Greater Peoria Multimodal Freight Growth Study II

Submitted to:
Tri-County Regional Planning Commission
June 30, 2017
Contents

STUDY OBJECTIVE, APPROACH, RESULTS, AND RECOMMENDATIONS 5

Study Objective: 5
Scope: Answer the following questions and make definite (actionable) recommendations. 5
Approach 5
Findings—Direct answers to the scope questions. 5
Primary Recommendation 7

WORK TASKS 8

Task 1: Commercial Analysis/Opportunities 8
Finding 8
Approach 8
Illinois Container on Barge Shuttle Project 8
Illinois to Gulf Container on Barge Program 10
Container on Barge Service Features 10
Project funding to date 10

Task 2: MARAD Programs are the likely support for financial assistance 11
Findings 11
Approach 11
America’s Marine Highway Program 12
Marine Highway Grants 12
Marine Highway Projects 12

Task 3: Evaluate Private Marine Terminals in the Tri-County Area 13
Findings 13
Subtask 3a: Initial List of Candidates 13
Subtask 3b: Initial Screening 13
Subtask 3c: Advanced Screening 14

Task 4: Operational Analysis 16
Findings 16
Approach 16
Specialized Cranes 16
Reach Stackers 17
Spreader Bar attachment to an existing crane 17
Site preparation 18

Task 5: Institutional Analysis 18
Findings 18
Approach 18
Rationale 19

Next steps 19

APPENDIX I. LIST OF DETAILED FINDINGS 20
APPENDIX II. INTERVIEWS 22
APPENDIX III. TERMINALS LIST 12
APPENDIX IV. ARMY CORPS OF ENGINEERS CHARTS 14
APPENDIX V. TERMINAL AERIAL PHOTOS 27
<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Creve Coeur, 1000 Wesley Road</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>Peoria Barge, J&amp;L Dock, 11 Sanger Street</td>
<td>51</td>
</tr>
<tr>
<td>3</td>
<td>Keystone Steel and Wire, Bartonville, IL 61641</td>
<td>52</td>
</tr>
<tr>
<td>4</td>
<td>CF Industries, 8826 US-24, Mapleton, IL 61547</td>
<td>52</td>
</tr>
</tbody>
</table>

**Location Comparison**

53
Table of Exhibits
Exhibit 1: Container on Barge Operations on the Columbia River .................................................. 6
Exhibit 2: Beardstown Market Area .................................................................................................. 9
Exhibit 3: Illinois Waterway Container on Barge Schematic .......................................................... 9
Exhibit 4: Conventional Barge Configured to Handle Fifty Five 20’ Containers ................................. 10
Exhibit 5: America’s Marine Highway System .................................................................................. 11
Exhibit 6: Advanced Terminal Screening ....................................................................................... 14
Exhibit 7: ADM Creve Coeur .......................................................................................................... 14
Exhibit 8: Peoria Barge and J&L Dock ............................................................................................ 15
Exhibit 9: Specialized Crane for High Volume Container on Barge Operations in NYC .................. 16
Exhibit 10: Kone Reach Stacker ...................................................................................................... 17
Exhibit 11: Conventional Crane with Container Spreader in Paducah, KY ........................................ 17
Exhibit 12: Army Corps of Engineers Illinois Waterway Chart 49 .................................................... 14
Exhibit 13: Army Corps of Engineers Illinois Waterway Chart 50 ................................................... 15
Exhibit 14: Army Corps of Engineers Illinois Waterway Chart 51 ................................................... 16
Exhibit 15: Army Corps of Engineers Illinois Waterway Chart 52 ................................................... 17
Exhibit 16: Army Corps of Engineers Illinois Waterway Chart 53 ................................................... 18
Exhibit 17: Army Corps of Engineers Illinois Waterway Chart 54 ................................................... 19
Exhibit 18: Army Corps of Engineers Illinois Waterway Chart 55 ................................................... 20
Exhibit 19: Army Corps of Engineers Illinois Waterway Chart 56 ................................................... 21
Exhibit 20: Army Corps of Engineers Illinois Waterway Chart 57 ................................................... 22
Exhibit 21: Army Corps of Engineers Illinois Waterway Chart 58 ................................................... 23
Exhibit 22: Army Corps of Engineers Illinois Waterway Chart 59 ................................................... 24
Exhibit 23: Army Corps of Engineers Illinois Waterway Chart 60 ................................................... 25
Exhibit 24: Army Corps of Engineers Illinois Waterway Chart 61 ................................................... 26
Exhibit 25: IWW Mile 145 .............................................................................................................. 27
Exhibit 26: IWW Mile 146 .............................................................................................................. 28
Exhibit 27: IWW Mile 147 .............................................................................................................. 29
Exhibit 28: IWW Mile 151 .............................................................................................................. 30
Exhibit 29: IWW Mile 152.0 ........................................................................................................... 31
Exhibit 30: IWW Mile 152.2 ........................................................................................................... 32
Exhibit 31: IWW Mile 152.5 ........................................................................................................... 33
Exhibit 32: IWW Mile 152.8 ........................................................................................................... 34
Exhibit 33: IWW Mile 154 .............................................................................................................. 35
Exhibit 34: IWW Mile 155 .............................................................................................................. 36
Exhibit 35: IWW Mile 157 .............................................................................................................. 37
Exhibit 36: IWW Mile 157 .............................................................................................................. 38
Exhibit 37: IWW Mile 158 .............................................................................................................. 39
Exhibit 38: IWW Mile 159 .............................................................................................................. 40
Exhibit 39: IWW Mile 160 .............................................................................................................. 41
Exhibit 40: IWW Mile 161 .............................................................................................................. 42
Exhibit 41: IWW Mile 162 .............................................................................................................. 43
Exhibit 42: IWW Mile 163 .............................................................................................................. 44
Exhibit 43: IWW Mile 164 .............................................................................................................. 45
Exhibit 44: IWW Mile 172 .............................................................................................................. 46
Exhibit 45: IWW Mile 180 .............................................................................................................. 47
Exhibit 46: Potential Port Facilities Examined .................................................................................. 50
Exhibit 47: Summary of Highway Freight Consideration by Location ............................................ 53
Study Objective, Approach, Results, and Recommendations

Study Objective:

Conduct a feasibility study to test the concept of establishment of a public/private partnership to develop a low cost, roll on/roll off and/or lift on/lift off service capability at one of the private marine terminals in the region. The rational is as follows:

1. A capable Tri-County terminal would permit the region’s economic development organizations to legitimately promote the ability of the region to handle high value cargo on the Illinois Waterway.
2. Prompt action may be required in order to take advantage of emerging funding opportunities associated with current and future Federal Promotional Activity.
3. Existing private terminals are likely able to be configured for this work much more quickly and with much less cost than a purpose built terminal.

Scope: Answer the following questions and make definite (actionable) recommendations.

1. Is there a willing local, private terminal that could be reconfigured for lift on lift off/roll on/roll off for modest cost? (high level cost analysis, not engineering costs) If more than one, then which is the most advantageous for the region?
2. Is there a current demand for such a facility? A review of local stakeholders did not uncover unmet demand. This review would broaden the search beyond the Tri-County area to identify how others may have answered this question. If this is the case, then can the application be transferred to Peoria?
3. Will public, promotional financing be required? If yes, is there a public means to fund the development of such a terminal?
4. Can current institutional structures accommodate this kind of development? Will any institutional changes be required?

Approach

The work was accomplished by Frank Harder, Principal of The Tioga Group and by Emil Liszniansky, Principal of Envision Group.

Site visits were made to several regional marine terminals and interviews were conducted with terminal operators, Peoria EDC, City of Pekin, Illinois Soybean Association and America’s Central Port as listed in Appendix II. The results of those contacts were analyzed to make the following findings.

Findings—Direct answers to the scope questions.

1. There are several interested local, private terminals that could be configured to handle containers for modest cost. While Peoria Barge Terminal appears the most advantageous location in the region, ADM in Creve Coeur and J&L Dock in Peoria also appear to be qualified candidates.
2. While demand for such a facility continues to be a speculative proposition, the Illinois Soybean Association and America’s Central Port are championing the “Illinois Container on Barge Shuttle.” They have developed a commercial rationale sufficiently persuasive to gain a significant grant of from US DOT’s Maritime Administration (MARAD) for a demonstration project that is expected to be in operation in 2018.

The service will move agricultural products (soybeans) in heavy 20’ containers between Beardstown and the large rail intermodal terminals near Joliette. A second service under consideration would take imported heavy building materials (marble, ceramic tile) upriver from the Gulf and return with agricultural products. The consistent aspect of these opportunities is that they rely on using very heavily loaded 20’ containers to take maximum advantage of the capabilities of river transport. In both cases the waterway value proposition trades reduced cost for slower speed of transit as compared to the rail or highway mode.

3. Public funding may or may not be required. Peoria Barge Terminal has already explored the prospect of container handling. While that firm could rig existing equipment today to perform the task on an ad hoc basis, a modest investment in specialized materials handling equipment would be required to make the operation efficient. Other regional terminals could also be equipped for the task, albeit at a somewhat higher cost.

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If needed, MARAD’s Marine Highway Program is the likely source of funding. The focus of that program is promotion of container on barge services. Tioga found no practical source of funding for specialized roll on/roll off facilities.

4. In order to take advantage of public funds for current or future MARAD initiatives, collaboration will be required from stakeholder public agencies including the Greater Peoria Economic Development Council, Tri-County Regional Planning Commission, and the Heart of Illinois Regional Port District.

While one of these agencies will need to take the “lead agency” role, regional success will only be achieved with strong public support and cooperation of the other two.

Primary Recommendation

Peoria’s designated “lead agency” should pursue the development of an efficient lift on lift off capability in the Tri-County region in collaboration with regional stakeholders, America’s Central Port, and the Illinois Soybean Association.

The rational is as follows:

1. A capable Tri-County terminal would permit local economic development organizations to legitimately promote the ability of the region to handle high value cargo on the Illinois Waterway.

2. Central Port already sponsors a MARAD sanctioned, Illinois Waterway container on barge project which is expected to be in service in 2018. They perceive the development of that capability in Peoria to be in their interests and are willing to support that development. Further, Branden Criman, Director of the Inland Waterways Gateway Office of MARAD in St Louis suggested consideration of that kind of collaboration.

3. The Illinois Soybean Association is the qualified, private stakeholder championing this service.

4. A Peoria area lead agency is needed in order to advance the establishment of a low cost lift on lift off terminal in the area and to provide a region a “seat at the table” as current and future MARAD initiatives develop and evolve.
Work Tasks

Task 1: Commercial Analysis/Opportunities

During this second phase of this study, Tioga broadened the search for commercial opportunities beyond the Tri-County Area.

Finding

The Illinois Container on Barge Shuttle Program is a funded demonstration project with the goal of establishing a regular container on barge service for agricultural products on the Illinois Waterway. The commercial supporters of the project are the Illinois Soybean Association and Clarkson Grain at Beardstown. The agency that is the public sponsor of the project is America’s Port in Granite City.

Approach

To accomplish this work task, Tioga conducted interviews the Illinois Soybean Association and with America’s Central Port at Granite City, IL. These interviews prompted review of the following additional documents:

3. Container---on---Barge for Illinois Fueled by Biodiesel An Operating Plan and Business Plan, August 27, 2011 funded by the Illinois Soybean Association (This document lays out the business case and key operational features for both new services envisioned by the Illinois Soybean Association)

Illinois Container on Barge Shuttle Project

“The Illinois Container on Barge Shuttle Program is intended to address the (relatively) high cost of that trucking (container dray) movement by repositioning containers from the rail ramps (near Joliet) to down-river location(s) for loading and return to the rail ramps. The intent is to realize direct logistics cost savings to shippers as well as indirect cost savings to the Public related to air quality, highway safety and preservation of highway infrastructure.”

The current operating plan is for empty 20’ containers to be transported via barge from the Chicago/Joliet area (Channahon) to Beardstown and Granite City on the Illinois and Mississippi Rivers. The containers will be heavily loaded with grain and returned to Chicago for transfer to the railroad. Beardstown is considered a central location for grain to be loaded onto containers on the barges. Additional grain could also be loaded in Granite City.

The Beardstown market area encompasses the counties immediately south of the Tri-County Region as illustrated in Exhibit 2: Beardstown Market Area

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Recent discussions with the Illinois Soybean Association and with America’s Central Port indicated that a Peoria area stop on the envisioned service would be a welcome addition, in that it would increase the initiative’s market reach for soybeans and provide the initiative the opportunity to compete for the export market for the dried distillers grains (ddgs) produced in the Tri-County Region. The Illinois Soybean Association’s 2011 report anticipated Peoria’s ultimate active interest and participation in this project it its business plan for the service as illustrated in Exhibit 3, which is a diagram of the planned service from that report.4


Illinois to Gulf Container on Barge Program

A second service identified for development by the Soybean Association is the movement of agricultural products to the Gulf (New Orleans, Mobile, or Houston) using the terminals developed for the Illinois Shuttle. The northbound commodity could be imported heavy building materials (marble, ceramic tile). A key assumption for this service is that empty containers can be made available in Chicago and transported to central Illinois by the Illinois Container on Barge Service.

Container on Barge Service Features

The consistent aspect of these opportunities is that they rely on:

1. Use of very heavily loaded 20’ containers to take maximum advantage of the heavy lift capability of river transport.

2. Both services will be configured as dedicated unit tows—barges and towboat moving as a unit, with container on barge as the primary mission. This operating method is similar to that used for barges that move high value liquids, rather than conventional barge services.

3. Small scale operations that assure consistently high load factors; barges will be added only as the program volume increases.

4. Use of regular dry bulk barges (Exhibit 4) which can be used conventionally in this service to fill back haul, or if head haul volumes are low. This is particularly important as the volume agricultural product shipments is both seasonal and volatile.

Exhibit 4: Conventional Barge Configured to Handle Fifty Five 20’ Containers

Project funding to date

In November 2016, through the efforts of the public and private sector champions, the “Illinois Container on Barge Shuttle Program” received an award of $713,000 from the U.S. DOT’s Maritime Administration (MARAD). This was matched by $100,000 from Clarkson Grain, Beardstown, IL and $100,000 from America’s Central Port, Granite City, IL.

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5 Ibid, page 22.
**Task 2: MARAD Programs are the likely support for financial assistance**

**Findings**

The most likely source of public funding for a Peoria area public/private partnership is US DOT’s Maritime Administration (MARAD).

MARAD Grants are made to Marine Highway Projects. There are currently nineteen (19) designated projects listed on the MARAD website including:

1. Illinois Intrastate Shuttle Program sponsored by America’s Central Port.
2. M-55/M-35 Container on Barge Program with several sponsors including America’s Central Port.

The easiest and most direct way to gain Federal funds for a public/private partnership that would equip a local terminal for container handling is to become an element of an existing designated Marine Highway Project.

**Approach**

On June 7, 2017 Branden Criman, Director of the Inland Waterways Gateway Office of MARAD in St Louis visited Peoria. Ms. Criman described the Marine Highway Program at some length and indicated her support and encouragement for the development of Peoria area projects and effective institutional entities.

Our initiative to establish a public/private partnership to develop a low cost lift on/lift off service capability at one of the private marine terminals in the region was received positively and discussed at some length. Ms. Criman noted that the funding level for this fiscal year is $5 million and that the proposed budget for next year has $4 million included. This information was corroborated by Tioga’s Washington, DC associate (former MARAD official) and through internet research.

**Exhibit 5: America’s Marine Highway System**

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6 The background material on MARAD is taken from the June 7 meeting notes and MARAD’s website. [https://www.marad.dot.gov/ships-and-shipping/dot-maritime-administration-americas-marine-highway-program/](https://www.marad.dot.gov/ships-and-shipping/dot-maritime-administration-americas-marine-highway-program/)

America’s Marine Highway Program

The America’s Marine Highway System consists of our Nation’s navigable waterways including the Illinois Waterway, other rivers, bays, channels, the Great Lakes, the Saint Lawrence Seaway System, coastal, and open-ocean routes (Exhibit 5). The Marine Highway Program works to further incorporate these waterways into the greater U.S. transportation system, especially where marine transportation services are the most efficient, effective, and sustainable transportation option. A fact sheet on the program is included in Appendix VI.

Marine Highway Grants

In 2016, the Consolidated Budget Act of 2016, provided $5M in funds for the America’s Marine Highway Program. Among the successful projects was the Illinois Container on Barge Shuttle Project, which was awarded $713,000. The press release for the project read as follows:8:

“Sponsored by America’s Central Port in Granite City, Ill., the Illinois Container on Barge Shuttle is an 18-month demonstration project to provide shuttle service for agricultural customers moving containerized exports between southern and northern Illinois to access the Union Pacific and BNSF rail ramps. The shuttle service will operate on the Illinois and Mississippi Rivers between Channahon and Granite City, Ill., with an option to extend container-on-barge service to the Gulf of Mexico ports in concert with related Marine Highway Designation.”

A second award impacting the Illinois Waterway was the M-55/M-35 Container on Barge Project, which was awarded $96,000. The press release for the project read as follows:9:

“The City of St. Louis Port Authority, along with three partners: Inland Rivers Ports & Terminals, Inc. (IRPT), Mississippi Rivers Cities & Towns Initiative (MRICTI), and Upper Mississippi River Basin Association (UMRBA) are provided funding to support planning efforts focused on the development of containerized shipping along the Mississippi River, between New Orleans, La., and Minneapolis, Minn., and Chicago, Ill.”

Marine Highway Projects

Marine Highway Projects represent concepts for new services or expansion of existing Marine Highway services that have the potential to offer public benefits and long-term sustainability without long-term Federal support. These projects receive preferential treatment for any future federal assistance from the Department of Transportation and MARAD. The projects will help start new businesses or expand existing ones to move more freight or passengers along America’s coastlines and waterways.

Should Peoria have a new initiative to propose, The Marine Highway Open Season “Call for Projects” is currently open. The Office of Marine Highways will review applications on a rolling basis every 6 months until December 31, 2018.

For Peoria, however, Ms. Criman noted the advantage of joining with America’s Central Port is that it is the lead agency for an existing approved and funded project. She indicated that it would likely be much easier and very much quicker to add funding to an existing project than to develop an entirely new initiative.

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9 Ibid.
**Task 3: Evaluate Private Marine Terminals in the Tri-County Area**

The goal of this task was to determine (1) if there is a willing local, private terminal that could be reconfigured to handle containers for modest cost and (2) evaluate the potential partners if there are multiple qualified partners.

The focus on lift on/lift off over roll on/roll off was largely due to the findings that (1) the identified commercial opportunity required containers and (2) the MARAD funding guidance prioritizes containers. It is also true that roll on/roll off is relatively less complex for the marine terminal.

**Findings**

Peoria Barge Terminal currently has most of the elements in place for both small and large scale lift on/lift off, container on barge operations. It also appears to be the easiest, lowest cost facility to prepare for efficient container on barge operations.

Three additional firms are clearly interested in continuing the conversation regarding this project and at least two of these firms that appear to be good candidates for low cost conversion for low volume operations.

**Subtask 3a: Initial List of Candidates**

An initial list of 35 facilities was prepared using U.S. Army Corps of Engineers documents. The initial list (Appendix III) consists of all the currently recognized marine facilities in the Tri-County area including barge terminals, administrative facilities, and mooring areas. It also contains two former barge terminals. The terminals are identified by their name, documented use, and location on the Illinois Waterway. Appendix IV is a series charts prepared by the Army Corps of Engineers, which is keyed to the list and can be used to identify and locate the facilities. In some cases the facility names are not up to date.

**Subtask 3b: Initial Screening**

Tioga conducted an initial facility screening based on (1) stated use and (2) an examination of overhead photos from Google Earth. Facilities other than barge terminals with appropriate alongside berthing space were screened from consideration. Those aerial photos are included as Appendix V.

Five terminals passed this initial screening.

1. CF Industries, Kingston Mines
2. Keystone Steel and Wire Bartonville, IL
3. ADM, Creve Coeur, IL
4. J&L Dock, Peoria, IL
5. Peoria Barge, Peoria, IL

These terminals were further evaluated using the following criteria:

1. Marine Access. There is some advantage in being south of the Peoria Lock during cold weather.
2. Rail Access. Most of these terminals have active rail access. Ideally rail transloading would be
available. It is also possible that the material handling equipment in place for the barge loading would also be available to do double duty in lifting containers from rail cars, should that become necessary.

3. Highway Access. The easiest, most appropriate access to the Interstate Highway System for all four sites is provided via I-474.

4. Dock Space. The figure reported the length of the dock using an estimate made from Google Earth.

5. The results are presented in Exhibit 6.

**Exhibit 6: Advanced Terminal Screening**

<table>
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<tr>
<th>Terminal</th>
<th>Marine Access</th>
<th>Rail Access</th>
<th>I-474 Highway Access</th>
<th>Dock Space (est)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF Industries</td>
<td>South of Peoria Lock</td>
<td>Yes</td>
<td>11 miles</td>
<td>800’</td>
</tr>
<tr>
<td>Keystone</td>
<td>North of Peoria Lock</td>
<td>Yes</td>
<td>1 Mile, then through an active steel mill</td>
<td>700’</td>
</tr>
<tr>
<td>ADM</td>
<td>North of Peoria Lock</td>
<td>Yes</td>
<td>1.5 miles</td>
<td>400’</td>
</tr>
<tr>
<td>J&amp;L Dock</td>
<td>North of Peoria Lock</td>
<td>No</td>
<td>2 miles</td>
<td>500’</td>
</tr>
<tr>
<td>Peoria Barge</td>
<td>North of Peoria Lock</td>
<td>Yes, inactive</td>
<td>2 miles</td>
<td>1170’</td>
</tr>
</tbody>
</table>

**Subtask 3c: Advanced Screening**

Site visits and interviews were conducted at ADM and Peoria Barge. Phone interviews were conducted with J&L Dock and Keystone Steel and Wire. CF Industries did not respond to requests for a meeting. A windshield survey was conducted from their parking lot.

**Exhibit 7: ADM Creve Coeur**
Keystone Steel and Wire indicated they are interested in continuing to be engaged in this process. While there is available undeveloped land, it is not likely that there would be an easy conversion to container handling. The facility is already busy and highway access would likely be through the active steel plant, which is undesirable from both a congestion and a safety perspective.

ADM indicated they are interested in continuing to be engaged in this process. Their dock was being rebuilt during the site visit. Rail and Highway access is excellent and some undeveloped and partially developed land is available. It is likely that a low volume, low cost conversion could be achieved on this site with the addition of a reach stacker. Extensive work would be required if large volume operations were conducted at this site. The ADM facility is illustrated in Exhibit 7.

J&L Dock indicated they are interested in continuing to be engaged in this process. The firm was interviewed by phone; there was no opportunity for a site visit. The dock is illustrated near the top of Exhibit 8. The facility has good highway access but no rail access. Land is limited, but it is likely that a low volume, low cost conversion could be achieved on this site.

Exhibit 8: Peoria Barge and J&L Dock

Peoria Barge indicated they are interested in continuing to be engaged in this process. The facility has good highway access. Rail access exists, but is in poor, unused condition. The facility includes a large dock and several acres of immediately useful land.

Peoria Barge has clear advantages over the other candidates in that it has a heavy lift crawler crane which could likely be converted to handling containers at very low cost. In addition, because of the dock space and available land it could also serve as a high volume facility, should business levels warrant. The facility is illustrated in Exhibit 8.
Task 4: Operational Analysis

While containers can be rigged individually to be handled with a conventional crane with sufficient lift capacity, the process is expensive and time consuming. Ocean, rail, and highway based container operations ordinarily rely on specialized container handling cranes or side lift devices (often called reach stackers) to handle container transfers safely and efficiently. A critical aspect of this project is the selection of materials handling equipment that properly matches both the demand level and the existing capabilities of the Peoria area marine terminal.

Findings

Peoria Barge has a crawler crane that can likely be adapted to handle containers with the addition of a standard container handling attachment.

Conversion for the other candidate terminals would require the addition of the appropriately specified reach stacker.

Specialized cranes, designed for large volume container on barge operations, are definitely not required in Peoria for the near term.

Approach

Tioga personnel have operational experience with container handling equipment. This was supplemented by conversations with the Illinois Soybean Association and internet research.

Specialized Cranes

For high volume operations specialized cranes are warranted. An example is illustrated in Exhibit 9. This particular New York City terminal loads hundreds barges each year. The twenty foot containers are loaded with compressed municipal solid waste and moved across New York harbor to nearby railheads for further movement by rail to landfills or incinerators. Each barge holds 48 containers.

Exhibit 9: Specialized Crane for High Volume Container on Barge Operations in NYC

This type of installation is expensive and is not required in Peoria at this time.
Reach Stackers

Reach stackers are another alternative for container on barge loading. They are commonly used in marine and rail terminals as well as container storage yards, where containers may be stored three or more high. In response to the emerging container on barge market intermodal lift equipment providers have developed reach stackers designed to reach down into a barge, well below the level of dock. These machines are less expensive and more flexible than cranes and would reduce the cost of getting into the container on barge business for most terminals. An example of this type of reach stacker is included as Exhibit 10. There are at least three manufacturers offering this type of equipment.

Exhibit 10: Kone Reach Stacker

Spreader Bar attachment to an existing crane

Another option for handling containers is to equip an existing dockside crane with a container “spreader” as illustrated in Exhibit 11 and on the front cover of this report. If the crane is already in place this is likely the least expensive way to get efficiently into the container handling business. This is likely the case for the Peoria Barge Terminal.

Exhibit 11: Conventional Crane with Container Spreader in Paducah, KY

A U-Tube video of a convention crane equipped with a container spreader loading containers into a barge in Paducah, KY is available at https://www.youtube.com/watch?v=mi3Qplr3Lto.
Site preparation

Lift equipment will need to be able to lift a maximum of 45 tons as illustrated in Exhibit 10, particularly in order to take advantage of the heavy lift efficiency of barge transport. Safe container lifting requires the dock structure to be able to support repetitive heavy lifting. Tioga’s terminal screening did not include this level of engineering review and analysis.

Task 5: Institutional Analysis

There are a number of local institutional issues surrounding the prospective establishment of a public/private partnership to develop a low cost lift on/lift off service capability at one of the private marine terminals in the region.

Findings

In order to be successful a series of public and private stakeholders and project champions are required.

1. Commercial private sector stakeholders and project champions are in place for The Illinois Container on Barge Shuttle and the Illinois to the Gulf Container on Barge Service. It is very likely that a Peoria area terminal could be added to those projected services to be operational within the next year.

2. In order to take advantage of this opportunity, collaboration will be required among stakeholder public agencies including the Greater Peoria Economic Development Council, Tri-County Regional Planning Commission, and the Heart of Illinois Regional Port District.

3. One these Peoria Region public stakeholders will likely need to be designated the lead agency and to take responsibility for the further advancement of this opportunity. Regional success will only be achieved with strong public support and cooperation of the other two.

Collaboration with America’s Central Port in Granite City is likely to be desirable. They are already the public sponsor for the currently recognized and partially funded Illinois Intrastate Shuttle Project. The actions envisioned in Peoria fit within the scope of that project.

While no other private stakeholders were identified, Tioga notes that creating a viable container on barge terminal in the region will permit local Economic Development Agencies a selling feature that may be helpful in responding to future, diverse economic development opportunities.

Approach

Tioga’s research regarding the prerequisites for successful development of new transportation services shows the absolute, critical need for project “Champions” as well as the effective collaboration of project stakeholders.

In addition, during this and the preliminary study Tioga interviewed numerous local, state, and national stakeholders.

Rationale

Illinois Container on Barge Shuttle Project is the only viable commercial prospect currently in view. The Illinois Soybean Association is the driving force behind the initiative having invested a decade in studies, commercial analysis, and lobbying efforts in order to advance the project to its present point.

Their public partners, MARAD and America’s Central Port, are willing to substantially fund the initiative. They also appear to be welcoming Peoria to a seat at the table for this initiative.

This “seat at the table” is likely to be important both as a means to take advantage of this opportunity and to have influence as new initiatives emerge. MARAD expects to continue its effort to promote the use of the Illinois Waterway as a part of America’s Marine Highway system.

The logical candidates for the lead agency role are the Greater Peoria Economic Development Council, Tri-County Regional Planning Commission, and the Heart of Illinois Regional Port District. All three agencies collaborated effectively in the course of the study.

Next steps

The most important step is to commit to a goal of establishing a container handling capability in the Peoria area within the next year.

The immediate next steps at this time include:

1. Designate a lead agency to carry this initiative forward.
2. Open a dialog with the stakeholders of the Illinois Container on Barge Shuttle Project with the goal of finding ways that a Peoria terminal could support the success of the demonstration.
3. Select one of the candidate private terminals to work with in this effort.
4. Evaluate the economic impact of the Illinois Barge Shuttle Project on the local economy. This analysis should include direct, indirect, and induced jobs as well as the impact on local tax revenue. The result can be used to help justify any required local, public investment.
5. Seek funding from MARAD as may be necessary to execute Peoria’s part of the demonstration.

Once the container handling capability is available (and demonstrated), the Tri-County Area’s economic developers will be in position to legitimately promote the ability of the region to handle high value, containerized cargo on the Illinois Waterway.
Appendix I. List of Detailed Findings

The Illinois Container on Barge Shuttle Program is a funded demonstration project with the goal of establishing a regular container on barge service for agricultural products on the Illinois Waterway. The commercial supporters of the project are the Illinois Soybean Association and Clarkson Grain at Beardstown. The agency that is the public sponsor of the project is America’s Port in Granite City. The most likely source of public funding for a Peoria area public/private partnership is US DOT’s Maritime Administration (MARAD).

MARAD Grants are made to Marine Highway Projects. There are currently nineteen (19) designated projects listed on the MARAD website including:11

1. Illinois Intrastate Shuttle Program sponsored by America’s Central Port.
2. M-55/M-35 Container on Barge Program with several sponsors including America’s Central Port.

The easiest and most direct way to gain Federal funds for a public/private partnership that would equip a local terminal for container handling is to become an element of an existing designated Marine Highway Project.

Peoria Barge Terminal currently has most of the elements in place for both small and large scale lift on/lift off, container on barge operations. It also appears to be the easiest, lowest cost facility to prepare for efficient container on barge operations.

Three additional firms are clearly interested in continuing the conversation regarding this project and at least two of these firms that appear to be good candidates for low cost conversion for low volume operations.

Peoria Barge has a crawler crane that can likely be adapted to handle containers with the addition of a standard container handling attachment.

Conversion for the other candidate terminals would require the addition of the appropriately specified reach stacker.

Specialized cranes, designed for large volume container on barge operations, are definitely not required in Peoria for the near term.

In order to be successful a series of public and private stakeholders and project champions are required.

1. Commercial private sector stakeholders and project champions are in place for the Illinois Container on Barge Shuttle and the Illinois to the Gulf Container on Barge Service. It is very likely that a Peoria area terminal could be added to those projected services to be operational within the next year.
2. In order to take advantage of this opportunity, collaboration will be required among stakeholder public agencies including the Greater Peoria Economic Development Council, Tri-County Regional Planning Commission, and the Heart of Illinois Regional Port District.
3. One these Peoria Region public stakeholders will likely need to be designated the lead agency and to take responsibility for the further advancement of this opportunity. Regional success will

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only be achieved with strong public support and cooperation of the other two. Collaboration with America’s Central Port in Granite City is likely to be desirable. They are already the public sponsor for the currently recognized and partially funded Illinois Intrastate Shuttle Project. The actions envisioned in Peoria fit within the scope of that project. While no other private stakeholders were identified, Tioga notes that creating a viable container on barge terminal in the region will permit local Economic Development Agencies a selling feature that may be helpful in responding to future, diverse economic development opportunities.

Appendix II. Interviews

Scott J. Sigman, Transportation & Export Infrastructure Lead, Illinois Soybean Association

Dan Silverthorne, Chairman, Heart of Illinois Regional Port District

Sally Hanley, Greater Peoria EDC

Tom Finch, President, Tom Meischner, Vice President, and Doug Rendleman, Operations Manager Peoria Barge Terminal

Dennis Wilmsmeyer, Executive Director, America’s Central Port, Granite City, IL

Brett Madison, Director of Terminal Services, ADM, Ottawa, IL

Joe Heinz, J&L Dock, Peoria, IL

Bob Beecham, President, Keystone Steel and Wire Bartonville, IL

Katy Shakelford, City Planner, Pekin, IL

Micheal Blunier, VP/General Manager, Roanoke Concrete Products, East Peoria, IL
### Appendix III. Terminals List

<table>
<thead>
<tr>
<th>No</th>
<th>Location</th>
<th>Terminal</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>145.4</td>
<td>Right CF INDUSTRIES, KINGSTON MINES TERMINAL DOCK</td>
<td>Receipt and shipment of anhydrous ammonia and 32% urea ammonium nitrate solution</td>
</tr>
<tr>
<td>30</td>
<td>145.7</td>
<td>Left GARVEY MARINE, KINGSTON MINES FLEET MOORINGS</td>
<td>Mooring barges for fleeting.</td>
</tr>
<tr>
<td>31</td>
<td>146.0</td>
<td>Left PEKin HARBOp SERvICES, KINgSTON FLEET MOORING</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>146.8</td>
<td>Right CF INDUSTRIES, PEORIA WAREHOUSE NO. 1 DOCK</td>
<td>Receipt of dry bulk fertilizer.</td>
</tr>
<tr>
<td>33</td>
<td>146.8</td>
<td>Right CF INDUSTRIES, PEORIA WAREHOUSE NO. 2 DOCK</td>
<td>Receipt of dry bulk fertilizer and coal.</td>
</tr>
<tr>
<td>34</td>
<td>147.1</td>
<td>Right CF INDUSTRIES, PEORIA WAREHOUSE COAL DOCK</td>
<td>Occasional receipt of coal. No evidence of use on aerial photo.</td>
</tr>
<tr>
<td>35</td>
<td>151.4</td>
<td>Left AMERICAN MILLING CO., PEKin GRAIN ELEVATOR DOCK</td>
<td>Shipment of alcohol and liquid and dry animal feed.</td>
</tr>
<tr>
<td>36</td>
<td>151.9</td>
<td>Right GARVEY MARINE, PEKin RIGHT BANK FLEET MOORINGS</td>
<td>Fleet Mooring</td>
</tr>
<tr>
<td>37</td>
<td>152.0</td>
<td>Left AVENTINE RENEWABLE ENERGY HOLDINGS, INC.</td>
<td>Shipment of alcohol and liquid and dry animal feed.</td>
</tr>
<tr>
<td>38</td>
<td>152.2</td>
<td>Left TOMEN GRAIN CO., PEKin GRAIN ELEVATOR DOCK</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>152.7</td>
<td>Right SEMMATERIALS, PEKin ASPHALT PLANT DOCK</td>
<td>Receipt of asphalt; mooring barges for fleeting</td>
</tr>
<tr>
<td>40</td>
<td>154.0</td>
<td>Right CARGILL CROP NUTRITION, PEKin TERMINAL DOCK</td>
<td>Receipt of miscellaneous dry bulk materials</td>
</tr>
<tr>
<td>41</td>
<td>154.9</td>
<td>Right CARRI SCHARF MATERIALS DOCK</td>
<td>Not used?</td>
</tr>
<tr>
<td>42</td>
<td>155.0</td>
<td>Right SHELL OIL PRODUCTS - U.S., BARTONVILLE, TERMINAL DOCK</td>
<td>Receipt of fuel oil and gasoline.</td>
</tr>
<tr>
<td>43</td>
<td>157.3</td>
<td>Left TERRA INDUSTRIES, NORTH PEKin TERMINAL DOCK</td>
<td>Occasional receipt of liquid fertilizer.</td>
</tr>
<tr>
<td>44</td>
<td>157.3</td>
<td>Right KEYSTONE STEEL &amp; WIRE CO., DOCK</td>
<td>x</td>
</tr>
<tr>
<td>45</td>
<td>158.1</td>
<td>Left KOCH NITROGEN CO., NORTH PEKin TERMINAL BARGE DOCK</td>
<td>Receipt of petroleum products and anhydrous ammonia.</td>
</tr>
<tr>
<td>46</td>
<td>158.3</td>
<td>Left ADM/GROWMARK, CREVe COEUR GRAIN DOCK</td>
<td>x</td>
</tr>
<tr>
<td>47</td>
<td>158.4</td>
<td>Left CENTRAL ILLINOIS FREIGHT HANDLING CORP. DOCK</td>
<td>Receipt and shipment of miscellaneous dry</td>
</tr>
<tr>
<td>48</td>
<td>159.1</td>
<td>Left KEeler’S PEoria HARBOp SERvICES WHARF</td>
<td>Mooring vessels for repair; mooring floating drydock; mooring barges for fleeting.</td>
</tr>
<tr>
<td>No</td>
<td>Location</td>
<td>Terminal</td>
<td>Use</td>
</tr>
<tr>
<td>----</td>
<td>----------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>51</td>
<td>159.3</td>
<td>Left</td>
<td>MIDWEST FOUNDATION CORP MOORINGS</td>
</tr>
<tr>
<td>52</td>
<td>160.2</td>
<td>Right</td>
<td>PEORIA RIVER TERMINAL WHARF</td>
</tr>
<tr>
<td>53</td>
<td>160.4</td>
<td>Right</td>
<td>PEORIA BARGE TERMINAL WHARF</td>
</tr>
<tr>
<td>54</td>
<td>160.5</td>
<td>Right</td>
<td>ARTCO FLEETING SERVICES, PEORIA DOCK AND FLEET MOORINGS</td>
</tr>
<tr>
<td>55</td>
<td>160.6</td>
<td>Right</td>
<td>J &amp; L DOCK FACILITIES WHARF</td>
</tr>
<tr>
<td>56</td>
<td>161.4</td>
<td>Right</td>
<td>ADM/GROWMARK RIVER SYSTEM, PEORIA TERMINAL WHARF</td>
</tr>
<tr>
<td>X</td>
<td>162.1</td>
<td>Left</td>
<td>CATERPILLAR TRACTOR CO. EAST PEORIA DOCK</td>
</tr>
<tr>
<td>57</td>
<td>162.4</td>
<td>Left</td>
<td>U. S. COAST GUARD, BASE PEORIA DOCK</td>
</tr>
<tr>
<td>58</td>
<td>162.6</td>
<td>Right</td>
<td>PEORIA CITY DOCK</td>
</tr>
<tr>
<td>59</td>
<td>163.3</td>
<td>Left</td>
<td>PAR-A-DICE CASINO BOAT DOCK</td>
</tr>
<tr>
<td>60</td>
<td>164.1</td>
<td>Right</td>
<td>U.S. ARMY CORPS OF ENGINEERS, ILLINOIS WATERWAY PROJECT OFFICE</td>
</tr>
<tr>
<td>X</td>
<td>164.4</td>
<td>Right</td>
<td>KOMATSU DRESSER CO. TERMINAL</td>
</tr>
<tr>
<td>61</td>
<td>172.6</td>
<td>Left</td>
<td>SPRING BAY MATERIALS CO DOCK</td>
</tr>
<tr>
<td>62</td>
<td>180.9</td>
<td>Right</td>
<td>GALENA ROAD GRAVEL, CHILLICOTHE DOCK</td>
</tr>
</tbody>
</table>
Appendix IV. Army Corps of Engineers Charts

Exhibit 12: Army Corps of Engineers Illinois Waterway Chart 49
Exhibit 13: Army Corps of Engineers Illinois Waterway Chart 50
Exhibit 14: Army Corps of Engineers Illinois Waterway Chart 51
Exhibit 15: Army Corps of Engineers Illinois Waterway Chart 52
Exhibit 16: Army Corps of Engineers Illinois Waterway Chart 53
Exhibit 17: Army Corps of Engineers Illinois Waterway Chart 54
Exhibit 18: Army Corps of Engineers Illinois Waterway Chart 55
Exhibit 19: Army Corps of Engineers Illinois Waterway Chart 56
Exhibit 20: Army Corps of Engineers Illinois Waterway Chart 57
Exhibit 21: Army Corps of Engineers Illinois Waterway Chart 58
Exhibit 22: Army Corps of Engineers Illinois Waterway Chart 59
Exhibit 23: Army Corps of Engineers Illinois Waterway Chart 60
Exhibit 24: Army Corps of Engineers Illinois Waterway Chart 61
Appendix V. Terminal Aerial Photos

29, 145.4 Right, CF Industries, Kingston Mines Terminal Dock

Exhibit 25: IWW Mile 145
30, 146 Right, Garvey Marine, Kingston Mines Fleet Moorings

31, 146 Right, Pekin Harbor Services, Kingston Fleet

Exhibit 26: IWW Mile 146
CF Industries, Peoria Warehouse docks,

32, 146.8 Right, CF Industries, Peoria Warehouse No. 1 Dock,

33, 146.8 Right, CF Industries, Peoria Warehouse No. 2 Dock,

34, 147.1 Right, CF Industries, Peoria Warehouse Coal Dock

Mapleton Ingredion Plant just upstream, connected by rail.

Exhibit 27: IWW Mile 147
35, 151.4 Left, American Milling Go, Pekin Grain Elevator Dock

36, 151.5 Left, MGP Ingredients, Pekin Warf

38, 151.7 Left, Aventine Renewable Energy Holdings, Inc.

Exhibit 28: IWW Mile 151
37, 152.0 Right, Garvey Marine Pekin Right Bank Fleet Moorings

Exhibit 29: IWW Mile 152.0
39, 152.2 Left, Tomen Grain Co. Pekin Grain Elevator Dock

Exhibit 30: IWW Mile 152.2
40, 152.5 Left, Garvey Marine, Pekin Left Bank Mooring

Exhibit 31: IWW Mile 152.5
41, 152.8 Right, Semmaterials, Pekin Asphalt Plant Dock

Exhibit 32: IWW Mile 152.8
41, 154.2 Right, Cargill Crop Nutrition, Pekin Terminal Dock

Exhibit 33: IWW Mile 154
43, 155.0 Right, Carri Scharf Materials Dock

44, 155.0 Right, Shell Oil, Bartonville Terminal Dock

Exhibit 34: IWW Mile 155
45, 157.3 Left, Terra Industries, North Pekin Terminal Dock

Exhibit 35: IWW Mile 157
46, 157.9 Right, Keystone Steel & Wire Dock

Exhibit 36: IWW Mile 157
47, 158.1 Right, Koch Nitrogen co, North Pekin Terminal Barge Dock

48, 158.3 Right, ADM/Growmark, Creve Coeur Grain Dock

49, 158.3 Right, Central Illinois Freight Handling Dock

Exhibit 37: IWW Mile 158
50, 159.1 Left, Keelser’s Peoria Harbor Services Warf

51, 159.3 Left, Midwest Foundation Corp Moorings

Exhibit 38: IWW Mile 159
52, 160.2 Right, Peoria River Terminal Warf

53, 160.4 Right, Peoria Barge Terminal Warf

54, 160.5 Right, ARTCO Fleeting Services, Peoria Dock and Fleet Moorings

55, 160.6 Right, J & L Dock Facilities Warf

Exhibit 39: IWW Mile 160
56, 161.4 Right, ADM/Gromark River System, Peoria Terminal Warf

Exhibit 40: IWW Mile 161
57, 162.4 Left, US Coast Guard, Base Peoria Dock

58, 162.6 Right, Peoria City Dock

Exhibit 41: IWW Mile 162
59, 163.3 Left, Par-a Dice Casino Boat Dock

Exhibit 42: IWW Mile 163
61, 172.6 Left, Spring Bay Material Co. Dock

Exhibit 44: IWW Mile 172
62, 180.9 Right, Galena Road Gravel, Chillicothe Dock

Exhibit 45: IWW Mile 180
Appendix VI. Marine Highway Fact Sheet

America’s Marine Highways
U.S. Department of Transportation

Mission: To lead the development and expansion of America’s Marine Highway system and to facilitate its integration into the U.S. surface transportation system.


Vision: The full integration of Marine Highway vessels and ports into the surface transportation system to ensure that reliable, regularly scheduled, competitive, and sustainable services are a routine choice for shippers.

Description:
America’s Marine Highway System consists of over 29,000 nautical miles of navigable waterways including rivers, bays, channels, the Great Lakes, the Saint Lawrence Seaway System, coastal, and open-ocean routes.

Public benefits include:
- Creating and sustaining jobs on U.S. vessels and in U.S. ports and shipyards;
- Increasing the state of good repair of the U.S. transportation system by reducing maintenance costs from wear and tear on roads and bridges;
- Increasing our nation’s economic competitiveness by adding new, cost-effective freight and passenger transportation capacity and reducing land-side congestion;
- Increasing the environmental sustainability of the U.S. transportation system by using less energy and reducing air emissions (such as greenhouse gases) per passenger or ton-mile of freight moved. Further environmental sustainability benefits come from the mandatory use of modern engine technology on designated projects;
- Increasing public safety and security by providing alternatives for the movement of hazardous materials outside heavily populated areas;
- Increasing transportation system resiliency and redundancy by providing transportation alternatives during times of disaster or national emergency;
Marine Highway Routes:
- Serve as extensions of the surface transportation system.
- Follow established navigable waterways and shipping lanes.
- Are commercially navigable coastal, inland, and intracoastal waters of the United States or connections between U.S. ports on those waterways, described in terms of the specific landside transportation routes (road or rail line) that they supplement or connect. They also include routes between U.S. and Canadian ports on the Great Lakes–Saint Lawrence Seaway System.
- Designated by the Secretary of Transportation as having the potential to benefit the public by providing additional transportation capacity as a part of the surface transportation system.

Marine Highway Projects:
- Projects are designated by the Secretary of Transportation through “Calls for Project” in the Federal Register.
  - Each has the potential to offer public benefits and long-term sustainability without long-term Federal support.
  - Each receives preferential treatment for any future federal assistance from the Department of Transportation and MARAD.
  - Each has the potential to reduce air pollution and traffic congestion along surface corridors as well as provide jobs for skilled mariners and shipbuilders.

For additional information, please e-mail the Office of Marine Highways and Passenger Services at mh@dot.gov or go to http://www.marad.dot.gov/ships_shipping_landing_page/mhi_home/mhi_home.htm.
Appendix VII.  Highway Freight Assessment

Overview

Envision was tasked with performing a high-level assessment of the existing highway network linking potential Port Facilities along the Illinois River in Greater Peoria with the Interstate Freeway System. After a review of all the private terminals in the region, these are the four best suited for equipment loading or conversion to container handling.

The four representative locations, illustrated in Exhibit 46, for potential port facilities were examined in this assessment as follows.

1. Creve Coeur, 1000 Wesley Road
2. Peoria, 11 Sanger Street
3. 7000 S Adams St, Peoria, IL 61641
4. CF Industries, 8826 US-24, Mapleton, IL 61547

Exhibit 46: Potential Port Facilities Examined

Using available data sources that included Illinois Department of Transportation GIS mapping and Envision HOI Long Range Transportation Plan, Envision examined each potential facility’s relative proximity to freeway access (I-474), the capacity of truck routes between the facility and the interstate system, and general roadway characteristics/impediments that may impact freight flow without performing any detailed traffic analysis. Superior access to the Interstate Highway System for all four sites is provided via I-474. While the 11 Sanger Street site is also accessible via I-74 to the north, Washington Street is only a Class II Truck Route south of SR 116 as the segment of Washington Street north of SR 116 to I-74 includes numerous signalized intersections and a roundabout in Peoria’s Downtown and Warehouse District.
Location 1: Creve Coeur, 1000 Wesley Road

Summary

Access to I-474 only 1.5 miles away is provided via Wesley Road and a short, 0.3-mile segment of SR 29. One signalized intersection is located on the segment of SR 29 between Wesley Road and the I-474 interchange at LaSalle Blvd. Wesley Road is a 2-lane local street with narrow 11-ft lanes with visible pavement deterioration. An at-grade rail crossing of the TPZR tracks is located just south of the I-474 bridges over Wesley Road and the Illinois River.

The intersection of US 29 and Wesley Road is signalized with a channelized right-turn island for ingress via southbound SR 29. Turn radii are adequate for trucks.

Prior to development of a Port Facility at this location a traffic impact study should be conducted based on proposed trip generation figures to determine whether a dedicated left-turn lane from Wesley Road to SR 29 northbound is needed or if split-phase signal operation should be installed on the Wesley Road approaches.

Highlights

- 1.5 miles to I-474 via Wesley Rd & SR 29
- v/c ratio varies (underutilized)
- Wesley Road has pavement issues & narrow lane widths

Location 2: Peoria Barge, J&L Dock, 11 Sanger Street

Summary

Access to I-474 only 2 miles away is provided via Sanger Street, Washington Street and Adams Street. Sanger is a local street with an unsignalized at-grade rail crossing of the IAIS tracks. Washington Street and Adams Street are both 4/5-lane principal arterials with a total of 3 traffic signals between the site and the interchange at I-474.

Access to the site at the intersection of Washington Street and Sanger Street is currently unsignalized. The skew angle of the intersection creates a tight turn radius that would require inbound trucks from Washington Street to make a right turn across both lanes on Washington St when turning onto Sanger Street.

Prior to development of a Port Facility at this location a traffic impact study should be conducted with a signal warrant analysis based on proposed trip generation figures.

Highlights

- 2 miles to I-474 via Sanger St, Washington St & Adams St.
- v/c ratio < 0.25 (underutilized)
- additional freight traffic may warrant traffic signal at Washington St. /Sanger St. intersection
**Location 3: Keystone Steel and Wire, Bartonville, IL 61641**

**Summary**

Access to the site is provided at the intersection of US 24 and Peru Ave at the entrance to Keystone Steel and Wire. Access to I-474 is provided to the site via US 24 which is a 4/5-lane arterial for the 1-mile segment between the access to Keystone Steel and Wire and the interstate. The urbanized segment of US 24 in Bartonville has two signalized intersections between the site and the I-474 at the intersections of S Adams Street and E McClure Street.

Access to the site at the intersection of US 24 and Peru Ave is currently unsignalized. The skew angle of the intersection creates a tight turn radius that would require trucks departing from the site destined for the intersection to make a right turn from Peru Ave across both northbound lanes of US 24.

Prior to development of a Port Facility at this location a traffic impact study should be conducted with a signal warrant analysis based on proposed trip generation figures.

**Highlights**

- 1 mile to I-474 via US 24, Peru Ave & Washington St
- v/c ratio is 0.25 to 0.50 (less than half capacity)
- additional freight traffic may warrant traffic signal at US 24/Peru Ave intersection

**Location 4: CF Industries, 8826 US-24, Mapleton, IL 61547**

**Summary**

Access to I-474 is provided to the site via US 24 which is a 4-lane arterial for the entire 11-mile segment between Caterpillar and the interstate. US 24 is a semi-limited access facility south of SR 9 with limited impediments. In the urbanized segment of US 24 in Bartonville there are 4 traffic signals spread over a one-mile segment.

Access to the site is provided at a signalized intersection with Terminal Road with a double-left turn for ingress from westbound US 24 and a continuous right turn for egress to eastbound US 24. All turn radii are adequate for trucks.

**Highlights**

- 11 miles to I-474 via US 24
- South of SR 9: v/c ratio < 0.25 (underutilized)
- North of SR 9: v/c ratio is 0.25 to 0.50 (less than half capacity)
Location Comparison

None of the four potential port facility locations assessed have any major impediments to truck freight access along the local highway network connecting to the Interstate Highway System. Locations 1-3 are all located within 2 miles of I-474 interchange access, while Location 4 (CF Industries) is located 11 miles south of the I-474, though the additional distance along US 24 consists primarily of rural, semi-limited access highway with few impediments to truck freight flow.

Access from the local street grid to arterial routes at Location 1 (Creve Coeur) and Location 4 (CF Industries) is provided via signalized intersections along SR 29 and US 24, respectively. Additional freight traffic at Location 1 may require changes to signal phasing/timing and/or lane configuration on the Wesley Road approach.

Access from the local street grid to arterial routes at Location 2 (Creve Coeur) and Location 3 (Keystone Steel and Wire) is provided via unsignalized intersections along Washington St and US 24, respectively. Prior to development of a Port Facility at either location a traffic impact study should be conducted with a signal warrant analysis performed based on proposed trip generation figures.

A high-level summary of highway freight considerations is included below in.

Exhibit 47: Summary of Highway Freight Consideration by Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Distance to Interstate (I-474)</th>
<th>Volume to Capacity Ratio (v/c)</th>
<th>Access Point to Arterial</th>
<th>Potential Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Creve Coeur</td>
<td>1.5 miles</td>
<td>varies (underutilized)</td>
<td>signalized</td>
<td>Examine signal operation of SR 29/Wesley Road intersection</td>
</tr>
<tr>
<td>2 – 11 Sanger Street</td>
<td>2 miles</td>
<td>&lt; 0.25 (underutilized)</td>
<td>unsignalized</td>
<td>Perform Signal Warrant at Washington St./Sanger St. intersection</td>
</tr>
<tr>
<td>3 – Keystone Steel and Wire</td>
<td>1 mile</td>
<td>0.25 to 0.50 (less than half capacity)</td>
<td>unsignalized</td>
<td>Perform Signal Warrant at US 24/Peru Ave intersection</td>
</tr>
<tr>
<td>4 – CF Industries</td>
<td>11 miles</td>
<td>South of SR 9: &lt; 0.25 (underutilized) North of SR 9: 0.25 to 0.50 (less than half capacity)</td>
<td>signalized</td>
<td>none</td>
</tr>
</tbody>
</table>