

ENVIRONMENTAL ASSESSMENT

Finance Docket No. 34040

**RIVERVIEW TRENTON RAILROAD COMPANY –
PETITION FOR AN EXEMPTION FROM 49 U.S.C. § 10901
TO ACQUIRE AND OPERATE A RAIL LINE IN WAYNE COUNTY MICHIGAN**

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**VOLUME II
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APPENDIX A
PHOTO LOG



Photo 1.

Looking south along mainlines of the Grand Trunk Western (GTW) where the RTRR rail stagnant line would connect along and the existing rail stagnant coming from left of photo. This existing rail stagnant is the south entrance to the former McLouth Steel Plant and is used occasionally to supply the remaining pickling operations at the plant. This is proposed to be the primary entrance to the RTRR intermodal terminal because it uses a grade separated overpass. (See Photo 2).

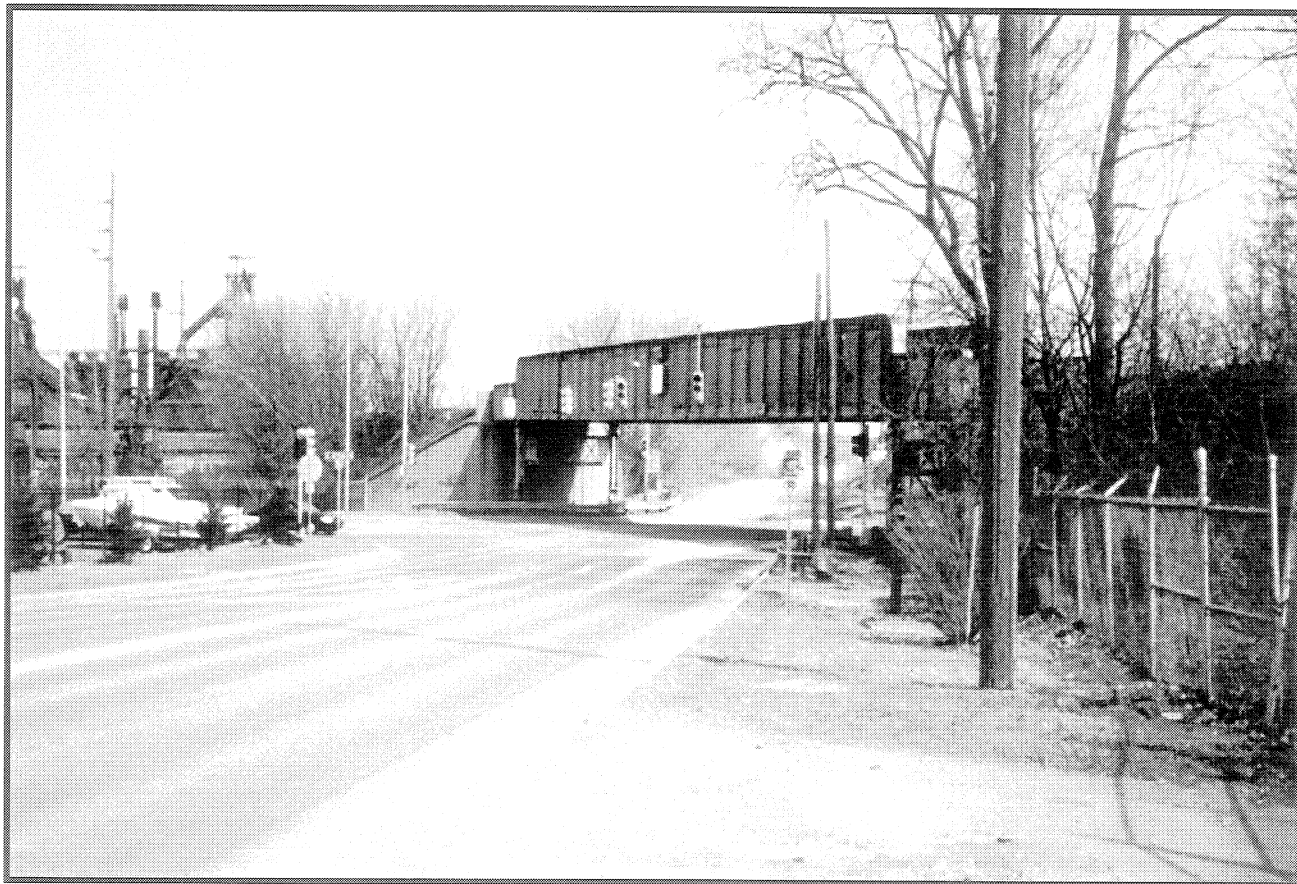


Photo 2.

Looking east down King Road in Trenton where it intersects with Jefferson Avenue and where both King and Jefferson are crossed by a rail overpass. Rail traffic entering the RTRR intermodal terminal would move from right to left (south to north) across the photo mainline.



Photo 3.

Looking east along the proposed RTRR Line between the overpass crossing Jefferson and King (Photo 2) and Ref. Point A on Figure 1 (vicinity map). The rail branching off to the right is no longer in use. In the distance are structures in the former McLouth Steel Company plant.

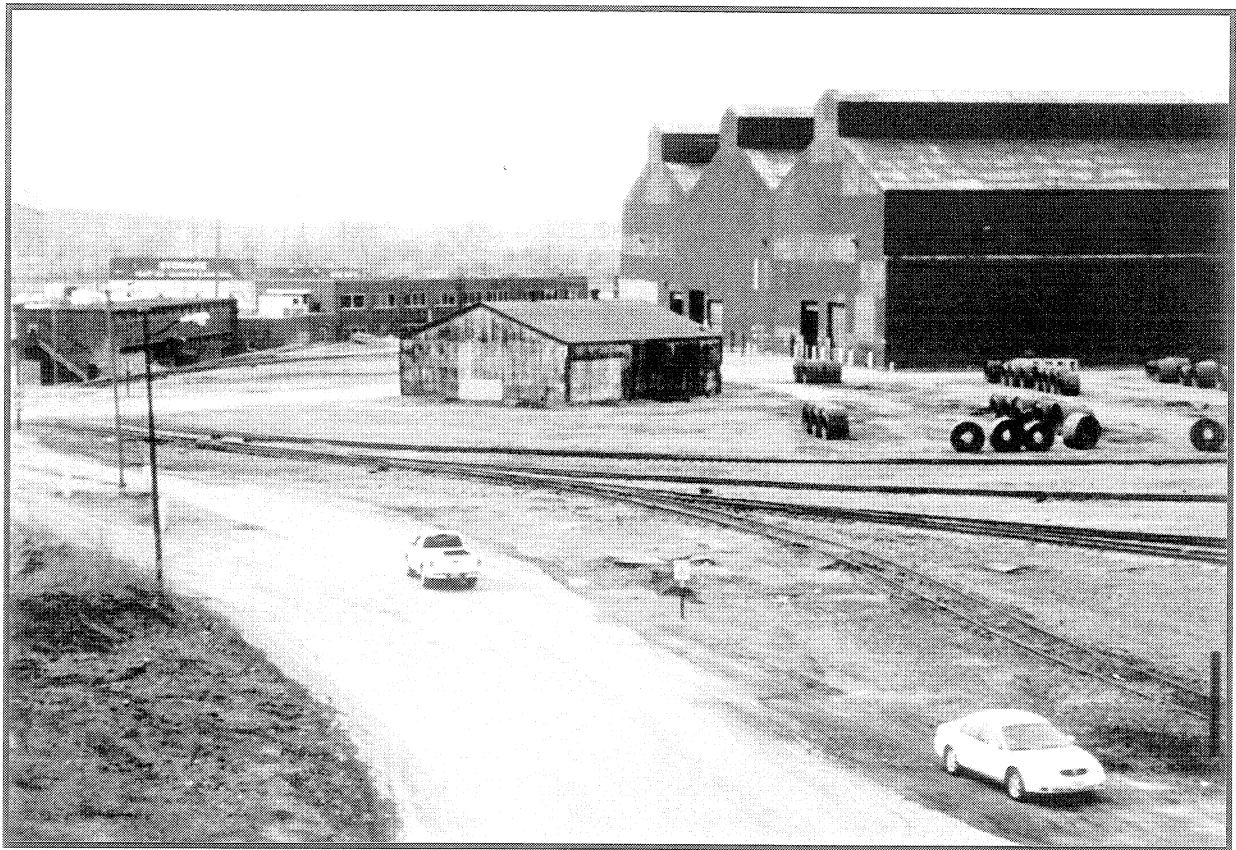


Photo 4.

Looking west and northwest across the former McLouth Plant. Reference Point A is at extreme right of photo. The proposed RTRR line is the rail line second from top on right side. Trains entering the RTRR intermodal terminal would go from left to right across the photo. This portion of the RTRR line would be on property owned by DSC. RTRR has obtained rights from DSC to operate across this portion of track.

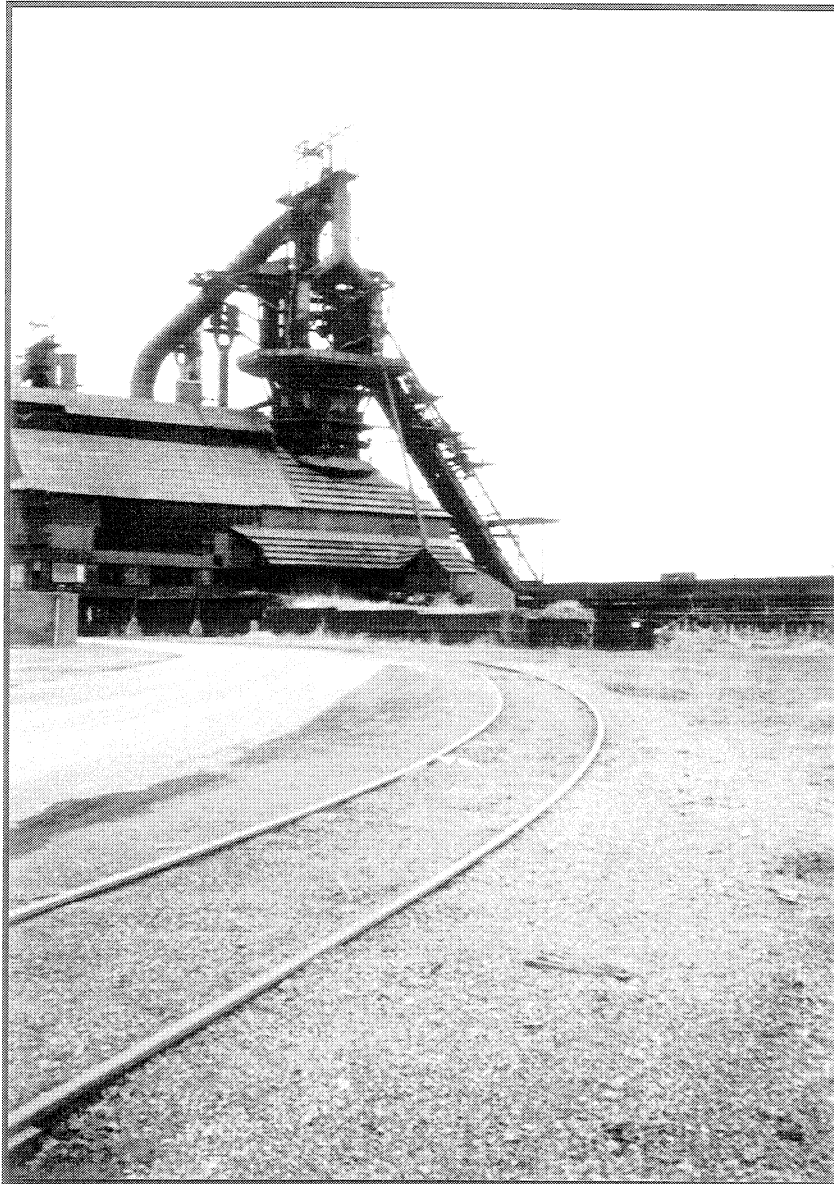


Photo 5.

Looking east and north along proposed RTRR line at Reference Point A on Figure 1. This is a sharp turn where rail traffic inbound to the intermodal terminal would turn from east to north. This is one of several rail sections where the alignment may need to be modified to accommodate containerized unit trains. The structure in the background is the former blast furnace.

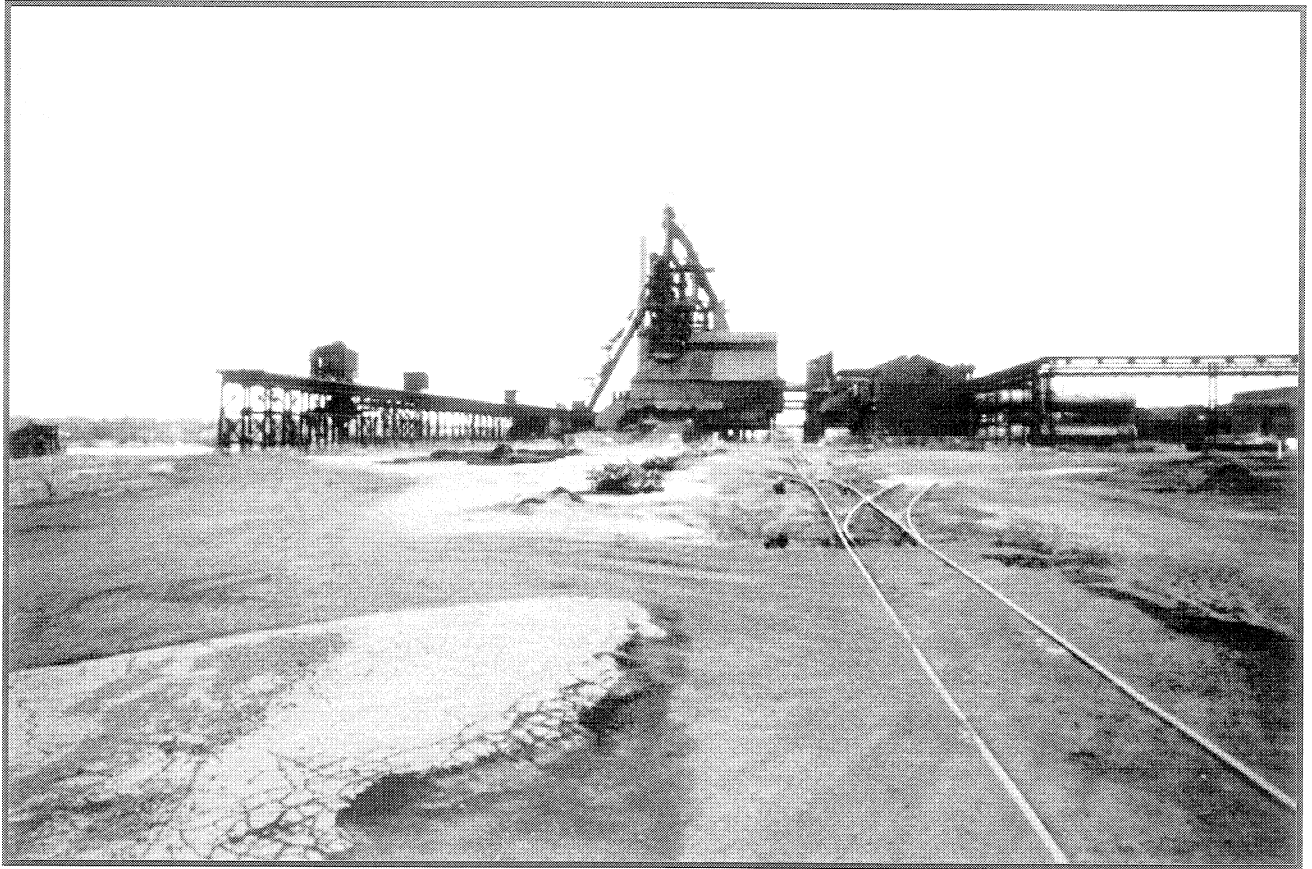


Photo 6.

Looking south toward the former blast furnace structures. As shown in this photo, the surface of the former McLouth Plant is virtually devoid of vegetation and has recently been regraded and covered with clay soil pursuant to the remediation plans. This photo was taken near Reference Point B on Figure 1.

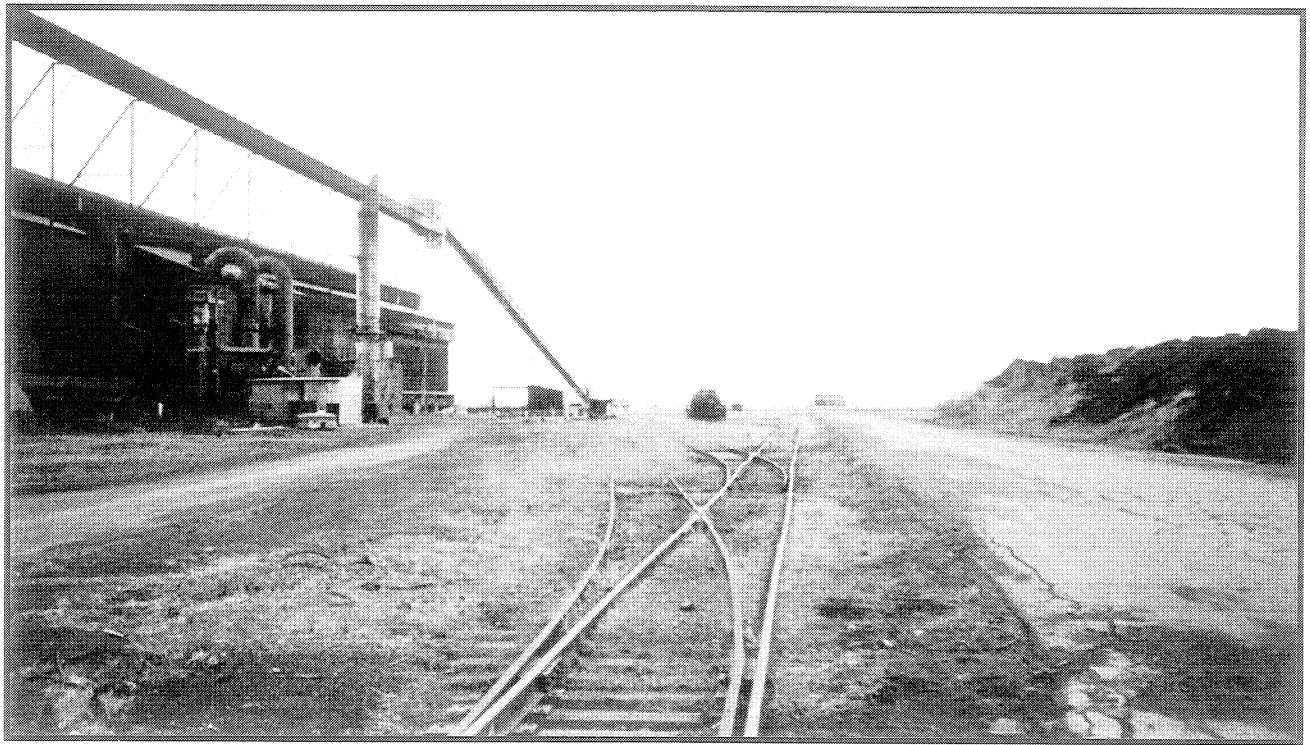


Photo 7.

Looking north near Reference Point B on Figure 1. The far end of the slag heap to the right (east) marks the southern end of the RTRR property and intermodal yard.

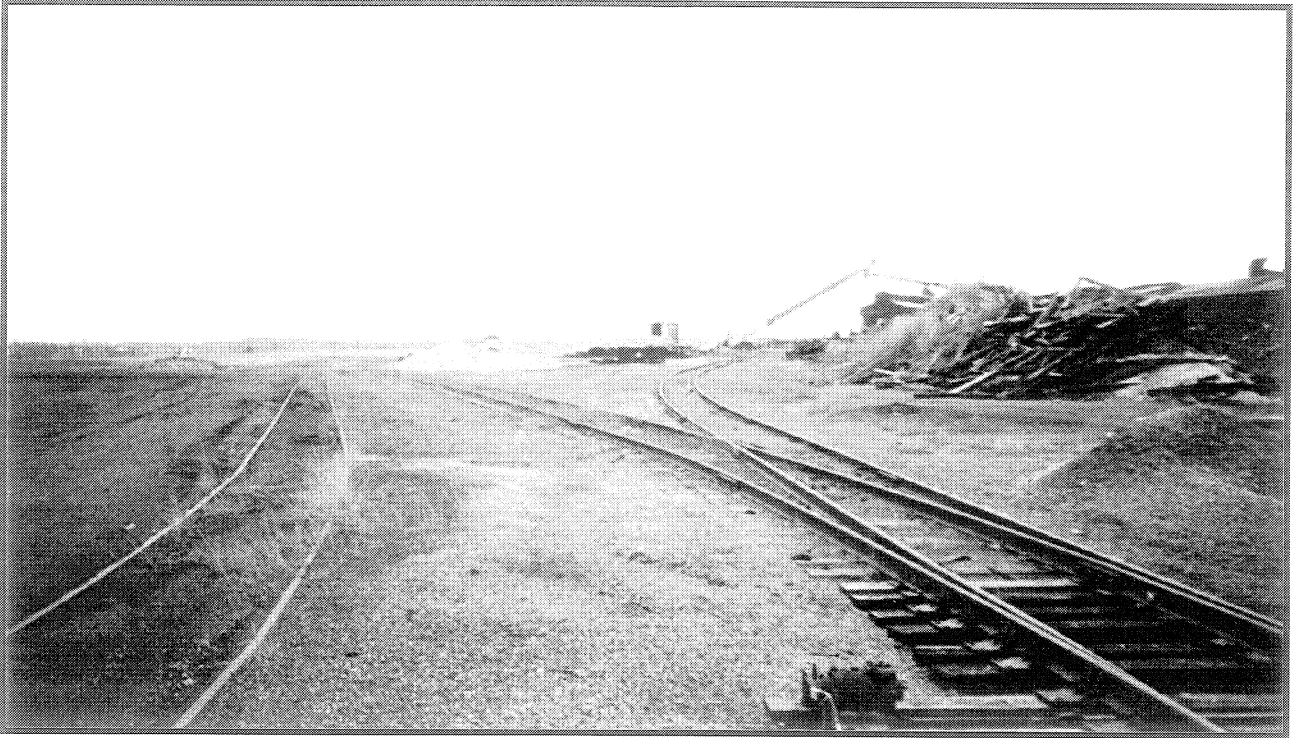


Photo 8.

Looking south from Reference Point C in Figure 1. This is the approximate boundary between the cities of Riverview (north or behind the photographer) and Trenton (south). All track shown in this and previous photos is in Trenton.

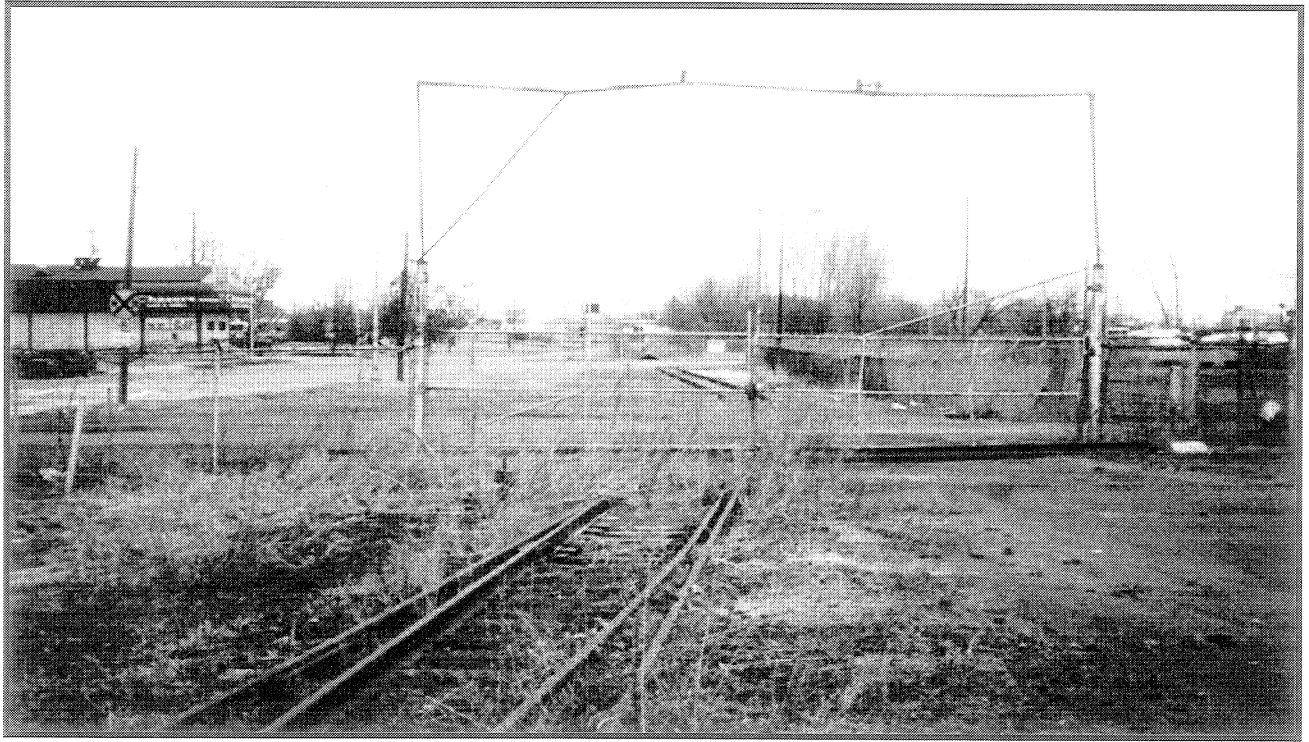


Photo 9.
Looking north along the proposed mainline of the RTRR where it would exit the proposed intermodal terminal and cross Jefferson Avenue.

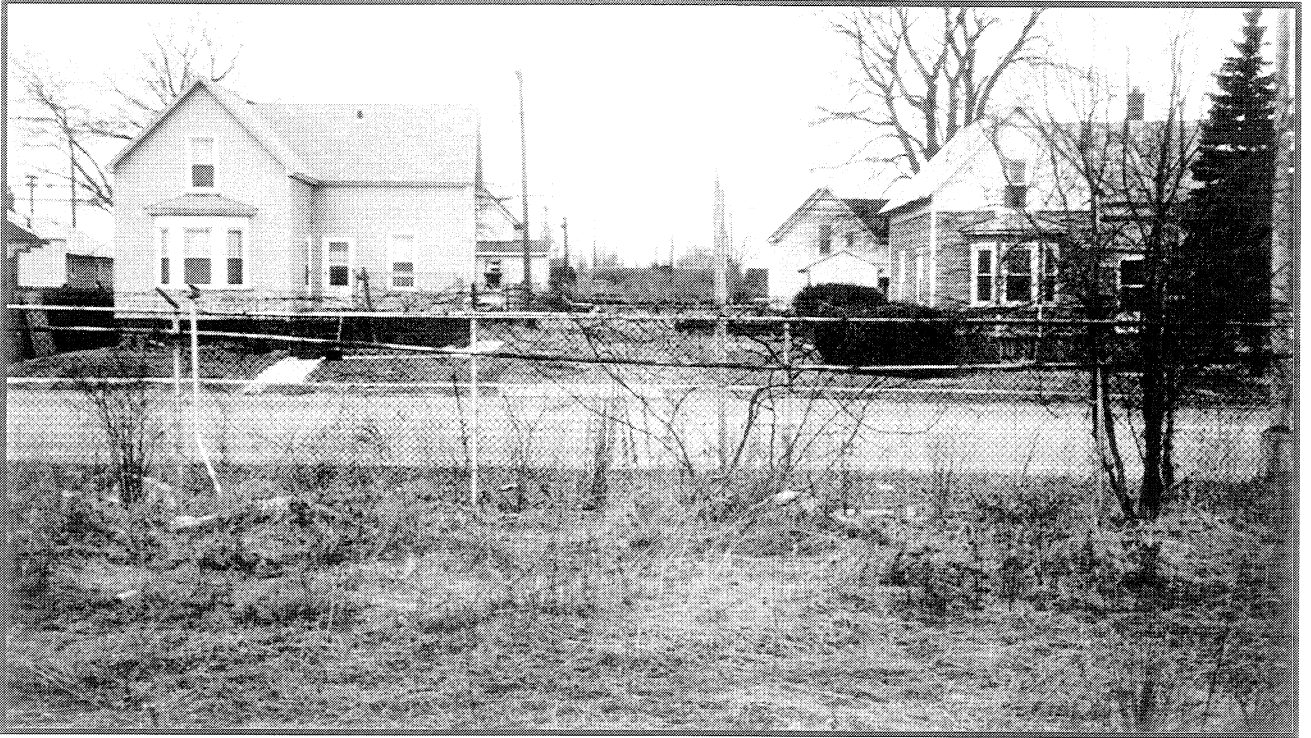


Photo 10.

Looking west from Reference Point D on Figure 1 across the RTRR fenceline and Jefferson Avenue at residences on the west side of Jefferson in Riverview.



Photo 11.

Looking east from near Reference Point D on Figure 1 toward several containers parked on RTRR property. Trees in background are along the margin of Monguagon Creek. (See Photo 12).



Photo 12.

Looking south from Reference Point E on Figure 1 down Monguagon Creek where it bends sharply to the east discharges to Detroit River. The channel was re-routed several decades ago by McLouth Steel to place the creek at the property edge. The mixed hardwoods along the margins of the creek comprise virtually all of the vegetation on the RTRR property. Monguagon Creek, and its surroundings, would not be disturbed by the proposed intermodal terminal.

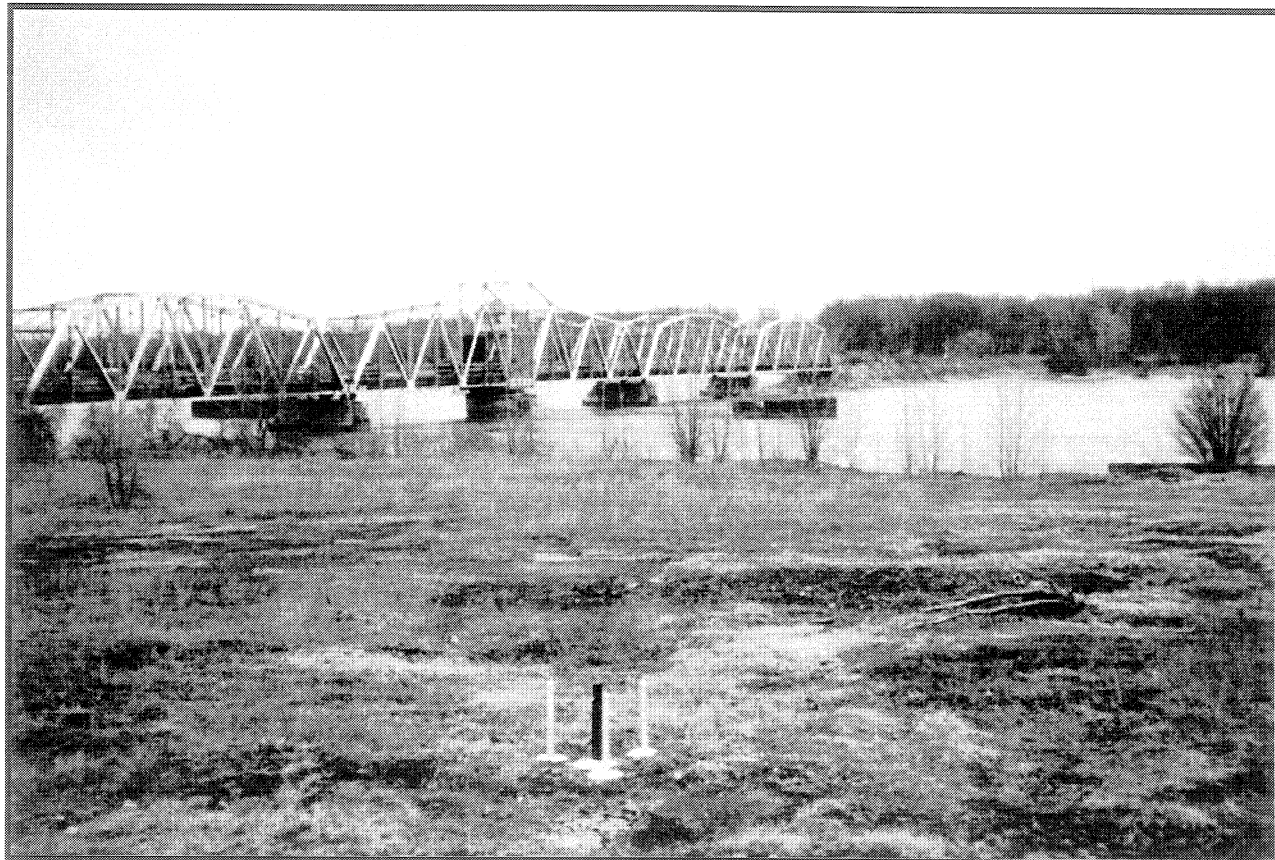


Photo 13.

Looking east across the Trenton Channel of the Detroit River to Grosse Ile. The Grosse Ile toll bridge is at left (north) of photo. The poles in the foreground are groundwater monitoring sampling wells.



Photo 14.

Looking south from the northeastern corner of the RTRR property toward Grosse Ile (left) and steel mill structures (right). The photo shows how the artificial escarpment on the RTRR property is comprised of several feet of debris from former steel mill operations.



Photo 15.

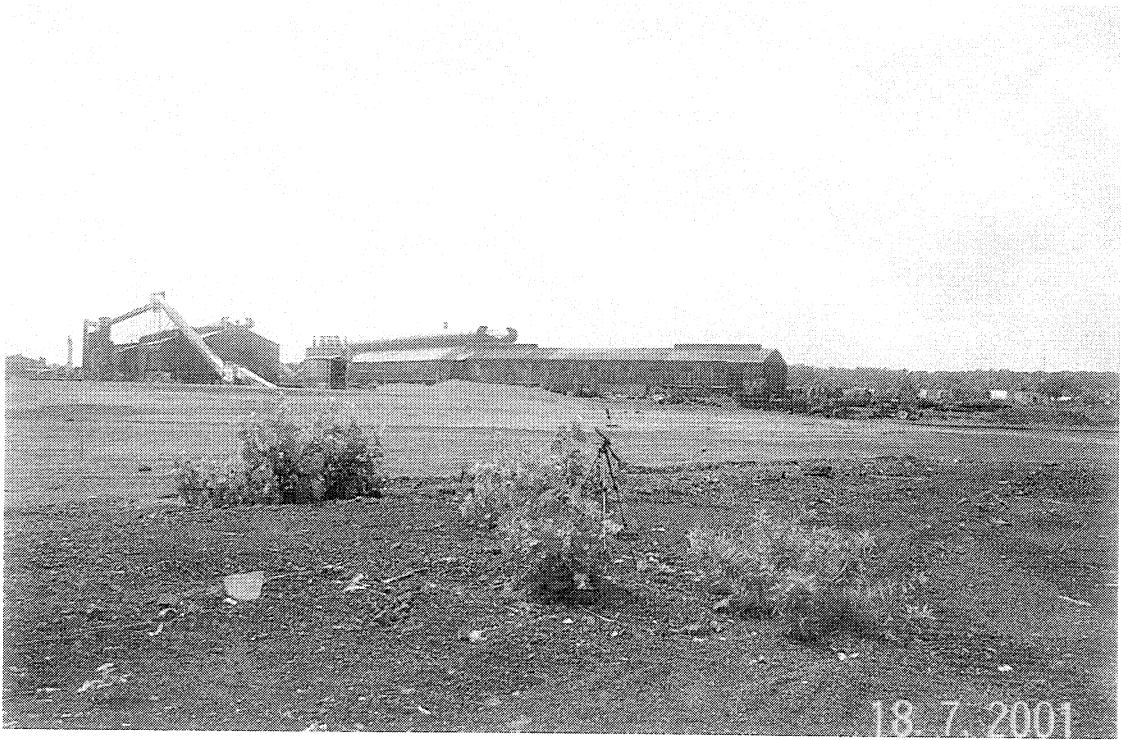
Looking to the southwest near Reference Point D on Figure 1. The grade level crossing is no longer in use, but would be used as a secondary point of entry or exit to the proposed RTRR intermodal terminal. Jefferson Ave. crosses the rail in a curve at this point. The new entrance to the RTRR intermodal terminal would be immediately to left of photo. In the background are residences and retail establishments in the City of Riverview on the west side of Jefferson. Photo 9 shows this intersection from the RTRR property on the opposite side of Jefferson.

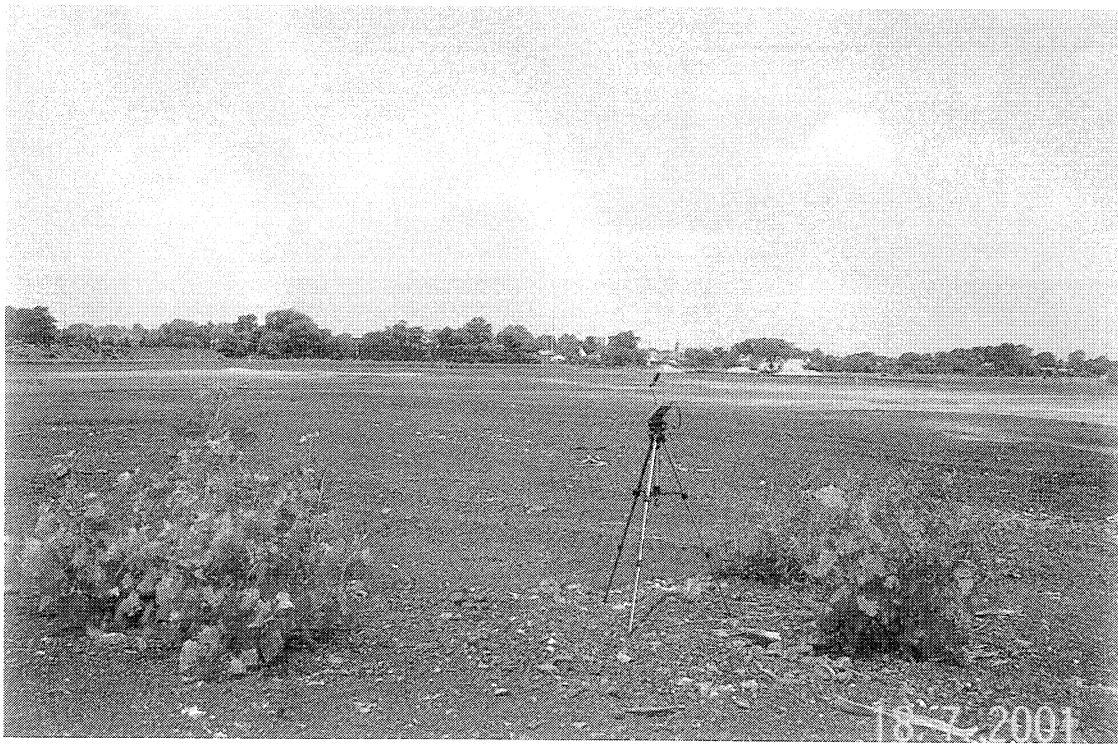


Photo 16.

Looking northwest along the rail line to be used to connect the RTRR at its northern terminus. This photo was taken north of the grade level crossing at Jefferson (See Photo 15). The grade level crossing in the photo is a road leading to the Jones Chemical Plant. Just beyond this plant is where the RTRR line would connect with the GTW mainlines.

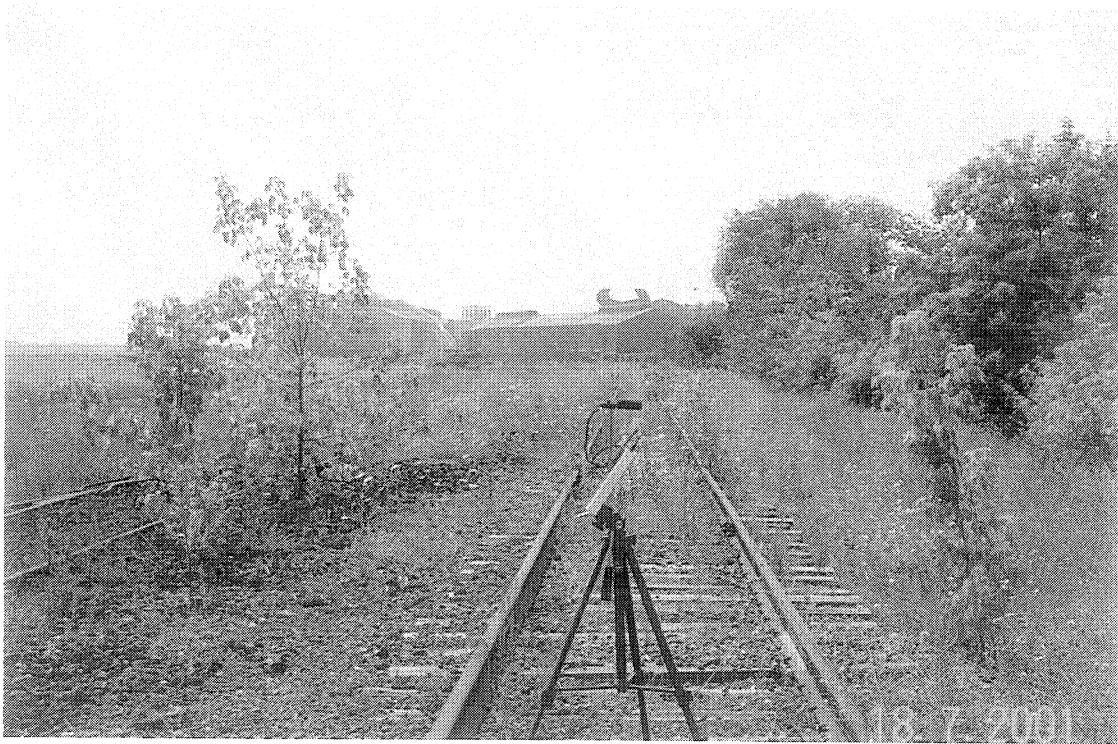
ADDITIONAL PHOTOS



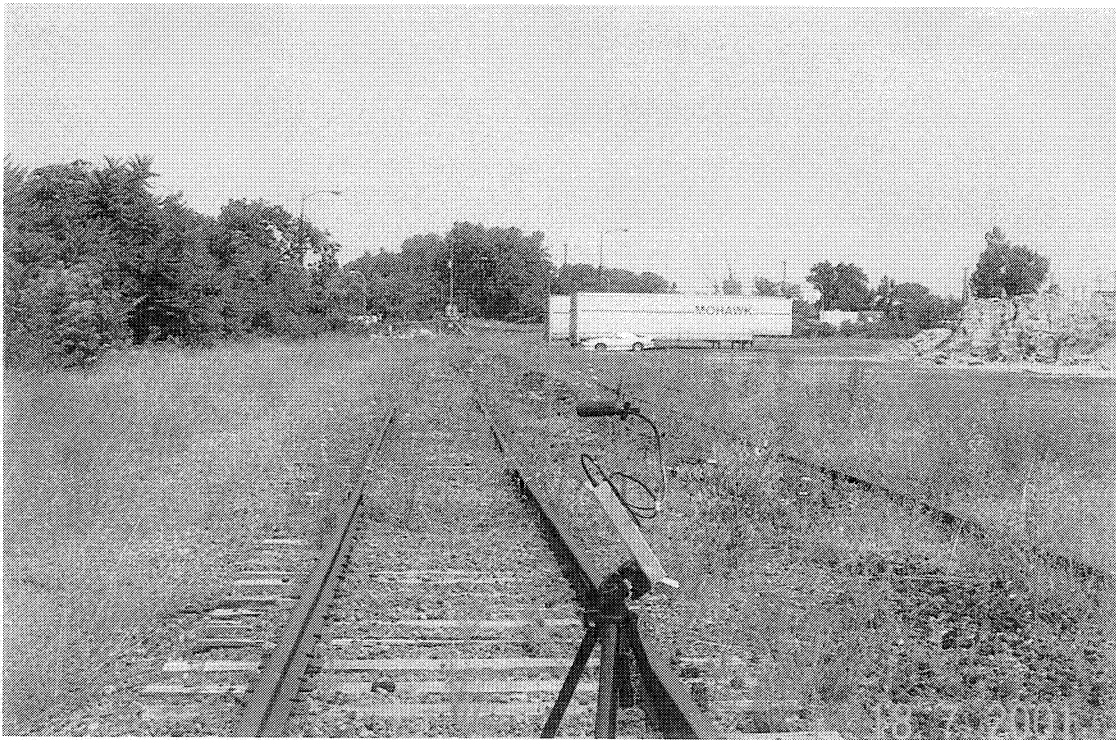












APPENDIX B

LISTING OF SENSITIVE RECEPTORS AND EMERGENCY RESPONSE FACILITIES

Appendix B

Listing of Sensitive Receptors and Emergency Response Facilities¹

Category	Name	Address	Miles from Terminal	Map Identifier
Church	Aller Edward R.	9262 Church Road	1.4	C1
Church	Bible Baptist Church	13950 Sibley Road	1.1	C2=S5
Church	Calvary Church & Spirit Life Center	3459 Fort St.	1.9	C3
Church	Calvary Tabernacle United	On Pine St, between Fort St and 23rd Street	1.8	C4
Church	Church of God Prophecy	16703 Helen St.	1.8	C5
Church	Downriver Christian Church	17572 Smith St.	0.9	C6
Church	First Baptist Church - Riverview	18050 Quarry St.	0.6	C7
Church	First United Methodist Church	2610 West Jefferson Ave.	1.9	C8
Church	Freedom International Church	4076 Biddle St.	1.6	C9
Church	Grosse Ile Presbyterian Church	7925 Horsemill Road	1.4	C10
Church	Immanuel Baptist Church	17111 Fort St.	1.3	C11
Church	Immanuel Lutheran Church	17125 Fordline St.	1.7	C12
Church	Jehovah's Witnesses	18637 Ray St.	0.9	C13
Church	New Life Creative Learning Center	16420 Trenton Road	1.7	C14=S12
Church	Reorganized Church of Jesus	14601 Pennsylvania Road	1.8	C15
Church	Riverview United Methodist	13199 Colvin St.	1.0	C16
Church	Sacred Heart Church	21599 Parke Lane	1.9	C17
Church	St. Cyprians Church	13249 Pennsylvania Road	1.2	C18
Church	St. Helena Catholic Church	753 Forest St.	1.6	C19
Church	St. Joseph Church	2565 3rd St.	1.8	C20
Church	St. Philip Lutheran Church	1790 Fort St.	1.5	C21
Church	St. Thomas Lutheran Church	9393 Church Road	1.4	C22
Church	Trenton Church of God	35 Roehrig St.	0.2	C23
Church	Victory Baptist Church	4051 8th St.	1.5	C24
Church	Wyandotte Assembly of God	2131 Pine St.	1.8	C25
Fire Department	Riverview Fire Department 2	14300 Sibley Road	1.3	F3
Fire Department	Riverview Fire Department 1	14100 Civic Park Drive	1.3	F1
Fire Department	Trenton Fire Department	1989 King Road	1.0	F2
Fire Department	Grosse Ile Fire Department	24525 Meridian Rd		F4
Hospital	Riverside Osteopathic Hospital	2242 West Jefferson Ave.	1.5	H1
Hospital	Oakwood Seaway Hospital	5450 Fort St.		H2
Hospital	Henry Ford Hospital Wyandotte	2333 Biddle St.		H3
Nursing Home	American House - Riverview	20300 Fort St.	1.2	N1
Nursing Home	Rivergate Terrace	14141 Pennsylvania Road		N3
Nursing Home	Samaritan Group Home	17090 Ray St.	1.3	N2
Police Department	Riverview Police Department	14100 Civic Park Drive	1.3	P1=F1
Police Department	Trenton Police Department	2872 West Jefferson Ave		P2
Police Department	Wayne County Sherriff-Marine	4 Grosse Ile Parkway		P3
Police Department	Grosse Ile Police Department	24525 Meridian Rd		P4
Schools	Allen Elementary	16500 McCann Rd.	1.8	S1
Schools	Davidson Junior High School	13940 Leroy St.	1.9	S2
Schools	Detroit Business Institute	19100 Fort St.	1.0	S3
Schools	Forest Elementary	19400 Hampton St.	1.2	S4
Schools	Foundations Learning Center	13950 Sibley Road	1.1	S5=C2
Schools	Huntington Elementary	17752 Kennebac St.	1.8	S6
Schools	Jo Brighton Skill Center	4460 18th St.	1.2	S7

Listing of Sensitive Receptors and Emergency Response Facilities¹ - continued

Category	Name	Address	Miles from Terminal	Map Identifier
Schools	Madison School	2101 Grove St.	1.5	S8
Schools	McKinley Elementary	640 Plum St.	1.8	S9
Schools	Memorial Elementary School	13425 Colvin St #2	1.0	S10
Schools	Monroe Elementary	1501 Grove St.	1.4	S11
Schools	New Life Creative Learning Center	16420 Trenton Road	1.7	S12=C14
Schools	Parke Lane Elementary	21610 Parke Lane	1.9	S13
Schools	Riverview Community School	13425 Colvin St #1	1.0	S14
Schools	Riverview High School	12431 Longsdorf St.	0.6	S15
Schools	Riverview Nursery Inc.	17510 Valade St.	1.0	S16
Schools	Seitz Junior High School	17800 Kennebac St.	1.7	S17
Schools	Southgate Adult and Community Education	14101 Leroy St.	1.9	S18

¹ The location of these facilities are presented in Figures 3(a-c). Location of Sensitive Receptors/Emergency Response Facilities.

APPENDIX C
RTRR DUE CARE PLAN

TMH ENVIRONMENTAL, L.L.C.
INVESTIGATIVE AND
REGULATORY COMPLIANCE
SERVICES

Due Care Plan

**City of Riverview Property
City of Trenton Property
West Jefferson at Sibley Avenue
Cities of Riverview and Trenton
Wayne County, Michigan**

Prepared for:

**The Riverview Trenton Railroad Company
Warren, Michigan**

**TMH Environmental
Project No. 092000-01
February 25, 2001
(Updated August 27, 2001)**

**Section 7a Compliance Analysis
For two Parcels Located on
West Jefferson Avenue at Sibley Avenue
Cities of Trenton and Riverview, Wayne County, Michigan**

**Prepared for:
The Riverview Trenton Railroad Company
Warren, Michigan**

**Prepared by:
TMH Environmental, L.L.C.
Orchard Lake, Michigan**

INTRODUCTION

This Section 7 a Compliance Analysis ("Due Care") Plan has been prepared in accordance with Section 20107a (Part 201) of the Michigan Natural Resources and Environmental Protection Act (451 P.A. 1994, as amended), and administrative rules. The Due Care Plan has been prepared for two parcels located on West Jefferson Avenue at Sibley Avenue, in the Cities of Trenton and Riverview, Wayne County, Michigan. The two parcels ("Subject Property," "Property," or "Site") are portions of a larger industrial property commonly known as the former McLouth Steel Facility, located at 1491 West Jefferson Avenue, Trenton, Michigan. The Subject Property has been classified a "facility" as defined by Part 201.

Baseline environmental assessments (BEAs), completed March 22, 2000, have been prepared for each of the two parcels that comprise the Property, and have been disclosed to the Michigan Department of Environmental Quality (MDEQ). BEAs that were prepared on behalf of Manuel J. Maroun d.b.a. Lakeshore Properties, with petition numbers P00-01190-LV (Riverview Property) and P00-01191-LV (Trenton Property) were affirmed by the MDEQ on September 1, 2000. The two parcels have been designated the Trenton Property (35.51 acres) and the Riverview Property (40.49 acres), respectively. BEAs have also been prepared on behalf of The Riverview Trenton Railroad Company for disclosure to the MDEQ.

Because it is intended that both parcels be simultaneously and jointly developed, a single comprehensive Due Care Plan has been prepared for the Subject Property. This Due Care Plan has been prepared using the following regulatory document:

Instructions for Preparing and Disclosing Baseline Environmental Assessments and Section 7a Compliance Analyses to the Michigan Department of Environmental Quality and For Requesting Optional Determinations. Michigan Department of Environmental Quality, Environmental Response Division, Effective Date: March 11, 1999.

Section 20107a(1) provides that a person who owns or operates property that he/she has knowledge is a facility must:

Undertake measures as are necessary to prevent exacerbation the existing contamination.

Exercise due care by undertaking response activity necessary to mitigate unacceptable exposure to hazardous substances, mitigate fire and explosion hazards due to hazardous substances, and allow for the intended use in a manner that protects the public health and safety.

Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that foreseeably could result from those acts or omissions.

This Due Care Plan has been prepared on behalf of The Riverview Trenton Railroad Company (“Owner/Operator”), which completed purchase of the Subject Property on November 27, 2000. The Riverview Trenton Railroad Company intends to develop and operate the Subject Property as an intermodal transfer facility. The Due Care Plan has been designed to assist the owner/operator to fulfill its obligations pursuant to Section 20107a of Part 201 and administrative rules. This Due Care Plan (and appendices) for the Subject Property was prepared for implementation of the proposed developed use, but also outlines provisions to assist with compliance for any future construction, renovation/demolition, or dormant land use activities that may occur.

1.0 DETAILED CHARACTERISTICS OF PROPERTY USE

The Subject Property currently is vacant, except for several debris piles associated with historic iron and steel operations at the Trenton Steel manufacturing facility (“Trenton Steel”), of which the Trenton and Riverview Properties were formerly part. Several Resource Conservation and Recovery Act (RCRA) waste management units (WMUs) have been identified at Trenton Steel (including the Trenton and Riverview Properties). In addition, several areas of concern (AOCs) that are subject to Part 201 have been identified at Trenton Steel, as well as the Subject Property. The WMUs and AOCs have been identified and are subject to corrective and remedial actions pursuant provisions outlined in a “Comprehensive Corrective Action and Remedial Consent Order for Trenton and Gibraltar Facilities” agreement (“Consent Order”) between the State of Michigan and the identified responsible party, DSC Ltd. The Gibraltar facility is a separate DSC facility located in Gibraltar, Michigan and is not subject to this Due Care plan. The identified WMUs and AOCs specific to the Trenton and Riverview Properties have been itemized in the previously referenced BEAs for each parcel. This Due Care plan is intended to address those WMUs and AOCs, which have been identified for each parcel, and for existing contamination not yet identified, if any.

Currently, the intended future use of the Subject Property is as an intermodal transfer facility, which will include receiving and shipping of consumer products via truck, ship, and rail transport facilities. Site activities will include the transfer and short-term storage of intermodal containers and trailers used in the transport of consumer products, including the interchange of containers between tractor-trailers and rail cars. Construction activities will include the rehabilitation and expansion of existing rail lines and associated infrastructure. There is no intent to store hazardous substances on site.

The site will be paved with either asphalt or concrete to the extent necessary for the intended usage. Impacted areas not covered with pavement will be covered with an alternative suitable cover material (e.g., landscaping). In addition, a small building (approximately 4000 to 6000 square feet, slab on grade) may be constructed onsite in the future. Consequently, other than normal commercial office use of cleaning materials and lawn maintenance chemicals, no hazardous substances will be used or stored on site. Because no significant quantities of hazardous substances will be used or stored onsite, the BEA for each parcel was prepared in accordance with Category N guidelines.

Figures 1 and 2 from the Consent Order are provided in Attachment I; the figures show general property features and also delineate the approximate locations of the identified WMUs and AOCs.

As discussed in Section 2.0, hazardous substances in excess of Part 201 residential criteria have been confirmed to be present in site soils and groundwater. Groundwater at the site has been characterized as flowing generally towards the Detroit River; thus, impacted groundwater may be migrating offsite to the river. A Notice of Migration of Contamination (MDEQ Form EQP4482) will be submitted under separate cover.

Summaries of contamination at the Property have been provided in the previously referenced BEAs for each site; more detailed information is provided in the following documents:

Summary of Initial Site Assessment Results, DSC Ltd. – Trenton Plant. Techna Corporation, October 20, 1997.

Final Closure Report and Certification, Interim Status Hazardous Waste Storage Unit, DSC Ltd., Techna Corporation, March 31, 1998. Includes:

Subsurface Investigation for the Former Emission Control Dust Storage Area at the Former McLouth Steel Products Corporation Facility, Trenton, Michigan. Clayton Environmental Consultants, August 19, 1997.

Hydrogeological Investigation for the Former Approved Electric Arc Furnace Dust Storage Area at the Former McLouth Steel Products Corporation Facility, Trenton, Michigan. Clayton Environmental Consultants, December 9, 1997.

RCRA Facility Assessment Report, DSC Ltd. – Trenton Plant, 1491 West Jefferson Avenue, Trenton, Michigan. Environmental Strategies Corporation, November 2, 1999.

1.1 Dormant Land Use Plan

For those portions of the Property that are currently dormant (vacant) or may remain dormant in the future, certain provisions will be implemented to assist in compliance with Section 7a due care obligations. The dormant land use plan provisions are provided in Appendix A.

1.2 Renovation/Demolition Use Plan

During any future renovations or demolition activities at the Property, certain provisions will be implemented to assist in compliance with Section 7a due care obligations. The renovation/demolition use plan provisions are provided in Appendix B.

1.3 Construction Use Plan

During any new construction activities at the Subject Property, certain provisions will be implemented to assist in compliance with Section 7a due care obligations. The construction use plan provisions are provided in Appendix C.

1.4 Developed Use Plan

During future use of the Property, certain provisions will be implemented to assist in compliance with Section 7a due care obligations. The developed use plan provisions are provided in Appendix D.

1.5 Sample Notification Letter

A sample notification letter, pursuant to R 299.51013(6)(7) for notifying third parties (e.g., utility workers or other persons conducting activities at the property in an easement or under the terms of a utility franchise, etc.) is provided in Appendix E.

2.0 HAZARDOUS SUBSTANCE INFORMATION

Information on the identified nature, extent, and severity of contamination has been previously documented in reports referenced in Section 1.0. The results of investigations conducted at Trenton Steel, which included the Subject Property, confirmed the presence of hazardous substances in soil and groundwater samples from the site. The concentrations of some detected hazardous substances exceed one or more Part 201 residential soil and groundwater criteria. Consequently, the Subject Property is classified as a “facility” in accordance with Part 201. Section 20101(l) defines a facility as “...any area, place, or property where a hazardous substance in excess of [unlimited residential or ecological] criteria has been released, deposited, stored, disposed of, or otherwise comes to be located.”

2.1 Known Hazardous Substances Present on the Property

Hazardous substances, with concentrations exceeding Part 201 residential criteria, that were detected in one or more soil or groundwater samples collected from the Subject Property, and their respective Chemical Abstract Service (CAS) numbers, are itemized below along with their reported maximum concentration.

Hazardous Substance	Media	Maximum Concentration	CAS Number
Barium	groundwater	0.6 mg/l*	7440-39-3
Cadmium	groundwater	0.017 mg/l*	7440-43-9
Chromium	groundwater	0.15 mg/l*	16065-83-1
Lead	groundwater	0.19 mg/l*	7439-92-1
Barium	soil	930 mg/kg	7440-39-3
Cadmium	soil	30 mg/kg	7440-43-9
Chromium	soil	7,400 mg/kg	16065-83-1
Lead	soil	7,400 mg/kg**	7439-92-1

* Concentration which exceeds Part 201 residential groundwater surface water interface (GSI) criterion.

** Concentration exceeds Part 201 residential and industrial soil direct contact criterion.

In addition, Techna calculated 95% UCL (lognormal transformation) values for the metal concentration data. Techna also calculated background concentrations based on data generated by both Clayton and Techna. The results are presented in their 1998 report referenced above, and are itemized below.

Metal	(CAS No.)	95% UCL (ln transformed) (mg/kg)	Background Upper Limit (mg/kg)
Barium	(7440-39-3)	86	280
Cadmium	(7440-43-9)	9.7	8.9
Chromium	(16065-83-1)	3,980	2,800
Lead	(7439-92-1)	1,310	976

Techna concluded that the hazardous substance concentrations detected in the soil and groundwater samples during the former electric arc furnace (“EAF”) dust pile closure assessment could not be attributed to the former EAF dust pile at the property, but rather are consistent with site-wide fill characteristics (Techna 1998).

Techna also conducted an “initial” site assessment of the Trenton Steel property during 1997; part of the assessment included certain portions of the Trenton Property and the Riverview Property. The results of the initial site assessment investigation are summarized in the referenced October 1997 Techna report. Techna advanced a series of test borings at the Trenton Property, and collected and analyzed soil and groundwater samples for selected hazardous substances. As part of the study, monitoring wells TMW3, TMW20, TMW2, and TMW1 were installed on the Riverview Property, and a river sample was obtained from sampling location RP2. The Trenton Property included several monitoring wells on or adjacent to the property, including wells designated TMW6, TMW18, TMW5, TMW19, and TMW4. Refer to Figure 4 in the 1997 Techna report for approximate monitoring well locations.

Groundwater samples were obtained from monitoring wells TMW6, TMW18, TMW19, and TMW20 (these well locations are adjacent to the Detroit River) and a river surface sample was obtained from sampling location RP2; apparently, samples from the remaining wells on the Trenton and Riverview Properties were not analyzed. Analytical results were reported for total metals, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs). Hazardous substances detected in at least one water sample from either the Trenton Property or the Riverview Property are itemized below:

Hazardous Substance	Maximum Concentrations		CAS Number
	Trenton	Riverview	
Arsenic	ND	0.010 mg/l	7440-38-2
Barium	0.64 mg/l*	0.03 mg/l	7440-39-3
Chromium	0.01 mg/l	ND	16065-83-1
Copper	0.01 mg/l	ND	7440-50-8
Zinc	0.01 mg/l	ND	7440-66-6
Toluene	0.002 mg/l	ND	108-88-3
Trichloroethene	0.003 mg/l	0.002 mg/l	79-01-6
cis-1,2-Dichloroethene	0.002 mg/l	ND	156-59-2
2,4-Dimethylphenol	ND	1.69 mg/l*	105-67-9
Phenol	ND	0.02 mg/l	108-95-2

* Concentration exceeds one or more Part 201 residential water criterion (i.e., surface water protection criterion and/or groundwater contact criterion).

Greater concentrations of these and additional hazardous substances were occasionally detected elsewhere on the Trenton Steel Facility (Techna 1997).

2.1.1 Impacts from Off-site Sources

A nearby property that represents an off-site source of impact to the subject property has been identified as Elf Atochem North America, Inc. The Elf Atochem property is located north of the Subject Property and represents a source of hazardous substance impact, particularly to the water and sediment of Monguagon Creek. An itemized list of hazardous substances detected in sediment samples from Monguagon Creek during the remedial action investigation conducted on behalf of Elf Atochem is provided in Attachment II. Classes of compounds detected include VOCs, PNAs, phthalates, 2,4-di-tert-pentylphenol, PCBs, heavy metals, and cyanide. Remediation of the creek was performed and in correspondence dated August 4, 1997, the MDEQ concluded “...that the response activities indertaken satisfactorily completed all requirements of the Consent Judgement...” The MDEQ correspondence indicates that approximately 37,670 tons of stabilized sediment from Monguagon Creek was removed to

the underlying clay and disposed into permitted sanitary landfill. A copy of the MDEQ "Certification of Completion" letter is provided in Attachment II.

2.1.2 Limited Phase II Environmental Site Assessment

During March 2000, DLZ Michigan, on behalf of the petitioner, conducted a limited Phase II ESA at the Subject Property and adjacent Riverview property. A total of nine (9) geoprobes were advanced on the two properties. In addition to collection of soil samples, sediment and surface water samples were obtained from Monguagon Creek.

Analytical results are summarized in the table provided in Attachment III. The presence of VOCs was not detected in the soil, sediment, or water samples analyzed. Metals were detected in the soil and sediment samples analyzed, but generally at concentrations consistent with Part 201 residential criteria. Arsenic was detected in two samples at levels slightly above default background and residential direct contact criteria. These latter concentrations of arsenic appear consistent with observed background levels in Southeast Michigan. The concentrations of iron detected, as was expected, exceed the default background level; no other Part 201 soil criteria are currently available for iron.

Several SVOCs, specifically polynuclear aromatics (PNAs), were detected in several soil samples and a sediment sample. The concentrations of PNAs detected, however, do not exceed Part 201 residential soil criteria.

PCBs (i.e., Aroclor 1260) were detected in a single soil sample, but not at a concentration exceeding Part 201 residential soil criteria.

The water samples analyzed did not contain detectable concentrations of VOCs, SVOCs, or PCBs. The water samples contained detectable levels of iron and lead; no other metal was detected. There is no Part 201 GSI criterion currently available for iron; however, the Part 201 aesthetic drinking water value is 0.3 mg/l. Iron was detected in the water samples with concentrations of 0.29 and 0.96 mg/l, respectively.

The surface water drinking water value for lead is 0.014 mg/l. Lead was detected in one water sample with a concentration of 0.007 mg/l.

2.2 General Location and Extent of Known Contamination

The hazardous substances detected in soil samples obtained from the Subject Property are located in the general area of the former EAF dust stockpile, which is located primarily within the Riverview Property. The former dust pile location is adjacent to the Trenton Property, and some of the sample locations were inside the boundaries of the Trenton Property. The samples analyzed were collected from the surface and at approximate depths of two and four feet bgs.

The authors of the referenced reports concluded that the presence of hazardous substances in the soil at the former dust pile location is not due to the former EAF dust pile on the site, but rather appears consistent with overall soil conditions on the two parcels. The occurrence of hazardous substances appears to be associated with the presence of extensive fill material across the site. The fill material varies in thickness from 4 to 25 feet, generally increasing in thickness from west, near West Jefferson Avenue, to east, towards the Detroit River. The fill material encountered consists principally of foundry-type sand generally associated with iron and steel production, but also occasionally contains brick fragments, metal debris, and other miscellaneous refuse.

Based on the available information, impacted groundwater (metals and organic compounds) was encountered generally on the eastern portions of the two sites, generally adjacent to the Detroit River. Metal impacted groundwater, however, was encountered in monitoring wells installed as part of the former EAF dust pile investigation. Monitoring wells upgradient of the former EAF dust stockpile contained metals concentrations consistent with the downgradient wells. As with soil, it thus appears that the EAF stockpile has not impacted the groundwater at the site, but rather that the presence of hazardous substances in site groundwater is an area wide phenomenon associated with fill material present across the Property.

2.3 Likelihood of Other Contamination

Based on the known history of the Subject Property and Trenton Steel, and the results of the several investigations, which identified several classes of hazardous substances (e.g., metals, VOCs, SVOCs) at the Subject Property, additional contamination, whether additional compounds or additional extent, may be present. Additional hazardous substances have been detected in soil and groundwater samples collected from several locations within the remaining property of the Trenton Steel Facility. The 1997 Techna and 1999 ESC reports include tables that itemize the compounds detected across the Trenton Plant Facility. Additional hazardous substances and classes of compounds detected in soil and groundwater samples, although not necessarily at concentrations that exceed Part 201 residential criteria, include:

Metals

Antimony	7440-36-0	Arsenic	7440-38-2
Barium	7440-39-3	Beryllium	7440-41-7
Cadmium	7440-43-9	Chromium	16065-83-1
Cobalt	7440-48-4	Copper	7440-50-8
Lead	7439-92-1	Mercury	7439-97-6
Nickel	7440-02-0	Selenium	7782-49-2
Silver	7440-22-4	Thallium	7440-28-0
Tin	7440-31-5	Vanadium	7440-62-2
Zinc	744066-6	Iron	7439-89-6

Volatile Organic Compounds

Benzene	71-43-2	Trichlorofluoromethane	75-69-4
Toluene	108-88-3	Trichloroethene	79-01-6
Ethylbenzene	100-41-4	Tetrachloroethene	127-18-4
Xylenes	1330-20-7	1,1-Dichloroethane	75-34-3
1,1-Dichloroethene	75-35-4	cis-1,2-Dichloroethene	156-59-2
1,2,4-Trimethylbenzene	95-63-6	1,3,5-Trimethylbenzene	108-67-8
sec-Butylbenzene	135-98-8	tert-Butylbenzene	98-06-6
Naphthalene	91-20-3	n-Propylbenzene	103-65-1

Semi-Volatile Organic Compounds

2,4-Dimethylphenol	105-67-9	Phenol	108-95-2
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Polynuclear Aromatics (PNAs)

Naphthalene	91-20-3	Acenaphthene	208-96-8
Fluorene	86-73-7	Phenanthrene	85-01-8
Anthracene	120-12-7	Fluoranthene	206-44-0
Pyrene	129-00-0	Benzo(a)anthracene	56-55-3

Chrysene	218-01-9	Benzo(b)fluoranthene	205-99-2
Benzo(k)fluoranthene	207-08-9	Benzo(a)pyrene	50-32-8
2-Methylnaphthalene	91-57-6		

Polychlorinated Biphenyls (PCBs) 1336-36-3

Additional Compounds

Cyanide 57-12-5
Sulfide (Sulfur CAS No. 7704-34-9)

Based on the history of the Property, the known environmental conditions (e.g., extensive fill material consistent with historic iron and steel production), and identified hazardous substances in soil and groundwater at the Trenton and Riverview Properties, and the overall Trenton Steel Facility, it appears likely that other contamination may be present at the Property. Any additional contamination that may be encountered at the Property is expected to be consistent with hazardous substances already identified and with historic heavy industry and past disposal practices. Several locations at the Trenton Steel Facility, including the Subject Property, have been identified as possible PCB-impacted areas. Consequently, PCBs may also be present on the Trenton Property.

Furthermore, impacted groundwater has been encountered at the site. Based on defined groundwater gradients and flow directions, it is possible impacted groundwater is migrating offsite into the Detroit River.

If future site investigations (e.g., as required by the Consent Order) or site development reveal the presence of hazardous substances or environmental conditions not consistent with those previously described, this Due Care Plan will be reviewed, and if appropriate, supplemented with the additional information and modified as necessary to reflect newly described conditions.

2.1 Fate and Transport

As summarized above, some of the hazardous substances identified as concerns (e.g., metals, VOCs, SVOCs) are relatively resistant to degradation. In addition, VOCs can be rather mobile in the environment. Due to their resistance to biodegradation, the VOCs of concern tend to remain in soils relatively long after release and after the contamination source(s) have been removed. Metals are expected to remain in the environment into perpetuity. In addition, some potential organic degradation products, such as vinyl chloride, are more toxic than the parent compounds and thus tend to have more restrictive criteria. Furthermore, impacted groundwater has been characterized as potentially migrating offsite towards the Detroit River.

2.2 Human Exposure Pathways

Potential human exposure pathways include the following:

- Direct contact (ingestion and dermal) with contaminated soil
- Direct contact (dermal) with contaminated groundwater
- Direct contact (ingestion and dermal) with contaminated surface water
- Ingestion of contaminated groundwater
- Ingestion of contaminated surface water
- Inhalation of vapors from soil (indoor and ambient)
- Inhalation of vapors from groundwater (indoor)
- Inhalation of vapors and/or aerosols from contaminated surface water

- Inhalation of contaminated soil particulates

With respect to ingestion of contaminated groundwater, there is no onsite groundwater usage. Potable water is and will continue to be provided by municipal supplies. As a result, on-site consumption of contaminated groundwater is not considered to represent an exposure pathway. However, as a provision of this Due Care Plan, onsite usage of groundwater as a potable supply (e.g., human consumption; landscape irrigation) is prohibited as long as the groundwater remains impacted with hazardous substances in concentrations exceeding applicable cleanup criteria.

There is potential for construction/utility workers to come into direct contact with impacted groundwater during subsurface activities; however, the concentrations of hazardous substances detected in groundwater to date do not exceed applicable criteria. Subsequently, direct contact with impacted groundwater is not currently identified as a pathway of concern.

Similarly, the concentrations of hazardous substances detected in soil and groundwater at the Property to date do not exceed vapor or particulate inhalation criteria. As a result, these inhalation pathways are not currently identified as pathways of concern.

Inhalation (vapors of volatile compounds, aerosols), ingestion, and dermal contact with contaminated surface water are also potential exposure routes. There is no surface water on the Property, but the Detroit River borders the property to the south; and a potential for offsite migration of contaminated water has been identified, but not yet confirmed. Groundwater samples have been collected from limited areas at the Subject Property: samples have been collected from the vicinity of the former EAF dust stockpile and analyzed for barium, cadmium, chromium, and lead. In addition to a river sample, groundwater samples have also been collected from wells located generally adjacent to the Detroit River and were analyzed for VOCs, SVOCs, and metals (Section 2.0). Similar types of heavy metals were detected between the two locations, with similar concentrations (exceeding the Part 201 GSI criterion) reported for barium. In addition, VOCs and SVOCs were also detected in water samples obtained from the wells adjacent to the river, with 2,4-Dimethylphenol also exceeding the Part 201 GSI criterion. The results reported above for the former EAF dust stockpile are for a one year quarterly monitoring program, while the results for samples from adjacent wells are from a single sampling event. Thus, impacts to surface water have not been adequately defined. Based on the results to date, however, and assuming a mixing zone acceptable to the State, it does not appear that the presence of any hazardous substances in adjacent surface water presents an unreasonable level of risk to human health, safety, welfare or the environment. However, as indicated previously, a notification of migration form will be submitted to the MDEQ under separate cover, thus fulfilling any owner/operator obligation regarding offsite migration of contamination. Furthermore, as a provision of this Due Care Plan, onsite use of surface water is prohibited until results of additional environmental investigation as required by the Consent Order confirms surface water conditions meet regulatory cleanup standards.

With respect to direct contact with soil, except for lead, the concentrations of hazardous substances detected in soil at the Property to date do not exceed Part 201 residential soil direct contact criteria. Lead has been occasionally detected in soils at the Property at concentrations that exceed both Part 201 residential and industrial soil direct contact criteria. Consequently, direct soil contact, specifically with lead impacted soils, is identified as an exposure pathway of concern at the Property.

As a result, the Due Care Plan focuses on procedures for appropriate management of soil and groundwater to mitigate exposure, exacerbation, and take precautions against foreseeable acts of third parties. In addition, the comprehensive provisions described below are designed to address management

of all affected media and thus will, when implemented, fulfill the owner/operator's obligations to prevent unacceptable exposure, exacerbation, and third party actions. This Due Care Plan, which is based on the known extent of contamination and on the overall history of the site, assumes that the fill material across the Subject Property is impacted with similar hazardous substances as those itemized above.

2.3 Category of Generic Criteria Applied to the Site

The generic criteria applied to the site are Part 201 residential and industrial. The residential criteria are employed to establish that the Subject Property is a "Facility" as defined by Part 201. The industrial criteria are applied to the Property because the property is zoned industrial and will remain zoned as such; furthermore, the intended future use of the Property is industrial. In addition, no concerns with respect to potential fire or explosive hazards associated with known residual contamination at the Property have been identified.

3.0 PLAN FOR RESPONSE ACTIVITIES

Specific requirements for site investigation and remediation are detailed in the Consent Order executed between DSC and the State. The owner/operator will allow access to DSC and MDEQ and their authorized representatives for execution of response activities by DSC as required under the Consent Order or other applicable law, including but not limited to environmental investigations and implementation of required response activities. In addition, the owner/operator may permit, when appropriate, incorporation of final cover into a remedial design for the Property. The response activities to be performed by DSC, as may be supplemented by the owner/operator's establishment of final cover, are expected and intended to allow the safe redevelopment of the Property. The owner/operator intends no direct implementation of any additional response actions at the Property, except as may otherwise be required to fulfill due care obligations as required by Section 7a.

4.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH SECTION 7a OBLIGATIONS

The completed and planned response activities will be effective in assisting the owner/operator with compliance with due care obligations, as discussed below.

Exacerbation: With respect to exacerbation, regardless of final remediation requirements, the placement of concrete, asphalt pavement, or other suitable cover will provide an effective barrier to exposure to impacted soil and groundwater, including direct contact and inhalation. Those areas not covered with pavement will be covered with suitable alternative material (e.g., gravel, landscaping). Furthermore, compliance with provisions provided in the Dormant Land Use Plan (Appendix A), Renovation/Demolition Use Plan (Appendix B), Construction Use Plan (Appendix C), and Developed Use Plan (Appendix D), as appropriate for continued use and future development of the facility, will assist in preventing exacerbation, and will not be considered exacerbation of existing conditions.

Due Care (Mitigation of Unacceptable Exposures): As described above, the most likely pathway of unacceptable exposure is direct contact with impacted soils. However, compliance with provisions provided in the Dormant Land Use Plan (Appendix A), Renovation/Demolition Use Plan (Appendix B), Construction Use Plan (Appendix C), and Developed Use Plan (Appendix D), as appropriate to continued use and future development of the facility, will assist in mitigating all unacceptable exposures to residual contaminants, whether direct contact with soil, groundwater, or surface water or inhalation of volatilized organics, soil particulates, or aerosols.

Reasonable Precautions: To protect against foreseeable actions of third parties, and in accordance with Rule 1013(6) and (7), written notices to the easement holders, utility franchise holders, and the owner/operator of all public utilities in the vicinity of the facility will be provided. To comply with requirements for providing information about the general nature and extent of contamination, such information will be attached to the notices. Comparable information will be provided to persons conducting activities at the site with permission of the owner/operator, and other persons not specifically identified in this plan but who may come in contact with hazardous substances present on the property (e.g., owners of subsurface mineral rights). Notice will be provided to easement holders or other persons via a method providing proof of delivery (e.g., hand delivery with stamp receipt, return receipt mail). If the person to whom notification is to be provided is not an individual, then the notice will be provided to the chief executive officer of the organization.

4.1 Land Use-Based Due Care Provisions

Appendices A through D provide provisions for implementation of due care provisions based on land use category. Provisions are provided for Dormant Land Use (Appendix A), Renovation/Demolition Use (Appendix B), Construction Use (Appendix C), and Developed Land Use (Appendix D). Not all provisions summarized for each land use category are necessarily required for the Property; nor is each land use category applicable to the Property. Provisions relevant to land use categories that are applicable to the Property will be implemented, when necessary and as appropriate to ensure compliance with Due Care obligations.

APPENDIX A DORMANT LAND USE PLAN

General Provisions

On those portions of the Property that are paved or otherwise covered (e.g., gravel, landscaped), the cover material serves as a barrier to direct contact exposure, emissions of volatile organic compounds (impermeable barriers), and atmospheric entrainment of contaminated particulate matter. Impermeable barriers also serve as impediments to the infiltration of precipitation. Currently, the contaminants that have been identified, or which may exist, in soils beneath any paved portions of the Property are effectively covered by the surface material. Such areas will be routinely inspected and repaired or upgraded as required to maintain an effective barrier. At those locations that are otherwise covered, but where the contaminants are limited to subsurface elevations, the surface soils will remain intact and be maintained, or if disturbed, will be returned to appropriate specifications, or substituted with clean fill, gravel, pavement, topsoil and landscaping, or alternative suitable cover material. At those locations of confirmed contamination where suitable cover material is not currently present, and which will remain dormant or vacant, appropriate cover material will be placed; such material may include gravel, landscaping (topsoil and grass), or suitable alternative.

During future construction (e.g., utility; rehabilitation of rail infrastructure, surface grading and paving) and, perhaps, redevelopment/demolition activities, existing pavement barriers may be removed and contaminated soils, if present, may be exposed. Due to the general nature of identified contaminants, exposure pathways appear limited to construction workers, who will be potentially exposed, directly or indirectly, via oral ingestion and dermal contact, and to construction workers and the general public via potential inhalation of vapors or contaminated airborne particulates. Disturbed soil will be managed in accordance with provisions described within this section and as described in Appendix C (Construction Use Plan).

If heretofore unknown subsurface structures (e.g., storage tanks, drums) are identified on the Property, they will be managed/remediated in accordance with procedures outlined in Appendix C (Construction Use Plan).

Only authorized personnel will have access to the Property. Exposure frequencies and durations will be monitored during construction; if rates exceed those considered protective of worker health and safety, appropriate actions will be implemented, including but not limited to a reduction in time spent within contaminated zones and/or increased level of personal protective equipment. Members of the general public will not have free access to the site and, thus, their potential exposure will be limited to airborne contaminants, if any, that may migrate offsite. The contaminated soils will be wetted down as necessary to reduce any nuisance dust conditions.

As previously indicated, the Property is subject to corrective measures investigations and possible response activities. As such, certain portions of the Property, identified as waste management units (WMUs), are scheduled for environmental investigations (e.g., RCRA and TSCA investigations) to characterize the nature, extent, and severity of contamination, and if contamination is confirmed, to determine appropriate response actions that may be required. These investigations are being conducted and managed by DSC Ltd., a previous owner of the Property, with MDEQ oversight. Certain locations on the Property have been previously investigated, have had no associated recognizable environmental conditions identified, and thus require no further action. Until corrective measures are completed for the identified WMUs, dormant land usage is limited to those "Alternative Use Locations" that require "no

further action.” The Alternative Use Locations are identified as those locations outside the approximate boundaries of the following WMUs (Figure 1, Attachment I):

- WMU 26 – North Debris Piles
- WMU 27 – Equipment Storage Yard (former)
- WMU 29 – TSCA Storage Building (former)
- WMU 30 – Former Electric Arc Furnace Emission Control Sludge/Dust Storage Pile Location
- WMU 31 – Electric Arc Furnace Emission Control Sludge/Dust Storage Tanks

Identification of useable Alternative Use Locations has been based on: 1) no identified recognized environmental conditions, 2) no further action required as indicated in the Consent Order, and/or 3) results of environmental investigations conducted at the site. Generally, excluded areas are those currently identified as WMUs. If during site use or future environmental investigations information becomes available indicating or confirming the presence of hazardous substances, the due care obligations influencing the continued use of an Alternative Use Location will be re-evaluated.

Dormant Land Use: As indicated previously, dormant land use (or use of undeveloped portions of the property) will be limited to identified Alternative Use Locations. Future use of WMU locations is dependent on the results of corrective measure activities on the Property, and is subject to applicable sections and provisions of this Due Care Plan. If necessary, the Due Care Plan will be modified, as appropriate, to reflect and incorporate new site information, as it becomes available.

Use of identified alternative dormant land locations is subject to the following provisions:

- Container storage will be limited to the identified Alternative Use Locations.
- Significant use or storage of hazardous substances is prohibited.
- Vehicle traffic is prohibited from the locations of the WMUs until adequately characterized for development of appropriate management options.
- Vehicular speed is limited to no more than 15 mph to reduce nuisance dust conditions; dust suppressant (e.g., water) will be applied to all unpaved roadways, as needed.
- The MDEQ, DSC Ltd., their authorized employees, agents, representatives, contractors and consultants, and other persons performing MDEQ-approved response activities relating to existing contamination, will have the right of access to the facility. Authorized access is subject to the following conditions and understanding described below, including but not limited to: reasonable notice of intent of access (including written notice of DSC access at least two business days in advance); provision of proper identification; access during normal business hours; compliance with applicable health and safety laws and regulations; and additional applicable conditions and understandings as may be required or adopted (including the requirements of any access agreement with DSC), and which are pertinent to site activities.
- The Property will be secured against unauthorized access by fencing or other appropriate barriers to unauthorized access and onsite security personnel. Access and egress shall be limited to designated entry locations, at which proper identification will be provided upon request.

The continued use of dormant land is also subject to applicable provisions described in other Sections of the Due Care Plan, as appropriate to conditions encountered and land use activities conducted. Such additional provisions, as applicable, may include, but are not necessarily limited to, procurement of any required permits, response activities to newly encountered, previously unknown, suspect contamination,

activities conducted in response to spills or releases of hazardous substances, and notification of third parties that may conduct activities on the Property.

APPENDIX B

RENOVATION/DEMOLITION USE PLAN

General Provisions

If any of the existing structures on site are renovated (e.g., rehabilitation of rail infrastructure) or demolished at some time in the future, excluding demolition subject to the Consent Order between MDEQ and DSC, project-specific technical specifications and site work scopes for such activities will be prepared by the facility owner/operator or their representatives, and will be appended to this Due Care Plan. Renovation/demolition activities will be conducted in a manner designed to comply with due care obligations.

Prior to such renovation/demolition of existing structures, any requirements for the removal or containment, as appropriate, of hazardous materials (e.g., asbestos, lead-based paint, etc.) will be completed in accordance with specifications developed for the required scope of work. In addition, as appropriate, contaminated soils and groundwater will be managed in accordance with procedures outlined in Appendix C (Construction Use Plan).

APPENDIX C

CONSTRUCTION USE PLAN

General Provisions

For those areas of the Property that are paved, if any, the pavement serves as a barrier to direct contact exposure, emissions of volatile organic compounds, and atmospheric entrainment of contaminated particulate matter. The pavement also serves as a barrier to infiltration of precipitation. Currently, hazardous substances that may exist in soils under the paved areas are effectively covered by the pavement surface.

During construction activities (e.g., utility; rehabilitation of rail infrastructure, surface grading and paving), existing pavement barriers may be removed and impacted soils, if present, may be exposed. Due to the nature of identified contaminants, exposure pathways appear limited to construction workers, who will be potentially exposed, directly or indirectly, via oral ingestion and dermal contact, and to construction workers and the general public via potential inhalation of volatilized compounds and airborne particulates.

Only authorized personnel will have access to the Property. Exposure frequencies and durations will be monitored during construction. If exposure rates exceed those considered protective of worker health and safety, appropriate actions will be implemented, including but not limited to a reduction in time spent within contaminated zones and/or increased level of personal protective equipment. Members of the general public will not have free access to the construction site, and, thus their potential exposure will be limited to airborne contaminants, if any, that may migrate offsite. Exposed contaminated soils will be wetted down as necessary to reduce nuisance dust conditions.

With respect to future construction activities that may occur within confirmed or suspected areas of hazardous substance impacts, the following provisions will be implemented, as appropriate and necessary to ensure protection of human health, safety, and welfare and the environment.

Soil Removal Activities

When future development plans require onsite construction activities, including but not limited to excavation of contaminated and non-contaminated soils, soil relocation shall be performed in accordance with Section 20120c of Part 201. Soil which requires excavation due to construction requirements will be appropriately managed, such that:

1. The excavated soil will be returned to the excavation, if appropriate;
2. Where possible, the soil may be relocated on the site and properly contained (e.g., covered);
3. Soil to be relocated offsite will be characterized to determine proper offsite disposal requirements, and soil requiring offsite disposal will be transported and disposed into an appropriate, properly licensed landfill facility (when necessary, soil to be disposed offsite may be temporarily relocated within the area of environmental contamination prior to final offsite disposal); and/or
4. In-place exposure barriers that are damaged will be repaired to their appropriate condition, or replaced with an equivalent or more effective alternative as part of future construction; or if a barrier is warranted but not currently present, one will be installed.

Offsite soil disposal activities will be recorded by appropriate documentation, including, but not limited to manifests, trucking logs, receipts, and other documentation consistent with Section 20120c. If soil is relocated offsite, other than to a properly licensed landfill facility, the following information will be recorded:

- a) The location from which the soil was removed;
- b) The location at which the soil was disposed;
- c) The volume of soil removed and disposed;
- d) The basis on which a determination was made that the soil does not present a threat to public health, safety, or welfare or the environment; and
- e) Documentation of land use restrictions, if applicable.

Based on results of previous and, if conducted, any supplemental investigations, soil staging areas will be established, as required. The staging area(s) will be identified on a site plan, and will be limited to those areas containing soil contaminated with similar classes or types and concentrations (based on categorical criteria) of hazardous substances. Clean areas will not be used to stage contaminated soils without the existence or placement of impervious barriers between the in-place soils and the temporarily stockpiled contaminated soils. Stockpiled soils will be covered nightly with appropriate material to minimize fugitive dust and runoff due to precipitation.

Construction-related hazardous substances storage, handling, and use areas at the facility will be identified based on results of previous and, when conducted, any supplemental investigations. The locations at which construction-related hazardous substances may be stored will be identified on a site plan. Storage and management of construction-related hazardous substances will be performed in a manner designed to protect public and worker health, safety, and welfare and the environment, and in a manner and location that will permit distinguishing between existing contamination and new releases, including but not limited to the use of double-walled containers and temporary secondary containment systems. Releases of construction-related hazardous substances will be managed in accordance with procedures described below in "Release of Hazardous Materials from Construction Use."

Ground and Storm Water Management

If groundwater is encountered or storm water runoff accumulates within excavation pits during soil removal as part of construction activities conducted within impacted areas, the groundwater or accumulated storm water will be managed in accordance with applicable provisions and requirements of Part 201, and if appropriate, Part 213, and other applicable laws and regulations. Accordingly, when encountered, groundwater or accumulated storm water will be sampled and analyzed to determine appropriate management requirements. Based on the results of chemical analysis, disposal options will be determined. Disposal options may consist of, but are not limited to the following, as appropriate: direct discharge to storm or sanitary sewer systems; surface water discharge, onsite treatment prior to discharge; or collection and transport to offsite locations for treatment and/or disposal. Management options will include consideration of cost and efficacy.

USTs, ASTs, Drums and Other Containers

No underground storage tanks (USTs), above ground storage tanks (ASTs), drums or other containers are known to exist at the Property other than those that may be in active use. If such containers are encountered during future construction activities that may occur at the Property, they will be managed in accordance with appropriate and applicable state and federal regulations (e.g., Part 213) as required.

Health and Safety

A project Health and Safety Plan (HASP) will be prepared. The HASP will be prepared in accordance with standards promulgated pursuant to the National Contingency Plan (40 CFR 300.150), the Occupational Safety and Health Act of 1970, 29 CFR 1910.120, and the Michigan Occupational Safety and Health Act. The project HASP will include actions required to minimize oral, dermal, and inhalation exposures; such actions will include, as appropriate, workers wearing appropriate personal protective equipment, prohibition of eating, drinking, smoking while present in contaminated areas, implementation of appropriate decontamination procedures, and fugitive dust control (e.g., periodic application of water or alternative dust suppressant to exposed soil surfaces). Post-construction exposure to residual contaminated material, if any, will be mitigated by surface structures, paved parking, and/or landscaping.

Prior to commencement of construction activities on the Property, a copy of this Due Care Plan, including the HASP, will be provided to project managers representing contractors and subcontractors involved with site construction activities. Post-construction exposure to subsurface workers will be preceded by notice to those (e.g., utility workers) who may have exposure to the contaminants.

Equipment and materials will be decontaminated before leaving contaminated portions of the facility to mitigate offsite tracking of contaminated soil material. Prior to leaving the Property, trucks and other equipment will be brushed clean of dirt, as appropriate. If brushing is not sufficient to remove excess dirt and dust, additional decontamination procedures will be implemented, including, but not limited to use of high pressure steam cleaning using potable water. Decontamination will take place at the fringe of identified contamination zones, prior to equipment leaving such zones in order to minimize off-site tracking of contaminated soils.

Sampling and Analysis

A quality assurance project plan (QAPP), as may be required during soil/groundwater removal/recovery activities, will be prepared prior to site activities. If one is required, the QAPP will be prepared in accordance with "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" QAMS-005, EPA-600/4-83-004; NTIS PB 83-170514; and MDEQ QAPP Guidance, dated February 1993.

Upon completion of any excavation activities, and prior to structure or parking construction or placement of exposure barrier (e.g., landscaping) within soil-impacted areas of the Property, and at the discretion of the property owner, samples of remaining, in-place soils will be conducted. Soil sample locations will be performed in general accordance with "Guidance Document Soil Verification" (MDNR April 1994). Sampling equipment will be decontaminated and sample transport and management will be conducted in general accordance with the project QAPP. Sampling locations will be documented as follows:

- Description of soil type;
- Site plan showing soil sample locations;
- Documentation of sample management using chain-of-custody procedures; and
- Tables summarizing analytical data and copies of raw laboratory data sheets and quality assurance/quality control reports.

Access to Property

The MDEQ, DSC Ltd., their authorized employees, agents, representatives, contractors and consultants, and other persons performing MDEQ-approved response activities relating to existing contamination, will have the right of access to the facility. Authorized access is subject to the following conditions and understanding described below, including but not limited to: reasonable notice of intent of access

(including written notice of DSC access at least two business days in advance); provision of proper identification; access during reasonable times; compliance with applicable health and safety laws and regulations; and additional applicable conditions and understandings as may be required or adopted (including the requirements of any access agreement with DSC), and which are pertinent to site activities.

Security

During construction activities, the construction area shall be accessible only to the owner/operator and its employees and authorized representatives, DSC Ltd. and the MDEQ and their authorized employees, agents, representatives, contractors and consultants, and other persons performing approved response activities relating to existing contamination. The Property will be secured against unauthorized access by construction fencing or other appropriate barriers to unauthorized access and onsite security personnel. Access and egress shall be limited to designated entry locations, at which proper identification must be provided upon request.

Existing Contamination: Not Previously Known

If existing contamination is encountered during construction activities that was not previously known to exist, and is not consistent with known existing contamination, this Due Care Plan will be modified, as appropriate. Such contamination will be characterized and managed in accordance with applicable requirements of Act 451. Soils will be characterized in place or will be properly staged in a designated area until characterization is complete and appropriate disposal or relocation options are determined. In addition, all appropriate actions will immediately be taken in accordance with all applicable laws and regulations to prevent, abate, or minimize release, threat of release, or endangerment. If during performance of construction activities an event occurs that presents an imminent and substantial endangerment to human health or the environment through a release, threat of release, or existing contamination or conditions at the Property that were previously unknown, the MDEQ project coordinator or, if unavailable, the Pollution Emergency Alerting System (PEAS, 1-800-292-4706) shall be immediately notified. Actions taken shall be in accordance with all applicable health and safety laws and regulations, and provisions of the project HASP.

Release of Hazardous Substances during Construction Use

If there is a release of hazardous substances during owner/operator's onsite usage during construction activities (e.g., released from temporary storage tanks, etc.), actions consistent with requirements of Part 201 or Part 213, as applicable, will be implemented, including but not limited to:

- Immediately stopping or preventing the release at its source(s);
- Determining the extent and severity of the release;
- Immediately identifying and eliminating any threat of fire or explosion or any direct contact hazards;
- Reporting the release, if it exceeds the applicable reportable quantity (if any) or if otherwise required by applicable law, to the MDEQ project coordinator or, if unavailable, the Pollution Emergency Alerting System (PEAS, 1-800-292-4706); and
- Diligently pursuing response activities necessary to achieve applicable cleanup criteria.

Fugitive Dust Control Plan

The following fugitive dust control program will be implemented at the facility, as appropriate:

Unpaved Roads and Parking Areas: Dust suppressant (e.g., water) will be applied to all unpaved roadways. Application frequency will be based on site-specific conditions (i.e., as needed).

Paved Roads and Parking Areas: A sweeper will be used on all paved roads and paved parking areas. Frequency of sweeping on paved roads will be based on site-specific conditions (i.e., as needed).

Record Keeping: Records of sweeping frequency and dust suppressant application will be maintained.

Traffic Speeds: Vehicular traffic on all construction site roadways will be limited to a maximum speed of 15 miles per hour, which will be posted near the construction site entrance.

Air Monitoring

During excavation of contaminated soil, selected soil samples and locations may be screened in the field for volatile organic compounds using a portable photoionization detector (PID). The PID will be calibrated in accordance with manufacturer instructions; calibration records will be maintained. If fugitive dust conditions are not adequately controlled by periodic application of dust suppressant to soil, as described above, stationary high volume air monitors will be established at appropriate locations to monitor background and construction-related fugitive dust conditions. Samples collected with the high volume systems will be analyzed for PM10 particulates and for appropriate parameters (e.g., VOCs) identified during previous and any supplemental investigations.

APPENDIX D
DEVELOPED LAND USE PLAN

General Provisions

Future use of the facility will be conducted in a manner that will not likely interfere with the implementation, or significantly increase the cost, of required response activities to achieve compliance with applicable Part 201 categorical use criteria as established by the MDEQ. Redevelopment or reuse will be conducted in general accordance with applicable requirements of Section 20133 of Part 201. Specifically, pursuant to Section 20133(1)(d), redevelopment or reuse will be conducted in a manner not likely to do any of the following:

- i. Exacerbate or contribute to the existing release or threat of release.
- ii. Interfere with the implementation of response activities.
- iii. Pose health risks related to the release or threat of release to persons who may be present at or in the vicinity of the facility.

When contaminated soils or water are encountered during redevelopment (e.g., utility; rehabilitation of rail infrastructure, surface grading and paving) activities on contaminated areas of the facility, the soil or water will be managed in accordance with applicable procedures described in Appendix C (Construction Use Plan), including but not limited to: general provisions for soil management; descriptions of required response activities; management requirements for soil and water; additional sampling and analysis, if appropriate; response to existing contamination previously unknown; response to new releases of hazardous materials; and dust control.

APPENDIX E
SAMPLE NOTIFICATION LETTER

Name:
Title:
Company:
Address:
City, State, Zip Code:

RE: Notification of Hazardous Substances Pursuant to Part 10. Compliance with Section 20107a of Act 451 (PA 1994, as amended), R 299.51013(6) and (7).
Trenton and Riverview Properties
Former McLouth Steel Facility
Trenton, Wayne County, Michigan

Dear Sir/Madam:

Pursuant to Part 201 of the Michigan Natural Resources and Environmental Protection Act (451 PA 1994, as amended) and administrative rules R 299.51013(6) and (7), written notice is being provided regarding the presence of hazardous substances in soil and groundwater at the following property:

Trenton Property – City of Trenton
Riverview Property – City of Riverview
The Former McLouth Steel Facility
1491 West Jefferson Avenue
Trenton, Wayne County, Michigan

Several hazardous substances have been detected in soil and groundwater at the referenced site. Compounds identified as primary hazardous substances of concern include, but are not necessarily limited to: volatile organic compounds; semi-volatile organic compounds, and heavy metals.

As set forth in the attached summary table, the identified compounds of concern may be relatively resistant to degradation and some are rather mobile in the environment. Due to their resistance to biodegradation, the compounds of concern tend to remain in soils relatively long after release and after the contamination source(s) have been removed.

If activities are to be conducted at the properties, proper management of impacted soils or groundwater is required, including preparation of appropriate soil and groundwater management plans, and Health and Safety Plans.

This notification is intended to fulfill requirements of Section 20107a(1)(c), which states that “A person who owns or operates property that he or she has knowledge is a facility shall do all of the following with respect to hazardous substances at the facility: Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party and the consequences that foreseeably could result from those acts or omissions.”

If you have any questions or require additional information regarding this notification, please contact _____ at _____.

Sincerely;

APPENDIX D

REFERENCES

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APPENDIX E

OCCURRENCE OF RARE, THREATENED AND ENDANGERED SPECIES AND OTHER SENSITIVE NATURAL RESOURCES IN THE VICINITY OF THE RTRR PROPERTY

MICHIGAN STATE UNIVERSITY EXTENSION

Enclosed is the data requested from Michigan Natural Features Inventory (MNFI). These data are a list of Element Occurrences (EO) at the section level. The sections contain the centroid of the EO. In some cases, the extent of an animal's range or a community type may extend past the section containing the centroid.

These data represent the best available information regarding elements tracked by MNFI. This list, however, is not a definitive statement on the presence, absence, or condition of the natural features in any given locality. Plant and animal populations and natural communities change with time. Also, not every site has been specifically surveyed. Therefore, the information provided should not be regarded as a complete statement on the occurrence of special natural features of the area in question.

These data are used to guide conservation and land management activities. Some of the data records are historical. While these data may not be important for regulatory purposes, they are important for management and restoration purposes and for scientific use.

The following codes are used for the Federal and State status:

Federal Status:

- C = Candidate - species being considered for federal status
- LE = Listed endangered
- LT = Listed threatened
- LELT = Listed endangered in part of the range, threatened in a different part.
- PE = Proposed endangered
- PT = Proposed threatened
- PS = Partial status - status in only a portion of the range

State status:

- E = Endangered (Legally protected)
- T = Threatened (Legally protected)
- SC = Special Concern (Rare or status uncertain; not legally protected)
- X = Presumed extirpated (Legally threatened if rediscovered)



Michigan Natural Features Inventory

P.O. Box 30444
Lansing, MI
48909-7944

(517) 373-1552
FAX: (517) 373-6705

For questions about MNFI and the data, contact Ed Schools, MNFI, (517) 373-0798, or schoolse@state.mi.us.

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RIVERSIDE/TRENTON RR
Wyandotte Quadrangle - 4208322

Scientific Name	State Common Name	Federal Status	State Status	Last Observed	Element Category	TOWN	RANGE	SECTION
CLEMMYS GUTTATA	SPOTTED TURTLE		T	1997-06-04	Animal	03S	11E	21
STERNA HIRUNDO	COMMON TERN		T	1962	Animal	03S	11E	21
STERNA HIRUNDO	COMMON TERN		T	1985	Animal	03S	11E	21
ACIPENSER FULVESCENS	LAKE STURGEON		T	1978	Animal	03S	11E	22
HYBOPSIS STORERIANA	SILVER CHUB		SC	1985-03	Animal	03S	11E	28
ELAPHE VULPINA GLOYDI	EASTERN FOX SNAKE		T	1992-07-12	Animal	04S	10E	23
STROPHOSTYLES HELVULA	TRAILING WILD BEAN		SC	1916-09-04	Plant	04S	11E	4
CHAMPION TREE	SWAMP WHITE OAK (QUERCUS BICOLOR)				Other	04S	11E	5
ELAPHE VULPINA GLOYDI	EASTERN FOX SNAKE		T	1912-06	Animal	04S	11E	8
CHAMPION TREE	HONEYLOCUST (GLEDITSIA TRIACANTHOS)				Other	04S	11E	16
SILENE VIRGINICA	FIRE PINK		T	1917-07-01	Plant	04S	11E	20
CHAMPION TREE	DOWNY HAWTHORN (CRATAEGUS MOLLIS)				Other	04S	11E	20
MYOTIS SODALIS	INDIANA BAT OR INDIANA MYOTIS	LE	E	1865	Animal	04S	11E	20
ACIPENSER FULVESCENS	LAKE STURGEON		T	1970	Animal	04S	11E	22
CYCLONAIAS TUBERCULATA	PURPLE WARTYBACK		SC	1933-06-13	Animal	04S	11E	22
EPIOBASMA TRIQUETRA	SNUFFBOX		E	1930	Animal	04S	11E	27
EPIOBASMA TORULOSA RANGIANA	NORTHERN RIFFLESHELL	LE	E	1930	Animal	04S	11E	27
ELAPHE VULPINA GLOYDI	EASTERN FOX SNAKE		T	1994	Animal	04S	11E	28
OBOVARIA SUBROTUNDA	ROUND HICKORYNUT		E	1930	Animal	04S	11E	28
LAMPSILIS FASCIOLA	WAVY-RAYED LAMPMUSSEL		T	1908-10-11	Animal	04S	11E	28
CAREX SQUARROSA	SEDGE		SC	1911-07-22	Plant	04S	11E	29
SILENE VIRGINICA	FIRE PINK		T	1915-06-19	Plant	04S	11E	29

APPENDIX F
CORRESPONDENCE

List of Agencies Consulted

Name	Address	Phone	Contact Person	Comments
Federal Railroad Administration (FRA)	400 7 th St. SW Washington, DC 20590	202.366.4000 or 313.266.3164	Attn: Administrator	Region 5
Michigan Department of Transportation	UPTRAIN Freight Services and Safety Division 425 West Ottawa St. Lansing, MI 48909	517.373.6494	Susan G. Brook Administrator	
Council on Environmental Quality (CEQ)	722 Jackson Place NW Washington, DC 20503	202.395.5750	Mr. Horst Greczmiel Associate Director for NEPA Oversight	
U.S. Environmental Protection Agency (EPA)	Office of Strategic Environmental Analysis 77 West Jackson Blvd. (MC-19J) Chicago, IL 60604	312.886.6686	Shirley Mitchell Division Head	
U.S. Army Corps of Engineers	P.O. Box 1027 Detroit, MI 48231-1027	313.226.2218	Walter Gauthier Permit Evaluation, Branch B	
U.S. Coastal Guard	Marine Safety Office (Detroit) 110 Mount Elliott Ave Detroit, MI 48207-4380	202.267.2100 or 313.568.9580	Capt. of Port	
Advisory Council on Historic Preservation (ACHP)	1100 Pennsylvania Avenue NW, Rm 803 Washington DC 20004	202.606.8505	Ralston Cox Program Analyst	Frances Gilmore- Sec.
Michigan Historical Center (Commission or Preservation)	717 West Allegan Lansing, MI 48918-1800	517.373.0533	Brian Grennell Environmental Review Specialist	

List of Agencies Consulted - continued

Name	Address	Phone	Contact Person	Comments
Michigan Department of Natural Resources	Fisheries Division (Mason Bldg.) P.O. Box 30446 Lansing, MI 48909	517.373.1280		
Michigan Department of Natural Resources	Wildlife Division(Mason Bldg.-4 th Floor) 530 West Allegan St. Lansing, MI 48933	517.373.1280		
Bureau of Indian Affairs (BIA) (Federal)	US Dept of Interior 1849 C Street NW (MS-4516-MIB) Washington, DC 20240		Chief of Division of Env. Services Mr. Jerry Gidner	
United States Department of Agriculture (USDA)/Natural Resources Conservation Services (NRCS) Midwest Regional Office	2820 Walton Commons West, Suite 123 Madison, WI 53718	608.224.3001	Charles Whitmore Regional Conservationist	
Federal Emergency Management Agency (FEMA)	536 S. Clark St., 6 th Floor Chicago, IL 60605-1521	312.408.5501	Public Affairs	
SEMCOG (Planning Agency) Southwest Michigan Council of Governments	535 Griswold Street, Suite 300 Detroit, MI 48226	313.961.4266	Richard Pfaff Regional Review Coordinator	
Wayne County Department of Environment	415 Clifford St., 7 th Floor Detroit, MI 48226	313.224.3620	James Murray Director	
City of Riverview - Mayor	14100 Civic Park Dr. Riverview, MI 48192	734.281.4239	Tim Durand Mayor of City of Riverview	

List of Agencies Consulted - continued

Name	Address	Phone	Contact Person	Comments
City of Trenton - Mayor	2800 3 rd St. Trenton, MI 48183	734.675.6500	Patricia Hartig Mayor of City of Trenton	
Detroit Department of Transportation (D-DOT)	425 West Ottawa St. P.O. Box 30050 Lansing, MI 48909	517.373.2835	Tim Hoeffner TRAN Division	
The Downriver Community Conference	15100 Northline Road Southgate, MI 48195	517.373.2090	James Terry Executive Director	
Michigan Department of Environmental Quality	Hollister Bldg 64 106 West Allegan St. Lansing, MI 48909 Or P.O. Box 30473 Lansing, MI 48909-7973	518.383.9400 800.662.9278- Tanya 517.373.9400	Mr. Russell J. Harding Director	Will send out to the different divisions within this branch
U.S. Fish and Wildlife Service (FWS) Region III	2651 Coolidge Rd, Ste 101 East Lansing, MI 48823	202.535.2260 517.351.6236 612.713.5345	Ms. Craig Czarnecki Field Inspector	



Sample
consultation
letter

June 22, 2001

Administrator
Federal Railroad Administration (FRA)
400 7th St. SW
Washington DC 20590

**Re: STB Finance Docket 34040, Riverview Trenton Railway Company -- Petition for Exemption
-- Acquisition and Operation of a Rail Line in Wayne County, MI**

**Request for comments/consultation on proposed Riverview Trenton Railroad in Wayne
County, Michigan.**

Dear Administrator:

This letter requests your views on a rail and intermodal facility project that is the subject of environmental review by the federal Surface Transportation Board ("STB"). Riverview Trenton Railroad Company (RTRR), a start-up Michigan Railroad Corporation, proposes to acquire approximately 1.5 miles of track, excluding sidings and spurs, all of which is within the boundaries of the property that formerly housed the McLouth Steel Products Company, in Wayne County Michigan and to operate over that line, connecting with nearby Class I railroads. RTRR would also operate an intermodal facility on the same site. The City is located in the Cities of Trenton and Riverview, MI; the boundary between the two cities bisects the property.

On May 1, 2001, RTRR filed a Petition for Exemption with the STB, which has jurisdiction over railroad operations, seeking a regulatory exemption to allow it to proceed with its rail operations. An Environmental Report prepared by RTRR was filed with the Petition, and a copy of that Report is available from the undersigned on request. RTRR's May 1 Petition remains pending before the STB. (Also pending is a related proceeding in STB Docket No. 33980 that was initiated by a December 11, 2000 notice of exemption filed with the STB by RTRR, to acquire and operate over the same line.) Wayne County and the Cities of Riverview and Trenton have previously made representations to the STB expressing, among other views, concern about traffic that might be generated by the RTRR facility.

Because the STB's action on the RTRR Petition for Exemption constitutes a federal action under the National Environmental Policy Act of 1969 (NEPA), the STB's Section of Environmental Analysis (SEA) has determined that it is required to prepare an environmental assessment (EA) for the proposed project. The transportation, noise and air quality impacts of the project arising from truck and rail traffic are among the issues that will be addressed in the EA. URS Corporation has been retained by RTRR to prepare a draft environmental assessment, under SEA's guidance, for SEA's independent consideration and verification. SEA will then issue its own draft EA for public comment.

Attached to this letter is a brief description of the proposed action and its alternatives that are being evaluated, including a map of the affected area and a proposed site layout. This information is drawn from RTRR's prior Environmental Report.

We request that you please provide us with any comments you have on the proposed action. If possible, please provide your comments by July 9, 2001.

Please send your comment letters to:

URS Corporation
P.O. Box 201088
Austin, TX 78720-1088
9400 Amberglen Boulevard
Austin, TX 78729
Tel: 512.454.4797



Administrator
June 22, 2001
Page 2

Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, TX 78720-1088

For more information related to this proposed action you may contact me at (512) 419-5316 or Troy Brady at (202) 565-1593, the SEA contact at the Board.

Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jaya Zyman-Ponebshek', is written over the printed name.

Jaya Zyman-Ponebshek
Project Manager

SUMMARY DESCRIPTION OF PROPOSED ACTION

Background

Riverview Trenton Railroad Company (RTRR), incorporated under Michigan's railroad corporation statute, is a short line railroad established for the purpose of providing rail transportation and operating a related intermodal terminal in the Cities of Riverview and Trenton in Wayne County, MI. RTRR is a wholly owned subsidiary of Crown Enterprises Inc.; Crown is owned by CenTra, a privately owned company headquartered in Warren, MI. CenTra, and its various subsidiaries, provide transportation-related services throughout the U.S., including operation of intermodal facilities.

RTRR proposes to acquire approximately 1.5 miles of track, excluding sidings and spurs, all of which is within the boundaries of property that housed the former McLouth Steel Products Company (McLouth plant), in Wayne County, Michigan and to operate over that line and, pursuant to an agreement with DSC Enterprises, the extension of the line on the DSC property. The McLouth plant was built in the late 1940s, and expanded in 1956 and 1961. It was idled in stages during late 1995 and early 1996. The plant remained idle until July 1998 when the new owner of the property, DSC Enterprises, restarted one pickling line and portions of the facility wastewater treatment plant. (BEA, 2000). The RTRR line had previously been used by Grand Trunk Western Railroad (GTW) and possibly other Class I railroads to service the McLouth plant. That service ceased about five years ago, when McLouth terminated operations. However, the DSC steel plant on the adjacent property continues to receive rail service via tracks located on its portion of the property.

The RTRR track would connect with the mainline of the Conrail and GTW via existing track connections. RTRR has purchased 76 acres of the northern portion of the former steel plant. RTRR has obtained rights to operate over the portions of the existing track in the remainder of the former steel mill property from DSC. Approximately half of the RTRR property is in the City of Trenton and half is in the City of Riverview and the rail line traverses both cities.

In March 2001, RTRR obtained the services of URS Corporation, an engineering and environmental services firm, to assist in the preparation of an environmental report generally responsive to STB's obligations under the National Environmental Policy Act of 1969 (NEPA). SEA's requirements for environmental reports are provided in 49 CFR Section 1105.7. The

RTRR Environmental Report was submitted to the STB with RTRR's May 1, 2001 Petition for Exemption.

Proposed Action

Figure 1 shows a general location map and Figure 2 shows the general location of various activities as currently planned. The RTRR track, which will be rehabilitated, would connect with the mainline of the Conrail and GTW via existing track connections.

At maximum the truck-rail phase of operations will result in the storage of 1500 containers at any one time. Approximately 140 employees will be hired or contracted to perform work on the site. RTRR estimates a couple of hundred additional secondary jobs will be created at other facilities as a result of the proposed action. The volume of trucks entering or leaving the terminal will range from 140 initially to a maximum of 300 per day. Truck traffic will be limited to daylight hours, likely 7 am to 7 pm. At 300 trucks per day, this would result in approximately 25 trucks per hour or approximately one every two minutes. It is anticipated that, at least at the initial stages of operations, there will be approximately two trains per day leaving or entering the terminal. The maximum length per train will be approximately 100 cars. At approximately 80 ft per car this could result in a train of approximately 8000 ft. Traveling at approximately 5 mph, a worst-case delay of 20 minutes could result at the track crossing at Jefferson Avenue. However, RTRR plans to use primarily the separated grade crossing at King and Jefferson on the south end of the line to access the GTW and Conrail lines. When this occurs, Jefferson Avenue will not be affected by the train traffic. However, there will be some occasions when the grade level crossing on the north end of the line will be used.

Purpose of the Proposed Action

RTRR proposes to acquire a short line railroad and operate over existing track and construct facilities for storing and maintaining containerized cargo and transferring the containers from trucks to rail and vice versa. The proposed action includes rehabilitation of the existing line and construction of new track, sidings, and spurs within the intermodal terminal as necessary. Ultimately, the intermodal terminal would include a third mode of transportation—ships and barges at facilities to be refurbished along the Trenton Channel of the Detroit River.

Need for Proposed Action

RTRR has developed a specialized “niche” within the intermodal transportation industry that will allow automotive manufacturers to benefit from containerization of automobile

component parts. Given the proximity of automotive industry suppliers and assembly plants in the region, RTRR will be able to develop a significant market of both in-bound and out-bound containerized freight. Combined with the complimentary transportation services offered by affiliates of RTRR, the development of a substantial intermodal facility offering multiple Class I rail access, water access and convenient proximity to Interstate I-75 will offer substantial benefits to shippers in the region.

No Action Alternative

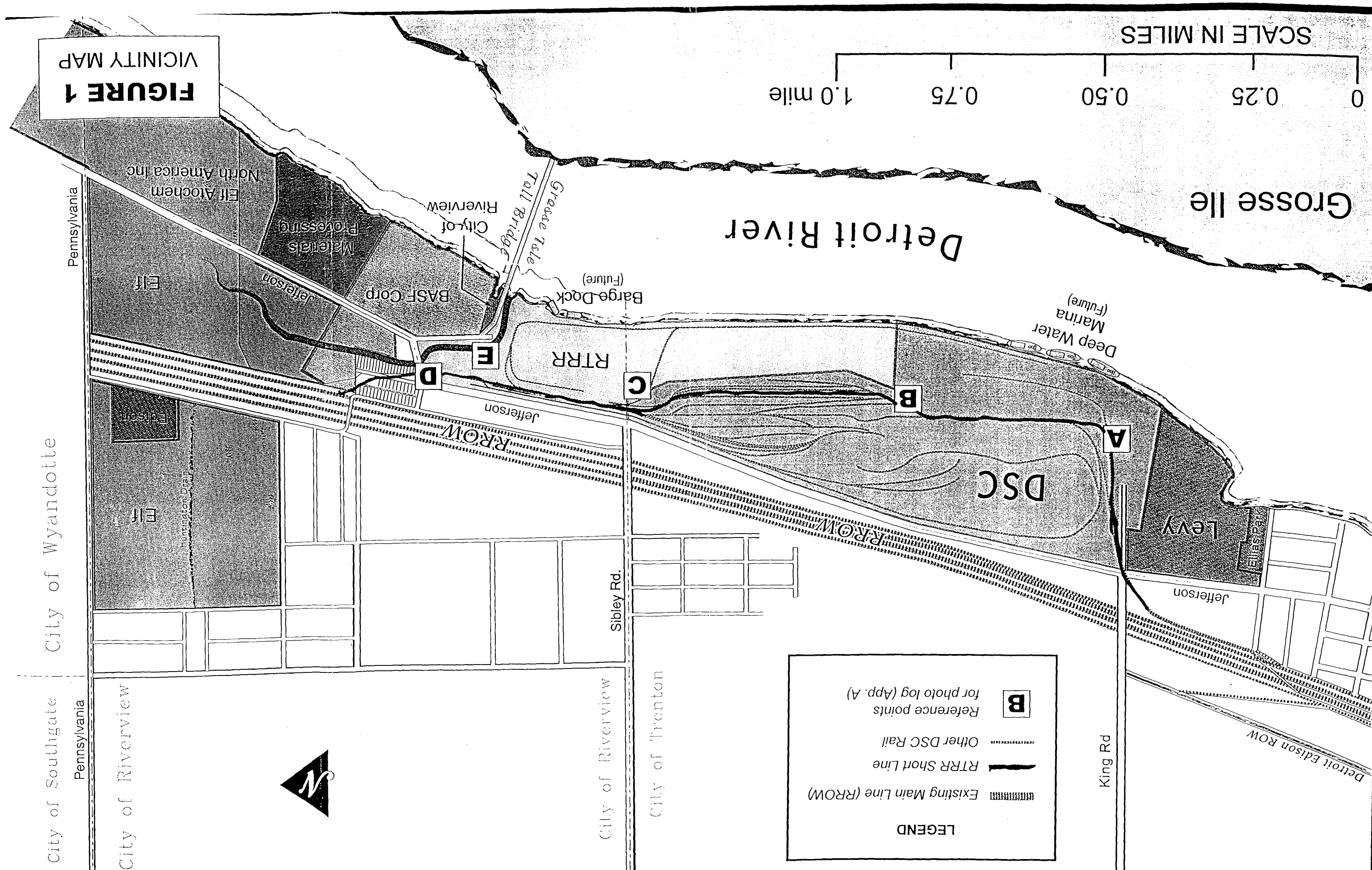
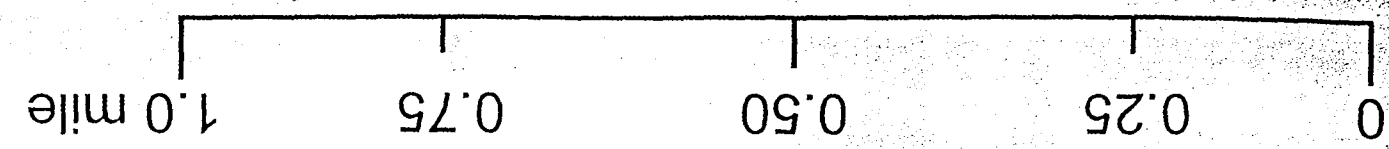
The no action alternative would arise if RTRR were to be denied the right to develop the site or if RTRR were to elect not to go forward with its plans. In this event, the 76 acres of the RTRR property would remain essentially as they are now with the only activity occurring being that related to ongoing remediation activities.

Preliminary Environmental Impacts Identified

Preliminary environmental studies show that water, biological and cultural resources will not be affected by the proposed action. However, the proposed action would have both positive impacts on transportation and air quality (meet a pressing regional transportation need, decrease traffic regionally, and cause minor regional air quality benefits) and negative impacts (increase traffic in the immediate vicinity of the site, possibly decrease local air quality). The project would also have noise impacts resulting from noise generated by large trucks, crane transfers and the movement of trains.

FIGURE 1
VICINITY MAP

SCALE IN MILES



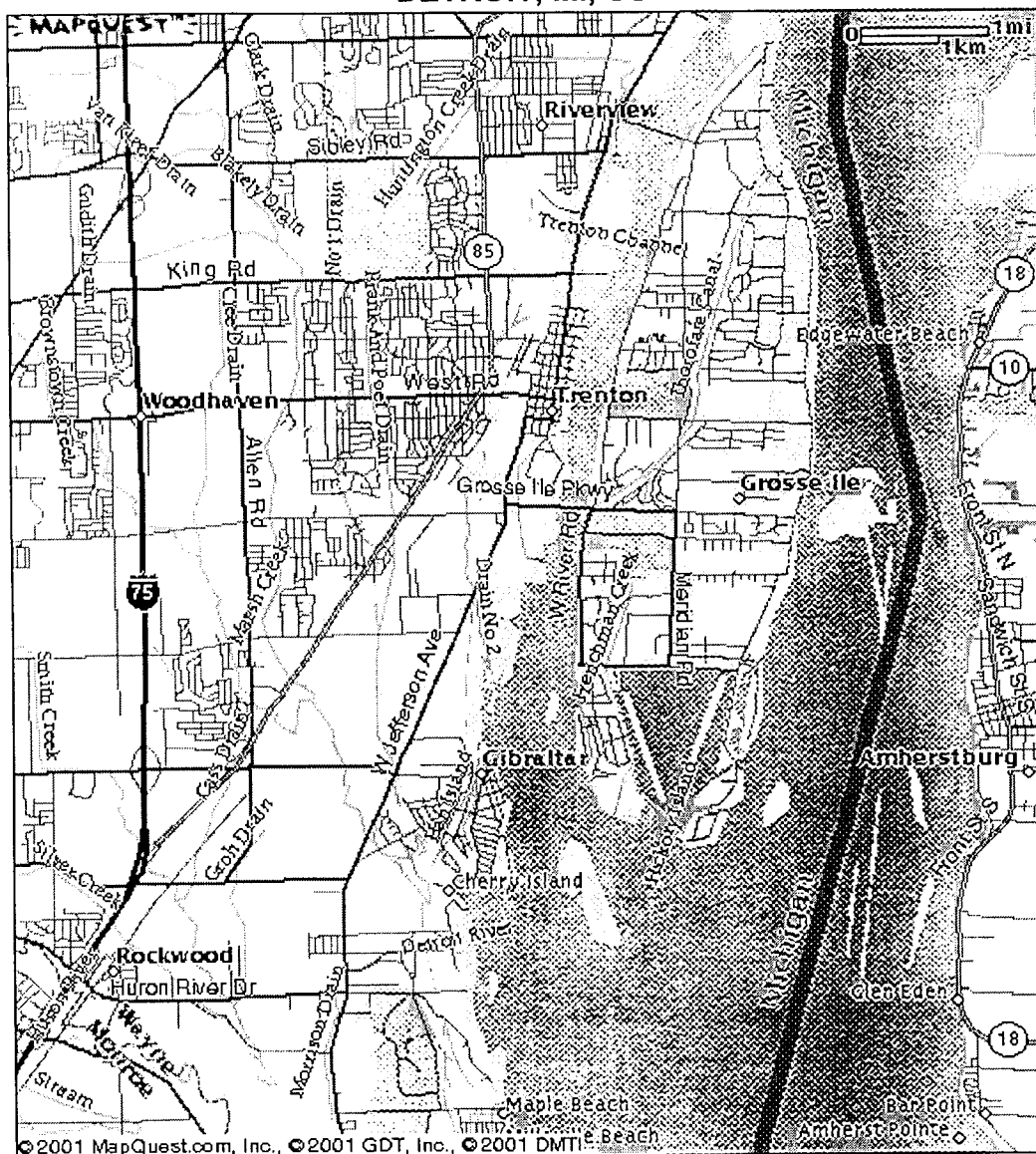
LEGEND

- Existing Main Line (RROW)
- RTRR Short Line
- Other DSC Rail
- Reference points for photo log (App. A)




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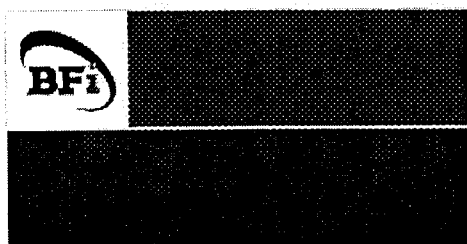
DETROIT, MI, US



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DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING, 425 WEST OTTAWA POST OFFICE BOX 30050, LANSING, MICHIGAN 48909

PHONE: (517) 373-2090 FAX: (517) 373-0167 WEB SITE: <http://www.mdot.state.mi.us>

GREGORY J. ROSINE, DIRECTOR

July 2, 2001

Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, Texas 78720-1088

Ms. Zyman-Ponebahek:

This is in response to your letter dated June 22, 2001 related to the Riverview Trenton Railroad Company acquisition of former McLough Steel Products Company trackage in the Cities of Trenton and Riverview, Michigan.

My comments are related to the intercity passenger operations in Michigan. Currently, there are no passenger operations on the mainline tracks connecting to the RTRR trackage. Based on the lack of passenger operations in this area, there would be no effect on passenger operations.

If you have any additional questions related to this issue, do not hesitate to contact me at 517-335-1931.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy H. Hoeffner".

Timothy H. Hoeffner, Manager
Rail Passenger Services

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JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T MASON BUILDING, PO BOX 30028, LANSING MI 48909-7528

WEBSITE: www.michigandnr.com

K. L. COOL, Director

REPLY TO:

FISHERIES DIVISION
PO BOX 30446
LANSING MI 48909-7946

July 2, 2001

Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
austin, Tx 78720-1088

Dear Mr. Zyman-Ponebshek:

SUBJECT: STB Finance Docket 34040 Riverview Trenton Railway, Wayne County
Comments for Environmental Assessment

Thank you for the opportunity to review the proposed acquisition and development of the Riverview Trenton Railway intermodal transportation facility at the site of the former McLouth Steel Products in Trenton, Michigan. URS will prepare an environmental assessment following NEPA standards for the proposed project. In addition we understand that an Environmental Report has been prepared by RTRR. I would like to request that a copy of that report be sent to me. Upon review, there may be further comments offered concerning the scope of the EA.

The EA for the facility should address both existing and planned future components. We will be concerned in particular with the proposed deep water marina and barge-dock facilities planned at the site. We will be interested in information concerning historic use of those portions of the site for deep draft vessels. Alternatives which minimize occupation of the navigation channel should be evaluated. Because of the industrialized character of the area, we would also be interested in methods to manage stormwater on the site, and in spill containment and prevention if hazardous materials will be stored or transferred on the site, to avoid discharge to the Detroit River.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script, reading "Sharon L. Hanshue".

Sharon L. Hanshue
Fisheries Division
517-335-4058



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

ENVIRONMENTAL ASSISTANCE DIVISION
TOWN CENTER 2ND FLOOR
PO BOX 30457
LANSING MI 48909-7957

June 29, 2001

Ms. Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, Texas 78720-1088

Dear Ms. Zyman-Ponebshek:

SUBJECT: STB Finance Docket 34040, Riverview Trenton Railway Company - Petition for Exemption-Acquisition and Operation of a Rail Line in Wayne County, Michigan

Thank you for the opportunity to review the summary description of the proposal to establish a rail and intermodal transportation facility in the cities of Trenton and Riverview in Michigan. Mr. Russell Harding, Director, Michigan Department of Environmental Quality (MDEQ), has requested that I respond to your proposed action regarding potential environmental impact.

The proposed action by the River Trenton Railway Company includes the purchase and operation of 1.5 miles of existing railroad track, excluding sidings and spurs, as well as the operation of an intermodal facility on the same site.

Based on the generic information presented in the action summary, we will need to review detailed information regarding the current permit for partial operation of the wastewater treatment facility, a storm water management (permit), and an assessment of the presence of on-site groundwater and/or soil contamination (baseline environmental assessment) prior to use of the site.

Due to the nature and scope of the summary action information presented for review, we request three copies of the Draft Environmental Assessment for review. Please send the documents to:

Mr. James W. Henderson, Ph.D.
Permit Coordinator
Environmental Assistance Division
Michigan Department of Environmental Quality
P.O. Box 30457
Lansing, Michigan 48909-7957

Sincerely,

Paul D. Zügger, Chief
Environmental Assistance Division
517-241-0490

cc: Mr. Russell J. Harding, Director, MDEQ
Mr. James W. Henderson, MDEQ



CITY of TRENTON

2800 Third Street
Trenton, Michigan 48183

July 19, 2001

Jaya Zyman-Ponebshek
URS Corporation
PO Box 201088
Austin, Texas 78720-1088

Re: STB Finance Docket 34040, Riverview Trenton Railway Company – Petition for Exemption

This communication is written in response to the receipt on July 2, 2001 of a June 22, 2001 Request for Comments reference the above, as received from URS Corporation, Austin, Texas.

Please be advised that the City of Trenton hereby objects to the proposed activity of the RTR, given its deleterious environmental impact on the community with increased truck and train traffic and patterns. The existing conditions of roadways cannot adequately handle the proposed 300 trucks per day, or one every two minutes that will service the facility in addition to the increased noise pollution and decrease in air quality.

This area of the region is already overburdened with blocked train crossings, and an additional blockage point of up to twenty (20) minutes is totally unacceptable to the community. The Jefferson Avenue corridor is a major north south conduit along the waterfront, which can ill afford blockages of the magnitude proposed. Any further such blockages will only further disrupt traffic flows and interfere with established emergency response patterns.

It should be noted that neither the City of Riverview nor Trenton has reviewed in detail a proposed site plan and no local approvals have been granted to date. Environmental concerns related to increased truck and train traffic, together with accompanying noise and air pollution, remain of paramount importance to the communities.

Patricia D. Hartig, Mayor
Telephone: (734) 675-6500 ♦ Fax: (734) 675-4088 ♦ E-mail: phartig@trenton-mi.com

Jaya Zyman-Ponebshek
Page Two
July 19, 2001

As previously indicated in my February 15, 2001, letter to the Surface Transportation Board, this 76-acre site is on the waterfront of the Detroit River, a federally designated American Heritage River. It is targeted for Brownfield remediation/redevelopment and is identified within the City's Master Plan as Mixed-Use. The proposed use is in direct conflict with ongoing local, state, and federal efforts.

Therefore, it is the City's position that this request should be denied.

Sincerely,

A handwritten signature in black ink, appearing to read "Patricia D. Hartig". The signature is fluid and cursive, with the first name "Patricia" being the most prominent part.

Patricia D. Hartig
Mayor

PDH/jkm

Copy to: Honorable Carl Levin and Debbie Stabenow, US Senators
Honorable John Dingell, US Representative
Trenton City Council
Mr. Wallace Long, City Attorney
Honorable Tim Durand, Mayor, City of Riverview
Mr. Troy Brady, Surface Transportation Board



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

Michigan State Office
3001 Coolidge Road, Suite 250
East Lansing, MI 48823-6350
517-324-5270 (t); 517-324-5171 (f)

July 5, 2001

Ms. Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, Texas 78720-1088

RE: STB Finance Docket 34040, Riverview Trenton Railway Company - Request for comments/consultation on proposed Riverview Trenton Railroad in Wayne County, Michigan

We received your letter requesting comment/consultation on the proposed Riverview Trenton Railroad in Wayne County, Michigan. Our review of the soils for that area reveals no negative impact on prime farmland or wetlands.

The Trenton Channel borders this property with some rail lines within 100 feet of the waters. Where the proposed rehabilitation of existing lines and construction of new track, sidings, and spurs will disturb soil, these areas will need to be protected from eroding. This will reduce the potential of sediment loads reaching the Trenton Channel.

Seeding recommendations for disturbed soil areas can be obtained from:

Steve Olds
District Conservationist
NRCS
Ann Arbor Service Center
7203 Jackson Rd.
Ann Arbor, Michigan 48103-9506
Phone: (734) 761-6722

We thank you for this opportunity to comment on the proposal. For a more timely response to proposed actions of this nature in Michigan, please contact me directly at the letterhead address.

RONALD C. WILLIAMS
State Conservationist

cc:

Steve Olds, District Conservationist, NRCS, Ann Arbor, Michigan
Albert Jones, ASTC for Field Operations, NRCS, East Lansing, Michigan
Charles Whitmore, Regional Conservationist, NRCS, Madison, Wisconsin
Bill Frederick, Acting State Soil Scientist, NRCS, East Lansing, Michigan

**NATURAL RESOURCES
COMMISSION**

KEITH J. CHARTERS, Chair
NANCY A. DOUGLAS
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STATE OF MICHIGAN



JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T MASON BUILDING, PO BOX 30028, LANSING MI 48909-7528

WEBSITE: www.dnr.state.mi.us

K. L. COOL, Director

REPLY TO:

NATURAL HERITAGE
WILDLIFE DIVISION
PO BOX 30180
LANSING MI 48909-7680

July 27, 2001

Ms. Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, TX 78720-1088

RE: threatened & endangered species review of acquisition and operation of rail line

Dear Ms. Zyman-Ponebshek:

The location of the proposed project was checked against known localities for natural features. Unique natural features are recorded in a statewide database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features at a site. The absence of records in the database for a particular site may mean that the site has not been surveyed. Records are not always up-to-date, and may require verification. In some cases, the only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, ... fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Department of Natural Resources, Wildlife Division. *Responsibility to protect endangered and threatened species is not limited to the list below. Other species may be present that have not been recorded in the database.*

The presence of threatened or endangered species does not preclude activities or development, but may require alterations in the project plan. Special concern species are not protected under endangered species legislation, but recommendations regarding their protection may be provided. Protection of special concern species will help prevent them from declining to the point of being listed as threatened or endangered in the future.

If the project is located on or adjacent to wetlands, inland lakes, or streams, additional permits may be required. Contact the Michigan Department of Environmental Quality, Land and Water Management Division, P.O. Box 30473, Lansing, MI 48909 (517-373-1170).

The following is a summary of the results for the project in Wayne County; T4S R11E sections 7, 8:

The project should have no impact on rare or unique natural features at the location specified above if it proceeds according to the plans provided. Please contact me for an evaluation if the project plans are changed.

Thank you for your advance coordination in addressing the protection of Michigan's natural resource heritage. If you have further questions, please call me at 517-373-1263.

Sincerely,

A handwritten signature in cursive script that reads "Lori G. Sargent".

Lori G. Sargent
Endangered Species Specialist
Wildlife Division

LGS:kpg

TRANSPORTATION
COMMISSION
BARTON W. LaBELLE - Chairman
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LH-LAN-0 (01/01)

STATE OF MICHIGAN



JOHN ENGLER, GOVERNOR

DEPARTMENT OF TRANSPORTATION

MURRAY D. VAN WAGONER (TRANSPORTATION) BUILDING
425 WEST OTTAWA STREET - PO BOX 30050, LANSING, MICHIGAN 48909
PHONE: 517-373-2090 FAX: 517-373-0167 WEB SITE: <http://www.mdot.state.mi.us>
GREGORY J. ROSINE, DIRECTOR

23 July 2001

Ms. Jaya Zyman-Ponebshek
URS Corporation
P. O. Box 201088
Austin, TX 78720-1088

Dear Ms. Zyman-Ponebshek:

Susan Brook asked me to respond to your recent letter regarding a proposal by the Riverview Trenton Railroad Company (RTRR) to acquire track for purposes of developing an intermodal facility in the cities of Trenton and Riverview, Michigan. The project is the subject of an environmental review by the federal Surface Transportation Board.

The purpose of this letter is to thank you for providing us with a summary of the proposed project and to inform you of our activities regarding intermodal transportation facilities in the Greater Detroit Area. We are neither supporting nor opposing the development as proposed by the Riverview Trenton Railroad Company.

The Michigan Department of Transportation (MDOT) is working with the Canadian National Railway (including the GTW), Canadian Pacific Railway, CSX Transportation, and the Norfolk Southern Railway to develop a large intermodal terminal complex in southwestern Detroit. The terminal complex could serve all the intermodal (containers, trailer-on-flatcar, Roadrainers, etc.) needs of major shippers in the region. Along with the railroads, we are working closely with the automotive industry, the Federal Highway Administration, local governments and agencies, and members of Congress on this project. Detailed feasibility and environmental studies have been completed or are currently underway. The project is referred to as the Detroit Intermodal Freight Terminal and is being planned to accommodate up to 1.9 million intermodal "lifts" annually in an area which could include 800-850 acres. Congress has appropriated \$18 million to date for development of the project and has indicated additional funding may be available. State monies have also been spent or dedicated to the project in partnership with the railroads.

Ms. Jaya Zyman-Ponebshek
Page 2
23 July 2001

We appreciate the information you provided and request a copy of the draft environmental assessment of the proposed RTRR project when it is available. Please don't hesitate to contact me directly at (517) 373-9058 or e-mail: karnesl@mdot.state.mi.us, if you have any questions concerning the Detroit Intermodal Freight Terminal project.

Sincerely,

A handwritten signature in cursive script that reads "Larry B. Karnes".

Larry B. Karnes
Intermodal Policy Division

cc: S. Brook



MICHIGAN DEPARTMENT OF STATE
Candice S. Miller, Secretary of State

Lansing, Michigan 48918-0001

STATE HISTORIC PRESERVATION OFFICE

Michigan Historical Center
717 West Allegan Street
Lansing, Michigan 48918-1800

August 1, 2001

Date:

Jaya Zyman-Ponebshek
Project Manager
URS Corporation
P.O. Box 201088
Austin, TX 78720-1088

Dear Applicant:

June 27, 2001

On June 27, 2001, the State Historic Preservation Officer (SHPO) received your request for a review under Section 106 of the National Historic Preservation Act of 1966, as amended. The Section 106 regulations specify what is required for a Section 106 review (36 CFR § 800.11). The information that you have sent is incomplete. The SHPO cannot initiate the Section 106 review process until we receive complete project information.

Section 106 requires federal agencies to take into account the effect of their undertakings on historic properties. It is the responsibility of the federal agency, *not the SHPO*, to fulfill the requirements of Section 106. In some instances, the federal agency may delegate legal responsibility to a state, local, or tribal government. Consultants or designees contracted to prepare information, analyses, or recommendations, are *not* recognized as federally-delegated authorities. For your reference, a complete version of the Section 106 regulations can be found at www.achp.gov/regs.html.

The information still required for your project review has been checked on the following pages. Please read each requirement carefully, and respond in full. Also, when sending the required information to the SHPO, please reference the date on which we first received your request for review (this date is provided above). Once the required information is received in full by the SHPO, we can proceed with the review. This letter does not clear the project. If you have any questions, please contact the Environmental Review section of the SHPO at (517) 335-2721.

Please note that incomplete project information shall be held for ninety (90) days from the date the SHPO received it, after which the SHPO will dispose of it, unless otherwise notified.

Thank you for your cooperation.

Sincerely,

Brian D. Conway
State Historic Preservation Officer

Enclosure (s)



August 15, 2001

Mr. Brian D. Conway
State Historic Preservation Officer
Michigan Department of State
State Historic Preservation Office
Michigan Historic Center
717 West Allegan Street
Lansing, Michigan 48918-1800

Re: STB Finance Docket 34040, Riverview Trenton Railway Company- Petition for
Exemption-Acquisition and Operation of a Rail Line in Wayne County, MI

Dear Mr. Conway:

In response to your letter dated August 1st, 2001 requesting additional information on Riverview Trenton Railroad's (RTRR) proposed action, I am enclosing for your review a copy of the preliminary environmental report that was prepared in April of this year. This preliminary environmental report contains a majority of the information that you have requested, including project location, work description, area of potential effects, site photographs, and determination of effects. As stated in the attached report, no historic sites and/or structures have been identified within the project boundaries.

According to the Surface Transportation Board's Rules (Board) governing this proposed project, Title 49 Section 1105.8, states that a historic report must be submitted by an applicant proposing an action that will result in the lease, transfer, or sale of a railroad line, sites or structures. RTRR has not identified any structures within the proposed project boundaries that are 50 years old or older. Therefore, RTRR is exempted from filing a historic report.

A Draft Environmental Assessment (EA) is currently being prepared and will be available for public review and comment within the next 2-3 months. If you would like a copy of the Draft EA, or require additional information, please do not hesitate to call me at (512) 419-5316 or Troy Brady of the Surface Transportation Board's, Section of Environmental Analysis at (202) 565-1593.

Sincerely,

A handwritten signature in black ink that reads "Jaya Zyman-Ponebshek/jal".

Jaya Zyman-Ponebshek
Project Manager

SEMCOG . . . Local Governments Advancing Southeast Michigan

Southeast Michigan Council of Governments • 535 Griswold • Suite 300 • Detroit, Michigan 48226 • 313-961-4266 • Fax 313-961-4869
www.semco.org

August 23, 2001

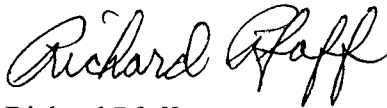
Jaya Zyman-Ponebshek
URS Corporation
P.O. Box 201088
Austin, TX 78720-1088

Dear Ms. Zyman-Ponebshek:

This is in response to your letter dated June 22, 2001 requesting comments from SEMCOG on the rail and intermodal facility project (STB Finance Docket 34040). Our transportation staff reviewed the Environmental Report received for its consistency with SEMCOG's 2025 Regional Transportation Plan and their comments are enclosed.

If you need further clarification on what is included in the enclosed memo, please do not hesitate to call me.

Sincerely,



Richard Pfaff
Regional Review Coordinator
pfaff@semcog.org

CC: Troy Brady, Surface Transportation Board - Section of Environmental Analysis

enclosure

MEMO

Southeast Michigan Council of Governments
535 Griswold, Suite 300
Detroit, MI 48226
(313) 961-4266
Fax (313) 961-4869
www.semco.org

August 17, 2001

TO: Richard Pfaff, Regional Review Coordinator

FROM: Bridgett Hewitt

SUBJECT: Review of STB Finance Docket 34040, Riverview Trenton Railroad Company's
Petition for Exemption: Acquisition and Operation of a Rail Line in Wayne County

I have reviewed the Environmental Report submitted with the Riverview Trenton Railroad Company's (RTRR) Petition for Exemption for its consistency with SEMCOG's 2025 Regional Transportation Plan (RTF). In this memo, I outline the RTRR's proposal, proposed action and its importance, the impacts of the proposed action on the area, and SEMCOG's conclusion and recommendation.

Proposal:

Riverview Trenton Railroad Company (RTRR) is seeking a regulatory exemption to allow it to proceed with its rail operations.

Proposed Action:

RTRR proposes to acquire a shortline railroad and operate over existing track and construct facilities for storing and maintaining containerized cargo and transferring the containers from trucks to rail and vice versa. Ultimately, the intermodal terminal would include a third mode of transportation — ships and barges at facilities to be refurbished along the Trenton Channel of the Detroit River.

Need for Proposed Action:

Given the increasing demand for intermodal transport facilities in the Detroit region, RTRR has developed a specialized niche within the intermodal transportation industry to allow auto manufacturers to benefit from containerization of automobile component parts. RTRR will be able to develop a market of both in-bound and out-bound containerized freight. The action will help to satisfy some of the regional demands for intermodal services and provide benefits of more efficient transport of cargo in a short of time.

Results of Proposed Action mentioned in the Environmental Plan:

Surface Water and Wetlands

No impact; action consistent with federal, state, and local water quality standards

Ground Water

No impact

Biological Resources

No impact

Transportation and Energy Resources

Positive Impacts:

- Meets pressing regional need of the lack of intermodal transfer facilities
- Decrease in truck traffic regionally because of increased shipping efficiencies
- Decrease in fuel usage because of decrease in truck traffic overall
- Overall increase in energy efficiency

Negative Impacts:

- Adverse impacts in the immediate vicinity of the RTRR site:
 - 140 trucks initially to maximum of 300 per day; approximately 25 trucks per hour or one every two minutes.
 - two trains per day; maximum train length - 100 cars with each car approximately 80 feet to equal a maximum of 8,000 feet
 - the cost of upgrading roads will be between \$40 and \$60 million

Air Quality

Positive Impacts:

- Reduced truck traffic from intermodal transportation
- No emissions from stationary point sources

Negative impacts:

- Local deterioration of air quality (if trucks left to idle too long on RTRR property or at intersections during rush hour traffic)
- Possible creation of a carbon monoxide "hot spot" (if large number of trucks left to idle in addition to other mobile source emissions in the vicinity)

Noise Conditions

Negative impacts:

- Generation of noise from the movement of large trucks, the operation of cranes transferring containerized cargoes, and the movement of trains

Cultural Resources

No impact

Recreational and Visual Resources

Positive impacts:

- No impact on existing recreational resources

Negative impacts:

- Some residence will have a diminished view of the river and Grosse Ile once the intermodal transfer operations begin

Unavoidable Adverse Impacts

- Increase in local truck traffic, with attendant increases in traffic-related noise, emissions, and congestion.
- Local traffic affected with the generation of about two trains per day only when the grade level track crossing on the north end of the line in Riverview is used - interference with commuting and movement of emergency vehicles as there is the potential for a 20-minute delay at maximum train lengths and minimal speeds.

Cumulative Environmental Effects:

(Result when the effects of a proposed action are added to or interact with other effects.)

- With operation of the marina, one ship per month will be serviced.
- Minor and short-term disruption to aquatic recreation and ecology - with ships and barges moving through the Trenton Channel of the Detroit River.
- Traffic on Grosse Ile toll bridge will be stopped when a ship passes.
- Commensurate increase in delays at grade level crossings and other effects of rail traffic including noise to nearby residents.
- Incremental increase over current levels of train traffic on the Conrail and GTW Railroad lines.

RTRR Mitigation Measures:

- Due Care Plan - designed to protect public health and natural resources; addressed what could potentially be the most significant adverse environmental impact from the proposed action; addresses any future construction on the site, any renovation of the McLouth Plan infrastructure, including existing rail lines, and dormant land activities.

SEMCOG's Conclusion:

As previously noted, the Environmental Report was reviewed for its consistency with the RTP. Comments are as follows:

- The RTP recognizes the need for a combined, shared rail/truck facility in the metro Detroit region. The lack of such facilities has caused inefficiencies in the region's transportation system. The proposed action of RTRR would address this need and create a multimodal facility that would add to the region's economic competitiveness. This competitiveness will increase with the eventual addition of shipping at the facility.
- The RTP also states that increasing amounts of freight traffic negatively impact the already poor condition of the region's freeways and major roadways. By having one facility capable of handling truck traffic along with other modes of transportation, RTRR's proposed action would help with the decrease in regional truck traffic as trucks would be diverted to one specific area.

- However, the decrease in truck traffic regionally does have a negative impact on communities adjacent to the site (i.e. there would be an increase in local truck traffic). This increase in local truck traffic will ultimately lead to increases in traffic-related noise, emissions, and congestion. These effects are not in line with the RTP's objective of reducing potential negative effects of the transportation on households and neighborhoods in the region.
- The increase in rail traffic would also result in increased noise and congestion, especially at grade crossings. In addition, the issue of blockages at grade crossings is a serious issue for communities in the region. It was noted in the Environmental Report, that a delay of up to 20 minutes would occur at grade-level crossings in the area (specifically at Jefferson Avenue). This poses a serious problem as delays to emergency vehicles would jeopardize the public safety of citizens in the communities of both Riverview and Trenton.
- The air quality concerns outlined in the Environmental Report (deterioration of air quality and the possible creation of a "carbon monoxide" hot spot) need to be analyzed. According to the RTP, air quality deterioration may potentially cause or exacerbate health problems, as well as affect ecosystems, and the built environment, through corrosion. If RTRR's proposed action can lead to these problems, then the surrounding communities will be at risk. In addition, the creation of a hot spot could affect the region's attainment status for carbon monoxide.
- An important goal of the RTP is the protection and enhancement of the environment. The Environmental Report does indicate that there would be minor and short-term disruption to the aquatic recreation and ecology of the area. Although termed as minor, the disruptions may have long term effects on the environment locally and regionally.
- Finally, the RTP calls for coordination and communication between private companies and local communities regarding freight issues and projects. As both the Cities of Riverview and Trenton have voiced concerns regarding the proposed operations at the site, RTRR should work with them to adequately address their concerns. By not going through the regulatory process, the concerns of local citizens may not get dealt with.

SEMCOG's Recommendation:

SEMCOG recommends that the petition for exemption be withheld at this time so that a full review of the project and the associated impacts can be analyzed. The analysis needs to identify all benefits, costs, and impacts prior to continuing with the project. It is also important that concerns raised by the Cities of Riverview and Trenton be addressed prior to proceeding with the project.



July 13, 2001

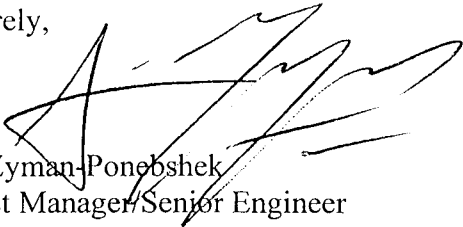
Mr. James W. Henderson, PhD
Permit Coordinator
Environmental Assistance Division
Michigan Department of Environmental Quality
P.O. Box 30457
Lansing, MI 48909-7957

Dear Mr. Henderson, PhD:

As requested, please find enclosed for your review and comment three (3) copies of the Preliminary Environmental Report on the Proposed Riverview Trenton Railroad and Intermodal Facility located in Wayne County, Michigan.

If you need additional information, please call me at 512.419.5316.

Sincerely,



Jaya Zyman-Ponebshek
Project Manager/Senior Engineer



July 13, 2001

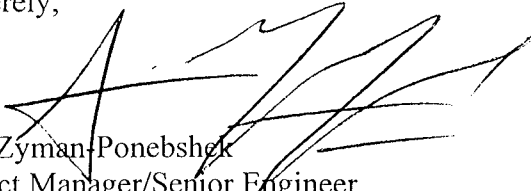
Ms. Sharon L. Hanshue
Fisheries Division
State of Michigan Department of Natural Resources
Stevens T Mason Building
P.O. Box 30028
Lansing, MI 48909-7528

Dear Ms. Hanshue:

As requested, please find enclosed for your review and comment one (1) copy of the Preliminary Environmental Report on the Proposed Riverview Trenton Railroad and Intermodal Facility located in Wayne County, Michigan.

If you need additional information, please call me at 512.419.5316.

Sincerely,



Jaya Zyman-Ponebshok
Project Manager/Senior Engineer



July 13, 2001

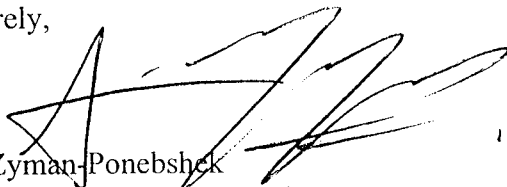
Ms. Bridgitt Hewitt
SEMCOG
535 Griswold St., Suite 300
Detroit, MI 48226

Dear Ms. Hewitt:

As requested, please find enclosed for your review and comment one (1) copy of the Preliminary Environmental Report on the Proposed Riverview Trenton Railroad and Intermodal Facility located in Wayne County, Michigan.

If you need additional information, please call me at 512.419.5316.

Sincerely,



Jaya Zyman-Ponebshek
Project Manager/Senior Engineer

APPENDIX G
NOISE CALCULATIONS

Appendix G

Sound Exposure Level (SEL_{ref}) for Various Noise Sources

Noise Source	Reference SEL at 50 feet
Locomotives	92 dBA
Rail Vehicles	82 dBA
Warning Horns	108 dBA
Equipment Lifting Containers in Yard	117 dBA
Locomotives Idling in Yard	116 dBA
Curve Squeal in Yard	136 dBA
Trucks Idling in Yard	111 dBA

Factors Used in Noise Calculations

An asterisk (*) indicates the factor was based on actual field measurement. Other factors are based on intermodal yard averages, the proposed operating plan from the Applicant, or assumptions based on field conditions.

Description	Factor
Future trucks per day	300 trucks per day
Percent trucks entering or leaving yard empty	23%
Percent trucks traveling to/from the north	66%
Percent of trains using Jefferson Ave crossing	40%
Number of cars per train entering/leaving yard	100 cars per train
Average train speed at Jefferson Ave crossing	6 mph
Average length of a block of cars moving into or out of the proposed intermodal facility	8000 feet
Average trains using Jefferson Ave crossing per day (either direction)	2
Average trains using the grade separated crossing (near King Ave) per day	3.2
Distance center of yard operations to nearest residence	600 feet*
Distance from deep water marina to Grosse Ile	1300 feet*
Time of intermodal yard operations	7 AM – 10 PM
Average number of locomotives per train	1.5*
Average train speed on the 4 tracks paralleling Jefferson Avenue	12 mph*
Train movements and siding movements requiring crossing gate closure per hour average (daytime, existing)	2*
Train movement and siding movements requiring crossing gate closure per hour average (night, existing)	0.8

Noise Formulas

All formulas used in the modeling of the potential noise impacts for the Applicant's proposed project are found in the publication, *Transit Noise and Vibration Impact Assessment*, April 1995.

Locomotives on Fixed Guideways

$$\text{Hourly } L_{eq} \text{ at 50 ft} = L_{eqL}(h) = SEL_{ref} + 10 \log(N_{locos}) + C_T - 10 \log(S/50) + 10 \log(V) - 35.6$$

Rail Vehicles on Fixed Guideways

$$\text{Hourly } L_{eq} \text{ at 50 ft} = L_{eqC}(h) = SEL_{ref} + 10 \log(N_{cars}) + 20 \log(S/50) + 10 \log(V) - 35.6$$

Warning Horns

$$\text{Hourly } L_{eq} \text{ at 50 ft} = L_{eqH}(h) = SEL_{ref} - 10 \log(S/50) + 10 \log(V) - 35.6$$

Combined

$$\text{Hourly } L_{eq} \text{ at 50 ft} = L_{eq}(h) = 10 \log \left[10^{(L_{eqL}/10)} + 10^{(L_{eqC}/10)} + 10^{(L_{eqH}/10)} \right]$$

Day-Night Sound Level

$$L_{dn} \text{ at 50 ft} = 10 \log \left[15 \cdot 10^{(L_{eqd}/10)} + 9 \cdot 10^{((L_{eqn} + 10)/10)} \right] - 13.8$$

Where:

- L_{eq} = hourly equivalent sound level
- L_{eqd} = daytime L_{eq} at 50 ft calculated by using daytime volumes in L_{eq} formulas
- L_{eqn} = nighttime L_{eq} at 50 ft calculated by using nighttime volumes in L_{eq} formulas
- C_T = 2 for an average throttle setting of 6
- S = train speed, in miles per hour
- V = average hourly volume of train traffic, in trains per hour
- N_{locos} = average number of locomotives per train
- N_{cars} = average number of cars per train
- L_{dn} = day-night sound level

The following formulas were used for intermodal yard noise from idling locomotives, squeal of wheels, idling trucks, and equipment operation.

Hourly Sound Levels for Stationary Sources

$$L_{eq}(h) \text{ at } 50 \text{ ft} = SEL_{ref} + 10 \log(N) + 10 \log(E/3600) - 35.6$$

Day-Night Noise Level for Stationary Sources

$$L_{dn} \text{ at } 50 \text{ ft} = 10 \log \left[15 \cdot 10^{(L_{eqd}/10)} + 9 \cdot 10^{((L_{eqn} + 10)/10)} \right] - 13.8$$

Where:

N = number of events of this type that occur in one hour

E = duration of one event, in seconds

L_{eqd} = daytime L_{eq} at 50 ft calculated by using daytime events in L_{eq} formulas

L_{eqn} = nighttime L_{eq} at 50 ft calculated by using nighttime events in L_{eq} formulas

The following formulas were used to calculate noise levels for particular distances from noise sources, based on whether the noise source was on a fixed guideway (as for trains passing by on the four tracks running roughly parallel to Jefferson Avenue) or a stationary source (as for intermodal yard operations). All formulas assume hard ground.

For Fixed Guideways

$$L_{dn} = L_{dn} \text{ at } 50 \text{ ft} - 10 \log (D/50)$$

For Stationary Sources

$$L_{dn} = L_{dn} \text{ at } 50 \text{ ft} - 20 \log (D/50)$$

Where:

D = distance from the source, in feet

APPENDIX H

**AIR EMISSIONS SUPPORTING
INFORMATION**

Emission Estimation Methodology

1.0 Emissions Estimation Methodology

Pollutant emissions from the Proposed Project Site sources described within this report have been quantified. This process involves gathering the appropriate emission factors and applying the necessary operational data for each source.

Emission estimations in this EA follow the same methodologies as current U.S. EPA guidance on emission inventories. Assumptions, methodology, and activity data for the Proposed Project Site were coordinated with RTRR in order to produce a consistent emission inventory based on realistic operating parameters.

The general method used to estimate emissions from a mobile source is based on the following basic equation:

$$Emissions = Ef * A$$

Where:

Ef Source specific pollutant emission factor (grams / vehicle mile traveled)
A Activity level for the source (vehicle miles)

Or alternatively,

$$Emissions = Lf * Ef * A * Hp$$

Where:

Lf Load Factor which is defined as the average operating horsepower divided by the maximum equipment horsepower. This is a unitless number.
Ef Source specific pollutant emission factor (grams / horsepower-hour).
A Activity level for the source (Hours).
Hp Maximum horsepower of the equipment.

The first equation is typically used for on-road sources (and some non-road trucks) while the second equation is used for non-road sources. A different emission factor is necessary for each pollutant evaluated for a source. And the activity level has to maintain unit consistency with the emission factor.

1.1 Emission Factors

Emission factors have been developed for many different types of sources and are widely published. The U.S. EPA documents emissions from and emission factors for many different sources each year. For stationary sources, the EPA keeps constantly updates it's "Compilation of Air Pollutant Emission Factors – AP-42" (AP-42). A counterpart for mobile sources currently does not exist. For

mobile sources, the EPA has developed emission factor models. These models are designed to calculate emission factors for mobile sources based on various inputs.

Emission factor models for both on-road and non-road sources are available from the EPA. The NONROAD model, however, is still in draft form and revisions to the model are ongoing. In addition, the NONROAD model does not have the ability to address all non-road sources. The NONROAD model does not address locomotives, airplanes, or tugboats. Because the proposed project is an intermodal rail terminal, locomotive emission factors had to be developed using other sources. This section describes the development of the emission factors used for this analysis.

On-road Emission Factors

VOC, NO_x and CO Emission factors for on-road sources were developed using the U.S. EPA's Mobile 5b-emission factor model. While SECOG stated to URS that they use the Mobile 5a model for their SIP modeling for the Department of Environmental Quality.¹² The Mobile 5b model is the current U.S. EPA recommended model for development of emission factors for on-road sources. The EPA has recently revised the Mobile model and has released the draft Mobile 6 model for peer review. Although the Mobile 6 model is the newest on-road model, it has not replaced the Mobile 5b model yet. The Mobile 5b model is a revision to the Mobile 5a model that repaired some calculating errors in the Mobile 5a model for light duty vehicles.

For the HDDV truck category, only slight differences exist between the two models. One important revision in the Mobile 5b model is the ability to calculate idling emissions. The Mobile 5a model does not have the ability to calculate idling emissions while the 5b version does. Because idling emissions can be an important component of intermodal transportation facilities, accurate idle factors were considered an important consideration in choosing an emission factor model. Because the Mobile 5b model calculates idling emissions and is the current U.S. EPA recommended model for on-road mobile source inventories, the Mobile 5b model was used to develop the emission factors for this Emission Inventory.

On-road vehicle emission factors are calculated based on various inputs provided to the model to simulate the vehicle fleet driving in the Project area. Inputs include parameters such as vehicle speeds, vehicle registration by vehicle type and age, type of Inspection/Maintenance program in place, and gasoline vapor pressure. U.S. EPA on-road vehicle classifications are used for modeling the Proposed Project Site. Every effort has been made to input parameters that reflect local conditions surrounding the Proposed Project Site.

¹² Personal Communication between Rajiv Patel of URS and Harold Brazil of SEMCOG on July 26, 2001.

The Mobile model inputs were obtained from Harold Brazil of the SEMCOG. The model inputs included Wayne County specific make, model and year registration data. In addition, the inputs take into account reformulated gasoline and an assumed average travel speeds of 10 mph on the proposed project site and 35 mph on the off-site feeder roads. The CO emission factors are conservatively based on winter conditions in Michigan. NO_x and VOC emission factors are conservatively based on summer conditions in Michigan. The inputs and outputs to the Mobile model are shown in Appendix H.

The U.S. EPA's Part 5 model was used to calculate PM₁₀ and SO₂ emission factors. The Part 5 emission factor model is the current U.S. EPA recommended emission factor model for the development of PM₁₀ and SO_x emission factors for Mobile sources. The Part 5 model has not been updated for many years and there are some legitimate concerns with respect to its accuracy. However, this is currently the best available tool to estimate on-road PM₁₀ and SO₂ emissions.

The inputs for the Part 5 model were adapted from the Mobile 5b inputs obtained from SEMCOG. The inputs include the Wayne County make, model and year vehicle registration data, reformulated gas and an assumed travel speed of 10 mph on the proposed project site, and 35 mph on the off-site feeder roads. inputs assumptions used to develop the NO_x, VOC and CO emission factors. The inputs and outputs to the Part 5 model are shown in Appendix H.

1.1.1 Locomotive Emission Factors

Locomotive engine emissions were calculated as part of this emission inventory. Because the proposed project site is projected to operate only with whole trains, no switch engine emissions have been calculated for this emission inventory. Line haul locomotive emission factors were calculated using information contained in EPA's 1997 Fact sheet "Emission Factors for Locomotives" (EPA 420-F-97-051) and the 1998 Locomotive Emission Standards Regulatory Support Document.¹³ To calculate emission factors for line-haul locomotives, baseline emission factors in the locomotive rulemaking were adjusted by the change in emissions calculated from Table 9 of the 1997 Fact sheet.

Load factors were developed using time in mode information and percent full power in mode information presented in the 1998 Locomotive rulemaking.¹⁴ The locomotive emission factors and load factors for the line-haul engine cycle are documented in Table 6 at the end of this section.

¹³ EPA, 1998; "Locomotive Emission Standards Regulatory Support Document". April 1998 (Revised).

¹⁴ EPA, 1998; "Locomotive Emission Standards Regulatory Support Document". April 1998 (Revised).

2.0 Operational Data

Activity level is dependant on the emission source and level of operations expected at the facility and includes such information as vehicle miles traveled, annual hours of operation, number of trains per year, as well as others.

All emissions for the Proposed Project Site are based on the anticipated operations for the new facility. RTRR provided operations hours, equipment counts, etc. for the initial year of operation (2002) and the year on which the projected maximum levels of operation are expected to be attained (2008). Additional information such as vehicle miles traveled and estimated travel times was obtained by a URS field team which collected actual data during an assessment at the facility and its surrounding areas.

2.1 Intermodal Terminal Operational Activity Data

Intermodal Terminal operational activity data was applied to the emission factors in order to calculate resulting emissions. Operational activity and sample calculations used to estimate on-site locomotive emissions, on and off-site on-road emissions, and non-road emissions are discussed below.

2.1.1 On-site Locomotive Operational Activity Data

Rail operational data was based on RTRR estimates and existing intermodal terminal operations in the Detroit area. RTRR has estimated that there will be approximately two trains per day leaving or entering the terminal. The trains will operate approximately 1.5 miles of track within the boundaries of the property which has been acquired. The trains will be traveling at an average speed of 5 mph when using these tracks. The intermodal trains loaded at the RTRR facility would connect with lines of Conrail and GTW, which are already in operation, via existing track connections.

The above information was used by URS in developing the on-site rail facility emission estimates for VOCs, CO, NO_x, and PM10. RTRR estimated that 1,500 containers would be in storage at any one time during maximum operations of the truck-rail phase.

Emissions in this inventory are based on the assumption that approximately two trains per day will leave or enter the terminal. URS has assumed that each train will have three 4,500-hp locomotives for line-haul operations with a load factor of 27.4%. By dividing the available track within the property by the average speed of each train, URS has determined an on-site activity time of 0.3 hours per train.

Example Calculation:

In 2008, there are expected to be 2 trains/day operated by with RTRR. The line haul engine NO_x emission factor is 8.318 g/bhp-hr. Locomotive emissions are calculated by multiplying the activity rates by the horsepower and emission factor to yield grams of NO_x and converting to short tons per year.

Line Haul:

$$\begin{aligned} &= 0.274 * 8.103 \text{ g/bhp-hr} * 0.30 \text{ hours/train} * 3 \text{ engines/train} * 4,500 \text{ hp/engine} * 730 \text{ trains/yr.} * \\ &1 \text{ lb/453.59 g} * 1 \text{ ton/2000 lb} \\ &= 7.24 \text{ tons NO}_x\text{/yr} \end{aligned}$$

2.1.2 Off-site Locomotive Operational Activity Data

The intermodal trains loaded at RTRR would connect with GTW, Conrail, Norfolk and Southern, and CSX. Average distances traveled to each of these railroads was measured using the MIRIS Base map for Wayne County. These distances were averaged to obtain a travel distance for each train. It was assumed that each line was used equally. It was assumed that trains would be traveling at an average speed of 55 mph.

Emissions in this inventory are based on the assumption that approximately two trains per day will leave or enter the terminal. URS has assumed that each train will have three 4,500-hp locomotives for line-haul operations with a load factor of 27.4%. By dividing the average distance traveled per train by the average speed of each train, URS has determined an off-site activity time of 0.60 hours per train.

Example Calculation:

In 2008, there are expected to be 2 trains/day operated by RTRR. The line haul engine NO_x emission factor is 8.318 g/bhp-hr. Locomotive emissions are calculated by multiplying the activity rates by the horsepower and emission factor to yield grams of NO_x and converting to short tons per year.

Line Haul:

$$\begin{aligned} &= 0.274 * 8.103 \text{ g/bhp-hr} * 2 * 0.60 \text{ hours-each way/train} * 3 \text{ engines/train} * 4,500 \text{ hp/engine} * \\ &730 \text{ trains/yr.} * 1 \text{ lb/453.59 g} * 1 \text{ ton/2000 lb} \\ &= 28.94 \text{ tons NO}_x\text{/yr} \end{aligned}$$

2.2 On-road Operational Activity Data**2.2.1 Off-site On-road Operational Activity Data**

In order to complete the emissions estimate for on-road mobile sources, emission factors are multiplied by the level of vehicle activity, Vehicle Miles Traveled (VMT) and minutes in idle. First, it was necessary to identify the number of each type of vehicle associated with the Proposed Project Site. Based on this information, the VMT were calculated.

Off-site on-road operational data was based on RTRR estimates and during the URS Traffic Study of the surrounding areas. RTRR has estimated that the volume of HDDV entering or leaving the terminal will range from 140 initially (2002) to a maximum of 300 per day (2008). Truck traffic will be limited to daylight hours, likely 7 am to 10 pm. Based on the Traffic Study, it was determined that trucks traveling to and from the south will use the following route from RTRR to SB I-75: RTRR entrance left

onto Jefferson Ave, south on Jefferson Ave to King Rd, west on King Rd to M-85 (Fort St), south on M-85 to SB I-75. This route is approximately 9 miles one-way and takes each HDDV approximately 14 minutes one-way when traveling at an average speed of 38.6 mph. Trucks traveling to and from the north will use the following route from RTRR to NB I-75: RTRR entrance left onto Jefferson Ave, south on Jefferson Ave to Sibley Rd, west on Sibley Rd to NB I-75. This route is approximately 5 miles one-way and takes each HDDV approximately 9.5 minutes one-way when traveling at an average speed of 31.6 mph. These routes were determined based on timed, test runs made along the various alternative routes during the early to mid afternoon. It has been assumed that 1/3 of the trucks will use the route to and from the south while 2/3 will use the route to and from the north.

During the Traffic Study, idle times for the HDDVs caused by traffic lights and train crossings were also determined. It was estimated that the time each truck will spend stopped at signals along these two routes is approximately 2.5 minutes. This is based on the time difference between actual travel time and the travel time had the assessors not been stopped at any signals and were able to travel the routes at the posted speed limit.

Based on the five train crossings that were observed at the King Rd and Sibley Rd crossings, the average gate closure times for the train crossings was found to be 2 minutes at an average of two trains an hour. This yields a total train crossing time of 4 minutes and allows for a 1/15 (4min/60min) chance that a vehicle will be caught in a crossing at any given time. It was determined that an insignificant number of trucks would use the crossing at Jefferson to the north. Therefore, idle time from this crossing was assumed to be negligible.

Example Calculation:

In the year 2008, RTRR estimates that 300 HDDV will be used to transport containers. The HDDV off-site NO_x emission factor is 7.034 g/vmt when in transit and 0.587 g/min.idle when in idle. HDDV in transit emissions are calculated by multiplying vehicle miles traveled with the emission factor to yield grams of NO_x and converting to short tons per year. HDDV idle emissions are calculated by multiplying minutes in idle with the emission factor to yield grams of NO_x and converting to short tons per year.

In Transit Emissions:

$$\begin{aligned}
 &= 7.034 \text{ g/vmt} * 2 \text{ trips/truck} * 300 \text{ trucks/day} * (1/3 * 9 \text{ miles/trip} + 2/3 * 5 \text{ miles/trip}) * 365 \text{ days/yr} * 1 \\
 &\text{lb/453.59 g} * 1 \text{ ton/2000 lb} \\
 &= 10.75 \text{ tons NO}_x\text{/yr}
 \end{aligned}$$

Idle Emissions:

$$\begin{aligned}
 &= 0.587 \text{ g/min.idle} * 2 \text{ trips/truck} * 300 \text{ trucks/day} * (1/15 \text{ delay/trip} * 2 \text{ min/delay} + 2.5 \text{ min/trip}) * 365 \\
 &\text{days/yr} * 1 \text{ lb/453.59 g} * 1 \text{ ton/2000 lb} \\
 &= 0.3732 \text{ tons NO}_x\text{/yr}
 \end{aligned}$$

Total Off-site HDDV Emissions:

10.75 tons NO_x/yr + 0.3732 tons NO_x/yr

=11.12 tons NO_x/yr

Additionally, trucks will be traveling throughout the city and to areas outside of the county, to pick up and drop off cargo. Using a road map of the Detroit area, distances of several assumed routes of travel were measured and an average distance traveled of 18.33 miles/truck one-way was estimated. The Wayne County line served as the boundary for the emissions calculations. It was assumed that all trucks would travel at an average speed of 55 mph on the interstates.

Example Calculation:

In the year 2008, RTRR estimates that 300 HDDV will be used to transport containers. The HDDV off-site NO_x emission factor is 9.667 g/vmt at 55 mph. HDDV in transit emissions are calculated by multiplying vehicle miles traveled with the emission factor to yield grams of NO_x and converting to short tons per year. HDDV idle emissions are calculated by multiplying minutes in idle with the emission factor to yield grams of NO_x and converting to short tons per year.

In Transit Emissions:

=9.667 g/vmt * 300 trucks/day * 2 * 15.10 miles/trip * 365 days/yr * 1 lb/453.59 g * 1 ton/2000 lb

=35.24 tons NO_x/yr

2.2.2 On-site On-road Operational Activity Data

In order to complete the emissions estimate for on-road mobile sources, emission factors are multiplied by the level of vehicle activity, Vehicle Miles Traveled (VMT) and minutes in idle. First, it was necessary to identify the number of each type of vehicle associated with the Proposed Project Site. Based on this information, the VMT were calculated.

On-site on-road operational data was based on RTRR estimates. RTRR has estimated that the volume of HDDV entering or leaving the terminal will range from 140 initially (2002) to a maximum of 300 per day (2008). Truck traffic will be limited to daylight hours, likely 7 am to 10 pm. It was estimated that each HDDV will travel approximately 0.5 miles on-site from the gate to where the containers are stored and then back to the gate. Each HDDV will travel at approximately 15 mph while on-site.

Based on the number of containers handled per day, if it is assumed that 10 trucks will be queued for loading or unloading, the average idle time will be about 13.5 minutes for the trucks that only load or unload, and about 22.8 minutes for trucks that load and unload. It was estimated that of the 300 trucks per day, about 230 trucks come and go with containers, where 70 either come or go empty (in one direction). This estimate is based on national statistics on truck/rail intermodal freight yards.

Example Calculation:

In the year 2008, RTRR estimates that 300 HDDV will be used to transport containers. The HDDV off-site NO_x emission factor is 10.506 g/vmt when in transit and 0.587 g/min.idle when in idle. HDDV in transit emissions are calculated by multiplying vehicle miles traveled with the emission factor to yield grams of NO_x and converting to short tons per year. HDDV idle emissions are calculated by multiplying minutes in idle with the emission factor to yield grams of NO_x and converting to short tons per year.

In Transit Emissions:

$$=10.506 \text{ g/vmt} * 300 \text{ trucks/day} * 0.5 \text{ miles/trip} * 365 \text{ days/yr} * 1 \text{ lb/453.59 g} * 1 \text{ ton/2000 lb} \\ =0.6341 \text{ tons NO}_x/\text{yr}$$

Idle Emissions:

$$=0.587 \text{ g/min.idle} * (22.8 \text{ min.idle} + 13.5 \text{ min.idle}) * 365 \text{ days/yr} * 1 \text{ lb/453.59 g} * 1 \text{ ton/2000 lb} \\ =0.0086 \text{ tons NO}_x/\text{yr}$$

Total On-site HDDV Emissions:

$$=0.6341 \text{ tons NO}_x/\text{yr} + 0.0086 \text{ tons NO}_x/\text{yr} \\ =0.6427 \text{ NO}_x/\text{yr}$$

2.2.3 On-Site Non-road Operational Activity Data

Non-road equipment operational data was based on RTRR estimates and existing intermodal terminal operations in the Detroit area. It has been estimated that there will be approximately 4 pieces of equipment used to move cargo from one transportation mode to another. It has been assumed that 2 pieces of the equipment will be Rubber Tire Gantry Cranes (RTG) which have an average horsepower rating of 535 hp and a load factor of 0.51. The other two pieces of equipment will be top picks that have an average horsepower rating of 365 hp and a load factor of 0.59. It was assumed that each piece of equipment will operate approximately 9 hours/day (36 total hours/day) in 2008, which is equivalent to RTRR's estimate of 3 equipment operators for 12 hours a day. In 2002, equipment operating hours were scaled back to 2/3 maximum to account for the lower level of operation initially.

Example Calculation:

The RTG NO_x emission factor is 4.4 g/hp-hr and the top pick NO_x emission factor is 4.71 g/hp-hr. Non-road emissions are calculated by multiplying the activity rates by the horsepower, the load factor, and emission factor to yield grams of NO_x and converting to short tons per year.

RTG Emissions:

$$=4.4 \text{ g/bhp-hr} * 2 \text{ equipment/day} * 535 \text{ hp/equipment} * 0.51 * 9 \text{ hrs/equipment} * 365 \text{ days/yr} * 1 \\ \text{lb/453.59 g} * 1 \text{ ton/2000 lb} \\ =8.69 \text{ tons NO}_x/\text{yr}$$

Top Pick Emissions:

$$=4.71 \text{ g/bhp-hr} * 2 \text{ equipment/day} * 365 \text{ hp/equipment} * 0.59 * 9 \text{ hrs/equipment} * 365 \text{ days/yr} * 1 \\ \text{lb/453.59 g} * 1 \text{ ton/2000 lb}$$

=7.35 tons NO_x/yr

Total Emissions:

=8.69 tons NO_x/yr + 7.35 tons NO_x/yr

=16.04 tons NO_x/yr

2.3 No Action Alternative

In addition to the proposed action and emissions calculated above, RTRR has considered a no action or no build alternative. The no action alternative would arise if RTRR were to be denied the right to redevelop the site for whatever reason or if RTRR were to elect on its own not to go forward with its plans as described above. In this event, the 76 acres of RTRR property would remain essentially as it is at the present and therefore there would be no additional emissions due to the project. The project is defined by the conversion of dry carrier goods from rolling tractor trailers to intermodal container carriers via rail and truck, so if the no-build alternative were to be taken, the emissions from the additional truck usage would need to be quantified. It was assumed that the additional truck usage would be equivalent to the max capacity of the proposed facility, 300 trucks per day. Using a road map of the Detroit area, distances of several assumed routes of travel were measured and an average distance traveled of 23.00 miles/truck one-way was estimated. The Wayne County line served as the boundary for the emissions calculations. It was assumed that all trucks would travel at an average speed of 55 mph.

Example Calculation:

In the year 2008, RTRR estimates that 300 HDDV will be used to transport containers. If the no-build alternative is taken, it is assumed that an equivalent amount of trucks would transfer goods using varying routes throughout the County. The HDDV off-site NO_x emission factor is 9.667 g/vmt at 55 mph. HDDV in transit emissions are calculated by multiplying vehicle miles traveled with the emission factor to yield grams of NO_x and converting to short tons per year. HDDV idle emissions are calculated by multiplying minutes in idle with the emission factor to yield grams of NO_x and converting to short tons per year.

In Transit Emissions:

=9.667 g/vmt * 300 trucks/day * 2 * 23.00 miles/trip * 365 days/yr * 1 lb/453.59 g * 1 ton/2000 lb

=53.67 tons NO_x/yr

Model Supporting Information

On-Site Truck Operations

		Source
Initial trucks used:	140 trucks/day	1
Load or Unload:	33 trucks/day	2
Load and Unload:	107 trucks/day	2
Build Out trucks used:	300 trucks/day	1
Load or Unload:	70 trucks/day	2
Load and Unload:	230 trucks/day	2
Average distance traveled	0.5 miles/truck	1
Average truck speed:	10 mph	1

Idle Time

Initial Year

Load or Unload	6.4 min per 33 trucks/day	3
Load and Unload	10.6 min per 107 trucks/day	3
Total:	17.0 min per 140 trucks/day	

Build Out Year

Load or Unload	13.5 min per 70 trucks/day	3
Load and Unload	22.8 min per 230 trucks/day	3
Total:	36.3 min per 300 trucks/day	

Notes:

1. Numbers based on national statistics on truck/rail freight yards.
2. Numbers based on the assumption that 10 trucks are queued at a time.

Off-Site Truck Operations

Initial trucks used:	140 trucks/day	Source 1
Build Out trucks used:	300 trucks/day	1

Various Routes

RTRR to SB I-75 / SB I-75 to RTRR

Average distance traveled	9.0 miles/per one-way trip	2
Average truck speed:	38.6 mph	2
Average trip time:	14 min	2
Trucks using this route:	0.333333 %	3

RTRR to NB I-75 / NB I-75 to RTRR

Average distance traveled	5.0 miles/per one-way trip	2
Average truck speed:	31.6 mph	2
Average trip time:	9.5 min	2
Trucks using this route:	0.666667 %	3

IDLE TIME

Idle time by lights:	2.5 min/per one-way trip	2
Gate closure by trains:	2 minutes/closure	2
Number of closures:	2 closures/hr	2
Odds of closure:	0.066667 %	2, 4

1. Numbers based on desired usage rates for project

2. Numbers obtained from actual site and surrounding area assessment conducted by URS, July 2001.

3. Numbers based on the assumption that 1/3 of the trucks will use the south route and 2/3 will use the north route.

4. Percentage base on an average of two closures an hour lasting an average of 2 minutes each (4 minutes total). This means that at any gi there is a 1/15 (4min/60min) chance of being caught in a closure.

HDDV Usage with Project

Route	Distance (mi.)
RTRR(I-75)/S County via I-75	5.0
RTRR(I-75)/GM Plant via I-75	18.0
RTRR(I-75)/Ford Plant via SR-24	10.0
RTRR(I-75)/W County via I-75:State 24:I-94	25.0
RTRR(I-75)/Downtown via I-75	17.5
AVERAGE One Way Travel Distance (mi.)	15.10

Number of Trucks 2002:	140
Number of Trucks 2008:	300

Notes:

All distances measured using the Rand McNally (1997) Road Map for Detroit Area
All routes measured are assumed and do not represent actual planning.

HDDV Usage with No-Build Alternative

Route	Distance (mi.)
W County Line/Downtown via I-94	30.0
N County Line/Downtown via I-94	12.5
S County Line/Downtown via I-75	22.5
S County Line/N County Line via I-275	25.0
W County Line/Downtown via I-96	25.0
AVERAGE One Way Travel Distance (mi.)	23.00

Number of Trucks 2002:	300
Number of Trucks 2008:	300

Notes:

All distances measured using the Rand McNally (1997) Road Map for Detroit Area
All routes measured are assumed and do not represent actual planning.

Vehicle	Year	Speed	Emission Factors (g/vmt) (Idle factors in g/min.idle)				
			NOx	CO	VOC	PM	SOX
HDDV	2002	Idle	0.70520	1.50270	0.19400	0.02722	0.02042
	2002	10	12.62100	20.30000	3.21200	0.73500	0.49000
	2002	35	8.44900	6.26100	1.33200	0.50300	0.49000
	2002	55	11.61300	5.54200	0.97900	0.73500	0.49000
	2008	Idle	0.58703	1.48043	0.19010	0.01885	0.01929
	2008	10	10.50600	19.99900	3.14800	0.73500	0.46300
	2008	35	7.03400	6.16800	1.30600	0.50300	0.46300
	2008	55	9.66700	5.46000	0.95900	0.50300	0.46300

HDDV - On-Site Emissions							
Vehicle	Year	Speed (mph)	Emissions (tpy)				
			NOx	PM	CO	VOC	SOX
HDDV	2002	Idle	0.00	0.00	0.01	0.00	0.00
	2002	10.00	0.36	0.02	0.57	0.09	0.01
	2002 Total	-	0.36	0.02	0.58	0.09	0.01
	2008	Idle	0.01	0.00	0.02	0.00	0.00
	2008	10.00	0.63	0.04	1.21	0.19	0.03
	2008 Total	-	0.64	0.04	1.23	0.19	0.03

HDDV - Off-Site Local Emissions							
Vehicle	Year	Speed (mph)	Emissions (tpy)				
			NOx	PM	CO	VOC	SOX
HDDV	2002	Idle	0.21	0.01	0.45	0.06	0.01
	2002	35.00	6.03	0.36	4.47	0.95	0.35
	2002 Total	-	6.24	0.37	4.91	1.01	0.36
	2008	Idle	0.37	0.01	0.94	0.12	0.01
	2008	35.00	10.75	0.77	9.43	2.00	0.71
	2008 Total	-	11.13	0.78	10.37	2.12	0.72

Notes:

Emissions include those emissions related to truck travel to / from the proposed project site and I 75.

HDDV - County Wide Project Emissions							
Vehicle	Year	Speed (mph)	Emissions (tpy)				
			NOx	PM	CO	VOC	SOX
HDDV	2002	55	19.76	9.43	1.67	1.25	0.83
	2008	55	35.24	19.90	3.50	1.83	1.69

HDDV - No-Build County Wide Emissions							
Vehicle	Year	Speed (mph)	Emissions (tpy)				
			NOx	PM	CO	VOC	SOX
HDDV	2002	55	64.48	30.77	5.44	4.08	2.72
	2008	55	53.67	30.32	5.32	2.79	2.57

Note:

Emissions calculated here are dispersed throughout Wayne County. They occur as a result of truck travel on interstate highways.

Table 18
RTRR EmissionsLocal Rail Activity

Locomotive Activities

		Source
Trains per day:	2 trains/day	1
Miles of track:	1.5 miles/train	1
Train speed:	5 mph	1
Number of engines:	3 engines/train	1
Size of engines:	4,500 hp/engine	1

1. Numbers based on desired usage rates for project

Note: 1.5 miles / train based on track distance to the nearest main line.

1 mile = 5,280 ft.

Route	Distance (ft.)	Distance (mi.)
Main line to Yard (North Route)	55,000	10.4
Main line to Yard (South Route)	40,500	7.7
Yard to Conrail West Route	109,500	20.7
Yard to Norfolk Southern South West Route	144,500	27.4
Yard to CSX North west route	120,000	22.7
Yard to CSX West to south route	203,750	38.6
Yard to GTW northeast route	67,750	12.8
Yard to GTW south route	105,000	19.9
AVERAGE One Way Travel Distance (mi.)		32.73
AVERAGE Speed of Trains (mph)		45
AVERAGE Activity Time for Trains (hours/trip)		0.73

Notes:

All distance measured using the MIRIS Base map for Wayne County.

All routes measured are assumed and do not represent actual planning.

All routes assume that entire trains will be pulled onto the main line tracks and transferred to a switching yard in the center of Detroit. The reverse will occur for incoming trains.

Trains will be transferred to Class I and Class II railroads serving the Greater Detroit Area.

Class I lines assumed include Conrail, Norfolk Southern, CSX, and GTW.

Table 4
RTRR EmissionsRail - Emission Factors

Source Category	Emission Source	Year	Emissions Factors					References
			NOx	PM	CO	VOC	SO2	
Locomotives	Line-Haul	2002	11.690	0.320	1.280	0.480	0.155	g/bhp-hr
		2008	8.103	0.281	1.280	0.425	0.155	g/bhp-hr
NOx, PM10, CO, and VOC emissions factors are taken from the EPA's Emission Factors for Locomotives Fact Sheet (EPA 420-F-97-051). SO ₂ emission factor based on a sulfur content of 500 ppm. SO ₂ emission factor equals 0.0005 lb of sulfur per lb of diesel * 2 lb of SO ₂ per lb of sulfur * 7.1 lb of diesel per gallon * 0.048 gal consumed per bhp-hour * 453.6 g/lb								

Table 20
RTRR Emissions Local Rail Emissions

Year	Trains / year	Line Haul Emissions (tons/year)			
		NOx	PM	CO	SO ₂
2002	730	10.44	0.29	1.14	0.14
2008	730	7.24	0.25	1.14	0.14
Year	Trains / year	Total On Site Emissions (tons/year)			
		NOx	PM	CO	SO ₂
2002	730	10.44	0.29	1.14	0.14
2008	730	7.24	0.25	1.14	0.14

Notes:

1. Line haul emissions are based on 3-4,500hp locomotives for each 6,000 ft. train and an assumed load factor of 27.4%.
2. Load factor calculated based on time in mode information on Page 54 of the U.S. EPA Locomotive Emission Standards, Regulatory Support Document (Revised). (April 1998).

Table 20
RTRR EmissionsCounty Wide Rail Emissions

Year	Trains / year	Line Haul Emissions (tons/year)			
		NOx	PM	CO	SO2
2002	730	50.62	1.39	5.54	0.67
2008	730	35.09	1.22	5.54	0.67
Year	Trains / year	Total Off Site Emissions (tons/year)			
		NOx	PM	CO	SO2
2002	730	50.62	1.39	5.54	0.67
2008	730	35.09	1.22	5.54	0.67

Notes:

1. Line haul emissions are based on 3-4,500hp locomotives for each 6,000 ft. train and an assumed load factor of 27.4%.
2. Load factor calculated based on time in mode information on Page 54 of the U.S. EPA Locomotive Emission Standards, Regulatory Support Document (Revised). (April 1998).

Equipment type	Load Factor	HP Rating	Emission Factors for year 2002 in g/hp-hr				
			NO _x	CO	THC	PM	SO _x
RTG	0.51	535	5.42	2.39	0.77	1.22	1.79
Top picks	0.59	365	5.8	5.44	1.79	1.56	1.68

Equipment type	Load Factor	HP Rating	Emission Factors for year 2008 in g/hp-hr				
			NO _x	CO	THC	PM	SO _x
RTG	0.51	535	4.4	1.94	0.48	1.18	1.79
Top picks	0.59	365	4.71	4.44	1.29	1.46	1.68

Notes:

Emission factors developed from the U.S. EPA's NONROAD model.

Equipment represents typical operating equipment for a container terminal.

Equipment type	Pieces of Equipment(1)	Hours of Use per Day(1)	2002 Emissions (tpy)				
			NO _x	CO	THC	PM	SO _x
RTG	2	6	7.14	3.15	1.01	1.61	2.36
Top picks	2	6	6.03	5.66	1.86	1.62	1.75
Total:			13.17	8.80	2.88	3.23	4.10

Equipment type	Pieces of Equipment(1)	Hours of Use per Day(1)	2008 Emissions (tpy)				
			NO _x	CO	THC	PM	SO _x
RTG	2	9	8.69	3.83	0.95	2.33	3.54
Top picks	2	9	7.35	6.92	2.01	2.28	2.62
Total:			16.04	10.76	2.96	4.61	6.16

1. Numbers based on desired usage rates for project

Source	2002 Emissions (tpy)				
	NOx	PM	CO	VOC	SOX
HDDV - On-Site	0.4	0.0	0.6	0.1	0.0
HDDV - Off-Site	6.2	0.4	4.9	1.0	0.4
Rail - On-Site	10.4	0.3	1.1	0.4	0.1
Non-Road	13.2	8.8	2.9	3.2	4.1
Total:	30.2	9.5	9.5	4.8	4.6

Source	2008 Emissions (tpy)				
	NOx	PM	CO	VOC	SOX
HDDV - On-Site	0.6	0.0	1.2	0.2	0.0
HDDV - Off-Site	11.1	0.8	10.4	2.1	0.7
Rail - On-Site	7.2	0.3	1.1	0.4	0.1
Non-Road	16.0	10.8	3.0	4.6	6.2
Total:	35.0	11.8	15.7	7.3	7.0

Year	Source	Project Emissions (tpy)					No Project Emissions (tpy)			
		NOx	PM	CO	VOC	SOX	NOx	PM	CO	VOC
2002	HDDV Transport Trucks	26.4	10.2	6.9	2.6	1.5	64.5	30.8	5.4	4.1
	Locomotive Operations	61.1	1.7	6.7	2.5	0.8	0.0	0.0	0.0	0.0
	Container Handling Equipmen	13.2	8.8	2.9	3.2	4.1	0.0	0.0	0.0	0.0
	Totals	100.6	20.6	16.5	8.4	6.5	64.5	30.8	5.4	4.1
2008	HDDV Transport Trucks	47.0	20.7	15.1	4.1	2.4	53.7	30.3	5.3	2.8
	Locomotive Operations	42.3	1.5	6.7	2.2	0.8	0.0	0.0	0.0	0.0
	Container Handling Equipmen	16.0	10.8	3.0	4.6	6.2	0.0	0.0	0.0	0.0
	Totals	105.4	33.0	24.7	11.0	9.4	53.7	30.3	5.3	2.8

Project Related Emissions Increase	Emissions (tpy)				
	NOx	PM	CO	VOC	SOX
2002	36.1	-10.1	11.1	4.3	3.7
2008	51.7	2.6	19.4	8.2	6.8

py)
SOX
2.7
0.0
0.0
2.7
2.6
0.0
0.0
2.6

[illegible]

PART5 Revised 02-24-95
URS RTRR RUN USING Michigan REGISTRATIONS

Fugitive Dust: Unpaved Roads Fleet Average 19.31 g/mi (as calculated in AP42 Vol 1 9/88)*

Direct SO4:	0.008	0.010	0.010	0.012	0.002	0.005	0.006	0.014
0.000	0.028	0.032	0.031	0.010				
Exhaust PM:	0.013	0.015	0.015	0.055	0.020	0.105	0.110	0.093
0.000	0.287	0.321	0.227	0.035				

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Indir. SO4:	0.023	0.030	0.030	0.049	0.009	0.027	0.035	0.056
0.000	0.114	0.133	0.128	0.033				
Sulfate PM:	0.031	0.040	0.040	0.060	0.011	0.032	0.041	0.070
0.000	0.142	0.166	0.159	0.043				
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.000	0.013	0.013	0.013	0.013				
Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
0.000	0.012	0.036	0.008	0.009				
Total PM:	0.056	0.065	0.065	0.128	0.046	0.153	0.166	0.170
0.000	0.425	0.503	0.376	0.089				

Fugitive Dust: Unpaved Roads Fleet Average	19.31 g/mi (as calculated in AP42 Vol 1 9/88)*
Paved Roads Fleet Average	13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*
Unpaved Roads Fleet Average	19.11 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and
Paved Roads Fleet Average	13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe
	tire-wear emissions)**
	and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt:	5.10 (g/m^2)	Fleet average
vehicle weight:	6000	
Unpaved Silt:	4.3%	Fleet average
number of wheels:	4	
Precipitation Days:	120 >0.01 in. (per year)	

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								
Total Idle								
(g/hr) :	*	*	*	*	*	*	*	1.004
0.000	1.220	1.131	1.172	*				
Gas. SO2:								
(g/mi) :	0.078	0.104	0.104	0.168	0.032	0.095	0.121	0.196
0.000	0.396	0.463	0.445	0.113				

* Missing Data

User supplied veh registration distributions.

2002

Particle Size Cutoff 10.00 Microns

Altitude: 500. Ft.

Driving: Transient RFG:No

Cal. Year: 2002

I/M Program: No

Region: Low

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								

Veh. Speeds:	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
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10.0	10.0	10.0	10.0	10.0				
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VTM Mix:	0.5896	0.2059	0.0912	0.0348	0.0045	0.0014	0.0015	0.0147
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0.0000	0.0166	0.0370	0.0028					
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Composite Emission Factors (g/mi)

Lead:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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0.000	0.000	0.000	0.000	0.000				
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SOF:	-	-	-	-	-	0.031	0.071	0.058
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0.000	0.215	0.123	0.196	-				
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RCP:	-	-	-	-	-	0.110	0.049	0.056
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0.000	0.274	0.388	0.249	-				
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Direct SO4:	0.008	0.010	0.010	0.011	0.002	0.005	0.007	0.015
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0.000	0.029	0.034	0.033	0.010				
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Exhaust PM:	0.013	0.015	0.017	0.068	0.020	0.146	0.127	0.129
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0.000	0.518	0.545	0.479	0.047				
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Indir. SO4:	0.023	0.030	0.030	0.050	0.009	0.029	0.036	0.060
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0.000	0.119	0.141	0.137	0.032				
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Sulfate PM:	0.031	0.040	0.040	0.062	0.011	0.034	0.043	0.075
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0.000	0.148	0.176	0.170	0.043				
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Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
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0.000	0.013	0.013	0.013	0.013				
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Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
-------	-------	-------	-------	-------	-------	-------	-------	-------

0.000	0.012	0.036	0.008	0.009				
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Total PM:	0.056	0.065	0.067	0.143	0.046	0.195	0.184	0.209
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0.000	0.662	0.735	0.636	0.101				
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Fugitive Dust: Unpaved Roads Fleet Average	77.24 g/mi (as calculated in AP42 Vol 1 9/88)*
--	--

Paved Roads Fleet Average	13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*
---------------------------	--

Unpaved Roads Fleet Average	77.04 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and
-----------------------------	--

tire-wear emissions)**	
Paved Roads Fleet Average	13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe

and tire-wear

emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt: 5.10 (g/m²) Fleet average
vehicle weight: 6000
Unpaved Silt: 4.3% Fleet average
number of wheels: 4
Precipitation Days: 120 >0.01 in. (per year)

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								
Total Idle								
(g/hr) :	*	*	*	*	*	*	*	1.253
0.000 1.904 1.633 1.780 *								
Gas. SO2:								
(g/mi) :	0.078	0.104	0.104	0.175	0.032	0.100	0.125	0.208
0.000 0.412 0.490 0.475 0.113								

* Missing Data

User supplied veh registration distributions.

2008

Particle Size Cutoff 10.00 Microns

Altitude: 500. Ft.

Driving: Transient RFG:No

Cal. Year: 2008

I/M Program: No

Region: Low

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								

Veh. Speeds:	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
10.0 10.0 10.0 10.0 10.0								
VMT Mix:	0.5744	0.2117	0.0925	0.0353	0.0040	0.0017	0.0027	0.0162
0.0000 0.0182 0.0407 0.0025								
Composite Emission Factors (g/mi)								
Lead:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000 0.000 0.000 0.000 0.000								
SOF:	-	-	-	-	-	0.022	0.061	0.040
0.000 0.114 0.069 0.086 -								
RCP:	-	-	-	-	-	0.078	0.043	0.039
0.000 0.145 0.219 0.110 -								
Direct SO4:	0.008	0.010	0.010	0.012	0.002	0.005	0.006	0.014
0.000 0.028 0.032 0.031 0.010								
Exhaust PM:	0.013	0.015	0.015	0.055	0.020	0.105	0.110	0.093
0.000 0.287 0.321 0.227 0.035								

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Indir. SO4:	0.023	0.030	0.030	0.049	0.009	0.027	0.035	0.056
0.000	0.114	0.133	0.128	0.033				
Sulfate PM:	0.031	0.040	0.040	0.060	0.011	0.032	0.041	0.070
0.000	0.142	0.166	0.159	0.043				
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.000	0.013	0.013	0.013	0.013				
Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
0.000	0.012	0.036	0.008	0.009				
Total PM:	0.056	0.065	0.065	0.128	0.046	0.153	0.166	0.170
0.000	0.425	0.503	0.376	0.089				

Fugitive Dust: Unpaved Roads Fleet Average	77.24 g/mi (as calculated in AP42 Vol 1 9/88)*
Paved Roads Fleet Average	13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*
Unpaved Roads Fleet Average	77.04 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and
Paved Roads Fleet Average	13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe
	tire-wear emissions)**
	and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt:	5.10 (g/m ²)	Fleet average
vehicle weight:	6000	
Unpaved Silt:	4.3%	Fleet average
number of wheels:	4	
Precipitation Days:	120 >0.01 in. (per year)	

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								
Total Idle (g/hr) :	*	*	*	*	*	*	*	1.004
0.000 1.220 1.131 1.172 *								
Gas. SO2:								
(g/mi) :	0.078	0.104	0.104	0.168	0.032	0.095	0.121	0.196
0.000 0.396 0.463 0.445 0.113								

* Missing Data

User supplied veh registration distributions.
2002-35

Particle Size Cutoff 10.00 Microns

Altitude: 500. Ft.

Driving: Transient RFG:No

Cal. Year: 2002
 Region: Low All
 Veh. Type: LDGV LDGT1 LDGT2 HDGV MC LDDV LDDT 2BHDDV
 LHDDV MHDDV HHDDV BUSES Veh.

Veh. Speeds:	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
VTM Mix:	0.5896	0.2059	0.0912	0.0348	0.0045	0.0014	0.0015	0.0147	
0.0000	0.0166	0.0370	0.0028						
Composite Emission Factors (g/mi)									
Lead:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000					
SOF:	-	-	-	-	-	0.031	0.071	0.058	
0.000	0.215	0.123	0.196	-					
RCP:	-	-	-	-	-	0.110	0.049	0.056	
0.000	0.274	0.388	0.249	-					
Direct SO4:	0.008	0.012	0.012	0.011	0.001	0.005	0.007	0.015	
0.000	0.029	0.034	0.033	0.011					
Exhaust PM:	0.013	0.017	0.018	0.067	0.020	0.146	0.127	0.129	
0.000	0.518	0.545	0.479	0.047					

Indir. SO4:	0.023	0.030	0.030	0.050	0.009	0.029	0.036	0.060	
0.000	0.119	0.141	0.137	0.032					
Sulfate PM:	0.031	0.042	0.041	0.061	0.010	0.034	0.043	0.075	
0.000	0.148	0.176	0.170	0.043					
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	
0.000	0.013	0.013	0.013	0.013					
Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008	
0.000	0.012	0.036	0.008	0.009					
Total PM:	0.056	0.067	0.069	0.142	0.046	0.195	0.184	0.209	
0.000	0.662	0.735	0.636	0.102					

Fugitive Dust: Unpaved Roads Fleet Average 336.56 g/mi (as calculated in AP42 Vol 1 9/88)*
 Paved Roads Fleet Average 13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*
 Unpaved Roads Fleet Average 336.35 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and
 tire-wear emissions)**
 Paved Roads Fleet Average 13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe
 and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.
 ** Includes fleet average brake-wear emissions.

Paved Road Silt: 5.10 (g/m^2) Fleet average
 vehicle weight: 6000

Fleet average

Veh. Type:		LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV	MHDDV	HHDDV	BUSES	Veh.					
Total Idle									
(g/hr) :		*	*	*	*	*	*	*	1.253
0.000	1.904	1.633	1.780	*					
Gas. SO2:									
(g/mi) :		0.078	0.103	0.103	0.175	0.033	0.100	0.125	0.208
0.000	0.412	0.490	0.475	0.113					

Veh.	Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV	MHDDV	HHDDV	BUSES	Veh.					

Indir. SO4:	0.023	0.030	0.030	0.049	0.009	0.027	0.035	0.056
0.000	0.114	0.133	0.128	0.033				
Sulfate PM:	0.031	0.042	0.042	0.060	0.010	0.032	0.041	0.070
0.000	0.142	0.166	0.159	0.044				
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.000	0.013	0.013	0.013	0.013				

Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
0.000	0.012	0.036	0.008	0.009				
Total PM:	0.055	0.067	0.067	0.127	0.046	0.153	0.166	0.170
0.000	0.425	0.503	0.376	0.090				

Fugitive Dust: Unpaved Roads Fleet Average 336.56 g/mi (as calculated in AP42 Vol 1 9/88)*

Paved Roads Fleet Average 13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*

Unpaved Roads Fleet Average 336.35 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and

tire-wear emissions)**

Paved Roads Fleet Average 13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe

and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt: 5.10 (g/m²) Fleet average

vehicle weight: 6000

Unpaved Silt: 4.3% Fleet average

number of wheels: 4

Precipitation Days: 60 >0.01 in. (per year)

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV	BUSES	Veh.						
Total Idle								
(g/hr) :	*	*	*	*	*	*	*	1.004
0.000 1.220 1.131 1.172	*							
Gas. SO2:								
(g/mi) :	0.078	0.103	0.103	0.168	0.033	0.095	0.121	0.196
0.000 0.396 0.463 0.445 0.113								

* Missing Data

User supplied veh registration distributions.
2002-55

Particle Size Cutoff 10.00 Microns

Altitude: 500. Ft.

Driving: Transient RFG:No

Cal. Year: 2002

I/M Program: No

Region: Low

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV	BUSES	Veh.						

Veh. Speeds:	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
55.0	55.0	55.0	55.0	55.0				
VTM Mix:	0.5896	0.2059	0.0912	0.0348	0.0045	0.0014	0.0015	0.0147
0.0000	0.0166	0.0370	0.0028					
Composite Emission Factors (g/mi)								
Lead:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000				
SOF:	-	-	-	-	-	0.031	0.071	0.058
0.000	0.215	0.123	0.196	-				
RCP:	-	-	-	-	-	0.110	0.049	0.056
0.000	0.274	0.388	0.249	-				
Direct SO4:	0.008	0.012	0.012	0.011	0.001	0.005	0.007	0.015
0.000	0.029	0.034	0.033	0.011				
Exhaust PM:	0.013	0.017	0.018	0.067	0.020	0.146	0.127	0.129
0.000	0.518	0.545	0.479	0.047				

Indir. SO4:	0.023	0.030	0.030	0.050	0.009	0.029	0.036	0.060
0.000	0.119	0.141	0.137	0.032				
Sulfate PM:	0.031	0.042	0.041	0.061	0.010	0.034	0.043	0.075
0.000	0.148	0.176	0.170	0.043				
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.000	0.013	0.013	0.013	0.013				
Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
0.000	0.012	0.036	0.008	0.009				
Total PM:	0.056	0.067	0.069	0.142	0.046	0.195	0.184	0.209
0.000	0.662	0.735	0.636	0.102				

Fugitive Dust: Unpaved Roads Fleet Average 528.88 g/mi (as calculated in AP42 Vol 1 9/88)*

Paved Roads Fleet Average 13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*

Unpaved Roads Fleet Average 528.67 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and

tire-wear emissions)**

Paved Roads Fleet Average 13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe

and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt:	5.10 (g/m^2)	Fleet average
vehicle weight:	6000	
Unpaved Silt:	4.3%	Fleet average
number of wheels:	4	
Precipitation Days:	60 >0.01 in. (per year)	

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								
Total Idle								
(g/hr) :	*	*	*	*	*	*	*	1.253
0.000 1.904	1.633	1.780	*					
Gas. SO2:								
(g/mi) :	0.078	0.103	0.103	0.175	0.033	0.100	0.125	0.208
0.000 0.412	0.490	0.475	0.113					

* Missing Data
 User supplied veh registration distributions.
 2008-55

Particle Size Cutoff 10.00 Microns Altitude: 500. Ft.

Driving: Transient RFG:No

Cal. Year: 2008

I/M Program: No

Region: Low

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								

Veh. Speeds:	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
55.0 55.0	55.0	55.0	55.0					
VMT Mix: 0.5744 0.2117 0.0925 0.0353 0.0040 0.0017 0.0027 0.0162								
0.0000	0.0182	0.0407	0.0025					
Composite Emission Factors (g/mi)								
Lead:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000 0.000	0.000	0.000	0.000	0.000				
SOF:	-	-	-	-	-	0.022	0.061	0.040
0.000 0.114	0.069	0.086	-					
RCP:	-	-	-	-	-	0.078	0.043	0.039
0.000 0.145	0.219	0.110	-					
Direct SO4:	0.008	0.012	0.012	0.011	0.001	0.005	0.006	0.014
0.000 0.028	0.032	0.031	0.011					
Exhaust PM:	0.012	0.017	0.017	0.054	0.020	0.105	0.110	0.093
0.000 0.287	0.321	0.227	0.035					

.....

Indir. SO4:	0.023	0.030	0.030	0.049	0.009	0.027	0.035	0.056
0.000 0.114	0.133	0.128	0.033					
Sulfate PM:	0.031	0.042	0.042	0.060	0.010	0.032	0.041	0.070
0.000 0.142	0.166	0.159	0.044					
Brake:	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
0.000 0.013	0.013	0.013	0.013					
Tire:	0.008	0.008	0.008	0.012	0.004	0.008	0.008	0.008
0.000 0.012	0.036	0.008	0.009					
Total PM:	0.055	0.067	0.067	0.127	0.046	0.153	0.166	0.170
0.000 0.425	0.503	0.376	0.090					

Fugitive Dust: Unpaved Roads Fleet Average 528.88 g/mi (as calculated in AP42 Vol 1 9/88)*

Paved Roads Fleet Average 13.41 g/mi (as calculated in draft AP42 Vol 1 3/93)*

Unpaved Roads Fleet Average 528.67 g/mi (as calculated in AP42 Vol 1 9/88, minus tailpipe and

tire-wear emissions)**
Paved Roads Fleet Average 13.21 g/mi (as calculated in draft AP42 Vol 1 3/93, minus tailpipe

and tire-wear emissions)**

* Includes fleet average tailpipe, tire-wear and brake-wear emissions.

** Includes fleet average brake-wear emissions.

Paved Road Silt: 5.10 (g/m²) Fleet average

vehicle weight: 6000

Unpaved Silt: 4.3% Fleet average

number of wheels: 4

Precipitation Days: 60 >0.01 in. (per year)

All

Veh. Type:	LDGV	LDGT1	LDGT2	HDGV	MC	LDDV	LDDT	2BHDDV
LHDDV MHDDV HHDDV BUSES Veh.								

Total Idle								
(g/hr) :	*	*	*	*	*	*	*	1.004
0.000 1.220 1.131 1.172 *								

Gas. SO2:								
(g/mi) :	0.078	0.103	0.103	0.168	0.033	0.095	0.121	0.196
0.000 0.396 0.463 0.445 0.113								

* Missing Data

URS RTRR RUN USING Michigan REGISTRATIONS

1 :VMFLAG (alternate VMT mixes)
 3 :MYMRFG (alternate mileage accumulation rates & registration)
 1 :IMFLAG (Inspection and maintenance)
 1 :RFGFLG (2 to apply reformulated gasoline effects, 1 not to)
 3 :OUTFMT (indicates type of output format)
 2 :IDLFLG (2 to print, 1 not to print idle emission factors)
 2 :SO2FLG (2 to print Gaseous SO2 emissions, 1 not to print them)
 1 :PRTFLG (determines which pollutants to print out)
 1 :BUSFLG (determines which alternative bus cycles to print out)

.040 .124 .096 .075 .061 .070 .067 .063 .058 .055

.052 .051 .042 .031 .029 .022 .015 .008 .004 .004

.003 .004 .003 .003 .021

.064 .176 .131 .078 .058 .062 .064 .056 .044 .042

.037 .040 .036 .029 .026 .019 .013 .006 .004 .003

.002 .003 .002 .001 .006

.070 .195 .145 .086 .064 .069 .061 .041 .034 .024

.030 .032 .025 .018 .020 .017 .012 .007 .004 .003

.003 .011 .010 .005 .012

.032 .085 .070 .080 .067 .068 .056 .036 .031 .027

.033 .043 .042 .036 .035 .029 .025 .014 .010 .010

.013 .027 .027 .023 .082

.017 .098 .088 .071 .072 .063 .052 .040 .027 .020

.020 .432 .000 .000 .000 .000 .000 .000 .000 .000

.000 .000 .000 .000 .000

.040 .124 .096 .075 .061 .070 .067 .063 .058 .055

.052 .051 .042 .031 .029 .022 .015 .008 .004 .004

.003 .004 .003 .003 .021

.064 .176 .131 .078 .058 .062 .064 .056 .044 .042

.037 .040 .036 .029 .026 .019 .013 .006 .004 .003

.002 .003 .002 .001 .006

LDDT

.043 .084 .084 .084 .084 .091 .076 .050 .051 .064

.066 .083 .069 .071 .000 .000 .000 .000 .000 .000

.000 .000 .000 .000 .000

2BHDDV

.000 .000 .000 .000 .000 .000 .000 .000 .000 .000

.000 .000 .000 .000 .000 .000 .000 .000 .273 .182

.125 .102 .080 .057 .182

LHDDV

.034 .067 .067 .067 .067 .073 .061 .040 .041 .051

.053 .066 .055 .057 .045 .019 .023 .028 .024 .016

.011 .009 .007 .005 .016

MHDDV

MHDDV

.029 .078 .065 .074 .062 .097 .069 .059 .044 .046

.051 .053 .048 .046 .042 .034 .028 .013 .011 .010

.007 .008 .007 .005 .015

HDDV

.030 .060 .059 .058 .057 .055 .054 .053 .052 .050

.050 .049 .047 .046 .045 .044 .044 .043 .042 .010

.008 .007 .006 .005 .025

BUSES

1 2002 1 2.5 : region, year, speed cycle, speed

04.3 05.1 2 : unpaved silt%, ind. silt g/m^2, WHEELFLG

120 : number of precip. days

2002 :scene name

10. -- Particle size cutoff

6000

04

1 2008 1 2.5 : region, year, speed cycle, speed

04.3 05.1 2 : unpaved silt%, ind. silt g/m^2, WHEELFLG

120 : number of precip. days

```

2008                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2002 1 10.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
120          : number of precip. days
2002                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2008 1 10.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
120          : number of precip. days
2008                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2002 1 35.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
60          : number of precip. days
2002-35                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2008 1 35.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
60          : number of precip. days
2008-35                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2002 1 55.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
60          : number of precip. days
2002-55                                     :scene name
10.  -- Particle size cutoff
6000
04
1 2008 1 55.0      : region, year, speed cycle, speed
04.3 05.1  2      : unpaved silt%, ind. silt g/m^2, WHEELFLG
60          : number of precip. days
2008-55                                     :scene name
10.  -- Particle size cutoff
6000
04

```

1RTRR NOx Emission Factors
MOBILE5b (14-Sep-96)

0

-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 0.998 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)
-M 49 Warning:
+ 1.00 MYR sum not = 1. (will normalize)

I/M Program: "", No "", "Anti-tam Program:", "", No "", "Reformulated Gas:", "", No
Minimum Temp.: "", 71.0, "", "Maximum Temp.:", "", 95.0, "", "Period 1 RVP:": "", 9.5, "", "Period 2 start year:": "", "", 1997
Gasoline Market Share: "", "", 1.000, "", "Ether Blend Market Share:": "", "", 0.000, "", "Alcohol Blend Market Share:": "", "", 0.000
"", "", "", "Ether Blend Oxygen Content:": "", "", 0.000, "", "Alcohol Blend Oxygen Content:": "", "", 0.000, "", "Alcohol Blend RVP Waiver:": "", "", No
"", "", "", "Composite Emission Factors", "", "", "", "Operating Percentages", "", "", "", "Vehicle Speed", "", "", "", "Vehicle Mix"
Pollutant, "Cal. Year", "LDGV ef", "LDGT1 ef", "LDGT2 ef", "LDGT ef", "HDGV ef", "LDDV ef", "LDDT ef", "HDDV ef", "MC ef", "All Veh", "Amb. Temp.",

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2002, 3.288, 3.052, 3.482, 3.184, 5.973, 0.902, 1.059, 3.212, 8.353, 3.361, 86, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 1
CO ,2002, 31.566, 29.038, 34.147, 30.605, 63.235, 2.943, 2.978, 20.260, 52.157, 31.587, 86, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 1
NOx,2002, 1.408, 1.422, 1.624, 1.484, 3.820, 1.518, 1.585, 12.621, 0.686, 2.301, 86, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0
Idle HC ,2002, 19.173, 18.251, 21.979, 19.394, 19.696, 3.270, 3.836, 11.640, 30.497, 18.727,
Idle CO ,2002, 243.392, 214.183, 267.142, 230.422, 297.383, 13.071, 13.227, 89.985, 471.153, 230.883,
Idle NOx,2002, 4.937, 4.998, 5.676, 5.206, 8.858, 5.088, 5.313, 42.312, 2.113, 7.773,

I/M Program: "", No "", "Anti-tam Program:", "", No "", "Reformulated Gas:", "", No
Minimum Temp.: "", 71.0, "", "Maximum Temp.:", "", 95.0, "", "Period 1 RVP:": "", 9.5, "", "Period 2 start year:": "", "", 1997

Gasoline Market Share:","1.000","Ether Blend Market Share:","0.000","Alcohol Blend Market Share:","0.000
","Ether Blend Oxygen Content:","0.000","Alcohol Blend Oxygen Content:","0.000","Alcohol Blend RVP Waiver:","No
","Composite Emission Factors","Operating Percentages","Vehicle Speed","Vehicle Mix"
Pollutant,"Cal. Year","LDGV ef","LDGT1 ef","LDGT2 ef","LDGT ef","HDTV ef","LDDT ef","HDDV ef","MC ef","All Veh","Amb. Temp.",

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2002, 1.355, 1.309, 1.468, 1.358, 2.237, 0.374, 0.439, 1.332, 5.823, 1.402, 86, 47.0, 6.0, 47.0, 500., 1,35.0,35.0,35.0,35.0,35.0,3
CO ,2002, 10.499, 10.577, 12.368, 11.126, 18.809, 0.908, 0.919, 6.249, 13.804, 10.660, 86, 47.0, 6.0, 47.0, 500., 1,35.0,35.0,35.0,35.0,35.0,3
NOx,2002, 1.389, 1.346, 1.548, 1.408, 4.741, 1.016, 1.061, 8.449, 0.974, 2.005, 86, 47.0, 6.0, 47.0, 500., 1,35.0,35.0,35.0,35.0,35.0,35.0,
Idle HC ,2002, 19.173, 18.251, 21.979, 19.394, 19.696, 3.270, 3.836, 11.640, 30.497, 18.727,
Idle CO ,2002, 243.392, 214.183, 267.142, 230.422, 297.383, 13.071, 13.227, 89.985, 471.153, 230.883,
Idle NOx,2002, 4.937, 4.998, 5.676, 5.206, 8.858, 5.313, 42.312, 2.113, 7.773,

I/M Program:","No","Anti-tam Program:","No","Reformulated Gas:","No
Minimum Temp:","71.0","Maximum Temp:","95.0","Period 1 RVP:","9.5","Period 2 RVP:","7.8","Period 2 start year:","1997
Gasoline Market Share:","1.000","Ether Blend Market Share:","0.000","Alcohol Blend Market Share:","0.000
","Ether Blend Oxygen Content:","0.000","Alcohol Blend Oxygen Content:","0.000","Alcohol Blend RVP Waiver:","No
","Composite Emission Factors","Operating Percentages","Vehicle Speed","Vehicle Mix"
Pollutant,"Cal. Year","LDGV ef","LDGT1 ef","LDGT2 ef","LDGT ef","HDTV ef","LDDT ef","HDDV ef","MC ef","All Veh","Amb. Temp.",

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2008, 2.930, 2.797, 3.149, 2.904, 4.827, 0.808, 1.076, 3.148, 8.353, 3.018, 86, 47.0, 6.0, 47.0, 500., 1,10.0,10.0,10.0,10.0,10.0,10.0,1
CO ,2008, 30.536, 27.862, 31.799, 29.058, 41.353, 2.819, 2.994, 19.986, 52.157, 29.606, 86, 47.0, 6.0, 47.0, 500., 1,10.0,10.0,10.0,10.0,10.0,1
NOx,2008, 1.340, 1.334, 1.601, 1.415, 3.521, 1.402, 1.574, 10.506, 0.686, 2.144, 86, 47.0, 6.0, 47.0, 500., 1,10.0,10.0,10.0,10.0,10.0,10.0,
Idle HC ,2008, 17.281, 17.280, 19.915, 18.081, 16.194, 2.927, 3.899, 11.406, 30.497, 17.019,
Idle CO ,2008, 227.731, 198.549, 234.628, 209.513, 194.477, 12.520, 13.296, 88.768, 471.153, 210.216,
Idle NOx,2008, 4.716, 4.693, 5.634, 4.979, 8.166, 4.702, 5.276, 35.222, 2.113, 7.257,

I/M Program:","No","Anti-tam Program:","No","Reformulated Gas:","No
Minimum Temp:","71.0","Maximum Temp:","95.0","Period 1 RVP:","9.5","Period 2 RVP:","7.8","Period 2 start year:","1997
Gasoline Market Share:","1.000","Ether Blend Market Share:","0.000","Alcohol Blend Market Share:","0.000
","Ether Blend Oxygen Content:","0.000","Alcohol Blend Oxygen Content:","0.000","Alcohol Blend RVP Waiver:","No
","Composite Emission Factors","Operating Percentages","Vehicle Speed","Vehicle Mix"
Pollutant,"Cal. Year","LDGV ef","LDGT1 ef","LDGT2 ef","LDGT ef","HDTV ef","LDDT ef","HDDV ef","MC ef","All Veh","Amb. Temp.",

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2008, 1.210, 1.190, 1.329, 1.232, 1.773, 0.335, 0.446, 1.306, 5.823, 1.259, 86, 47.0, 6.0, 47.0, 500., 1.35.0,35.0,35.0,35.0,35.0,3
CO ,2008, 10.039, 10.007, 11.546, 10.475, 12.301, 0.869, 0.923, 6.164, 13.804, 9.923, 86, 47.0, 6.0, 47.0, 500., 1.35.0,35.0,35.0,35.0,35.0,35
NOx,2008, 1.330, 1.254, 1.514, 1.333, 4.371, 0.939, 1.054, 7.034, 0.974, 1.874, 86, 47.0, 6.0, 47.0, 500., 1.35.0,35.0,35.0,35.0,35.0,35.0,
Idle HC ,2008, 17.281, 17.280, 19.915, 18.081, 16.194, 2.927, 3.899, 11.406, 30.497, 17.019,
Idle CO ,2008, 227.731, 198.549, 234.628, 209.513, 194.477, 12.520, 13.296, 88.768, 471.153, 210.216,
Idle NOx,2008, 4.716, 4.693, 5.634, 4.979, 8.166, 4.702, 5.276, 35.222, 2.113, 7.257,

I/M Program: "" , No , "" , "Anti-tam Program:" "" , No , "" , "Reformulated Gas:" "" , No

Minimum Temp: "" , 71.0 "" , "Maximum Temp:" "" , 95.0 "" , "Period 1 RVP:" "" , 9.5 "" , "Period 2 RVP:" "" , 7.8 "" , "Period 2 start year:" "" , 1997

Gasoline Market Share: "" , "" , 1.000 "" , "Ether Blend Market Share:" "" , 0.000 "" , "Alcohol Blend Market Share:" "" , 0.000

"" , "" , "" , "Ether Blend Oxygen Content:" "" , 0.000 "" , "Alcohol Blend Oxygen Content:" "" , 0.000 "" , "Alcohol Blend RVP Waiver:" "" , "" , No

"" , "" , "Composite Emission Factors" "" , "" , "" , "Operating Percentages" "" , "" , "" , "Vehicle Speed" "" , "" , "" , "Vehicle Mix"

Pollutant, "Cal. Year" , "LDGV ef" , "LDGT1 ef" , "LDGT2 ef" , "LDGT ef" , "HDGV ef" , "LDDV ef" , "LDDT ef" , "HDDV ef" , "MC ef" , "All Veh" , "Amb. Temp." ,

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2002, 1.051, 1.059, 1.188, 1.099, 1.805, 0.275, 0.323, 0.979, 5.579, 1.105, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,5
CO ,2002, 6.924, 7.381, 8.922, 7.854, 19.189, 0.803, 0.813, 5.531, 10.174, 7.526, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,
NOx,2002, 1.729, 1.711, 1.980, 1.793, 5.478, 1.396, 1.458, 11.613, 1.309, 2.572, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,
Idle HC ,2002, 19.173, 18.251, 21.979, 19.394, 19.696, 3.270, 3.836, 11.640, 30.497, 18.727,
Idle CO ,2002, 243.392, 214.183, 267.142, 230.422, 297.383, 13.071, 13.227, 89.985, 471.153, 230.883,
Idle NOx,2002, 4.937, 4.998, 5.676, 5.206, 8.858, 5.088, 5.313, 42.312, 2.113, 7.773,

I/M Program: "" , No , "" , "Anti-tam Program:" "" , No , "" , "Reformulated Gas:" "" , No

Minimum Temp: "" , 71.0 "" , "Maximum Temp:" "" , 95.0 "" , "Period 1 RVP:" "" , 9.5 "" , "Period 2 RVP:" "" , 7.8 "" , "Period 2 start year:" "" , 1997

Gasoline Market Share: "" , "" , 1.000 "" , "Ether Blend Market Share:" "" , 0.000 "" , "Alcohol Blend Market Share:" "" , 0.000

"" , "" , "" , "Ether Blend Oxygen Content:" "" , 0.000 "" , "Alcohol Blend Oxygen Content:" "" , 0.000 "" , "Alcohol Blend RVP Waiver:" "" , "" , No

"" , "" , "Composite Emission Factors" "" , "" , "" , "Operating Percentages" "" , "" , "" , "Vehicle Speed" "" , "" , "" , "Vehicle Mix"

Pollutant, "Cal. Year" , "LDGV ef" , "LDGT1 ef" , "LDGT2 ef" , "LDGT ef" , "HDGV ef" , "LDDV ef" , "LDDT ef" , "HDDV ef" , "MC ef" , "All Veh" , "Amb. Temp." ,

0Emission factors are as of July 1st of the indicated calendar year.

HC ,2008, 0.933, 0.955, 1.066, 0.989, 1.420, 0.246, 0.328, 0.959, 5.579, 0.985, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,5
CO ,2008, 6.401, 6.761, 8.014, 7.141, 12.549, 0.770, 0.817, 5.456, 10.174, 6.759, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,
NOx,2008, 1.637, 1.585, 1.923, 1.688, 5.050, 1.290, 1.448, 9.667, 1.309, 2.389, 86, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,55.0,
Idle HC ,2008, 17.281, 17.280, 19.915, 18.081, 16.194, 2.927, 3.899, 11.406, 30.497, 17.019,

Idle CO ,2008, 227.731, 198.549, 234.628, 209.513, 194.477, 12.520, 13.296, 88.768, 471.153, 210.216,
Idle NOx,2008, 4.716, 4.693, 5.634, 4.979, 8.166, 4.702, 5.276, 35.222, 2.113, 7.257,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

0.0,10.0,10.0,0.589,0.207,0.091,0.035,0.001,0.002,0.070,0.004,
0.0,10.0,10.0,10.0,0.589,0.207,0.091,0.035,0.001,0.002,0.070,0.004,
10.0,10.0,10.0,0.589,0.207,0.091,0.035,0.001,0.002,0.070,0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

5.0,35.0,35.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,
.0,35.0,35.0,35.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,
5.0,35.0,35.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

0.0,10.0,10.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
0.0,10.0,10.0,10.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
10.0,10.0,10.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

5.0,35.0,35.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
.0,35.0,35.0,35.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
5.0,35.0,35.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

5.0,55.0,55.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,
55.0,55.0,55.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,
55.0,55.0,55.0, 0.589, 0.207, 0.091, 0.035, 0.001, 0.002, 0.070, 0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

5.0,55.0,55.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
55.0,55.0,55.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
5.0,55.0,55.0, 0.574, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

1 Riverview Trenton Railroad Winter (CO) Emission Factors
MOBILE5b (14-Sep-96)

0

- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 0.998 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 49 Warning:
- + 1.00 MYR sum not = 1. (will normalize)
- M 83 Comment:

- + One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

I/M Program: "No", "No", "Anti-tam Program", "No", "No", "Reformulated Gas", "No", "No"
Minimum Temp: "26.0", "Maximum Temp", "39.0", "Period 1 RVP", "14.3", "Period 2 RVP", "14.3", "Period 2 start year", "2020"
Gasoline Market Share: "1.000", "Ether Blend Market Share", "0.000", "Alcohol Blend Market Share", "0.000"
"Ether Blend Oxygen Content", "0.000", "Alcohol Blend Oxygen Content", "0.000", "Alcohol Blend RVP Waiver", "No"
"Composite Emission Factors", "Operating Percentages", "Vehicle Speed", "Vehicle Mix"
Pollutant, "Cal. Year", "LDGV ef", "LDGT1 ef", "LDGT2 ef", "LDGT ef", "HDDV ef", "LDDT ef", "MC ef", "All Veh", "Amb. Temp.",

0 Emission factors are as of Jan. 1st of the indicated calendar year.

HC 2002, 5.465, 5.644, 6.589, 5.934, 5.951, 0.890, 1.063, 3.234, 7.708, 5.463, 34, 47.0, 6.0, 47.0, 500, 1, 10.0, 10.0, 10.0, 10.0, 10.0, 1
CO 2002, 58.209, 60.518, 69.273, 63.205, 71.726, 2.932, 2.984, 20.300, 94.177, 57.519, 34, 47.0, 6.0, 47.0, 500, 1, 10.0, 10.0, 10.0, 10.0, 10.0, 1

NOx,2002, 1.793, 1.817, 2.085, 1.899, 4.011, 1.518, 1.592, 12.994, 0.820, 2.677, 34, 47.0, 6.0, 47.0, 500.,1,10.0,10.0,10.0,10.0,10.0,
 Idle HC ,2002, 42.492, 43.917, 52.399, 46.521, 27.974, 3.227, 3.854, 11.720, 57.173, 40.989,
 Idle CO ,2002, 446.778, 441.741, 534.066, 470.078, 337.317, 13.024, 13.254, 90.162, 850.732, 425.558,
 Idle NOx,2002, 6.275, 6.387, 7.289, 6.664, 9.303, 5.088, 5.337, 43.565, 2.526, 9.076,

-M 83 Comment:

- + One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

I/M Program: "" No "" "Anti-tam Program:" "" No "" "Reformulated Gas:" "" No
 Minimum Temp.: "" 26.0 "" "Maximum Temp.:" "" 39.0 "" "Period 1 RVP:" "" 14.3 "" "Period 2 RVP:" "" 14.3 "" "Period 2 start year:" "" "" 2020
 Gasoline Market Share: "" "" 1.000 "" "Ether Blend Market Share:" "" "" 0.000 "" "Alcohol Blend Market Share:" "" "" 0.000
 "" "" "" "Ether Blend Oxygen Content:" "" "" 0.000 "" "Alcohol Blend Oxygen Content:" "" "" 0.000 "" "Alcohol Blend RVP Waiver:" "" "" No
 "" "" "" "Composite Emission Factors" "" "" "" "" "Operating Percentages" "" "" "" "Vehicle Speed" "" "" "" "Vehicle Mix"
 Pollutant,"Cal. Year","LDGV ef","LDGT1 ef","LDGT2 ef","LDGT ef","HDGV ef","LDDV ef","LDDT ef","HDDV ef","MC ef","All Veh","Amb. Temp.",

OEmission factors are as of Jan. 1st of the indicated calendar year.

HC ,2002, 2.117, 2.315, 2.664, 2.422, 1.423, 0.369, 0.441, 1.341, 2.967, 2.129, 34, 47.0, 6.0, 47.0, 500.,1,35.0,35.0,35.0,35.0,35.0,3
 CO ,2002, 19.453, 22.052, 24.975, 22.949, 21.335, 0.904, 0.920, 6.261, 24.925, 19.608, 34, 47.0, 6.0, 47.0, 500.,1,35.0,35.0,35.0,35.0,3
 NOx,2002, 1.766, 1.723, 1.996, 1.807, 4.979, 1.016, 1.066, 8.700, 1.165, 2.368, 34, 47.0, 6.0, 47.0, 500.,1,35.0,35.0,35.0,35.0,35.0,
 Idle HC ,2002, 42.492, 43.917, 52.399, 46.521, 27.974, 3.227, 3.854, 11.720, 57.173, 40.989,
 Idle CO ,2002, 446.778, 441.741, 534.066, 470.078, 337.317, 13.024, 13.254, 90.162, 850.732, 425.558,
 Idle NOx,2002, 6.275, 6.387, 7.289, 6.664, 9.303, 5.088, 5.337, 43.565, 2.526, 9.076,

-M 83 Comment:

- + One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

I/M Program: "" No "" "Anti-tam Program:" "" No "" "Reformulated Gas:" "" No

Minimum Temp.: "", 26.0, "", "Maximum Temp.: "", 39.0, "", "Period 1 RVP.: "", 14.3, "", "Period 2 RVP.: "", 14.3, "", "Period 2 start year.: "", "", 2020
Gasoline Market Share.: "", "", 1.000, "", "Ether Blend Market Share.: "", "", 0.000, "", "Alcohol Blend Market Share.: "", "", 0.000
"", "", "", "Ether Blend Oxygen Content.: "", "", 0.000, "", "Alcohol Blend Oxygen Content.: "", "", 0.000, "", "Alcohol Blend RVP Waiver.: "", "", No
", "Composite Emission Factors", "", "", "", "Operating Percentages", "", "", "", "Vehicle Speed", "", "", "", "Vehicle Mix"
Pollutant, "Cal. Year", "LDGV ef", "LDGT1 ef", "LDGT2 ef", "LDGT ef", "HDGV ef", "LDDV ef", "LDDT ef", "HDDV ef", "MC ef", "All Veh", "Amb. Temp.",

0Emission factors are as of Jan. 1st of the indicated calendar year.

HC ,2008, 4.982, 5.266, 6.087, 5.516, 5.301, 0.810, 1.074, 3.150, 7.708, 5.007, 34, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0, 1
CO ,2008, 52.344, 56.908, 62.562, 58.627, 55.418, 2.823, 2.992, 19.999, 94.177, 51.822, 34, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 1
NOx,2008, 1.678, 1.685, 2.017, 1.786, 3.677, 1.414, 1.573, 10.594, 0.820, 2.460, 34, 47.0, 6.0, 47.0, 500., 1, 10.0, 10.0, 10.0, 10.0, 10.0, 10.0
Idle HC ,2008, 37.621, 40.747, 47.454, 42.786, 24.880, 2.934, 3.893, 11.414, 57.173, 36.654,
Idle CO ,2008, 390.157, 404.332, 454.883, 419.703, 260.622, 12.536, 13.289, 88.826, 850.732, 371.572,
Idle NOx,2008, 5.907, 5.929, 7.098, 6.285, 8.526, 4.739, 5.274, 35.516, 2.526, 8.362,

-M 83 Comment:

- + One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

I/M Program.: "", No, "", "Anti-tam Program.: "", No, "", "Reformulated Gas.: "", No

Minimum Temp.: "", 26.0, "", "Maximum Temp.: "", 39.0, "", "Period 1 RVP.: "", 14.3, "", "Period 2 RVP.: "", 14.3, "", "Period 2 start year.: "", "", 2020
Gasoline Market Share.: "", "", 1.000, "", "Ether Blend Market Share.: "", "", 0.000, "", "Alcohol Blend Market Share.: "", "", 0.000
"", "", "", "Ether Blend Oxygen Content.: "", "", 0.000, "", "Alcohol Blend Oxygen Content.: "", "", 0.000, "", "Alcohol Blend RVP Waiver.: "", "", No
", "Composite Emission Factors", "", "", "", "Operating Percentages", "", "", "", "Vehicle Speed", "", "", "", "Vehicle Mix"
Pollutant, "Cal. Year", "LDGV ef", "LDGT1 ef", "LDGT2 ef", "LDGT ef", "HDGV ef", "LDDV ef", "LDDT ef", "HDDV ef", "MC ef", "All Veh", "Amb. Temp.",

0Emission factors are as of Jan. 1st of the indicated calendar year.

HC ,2008, 1.943, 2.143, 2.485, 2.247, 1.274, 0.336, 0.446, 1.306, 2.967, 1.960, 34, 47.0, 6.0, 47.0, 500., 1, 35.0, 35.0, 35.0, 35.0, 35.0, 3
CO ,2008, 17.222, 20.430, 22.662, 21.108, 16.484, 0.871, 0.923, 6.168, 24.925, 17.487, 34, 47.0, 6.0, 47.0, 500., 1, 35.0, 35.0, 35.0, 35.0, 35.0, 3
NOx,2008, 1.666, 1.585, 1.909, 1.683, 4.563, 0.946, 1.053, 7.092, 1.165, 2.184, 34, 47.0, 6.0, 47.0, 500., 1, 35.0, 35.0, 35.0, 35.0, 35.0, 3
Idle HC ,2008, 37.621, 40.747, 47.454, 42.786, 24.880, 2.934, 3.893, 11.414, 57.173, 36.654,
Idle CO ,2008, 390.157, 404.332, 454.883, 419.703, 260.622, 12.536, 13.289, 88.826, 850.732, 371.572,
Idle NOx,2008, 5.907, 5.929, 7.098, 6.285, 8.526, 4.739, 5.274, 35.516, 2.526, 8.362,

+ One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

0Emission factors are as of Jan. 1st of the indicated calendar year.

-M 83 Comment:

+ One or more evaporative temperatures (input daily maximum, input ambient, calculated hot soak, and/or calculated running loss) is 40F or less, or input daily minimum is 25F or less; no evaporative emission factors (hot soak, diurnal, running loss, or resting loss) will be calculated.

I/M Program: "No", "Anti-tam Program: "No", "Reformulated Gas: "No", "Minimum Temp: "26.0", "Maximum Temp: "39.0", "Period 1 RVP: "14.3", "Period 2 start year: "2020", "Gasoline Market Share: "1.000", "Ether Blend Market Share: "0.000", "Alcohol Blend Market Share: "0.000", "Ether Blend Oxygen Content: "0.000", "Alcohol Blend Oxygen Content: "0.000", "Alcohol Blend RVP Waiver: "No", "Composite Emission Factors: "Operating Percentages", "Vehicle Speed", "Vehicle Mix"

Pollutant,"Cal. Year","LDGV ef","LDGT1 ef","LDGT2 ef","LDGT ef","HDGV ef","LDDV ef","LDDT ef","HDDV ef","MC ef","All Veh","Amb. Temp.",

0Emission factors are as of Jan. 1st of the indicated calendar year.

HC ,2008, 1.470, 1.695, 1.978, 1.781, 0.853, 0.247, 0.328, 0.960, 2.509, 1.502, 34, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,5
CO ,2008, 10.997, 13.785, 15.656, 14.354, 16.817, 0.771, 0.817, 5.460, 18.370, 11.782, 34, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,5
NOx,2008, 2.053, 2.003, 2.425, 2.131, 5.273, 1.301, 1.448, 9.748, 1.565, 2.774, 34, 47.0, 6.0, 47.0, 500., 1.55.0,55.0,55.0,55.0,55.0,
Idle HC ,2008, 37.621, 40.747, 47.454, 42.786, 24.880, 2.934, 3.893, 11.414, 57.173, 36.654,
Idle CO ,2008, 390.157, 404.332, 454.883, 419.703, 260.622, 12.536, 13.289, 88.826, 850.732, 371.572,
Idle NOx,2008, 5.907, 5.929, 7.098, 6.285, 8.526, 4.739, 5.274, 35.516, 2.526, 8.362,

Cold"; "Hot"; "Stabilized"; "Alt. (Ft)"; "Region"; "LDGV speed"; "LDGT1 speed"; "LDGT2 speed"; "HDGV speed"; "LDDV speed"; "LDDT speed"; "HDDV s

0.0,10.0,10.0, 0.590, 0.206, 0.091, 0.035, 0.001, 0.002, 0.070, 0.005,
0.0,10.0,10.0,10.0, 0.590, 0.206, 0.091, 0.035, 0.001, 0.002, 0.070, 0.005,

10.0,10.0,10.0,0.590,0.206,0.091,0.035,0.001,0.002,0.070,0.005,

Cold","Hot","Stabilized","Alt. (Ft)","Region","LDGV speed","LDGT1 speed","LDGT2 speed","HDGV speed","LDDV speed","LDDT speed","HDDV s

5.0,35.0,35.0,0.590,0.206,0.091,0.035,0.001,0.002,0.070,0.005,
.0,35.0,35.0,35.0,0.590,0.206,0.091,0.035,0.001,0.002,0.070,0.005,
5.0,35.0,35.0,0.590,0.206,0.091,0.035,0.001,0.002,0.070,0.005,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

0.0, 10.0, 10.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
0.0, 10.0, 10.0, 10.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
10.0, 10.0, 10.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

Cold", "Hot", "Stabilized", "Alt. (Ft)", "Region", "LDGV speed", "LDGT1 speed", "LDGT2 speed", "HDGV speed", "LDDV speed", "LDDT speed", "HDDV s

5.0, 35.0, 35.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
.0, 35.0, 35.0, 35.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
5.0, 35.0, 35.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

Cold"; "Hot"; "Stabilized"; "Alt. (Ft)"; "Region"; "LDGV speed"; "LDGT1 speed"; "LDGT2 speed"; "HDGV speed"; "LDDV speed"; "LDDT speed"; "HDDV s

5.0,55.0,55.0, 0.590, 0.206, 0.091, 0.035, 0.001, 0.002, 0.070, 0.005,
.0,55.0,55.0,55.0, 0.590, 0.206, 0.091, 0.035, 0.001, 0.002, 0.070, 0.005,
55.0,55.0,55.0, 0.590, 0.206, 0.091, 0.035, 0.001, 0.002, 0.070, 0.005,

Cold","Hot","Stabilized","Alt. (Ft)","Region","LDGV speed","LDGT1 speed","LDGT2 speed","HDGV speed","LDDV speed","LDDT speed","HDDV s

5.0,55.0,55.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
.0,55.0,55.0,55.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,
5.0,55.0,55.0, 0.575, 0.212, 0.093, 0.035, 0.002, 0.003, 0.077, 0.004,

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

eed","MC speed","LDGV mix","LDGT1 mix","LDGT2 mix","HDGV mix","LDDV mix","LDDT mix","HDDV mix","MC mix","Scenario Title"

**Criteria Air Pollutants, Likely Emissions Sources, and
Their Potential Health and Environmental Effects**

Criteria Air Pollutants, Likely Emissions Sources, and their Potential Health and Environmental Effects

Criteria Pollutants

A description of the criteria air pollutants, likely emissions sources, and a description of their potential health and environmental effects are presented in Attachment H. This information was obtained from the EPA Office of Air and Radiation (EPA OAR aqtrnd, 1998 and EPA OAR greenbk, 2000).

Ozone – O_3 is formed by the reaction of Volatile Organic Compounds (VOCs) and NO_x in the presence of heat and sunlight. VOCs and NO_x are regulated as a result of their contribution to the formation of O_3 and are deemed O_3 “precursors”. Some of the more common man-made sources of these O_3 precursors include gasoline vapors, chemical solvents, combustion products of various fuels, and certain consumer products. At elevated levels, the reactivity of O_3 can cause health problems by damaging lung tissue, reducing lung function, and sensitizing the lungs to other irritants. O_3 can also affect vegetation and ecosystems, and lead to other environmental stresses.

In July 1997, EPA issued revised health-based air quality standards for O_3 (EPA OAR rehear, 1999). EPA replaced the existing 1-hr primary O_3 standard of 0.12 parts per million (ppm) with a new 8-hr standard of 0.08 ppm. EPA also replaced the previous secondary standard with the new 8-hour standard. However, on May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit declared the revised O_3 standards to be unconstitutional due to improper delegation of legislative authority to the EPA (EPA OAR rehear, 1999). Due to ongoing litigation, the final outcome of the adoption of these regulations is currently unknown; furthermore, the revised O_3 standards are currently unenforceable.

Nitrogen Dioxide - NO_2 is a reddish brown, highly reactive gas that is formed in the atmosphere through the oxidation of nitric oxide (NO). Nitric oxide is a colorless, odorless gas and quickly converts to NO_2 . NO_x , the term used to describe the sum of NO, NO_2 , and other oxides of nitrogen, plays a role in the formation of O_3 . The major sources of man-made NO_x emissions are high-temperature combustion processes, such as those occurring in motor vehicles, construction equipment, marine vessels, industrial processes, and power plants.

With elevated and prolonged exposure, NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides also contribute to the formation of acidic deposition (acid rain), which damages lakes, harms forests and buildings, contributes to reduced visibility, and is suspected of damaging health.

Carbon Monoxide - CO is a colorless, odorless gas and is formed from the incomplete combustion of carbon in fuel. It is a component of motor vehicle exhaust; therefore, high concentrations of CO generally occur in areas with heavy traffic congestion. Other sources of CO emissions include industrial processes and non-transportation fuel combustion.

In humans, CO enters the bloodstream through the lungs and reduces oxygen delivery to the body's organs and tissues. CO has the greatest effect on sensitive individuals such as those with lung and cardiovascular disease. At high levels of exposure, CO can be poisonous and even healthy individuals may be affected. At concentrations commonly found in the ambient air, CO does not appear to have adverse effects on plants, wildlife, or materials (MPCA co, 2000).

Sulfur Dioxide - SO₂ belongs to the family of sulfur oxide gases. The highest monitored concentrations of SO₂ are recorded in the vicinity of large industrial facilities (Radian, 1999).

High concentrations of SO₂ can affect breathing and may aggravate existing respiratory and cardiovascular diseases in humans. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. Together, SO₂ and NO_x are the major precursors to acid rain.

Particulate Matter – PM is the general term used for a mixture of solid particles and liquid droplets found in the air. Some particles are large or dark enough to be seen as soot or smoke. Others are so small they can be detected only with a microscope. Particulate matter is separated into two different sizes for the purpose of the NAAQS: PM₁₀ and PM_{2.5}. The nomenclature refers to particulate matter with a diameter of 10 microns (µm) or less and 2.5 µm or less, respectively. These particles originate from many different stationary and mobile sources, as well as from natural sources. Fine particles (PM_{2.5}) result from fuel combustion in motor vehicles, power generation and industrial facilities. Coarse particles (PM₁₀) are generally emitted from sources such as vehicles traveling on unpaved roads, materials handling, crushing and grinding operations or windblown dust. Some particles are emitted directly from their sources, such as smokestacks and cars. In other cases, gases such as sulfur oxide, SO₂, NO_x and VOCs interact with other compounds in the air to form fine particles.

PM can enter the human body through the respiratory system. These particles have been associated with increased respiratory diseases such as asthma, bronchitis and emphysema; cardiopulmonary disease; and cancer. In addition to health problems, PM is the major cause of reduced visibility in many parts of the United States. Airborne particles also can cause damage to paints and building materials.

In July 1997, EPA revised the PM standards. EPA's revision to the primary standards consisted of adding a new annual PM_{2.5} standard set at 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and a new 24-hour PM_{2.5} standard set at 65 $\mu\text{g}/\text{m}^3$. EPA retained the annual PM₁₀ standard of 50 $\mu\text{g}/\text{m}^3$ and adjusted the 24-hour PM₁₀ standard of 150 $\mu\text{g}/\text{m}^3$ by changing the form of the standard. Additionally, EPA revised the secondary standards by making them identical to the primary standards (EPA OAPQS pmfact, 1997). In May 1999, as with the O₃ standards, the authority to establish the new PM_{2.5} standards was considered unconstitutional and the EPA was prohibited from enforcing the new standards. The EPA has appealed this decision and plans to proceed with setting up a monitoring network and designating areas as either attainment or nonattainment for the new PM_{2.5} standards.

Lead (Pb) - In the past, automotive sources were the major contributor of Pb emissions to the atmosphere. As a result of EPA's regulatory efforts to reduce the content of Pb in gasoline, the contribution from the transportation sector has greatly declined over the past decade. Today, metals processing is the major source of Pb emissions to the atmosphere. The highest air concentrations of Pb are found in the vicinity of nonferrous and ferrous smelters, as well as battery manufacturers.

Exposure to Pb occurs mainly through inhalation of air and ingestion of Pb in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues. Pb can adversely affect the kidneys, liver, nervous system, and other organs. Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals.

Non-Criteria Pollutants

VOCs and Hazardous Air Pollutants (HAPs) are pollutants for which NAAQS have not been established and are considered "non-criteria pollutants". However, they are regulated pollutants and potentially result in health effects.

Volatile Organic Compounds – VOCs exist in gaseous form under normal conditions and are emitted from a variety of sources including motor vehicles, trains, marine vessels, construction equipment, refineries, petrochemical manufacturing plants, and other industrial sources. Additionally, VOCs enter the atmosphere through the evaporation of gasoline and solvents from gasoline/oil storage, transfer operations, and paint shops (MPCA voc, 2000). Another source of VOCs is biogenic, or naturally occurring. Trees are responsible for most of the biogenic VOCs released into the atmosphere.

As a group, VOCs are of concern because of their contribution to the formation of O₃. Individually, some VOCs are toxic or hazardous air pollutants. Exposure to VOCs can cause eye

and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment. Additionally, some VOCs have the potential to cause cancer (EPA, 2000).

Hazardous Air Pollutants - HAPs may exist as particulate matter or as vapor. HAPs include metals, other particles, gases absorbed onto particles, and vapors from fuels and other sources. HAPs also are referred to as air toxics or toxic air pollutants and are primarily a subset of VOCs. They are generally defined as those pollutants that are known or suspected to cause serious health problems (EPA OAQPS basicfac, 2000). Section 112 of the Clean Air Act includes a comprehensive list of the 189 regulated HAPs. HAPs can be emitted by natural sources, but the majority of HAPs are man-made and are emitted by a variety of industrial sources and motor vehicles (EPA OAQPS basicfac, 2000).

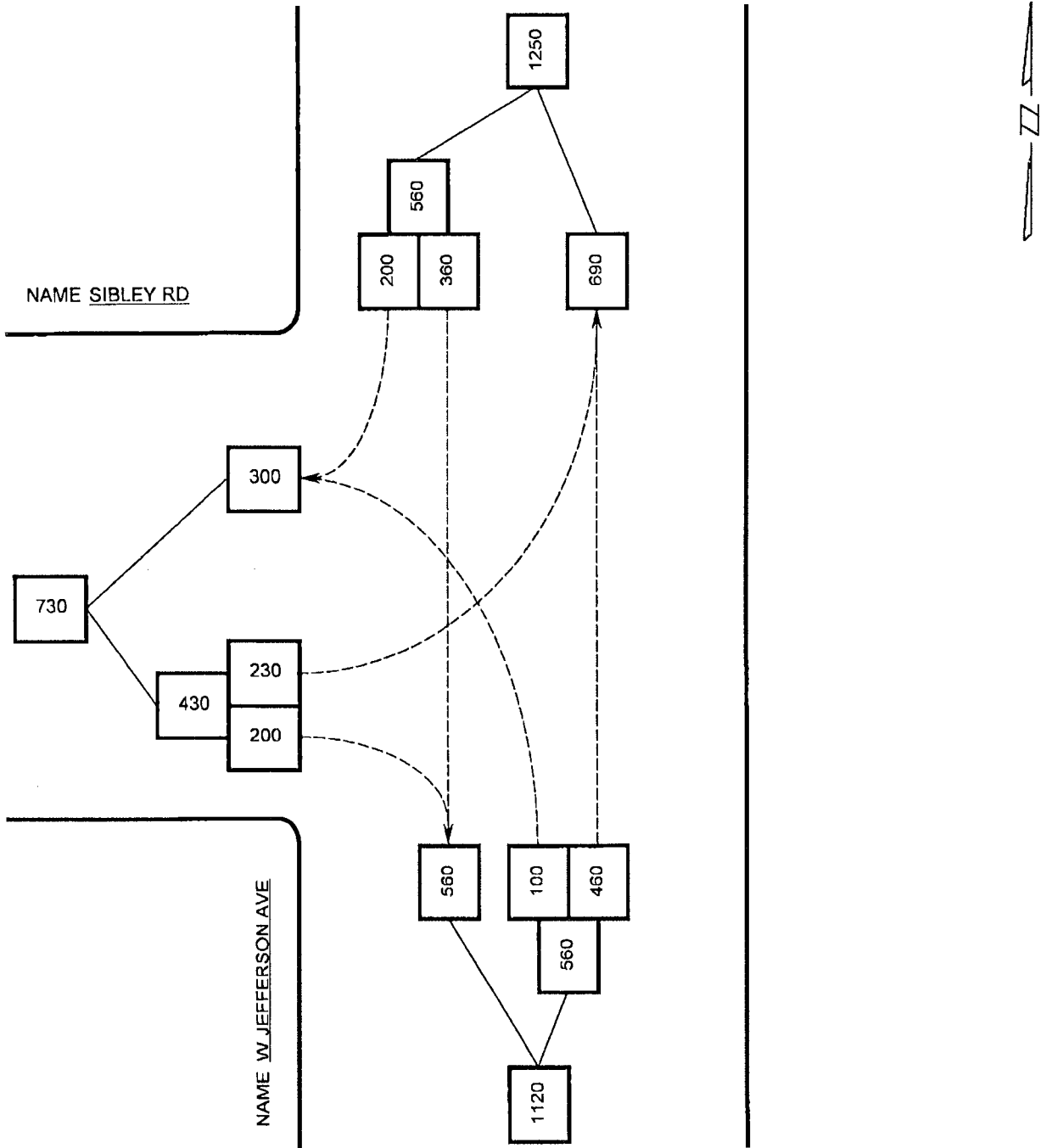
HAPs can be damaging to human health and the environment. Human exposure to these pollutants at sufficient concentrations and duration can result in cancer, poisoning and rapid onset of sickness, such as nausea or difficulty in breathing. Additionally, HAPs can be deposited onto soil or into lakes and streams affecting ecological systems (EPA OAQPS basicfac, 2000).

APPENDIX I

**INTERSECTION DIAGRAMS, CAPACITY ANALYSIS AND
CALCULATIONS**

Intersection Diagrams and Capacity Analysis

INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY

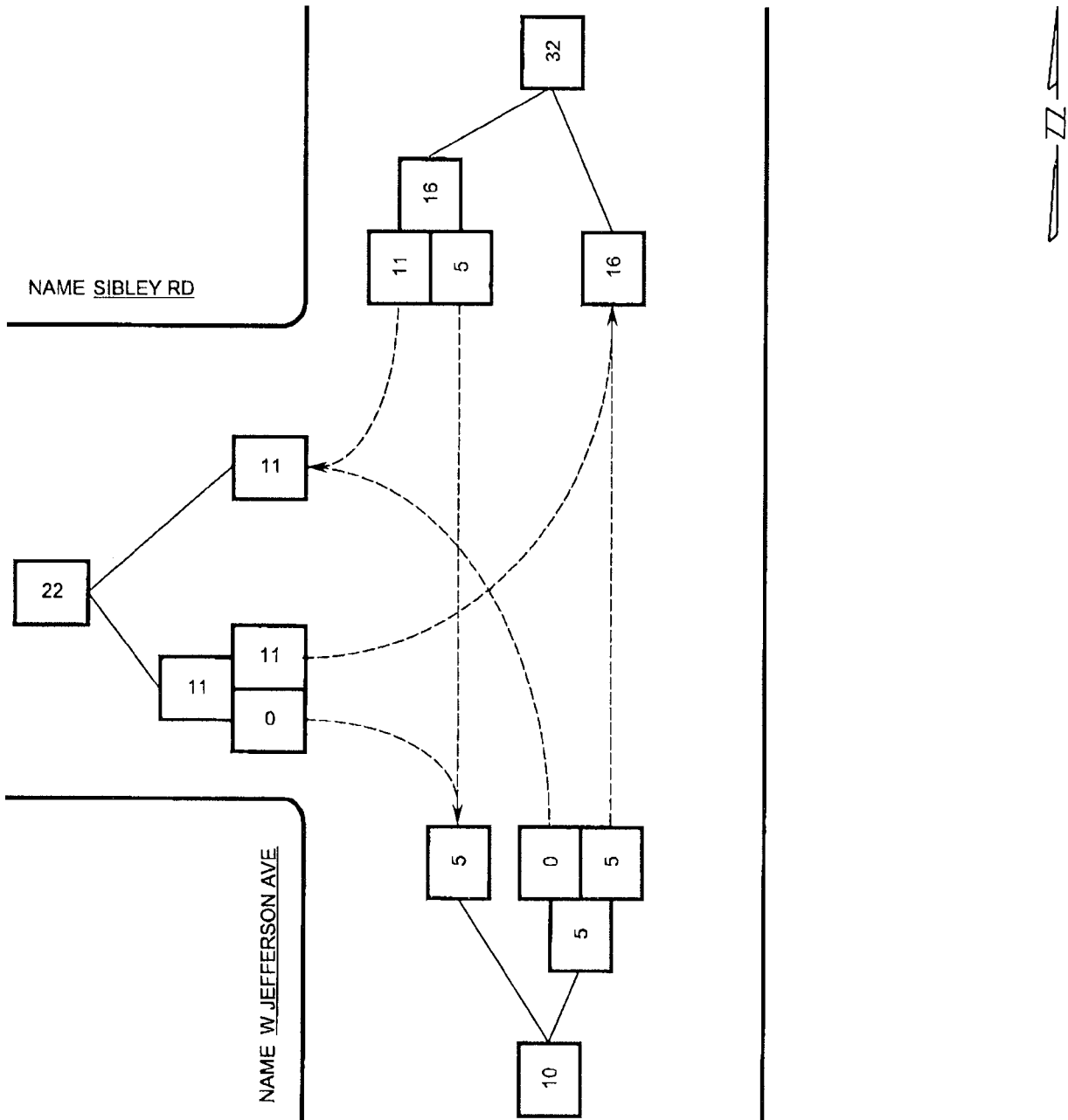
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INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
 CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

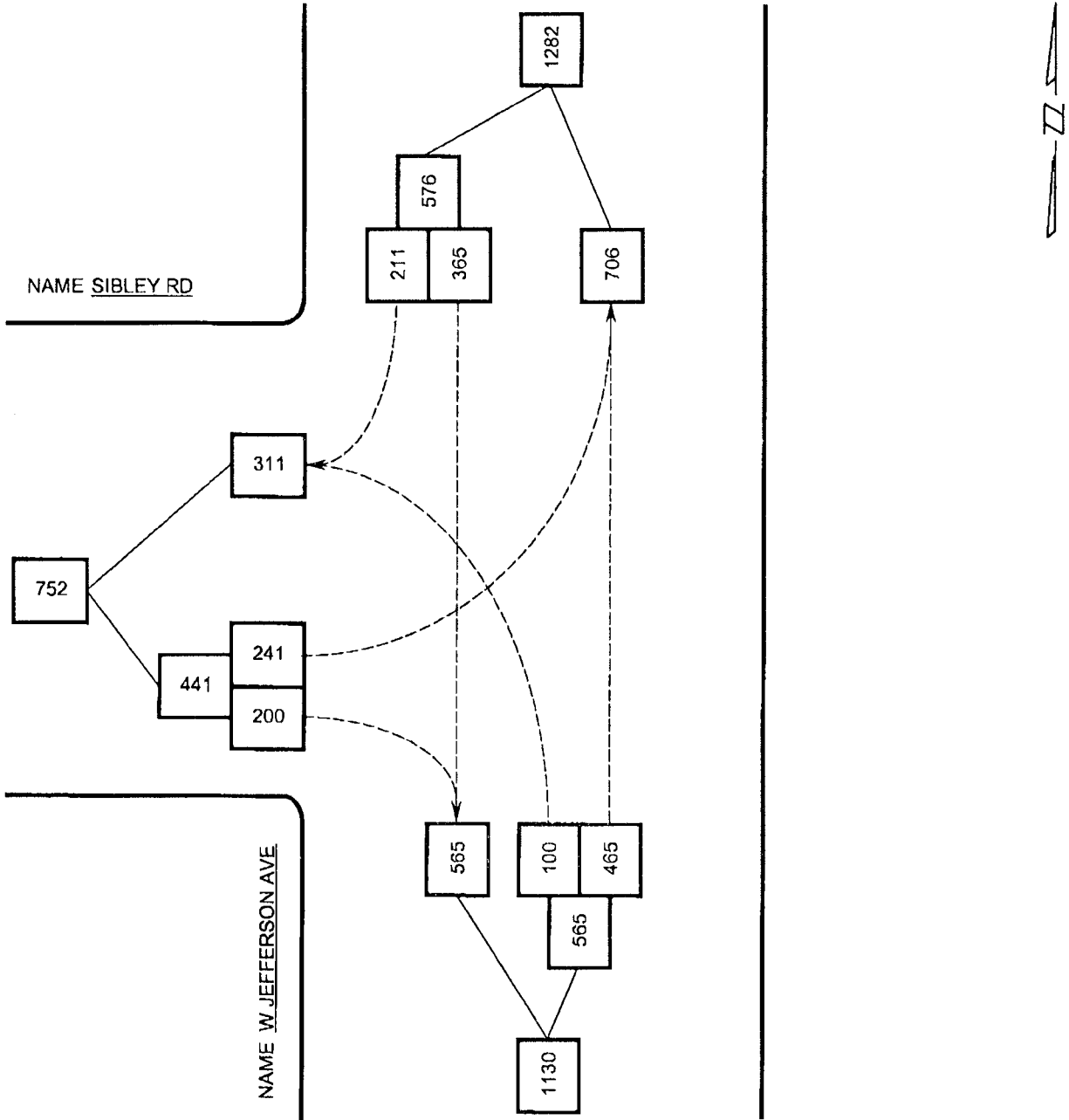
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INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
 CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



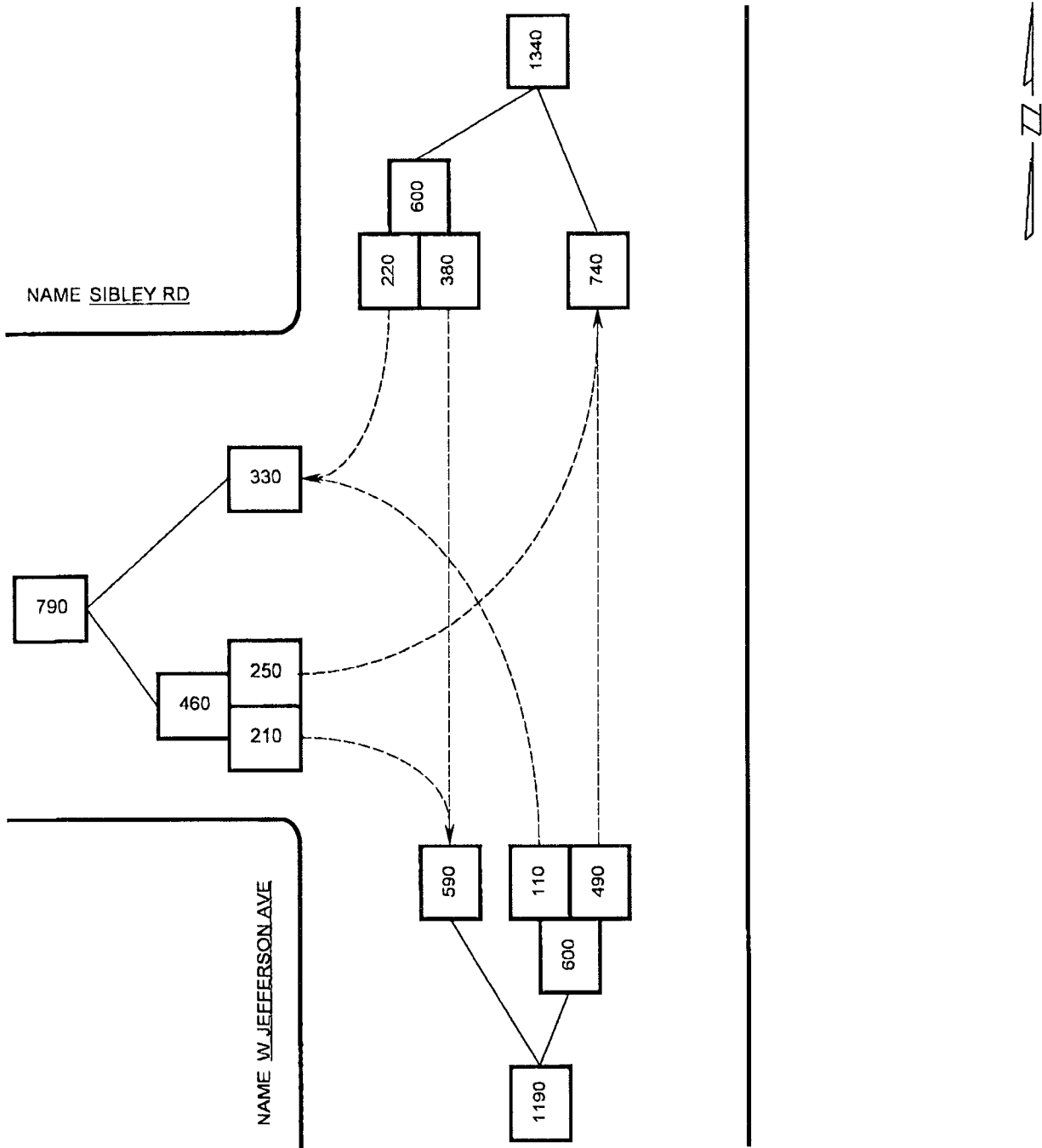
**EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
 WITH SITE-GENERATED TRUCK TRAFFIC**

08/20/01

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INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY

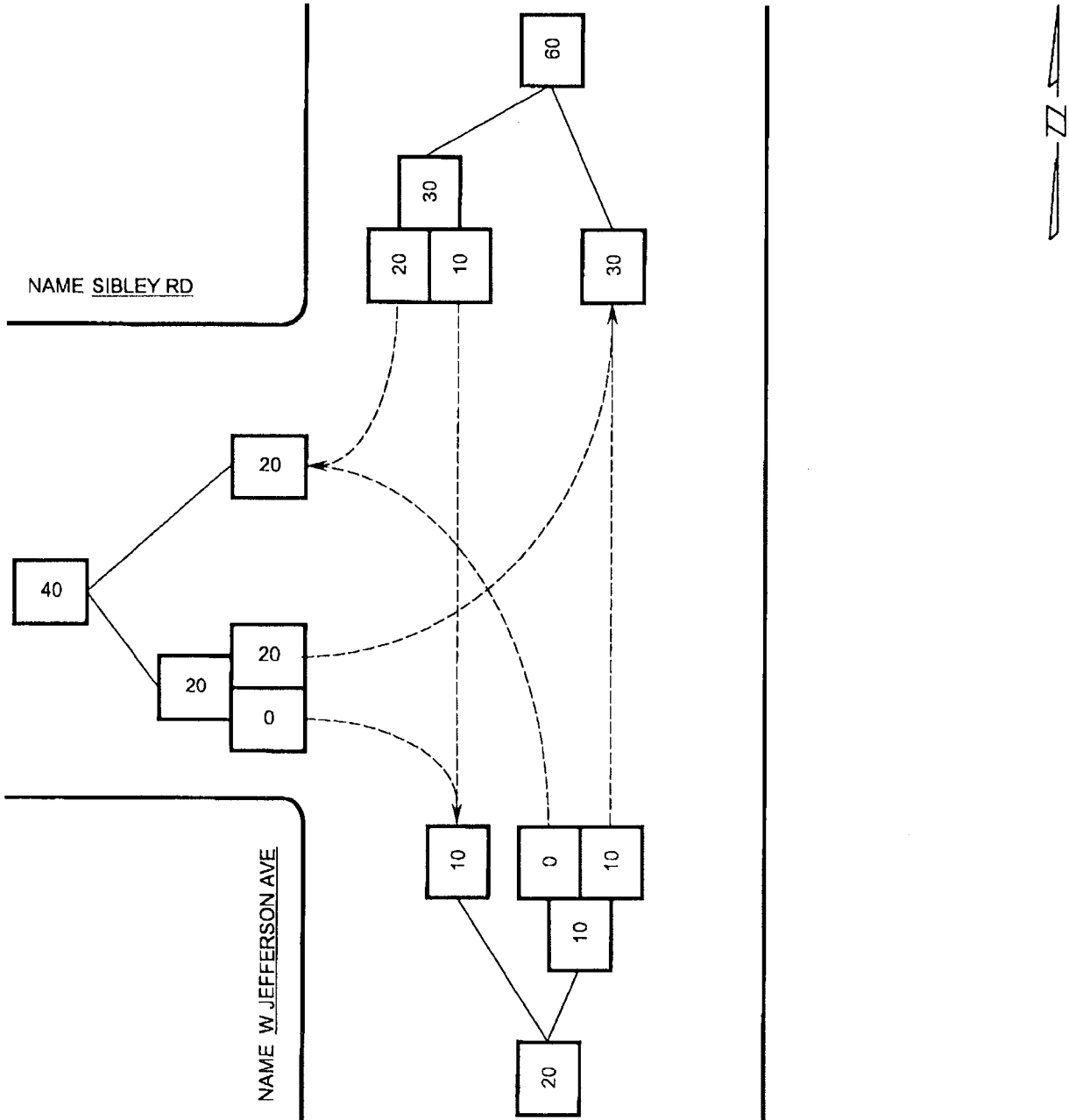
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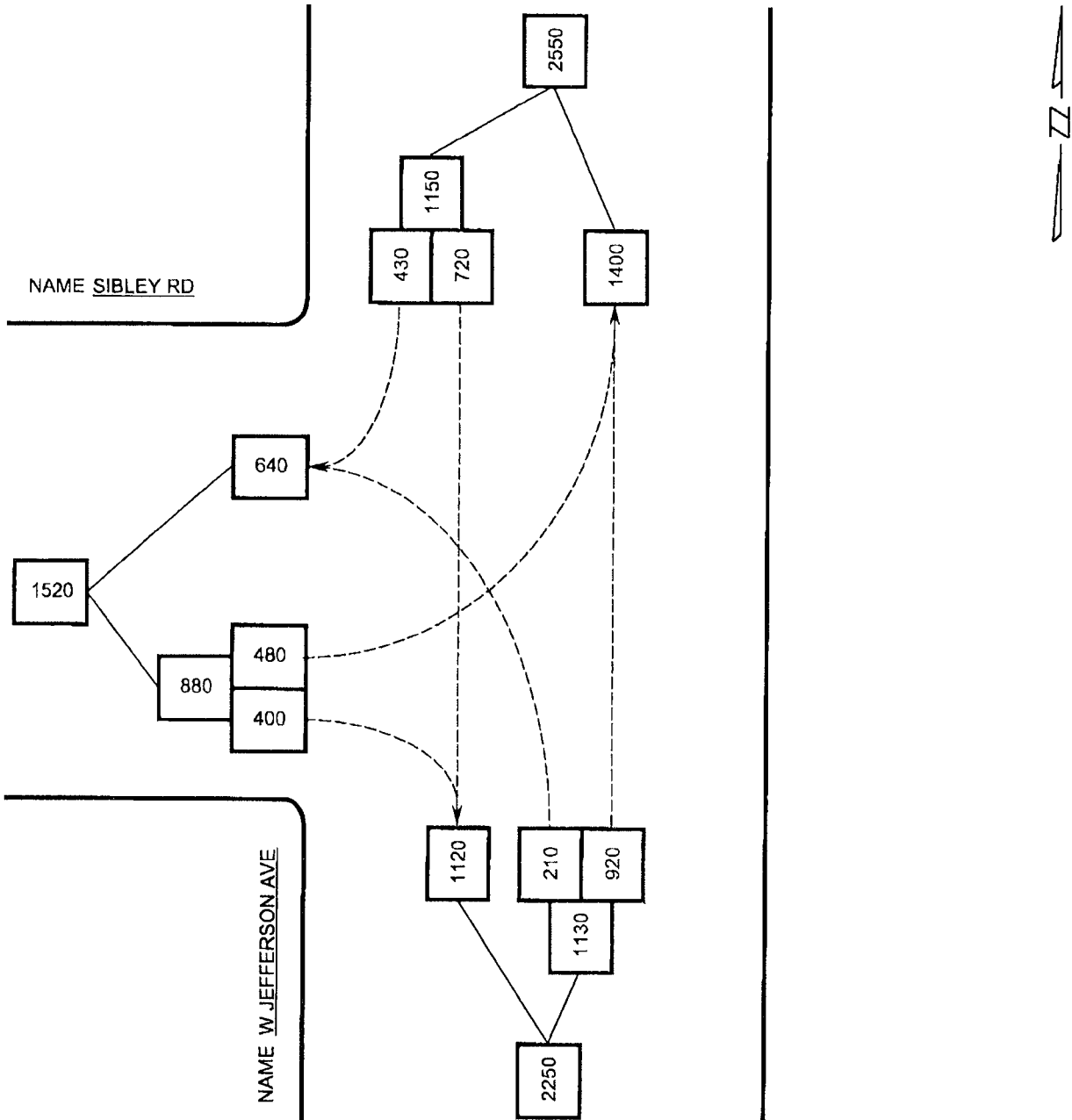
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W JEFFERSON AVE AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY SITE-GENERATED TRUCK TRAFFIC		
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INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



**PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC**

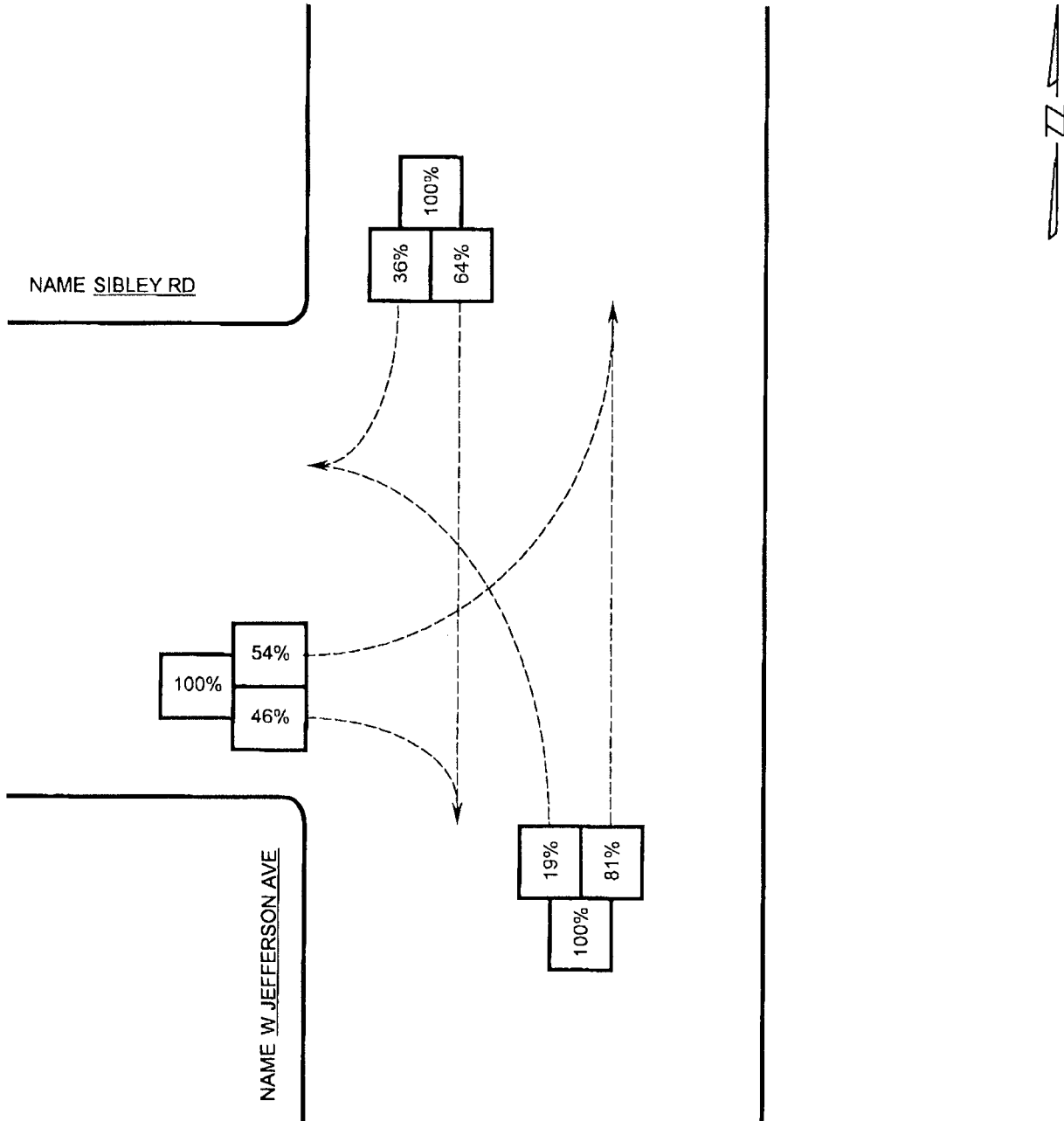
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INTERSECTION OF
W JEFFERSON AVE AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



PEAK HOUR TRAFFIC TURNING MOVEMENT SUMMARY

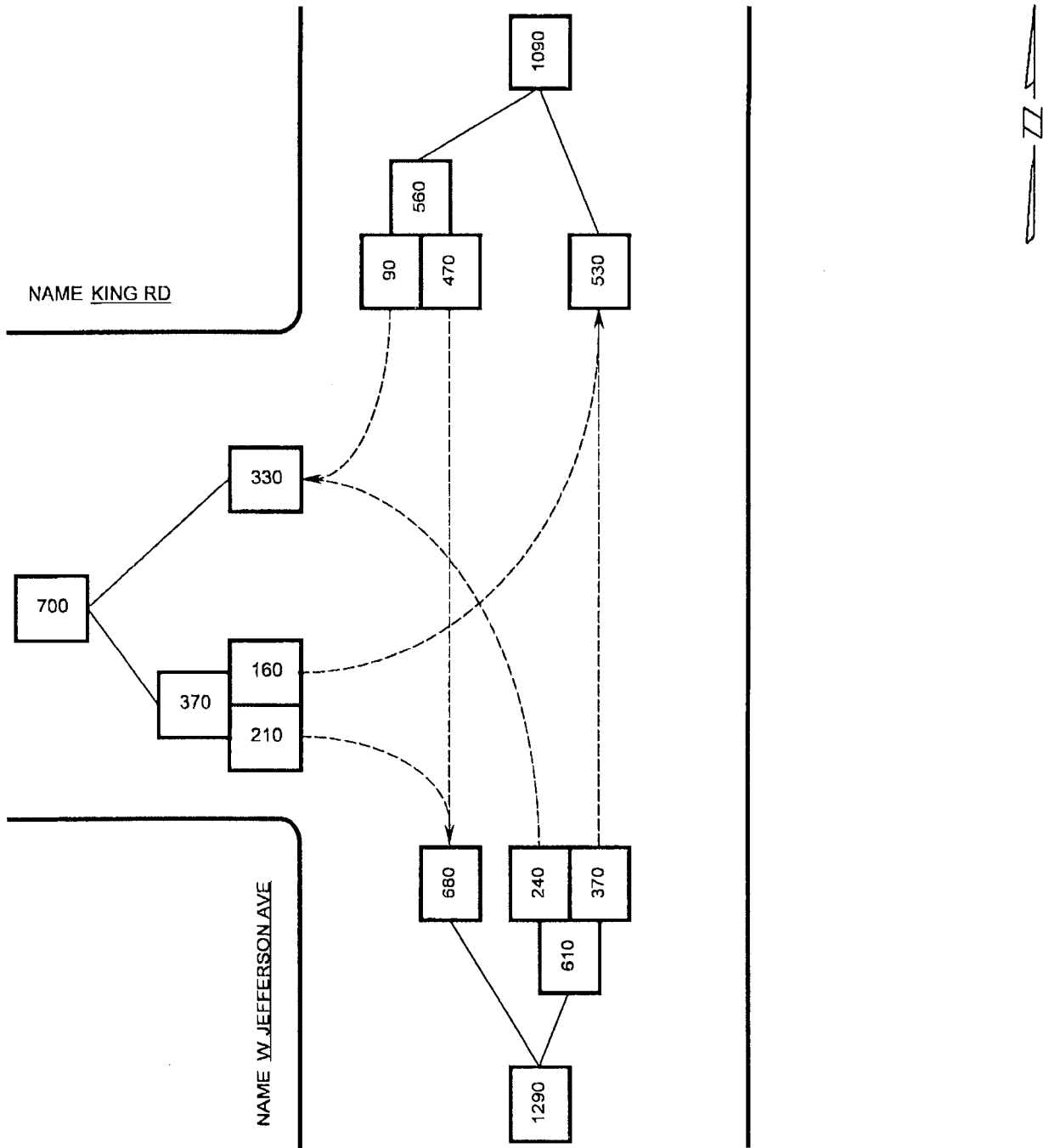
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
CITY: TRENTON STATE: MICHIGAN



EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY

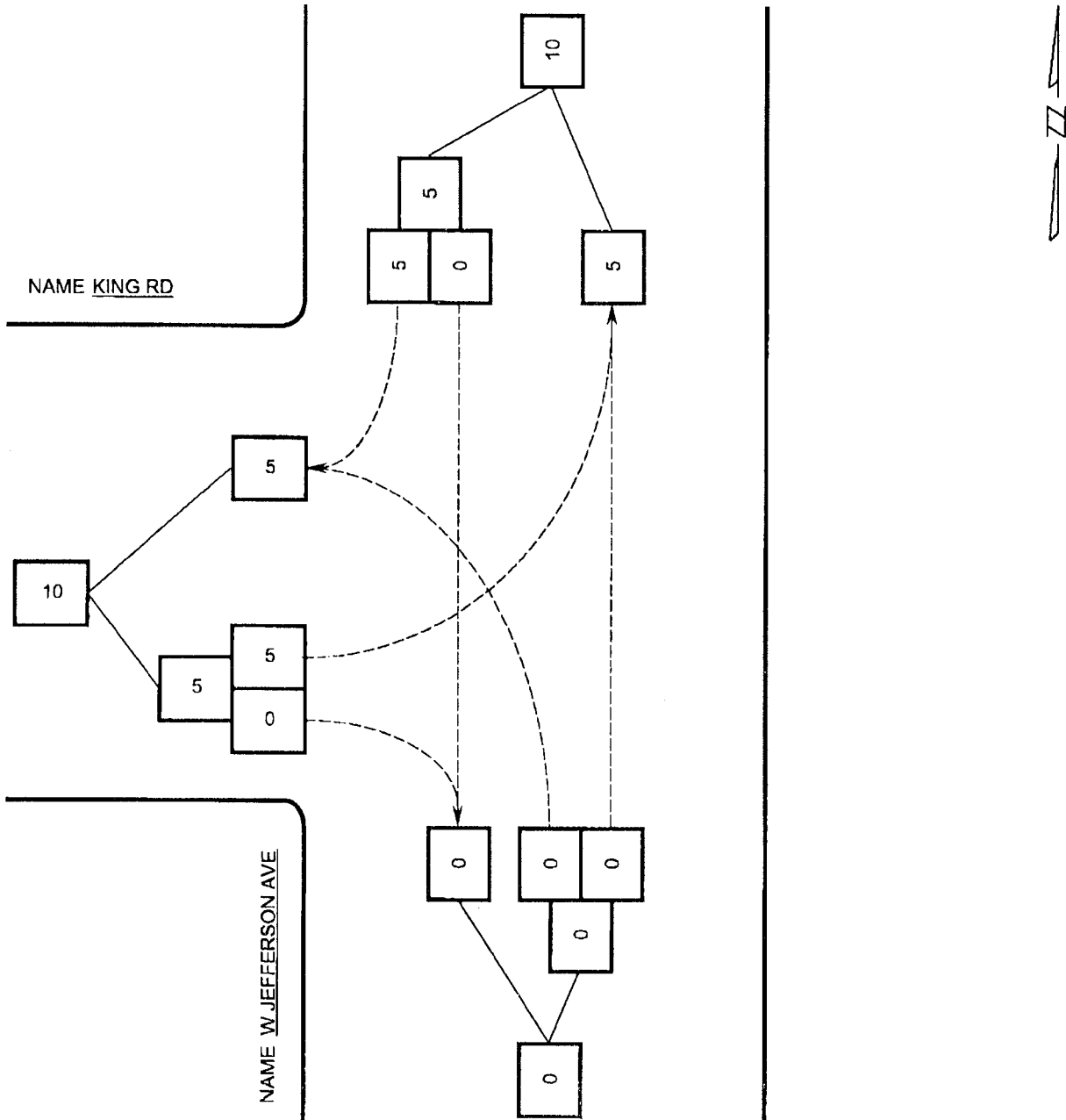
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
 CITY: TRENTON STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
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EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

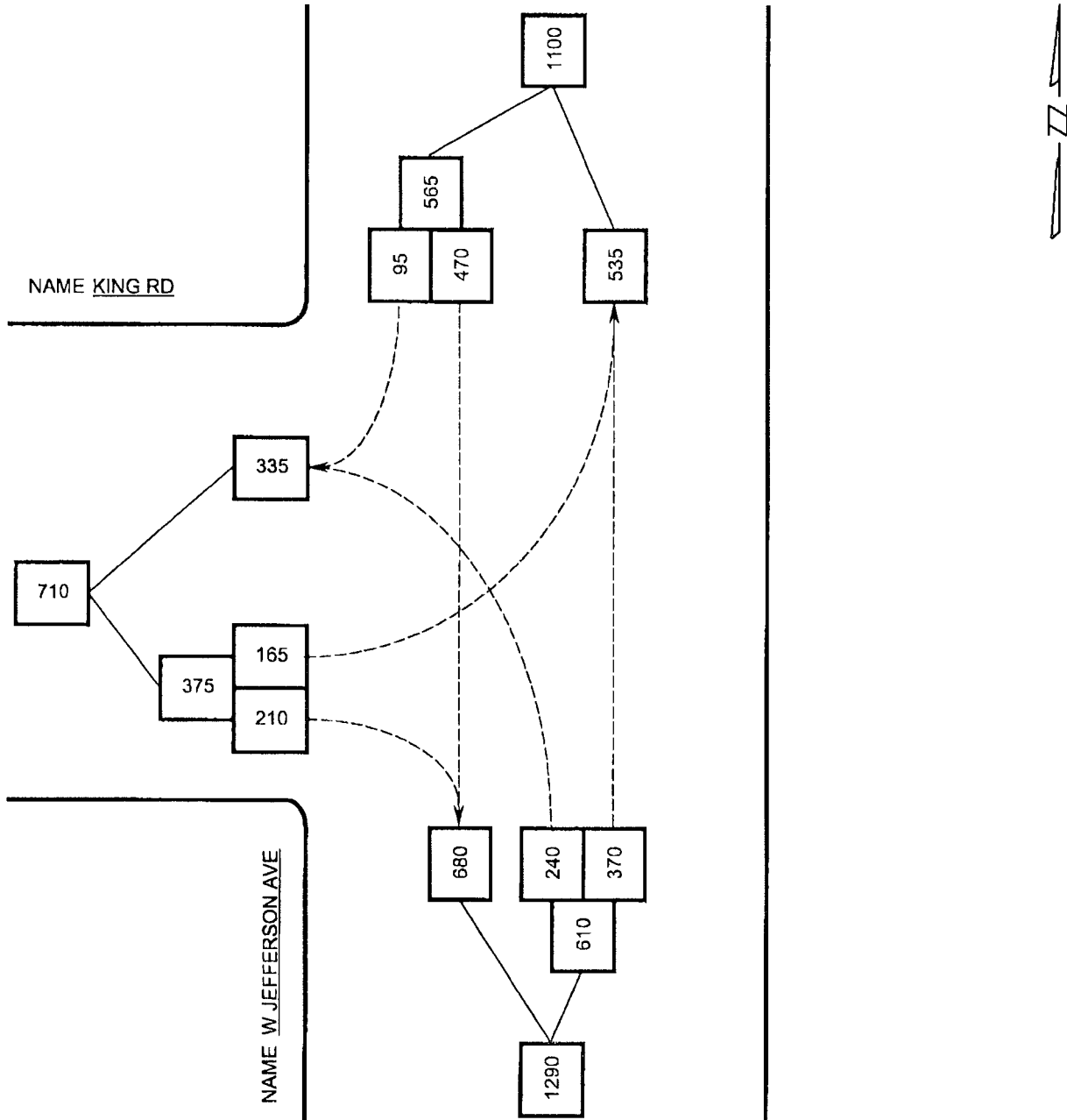
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
CITY: TRENTON STATE: MICHIGAN



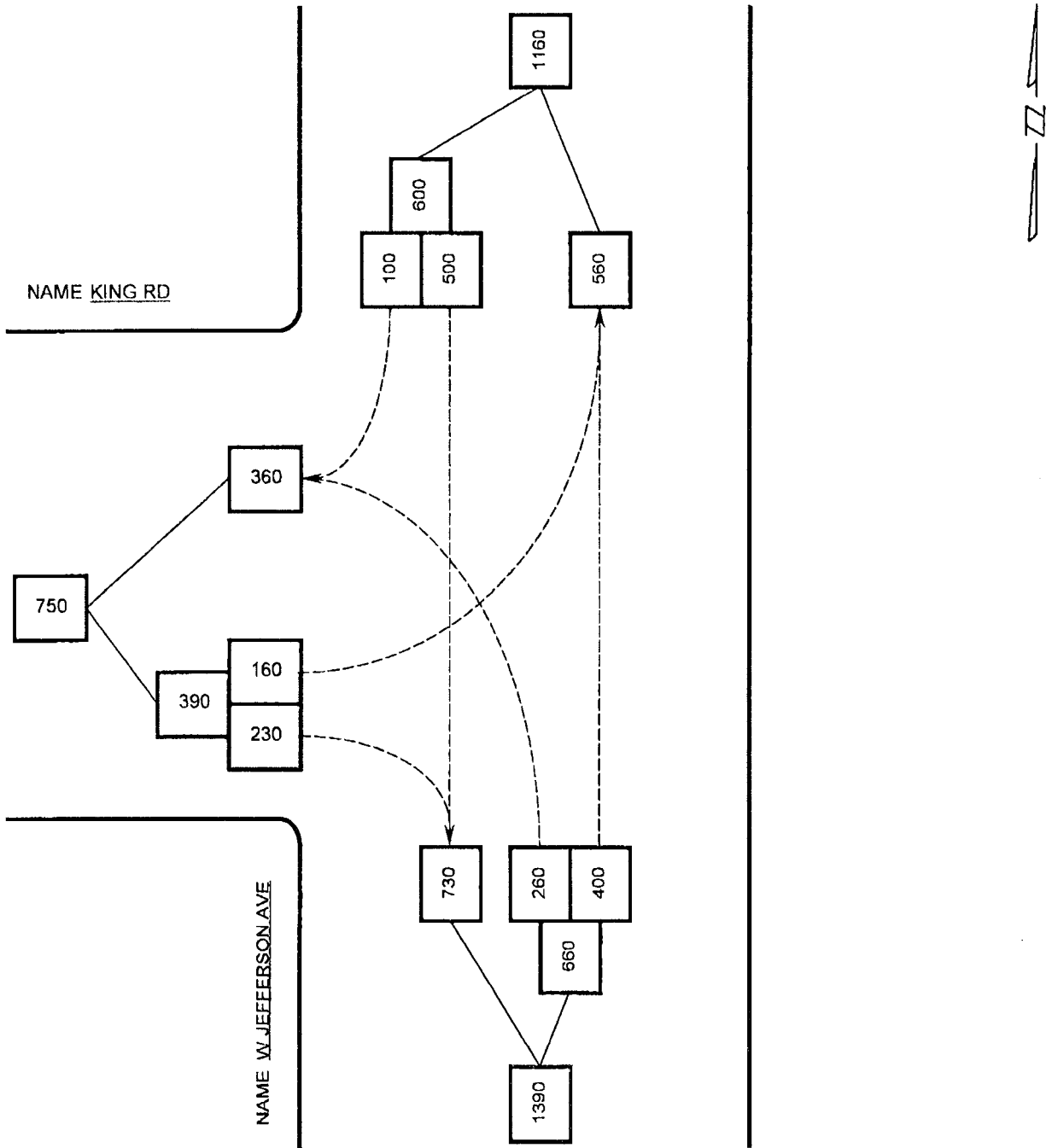
**EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC**

08/20/01

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INTERSECTION OF
W JEFFERSON AVE **AND** **KING RD**
CITY: TRENTON **STATE: MICHIGAN**



PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY

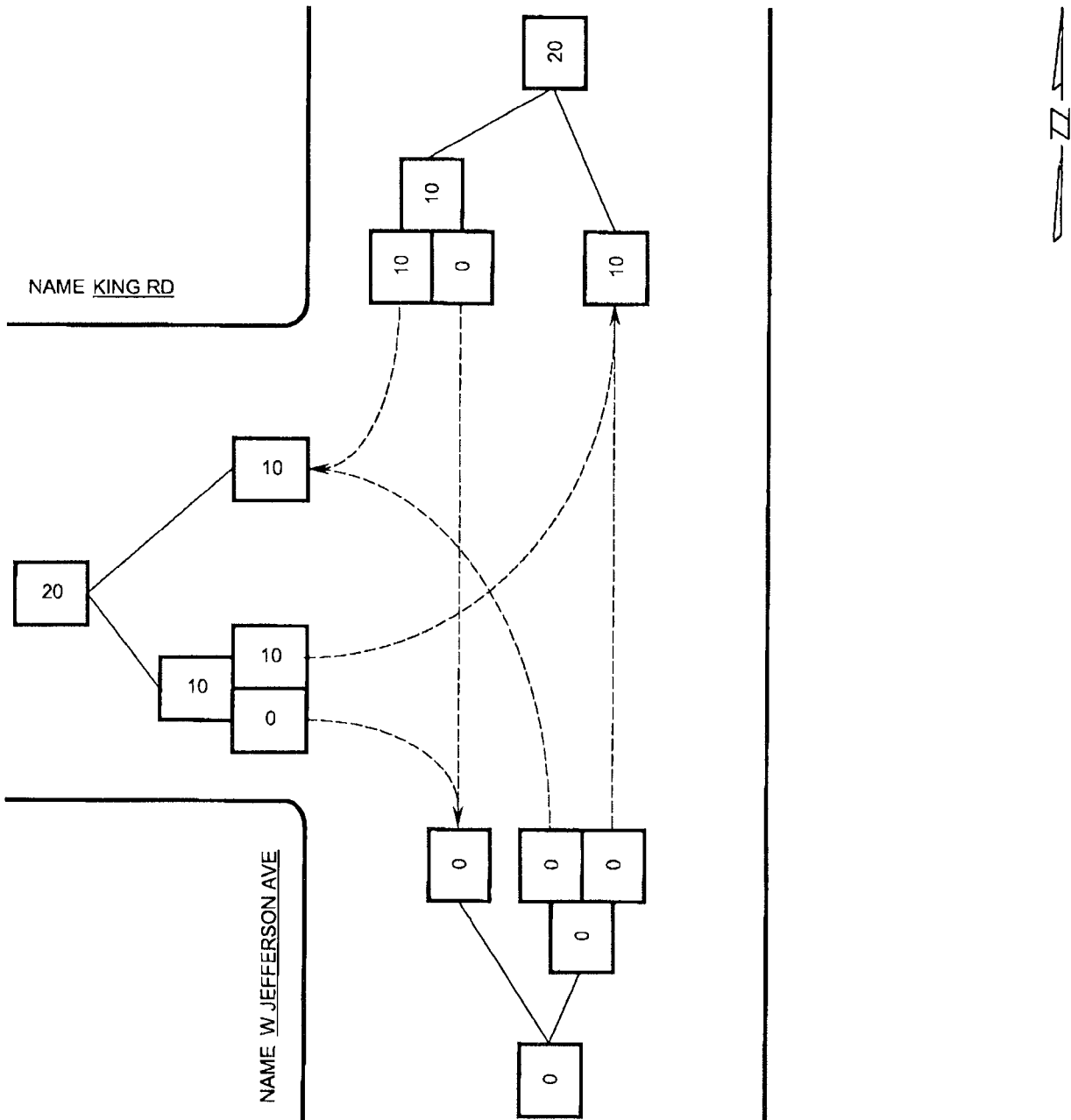
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
CITY: TRENTON STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
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PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

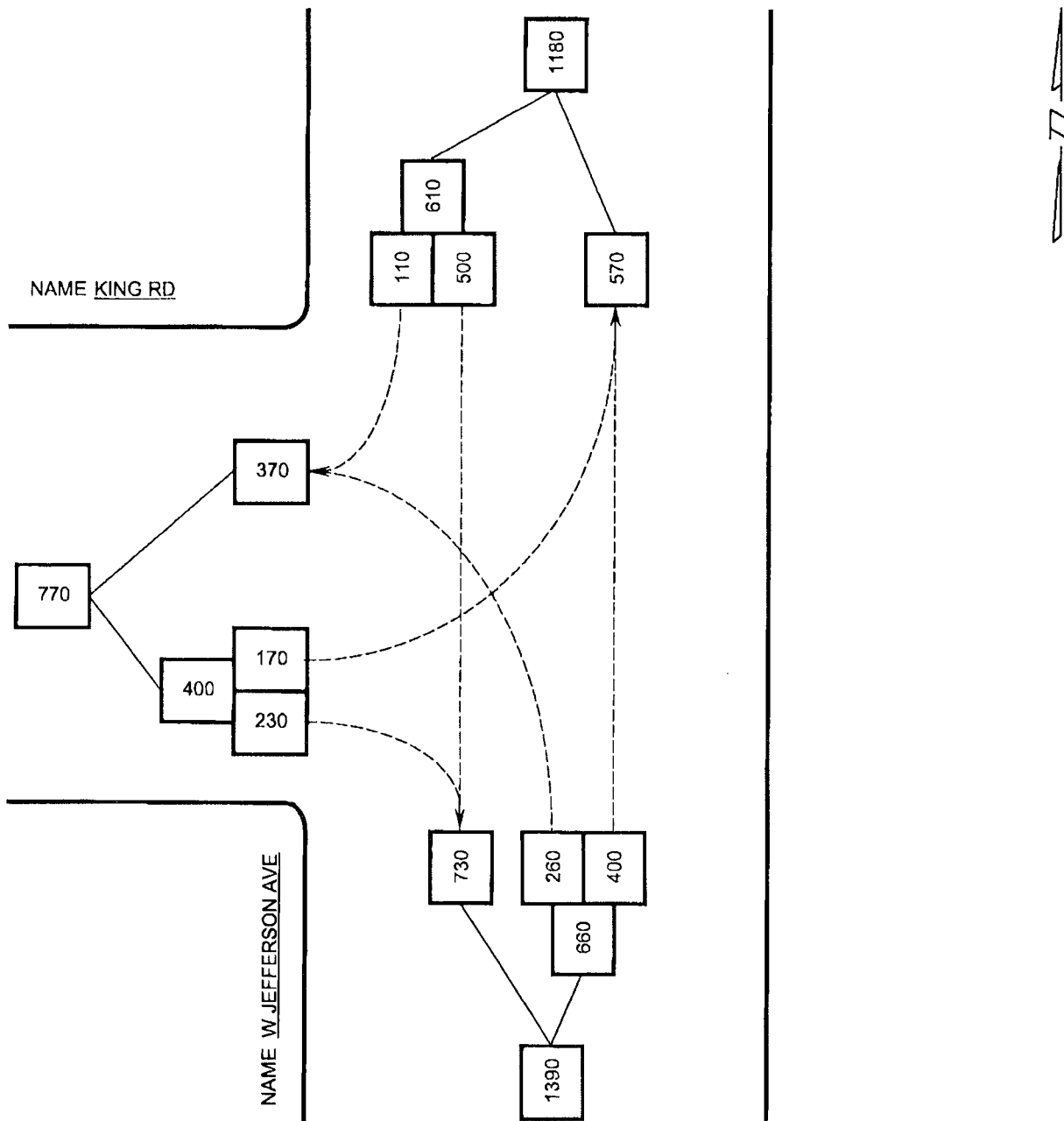
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
CITY: TRENTON STATE: MICHIGAN



PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC

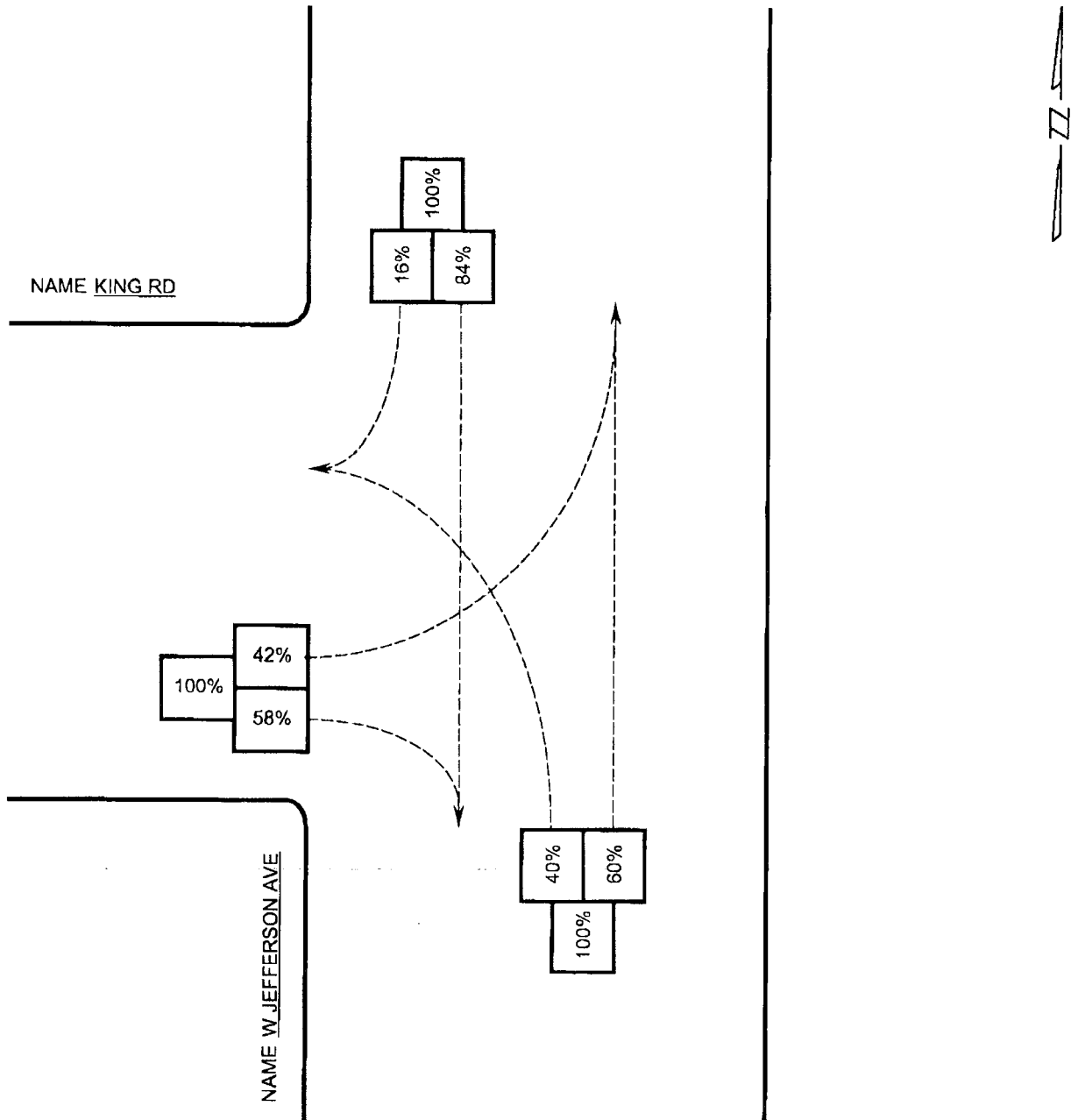
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INTERSECTION OF
W JEFFERSON AVE AND KING RD
 CITY: TRENTON STATE: MICHIGAN



PEAK HOUR TRAFFIC TURNING MOVEMENT SUMMARY

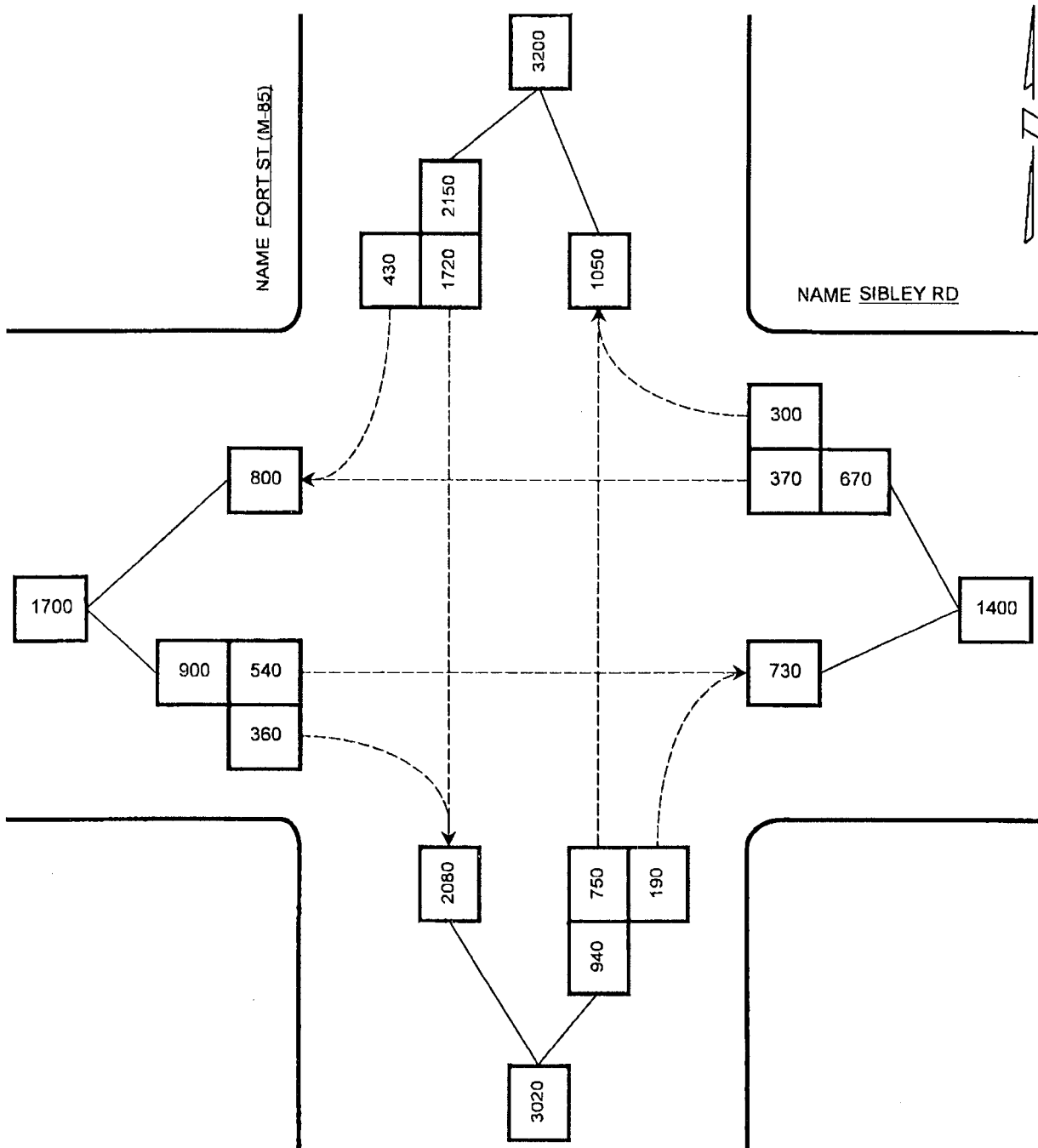
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INTERSECTION OF
FORT ST (M-85) AND SIBLEY RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY

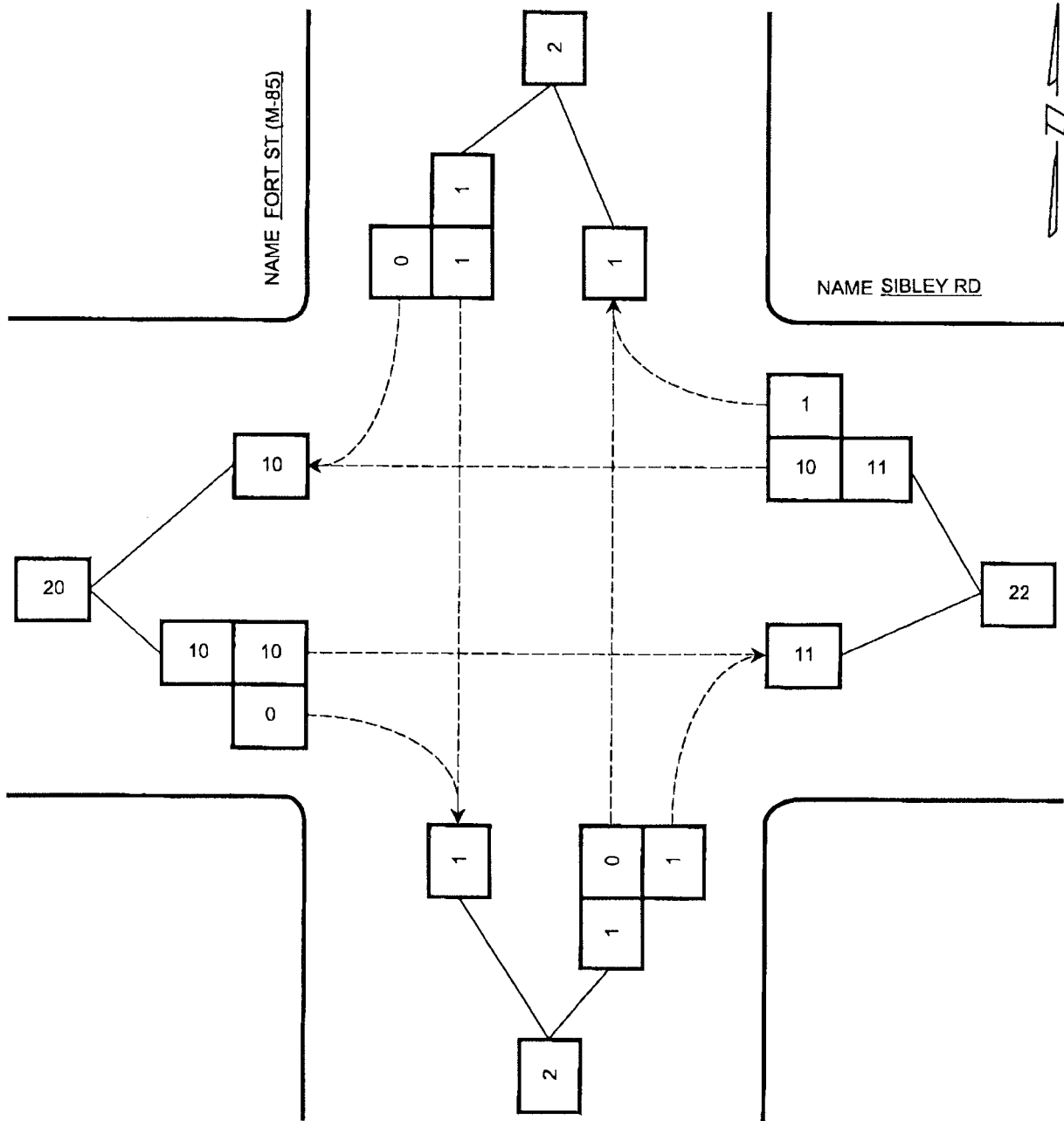
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INTERSECTION OF
FORT ST (M-85) AND SIBLEY RD
 CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



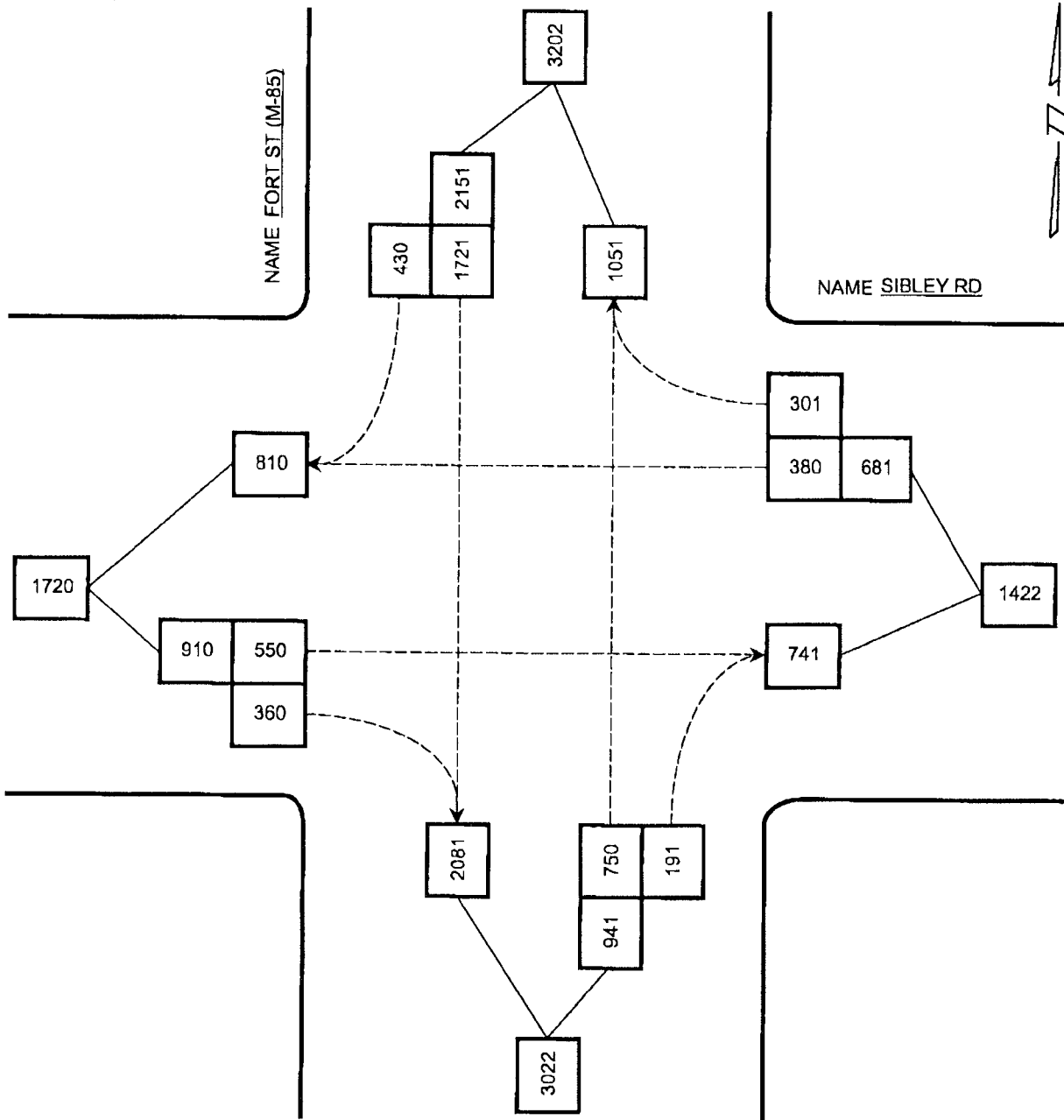
NOTE: VOLUMES INCLUDE S.U.
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EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

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CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
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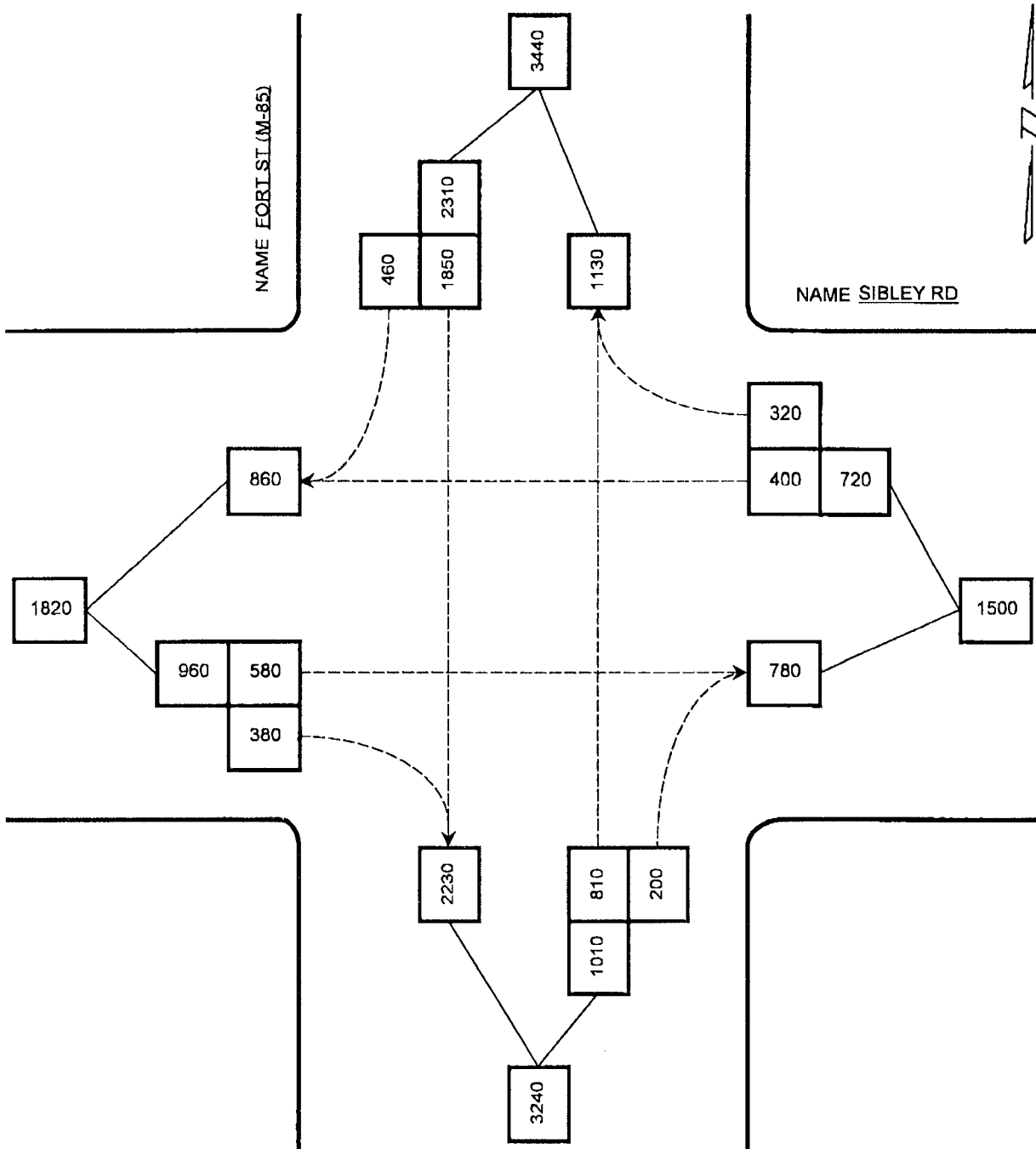
EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC

08/20/01

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INTERSECTION OF
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PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY

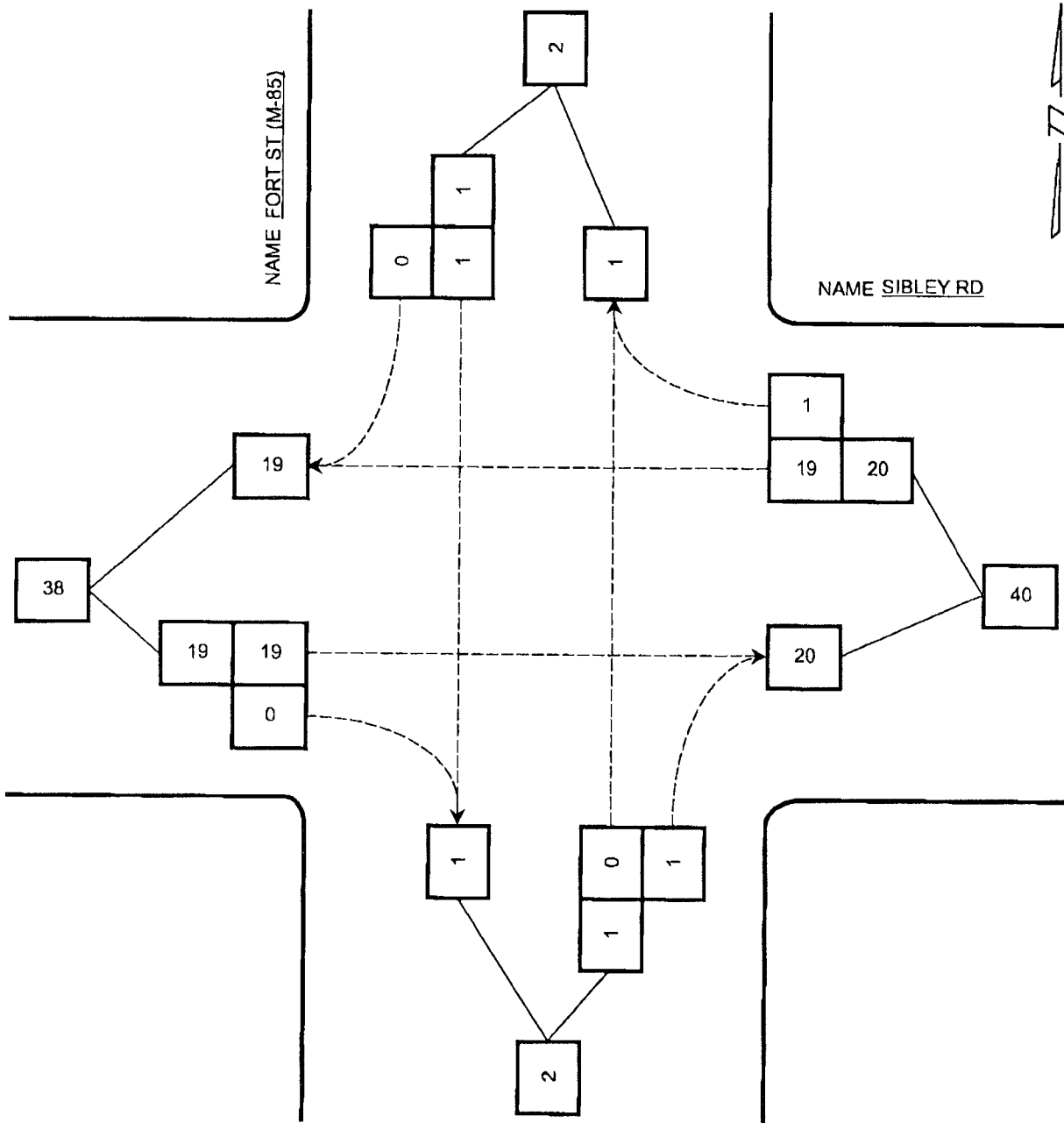
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INTERSECTION OF
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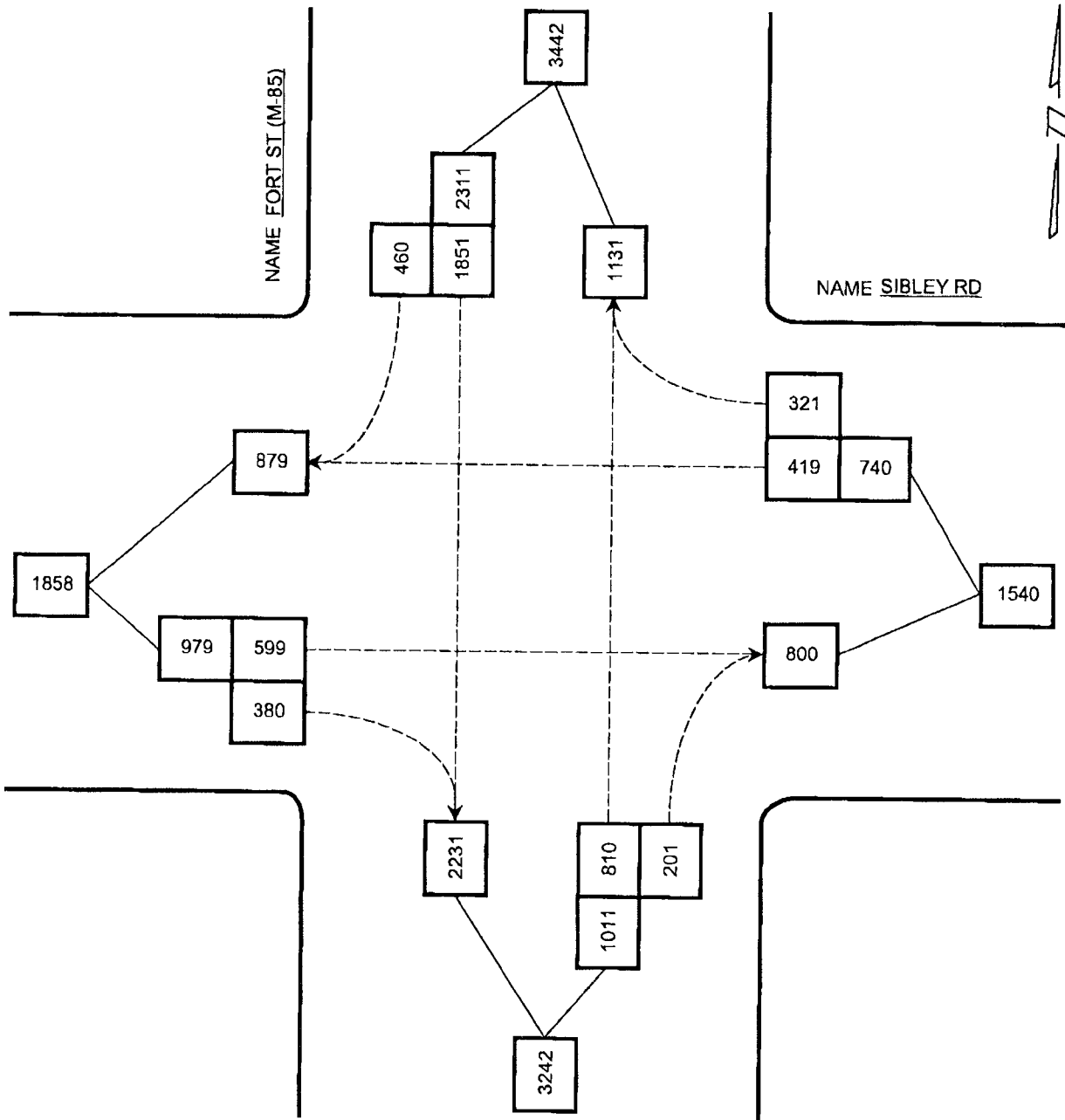
PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

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INTERSECTION OF
FORT ST (M-85) AND SIBLEY RD
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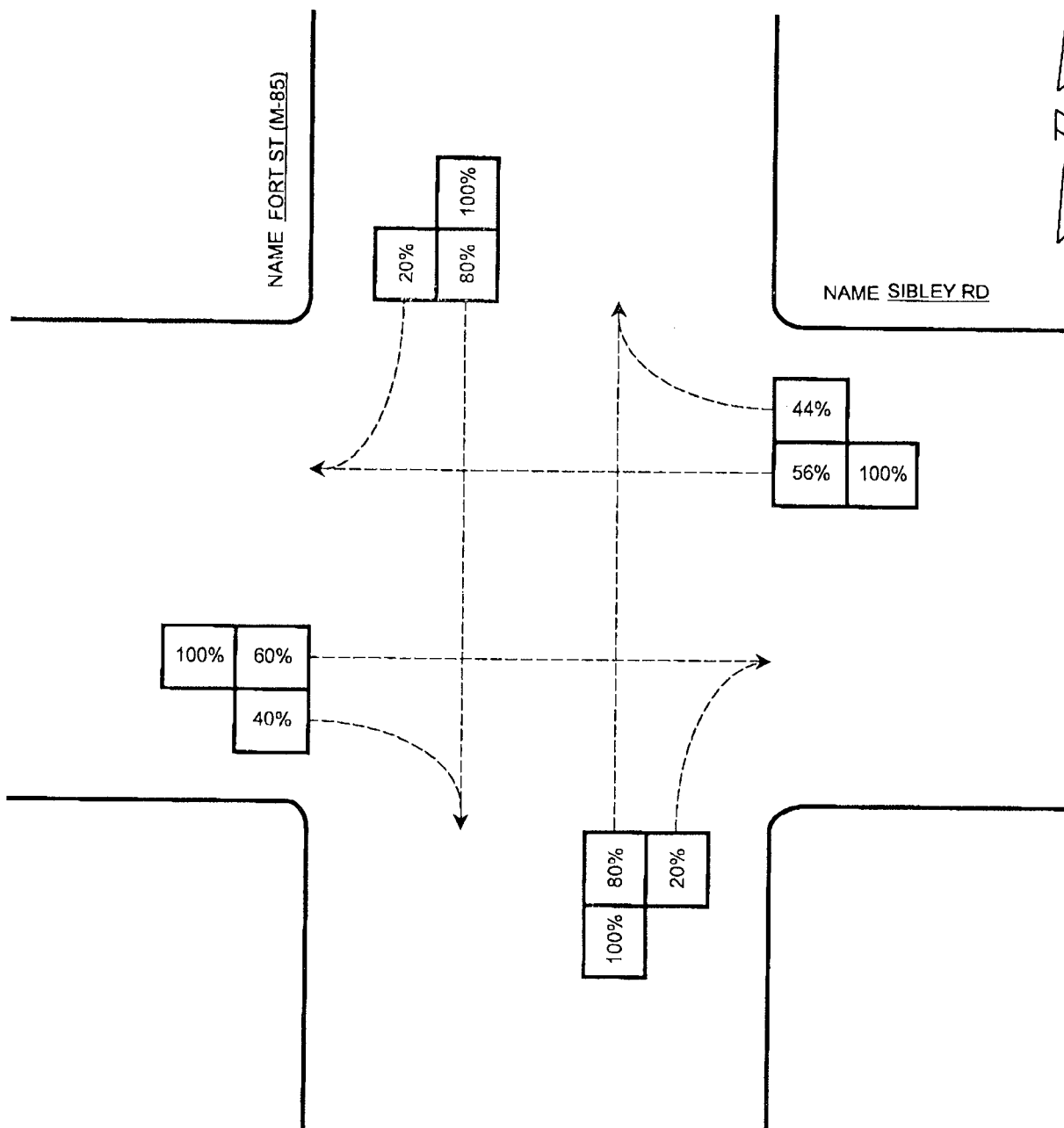
PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
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08/20/01

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Exhibit No.
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INTERSECTION OF
FORT ST (M-85) AND SIBLEY RD
 CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



PEAK HOUR TRAFFIC TURNING MOVEMENT SUMMARY

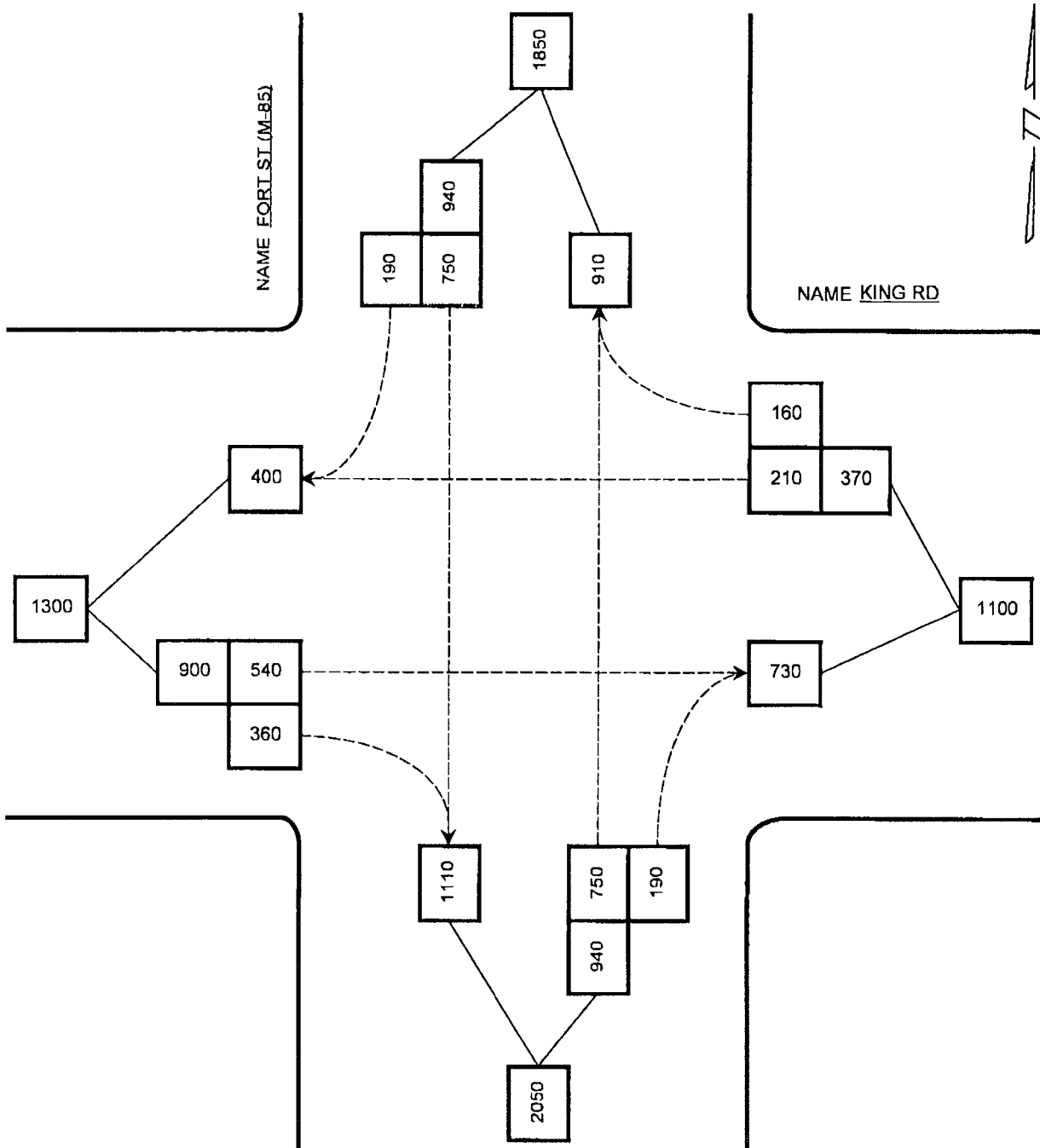
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INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY

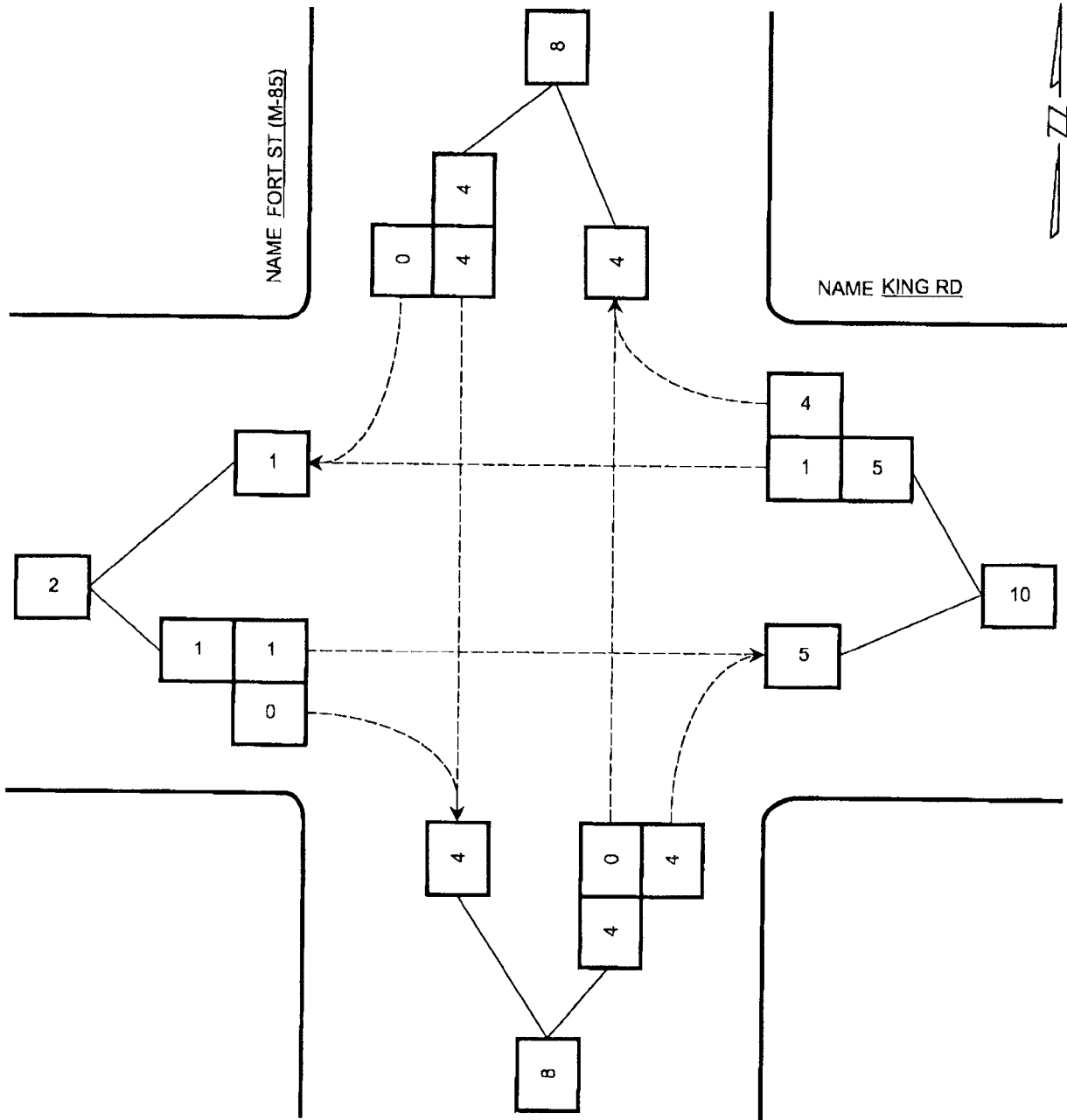
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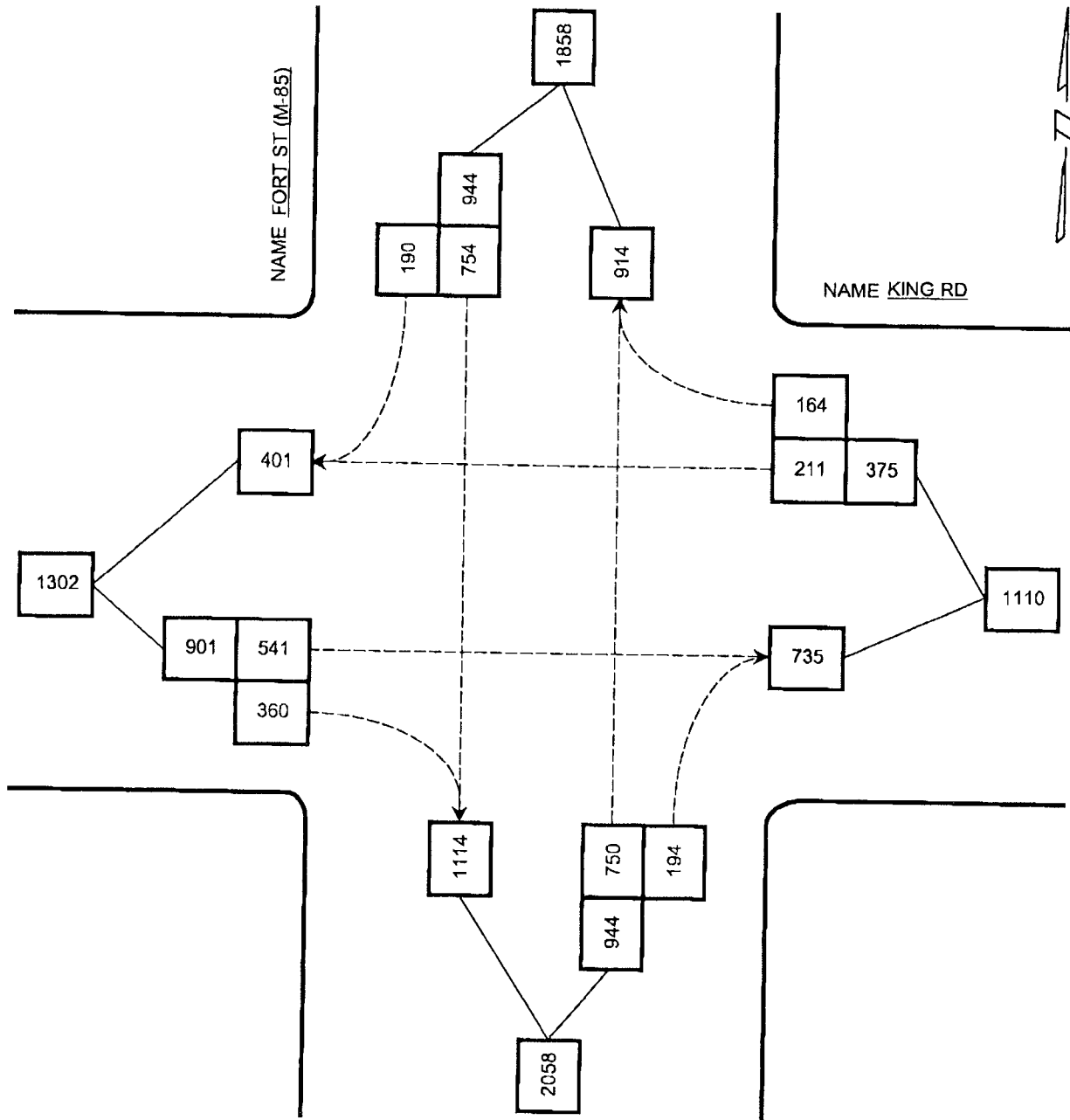
NOTE: VOLUMES INCLUDE S.U.
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EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

08/20/01

URS
 Exhibit No.
 X

INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



**EXISTING PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC**

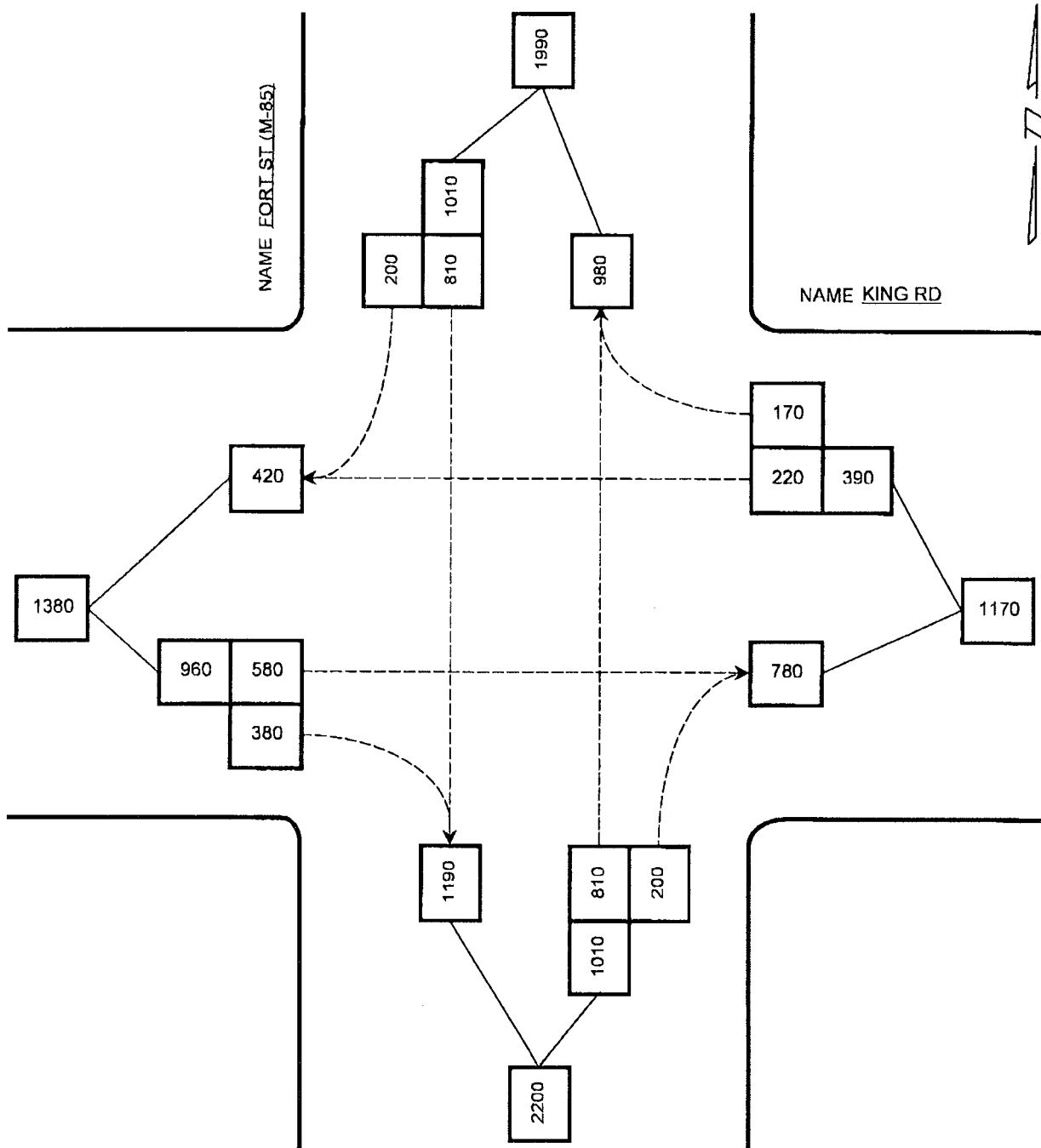
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INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
AND M.U. VEHICLES

PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY

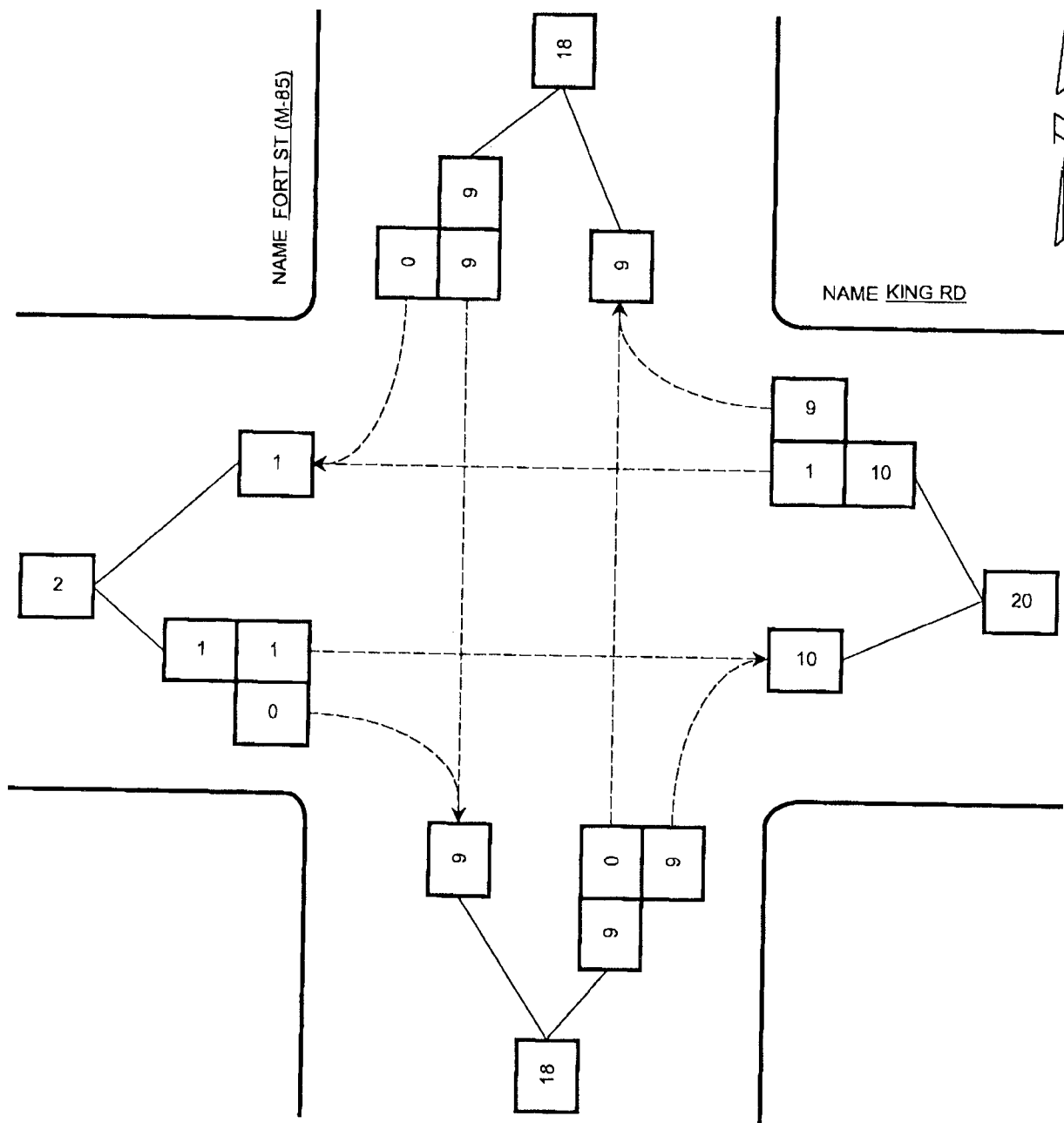
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URS

Exhibit No.

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INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN

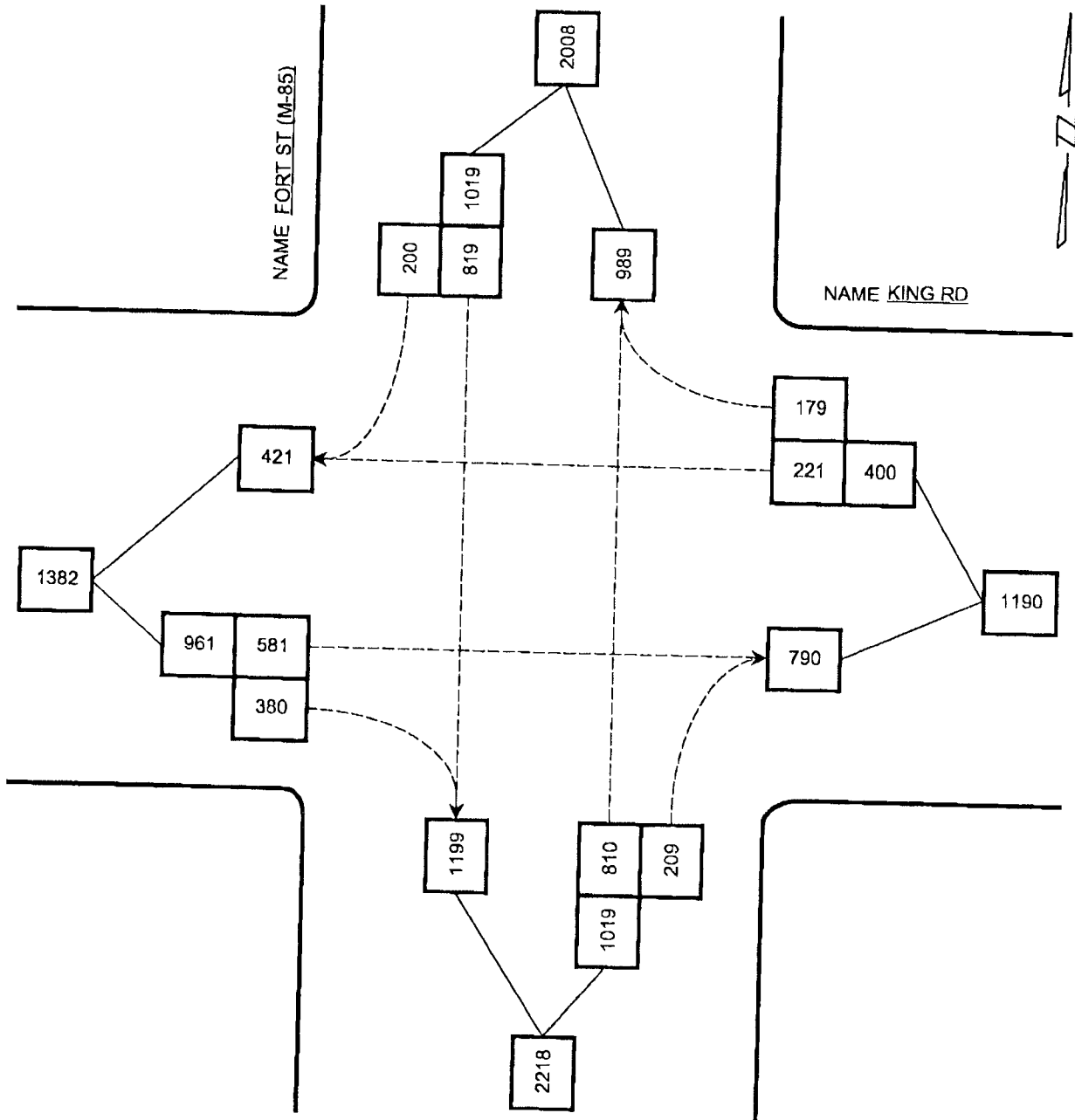


PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
SITE-GENERATED TRUCK TRAFFIC

08/20/01

URSExhibit No.
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INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



NOTE: VOLUMES INCLUDE S.U.
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PROJECTED PEAK HOUR TRAFFIC VOLUME SUMMARY
WITH SITE-GENERATED TRUCK TRAFFIC

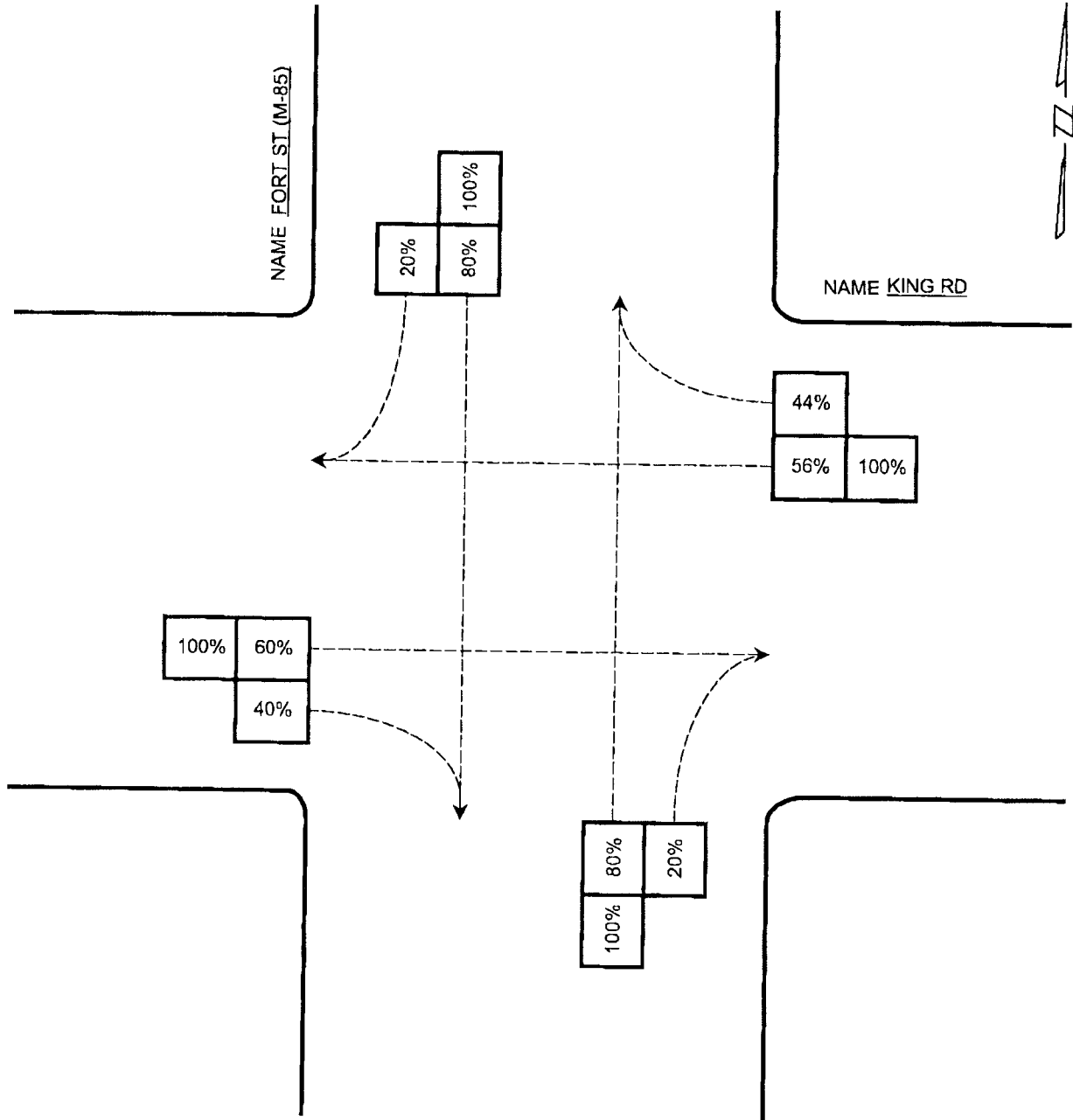
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INTERSECTION OF
FORT ST (M-85) AND KING RD
CITY: TRENTON/RIVERVIEW STATE: MICHIGAN



PEAK HOUR TRAFFIC TURNING MOVEMENT SUMMARY

08/20/01

URS

Exhibit No.

X

1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3348	0
Flt Permitted	0.950		0.308			
Satd. Flow (perm)	1770	1583	574	3539	3348	0
Satd. Flow (RTOR)		217			115	
Volume (vph)	230	200	100	460	360	200
Lane Group Flow (vph)	250	217	109	500	608	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.42	0.32	0.19	0.24	0.50	
Uniform Delay, d1	25.3	0.0	10.9	10.3	20.8	
Delay	25.9	3.4	11.7	10.4	21.1	
LOS	C	A	B	B	C	
Approach Delay	15.4			10.6	21.1	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 15.8

Intersection LOS: B

Intersection Capacity Utilization 47.7%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave

ø2	ø4
ø6	ø5

1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↕	↕	↱
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3345	0
Flt Permitted	0.950		0.297			
Satd. Flow (perm)	1770	1583	553	3539	3345	0
Satd. Flow (RTOR)		217			125	
Volume (vph)	241	200	100	465	365	211
Lane Group Flow (vph)	262	217	109	505	626	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effect Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.44	0.32	0.19	0.25	0.51	
Uniform Delay, d1	25.5	0.0	11.0	10.3	20.6	
Delay	26.1	3.4	11.8	10.4	20.9	
LOS	C	A	B	B	C	
Approach Delay	15.8			10.6	20.9	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 15.8

Intersection LOS: B

Intersection Capacity Utilization 48.8%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave

↰ 02	↱ 04
↕ 06	↰ 05

1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions

Lane Group	EBL	EBF	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3345	0
Flt Permitted	0.950		0.281			
Satd. Flow (perm)	1770	1583	523	3539	3345	0
Satd. Flow (RTOR)		228			125	
Volume (vph)	250	210	110	490	380	220
Lane Group Flow (vph)	272	228	120	533	652	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.45	0.33	0.22	0.26	0.53	
Uniform Delay, d1	25.7	0.0	11.4	10.4	21.0	
Delay	26.3	3.4	12.5	10.5	21.4	
LOS	C	A	B	B	C	
Approach Delay	15.8			10.9	21.4	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.53

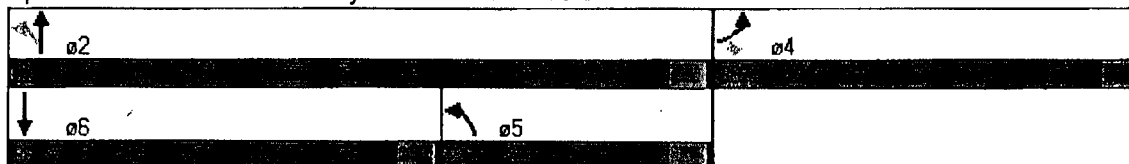
Intersection Signal Delay: 16.0

Intersection LOS: B

Intersection Capacity Utilization 50.8%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave



1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3337	0
Flt Permitted	0.950		0.262			
Satd. Flow (perm)	1770	1583	488	3539	3337	0
Satd. Flow (RTOR)		228			142	
Volume (vph)	270	210	110	500	390	240
Lane Group Flow (vph)	293	228	120	543	685	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.49	0.33	0.22	0.26	0.56	
Uniform Delay, d1	26.1	0.0	11.7	10.4	20.8	
Delay	26.7	3.4	12.9	10.5	21.1	
LOS	C	A	B	B	C	
Approach Delay	16.5			11.0	21.1	
Approach LOS	B			B	C	

Intersection Summary:

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 53.0%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave

02	04
06	05

2: King Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions



Lane Group	EBR	EBL	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3454	0
Flt Permitted	0.950		0.396			
Satd. Flow (perm)	1770	1583	738	3539	3454	0
Satd. Flow (RTOR)		228			44	
Volume (vph)	160	210	240	370	470	90
Lane Group Flow (vph)	174	228	261	402	609	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.35	0.38	0.55	0.18	0.27	
Uniform Delay, d1	28.7	0.0	10.0	7.3	7.2	
Delay	29.3	4.0	11.0	7.4	7.3	
LOS	C	A	B	A	A	
Approach Delay	15.0			8.8	7.3	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 9.7

Intersection LOS: A

Intersection Capacity Utilization 51.3%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

02	04
06	

2: King Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	←	→	←	→	→	←
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3451	0
Flt Permitted	0.950		0.394			
Satd. Flow (perm)	1770	1583	734	3539	3451	0
Satd. Flow (RTOR)		228			46	
Volume (vph)	164	210	240	371	471	94
Lane Group Flow (vph)	178	228	261	403	614	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.36	0.38	0.56	0.18	0.28	
Uniform Delay, d1	28.8	0.0	10.0	7.3	7.2	
Delay	29.4	4.0	11.0	7.4	7.3	
LOS	C	A	B	A	A	
Approach Delay	15.1			8.8	7.3	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 51.7%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

← ø2	← ø4
↓ ø6	

2: King Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3451	0
Flt Permitted	0.950		0.376			
Satd. Flow (perm)	1770	1583	700	3539	3451	0
Satd. Flow (RTOR)		250			47	
Volume (vph)	160	230	260	400	500	100
Lane Group Flow (vph)	174	250	283	435	652	0
Turn Type	Perm		Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effect Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.35	0.40	0.63	0.19	0.29	
Uniform Delay, d1	28.7	0.0	10.9	7.4	7.3	
Delay	29.3	3.9	12.2	7.5	7.4	
LOS	C	A	B	A	A	
Approach Delay	14.3			9.3	7.4	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 53.8%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

02	04
06	

2: King Rd & Jeffersoo Ave

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3444	0
Flt Permitted	0.950		0.371			
Satd. Flow (perm)	1770	1583	691	3539	3444	0
Satd. Flow (RTOR)		250			51	
Volume (vph)	169	230	260	401	501	109
Lane Group Flow (vph)	184	250	283	436	663	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.37	0.40	0.64	0.19	0.30	
Uniform Delay, d1	28.9	0.0	11.0	7.4	7.3	
Delay	29.5	3.9	12.3	7.5	7.4	
LOS	C	A	B	A	A	
Approach Delay	14.7			9.4	7.4	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 54.7%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jeffersoo Ave

02	04
06	

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEB	SEB	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑	↑↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3302	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3302	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		10			152				132		105	
Volume (vph)	0	540	360	0	370	300	0	750	190	0	1720	430
Lane Group Flow (vph)	0	978	0	0	728	0	0	815	207	0	2337	0
Turn Type								Perm				
Protected Phases		4			8			2			6	
Permitted Phases								2				
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)		33.0			33.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.37			0.37			0.54	0.54		0.54	
v/c Ratio		0.80			0.56			0.29	0.22		0.85	
Uniform Delay, d1		25.2			17.5			11.1	3.6		16.6	
Delay		25.8			17.8			11.2	4.2		17.0	
LOS		C			B			B	A		B	
Approach Delay		25.8			17.8			9.8			17.0	
Approach LOS		C			B			A			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 82.0%

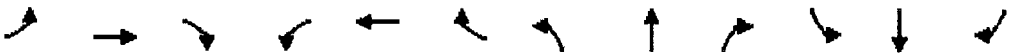
ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

↑ ø2	→ ø4
↓ ø6	← ø8

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

												
Lane Group	EBL	EB	EBR	WBL	WB	WBR	NBL	NBT	NBR	SBL	SB	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3306	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3306	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		10			152				127		105	
Volume (vph)	0	550	360	0	380	301	0	750	191	0	1721	430
Lane Group Flow (vph)	0	989	0	0	740	0	0	815	208	0	2338	0
Turn Type								Perm				
Protected Phases		4			8			2			6	
Permitted Phases								2				
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		33.0			33.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.37			0.37			0.54	0.54		0.54	
v/c Ratio		0.81			0.57			0.29	0.23		0.86	
Uniform Delay, d1		25.3			17.6			11.1	3.9		16.6	
Delay		26.2			17.9			11.2	4.4		17.0	
LOS		C			B			B	A		B	
Approach Delay		26.2			17.9			9.8			17.0	
Approach LOS		C			B			A			B	

Intersection Summary:

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 17.5

Intersection LOS: B

Intersection Capacity Utilization 82.3%

ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

↑ 02	→ 04
↓ 06	← 08

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEB	SEB	SEB
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑↑	↑↑	↑↑	↑↑↑	↑↑↑	↑↑
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3302	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3302	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		7			129				112		105	
Volume (vph)	0	580	380	0	400	320	0	810	200	0	1850	460
Lane Group Flow (vph)	0	1043	0	0	783	0	0	880	217	0	2511	0
Turn Type								Perm				
Protected Phases		4			8			2			6	
Permitted Phases								2				
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		33.0			33.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.37			0.37			0.54	0.54		0.54	
v/c Ratio		0.85			0.61			0.32	0.24		0.92	
Uniform Delay, d1		26.0			19.0			11.3	4.9		17.8	
Delay		28.7			19.3			11.4	5.2		20.6	
LOS		C			B			B	A		C	
Approach Delay		28.7			19.3			10.2			20.6	
Approach LOS		C			B			B			C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 87.3%

ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

↑ ø2	→ ø4
↓ ø6	← ø8

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑	↑↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3334	0	0	3309	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3334	0	0	3309	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)	7				129			104		105		
Volume (vph)	0	599	380	0	419	321	0	810	201	0	1851	460
Lane Group Flow (vph)	0	1064	0	0	804	0	0	880	218	0	2512	0
Turn Type	Perm											
Protected Phases	4			8			2			6		
Permitted Phases	2											
Minimum Split (s)	20.0			20.0			20.0			20.0		
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)	3.5			3.5			3.5			3.5		
All-Red Time (s)	0.5			0.5			0.5			0.5		
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	33.0			33.0			49.0			49.0		
Actuated g/C Ratio	0.37			0.37			0.54			0.54		
v/c Ratio	0.87			0.62			0.32			0.24		
Uniform Delay, d1	26.3			19.2			11.3			5.3		
Delay	29.6			19.6			11.4			5.6		
LOS	C			B			B			A		
Approach Delay	29.6			19.6			10.2			20.6		
Approach LOS	C			B			B			C		

Intersection Summary

Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Prelimed	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 87.9%	ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

↑ ø2	→ ø4
↓ ø6	← ø8

4: King Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑			↗	↑↑	↗
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3309	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3309	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		78			78				207			207
Volume (vph)	0	540	360	0	210	160	0	750	190	0	750	190
Lane Group Flow (vph)	0	978	0	0	402	0	0	815	207	0	815	207
Turn Type								Perm			Perm	
Protected Phases		4			8			2			6	
Permitted Phases									2			6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.57			0.24			0.56	0.27		0.56	0.27
Uniform Delay, d1		14.3			10.1			20.3	0.0		20.3	0.0
Delay		14.6			10.2			20.6	2.7		20.6	2.7
LOS		B			B			C	A		C	A
Approach Delay		14.6			10.2			16.9			16.9	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%); Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.57

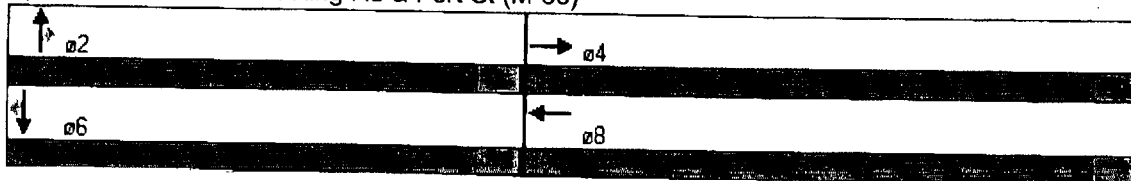
Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 58.0%

ICU Level of Service A

Splits and Phases: 4: King Rd & Fort St (M-85)



4: King Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑			↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3306	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3306	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		77			78				211			207
Volume (vph)	0	540	360	0	210	164	0	750	194	0	754	190
Lane Group Flow (vph)	0	978	0	0	406	0	0	815	211	0	820	207
Turn Type									Perm			Perm
Protected Phases		4			8			2			6	
Permitted Phases									2			6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.57			0.24			0.56	0.27		0.56	0.27
Uniform Delay, d1		14.3			10.1			20.3	0.0		20.3	0.0
Delay		14.6			10.3			20.6	2.6		20.6	2.7
LOS		B			B			C	A		C	A
Approach Delay		14.6			10.3			16.9			17.0	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pre-timed

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 58.1%

ICU Level of Service A

Splits and Phases: 4: King Rd & Fort St (M-85)

↑ a2	→ a4
↓ a6	← a8

4: King Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑			↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3309	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3309	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		62			62				210			217
Volume (vph)	0	580	380	0	220	170	0	810	200	0	810	200
Lane Group Flow (vph)	0	1043	0	0	424	0	0	880	217	0	880	217
Turn Type									Perm			Perm
Protected Phases	4			8			2			6		
Permitted Phases												
Minimum Split (s)	20.0			20.0			20.0			20.0		
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	45.0			45.0			37.0			37.0		
Actuated g/C Ratio	0.50			0.50			0.41			0.41		
v/c Ratio	0.61			0.25			0.60			0.28		
Uniform Delay, d1	15.1			10.8			20.8			0.5		
Delay	15.4			10.9			21.1			2.9		
LOS	B			B			C			A		
Approach Delay	15.4			10.9			17.5			17.4		
Approach LOS	B			B			B			B		

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.61

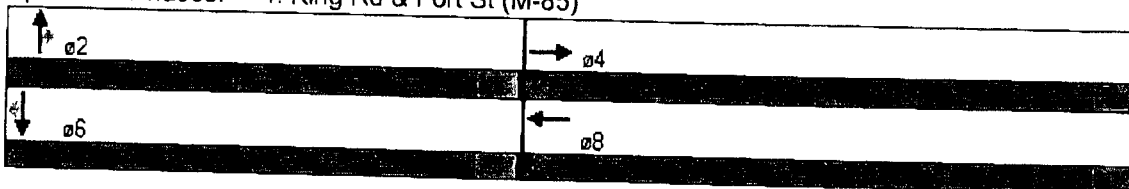
Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Splits and Phases: 4: King Rd & Fort St (M-85)



4: King Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

	EBL	EBR	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBR	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3302	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3302	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		60			62				210			217
Volume (vph)	0	580	380	0	220	179	0	810	209	0	819	200
Lane Group Flow (vph)	0	1043	0	0	434	0	0	880	227	0	890	217
Turn Type									Perm			Perm
Protected Phases		4			8			2			6	
Permitted Phases									2			6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.62			0.26			0.60	0.29		0.61	0.28
Uniform Delay, d1		15.2			10.9			20.8	1.2		20.8	0.0
Delay		15.5			11.0			21.1	3.3		21.2	2.6
LOS		B			B			C	A		C	A
Approach Delay		15.5			11.0			17.4			17.5	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 61.9%

ICU Level of Service B

Splits and Phases: 4: King Rd & Fort St (M-85)

↑ 2	→ 4
↓ 6	← 8



Facsimile

Date: August 9, 2001 Page 1 of: 17

To: Jaya Zyman-Ponebshek From: Kevin O'Neill

Firm: URS Corporation cc: _____

Facsimile: 512.454.8807 _____

Subject: RTRR Traffic Analysis Intersection Capacity Reports -- Fax 2 of 2

Message:

Jaya,

Attached are the 16 Synchro report printouts for the intersection capacity analysis.

Kevin

Kevin O'Neill
Surface Transportation
URS Corporation
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1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3348	0
Flt Permitted	0.950		0.308			
Satd. Flow (perm)	1770	1583	574	3539	3348	0
Satd. Flow (RTOR)		217			115	
Volume (vph)	230	200	100	460	360	200
Lane Group Flow (vph)	250	217	109	500	608	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.42	0.32	0.19	0.24	0.50	
Uniform Delay, d1	25.3	0.0	10.9	10.3	20.8	
Delay	25.9	3.4	11.7	10.4	21.1	
LOS	C	A	B	B	C	
Approach Delay	15.4			10.6	21.1	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.50

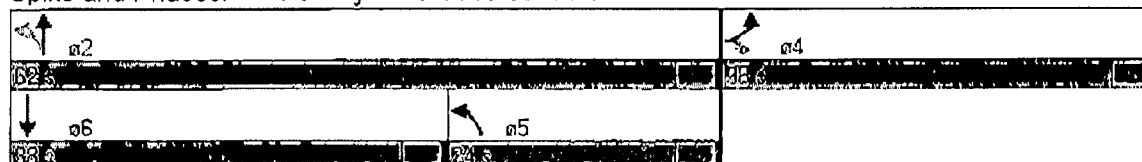
Intersection Signal Delay: 15.8

Intersection Capacity Utilization 47.7%

Intersection LOS: B

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave



1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕	↕	↗
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3345	0
Flt Permitted	0.950		0.297			
Satd. Flow (perm)	1770	1583	553	3539	3345	0
Satd. Flow (RTOR)		217			125	
Volume (vph)	241	200	100	465	365	211
Lane Group Flow (vph)	262	217	109	505	626	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.44	0.32	0.19	0.25	0.51	
Uniform Delay, d1	25.5	0.0	11.0	10.3	20.6	
Delay	26.1	3.4	11.8	10.4	20.9	
LOS	C	A	B	B	C	
Approach Delay	15.8			10.6	20.9	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%) Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.51

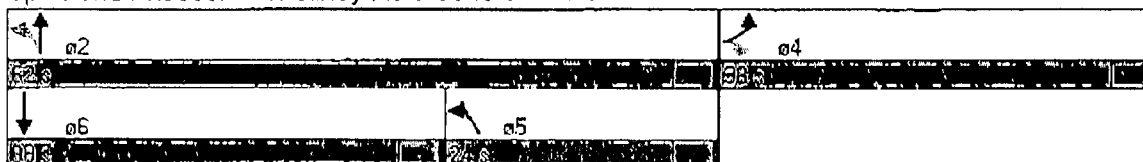
Intersection Signal Delay: 15.8

Intersection LOS: B

Intersection Capacity Utilization 48.8%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave



1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3345	0
Flt Permitted	0.950		0.281			
Satd. Flow (perm)	1770	1583	523	3539	3345	0
Satd. Flow (RTOR)		228			125	
Volume (vph)	250	210	110	490	380	220
Lane Group Flow (vph)	272	228	120	533	652	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.45	0.33	0.22	0.26	0.53	
Uniform Delay, d1	25.7	0.0	11.4	10.4	21.0	
Delay	26.3	3.4	12.5	10.5	21.4	
LOS	C	A	B	B	C	
Approach Delay	15.8			10.9	21.4	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.53

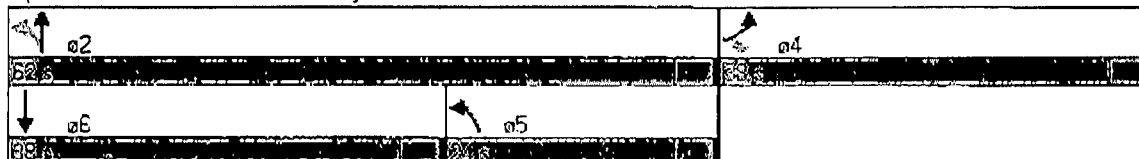
Intersection Signal Delay: 16.0

Intersection LOS: B

Intersection Capacity Utilization 50.8%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave



1: Sibley Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

						
Lane Group	EBL	EBR	NBL	NBT	SEB	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3337	0
Flt Permitted	0.950		0.262			
Satd. Flow (perm)	1770	1583	488	3539	3337	0
Satd. Flow (RTOR)		228			142	
Volume (vph)	270	210	110	500	390	240
Lane Group Flow (vph)	293	228	120	543	685	0
Turn Type	Perm pm+pt					
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	38.0	38.0	24.0	62.0	38.0	0.0
Total Split (%)	38%	38%	24%	62%	38%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Act Effct Green (s)	34.0	34.0	58.0	58.0	34.0	
Actuated g/C Ratio	0.34	0.34	0.58	0.58	0.34	
v/c Ratio	0.49	0.33	0.22	0.26	0.56	
Uniform Delay, d1	26.1	0.0	11.7	10.4	20.8	
Delay	26.7	3.4	12.9	10.5	21.1	
LOS	C	A	B	B	C	
Approach Delay	16.5		11.0		21.1	
Approach LOS	B		B		C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.56

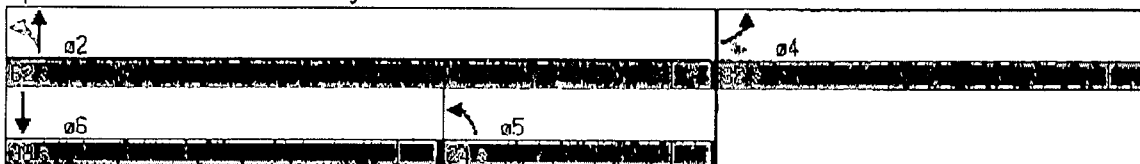
Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 53.0%

ICU Level of Service A

Splits and Phases: 1: Sibley Rd & Jefferson Ave



2: King Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions

Lane Group	EBL	EBR	NBL	NBT	SBL	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3454	0
Flt Permitted	0.950		0.396			
Satd. Flow (perm)	1770	1583	738	3539	3454	0
Satd. Flow (RTOR)		228			44	
Volume (vph)	160	210	240	370	470	90
Lane Group Flow (vph)	174	228	261	402	609	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.35	0.38	0.55	0.18	0.27	
Uniform Delay, d1	28.7	0.0	10.0	7.3	7.2	
Delay	29.3	4.0	11.0	7.4	7.3	
LOS	C	A	B	A	A	
Approach Delay	15.0			8.8	7.3	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBL, Start of Green

Natural Cycle: 55

Control Type: Pre-timed

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 9.7

Intersection LOS: A

Intersection Capacity Utilization 51.3%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

02	04
03	05
06	
07	

2: King Rd & Jefferson Ave

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3451	0
Flt Permitted	0.950		0.394			
Satd. Flow (perm)	1770	1583	734	3539	3451	0
Satd. Flow (RTOR)		228		46		
Volume (vph)	164	210	240	371	471	94
Lane Group Flow (vph)	178	228	261	403	614	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.36	0.38	0.56	0.18	0.28	
Uniform Delay, d1	28.8	0.0	10.0	7.3	7.2	
Delay	29.4	4.0	11.0	7.4	7.3	
LOS	C	A	B	A	A	
Approach Delay	15.1			8.8	7.3	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100.

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 51.7%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

02	04
05	03
06	
07	

2: King Rd & Jefferson Ave

Peak Hour Traffic-Projected Conditions

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3451	0
Flt Permitted	0.950		0.376			
Satd. Flow (perm)	1770	1583	700	3539	3451	0
Satd. Flow (RTOR)		250			47	
Volume (vph)	160	230	260	400	500	100
Lane Group Flow (vph)	174	250	283	435	652	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.35	0.40	0.63	0.19	0.29	
Uniform Delay, d1	28.7	0.0	10.9	7.4	7.3	
Delay	29.3	3.9	12.2	7.5	7.4	
LOS	C	A	B	A	A	
Approach Delay	14.3			9.3	7.4	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 53.8%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jefferson Ave

 02	 04
 03	 05
 06	
 07	

2: King Rd & Jeffersoo Ave

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↕	↕	↗
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	1770	1583	1770	3539	3444	0
Flt Permitted	0.950		0.371			
Satd. Flow (perm)	1770	1583	691	3539	3444	0
Satd. Flow (RTOR)		250			51	
Volume (vph)	169	230	260	401	501	109
Lane Group Flow (vph)	184	250	283	436	663	0
Turn Type	Perm		Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	32.0	32.0	68.0	68.0	68.0	0.0
Total Split (%)	32%	32%	68%	68%	68%	0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	28.0	28.0	64.0	64.0	64.0	
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.64	
v/c Ratio	0.37	0.40	0.64	0.19	0.30	
Uniform Delay, d1	28.9	0.0	11.0	7.4	7.3	
Delay	29.5	3.9	12.3	7.5	7.4	
LOS	C	A	B	A	A	
Approach Delay	14.7			9.4	7.4	
Approach LOS	B			A	A	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green.

Natural Cycle: 60

Control Type: Prelimed

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 54.7%

ICU Level of Service A

Splits and Phases: 2: King Rd & Jeffersoo Ave

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3302	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3302	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		10			152				132		105	
Volume (vph)	0	540	360	0	370	300	0	750	190	0	1720	430
Lane Group Flow (vph)	0	978	0	0	728	0	0	815	207	0	2337	0
Turn Type								Perm				
Protected Phases		4			8			2			6	
Permitted Phases								2				
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		33.0			33.0			49.0	49.0		49.0	
Actuated g/C Ratio		0.37			0.37			0.54	0.54		0.54	
v/c Ratio		0.80			0.56			0.29	0.22		0.85	
Uniform Delay, d1		25.2			17.5			11.1	3.6		16.6	
Delay		25.8			17.8			11.2	4.2		17.0	
LOS		C			B			B	A		B	
Approach Delay		25.8			17.8			9.8			17.0	
Approach LOS		C			B			A			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 82.0%

ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

↑ α2	→ α4
↓ α6	← α8

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑	↑↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3306	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3306	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		10			152			127			105	
Volume (vph)	0	550	360	0	380	301	0	750	191	0	1721	430
Lane Group Flow (vph)	0	989	0	0	740	0	0	815	208	0	2338	0
Turn Type	Perm											
Protected Phases	4			8			2			6		
Permitted Phases	2											
Minimum Split (s)	20.0			20.0			20.0			20.0		
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)	3.5			3.5			3.5			3.5		
All-Red Time (s)	0.5			0.5			0.5			0.5		
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	33.0			33.0			49.0			49.0		
Actuated g/C Ratio	0.37			0.37			0.54			0.54		
v/c Ratio	0.81			0.57			0.29			0.23		
Uniform Delay, d1	25.3			17.6			11.1			3.9		
Delay	26.2			17.9			11.2			4.4		
LOS	C			B			B			A		
Approach Delay	26.2			17.9			9.8			17.0		
Approach LOS	C			B			A			B		
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 55												
Control Type: Pretimed												
Maximum v/c Ratio: 0.86												
Intersection Signal Delay: 17.5												
Intersection LOS: B												
Intersection Capacity Utilization 82.3%												
ICU Level of Service D												

Splits and Phases: 3: Sibley Rd & Fort St (M-85)

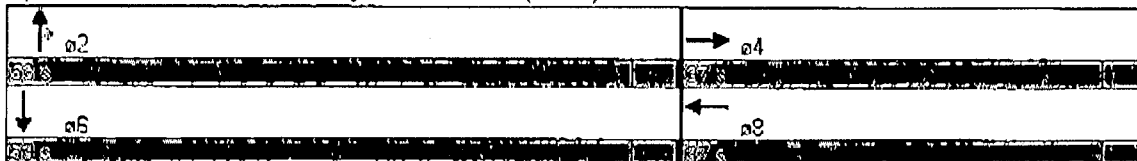
↑ φ2	→ φ4
↓ φ6	← φ8

3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑↑			↑	↑↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3302	0	0	5085	1583	0	4933	0
Plt Permitted												
Satd. Flow (perm)	0	3330	0	0	3302	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)	7			129			112			105		
Volume (vph)	0	580	380	0	400	320	0	810	200	0	1850	460
Lane Group Flow (vph)	0	1043	0	0	783	0	0	880	217	0	2511	0
Turn Type	Perm											
Protected Phases	4			8			2			6		
Permitted Phases	2											
Minimum Split (s)	20.0			20.0			20.0			20.0		
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)	3.5			3.5			3.5			3.5		
All-Red Time (s)	0.5			0.5			0.5			0.5		
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	33.0			33.0			49.0			49.0		
Actuated g/C Ratio	0.37			0.37			0.54			0.54		
v/c Ratio	0.85			0.61			0.32			0.24		
Uniform Delay, d1	26.0			19.0			11.3			4.9		
Delay	28.7			19.3			11.4			5.2		
LOS	C			B			B			A		
Approach Delay	28.7			19.3			10.2			20.6		
Approach LOS	C			B			B			C		
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 65												
Control Type: Pretimed												
Maximum v/c Ratio: 0.92												
Intersection Signal Delay: 19.8						Intersection LOS: B						
Intersection Capacity Utilization 87.3%						ICU Level of Service D						

Splits and Phases: 3: Sibley Rd & Fort St (M-85)



3: Sibley Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑				↑↑			↑↑↑		↑	↑↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3334	0	0	3309	0	0	5085	1583	0	4933	0
Flt Permitted												
Satd. Flow (perm)	0	3334	0	0	3309	0	0	5085	1583	0	4933	0
Satd. Flow (RTOR)		7			129				104		105	
Volume (vph)	0	599	380	0	419	321	0	810	201	0	1851	460
Lane Group Flow (vph)	0	1064	0	0	804	0	0	880	218	0	2512	0
Turn Type	Perm											
Protected Phases	4				8				2		6	
Permitted Phases	2											
Minimum Split (s)	20.0				20.0				20.0	20.0	20.0	
Total Split (s)	0.0	37.0	0.0	0.0	37.0	0.0	0.0	53.0	53.0	0.0	53.0	0.0
Total Split (%)	0%	41%	0%	0%	41%	0%	0%	59%	59%	0%	59%	0%
Yellow Time (s)	3.5				3.5				3.5	3.5	3.5	
All-Red Time (s)	0.5				0.5				0.5	0.5	0.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	33.0				33.0				49.0	49.0	49.0	
Actuated g/C Ratio	0.37				0.37				0.54	0.54	0.54	
v/c Ratio	0.87				0.62				0.32	0.24	0.92	
Uniform Delay, d1	26.3				19.2				11.3	5.3	17.8	
Delay	29.6				19.6				11.4	5.6	20.6	
LOS	C				B				B	A	C	
Approach Delay	29.6				19.6				10.2		20.6	
Approach LOS	C				B				B		C	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SPT, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.92

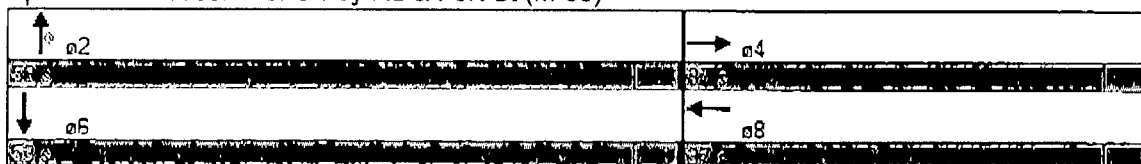
Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 87.9%

ICU Level of Service D

Splits and Phases: 3: Sibley Rd & Fort St (M-85)



4: King Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑			↑	↑↑	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3309	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3309	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		78			78			207			207	
Volume (vph)	0	540	360	0	210	160	0	750	190	0	750	190
Lane Group Flow (vph)	0	978	0	0	402	0	0	815	207	0	815	207
Turn Type							Perm					Perm
Protected Phases	4			8			2					6
Permitted Phases							2					6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.57			0.24			0.56	0.27		0.56	0.27
Uniform Delay, d1		14.3			10.1			20.3	0.0		20.3	0.0
Delay		14.6			10.2			20.6	2.7		20.6	2.7
LOS		B			B			C	A		C	A
Approach Delay		14.6			10.2			16.9			16.9	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 58.0%

ICU Level of Service A

Splits and Phases: 4: King Rd & Fort St (M-85)

 02	 04
 06	 08

4: King Rd & Fort St (M-85)

Peak Hour Traffic-Existing Conditions + Site-Generated Truck Traffic

	↖	→	↘	↙	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SEB
Lane Configurations	↑↑			↑↑			↑↑			↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3327	0	0	3306	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3327	0	0	3306	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		77			78			211				207
Volume (vph)	0	540	360	0	210	164	0	750	194	0	754	190
Lane Group Flow (vph)	0	978	0	0	406	0	0	815	211	0	820	207
Turn Type							Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases							2			6		
Minimum Split (s)	20.0			20.0			20.0			20.0		
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		1.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	45.0			45.0			37.0			37.0		
Actuated g/C Ratio	0.50			0.50			0.41			0.41		
v/c Ratio	0.57			0.24			0.56			0.27		
Uniform Delay, d1	14.3			10.1			20.3			0.0		
Delay	14.6			10.3			20.6			2.6		
LOS	B			B			C			A		
Approach Delay	14.6			10.3			16.9			17.0		
Approach LOS	B			B			B			B		

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.57

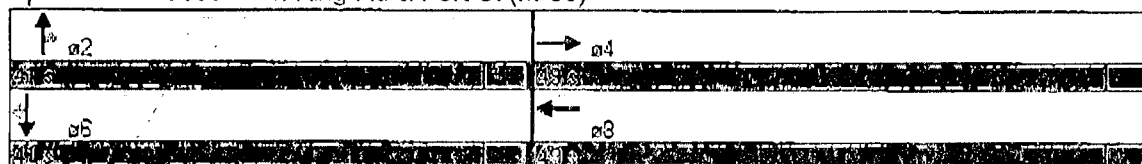
Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 58.1%

ICU Level of Service A

Splits and Phases: 4: King Rd & Fort St (M-85)



4: King Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SEB
Lane Group												
Lane Configurations		↑↑			↑↑			↑↑	↑		↑↑	↑
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3309	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3309	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		62			62			210			217	
Volume (vph)	0	580	380	0	220	170	0	810	200	0	810	200
Lane Group Flow (vph)	0	1043	0	0	424	0	0	880	217	0	880	217
Turn Type								Perm			Perm	
Protected Phases		4			8			2			6	
Permitted Phases								2				6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.61			0.25			0.60	0.28		0.60	0.28
Uniform Delay, d1		15.1			10.8			20.8	0.5		20.8	0.0
Delay		15.4			10.9			21.1	2.9		21.1	2.6
LOS		B			B			C	A		C	A
Approach Delay		15.4			10.9			17.5			17.4	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%) Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 61.7%

ICU Level of Service B

Splits and Phases: 4: King Rd & Fort St (M-85)

↑ 02	→ 04
↓ 06	← 03

4: King Rd & Fort St (M-85)

Peak Hour Traffic-Projected Conditions + Site-Generated Truck Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑↑			↑↑			↑↑		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Satd. Flow (prot)	0	3330	0	0	3302	0	0	3539	1583	0	3539	1583
Flt Permitted												
Satd. Flow (perm)	0	3330	0	0	3302	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)		60			62				210			217
Volume (vph)	0	580	380	0	220	179	0	810	209	0	819	200
Lane Group Flow (vph)	0	1043	0	0	434	0	0	880	227	0	890	217
Turn Type								Perm			Perm	
Protected Phases		4			8			2			6	
Permitted Phases									2			6
Minimum Split (s)		20.0			20.0			20.0	20.0		20.0	20.0
Total Split (s)	0.0	49.0	0.0	0.0	49.0	0.0	0.0	41.0	41.0	0.0	41.0	41.0
Total Split (%)	0%	54%	0%	0%	54%	0%	0%	46%	46%	0%	46%	46%
Yellow Time (s)		3.5			3.5			3.5	3.5		3.5	3.5
All-Red Time (s)		0.5			0.5			0.5	0.5		0.5	0.5
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		45.0			45.0			37.0	37.0		37.0	37.0
Actuated g/C Ratio		0.50			0.50			0.41	0.41		0.41	0.41
v/c Ratio		0.62			0.26			0.60	0.29		0.61	0.28
Uniform Delay, d1		15.2			10.9			20.8	1.2		20.8	0.0
Delay		15.5			11.0			21.1	3.3		21.2	2.6
LOS		B			B			C	A		C	A
Approach Delay		15.5			11.0			17.4			17.5	
Approach LOS		B			B			B			B	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.62

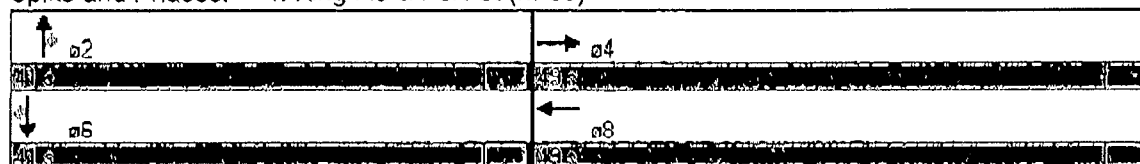
Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 61.9%

ICU Level of Service B

Splits and Phases: 4: King Rd & Fort St (M-85)



Calculations for at Grade Crossing Vehicle Delay and Queues

For trains not generated by RTRR's facility, estimates were made of the blocked time per train (D_C) – the time required for a train to pass by the highway/rail at-grade crossing – from observations made in the field of actual train crossings. On average, each crossing lasted two minutes including the time required for the gates to close and open. For trains generated by RTRR's facility, the following equation was used to calculate the blocked time per train (D_C):

$$\text{Blocked Crossing Time } (D_C) = \left[\frac{L}{V \times 88} \right] + 0.50$$

where:

- D_C = Time required, in minutes, for the train to pass the highway/rail at-grade crossing, including the time required for gate closing and opening.
- L = Train length, in feet
- V = Train speed, in miles per hour, over the highway/rail at-grade crossing.
- 88 = Conversion factor from miles per hour to feet per minute (1 mile per hour = 88 feet per minute).
- 0.50 = Time required, in minutes, for gate closing and opening before and after train passage.

The value for blocked crossing time D_C was used to estimate the crossing delay per stopped vehicle, maximum vehicle queue, and average delay for all vehicles.

Crossing Delay Per Stopped Vehicle

The crossing delay per stopped vehicle (D_A) represents the average amount of time that a drive would have to wait at a highway/rail at-grade crossing for a train to pass. The crossing delay per stopped vehicle was calculated for the at-grade crossings just west of Jefferson Avenue on both Sibley Road and King Road for both the existing and projected year traffic volumes with and without the site-generated truck traffic to estimate the change in crossing delay. It was assumed that vehicles arrive at the highway/at-grade crossing in a uniform distribution in order to simplify the analysis. The following equation was used to calculate the crossing delay per stopped vehicle:

$$\text{Crossing Delay Per Stopped Vehicle } (D_A) = \frac{D_C \times (S_C / S_C - S_Q)}{2}$$

where:

- D_A = Crossing delay per stopped vehicle, in minutes.
- D_C = Blocked crossing time per train, in minutes, including gate opening and closing.
- S_C = Vehicle departure rate, per minute per lane. Assume a value of 1,400 vehicles per hour per lane (equivalent to 23.3 vehicles per minute per lane).

- S_Q = Average arrival rate of traffic in vehicles per minute per lane. This value was obtained from ADT volume information from the Wayne County Division of Roads and the Michigan Department of Transportation.
- 2 = An average factor used to account for vehicles that do not experience delays for the entire time that the train blocks the highway/rail at-grade crossing.

The estimated value of D_A in the equation was used to calculate the average delay for all vehicles.

Maximum Vehicle Queue

The maximum vehicle queue (Q) represents the estimated longest queue of vehicles that would occur at a highway/rail at-grade crossing. It was assumed that the maximum vehicle queue would occur during the peak hour of roadway traffic and assumed the peak-hour traffic to be equal to 10 percent of the ADT volume – a typical assumption used by traffic engineers. The following equation was used to calculate the maximum vehicle queue:

$$\text{Maximum Vehicle Queue } (Q) = ADT \times 0.1 \times \left[\frac{0.6}{60} \right] \times \left[\frac{D_c}{NL/2} \right]$$

where:

- Q = Maximum vehicle queue (number of vehicles) in peak-hour traffic.
- ADT = Average daily traffic volume for the highway/rail at-grade crossing, in vehicles per day. This value was obtained from ADT volume information from the Wayne County Division of Roads and the Michigan Department of Transportation.
- 0.1 = Conversion factor to convert ADT volume, in vehicles per day, to peak-hour traffic volume, in vehicles per hour. The 10 percent conversion factor is a typical value used in traffic engineering analyses.
- 0.53 = A 53 percent factor to convert two-way traffic to peak-direction traffic. This conversion factor was calculated from the 24-hour counts provided by the Wayne County Division of Roads.
- D_c = Blocked crossing time per train, in minutes, including gate opening and closing.
- NL = Number of highway lanes at the highway/rail at-grade crossing. This value was determined during a site visit.
- 2 = Factor to convert the total number of highway lanes to the number of lanes in the peak direction.

Number of Vehicles Delayed Per Day

The number of vehicles delayed per day (T_D) represents the number of vehicles in a 24-hour period that would be stopped for trains at a highway/rail at-grade crossing. The number of vehicles delayed per day at a highway/rail at-grade crossing was estimated using the following equation:

$$\text{Vehicles Delayed Per Day } (T_D) = \left[\frac{D_C}{1,440} \right] \times N \times ADT$$

where:

T_D	=	Number of vehicles delayed per day.
D_C	=	Blocked crossing time per train, in minutes, including time for gate closing and opening.
1,440	=	Minutes per day.
N	=	Number of trains per day. This value was obtained from the FRA's highway/rail at-grade crossing database and from observations made at the site.
ADT	=	Average daily traffic volume for the highway/rail at-grade crossing, in vehicles per day. This value was obtained from ADT volume information from the Wayne County Division of Roads and the Michigan Department of Transportation.

Average Delay for All Vehicles

The average delay for all vehicles (D_V) is the estimated delay experienced by all drivers at the affected highway/rail at-grade crossing, including vehicles not delayed by train traffic. The following equation was used to estimate the average delay for all vehicles:

$$\text{Average Delay for All Vehicles } (D_V) = D_C \times N \times D_A \times \left[\frac{24}{1,440} \right] \times 0.0833$$

where:

D_V	=	Average delay for all vehicles, in minutes per vehicle
D_C	=	Blocked crossing time per train, in minutes, including gate opening and closing.
N	=	Number of trains per day. This value was obtained from the FRA's highway/rail at-grade crossing database and from observations made at the site.
D_A	=	Crossing delay per stopped vehicle, in minutes.
24	=	Number of hours per day.
1,440	=	Number of minutes per day.
0.0833	=	A factor used to double the uniform hourly traffic distribution as a proportion of daily traffic. If traffic is uniformly distributed, then the hourly arrival rate is one twenty-fourth (0.0417) of the daily arrival rate. Doubling this value results in a factor of 0.0833. This factor approximates a 95 percent confidence level that the peak-queue length (or delay) would not exceed twice the average. This practice is generally accepted in traffic engineering analyses to produce a conservative estimate of vehicle delay.

APPENDIX J

NOISE RECEPTOR MONITORING PROFILE AND RECEIVER LOCATIONS AND NOISE MODEL RESULTS

Noise Receptor Monitoring Profiles



Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTRR FACILITY
 Date: 7/18/01
 Day of week: WED

Time: 12:30
 Site I.D. No: 1
 Monitor No: 6926
 Downloaded File No: 31001

Collection Site Address: _____
SOUTH END OF RTRR PROPERTY

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other (RTRR SITE)

Photos +4

Measurement Data

SLM Calibration: Before 102.0 After -
 Time of Collection: Start 13:30 Stop 13:30 Total 24 HRS
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 MPH Clouds PT CLOUDY

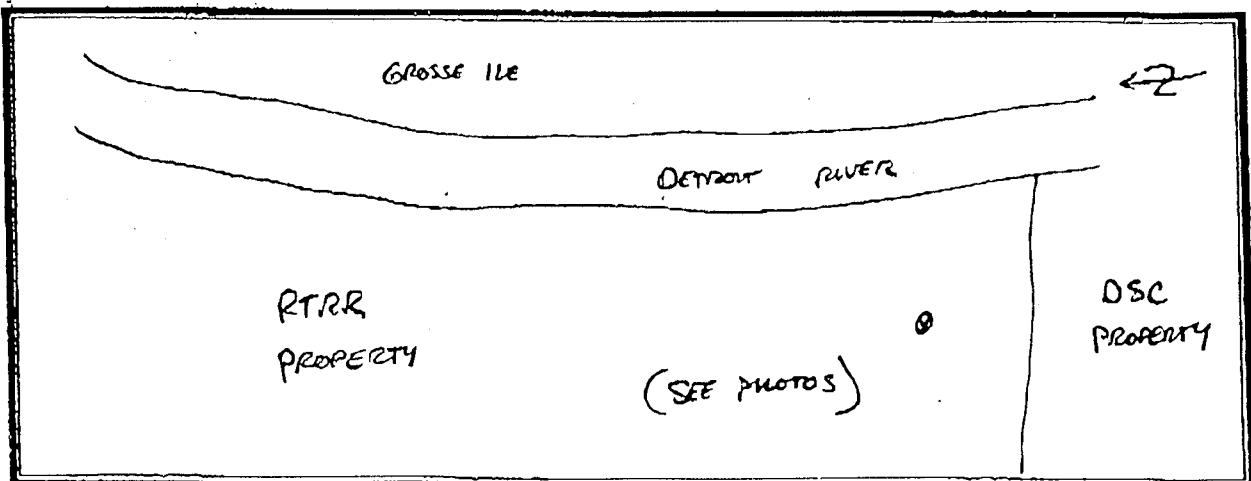
GUSTS 10-12 MPH

Traffic Count Data 1 Hour Count

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name <u>SEPPERSW N</u>	Name <u>SEPPERSW S</u>	Name _____	Name _____
Auto <u>209</u>	Auto <u>230</u>	Auto _____	Auto _____
M.T. <u>7</u>	M.T. <u>8</u>	M.T. _____	M.T. _____
H.T. <u>10</u>	H.T. <u>17</u>	H.T. _____	H.T. _____
Bus <u>1</u>	Bus <u>1</u>	Bus _____	Bus _____
Motos <u>0</u>	Motos <u>2</u>	Motos _____	Motos _____

Comments: TRAFFIC COUNT FROM 10:00 TO 11:00 ON 7/17/01

Site Location Map (Include North Arrow)



File Name.....31001
Test Location.....site 1
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor6926
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 6926 V1.7
REPORT PRINTED 08/10/01 AT 11:34:51

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION RANGE... 38.8dB TO 138.8dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/18/01 AT 13:30:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/19/01 AT 13:30:03
TEST INTERRUPTIONS...1

Lav..... 50.2dB
Lav (80)..... 38.8dB Lav (90)..... 38.8dB
SEL..... 99.4dB
TWA..... 54.9dB
TWA (80)..... 38.8dB TWA (90)..... 38.8dB
Lmax..... 82.1dB ON 7/18/01 AT 14:37:59
Lpk.....115.5dB ON 7/18/01 AT 13:30:03
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.00%
8 HR % DOSE (90dB CUTOFF)..... 0.00%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/18/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
-----	------	-----	-----	-----	----	----

1	13:30:03	52.6	64.1	115.5	55	46
2	13:40:03	58.5	69.8 UNR		62	49
3	13:50:03	60.4	74.4 UNR		63	51
4	14:00:03	59.1	69.4 UNR		62	50
5	14:10:03	59.8	70.5 UNR		63	51
6	14:20:03	60.8	69.2	111.7	63	53
7	14:30:03	61.7	82.1 UNR		63	52
8	14:40:03	58.8	70.7 UNR		62	50
9	14:50:03	55.5	66.7 UNR		59	46
10	15:00:03	50.4	60.4 UNR		53	45
11	15:10:03	50.8	64.4 UNR		53	43
12	15:20:03	53.1	63.7 UNR		56	46
13	15:30:03	53.8	64.4	111.7	57	47
14	15:40:03	49.4	61.4 UNR		52	43
15	15:50:03	44.8	53.2 UNR		46	42
16	16:00:03	48.5	60.5 UNR		51	43
17	16:10:03	46.5	59.6 UNR		49	42
18	16:20:03	47.4	60.7 UNR		50	42
19	16:30:03	51.1	66.4 UNR		53	43
20	16:40:03	49	60.7 UNR		52	42
21	16:50:03	49.2	59.5 UNR		52	42
22	17:00:03	49.3	58.7 UNR		52	42
23	17:10:03	52	61.7 UNR		55	45
24	17:20:03	49.9	61.3 UNR		52	44
25	17:30:03	53.1	64.8 UNR		56	44
26	17:40:03	53.2	62 UNR		56	47
27	17:50:03	52.8	66.4 UNR		56	44
28	18:00:03	47.2	54.8 UNR		50	41
29	18:10:03	52.6	66.1 UNR		54	41
30	18:20:03	45.8	56.5 UNR		49	40
31	18:30:03	49.5	60.2 UNR		53	43
32	18:40:03	51.2	67.1 UNR		51	40
33	18:50:03	44.3	55.1 UNR		46	38
34	19:00:03	47.5	57.2 UNR		51	40
35	19:10:03	49.9	61.9 UNR		52	42
36	19:20:03	49	58.4 UNR		52	43
37	19:30:03	44.1	52.4 UNR		47	39
38	19:40:03	48.1	65.1 UNR		47	40
39	19:50:03	46.3	58.8 UNR		47	40
40	20:00:03	41.8	49.4 UNR		43	38
41	20:10:03	44.4	53 UNR		46	41
42	20:20:03	47.6	64.4 UNR		50	42
43	20:30:03	50.9	62.3 UNR		55	39
44	20:40:03	47.3	56.9 UNR		50	41
45	20:50:03	45.1	56.8 UNR		47	40
46	21:00:03	49.5	60.2 UNR		53	42
47	21:10:03	44.3	51.8 UNR		47	40
48	21:20:03	46.4	60.8 UNR		47	38
49	21:30:03	50.3	62.2 UNR		54	38

50	21:40:03	49.8	63.2 UNR	53	39
51	21:50:03	47	58.9 UNR	50	39
52	22:00:03	48.3	59.8 UNR	51	39
53	22:10:03	39.6	49.5 UNR	40	38
54	22:20:03	42.1	47.8 UNR	45	38
55	22:30:03	42.2	49.1 UNR	45	38
56	22:40:03	39.9	49.7 UNR	41	38
57	22:50:03	46.6	61.3 UNR	49	39
58	23:00:03	40.1	46.3 UNR	43	38
59	23:10:03	40.9	50.2 UNR	42	38
60	23:20:03	42.1	54.1 UNR	43	38
61	23:30:03	42.6	59.4 UNR	45	38
62	23:40:03	40.1	45.8 UNR	41	38
63	23:50:03	39.1	42.6 UNR	39	38
64	0:00:03	40.3	45.4 UNR	42	38
65	0:10:03	39.3	42.9 UNR	40	38
66	0:20:03	39.7	45.7 UNR	41	38
67	0:30:03	40.3	46.1 UNR	42	38
68	0:40:03	41.8	49.9 UNR	43	39
69	0:50:03	49	66.2 UNR	48	38
70	1:00:03	41.6	63 UNR	42	38
71	1:10:03	39.3	47.4 UNR	39	38
72	1:20:03	42.5	53.4 UNR	45	38
73	1:30:03	38.9	44.5 UNR	38	38
74	1:40:03	38.9	43.3 UNR	38	38
75	1:50:03	46.3	60.5 UNR	45	38
76	2:00:03	46.5	60.2 UNR	49	38
77	2:10:03	40	45.2 UNR	42	38
78	2:20:03	38.9	41.8 UNR	39	38
79	2:30:03	39.7	50 UNR	40	38
80	2:40:03	39.8	46.1 UNR	41	38
81	2:50:03	39	42.6 UNR	39	38
82	3:00:03	40.9	51.9 UNR	43	38
83	3:10:03	39.8	45.6 UNR	41	38
84	3:20:03	41.4	52.2 UNR	43	38
85	3:30:03	41.1	48.8 UNR	43	38
86	3:40:03	39.7	49.3 UNR	41	38
87	3:50:03	42	53 UNR	45	38
88	4:00:03	42.4	55.5 UNR	46	38
89	4:10:03	42.7	53.5 UNR	46	38
90	4:20:03	40.7	58 UNR	42	38
91	4:30:03	39.2	43.7 UNR	40	38
92	4:40:03	39.7	46.5 UNR	41	38
93	4:50:03	42.8	54.8 UNR	46	38
94	5:00:03	48.7	66.5 UNR	45	38
95	5:10:03	39.7	49.7 UNR	40	38
96	5:20:03	41.3	49.5 UNR	44	38
97	5:30:03	39.7	48.9 UNR	40	38
98	5:40:03	42.2	49.5 UNR	44	39

99	5:50:03	42.6	47.6 UNR	44	41
100	6:00:03	44.9	61.4 UNR	46	40
101	6:10:03	44	51.2 UNR	45	42
102	6:20:03	44.3	50.3 UNR	45	42
103	6:30:03	44.4	52.6 UNR	45	42
104	6:40:03	44.6	57.8 UNR	46	42
105	6:50:03	48.7	59.8 UNR	51	43
106	7:00:03	45.9	55.8 UNR	48	43
107	7:10:03	47.6	56 UNR	49	44
108	7:20:03	47.2	58.8 UNR	48	45
109	7:30:03	53.4	69.7 UNR	52	46
110	7:40:03	48.3	61 UNR	50	45
111	7:50:03	52.2	74.5 UNR	47	43
112	8:00:03	47.3	53.9 UNR	49	45
113	8:10:03	45.6	51.1 UNR	47	44
114	8:20:03	45.3	50.4 UNR	46	43
115	8:30:03	45.7	53.3 UNR	47	43
116	8:40:03	50.7	65 UNR	54	44
117	8:50:03	45.2	49.7 UNR	46	43
118	9:00:03	47.6	62.1 UNR	48	43
119	9:10:03	54.6	73.2 UNR	51	43
120	9:20:03	47.5	58.5 UNR	51	42
121	9:30:03	44.7	53 UNR	46	41
122	9:40:03	42.9	47.7 UNR	45	40
123	9:50:03	46.1	58.4 UNR	47	41
124	10:00:03	45.9	56.6 UNR	48	42
125	10:10:03	48.4	65.7 UNR	49	43
126	10:20:03	46.2	55.9 UNR	48	42
127	10:30:03	46.7	55.4 UNR	50	42
128	10:40:03	51.6	65.9 UNR	53	43
129	10:50:03	45.5	58.6 UNR	47	42
130	11:00:03	46	54.6 UNR	49	41
131	11:10:03	48.3	59.5 UNR	53	40
132	11:20:03	51.4	63.1 UNR	55	42
133	11:30:03	48	56.8 UNR	52	41
134	11:40:03	45.3	56.8 UNR	47	40
135	11:50:03	50.3	63.3 UNR	51	43
136	12:00:03	49.1	60.1 UNR	51	41
137	12:10:03	46.5	54.5 UNR	49	42
138	12:20:03	43.4	49.3 UNR	45	41
139	12:30:03	44	50.7 UNR	46	41
140	12:40:03	43.6	51.6 UNR	45	40
141	12:50:03	42.9	48.3 UNR	44	40
142	13:00:03	43	51.2 UNR	44	40
143	13:10:03	43.8	50.5 UNR	45	41
144	13:20:03	44.1	52.8 UNR	46	40

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

38	221600	*****	16.03
39	96133	*****	6.95
40	84134	*****	6.09
41	97709	*****	7.07
42	110150	*****	7.97
43	119716	*****	8.66
44	116622	*****	8.44
45	105165	*****	7.61
46	84708	*****	6.13
47	64429	*****	4.66
48	49656	****	3.59
49	38872	***	2.81
50	31910	**	2.31
51	24544	**	1.78
52	21019	**	1.52
53	18360	*	1.33
54	15563	*	1.13
55	12890	*	0.93
56	11659	*	0.84
57	10575	*	0.76
58	9516	*	0.69
59	8585	*	0.62
60	7724	*	0.56
61	6510	+	0.47
62	5248	+	0.38
63	3484	+	0.25
64	2420	+	0.18
65	1647	+	0.12
66	723	.	0.05
67	382	.	0.03
68	257	.	0.02
69	147	.	0.01
70	104	.	0.01
71	73	.	0.01
72	65	.	0
73	30	.	0
74	25	.	0
75	5	.	0
76	5	.	0
77	6	.	0
78	5	.	0
79	5	.	0
80	7	.	0
81	9	.	0

82 4 0

Ln(0.0) = 82dB

Ln(10.0) = 51dB

Ln(50.0) = 43dB

Ln(90.9) = 38dB

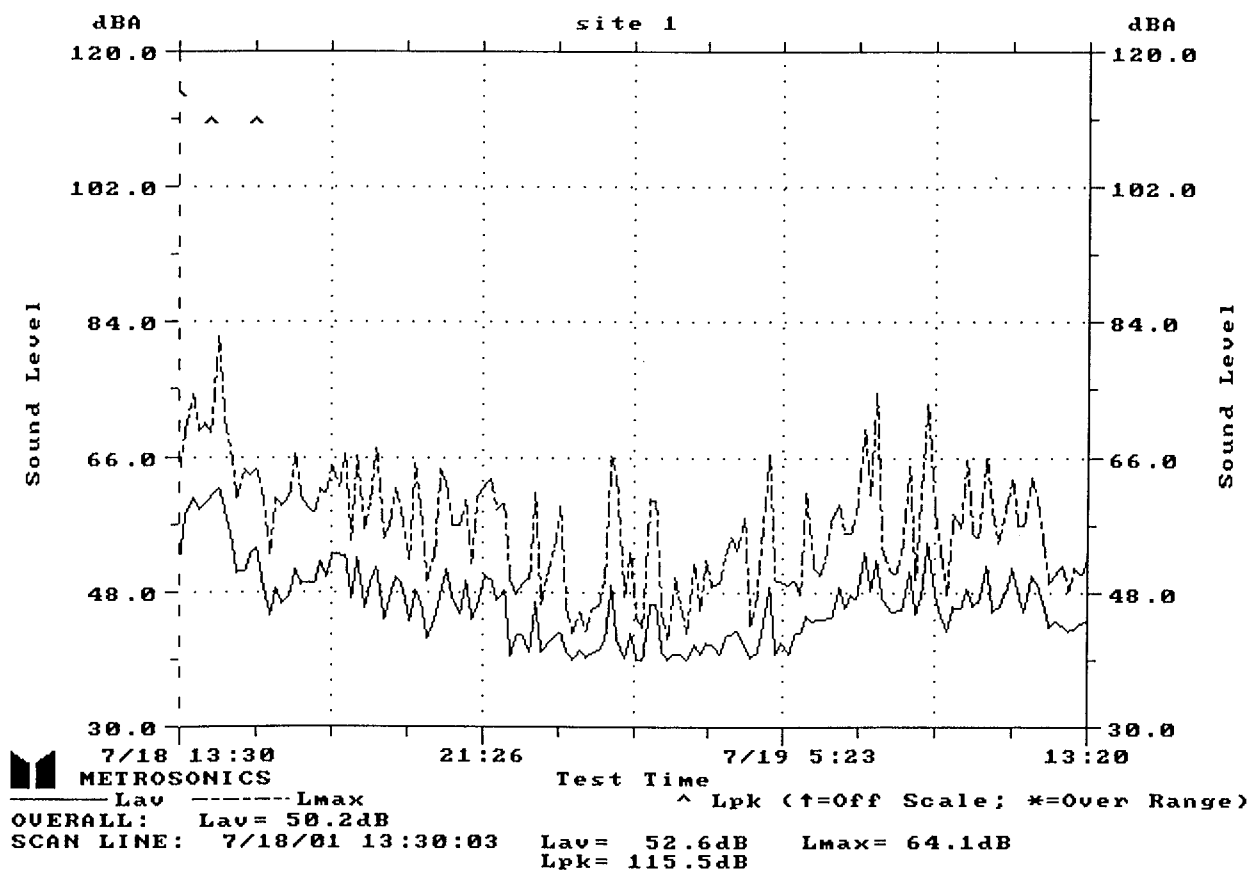
	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF

Ldod	47.9dB	38.8dB	38.8dB
------	--------	--------	--------

Losha	46.9dB	38.8dB	38.8dB
-------	--------	--------	--------

Leq(6)	46.3dB	38.8dB	38.8dB
--------	--------	--------	--------

Filename.....31001
 Logger.....db-3100 SN 6926
 Test Location.....site 1
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor6926
 Comment Field 2...1330 to 1330
 Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTRR FACILITY
 Date: 7/18/01
 Day of week: WED

Time: 12:30
 Site I.D. No: 2
 Monitor No: 3181
 Downloaded File No: 31002

Collection Site Address: _____
NUM END OF RTRR PROPERTY

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other (RTRR SITE)

Photos 14

Measurement Data

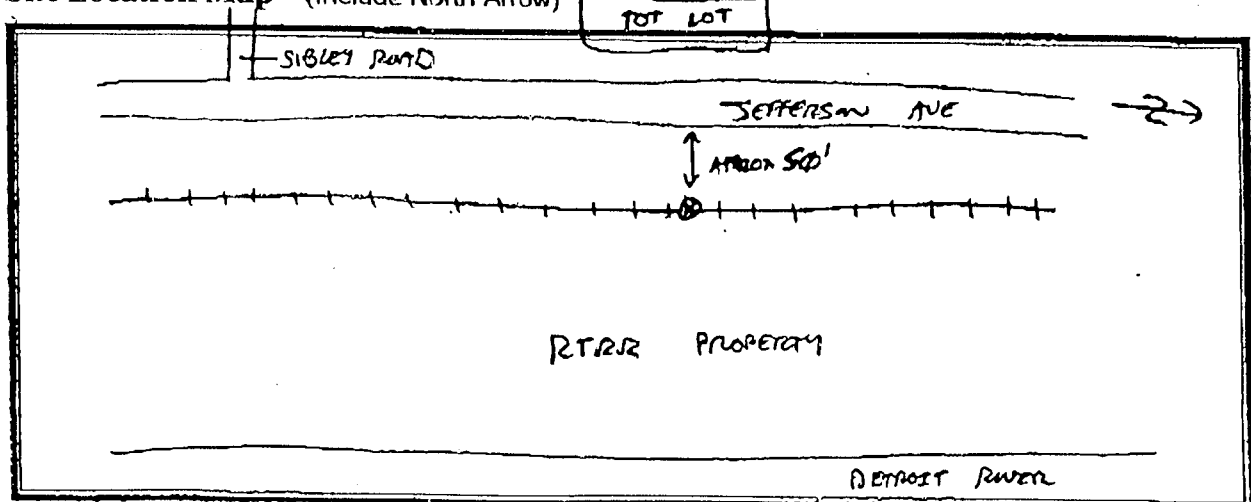
SLM Calibration: Before 102.0 After —
 Time of Collection: Start 13:30 Stop 13:30 Total 24 HRS
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 MPH Clouds PT CLOUDY

Traffic Count Data SEE SITE 1

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name _____	Name _____	Name _____	Name _____
Auto _____	Auto _____	Auto _____	Auto _____
M.T. _____	M.T. _____	M.T. _____	M.T. _____
H.T. _____	H.T. _____	H.T. _____	H.T. _____
Bus _____	Bus _____	Bus _____	Bus _____
Motos _____	Motos _____	Motos _____	Motos _____

Comments _____

Site Location Map (Include North Arrow)



File Name.....31002
Test Location.....site 2
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 3181
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 3181 V1.7
REPORT PRINTED 08/10/01 AT 11:35:02

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION RANGE... 38.9dB TO 138.9dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/18/01 AT 13:30:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/19/01 AT 13:30:03
TEST INTERRUPTIONS...1

Lav..... 61.1dB
Lav (80)..... 41.9dB Lav (90)..... 38.9dB
SEL.....110.3dB
TWA..... 65.9dB
TWA (80)..... 46.7dB TWA (90)..... 38.9dB
Lmax..... 83.8dB ON 7/18/01 AT 18:36:34
Lpk.....UNDER
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.00%
8 HR % DOSE (90dB CUTOFF)..... 0.00%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/18/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
-----	------	-----	-----	-----	----	----

1	13:30:03	62.7	75.8 UNR	66	46
2	13:40:03	63.3	74.9 UNR	66	54
3	13:50:03	63.9	74.6 UNR	67	53
4	14:00:03	64.8	79.9 UNR	67	52
5	14:10:03	63.8	77.5 UNR	67	52
6	14:20:03	63.1	74.9 UNR	66	54
7	14:30:03	62.5	76.2 UNR	65	52
8	14:40:03	66.5	83.2 UNR	67	53
9	14:50:03	63.3	75 UNR	66	54
10	15:00:03	64.1	76.2 UNR	67	53
11	15:10:03	63.2	75.3 UNR	66	50
12	15:20:03	64.3	78.5 UNR	67	54
13	15:30:03	63.6	75 UNR	66	53
14	15:40:03	63	70.9 UNR	66	53
15	15:50:03	63.1	73.8 UNR	66	52
16	16:00:03	63.3	73.4 UNR	66	52
17	16:10:03	63.2	76 UNR	66	50
18	16:20:03	61.7	71.9 UNR	65	50
19	16:30:03	62.9	74.6 UNR	66	51
20	16:40:03	62.2	72.9 UNR	65	51
21	16:50:03	62	73 UNR	65	49
22	17:00:03	63.5	75.4 UNR	66	55
23	17:10:03	62.4	74.5 UNR	65	51
24	17:20:03	63.2	76.8 UNR	66	47
25	17:30:03	62.1	72.9 UNR	66	48
26	17:40:03	62	74 UNR	65	51
27	17:50:03	62.8	77.1 UNR	66	51
28	18:00:03	62.7	75 UNR	66	49
29	18:10:03	61.6	73.7 UNR	65	47
30	18:20:03	60.4	68.4 UNR	64	46
31	18:30:03	65.4	83.8 UNR	66	44
32	18:40:03	61.1	70.3 UNR	64	50
33	18:50:03	60.2	72.2 UNR	63	47
34	19:00:03	62	76.6 UNR	64	47
35	19:10:03	61.5	75.7 UNR	65	46
36	19:20:03	60.3	72.7 UNR	64	47
37	19:30:03	62.1	74.3 UNR	64	48
38	19:40:03	62.1	72.8 UNR	65	51
39	19:50:03	61.2	73.2 UNR	65	49
40	20:00:03	61.8	74.9 UNR	65	47
41	20:10:03	60.3	68.2 UNR	64	45
42	20:20:03	61.2	72.8 UNR	65	49
43	20:30:03	60.9	71 UNR	64	47
44	20:40:03	61.5	72.8 UNR	64	46
45	20:50:03	60.1	74 UNR	63	46
46	21:00:03	61.2	75.6 UNR	64	50
47	21:10:03	59.7	71.2 UNR	63	44
48	21:20:03	58.8	70 UNR	62	43
49	21:30:03	59.4	70.4 UNR	63	43

50	21:40:03	59.9	72.8 UNR	63	45
51	21:50:03	59.3	74.8 UNR	63	42
52	22:00:03	59.5	74.7 UNR	63	44
53	22:10:03	58.9	71.7 UNR	63	41
54	22:20:03	59.5	71.8 UNR	63	43
55	22:30:03	58.3	72.1 UNR	62	40
56	22:40:03	54.7	65.9 UNR	60	39
57	22:50:03	60.4	81.9 UNR	62	42
58	23:00:03	57.9	71.6 UNR	62	40
59	23:10:03	57	72.2 UNR	61	40
60	23:20:03	57.1	73 UNR	60	41
61	23:30:03	56.5	66 UNR	61	42
62	23:40:03	56.7	68.2 UNR	61	40
63	23:50:03	55.3	69.5 UNR	59	40
64	0:00:03	59.3	78 UNR	60	40
65	0:10:03	53.1	66.3 UNR	58	40
66	0:20:03	53.5	66.2 UNR	58	39
67	0:30:03	53.1	69.4 UNR	56	39
68	0:40:03	52.3	67.3 UNR	55	39
69	0:50:03	55.7	76 UNR	59	39
70	1:00:03	52.1	67.9 UNR	56	39
71	1:10:03	55.1	71.9 UNR	57	39
72	1:20:03	51.5	69.5 UNR	49	39
73	1:30:03	48.9	63.8 UNR	49	39
74	1:40:03	47.1	64.5 UNR	43	38
75	1:50:03	56.9	76.9 UNR	53	39
76	2:00:03	49.5	61.9 UNR	53	39
77	2:10:03	48.8	65.8 UNR	43	39
78	2:20:03	50.7	70.6 UNR	50	38
79	2:30:03	51	63.4 UNR	55	39
80	2:40:03	57.5	74.4 UNR	60	38
81	2:50:03	50.9	66.1 UNR	49	38
82	3:00:03	54.4	69.8 UNR	58	39
83	3:10:03	52.8	72.1 UNR	54	38
84	3:20:03	47.1	61.6 UNR	48	39
85	3:30:03	54	70.7 UNR	55	38
86	3:40:03	47.3	63.3 UNR	44	38
87	3:50:03	47.8	64.3 UNR	48	38
88	4:00:03	49.5	65.3 UNR	48	38
89	4:10:03	52.9	64.8 UNR	57	38
90	4:20:03	48.7	62.9 UNR	52	39
91	4:30:03	56.3	74.1 UNR	57	38
92	4:40:03	52.1	71.6 UNR	54	38
93	4:50:03	51	66.7 UNR	53	39
94	5:00:03	56.5	69.7 UNR	61	39
95	5:10:03	53.7	68.7 UNR	57	40
96	5:20:03	53.6	70.8 UNR	57	41
97	5:30:03	53.4	66.6 UNR	58	41
98	5:40:03	55.4	69.6 UNR	60	43

99	5:50:03	56.9	69.1 UNR	62	43
100	6:00:03	57.4	68.3 UNR	62	43
101	6:10:03	59.2	70.9 UNR	63	44
102	6:20:03	60.2	74.9 UNR	63	45
103	6:30:03	62.3	76.8 UNR	66	47
104	6:40:03	61.7	74.3 UNR	65	48
105	6:50:03	62.3	76.3 UNR	66	48
106	7:00:03	62.4	78.4 UNR	65	47
107	7:10:03	63.6	76.3 UNR	66	49
108	7:20:03	62.4	76.9 UNR	65	48
109	7:30:03	64.8	79.6 UNR	67	50
110	7:40:03	61.9	76.3 UNR	65	50
111	7:50:03	65.5	74.8 UNR	69	53
112	8:00:03	61.1	69.4 UNR	65	49
113	8:10:03	61.9	74.8 UNR	65	48
114	8:20:03	61.4	71.3 UNR	65	45
115	8:30:03	60.2	70 UNR	64	46
116	8:40:03	62.5	74.5 UNR	65	48
117	8:50:03	61.9	76.3 UNR	64	46
118	9:00:03	61.1	75.1 UNR	64	47
119	9:10:03	64.4	76.3 UNR	68	48
120	9:20:03	63.3	75.5 UNR	66	48
121	9:30:03	62.3	75 UNR	66	43
122	9:40:03	61.5	74.5 UNR	64	45
123	9:50:03	62.2	73.6 UNR	65	47
124	10:00:03	62	75.1 UNR	65	45
125	10:10:03	62.5	72.9 UNR	66	45
126	10:20:03	62.7	75.7 UNR	65	44
127	10:30:03	63.8	77.5 UNR	66	46
128	10:40:03	63.3	76.8 UNR	66	48
129	10:50:03	61.4	73.7 UNR	65	44
130	11:00:03	63.9	76.5 UNR	67	50
131	11:10:03	62.3	75 UNR	65	46
132	11:20:03	61.6	75.1 UNR	64	47
133	11:30:03	60.4	72.1 UNR	64	45
134	11:40:03	64.4	78.2 UNR	68	48
135	11:50:03	61.9	73.2 UNR	65	47
136	12:00:03	62.6	75 UNR	66	48
137	12:10:03	63.6	76.2 UNR	67	47
138	12:20:03	62	76 UNR	65	45
139	12:30:03	62.7	75.6 UNR	66	46
140	12:40:03	61.9	75.6 UNR	65	44
141	12:50:03	62.5	73.3 UNR	66	45
142	13:00:03	62.5	75.2 UNR	65	47
143	13:10:03	63.4	76 UNR	67	46
144	13:20:03	62.1	73.4 UNR	65	46

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

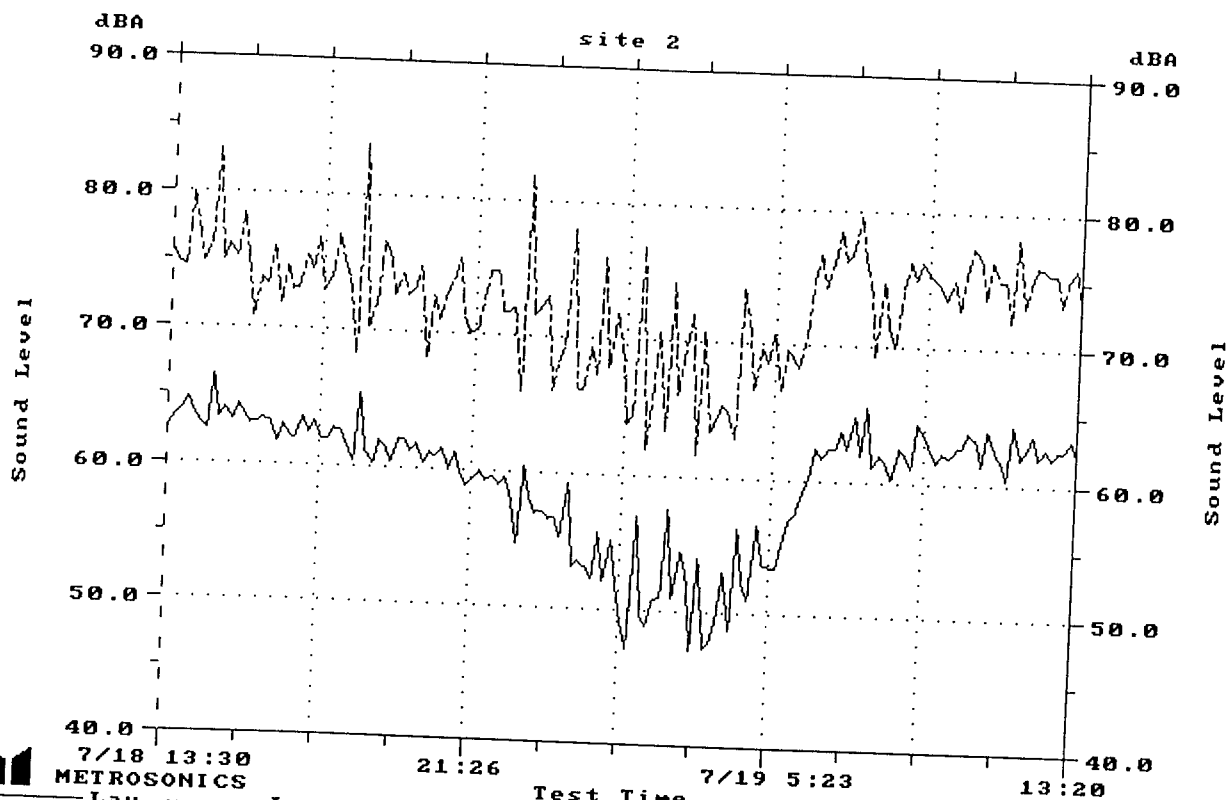
38	36659 ***	2.65
39	79903 *****	5.78
40	59709 ****	4.32
41	43359 ***	3.14
42	35553 ***	2.57
43	33618 **	2.43
44	32105 **	2.32
45	30530 **	2.21
46	30861 **	2.23
47	31008 **	2.24
48	32927 **	2.38
49	32329 **	2.34
50	34308 **	2.48
51	34718 ***	2.51
52	37057 ***	2.68
53	38939 ***	2.82
54	40122 ***	2.9
55	44506 ***	3.22
56	47947 ***	3.47
57	52419 ****	3.79
58	58280 ****	4.22
59	65368 *****	4.73
60	69558 *****	5.03
61	69978 *****	5.06
62	68037 *****	4.92
63	61465 ****	4.45
64	49577 ****	3.59
65	40046 ***	2.9
66	28054 **	2.03
67	17904 *	1.3
68	12601 *	0.91
69	9459 *	0.68
70	7030 *	0.51
71	5246 +	0.38
72	3751 +	0.27
73	2984 +	0.22
74	2157 +	0.16
75	1121 .	0.08
76	596 .	0.04
77	240 .	0.02
78	149 .	0.01
79	94 .	0.01
80	34 .	0
81	33 .	0

82	22 .	0
83	39 .	0

$L_n(0.0) = 83\text{dB}$
 $L_n(10.0) = 64\text{dB}$
 $L_n(50.0) = 55\text{dB}$
 $L_n(90.9) = 40\text{dB}$

	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF
L _{dod}	59.3dB	38.9dB	38.9dB
L _{sha}	58.4dB	38.9dB	38.9dB
L _{eq} (6)	57.7dB	38.9dB	38.9dB

Filename.....31002
 Logger.....db-3100 SN 3181
 Test Location.....site 2
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor 3181
 Comment Field 2...1330 to 1330
 Numeric Code #1... #2... #3... #4... #5...



Test Time
 ^ Lpk (†=Off Scale; *=Over Range)
 Lav = 62.7dB Lmax = 75.8dB
 Lpk = Under Range



Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTAR FACILITY
 Date: 7/18/01
 Day of week: WED

Time: 12:30
 Site I.D. No: 3
 Monitor No: 3290
 Downloaded File No: 31003

Collection Site Address: _____
SOUTH END OF DSC PROPERTY
JEFFERSON AVE + KING RD

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other

Photos +4

(DSC PROPERTY)

Measurement Data

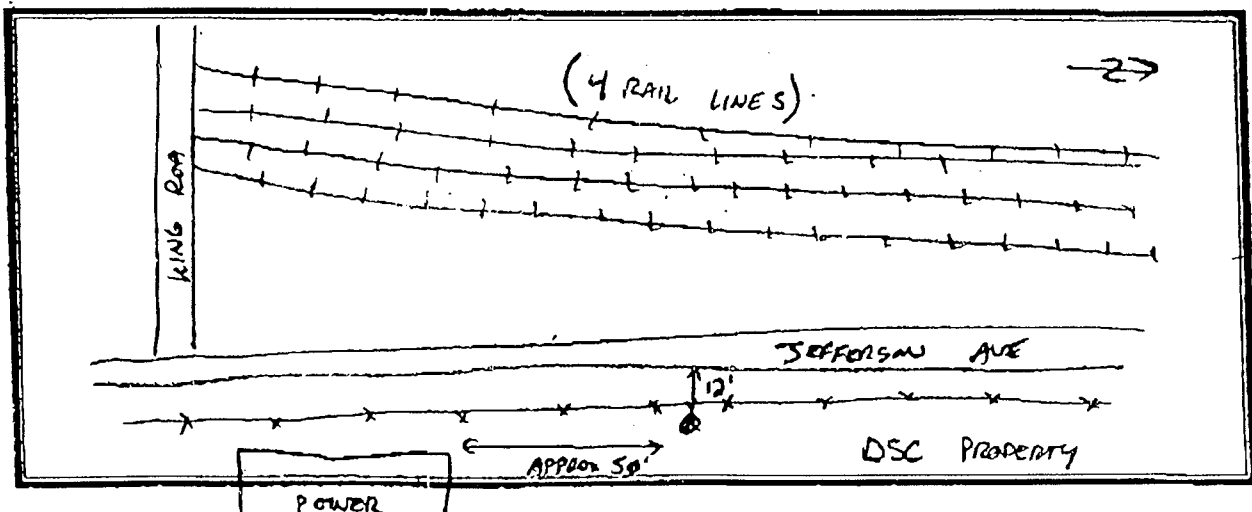
SLM Calibration: Before 102.0 After -
 Time of Collection: Start 13:30 Stop 13:30 Total 24 hrs
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-7 MPH Clouds PT CLOUDY

Traffic Count Data SEE SITE 1

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name _____	Name _____	Name _____	Name _____
Auto _____	Auto _____	Auto _____	Auto _____
M.T. _____	M.T. _____	M.T. _____	M.T. _____
H.T. _____	H.T. _____	H.T. _____	H.T. _____
Bus _____	Bus _____	Bus _____	Bus _____
Motos _____	Motos _____	Motos _____	Motos _____

Comments _____

Site Location Map (Include North Arrow)



File Name.....31003
Test Location.....site 3
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 3290
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 3290 V1.7
REPORT PRINTED 08/10/01 AT 11:35:10

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION RANGE... 38.6dB TO 138.6dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/18/01 AT 13:30:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/19/01 AT 13:30:03
TEST INTERRUPTIONS...1

Lav..... 64.6dB
Lav (80)..... 58.0dB Lav (90)..... 46.4dB
SEL.....113.8dB
TWA..... 69.4dB
TWA (80)..... 62.8dB TWA (90)..... 51.2dB
Lmax..... 93.3dB ON 7/18/01 AT 15:24:51
Lpk.....118.4dB ON 7/18/01 AT 15:24:51
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.18%
8 HR % DOSE (90dB CUTOFF)..... 0.01%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/18/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
-----	------	-----	-----	-----	----	----

1	13:30:03	65.7	80.8 UNR	70	54
2	13:40:03	67.2	85.1 UNR	70	56
3	13:50:03	66.9	82.3 UNR	70	56
4	14:00:03	66.6	82.4 UNR	70	55
5	14:10:03	64.8	76.3 UNR	69	53
6	14:20:03	65.3	77.3 UNR	69	53
7	14:30:03	67.6	84.4 UNR	71	54
8	14:40:03	69.1	86.9 UNR	71	54
9	14:50:03	65.7	80.3 UNR	70	52
10	15:00:03	66.9	83.8 UNR	70	53
11	15:10:03	66.8	81.9 UNR	71	53
12	15:20:03	70.6	93.3 118.4	71	53
13	15:30:03	67.7	79.4 UNR	72	58
14	15:40:03	67.2	83.9 UNR	71	53
15	15:50:03	66.3	82.2 UNR	70	52
16	16:00:03	66.3	82.8 UNR	70	54
17	16:10:03	67	83.8 UNR	70	53
18	16:20:03	66.1	85 UNR	69	52
19	16:30:03	68.5	83.3 UNR	71	53
20	16:40:03	64	74.7 UNR	68	53
21	16:50:03	65.7	81.3 UNR	70	53
22	17:00:03	64.6	78.7 UNR	69	53
23	17:10:03	64.8	79.9 UNR	69	53
24	17:20:03	65.7	78 UNR	70	53
25	17:30:03	65.6	79.8 UNR	69	53
26	17:40:03	66.4	81.8 UNR	70	53
27	17:50:03	65.8	82.8 UNR	70	53
28	18:00:03	65.4	81.7 UNR	70	52
29	18:10:03	63.3	76.9 UNR	68	52
30	18:20:03	62.4	74.7 UNR	67	52
31	18:30:03	64.1	75.3 UNR	69	52
32	18:40:03	63.3	75.9 UNR	68	52
33	18:50:03	62	75.9 UNR	66	51
34	19:00:03	62.3	75.4 UNR	66	51
35	19:10:03	66.1	86.8 UNR	68	52
36	19:20:03	61.9	74.9 UNR	66	51
37	19:30:03	69.7	91.2 UNR	69	52
38	19:40:03	64.6	83.5 UNR	68	51
39	19:50:03	63.1	82.1 UNR	67	51
40	20:00:03	61.9	75.2 UNR	66	51
41	20:10:03	63.6	77.9 UNR	68	51
42	20:20:03	63.5	76.3 UNR	69	51
43	20:30:03	65.9	83.4 UNR	69	51
44	20:40:03	61.6	77.1 UNR	65	51
45	20:50:03	66.5	87.3 112.2	68	52
46	21:00:03	64.2	81.7 UNR	67	51
47	21:10:03	62.5	74.2 UNR	66	51
48	21:20:03	61.8	77.9 UNR	65	51
49	21:30:03	61	72.7 UNR	65	51

50	21:40:03	62.7	77.8 UNR	66	51
51	21:50:03	58.8	74.5 UNR	59	51
52	22:00:03	65.6	84.2 UNR	67	51
53	22:10:03	61	77.5 UNR	64	51
54	22:20:03	59.6	73.5 UNR	62	51
55	22:30:03	59.8	74.3 UNR	62	51
56	22:40:03	58.9	72.1 UNR	62	51
57	22:50:03	59.9	77 UNR	62	51
58	23:00:03	65.8	87.8 UNR	63	51
59	23:10:03	61.4	81.2 UNR	61	51
60	23:20:03	57.2	70.3 UNR	59	51
61	23:30:03	59.2	72.4 UNR	62	50
62	23:40:03	58.1	74.8 UNR	59	50
63	23:50:03	54.4	69.4 UNR	55	50
64	0:00:03	63	84.2 UNR	60	51
65	0:10:03	59.6	79.1 UNR	58	51
66	0:20:03	58.2	75.6 UNR	59	50
67	0:30:03	52.8	68.5 UNR	53	50
68	0:40:03	53.1	71.4 UNR	51	50
69	0:50:03	64.5	83.5 UNR	59	50
70	1:00:03	55	74.1 UNR	54	50
71	1:10:03	57.3	79.8 UNR	55	50
72	1:20:03	55.5	75.7 UNR	53	50
73	1:30:03	65	85.3 UNR	55	51
74	1:40:03	52.1	58.6 UNR	52	51
75	1:50:03	55.2	70.4 UNR	56	51
76	2:00:03	54.6	73.3 UNR	56	51
77	2:10:03	52.9	69.8 UNR	52	50
78	2:20:03	54.9	71.5 UNR	53	50
79	2:30:03	55.6	72.6 UNR	54	50
80	2:40:03	58.6	80.1 UNR	55	51
81	2:50:03	54.3	72.3 UNR	52	50
82	3:00:03	54.4	68.9 UNR	54	50
83	3:10:03	56.1	77.1 UNR	52	51
84	3:20:03	51.6	58.1 UNR	52	51
85	3:30:03	56.4	75.9 UNR	53	51
86	3:40:03	54	72.6 UNR	51	50
87	3:50:03	53.8	74.1 UNR	53	51
88	4:00:03	60.2	77.4 UNR	62	50
89	4:10:03	54.2	74.7 UNR	52	50
90	4:20:03	56.9	79.1 UNR	53	50
91	4:30:03	56.2	73.7 UNR	54	50
92	4:40:03	56.6	72.1 UNR	56	50
93	4:50:03	56.1	72.9 UNR	54	50
94	5:00:03	56.1	72.3 UNR	57	50
95	5:10:03	61.2	79.3 UNR	57	51
96	5:20:03	52.7	69.4 UNR	52	50
97	5:30:03	58.4	75 UNR	60	51
98	5:40:03	58.9	75.1 UNR	59	50

99	5:50:03	58.7	78.5 UNR	58	50
100	6:00:03	61.3	74.7 UNR	64	52
101	6:10:03	62.6	81.2 UNR	64	52
102	6:20:03	64	81.8 UNR	68	52
103	6:30:03	63.6	77.3 UNR	68	52
104	6:40:03	63.5	78 UNR	68	52
105	6:50:03	64.3	80.1 UNR	68	53
106	7:00:03	63.9	79.6 UNR	68	53
107	7:10:03	64.1	76.6 UNR	69	52
108	7:20:03	62.6	75 UNR	67	53
109	7:30:03	68.2	85.9 UNR	70	54
110	7:40:03	66.9	81.2 UNR	71	53
111	7:50:03	68.6	89.5 UNR	70	53
112	8:00:03	64.5	79.9 UNR	69	53
113	8:10:03	64.4	75.1 UNR	69	53
114	8:20:03	66.6	83.8 UNR	70	53
115	8:30:03	67.1	85 UNR	69	52
116	8:40:03	66.8	83.7 UNR	70	53
117	8:50:03	64.3	80.5 UNR	68	52
118	9:00:03	64.6	76.9 UNR	69	54
119	9:10:03	64.9	81.4 UNR	68	53
120	9:20:03	67.3	89.5 UNR	67	52
121	9:30:03	66.6	81 118.1	70	54
122	9:40:03	63.3	76.4 UNR	68	52
123	9:50:03	65.5	80.2 UNR	69	52
124	10:00:03	65.9	82.1 UNR	69	52
125	10:10:03	67.7	85.3 UNR	70	54
126	10:20:03	68.7	83.1 UNR	71	52
127	10:30:03	68.9	89.6 111.2	71	52
128	10:40:03	66.6	83.3 UNR	70	53
129	10:50:03	67.6	85.1 UNR	71	52
130	11:00:03	67.2	86 UNR	69	52
131	11:10:03	64.8	81 UNR	68	53
132	11:20:03	69.5	86.6 UNR	73	53
133	11:30:03	63.9	80.9 UNR	68	53
134	11:40:03	68.4	85.6 UNR	72	53
135	11:50:03	63.8	75.5 UNR	68	52
136	12:00:03	69.8	90.1 UNR	70	52
137	12:10:03	65.4	81.1 UNR	69	52
138	12:20:03	65	77.1 UNR	70	51
139	12:30:03	64.7	82.2 UNR	68	52
140	12:40:03	67.1	85.6 UNR	69	52
141	12:50:03	64.3	78.6 UNR	68	51
142	13:00:03	64.7	81.2 UNR	68	53
143	13:10:03	67.5	82.9 UNR	69	53
144	13:20:03	69.5	88.4 UNR	71	53

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

50	77123	*****	5.58
51	258548	*****	18.7
52	120837	*****	8.74
53	100833	*****	7.29
54	86715	*****	6.27
55	79711	*****	5.77
56	73439	*****	5.31
57	69159	*****	5
58	64583	*****	4.67
59	57138	****	4.13
60	47714	***	3.45
61	40144	***	2.9
62	32912	**	2.38
63	29176	**	2.11
64	25742	**	1.86
65	25379	**	1.84
66	25320	**	1.83
67	25967	**	1.88
68	26391	**	1.91
69	26335	**	1.91
70	23999	**	1.74
71	19593	*	1.42
72	14568	*	1.05
73	9772	*	0.71
74	6041	+	0.44
75	3568	+	0.26
76	2716	+	0.2
77	1956	+	0.14
78	1638	+	0.12
79	1355	.	0.1
80	1166	.	0.08
81	892	.	0.06
82	691	.	0.05
83	474	.	0.03
84	245	.	0.02
85	202	.	0.01
86	110	.	0.01
87	80	.	0.01
88	63	.	0
89	60	.	0
90	24	.	0
91	13	.	0
92	6	.	0
93	2	.	0

$L_n(0.0) = 93\text{dB}$

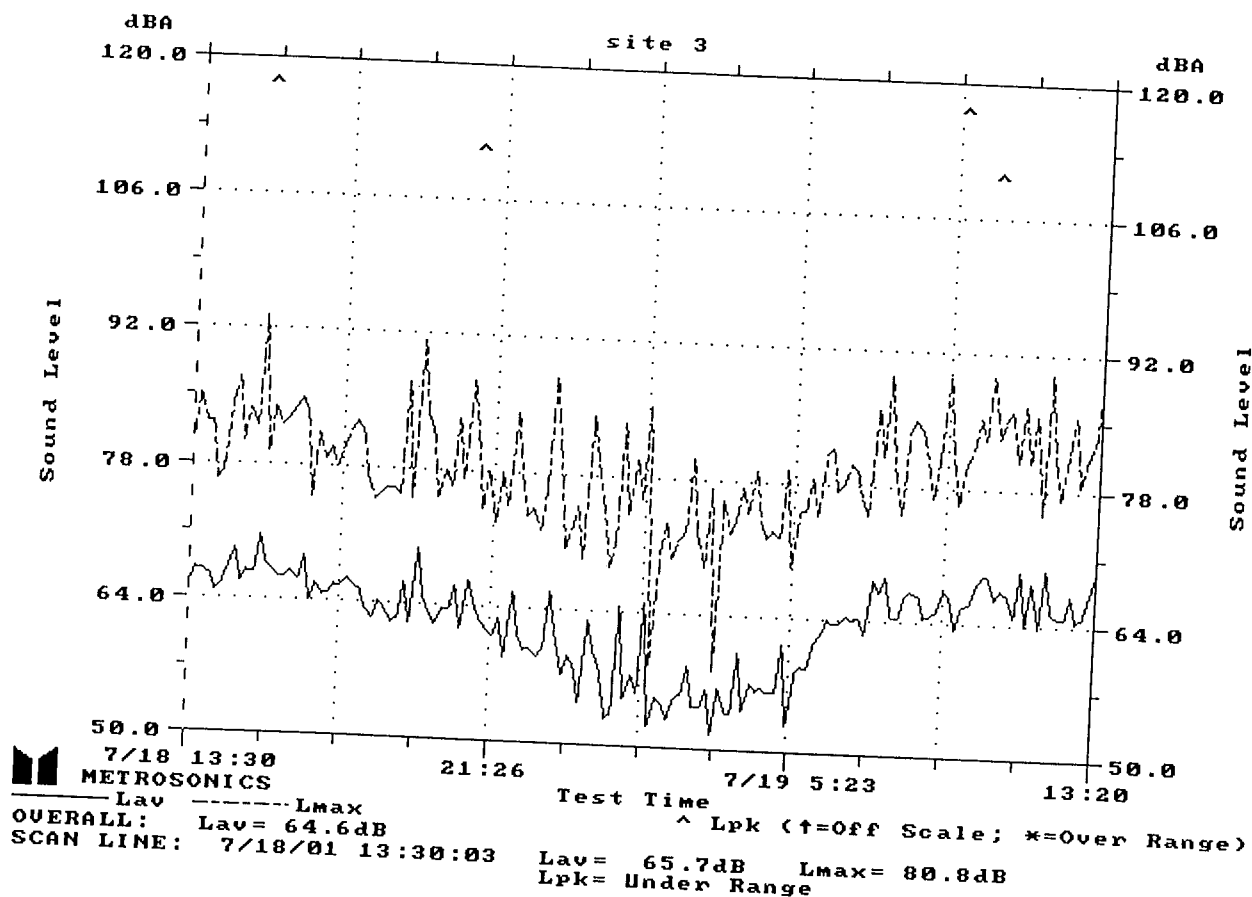
$L_n(10.0) = 68\text{dB}$

$L_n(50.0) = 55\text{dB}$

$L_n(90.9) = 51\text{dB}$

	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF
L _{dod}	62.2dB	49.0dB	38.6dB
L _{osha}	61.0dB	40.4dB	38.6dB
L _{eq(6)}	60.2dB	38.6dB	38.6dB

Filename.....31003
Logger.....db-3100 SN 3290
Test Location.....site 3
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 3290
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTRR FACILITY
 Date: 7/18/01
 Day of week: Wed

Time: 12:30
 Site I.D. No: 4
 Monitor No: 6930
 Downloaded File No: 31004

Collection Site Address: _____
9510 HORSESHOE RMD

Land Use Classification: ☒ Residential
☐ Religious
☐ Commercial
☐ Educational
☐ Other

Photos +5 (4 of Property)

Measurement Data

SLM Calibration: Before 102.0 After -
 Time of Collection: Start 13:30 Stop 13:30 Total 21 hrs
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 MPH Clouds PT CLOUDY

Traffic Count Data SEE SITE 1

Roadway #1
 Name _____
 Auto _____
 M.T. _____
 H.T. _____
 Bus _____
 Motos _____

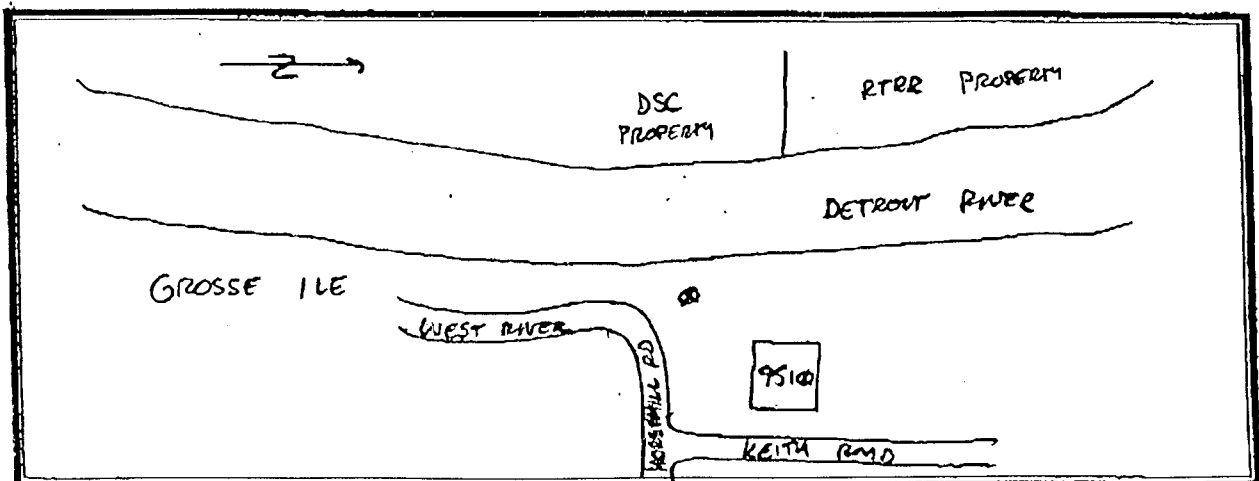
Roadway #2
 Name _____
 Auto _____
 M.T. _____
 H.T. _____
 Bus _____
 Motos _____

Roadway #3
 Name _____
 Auto _____
 M.T. _____
 H.T. _____
 Bus _____
 Motos _____

Roadway #4
 Name _____
 Auto _____
 M.T. _____
 H.T. _____
 Bus _____
 Motos _____

Comments _____

Site Location Map (Include North Arrow)



File Name.....31004
Test Location.....site 4
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 6930
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 6930 V1.7
REPORT PRINTED 08/10/01 AT 11:35:16

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION RANGE... 39.0dB TO 139.0dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/18/01 AT 13:30:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/19/01 AT 13:30:03
TEST INTERRUPTIONS...1

Lav..... 50.4dB
Lav (80)..... 39.0dB Lav (90)..... 39.0dB
SEL..... 99.6dB
TWA..... 55.1dB
TWA (80)..... 39.0dB TWA (90)..... 39.0dB
Lmax..... 75.3dB ON 7/18/01 AT 18:46:24
Lpk.....116.6dB ON 7/18/01 AT 13:30:03
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.00%
8 HR % DOSE (90dB CUTOFF)..... 0.00%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/18/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
-----	------	-----	-----	-----	----	----

1	13:30:03	49.4	58	116.6	52	44
2	13:40:03	53.4	62.1 UNR		56	48
3	13:50:03	52.1	61 UNR		54	48
4	14:00:03	49.6	58.3 UNR		52	46
5	14:10:03	52.6	61.2 UNR		55	47
6	14:20:03	53	62.1 UNR		56	47
7	14:30:03	52.4	62.5 UNR		55	47
8	14:40:03	52.3	61.3 UNR		55	47
9	14:50:03	51.3	63.5 UNR		54	44
10	15:00:03	50.9	71.7 UNR		53	41
11	15:10:03	52	60.2 UNR		55	46
12	15:20:03	50.7	59.2 UNR		54	46
13	15:30:03	48.4	60.5 UNR		50	42
14	15:40:03	49.4	59.9 UNR		53	41
15	15:50:03	49.2	57.7 UNR		53	42
16	16:00:03	53.9	62.8 UNR		58	42
17	16:10:03	51.1	62.2 UNR		55	40
18	16:20:03	48.8	60.7 UNR		52	39
19	16:30:03	52.8	61.9 UNR		57	43
20	16:40:03	46.6	58.5 UNR		50	39
21	16:50:03	46.5	58.3 UNR		49	39
22	17:00:03	46.4	57.7 UNR		50	39
23	17:10:03	48.7	59.6 UNR		53	39
24	17:20:03	50.6	63.5 UNR		53	39
25	17:30:03	48.3	57.9 UNR		51	42
26	17:40:03	51.7	61.9 UNR		55	41
27	17:50:03	53.6	66.7 UNR		56	43
28	18:00:03	48	59.5 UNR		51	39
29	18:10:03	55.7	69.3 UNR		60	40
30	18:20:03	48.2	61.4 UNR		51	39
31	18:30:03	51.9	59.3 UNR		56	43
32	18:40:03	58.3	75.3 UNR		59	41
33	18:50:03	50.8	61.6 UNR		53	44
34	19:00:03	52	62 UNR		55	40
35	19:10:03	54.4	69 UNR		55	44
36	19:20:03	58.3	70 UNR		61	51
37	19:30:03	55.1	68.5 UNR		58	41
38	19:40:03	52	63.9 UNR		54	41
39	19:50:03	53	60.8 UNR		57	44
40	20:00:03	48.1	62.6 UNR		52	39
41	20:10:03	55.8	75.1 UNR		55	40
42	20:20:03	57	64.2 UNR		60	49
43	20:30:03	54.9	66 UNR		57	46
44	20:40:03	57	66.1 UNR		60	48
45	20:50:03	55.4	65.8 UNR		58	47
46	21:00:03	56.8	67.7 UNR		59	44
47	21:10:03	50.8	66.7 UNR		52	40
48	21:20:03	49.4	57.8 UNR		54	39
49	21:30:03	57	68.9 UNR		60	39

50	21:40:03	50.5	60.6 UNR	54	39
51	21:50:03	50.1	60.5 UNR	54	39
52	22:00:03	50	61.2 UNR	52	39
53	22:10:03	41.3	49.5 UNR	44	39
54	22:20:03	47.9	60.4 UNR	51	39
55	22:30:03	47.5	59.1 UNR	51	39
56	22:40:03	40.4	47.8 UNR	43	39
57	22:50:03	47.1	57.1 UNR	51	39
58	23:00:03	40.4	50.3 UNR	41	39
59	23:10:03	41	50.5 UNR	42	39
60	23:20:03	42.9	56.5 UNR	43	39
61	23:30:03	42.6	58.2 UNR	41	39
62	23:40:03	40.4	53.5 UNR	39	39
63	23:50:03	39.7	52.4 UNR	39	39
64	0:00:03	42.2	60.8 UNR	41	39
65	0:10:03	40.2	49.2 UNR	40	39
66	0:20:03	45.3	70.2 UNR	39	39
67	0:30:03	39.8	52.3 UNR	39	39
68	0:40:03	40.8	57.9 UNR	39	39
69	0:50:03	48	65 UNR	51	39
70	1:00:03	40.3	51.4 UNR	41	39
71	1:10:03	39	43.5 UNR	39	39
72	1:20:03	39.6	46.7 UNR	40	39
73	1:30:03	40.7	54.4 UNR	39	39
74	1:40:03	40.3	50.3 UNR	39	39
75	1:50:03	52.4	67.4 UNR	54	39
76	2:00:03	43.8	56.1 UNR	46	39
77	2:10:03	40.2	51.3 UNR	41	39
78	2:20:03	39.4	48.4 UNR	39	39
79	2:30:03	39	39 UNR	39	39
80	2:40:03	39.2	47 UNR	39	39
81	2:50:03	39	39 UNR	39	39
82	3:00:03	39.1	42.7 UNR	39	39
83	3:10:03	39.8	50.6 UNR	39	39
84	3:20:03	39.6	49.1 UNR	39	39
85	3:30:03	39.3	46.6 UNR	39	39
86	3:40:03	39	39 UNR	39	39
87	3:50:03	41.5	55.1 UNR	41	39
88	4:00:03	39.2	45.6 UNR	39	39
89	4:10:03	40.3	52.9 UNR	40	39
90	4:20:03	39.6	50.6 UNR	39	39
91	4:30:03	39	42.6 UNR	39	39
92	4:40:03	40	51.3 UNR	39	39
93	4:50:03	44.7	56.1 UNR	48	39
94	5:00:03	46.6	61.2 UNR	49	39
95	5:10:03	39.6	47.9 UNR	39	39
96	5:20:03	46	63.7 UNR	44	39
97	5:30:03	39.4	48.2 UNR	39	39
98	5:40:03	40.9	49.3 UNR	41	39

99	5:50:03	43.4	60.3 UNR	43	39
100	6:00:03	42.3	56.1 UNR	43	39
101	6:10:03	44.4	54.9 UNR	47	40
102	6:20:03	44.9	62.7 UNR	44	40
103	6:30:03	46.5	56.6 UNR	50	40
104	6:40:03	42.6	50.3 UNR	46	39
105	6:50:03	52.3	70.3 UNR	55	40
106	7:00:03	54.1	61.7 UNR	57	48
107	7:10:03	47.7	62.3 UNR	52	41
108	7:20:03	48.4	59.5 UNR	50	43
109	7:30:03	51	65.4 UNR	53	42
110	7:40:03	51	69.3 UNR	52	41
111	7:50:03	46.8	64.3 UNR	48	40
112	8:00:03	44	51.3 UNR	46	40
113	8:10:03	43.9	52 UNR	46	40
114	8:20:03	49	70.7 UNR	50	41
115	8:30:03	51.4	68 UNR	53	43
116	8:40:03	50.7	63.5 UNR	53	41
117	8:50:03	47.4	57.9 UNR	50	41
118	9:00:03	47.6	60 UNR	50	42
119	9:10:03	56	75.1 UNR	51	41
120	9:20:03	46	57.1 UNR	50	39
121	9:30:03	46.4	62.3 UNR	49	39
122	9:40:03	44.9	59.1 UNR	48	39
123	9:50:03	48	57.9 UNR	50	39
124	10:00:03	51.5	63.3 UNR	56	39
125	10:10:03	51.7	65.6 UNR	54	42
126	10:20:03	46.9	55.3 UNR	51	39
127	10:30:03	46.6	55.5 UNR	51	39
128	10:40:03	48.9	59.2 UNR	53	40
129	10:50:03	41.4	52.9 UNR	44	39
130	11:00:03	49.8	60.6 UNR	53	40
131	11:10:03	51.6	62.9 UNR	56	39
132	11:20:03	53.6	68.3 UNR	57	39
133	11:30:03	54.8	65.9 UNR	59	39
134	11:40:03	50	64.8 UNR	52	39
135	11:50:03	55.2	69.7 UNR	56	43
136	12:00:03	52.5	65.1 UNR	56	39
137	12:10:03	49.5	63.6 UNR	52	39
138	12:20:03	43.1	51.9 UNR	46	39
139	12:30:03	48.6	57.4 UNR	53	39
140	12:40:03	48.2	66.2 UNR	50	39
141	12:50:03	44.1	52.4 UNR	47	39
142	13:00:03	46.7	56.3 UNR	50	40
143	13:10:03	46.4	56.4 UNR	49	40
144	13:20:03	51.1	62.6 UNR	54	39

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

39	463124	*****	33.5
40	72004	*****	5.21
41	73892	*****	5.35
42	64105	*****	4.64
43	62893	*****	4.55
44	61457	****	4.45
45	56785	****	4.11
46	58558	****	4.24
47	64908	*****	4.7
48	58600	****	4.24
49	53757	****	3.89
50	50002	****	3.62
51	43236	***	3.13
52	38238	***	2.77
53	32536	**	2.35
54	27962	**	2.02
55	25076	**	1.81
56	19965	*	1.44
57	16688	*	1.21
58	10540	*	0.76
59	8028	*	0.58
60	5682	+	0.41
61	4256	+	0.31
62	3071	+	0.22
63	2296	+	0.17
64	1433	+	0.1
65	996	.	0.07
66	686	.	0.05
67	528	.	0.04
68	489	.	0.04
69	202	.	0.01
70	78	.	0.01
71	49	.	0
72	78	.	0.01
73	83	.	0.01
74	93	.	0.01
75	26	.	0

Ln(0.0) = 75dB

Ln(10.0) = 53dB

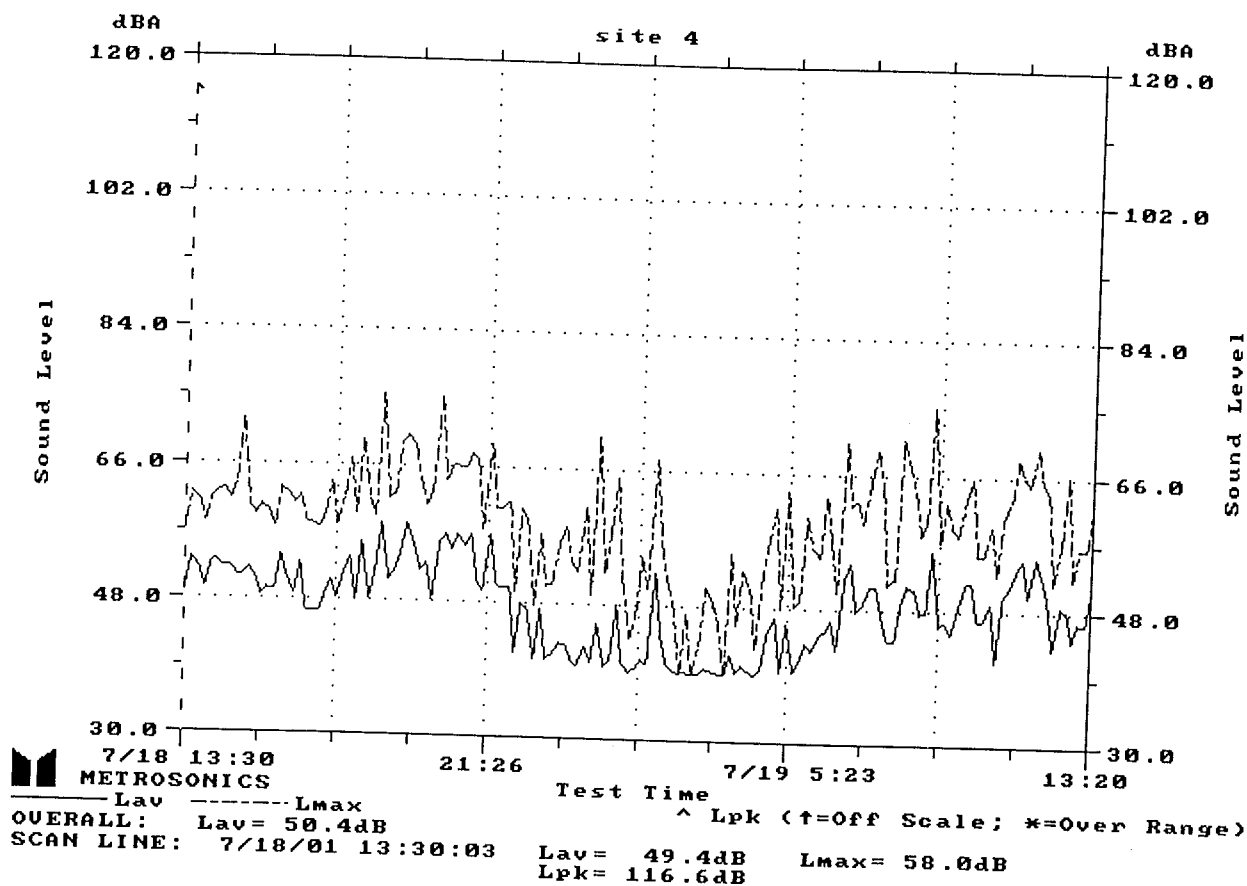
Ln(50.0) = 43dB

Ln(90.9) = 39dB

NO 80.0dB 90.0dB

	CUTOFF	CUTOFF	CUTOFF
Ldod	48.4dB	39.0dB	39.0dB
Losha	47.5dB	39.0dB	39.0dB
Leq(6)	46.9dB	39.0dB	39.0dB

Filename.....31004
Logger.....db-3100 SN 6930
Test Location.....site 4
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 6930
Comment Field 2...1330 to 1330
Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTRR FACILITY
 Date: 7/19/01
 Day of week: THURS

Time: 14:00
 Site I.D. No: 8
 Monitor No: 6926
 Downloaded File No: 31005

Collection Site Address: CITY OF TRENTON
J.F. KENNEDY RECREATION CENTER
(ACROSS FROM TRENTON HIGH SCHOOL)

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other (REC CENTER)

Photos +3

Measurement Data

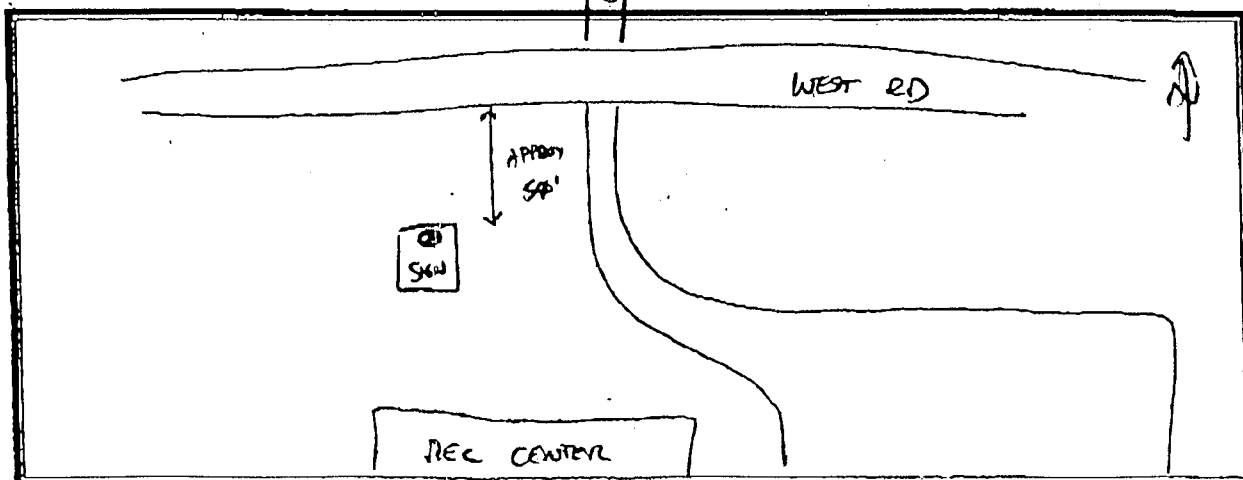
SLM Calibration: Before 100.0 After -
 Time of Collection: Start 15:00 Stop 15:00 Total 24 HOURS
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 MPH Clouds PT CLOUDS

Traffic Count Data 30 MIN COUNT

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name <u>WEST RD E</u>	Name <u>WEST RD W</u>	Name _____	Name _____
Auto <u>497</u>	Auto <u>494</u>	Auto _____	Auto _____
M.T. <u>12</u>	M.T. <u>6</u>	M.T. _____	M.T. _____
H.T. <u>2</u>	H.T. <u>3</u>	H.T. _____	H.T. _____
Bus <u>0</u>	Bus <u>0</u>	Bus _____	Bus _____
Motos <u>4</u>	Motos <u>4</u>	Motos _____	Motos _____

Comments TRAFFIC COUNT FROM 15:30 TO 16:00 ON 7/19/01

Site Location Map (Include North Arrow)



File Name.....31005
Test Location.....site 5
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 6930
Comment Field 2...1500 to 1500
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 6930 V1.7
REPORT PRINTED 08/10/01 AT 11:35:25

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION TIME.... 7/19/01 AT 13:54:42
PRE-TEST CALIBRATION RANGE... 38.9dB TO 138.9dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/19/01 AT 15:00:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/20/01 AT 15:00:03
TEST INTERRUPTIONS...1

Lav..... 65.4dB
Lav (80)..... 54.0dB Lav (90)..... 38.9dB
SEL.....114.6dB
TWA..... 70.2dB
TWA (80)..... 58.8dB TWA (90)..... 38.9dB
Lmax..... 89.8dB ON 7/19/01 AT 18:21:18
Lpk.....116.5dB ON 7/19/01 AT 15:00:03
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.07%
8 HR % DOSE (90dB CUTOFF)..... 0.00%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/19/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
	1 15:00:03	66.9		78.6 116.5	69	62
	2 15:10:03	68.5		82.2 UNR	70	61
	3 15:20:03	68.9		77.2 UNR	71	64
	4 15:30:03	66.3		75.6 UNR	69	60
	5 15:40:03	65.5		74 UNR	68	60
	6 15:50:03	65.2		77.3 UNR	67	59
	7 16:00:03	66.8		81.1 UNR	69	60
	8 16:10:03	66.2		79 UNR	68	59
	9 16:20:03	65.7		79.6 UNR	67	60
	10 16:30:03	65.6		75 UNR	68	60
	11 16:40:03	66.8		79.7 UNR	69	60
	12 16:50:03	66.8		77.1 UNR	69	59
	13 17:00:03	68.1		85.2 UNR	70	61
	14 17:10:03	64.8		73.3 UNR	68	58
	15 17:20:03	67.2		80.2 UNR	69	59
	16 17:30:03	65.7		76.3 UNR	68	59
	17 17:40:03	64.8		77.8 UNR	67	58
	18 17:50:03	67.1		80.6 UNR	70	60
	19 18:00:03	67		81.8 UNR	70	59
	20 18:10:03	66.6		79.3 113.8	69	60
	21 18:20:03	70.2		89.8 116.3	71	59
	22 18:30:03	65.8		80.9 UNR	68	59
	23 18:40:03	65.9		81.6 UNR	68	56
	24 18:50:03	66.9		83.4 UNR	68	59
	25 19:00:03	65.2		76.3 UNR	68	58
	26 19:10:03	66.9		82.4 UNR	68	58
	27 19:20:03	67		81.3 UNR	70	59
	28 19:30:03	66		81.4 UNR	68	57
	29 19:40:03	65.5		77.4 UNR	68	58
	30 19:50:03	69.3		87.5 113.2	69	58
	31 20:00:03	66.2		75.7 UNR	69	60
	32 20:10:03	66.8		80.8 UNR	69	60
	33 20:20:03	67		83.2 UNR	69	59
	34 20:30:03	67.4		83.5 UNR	69	59
	35 20:40:03	65.6		75.1 UNR	68	57
	36 20:50:03	66.8		78.3 UNR	70	58
	37 21:00:03	68.9		87.3 UNR	70	57
	38 21:10:03	68.9		85.2 UNR	71	58
	39 21:20:03	66.1		80.3 UNR	69	58
	40 21:30:03	68.5		83.5 UNR	70	60
	41 21:40:03	66.3		77 UNR	69	57
	42 21:50:03	66.4		87 114.1	68	55
	43 22:00:03	66.1		77.3 UNR	69	57
	44 22:10:03	68.1		82.4 UNR	71	56
	45 22:20:03	65.8		78.1 UNR	69	56
	46 22:30:03	66.8		80.5 UNR	69	57
	47 22:40:03	68.2		86.1 111.5	70	54
	48 22:50:03	65.1		76.7 UNR	68	53

49	23:00:03	66.5	78.6 UNR	69	56
50	23:10:03	66.7	78.7 UNR	70	55
51	23:20:03	65.1	79.6 UNR	68	54
52	23:30:03	64.1	76.6 UNR	67	53
53	23:40:03	62.2	76.6 UNR	65	51
54	23:50:03	61.9	75.2 UNR	65	52
55	0:00:03	62.8	75.5 UNR	65	51
56	0:10:03	62.1	76.9 UNR	65	50
57	0:20:03	61.4	76.5 UNR	64	48
58	0:30:03	59.7	74.9 UNR	63	48
59	0:40:03	61.3	77.3 UNR	64	49
60	0:50:03	58	73.7 UNR	61	49
61	1:00:03	60.9	78.9 UNR	62	48
62	1:10:03	61.2	77.4 UNR	64	49
63	1:20:03	57	70.6 UNR	60	48
64	1:30:03	61.5	77.8 UNR	65	48
65	1:40:03	63.7	76.9 UNR	66	49
66	1:50:03	60.7	77.4 UNR	59	48
67	2:00:03	59.5	75.9 UNR	60	48
68	2:10:03	61	73.8 UNR	63	48
69	2:20:03	58.3	76.1 UNR	57	47
70	2:30:03	58.3	73.7 UNR	59	48
71	2:40:03	52.9	68.1 UNR	55	47
72	2:50:03	54	70.5 UNR	53	46
73	3:00:03	61.1	77.9 UNR	61	47
74	3:10:03	57.4	76.3 UNR	55	47
75	3:20:03	52.2	65.7 UNR	53	47
76	3:30:03	53.9	73.5 UNR	51	47
77	3:40:03	55	74.7 UNR	53	47
78	3:50:03	56.3	73.3 UNR	56	46
79	4:00:03	49.6	64.3 UNR	51	47
80	4:10:03	52.2	64 UNR	55	47
81	4:20:03	53.4	65.4 UNR	56	47
82	4:30:03	56	71.7 UNR	58	47
83	4:40:03	53.7	68 UNR	57	47
84	4:50:03	57.8	77.8 UNR	56	46
85	5:00:03	53.4	64.2 UNR	57	46
86	5:10:03	56.5	75 UNR	58	46
87	5:20:03	59.1	74.8 UNR	62	49
88	5:30:03	58.6	75.3 UNR	62	47
89	5:40:03	60	72.2 UNR	63	48
90	5:50:03	60	75 UNR	63	50
91	6:00:03	59.6	75.4 UNR	63	49
92	6:10:03	59.3	70.5 UNR	63	50
93	6:20:03	60.7	72.7 UNR	63	53
94	6:30:03	62.1	75.3 UNR	65	53
95	6:40:03	66.5	84.7 111.5	68	55
96	6:50:03	62.5	73.1 UNR	66	54
97	7:00:03	64	72 UNR	69	55

98	7:10:03	64.2	76.7 UNR	67	57
99	7:20:03	64.1	78.5 UNR	67	55
100	7:30:03	63.8	74.1 UNR	66	56
101	7:40:03	67.6	78.7 UNR	70	59
102	7:50:03	66.5	79.4 UNR	69	58
103	8:00:03	65.4	77.1 UNR	68	56
104	8:10:03	66.2	81.3 UNR	69	57
105	8:20:03	68.8	86.1 112.9	71	58
106	8:30:03	65.3	79.3 UNR	68	57
107	8:40:03	65.3	79.2 UNR	67	56
108	8:50:03	66	78.7 UNR	69	56
109	9:00:03	66.3	80.5 UNR	68	56
110	9:10:03	66	81.4 UNR	68	57
111	9:20:03	65.2	76.6 UNR	67	57
112	9:30:03	64.2	74.9 UNR	67	57
113	9:40:03	67.8	81.4 UNR	70	59
114	9:50:03	66.8	79 UNR	69	59
115	10:00:03	67	80.5 UNR	68	58
116	10:10:03	67	81.1 UNR	68	59
117	10:20:03	64.3	73.5 UNR	67	56
118	10:30:03	67.9	81.8 UNR	72	58
119	10:40:03	67.4	84 UNR	68	57
120	10:50:03	66.9	81.1 UNR	69	59
121	11:00:03	66	76.1 UNR	68	59
122	11:10:03	66.7	80.9 UNR	69	58
123	11:20:03	66	77.2 UNR	68	58
124	11:30:03	67.1	85 UNR	67	58
125	11:40:03	66.5	79.6 UNR	68	59
126	11:50:03	67.5	80.2 UNR	70	59
127	12:00:03	65.3	77.5 UNR	68	57
128	12:10:03	65.6	78.3 UNR	68	59
129	12:20:03	65	76.9 UNR	67	57
130	12:30:03	67	78.9 UNR	70	58
131	12:40:03	65.2	80.4 UNR	67	58
132	12:50:03	67.7	81.3 UNR	71	58
133	13:00:03	65.8	75.4 UNR	68	58
134	13:10:03	65.7	74.5 UNR	68	58
135	13:20:03	66.3	78 UNR	68	59
136	13:30:03	68.4	79.9 UNR	71	60
137	13:40:03	66.4	79.6 UNR	69	58
138	13:50:03	65.6	76.4 UNR	68	58
139	14:00:03	66.8	78.1 UNR	69	60
140	14:10:03	67.9	80.2 UNR	70	61
141	14:20:03	66.7	78.4 UNR	69	60
142	14:30:03	65.2	77.7 UNR	68	58
143	14:40:03	66.8	82.9 UNR	68	60
144	14:50:03	67.7	81.3 UNR	70	60

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

45	27 .	0
46	13440 *	0.97
47	61644 ****	4.46
48	50830 ****	3.68
49	35424 ***	2.56
50	27418 **	1.98
51	24821 **	1.8
52	25031 **	1.81
53	25117 **	1.82
54	26555 **	1.92
55	31272 **	2.26
56	38677 ***	2.8
57	45439 ***	3.29
58	51777 ****	3.75
59	61640 ****	4.46
60	72298 *****	5.23
61	81798 *****	5.92
62	93638 *****	6.77
63	102503 *****	7.41
64	97255 *****	7.04
65	98855 *****	7.15
66	85820 *****	6.21
67	68992 *****	4.99
68	50061 ****	3.62
69	31637 **	2.29
70	20829 **	1.51
71	16138 *	1.17
72	11484 *	0.83
73	9307 *	0.67
74	6933 *	0.5
75	5289 +	0.38
76	3858 +	0.28
77	2399 +	0.17
78	1385 +	0.1
79	984 .	0.07
80	705 .	0.05
81	370 .	0.03
82	242 .	0.02
83	180 .	0.01
84	120 .	0.01
85	79 .	0.01
86	52 .	0
87	60 .	0

88	7 .	0
89	10 .	0

$Ln(0.0) = 89\text{dB}$

$Ln(10.0) = 68\text{dB}$

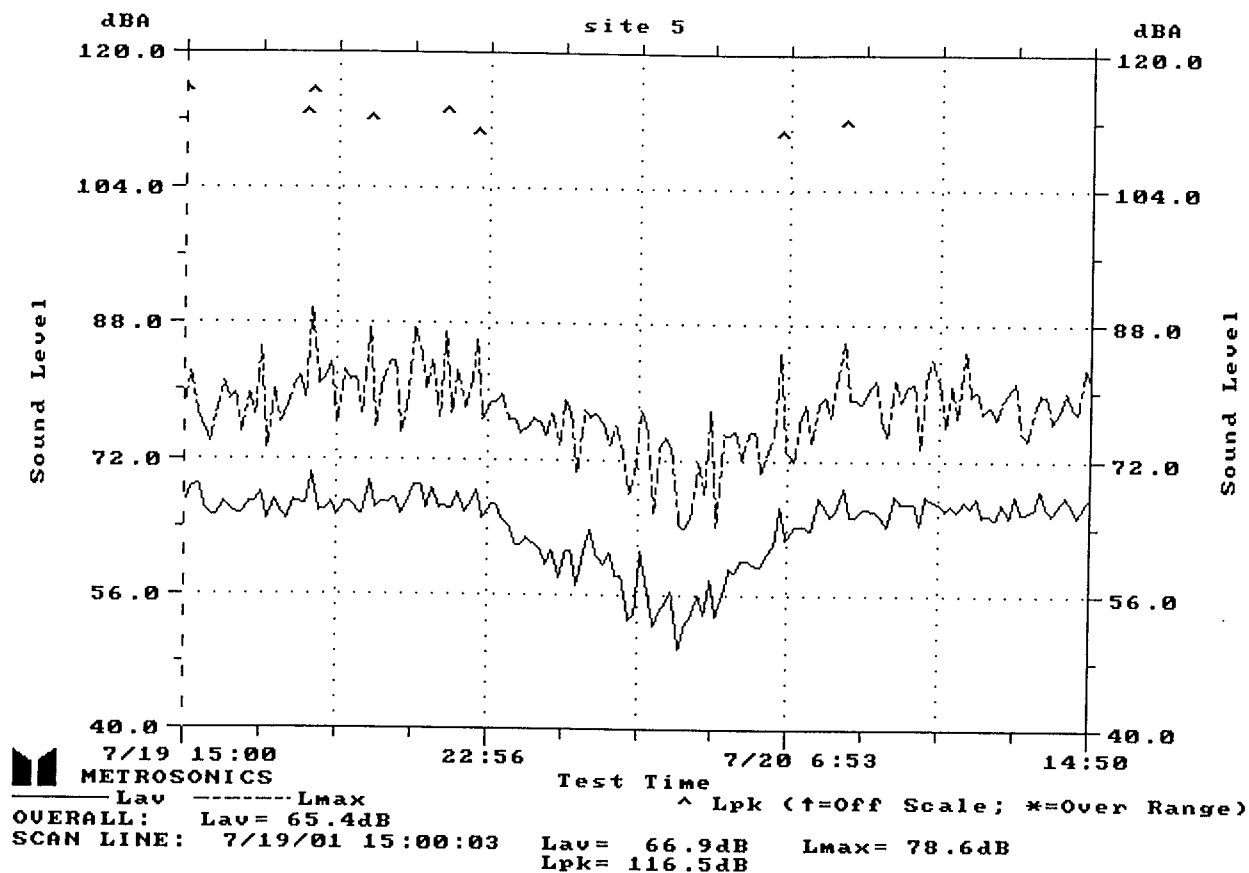
$Ln(50.0) = 62\text{dB}$

$Ln(90.9) = 48\text{dB}$

	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF

Ldod	63.9dB	43.9dB	38.9dB
Losha	63.3dB	38.9dB	38.9dB
Leq(6)	62.8dB	38.9dB	38.9dB

Filename.....31005
 Logger.....db-3100 SN 6930
 Test Location.....site 5
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor 6930
 Comment Field 2...1500 to 1500
 Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTRR FACILITY
 Date: 7/19/01
 Day of week: THURS

Time: 14:00
 Site I.D. No: 6
 Monitor No: 3290
 Downloaded File No: 310006

Collection Site Address: _____
HASS PARK
SIBLEY ROAD + QUARRY ROAD

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other (PARK)

Photos +5

Measurement Data

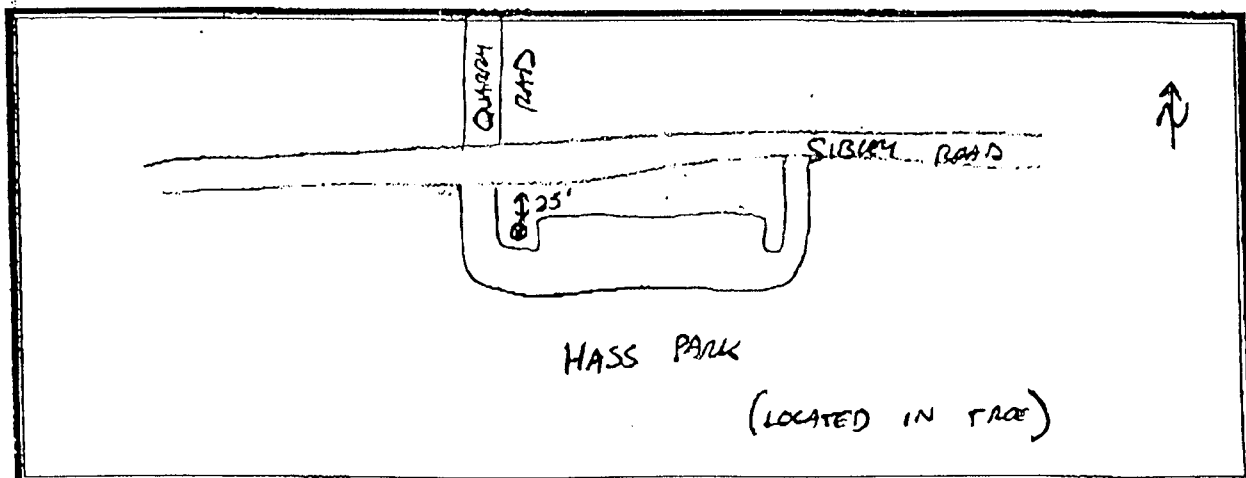
SLM Calibration: Before 102.0 After -
 Time of Collection: Start 15:00 Stop 15:00 Total 24 HRS
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 24 MPH Clouds PT CLOUD

Traffic Count Data 30 MIN COUNT

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name <u>SIBLEY RD E</u>	Name <u>SIBLEY RD W</u>	Name _____	Name _____
Auto <u>86</u>	Auto <u>112</u>	Auto _____	Auto _____
M.T. <u>7</u>	M.T. <u>4</u>	M.T. _____	M.T. _____
H.T. <u>7</u>	H.T. <u>11</u>	H.T. _____	H.T. _____
Bus <u>0</u>	Bus <u>0</u>	Bus _____	Bus _____
Motos <u>1</u>	Motos <u>1</u>	Motos _____	Motos _____

Comments TRAFFIC COUNT FROM 10:30 TO 11:00 ON 7/20/01

Site Location Map (Include North Arrow)



File Name.....31006
Test Location.....site 6
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 3290
Comment Field 2...1500 to 1500
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 3290 V1.7
REPORT PRINTED 08/10/01 AT 11:35:31

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION TIME.... 7/19/01 AT 13:54:04
PRE-TEST CALIBRATION RANGE... 38.6dB TO 138.6dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/19/01 AT 15:00:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/20/01 AT 15:00:03
TEST INTERRUPTIONS...1

Lav..... 63.7dB
Lav (80)..... 55.9dB Lav (90)..... 48.3dB
SEL.....112.9dB
TWA..... 68.5dB
TWA (80)..... 60.7dB TWA (90)..... 53.1dB
Lmax..... 92.1dB ON 7/19/01 AT 17:22:29
Lpk.....UNDER
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.11%
8 HR % DOSE (90dB CUTOFF)..... 0.01%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/19/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
	1 15:00:03	65.7	82.9	UNR	67	53
	2 15:10:03	64.9	78.9	UNR	67	53
	3 15:20:03	66.5	81.2	UNR	69	52
	4 15:30:03	64.8	80.7	UNR	67	49
	5 15:40:03	62.9	76.6	UNR	66	49
	6 15:50:03	64.6	79.7	UNR	67	51
	7 16:00:03	62.1	77.8	UNR	65	50
	8 16:10:03	69.9	92	UNR	65	49
	9 16:20:03	64.8	79.4	UNR	67	50
	10 16:30:03	62.1	75.3	UNR	65	50
	11 16:40:03	64.4	77.1	UNR	68	52
	12 16:50:03	64.4	79.3	UNR	67	49
	13 17:00:03	66.6	83.3	UNR	67	51
	14 17:10:03	66.1	81.2	UNR	69	51
	15 17:20:03	71.2	92.1	UNR	69	49
	16 17:30:03	62.9	74.9	UNR	66	49
	17 17:40:03	61.6	75.2	UNR	64	51
	18 17:50:03	63.5	76.9	UNR	67	50
	19 18:00:03	64	76.6	UNR	66	50
	20 18:10:03	63.4	79.9	UNR	66	50
	21 18:20:03	62.7	75.5	UNR	66	50
	22 18:30:03	62	72.1	UNR	65	51
	23 18:40:03	66.8	86.2	UNR	67	51
	24 18:50:03	63.5	78.3	UNR	66	52
	25 19:00:03	61.2	70.3	UNR	65	52
	26 19:10:03	62.9	74.7	UNR	66	54
	27 19:20:03	63.7	77.9	UNR	66	55
	28 19:30:03	64.8	85.3	UNR	65	52
	29 19:40:03	62.6	76.6	UNR	65	53
	30 19:50:03	64.1	81.8	UNR	66	54
	31 20:00:03	62	76.8	UNR	65	52
	32 20:10:03	63.4	76.5	UNR	65	57
	33 20:20:03	67.3	82.8	UNR	68	58
	34 20:30:03	64.3	82	UNR	65	50
	35 20:40:03	61.9	76.6	UNR	65	52
	36 20:50:03	61.7	75.2	UNR	64	51
	37 21:00:03	61.3	74.6	UNR	65	50
	38 21:10:03	62.1	77.7	UNR	65	49
	39 21:20:03	63.9	79.6	UNR	65	53
	40 21:30:03	61.1	75.9	UNR	64	49
	41 21:40:03	61.8	70.9	UNR	65	52
	42 21:50:03	62.9	81	UNR	65	50
	43 22:00:03	62	72.2	UNR	65	52
	44 22:10:03	60.6	71	UNR	64	50
	45 22:20:03	61	74.3	UNR	64	49
	46 22:30:03	59	70.1	UNR	62	47
	47 22:40:03	59.8	73	UNR	63	48
	48 22:50:03	57.1	67.5	UNR	62	44

49	23:00:03	60.2	76.4 UNR	62	45
50	23:10:03	55	66.9 UNR	59	44
51	23:20:03	55.9	71.3 UNR	59	44
52	23:30:03	54.9	65.7 UNR	59	41
53	23:40:03	55.2	74.3 UNR	58	43
54	23:50:03	59.1	74 UNR	62	42
55	0:00:03	56	74.1 UNR	58	41
56	0:10:03	57.4	76.3 UNR	58	40
57	0:20:03	56.9	73.5 UNR	60	41
58	0:30:03	52	64.6 UNR	56	40
59	0:40:03	53.2	65.7 UNR	57	41
60	0:50:03	51.9	66.7 UNR	54	40
61	1:00:03	56.1	74.8 UNR	57	39
62	1:10:03	56.6	74.4 UNR	56	39
63	1:20:03	52.9	70.1 UNR	55	40
64	1:30:03	58.3	75.8 UNR	60	41
65	1:40:03	49.3	63 UNR	52	40
66	1:50:03	50.2	65.7 UNR	53	39
67	2:00:03	49.1	64.8 UNR	51	39
68	2:10:03	54.2	72.2 UNR	52	40
69	2:20:03	40.4	42.3 UNR	40	39
70	2:30:03	49.7	67 UNR	49	39
71	2:40:03	51.6	66.4 UNR	54	40
72	2:50:03	61.9	81.1 UNR	58	42
73	3:00:03	56.3	74.3 UNR	57	39
74	3:10:03	54.2	72.2 UNR	55	39
75	3:20:03	47	65 UNR	45	40
76	3:30:03	57	76.2 UNR	53	39
77	3:40:03	49.8	65.1 UNR	51	39
78	3:50:03	49.3	66.6 UNR	48	39
79	4:00:03	54.7	73.2 UNR	52	40
80	4:10:03	49.3	65.8 UNR	49	39
81	4:20:03	48.4	63.4 UNR	49	40
82	4:30:03	55.8	74.9 UNR	55	40
83	4:40:03	51.3	66.3 UNR	54	40
84	4:50:03	53.1	71.4 UNR	53	41
85	5:00:03	54.9	73.5 UNR	56	41
86	5:10:03	53.5	71 UNR	55	41
87	5:20:03	54.2	67.8 UNR	57	42
88	5:30:03	55.2	67.7 UNR	59	44
89	5:40:03	58.4	73.3 UNR	62	45
90	5:50:03	57.8	73.8 UNR	61	45
91	6:00:03	58.4	73.1 UNR	62	45
92	6:10:03	63.4	76.9 UNR	66	48
93	6:20:03	63.5	81.2 UNR	65	46
94	6:30:03	60.7	77.5 UNR	63	44
95	6:40:03	64.4	82 UNR	66	47
96	6:50:03	67.2	83.4 UNR	71	50
97	7:00:03	59.3	72.6 UNR	63	48

98	7:10:03	66.4	82.6 UNR	66	50
99	7:20:03	62.6	74.5 UNR	66	47
100	7:30:03	64.4	76.4 UNR	68	50
101	7:40:03	67.7	82.1 UNR	70	52
102	7:50:03	61.8	76.2 UNR	64	50
103	8:00:03	64.5	79.1 UNR	67	50
104	8:10:03	66.2	80.6 UNR	70	50
105	8:20:03	67.4	81.8 UNR	70	50
106	8:30:03	68.6	87.4 UNR	71	51
107	8:40:03	65	78.8 UNR	67	50
108	8:50:03	64.6	79.1 UNR	68	48
109	9:00:03	65.5	79.3 UNR	69	51
110	9:10:03	66.5	84.2 UNR	70	49
111	9:20:03	65	79.6 UNR	67	50
112	9:30:03	63.3	78 UNR	67	48
113	9:40:03	64.7	78.7 UNR	68	47
114	9:50:03	69.9	90.3 UNR	67	47
115	10:00:03	64.8	79.2 UNR	67	51
116	10:10:03	68.2	84.6 UNR	71	49
117	10:20:03	66.4	79.1 UNR	70	53
118	10:30:03	63.2	79.1 UNR	66	52
119	10:40:03	67.8	85.1 UNR	69	53
120	10:50:03	65.5	77.3 UNR	69	54
121	11:00:03	63.9	78.6 UNR	66	48
122	11:10:03	61.5	73.7 UNR	65	50
123	11:20:03	66.5	80.4 UNR	70	51
124	11:30:03	65	81.8 UNR	68	50
125	11:40:03	67.9	82.7 UNR	72	53
126	11:50:03	66.9	80.9 UNR	71	52
127	12:00:03	66.3	79.5 UNR	70	51
128	12:10:03	67.2	82.6 UNR	71	48
129	12:20:03	64.4	80.6 UNR	67	47
130	12:30:03	68.2	90 UNR	68	54
131	12:40:03	63.1	76.5 UNR	66	55
132	12:50:03	64.8	78.6 UNR	67	55
133	13:00:03	66.3	80.2 UNR	70	56
134	13:10:03	65	80.4 UNR	68	56
135	13:20:03	67.2	82.6 UNR	68	55
136	13:30:03	66.4	81.6 UNR	69	55
137	13:40:03	66.1	80.4 UNR	70	56
138	13:50:03	66.6	80.1 UNR	70	56
139	14:00:03	62.8	74.9 UNR	66	50
140	14:10:03	64.5	79.8 UNR	67	49
141	14:20:03	65.1	78.9 UNR	68	51
142	14:30:03	62.6	78.2 UNR	66	50
143	14:40:03	63.2	79.1 UNR	66	50
144	14:50:03	62.4	76.5 UNR	65	50

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

38	264 .	0.02
39	28804 **	2.08
40	80385 *****	5.81
41	51621 ****	3.73
42	31229 **	2.26
43	23257 **	1.68
44	22897 **	1.66
45	24518 **	1.77
46	28188 **	2.04
47	28339 **	2.05
48	30478 **	2.2
49	35082 ***	2.54
50	39556 ***	2.86
51	45712 ***	3.31
52	49096 ****	3.55
53	54213 ****	3.92
54	55762 ****	4.03
55	62611 *****	4.53
56	65003 *****	4.7
57	61724 ****	4.46
58	60051 ****	4.34
59	59456 ****	4.3
60	60061 ****	4.34
61	58867 ****	4.26
62	56920 ****	4.12
63	51603 ****	3.73
64	43917 ***	3.18
65	39074 ***	2.83
66	28533 **	2.06
67	20988 **	1.52
68	15507 *	1.12
69	12540 *	0.91
70	10971 *	0.79
71	9369 *	0.68
72	7976 *	0.58
73	6800 +	0.49
74	5689 +	0.41
75	4362 +	0.32
76	3294 +	0.24
77	2407 +	0.17
78	1864 +	0.13
79	1184 .	0.09
80	763 .	0.06

81	550 .	0.04
82	307 .	0.02
83	133 .	0.01
84	101 .	0.01
85	71 .	0.01
86	71 .	0.01
87	73 .	0.01
88	36 .	0
89	55 .	0
90	25 .	0
91	31 .	0
92	12 .	0

$L_n(0.0) = 92\text{dB}$

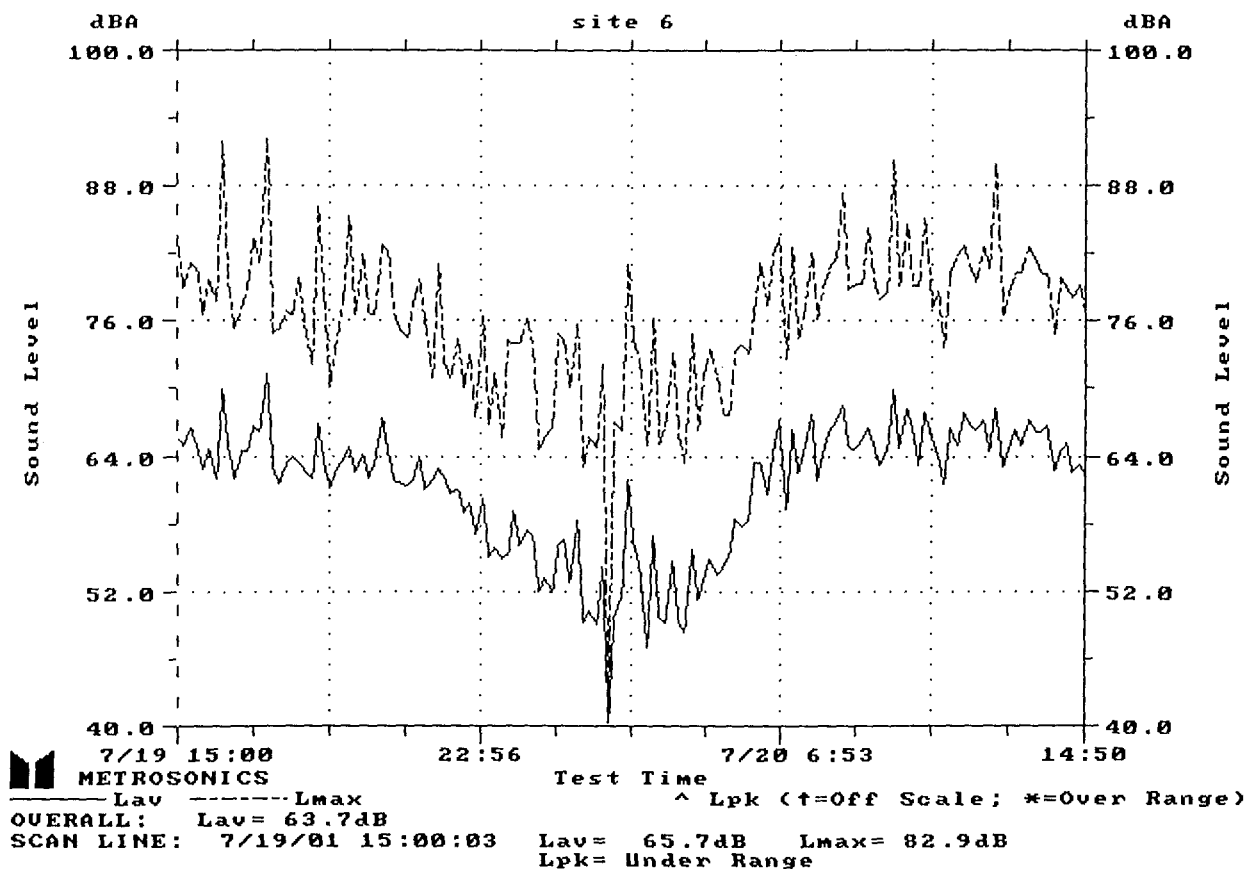
$L_n(10.0) = 65\text{dB}$

$L_n(50.0) = 55\text{dB}$

$L_n(90.9) = 41\text{dB}$

	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF
L _{dod}	61.2dB	45.9dB	38.6dB
L _{osha}	59.9dB	38.6dB	38.6dB
L _{eq(6)}	59.1dB	38.6dB	38.6dB

Filename.....31006
 Logger.....db-3100 SN 3290
 Test Location.....site 6
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor 3290
 Comment Field 2...1500 to 1500
 Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTTR FACILITY
 Date: 7/19/01
 Day of week: THURS

Time: 14:00
 Site I.D. No: 7
 Monitor No: 3181
 Downloaded File No: 31002

Collection Site Address: _____
KINGMAN MAJOR RETIREMENT COMMUNITY
KING ROAD + WESTFIELD ROAD

Land Use Classification: ☒ Residential
☐ Religious
☐ Commercial
☐ Educational
☐ Other

Photos +3

Measurement Data

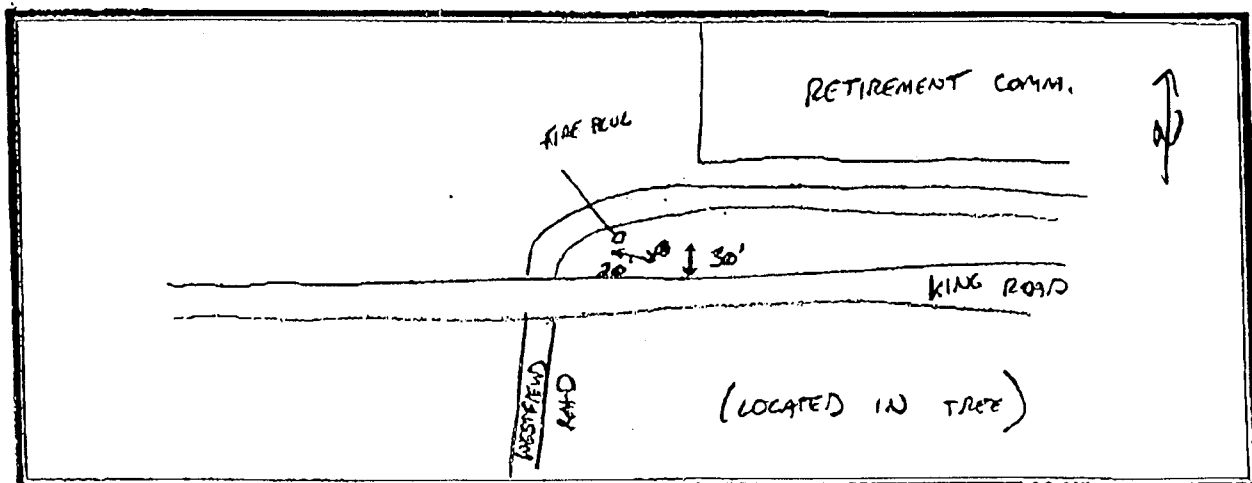
SLM Calibration: Before 10:00 After -
 Time of Collection: Start 15:00 Stop 15:00 Total 24 hrs
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 mph Clouds PT CLOUDY

Traffic Count Data 30 MIN COUNT

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name <u>KING RD E</u>	Name <u>KING RD W</u>	Name _____	Name _____
Auto <u>196</u>	Auto <u>230</u>	Auto _____	Auto _____
M.T. <u>3</u>	M.T. <u>5</u>	M.T. _____	M.T. _____
H.T. <u>14</u>	H.T. <u>24</u>	H.T. _____	H.T. _____
Bus <u>0</u>	Bus <u>0</u>	Bus _____	Bus _____
Motos <u>2</u>	Motos <u>0</u>	Motos _____	Motos _____

Comments TRAFFIC COUNT FROM 09:30 TO 10:00 ON 7/20/01

Site Location Map (Include North Arrow)



File Name.....31007
Test Location.....site 7
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 3181
Comment Field 2...1500 to 1500
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 3181 V1.7
REPORT PRINTED 08/10/01 AT 11:35:36

EXCHANGE RATE..... 3dB FILTER.....A WGHT
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION TIME.... 7/19/01 AT 13:53:45
PRE-TEST CALIBRATION RANGE... 39.0dB TO 139.0dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #.....
Calibrator Calibration Date.....

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/19/01 AT 15:00:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/20/01 AT 15:00:03
TEST INTERRUPTIONS...1

Lav..... 65.1dB
Lav (80)..... 52.0dB Lav (90)..... 47.8dB
SEL.....114.3dB
TWA..... 69.9dB
TWA (80)..... 56.7dB TWA (90)..... 52.6dB
Lmax..... 95.2dB ON 7/20/01 AT 13:12:32
Lpk.....UNDER
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.04%
8 HR % DOSE (90dB CUTOFF)..... 0.01%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/19/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
	1	15:00:03	66.6	77.1 UNR		69 57
	2	15:10:03	66.7	78.4 UNR		69 56
	3	15:20:03	66.4	79.6 UNR		69 52
	4	15:30:03	65.1	76.8 UNR		67 54
	5	15:40:03	66.3	78.4 UNR		68 55
	6	15:50:03	66	77.8 UNR		68 56
	7	16:00:03	65.6	75.3 UNR		68 57
	8	16:10:03	67.2	81.4 UNR		69 58
	9	16:20:03	65.9	77.3 UNR		68 57
	10	16:30:03	67.3	77.9 UNR		69 57
	11	16:40:03	65.8	75.6 UNR		69 56
	12	16:50:03	66.7	79.7 UNR		69 57
	13	17:00:03	66.3	78.7 UNR		69 56
	14	17:10:03	67.1	80.5 UNR		69 58
	15	17:20:03	65.3	74.9 UNR		68 57
	16	17:30:03	66	74.7 UNR		68 58
	17	17:40:03	65.7	75.2 UNR		68 55
	18	17:50:03	65.6	76.2 UNR		68 55
	19	18:00:03	66.2	78.5 UNR		69 56
	20	18:10:03	66.3	78.5 UNR		69 56
	21	18:20:03	66.1	76.1 UNR		69 56
	22	18:30:03	65.9	74.5 UNR		69 56
	23	18:40:03	65.2	76.2 UNR		68 57
	24	18:50:03	65	74.1 UNR		68 53
	25	19:00:03	66.7	79.4 UNR		69 57
	26	19:10:03	63.7	74.6 UNR		67 52
	27	19:20:03	64.4	78.4 UNR		67 52
	28	19:30:03	64.3	76.5 UNR		67 53
	29	19:40:03	64.1	76.3 UNR		67 52
	30	19:50:03	63.6	73.8 UNR		67 52
	31	20:00:03	64.3	76.4 UNR		67 55
	32	20:10:03	62.4	72 UNR		66 49
	33	20:20:03	63.6	73.7 UNR		67 52
	34	20:30:03	63	75.9 UNR		66 50
	35	20:40:03	64.2	74.3 UNR		68 52
	36	20:50:03	64.7	82.8 UNR		67 52
	37	21:00:03	62.4	71 UNR		66 49
	38	21:10:03	63.9	77.2 UNR		67 50
	39	21:20:03	61.9	73.1 UNR		65 49
	40	21:30:03	61.9	71.8 UNR		65 50
	41	21:40:03	62.5	78.4 UNR		66 48
	42	21:50:03	62.2	71.9 UNR		66 49
	43	22:00:03	62.8	78.8 UNR		66 49
	44	22:10:03	62.2	72.1 UNR		66 50
	45	22:20:03	61.6	70.9 UNR		66 49
	46	22:30:03	62.8	78.2 UNR		66 49
	47	22:40:03	61.1	69.9 UNR		65 47
	48	22:50:03	61.6	74.7 UNR		66 48

49	23:00:03	59.9	69.7 UNR	64	47
50	23:10:03	61	73.9 UNR	65	47
51	23:20:03	62.3	74.2 UNR	66	48
52	23:30:03	60.5	71.5 UNR	65	47
53	23:40:03	60.4	71.8 UNR	65	46
54	23:50:03	62.9	82.1 UNR	65	47
55	0:00:03	59	73.4 UNR	63	46
56	0:10:03	56.3	69.1 UNR	61	44
57	0:20:03	58.5	70.1 UNR	64	45
58	0:30:03	55.7	69.8 UNR	59	43
59	0:40:03	57	75.5 UNR	57	43
60	0:50:03	56.8	71.9 UNR	59	44
61	1:00:03	55.4	66.9 UNR	59	44
62	1:10:03	54.6	68.2 UNR	57	42
63	1:20:03	54.9	70.4 UNR	57	43
64	1:30:03	55.8	72.2 UNR	58	44
65	1:40:03	56.5	69.5 UNR	61	43
66	1:50:03	54.8	70.6 UNR	57	43
67	2:00:03	54.4	68.3 UNR	57	46
68	2:10:03	53.6	68.9 UNR	55	44
69	2:20:03	51.9	68 UNR	51	43
70	2:30:03	55.1	75.2 UNR	52	43
71	2:40:03	56.2	71.9 UNR	58	44
72	2:50:03	57.1	75.1 UNR	54	43
73	3:00:03	60	78.3 UNR	61	43
74	3:10:03	52.8	68.8 UNR	50	44
75	3:20:03	54.2	72 UNR	51	43
76	3:30:03	52.3	68.9 UNR	52	42
77	3:40:03	52.2	70 UNR	52	41
78	3:50:03	50.1	67.9 UNR	47	42
79	4:00:03	53.3	69.2 UNR	52	43
80	4:10:03	49.4	65.4 UNR	48	39
81	4:20:03	53.8	69 UNR	53	43
82	4:30:03	54.8	71 UNR	55	43
83	4:40:03	55.4	69.5 UNR	59	45
84	4:50:03	56	69.1 UNR	60	42
85	5:00:03	56.7	70.1 UNR	61	45
86	5:10:03	55.2	71.1 UNR	58	42
87	5:20:03	59.3	72.2 UNR	64	43
88	5:30:03	63	80.7 UNR	65	46
89	5:40:03	61.4	77.1 UNR	65	48
90	5:50:03	62.9	77.5 UNR	66	47
91	6:00:03	62.3	77.1 UNR	66	48
92	6:10:03	63.3	78.8 UNR	66	48
93	6:20:03	64.6	80.1 UNR	68	51
94	6:30:03	66.3	79.8 UNR	68	52
95	6:40:03	65.5	78.3 UNR	69	52
96	6:50:03	64.9	73.7 UNR	69	53
97	7:00:03	66.3	80 UNR	69	55

98	7:10:03	65.8	79.8 UNR	68	52
99	7:20:03	67	77.6 UNR	70	57
100	7:30:03	66.9	79.7 UNR	69	57
101	7:40:03	67.6	79.8 UNR	70	55
102	7:50:03	68.2	81.9 UNR	70	54
103	8:00:03	67.9	80.2 UNR	70	55
104	8:10:03	66.6	81 UNR	69	55
105	8:20:03	66.7	80.5 UNR	69	54
106	8:30:03	65.9	80.1 UNR	68	54
107	8:40:03	67.1	79.6 UNR	70	55
108	8:50:03	68.2	82.5 UNR	70	53
109	9:00:03	67	82.5 UNR	69	53
110	9:10:03	66.1	78.2 UNR	68	52
111	9:20:03	64.8	77.7 UNR	68	50
112	9:30:03	66.7	77.9 UNR	70	56
113	9:40:03	69.4	84.2 UNR	73	54
114	9:50:03	67.9	84.3 UNR	70	56
115	10:00:03	68.3	84.1 UNR	70	57
116	10:10:03	68.1	80.8 UNR	71	57
117	10:20:03	66	79.3 UNR	68	55
118	10:30:03	66.6	77.5 UNR	69	54
119	10:40:03	67	78.7 UNR	70	53
120	10:50:03	69.1	80.4 UNR	72	58
121	11:00:03	67.1	78.7 UNR	70	57
122	11:10:03	68.6	81 UNR	72	54
123	11:20:03	66.6	79.7 UNR	69	55
124	11:30:03	67.4	79.3 UNR	69	58
125	11:40:03	67.4	79.6 UNR	70	57
126	11:50:03	68.4	80.9 UNR	71	55
127	12:00:03	68.5	80.3 UNR	71	56
128	12:10:03	67.8	79.1 UNR	70	57
129	12:20:03	67.6	79.5 UNR	70	58
130	12:30:03	66	78.2 UNR	69	50
131	12:40:03	67.2	79.3 UNR	69	56
132	12:50:03	67.8	82 UNR	69	57
133	13:00:03	67.7	78.3 UNR	70	58
134	13:10:03	72.5	95.2 UNR	72	58
135	13:20:03	67.6	80.5 UNR	71	55
136	13:30:03	66.2	78.3 UNR	68	58
137	13:40:03	66.4	79 UNR	69	56
138	13:50:03	67.2	80.3 UNR	69	57
139	14:00:03	67.3	78.3 UNR	70	56
140	14:10:03	67.1	79.1 UNR	69	56
141	14:20:03	67.3	82.3 UNR	69	54
142	14:30:03	66.6	77.7 UNR	69	57
143	14:40:03	67.3	79.8 UNR	69	56
144	14:50:03	66.6	79.4 UNR	69	57

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

39	2843 +	0.21
40	1091 .	0.08
41	8023 *	0.58
42	18025 *	1.3
43	45240 ***	3.27
44	48334 ***	3.5
45	44833 ***	3.24
46	37650 ***	2.72
47	29546 **	2.14
48	25802 **	1.87
49	28773 **	2.08
50	29493 **	2.13
51	28615 **	2.07
52	29922 **	2.16
53	31638 **	2.29
54	32206 **	2.33
55	34990 ***	2.53
56	37046 ***	2.68
57	38951 ***	2.82
58	41501 ***	3
59	46502 ***	3.36
60	51768 ****	3.74
61	56796 ****	4.11
62	65194 *****	4.72
63	75104 *****	5.43
64	80462 *****	5.82
65	90738 *****	6.56
66	89509 *****	6.47
67	73275 *****	5.3
68	55255 ****	4
69	33802 **	2.45
70	18901 *	1.37
71	12637 *	0.91
72	8220 *	0.59
73	6764 +	0.49
74	6266 +	0.45
75	4960 +	0.36
76	4272 +	0.31
77	3197 +	0.23
78	2197 +	0.16
79	1161 .	0.08
80	456 .	0.03
81	200 .	0.01

82	107 .	0.01
83	39 .	0
84	27 .	0
85	5 .	0
86	5 .	0
87	6 .	0
88	8 .	0
89	6 .	0
90	5 .	0
91	7 .	0
92	7 .	0
93	8 .	0
94	9 .	0
95	3 .	0

Ln(0.0) = 95dB

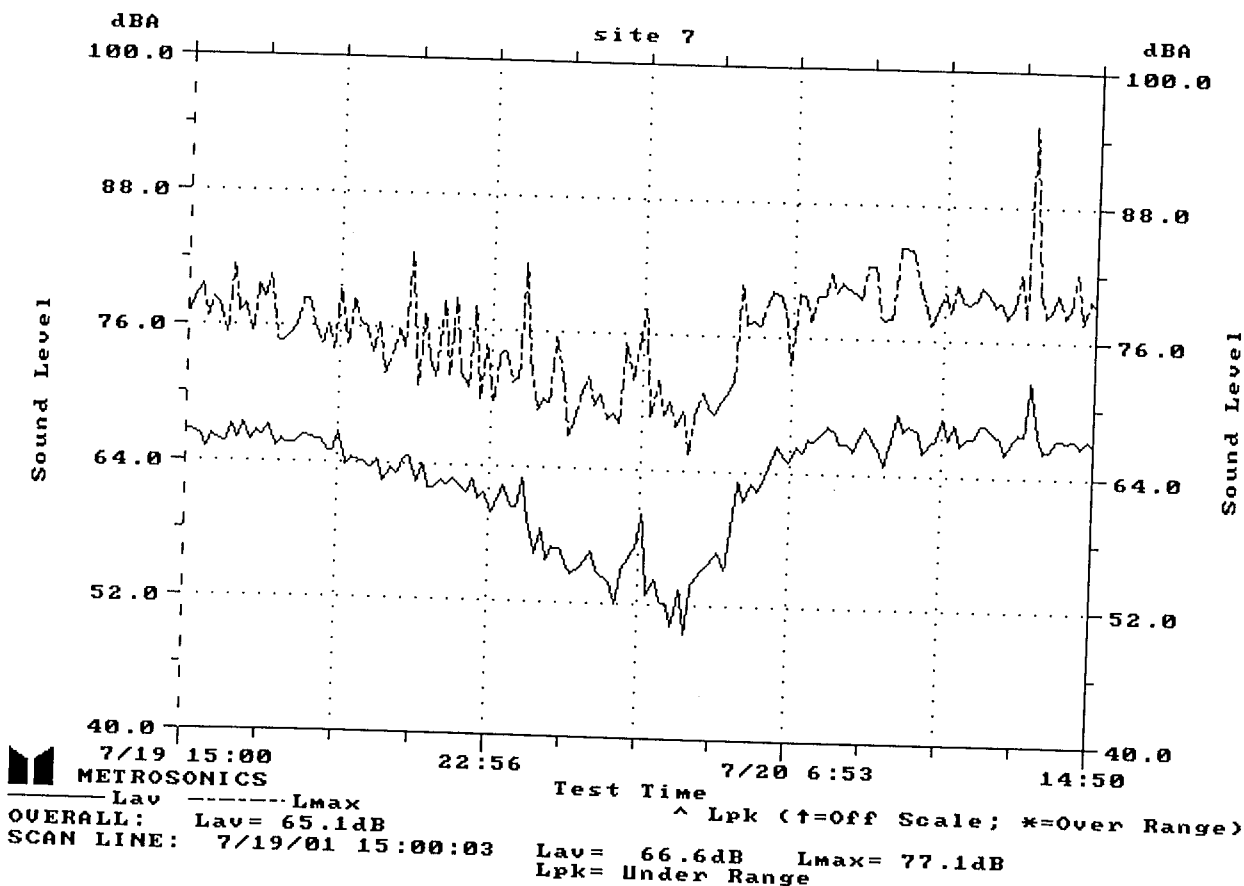
Ln(10.0) = 68dB

Ln(50.0) = 60dB

Ln(90.9) = 45dB

	NO	80.0dB	90.0dB
	CUTOFF	CUTOFF	CUTOFF
Ldod	63.4dB	40.3dB	39.0dB
Losha	62.6dB	39.0dB	39.0dB
Leq(6)	62.0dB	39.0dB	39.0dB

Filename.....31007
 Logger.....db-3100 SN 3181
 Test Location.....site 7
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor 3181
 Comment Field 2...1500 to 1500
 Numeric Code #1... #2... #3... #4... #5...





Noise Monitoring Data Collection Worksheet

Project Number: _____
 Project Name: RTX FACILITY
 Date: 7/19/01
 Day of week: THURS

Time: 14:00
 Site I.D. No: 5
 Monitor No: 6930
 Downloaded File No: 31008

Collection Site Address: _____
PUBLIC PARKING LOT
EUREKA AVE + 3rd STREET

Land Use Classification: _____ Residential
 _____ Religious
 _____ Commercial
 _____ Educational
☒ Other
(PUBLIC PARKING AREA)

Photos +3

Measurement Data

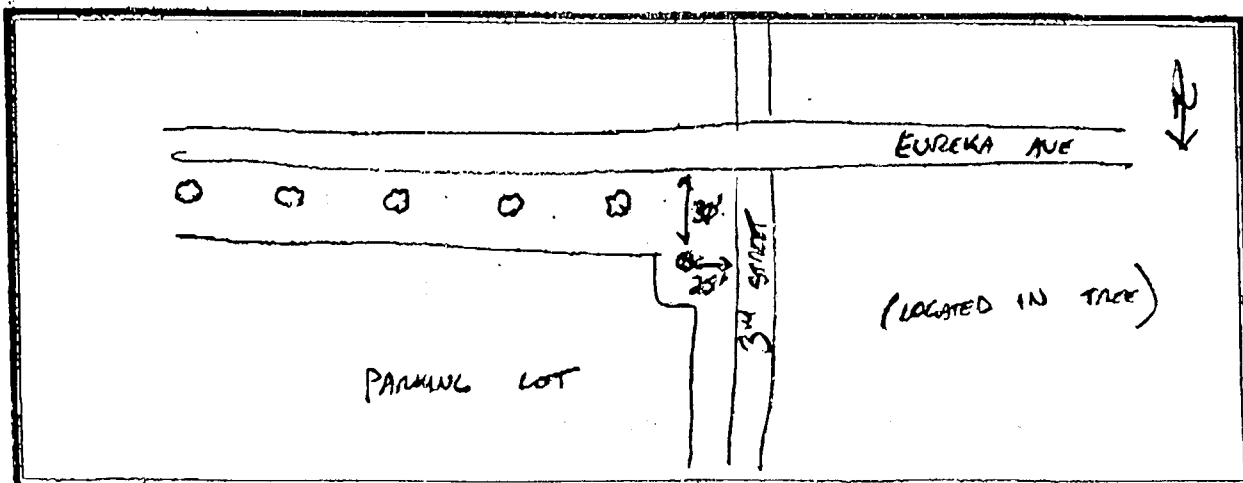
SLM Calibration: Before 102.0 After -
 Time of Collection: Start 15:00 Stop 15:00 Total 24 HRS
 Data Records: Leq _____ Lmax _____ Lmin _____
 Weather: Temp 85° F Wind 2-4 MPH Clouds PT CLOUDY

Traffic Count Data 30 MIN COUNT

Roadway #1	Roadway #2	Roadway #3	Roadway #4
Name <u>EUREKA AVE E</u>	Name <u>EUREKA AVE W</u>	Name _____	Name _____
Auto <u>304</u>	Auto <u>258</u>	Auto _____	Auto _____
M.T. <u>3</u>	M.T. <u>0</u>	M.T. _____	M.T. _____
H.T. <u>0</u>	H.T. <u>2</u>	H.T. _____	H.T. _____
Bus <u>1</u>	Bus <u>2</u>	Bus _____	Bus _____
Motos <u>0</u>	Motos <u>3</u>	Motos _____	Motos _____

Comments TRAFFIC COUNT FROM 16:15 TO 16:45 ON 7/19/01

Site Location Map (Include North Arrow)



File Name.....31008
Test Location....site 8
Employee Name.....jdd
Employee Number...26492
Department.....planning
Comment Field 1...monitor 6926
Comment Field 2...1500 to 1500
Numeric Code #1... #2... #3... #4... #5...

METROSONICS db-3100 SN 6926 V1.7
REPORT PRINTED 08/10/01 AT 11:35:41

EXCHANGE RATE..... 3dB FILTER.....A WGH
DOSE CRITERION.... 90dB RESPONSE...SLOW
PRE-TEST CALIBRATION TIME.... 7/19/01 AT 13:53:20
PRE-TEST CALIBRATION RANGE... 38.7dB TO 138.7dB
NO POST-TEST CALIBRATION
Calibrator Type & Serial #...
Calibrator Calibration Date..

-- OVERALL STATISTICS REPORT --

TEST BEGAN.... 7/19/01 AT 15:00:03
TEST LENGTH... 1 DAYS 0:00:00
TEST ENDED.... 7/20/01 AT 15:00:03
TEST INTERRUPTIONS...1

Lav..... 61.7dB
Lav (80)..... 41.9dB Lav (90)..... 38.7dB
SEL.....110.9dB
TWA..... 66.4dB
TWA (80)..... 46.7dB TWA (90)..... 38.7dB
Lmax..... 82.7dB ON 7/20/01 AT 9:34:54
Lpk.....118.7dB ON 7/20/01 AT 7:28:09
TIME OVER 115dB.. 0 DAYS 0:00:00.00
8 HR % DOSE (80dB CUTOFF)..... 0.00%
8 HR % DOSE (90dB CUTOFF)..... 0.00%

-- TABULAR TIME HISTORY REPORT --

OF PERIODS: 144 MODE: CONTINUOUS
PERIOD LENGTH: 0:10:00
TIME HISTORY CUTOFF: NONE
Ln(1): 10.0% Ln(2): 90.0%

DATE: 7/19/01

INT	TIME	Lav	Lmx	Lpk	L1	L2
	1 15:00:03	66	81.7	115.4	69	58
	2 15:10:03	63	72.9	UNR	65	57
	3 15:20:03	63.3	74.6	UNR	66	55
	4 15:30:03	61.2	72	UNR	64	55
	5 15:40:03	62.8	72.2	UNR	66	56
	6 15:50:03	61.7	75.6	UNR	65	55
	7 16:00:03	63.4	77.1	UNR	65	55
	8 16:10:03	61.6	72.1	UNR	65	55
	9 16:20:03	61.7	75.3	UNR	64	55
	10 16:30:03	61.9	78.1	UNR	65	54
	11 16:40:03	62.8	78.2	UNR	66	55
	12 16:50:03	60.6	72.6	UNR	63	54
	13 17:00:03	60.7	70.4	UNR	63	54
	14 17:10:03	60.5	72.1	UNR	64	54
	15 17:20:03	59.4	66.5	UNR	62	53
	16 17:30:03	60.3	70.6	UNR	64	53
	17 17:40:03	61.8	72.4	UNR	65	53
	18 17:50:03	61.3	73.1	UNR	64	55
	19 18:00:03	62.4	71.9	UNR	66	54
	20 18:10:03	60	69	UNR	63	54
	21 18:20:03	64.4	73.6	UNR	67	59
	22 18:30:03	62.5	72.6	UNR	65	55
	23 18:40:03	60.6	72	UNR	64	53
	24 18:50:03	61.8	77.9	UNR	64	54
	25 19:00:03	62.9	76.7	UNR	63	54
	26 19:10:03	61.7	77.7	UNR	64	54
	27 19:20:03	61.2	74.1	UNR	64	54
	28 19:30:03	61.7	73.4	UNR	64	55
	29 19:40:03	61.2	71.7	UNR	64	55
	30 19:50:03	62.7	73.4	UNR	65	56
	31 20:00:03	61.4	75.2	UNR	64	55
	32 20:10:03	61.1	73.9	UNR	63	55
	33 20:20:03	65.1	79.9	UNR	66	56
	34 20:30:03	61	71.1	UNR	64	55
	35 20:40:03	60.6	70.4	UNR	63	54
	36 20:50:03	59.9	75.9	UNR	62	53
	37 21:00:03	59.4	68.7	UNR	62	53
	38 21:10:03	60.8	78.9	UNR	63	52
	39 21:20:03	58.8	69.1	UNR	63	51
	40 21:30:03	59.5	70.5	UNR	63	52
	41 21:40:03	59.1	71.2	UNR	62	51
	42 21:50:03	59.2	70.5	UNR	63	52
	43 22:00:03	59.8	68.2	UNR	62	53
	44 22:10:03	60.5	77.1	UNR	63	52
	45 22:20:03	59.4	67.6	UNR	62	52
	46 22:30:03	60	73	UNR	62	52
	47 22:40:03	61.9	78.7	UNR	63	53
	48 22:50:03	59.2	73.4	UNR	62	52

49	23:00:03	58.3	64.8 UNR	61	52
50	23:10:03	57.6	65.1 UNR	60	52
51	23:20:03	58.2	71 UNR	62	51
52	23:30:03	56.2	69.2 UNR	59	50
53	23:40:03	56.7	68.7 UNR	60	50
54	23:50:03	58	67.3 UNR	61	50
55	0:00:03	58.6	76.6 UNR	61	51
56	0:10:03	56.4	69.7 UNR	58	51
57	0:20:03	54.8	68.5 UNR	58	50
58	0:30:03	57.3	72.8 UNR	59	50
59	0:40:03	58	75.8 UNR	59	50
60	0:50:03	54	65.1 UNR	57	50
61	1:00:03	53.3	62.6 UNR	55	50
62	1:10:03	55.1	69.3 UNR	57	51
63	1:20:03	53.7	64.7 UNR	55	51
64	1:30:03	54.2	66.6 UNR	56	52
65	1:40:03	55.1	68.9 UNR	57	51
66	1:50:03	52.8	60.3 UNR	54	51
67	2:00:03	55.8	71 UNR	58	51
68	2:10:03	56	74.6 UNR	55	51
69	2:20:03	54.5	69.8 UNR	55	52
70	2:30:03	53.6	62.4 UNR	56	50
71	2:40:03	53.3	66.8 UNR	55	50
72	2:50:03	57.5	73.1 UNR	60	50
73	3:00:03	54.8	69.4 UNR	57	50
74	3:10:03	52.6	61.4 UNR	53	50
75	3:20:03	57.7	74.4 UNR	56	51
76	3:30:03	56.1	71.3 UNR	56	52
77	3:40:03	55.8	71.8 UNR	56	52
78	3:50:03	54.8	66.2 UNR	56	52
79	4:00:03	54.2	65.3 UNR	56	52
80	4:10:03	52.3	61.4 UNR	53	50
81	4:20:03	55	69.7 UNR	55	50
82	4:30:03	53.4	62.6 UNR	55	51
83	4:40:03	55.1	72.7 UNR	55	51
84	4:50:03	54.8	68.3 UNR	57	51
85	5:00:03	55.1	70.1 UNR	58	51
86	5:10:03	53.9	63.7 UNR	56	50
87	5:20:03	55	63.3 UNR	58	50
88	5:30:03	56.5	68.5 UNR	59	51
89	5:40:03	58.4	73.6 112	61	52
90	5:50:03	58.8	72.1 111.3	61	52
91	6:00:03	63.8	73 UNR	67	53
92	6:10:03	67.1	75.3 UNR	70	60
93	6:20:03	61.7	76 111.6	64	53
94	6:30:03	60.4	71.3 113	64	53
95	6:40:03	62.6	77.3 114.4	65	54
96	6:50:03	63.4	80.4 116.1	66	53
97	7:00:03	60.3	69.4 114.9	63	54

98	7:10:03	60.1	69.1	116.5	64	53
99	7:20:03	64.6	79.1	118.7	67	55
100	7:30:03	62.9	74.7	118	66	54
101	7:40:03	61.6	74.6 UNR		65	53
102	7:50:03	61.6	78.2 UNR		64	54
103	8:00:03	63.9	76.2 UNR		67	55
104	8:10:03	62.7	77.3 UNR		65	56
105	8:20:03	63.5	74.3 UNR		66	55
106	8:30:03	62.9	75.5 UNR		66	55
107	8:40:03	62.9	75.7 UNR		65	54
108	8:50:03	61.5	72.9 UNR		65	54
109	9:00:03	62.3	75.5 UNR		65	54
110	9:10:03	64.8	80.3 UNR		66	54
111	9:20:03	62.2	72.2 UNR		66	54
112	9:30:03	64.6	82.7 UNR		67	54
113	9:40:03	63.5	73.7 UNR		66	55
114	9:50:03	64.3	79.7 UNR		67	56
115	10:00:03	62.7	73.9 UNR		66	55
116	10:10:03	63.8	74.8 UNR		68	55
117	10:20:03	62.6	73.2 UNR		66	56
118	10:30:03	65	79.7 UNR		67	54
119	10:40:03	62.1	75.4 UNR		65	55
120	10:50:03	63.2	75.1 UNR		66	55
121	11:00:03	61.6	73.4 UNR		64	54
122	11:10:03	64.7	78.6 UNR		68	55
123	11:20:03	65.3	79.8 UNR		68	55
124	11:30:03	62.4	76.6 UNR		64	55
125	11:40:03	63.7	76.8 UNR		67	54
126	11:50:03	60.9	73 UNR		63	54
127	12:00:03	63.9	77.8 UNR		67	54
128	12:10:03	62.5	74 UNR		65	54
129	12:20:03	62.5	74.1 UNR		66	54
130	12:30:03	64.9	80.3 UNR		67	55
131	12:40:03	70.1	77.2 UNR		73	57
132	12:50:03	62.4	76.6 UNR		65	55
133	13:00:03	61.6	74.6 UNR		64	55
134	13:10:03	64	80.3 UNR		66	56
135	13:20:03	64.9	79.9 UNR		67	56
136	13:30:03	63.9	76 UNR		67	57
137	13:40:03	63.8	75.4 UNR		67	57
138	13:50:03	63.7	76.6 UNR		66	56
139	14:00:03	60.4	72.9 UNR		62	54
140	14:10:03	65.2	79 UNR		69	54
141	14:20:03	65.1	82.5 UNR		65	55
142	14:30:03	63	73.5 UNR		66	55
143	14:40:03	64.7	77.3 UNR		67	57
144	14:50:03	62.3	72.6 UNR		65	56

-- AMPLITUDE DISTRIBUTION REPORT --

TOTAL SAMPLES = 1382400

dB SAMPLES % OF TOTAL

49	222 .	0.02
50	47971 ***	3.47
51	102141 *****	7.39
52	121362 *****	8.78
53	71894 *****	5.2
54	89342 *****	6.46
55	112303 *****	8.12
56	116523 *****	8.43
57	105415 *****	7.63
58	91389 *****	6.61
59	78855 *****	5.7
60	72829 *****	5.27
61	67396 *****	4.88
62	66016 *****	4.78
63	60543 *****	4.38
64	48019 ***	3.47
65	34455 **	2.49
66	25987 **	1.88
67	17147 *	1.24
68	12945 *	0.94
69	9967 *	0.72
70	7795 *	0.56
71	6142 +	0.44
72	6932 *	0.5
73	3537 +	0.26
74	1752 +	0.13
75	1257 .	0.09
76	923 .	0.07
77	564 .	0.04
78	339 .	0.02
79	273 .	0.02
80	95 .	0.01
81	35 .	0
82	35 .	0

Ln(0.0) = 82dB

Ln(10.0) = 64dB

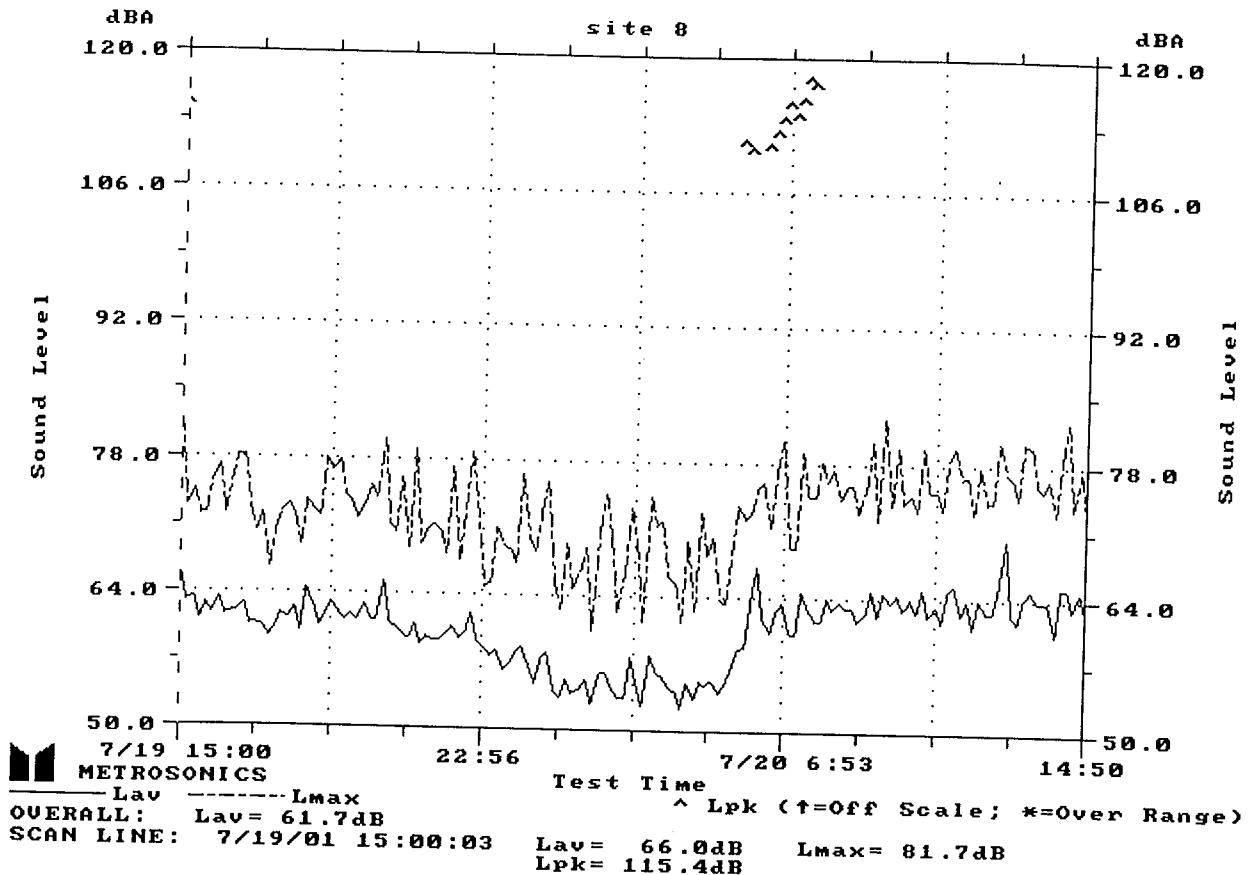
Ln(50.0) = 57dB

Ln(90.9) = 51dB

NO 80.0dB 90.0dB
CUTOFF CUTOFF CUTOFF

Ldod	60.2dB	38.7dB	38.7dB
Losha	59.6dB	38.7dB	38.7dB
Leq(6)	59.2dB	38.7dB	38.7dB

Filename.....31008
 Logger.....db-3100 SN 6926
 Test Location.....site 8
 Employee Name.....jdd
 Employee Number...26492
 Department.....planning
 Comment Field 1...monitor 6926
 Comment Field 2...1500 to 1500
 Numeric Code #1... #2... #3... #4... #5...



Traffic Information

TNM Traffic Breakdown

[illegible]

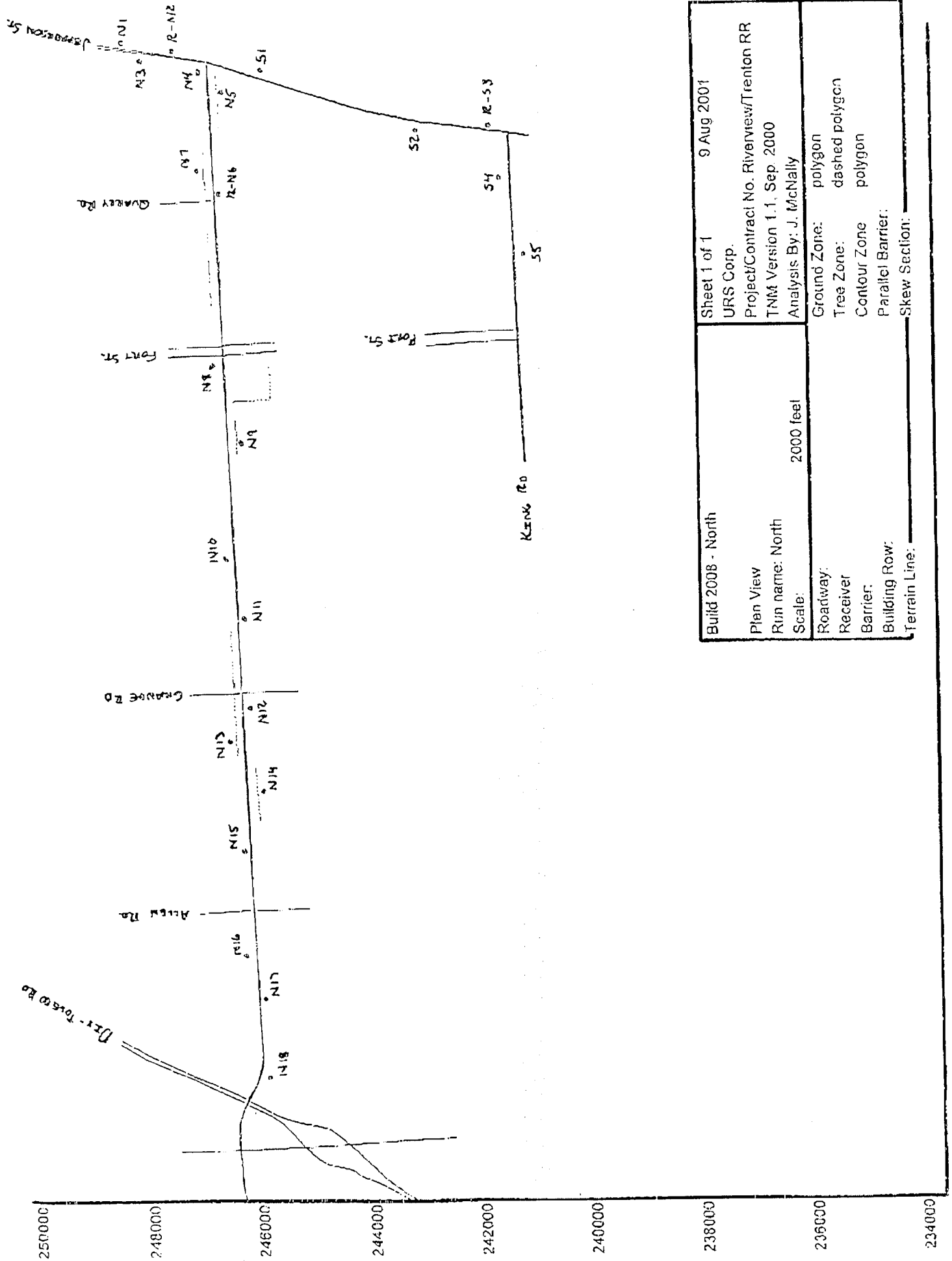
NOTES:

* ADT and Peak Volume data provided by Wayne County.

* N/A indicates link not included on anticipated haul route.

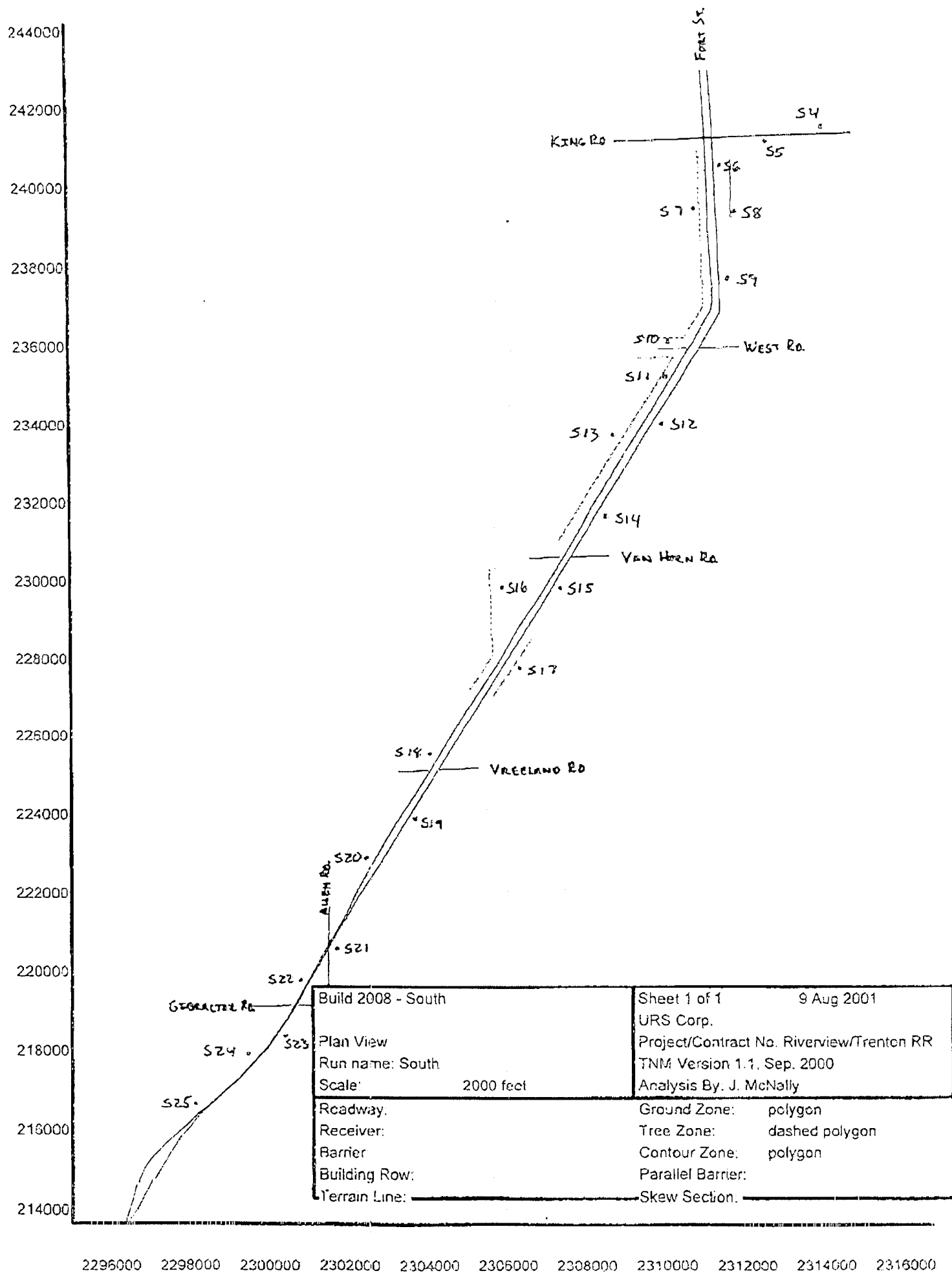
Roadway Name:	Sibley Rd
---------------	-----------

Model Inputs and Results



Build 2008 - North	Sheet 1 of 1	9 Aug 2001
Plan View	URS Corp.	
Run name: North	Project/Contract No. Riverview/Trenton RR	
Scale: 2000 feet	TNM Version 1.1, Sep. 2000	
	Analysis By: J. McNally	
Roadway:	Ground Zone: polygon	
Receiver	Tree Zone: dashed polygon	
Barrier:	Contour Zone: polygon	
Building Row:	Parallel Barrier:	
Terrain Line:	Skew Section:	

2296000 2298000 2300000 2302000 2304000 2306000 2308000 2310000 2312000 2314000 2316000



Existing (2001)

Model Results and Inputs

RESULTS: SOUND LEVELS

URS Corp.
J. McNally

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Receiver
Name

Riverview/Trenton RR

Validation - North

INPUT HEIGHTS

68 deg F, 50% RH

Riverview/Trenton RR

9 August 2001

TNM 1.1

Calculated with TNM 1.1

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Calculated	Crit'n	Increase over existing			Type Impact	With Barrier			Calculated minus Goal
							Calculated	Crit'n	Sub'l Inc		Calculated	LAeq1h	Noise Reduction Calculated	Goal
			dBA	dBA	dBA	dBA	dB	dB	dB		dBA	dB	dB	dB
R-N2	61	1	62.7	62.6	66	66	-0.1	10	---	---	62.6	0.0	0.0	-8.0
R-N6	65	1	65.9	63.8	66	66	-2.1	10	---	---	63.8	0.0	0.0	-8.0
N1	67	1	0.0	62.7	66	66	62.7	10	---	---	62.7	0.0	0.0	-8.0
N3	68	1	0.0	60.6	66	66	60.6	10	---	---	60.6	0.0	0.0	-8.0
N4	69	1	0.0	60.3	66	66	60.3	10	---	---	60.3	0.0	0.0	-8.0
N7	72	1	0.0	53.9	66	66	53.9	10	---	---	53.9	0.0	0.0	-8.0
N5	74	1	0.0	60.7	66	66	60.7	10	---	---	60.7	0.0	0.0	-8.0
N8	24	1	0.0	59.1	66	66	59.1	10	---	---	59.1	0.0	0.0	-8.0
N9	26	1	0.0	55.8	66	66	55.8	10	---	---	55.8	0.0	0.0	-8.0
N10	27	1	0.0	62.4	66	66	62.4	10	---	---	62.4	0.0	0.0	-8.0
N11	28	1	0.0	60.9	66	66	60.9	10	---	---	60.9	0.0	0.0	-8.0
N12	30	1	0.0	61.2	66	66	61.2	10	---	---	61.2	0.0	0.0	-8.0
N13	31	1	0.0	55.1	66	66	55.1	10	---	---	55.1	0.0	0.0	-8.0
N14	32	1	0.0	54.7	66	66	54.7	10	---	---	54.7	0.0	0.0	-8.0
N15	33	1	0.0	60.8	66	66	60.8	10	---	---	60.8	0.0	0.0	-8.0
N16	34	1	0.0	60.3	66	66	60.3	10	---	---	60.3	0.0	0.0	-8.0
N17	36	1	0.0	64.9	66	66	64.9	10	---	---	64.9	0.0	0.0	-8.0
N18	38	1	0.0	61.3	66	66	61.3	10	---	---	61.3	0.0	0.0	-8.0
S1	43	1	0.0	58.4	66	66	58.4	10	---	---	58.4	0.0	0.0	-8.0
S2	44	1	0.0	59.4	66	66	59.4	10	---	---	59.4	0.0	0.0	-8.0
S4	45	1	0.0	57.1	66	66	57.1	10	---	---	57.1	0.0	0.0	-8.0
S5	46	1	0.0	58.3	66	66	58.3	10	---	---	58.3	0.0	0.0	-8.0
R-S3	78	1	65.5	66.8	66	66	1.3	10	Snd Lvl	---	66.8	0.0	0.0	-8.0

Riverview/Trenton RR

RESULTS: SOUND LEVELS

Dwelling Units

	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	23	0.0	0.0	0.0
All Impacted	1	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

9 August 2001

2

Q:\Surf\2000000193\00\Design (non-Cad)\Environ\TNM\Validation\North

INPUT: ROADWAYS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:

Riverview/Trenton RR
Validation - North

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway

Points

Name

Width

No.

Coordinates (pavement)

X

Y

Z

ft

ft

ft

ft

mph

%

Flow Control
Control Speed
Device Constraint
Percent Vehicles
Affected

Segment

Pvmt

On

Type

Struct?

King Rd EB - 2

68 2308113.5 240951.1 595.00

Average

Fort Rd. SB

69 2309113.0 240981.2 595.00

Average

King Rd. WB - 2

77 2310366.8 241028.2 595.00

Average

King Rd. WB

85 2310274.8 242731.3 595.00

Average

King Rd WB

86 2310343.0 241733.7 595.00

Average

INPUT: ROADWAYS

Fort Rd. N

Riverview/Trenton RR

US-24 (Dix Toledo Rd) NB - 2	12.0	point161	161	2310556.5	241082.9	595.00	Average
		point162	162	2310526.2	241740.4	595.00	Average
		point163	163	2310480.5	242738.9	595.00	
	12.0	point505	505	2296469.5	246148.6	600.00	Average
		point506	506	2296678.5	246602.9	600.00	Average
		point507	507	2296876.2	247062.2	600.00	Average
		point508	508	2297077.0	247520.0	600.00	Average
		point509	509	2297285.2	247974.7	600.00	Average
		point510	510	2297545.2	248401.7	600.00	
		point511	511	2297484.2	248433.0	600.00	Average
US-24 (Dix Toledo Rd) SB - 2	12.0	point512	512	2297219.0	248009.1	600.00	Average
		point513	513	2297021.5	247549.8	600.00	Average
		point514	514	2296821.5	247091.5	600.00	Average
		point515	515	2296620.0	246633.9	600.00	Average
		point516	516	2296401.5	246184.2	600.00	
	12.0	point320	320	2315442.5	246580.8	585.00	Average
		point321	321	2314978.5	246563.0	588.00	Average
Sibley WB		point322	322	2314478.8	246544.5	592.00	Average
		point323	323	2313979.2	246526.0	596.00	Average
		point324	324	2313479.5	246507.5	600.00	Average
		point332	332	2312979.8	246489.1	603.00	
	12.0	point456	456	2294364.8	242630.2	600.00	Average
		point457	457	2294495.5	242843.3	600.00	Average
		point458	458	2294626.2	243056.5	601.00	Average
US-24 (Dix Toledo Rd) NB - 1		point459	459	2294756.8	243269.6	602.00	Average
		point460	460	2294890.5	243480.9	605.00	Average
		point461	461	2295044.5	243677.8	607.00	Average
		point462	462	2295213.0	243862.5	610.00	Average
		point463	463	2295384.2	244044.7	615.00	Average
		point464	464	2295559.0	244223.3	620.00	Average
		point619	619	2295682.5	244354.8	618.50	
		point465	465	2295762.0	244442.6	617.00	Average
		point521	521	2295913.0	244640.2	614.00	Average
		point500	500	2295982.8	244928.8	611.00	Average

Y

INPUT: ROADWAYS

Riverview/Trenton RR

US-24 (Dix Toledo Rd) SB - 1	point501	501	2296029.0	245174.5	609.00	Average
	point502	502	2296093.8	245416.0	607.00	Average
	point503	503	2296194.8	245644.7	605.00	Average
	point517	517	2296316.5	245863.1	600.00	Average
12.0	point518	518	2296435.2	246083.0	600.00	Average
	point519	519	2296365.0	246108.9	600.00	Average
	point467	467	2296254.2	245884.8	600.00	Average
	point468	468	2296142.5	245661.2	605.00	Average
	point469	469	2296088.2	245577.0	608.00	Average
	point470	470	2296027.5	245497.7	613.00	Average
	point471	471	2295848.0	245323.6	617.00	Average
	point472	472	2295663.5	245154.9	620.00	Average
	point473	473	2295486.5	244978.5	620.00	Average
	point474	474	2295389.5	244863.1	616.00	Average
	point475	475	2295335.0	244779.4	615.00	Average
	point476	476	2295292.2	244689.0	614.00	Average
	point477	477	2295242.0	244495.4	613.00	Average
	point478	478	2295190.8	244302.0	613.00	Average
	point479	479	2295151.0	244206.8	612.00	Average
	point522	522	2295088.5	244128.7	612.00	Average
	point448	448	2295029.2	243983.7	610.00	Average
	point449	449	2294942.0	243749.4	607.00	Average
	point450	450	2294831.2	243525.2	605.00	Average
	point451	451	2294703.0	243310.7	602.00	Average
	point452	452	2294572.5	243097.4	601.00	Average
	point453	453	2294442.2	242884.1	600.00	Average
	point454	454	2294311.8	242670.8	600.00	Average
	point430	430	2295763.2	242382.1	605.00	Average
12.0	point431	431	2295703.2	243380.3	605.00	Average
	point432	432	2295650.2	244378.9	605.00	Average
	point433	433	2295601.2	245377.7	605.00	Average
	point425	425	2295551.0	246376.5	605.00	Average
	point426	426	2295515.5	247375.8	605.00	Average
	point534	534	2299837.5	246960.6	600.00	Average
I-75 N						
Allen Rd.						

INPUT: ROADWAYS

Riverview/Trenton RR

Roadway155	12.0	point535	535 2299891.0	246011.8	600.00	Average
		point536	536 2299925.0	244962.7	600.00	
Grange Rd.	12.0	point537	537 2299891.0	245928.8	598.00	Average
		point538	538 2303817.0	247114.6	600.00	
Roadway157		point539	539 2303860.8	246170.9	596.00	
	12.0	point540	540 2303894.5	245105.3	592.00	Average
Fort Rd. SB - N	12.0	point541	541 2303864.0	246101.3	596.00	
		point542	542 2310111.2	247382.7	600.00	Average
		point543	543 2310140.2	246416.4	601.00	
Fort Rd. SB - S	12.0	point544	544 2310140.2	246353.3	601.00	Average
		point545	545 2310196.0	245390.3	598.00	
Fort Rd. NB - S	12.0	point546	546 2310373.0	245366.4	598.00	Average
		point547	547 2310306.2	246366.6	602.00	
Fort Rd. NB - N	12.0	point548	548 2310302.8	246419.7	602.00	Average
		point549	549 2310267.0	247398.7	600.00	
Quarry Rd.	12.0	point550	550 2312906.5	247490.4	600.00	Average
		point551	551 2312947.8	246522.5	603.00	
Jefferson NB-2	12.0	point52	52 2314065.0	240769.0	580.00	Average
		point627	627 2314120.5	241164.2	580.00	
		point54	54 2314330.8	242751.3	581.00	Average
		point55	55 2314558.0	243723.1	583.00	Average
		point56	56 2314851.2	244679.0	584.00	Average
SB Jefferson	12.0	point57	57 2315478.0	246577.8	585.00	Average
		point43	43 2315455.5	246585.6	585.00	
		point44	44 2314828.2	244686.2	584.00	Average
		point45	45 2314535.0	243730.1	583.00	Average
		point47	47 2314307.0	242755.6	581.00	Average
		point626	626 2314100.5	241188.2	580.00	Average
		point51	51 2314041.2	240772.3	580.00	
Sibley WB-2	12.0	point628	628 2312979.8	246489.1	603.00	Average
		point333	333 2312480.2	246470.6	604.00	Average
		point334	334 2311980.5	246452.1	605.00	Average
		point335	335 2311481.0	246430.6	604.50	Average
		point336	336 2310981.2	246415.2	604.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2

12.0

point345	345	2310481.5	246396.6	603.00
point630	630	2310231.5	246388.5	601.50
point629	629	2312980.2	246477.1	603.00
point327	327	2313480.0	246495.5	600.00
point328	328	2313979.5	246514.0	596.00
point329	329	2314479.2	246532.5	592.00
point330	330	2314979.0	246551.0	588.00
point331	331	2315442.2	246568.8	585.00

Sibley WB-2-2

12.0

point632	632	2310231.5	246388.5	601.50
point345	345	2309981.8	246380.4	600.00
point346	346	2309482.2	246361.6	599.00
point347	347	2308982.5	246347.4	598.00
point348	348	2308482.8	246327.0	597.50
point356	356	2307983.2	246305.3	597.00
point357	357	2307483.8	246283.0	596.00
point358	358	2306984.2	246260.9	595.00
point359	359	2306484.8	246239.4	594.00
point360	360	2305985.0	246219.7	593.00
point368	368	2305485.5	246200.0	592.00
point369	369	2304986.0	246180.3	593.00
point370	370	2304486.2	246160.7	594.50
point371	371	2303986.8	246141.1	596.00

Sibley EB-2

12.0

point633	633	2310232.0	246376.5	601.50
point338	338	2310482.0	246384.6	603.00
point339	339	2310981.8	246403.2	604.00
point340	340	2311481.2	246418.6	604.50
point341	341	2311981.0	246440.1	605.00
point342	342	2312480.8	246458.6	604.00
point326	326	2312980.2	246477.1	603.00

Sibley WB-2-2-2

12.0

point634	634	2303986.8	246141.1	596.00
point372	372	2303487.0	246121.6	596.00
point380	380	2302987.5	246099.1	597.00
point381	381	2302488.0	246076.0	597.00
point382	382	2301988.5	246053.0	598.00

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

URS Corp.
J. McNally

9 August 2001
TNM 1.1

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT:

Riverview/Trenton RR
Validation - North

RUN:

Roadway

Points

Name

No. Segment

			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
King Rd EB - 2	point68	68	669	35	23	35	52	35	0	0	0	0
	point69	69	669	35	23	35	52	35	0	0	0	0
	point77	77										
Fort Rd. SB	point85	85	851	40	29	40	66	40	0	0	0	0
	point86	86	851	40	29	40	66	40	0	0	0	0
	point87	87										
King Rd. WB - 2	point159	159	669	35	23	35	52	35	0	0	0	0
	point66	66	669	35	23	35	52	35	0	0	0	0
	point67	67										
King Rd. WB	point60	60	274	35	9	35	22	35	0	0	0	0
	point61	61	274	35	9	35	22	35	0	0	0	0
	point62	62	274	35	9	35	22	35	0	0	0	0
King Rd WB	point64	64	274	35	9	35	22	35	0	0	0	0
	point78	78	274	35	9	35	22	35	0	0	0	0
	point65	65										
Fort Rd. N	point160	160	274	35	9	35	22	35	0	0	0	0
	point70	70	274	35	9	35	22	35	0	0	0	0
	point71	71	274	35	9	35	22	35	0	0	0	0
Q:\Surf2200000193\00\Design (non-Cad)\Environ\TNM\Validation\North	point72	72	274	35	9	35	22	35	0	0	0	0
	point75	75	274	35	9	35	22	35	0	0	0	0
	point76	76										
Q:\Surf2200000193\00\Design (non-Cad)\Environ\TNM\Validation\North	point161	161	851	40	29	40	66	40	0	0	0	0

9 August 2001

INPUT: TRAFFIC FOR LAeq1h Volumes

		Riverview/Trenton RR									
US-24 (Dix Toledo Rd) SB - 1	point502	502	0	0	0	0	0	0	0	0	0
	point503	503	0	0	0	0	0	0	0	0	0
	point517	517	0	0	0	0	0	0	0	0	0
	point518	518									
	point519	519	0	0	0	0	0	0	0	0	0
	point467	467	0	0	0	0	0	0	0	0	0
	point468	468	0	0	0	0	0	0	0	0	0
	point469	469	0	0	0	0	0	0	0	0	0
	point470	470	0	0	0	0	0	0	0	0	0
	point471	471	0	0	0	0	0	0	0	0	0
	point472	472	0	0	0	0	0	0	0	0	0
	point473	473	0	0	0	0	0	0	0	0	0
	point474	474	0	0	0	0	0	0	0	0	0
	point475	475	0	0	0	0	0	0	0	0	0
	point476	476	0	0	0	0	0	0	0	0	0
	point477	477	0	0	0	0	0	0	0	0	0
	point478	478	0	0	0	0	0	0	0	0	0
	point479	479	0	0	0	0	0	0	0	0	0
	point522	522	0	0	0	0	0	0	0	0	0
I-75 N	point448	448	0	0	0	0	0	0	0	0	0
	point449	449	0	0	0	0	0	0	0	0	0
	point450	450	0	0	0	0	0	0	0	0	0
	point451	451	0	0	0	0	0	0	0	0	0
	point452	452	0	0	0	0	0	0	0	0	0
	point453	453	0	0	0	0	0	0	0	0	0
	point454	454									
	point430	430	0	0	0	0	0	0	0	0	0
	point431	431	0	0	0	0	0	0	0	0	0
	point432	432	0	0	0	0	0	0	0	0	0
Allen Rd.	point433	433	0	0	0	0	0	0	0	0	0
	point425	425	0	0	0	0	0	0	0	0	0
	point426	426									
	point534	534	0	0	0	0	0	0	0	0	0
	point535	535									

INPUT: TRAFFIC FOR LAeq1h Volumes

		375	582	30	20	30	45	30	0	0	Riverview/Trenton RR	
Sibley EB-2	point375	375	582	30	20	30	45	30	0	0	0	0
	point376	376										
	point639	639	809	30	27	30	63	30	0	0	0	0
	point12	12	809	30	27	30	63	30	0	0	0	0
	point398	398	809	30	27	30	63	30	0	0	0	0
	point14	14	809	30	27	30	63	30	0	0	0	0
	point17	17	809	30	27	30	63	30	0	0	0	0
	point398	398	809	30	27	30	63	30	0	0	0	0
	point399	399	809	30	27	30	63	30	0	0	0	0
	point400	400	809	30	27	30	63	30	0	0	0	0
Sibley Rd. over I-75	point401	401	809	30	27	30	63	30	0	0	0	0
	point402	402										
	point638	638	1113	30	87	30	37	30	0	0	0	0
	point617	617	1113	30	87	30	37	30	0	0	0	0
	point411	411	1113	30	87	30	37	30	0	0	0	0
	point572	572	1113	30	87	30	37	30	0	0	0	0
	point413	413	1113	30	87	30	37	30	0	0	0	0
	point414	414	1113	30	87	30	37	30	0	0	0	0
	point416	416	1113	30	87	30	37	30	0	0	0	0
	point614	614	1113	30	87	30	37	30	0	0	0	0
Sibley Rd. EB	point417	417	1113	30	87	30	37	30	0	0	0	0
	point573	573	1113	30	87	30	37	30	0	0	0	0
	point419	419	1113	30	87	30	37	30	0	0	0	0
	point420	420										
	point1	1	1003	30	78	30	33	30	0	0	0	0
	point2	2	1003	30	78	30	33	30	0	0	0	0
	point574	574	1003	30	78	30	33	30	0	0	0	0
	point4	4	1003	30	78	30	33	30	0	0	0	0
	point615	615	1003	30	78	30	33	30	0	0	0	0
	point5	5	1003	30	78	30	33	30	0	0	0	0
	point616	616	1003	30	78	30	33	30	0	0	0	0
	point15	15	1003	30	78	30	33	30	0	0	0	0
	point571	571	1003	30	78	30	33	30	0	0	0	0
	point10	10	1003	30	78	30	33	30	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

Jeff North	point618	618	1003	30	78	30	33	30	0	0	0	Riverview/Trenton RR
	point11	11										0
	point642	642	490	35	14	35	31	35	0	0	0	0
	point643	643	490	35	14	35	31	35	0	0	0	0
Jeff South	point644	644										
	point645	645	490	35	14	35	31	35	0	0	0	0
	point646	646	490	35	14	35	31	35	0	0	0	0
	point647	647										

INPUT: RECEIVERS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: RECEIVERS

PROJECT/CONTRACT:
RUN:

Riverview/Trenton RR
Validation - North

Receiver

Name	No.	# DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria			Active in Calc.
			X	Y				Existing LAeq1h dBA	Impact LAeq1h dBA	Sub'l dB	
			ft	ft	ft		ft	dBA	dBA	dB	
R-N2	61	1	2315664.0	247197.9	585.00	5.00	62.70	66	10.0	8.0	Y
R-N6	65	1	2313066.8	246423.0	603.00	5.00	65.90	66	10.0	8.0	Y
N1	67	1	2315808.8	248121.3	583.00	5.00	0.00	66	10.0	8.0	Y
N3	68	1	2315534.5	247785.1	579.00	5.00	0.00	66	10.0	8.0	Y
N4	69	1	2315314.8	246735.2	584.00	5.00	0.00	66	10.0	8.0	Y
N7	72	1	2313502.5	246769.5	600.00	5.00	0.00	66	10.0	8.0	Y
N5	74	1	2314909.0	246337.3	692.00	5.00	0.00	66	10.0	8.0	Y
N8	24	1	2309904.8	246584.3	600.00	5.00	0.00	66	10.0	8.0	Y
N9	26	1	2308484.2	246083.4	597.50	5.00	0.00	66	10.0	8.0	Y
N10	27	1	2306343.5	246385.3	594.00	5.00	0.00	66	10.0	8.0	Y
N11	28	1	2305355.5	246035.3	592.00	5.00	0.00	66	10.0	8.0	Y
N12	30	1	2303567.5	245980.5	596.00	5.00	0.00	66	10.0	8.0	Y
N13	31	1	2302940.2	246344.1	597.00	5.00	0.00	66	10.0	8.0	Y
N14	32	1	2302050.8	245774.6	598.00	5.00	0.00	66	10.0	8.0	Y
N15	33	1	2301145.0	246152.0	598.50	5.00	0.00	66	10.0	8.0	Y
N16	34	1	2299046.0	246104.0	600.00	5.00	0.00	66	10.0	8.0	Y
N17	36	1	2298270.8	245767.8	600.00	5.00	0.00	66	10.0	8.0	Y
N18	38	1	2296840.0	245733.4	608.00	5.00	0.00	66	10.0	8.0	Y
S1	43	1	2315350.0	245591.9	585.00	5.00	0.00	66	10.0	8.0	Y
S2	44	1	2314176.8	242819.8	581.00	5.00	0.00	66	10.0	8.0	Y
S4	45	1	2313303.5	241344.6	585.00	5.00	0.00	66	10.0	8.0	Y
S5	46	1	2311891.5	240939.7	590.00	5.00	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS
R-S3

78 1 2314215.5 241581.4 580.00 5.00 65.50 66 10.0 8.0 Y Riverview/Trenton RR

INPUT: BUILDING ROWS

URS Corp.
J. McNally

INPUT: BUILDING ROWS
PROJECT/CONTRACT:

RUN:

Building Row

Name

Riverview/Trenton RR
Validation - North

Points

Average Height ft	Building Percent %	No.	Coordinates (ground)		
			X ft	Y ft	Z ft
Building31	30.00	50	60	2315249.8	246411.2
			61	2314250.5	246375.5
Building32	30.00	50	62	2314075.0	246689.8
			63	2313076.0	246646.4
Building33	30.00	50	64	2312430.2	246631.7
			65	2310931.5	246572.9
Building34	30.00	60	66	2309998.8	245548.4
			67	2309299.2	245521.5
			68	2309257.0	246220.2
Building35	30.00	60	69	2308978.0	246176.1
			70	2308278.5	246149.7
Building36	30.00	60	71	2305124.5	246321.8
			72	2303925.2	246279.0
Building37	30.00	60	73	2303778.2	246276.4
			74	2302629.2	246226.4
Building38	30.00	60	75	2302647.2	245909.0
			76	2301500.0	245830.7

Riverview/Trenton RR

9 August 2001
TNM 1.1

RESULTS: SOUND LEVELS

URS Corp.
J. McNally

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Receiver
Name

Riverview/Trenton RR

Validation - South

INPUT HEIGHTS

68 deg F, 50% RH

Riverview/Trenton RR

9 August 2001
TNM 1.1
Calculated with TNM 1.1

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Calculated	Crit'n	Increase over existing			Type Impact	With Barrier			Calculated minus Goal
						Calculated	Crit'n	Sub'l Inc		Calculated LAeq1h	Calculated	Goal	
		dBA	dBA	dBA	dBA	dB	dB			dBA	dB	dB	dB
S4	45	1	0.0	56.7	66	56.7	10	---	---	56.7	0.0	8	-8.0
S5	46	1	0.0	58.7	66	58.7	10	---	---	58.7	0.0	8	-8.0
S6	49	1	0.0	61.8	66	61.8	10	---	---	61.8	0.0	8	-8.0
S8	50	1	0.0	59.8	66	59.8	10	---	---	59.8	0.0	8	-8.0
S7	51	1	0.0	55.7	66	55.7	10	---	---	55.7	0.0	8	-8.0
S9	53	1	0.0	59.5	66	59.5	10	---	---	59.5	0.0	8	-8.0
S10	54	1	0.0	52.9	66	52.9	10	---	---	52.9	0.0	8	-8.0
S11	55	1	0.0	61.3	66	61.3	10	---	---	61.3	0.0	8	-8.0
S12	57	1	0.0	60.1	66	60.1	10	---	---	60.1	0.0	8	-8.0
S13	58	1	0.0	53.3	66	53.3	10	---	---	53.3	0.0	8	-8.0
S14	59	1	0.0	59.8	66	59.8	10	---	---	59.8	0.0	8	-8.0
S15	61	1	0.0	59.8	66	59.8	10	---	---	59.8	0.0	8	-8.0
S17	62	1	0.0	54.0	66	54.0	10	---	---	54.0	0.0	8	-8.0
S16	65	1	0.0	50.7	66	50.7	10	---	---	50.7	0.0	8	-8.0
S18	38	1	0.0	59.7	66	59.7	10	---	---	59.7	0.0	8	-8.0
S19	67	1	0.0	60.8	66	60.8	10	---	---	60.8	0.0	8	-8.0
S20	68	1	0.0	60.0	66	60.0	10	---	---	60.0	0.0	8	-8.0
S21	69	1	0.0	61.8	66	61.8	10	---	---	61.8	0.0	8	-8.0
S22	71	1	0.0	61.0	66	61.0	10	---	---	61.0	0.0	8	-8.0
S23	72	1	0.0	61.6	66	61.6	10	---	---	61.6	0.0	8	-8.0
S24	74	1	0.0	59.9	66	59.9	10	---	---	59.9	0.0	8	-8.0
S25	76	1	0.0	59.1	66	59.1	10	---	---	59.1	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction										

RESULTS: SOUND LEVELS

Riverview/Trenton RR

All Selected	22	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

INPUT: ROADWAYS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: ROADWAYS
PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR
Validation - South

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway
Name

Points

Name	Width	Name	No.	Coordinates (pavement)			Flow Control		Segment		
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft	mph	%			
King Rd EB - 2	12.0	point68	68	2308113.5	240951.1	595.00			Average		
		point69	69	2309113.0	240981.2	595.00			Average		
		point77	77	2310366.8	241028.2	595.00					
I-75 S, S of Fort Rd.	12.0	point148	148	2295948.2	214505.7	585.00			Average		
		point149	149	2295838.2	214109.6	586.00			Average		
		point150	150	2295739.8	213722.1	587.00			Average		
		point151	151	2295655.5	213402.2	587.00			Average		
		point152	152	2295463.5	213061.0	587.00			Average		
Fort Rd. SB	12.0	point85	85	2310274.8	242731.3	595.00			Average		
		point86	86	2310343.0	241733.7	595.00			Average		
		point87	87	2310366.5	241071.9	595.00					
King Rd. WB - 2	12.0	point159	159	2310366.2	241052.6	595.00			Average		
		point66	66	2309112.2	241005.2	595.00			Average		
		point67	67	2308112.8	240975.1	595.00					
King Rd. WB	12.0	point60	60	2314078.8	241187.3	580.00			Average		
		point61	61	2313109.5	241151.2	585.00			Average		
		point62	62	2312110.2	241110.1	590.00			Average		
		point64	64	2311110.8	241082.2	592.00			Average		
		point78	78	2310559.0	241060.4	595.00			Average		
King Rd WB		point65	65	2310366.2	241052.6	595.00					
	12.0	point160	160	2310366.8	241028.2	595.00			Average		

INPUT: ROADWAYS

Riverview/Trenton RR

Fort Rd. N	point70	70	2310560.2	241036.1	595.00	Average
	point71	71	2311111.5	241058.3	592.00	Average
	point72	72	2312111.0	241086.2	590.00	Average
	point75	75	2313110.2	241127.2	585.00	Average
	point76	76	2314076.2	241161.5	585.00	
	12.0	161	2310556.5	241082.9	595.00	Average
Fort Rd. NB	point162	162	2310526.2	241740.4	595.00	Average
	point163	163	2310480.5	242738.9	595.00	
	12.0	229	2296386.5	214594.4	585.00	Average
	point228	228	2296484.8	214739.4	585.00	Average
	point217	217	2296592.0	214908.2	585.00	Average
	point226	226	2296833.2	215283.6	586.00	Average
	point225	225	2297057.2	215613.2	586.00	Average
	point224	224	2297307.8	215929.6	586.00	Average
	point223	223	2297407.0	216043.2	587.00	Average
	point221	221	2297553.5	216246.0	587.00	Average
	point220	220	2297857.2	216506.9	587.00	Average
	point219	219	2298598.2	217179.8	588.00	Average
	point218	218	2299276.2	217917.1	588.00	Average
	point217	217	2299846.5	218740.1	588.00	Average
NB I-75 - S of Fort Rd.	point216	216	2300331.8	219614.7	589.00	
	12.0	240	2295494.5	213042.9	587.00	Average
	point238	238	2295679.8	213371.8	587.00	Average
	point237	237	2295769.5	213548.9	587.00	Average
	point236	236	2295972.5	213893.4	586.00	Average
	point235	235	2296174.8	214238.5	586.00	Average
	point234	234	2296271.2	214413.7	586.00	Average
	point233	233	2296337.8	214602.4	585.00	
	12.0	552	2311199.0	235819.4	590.00	Average
	point553	553	2310244.2	235790.3	590.00	
Roadway164	12.0	554	2309192.5	235732.9	590.00	Average
	point555	555	2309886.0	235773.8	590.00	
Van Horn	12.0	556	2307936.8	230469.8	584.50	Average
	point557	557	2307000.0	230434.2	584.50	

INPUT: ROADWAYS

Van Horn Rd.	12.0	point558	558	2305926.8	230389.1	584.50	Riverview/Trenton RR
		point559	559	2306711.5	230420.9	584.50	Average
Vreeland Rd.	12.0	point560	560	2302558.5	224901.3	585.00	Average
		point561	561	2303290.0	224935.5	584.00	
vreeland rd.	12.0	point562	562	2304562.5	224989.3	585.00	Average
		point563	563	2303615.0	224945.4	584.00	
Fort Rd. SB-2	12.0	point575	575	2310367.8	241012.7	595.00	Average
		point88	88	2310389.2	240233.3	592.00	Average
		point90	90	2310427.0	239173.3	590.00	Average
		point97	97	2310446.2	238735.5	586.00	Average
		point98	98	2310512.2	237737.7	587.00	Average
		point99	99	2310520.2	237345.7	587.00	Average
		point100	100	2310526.8	237145.8	588.00	Average
		point101	101	2310522.0	236945.9	589.00	Average
		point102	102	2310507.8	236746.4	590.00	Average
		point103	103	2310211.0	236225.2	590.00	Average
		point104	104	2310006.8	235881.3	590.00	Average
		point105	105	2309802.5	235537.4	589.00	Average
		point106	106	2309598.2	235193.5	589.00	Average
		point108	108	2309276.0	234652.9	588.00	Average
		point109	109	2308758.5	233797.3	588.00	Average
		point110	110	2308259.0	232931.0	588.00	Average
		point111	111	2308000.0	232503.2	587.00	Average
		point112	112	2307744.8	232073.3	587.00	Average
		point113	113	2307489.5	231643.4	586.00	Average
		point115	115	2307234.2	231213.5	586.00	Average
		point116	116	2306978.8	230783.7	586.00	Average
		point117	117	2306723.5	230353.8	585.00	Average
		point118	118	2306468.0	229923.9	585.00	Average
		point119	119	2306204.8	229499.8	585.00	Average
		point120	120	2305652.5	228666.1	585.00	Average
		point122	122	2305144.2	227805.0	585.00	Average
		point123	123	2304604.8	226963.0	585.00	Average
		point124	124	2304075.8	226114.4	585.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR

	point125	125	2303547.0	225265.5	584.00	Average
	point126	126	2303016.5	224417.9	585.00	Average
	point127	127	2302482.8	223572.2	585.00	Average
	point128	128	2301963.2	222717.8	587.00	Average
	point130	130	2301486.8	221838.5	590.00	Average
	point131	131	2301253.8	221365.6	590.00	Average
	point132	132	2301028.0	220942.8	589.00	Average
	point133	133	2300775.5	220511.2	589.00	Average
	point134	134	2300310.5	219625.8	589.00	
Roadway184	point578	578	2300771.2	219479.6	585.00	Average
	point579	579	2300770.0	220417.5	589.00	
allen	point580	580	2300800.5	221473.5	585.00	Average
	point581	581	2300774.8	220553.8	589.00	
Gibraltar Rd.	point620	620	2298920.8	218923.9	0.00	Average
	point621	621	2299886.2	218961.8	0.00	
Gibraltar Rd.	point622	622	2300959.2	219008.5	0.00	Average
	point623	623	2300008.2	218972.9	0.00	
Fort Rd. NB-2	point624	624	2300331.8	219614.7	589.00	Average
	point215	215	2300796.8	220500.1	589.00	Average
	point214	214	2301066.8	220920.9	589.00	Average
	point213	213	2301315.2	221343.2	590.00	Average
	point212	212	2301592.8	221793.2	590.00	Average
	point211	211	2302126.8	222649.2	587.00	Average
	point209	209	2302643.8	223472.3	585.00	Average
	point208	208	2303173.8	224317.4	585.00	Average
	point207	207	2303709.2	225188.8	584.00	Average
	point206	206	2304231.2	226029.5	585.00	Average
	point205	205	2304757.0	226876.7	585.00	Average
	point204	204	2305276.2	227717.4	585.00	Average
	point200	200	2305819.0	228586.6	585.00	Average
	point198	198	2306344.2	229413.3	585.00	Average
	point193	193	2306605.0	229839.9	585.00	Average
	point192	192	2306864.2	230267.5	585.00	Average
	point191	191	2307123.2	230695.1	586.00	Average

Riverview/Trenton RR

Average	Y
Average	Y
Average	
Average	

INPUT: TRAFFIC FOR LAeq1h Volumes

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR

Validation - South

Roadway

Points

Name

No. Segment

				Autos		MTrucks		HTrucks		Buses		Motorcycles	
				V	S	V	S	V	S	V	S	V	S
				veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
King Rd EB - 2	point68	68		669	35	23	35	52	35	0	0	0	0
	point69	69		669	35	23	35	52	35	0	0	0	0
	point77	77											
I-75 S, S of Fort Rd.	point148	148		0	0	0	0	0	0	0	0	0	0
	point149	149		0	0	0	0	0	0	0	0	0	0
	point150	150		0	0	0	0	0	0	0	0	0	0
	point151	151		0	0	0	0	0	0	0	0	0	0
	point152	152											
Fort Rd. SB	point85	85		851	40	29	40	66	40	0	0	0	0
	point86	86		851	40	29	40	66	40	0	0	0	0
	point87	87											
King Rd. WB - 2	point159	159		669	35	23	35	52	35	0	0	0	0
	point66	66		669	35	23	35	52	35	0	0	0	0
	point67	67											
King Rd. WB	point60	60		274	35	9	35	22	35	0	0	0	0
	point61	61		274	35	9	35	22	35	0	0	0	0
	point62	62		274	35	9	35	22	35	0	0	0	0
	point64	64		274	35	9	35	22	35	0	0	0	0
	point78	78		274	35	9	35	22	35	0	0	0	0
King Rd WB	point65	65											
	point160	160		274	35	9	35	22	35	0	0	0	0
	point70	70		274	35	9	35	22	35	0	0	0	0

Q:\Surf\22000000193\00\Design (non-Cad)\Environ\TNM\Validation\South

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9 August 2001

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

point71	71	274	35	9	35	22	35	0	0	0	0
point72	72	274	35	9	35	22	35	0	0	0	0
point75	75	274	35	9	35	22	35	0	0	0	0
point76	76										
point161	161	851	40	29	40	66	40	0	0	0	0
point162	162	851	40	29	40	66	40	0	0	0	0
point163	163										
point229	229	639	40	22	40	50	40	0	0	0	0
point228	228	639	40	22	40	50	40	0	0	0	0
point217	217	639	40	22	40	50	40	0	0	0	0
point226	226	639	40	22	40	50	40	0	0	0	0
point225	225	639	40	22	40	50	40	0	0	0	0
point224	224	639	40	22	40	50	40	0	0	0	0
point223	223	639	40	22	40	50	40	0	0	0	0
point221	221	639	40	22	40	50	40	0	0	0	0
point220	220	639	40	22	40	50	40	0	0	0	0
point219	219	639	40	22	40	50	40	0	0	0	0
point218	218	639	40	22	40	50	40	0	0	0	0
point217	217	639	40	22	40	50	40	0	0	0	0
point216	216										
point240	240	0	0	0	0	0	0	0	0	0	0
point238	238	0	0	0	0	0	0	0	0	0	0
point237	237	0	0	0	0	0	0	0	0	0	0
point236	236	0	0	0	0	0	0	0	0	0	0
point235	235	0	0	0	0	0	0	0	0	0	0
point234	234	0	0	0	0	0	0	0	0	0	0
point233	233										
point552	552	0	0	0	0	0	0	0	0	0	0
point553	553										
point554	554	0	0	0	0	0	0	0	0	0	0
point555	555										
point556	556	0	0	0	0	0	0	0	0	0	0
point557	557										
point558	558	0	0	0	0	0	0	0	0	0	0

NB I-75 - S of Fort Rd.

West Rd.

Roadway164

Van Horn

Van Horn Rd.

INPUT: RECEIVERS

URS Corp.
J. McNally

INPUT: RECEIVERS

PROJECT/CONTRACT:

RUN:

Receiver
Name

Riverview/Trenton RR
Validation - South

9 August 2001
TNM 1.1

Riverview/Trenton RR

Receiver Name	No.	# DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria			Active in
			X	Y				Existing LAeq1h	Impact LAeq1h	Sub'l Inc	
			ft	ft	ft		ft	dBA	dBA	dB	dB
S4	45	1	2313303.5	241344.6	585.00	5.00	585.00	0.00	66	10.0	8.0
S5	46	1	2311891.5	240939.7	590.00	5.00	590.00	0.00	66	10.0	8.0
S6	49	1	2310742.5	240349.6	592.00	5.00	592.00	0.00	66	10.0	8.0
S8	50	1	2311099.2	239183.2	590.00	5.00	590.00	0.00	66	10.0	8.0
S7	51	1	2310083.8	239258.6	590.00	5.00	590.00	0.00	66	10.0	8.0
S9	53	1	2310927.8	237543.2	587.00	5.00	587.00	0.00	66	10.0	8.0
S10	54	1	2309308.5	235937.6	590.00	5.00	590.00	0.00	66	10.0	8.0
S11	55	1	2309329.0	235038.7	589.00	5.00	589.00	0.00	66	10.0	8.0
S12	57	1	2309230.2	233831.1	588.00	5.00	588.00	0.00	66	10.0	8.0
S13	58	1	2308070.5	233556.6	588.00	5.00	588.00	0.00	66	10.0	8.0
S14	59	1	2307924.2	231614.8	587.00	5.00	587.00	0.00	66	10.0	8.0
S15	61	1	2306721.8	229645.5	585.00	5.00	585.00	0.00	66	10.0	8.0
S17	62	1	2305654.5	227525.2	585.00	5.00	585.00	0.00	66	10.0	8.0
S16	65	1	2305195.0	229638.6	585.00	5.00	585.00	0.00	66	10.0	8.0
S18	38	1	2303341.0	225322.6	584.00	5.00	584.00	0.00	66	10.0	8.0
S19	67	1	2302973.2	223682.7	585.00	5.00	585.00	0.00	66	10.0	8.0
S20	68	1	2301724.5	222694.6	587.00	5.00	587.00	0.00	66	10.0	8.0
S21	69	1	2300983.5	220430.3	589.00	5.00	589.00	0.00	66	10.0	8.0
S22	71	1	2300067.2	219593.2	589.00	5.00	589.00	0.00	66	10.0	8.0
S23	72	1	2299672.5	218207.1	588.00	5.00	588.00	0.00	66	10.0	8.0
S24	74	1	2298773.8	217733.7	588.00	5.00	588.00	0.00	66	10.0	8.0
S25	76	1	2297440.5	216484.8	587.00	5.00	587.00	0.00	66	10.0	8.0

Future No-Build (2008)

Model Results and Inputs

RESULTS: SOUND LEVELS

URS Corp.
J. McNally

RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Receiver
Name

Riverview/Trenton RR

No-Build 2008 - North

INPUT HEIGHTS

68 deg F, 50% RH

Riverview/Trenton RR

9 August 2001

TNM 1.1

Calculated with TNM 1.1

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing		Type Impact	With Barrier		Calculated minus Goal
						Calculated	Crit'n		Calculated	Noise Reduction Calculated	
			dBA	dBA		dB			dBA	dB	dB
R-N2	61	1	0.0	62.8	66	62.8	10	---	62.8	0.0	8 -8.0
R-N6	65	1	0.0	64.2	66	64.2	10	---	64.2	0.0	8 -8.0
N1	67	1	0.0	62.8	66	62.8	10	---	62.8	0.0	8 -8.0
N3	68	1	0.0	60.7	66	60.7	10	---	60.7	0.0	8 -8.0
N4	69	1	0.0	60.6	66	60.6	10	---	60.6	0.0	8 -8.0
N7	72	1	0.0	54.3	66	54.3	10	---	54.3	0.0	8 -8.0
N5	74	1	0.0	61.0	66	61.0	10	---	61.0	0.0	8 -8.0
N8	24	1	0.0	59.4	66	59.4	10	---	59.4	0.0	8 -8.0
N9	26	1	0.0	56.2	66	56.2	10	---	56.2	0.0	8 -8.0
N10	27	1	0.0	62.8	66	62.8	10	---	62.8	0.0	8 -8.0
N11	28	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8 -8.0
N12	30	1	0.0	61.6	66	61.6	10	---	61.6	0.0	8 -8.0
N13	31	1	0.0	55.5	66	55.5	10	---	55.5	0.0	8 -8.0
N14	32	1	0.0	55.1	66	55.1	10	---	55.1	0.0	8 -8.0
N15	33	1	0.0	61.2	66	61.2	10	---	61.2	0.0	8 -8.0
N16	34	1	0.0	60.7	66	60.7	10	---	60.7	0.0	8 -8.0
N17	36	1	0.0	65.2	66	65.2	10	---	65.2	0.0	8 -8.0
N18	38	1	0.0	61.7	66	61.7	10	---	61.7	0.0	8 -8.0
S1	43	1	0.0	58.6	66	58.6	10	---	58.6	0.0	8 -8.0
S2	44	1	0.0	59.5	66	59.5	10	---	59.5	0.0	8 -8.0
S4	45	1	0.0	57.3	66	57.3	10	---	57.3	0.0	8 -8.0
S5	46	1	0.0	58.5	66	58.5	10	---	58.5	0.0	8 -8.0
R-S3	78	1	0.0	67.0	66	67.0	10	Std Lvl	67.0	0.0	8 -8.0

9 August 2001

Riverview/Trenton RR

RESULTS: SOUND LEVELS

Dwelling Units

# DUs	Noise Reduction		
	Min	Avg	Max
	dB	dB	dB
All Selected	23	0.0	0.0
All Impacted	1	0.0	0.0
All that meet NR Goal	0	0.0	0.0

INPUT: ROADWAYS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: ROADWAYS

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR
No-Build 2008 - North

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway
Name

Width

Name

No.

Points

Coordinates (pavement)

X

Y

Z

ft

ft

ft

King Rd EB - 2

12.0 point68

68 2308113.5 240951.1 595.00

Average

point69

69 2309113.0 240981.2 595.00

Average

point77

77 2310366.8 241028.2 595.00

Average

Fort Rd. SB

12.0 point85

85 2310274.8 242731.3 595.00

Average

point86

86 2310343.0 241733.7 595.00

Average

point87

87 2310366.5 241071.9 595.00

Average

King Rd. WB - 2

12.0 point159

159 2310366.2 241052.6 595.00

Average

point66

66 2309112.2 241005.2 595.00

Average

point67

67 2308112.8 240975.1 595.00

Average

King Rd. WB

12.0 point60

60 2314078.8 241187.3 580.00

Average

point61

61 2313109.5 241151.2 585.00

Average

point62

62 2312110.2 241110.1 590.00

Average

point64

64 2311110.8 241082.2 592.00

Average

point78

78 2310559.0 241060.4 595.00

Average

point65

65 2310366.2 241052.6 595.00

Average

King Rd WB

12.0 point160

160 2310366.8 241028.2 595.00

Average

point70

70 2310560.2 241036.1 595.00

Average

point71

71 2311111.5 241058.3 592.00

Average

point72

72 2312111.0 241086.2 590.00

Average

point75

75 2313110.2 241127.2 585.00

Average

point76

76 2314076.2 241161.5 585.00

Average

INPUT: ROADWAYS

Riverview/Trenton RR

Fort Rd. N	12.0	point161	161	2310556.5	241082.9	595.00	Average
		point162	162	2310526.2	241740.4	595.00	Average
		point163	163	2310480.5	242738.9	595.00	
US-24 (Dix Toledo Rd) NB - 2	12.0	point505	505	2296469.5	246148.6	600.00	Average
		point506	506	2296678.5	246602.9	600.00	Average
		point507	507	2296876.2	247062.2	600.00	Average
		point508	508	2297077.0	247520.0	600.00	Average
		point509	509	2297285.2	247974.7	600.00	Average
		point510	510	2297545.2	248401.7	600.00	
US-24 (Dix Toledo Rd) SB - 2	12.0	point511	511	2297484.2	248433.0	600.00	Average
		point512	512	2297219.0	248009.1	600.00	Average
		point513	513	2297021.5	247549.8	600.00	Average
		point514	514	2296821.5	247091.5	600.00	Average
		point515	515	2296620.0	246633.9	600.00	Average
		point516	516	2296401.5	246184.2	600.00	Average
Sibley WB	12.0	point320	320	2315442.5	246580.8	585.00	Average
		point321	321	2314978.5	246563.0	588.00	Average
		point322	322	2314478.8	246544.5	592.00	Average
		point323	323	2313979.2	246526.0	596.00	Average
		point324	324	2313479.5	246507.5	600.00	Average
		point332	332	2312979.8	246489.1	603.00	
US-24 (Dix Toledo Rd) NB - 1	12.0	point456	456	2294364.8	242630.2	600.00	Average
		point457	457	2294495.5	242843.3	600.00	Average
		point458	458	2294626.2	243056.5	601.00	Average
		point459	459	2294756.8	243269.6	602.00	Average
		point460	460	2294890.5	243480.9	605.00	Average
		point461	461	2295044.5	243677.8	607.00	Average
		point462	462	2295213.0	243862.5	610.00	Average
		point463	463	2295384.2	244044.7	615.00	Average
		point464	464	2295559.0	244223.3	620.00	Average
		point619	619	2295682.5	244354.8	618.50	Average
		point465	465	2295762.0	244442.6	617.00	Average
		point521	521	2295913.0	244640.2	614.00	Average
		point500	500	2295982.8	244928.8	611.00	Average

Y

INPUT: ROADWAYS

Riverview/Trenton RR

US-24 (Dix Toledo Rd) SB - 1	12.0	point501	501 2296029.0	245174.5	609.00	Average
		point502	502 2296093.8	245416.0	607.00	Average
		point503	503 2296194.8	245644.7	605.00	Average
		point517	517 2296316.5	245863.1	600.00	Average
		point518	518 2296435.2	246083.0	600.00	Average
		point519	519 2296365.0	246108.9	600.00	Average
		point467	467 2296254.2	245884.8	600.00	Average
		point468	468 2296142.5	245661.2	605.00	Average
		point469	469 2296088.2	245577.0	608.00	Average
		point470	470 2296027.5	245497.7	613.00	Average
I-75 N	12.0	point471	471 2295848.0	245323.6	617.00	Average
		point472	472 2295663.5	245154.9	620.00	Average
		point473	473 2295486.5	244978.5	620.00	Average
		point474	474 2295389.5	244863.1	616.00	Average
		point475	475 2295335.0	244779.4	615.00	Average
		point476	476 2295292.2	244689.0	614.00	Average
		point477	477 2295242.0	244495.4	613.00	Average
		point478	478 2295190.8	244302.0	613.00	Average
		point479	479 2295151.0	244206.8	612.00	Average
		point522	522 2295088.5	244128.7	612.00	Average
Allen Rd.	12.0	point448	448 2295029.2	243983.7	610.00	Average
		point449	449 2294942.0	243749.4	607.00	Average
		point450	450 2294831.2	243525.2	605.00	Average
		point451	451 2294703.0	243310.7	602.00	Average
		point452	452 2294572.5	243097.4	601.00	Average
		point453	453 2294442.2	242884.1	600.00	Average
		point454	454 2294311.8	242670.8	600.00	Average
		point430	430 2295763.2	242382.1	605.00	Average
		point431	431 2295703.2	243380.3	605.00	Average
		point432	432 2295650.2	244378.9	605.00	Average
Y	12.0	point433	433 2295601.2	245377.7	605.00	Average
		point425	425 2295551.0	246376.5	605.00	Average
		point426	426 2295515.5	247375.8	605.00	Average
		point534	534 2299837.5	246960.6	600.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR

Roadway155	12.0	point535	535	2299891.0	246011.8	600.00	Average
		point536	536	2299925.0	244962.7	600.00	
Grange Rd.	12.0	point537	537	2299891.0	245928.8	598.00	Average
		point538	538	2303817.0	247114.6	600.00	
Roadway157		point539	539	2303860.8	246170.9	596.00	
	12.0	point540	540	2303894.5	245105.3	592.00	Average
Fort Rd. SB - N		point541	541	2303864.0	246101.3	596.00	
	12.0	point542	542	2310111.2	247382.7	600.00	Average
		point543	543	2310140.2	246416.4	601.00	
Fort Rd. SB - S	12.0	point544	544	2310140.2	246353.3	601.00	Average
		point545	545	2310196.0	245390.3	598.00	
Fort Rd. NB - S	12.0	point546	546	2310373.0	245366.4	598.00	Average
		point547	547	2310306.2	246366.6	602.00	
Fort Rd. NB - N	12.0	point548	548	2310302.8	246419.7	602.00	Average
		point549	549	2310267.0	247398.7	600.00	
Quarry Rd.	12.0	point550	550	2312906.5	247490.4	600.00	Average
		point551	551	2312947.8	246522.5	603.00	
Jefferson NB-2	12.0	point552	552	2314065.0	240769.0	580.00	Average
		point553	553	2314120.5	241164.2	580.00	
		point554	554	2314330.8	242751.3	581.00	Average
		point555	555	2314558.0	243723.1	583.00	Average
		point556	556	2314851.2	244679.0	584.00	Average
		point557	557	2315478.0	246577.8	585.00	Average
SB Jefferson	12.0	point558	558	2315455.5	246585.6	585.00	Average
		point559	559	2314828.2	244686.2	584.00	Average
		point560	560	2314535.0	243730.1	583.00	Average
		point561	561	2314307.0	242755.6	581.00	Average
		point562	562	2314100.5	241188.2	580.00	Average
		point563	563	2314041.2	240772.3	580.00	Average
Sibley WB-2	12.0	point564	564	2312979.8	246489.1	603.00	Average
		point565	565	2312480.2	246470.6	604.00	Average
		point566	566	2311980.5	246452.1	605.00	Average
		point567	567	2311481.0	246430.6	604.50	Average
		point568	568	2310981.2	246415.2	604.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR
Average

Sibley EB-2

12.0

point345	345	2310481.5	246396.6	603.00
point630	630	2310231.5	246388.5	601.50
point629	629	2312980.2	246477.1	603.00
point327	327	2313480.0	246495.5	600.00
point328	328	2313979.5	246514.0	596.00
point329	329	2314479.2	246532.5	592.00
point330	330	2314979.0	246551.0	588.00
point331	331	2315442.2	246568.8	585.00

Average
Average
Average
Average
Average

Sibley WB-2-2

12.0

point632	632	2310231.5	246388.5	601.50
point345	345	2309981.8	246380.4	600.00
point346	346	2309482.2	246361.6	599.00
point347	347	2308982.5	246347.4	598.00
point348	348	2308482.8	246327.0	597.50
point356	356	2307983.2	246305.3	597.00
point357	357	2307483.8	246283.0	596.00
point358	358	2306984.2	246260.9	595.00
point359	359	2306484.8	246239.4	594.00
point360	360	2305985.0	246219.7	593.00
point368	368	2305485.5	246200.0	592.00
point369	369	2304986.0	246180.3	593.00
point370	370	2304486.2	246160.7	594.50
point371	371	2303986.8	246141.1	596.00

Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average

Sibley EB-2

12.0

point633	633	2310232.0	246376.5	601.50
point338	338	2310482.0	246384.6	603.00
point339	339	2310981.8	246403.2	604.00
point340	340	2311481.2	246418.6	604.50
point341	341	2311981.0	246440.1	605.00
point342	342	2312480.8	246458.6	604.00
point326	326	2312980.2	246477.1	603.00
point634	634	2303986.8	246141.1	596.00
point372	372	2303487.0	246121.6	596.00
point380	380	2302987.5	246099.1	597.00
point381	381	2302488.0	246076.0	597.00
point382	382	2301988.5	246053.0	598.00

Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average
Average

Sibley WB-2-2-2

12.0

point372	372	2303487.0	246121.6	596.00
point380	380	2302987.5	246099.1	597.00
point381	381	2302488.0	246076.0	597.00
point382	382	2301988.5	246053.0	598.00

Average
Average
Average
Average
Average

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2	12.0	point383	383	2301489.0	246033.4	598.00	Average
		point384	384	2300989.5	246013.9	599.00	Average
		point392	392	2300489.8	245994.4	599.00	Average
		point393	393	2299990.2	245975.1	600.00	
		point635	635	2303987.2	246129.2	596.00	Average
		point377	377	2304486.8	246148.7	594.50	Average
		point378	378	2304986.2	246168.3	593.00	Average
		point362	362	2305486.0	246188.0	592.00	Average
		point363	363	2305985.5	246207.7	593.00	Average
		point364	364	2306485.2	246227.4	594.00	Average
Sibley WB-2-2-2-2	12.0	point365	365	2306984.8	246248.9	595.00	Average
		point366	366	2307484.2	246271.0	596.00	Average
		point350	350	2307983.8	246293.3	597.00	Average
		point351	351	2308483.2	246315.0	597.50	Average
		point352	352	2308983.0	246335.4	598.00	Average
		point353	353	2309482.5	246349.6	599.00	Average
		point354	354	2309982.2	246368.5	600.00	Average
		point631	631	2310232.0	246376.5	601.50	
		point636	636	2299990.2	245975.1	600.00	Average
		point394	394	2299490.8	245952.6	600.00	Average
Sibley EB-2	12.0	point395	395	2298991.5	245924.2	600.00	Average
		point396	396	2298492.0	245898.3	600.00	Average
		point404	404	2297992.5	245878.4	600.00	Average
		point406	406	2297231.5	245840.4	605.00	Average
		point407	407	2297101.8	245845.8	606.00	Average
		point408	408	2296921.5	245895.2	608.00	Average
		point409	409	2296709.2	245979.6	610.00	Average
		point410	410	2296490.2	246098.5	613.00	
		point637	637	2299990.5	245963.1	600.00	Average
		point386	386	2300490.2	245982.4	599.00	Average
		point387	387	2300989.8	246001.9	599.00	Average
		point388	388	2301489.5	246021.4	598.00	Average
		point389	389	2301989.0	246041.0	598.00	Average
		point390	390	2302488.8	246064.0	597.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2	point374	374	2302988.0	246087.1	597.00	Average
	point375	375	2303487.5	246109.6	596.00	Average
	point376	376	2303987.2	246129.2	596.00	
	point639	639	2296484.8	246087.9	613.00	Average
	point12	12	2296705.0	245968.4	610.00	Average
	point398	398	2296918.2	245883.6	608.00	Average
	point14	14	2297099.8	245834.0	606.00	Average
	point17	17	2297232.0	245828.4	605.00	Average
	point398	398	2297993.0	245866.4	600.00	Average
	point399	399	2298492.8	245886.3	600.00	Average
Sibley Rd. over I-75	point400	400	2298992.2	245912.2	600.00	Average
	point401	401	2299491.2	245940.7	600.00	Average
	point402	402	2299990.5	245963.1	600.00	Average
	point638	638	2296490.2	246098.5	613.00	Average
	point617	617	2296357.5	246166.6	613.00	Average
	point411	411	2296267.5	246212.3	613.00	Average
	point572	572	2296064.0	246282.5	610.00	Average
	point413	413	2295953.5	246293.3	613.00	Average
	point414	414	2295742.8	246286.6	618.00	Average
	point416	416	2295534.8	246275.0	623.00	Average
Sibley Rd. EB	point614	614	2295285.2	246257.7	619.00	Average
	point417	417	2295035.8	246240.3	615.00	Average
	point573	573	2294786.5	246206.2	610.00	Average
	point419	419	2294669.0	246163.0	605.00	Average
	point420	420	2294451.8	246037.1	603.00	Average
	point1	1	2294458.0	246026.9	603.00	Average
	point2	2	2294673.2	246151.7	605.00	Average
	point574	574	2294789.2	246194.6	610.00	Average
	point4	4	2295037.0	246228.4	613.00	Average
	point615	615	2295286.2	246245.7	618.00	Average
	point5	5	2295535.5	246263.0	623.00	Average
	point616	616	2295744.2	246272.2	618.00	Average
	point15	15	2295953.0	246281.4	613.00	Average
	point571	571	2296061.5	246270.9	610.00	Average

INPUT: ROADWAYS

Jeff North	12.0	point10	10	2296262.0	246201.6	613.00	Riverview/Trenton RR Average Average Y
		point618	618	2296352.0	246155.9	613.00	
		point11	11	2296484.8	246087.9	613.00	
Jeff South	12.0	point642	642	2315486.5	246602.0	585.00	Average Average
		point643	643	2315638.2	247548.8	580.00	
		point644	644	2315795.8	248548.7	577.00	Average Average
	12.0	point645	645	2315760.0	248551.8	577.00	
		point646	646	2315614.5	247565.7	580.00	
		point647	647	2315458.0	246603.3	585.00	

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

URS Corp.
J. McNally

9 August 2001
TNM 1.1

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT: Riverview/Trenton RR

RUN: No-Build 2008 - North

Roadway Name	Points	No.	Segment	Autos		MTTrucks		HTTrucks		Buses		Motorcycles	
				V	S	V	S	V	S	V	S	V	S
				veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
King Rd EB - 2	point68	68		720	35	24	35	56	35	0	0	0	0
	point69	69		720	35	24	35	56	35	0	0	0	0
	point77	77											
Fort Rd. SB	point85	85		851	40	29	40	66	40	0	0	0	0
	point86	86		851	40	29	40	66	40	0	0	0	0
	point87	87											
King Rd. WB - 2	point159	159		720	35	24	35	56	35	0	0	0	0
	point66	66		720	35	24	35	56	35	0	0	0	0
	point67	67											
King Rd. WB	point60	60		294	35	10	35	23	35	0	0	0	0
	point61	61		294	35	10	35	23	35	0	0	0	0
	point62	62		294	35	10	35	23	35	0	0	0	0
	point64	64		294	35	10	35	23	35	0	0	0	0
	point78	78		294	35	10	35	23	35	0	0	0	0
	point65	65											
King Rd WB	point160	160		294	35	10	35	23	35	0	0	0	0
	point70	70		294	35	10	35	23	35	0	0	0	0
	point71	71		294	35	10	35	23	35	0	0	0	0
	point72	72		294	35	10	35	23	35	0	0	0	0
	point75	75		294	35	10	35	23	35	0	0	0	0
	point76	76											
Fort Rd. N	point161	161		851	40	29	40	66	40	0	0	0	0

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9 August 2001

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

point162	162	851	40	29	40	66	40	0	0	0
point163	163									
point505	505	0	0	0	0	0	0	0	0	0
point506	506	0	0	0	0	0	0	0	0	0
point507	507	0	0	0	0	0	0	0	0	0
point508	508	0	0	0	0	0	0	0	0	0
point509	509	0	0	0	0	0	0	0	0	0
point510	510									
point511	511	0	0	0	0	0	0	0	0	0
point512	512	0	0	0	0	0	0	0	0	0
point513	513	0	0	0	0	0	0	0	0	0
point514	514	0	0	0	0	0	0	0	0	0
point515	515	0	0	0	0	0	0	0	0	0
point516	516									
point320	320	291	30	10	30	23	30	0	0	0
point321	321	291	30	10	30	23	30	0	0	0
point322	322	291	30	10	30	23	30	0	0	0
point323	323	291	30	10	30	23	30	0	0	0
point324	324	291	30	10	30	23	30	0	0	0
point332	332									
point456	456	0	0	0	0	0	0	0	0	0
point457	457	0	0	0	0	0	0	0	0	0
point458	458	0	0	0	0	0	0	0	0	0
point459	459	0	0	0	0	0	0	0	0	0
point460	460	0	0	0	0	0	0	0	0	0
point461	461	0	0	0	0	0	0	0	0	0
point462	462	0	0	0	0	0	0	0	0	0
point463	463	0	0	0	0	0	0	0	0	0
point464	464	0	0	0	0	0	0	0	0	0
point619	619	0	0	0	0	0	0	0	0	0
point465	465	0	0	0	0	0	0	0	0	0
point521	521	0	0	0	0	0	0	0	0	0
point500	500	0	0	0	0	0	0	0	0	0
point501	501	0	0	0	0	0	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

		Riverview/Trenton RR									
US-24 (Dix Toledo Rd) SB - 1	point502	502	0	0	0	0	0	0	0	0	0
	point503	503	0	0	0	0	0	0	0	0	0
	point517	517	0	0	0	0	0	0	0	0	0
	point518	518									
	point519	519	0	0	0	0	0	0	0	0	0
	point467	467	0	0	0	0	0	0	0	0	0
	point468	468	0	0	0	0	0	0	0	0	0
	point469	469	0	0	0	0	0	0	0	0	0
	point470	470	0	0	0	0	0	0	0	0	0
	point471	471	0	0	0	0	0	0	0	0	0
	point472	472	0	0	0	0	0	0	0	0	0
	point473	473	0	0	0	0	0	0	0	0	0
	point474	474	0	0	0	0	0	0	0	0	0
	point475	475	0	0	0	0	0	0	0	0	0
	point476	476	0	0	0	0	0	0	0	0	0
	point477	477	0	0	0	0	0	0	0	0	0
	point478	478	0	0	0	0	0	0	0	0	0
	point479	479	0	0	0	0	0	0	0	0	0
	point522	522	0	0	0	0	0	0	0	0	0
	point448	448	0	0	0	0	0	0	0	0	0
I-75 N	point449	449	0	0	0	0	0	0	0	0	0
	point450	450	0	0	0	0	0	0	0	0	0
	point451	451	0	0	0	0	0	0	0	0	0
	point452	452	0	0	0	0	0	0	0	0	0
	point453	453	0	0	0	0	0	0	0	0	0
	point454	454									
	point430	430	0	0	0	0	0	0	0	0	0
	point431	431	0	0	0	0	0	0	0	0	0
	point432	432	0	0	0	0	0	0	0	0	0
	point433	433	0	0	0	0	0	0	0	0	0
Allen Rd.	point425	425	0	0	0	0	0	0	0	0	0
	point426	426									
	point534	534	0	0	0	0	0	0	0	0	0
	point535	535									

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

Sibley EB-2	point630	630	291	30	10	30	23	30	0	0	0	0
	point629	629	291	30	10	30	23	30	0	0	0	0
	point327	327	291	30	10	30	23	30	0	0	0	0
	point328	328	291	30	10	30	23	30	0	0	0	0
	point329	329	291	30	10	30	23	30	0	0	0	0
	point330	330	291	30	10	30	23	30	0	0	0	0
	point331	331										
Sibley WB-2-2	point632	632	668	30	23	30	52	30	0	0	0	0
	point345	345	668	30	23	30	52	30	0	0	0	0
	point346	346	668	30	23	30	52	30	0	0	0	0
	point347	347	668	30	23	30	52	30	0	0	0	0
	point348	348	668	30	23	30	52	30	0	0	0	0
	point356	356	668	30	23	30	52	30	0	0	0	0
	point357	357	668	30	23	30	52	30	0	0	0	0
	point358	358	668	30	23	30	52	30	0	0	0	0
	point359	359	668	30	23	30	52	30	0	0	0	0
	point360	360	668	30	23	30	52	30	0	0	0	0
	point368	368	668	30	23	30	52	30	0	0	0	0
	point369	369	668	30	23	30	52	30	0	0	0	0
	point370	370	668	30	23	30	52	30	0	0	0	0
	point371	371										
Sibley EB-2	point633	633	481	30	16	30	38	30	0	0	0	0
	point338	338	481	30	16	30	38	30	0	0	0	0
	point339	339	481	30	16	30	38	30	0	0	0	0
	point340	340	481	30	16	30	38	30	0	0	0	0
	point341	341	481	30	16	30	38	30	0	0	0	0
	point342	342	481	30	16	30	38	30	0	0	0	0
	point326	326										
Sibley WB-2-2-2	point634	634	627	30	21	30	49	30	0	0	0	0
	point372	372	627	30	21	30	49	30	0	0	0	0
	point380	380	627	30	21	30	49	30	0	0	0	0
	point381	381	627	30	21	30	49	30	0	0	0	0
	point382	382	627	30	21	30	49	30	0	0	0	0
	point383	383	627	30	21	30	49	30	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

point384	384	627	30	21	30	49	30	0	0	0	Riverview/Trenton RR
point392	392	627	30	21	30	49	30	0	0	0	
point393	393										
point635	635	668	30	23	30	52	30	0	0	0	
point377	377	668	30	23	30	52	30	0	0	0	
point378	378	668	30	23	30	52	30	0	0	0	
point362	362	668	30	23	30	52	30	0	0	0	
point363	363	668	30	23	30	52	30	0	0	0	
point364	364	668	30	23	30	52	30	0	0	0	
point365	365	668	30	23	30	52	30	0	0	0	
point366	366	668	30	23	30	52	30	0	0	0	
point350	350	668	30	23	30	52	30	0	0	0	
point351	351	668	30	23	30	52	30	0	0	0	
point352	352	668	30	23	30	52	30	0	0	0	
point353	353	668	30	23	30	52	30	0	0	0	
point354	354	668	30	23	30	52	30	0	0	0	
point631	631										
point636	636	868	30	29	30	68	30	0	0	0	
point394	394	868	30	29	30	68	30	0	0	0	
point395	395	868	30	29	30	68	30	0	0	0	
point396	396	868	30	29	30	68	30	0	0	0	
point404	404	868	30	29	30	68	30	0	0	0	
point406	406	868	30	29	30	68	30	0	0	0	
point407	407	868	30	29	30	68	30	0	0	0	
point408	408	868	30	29	30	68	30	0	0	0	
point409	409	868	30	29	30	68	30	0	0	0	
point410	410										
point637	637	627	30	21	30	49	30	0	0	0	
point386	386	627	30	21	30	49	30	0	0	0	
point387	387	627	30	21	30	49	30	0	0	0	
point388	388	627	30	21	30	49	30	0	0	0	
point389	389	627	30	21	30	49	30	0	0	0	
point390	390	627	30	21	30	49	30	0	0	0	
point374	374	627	30	21	30	49	30	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

Sibley EB-2

point375	375	627	30	21	30	49	30	0	0	0
point376	376									
point639	639	868	30	29	30	68	30	0	0	0
point12	12	868	30	29	30	68	30	0	0	0
point398	398	868	30	29	30	68	30	0	0	0
point14	14	868	30	29	30	68	30	0	0	0
point17	17	868	30	29	30	68	30	0	0	0
point398	398	868	30	29	30	68	30	0	0	0
point399	399	868	30	29	30	68	30	0	0	0
point400	400	868	30	29	30	68	30	0	0	0
point401	401	868	30	29	30	68	30	0	0	0
point402	402									

Sibley Rd. over I-75

point638	638	1142	30	38	30	89	30	0	0	0
point617	617	1142	30	38	30	89	30	0	0	0
point411	411	1142	30	38	30	89	30	0	0	0
point572	572	1142	30	38	30	89	30	0	0	0
point413	413	1142	30	38	30	89	30	0	0	0
point414	414	1142	30	38	30	89	30	0	0	0
point416	416	1142	30	38	30	89	30	0	0	0
point614	614	1142	30	38	30	89	30	0	0	0
point417	417	1142	30	38	30	89	30	0	0	0
point573	573	1142	30	38	30	89	30	0	0	0
point419	419	1142	30	38	30	89	30	0	0	0
point420	420									

Sibley Rd. EB

point1	1	1142	30	38	30	89	30	0	0	0
point2	2	1142	30	38	30	89	30	0	0	0
point574	574	1142	30	38	30	89	30	0	0	0
point4	4	1142	30	38	30	89	30	0	0	0
point615	615	1142	30	38	30	89	30	0	0	0
point5	5	1142	30	38	30	89	30	0	0	0
point616	616	1142	30	38	30	89	30	0	0	0
point15	15	1142	30	38	30	89	30	0	0	0
point571	571	1142	30	38	30	89	30	0	0	0
point10	10	1142	30	38	30	89	30	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

Jeff North	point618	618	1142	30	38	30	89	30	0	0	Riverview/Trenton RR
	point11	11									0
	point642	642	430	35	15	35	34	35	0	0	0
	point643	643	430	35	15	35	34	35	0	0	0
	point644	644									
Jeff South	point645	645	430	35	15	35	34	35	0	0	0
	point646	646	430	35	15	35	34	35	0	0	0
	point647	647									

INPUT: RECEIVERS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: RECEIVERS

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR
No-Build 2008 - North

Receiver
Name

Name	No.	# DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria				Active in Calc.	
			X	Y	ft			ft	Existing LAeq1h dBA	Impact LAeq1h dBA	Sub'l dB Inc		NR
R-N2	61	1	2315664.0	247197.9	585.00	5.00	0.00	66	10.0	8.0	Y		
R-N6	65	1	2313066.8	246423.0	603.00	5.00	0.00	66	10.0	8.0	Y		
N1	67	1	2315808.8	248121.3	583.00	5.00	0.00	66	10.0	8.0	Y		
N3	68	1	2315534.5	247785.1	579.00	5.00	0.00	66	10.0	8.0	Y		
N4	69	1	2315314.8	246735.2	584.00	5.00	0.00	66	10.0	8.0	Y		
N7	72	1	2313502.5	246769.5	600.00	5.00	0.00	66	10.0	8.0	Y		
N5	74	1	2314909.0	246337.3	692.00	5.00	0.00	66	10.0	8.0	Y		
N8	24	1	2309904.8	246584.3	600.00	5.00	0.00	66	10.0	8.0	Y		
N9	26	1	2308484.2	246083.4	597.50	5.00	0.00	66	10.0	8.0	Y		
N10	27	1	2306343.5	246385.3	594.00	5.00	0.00	66	10.0	8.0	Y		
N11	28	1	2305355.5	246035.3	592.00	5.00	0.00	66	10.0	8.0	Y		
N12	30	1	2303567.5	245980.5	596.00	5.00	0.00	66	10.0	8.0	Y		
N13	31	1	2302940.2	246344.1	597.00	5.00	0.00	66	10.0	8.0	Y		
N14	32	1	2302050.8	245774.6	598.00	5.00	0.00	66	10.0	8.0	Y		
N15	33	1	2301145.0	246152.0	598.50	5.00	0.00	66	10.0	8.0	Y		
N16	34	1	2299046.0	246104.0	600.00	5.00	0.00	66	10.0	8.0	Y		
N17	36	1	2298270.8	245767.8	600.00	5.00	0.00	66	10.0	8.0	Y		
N18	38	1	2296840.0	245733.4	608.00	5.00	0.00	66	10.0	8.0	Y		
S1	43	1	2315350.0	245591.9	585.00	5.00	0.00	66	10.0	8.0	Y		
S2	44	1	2314176.8	242819.8	581.00	5.00	0.00	66	10.0	8.0	Y		
S4	45	1	2313303.5	241344.6	585.00	5.00	0.00	66	10.0	8.0	Y		
S5	46	1	2311891.5	240939.7	590.00	5.00	0.00	66	10.0	8.0	Y		

INPUT: RECEIVERS
R-S3

78 1 2314215.5 241581.4 580.00 5.00 0.00 66 10.0 8.0 Y Riverview/Trenton RR

INPUT: BUILDING ROWS

URS Corp.
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9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: BUILDING ROWS
PROJECT/CONTRACT:

RUN: Riverview/Trenton RR
No-Build 2008 - North

Building Row Name	Points			Coordinates (ground)		
	Average Height ft	Building Percent %	No.	X ft	Y ft	Z ft
Building31	30.00	50	60	2315249.8	246411.2	585.00
Building32	30.00	50	61	2314250.5	246375.5	595.00
			62	2314075.0	246689.8	600.00
Building33	30.00	50	63	2313076.0	246646.4	600.00
			64	2312430.2	246631.7	604.00
Building34	30.00	60	65	2310931.5	246572.9	604.00
			66	2309998.8	245548.4	598.00
Building35	30.00	60	67	2309299.2	245521.5	597.00
			68	2309257.0	246220.2	597.00
Building36	30.00	60	69	2308978.0	246176.1	597.00
			70	2308278.5	246149.7	597.00
Building37	30.00	60	71	2305124.5	246321.8	594.00
			72	2303925.2	246279.0	594.00
Building38	30.00	60	73	2303778.2	246276.4	596.00
			74	2302629.2	246226.4	596.00
	30.00	60	75	2302647.2	245909.0	597.00
			76	2301500.0	245830.7	597.00

RESULTS: SOUND LEVELS

URS Corp.
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RESULTS: SOUND LEVELS

PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Receiver
Name

Riverview/Trenton RR

No-Build 2008 - South

INPUT HEIGHTS

68 deg F, 50% RH

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Riverview/Trenton RR

9 August 2001
TNM 1.1
Calculated with TNM 1.1

No.	#DUs	Existing LAeq1h	No Barrier LAeq1h	Increase over existing			Type Impact	With Barrier			Calculated minus Goal
				Calculated	Crit'n	Sub'l Inc		Calculated LAeq1h	Noise Reduction Calculated	Goal	
		dBA	dBA	dB	dBA			dBA	dB	dB	dB
S4	45	1	0.0	66	56.9	10	---	56.9	0.0	8	-8.0
S5	46	1	0.0	66	59.0	10	---	59.0	0.0	8	-8.0
S6	49	1	0.0	66	62.1	10	---	62.1	0.0	8	-8.0
S8	50	1	0.0	66	60.1	10	---	60.1	0.0	8	-8.0
S7	51	1	0.0	66	56.0	10	---	56.0	0.0	8	-8.0
S9	53	1	0.0	66	59.8	10	---	59.8	0.0	8	-8.0
S10	54	1	0.0	66	53.2	10	---	53.2	0.0	8	-8.0
S11	55	1	0.0	66	61.6	10	---	61.6	0.0	8	-8.0
S12	57	1	0.0	66	60.4	10	---	60.4	0.0	8	-8.0
S13	58	1	0.0	66	53.6	10	---	53.6	0.0	8	-8.0
S14	59	1	0.0	66	60.1	10	---	60.1	0.0	8	-8.0
S15	61	1	0.0	66	60.1	10	---	60.1	0.0	8	-8.0
S17	62	1	0.0	66	54.3	10	---	54.3	0.0	8	-8.0
S16	65	1	0.0	66	51.0	10	---	51.0	0.0	8	-8.0
S18	38	1	0.0	66	60.0	10	---	60.0	0.0	8	-8.0
S19	67	1	0.0	66	61.1	10	---	61.1	0.0	8	-8.0
S20	68	1	0.0	66	60.3	10	---	60.3	0.0	8	-8.0
S21	69	1	0.0	66	62.2	10	---	62.2	0.0	8	-8.0
S22	71	1	0.0	66	61.3	10	---	61.3	0.0	8	-8.0
S23	72	1	0.0	66	62.0	10	---	62.0	0.0	8	-8.0
S24	74	1	0.0	66	60.2	10	---	60.2	0.0	8	-8.0
S25	76	1	0.0	66	59.4	10	---	59.4	0.0	8	-8.0
Dwelling Units		# DUs	Noise Reduction								

RESULTS: SOUND LEVELS

Riverview/Trenton RR

	Min dB	Avg dB	Max dB
All Selected	22	0.0	0.0
All Impacted	0	0.0	0.0
All that meet NR Goal	0	0.0	0.0

INPUT: ROADWAYS

							Riverview/Trenton RR
		point125	125	2303547.0	225265.5	584.00	Average
		point126	126	2303016.5	224417.9	585.00	Average
		point127	127	2302482.8	223572.2	585.00	Average
		point128	128	2301963.2	222717.8	587.00	Average
		point130	130	2301486.8	221838.5	590.00	Average
		point131	131	2301253.8	221365.6	590.00	Average
		point132	132	2301028.0	220942.8	589.00	Average
		point133	133	2300775.5	220511.2	589.00	Average
		point134	134	2300310.5	219625.8	589.00	
Roadway184	12.0	point578	578	2300771.2	219479.6	585.00	Average
		point579	579	2300770.0	220417.5	589.00	
allen	12.0	point580	580	2300800.5	221473.5	585.00	Average
		point581	581	2300774.8	220553.8	589.00	
Gibraltar Rd.	12.0	point620	620	2298920.8	218923.9	0.00	Average
		point621	621	2299886.2	218961.8	0.00	
Gibraltar Rd.	12.0	point622	622	2300959.2	219008.5	0.00	Average
		point623	623	2300008.2	218972.9	0.00	
Fort Rd. NB-2	12.0	point624	624	2300331.8	219614.7	589.00	Average
		point215	215	2300796.8	220500.1	589.00	Average
		point214	214	2301066.8	220920.9	589.00	Average
		point213	213	2301315.2	221343.2	590.00	Average
		point212	212	2301592.8	221793.2	590.00	Average
		point211	211	2302126.8	222649.2	587.00	Average
		point209	209	2302643.8	223472.3	585.00	Average
		point208	208	2303173.8	224317.4	585.00	Average
		point207	207	2303709.2	225188.8	584.00	Average
		point206	206	2304231.2	226029.5	585.00	Average
		point205	205	2304757.0	226876.7	585.00	Average
		point204	204	2305276.2	227717.4	585.00	Average
		point200	200	2305819.0	228586.6	585.00	Average
		point198	198	2306344.2	229413.3	585.00	Average
		point193	193	2306605.0	229839.9	585.00	Average
		point192	192	2306864.2	230267.5	585.00	Average
		point191	191	2307123.2	230695.1	586.00	Average

INPUT: TRAFFIC FOR LAeq1h Volumes

	point71	71	294	35	10	35	23	35	0	0	0	Riverview/Trenton RR
	point72	72	294	35	10	35	23	35	0	0	0	
	point75	75	294	35	10	35	23	35	0	0	0	
	point76	76										
Fort Rd. N	point161	161	851	40	29	40	66	40	0	0	0	
	point162	162	851	40	29	40	66	40	0	0	0	
	point163	163										
Fort Rd. NB	point229	229	689	40	23	40	54	40	0	0	0	
	point228	228	689	40	23	40	54	40	0	0	0	
	point217	217	689	40	23	40	54	40	0	0	0	
	point226	226	689	40	23	40	54	40	0	0	0	
	point225	225	689	40	23	40	54	40	0	0	0	
	point224	224	689	40	23	40	54	40	0	0	0	
	point223	223	689	40	23	40	54	40	0	0	0	
	point221	221	689	40	23	40	54	40	0	0	0	
	point220	220	689	40	23	40	54	40	0	0	0	
	point219	219	689	40	23	40	54	40	0	0	0	
	point218	218	689	40	23	40	54	40	0	0	0	
	point217	217	689	40	23	40	54	40	0	0	0	
	point216	216										
NB I-75 - S of Fort Rd.	point240	240	0	0	0	0	0	0	0	0	0	
	point238	238	0	0	0	0	0	0	0	0	0	
	point237	237	0	0	0	0	0	0	0	0	0	
	point236	236	0	0	0	0	0	0	0	0	0	
	point235	235	0	0	0	0	0	0	0	0	0	
	point234	234	0	0	0	0	0	0	0	0	0	
	point233	233										
West Rd.	point552	552	0	0	0	0	0	0	0	0	0	
	point553	553										
Roadway164	point554	554	0	0	0	0	0	0	0	0	0	
	point555	555										
Van Horn	point556	556	0	0	0	0	0	0	0	0	0	
	point557	557										
Van Horn Rd.	point558	558	0	0	0	0	0	0	0	0	0	

INPUT: TRAFFIC FOR LAeq1h Volumes

		126	914	40	31	40	71	40	0	0	Riverview/Trenton RR
	point126	126	914	40	31	40	71	40	0	0	0
	point127	127	914	40	31	40	71	40	0	0	0
	point128	128	914	40	31	40	71	40	0	0	0
	point130	130	914	40	31	40	71	40	0	0	0
	point131	131	914	40	31	40	71	40	0	0	0
	point132	132	914	40	31	40	71	40	0	0	0
	point133	133	914	40	31	40	71	40	0	0	0
	point134	134									
Roadway184	point578	578	0	0	0	0	0	0	0	0	0
	point579	579									
allen	point580	580	0	0	0	0	0	0	0	0	0
	point581	581									
Gibraltar Rd.	point620	620	0	0	0	0	0	0	0	0	0
	point621	621									
Gibraltar Rd.	point622	622	0	0	0	0	0	0	0	0	0
	point623	623									
Fort Rd. NB-2	point624	624	914	40	31	40	71	40	0	0	0
	point215	215	914	40	31	40	71	40	0	0	0
	point214	214	914	40	31	40	71	40	0	0	0
	point213	213	914	40	31	40	71	40	0	0	0
	point212	212	914	40	31	40	71	40	0	0	0
	point211	211	914	40	31	40	71	40	0	0	0
	point209	209	914	40	31	40	71	40	0	0	0
	point208	208	914	40	31	40	71	40	0	0	0
	point207	207	914	40	31	40	71	40	0	0	0
	point206	206	914	40	31	40	71	40	0	0	0
	point205	205	914	40	31	40	71	40	0	0	0
	point204	204	914	40	31	40	71	40	0	0	0
	point200	200	914	40	31	40	71	40	0	0	0
	point198	198	914	40	31	40	71	40	0	0	0
	point193	193	914	40	31	40	71	40	0	0	0
	point192	192	914	40	31	40	71	40	0	0	0
	point191	191	914	40	31	40	71	40	0	0	0
	point190	190	914	40	31	40	71	40	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

		189	914	40	31	40	71	40	0	0	0	Riverview/Trenton RR
point189		189	914	40	31	40	71	40	0	0	0	
point190		190	914	40	31	40	71	40	0	0	0	
point187		187	914	40	31	40	71	40	0	0	0	
point184		184	914	40	31	40	71	40	0	0	0	
point183		183	914	40	31	40	71	40	0	0	0	
point182		182	914	40	31	40	71	40	0	0	0	
point179		179	914	40	31	40	71	40	0	0	0	
point178		178	914	40	31	40	71	40	0	0	0	
point177		177	914	40	31	40	71	40	0	0	0	
point176		176	914	40	31	40	71	40	0	0	0	
point164		164	914	40	31	40	71	40	0	0	0	
point165		165	914	40	31	40	71	40	0	0	0	
point166		166	914	40	31	40	71	40	0	0	0	
point167		167	914	40	31	40	71	40	0	0	0	
point168		168	914	40	31	40	71	40	0	0	0	
point169		169	914	40	31	40	71	40	0	0	0	
point170		170	914	40	31	40	71	40	0	0	0	
point172		172	914	40	31	40	71	40	0	0	0	
point173		173										
Fort Rd. SB-2-2		625	689	40	23	40	54	40	0	0	0	
point625		625	689	40	23	40	54	40	0	0	0	
point135		135	689	40	23	40	54	40	0	0	0	
point136		136	689	40	23	40	54	40	0	0	0	
point137		137	689	40	23	40	54	40	0	0	0	
point138		138	689	40	23	40	54	40	0	0	0	
point141		141	689	40	23	40	54	40	0	0	0	
point142		142	689	40	23	40	54	40	0	0	0	
point143		143	689	40	23	40	54	40	0	0	0	
point144		144	689	40	23	40	54	40	0	0	0	
point612		612	689	40	23	40	54	40	0	0	0	
point145		145	689	40	23	40	54	40	0	0	0	
point613		613	689	40	23	40	54	40	0	0	0	
point146		146	689	40	23	40	54	40	0	0	0	
point147		147			23	40	54	40	0	0	0	

INPUT: RECEIVERS

URS Corp.
J. McNally

INPUT: RECEIVERS

PROJECT/CONTRACT:

RUN:

Receiver

Name

Riverview/Trenton RR
No-Build 2008 - South

9 August 2001
TNM 1.1

Riverview/Trenton RR

Name	No.	# DUs	Coordinates (ground)			Z	Height above Ground	Input Sound Levels and Criteria				Active in Calc.	
			X	Y	ft			ft	Existing LAeq1h dBA	Impact LAeq1h dBA	Sub'l dB Inc		NR Goal
			ft	ft	ft	ft		dBA	dBA	dB			
S4	45	1	2313303.5	241344.6	585.00	5.00	0.00	66	10.0	8.0	Y		
S5	46	1	2311891.5	240939.7	590.00	5.00	0.00	66	10.0	8.0	Y		
S6	49	1	2310742.5	240349.6	592.00	5.00	0.00	66	10.0	8.0	Y		
S8	50	1	2311099.2	239183.2	590.00	5.00	0.00	66	10.0	8.0	Y		
S7	51	1	2310083.8	239258.6	590.00	5.00	0.00	66	10.0	8.0	Y		
S9	53	1	2310927.8	237543.2	587.00	5.00	0.00	66	10.0	8.0	Y		
S10	54	1	2309308.5	235937.6	590.00	5.00	0.00	66	10.0	8.0	Y		
S11	55	1	2309329.0	235038.7	589.00	5.00	0.00	66	10.0	8.0	Y		
S12	57	1	2309230.2	233831.1	588.00	5.00	0.00	66	10.0	8.0	Y		
S13	58	1	2308070.5	233556.6	588.00	5.00	0.00	66	10.0	8.0	Y		
S14	59	1	2307924.2	231614.8	587.00	5.00	0.00	66	10.0	8.0	Y		
S15	61	1	2306721.8	229645.5	585.00	5.00	0.00	66	10.0	8.0	Y		
S17	62	1	2305654.5	227525.2	585.00	5.00	0.00	66	10.0	8.0	Y		
S16	65	1	2305195.0	229638.6	585.00	5.00	0.00	66	10.0	8.0	Y		
S18	38	1	2303341.0	225322.6	584.00	5.00	0.00	66	10.0	8.0	Y		
S19	67	1	2302973.2	223682.7	585.00	5.00	0.00	66	10.0	8.0	Y		
S20	68	1	2301724.5	222694.6	587.00	5.00	0.00	66	10.0	8.0	Y		
S21	69	1	2300983.5	220430.3	589.00	5.00	0.00	66	10.0	8.0	Y		
S22	71	1	2300067.2	219593.2	589.00	5.00	0.00	66	10.0	8.0	Y		
S23	72	1	2299672.5	218207.1	588.00	5.00	0.00	66	10.0	8.0	Y		
S24	74	1	2298773.8	217733.7	588.00	5.00	0.00	66	10.0	8.0	Y		
S25	76	1	2297440.5	216484.8	587.00	5.00	0.00	66	10.0	8.0	Y		

INPUT: BUILDING ROWS

URS Corp.
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INPUT: BUILDING ROWS
PROJECT/CONTRACT:
RUN:

Building Row
Name

Riverview/Trenton RR
No-Build 2008 - South

9 August 2001
TNM 1.1

Points

Building Row Name	Average Height ft	Building Percent %	No.	Coordinates (ground)			Z ft
				X ft	Y ft		
Building24	30.00	50	43	2310189.8	240728.5		595.00
			44	2310219.0	239934.8		592.00
Building25	30.00	50	45	2310219.0	239817.3		590.00
			46	2310248.5	238465.2		585.00
Building26	30.00	50	47	2310277.8	238171.3		585.00
			48	2310307.2	236819.2		590.00
Building27	30.00	50	49	2309807.8	236025.6		590.00
			50	2308691.5	236055.0		590.00
Building28	30.00	50	51	2308574.0	235508.1		590.00
			52	2309572.8	235566.9		590.00
Building29	30.00	50	53	2306635.2	230805.2		586.00
			54	2304902.0	230159.1		585.00
	30.00	50	55	2304960.8	227895.8		585.00
			56	2304373.2	227014.1		585.00
	30.00	50	57	2305959.5	228336.7		585.00
			58	2304902.0	226749.5		585.00

Future Build (2008)

Model Results and Inputs

RESULTS: SOUND LEVELS

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RESULTS: SOUND LEVELS
PROJECT/CONTRACT:

RUN:

BARRIER DESIGN:

ATMOSPHERICS:

Riverview/Trenton RR

Build 2008 - North

INPUT HEIGHTS

68 deg F, 50% RH

Riverview/Trenton RR

9 August 2001

TNM 1.1

Calculated with TNM 1.1

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h dBA	No Barrier LAeq1h Calculated dBA	Increase over existing Calculated dBA	Type Impact	Sub'l Inc	With Barrier		Noise Reduction		Calculated minus Goal dB
								Calculated LAeq1h dBA	Calculated dB	Calculated dB	Goal dB	
R-N2	61	1	0.0	64.7	64.7	10 ---			64.7	0.0	8	-8.0
R-N6	65	1	0.0	66.0	66.0	10 Snd Lvl			66.0	0.0	8	-8.0
N1	67	1	0.0	64.7	64.7	10 ---			64.7	0.0	8	-8.0
N3	68	1	0.0	62.8	62.8	10 ---			62.8	0.0	8	-8.0
N4	69	1	0.0	62.4	62.4	10 ---			62.4	0.0	8	-8.0
N7	72	1	0.0	56.2	56.2	10 ---			56.2	0.0	8	-8.0
N5	74	1	0.0	62.7	62.7	10 ---			62.7	0.0	8	-8.0
N8	24	1	0.0	60.5	60.5	10 ---			60.5	0.0	8	-8.0
N9	26	1	0.0	57.3	57.3	10 ---			57.3	0.0	8	-8.0
N10	27	1	0.0	63.8	63.8	10 ---			63.8	0.0	8	-8.0
N11	28	1	0.0	62.3	62.3	10 ---			62.3	0.0	8	-8.0
N12	30	1	0.0	62.7	62.7	10 ---			62.7	0.0	8	-8.0
N13	31	1	0.0	56.6	56.6	10 ---			56.6	0.0	8	-8.0
N14	32	1	0.0	56.3	56.3	10 ---			56.3	0.0	8	-8.0
N15	33	1	0.0	62.3	62.3	10 ---			62.3	0.0	8	-8.0
N16	34	1	0.0	61.6	61.6	10 ---			61.6	0.0	8	-8.0
N17	36	1	0.0	66.0	66.0	10 Snd Lvl			66.0	0.0	8	-8.0
N18	38	1	0.0	62.5	62.5	10 ---			62.5	0.0	8	-8.0
S1	43	1	0.0	59.5	59.5	10 ---			59.5	0.0	8	-8.0
S2	44	1	0.0	60.3	60.3	10 ---			60.3	0.0	8	-8.0
S4	45	1	0.0	58.4	58.4	10 ---			58.4	0.0	8	-8.0
S5	46	1	0.0	59.5	59.5	10 ---			59.5	0.0	8	-8.0
R-S3	78	1	0.0	67.7	67.7	10 Snd Lvl			67.7	0.0	8	-8.0

9 August 2001

Riverview/Trenton RR

RESULTS: SOUND LEVELS

Dwelling Units

# DUs	Noise Reduction		
	Min dB	Avg dB	Max dB
23	23	0.0	0.0
3	3	0.0	0.0
0	0	0.0	0.0

All Selected

All Impacted

All that meet NR Goal

INPUT: ROADWAYS

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: ROADWAYS

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR
Build 2008 - North

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement)			Flow Control		Percent Vehicles Affected	Segment	
				X	Y	Z	Control Device	Speed Constraint		Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
King Rd EB - 2	12.0	point68	68	2308113.5	240951.1	595.00				Average	
		point69	69	2309113.0	240981.2	595.00				Average	
		point77	77	2310366.8	241028.2	595.00					
Fort Rd. SB	12.0	point85	85	2310274.8	242731.3	595.00				Average	
		point86	86	2310343.0	241733.7	595.00				Average	
		point87	87	2310366.5	241071.9	595.00					
King Rd. WB - 2	12.0	point159	159	2310366.2	241052.6	595.00				Average	
		point66	66	2309112.2	241005.2	595.00				Average	
		point67	67	2308112.8	240975.1	595.00					
King Rd. WB	12.0	point60	60	2314078.8	241187.3	580.00				Average	
		point61	61	2313109.5	241151.2	585.00				Average	
		point62	62	2312110.2	241110.1	590.00				Average	
		point64	64	2311110.8	241082.2	592.00				Average	
		point78	78	2310559.0	241060.4	595.00				Average	
		point65	65	2310366.2	241052.6	595.00					
King Rd WB	12.0	point160	160	2310366.8	241028.2	595.00				Average	
		point70	70	2310560.2	241036.1	595.00				Average	
		point71	71	2311111.5	241058.3	592.00				Average	
		point72	72	2312111.0	241086.2	590.00				Average	
		point75	75	2313110.2	241127.2	585.00					
		point76	76	2314076.2	241161.5	585.00				Average	

INPUT: ROADWAYS

Riverview/Trenton RR

Fort Rd. N

12.0 point161 161 2310556.5 241082.9 595.00
point162 162 2310526.2 241740.4 595.00
point163 163 2310480.5 242738.9 595.00

US-24 (Dix Toledo Rd) NB - 2

12.0 point505 505 2296469.5 246148.6 600.00
point506 506 2296678.5 246602.9 600.00
point507 507 2296876.2 247062.2 600.00
point508 508 2297077.0 247520.0 600.00
point509 509 2297285.2 247974.7 600.00

US-24 (Dix Toledo Rd) SB - 2

12.0 point510 510 2297545.2 248401.7 600.00
point511 511 2297484.2 248433.0 600.00
point512 512 2297219.0 248009.1 600.00
point513 513 2297021.5 247549.8 600.00
point514 514 2296821.5 247091.5 600.00
point515 515 2296620.0 246633.9 600.00
point516 516 2296401.5 246184.2 600.00

Sibley WB

12.0 point320 320 2315442.5 246580.8 585.00
point321 321 2314978.5 246563.0 588.00
point322 322 2314478.8 246544.5 592.00
point323 323 2313979.2 246526.0 596.00
point324 324 2313479.5 246507.5 600.00
point332 332 2312979.8 246489.1 603.00

US-24 (Dix Toledo Rd) NB - 1

12.0 point456 456 2294364.8 242630.2 600.00
point457 457 2294495.5 242843.3 600.00
point458 458 2294626.2 243056.5 601.00
point459 459 2294756.8 243269.6 602.00
point460 460 2294890.5 243480.9 605.00
point461 461 2295044.5 243677.8 607.00
point462 462 2295213.0 243862.5 610.00
point463 463 2295384.2 244044.7 615.00
point464 464 2295559.0 244223.3 620.00
point619 619 2295682.5 244354.8 618.50
point465 465 2295762.0 244442.6 617.00
point521 521 2295913.0 244640.2 614.00
point500 500 2295982.8 244928.8 611.00

Y

INPUT: ROADWAYS

Riverview/Trenton RR

US-24 (Dix Toledo Rd) SB - 1	point501	501	2296029.0	245174.5	609.00	
	point502	502	2296093.8	245416.0	607.00	
	point503	503	2296194.8	245644.7	605.00	
	point517	517	2296316.5	245863.1	600.00	
	point518	518	2296435.2	246083.0	600.00	
	12.0	point519	519	2296365.0	246108.9	600.00
	point467	467	2296254.2	245884.8	600.00	
	point468	468	2296142.5	245661.2	605.00	
	point469	469	2296088.2	245577.0	608.00	
	point470	470	2296027.5	245497.7	613.00	
	point471	471	2295848.0	245323.6	617.00	
	point472	472	2295663.5	245154.9	620.00	
	point473	473	2295486.5	244978.5	620.00	
	point474	474	2295389.5	244863.1	616.00	
	point475	475	2295335.0	244779.4	615.00	
	point476	476	2295292.2	244689.0	614.00	
	point477	477	2295242.0	244495.4	613.00	
	point478	478	2295190.8	244302.0	613.00	
I-75 N	point479	479	2295151.0	244206.8	612.00	
	point522	522	2295088.5	244128.7	612.00	
	point448	448	2295029.2	243983.7	610.00	
	point449	449	2294942.0	243749.4	607.00	
	point450	450	2294831.2	243525.2	605.00	
	point451	451	2294703.0	243310.7	602.00	
	point452	452	2294572.5	243097.4	601.00	
	point453	453	2294442.2	242884.1	600.00	
	point454	454	2294311.8	242670.8	600.00	
	12.0	point430	430	2295763.2	242382.1	605.00
	point431	431	2295703.2	243380.3	605.00	
	point432	432	2295650.2	244378.9	605.00	
	point433	433	2295601.2	245377.7	605.00	
	point425	425	2295551.0	246376.5	605.00	
	point426	426	2295515.5	247375.8	605.00	
	12.0	point534	534	2299837.5	246960.6	600.00
	Allen Rd.					

INPUT: ROADWAYS

Riverview/Trenton RR

Roadway155	12.0	point535	535	2299891.0	246011.8	600.00	Average
		point536	536	2299925.0	244962.7	600.00	
Grange Rd.	12.0	point537	537	2299891.0	245928.8	598.00	Average
		point538	538	2303817.0	247114.6	600.00	
Roadway157	12.0	point539	539	2303860.8	246170.9	596.00	Average
		point540	540	2303894.5	245105.3	592.00	
Fort Rd. SB - N	12.0	point541	541	2303864.0	246101.3	596.00	Average
		point542	542	2310111.2	247382.7	600.00	
Fort Rd. SB - S	12.0	point543	543	2310140.2	246416.4	601.00	Average
		point544	544	2310140.2	246353.3	601.00	
Fort Rd. NB - S	12.0	point545	545	2310196.0	245390.3	598.00	Average
		point546	546	2310373.0	245366.4	598.00	
Fort Rd. NB - N	12.0	point547	547	2310306.2	246366.6	602.00	Average
		point548	548	2310302.8	246419.7	602.00	
Quarry Rd.	12.0	point549	549	2310267.0	247398.7	600.00	Average
		point550	550	2312906.5	247490.4	600.00	
Jefferson NB-2	12.0	point551	551	2312947.8	246522.5	603.00	Average
		point552	52	2314065.0	240769.0	580.00	Average
		point627	627	2314120.5	241164.2	580.00	Average
		point54	54	2314330.8	242751.3	581.00	Average
		point55	55	2314558.0	243723.1	583.00	Average
		point56	56	2314851.2	244679.0	584.00	Average
		point57	57	2315478.0	246577.8	585.00	Average
SB Jefferson	12.0	point43	43	2315455.5	246585.6	585.00	Average
		point44	44	2314828.2	244686.2	584.00	Average
		point45	45	2314535.0	243730.1	583.00	Average
		point47	47	2314307.0	242755.6	581.00	Average
		point626	626	2314100.5	241188.2	580.00	Average
		point51	51	2314041.2	240772.3	580.00	Average
Sibley WB-2	12.0	point628	628	2312979.8	246489.1	603.00	Average
		point333	333	2312480.2	246470.6	604.00	Average
		point334	334	2311980.5	246452.1	605.00	Average
		point335	335	2311481.0	246430.6	604.50	Average
		point336	336	2310981.2	246415.2	604.00	Average

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2

12.0

point345	345	2310481.5	246396.6	603.00
point630	630	2310231.5	246388.5	601.50
point629	629	2312980.2	246477.1	603.00
point327	327	2313480.0	246495.5	600.00
point328	328	2313979.5	246514.0	596.00
point329	329	2314479.2	246532.5	592.00
point330	330	2314979.0	246551.0	588.00
point331	331	2315442.2	246568.8	585.00

Sibley WB-2-2

12.0

point632	632	2310231.5	246388.5	601.50
point345	345	2309981.8	246380.4	600.00
point346	346	2309482.2	246361.6	599.00
point347	347	2308982.5	246347.4	598.00
point348	348	2308482.8	246327.0	597.50
point356	356	2307983.2	246305.3	597.00
point357	357	2307483.8	246283.0	596.00
point358	358	2306984.2	246260.9	595.00
point359	359	2306484.8	246239.4	594.00
point360	360	2305985.0	246219.7	593.00
point368	368	2305485.5	246200.0	592.00
point369	369	2304986.0	246180.3	593.00
point370	370	2304486.2	246160.7	594.50
point371	371	2303986.8	246141.1	596.00

Sibley EB-2

12.0

point633	633	2310232.0	246376.5	601.50
point338	338	2310482.0	246384.6	603.00
point339	339	2310981.8	246403.2	604.00
point340	340	2311481.2	246418.6	604.50
point341	341	2311981.0	246440.1	605.00
point342	342	2312480.8	246458.6	604.00
point326	326	2312980.2	246477.1	603.00

Sibley WB-2-2-2

12.0

point634	634	2303986.8	246141.1	596.00
point372	372	2303487.0	246121.6	596.00
point380	380	2302987.5	246099.1	597.00
point381	381	2302488.0	246076.0	597.00
point382	382	2301988.5	246053.0	598.00

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2	point383	383	2301489.0	246033.4	598.00	Average
	point384	384	2300989.5	246013.9	599.00	Average
	point392	392	2300489.8	245994.4	599.00	Average
	point393	393	2299990.2	245975.1	600.00	Average
12.0	point635	635	2303987.2	246129.2	596.00	Average
	point377	377	2304486.8	246148.7	594.50	Average
	point378	378	2304986.2	246168.3	593.00	Average
	point362	362	2305486.0	246188.0	592.00	Average
	point363	363	2305985.5	246207.7	593.00	Average
	point364	364	2306485.2	246227.4	594.00	Average
	point365	365	2306984.8	246248.9	595.00	Average
	point366	366	2307484.2	246271.0	596.00	Average
	point350	350	2307983.8	246293.3	597.00	Average
	point351	351	2308483.2	246315.0	597.50	Average
	point352	352	2308983.0	246335.4	598.00	Average
	point353	353	2309482.5	246349.6	599.00	Average
12.0	point354	354	2309982.2	246368.5	600.00	Average
	point631	631	2310232.0	246376.5	601.50	Average
	point636	636	2299990.2	245975.1	600.00	Average
	point394	394	2299490.8	245952.6	600.00	Average
	point395	395	2298991.5	245924.2	600.00	Average
	point396	396	2298492.0	245898.3	600.00	Average
	point404	404	2297992.5	245878.4	600.00	Average
	point406	406	2297231.5	245840.4	605.00	Average
	point407	407	2297101.8	245845.8	606.00	Average
	point408	408	2296921.5	245895.2	608.00	Average
	point409	409	2296709.2	245979.6	610.00	Average
	point410	410	2296490.2	246098.5	613.00	Average
12.0	point637	637	2299990.5	245963.1	600.00	Average
	point386	386	2300490.2	245982.4	599.00	Average
	point387	387	2300989.8	246001.9	599.00	Average
	point388	388	2301489.5	246021.4	598.00	Average
	point389	389	2301989.0	246041.0	598.00	Average
	point390	390	2302488.8	246064.0	597.00	Average

Sibley WB-2-2-2-2

Sibley EB-2

INPUT: ROADWAYS

Riverview/Trenton RR

Sibley EB-2	point374	374	2302988.0	246087.1	597.00	Average
	point375	375	2303487.5	246109.6	596.00	Average
	point376	376	2303987.2	246129.2	596.00	
	point639	639	2296484.8	246087.9	613.00	Average
	point12	12	2296705.0	245968.4	610.00	Average
	point398	398	2296918.2	245883.6	608.00	Average
	point14	14	2297099.8	245834.0	606.00	Average
	point17	17	2297232.0	245828.4	605.00	Average
	point398	398	2297993.0	245866.4	600.00	Average
	point399	399	2298492.8	245886.3	600.00	Average
	point400	400	2298992.2	245912.2	600.00	Average
	point401	401	2299491.2	245940.7	600.00	Average
Sibley Rd. over I-75	point402	402	2299990.5	245963.1	600.00	
	point638	638	2296490.2	246098.5	613.00	Average
	point617	617	2296357.5	246166.6	613.00	Average
	point411	411	2296267.5	246212.3	613.00	Average
	point572	572	2296064.0	246282.5	610.00	Average
	point413	413	2295953.5	246293.3	613.00	Average
	point414	414	2295742.8	246286.6	618.00	Average
	point416	416	2295534.8	246275.0	623.00	Average
	point614	614	2295285.2	246257.7	619.00	Average
	point417	417	2295035.8	246240.3	615.00	Average
	point573	573	2294786.5	246206.2	610.00	Average
	point419	419	2294669.0	246163.0	605.00	Average
Sibley Rd. EB	point420	420	2294451.8	246037.1	603.00	
	point1	1	2294458.0	246026.9	603.00	Average
	point2	2	2294673.2	246151.7	605.00	Average
	point574	574	2294789.2	246194.6	610.00	Average
	point4	4	2295037.0	246228.4	613.00	Average
	point615	615	2295286.2	246245.7	618.00	Average
	point5	5	2295535.5	246263.0	623.00	Average
	point616	616	2295744.2	246272.2	618.00	Average
	point15	15	2295953.0	246281.4	613.00	Average
	point571	571	2296061.5	246270.9	610.00	Average

INPUT: ROADWAYS

Jeff North	12.0	point10	10	2296262.0	246201.6	613.00	Average	Y
		point618	618	2296352.0	246155.9	613.00		
		point11	11	2296484.8	246087.9	613.00		
Jeff South	12.0	point642	642	2315486.5	246602.0	585.00	Average	
		point643	643	2315638.2	247548.8	580.00	Average	
		point644	644	2315795.8	248548.7	577.00	Average	
	12.0	point645	645	2315760.0	248551.8	577.00	Average	
		point646	646	2315614.5	247565.7	580.00	Average	
		point647	647	2315458.0	246603.3	585.00	Average	

INPUT: TRAFFIC FOR LAeq1h Volumes

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR

Build 2008 - North

Roadway

Points

Roadway Name	No.	Segment	Autos		MTTrucks		HTTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
King Rd EB - 2	68		720	35	24	35	56	35	0	0	0	0
	69		720	35	24	35	56	35	0	0	0	0
	77											
Fort Rd. SB	85		851	40	29	40	66	40	0	0	0	0
	86		851	40	29	40	66	40	0	0	0	0
	87											
King Rd. WB - 2	159		720	35	24	35	56	35	0	0	0	0
	66		720	35	24	35	56	35	0	0	0	0
	67											
King Rd. WB	60		294	35	10	35	33	35	0	0	0	0
	61		294	35	10	35	33	35	0	0	0	0
	62		294	35	10	35	33	35	0	0	0	0
	64		294	35	10	35	33	35	0	0	0	0
	78		294	35	10	35	33	35	0	0	0	0
	65											
King Rd WB	160		294	35	10	35	33	35	0	0	0	0
	70		294	35	10	35	33	35	0	0	0	0
	71		294	35	10	35	33	35	0	0	0	0
	72		294	35	10	35	33	35	0	0	0	0
	75		294	35	10	35	33	35	0	0	0	0
	76											
Fort Rd. N	161		851	40	29	40	66	40	0	0	0	0

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9 August 2001

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

point162	162	851	40	29	40	66	40	0	0	0	0
point163	163										
point505	505	0	0	0	0	0	0	0	0	0	0
point506	506	0	0	0	0	0	0	0	0	0	0
point507	507	0	0	0	0	0	0	0	0	0	0
point508	508	0	0	0	0	0	0	0	0	0	0
point509	509	0	0	0	0	0	0	0	0	0	0
point510	510										
point511	511	0	0	0	0	0	0	0	0	0	0
point512	512	0	0	0	0	0	0	0	0	0	0
point513	513	0	0	0	0	0	0	0	0	0	0
point514	514	0	0	0	0	0	0	0	0	0	0
point515	515	0	0	0	0	0	0	0	0	0	0
point516	516										
point320	320	291	30	10	30	43	30	0	0	0	0
point321	321	291	30	10	30	43	30	0	0	0	0
point322	322	291	30	10	30	43	30	0	0	0	0
point323	323	291	30	10	30	43	30	0	0	0	0
point324	324	291	30	10	30	43	30	0	0	0	0
point332	332										
point456	456	0	0	0	0	0	0	0	0	0	0
point457	457	0	0	0	0	0	0	0	0	0	0
point458	458	0	0	0	0	0	0	0	0	0	0
point459	459	0	0	0	0	0	0	0	0	0	0
point460	460	0	0	0	0	0	0	0	0	0	0
point461	461	0	0	0	0	0	0	0	0	0	0
point462	462	0	0	0	0	0	0	0	0	0	0
point463	463	0	0	0	0	0	0	0	0	0	0
point464	464	0	0	0	0	0	0	0	0	0	0
point619	619	0	0	0	0	0	0	0	0	0	0
point465	465	0	0	0	0	0	0	0	0	0	0
point521	521	0	0	0	0	0	0	0	0	0	0
point500	500	0	0	0	0	0	0	0	0	0	0
point501	501	0	0	0	0	0	0	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

Sibley EB-2

point375	375	627	30	21	30	69	30	0	0	0
point376	376									
point639	639	868	30	29	30	88	30	0	0	0
point12	12	868	30	29	30	88	30	0	0	0
point398	398	868	30	29	30	88	30	0	0	0
point14	14	868	30	29	30	88	30	0	0	0
point17	17	868	30	29	30	88	30	0	0	0
point398	398	868	30	29	30	88	30	0	0	0
point399	399	868	30	29	30	88	30	0	0	0
point400	400	868	30	29	30	88	30	0	0	0
point401	401	868	30	29	30	88	30	0	0	0
point402	402									

Sibley Rd. over I-75

point638	638	1142	30	38	30	89	30	0	0	0
point617	617	1142	30	38	30	89	30	0	0	0
point411	411	1142	30	38	30	89	30	0	0	0
point572	572	1142	30	38	30	89	30	0	0	0
point413	413	1142	30	38	30	89	30	0	0	0
point414	414	1142	30	38	30	89	30	0	0	0
point416	416	1142	30	38	30	89	30	0	0	0
point614	614	1142	30	38	30	89	30	0	0	0
point417	417	1142	30	38	30	89	30	0	0	0
point573	573	1142	30	38	30	89	30	0	0	0
point419	419	1142	30	38	30	89	30	0	0	0
point420	420									

Sibley Rd. EB

point1	1	1142	30	38	30	89	30	0	0	0
point2	2	1142	30	38	30	89	30	0	0	0
point574	574	1142	30	38	30	89	30	0	0	0
point4	4	1142	30	38	30	89	30	0	0	0
point615	615	1142	30	38	30	89	30	0	0	0
point5	5	1142	30	38	30	89	30	0	0	0
point616	616	1142	30	38	30	89	30	0	0	0
point15	15	1142	30	38	30	89	30	0	0	0
point571	571	1142	30	38	30	89	30	0	0	0
point10	10	1142	30	38	30	89	30	0	0	0

INPUT: BUILDING ROWS

URS Corp.
J. McNally

INPUT: BUILDING ROWS
PROJECT/CONTRACT:

RUN:

Building Row

Name

Riverview/Trenton RR
Build 2008 - North

Points

Average Height ft	Building Percent %	No.	Coordinates (ground)		
			X ft	Y ft	Z ft
Building31	30.00	50	60	2315249.8	246411.2
			61	2314250.5	246375.5
Building32	30.00	50	62	2314075.0	246689.8
			63	2313076.0	246646.4
Building33	30.00	50	64	2312430.2	246631.7
			65	2310931.5	246572.9
Building34	30.00	60	66	2309998.8	245548.4
			67	2309299.2	245521.5
			68	2309257.0	246220.2
Building35	30.00	60	69	2308978.0	246176.1
			70	2308278.5	246149.7
Building36	30.00	60	71	2305124.5	246321.8
			72	2303925.2	246279.0
Building37	30.00	60	73	2303778.2	246276.4
			74	2302629.2	246226.4
Building38	30.00	60	75	2302647.2	245909.0
			76	2301500.0	245830.7

Riverview/Trenton RR

9 August 2001
TNM 1.1

INPUT: ROADWAYS

URS Corp.
J. McNally

INPUT: ROADWAYS
PROJECT/CONTRACT:
RUN:

Roadway
Name

Riverview/Trenton RR
Build 2008 - South

Points

Width	Name	No.	Coordinates (pavement)			Flow Control	Control Device	Speed	Constraint	Percent Vehicles Affected	Segment	
			X	Y	Z						Pvmt Type	On Struct?
ft			ft	ft	ft			mph		%		
12.0	point68	68	2308113.5	240951.1	595.00						Average	
	point69	69	2309113.0	240981.2	595.00						Average	
	point77	77	2310366.8	241028.2	595.00							
12.0	point148	148	2295948.2	214505.7	585.00						Average	
	point149	149	2295838.2	214109.6	586.00						Average	
	point150	150	2295739.8	213722.1	587.00						Average	
	point151	151	2295655.5	213402.2	587.00						Average	
	point152	152	2295463.5	213061.0	587.00							
12.0	point85	85	2310274.8	242731.3	595.00						Average	
	point86	86	2310343.0	241733.7	595.00						Average	
	point87	87	2310366.5	241071.9	595.00							
12.0	point159	159	2310366.2	241052.6	595.00						Average	
	point66	66	2309112.2	241005.2	595.00						Average	
	point67	67	2308112.8	240975.1	595.00							
12.0	point60	60	2314078.8	241187.3	580.00						Average	
	point61	61	2313109.5	241151.2	585.00						Average	
	point62	62	2312110.2	241110.1	590.00						Average	
	point64	64	2311110.8	241082.2	592.00						Average	
	point78	78	2310559.0	241060.4	595.00						Average	
	point65	65	2310366.2	241052.6	595.00							
	point160	160	2310366.8	241028.2	595.00						Average	

King Rd WB

INPUT: ROADWAYS

Riverview/Trenton RR

Fort Rd. N	12.0	point70	70	2310560.2	241036.1	595.00	Average
		point71	71	2311111.5	241058.3	592.00	Average
		point72	72	2312111.0	241086.2	590.00	Average
		point75	75	2313110.2	241127.2	585.00	Average
		point76	76	2314076.2	241161.5	585.00	Average
		point161	161	2310556.5	241082.9	595.00	Average
Fort Rd. NB	12.0	point162	162	2310526.2	241740.4	595.00	Average
		point163	163	2310480.5	242738.9	595.00	Average
		point229	229	2296386.5	214594.4	585.00	Average
		point228	228	2296484.8	214739.4	585.00	Average
		point217	217	2296592.0	214908.2	585.00	Average
		point226	226	2296833.2	215283.6	586.00	Average
		point225	225	2297057.2	215613.2	586.00	Average
		point224	224	2297307.8	215929.6	586.00	Average
		point223	223	2297407.0	216043.2	587.00	Average
		point221	221	2297553.5	216246.0	587.00	Average
		point220	220	2297857.2	216506.9	587.00	Average
NB I-75 - S of Fort Rd.	12.0	point219	219	2298598.2	217179.8	588.00	Average
		point218	218	2299276.2	217917.1	588.00	Average
		point217	217	2299846.5	218740.1	588.00	Average
		point216	216	2300331.8	219614.7	589.00	Average
		point240	240	2295494.5	213042.9	587.00	Average
		point238	238	2295679.8	213371.8	587.00	Average
		point237	237	2295769.5	213548.9	587.00	Average
		point236	236	2295972.5	213893.4	586.00	Average
		point235	235	2296174.8	214238.5	586.00	Average
		point234	234	2296271.2	214413.7	586.00	Average
West Rd.	12.0	point233	233	2296337.8	214602.4	585.00	Average
		point552	552	2311199.0	235819.4	590.00	Average
		point553	553	2310244.2	235790.3	590.00	Average
Roadway164	12.0	point554	554	2309192.5	235732.9	590.00	Average
		point555	555	2309886.0	235773.8	590.00	Average
Van Horn	12.0	point556	556	2307936.8	230469.8	584.50	Average
		point557	557	2307000.0	230434.2	584.50	Average

INPUT: ROADWAYS

Riverview/Trenton RR

Van Horn Rd.	12.0	point558	558	2305926.8	230389.1	584.50	Average
		point559	559	2306711.5	230420.9	584.50	
Vreeland Rd.	12.0	point560	560	2302558.5	224901.3	585.00	Average
		point561	561	2303290.0	224935.5	584.00	
vreeland rd.	12.0	point562	562	2304562.5	224989.3	585.00	Average
		point563	563	2303615.0	224945.4	584.00	
Fort Rd. SB-2	12.0	point575	575	2310367.8	241012.7	595.00	Average
		point88	88	2310389.2	240233.3	592.00	Average
		point90	90	2310427.0	239173.3	590.00	Average
		point97	97	2310446.2	238735.5	586.00	Average
		point98	98	2310512.2	237737.7	587.00	Average
		point99	99	2310520.2	237345.7	587.00	Average
		point100	100	2310526.8	237145.8	588.00	Average
		point101	101	2310522.0	236945.9	589.00	Average
		point102	102	2310507.8	236746.4	590.00	Average
		point103	103	2310211.0	236225.2	590.00	Average
		point104	104	2310006.8	235881.3	590.00	Average
		point105	105	2309802.5	235537.4	589.00	Average
		point106	106	2309598.2	235193.5	589.00	Average
		point108	108	2309276.0	234652.9	588.00	Average
		point109	109	2308758.5	233797.3	588.00	Average
		point110	110	2308259.0	232931.0	588.00	Average
		point111	111	2308000.0	232503.2	587.00	Average
		point112	112	2307744.8	232073.3	587.00	Average
		point113	113	2307489.5	231643.4	586.00	Average
		point115	115	2307234.2	231213.5	586.00	Average
		point116	116	2306978.8	230783.7	586.00	Average
		point117	117	2306723.5	230353.8	585.00	Average
		point118	118	2306468.0	229923.9	585.00	Average
		point119	119	2306204.8	229499.8	585.00	Average
		point120	120	2305652.5	228666.1	585.00	Average
		point122	122	2305144.2	227805.0	585.00	Average
		point123	123	2304604.8	226963.0	585.00	Average
		point124	124	2304075.8	226114.4	585.00	Average

Riverview/Trenton RR

[illegible]

INPUT: TRAFFIC FOR LAeq1h Volumes

URS Corp.
J. McNally

9 August 2001
TNM 1.1

Riverview/Trenton RR

INPUT: TRAFFIC FOR LAeq1h Volumes

PROJECT/CONTRACT:

RUN:

Riverview/Trenton RR
Build 2008 - South

Roadway

Points

Name	No.	Segment	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
King Rd EB - 2	68	point68	720	35	24	35	56	35	0	0	0	0
	69	point69	720	35	24	35	56	35	0	0	0	0
	77	point77										
I-75 S, S of Fort Rd.	148	point148	0	0	0	0	0	0	0	0	0	0
	149	point149	0	0	0	0	0	0	0	0	0	0
	150	point150	0	0	0	0	0	0	0	0	0	0
	151	point151	0	0	0	0	0	0	0	0	0	0
	152	point152										
Fort Rd. SB	85	point85	851	40	29	40	66	40	0	0	0	0
	86	point86	851	40	29	40	66	40	0	0	0	0
	87	point87										
King Rd. WB - 2	159	point159	720	35	24	35	56	35	0	0	0	0
	66	point66	720	35	24	35	56	35	0	0	0	0
	67	point67										
King Rd. WB	60	point60	294	35	10	35	33	35	0	0	0	0
	61	point61	294	35	10	35	33	35	0	0	0	0
	62	point62	294	35	10	35	33	35	0	0	0	0
	64	point64	294	35	10	35	33	35	0	0	0	0
	78	point78	294	35	10	35	33	35	0	0	0	0
	65	point65										
King Rd WB	160	point160	294	35	10	35	33	35	0	0	0	0
	70	point70	294	35	10	35	33	35	0	0	0	0

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INPUT: TRAFFIC FOR LAeq1h Volumes

Riverview/Trenton RR

point71	71	294	35	10	35	33	35	0	0	0
point72	72	294	35	10	35	33	35	0	0	0
point75	75	294	35	10	35	33	35	0	0	0
point76	76									
Fort Rd. N	161	851	40	29	40	66	40	0	0	0
point162	162	851	40	29	40	66	40	0	0	0
point163	163									
Fort Rd. NB	229	689	40	23	40	64	40	0	0	0
point228	228	689	40	23	40	64	40	0	0	0
point217	217	689	40	23	40	64	40	0	0	0
point226	226	689	40	23	40	64	40	0	0	0
point225	225	689	40	23	40	64	40	0	0	0
point224	224	689	40	23	40	64	40	0	0	0
point223	223	689	40	23	40	64	40	0	0	0
point221	221	689	40	23	40	64	40	0	0	0
point220	220	689	40	23	40	64	40	0	0	0
point219	219	689	40	23	40	64	40	0	0	0
point218	218	689	40	23	40	64	40	0	0	0
point217	217	689	40	23	40	64	40	0	0	0
point216	216									
NB I-75 - S of Fort Rd.	240	0	0	0	0	0	0	0	0	0
point238	238	0	0	0	0	0	0	0	0	0
point237	237	0	0	0	0	0	0	0	0	0
point236	236	0	0	0	0	0	0	0	0	0
point235	235	0	0	0	0	0	0	0	0	0
point234	234	0	0	0	0	0	0	0	0	0
point233	233									
West Rd.	552	0	0	0	0	0	0	0	0	0
point553	553									
Roadway164	554	0	0	0	0	0	0	0	0	0
point555	555									
Van Horn	556	0	0	0	0	0	0	0	0	0
point557	557									
Van Horn Rd.	558	0	0	0	0	0	0	0	0	0

INPUT: TRAFFIC FOR LAeq1h Volumes

	point126	126	914	40	31	40	81	40	0	0	0	Riverview/Trenton RR
	point127	127	914	40	31	40	81	40	0	0	0	
	point128	128	914	40	31	40	81	40	0	0	0	
	point130	130	914	40	31	40	81	40	0	0	0	
	point131	131	914	40	31	40	81	40	0	0	0	
	point132	132	914	40	31	40	81	40	0	0	0	
	point133	133	914	40	31	40	81	40	0	0	0	
	point134	134										
Roadway184	point578	578	0	0	0	0	0	0	0	0	0	
	point579	579										
allen	point580	580	0	0	0	0	0	0	0	0	0	
	point581	581										
Gibraltar Rd.	point620	620	0	0	0	0	0	0	0	0	0	
	point621	621										
Gibraltar Rd.	point622	622	0	0	0	0	0	0	0	0	0	
	point623	623										
Fort Rd. NB-2	point624	624	914	40	31	40	81	40	0	0	0	
	point215	215	914	40	31	40	81	40	0	0	0	
	point214	214	914	40	31	40	81	40	0	0	0	
	point213	213	914	40	31	40	81	40	0	0	0	
	point212	212	914	40	31	40	81	40	0	0	0	
	point211	211	914	40	31	40	81	40	0	0	0	
	point209	209	914	40	31	40	81	40	0	0	0	
	point208	208	914	40	31	40	81	40	0	0	0	
	point207	207	914	40	31	40	81	40	0	0	0	
	point206	206	914	40	31	40	81	40	0	0	0	
	point205	205	914	40	31	40	81	40	0	0	0	
	point204	204	914	40	31	40	81	40	0	0	0	
	point200	200	914	40	31	40	81	40	0	0	0	
	point198	198	914	40	31	40	81	40	0	0	0	
	point193	193	914	40	31	40	81	40	0	0	0	
	point192	192	914	40	31	40	81	40	0	0	0	
	point191	191	914	40	31	40	81	40	0	0	0	
	point190	190	914	40	31	40	81	40	0	0	0	

Riverview/Trenton RR

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INPUT: RECEIVERS

URS Corp.
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INPUT: RECEIVERS

PROJECT/CONTRACT:

RUN:

Receiver

Name

Riverview/Trenton RR

Build 2008 - South

9 August 2001
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Riverview/Trenton RR

No.	# DUs	Coordinates (ground)		Z	Height above Ground	Input Sound Levels and Criteria		Active
		X	Y			Existing LAeq1h	Impact Criteria LAeq1h Sub'l Inc	
		ft	ft	ft	ft	dBA	dBA	NR
S4	45	1	2313303.5	241344.6	585.00	0.00	66	10.0
S5	46	1	2311891.5	240939.7	590.00	0.00	66	10.0
S6	49	1	2310742.5	240349.6	592.00	0.00	66	10.0
S8	50	1	2311099.2	239183.2	590.00	0.00	66	10.0
S7	51	1	2310083.8	239258.6	590.00	0.00	66	10.0
S9	53	1	2310927.8	237543.2	587.00	0.00	66	10.0
S10	54	1	2309308.5	235937.6	590.00	0.00	66	10.0
S11	55	1	2309329.0	235038.7	589.00	0.00	66	10.0
S12	57	1	2309230.2	233831.1	588.00	0.00	66	10.0
S13	58	1	2308070.5	233556.6	588.00	0.00	66	10.0
S14	59	1	2307924.2	231614.8	587.00	0.00	66	10.0
S15	61	1	2306721.8	229645.5	585.00	0.00	66	10.0
S17	62	1	2305654.5	227525.2	585.00	0.00	66	10.0
S16	65	1	2305195.0	229638.6	585.00	0.00	66	10.0
S18	38	1	2303341.0	225322.6	584.00	0.00	66	10.0
S19	67	1	2302973.2	223682.7	585.00	0.00	66	10.0
S20	68	1	2301724.5	222694.6	587.00	0.00	66	10.0
S21	69	1	2300983.5	220430.3	589.00	0.00	66	10.0
S22	71	1	2300067.2	219593.2	589.00	0.00	66	10.0
S23	72	1	2299672.5	218207.1	588.00	0.00	66	10.0
S24	74	1	2298773.8	217733.7	588.00	0.00	66	10.0
S25	76	1	2297440.5	216484.8	587.00	0.00	66	10.0

INPUT: BUILDING ROWS

URS Corp.
J. McNally

INPUT: BUILDING ROWS

PROJECT/CONTRACT:

RUN:

Building Row
Name

Riverview/Trenton RR

Build 2008 - South

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Building Row Name	Average Height ft	Building Percent %	Points			
			No.	Coordinates (ground)		
				X	Y	Z
				ft	ft	ft
Building24	30.00	50	43	2310189.8	240728.5	595.00
			44	2310219.0	239934.8	592.00
Building25	30.00	50	45	2310219.0	239817.3	590.00
			46	2310248.5	238465.2	585.00
Building26	30.00	50	47	2310277.8	238171.3	585.00
			48	2310307.2	236819.2	590.00
			49	2309807.8	236025.6	590.00
			50	2308691.5	236055.0	590.00
Building27	30.00	50	51	2308574.0	235508.1	590.00
			52	2309572.8	235566.9	590.00
			53	2306635.2	230805.2	586.00
Building28	30.00	50	54	2304902.0	230159.1	585.00
			55	2304960.8	227895.8	585.00
			56	2304373.2	227014.1	585.00
Building29	30.00	50	57	2305959.5	228336.7	585.00
			58	2304902.0	226749.5	585.00

Riverview/Trenton RR