

**OLYMPIAN DRIVE LOCATION STUDY
CHAMPAIGN COUNTY
ILLINOIS**

**PREPARED FOR
CHAMPAIGN COUNTY
MARCH 1997**

PREPARED BY

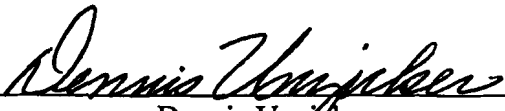


Location/Design Report

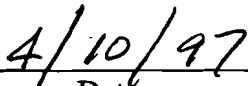
OLYMPIAN DRIVE LOCATION STUDY
Surface Transportation Program Urban
Section 95-00366-00-ES
Project STPM-5181(28)
FAU 7198
Champaign County

Design Approval for the referenced project has been granted. A "Design Approval Requested and Received" notice should be published in accordance with FAPLHI, Chapter 5, Section 4-1a(page 5-4-1).

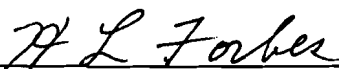
DESIGN APPROVAL RECOMMENDED



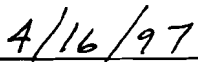
Dennis Unzicker
Champaign County Engineer



Date

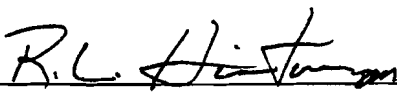


H. L. Forbes
District Engineer

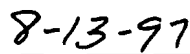


Date

DESIGN APPROVED



Robert L. Hinton
Bureau of Local Roads and Streets



Date

60
55
P



Illinois Department of Transportation

Memorandum

To: H.L. Forbes Attn: G. Sherer
From: Robert L. Hinton
Subject: Design Approval
Date: August 13, 1997

FAU 7198 (Olympian Dr.)
Champaign County
Section 95-00366-00-ES
Project STPM-5181(28)

Design approval is given for the subject project based on the disposition of comments and conditions contained in the minutes of the June 11, 1997 meeting prepared by Jeff Ball. The meeting was held to discuss comments contained in a May 5, 1997 memo from Robert L. Hinton to H.L. Forbes.

Five copies of the signature page of the Design Report are attached.

Robert L. Hinton, P. E.
Engineer of Local Roads and Streets

Darrell W. McMurray
By: Darrell W. McMurray
Local Project Implementation Engineer

97 AUG 15 AM 8:47
DIST 5 PARIS

MEETING MINUTES

PROJECT: Olympian Drive Location Study

PROJECT NO.: 94S2055

DATE: June 11, 1997

LOCATION: IDOT Central Office

BY: Jeff Ball

PARTICIPANTS: George Conklin - IDOT District 5
George H. Sherer, Jr. - IDOT District 5
John Saner - IDOT Local Roads
Earl Schroeder - IDOT Local Roads
Jim Moll - Hanson Engineers Inc.
Jeff Ball - Hanson Engineers Inc.

DISTRIBUTION:

George H. Sherer, Jr.

Earl Schroeder

Dennis Unzicker

The following minutes express our understanding of the items discussed. Please respond in writing within five days of receipt if any changes are required.

A meeting was held June 11, 1997 at the IDOT Central Office to discuss report comments for the Olympian Drive Location Study received from IDOT dated May 5, 1997.

1. The Federal Aviation Administration and the Illinois Division of Aeronautics have been contacted regarding the proposed project. A copy of the correspondence will be sent to IDOT.
2. The western project limit is east of the Interstate 57 interchange. The intersection design study for Mattis Avenue should be labeled for informational use only. The ECAD limits can be different from the design approval limits.
3. The western project limit is east of the Interstate 57 interchange.
4. AASHTO states the minimum length of vertical curve is 0.6 times the design speed for metric design. IDOT will state that they are granting design approval with the condition that vertical curves meet the 60 m minimum.
5. IDOT would just like us to be aware that the maximum superelevation rate is 6%. It is not necessary to change anything.

6. It is necessary to have approval of the preliminary bridge design prior to design. It is not necessary for design approval.

Intersection Design Studies

- 7a. It is difficult to predict what will actually be in place at the time of construction. The intersection geometrics will be reviewed by District geometrics staff at the time of construction.

IDOT will grant design approval with the understanding that the final intersection geometrics will be reviewed during final design.

IDOT wants a letter from the County stating that they have the authority to review the IDS's on behalf of the cities.

The need for traffic signals in 2003 will be discussed with the District 5 Geometrics engineer. Design approval can be granted with the condition that it will be necessary to review the signal warrants during design.

- 7b. The Mattis Avenue IDS will be labeled "for information only." Therefore these comments do not need to be addressed.

- 7c-g. It is difficult to predict what will actually be in place at the time of construction. The intersection geometrics will be reviewed by District geometrics staff at the time of construction.

IDOT will grant design approval with the understanding that the final intersection geometrics will be reviewed during final design.

8. An addendum to the design report will be required for each construction stage to cover the intersection design. This does not need to include any discussion of stage construction on the mainline. The addendums will only need to cover stage construction issues at the intersections.

A capacity analysis will be included in the addendum to demonstrate that the intersection design will work if an interim design is constructed at the intersections.

If the full section is constructed at the cross roads, the transition to the existing pavement width will need to be shown in the addendum.

There is no information for a leg east of the intersection with U.S. Route 45. It may be necessary to prepare a new IDS prior to construction of the intersection.



Illinois Department of Transportation

Memorandum

97 MAY -6 PM 3:53

DIST 5 PARIS

To: Lynn Forbes
From: Robert L. Hinton
Subject: Design Report
Date: May 5, 1997

97 MAY -6 PM 3:56
DIST 5 PARIS
ILLINOIS
DEPT OF TRANS

FAU 7198
Champaign County
Section 95-00366-00-ES
Project No. STPM-5181 (28)

We have the following comments on the design report for the subject project:

1. Since this project is in the vicinity of Frasca Field, evidence of coordination with Division of Aeronautics and with the Federal Aviation Administration is needed.
2. The geometrics from Mattis Avenue to east of the I-57 ramps do not meet the 100 km/h design speed. This is not discussed in the report.
3. The type of traffic control at the I-57 ramps is not discussed. Are any geometric changes needed at the ramp terminal?
4. The minimum length of vertical curve should be 60m.
5. Show the superelevation rate on the curve data. The superelevation rate for the curves with radii of 1100m should be 3.95%. A superelevation transition rate of 60m would be adequate.
6. A copy of the report is being sent to the Bureau of Bridges and Structures for review of the preliminary bridge design.
7. Intersection Design Studies
 - a) General
 - i) Show transitions to the existing pavement for the crossroads.
 - ii) Label existing pavement widths for the crossroads.
 - iii) Include a paved shoulder with a minimum width of 1.2m. around the intersection radii.

Lynn Forbes
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May 5, 1997

iv) If any of the crossroads are under the jurisdiction of the cities of Champaign or Urbana, include their concurrence in the geometrics of the intersection.

v) For traffic signals warranted by the system warrant, the 8th maximum hourly volume shown on the IOS should be for the year 2003.

b) Mattis Avenue

i) When is the west leg of the intersection proposed for construction?

ii) Show the intersection pavement marking and lane usage for the period of time until the west leg is built.

iii) Consideration should be given to providing a left turn lane into Grubbs Avenue.

c) Prospect Avenue

The shoulder width on Prospect Avenue should be 3.0m on the south leg and 2.4m on the north leg.

d) Neil Street

i) When is Neil Street proposed for construction?

ii) Will the right-turn lanes on Olympian Drive be built before Neil Street is extended?

e) Market Street

The shoulder width on Market Street should be 3.0m wide.

f) Lincoln Avenue

i) Traffic signals do not appear to be warranted in the year of construction since less than 700 vehicles will enter the intersection during the peak hour.

ii) The shoulder width for Lincoln Avenue should be 2.4m.

Lynn Forbes
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May 5, 1997

g) U.S. 45

i) When is the east leg proposed for construction?

ii) Show the intersection pavement marking and lane usage for the period of time until the east leg is built.

8. Stage Construction

Details showing stage construction are needed. These include the geometrics and proposed traffic control for the interim improvement and any transition from 4 lanes to 2 lanes. In addition existing traffic volumes are high enough at Prospect Avenue, Market Street, and U.S. 45 to warrant a capacity analysis for the interim improvement. If this information is not included in the design report, an addendum to the report will be needed prior to each stage being constructed.

Robert L. Hinton, P. E.
Engineer of Local Roads and Streets



By: Darrell W. McMurray
Local Project Implementation Engineer

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LOCATION/DESIGN REPORT
OLYMPIAN DRIVE LOCATION STUDY
CHAMPAIGN COUNTY
JOB NO. P-95-084-95
SECTION NO. 95-00366-00-ES
PROJECT NO. STPM-5181(28)

Prepared By

HANSON ENGINEERS INCORPORATED
1525 South Sixth Street
Springfield, Illinois

In Cooperation with
SODEMANN AND ASSOCIATES, INC.
340 North Neil Street
Champaign, Illinois

Prepared For

CHAMPAIGN COUNTY
Illinois

NOVEMBER 1996

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CHAMPAIGN COUNTY

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Champaign County Highway Department, the City of Champaign, the City of Urbana, and the Illinois Department of Transportation retained Hanson Engineers to prepare a location/design study for proposed Olympian Drive. Rapid growth in the area north of Champaign and Urbana is likely to continue. The county and municipalities are working together to plan the necessary roadway network for the anticipated development. The Olympian Drive Location Study evaluated a variety of locations and facility types for a new east-west highway connecting Interstate 57 with U.S. Route 45. This evaluation included transportation engineering, environmental studies, traffic projections, and economic considerations.

A traffic simulation model previously developed for the City of Champaign was used to forecast traffic on the future road network. The traffic volumes, generated from land use data provided by local agencies, reinforced the need for the proposed improvement. The traffic simulation model was also used to forecast traffic volumes at the proposed major intersections. These traffic volumes were then used to prepare intersection design studies.

Alignment 1, the recommended alignment is approximately 7.4 km (4.6 mi.) in length and extends from Interstate 57 on the west to U.S. Route 45 on the east. The new road follows existing Olympian Drive to Market Street. East of Market Street it is on new alignment that curves to the north and east to a grade-separated crossing of the Illinois Central Railroad (ICRR) tracks and a bridge across the Saline Branch drainage ditch, then to a new intersection with U.S. Route 45. All intersections with the local street network are at grade.

The recommended facility is a four-lane road with a wide grass median, paved shoulders, and open ditch drainage. This facility type will assist in controlling access, providing safer operating conditions at higher speeds, and providing the opportunity to add median lanes or additional turn lanes if traffic demands warrant it.

Several alignment controls were identified as part of the study process. These included the planned Frasca Field north-south runway extension, the ICRR facilities, existing property lines, and residences and utilities along existing Olympian Drive. These factors, combined with safety considerations at the proposed intersection of U.S. Route 45, contributed to the selection of the recommended alignment.

Access to adjacent property was an important consideration in the planning of the proposed facility. In order to provide traffic progression in both directions and limit driver delays, access points were limited to one-half mile spacings. To maintain the integrity of this and other facilities, and protect the communities' investment in them, it is recommended that the local agencies adopt a formal access management program that enables them to regulate access to highways under their jurisdiction.

The environmental studies conducted for the proposed project did not identify any significant impacts. A cultural resource site was discovered along the Saline Branch. This site will require Phase II investigations after land acquisition and before construction. An Environmental Class of Action Determination document was prepared for the project and was approved by the Federal Highway Administration.

The public involvement process consisted of four project newsletters, two public informational meetings, and one public hearing. Project newsletters were mailed to all property owners in the study corridor, public officials, and other interested persons. The public was given the opportunity to express their concerns on the various alignment alternatives at each stage of the study. The recommended alignment received the most public support of the alternatives presented, including the no-build option. The public hearing was announced in the local newspaper and in a project newsletter. The public hearing was attended by 22 members of the public, and no oral or written comments were received.

The approximate cost to construct the preferred alignment is \$21.5 million. During the course of this study it was determined that a large amount of borrow material would be necessary to construct the project. This was due, in part, to the need to construct the alignment above the existing ground to provide drainage, and to construct the embankment over the Illinois Central Railroad tracks. A unique solution was found; combining the Olympian Drive and Beaver Lake projects.

The City of Champaign had retained RUST Environment and Infrastructure to prepare a study for a regional detention plan entitled the "Beaver Lake Stormwater Improvement Plan." This plan called for a series of detention basins and channels to provide storage for the developing areas north of Champaign. The projected cost for the Beaver Lake Stormwater Improvement Plan was approximately \$10.1 million.

Through meetings with the City of Champaign, RUST Environment and Infrastructure, and property owners, it was determined that the Beaver Lake and Olympian Drive projects could be combined into a single project. Specifically, the four individual stormwater detention basins could be combined into a single detention basin located adjacent to the ICRR tracks, and the stormwater conveyance channel could be combined with the south ditch along Olympian Drive from Market Street to east of Prospect Avenue. The basin would provide the borrow material needed to construct the embankment for the railroad grade separation, and the stormwater conveyance ditch would provide the borrow material needed to build the proposed road above the existing ground elevation. This plan to combine projects could save the local agencies an estimated \$9.5 million, based on the Beaver Lake Stormwater Improvement Plan cost estimate.

It is likely that the new roadway would be constructed in various stages, depending on need and available funding. Based upon recent growth, it is anticipated that the first stage constructed would be from Interstate 57 to Market Street. This would most likely be followed by an extension to Lincoln Avenue and then to U.S. Route 45. Each of these stages would likely be built two lanes at a time, and lanes would be added as traffic warrants.

It is also recommended that the local agencies request a classification change of Olympian Drive from "minor arterial" to "other principal arterial" from the Illinois Department of Transportation through the Metropolitan Planning Organization (MPO). The other principal arterial designation is consistent with the planned facility and projected trip lengths.

The local agencies have held preliminary meetings with the Illinois Commerce Commission and the Illinois Central Railroad to discuss construction of the project and participation in construction costs. The City of Urbana has begun preparation of a location study for Lincoln Avenue to identify the best alignment and location of an intersection with Olympian Drive. The City of Champaign has also begun preparation of a study to relocate the intersection of Farber Drive and Olympian Drive including revisions to their proposed street network.

Following design approval of the Olympian Drive alignment, the local agencies will secure funding to begin design and construction of the proposed facility.

SECTION 1.0
INTRODUCTION

SECTION 1.0 INTRODUCTION

1.1 DESCRIPTION AND LOCATION OF PROJECT

The proposed action is to construct a four-lane roadway north of the cities of Champaign and Urbana in Champaign County, Illinois. The proposed facility has been designated Olympian Drive. Its western terminus is at the interchange of existing Olympian Drive (Township Road 151) and Interstate 57. The facility extends approximately 8.0 km (5.0 mi.) to the east to its eastern terminus at U.S. 45. The study corridor is approximately 1.6 km (1.0 mi.) wide and is located between Oak Road (County Road 1850N) and Ford Harris Road (County Road 2000N). The location of Champaign County within Illinois is shown in Figure 1.1. The location of the project corridor in relation to the cities of Champaign and Urbana is shown in Figure 1.2 and Figure 1.3.

1.2 PROJECT STATUS

The 1970 Comprehensive Transportation Plan and the 1986 Comprehensive Transportation Plan Update both recognized the need to establish a primary access route to enable the controlled development of the northern portion of the Champaign and Urbana communities. The long-range transportation plans for the Champaign-Urbana area include an east-west route north of Interstate 74. In keeping with these plans, the Illinois Department of Transportation completed construction of an interchange at Interstate 57 and Olympian Drive (Township Road 151) in 1989.

In 1990, the Champaign-Urbana Urbanized Area Transportation Study (CUUATS) formed a subcommittee to conduct a feasibility study on the extension of Olympian Drive (Township Road 151) from the Interstate 57 interchange to U.S. 45. The Draft TR 151 Scoping Study Summary Report was submitted by the subcommittee on August 12, 1991.

This report made the following recommendations:

- Incorporate the report into the CUUATS member agencies' comprehensive plans for long-range development for the north Interstate 74 area.
- Proceed with a location study to further investigate the issues and concerns contained in the scoping study report and determine the most appropriate alignment for TR 151 within the preferred corridor. The preferred corridor determined during the scoping study is shown in Figure 1.4.
- Take into consideration the proposed development plans for the Reifsteck and Frasca properties to ensure that the development options of these properties are not pre-empted by the siting of TR 151.
- After the TR 151 alignment is determined, recommend the involved CUUATS member agencies reserve the required rights-of-way along the road in their respective jurisdictions.
- Undertake plan preparation following selection of an alignment.
- Actively explore the funding sources for TR 151 that can support the location study, design engineering, and construction.
- Ensure that the concerned public is well informed of the planning activity revolving around the TR 151 extension and that their input is seriously taken into consideration in accordance with federal and state funding guidelines.

As a result of these recommendations, Champaign County, the City of Champaign, the City of Urbana, and the Illinois Department of Transportation jointly retained Hanson Engineers in cooperation with Sodemann and Associates to conduct a location study for the proposed improvement.

1.3 PROJECT DEVELOPMENT PROCESS

This location/design report is a summary of the study of engineering alternatives, including the no-build alternative. The study includes the selection of a roadway alignment and design features based on the best combination of socioeconomic, environmental, and engineering aspects of the project. This location/design study will also evaluate public input to the project to assure that final decisions on the project are made in the best overall public interest.

To accomplish the task of alternative selection, the following process was developed for the project:

1. Establish and study preliminary alternatives within the study corridor based on preliminary engineering, environmental, and socioeconomic aspects of the project.
2. Present preliminary alternatives to the public and obtain public information and comments.
3. Evaluate the engineering, environmental, and socioeconomic aspects of the project along with public input, prepare the Environmental Class of Action Determination document, and present the most desirable improvement alternative at a public hearing.
4. Complete the Final Location/Design Report by evaluating public comments and submitting the Final Design Location Report and Environmental Class of Action Determination document for approval.

1.4 FURTHER PROJECT DEVELOPMENT

Following approval of the Environmental Class of Action Determination document and design approval of the Location/Design Report, it will be necessary to have a detailed survey of the alignment completed, including property lines and section corners. The survey data used for the Location/Design Study was developed from aerial mapping with a 1.5 meter contour interval. The alignment was set using property lines taken from tax assessment mapping and superimposed on the aerial mapping. While this is sufficient for a planning study, it is not accurate enough for preparation of land acquisition plats and construction documents.

Once a detailed survey of the corridor is complete it will be necessary to set a final centerline location. Soil investigations should also be made along the alignment and in the borrow areas to identify the suitability for embankment. Foundation investigations should be made at the proposed structure locations.

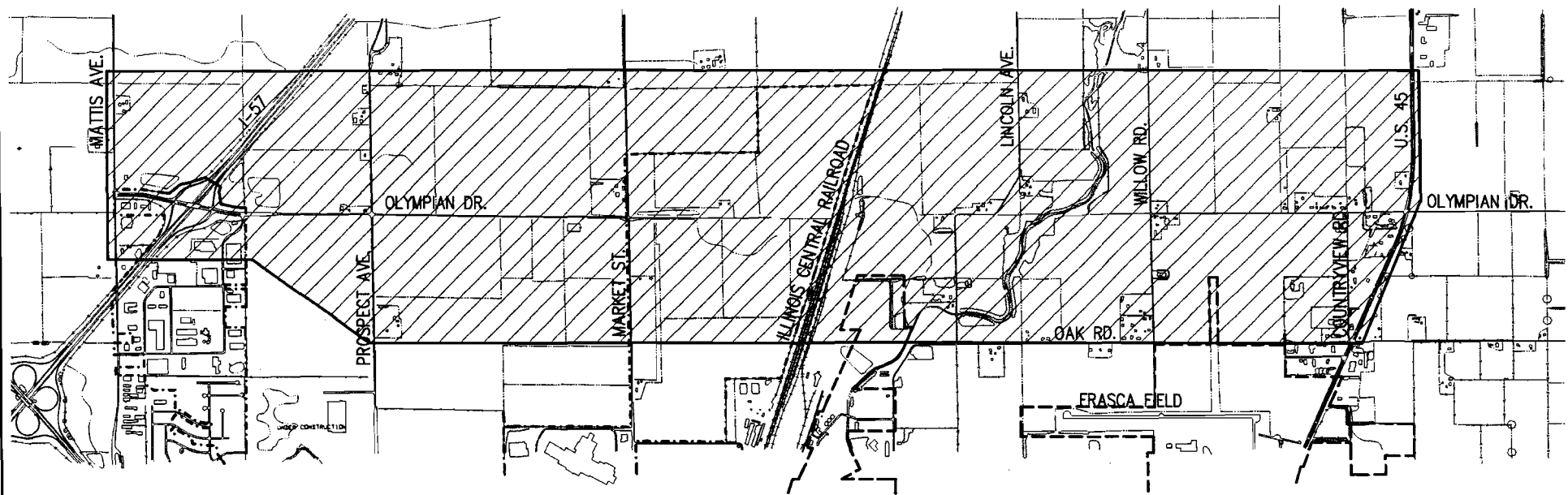
Olympian Drive is currently classified as a minor arterial. In order for the proposed facility to fulfill the stated purpose and need and serve the needs of the community it is recommended that the local agencies request the Metropolitan Planning Organization (MPO), CUUATS, to petition the Illinois Department of Transportation to redesignate Olympian Drive from a minor arterial to an "other principal arterial" through the MPO process. The other principal arterial designation is consistent with the planned facility and projected trip lengths.




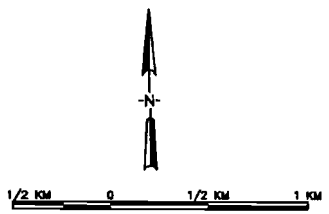
— LOCATION OF PROJECT

COUNTY LOCATION MAP
OLYMPIAN DRIVE LOCATION STUDY
CHAMPAIGN COUNTY
ILLINOIS
 HEI NO. 94S2055 FIGURE 1.1

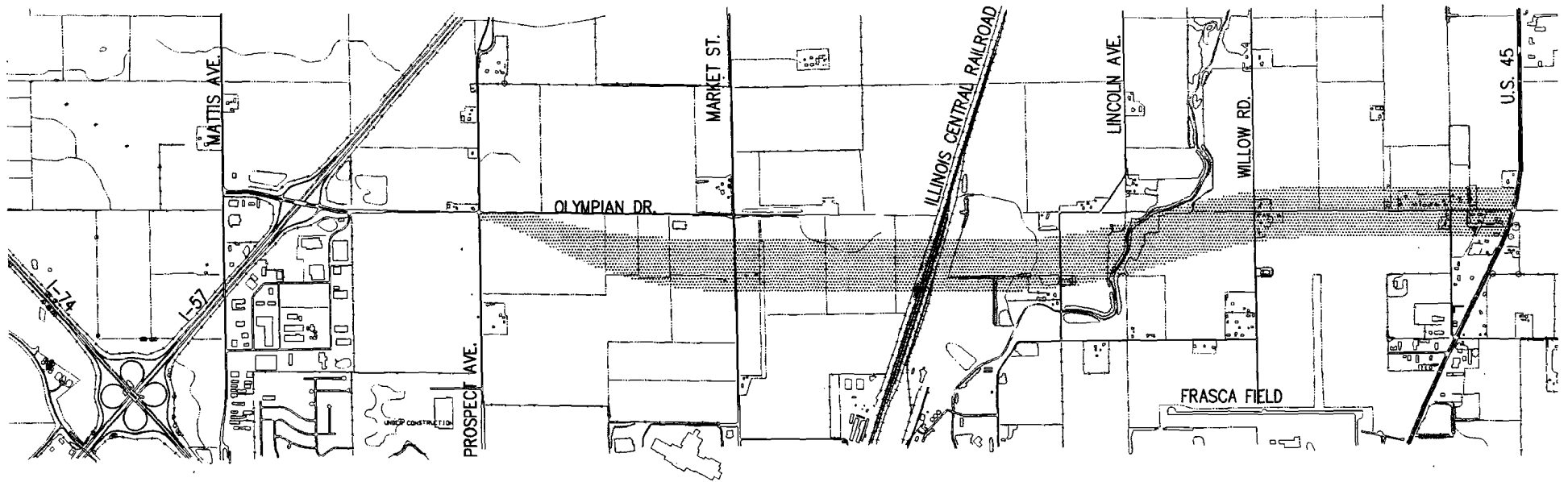
PLANNING SERVICES CORPORATION 11/7/96 11:40 PMS




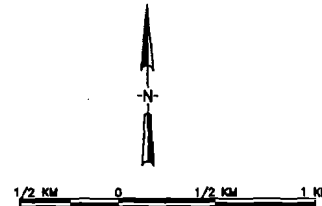
- CHAMPAIGN CORPORATE LIMITS
- URBANA CORPORATE LIMITS
-  CORRIDOR LIMITS



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|--------------------------------------|------------|
| PROJECT CORRIDOR | |
| OLYMPIAN DRIVE LOCATION STUDY | |
| CHAMPAIGN COUNTY | |
| ILLINOIS | |
| HEI NO. 94S2055 | FIGURE 1.3 |



 T.R. 151 SCOPING STUDY PREFERRED CORRIDOR



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|--------------------------------------|------------|
| SCOPING STUDY CORRIDOR | |
| OLYMPIAN DRIVE LOCATION STUDY | |
| CHAMPAIGN COUNTY | |
| ILLINOIS | |
| HEI NO. 94S2055 | FIGURE 1.4 |