersection with the east right-of-way line of Southside Avenue; thence southerly along said right-of-way line to the point of intersection with the irregular northwest parcel line of Parcel 146, Plat Book 152, Page 42, HCAP; thence, northeasterly along said parcel line extended to the point of intersection with the east right-of-way line of Southside Avenue; thence, along said parcel line of said parcel the following directions and distances N. 55° 48' 47" E., a distance of 199.10 feet and N. 66° 33' 47" E., a distance of 190.76 feet to the north corner of said parcel; thence, southeastwardly along the northeast parcel line of said parcel and said line extended to the intersection with the southern corporation line of the City of Cincinnati also being the bank of the Ohio River; thence southwestwardly along said corporation line to the point of intersection with the southwardly extension of the west parcel line of Parcel 53, Plat Book 157, Page 58 HCAP; thence northwardly along said parcel line extended, said line and said line extended to the intersection with the centerline of Southside Avenue; thence easterly along said centerline to the intersection with the centerline of Idaho Street; thence northwardly along said centerline and extension to place of beginning.
RELOCATION PROCESS

As a result of Urban Renewal actions in Focus Area 1, there will be no relocation of families. Currently, there are two container storage companies operating as tenants on the Conrail site. Those tenants will not be eligible for relocation benefits if they continue to operate on the Conrail site until their leases expire. However, if they decide to relocate prior to their lease terms expiring, payments to those businesses required to relocate will be made in accordance with the benefits as set forth in the provisions of Cincinnati Municipal Code Chapter 740. Relocation guidelines are necessary to help businesses find replacement sites as a result of government action.

The process is best understood with the aid of a relocation counselor. A City of Cincinnati relocation counselor is available to help with any aspect of relocating. The counselor will help in finding new locations; give information concerning eligibility for relocation payments, and help with other problems which may occur during relocation. Both Conrail tenants were notified in March 1997 of the City's purchase of the Conrail site. The businesses operating on the Conrail site were contacted by a relocation counselor who gives information about relocation benefits and procedures. Finally, the business prepares for the move into the new location.
EXISTING CONDITIONS

The Urban Renewal area is located approximately 3 miles west of downtown Cincinnati, south of River Road between Southside Bridge on the east, Idaho Street on the west and the Ohio River on the south. Development of the Conrail site by private developers has been impeded by poor truck access to the site from the east. The existing US Route 50, River Road has four lanes, two moving lanes and two parking lanes to serve the community. Lane widths are sub-standard causing restricted traffic flow. Traffic along River Road is of great concern to the Sedamsville and Riverside communities. Traffic counts indicate 29,000 vehicle movements per day including trucks and cars in both directions. Recent traffic counts were taken at the entrance to the Conrail Site at Illinois Avenue to measure existing truck traffic count created by the current intermodal container operation. This count indicated a total of 415 trucks per day in and out. Produce dealers in their existing locations were also surveyed. This analysis indicated that a total of 400 trucks per day will be generated by the produce dealers. This analysis indicates there will be no increase in truck traffic. Existing traffic generated by the container operation will be replaced by traffic to the produce dealers. Traffic to and from existing businesses along Southside Avenue will remain using access to River Road at Southside Avenue bridge on the east and Idaho Street on the west. Surface paving improvements are planned for Southside Avenue extending from the recent improvements from Idaho Avenue east to the Southside Avenue bridge. These public improvements of Southside Avenue will help the existing businesses remain and grow. Success in implementing this plan will be dependent on immediate road improvements to provide improved access to the site for the Produce Industry and to the communities of Sedamsville, Riverside and Delhi.

The Cincinnati Public Works/Highway Division has plans to improve River Road, Exhibit F. Phase I will begin at the 6th Street Viaduct to the “S” turn near Mt. Echo. Phase II will require acquisition of existing properties along the south side of River Road from the “S” turn west to Southside Avenue. This will allow for widening the pavement, re-aligning the “S” turn and providing a “local lane” for parking and access to the residences along the north side of River Road. Phase II will provide two moving lanes in each direction. Long term planning indicates removal of and improving 6th Street Viaduct (Waldvogel). This will additionally improve access to the site.
A public access road from the "S" turn in River Road is proposed to be constructed on underutilized railroad property south of River Road. This access road will be two lanes wide, one in each direction, extending west along the north side of the existing railroad right-of-way. This will provide direct access to the Conrail Site entering at the east side of the site under the existing Southside Bridge.

These off-site improvements are necessary to meet an important requirement of the Produce Industry, that is, to make access to this site from I-75, I-71 as easy as the existing location in Riverfront west. Most traffic to the site will be from the east. The existing condition of River Road to the west of Fairbanks provides good access to the site from the west.

A new entrance from River Road will be located east of Illinois Avenue and west of Fairbanks Avenue. This entrance will have a traffic signal as previously stated in the Executive Summary and is located where good line of site is possible for safely entering River Road. Distance between this entrance and the traffic signal at Fairbanks is 800 feet.

An entrance at the west side of the site allows direct access for a proposed truck maintenance facility at the west side of the site. This entrance is not intended to serve produce operators on the eastern portion of the site.

The Conrail site is bounded on the south by CSX and Central of Indiana Railroads. At this time, no roadway access to Southside Avenue crossing these railroads is proposed. Central of Indiana has a main line and a siding track adjacent to the south property line. The siding track is used by Continental Grain for a seasonal grain unloading station to transfer grain from rail to trucks, then trucks use the Conrail Site for access to the grain elevator. There is no recorded easement across the Conrail site. However, there are negotiations to accommodate this truck access.

An additional railroad siding is proposed north of the existing Indiana Central Siding Track to serve the Conrail site.
The site is located at the base of a hillside along the Ohio River. In 1924 the railroads excavated the hillside to provide a level switching yard. River Road is 40' above the Conrail site along the western portion of the site. The residential properties along the south side of River Road west of Illinois Avenue and the hillside will not be changed by this plan.

All public improvements and City actions contemplated by this plan are conditioned on subsequent appropriation of funds by City Council, sufficient for implementation.
ON-SITE INFLUENCES

As a result of the Conrail Site having been a railroad switching yard, it is linear and level. A level plateau at elevation 495.5 measures 5,000 feet long east-west and varies from 450 to 650 feet north-south. This plateau contains approximately 60 acres of easily developable land. The northern steep slope to River Road should not be disturbed. Previous 1924 excavations to expand the Round House have caused land slides causing houses and utilities to be destroyed.

The general site elevation is 495.5. The following historic information is based on information from the US Corps of Engineers.

<table>
<thead>
<tr>
<th>Flood History</th>
<th>Normal Pool Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1937 510.0</td>
<td>455</td>
</tr>
<tr>
<td>1913 499.5</td>
<td>481.6</td>
</tr>
<tr>
<td>1964 498.6</td>
<td>10 year</td>
</tr>
<tr>
<td>1945 498.5</td>
<td>50 year</td>
</tr>
<tr>
<td>1948 494.8</td>
<td>100 year</td>
</tr>
</tbody>
</table>

The recent 1997 flood did not enter north of the railroad; however, Southside Avenue, Idaho Street at River Road and Bold Face Park were flooded. Several existing businesses along Southside Avenue experienced flooding.

Since the produce dealers will require truck docks to all buildings on site, the floor levels are expected to be raised 4 feet above the grade level or about 499.5 feet. This elevation is a little above the 100 year flood plain, Exhibit E.

Utilities are available along River Road. Gas, electric, phone, 24” dia. water, and a combined sewer. These utilities will be extended in a 30 feet wide easement with the north access road. A 14’ x 14’ storm sewer exists toward the eastern portion of the site. It extends from Bold Face Park (valley) under River Road through the site to discharge into the river.

British Petroleum has a 60′ wide easement for 6” and 8” gas lines that cross the river and traverse the Conrail Site near the Southside Bridge. There are no other recorded easements.
This site is easily and quickly developable. There are no permanent structures on site. The existing operation of trailer storage can quickly be removed. Existing pavement is marginal and can be broken up and used as fill material. Foundations from the Round House in the northwest corner can remain since this area will be used for trailer parking. Construction access can use the existing River Road entrance until the permanent entrance and roadway are available.
GOALS

Riverside/Sedamsville Urban Renewal Goals-Focus Area I

- Retain the existing residential structures and vegetation in the transition zone located on the south side of River Road between Southside Bridge and Idaho Street.
- Improve the vehicular traffic movement through Riverside/Sedamsville
  - Upgrading River Road
  - Providing an access road to the Conrail Site.
  - Upgrade the intersection of Fairbanks and River Road.
  - Upgrade the intersection of Hillside and River Road.
  - Provide a controlled access with traffic signals to the Conrail Site.
  - Provide a local traffic lane for pedestrians and residents on the north side of River Road.
  - Upgrade Southside Avenue.
- Redevelop the Conrail Site with businesses that are job intensive and are compatible with the exiting M-2 zoning.
- Retain the two existing scrap businesses along Southside Avenue subject to the existing conditional use hearing decisions.
- Retain the existing commercial and industrial businesses along Southside Avenue.
- Increase landscape planting where feasible along the rear property line of the eleven resident homes on the south side of River Road to screen new development on the Conrail Site.
- Establish a buffer along a portion of the south property line of the Conrail Site to obscure the view of the existing adjacent scrap operations.
- Provide direct rail service to the Conrail Site.
- Include landscaping along a signage in the entrance to the Conrail Site from River Road.
- Eliminate existing conditions of blight and deterioration.
URBAN DESIGN PLAN

This plan is based on providing a relocation site for the Produce Industry. Individual dealers provided the planning team with planning information regarding projected building area, number of truck docks, number of employee and customer parking and number of trailers stored on site. This data is displayed in Exhibit "I" and is the basis of this plan.

The primary entrance to the site will be via a new access road south of River Road, extending from the "S" turn in River Road westward to the Southside Avenue bridge. The access road will continue westward parallel to River Road and align at the base of the hillside approximately 2800 lineal feet. A major entrance directly from River Road will be located east of Illinois Avenue and west of Fairbanks Avenue. This entrance will have a traffic signal. A minor entrance will be located at the west end of the site east of Idaho Street to provide access to a truck maintenance facility. This entrance will be designed to permit trucks to exit onto River Road into the right-hand lane. No access road is planned from Southside Avenue north to the Conrail Site.

Landscaped areas will be provided along River Road from Southside Avenue to the major site entrance. The site entrance will have a site identification sign and landscaped island. Landscaping and street trees will be installed along the 2800 foot site access roadway. Visual barrier landscape screens be installed adjacent to the south property line of the residences along River Road. A visual barrier landscape screen will also be installed along the south property line north of the railroad approximately 600 feet in length to provide screening of scrap operations along Southside Avenue.

The entrance and access road follows the north property and base of the hillside along the north side. A twenty foot landscaped area will extend along River Road from Southside Avenue to the site entrance. The site entrance will accommodate truck turning radius for a good entrance onto River Road. This entrance will be landscaped and display signs for site identification and produce dealer identification. A visual landscape barrier will be installed adjacent to the south property line of the residences along River Road. This will screen the view over the Conrail site. The on site access road will have landscape strips on north and south sides.

The Castellini Company is to be located on the western portion of the site. This facility requires approximately 30 acres. This company has the largest space requirements for building, truck docks and trailer storage. The western portion of the site is widest in the north-south direction allowing more trailer parking.
Truckway Leasing Co. is a truck maintenance facility that will maintain Castellini trucks and also serve the general public. The west River Road entrance will provide access to this facility.

Several dealers requested stand-alone buildings on individual sites: Catanzaro, Gentile, Caruso Ciresi and Flatow Riley request a plan that would allow them to purchase land and develop their own buildings. Other dealers such as Sanzone-Palmisano, DeGaro, Lasita and Fries Bros. have requested space in a common building to be developed by the City then sold. The plan accommodates the request of all the dealers.

Businesses south of the railroad along Southside Avenue were interviewed, as well as produce dealers. All of these businesses indicate a desire to remain in their present location. Some have plans for growth and have acquired additional land to support this.

Existing eleven residents along the south side of River Road west of Illinois Avenue were also interviewed. This plan does not propose removing these residences. In general, the residents support this plan.

A landscaped screen will be installed adjacent to their south property line to screen the view over the developed Conrail Site.

Conclusion:
This plan can accommodate the relocation of the Product Industry. The desire of the industry to be located near each other to allow cross trading of product and convenience to customers. This plan is workable with good access to the site and good truck flow on site. Space for truck movements to and from the loading docks will accommodate the largest trucks permitted. Planned expansion for Castellini, Gentile and Caruso Ciresi are shown. This plan can be executed to allow the produce industry to relocate by March 1, 1998. However, prior planning and aggressive construction scheduling techniques will be required by all parties. It is important that this plan be approved immediately to allow Department of Economic Development to begin negotiations for sale of land and the construction of site utilities and access road. This will accomplish the stated goal of providing a site within the City of Cincinnati to relocate the Produce Industry which clears the way for riverfront development to begin in a timely manner.

All public improvements and City actions contemplated by this plan are conditioned on subsequent appropriations of funds by City Council, sufficient for implementation.
IMPLEMENTATION STRATEGY

Use of property purchased by the City will be limited to the proposed Urban Design Plan and is intended to be used as storage and warehouse facilities for produce dealers or similar warehouse and trucking operations.

The implementation plan is divided into three functional areas, Right-Of-Way Improvements, Development Projects, and Community Programs. The proposed right-of-way improvements focus on improving River Road to meet current standards for highway design, relieve the restricted movement from Waldvogel to Fairbanks and improve access to the Conrail Site and western communities of Sedamsville, Riverside and Delhi. The development projects focus on site development infrastructure projects necessary to prepare the site for subdivision and sale to individual owners and considerable private investment to develop individual sites and construct warehouse and storage structures. City funds are committed to Phase I River Road improvements or the development improvements noted in the Implementation Strategy portion of the plan. Funding must be secured for all right-of-way improvements and development projects.

The following charts provide a summary of the projects and possible funding sources for both the right-of-way projects and development projects.
# RIGHT OF WAY IMPROVEMENTS

<table>
<thead>
<tr>
<th>PROJECT/PROGRAM</th>
<th>SCOPE</th>
<th>POTENTIAL IMPLEMENTATION ENTITY/SOURCE AND DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Road Improvements - Phase II</td>
<td>Widening and realignment of River Road from “S” turn west to Fairbanks and new entrance to Conrail Site.</td>
<td>Public Works/Highway Engineering Funded by City and State of Ohio 1998 thru 2000</td>
</tr>
<tr>
<td>Removal and replacement of Waldvogel Viaduct</td>
<td>Complete removal and reconstruction of roadway connection from 6th St. Viaduct to Warsaw and Elberon Avenues.</td>
<td>Public Works/Highway Engineering Funded by City and State of Ohio 2004</td>
</tr>
<tr>
<td>Improve River Road at Hillside Avenue</td>
<td>Redesign alignment and gradient at Hillside Avenue</td>
<td>Public Works/Highway Engineering - Funded by City and State of Ohio</td>
</tr>
<tr>
<td>Local access road to Conrail Site</td>
<td>Acquire property on Southside of River Road approximately 39 properties. Acquire underutilized railroad property from Indiana Central Railroad. Construct new access road south of River Road to the Conrail Site.</td>
<td>Public Works/Highway Engineering Funded by City and State of Ohio 1998 thru 2000</td>
</tr>
<tr>
<td>Southside Avenue Improvements</td>
<td>Widening and surface improvements from Southside Avenue bridge west to meet recently resurfaced pavement from Idaho St. eastward.</td>
<td>Public Works/Highway Engineering Funded by City and State of Ohio 2002</td>
</tr>
<tr>
<td>PROJECT/PROGRAM</td>
<td>SCOPE</td>
<td>POTENTIAL IMPLEMENTATION SOURCE/ENTITY AND DATE</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Environmental Remediation of the Conrail Site</td>
<td>Remediate site to standards identified by BHE Consultants in its Phase II report.</td>
<td>BHE, Office of Environmental Management and Department of Economic Development. Funded by City and State of Ohio 1997</td>
</tr>
<tr>
<td>Redevelopment of the Conrail Site</td>
<td>Construct new commercial and industrial facilities compatible with existing M-2 Zoning Site.</td>
<td>Private Business and Department of Economic Development. Funded by City and State of Ohio 1997 thru 1998</td>
</tr>
<tr>
<td>New site entrance at River Road</td>
<td>Construct new roadway access from River Road including traffic signal, divided roadway, site identification sign and landscaping.</td>
<td>Public Works/Highway Engineering and Economic Development Funded by City and State of Ohio 1997 thru 1998</td>
</tr>
<tr>
<td>On site access road and utilities to permit sale of developable sites.</td>
<td>Design and construct approximately 2800 L.F. roadway west of Southside bridge. Project will also include infrastructure utilities, water, storm sewer, sanitary sewer, gas, electric and phone.</td>
<td>Public Works/Highway Engineering and Economic Development Funded by City and State of Ohio 1997</td>
</tr>
<tr>
<td>Landscaping Projects</td>
<td>Landscape screen located at south property line of 11 residences along south side of River Road. Landscape along River Road from Southside Avenue west to new entrance. Landscape along new 2800 L.F. access road. Landscape screen approximately 600 l.f. located along the south property line to screen scrap dealers operation from Conrail Site.</td>
<td>Public Works/Highway Engineering and Economic Development. Funded by City and State of Ohio. 1998</td>
</tr>
</tbody>
</table>
### COMMUNITY PROGRAMS

<table>
<thead>
<tr>
<th>PROJECT/PROGRAM</th>
<th>SCOPE</th>
<th>POTENTIAL IMPLEMENTATION SOURCE/ENTITY</th>
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<tbody>
<tr>
<td>Retain and strengthen existing business</td>
<td>Interact with existing businesses to monitor current issues and identify solutions to today’s business concerns.</td>
<td>Economic Development and CNAS Team</td>
</tr>
<tr>
<td>Employment Linkage Program</td>
<td>Create a program to link residents to new job opportunities</td>
<td>Employment and Training, Economic Development, Community Councils and Businesses</td>
</tr>
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### SPACE REQUIREMENTS FOR PRODUCE DEALERS

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>EXISTING AREA</th>
<th>PROPOSED AREA</th>
<th>EMPLOYEES RETAINED</th>
<th>EMPLOYEES CREATED</th>
<th>AVERAGE WAGES</th>
</tr>
</thead>
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<td>FLATOW RILEY</td>
<td>16000</td>
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<td>18</td>
<td>$12/hr*</td>
</tr>
<tr>
<td>J. LASITA</td>
<td>15000</td>
<td>30000</td>
<td>25</td>
<td>5</td>
<td>$12/hr*</td>
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<tr>
<td>FRIES BROS</td>
<td>13500</td>
<td>18000</td>
<td>16</td>
<td>3</td>
<td>$14/hr*</td>
</tr>
<tr>
<td>SANZONE PALM</td>
<td>43380</td>
<td>30000</td>
<td>N/A</td>
<td>16</td>
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</tr>
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| SUMMARY          | 378280        | 563400        | 647                | 67+               |               |

|                |               |               | 10                 | 20                | 4             |
| AMP           |               |               |                    |                   |               |
| TRUCKS ON SITE| MECHANICAL    |                |                    |                   |               |
| INDIV SPOTS   | RAIL          | 6              | 34,157,000         |
| RAIL          | INVESTMENT    | 6              | 34,157,000         |

* Average wages for these produce companies are estimated at $25,000/year

**EXHIBIT "I"**
DESIGN AND USE GUIDELINES

These Design and Use Guidelines for the entire urban renewal area are supplemental to all applicable building, fire and zoning code requirements. City design approval under these guidelines does not relieve owners from code compliance obligations. These guidelines are intended for any new construction and site improvements and do not apply to existing business operations or existing conditional use decisions. New construction projects utilizing City of Cincinnati development funds are included in these requirements.

In concept, building masses should be located close to the south property line to allow for rail access to the buildings. Associated truck loading areas to serve the buildings shall occupy the northern portions of the site. All buildings should be oriented to the primary roadway.

Contracts for sale or lease for redevelopment will require design review and approval of redevelopment plans and specifications by the City's Office of Architecture and Urban Design, and will include covenants to use the property in accordance with these guidelines for a minimum period of no less than fifteen years.

The following architectural design guidelines will be required:

- Flush panel metal siding to allow for high level of thermal insulation should be the primary building material throughout the Conrail Industrial Park. However, the use of split face block, concrete, glass, stucco or "Dryvit" panels may be allowed as an alternative exterior surface after review and approval by the City.

- A four foot deep canopy should be provided above all truck dock seals.

- Office uses may consider the combination of several materials provided there is a design and material continuity on both functional uses.

- Buildings should be unified at the base, fascia or corners by the use of one material.

- Architectural metal panels with flat surfaces are permitted. Corrugated or highly articulated metal panels (e.g. V-Beam ribbed panels) are not permitted.
• Exterior building materials should be warm earth tones/or neutrals. Supplemental or accent colors within the color range are permitted.

• All buildings shall be designed by a registered architect or a registered engineer.

• Where a phased building program is proposed, a total master plan for the site will be required.

New Building Massing/Orientation

Excessively high buildings, towers or buildings not compatible in scale to the adjacent buildings will not receive design approval.

• The facade of the primary building shall be considered as the primary building mass projection above the primary building mass or roof line shall be minimized and should not exceed 2 times the height of the primary mass.

General building massing should promote a strong horizontal mass with a flat gable.

• Mechanical units shall be well organized in a central location and when possible screened from view regardless of whether they are on grade or on the roof.

Setbacks

No building shall be located on any one or more parcels nearer to the lot line as set forth below:

• Adjacent to main access road - fifty feet required.

• Adjacent to side lot lines - twenty feet.

• Adjacent to rear lot lines - fifteen feet.

Parking Lots/Off Street Parking

Each owner of a site shall provide adequate off-street parking to accommodate all parking needs of the site. The intent is to eliminate the need for any on-street parking.

Required off-street parking shall be provided on the site of the use served.

The parking required for all uses permitted in the development area shall be determined from the controlling zoning regulations of the City of Cincinnati.
No parking lot shall be constructed nearer than fifteen (15) feet to a lot line fronting on a dedicated street, nor nearer than five (5) feet to any other lot line and shall be screened with appropriate landscaping. Deciduous trees within parking areas shall be provided at a ratio of one tree per 20 cars. All access and parking areas shall be concrete or bituminous paving material.

**Truck Loading and Staging Area**

The loading areas required for all uses shall be determined from the controlling zoning regulations of the City of Cincinnati. Layout must permit easy movement of legal size tractor trailers.

No outdoor storage in loading areas facing the public road is permitted. This includes empty pallets. All trash containers and compactors must be fully enclosed.

**Material Storage Areas - Accessory to Principal Use**

Outside storage areas for materials incidental to principal use are acceptable provided the storage areas are permanently screened from view or contained within permanent structures or buildings.

**Garbage and Refuse Collection**

No garbage or refuse shall be placed, stored or maintained in the development area except in a sanitary container storage areas or buildings.

**Landscaping**

The area between all public street curbs and the public street right-of-way and the area between the public street right-of-way and any building shall be landscaped by the private owners with an effective combination of street trees, ornamental trees, ground cover and shrubbery. Trees may be deciduous and/or coniferous in species. All unpaved areas not utilized for parking shall be landscaped in a similar manner. All City permits shall be obtained by the developer for street trees and streetscapes.

Side and Rear Yard Setback Areas not used for parking shall be landscaped utilizing ground cover, trees and/or shrubs.
Undeveloped areas proposed for future expansion shall be maintained in a weed-free condition with suitable ground cover.

Property owners shall be responsible for maintaining all landscaping installed on both their development parcel, as well as any publicly installed street trees, bushes and ground cover within the abutting rights-of-way.

In addition to the above, landscaping should be provided within all employee parking lots. The total area should be separated by smaller landscaped parking areas which will be located within the parking lots to break-up the expanse of pavement. Each separate landscaped area should include at least two street trees. These separate landscaped areas should also be adequately planted with shrubs or ground cover. Care should be taken to protect landscaping areas from damage by vehicles through the use of curbs, low walls or other similar construction. One tree per ten cars is required.

Areas used for parking shall be landscaped and/or fenced in such a manner as to screen said areas from view from public streets and adjacent properties. Plant materials used for this purpose shall consist of linear or grouped masses of trees and shrubs as a means of providing screening.

Recommended Landscaping Material:
- Large Deciduous Trees (shade or street trees)
  Recommended sizes: 3" - 3 1/2" caliper
  - Red Oak (Quercus Borealis)
  - Red Maple (Acer Rubrum)
  - Silver Linden (Tilia Tomentosa)
  - Littleleaf Linden (Tilia Cordata)
  - Marshall's Seedless Green Ash (Fraxinus Pennsylvanica)
  - Sycamore (Platanus Acerisolia-Bloodgood Strain)

Street trees should be planted 20 to 25 feet on center.
- Screen:
  - Evergreen - Low
    Spreading Yew (Taxus Cuspidata)
    Recommended Size: 18 - 24" spread
    Spacing: Two staggered rows
              Three feet on center
• Deciduous - High
  European Hornbeam Upright (Carpinus Betulus Fastigiata)
  Recommended Size: 8 - 10' High
  Spacing: Two staggered rows
           Five feet on center

• Evergreen - High
  Also clumps of evergreens to emphasize corners, etc.
  Austrian Pine (Pinus Nigra)
  Recommended Size: 6 - 8' High
  Spacing: Two staggered rows
           Ten feet on center

• Ground Cover:
  Recommended sodding.

• Soil Removal and Placement:
  Soil removal and/or placement required during the development of a site or at any other time may only take place after submission of plans and specifications for said removal and/or placement have been submitted to and approved in writing by the City of Cincinnati.

Fences

Fences, when required to screen parking and loading areas or when otherwise used by the site owner as a landscaping element, shall be limited to a height of not more than eight (8) feet, shall be constructed with materials that are compatible and harmonious in appearance with the principal building on the site, and shall be maintained in an orderly and attractive manner.

• Fencing Exposed to View from the Street:
  Along public rights-of-way, the use of tubular steel picket fencing and gates not exceeding a height of 8 feet or masonry screen walls are desired.

• Fencing Not Exposed to View from the Street:
  Chain link fencing, if used for security purposes should not exceed 8 feet, should be galvanized aluminum or black vinyl coated for ease of maintenance and landscaped with vines or hedges. Chain link which has wood, metal or plastic slats woven into the material will not be permitted.
Utility Connections

All power and telephone cable service and other communication service feed lines shall be underground or rear lot construction with ground mounted transformers. Earth satellite transmission stations shall be screened from view with landscaping or permanent screening elements as high as the receiving dish.

Signs

Signs defined according to type of message conveyed:

- Sign, Real Estate: A sign advertising the sale, rental or lease of the premises on which it is maintained.
- Sign, Instructional: A sign conveying instructions with respect to the premises on which it is maintained, such as a sign designating the entrance to or exit from a parking area, a trespassing sign, a danger sign, or similar signs.
- Sign, Professional: A sign indicating the name and occupation of a professional person or group of associated professional persons.
- Sign, Identification: A sign indicating the name of a permitted use, the name or address of a building, or the name of the management thereof.
- Sign, Nameplate: A sign indicating the name and address of an occupant.
- Sign, Announcement: A sign of temporary character such as a construction sign or a sign indicating the names of persons associated with, or events conducted upon the premises upon which the sign is maintained.
- Sign, Business: A sign directing attention to a business, commodity, or service conducted, sold or offered upon the same premises as those upon which the sign is maintained.
- Sign, Trademark: An identification sign portraying a symbol or trademark, with or without lettering, of a business or industry and which symbol or trademark has been used on signs in other locations and in printed advertising.
- Sign, Projecting: A sign attached perpendicular to the building.
- Sign, Advertising: A sign directing attention to a business, commodity, service or entertainment conducted, sold or offered elsewhere than upon the premises where the sign is maintained, including a billboard sign.
The following signs will be permitted if in compliance with all zoning requirements:

- Non-illuminated real estate signs, as permitted and regulated in R-1 District of the City of Cincinnati Zoning Code. These signs must be removed upon completion of sale, lease or hire.

- Non-illuminated or indirect illuminated instructional sign shall not exceed three (3) square feet in area per sign face. The top of the sign and mounting device shall not exceed a height of three (3) feet.

- Identification or Trademark Signs, exclusive of flashing signs, are subject to the following limitations:
  - Identification Signs shall be erected only as ground and wall signs.
  - One (1) ground sign shall be permitted on the premises for each street frontage, provided that:
    - No such ground sign shall exceed a height of six (6) feet above the grade.
    - The area of such ground sign shall not exceed twenty (20) square feet per sign face, except that if such a sign is located more than twenty-five (25) feet from the property line at the street from which the sign face is visible, one (1) additional square foot may be added for each two (2) feet of average setback in excess of twenty-five (25) feet, provided that the total sign area shall not exceed one hundred (100) square feet per sign face.

- Wall signs shall be permitted on the same premises, provided that:
  - No sign erected on the exterior of a building shall extend outward more than eighteen (18) inches from the wall and not beyond the horizontal limits of the wall.
  - No wall sign shall extend above the parapet or eave of a roof. No wall sign shall be placed on a tower or permitted above the roof of the primary building mass.
• The area in square feet of a wall sign shall not exceed two (2) times the horizontal length of the building wall of the primary building mass to which the sign is attached up to a maximum sign area of one hundred and fifty (150) square feet per building or shall not exceed 5% of the area of the facade to which the sign is attached (whichever is the lesser).

• Wall signs printed or painted directly on the wall surface shall not be permitted. No signs shall be painted on or applied to roofs.

• Wall signs with the individual letters applied directly to the wall surface shall be measured by a rectangle around the outside of the lettering and/or the pictorial symbol taking into account the size of caps and lower case and calculating the area enclosed by such a line.

• Combination of Signs:
A combination of ground and wall signs may be permitted provided the aggregated area of the two signs does not exceed the larger area of either of the two signs. Mounting heights of either sign shall be controlled by the specific criteria of each individual sign type.

• One (1) Announcement or Construction Sign denoting the architects, engineers, contractors and other related organizations shall be permitted during construction, but shall be removed within ten (10) days after completion of construction. The size of Construction Signs shall be limited to thirty two (32) square feet.

• A Future Tenant Identification Sign listing the name of future tenants, responsible agency or Realtor and related subjects shall be permitted during construction but shall be removed within ten (10) days after completion of construction. The size of Future Tenant Identification Signs shall be limited to thirty two (32) square feet.
• Prohibited Devices or Signs:
  • No sign or its lighting shall move, flash or make noise.
  • Colored lights and illuminated signs employing colors used in traffic signal lights are prohibited within one hundred (100) feet of any signalized intersection.
  • Any imitation of official traffic signs or signals and the use of such words as “stop”, “look”, “danger”, “go slow”, “caution”, or “warning” are prohibited.
  • Fluorescent or day-glow colors in signs are prohibited.
• Permanent, portable (or roll-away) and temporary advertising or billboards are prohibited.

Temporary Structures

Temporary structures shall not be placed or maintained on any site except during the construction of facilities approved by the City of Cincinnati. Within ten (10) days of the completion of such construction, the temporary structure shall be removed from the site and the area occupied by said structure shall be restored to meet all applicable covenants and surrounding site conditions. When a temporary structure is placed on a site, it must be located within the building setback lines.

Maintenance

Each site owner shall at all times keep his premises, buildings, improvements and appurtenances in a safe, clean, neat and sanitary condition, complying with all laws, ordinances and regulations. Each site owner shall provide for the removal of trash and rubbish from his premises.

During construction, it shall be the responsibility of each site owner to insure that construction sites are kept free of unsightly accumulations of rubbish and scrap materials, and that construction materials, trailers, shacks and the like are kept in a neat and orderly manner.

Storm Water Drainage

Individual parcels and developments shall be built in accordance with Metropolitan Sewer District (MSD) and Ohio Basic Building Code Requirements, pertaining to the control of storm water drainage within their sites.
Flood Protection

Developments in the Urban Renewal Area will abide by Cincinnati Building Codes and permit guidelines as they pertain to flooding.

Any deviations or variance to these guidelines will not be permitted except with the written approval of the Director of the Department of Economic Development and only upon the submission of complete detailed plans prior to initial approval of development of the properties.

USE REQUIREMENTS

Material Storage Areas - As a Principal Use

Outside storage of material as the principal use or operation is limited to an average of 30 feet in height in the area north of Southside Avenue.
Conrail Site & Vicinity
Blight Study

Prepared for:
City of Cincinnati
Department of Economic Development

Prepared by:
City of Cincinnati
Department of Public Works
Division of Engineering
Office of Architecture and Urban Design
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<tr>
<th>Item</th>
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<td>Executive Summary</td>
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<td>Distribution Chart</td>
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<td>Map of Study Area</td>
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<td>Survey Forms</td>
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<td>Cincinnati Municipal Code, Chapter 725 - Urban Renewal</td>
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CONRAIL SITE AND VICINITY URBAN RENEWAL PLAN - BLIGHT STUDY

Documentation of Blight or Deterioration

The purpose of this study is to determine if the Conrail Site and Vicinity Urban Renewal Area qualifies as a blighted or deteriorating area as defined by Chapter 725 of the Cincinnati Municipal Code, Urban Renewal.

I. Boundary Description

The findings of this eligibility study are based on surveys and analysis of the parcels and structures contained in the study area. The boundaries are depicted on the map and as described as follows:

Situate, in the City of Cincinnati, Hamilton County, State of Ohio, and being more particularly described as follows:

Beginning at a point in the centerline of River Road, said point being the point of intersection with the northwardly extension of the centerline of Idaho Street, thence northeastwardly along the centerline of River Road and continuing in an eastwardly direction along said centerline to the point of intersection with the northwardly extension of the northeast parcel line of Parcel 113, Plat Book 152, Page 42, HCAP; thence southwestwardly along said parcel line of said parcel to the point of intersection with the east right-of-way line of Southside Avenue; thence southwardly along said right-of-way line to the point of intersection with the irregular northwest parcel line of Parcel 146, Plat Book 152, Page 42, HCAP; thence, northwardly along said parcel line extended to the point of intersection with the east right-of-way line of Southside Avenue; thence, along said parcel line of said parcel the following directions and distances N. 55 48' 47" E., a distance of 199.10 feet and N. 66 33' 47" E., a distance of 190.76 feet to the north corner of said parcel; thence, southeastwardly along the northeast parcel line of said parcel and said line extended to the intersection with the southern corporation line of the City of Cincinnati also being the bank of the Ohio River; thence southwestwardly along said corporation line to the point of intersection with the southwardly extension of the west parcel line of Parcel 53, Plat Book 157, Page 58 HCAP; thence, northwardly along said parcel line extended, said line and said line extended to the intersection with the centerline of Southside Avenue; thence eastwardly along said centerline to the intersection with the centerline of Idaho Street; thence northwardly along said centerline and extension to place of beginning.
II. Conditions of Study Area

A. As a whole, twenty-seven (27) of twenty-seven (27), equaling one hundred (100) percent of structures/vacant parcels in the study area fulfilled the criteria identified in the Cincinnati Municipal Code Section 725-1-b(a), Blighted Area. All blocks within the study area show the presence of some of the following blighting factors:

1. Age

Fifty-nine (59) percent of the buildings in the study area are forty (40) years of age or greater.

2. Obsolescence

Functional or economic obsolescence occurs in none or zero (0) percent of the buildings in the area.

3. Dilapidation

None or zero (0) percent of the structures in the study area were found to have dilapidation.

4. Deterioration

Seventy (70) percent of the structures/vacant parcels in the study area exhibited deterioration.

5. Abandonment/Excessive Vacancies

Abandonment/excessive vacancies (exceeding 1/3 area) were found to be present in none or zero (0) percent of the structures/vacant parcels in the area.

6. Periodic Flooding

Fifty-nine (59) percent of the structures/vacant parcels in the area are subject to periodic flooding or located in a designated flood hazard.

7. Faulty Lot Layment/Overcrowding/Inadequate Loading or Parking

One or more of these factors were found in fifteen (15) percent of the structures/vacant parcels in the study area.

8. Deleterious or Incompatible Land Use/Inadequate Site Conditions/Environmentally Hazardous Conditions
One or more of these factors were found in seventy-four (74) percent of the structures/vacant parcels in the study area.

9. Inadequate Public Facilities or Right-of-way

One or more of these factors was found in ninety-six (96) percent of the structures/vacant parcels in the area.

10. Diversity of Ownership

Diversity of ownership was a factor in none or zero (0) percent of the structures/vacant parcels in the study area.

11. Illegal Use/Code Violation

These factors were found in four (4) percent of the structures/vacant parcels in the area.

12. Unsuitable Soil Conditions

This factor was not exhibited within the study area.

13. Unused Railroads or Service Stations, Landfills/Junkyards

One or more of these factors were exhibited in eleven (11) percent of the structures/vacant parcels in the area.

14. Other factors inhibiting sound private development

No such factors were exhibited in the study area.

B. Structures and vacant parcels meeting the criteria are reasonably distributed throughout the area. At least fifty (50) percent of the total number of structures reasonably distributed throughout the area meet the "blighted area" criteria with three or more factors; and vacant parcels, with two or more factors (see distribution chart).

C. Additionally, at least twenty-five (25) percent of the structures, reasonably distributed throughout the area, are deteriorated or deteriorating; or the public improvements are in a general state of deterioration (see factor 4 above).

The conclusion drawn from this data is that the number, degree, and distribution of blighting factors, which are documented in this report, warrant the designation of the Conrail Site and Vicinity Urban Renewal area as a "blighted area" as defined by Chapter 725 of the Cincinnati Municipal Code, Urban Renewal.
# Blight Study

## Distribution of Blighting Influences and Blighted Units by Block

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**Blighting Influences**  
EXTERIOR BUILDING SURVEY FORMS

FOR

CONRAIL SITE AND VICINITY

BLIGHT STUDY
**Exterior Building Survey Form**

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| Lighting Influence   | 2 |

**Determination**

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<td>1 1900-1910</td>
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<td>5 1940-1950</td>
<td>6 - Shingle Covered</td>
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<td>P - Public</td>
<td>5 - Five Stories , etc.</td>
<td>6 1950-1960</td>
<td>7 - Slate Covered</td>
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</table>

**Structural Conditions**:  
0) Sound  1) Requires Minor Repair  2) Requires Major Repair  3) In Critical Condition  9) Unable to View

**Blighting Influences**:  

**NOTES**: 

---

-
## Exterior Building Survey Form

### Parcel No.

| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

### Building No.

| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

### Address

- 3167
- 3168
- 3169
- 3170
- 3171
- 3172
- 3173

### Land Use

- R
- R
- R
- R
- R
- R
- R

### Number of Units

| 1 | 2 | 1 | 1 | 1 | 1 | 1 |

### Number Occupied

| 02 | 2 | 2 | 02 | 3 | 02 | 2 | 1 |

### Construction

| 93 | 3 | 1 | 3 | 3 | 3 | 3 |

### Decade

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

### Foundation

| 9 | 0 | 0 | 1 | 2 | 1 | 9 |

### Walls

| 9 | 1 | 2 | 1 | 2 | 2 |

### Roof

### Secondary

### See Note

### Building Rating

| 2 | 1 | 2 | 2 | 1 | 2 |

### Lighting Influence

| √ | √ | √ | √ | √ | √ | √ |

### Determination

#### LAND USE

- R - Residential
- C - Commercial
- I - Industrial
- P - Public
- S - Semi-Public
- T - Transient

#### HEIGHT

- One Story
- One & one half stories
- Two Stories
- Three Stories
- Four Stories
- Five Stories, etc.

#### DECADE

- Before 1900
- 1900-1910
- 1910-1920
- 1920-1930
- 1930-1940
- 1940-1950
- 1950-1960
- After 1960

#### CONSTRUCTION

- Masonry
- Concrete
- Wood
- Metal
- Roll Covered
- Shingle Covered
- Slate Covered
- Tile Covered
- Stucco Covered
- Masonry & Metal, etc.
- Wood, Stucco Covered, etc.

#### STRUCTURAL CONDITIONS

- Sound
- Requires Minor Repair
- Requires Major Repair
- In Critical Condition
- Unable to View

#### LIGHTING INFLUENCES

- Age
- Obsolescence
- Dilapidation
- Deterioration
- Abandonment / Excessive Vacancies
- Periodic Flooding
- Faulty Lot Layout / Overcrowding / Inadequate Loading / Parking
- Deleterious / Incompatible Land Use / Site Conditions
- Inadequate Public Facilities / ROW
- Diversity Of Ownership
- Illegal Use / Code Violation
- Unsuitable Soil Conditions
- Unused Railyards or Service Stations - Landfill / Junkyard

#### NOTES

---
### Exterior Building Survey Form

**Personnel:** T.S. *F.W. Date: 3/21/97

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### Building Rating

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### Determination

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<td>1 1900-1910</td>
<td>2 - Concrete</td>
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<td>2 - Two Stories</td>
<td>2 1910-1920</td>
<td>3 - Wood</td>
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<tr>
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<td>02 - Two &amp; one half stories</td>
<td>3 1920-1930</td>
<td>4 - Metal</td>
</tr>
<tr>
<td>SemiPublic</td>
<td>3 - Three Stories</td>
<td>4 1930-1940</td>
<td>9 - Stucco Covered</td>
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<tr>
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<td>4 - Four Stories</td>
<td>5 1940-1950</td>
<td>14 - Masonry &amp; Metal, etc.</td>
</tr>
<tr>
<td></td>
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<td>6 1950-1960</td>
<td>93 - Wood, Stucco Covered, etc.</td>
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### BLIGHTING INFLUENCES

7. Faulty Lot Layout / Overcrowding / Inadequate Loading / Parking 8. Deleterious / Incompatible Land Use / Site Conditions
12. Unsuitable Soil Conditions 13. Unused Railyards or Service Stations - Landfill / Junkyard
14. Other Factors Inhibiting Sound Private Development

### NOTES:
BLIGHT STUDY

BLOCK NO. 2
BUILDING/PARCEL NO. 7

BLOCK NO. 2
BUILDING/PARCEL NO. 8
CHAPTER 725. URBAN RENEWAL

Section

725. Legislative Finding.
725-1. Definitions.
725-1-B. Blighted Area.
725-1-D. Deteriorating Area.
725-1-P. Repealed.
725-1-P1. Project Area.
725-1-P2. Project Improvements.
725-1-R. Redevelopment.
725-1-R1. Redeveloper.
725-1-R2. Rehabilitation.
725-1-S. Site Preparation.
725-1-U. Urban Renewal.
725-1-U1. Urban Renewal Area (Impacted Area).
725-1-U2. Urban Renewal Plan.
725-5. Urban Renewal Agent; Urban Renewal Plans.
725-15. Acquisition of Property; Rehabilitation; Site Preparation and Project Improvements.
725-17. Conforming Agreements.
725-25. Financial Assistance.

§ 725. Legislative Finding.

It is hereby found and determined that there exist within the city blighted and deteriorating areas of the nature defined in this chapter which constitute a serious and growing menace injurious and imincible to the public health, safety, morals and general welfare of the residents thereof; that the existence of such areas:

(a) contributes substantially and increasingly to the spread of disease and crime, and to losses by fire and accident, necessitating excessive and disproportionate expenditures of public funds for the preservation of the public health and safety, for crime prevention, correction, prosecution and punishment, for the treatment of juvenile delinquency, for the maintenance of adequate police, fire and accident protection and for other public services and facilities;

(b) constitutes an economic and social liability; and

(c) substantially impairs and arrests the sound growth of the community by causing the obsolescence of urban neighborhoods and facilities, and by impeding and retarding the sound private development of property and creation and preservation of housing and employment opportunities; that both properties improved with structures and vacant properties contribute to the above conditions; that this menace is beyond remedy and control solely by regulatory processes and exercise of the police power, and cannot be dealt with effectively by the ordinary operation of private enterprise without the aids herein provided; that the elimination by the city, in whole or in part, of blighted and deteriorating areas by urban renewal as defined herein is necessary for the public welfare and is a public use and purpose for which public money may be expended and private property acquired; that in blighted areas the conditions of blight spread throughout the area in many instances require for the public welfare the acquisition by the city of both properties which do and properties which do not contribute to the qualification of the area as blighted; and that in deteriorating areas the public welfare requires acquisition of properties which contribute to the qualification of the area as deteriorating in order to prevent deterioration into a blighted area, but in deteriorating areas the city will not implement eminent
domain for blight elimination for other properties.

Analogous to C.O. 750-1; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1. Definitions.

For the purpose of this chapter the words and phrases defined in the sections hereunder shall have the meanings therein respectively ascribed to them, unless a different meaning is clearly indicated by the context. The singular shall include the plural and the masculine shall include the feminine and neuter genders.
(Sec. 750-3; ordained by Ord. No. 179-1959, eff. May 27, 1959; renumbered to C.M.C. 725-1, eff. Jan. 1, 1972)

Analogous to C.O. 750-3; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1-B. Blighted Area.

"Blighted area" shall mean an area within the city in which are found the conditions defined in both paragraphs (a) and (b) herein:

(a) At least 50 percent of the total number of structures and vacant parcels, reasonably distributed throughout the area, meet the following criteria:

(1) For structures, the presence in the structure, in its accessory outbuildings, in the parcel on which the structure is located, or in relationship to surrounding properties of three or more of the following factors or the presence of any one or two factors to an excessive degree:

(i) Age in excess of forty years;

(ii) Obsolescence (either functional or economic), including inadequate ventilation, light, or sanitary facilities;

(iii) Dilapidation or deterioration;

(iv) Abandonment, vacancy exceeding 33 percent, or extensive adaptation of space for storage;

(v) Faulty arrangement or lot layout, including, but not limited to, lack of required off-street parking or loading space; overcrowding; or land coverage exceeding zoning requirements;

(vi) Deleterious land use, unsafe or environmentally hazardous conditions, unsuitable or unstable soil conditions, failure to maintain grounds, or a mixture of incompatible uses;

(vii) Periodic flooding or location in a designated area of special flood hazard;

(viii) Inadequate or deteriorated public facilities or rights-of-way, or defective layout of streets;

(ix) Diversity of ownership or defective or unusual conditions of title (including substantial tax or assessment delinquencies) rendering private assemblage for redevelopment unlikely;

(x) Illegal use of structures, or conditions or uses not permitted by current building, fire, health, or zoning codes except as pre-existing uses; or

(xi) Other factors inhibiting sound private development or otherwise detrimental to the public health, safety, morals and general welfare; or

(2) For vacant parcels (including parking lots with no structure on the same parcel) the presence in the parcel or in relationship to surrounding properties, of two or more of the following factors or the presence of any one factor to an excessive degree:

(i) Diversity of ownership or defective or unusual conditions of title (including substantial tax or assessment delinquencies) rendering private assemblage for redevelopment unlikely;

(ii) Illegal use, or conditions or uses not permitted by current building, fire, health or zoning codes except as pre-existing uses;

(iii) Faulty arrangement or lot layout;

(iv) Inadequate or deteriorated public facilities or rights-of-way, or defective layout of streets;

(v) Unsafe or environmentally hazardous conditions, unsuitable or unstable soil conditions, failure to maintain grounds, or deleterious land use;

City of Municipal Code
(vi) Periodic flooding or location in a designated area of special flood hazard;

(vii) Abandonment, or vacancy for a period of five or more years;

(viii) Other factors inhibiting sound private development or otherwise detrimental to the public health, safety, morals and general welfare;

(3) For vacant parcels or structures, the presence in the vacant parcel or in the parcel on which a structure is located on one or more of the following:

(i) A railroad or railroad right-of-way, abandoned or unused for three or more years;

(ii) A gasoline service station or motor vehicle service garage, abandoned or unused for three or more years; or

(iii) A junkyard or solid waste disposal or landfill site; and

(b) Additionally, at least 25 percent of the structures, reasonably distributed throughout the area, are deteriorated or deteriorating; or the public improvements are in a general state of deterioration.

As used in this section and Section 725-1-D:

"Structure" shall mean a structure of at least 250 square feet floor area; for purposes of counting, multiple structures on one parcel shall be counted separately; accessory outbuildings shall not be counted as separate "structures."

"Vacant parcel" shall mean a parcel containing no structure.

"Parcel" shall mean a parcel as designated by the Hamilton County Auditor's office, provided that two or more adjoining parcels under single ownership shall be considered one parcel; provided further that an unused portion of an otherwise developed parcel, appropriate for sale as a separate development tract, may be considered and counted as a separate "vacant parcel"; and provided that for purposes of counting parcels a vacant parcel in excess of 100,000 square feet in area shall be counted as that number of parcels which is the result of dividing the total parcel area in square feet by 100,000, rounded to the next highest whole number.


Analogous to C.O. 750-3a; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1-D. Deteriorating Area.

"Deteriorating area" shall mean an area within the city in which:

(a) At least 25 percent but fewer than 50 percent of the total number of structures and vacant parcels, reasonably distributed throughout the area, meet the criteria and factors specified in Sec. 725-1-B(a); and

(b) At least 20 percent of the structures, reasonably distributed throughout the area, are deteriorated or deteriorating; or the public improvements are in a general state of deterioration.


§ 725-1-P. Repealed.


§ 725-1-P1. Project Area.

"Project area" shall mean a blighted or deteriorating area for which an urban renewal plan has been prepared. A project area shall consist of or be located within one or more urban renewal areas.

(750-3d; ordained by Ord. No. 179-1959, eff. May 27, 1959; renumbered to C.M.C. 725-1-P1, eff. Jan. 1, 1972)

Analogous to C.O. 750-3e; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1-P2. Project Improvements.

"Project improvements" shall mean public improvements within or serving the project area which...
are necessary for carrying out the urban renewal objectives provided for in the urban renewal plan or council-approved design plans.

(Sec. 750-3c; ordained by Ord. No. 180-1968, eff. Apr. 10, 1968; renumbered to C.M.C. 725-1-P2, eff. Jan. 1, 1972)

§ 725-1-R. Redevelopment.

'Redevelopment' shall mean the acquisition of property in a blighted or deteriorating area, the demolition of the structures thereon, if any, site preparation, the making of project improvements or the disposition of such property for use in accordance with an urban renewal plan.


Analogous to C.O. 750-3b; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1-R1. Redeveloper.

'Redeveloper' shall mean any person, firm, public agency or corporation purchasing or leasing property within a project area for use in accordance with the urban renewal plan.


Analogous to C.O. 750-3g; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-1-R2. Rehabilitation.

'Rehabilitation' shall mean the restoration, rehabilitation or conservation of a deteriorating or blighted area by:

(a) Formulating and carrying out a plan for a program of voluntary improvement, modernization, repair or rehabilitation of privately owned structures;

(b) The acquisition of real estate and the demolition or removal of buildings thereon, if any, where necessary to eliminate unhealthful, unsanitary or unsafe conditions, lessen density, or eliminate conditions of blight or deterioration or incompatible land uses detrimental to the public health and welfare;

(c) Otherwise removing or preventing the spread of blight or deterioration;

(d) Constructing or reconstructing necessary streets, playgrounds, utilities, parks and other public improvements;

(e) acquir[ing and clearing] land for development of privately owned community facilities;

(f) Disposing, for uses in accordance with the urban renewal plan, of property acquired; and

(g) Purchasing, repairing and rehabilitating for guidance purposes and disposition of buildings which are located in the urban renewal area; or

(h) Use of federal or state funding programs for rehabilitation of properties and elimination of blight.


§ 725-1-S. Site Preparation.

'Site preparation' shall mean the demolition, clearance and removal of structures and abandoned utility facilities from a site and the necessary filling, grading and relocation or adjustment of utility facilities, and construction of improvements, necessary to prepare the site for disposition to a redeveloper or to carry out the city's contractual obligations under contracts for sale or lease of lands.


§ 725-1-U. Urban Renewal.

'Urban renewal' shall mean the redevelopment or the rehabilitation of a deteriorating or blighted area or areas, or a combination thereof, by actions including but not limited to the acquisition of real estate, and the demolition or removal of buildings, the installation of public improvements and supporting facilities, and the disposition of such property to public or private agencies for redevelopment or rehabilitation in
accordance with an urban renewal plan.

§ 725-1-U1. Urban Renewal Area (Impacted Area).

"Urban renewal area" shall mean an area defined by an urban renewal plan approved by council pursuant to this chapter and constituting a blighted or deteriorating area or areas.

§ 725-1-U2. Urban Renewal Plan.

"Urban renewal plan" shall mean a plan approved by council pursuant to this chapter for the urban renewal of an urban renewal area or a project area, whether denominated "urban renewal plan" or "urban design plan."


The planning commission may from time to time, or upon request from the city manager, identify proposed urban renewal areas. The city manager may prepare preliminary plans and recommendations or draft urban renewal plans for the urban renewal of such areas. A preliminary plan or draft urban renewal plan shall be sufficiently comprehensive to show the general features of development of the urban renewal area, including but not limited to approximate area boundaries, future land use, densities, traffic regulation and such other matters as may be appropriate. The preliminary plan or draft urban renewal plan shall be submitted to the planning commission for review and comment prior to preparation of the urban renewal plan in final form.
Analogous to C.O. 750-3; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-8. Urban Renewal Agent; Urban Renewal Plans.

The city manager is hereby designated as the agent of the city for carrying out its programs of urban renewal.

Subsequent to identification of a proposed urban renewal area by the planning commission, and submission to the planning commission for review and comment of a preliminary plan or draft urban renewal plan, the city manager is hereby authorized to cause to be undertaken either by force account or by contract the necessary studies, plans and surveys in connection with a proposed urban renewal area or project areas and may cause an urban renewal plan to be prepared covering such area. An urban renewal plan shall include when appropriate but need not be limited to the following:

(a) A description of the boundaries of the urban renewal area.

(b) A map or maps showing land uses proposed in the area after renewal thereof, the proposed street layout, and any publicly or privately owned community facilities to be constructed in the area.

(c) A statement indicating the uses and development restrictions on property in the area which is to be sold or leased by the city for redevelopment.

(d) A statement as to the changes in public facilities or utilities which will be required in the area after redevelopment or rehabilitation.

The city manager shall cause a plan to be prepared for the relocation of the families which will be displaced by the urban renewal of each such area and shall establish a relocation service to aid such families to find other suitable accommodations.

Documentation shall be prepared and maintained giving evidence that an urban renewal area is blighted.
or deteriorating. If necessary to establish whether an area is a blighted or deteriorating area, the city manager is hereby authorized to require owners and residents of properties to provide reasonable access for interior and exterior inspections.


When an urban renewal plan has been prepared the city manager shall transmit the plan to council, together with documentation of blight or deterioration and with a feasible method for the relocation of the families which will be displaced from the area.


Upon receipt of the urban renewal plan, council shall refer the plan to the planning commission for approval. In the event of failure to approve the plan the planning commission shall communicate its reasons therefor to council.


Upon receipt of the approval of the planning commission council shall hold a public hearing on the question of the adoption of the urban renewal plan at which an opportunity shall be provided to all persons or organizations interested to be heard either in person or by counsel. In the event the planning commission fails to approve the plan, council may hold such hearing or may indefinitely postpone consideration of the plan. Notice of the time and place of such hearing shall be published in the City Bulletin or other newspaper of general circulation in the city once a week for not less than two successive weeks immediately prior to the date of the hearing. The first publication shall be not less than 10 days prior to the date of the hearing, inclusive of the date of publication but exclusive of the date of hearing.

The notice shall contain a description of the urban renewal or project area by its location in relation to highways, streets, streams or other landmarks, and shall state that maps and plats and other materials describing the urban renewal plan are available for public inspection at a place to be designated in such notice. The notice shall also contain a statement that the city's relocation program will be available for examination and will be open for discussion at the hearing.

Failure to comply strictly with the notice requirements of this section shall not invalidate approval of an urban renewal plan or modification thereof.


After the public hearing, council may approve the urban renewal plan by a majority vote, unless the planning commission has failed to approve the plan, in which case it may be approved by a vote of not less than two-thirds of the members of council. In the event that council approves the urban renewal plan, it shall include in its approval the following findings:

(a) That the area described in the urban renewal plan is a deteriorating or blighted area;

(b) That there is a feasible method for the temporary relocation of the families displaced from the urban renewal or project area and that there are or are being provided in the area or in other areas not less desirable in regard to public utilities and public and commercial facilities at rents and prices within the financial means of the families displaced from the area decent, safe and sanitary dwellings equal in number to the number of and available to such displaced families,
and reasonably accessible to their places of employment.

(c) If financial aid is to be provided by the federal government, that the aid is necessary to enable the project to be undertaken in accordance with the urban renewal plan;

(d) That the urban renewal plan will afford maximum opportunity consistent with the sound needs of the locality as a whole for the redevelopment or rehabilitation of the area by private enterprise;

(e) That the urban renewal plan conforms to the master plan as it then exists for the overall development of the city.


§ 725-14 Recording and Filing of Approved Urban Renewal Plans.

The director of city planning shall maintain copies of urban renewal plans approved by city council together with copies of the blight documentation required by Section 725-3. The director of city planning shall cause to be prepared and maintained maps of the city depicting boundaries of urban renewal areas including all plans approved after January 1, 1990.

(Sec. 725-14; ordained by Ord. No. 225-90, eff. July 2, 1990)

§ 725-15. Acquisition of Property, Rehabilitation; Site Preparation and Project Improvements.

After the approval of the urban renewal plan by council, the city manager shall proceed to carry out the redevelopment or rehabilitation of the urban renewal project area in accordance with the urban renewal plan. The city manager is hereby authorized in a blighted area to acquire either by negotiation or appropriation any property, whether or not a particular property contributes to the qualification of the area as a blighted area, the acquisition of which is reasonably necessary in carrying out the urban renewal plan. The city manager is hereby authorized in a deteriorating area to acquire either by negotiation or appropriation only properties which contribute to the qualification of the area as a deteriorating area, the acquisition of which is reasonably necessary in carrying out the urban renewal plan. The acquisition authorization stated here in no respect limits the city's authority to acquire any property for any public purpose other than blight elimination. The city manager is hereby authorized in blighted or deteriorating areas to rehabilitate property, demolish the buildings and do other site preparation work on property acquired by the city, to cause such studies, plans and surveys to be made by force account or by contract which are necessary and proper to carry out the project improvements in accordance with the urban renewal plan or in accordance with council-approved design plans, to do all things necessary or appropriate to carry out the acquisition of property, redevelopment, rehabilitation, demolition of buildings, to provide studies, plans or surveys for project improvements, and to provide, if necessary, the services of architects and home management specialists to residents or businesses in the area.

Analogous to C.O. 750-17; r. Ord. No. 179-1959, eff. May 27, 1959.

§ 725-17. Conforming Agreements.

If the owner of property in an urban renewal area is willing to make the use of such property conform to the urban renewal plan and the city manager is of the opinion that the acquisition of the owner's property will not be necessary to carry out the urban renewal plan if the owner makes the property conform to the urban renewal plan, then in such case the city manager, in lieu of acquiring such property may, on behalf of the city, enter into an agreement with such owner in which the owner agrees to conform the land, the structures thereon and the use thereof to the urban renewal plan within the time set forth in the agreement. The city manager may require as a condition to entering into such agreement that the owner furnish such security for the performance of obligations under such agreement as the city manager believes is necessary in order to protect the interests of the city.

(Sec. 750-19; ordained by Ord. No. 179-1959, eff. May 27, 1959; renumbered to C.M.C. 725-17, eff. Jan. 1, 1972)

The city manager or any person interested may petition council to modify an urban renewal plan. Such petition shall be in writing and shall state in detail the modification desired. Upon receipt of such petition, council shall refer it to the city planning commission for its recommendation. The city planning commission shall either approve or disapprove modification and return the petition to council, together with its recommendation.

In the event the proposed modification contemplates an expansion of the urban renewal or project area, documentation shall be prepared giving evidence that at the time of the proposed modification either:

(a) The area which comprises the addition to the existing urban renewal or project area qualifies as a blighted or deteriorating area; or

(b) The entire urban renewal or project area including the proposed additional area qualifies as a blighted or deteriorating area.

In the event the proposed modification contemplates an alteration of the urban renewal or project area boundaries, additional public acquisition of property, or a change in zoning within the area, council shall, before considering it, hold a public hearing thereon, at which an opportunity shall be provided for all persons interested to be heard, either in person or by counsel. Notice of such hearing shall be given in the manner prescribed in Section 725-11 of this chapter. Council may either approve or reject the proposed modification by a majority vote unless the planning commission has failed to approve the plan, in which case it may be approved by a vote of not less than two-thirds of the members of council. If the proposed modification is adopted by council, it shall become a part of the urban renewal plan.


Each deed conveying title to property within an urban renewal or project area shall contain a covenant or covenants prohibiting the restriction of the sale or use of such property on the basis of race, religion or any other standard that is not applicable to all persons or families irrespective of race, religion or ancestry.


§ 725-25. Financial Assistance.

The city manager is hereby authorized to take all necessary administrative steps to secure financing of urban renewal programs, including federal or state aid, and is further authorized to cause the necessary studies, plans and surveys to be undertaken by force account or by contract necessary for making application for such financing when application therefor has been authorized by council.

The city manager is hereby designated as the agent of the city to execute and administer in the city...
the urban renewal programs financed or assisted by federal or state agencies. In the execution and administration of such urban renewal programs, the city manager is authorized to cause the necessary and appropriate services, studies and plans to be undertaken either by force account or by contract. The city manager or person designated by the city manager may sign proclamations relative to fair market values of properties.


The city manager may delegate to the director of any department or any division of any department under the control of the city manager the duties imposed and authority conferred on the city manager by this chapter.

ENVIRONMENTAL REPORT
Phase II
Environmental Site Assessment
of the
Conrail River Road Railroad Yard
Cincinnati, Ohio

Prepared for:
The City of Cincinnati
Department of Economic Development
805 Central Avenue, Suite 710
Cincinnati, Ohio 45202

Prepared by:
BHE Environmental, Inc.
4055 Executive Park Drive
Cincinnati, Ohio 45241

December 1995

Notice: This report has been prepared by BHE Environmental, Inc. (BHE), for the use of its client in accordance with an approved Scope of Work. Use of this report or the information in the report by persons other than BHE’s client without the express written consent of BHE shall be at the risk and liability of that person. BHE shall not be liable for any damages resulting from any unauthorized use of this report. The report may not include all information pertaining to the described site.
INTRODUCTION

PURPOSE

In September 1995, the City of Cincinnati, Department of Economic Development, contracted BHE Environmental, Inc., to conduct a Phase I Environmental Site Assessment (ESA) of the Consolidated Railroad Corporation (Conrail) River Road railroad yard in the Sedamsville section of Cincinnati, Ohio (see Figure 1). The purpose of the Phase I ESA was to identify any recognized environmental conditions associated with the property. A recognized environmental condition is defined by ASTM Standard E 1527-94 as "the presence or likely presence of any hazardous substances or petroleum products ... that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures ... ground, groundwater, or surface water of the property."

During the Phase I ESA, BHE identified the following recognized environmental conditions at the subject site:

- Formerly a railroad yard with a round house, turntable, and associated structures. A variety of hazardous materials and petroleum products are typically associated with the maintenance activities that would have been conducted in the round house. In addition, releases may have occurred throughout the area of the property formerly occupied by railroad tracks. These spills and leaks may have been from maintenance fluids used on site, materials transported by the trains, and the locomotives themselves.

- The property was formerly leased by an oil hauler. It is possible that petroleum releases from their activities have occurred.

- The western portion of the site was formerly leased by a drum recycler that reportedly stored thousands of drums of unidentified materials. Because of the drum storage, the site is listed on the Ohio EPA Master Spills List. It is possible that materials stored in the drums were released on site.

- A release of diesel fuel occurred in the maintenance area of a former tenant when a building used for maintenance and truck storage was destroyed by fire. An emergency response cleanup was conducted; however, the extent of remaining contamination, if any, is not known.

- Two current tenants use petroleum products and hazardous materials for maintenance of yard equipment and containers. Evidence of releases of petroleum products and possibly other maintenance fluids was observed in both maintenance areas.

- An electrical transformer was observed lying on its side on the ground near a fallen utility pole just southwest of the former machine and carpenter's shop.
foundation. Based on the appearance of the transformer, it was installed before 1979 and, therefore, the dielectric fluid may have contained PCBs.

SCOPE OF WORK

To determine if hazardous substances or petroleum hydrocarbons had been released to the environment from the recognized environmental conditions identified at the site, a Phase II ESA was undertaken to obtain soil and groundwater samples. The Phase II Scope of Work included the following:

- Installed 12 soil borings (see Figure 2 for locations). Soil samples from each boring were selected for chemical analysis.
- Collected a groundwater sample from one boring for chemical analysis.
- Analyzed the soil and groundwater samples for hazardous substances and petroleum hydrocarbons.

SITE DESCRIPTION

The Conrail River Road rail yard is about 67 acres in size and is located at 3345 River Road (U. S. Route 50) in the Sedamsville section of Cincinnati, Ohio. The property is bounded by River Road to the north and west, an undeveloped lot to the east, and active Conrail railroad tracks to the south (see Figure 2). The area north of River Road is mixed residential and commercial. The properties across the active Conrail tracks are occupied by a bulk oil terminal, a grain terminal, a scrap recycling facility, a former home heating fuel distributor, undeveloped land, residences, and a liquid bulk products terminal.

The property is relatively flat, with the exception of a steep, approximately 50-foot high embankment along the northern edge of the site. The site elevation ranges from approximately 550 feet above mean sea level (National Geodetic Vertical Datum) at the top of the embankment to about 500 feet above mean sea level at the bottom of the embankment and throughout the rest of the site.

Most of the property is paved or covered with gravel. The remaining areas are overgrown with bushes and trees. No bodies of water are located on the property. The Ohio River is located about 600 feet south of the site.
FIELD INVESTIGATION

On October 30, 1995, BHE mobilized its Geoprobe® soil sampling system to the Conrail River Road rail yard to install soil borings for the Phase II ESA. A total of 12 borings were installed at the locations shown on Figure 2.

The Geoprobe® uses a hydraulic system to push a sampling tube. After the sampling tube is pushed to the top of the desired sampling depth, a retractable drive point in the sampling tube is released and the sampler is advanced. The drive point retracts as the sampling tube is advanced, allowing a soil sample into the liner of the sampling tube. The soil sampler is then removed from the boring and the new disposable, transparent sample-tube liner containing the soil sample is removed from the sample tube.

For this investigation, four-foot long and two-foot long soil samplers were used to collect the soil samples. The sample collection scheme varied to some degree, but generally the four-foot long sampler was used to collected soil samples within the upper eight feet of the boring. The two-foot long sampler was used below that depth. The original scope of work required that six shallow borings be sampled to eight feet below grade and that six deep borings be extended to the water table at an estimated depth of 30 feet. Because groundwater was not encountered at the anticipated depth, all deep borings were extended to a depth of at least 35 feet. Only boring GB-12 encountered groundwater.

The recovered soil samples were placed in new glass sample jars with Teflon-lined lids, in accordance with standard U. S. EPA sampling protocol. The samples were logged and described by the BHE on-site geologist. (See Appendix A for Drilling Logs). A portion of each sample was placed in a zip lock bag for the field screening using a Foxboro Century 128 organic vapor analyzer (OVA), calibrated to methane. The highest observed meter response for each sample was recorded on the Drilling Log. One soil sample from each shallow boring was selected for chemical analysis based on the field screening results, discoloration and odor. Two samples from the deep borings were selected for analysis; a shallow sample was selected based on field screening, discoloration and odor and a second sample was selected from near the bottom of the boring based on discoloration and odor. The samples were submitted to CT&E Environmental Services, Inc. (CTE) for analysis.

The original scope of work called for collecting groundwater samples from all six deep borings, if possible. A sample of groundwater could only be collected from boring GB-12. To collect the sample a stainless steel, mill-slotted well screen attached to Geoprobe® drilling rods was lowered to the bottom of the boring. A length of new, disposable polyethylene tubing with a stainless
steel ball valve was used as a positive-displacement pump to collect the sample. The groundwater sample was collected in two 40-ml vials with Teflon, septa lids. The groundwater sample was chilled to 4°C and shipped to CTE for analysis.

ANALYTICAL RESULTS

SOIL SAMPLES

A total of 17 soil samples were selected for chemical analysis during the Phase II ESA. All 17 samples were analyzed for diesel range organics (DRO) by EPA Method 8015, volatile organic compounds (VOCs) by EPA Method 8240 and polychlorinated biphenyls (PCBs) by EPA Method 8080. Additionally, the shallowest samples from borings GB-1, GB-6, GB-7, GB-8, GB-9, GB-10 and GB-11 were analyzed for base, neutral and acid extractable semivolatile organics (BNAs) by EPA Method 8270 and the shallowest sample from each of the 12 borings was analyzed for RCRA metals by appropriate EPA methods. The CTE Laboratory Analysis Reports may be found in Appendix B. The following sections summarize the analytical results. Refer to Table 1 and Figures 3 and 4 for a summary of the analytical results.

DRO

The Phase I ESA indicated that the site may have been affected by releases of diesel fuels by the operations of the railroad company and several tenants. To quantify if a releases had occurred at the site all 17 soil samples were analyzed for DRO. DRO was quantified to be present in nine of the 17 samples at concentrations ranging from 6.1 ppm [GB-10 (6-8 ft)] to 4,300 ppm [GB-9 (2-4 ft)]. At those boring locations where two samples were submitted for chemical analysis only the shallow sample contained DRO.

VOCs

The Phase I ESA also indicated that VOCs associated with maintenance activities of the railroad company or its tenants may have been released at the site. To quantify if a release had occurred, all 17 samples were analyzed for VOCs. Only two soil samples contained measurable quantities of VOCs. Sample GB-3 (0-2 ft) contained acetone (0.13 ppm) and tetrachloroethene (0.1 ppm), and sample GB-10 (6-8 ft) contained acetone (0.13 ppm). Acetone is a suspected laboratory contaminant, but tetrachloroethene is a solvent which may have been used at the site.
BNAs

Selected soil samples were analyzed for BNA compounds which includes a group of compounds referred to as polynuclear aromatic hydrocarbons (PAHs) that may be present in the diesel and coal used at the site as fuel for the train engines and the trucks used by various tenants. Since the most like sources of these compounds would be spills from the engines and trucks, only shallow soil samples at seven locations were analyzed for BNAs. BNA compounds were quantified to be present in samples GB-1 (0-2 ft), GB-6 (0-2 ft), GB-7 (0-2 ft), GB-9 (2-4 ft), GB-11 (0-2 ft). Total BNAs ranged from 0.85 ppm in sample GB-1 (0-2 ft) to 29.09 ppm in sample GB-11 (0-2 ft). The BNA compounds present in the soil samples are PAHs found in diesel fuel and coal. The diesel PAH-compounds include naphthalene and 2-methylnaphthalene. The coal PAH-compounds include acenaphthene, phenanthrene, anthracene, fluoranthene, pyrene, chrysene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenzofuran. The samples from GB-1 (0-2 ft) and GB-6 (0-2 ft) contain diesel PAH-compounds, whereas the other samples containing coal PAH-compounds.

PCBs

All 17 soil samples were analyzed for PCB compounds. Source at the site could include electric transformers that may have been used at the site. No PCBs were quantified to be present above the method detection limit in any of the soil samples.

Metals

The shallowest soil sample from all 12 borings was analyzed for the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver). All of these metals may have been present in coal or other materials handled at the site. All of the metals, except selenium and silver, were quantified above the laboratory method detection limit in one or more of the 12 soil samples. Arsenic and barium were quantified in all of the samples; chromium in eleven of the samples, cadmium in seven of the samples, lead in five samples and mercury in one sample.

GROUNDWATER

Groundwater was only identified to be present at the maximum drilling depth at boring GB-12. A groundwater sample collected from the boring was only analyzed for VOCs due to the limited amount of water present. No VOCs were present in the sample above the laboratory method detection limit.
CONCLUSIONS

Because the Phase I ESA identified that hazardous substances and petroleum compounds may have been released to soil or groundwater from past and ongoing site activities, soil and groundwater samples were collected from 12 soil borings to determine, if possible, if a release had occurred. As the intent of a Phase II ESA is to determine only the presence or absence of these contaminants, the work completed cannot define the extent or magnitude of contamination.

Petroleum hydrocarbons as DRO and PAHs were present at boring locations GB-1, GB-2, GB-3 GB-6, GB-7, GB-9, GB-10, GB-11 and GB-12. At locations where both shallow and deep soil samples were analyzed, the DRO was only present in the shallow sample. Available information suggests that the DRO is associated with diesel fuel used by the railroad and several tenants. The highest measured concentrations of DRO were at locations GB-9 and GB-11. Boring location GB-9 is near an operational above ground fuel storage tank around which an obvious spill has occurred. PAH compounds associated with diesel fuel were identified at locations GB-1 and GB-9. Currently there are no specific action levels for DRO in soil associated with surface releases, however, the Ohio Bureau of Underground Storage Tank Regulations (BUSTR) action level of 380 ppm could be considered a conservation action level. Only the sample at GB-9 contained DRO at a concentration above this action level.

VOCs were identified only at two locations (GB-3 and GB-10). Acetone, a common laboratory contaminant, was present in both samples and its presence is not believed to be associated with a release of hazardous substances. The soil sample collected from GB-3 contained tetrachloroethene at 0.1 ppm. GB-3 was collected at the location of a former barrel recycler and may reflect a spill by that tenant. Currently there are no specific state or federal numeric action levels for remediation of tetrachloroethene in soil. However, a U. S. EPA toxicologist has calculated the concentration of tetrachloroethene in soil that would result in an unacceptable risk to human health. The U. S. EPA toxicologist as determined that a concentration less than 12 ppm will not result in an unacceptable human health risk. The measured concentration at location GB-3 is less than 12 ppm.

PCBs were not present in soil sample at the site. These data suggest that releases from transformers and other electrical equipment has not occurred in the areas samples at the site.

Several PAH compounds associated with coal and coal ash were identified in samples collected at locations GB-7, GB-9 and GB-11. Finding these compounds is expected based on past railroad activities. The types of compounds present and the concentrations identified reflect natural conditions for coal.
Six naturally occurring metals were identified to be present in one or more soil samples at the site. All may be associated with the coal used at the site or may be present in the natural soil of the site. To evaluate if the measured concentrations reflect natural conditions, the reported concentrations can be compared to reported natural ranges of these metals in soils of Ohio and the eastern U. S. (Table 2). As can be seen on the table, the measured concentrations of all metals found in soil at the site are within ranges reflecting natural soil conditions.

**RECOMMENDATIONS**

Based on the sampling program completed during the Phase II ESA at the Conrail River Road rail yard, only one area of the site requires further consider. Soil boring GB-9 is located at an above ground fuel storage tank used by a current tenant from which there has been an obvious spill. The analytical results indicate that total petroleum hydrocarbons from the tank are in soil at this location. Appropriate actions should be taken to remediate the petroleum hydrocarbons in the soil.

While evidence of coal, coal ash and diesel fuel are evident at the site, the measured concentrations appear to reflect normal conditions for a rail yard. No further investigation is needed to further quantify the nature of these contaminants in the environment.

Prepared By:

[Signature]

William E. Thompson, CPG
Director
Earth Sciences Group

December 15, 1995
Phase I
Environmental Site Assessment
of the
Conrail River Road Railroad Yard
Cincinnati, Ohio

Prepared for:
The City of Cincinnati
Department of Economic Development
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Cincinnati, Ohio 45202

Prepared by:
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November 1995
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INTRODUCTION

PURPOSE

In September 1995, the City of Cincinnati, Department of Economic Development, contracted BHE Environmental, Inc. to conduct a Phase I environmental site assessment (ESA) of the Consolidated Railroad Corporation (Conrail) River Road railroad yard in the Sedamsville area of Cincinnati, Ohio (see Figure 1). The purpose of this Phase I ESA was to identify any recognized environmental conditions associated with the property. The Phase I ESA was conducted by Ms. Karen Epcke and Mr. Dennis Schucker. Ms. Epcke’s and Mr. Schucker’s qualifications are presented as Appendix A. This report has been prepared exclusively for the use of the City of Cincinnati.

SCOPE OF WORK

The scope of work for the Phase I ESA consisted of collecting and reviewing available background information, conducting a site inspection, and preparing a report summarizing BHE’s activities and findings in accordance with the American Society for Testing and Materials (ASTM) Standard E 1527-94 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process). The following subsections present specific tasks included in this effort.

Records Review

Site Physical Characteristics Sources

In the site physical characteristics research phase of this project, BHE performed the following tasks:

- Obtained and reviewed soil, geology, and groundwater maps/references to determine the on-site soil types, depth to bedrock and type, depth to groundwater, groundwater quality, and any significant geologic features that may affect contaminant migration.

- Reviewed a United States Geological Survey (USGS) 7.5-minute series topographic map (Covington, Kentucky-Ohio Quadrangle) of the area of the subject property.
**Historical Sources**

In the historical research phase of this project, BHE performed the following tasks to determine land ownership and prior uses of the subject property to identify if any on-site operations may have adversely affected the subject site:


- Reviewed Williams Cincinnati City Directories at the Public Library of Cincinnati and Hamilton County from 1927/1928 to 1993.


**Regulatory Agency File Sources**

In the regulatory review phase of the project, BHE performed the following tasks:

- Reviewed the U.S. Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list and National Priorities List (NPL) to locate potential and existing hazardous waste sites within one-half mile and one mile, respectively, of the subject property.

- Reviewed the U.S. EPA Emergency Response Notification System (ERNS) list to determine whether any releases of oil or hazardous substances have been reported at the subject site or adjacent sites.

- Reviewed the U.S. EPA Resource Conservation and Recovery Information System (RCRIS) list of Resource Conservation and Recovery Act (RCRA) facilities to identify hazardous waste large and small quantity generators at or adjacent to the subject site and treatment, storage, and disposal facilities (TSDFs) within one mile of the subject site.

- Reviewed the Master Sites List (MSL) maintained by the Ohio Environmental Protection Agency (OEPA) Division of Emergency and Remedial Response (DERR) to locate potential and existing hazardous waste sites within one mile of the subject site.

- Reviewed the OEPA Division of Solid and Hazardous Waste Management list of licensed solid waste facilities in Ohio to locate permitted landfills and solid waste disposal facilities within one-half mile of the subject site.

- Reviewed the Ohio Department of Commerce Division of State Fire Marshal Bureau of Underground Storage Tank Regulations (BUSTR) lists of registered USTs adjacent to the subject site and leaking USTs within one-half mile of the subject site.

- Contacted the City of Cincinnati Division of Fire regarding hazardous material spills, releases, or fires, the presence of underground storage tanks (USTs), and any UST removals or remediation projects at or adjacent to the subject property.
Site Inspection and Interviews

During the October 26, 1995 site inspection, BHE performed the following tasks:

- Determined any current and/or former locations of aboveground storage tanks (ASTs) or USTs and associated piping and characterized tank contents.

- Inspected the subject property for equipment (e.g., transformers, capacitors, hydraulic equipment, and generators) that might contain PCBs. Inspected areas of potential PCB-containing equipment use for evidence of spills or releases.

- Performed a detailed inspection of the site for the presence of hazardous materials and evidence of hazardous material dumping, burial, releases, or spills (e.g., filled areas, graded areas, mounds, depressions, subsidence, stressed vegetation, stained soil or pavement, leachate seeps, unnaturally discolored ponded or flowing waters, and abnormal odors). Characterized any material that may have been dumped or released on site.

- Inspected the subject property for the presence of bodies of water and for any areas that may be classified as floodplains or jurisdictional wetlands.

- Inspected the subject property for the presence of groundwater wells, dry wells, cisterns, cess pools, septic tanks, grease traps, emission stacks, or vent pipes.

- Inspected the grounds for evidence of effects from off-site facilities or activities.

- Inspected the storage, handling, and disposal of hazardous materials used or generated on site.

SITE DESCRIPTION

LOCATION AND LEGAL DESCRIPTION

The subject property is a 67.02-acre site located at 3345 River Road (U.S. 50) in the Sedamsville area of Cincinnati, Ohio. The property is bounded by River Road to the north and west, an undeveloped lot to the east, and active Conrail railroad tracks to the south (see Figure 2). The area opposite the subject site across River Road is mixed residential and commercial. Southside Avenue is beyond the vacant lot to the east. The properties across the active Conrail tracks from the subject site are occupied by a Uno Ven 76 bulk oil terminal, a Consolidated Grain and Barge Company grain terminal, a scrap recycling facility, Schureman Home Heating, undeveloped land, residences, and the Lindsey Southside bulk products terminal.

SITE AND VICINITY CHARACTERISTICS

Most of the subject property is relatively flat, with the exception of a steep, approximately 50-foot embankment along the northern edge of the site. The site elevation ranges from

11.262/NW
approximately 550 feet above mean sea level (National Geodetic Vertical Datum) at the top of the embankment to about 500 feet above mean sea level at the bottom of the embankment and throughout the rest of the site.

Most of the property is paved or covered with gravel. The remaining areas of the site (particularly the northern side) are overgrown with bushes and trees. No bodies of water are located on the subject property. The Ohio River is approximately 600 feet south of the subject site.

Soils, Geology, and Hydrogeology

The surface soil of the northern edge of subject property (the embankment) is mapped by the USDA Soil Conservation Service (SCS) as the Urban land-Elkinsville complex, 8 to 15 percent slopes. Areas of this complex typically are approximately 60 percent urban land and 20 percent Elkinsville silt loam. The Urban land portion of the complex is so covered with buildings and pavement that the original soil type is obscured. The Elkinsville silt loam is a deep, strongly sloping, well-drained soil on terraces. Permeability is moderate, the available water capacity is high or very high, runoff is rapid, and the potential for frost action is high. The soil is highly corrosive to concrete.

The soil in remaining areas of the site is mapped as the Urban land-Huntington complex, frequently flooded. This complex consists of about 60 percent Urban land and 20 percent Huntington silt loam. The Huntington silt loam is a deep, nearly level, well-drained, gently sloping soil on floodplains. The Urban-Huntington complex is subject to flooding by the Ohio River, where not protected by a floodwall. The seasonal water table is high, causing slow permeability. Available water capacity is high or very high, runoff is slow, and the potential for frost action is high.

The area of the subject site is among the best groundwater areas in the county. Yields of as much as 1,000 gallons per minute can be obtained from permeable sand and gravel deposits in ancient stream channels.

Floodplains

The subject site is approximately 600 feet north of the Ohio River. It is likely that the site is within the 100-year floodplain of the river.
Wetlands

BHE inspected the subject site to determine if any portions of the site could be classified as jurisdictional wetlands as defined by the Clean Water Act. Definition of a wetland is based on several parameters such as vegetation type, groundwater and surface water characteristics, and soil characteristics. BHE observed no evidence of hydrophytic vegetation on site and no bodies of water are located on the subject property.

BHE reviewed the National Wetlands Inventory Map for the area of the subject site (Covington, Kentucky-Ohio Quadrangle). No wetlands are identified on the subject property.

BHE reviewed the USDA NRCS list of hydric soils and non-hydric soils with hydric components in Hamilton County. Neither of the on-site soil types is listed as a hydric soil or a non-hydric soil with hydric components.

STRUCTURES, ROADS, AND OTHER IMPROVEMENTS

The subject property is accessed via a paved driveway from River Road. Approximately the eastern third of the site is divided from the western two-thirds of the site by a berm constructed of soil and construction debris (i.e., concrete rubble).

Structures in the eastern third of the site include an office trailer and several semi-tractor trailer containers used for maintenance equipment storage (see Figure 3). A concrete pad is just south of the maintenance containers. Most of the remaining area of the eastern third of the site is covered with gravel. An underground petroleum pipeline runs through the vegetated area at the north edge of this portion of the site, just south of River Road. BHE was not able to determine whether or not this pipeline is on the subject site or just north of the site.

Structures in the western two-thirds of the site include a small office building and several semi-tractor trailer containers used for maintenance equipment storage (see Figure 4). A number of concrete foundations of former structures are located in this portion of the site, west of the office building. A metal rack and a concrete floor divided into segments by piping (possibly part of a former fueling or wash station) are located north of the office. The central portion of the western two-thirds of the site is paved, and most of the remaining area is covered with gravel.
PROPERTY USES

CURRENT USES

The eastern third of the subject site is currently occupied by Reserve International Services, Inc., and the western two thirds of the site is occupied by Kentucky Container Service, Inc. Both companies store and perform maintenance on semi-tractor trailer containers for shipping lines. Nearly all of the containers stored on site are empty. The few containers with materials in them are stored for short periods of time before being shipped off site. Reportedly, containers of hazardous materials are never stored on site.

PAST USES

The subject site was formerly a railroad yard. The 1922, 1934, and 1951 Sanborn Maps identify an active New York Central Lines Cleveland, Cincinnati, Chicago & St. Louis Railroad Company round house and turntable at the western end of the site. A water treatment plant, building, a water storage building, two water storage tanks, and a boiler house are shown just southwest of the round house. An office/stock building, a smaller office building, a tool shed, and a building that housed a machine shop, a carpenter’s shop, and a locker room are shown just east and southeast of the roundhouse (in the current Kentucky Container maintenance area). Several small structures that may have been associated with the fire prevention system are shown farther east of the round house. Most of the remainder of the site is shown as being occupied by numerous sets of railroad tracks. The Williams City Directories from the early 1940s through the late 1960s identify the yard as the New York System car depot, storage depot, round house, and wade tower. The 1938, 1950, and 1956 aerial photographs all show a railroad yard with a round house, turntable, and associated structures at the subject site.

In the early 1970s, the city directories list the Penn Central Transportation Company round house, trainmaster’s office, police department, signal department, and maintenance-of-way office at the site. In 1978, the city directory lists the Conrail round house and truck trailer depot at the site. The 1981 Sanborn Map shows the turntable was not in operation and the water treatment structures and boiler house were no longer present. The 1975 and 1977 aerial photographs still show the railroad yard, round house, turntable, and associated structures. The 1990 aerial photograph, however, shows most of the railroad tracks had been removed and the site was occupied by numerous rows of semi-tractor trailer containers. The building footprint of the former round house is visible in the photograph. The city directories list Intermodal Transportation (oil
hauliers) and Xtra (a division of Intermodal Transportation) at the subject property in 1983 and 1988 and Kentucky Container Service of Ohio at the site in 1993.

BHE was informed by Kentucky Container employees that Queen City Barrel leased the westernmost portion of the site from the late 1980s until about 1990. Queen City Barrel reportedly stored approximately 10,000 to 20,000 unauthorized 55-gallon drums of unknown material in the area of the round house and west of the round house. Kentucky Container employees stated that fumes from materials stored in the drums were very strong at times. Conrail terminated Queen City Barrel's lease when it became aware of the situation, and Queen City Barrel subsequently removed the drums.

Copies of the Sanborn Maps and the aerial photographs are presented as Appendices B and C, respectively.

**POTENTIAL ENVIRONMENTAL CONCERNS**

**ON-SITE POTENTIAL ENVIRONMENTAL CONCERNS**

BHE reviewed the Environmental Data Resources, Inc. (EDR) list of OEPA DERR MSL, U.S. EPA CERCLIS, and U.S. EPA NPL sites to determine whether or not the subject property is listed as a potential or existing hazardous waste site. A copy of the EDR report is presented as Appendix D. The MSL is a database developed by the OEPA DERR of hazardous waste sites or sites where there is a known, suspected, or likely release of hazardous waste from a facility. The CERCLIS list is a federal inventory of potential problem sites containing or suspected to contain hazardous substances perceived as a threat to human health or the environment. Each CERCLIS site is assigned a priority ranking for further investigation to determine if the site should be included on the NPL. The NPL is a federal list of designated Superfund sites which have been targeted for priority cleanup.

The subject property is not listed on the CERCLIS list or the NPL. The subject site is listed on the OEPA MSL as a low priority site, indicating there is evidence or it is suspected that hazardous waste has been managed, and there is the potential for a release of hazardous waste that may pollute the air, water or soil. The EDR report identifies the subject site as the Queen City Barrel Company (which formerly leased a portion of the site) and identifies the problem at the site as contamination of the groundwater by volatile organic compounds. This is discussed further in the *Hazardous Material Spills, Leaks, Fires, or Dumping* section of the report.
Hazardous Waste Generators and TSDFs

BHE reviewed the EDR report to determine whether or not a RCRA large or small quantity hazardous waste generator or TSDF is reported at the subject property. An EPA number is required in order to handle hazardous wastes. It is the responsibility of the notifier to inform the proper agency of any subsequent changes in the status of the site; therefore, some of the information on the list may not be current. Inclusion on the list of RCRIS notifiers does not imply that a hazardous waste is being mishandled at a site, but simply indicates the type of hazardous waste activity occurring at the site. No RCRA facilities are identified at the subject property.

Solid Waste Facilities

BHE reviewed the EDR report to determine whether an OEPA Division of Solid and Hazardous Waste Management licensed solid waste facility is located at the subject property. BHE determined that there is no licensed solid waste facility at the subject site.

Storage Tanks

BHE reviewed BUSTR information provided by EDR regarding registered or leaking USTs at the subject property. BUSTR has no record of registered or leaking USTs at the subject property.

BHE contacted the City of Cincinnati Division of Fire regarding USTs at the subject site. The Division of Fire has no record of any USTs at the subject site.

BHE inspected the subject property for visual evidence of ASTs and USTs such as former pump islands, fill caps, and vent pipes. No evidence of current or former USTs was observed.

Several ASTs are located on site. One gasoline, one diesel fuel, and one waste oil AST are located in the Reserve International Services maintenance area. Each of the ASTs is an approximate 550-gallon steel tank situated within welded sheet metal secondary containment. BHE noted free product in the diesel fuel and waste oil secondary containment, as well as evidence of releases from the secondary containment onto the ground. One approximate 550-gallon diesel fuel AST is located in the Kentucky Container area of the site, northwest of the office building. The AST is within secondary containment; BHE observed no evidence of releases from the containment.

Hazardous Materials/Petroleum Products and Waste Disposal Practices

BHE visually inspected the subject property for evidence of hazardous materials or petroleum products that are used, stored, and/or disposed on site. A variety of materials are in the
maintenance equipment storage containers in both the Reserve International Services and Kentucky Container maintenance areas. These materials include consumer-sized quantities (i.e., spray cans and one-quart containers) of motor oil, lubricants, enamels, etc. Also stored in the maintenance equipment storage containers are gasoline in safety cans and five-gallon buckets of gear oil, hydraulic oil, grease, and coatings/paints.

As previously discussed, two approximate 550-gallon ASTs containing gasoline, diesel fuel, and waste oil are located in the Reserve International Services maintenance area and one approximate 550-gallon diesel fuel AST is located northwest of the Kentucky Container office building.

According to Mr. Dave Fee, the Manager of Reserve International Services, maintenance is conducted on their yard equipment and the containers, but not on the semi-tractors, which do not remain on site after delivering the containers. He informed BHE that waste oil generated from maintenance on the yard equipment is collected in five-gallon buckets and transferred to the waste oil AST. The waste oil is periodically disposed by an oil recycler. An overflowing five-gallon bucket filled with waste oil and rainwater was observed in the Reserve International maintenance area. Mr. Fee informed BHE that no other waste materials are generated on site.

Two rusted, unlabeled 55-gallon drums were observed beneath a semi-tractor trailer immediately east of the maintenance area. The drums appeared to be empty; their former contents are not known.

Several 55-gallon drums are located on the Kentucky Container portion of the site. One 55-gallon drum of antifreeze and one 55-gallon drum of oil are stored on their sides on stacks of wood pallets on a concrete foundation in the maintenance area. A container to catch drips is located beneath the antifreeze spicket; however, there is no container beneath the oil spicket and oil staining was observed on the concrete beneath the spicket. One additional 55-gallon drum of antifreeze, four 55-gallon drums of waste oil, and two empty drums are also located in the maintenance area. Mr. Dave Anderson with Kentucky Container informed BHE that the waste oil is periodically picked up and disposed by Recovery Systems. He stated that Kentucky Container performs maintenance on their yard equipment and the containers, but not on the semi-tractors.

**Hazardous Material Spills, Leaks, Fires, or Dumping**

BHE reviewed the EDR report to determine if the subject property is identified as a U.S. EPA ERNS site. The ERNS database contains information acquired through the U.S. Coast Guard, the National Response Center, and the Department of Transportation on reported releases of oil
and hazardous substances. The subject property is not listed on the ERNS database, indicating no releases have been reported.

BHE reviewed the EDR report to determine if the subject site is identified on the OEPA Ohio Spills database. Two spill incidents are reported at the subject property. The database identifies the subject site occupant as Queen City Barrel, but does not provide any detailed information regarding the spills.

According to information provided by Conrail and interviews with Kentucky Container employees, in about 1990, Queen City Barrel leased the westernmost portion of the site and was storing approximately 10,000 to 20,000 unauthorized 55-gallon drums of unknown materials on the subject property (in the area of the round house and west of the round house). Kentucky Container employees stated that fumes from materials stored in the drums were very strong at times. Conrail terminated their lease when it became aware of the situation, and Queen City Barrel subsequently removed the drums. Soil sampling was reportedly conducted by Queen City Barrel; however, BHE has no information regarding the results.

Information provided by Conrail and interviews with Kentucky Container employees show that, in 1992, the former railroad machine and carpenter's shop building was destroyed by fire. The building was used by Kentucky Container for truck storage and maintenance at the time and trucks located in the building leaked fuel onto the ground. Emergency response remediation was conducted by ChemWaste and OHM Remediation Services Corporation. OHM apparently collected soil samples in the contaminated area and submitted the samples to a laboratory for total petroleum hydrocarbon (TPH), RCRA TCLP Leachate Metals, TCLP Leachate Base/Neutral/Acid, and TCLP Leachate Volatile analysis. Analytical results showed non detectable levels of base/neutral/acidic and volatiles and elevated levels of TPH (17,400 to 97,900 ppm). Detectable levels of metals (barium, cadmium, chromium, and lead) were also identified. The lead level in one of the samples defined the soil as a hazardous waste. From the available information, BHE was not able to determine the extent of the remediation.

The City of Cincinnati Division of Fire was contacted regarding hazardous material spills, leaks, or fires at the subject property. The Division of Fire informed BHE they have no records of spills, leaks, or fires at the subject site. However, a response to the site by the Division of Fire is discussed in the OHM field notes for the remediation project. BHE obtained a Division of Fire Incident Report for the fire from Kentucky Container (presented as Appendix E). The incident is reported at 3121 River Road; therefore, the report was not found in the file search. The Incident
Report states that, on August 18, 1992, a fire originated in a warehouse on site due to an undetermined cause. The fire spread throughout the structure and caused multiple explosions.

The site was visually inspected for evidence of spills, dumping, or other releases to the property. According to Mr. Dave Fee, the Manager of Reserve International Services, Conrail had deposited construction debris throughout the site. When the property was first leased, the tenants plowed the debris into a berm that separates the two tenant areas. BHE did not observe any evidence of hazardous materials within the construction debris.

Miscellaneous materials such as tires, aluminum cans, bottles, paper trash, concrete rubble, and pieces of wood are scattered throughout the overgrown and wooded areas of the site. Also, piles of tires are located near the Reserve International Services maintenance area and piles of roofing material are located in the Kentucky Container portion of the site, in the area of the former roundhouse and turntable. BHE observed an unlabeled, rusty drum at the edge of the wooded area at the north end of the site, north of the former roundhouse.

Evidence of material releases was observed in both the Reserve International Systems and Kentucky Container maintenance areas. The releases are presumably from the use of petroleum products and other maintenance fluids in these areas.

**Sumps, Pits, Wells, Etc.**

BHE inspected the subject property for the presence of sumps, pits, dry wells, monitoring wells, cisterns, grease traps, or cess pools. No evidence of any of these features was observed on site.

**Polychlorinated Biphenyls**

BHE inspected the property for suspected PCB-containing equipment such as electrical transformers and capacitors, fluorescent light ballasts, and hydraulic equipment. Two pole-mounted electrical transformers owned and maintained by Cincinnati Gas and Electric (CG&E) are located outside just east of the Kentucky Container maintenance area and one pole-mounted CG&E transformer is located southwest of the roundhouse at the south edge of the wooded area along River Road. Per the Toxic Substances Control Act (TSCA), the EPA requires that unlabeled transformers be treated as if they have not been tested and are assumed to be PCB-contaminated, containing between 50 and 499 ppm PCBs. If the electrical transformers were contaminated with PCBs, they would not pose a health or environmental concern unless they were to leak. BHE did not observe any evidence indicating the transformers had leaked.
An electrical transformer was observed lying on its side on the ground near a fallen utility pole just southwest of the former machine and carpenter's shop foundation. The transformer did not contain any dielectric fluid, indicating the fluid may have leaked on site. Based on the appearance of the transformer, it was installed before 1979 (when the EPA banned the presence of PCBs in electrical equipment) and, therefore, the dielectric fluid may have contained PCBs.

Wastewater and Storm Water Disposal

Sanitary wastewater service is provided to the subject property by the Hamilton County Metropolitan Sewer District. BHE did not observe evidence of an on-site septic system.

Stormwater from the subject property runs off into stormwater sewer drains scattered throughout the site and off site to the south towards the Ohio River.

Potable Water Source

The subject property is supplied water by the City of Cincinnati. BHE observed no evidence of an on-site groundwater well. Kentucky Container employees informed BHE that they do not drink the water. They were, at one point, told that the water line supplying the subject site runs through the area where Queen City Barrel stored thousands of 55-gallon drums of material and, because of a break in the water line, the water could be contaminated.

OFF-SITE POTENTIAL ENVIRONMENTAL CONCERNS

Potential Hazardous Waste Sites

BHE reviewed the OEPA MSL and the U.S. EPA NPL sites to identify potential hazardous waste sites within one mile of the subject property and U.S. EPA CERCLIS sites to identify such sites within one-half mile of the subject property. No NPL sites were identified within the search radius.

The Riverside Grain Terminal, located at 3260 River Road adjacent to the subject site to the south, is listed on both the CERCLIS list and the MSL. According to the EDR report, the U.S. EPA conducted a preliminary assessment of the site, identified no hazard, and determined that no further action is necessary. The OEPA has not assigned the site a priority but identifies the problem at the site as groundwater petroleum hydrocarbon contamination. Based on the inferred hydraulic gradient (to the south), it is unlikely that a release from the Riverside Grain Terminal would adversely affect the subject property.
Hazardous Waste Generators and TSDFs

BHE reviewed the list provided by EDR of RCRA generators adjacent to the subject site, and TSDFs within one mile of the subject site. The EDR report identified four RCRA small quantity generators adjacent to the subject property. They are Cincinnati Auto Shredder (3291 Southside Avenue), Uno Ven Company (3117 Southside Avenue), Wiseman Oil Company (3415 Southside Avenue), and Southside River Rail Corporation (3415 Southside Avenue). All of these facilities are adjacent to the subject property to the south. The waste types generated by Cincinnati Auto Shredder are not reported. Uno Ven Company and Wiseman Oil Company generate ignitable hazardous waste and Southside River Rail Corporation generates corrosive hazardous waste and brine purification muds from the mercury cell process in chlorine production.

BHE has no evidence that a release of hazardous materials or wastes has occurred at any of these facilities. If a release did occur, based on the inferred hydraulic gradient (to the south), it is unlikely that the subject site would be adversely affected.

Hazardous Material Spills, Leaks, Fires, or Dumping

BHE reviewed the OEPA Ohio Spills list provided by EDR of spill sites adjacent to the subject site. A spill is reported at Lindsay Motor Express at 3415 Southside Avenue, adjacent to the subject site to the south. Details regarding the spill are not provided.

Solid Waste Facilities

BHE reviewed the OEPA Division of Solid and Hazardous Waste Management list of licensed solid waste facilities provided by EDR to determine whether a landfill is located within one-half mile of the subject property. The list does not identify any active or inactive landfills within the search radius.

Registered and Leaking UST Sites

BHE reviewed the EDR list of sites with registered USTs adjacent to the subject site and leaking UST sites within one-half mile of the subject site. Registered USTs are identified at Uno Ven (3117 Southside Avenue) and Southside River Rail Corporation (3415 Southside Avenue). The USTs at the Uno Ven site have reportedly been removed. One 10,000-gallon diesel fuel UST is identified at the Southside River Rail site.

Leaking USTs within one-half mile of the subject property are reported at the following sites:

Cargill Molasses Plant
3335 Southside Avenue

Cincinnati Fire Department #37
310 Lilienthal Street
Uno Ven Company
3117 Southside Avenue

Super America #5574
2857 River Road

Schureman Home Heating
3364 Southside Avenue

Petey Q
2850 River Road

The Cincinnati Fire Department site has been granted "No Further Action" status by BUSTR, indicating no further investigation or remediation is required. The remaining sites are under various stages of investigation or remediation. Based on the inferred hydraulic gradient, it is unlikely that the leaking USTs at any of these sites would adversely affect the subject site.

CONCLUSIONS

RECOGNIZED ENVIRONMENTAL CONDITIONS

The purpose of this Phase I ESA was to identify any recognized environmental conditions associated with the property. A recognized environmental condition is defined by ASTM Standard E 1527-94 as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws." Based on a review of past property uses, Federal, State, and local agency records, and a site inspection of the subject property, BHE identified the following recognized environmental conditions at the subject site:

- The subject property was formerly the site of a railroad yard with a round house, turntable, and associated structures. A variety of hazardous materials and petroleum products are typically associated with the maintenance activities that would have been conducted in the round house. In addition, releases may have occurred throughout the area of the property formerly occupied by railroad tracks. These spills and leaks may have been from maintenance fluids used on site, materials transported by the trains, and the engines themselves. It is not known if the water treatment plant located southwest of the round house treated water drawn from the Ohio River for use on site, or if the plant was used to treat wastewater generated by activities on site. In the latter case, releases of wastewater contaminated with hazardous materials and petroleum products may have occurred in the area of the water treatment plant. It is likely that hazardous materials and petroleum products were used in association with the machine shop.

- The subject property was formerly leased by Intermodal Transportation, an oil hauler. It is possible that petroleum releases from their activities have occurred on site.
• The western portion of the subject site was formerly leased by Queen City Barrel, which reportedly stored thousands of drums of unidentified materials on the property. Because of the drum storage, the subject site is listed on the OEPA MSL. It is possible that materials stored in the drums were released on site.

• A release of diesel fuel occurred in the Kentucky Container maintenance area when a building used for maintenance and truck storage was destroyed by fire. Analytical results of soil samples collected after the fire showed elevated TPH levels and detectable levels of TCLP metals (barium, cadmium, chromium, and lead). The lead level in one of the samples defines the soil as a hazardous waste. An emergency response cleanup was conducted; however, the extent of any remaining contamination is not known.

• Reserve International Services and Kentucky Container use petroleum products and hazardous materials in their maintenance on yard equipment and containers. Evidence of releases of petroleum products and possibly other maintenance fluids was observed in both maintenance areas.

• An electrical transformer was observed lying on its side on the ground near a fallen utility pole just southwest of the former machine and carpenter's shop foundation. The transformer did not contain any dielectric fluid, indicating the fluid may have leaked on site. Based on the appearance of the transformer, it was installed before 1979 and, therefore, the dielectric fluid may have contained PCBs.

DISCLAIMER

In completing this environmental assessment, BHE used the professional standards applicable to the industry today. The work performed was limited to the tasks described in the aforementioned scope of work. Because environmental assessments are only as effective as the accuracy and completeness of the information provided to BHE concerning current and prior uses of the site, the tasks listed may not necessarily identify all environmental risks at the site. BHE is not responsible for any damages resulting from inaccurate or incomplete information provided to them or for results or judgments that conformed to reasonable professional standards and methods applicable in the industry at the time the project was completed.

Prepared By:

Karen F. Epcke
Project Manager
Environmental Sciences Group
TRAFFIC STUDY
The Traffic Engineering Division was asked to evaluate traffic flow, roadway characteristics, and safety record along River Road as it relates to the Conrail development site and proposal roadway improvements. A consultant was hired to conduct vehicle classification traffic counts on April 8 & 9, 1997 on River Road between Mt. Echo and State Avenue. This two-day traffic count totaled all the vehicles traveling along River Road plus separated them into automobiles, buses, and small and large trucks. The traffic counters can do this by counting the number of axles and the spacing between them. The following is an average day traffic count.

- 29,000 total vehicles per day
- 24,000 automobiles (81.4%)
- 5,400 total buses and trucks (18.4%)
- 165 buses (0.6%)
- 2,620 small delivery type trucks (8.9%)
- 2,615 large trucks with three or more axles (8.9%)

The Division of Traffic Engineering conducted their own traffic counts on April 9 & 10, 1997 on Illinois Avenue which is west of Fairbanks Avenue and accesses the existing Conrail site. Since the site is currently used as a truck container storage area, the traffic in and out is nearly all truck related. The following is an average day traffic count.

- 420 total vehicles per day
- 200 trucks in (48.8%)
- 200 trucks out (48.8%)
- 20 automobiles approximately (2.4%)

River Road is a major arterial street designated as U.S. Route 50 from the Sixth Street Expressway to the western City corporation limit. It is nearly 11 miles in length and the longest street in the City. River Road is divided into three segments that have different characteristics.

The first segment, from the Sixth Street Expressway to Fairbanks Avenue, is 1.7 miles
long and carries a daily traffic volume of approximately 29,000 vehicles. For most of this segment the roadway is 36 feet wide with four (4) substandard nine-foot (9') lanes. With the narrow lanes, the roadway curvature and the utility poles set close to the curbs, large trucks cannot always stay within the painted lines. Parking is permitted on both sides of the street except during AM or PM peak hours when two lanes are needed in the direction of peak traffic flow. The speed limit is 35 MPH between the Sixth Street Expressway and State Avenue and 30 MPH from State Avenue to Fairbanks Avenue.

The second segment, from Fairbanks Avenue to Lillienthal Street is 1.2 miles long and carries a daily traffic volume of approximately 12,000 vehicles. It is generally 44 feet wide with four (4) eleven-foot (11') lanes. Parking is permitted on both sides of the street except during AM or PM peak hours. The speed limit is 35 MPH.

The third segment, from Lillienthal Street to the City corporation line at Addyston, is 8.1 miles long and carries a daily traffic volume of approximately 13,000 vehicles. It is generally 50 to 55 feet wide with five (5) eleven-foot (11') lanes. Parking is prohibited at all times on both sides of the street. The speed limit is 40 MPH from west of Lillienthal to west of Anderson Ferry Road and 45 MPH from west of Anderson Ferry to the corporation line.

The safety record from 1/1/91 to 10/1/94 (3 years & 9 months) was analyzed and the following accident rates were calculated.

- Sixth Street Expressway to Fairbanks: 4.69 Accidents per million vehicle-miles
- Fairbanks to Lillienthal: 3.97 Accidents per million vehicle-miles
- Lillienthal to City Corporation Line: 1.07 Accidents per million vehicle-miles

The above accident rates indicate that roadway safety improves with wider travel lanes and less on-street parking (as in segment #3), although the speed limit increases. Therefore, an improved and wider River Road with eleven-foot (11') and twelve-foot (12') lanes from Sixth Street Expressway to Fairbanks will improve safety and make driving more tolerable when traveling next to semi-tractor trailer trucks. This improvement is necessary to alleviate the safety problem while allowing non-peak hour on-street parking for the residents in the area. It will also make the Conrail development site a more accessible destination to the preferred developer with the existing and future mixture of truck and automobile traffic.
October 8, 1996

Mr. Rick Schupp, P.E.
City of Cincinnati
One Centennial Plaza
705 Central Avenue, Suite 250
Cincinnati, OH 45202

Re: Job No: 9605-007

Dear Mr. Schupp:

As per your request we have performed a traffic study for the proposed Conrail Development on River Road. The purpose of the study was to estimate the amount of vehicles that would be generated by the development and to perform traffic signal analysis.

Based on the information provided to our office, there are two proposals being considered for roadway improvements on River Road in conjunction with this development. The first proposal (see following schematic labeled Proposal 6 by the City) consists of providing a signalized entrance to the development with an exclusive left turn lane for westbound River Road into the development and exclusive left and right turn lanes out of the development.

The second proposal (see following schematic labeled Proposal 5 by the City) consists of the same signalized Development Drive provided in Proposal 6 along with a Service Road that extends from the Development Drive eastward to intersect River Road.

The ITE Trip Generation Book was used to estimate trips that will be generated by the development. The land use 150 for warehouse type developments was used for the analysis. In order to develop the estimated turning movement counts for each proposal we performed 24-hour volume counts on River Road. One count was performed west of Fairbanks Road in the vicinity of the proposed Development Drive and the other was performed east of Fairbanks Road in the vicinity of where the Service Road in Proposal 5 would intersect River Road. Trip generation data was superimposed on the 24-hour counts to obtain the expected traffic distributions that would result for each proposal.
It should be noted that ITE Trip Generation only provides volume estimation data for Weekday Peak Hours, Weekday Totals and Saturday and Sunday Totals for this type of development. In order to analyze traffic signal warrants 1 and 2, assumptions had to be made using both the Peak Hour and Weekday volume estimates provided by the ITE Trip Generation. Assumptions were based on engineering experience and knowledge of the development area. Assumptions are documented in the “Distribution of Daily Traffic” sections of this report.

Traffic signal warrant analysis were performed for both proposals with two levels of development employment as outlined by Toni Selvey-Maddock’s E-Mail (enclosed) dated September 4, 1996. Phase A traffic signal analysis were performed using the volumes generated by 500 employees at the Conrail Development - Phase B traffic signal analysis were performed using the volumes generated by 1000 employees. The following summarizes our traffic signal analysis:

### PROPOSAL 6
(SIGNALIZED DRIVEWAY ONLY)

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### PROPOSAL 5
(SIGNALIZED DRIVEWAY & SERVICE ROAD)

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As shown above, the traffic signal at Conrail Development Drive and River Road for both proposals can be warranted with 500 or 1000 development employees. The Service Road and River Road traffic signal in Proposal Five can be warranted with 1000 development employees.
In addition to performing 24-hour volume counts on River Road, a gap study was performed to determine if there are adequate gaps in the River Road traffic stream to allow semi-trucks to enter the road from an unsignalized intersection. The gap study shows the average gap on River Road to be 4 seconds during the PM peak hour. It is our professional opinion that 4 seconds is a dangerously short gap, especially for semi-trucks and a traffic signal may be justified for safety and traffic flow considerations.

Please feel free to call should you have any questions or require additional information.

Sincerely,

Ali A. Saleh, P.E.
Vice President

AAS/ss
Rick. The Conrail Site is approximately 60 acres of which 50 +/- are usable for development. Company A is a distribution company which will use 20 to 25 acres. They have 1,500 truck trips per week of which 260 are for out of town travel. The rest of the site will be marketed to similar uses so if the consultants could double these figures for planning purposes that should work. We expect the combined employment at the site to be at 1000. Thanks Toni.
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VI. PROPOSAL 5 DISTRIBUTION OF DAILY TRAFFIC

VII. PROPOSAL 5 WARRANT ANALYSIS

VIII. RIVER ROAD GAP ANALYSIS
SECTION I

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**Totals**

- A.M.: 2343
- P.M.: 5794
- Combined: 3970
- 3615
- 6613
- 9409

**Day Totals**

- 2643
- 5794
- 3970
- 3615
- 6613
- 9409

**Split**

- A.M.: 33.9%
- P.M.: 61.5%
- Combined: 60.0%

**Peak Hour**

- 07:00
- 08:00
- 09:00
- 10:00
- 11:00
- 12:00
- 07:00
- 08:00
- 09:00
- 10:00
- 11:00
- 12:00

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| P.M. | 16902 | 12663 | 29565 |

**Percent**

| Begin | 36.4% | 71.0% | 63.5% | 28.9% |

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<td>.85</td>
<td>.25</td>
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</table>
SECTION II

PROPOSAL 6
TRIP GENERATION
PROPOSAL 6
LAND USE 150 WAREHOUSING
Based on 500 employees (PHASE A)

<table>
<thead>
<tr>
<th>AM</th>
<th>PM</th>
</tr>
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<tr>
<td>Existing Peak Hour</td>
<td>7:00-8:00 AM</td>
</tr>
<tr>
<td>Peak Volume</td>
<td>4:45-5:45 PM</td>
</tr>
<tr>
<td>Existing Distribution</td>
<td>1456</td>
</tr>
<tr>
<td>1016 EB = 70%</td>
<td>1364</td>
</tr>
<tr>
<td>440 WB = 30%</td>
<td>349 EB = 26%</td>
</tr>
<tr>
<td>1015 WB = 74%</td>
<td></td>
</tr>
</tbody>
</table>

Trip Generation

Average Rate .51
Total Trips (.51) (500) = 255
50% Entering 128 Entering
50% Exiting 128 Exiting
WB 128 X .30 = 38 Entering & Exiting
WB 65 X .74 = 48 Entering
EB 128 X .70 = 90 Entering & Exiting
230 X .74 = 170 Exiting
EB 65 X .26 = 17 Entering
230 X .26 = 60 Exiting
PROPOSAL 6
LAND USE 150 WAREHOUSING
Based on 1000 employees (PHASE B)

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Peak Hour</td>
<td>7:00-8:00 AM</td>
<td>4:45-5:45 PM</td>
</tr>
<tr>
<td>Peak Volume</td>
<td>1456</td>
<td>1364</td>
</tr>
<tr>
<td>Existing Distribution</td>
<td>1016 EB = 70%</td>
<td>349 EB = 26%</td>
</tr>
<tr>
<td></td>
<td>440 WB = 30%</td>
<td>1015 WB = 74%</td>
</tr>
</tbody>
</table>

**Trip Generation**

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Rate</td>
<td>.51</td>
<td>.59</td>
</tr>
<tr>
<td>Total Trips</td>
<td>(.51) (1000) = 510</td>
<td>(.59) (1000) = 590</td>
</tr>
<tr>
<td>50% Entering</td>
<td>255 Entering</td>
<td>22% Entering = 130 Entering</td>
</tr>
<tr>
<td>50% Exiting</td>
<td>255 Exiting</td>
<td>78% Exiting = 460 Exiting</td>
</tr>
</tbody>
</table>

**Distribution**

- 70% EB 30% WB
- WB 255 X .30 = 77 Entering & Exiting
- EB 255 X .70 = 178 Entering & Exiting

**Distribution**

- WB 130 X .74 = 96 Entering
- 460 X .74 = 340 Exiting
- EB 130 X .26 = 34 Entering
- 460 X .26 = 120 Exiting
PROPOSAL 6
PHASE A (500 EMPLOYEES)
Warehousing
(150)

Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 12
Average Number of Employees: 414
Directional Distribution: 72% entering, 28% exiting

Trip Generation per Employee

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.51</td>
<td>0.37 - 2.14</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: \( T = 0.374(X) + 54.636 \)  \( R^2 = 0.95 \)

*Trip Generation, January 1991* 185  Institute of Transportation Engineers
Warehousing (150)

Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 14
Average Number of Employees: 392
Directional Distribution: 35% entering, 65% exiting

Trip Generation per Employee

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.59</td>
<td>0.37 - 2.22</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: \( T = 0.438(X) + 58.428 \)

\( R^2 = 0.93 \)

Trip Generation, January 1991
Distribution of Daily Traffic

LAND USE 150 WAREHOUSE
TOTAL DAILY TRIPS GENERATED

PHASE A (500 EMPLOYEES)
Average Rate = 3.89
Total Trips Generated = 3.89 X 500 = 1945 Trips
1945 total trips generated by this development

PHASE B (1000 EMPLOYEES)
Average Rate = 3.89
Total Trips Generated = 3.89 X 1000 = 3890 Trips
3890 total trips generated by this development

PHASE A (500 EMPLOYEES)
AM Peak = 255 trips * 255/1945 = 13% of total trips
PM Peak = 295 trips * 295/1945 = 15% of total trips
28%

PHASE B (1000 EMPLOYEES)
AM Peak = 510 trips * 510/3890 = 13% of total trips
PM Peak = 590 trips * 590/3890 = 15% of total trips
28%

*FROM PEAK HOUR TRIP GENERATION ANALYSIS

Experience indicates the next largest traffic generating time period is during the lunch time mid-day peak. Typical mid-day peak hours will not be as large as either the AM or PM peak hours.

Mid-day peak hour trips generated by this development would typically constitute 10% of the total trips generated. The remaining 62% of the trips generated by this development can be assumed to be evenly distributed throughout the workday. Tables 1 and 2 provide the assumed hourly distribution of total daily trips generated by the proposed development based on the above assumptions.
Warehousing
(150)

Average Vehicle Trip Ends vs: Employees
On a: Weekday

Number of Studies: 15
Average Number of Employees: 358
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Employee

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.89</td>
<td>1.47 - 15.71</td>
<td>3.08</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: $T = 3.084(X) + 288.813$

$R^2 = 0.85$

Trip Generation, January 1991

184 Institute of Transportation Engineers
SECTION III

PROPOSAL 6
DISTRIBUTION OF
DAILY TRAFFIC
# PHASE A (500 EMPLOYEES)

<table>
<thead>
<tr>
<th>Hour</th>
<th>Existing River Road Volumes</th>
<th>Total Existing River Road Volumes</th>
<th>Total Percentage of Daily Driveway Trips</th>
<th>Percentage Entering</th>
<th>Percentage Exiting</th>
<th>Total Daily Trips (Generated by Drive)</th>
<th>Trips Entering Drive 4X5X7</th>
<th>Trips Exiting Drive 4X6X7</th>
<th>Total River Road Volume for Signal Analysis 3-8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EB</td>
<td>WB</td>
<td></td>
<td>EB</td>
<td>WB</td>
<td></td>
<td>Enter</td>
<td>Exit</td>
<td>7</td>
</tr>
<tr>
<td>7-8</td>
<td>1016</td>
<td>440</td>
<td>1456</td>
<td>13*</td>
<td>50*</td>
<td>50*</td>
<td>1945</td>
<td>126</td>
<td>126</td>
</tr>
<tr>
<td>8-9</td>
<td>758</td>
<td>316</td>
<td>1074</td>
<td>7.75</td>
<td>50</td>
<td>50</td>
<td>1945</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>9-10</td>
<td>395</td>
<td>368</td>
<td>763</td>
<td>7.75</td>
<td>50</td>
<td>50</td>
<td>1945</td>
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<td>75</td>
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<tr>
<td>10-11</td>
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<td>391</td>
<td>782</td>
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<td>50</td>
<td>50</td>
<td>1945</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>11-12</td>
<td>377</td>
<td>364</td>
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<td>1945</td>
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<td>12-1</td>
<td>408</td>
<td>470</td>
<td>878</td>
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<td>30</td>
<td>1945</td>
<td>105</td>
<td>45</td>
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<td>1945</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>2-3</td>
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<td>503</td>
<td>935</td>
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<td>50</td>
<td>1945</td>
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<td>-1945</td>
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<td>940</td>
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<td>1945</td>
<td>75</td>
<td>75</td>
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<td>5-6</td>
<td>358</td>
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<td>22*</td>
<td>78*</td>
<td>1945</td>
<td>64</td>
<td>227</td>
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</table>

AM AND PM PEAK HOUR GIVEN BY ITE TRIP GENERATION

Table 1
### PHASE B (1000 EMPLOYEES)

<table>
<thead>
<tr>
<th>Hour</th>
<th>Existing River Road Volumes</th>
<th>Total Existing River Road Volumes</th>
<th>Total Percentage of Daily Driveway Trips</th>
<th>Percentage Entering</th>
<th>Percentage Exiting</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EB</td>
<td>WB</td>
<td></td>
<td>Enter</td>
<td>Exit</td>
<td></td>
<td></td>
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<tr>
<td>7-8</td>
<td>1016</td>
<td>440</td>
<td>1456</td>
<td>13*</td>
<td>50*</td>
<td>50*</td>
<td>3890</td>
<td>252</td>
<td>252</td>
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<td>3890</td>
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<td>150</td>
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<td>9-10</td>
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<td>50</td>
<td>3890</td>
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<td>391</td>
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<td>50</td>
<td>50</td>
<td>3890</td>
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<td>3890</td>
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<td>150</td>
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<td>4-5</td>
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<td>150</td>
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<td>5-6</td>
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<td>15*</td>
<td>22*</td>
<td>78*</td>
<td>3890</td>
<td>128</td>
<td>454</td>
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</table>

**AM AND PM PEAK HOUR GIVEN BY ITE TRIP GENERATION**

Table 2
SECTION IV

PROPOSAL 6
SIGNAL WARRANT ANALYSIS
### PROPOSAL 6
**PHASE A (500 EMPLOYEES)**
**WARRANT 1, MINIMUM VEHICULAR VOLUME**

<table>
<thead>
<tr>
<th>HOUR</th>
<th>MAJOR STREET</th>
<th>MINOR STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Volume Both Approaches</td>
<td>River Road Volume Both Approached</td>
</tr>
<tr>
<td>7-8</td>
<td>600</td>
<td>1582</td>
</tr>
<tr>
<td>8-9</td>
<td>600</td>
<td>1149</td>
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<tr>
<td>9-10</td>
<td>600</td>
<td>838</td>
</tr>
<tr>
<td>10-11</td>
<td>600</td>
<td>857</td>
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<td>11-12</td>
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<td>12-1</td>
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<tr>
<td>1-2</td>
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<td>885</td>
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</tr>
<tr>
<td>3-4</td>
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<td>1134</td>
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<td>4-5</td>
<td>600</td>
<td>1367</td>
</tr>
<tr>
<td>5-6</td>
<td>600</td>
<td>1382</td>
</tr>
</tbody>
</table>
## PROPOSAL 6
### PHASE B (1000 EMPLOYEES)
### WARRANT 1, MINIMUM VEHICULAR VOLUME

<table>
<thead>
<tr>
<th>HOUR</th>
<th>MAJOR STREET</th>
<th></th>
<th></th>
<th>MINOR STREET</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>Required Volume Both Approaches</td>
<td>River Road Volume Both Approached</td>
<td>Satisfy Warrant?</td>
<td>Required Volume Higher Volume Approach</td>
<td>Development Drive Volume</td>
<td>Satisfy Warrant?</td>
</tr>
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<td>7-8</td>
<td>600</td>
<td>1708</td>
<td>Y</td>
<td>200</td>
<td>252</td>
<td>Y</td>
</tr>
<tr>
<td>8-9</td>
<td>600</td>
<td>1224</td>
<td>Y</td>
<td>200</td>
<td>150</td>
<td>N</td>
</tr>
<tr>
<td>9-10</td>
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<td>913</td>
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<td>200</td>
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</table>
PROPOSAL 6
PHASE A (500 EMPLOYEES)
WARRANT 2, INTERRUPTION OF CONTINUOUS TRAFFIC

<table>
<thead>
<tr>
<th>HOUR</th>
<th>MAJOR STREET</th>
<th>MINOR STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Volume Both Approaches</td>
<td>Required Volume Higher Volume Approach</td>
</tr>
<tr>
<td></td>
<td>River Road Volume Both Approached</td>
<td>Satisfy Warrant?</td>
</tr>
<tr>
<td>7-8 AM</td>
<td>900</td>
<td>1582</td>
</tr>
<tr>
<td>8-9 AM</td>
<td>900</td>
<td>1149</td>
</tr>
<tr>
<td>4-5 PM</td>
<td>900</td>
<td>1367</td>
</tr>
<tr>
<td>5-6 PM</td>
<td>900</td>
<td>1382</td>
</tr>
</tbody>
</table>
## PROPOSAL 6
### PHASE B (1000 EMPLOYEES)
### WARRANT 2, INTERRUPTION OF CONTINUOUS TRAFFIC

<table>
<thead>
<tr>
<th>HOUR</th>
<th>MAJOR STREET</th>
<th>MINOR STREET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Volume Both Approaches</td>
<td>River Road Volume Both Approached</td>
</tr>
<tr>
<td>7-8 AM</td>
<td>900</td>
<td>1708</td>
</tr>
<tr>
<td>8-9 AM</td>
<td>900</td>
<td>1224</td>
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<tr>
<td>4-5 PM</td>
<td>900</td>
<td>1442</td>
</tr>
<tr>
<td>5-6 PM</td>
<td>900</td>
<td>1446</td>
</tr>
</tbody>
</table>
PEAK HOUR VOLUME WARRANT

PROPOSAL G 700 - 800 AM PHASE A (SOC EMPLOYEES)

2 OR MORE LANES & 2 OR MORE LANES

2 OR MORE LANES & 1 LANE

1 LANE & 1 LANE

MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH

RIVER RD

*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.
PEAK HOUR VOLUME WARRANT

PROPOSAL C  445-545 PM  PHASE A (500 EMPLOYEES)

2 OR MORE LANES & 2 OR MORE LANES

2 OR MORE LANES & 1 LANE

1 LANE & 1 LANE

MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH  RIVER RD

*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

(Rev. 13)
PEAK HOUR VOLUME WARRANT

PROPOSAL 6 700-800 AM PHASE B (1000 EMPLOYEES)

2 OR MORE LANES & 2 OR MORE LANES

2 OR MORE LANES & 1 LANE

1 LANE & 1 LANE

MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH

RIVER RD

NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.
SECTION V

PROPOSAL 5
TRIP GENERATION
PROPOSAL 5  
LAND USE 150 WAREHOUSING  
Based on 500 employees (PHASE A)

<table>
<thead>
<tr>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Peak Hour</td>
<td></td>
</tr>
<tr>
<td>7:00-8:00 AM</td>
<td>4:45-5:45 PM</td>
</tr>
<tr>
<td>Peak Volume</td>
<td>1456</td>
</tr>
<tr>
<td>Existing Distribution</td>
<td>1016 EB = 70%</td>
</tr>
<tr>
<td></td>
<td>440 WB = 30%</td>
</tr>
<tr>
<td></td>
<td>349 EB = 26%</td>
</tr>
<tr>
<td></td>
<td>1015 WB = 74%</td>
</tr>
</tbody>
</table>

**Trip Generation**

<table>
<thead>
<tr>
<th></th>
<th>AM</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Rate</td>
<td>.51</td>
<td>.59</td>
</tr>
<tr>
<td>Total Trips</td>
<td>(.51) (500) = 255</td>
<td>(.59) (500) = 295</td>
</tr>
<tr>
<td>50% Entering</td>
<td>128 Entering</td>
<td>22% Entering = 65 Entering</td>
</tr>
<tr>
<td>50% Exiting</td>
<td>128 Exiting</td>
<td>78% Exiting = 230 Exiting</td>
</tr>
<tr>
<td>WB 128 X .30 = 38 Entering &amp; Exiting</td>
<td>WB 65 X .74 = 48 Entering</td>
<td></td>
</tr>
<tr>
<td>EB 128 X .70 = 90 Entering &amp; Exiting</td>
<td>230 X .74 = 170 Exiting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EB 65 X .26 = 17 Entering</td>
<td>EB 230 X .26 = 60 Exiting</td>
</tr>
</tbody>
</table>
PROPOSAL 5
LAND USE 150 WAREHOUSING
Based on 1000 employees (PHASE B)

Existing Peak Hour | AM 7:00-8:00 AM | PM 4:45-5:45 PM
Peak Volume | 1456 | 1364
Existing Distribution | 1016 EB = 70% |
| 440 WB = 30% |
| 349 EB = 26% |
| 1015 WB = 74% |

Trip Generation

Average Rate | .51 |
Total Trips | (.51) (1000) = 510 |
50% Entering | 255 Entering |
50% Exiting | 255 Exiting |

70% EB 30% WB
WB 255 X .30 = 77 Entering & Exiting
EB 255 X .70 = 178 Entering & Exiting

Distribution

WB 130 X .74 = 96 Entering
460 X .74 = 340 Exiting
EB 130 X .26 = 34 Entering
460 X .26 = 120 Exiting
**PROPOSAL 5**

**PHASE A (500 EMPLOYEES)**
PROPOSAL 5
PHASE B (1000 EMPLOYEES)
Warehousing
(150)

Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 14
Average Number of Employees: 392
Directional Distribution: 35% entering, 65% exiting

Trip Generation per Employee

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.59</td>
<td>0.37 - 2.22</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: $T = 0.438(X) + 58.428$

$R^2 = 0.93$

Trip Generation, January 1991

Institute of Transportation Engineers
Warehousing (150)

Average Vehicle Trip Ends vs: Employees
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 12
Average Number of Employees: 414
Directional Distribution: 72% entering, 28% exiting

Trip Generation per Employee

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.51</td>
<td>0.37 - 2.14</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Fitted Curve Equation: \( T = 0.374(X) + 54.636 \)
\( R^2 = 0.95 \)
SECTION VI

PROPOSAL 5
DISTRIBUTION OF
DAILY TRAFFIC
The total trips generated by the Conrail Development is unchanged between Proposal Five and Proposal Six. The difference between the two is the Proposal Five eastbound traffic (turning right out of the development) would be split between River Road and the Service Road. It can be assumed that vehicles who wish to travel east would utilize the service road in order to avoid River Road congestion while people who wish to travel north would have to utilize River Road to get to northbound Fairbanks.

A comparison of volume levels on Fairbanks Road to River Road shows that both roads are almost equally utilized. Based on this and knowledge of this area, we assigned a 60%/40% division of eastbound traffic out of the development with 60% utilizing the Service Road and 40% utilizing River Road to get to northbound Fairbanks.
PROPOSAL 5
PM PHASE A
500 EMPLOYEES

---→ EXISTING VOLUME

→ GENERATED BY DEVELOPMENT VOLUME

FAIRBANKS

RIVER RD.

---→ 349

349

17

17+24+24

24

60

36

1015

40%

60%

24

127

2656

DRIVE

SERVICE RD.

TEC

TEC Engineering, Inc.
40 Sherr Ln Suite 302
Deerfield 40246
PROPOSAL 5
PM PHASE B
1000 EMPLOYEES

---→ EXISTING VOLUME

---→ GENERATED BY
DEVELOPMENT
VOLUME

RIVER RD.

FAIRBANKS

---→ 349
34

---→ 340
37+48

Drive

37+48+48

---→ 127

127

1015 ←---

2656 ←---

48

60%

60%

48

72

SERVICE RD.

TEC

TEC Engineering, Inc.
10 Bays LeSueur E52
Claymation 45246
SECTION VII

PROPOSAL 5
WARRANT ANALYSIS
SIGNAL WARRANT ANALYSIS PROPOSAL 5

Conrail Development Drive

Warrant 1, Minimum Vehicular Volume - Warrant analysis for this intersection is virtually identical to the analysis performed for Proposal Six with only a slight drop in River Road volumes occurring because of traffic diverting to the Service Road.

Summary - Neither Phase A (500 Employees) nor Phase B (1000 Employees) satisfies the requirements for Warrant 1, minimum vehicular volume. Phase A only satisfies one and Phase B only satisfies 3 of the required 8 hours.

Warrant 2, Interruption of Continuous Traffic - Warrant analysis for this intersection is virtually identical to the analysis performed for Proposal Six with only a slight drop in River Road volumes occurring because of traffic diverting to the Service Road.

Summary - Phase A (500 Employees) misses satisfying the requirements for Warrant 2, Interruption of Continuous Traffic by only one hour while Phase B (1000 Employees) satisfies all four hours.

Warrant 11, Peak Hour Warrant - Warrant analysis for this intersection is virtually identical to the analysis performed for Proposal Six with only a slight drop in River Road volumes occurring because of traffic diverting to the Service Road.

Summary - Both Phase A (500 Employees) and Phase B (1000 Employees) meet the requirements of Warrant 11, Peak Hour Warrant.

Service Road and River Road

Warrant 1, Minimum Vehicular Volume - The traffic distribution indicates that zero hours satisfy the requirements of this warrant.

Warrant 2, Interruption of Continuous Traffic- The traffic distribution indicates that zero hours satisfy the requirements of this warrant.

Warrant 11, Peak Hour Warrant - The following tables labeled TS-10 provide the analysis for Warrant 11, Peak Hour Warrant. Our analysis indicates the AM peak hour (7:00-8:00 AM) for Phase B development (1000 Employees) meets the requirements of Warrant 11, Peak Hour Warrant.
**PEAK HOUR VOLUME WARRANT**

**Proposal 5  7-8 AM  Phase A (500 Employees)**

- 2 OR MORE LANES & 2 OR MORE LANES

- 2 OR MORE LANES & 1 LANE

- 1 LANE & 1 LANE

**MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH**

*NOTE:*
- 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes.
- 100 VPH applies as the lower threshold volume for a minor street approach with one lane.

(Rev. 13)
PEAK HOUR VOLUME WARRANT

PROPOSAL 5  4:45-5:45 PM PHASE A (500 EMPLOYEES)

2 OR MORE LANES & 2 OR MORE LANES

2 OR MORE LANES & 1 LANE

1 LANE & 1 LANE

MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH

*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

REF. SEC.
6C-10.3
PEAK HOUR VOLUME WARRANT

PROPOSAL 5  4:15 - 5:45 PM PHASE B (1000 EMPLOYEES)

2 OR MORE LANES & 2 OR MORE LANES

(2 OR MORE LANES & 1 LANE)

1 LANE & 1 LANE

MAJOR STREET — TOTAL OF BOTH APPROACHES — VPH

RIVER RD

*NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.
SECTION VIII

GAP ANALYSIS
### Vehicle group 1

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<thead>
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<th>Volume</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>22</th>
<th>24</th>
<th>26</th>
<th>28</th>
<th>Total Avg.</th>
<th>Gaps (in seconds)</th>
<th>Date 09/12/96</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>13</td>
<td>15</td>
<td>17</td>
<td>19</td>
<td>21</td>
<td>23</td>
<td>25</td>
<td>27</td>
<td>29</td>
<td>&gt; 30 Gaps</td>
<td>Gaps</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>0:00</td>
<td>587</td>
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<td>1</td>
<td>0</td>
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<td>6</td>
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<td>0</td>
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<td>36</td>
<td>17</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>2</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>Total</td>
<td>1569</td>
<td>102</td>
<td>34</td>
<td>15</td>
<td>9</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>176</td>
</tr>
</tbody>
</table>

<p>| TOTAL* | 1569 | 102 | 34 | 15 | 9 | 2 | 4 | 4 | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 176 | 4          |
| Percent| 58% | 19.3% | 8.5% | 5.1% | 1.1% | 2.3% | 2.3% | 1.7% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |</p>
<table>
<thead>
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<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
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<th>18</th>
<th>20</th>
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<th>24</th>
<th>26</th>
<th>28</th>
<th>Total Avg.</th>
<th>Gaps</th>
<th>Gap</th>
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<td>229</td>
<td>52</td>
<td>13</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>4</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>93</td>
<td>6</td>
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<td>52</td>
<td>12</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>92</td>
<td>6</td>
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<tr>
<td>17:30</td>
<td>220</td>
<td>33</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<td>0</td>
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<td>2</td>
<td>81</td>
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<tr>
<td>Total</td>
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<td>33</td>
<td>16</td>
<td>15</td>
<td>9</td>
<td>4</td>
<td>15</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>1</td>
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<td>9</td>
<td>266</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL*</td>
<td>703</td>
<td>143</td>
<td>33</td>
<td>16</td>
<td>15</td>
<td>9</td>
<td>4</td>
<td>15</td>
<td>7</td>
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<td>2</td>
<td>2</td>
<td>3</td>
<td>9</td>
<td>266</td>
<td>6</td>
</tr>
</tbody>
</table>

| Percent | 53.8% | 12.4% | 6% | 5.6% | 3.4% | 1.5% | 5.6% | 2.6% | 1.9% | 0.8% | 0.4% | 0.8% | 1.1% | 3.4% |

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**Other:**

Fair

*Site Code: 9666822*

Start Date: 09/12/96

File I.D.: 960877XL

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**Westbound-Eastbound: River Road (West Location)**

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**S.-L. Engineering, Inc.**

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Cincinnati, Ohio 45246
(513) 771-8828

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