

TRUCK ROUTE ACCESS EVALUATION

Dow Corning, Varsity Dayton Walther and Ghent Generating Station
Carroll County
Site # 33 & 51

KTC Report No.99-25

“Freight Movement and Intermodal Access in Kentucky”
Project No. SPR 98-189

By

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1.0 Introduction

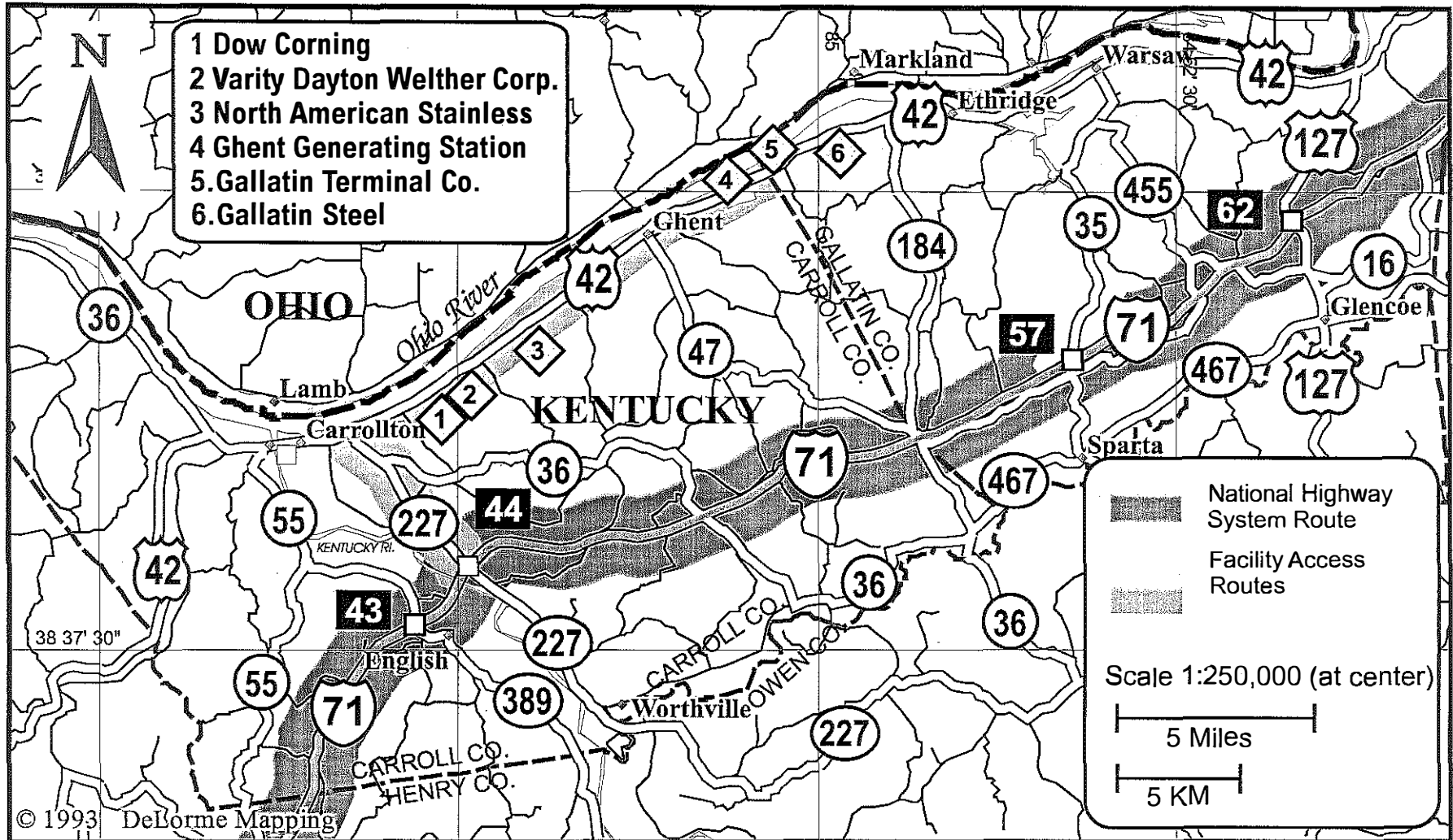
This is a study undertaken on behalf of the Kentucky Transportation Cabinet (KYTC). There are two main objectives of the Freight Movement and Intermodal Access in Kentucky Study (SPR 98-189): evaluation of the access for trucks between intermodal or other truck generating sites and the National Highway System (NHS); and furthering the understanding of freight commodity flows throughout the state. This report summarizes the access evaluation for Dow Corning and Varsity Dayton Walther Corporation (site #33) as well as the Ghent Generating Station (site #51). These facilities share a route and are therefore discussed in this single report. The facilities are located in Carroll County in the Northern Kentucky Area Development District (ADD) and KYTC Highway District #6. The location of each site is shown in Figure 1. Work on other specific sites as well as the freight commodity flow task is ongoing and documented elsewhere.

The sites to be evaluated in this study were selected from two existing databases (a truck facility survey from 1994 and the intermodal facility inventory) based on ADD and KYTC Highway District planner recommendations, geographic location, distance to the NHS, and the number of trucks accessing the site. Consideration was also made for the freight type handled and transportation modes used.

The site was visited for video recording on April 8, 1998, and field data were collected on August 5, 1998. The facilities are located along US 42 north of Carrollton on the Ohio River. The surrounding area is generally rural. Other facilities noted in the area include North American Stainless, Gallatin Terminal Company and Gallatin Steel.

A phone survey was conducted with facility managers early in the study process. The surveys were conducted only with industries in the pre-existing intermodal or truck databases or the major industries observed during the sites visits. While the overall response from industries was very good, in some cases facility managers could not be contacted or did not want to assist with the survey. In order to stay within the resources available for the project not all smaller facilities with lower truck volumes could be contacted. The phone survey found that a total of approximately 180 trucks per day access the sites. The trucks are generally semi tractor trailers with a maximum length of 53 feet. The freight handled at these facilities includes raw materials and steel. The survey respondents indicated that the turning radius from KY 36 onto US 42 is not sufficient for trucks. There were safety concerns due to high traffic speeds on the routes. Other problems noted indicated narrow lane widths and rough pavement. The phone survey information can be found in Appendix A.

Figure 1: Location of Truck Generating Sites



2.0 Truck Routes in Use

As shown in Figure 1, there are two routes used by trucks to reach I-71, which is part of the National Highway System. The Carroll County route (shown in orange) is used by trucks from both sites to reach I-71 at exit 44, a distance of approximately 11 miles. Note that trucks from each facility travel different distances. Trucks follow US 42 (ADT 5,813, 1993) to Carrollton, then use KY 36 (ADT 11,975, 1993) and KY 227 (ADT 10,187, 1995) to reach I-71. The Gallatin County route (shown in green) is used primarily by trucks from the Ghent Generating Station traveling to exit 57 of I-71, a distance of approximately 15 miles. If this route was used by 102 inch wide trailers it would be an STAA violation. Trucks using this route follow US 42 (ADT 5,337, 1997) to Warsaw then KY 35 (ADT 3,133, 1997) to the I-71 interchange. US 42 and KY 35 are two-lane rural highways, while KY 36 and KY 227 have significant commercial development. All roads on both routes are state-maintained.

3.0 Route Data Collection and Evaluation

The route features that are to be evaluated in this study are shown in Table 1 along with a brief description of the evaluation method. While some of these features required only subjective evaluation by the engineer during site inspection, others required quantitative measurement in order to label the particular point or section as “preferred,” “adequate” or “less than adequate” for truck access. The guidelines for labeling a point or section into one of these three descriptive categories are provided in both the interim and final report for this project. In several cases measurements were only taken where subjective evaluation indicated a problem might exist.

3.1 Traffic Operations and Level of Service

The phone survey did not indicate operational problems for these routes. Thus, no traffic evaluations were performed.

3.2 Accident History

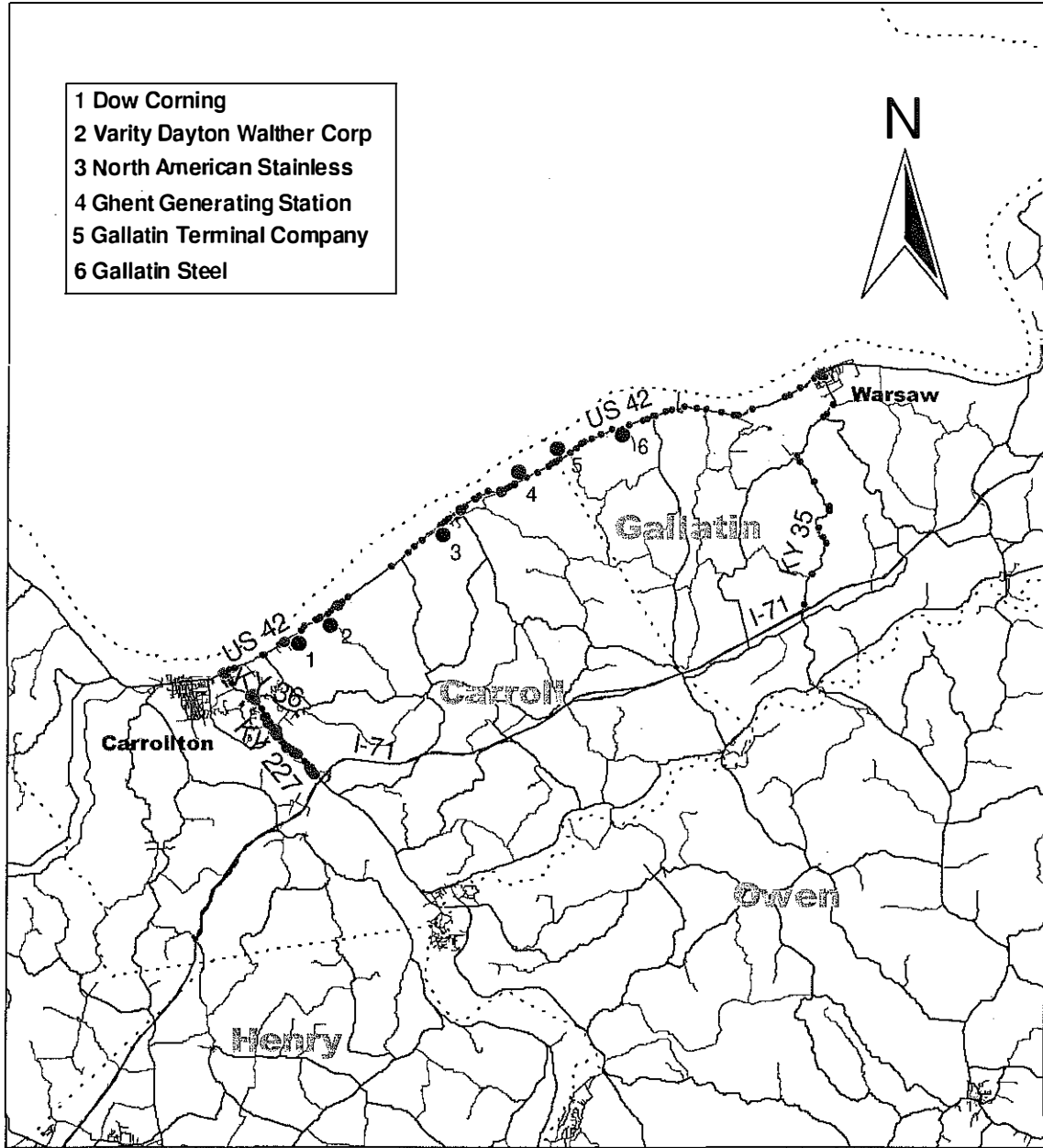
In 1997, the Kentucky Transportation Center studied all state-maintained roads throughout Kentucky and determined average truck accident rates for different types of road sections. A critical accident rate was calculated using the average accident rate for a specific highway type with an assumed level of statistical significance and exposure (vehicle miles traveled). US 42 between milepoints 13.0 and 14.0 in Carroll County (see Figure 2) had a critical rate factor (the ratio of the actual accident rate to the critical accident rate) of 0.9, indicating that the truck accident rate is only slightly less than the critical rate for that type of highway.

Figure 2 shows the locations of accidents during the years 1995, 1996 and 1997. The figure shows a large number of accidents at intersections along KY 227 near I-71. There were also sections of US 42 with several accidents. As expected, the roads with higher traffic volumes show higher numbers of accidents.

Table 1: Route Features and Method of Evaluation

Feature	Methodology	Team Consensus based on Committee Meeting and Draft Report Feedback	Feature Type
Offtracking	Lane Width with formula based on wheel and axle spacing	Evaluate where observation of trucks indicates possible offtracking - use HIS data and collect in field	Point
Max. Safe Speed on a Curve	Ball Bank Indicator Reading	Evaluate complete route due to ease of data collection	Point
Grade	Speed Reduction Tables with Percent Grade and Direct Observation	Evaluate where observation of trucks indicates speed reduction occurs using HIS data and collect in field as needed	Continuous
Lane Width	HIS data and field measurement	Review complete route due to ease of data collection	Continuous
Clear Zone	Observation	Subjective evaluation	Subjective
Shoulders	HIS data and field measurement	Evaluate where HIS data is available and estimate based on observation elsewhere	Continuous
Pavement Condition	Observation	Subjective evaluation	Subjective
Truck Stopping Sight Distance	Field measurements	Measure only when observation indicates possible problem	Point
Turning Radii	Field measurements and observations of trucks	Measure only when observation indicates possible problem	Point
Accident History	Accident data files and KTC High Truck Accident Report	Do for entire route	Subjective
Intersection LOS	Traffic counts	Only where problems are indicated by facility managers	Point
Route LOS	Traffic counts and travel time studies	Only where problems are indicated by managers	Continuous
RR Crossings	Field Observation	Evaluate all level crossings	Point
Bridges	KYTC Sufficiency Rating	Evaluate all bridges	Point

Figure 2: Accident Locations (1995-1997)



- 1 Dow Corning
- 2 Varity Dayton Walther Corp
- 3 North American Stainless
- 4 Ghent Generating Station
- 5 Gallatin Terminal Company
- 6 Gallatin Steel

LEGEND

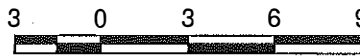
- Facility
- Accidents: 1-2
- Accidents: 3-7
- Accidents: 8-15
- Critical Accident Rate Section

Scale - 1:220000

2 0 2 4 6 Miles



3 0 3 6 9 Kilometers



A summary of the accidents along the truck routes is shown in Tables 2 and 3 for the same three year period. Truck accidents represent a significant portion of the overall accidents along both routes. The 9.8% of accidents involving trucks on the Carroll County route is approximately equal to the percentage trucks along the route (9.9%). The only fatal accident on this route involved a truck. The 12.2% of accidents involving trucks on the Gallatin County route is higher than the percentage trucks along that route (8.2%). This suggests there are some safety concerns from an accident history point of view that could be addressed along these routes. The percentage trucks was obtained from 1997 and 1998 KYTC Vehicle Classification Counts.

Table 2: Accident Types along the Carroll County Route

	<i>Non-Truck Accidents</i>	<i>Truck Accidents</i>	<i>Percent Trucks</i>
<i>Total</i>	156	17	9.8
Fatal Accidents	0	1	100.0
Injury	39	6	13.3
Intersection	41	4	8.9

Table 3: Accident Types along the Gallatin County Route

	<i>Non-Truck Accidents</i>	<i>Truck Accidents</i>	<i>Percent Trucks</i>
Fatal Accidents	0	0	0.0
Injury	22	1	4.3
Intersection	15	0	0.0
Total	65	9	12.2

3.3 Cross Section Features

Figures 3 and 4 illustrate the sections of the routes having different widths of lanes and shoulders. US 42 has “less than adequate” 10-foot lanes between the two sites and in a section near Warsaw. There were “adequate” 11-foot lanes on US 42 in Carrollton and on most of KY 35. The other route sections have “preferred” 12-foot lanes. A “preferred” paved shoulder wider than 10 feet was found on a short section of US 42 north of the Ghent Generating Station. All other route sections had “less than adequate” shoulders of various widths.

KY 35 had clear zone problems such as side slopes, mailboxes and guardrails near the travel lanes. Other route sections had few clear zone problems. The pavement along KY 35 was in good condition and other route sections had fair pavement.

3.4 Curvature Features

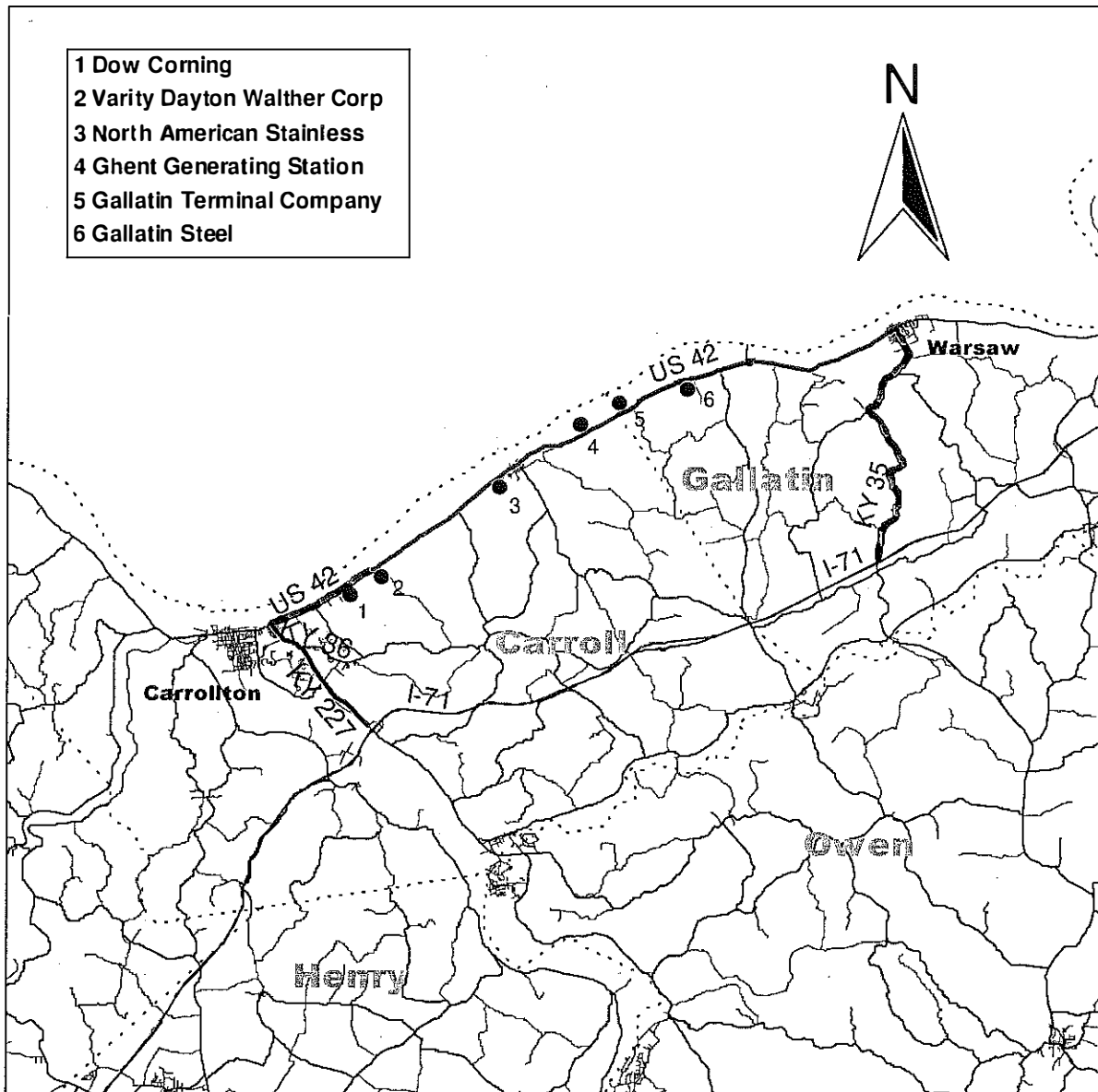
Grades are considered problematic if they cause trucks to slow down excessively. Four grades on KY 35 were rated “less than adequate” due to observed speed reduction. The locations of those grades are shown in Figure 5.

Offtracking is considered a problem where a truck cannot stay in its lane through a curve. Figure 6 shows the location of several curves on the Gallatin County route where offtracking could be a problem based on field observations. The milepoints of the problematic curves are listed in Appendix B. The 18 curves were rated “less than adequate,” and most were located on KY 35.

The Gallatin County route also included several curves where safe speed on a curve could be a problem as measured using a ball bank indicator. The location of these curves is shown in Figure 7, and the milepoints are listed in Appendix B. There were 12 curves rated “adequate” and 4 rated “less than adequate.”

The turning radii of two intersections were approximated in the field. The right turn from KY 36 onto US 40 in Carrollton (45-foot radius) was rated “less than adequate” because trucks must turn into opposing traffic lanes. The approximate layout of the intersection is shown in Figure 8 and a truck making the turn is shown in Figure 9. The 15-foot turning radius of the turn from US 42 onto KY 35 in Warsaw was also rated “less than adequate” because trucks must turn into opposing lanes. The approximate layout of this intersection is shown in Figure 10.

Figure 3: Lane Widths



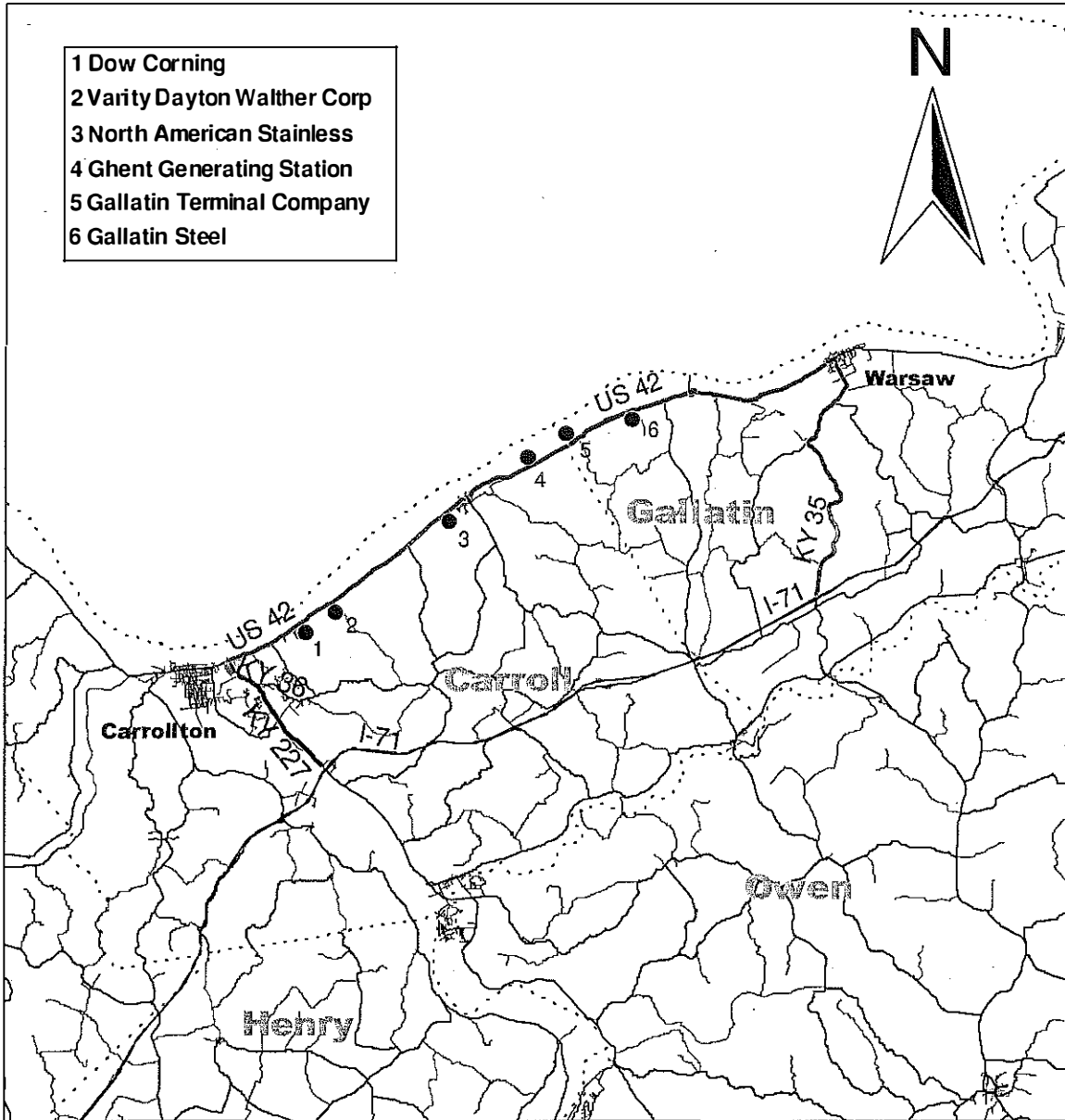
LEGEND

●	Facility
—	Lane Width - 10 Feet
—	Lane Width - 11 Feet
—	Lane Width - 12 Feet
—	Lane Width - 14 Feet

Scale - 1:220000

2	0	2	4	6	Miles
3	0	3	6	9	Kilometers

Figure 4: Shoulder Widths



LEGEND

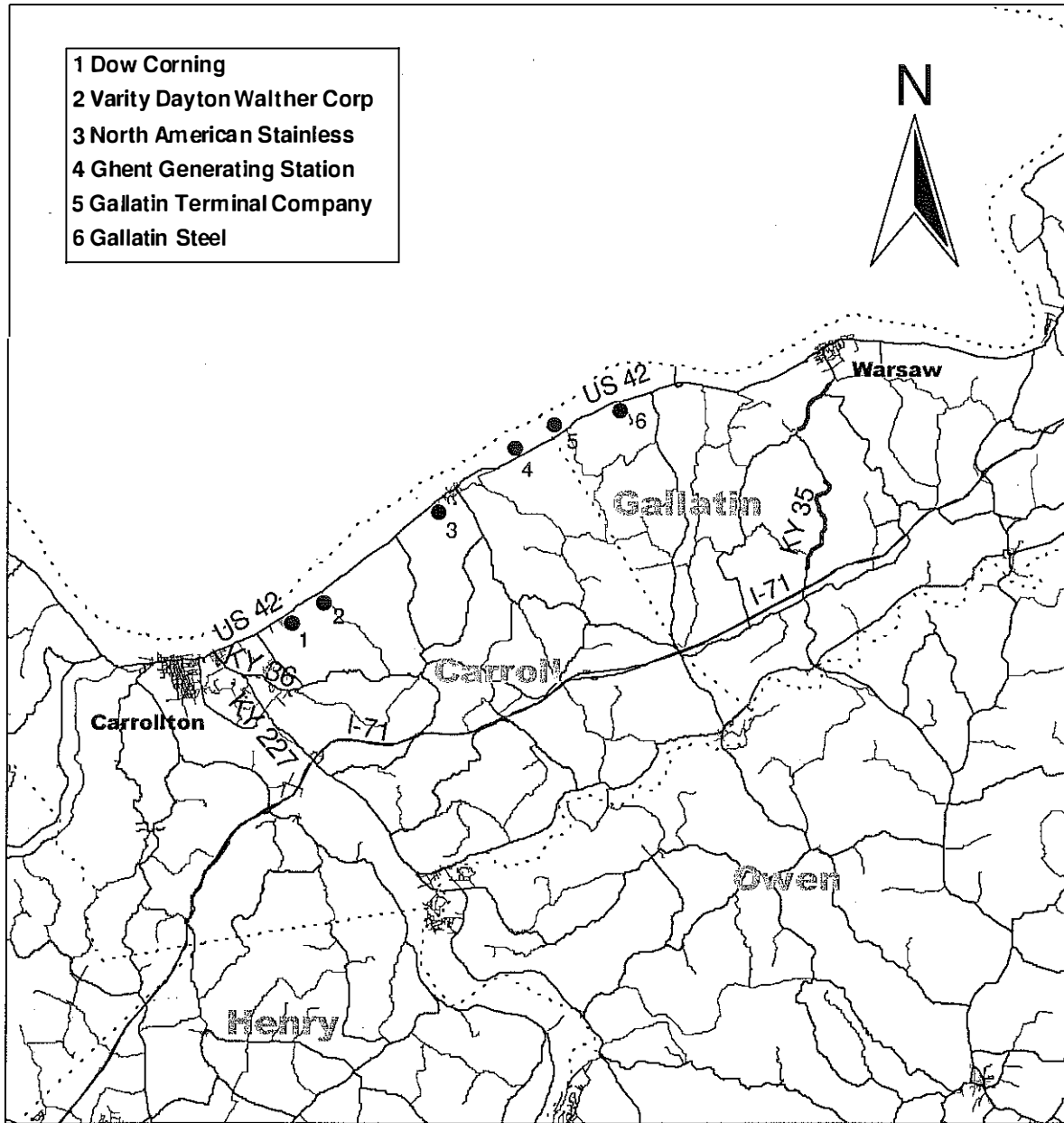
- Facility
- Shoulder Width - 1 Foot
- Shoulder Width - 2-3 Feet
- Shoulder Width - 4-6 Feet
- Shoulder Width - 8-13 Feet

Scale - 1:220000

2 0 2 4 6 Miles

3 0 3 6 9 Kilometers

Figure 5: Problematic Grades



- 1 Dow Corning
- 2 Varity Dayton Walther Corp
- 3 North American Stainless
- 4 Ghent Generating Station
- 5 Gallatin Terminal Company
- 6 Gallatin Steel

LEGEND

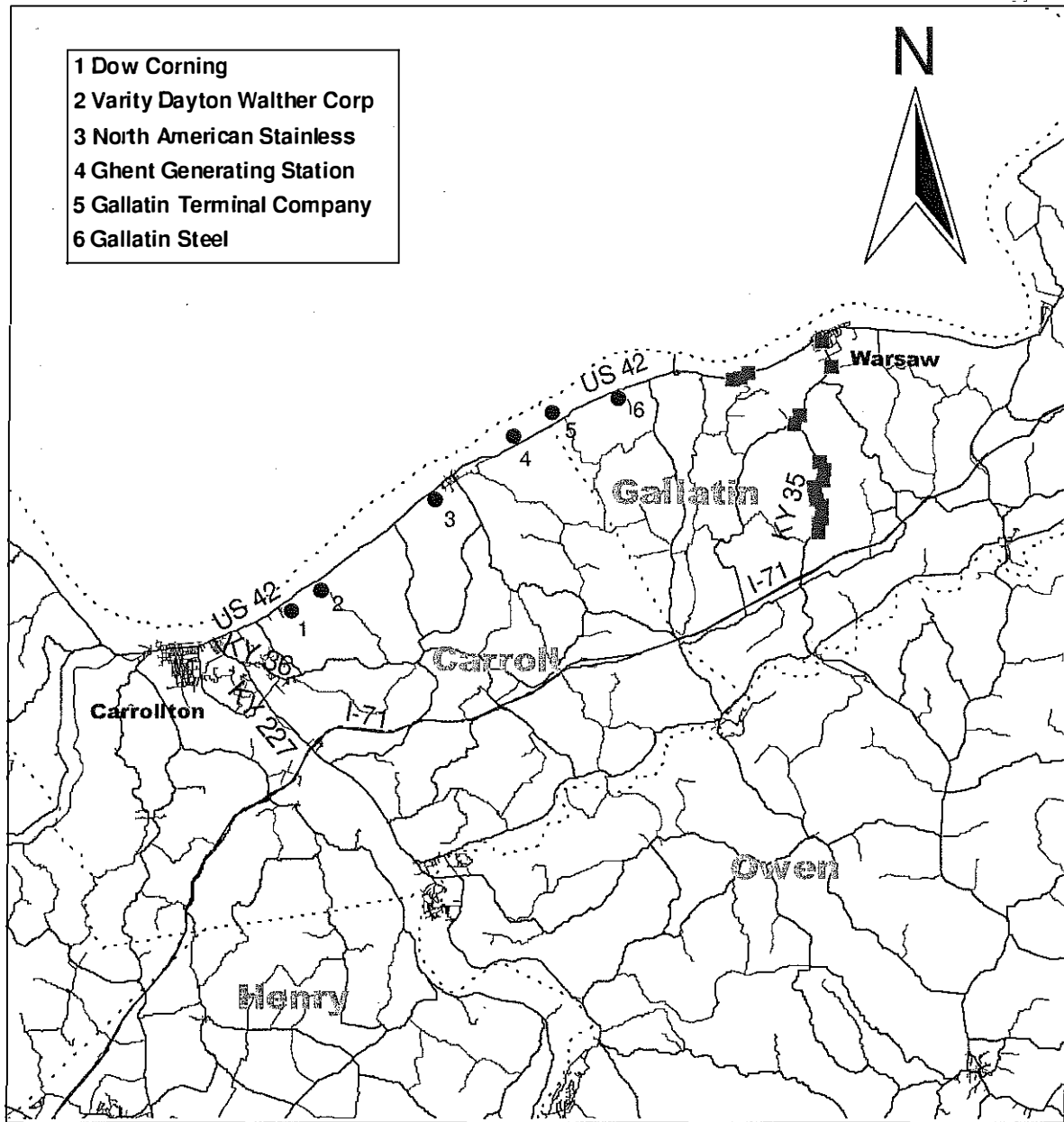
- Facility
- Grade - Less Than Adequate

Scale - 1:220000

2 0 2 4 6 Miles

3 0 3 6 9 Kilometers

Figure 6: Curves Where Offtracking Could Occur



LEGEND

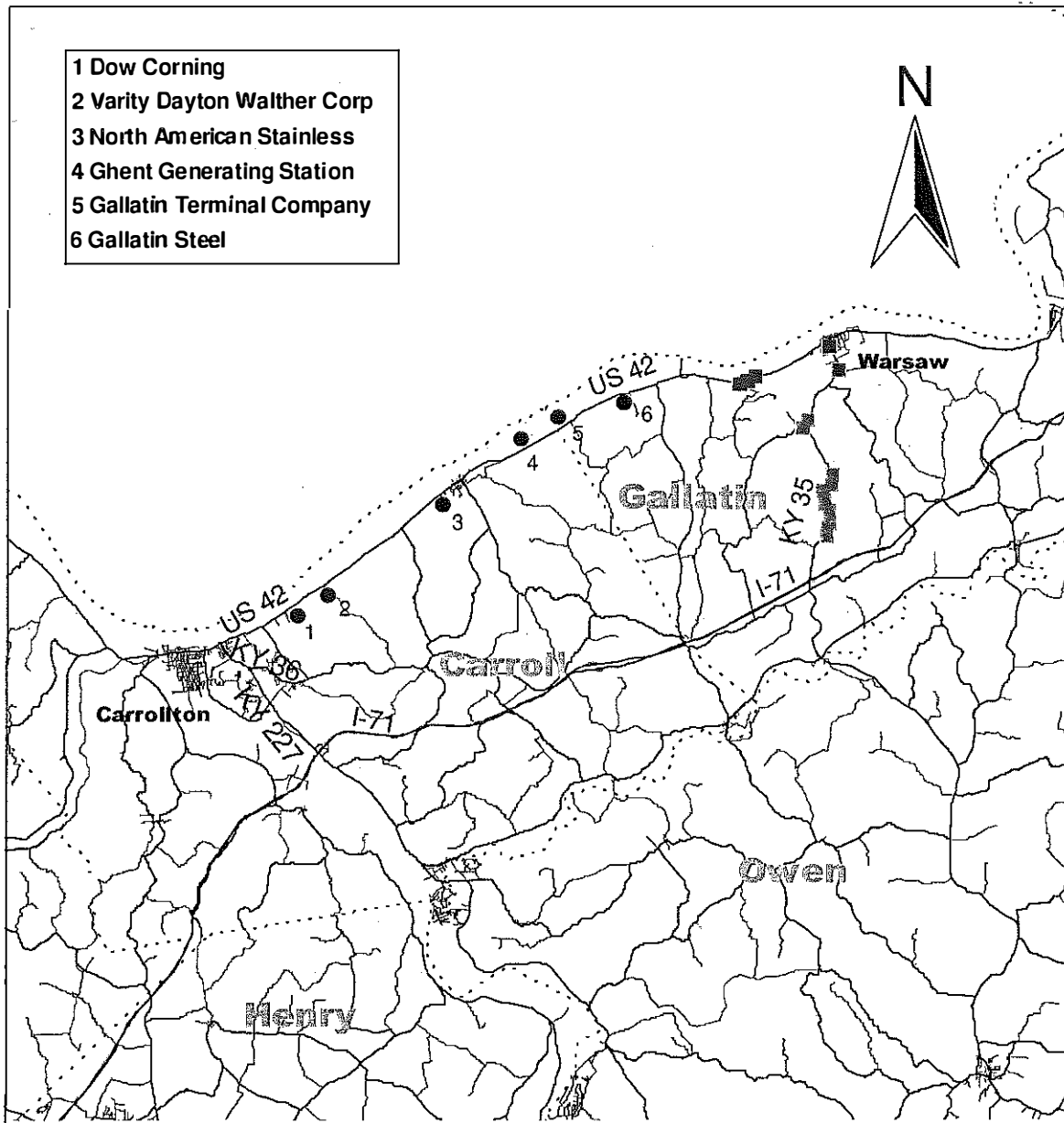
- Facility
- Offtracking - Less Than Adequate

Scale - 1:220000

2 0 2 4 6 Miles

3 0 3 6 9 Kilometers

Figure 7: Curves Where Safe Speed May be a Problem



- 1 Dow Corning
- 2 Varity Dayton Walther Corp
- 3 North American Stainless
- 4 Ghent Generating Station
- 5 Gallatin Terminal Company
- 6 Gallatin Steel

LEGEND

- Facility
- Ball Bank Indicator - Adequate
- Ball Bank Indicator - Less Than Adequate

Scale - 1:220000



Figure 8: Approximate Turning Radius at KY 36 and US 42

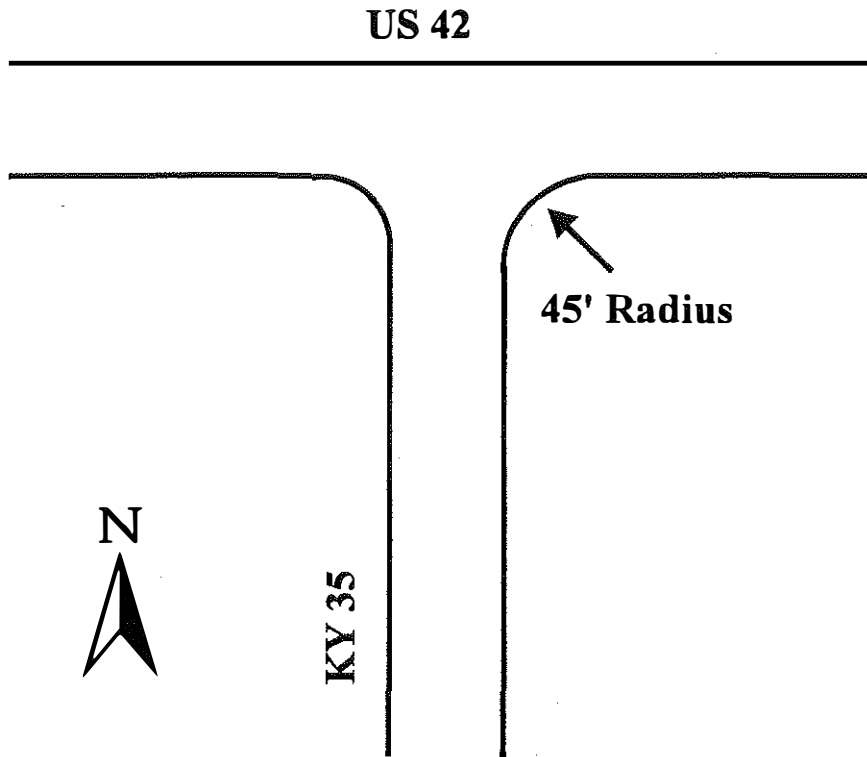
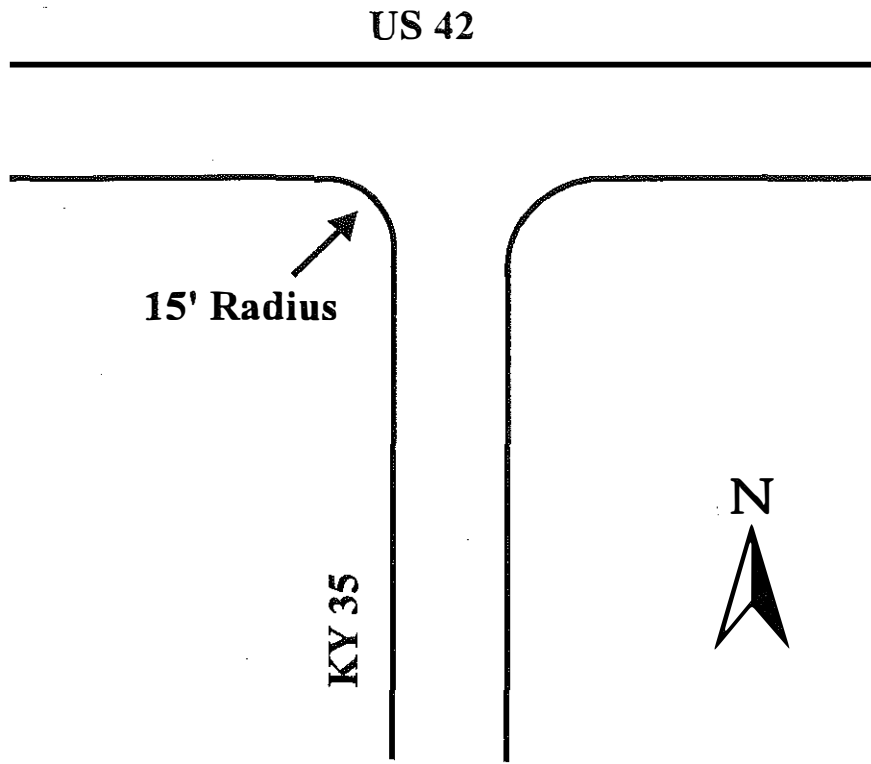


Figure 9: Truck Turning From KY 36 onto US 42



Figure 10: Approximate Turning Radius at US 42 and KY 35



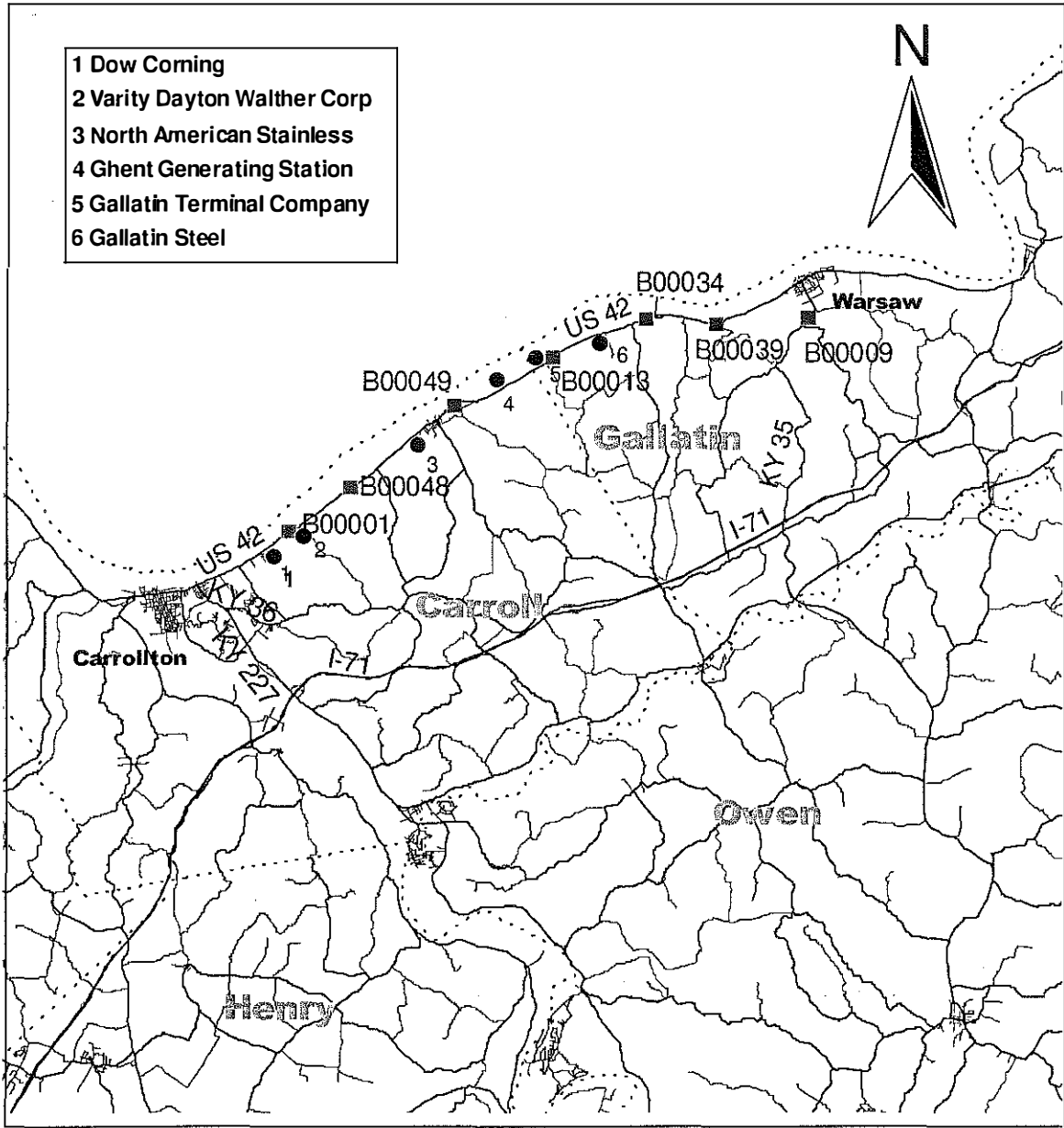
3.5 Railroad Crossings

The Carroll County route included two railroad crossings located on US 42 approximately five miles east of Carrollton and on KY 227 one mile north of I-71. Both crossings received a “preferred” rating. A railroad crossing at the Ghent Generating Station on the Gallatin County route was rated “adequate” because the tracks cross at an angle.

3.6 Bridges

Figure 11 shows the location of all bridges on these routes. The location and bridge sufficiency rating (provided by the Division of Operations at the KYTC) for each bridge is listed in Appendix B. A sufficiency rating of 80 or higher (out of a possible 100) is considered “preferred,” and a rating of at least 50 is “adequate.” There are three “adequate” bridges on the Carroll County route, and the Gallatin County route includes one bridge rated “adequate.” All other bridges were “preferred.”

Figure 11: Bridge Locations



- 1 Dow Corning
- 2 Varity Dayton Walther Corp
- 3 North American Stainless
- 4 Ghent Generating Station
- 5 Gallatin Terminal Company
- 6 Gallatin Steel

LEGEND

- Facility
- B00000 Bridges - Bridge Number

Scale - 1:220000

2 0 2 4 6 Miles

3 0 3 6 9 Kilometers

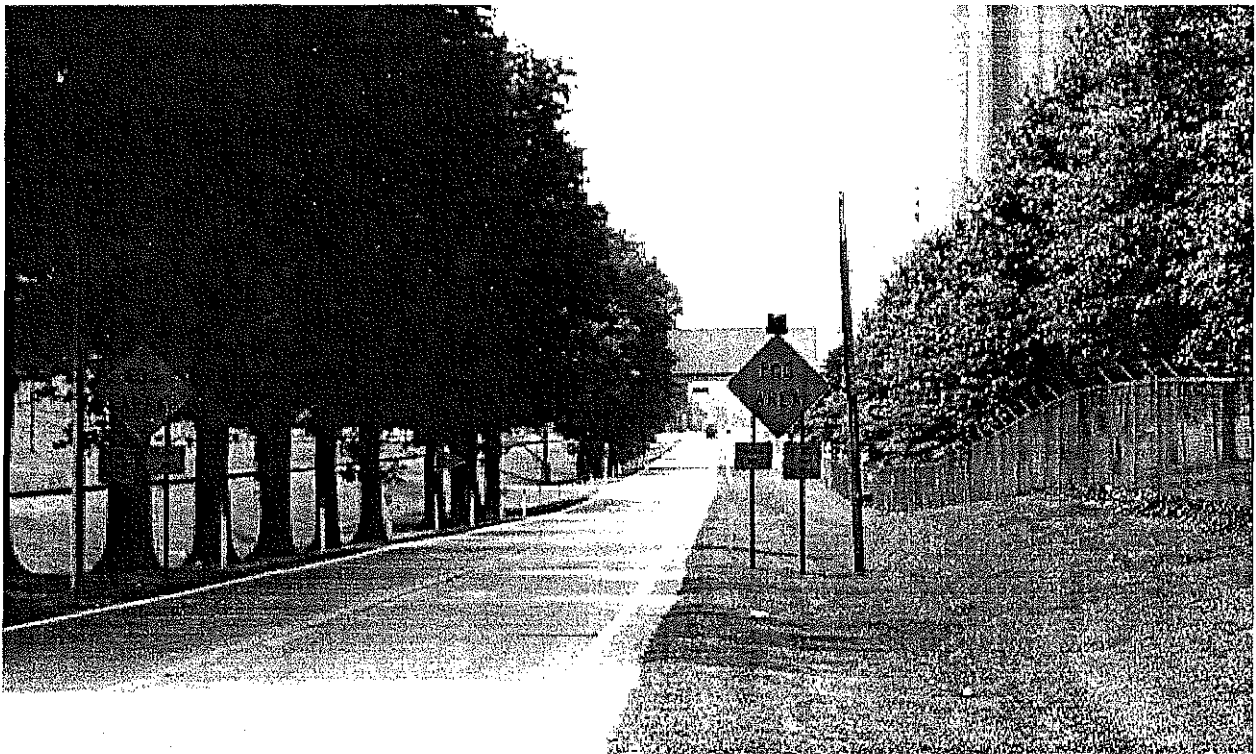
3.7 Sight Distance

There were no sight distance problems on these routes.

3.8 Other Route Features

There is a lack of directional signing at the intersection of KY 35 and US 42. Heavy fog is a potential problem in the vicinity of the Ghent Generating Station. As shown in Figure 12, warning signs and flexible delineator posts have been installed in the area.

Figure 12: Fog Area at Ghent Generating Station



4.0 Route Evaluation and Recommendations

4.1 Problem Truck Miles and Truck Points

In order to compare different routes to consider relative urgency of needed route improvements the features rated “preferred,” “adequate” and “less than adequate” along a route were normalized for the number of miles, number of points and number of trucks using the route section. In the case of these Carroll and Gallatin County routes, eight features that were evaluated quantitatively have sections or points that are considered only “adequate” or “less than adequate.” A section or point that is considered “less than adequate” is weighted two times that of an “adequate” point or section. Less than “preferred” sections are weighted by length as well as the number of trucks passing that point. The number of trucks was obtained from 1997 and 1998 KYTC Vehicle Classification Counts.

Tables 4 and 5 contain the total problem truck miles and total problem points for lane width, shoulders, grade, offtracking, safe speed, turning radius, railroads and bridges which apply to these routes. The rating of these routes relative to others evaluated will be reported in the final report.

Table 4: Summary of Problem Truck Miles and Points for the Carroll County Route

Feature	Road	Location	Points*	Length (miles)	Trucks (/day)	Truck-points	Truck-miles
Lane Width	US 42	Near Carrollton	1	2.7	850		2295.0
	US 42	Near facilities	2	4.9	850		8330.0
Total							10,625.0
Shoulders	US 42	Length	2	7.6	850		12920.0
	KY 36	Length	2	0.9	1285		2313.0
	KY 227	Length	2	2.6	1107		5756.4
Total							20,989.4
Turning Radius	KY 36	US 42	2		400	800	
Bridges	US 42	MP 9.7	1		850	850	
	US 42	MP 11.5	1		850	850	
	US 42	MP 14.4	1		850	850	
Total						2,550	

*1 point for “adequate” features and 2 points for “less than adequate” features (0 points for “preferred” features not shown)

Table 5: Summary of Problem Truck Miles and Points for the Gallatin County Route

Feature	Road	Location	Points*	Length (miles)	Trucks (/day)	Truck-points	Truck-miles
Lane Width	US 42	Near facility	2	1.7	464		1577.6
	US 42	Near Warsaw	2	3.2	464		2969.6
	KY 35	Near I-71	1	6.4	97		620.8
Total							5,168.0
Shoulders	US 42	Carroll County	2	1.7	464		1577.6
	US 42	Gallatin County	2	6.6	464		6124.8
	KY 35	Length	2	6.6	97		1280.4
Total							8,982.8
Grade	KY 35	MP 2.58 - 3.53	2	0.77	48		73.9
	KY 35	MP 3.53 - 5.06	2	1.53	49		149.9
	KY 35	MP 6.48 - 7.23	2	0.75	48		72.0
	KY 35	MP 7.23 - 7.85	2	0.62	49		60.8
Total							356.6
Offtracking		see Table B1				5,694	
Curve Speed		see Table B2				4,336	
Railroad	US 42	At facility	1		464	464	
Bridge	US 42	MP 4.6	1		464	464	

*1 point for “adequate” features and 2 points for “less than adequate” features (0 points for “preferred” features not shown)

4.2 Maintenance Improvement Locations

Some features noted during the site work could be changed to improve truck access without requiring major construction or expense. Additional directional signing could be used on KY 35 at the intersection of US 42. The turning radius from KY 36 onto US 42 could be improved by removing an unused sign post (see Figure 9) and widening the pavement.

4.3 Overall Route Rating

In order to account for both the subjectively and objectively evaluated route features along truck routes throughout the state, UK engineers who studied the route and its features (either during a site visit or by viewing a video of trucks using the routes) have rated the overall access on a scale of 1 through 10. The interpretation for these ratings is shown in Table 6. The Carroll County route received an overall rating of 8, while the Gallatin County route was given a rating of 2 indicating that major construction is required to improve the route.

Table 6: Interpretation of the Overall Route Rating

Overall Route Rating	Qualitative Interpretation of Rating
1	Trucks should not be using this route
2	Major construction is required to improve this route
3-5	Minor improvements are <u>required</u> on this route
6-8	Minor improvements could <u>improve</u> this route
9	Minor problems exist that do not seriously impede truck access
10	Trucks are served with reasonable access

4.4 Conclusions and Recommendations

In conclusion, the following problems were identified along the truck routes:

- Sections with narrow lanes and shoulders,
- Problematic horizontal curves on the Gallatin County route,
- Sections of grade on KY 35,
- Inadequate turning radii at two intersections;
- Truck accident safety concerns on the Carroll county route;
- A lack of directional signing at the intersection of KY 36 and US 42, and
- A railroad crossing that is not perpendicular to the roadway.

The recommended improvements are remove sign and widen pavement at the intersection of KY 36 and US 42 and add directional signing at the intersection of KY 35 and US 42. Reconstruction of the Gallatin County route might be considered however, at this time traffic and truck volumes are relatively low and the facilities have the good alternative route in Carroll for access.

Appendices

Appendix A: Phone Surveys Conducted with Facilities

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
33	Varity Dayton Walther Corporation	Carrollton	Carroll	Northern Kentucky

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
Ken Fowler Machine Division		502-732-6934	502-732-9191

1. Is the location of your facility on the map correct? Yes
2. Our information shows about 50 trucks per day access your facility. Is that correct? *If not, fill in correct volume.* Yes
3. Is the truck traffic to and from your facility seasonal or mostly constant? Constant
4. *(If truck traffic is seasonal)* Is the _____ trucks/day for the peak season?
5. What is the most common size truck operating at your facility? 43' Semitrailer
6. What is the largest truck operating at your facility? 53' Semitrailer
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different? *(one may be an empty truck)*
In: Steel rolls Out: Steel wire
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) Peak: noon - 5:00 p.m.
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
Widen US 42
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) From: Michigan To: Louisville
11. Do you have any other problems or concerns along the route you would like us to consider?

KY 227 is too narrow.
Turning radius from KY 227 to US 42 eastbound.
12. Would you like a copy of the final report (roadway/route evaluation ???)

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
33	Dow Corning	Carrollton	Carroll	Northern Kentucky

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
Jim Heston	Team Leader	502-732-2244	502-732-2090

1. Is the location of your facility on the map correct? Yes
2. Our information shows about 44 trucks per day access your facility. Is that correct? *If not, fill in correct volume.* No, 88
3. Is the truck traffic to and from your facility seasonal or mostly constant? Constant
4. *(If truck traffic is seasonal)* Is the _____ trucks/day for the peak season?
5. What is the most common size truck operating at your facility? 53' Semitrailer (box)
6. What is the largest truck operating at your facility? 53' Semitrailer (tanker)
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different? *(one may be an empty truck)*
In: Raw materials Out: Silicon fluids
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) Tankers: A.M. Box trailers: P,M.
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Time and Day of Week
Poor turning radius from KY 36 onto US 42
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) West to I-71 (Not allowed on US 42 east of facility)
11. Do you have any other problems or concerns along the route you would like us to consider?
KY 227 is rough near I-71
Reduce speed limit from 55 to 35
12. Would you like a copy of the final report (roadway/route evaluation ???) Yes

<u>Facility ID</u>	<u>Facility Name</u>	<u>Location / City</u>	<u>County</u>	<u>ADD</u>
51	Ghent Generating Station Dock	Ghent	Carroll	Northern Kentucky

<u>Contact Name</u>	<u>Title</u>	<u>Phone</u>	<u>Fax</u>
Ray Clem		502-347-5383	502-347-9903

1. Is the location of your facility on the map correct? Yes
2. Our information shows about 40 trucks per day access your facility. Is that correct? *If not, fill in correct volume.* Yes
3. Is the truck traffic to and from your facility seasonal or mostly constant?
Seasonal, Fall and Spring peaks
4. *(If truck traffic is seasonal)* Is the 40 trucks/day for the peak season? No, 100 in peak
5. What is the most common size truck operating at your facility? 7,000 gallon Semitrailer
6. What is the largest truck operating at your facility? 48' Semitrailer
7. What type of freight or commodity is shipped, and is incoming and outgoing freight different?
(one may be an empty truck)
In: Maintenance material Out: None
8. Does the truck traffic peak at specific times of the day? (e.g., out in the morning and return in the afternoon) Peak in late morning
9. What traffic congestion and delay problems along the routes are you aware of, or feel need improvement?
Location (route segment, intersection, etc.) Heavy traffic
Time and Day of Week Rush hour
10. Where do trucks at your facility go to and come from? (This may be an interstate, cities, general direction-N,S,E,W) Half to exit 44 and half to exit 57
11. Do you have any other problems or concerns along the route you would like us to consider?
More law enforcement for speeders
12. Would you like a copy of the final report (roadway/route evaluation ???) Yes

Appendix B: Curve and Bridge Data

Table B1: Offtracking on the Gallatin County Route

Route	Location	Points	Trucks	Truck-points	Total
US 42	MP 4.6	2	464	928	
US 42	MP 4.8	2	464	928	
US 42	MP 5.0	2	464	928	
KY 35	MP 3.3	2	97	194	
KY 35	MP 3.5	2	97	194	
KY 35	MP 3.6	2	97	194	
KY 35	MP 3.9	2	97	194	
KY 35	MP 4.1	2	97	194	
KY 35	MP 4.2	2	97	194	
KY 35	MP 4.4	2	97	194	
KY 35	MP 4.7	2	97	194	
KY 35	MP 5.0	2	97	194	
KY 35	MP 5.2	2	97	194	
KY 35	MP 6.3	2	97	194	
KY 35	MP 6.6	2	97	194	
KY 35	MP 8.0	2	97	194	
KY 35	MP 8.6	2	97	194	
KY 35	MP 8.65	2	97	194	5,694

Table B2: Curve Speed on the Gallatin County Route

Route	Location	Points	Trucks	Truck-points	Total
US 42	MP 4.6	2	464	928	
US 42	MP 4.8	2	464	928	
US 42	MP 5.0	2	464	928	
KY 35	MP 3.3	1	97	97	
KY 35	MP 3.5	1	97	97	
KY 35	MP 3.6	1	97	97	
KY 35	MP 3.9	1	97	97	
KY 35	MP 4.1	1	97	97	
KY 35	MP 4.2	1	97	97	
KY 35	MP 4.4	1	97	97	
KY 35	MP 4.7	1	97	97	
KY 35	MP 5.0	1	97	97	
KY 35	MP 6.3	1	97	97	
KY 35	MP 6.6	1	97	97	
KY 35	MP 8.0	1	97	97	
KY 35	MP 8.6	2	97	194	
KY 35	MP 8.65	2	97	194	4,336

Table B3: Bridge Sufficiency Ratings

County	Route	Milepoint	Sufficiency Rating
Carroll	US 42	9.7	76.6
Carroll	US 42	11.5	74.8
Carroll	US 42	14.4	68.7
Gallatin	US 42	0.5	83.6
Gallatin	US 42	2.9	95.0
Gallatin	US 42	4.6	77.8
Gallatin	KY 35	7.8	94.6